ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SLO 0590

Run #10 Filename P616246 Samp: 1 Inj: 1 Acquired: 28-DEC-18 09:16:10
Processed: 29-DEC-18 08:29:13 Sample ID: E1801105-001DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:42	1.126e+04	1.335e+04	0.84	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:39	6.250e+02	3.631e+02	1.72	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:41	4.302e+02	2.787e+02	1.54	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:30	1.213e+03	9.382e+02	1.29	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:37	4.730e+02	4.113e+02	1.15	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:10	1.258e+02	7.922e+01	1.59	no	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:58	1.097e+02	9.776e+01	1.12	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:11	5.237e+02	4.297e+02	1.22	no	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:31	1.080e+02	1.283e+02	0.84	no	no	1.463
10	Unk	OCDF	40:44	1.558e+02	1.779e+02	0.88	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:41	1.867e+03	2.431e+03	0.77	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:59	3.476e+01	2.294e+01	1.52	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	yes	1.071
14	Unk	1,2,3,6,7,8-HxCDD	NotFnd	*	*	*	no	yes	1.060
15	Unk	1,2,3,7,8,9-HxCDD	NotFnd	*	*	*	no	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:05	1.745e+01	1.991e+01	0.88	no	no	1.112
17	Unk	OCDD	40:33	1.192e+02	1.804e+02	0.66	no	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:41	3.383e+04	4.324e+04	0.78	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:38	5.269e+04	3.301e+04	1.60	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:40	5.050e+04	3.127e+04	1.62	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:30	2.243e+04	4.269e+04	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:36	2.568e+04	4.856e+04	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:08	2.432e+04	4.496e+04	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:55	2.233e+04	4.248e+04	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:11	1.805e+04	3.915e+04	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:31	1.605e+04	3.503e+04	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:40	1.659e+04	2.092e+04	0.79	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:58	3.789e+04	2.406e+04	1.58	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:17	3.169e+04	2.509e+04	1.26	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:22	3.036e+04	2.400e+04	1.26	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:05	3.421e+04	3.247e+04	1.05	yes	no	0.857
32	IS	13C-OCDD	40:32	3.870e+04	4.254e+04	0.91	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:55	2.211e+04	2.704e+04	0.82	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:36	3.010e+04	2.433e+04	1.24	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:42	4.523e+01				no	1.086

$$\text{OCDD} = \frac{(1.192e+02 + 1.804e+02) \times 4000\ \text{pg} \times 500}{(3.870e+04 + 4.254e+04) \times 10.238\ \text{g} \times 47.3 / 100 \times 1.157} = 8970.205\ \text{ng/kg}$$

LG 12/29/18

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90074584

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SLO 0590

Run #10 Filename P616246 Samp: 1 Inj: 1 Acquired: 28-DEC-18 09:16:10
Processed: 29-DEC-18 08:29:13 LAB. ID: E1801105-001DL

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.52e+06	1.31e+03	1.2e+03	1.87e+06	2.58e+03	7.2e+02
2	1,2,3,7,8-PeCDF	1.06e+05	5.88e+02	1.8e+02	6.61e+04	1.98e+03	3.3e+01
3	2,3,4,7,8-PeCDF	7.04e+04	5.88e+02	1.2e+02	4.89e+04	1.98e+03	2.5e+01
4	1,2,3,4,7,8-HxCDF	2.52e+05	1.24e+03	2.0e+02	1.99e+05	6.08e+02	3.3e+02
5	1,2,3,6,7,8-HxCDF	8.72e+04	1.24e+03	7.1e+01	8.25e+04	6.08e+02	1.4e+02
6	2,3,4,6,7,8-HxCDF	2.44e+04	1.24e+03	2.0e+01	1.55e+04	6.08e+02	2.6e+01
7	1,2,3,7,8,9-HxCDF	2.00e+04	1.24e+03	1.6e+01	1.58e+04	6.08e+02	2.6e+01
8	1,2,3,4,6,7,8-HpCDF	1.21e+05	4.84e+02	2.5e+02	8.82e+04	6.04e+02	1.5e+02
9	1,2,3,4,7,8,9-HpCDF	2.25e+04	4.84e+02	4.7e+01	2.71e+04	6.04e+02	4.5e+01
10	OCDF	3.39e+04	1.14e+03	3.0e+01	3.80e+04	2.18e+03	1.7e+01
11	2,3,7,8-TCDD	2.96e+05	3.88e+03	7.6e+01	3.92e+05	1.37e+03	2.9e+02
12	1,2,3,7,8-PeCDD	8.36e+03	1.20e+03	7.0e+00	5.96e+03	7.04e+02	8.5e+00
13	1,2,3,4,7,8-HxCDD	*	6.76e+02	*	*	5.12e+02	*
14	1,2,3,6,7,8-HxCDD	*	6.76e+02	*	*	5.12e+02	*
15	1,2,3,7,8,9-HxCDD	*	6.76e+02	*	*	5.12e+02	*
16	1,2,3,4,6,7,8-HpCDD	4.72e+03	4.96e+02	9.5e+00	5.42e+03	4.20e+02	1.3e+01
17	OCDD	2.21e+04	7.52e+02	2.9e+01	3.29e+04	1.04e+03	3.2e+01
18	13C-2,3,7,8-TCDF	4.98e+06	1.09e+04	4.6e+02	6.39e+06	7.70e+03	8.3e+02
19	13C-1,2,3,7,8-PeCDF	9.34e+06	1.07e+03	8.7e+03	5.86e+06	8.08e+02	7.3e+03
20	13C-2,3,4,7,8-PeCDF	9.40e+06	1.07e+03	8.8e+03	5.76e+06	8.08e+02	7.1e+03
21	13C-1,2,3,4,7,8-HxCDF	4.72e+06	1.33e+03	3.5e+03	8.82e+06	2.12e+03	4.2e+03
22	13C-1,2,3,6,7,8-HxCDF	5.44e+06	1.33e+03	4.1e+03	1.03e+07	2.12e+03	4.8e+03
23	13C-2,3,4,6,7,8-HxCDF	5.15e+06	1.33e+03	3.9e+03	9.55e+06	2.12e+03	4.5e+03
24	13C-1,2,3,7,8,9-HxCDF	4.56e+06	1.33e+03	3.4e+03	8.57e+06	2.12e+03	4.0e+03
25	13C-1,2,3,4,6,7,8-HpCDF	3.92e+06	3.16e+03	1.2e+03	8.42e+06	6.03e+03	1.4e+03
26	13C-1,2,3,4,7,8,9-HpCDF	3.37e+06	3.16e+03	1.1e+03	7.56e+06	6.03e+03	1.3e+03
27	13C-2,3,7,8-TCDD	2.68e+06	1.28e+04	2.1e+02	3.41e+06	5.49e+03	6.2e+02
28	13C-1,2,3,7,8-PeCDD	7.21e+06	2.22e+03	3.2e+03	4.54e+06	2.01e+03	2.3e+03
29	13C-1,2,3,4,7,8-HxCDD	7.09e+06	2.92e+03	2.4e+03	5.58e+06	2.07e+03	2.7e+03
30	13C-1,2,3,6,7,8-HxCDD	6.43e+06	2.92e+03	2.2e+03	5.13e+06	2.07e+03	2.5e+03
31	13C-1,2,3,4,6,7,8-HpCDD	7.52e+06	1.42e+03	5.3e+03	7.09e+06	7.80e+02	9.1e+03
32	13C-OCDD	7.20e+06	9.80e+02	7.4e+03	8.01e+06	3.84e+02	2.1e+04
33	13C-1,2,3,4-TCDD	3.31e+06	1.28e+04	2.6e+02	4.19e+06	5.49e+03	7.6e+02
34	13C-1,2,3,7,8,9-HxCDD	6.16e+06	2.92e+03	2.1e+03	4.98e+06	2.07e+03	2.4e+03
35	37Cl-2,3,7,8-TCDD	1.02e+04	3.54e+03	2.9e+00			

---Sample Calculation---

$$\text{D/L TCDD} = \frac{2.5 \times (3.880e{+}03 + 1.368e{+}03) \times 2000}{(2.675e{+}06 + 3.407e{+}06) \times (\quad) \times 1.049} =$$

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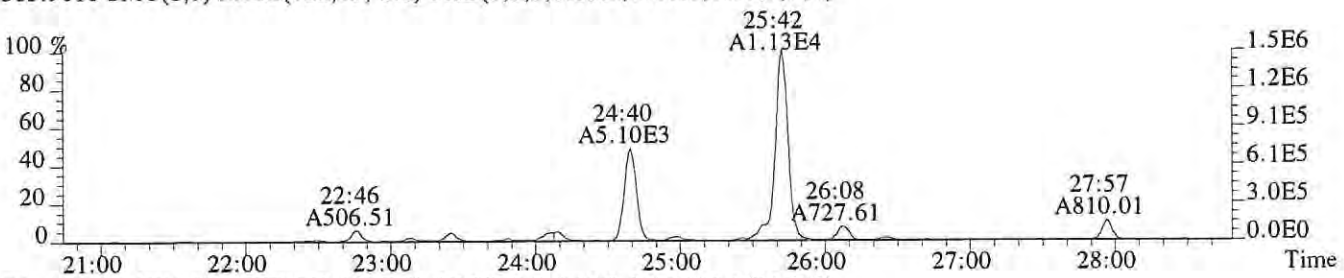
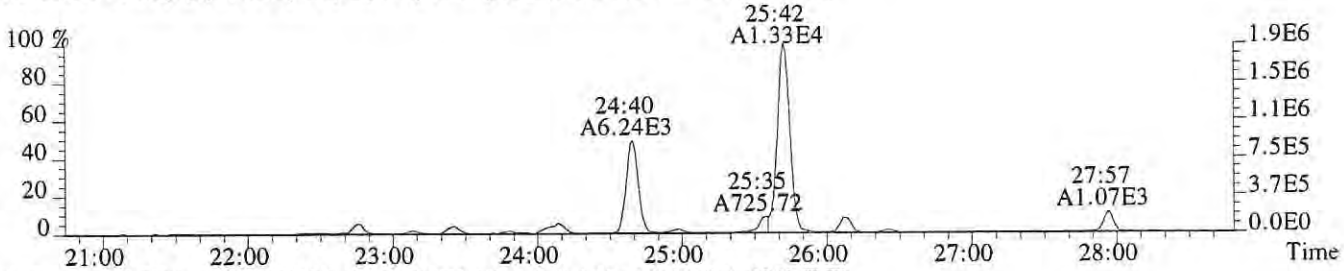
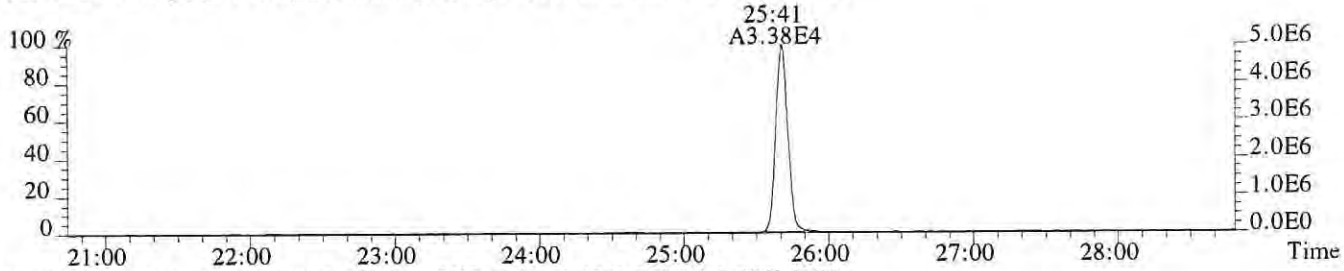
File:P616246 #1-573 Acq:28-DEC-2018 09:16:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-001DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1308.0,1.00%,F,T)



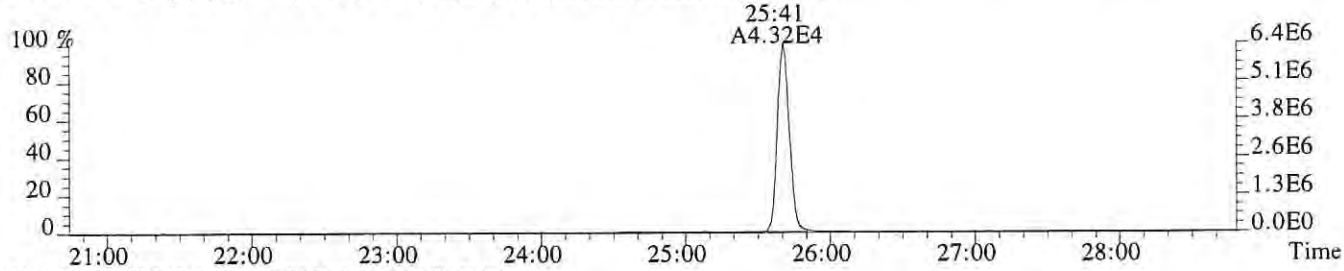
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2576.0,1.00%,F,T)



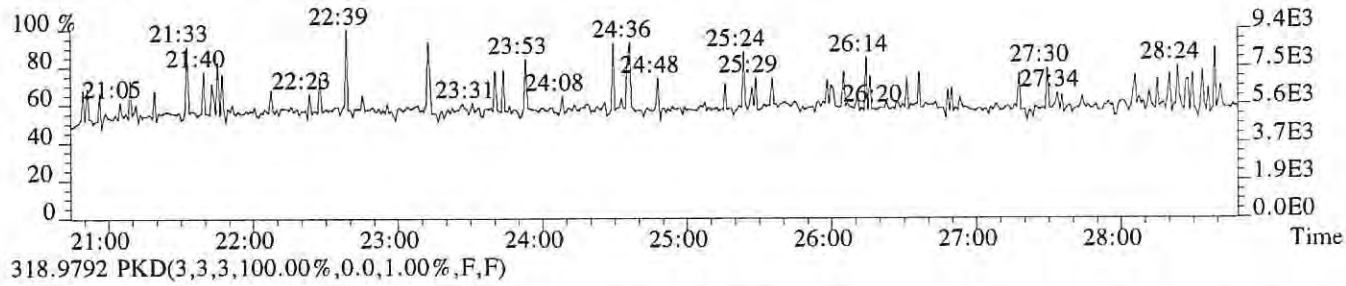
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10852.0,1.00%,F,T)



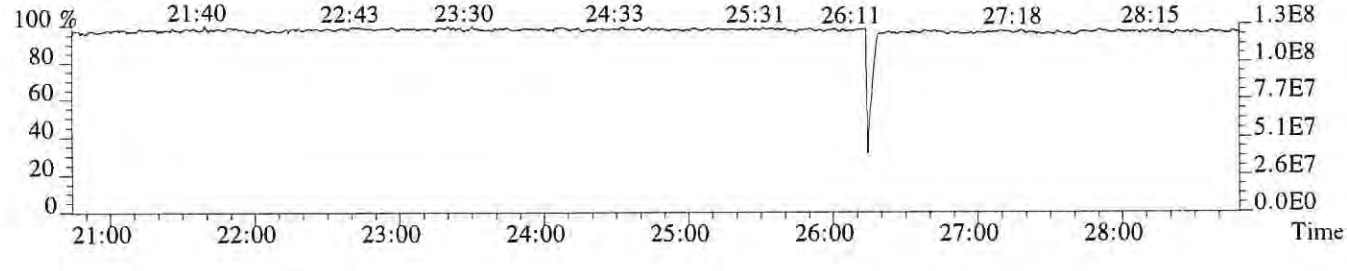
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7700.0,1.00%,F,T)



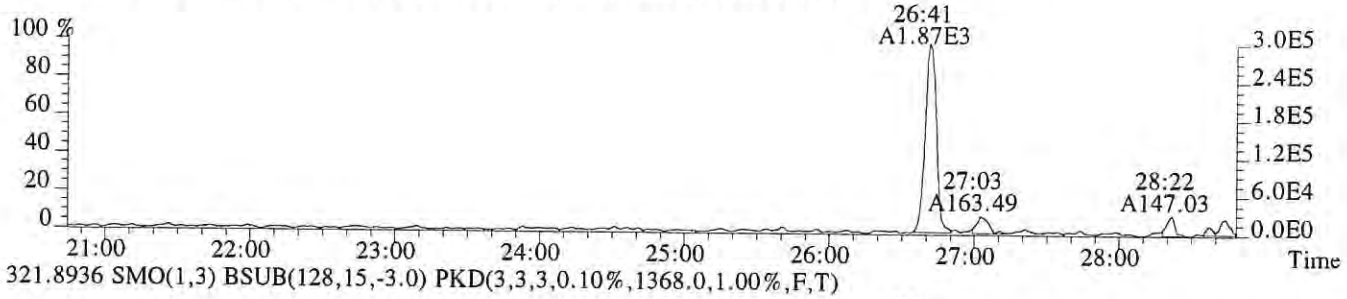
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



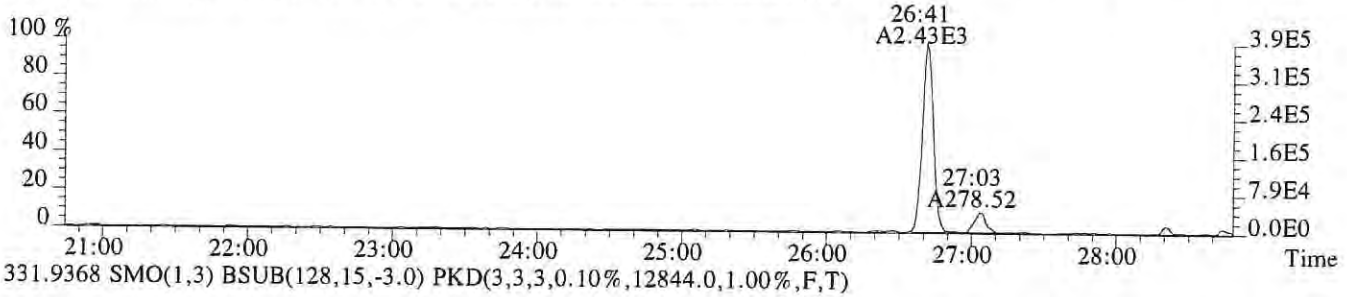
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



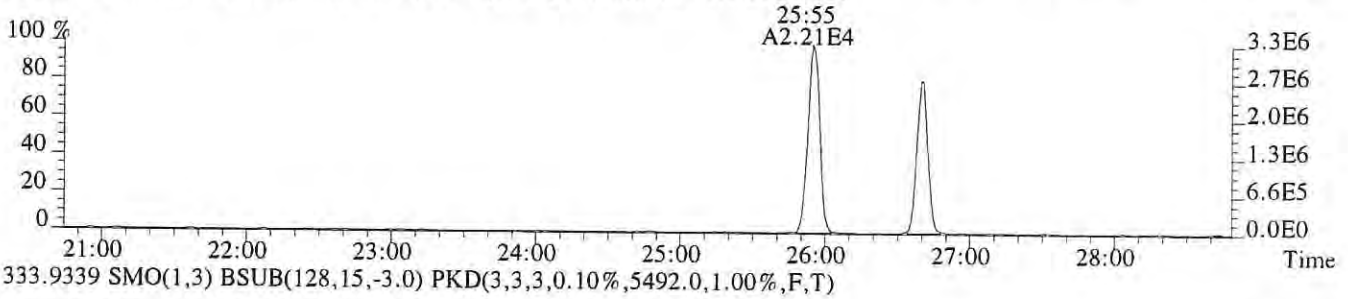
File:P616246 #1-573 Acq:28-DEC-2018 09:16:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-001DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3880.0,1.00%,F,T)



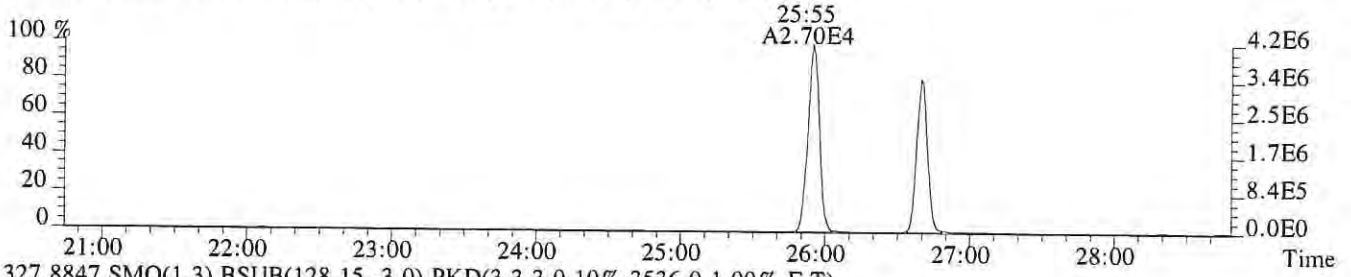
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1368.0,1.00%,F,T)



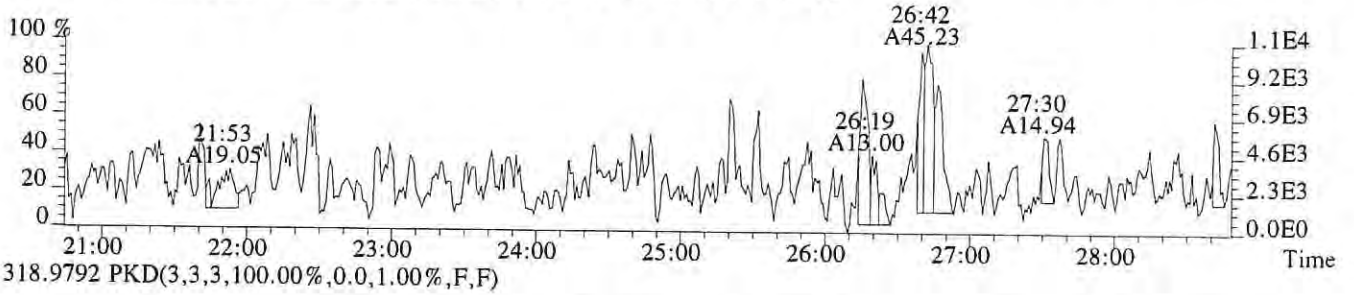
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12844.0,1.00%,F,T)



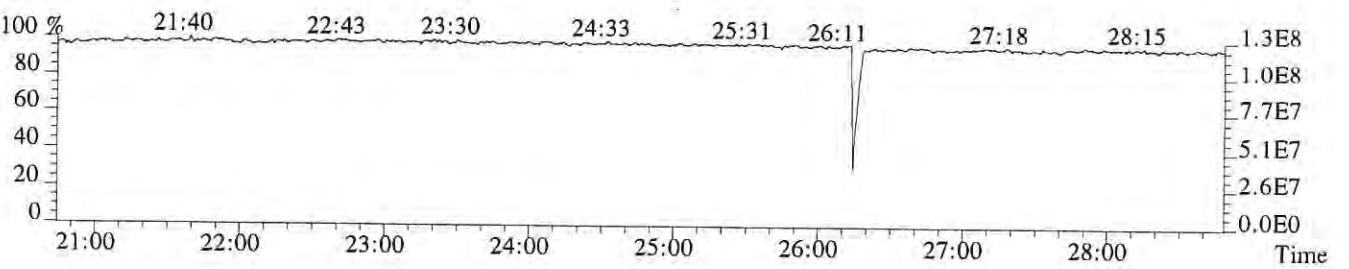
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5492.0,1.00%,F,T)



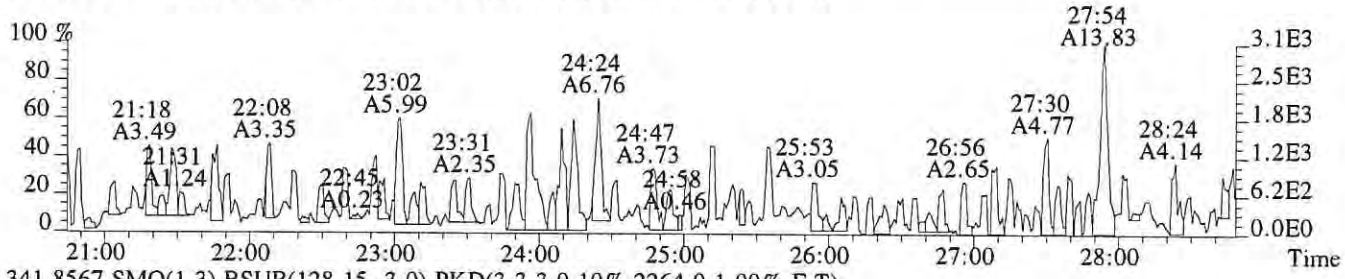
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3536.0,1.00%,F,T)



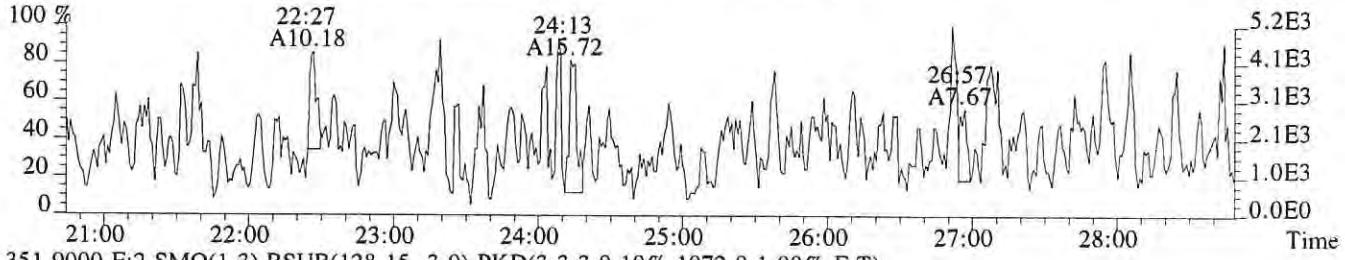
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



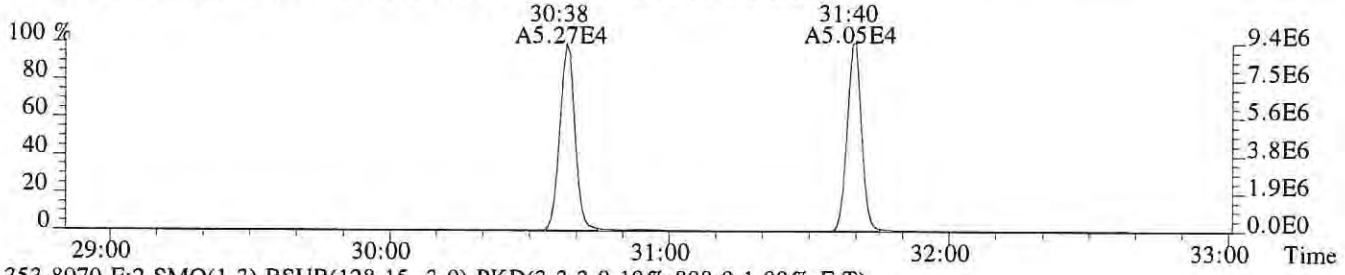
File:P616246 #1-573 Acq:28-DEC-2018 09:16:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-001DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,360.0,1.00%,F,T)



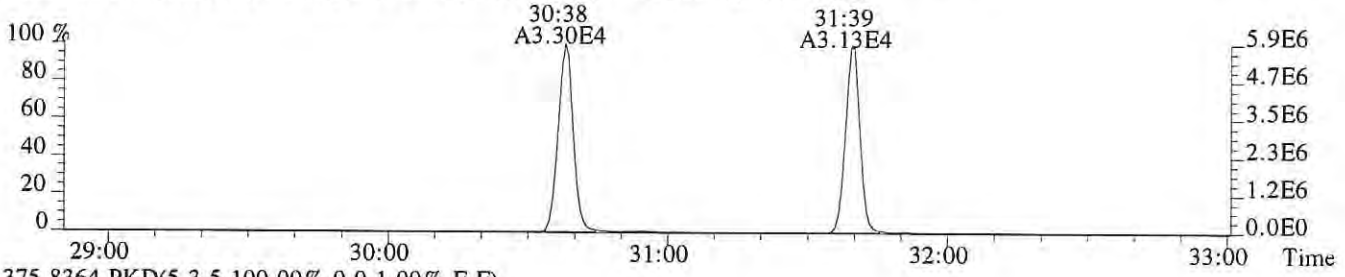
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2264.0,1.00%,F,T)



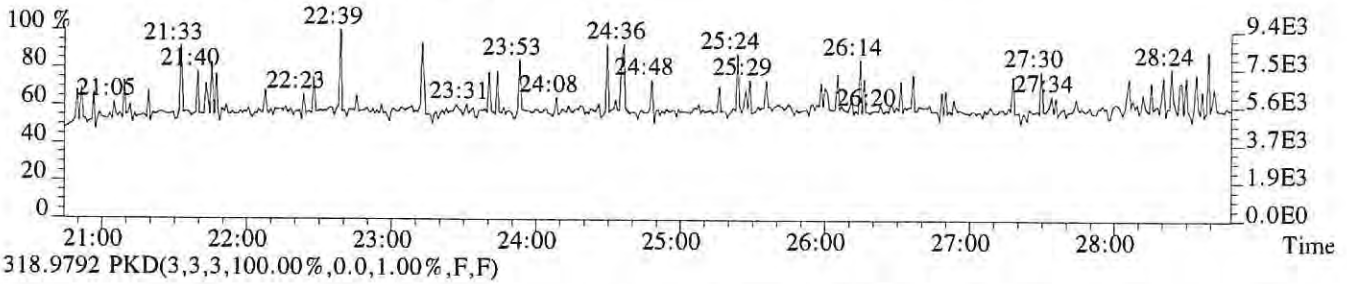
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1072.0,1.00%,F,T)



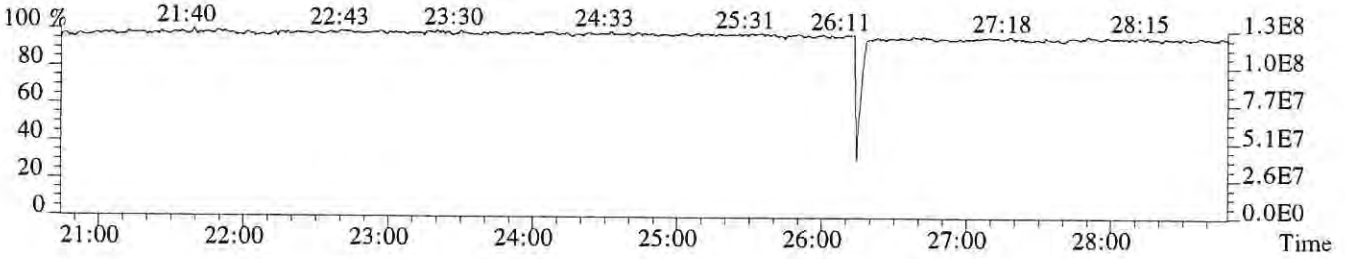
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,808.0,1.00%,F,T)



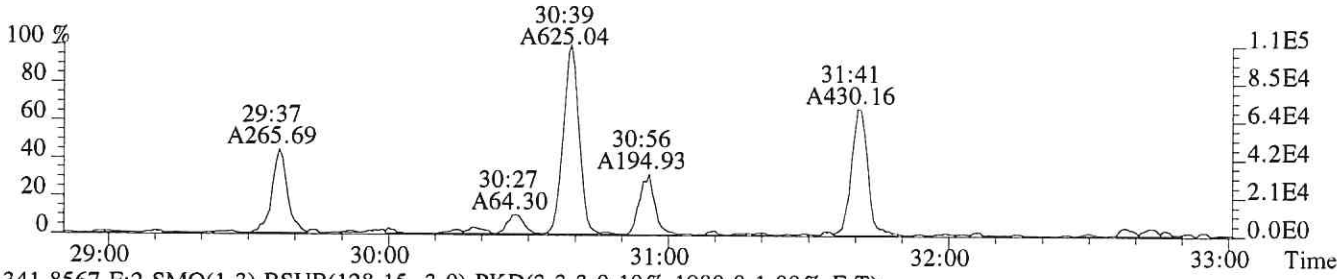
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



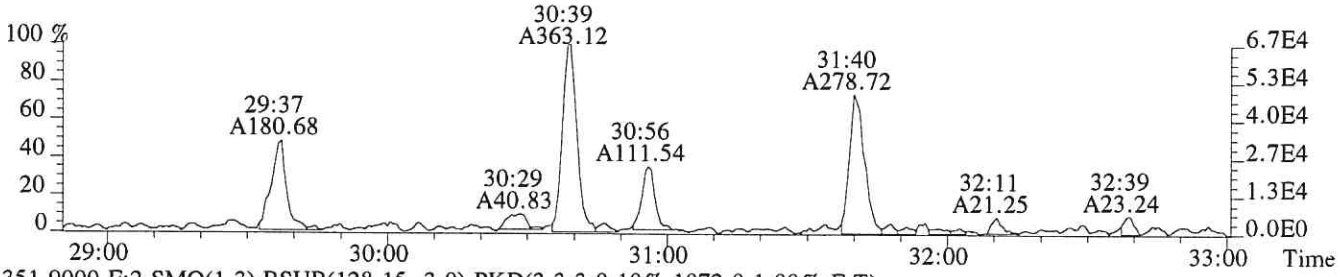
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



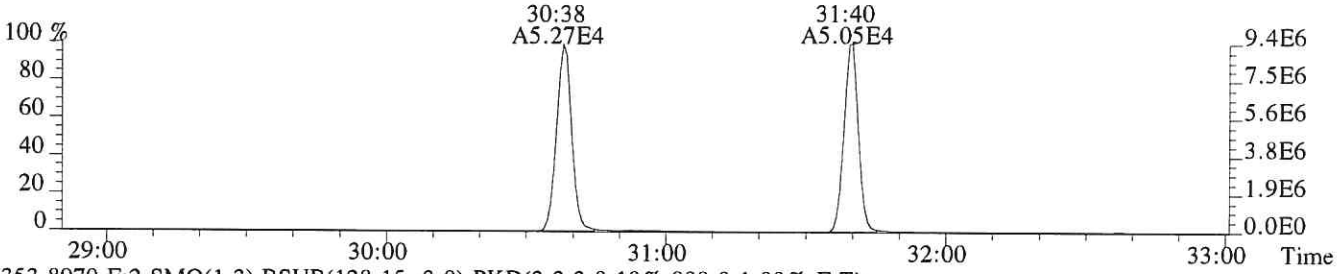
File:P616246 #1-376 Acq:28-DEC-2018 09:16:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-001DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,588.0,1.00%,F,T)



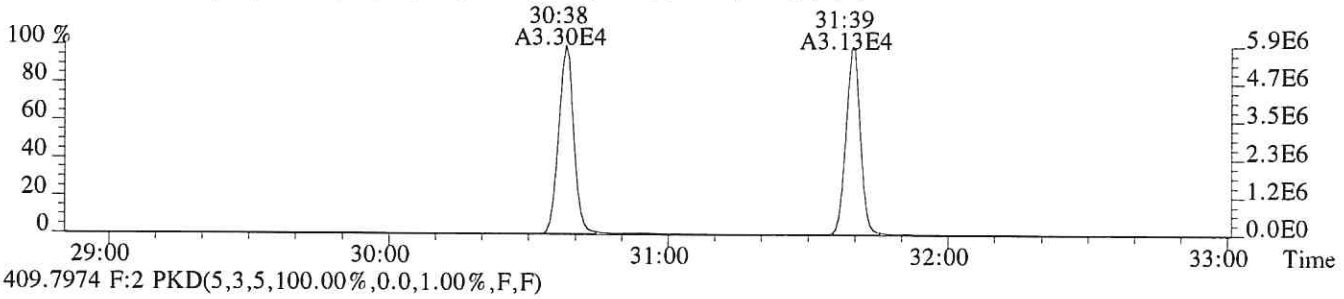
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1980.0,1.00%,F,T)



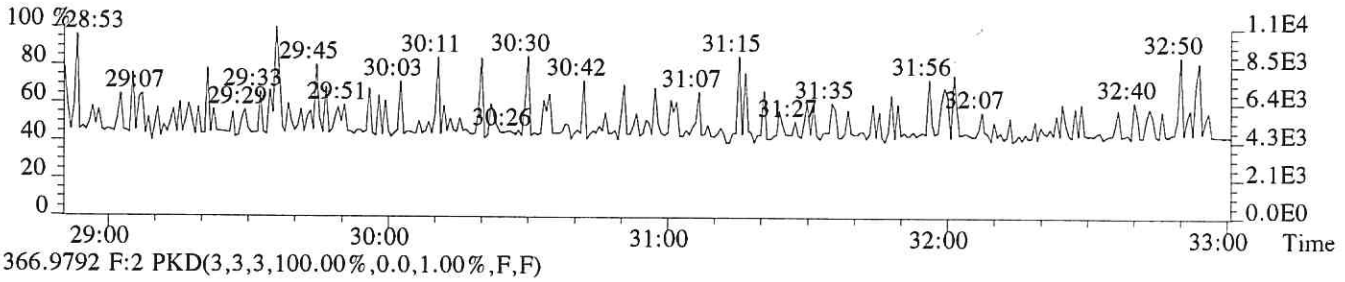
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1072.0,1.00%,F,T)



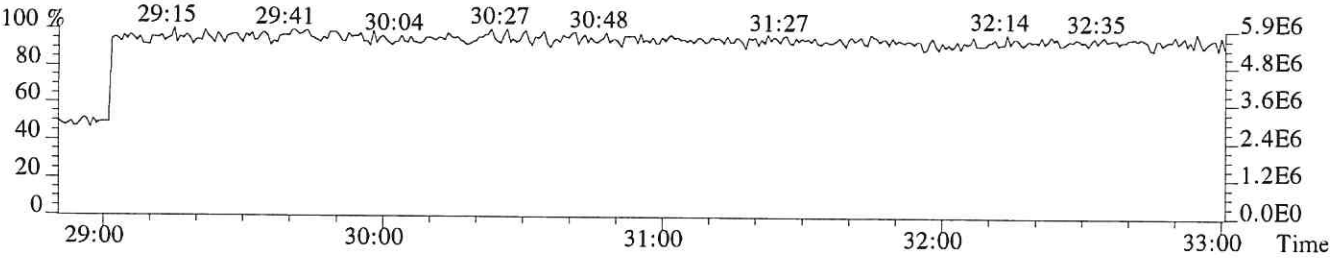
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,808.0,1.00%,F,T)



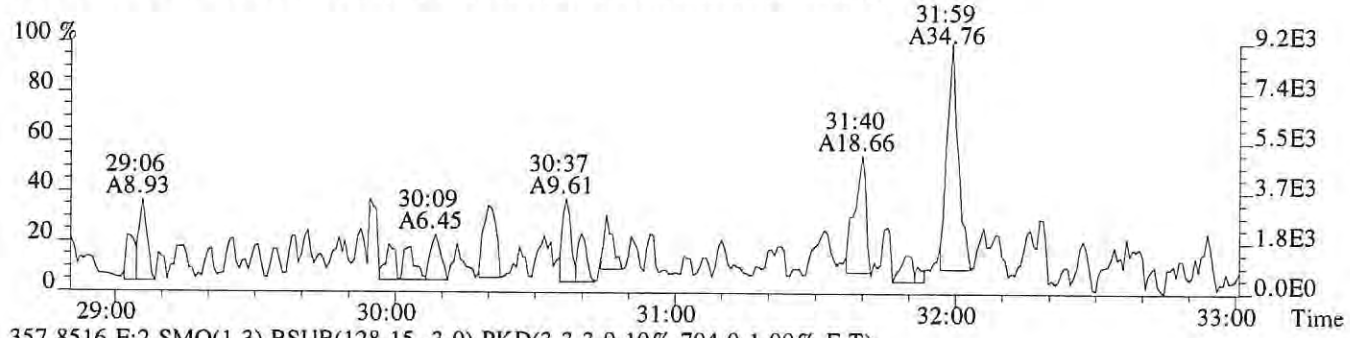
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



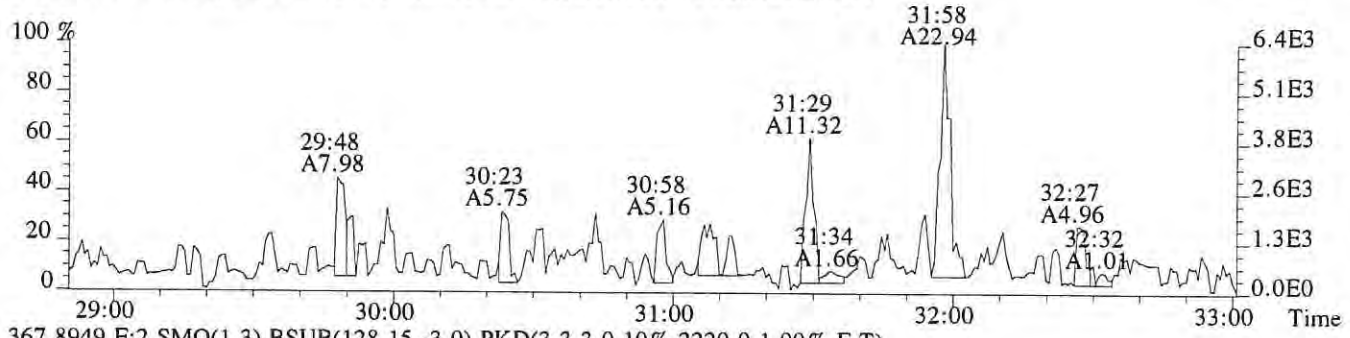
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



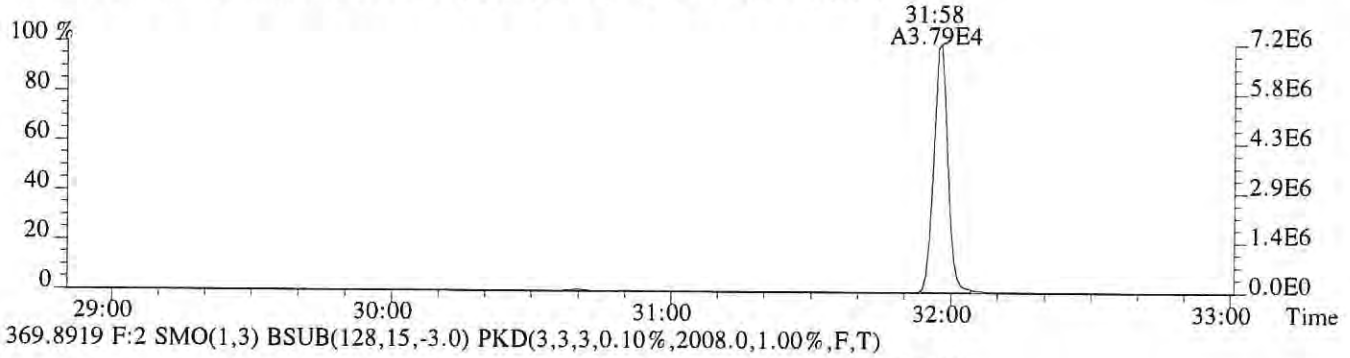
File:P616246 #1-376 Acq:28-DEC-2018 09:16:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-001DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1196.0,1.00%,F,T)



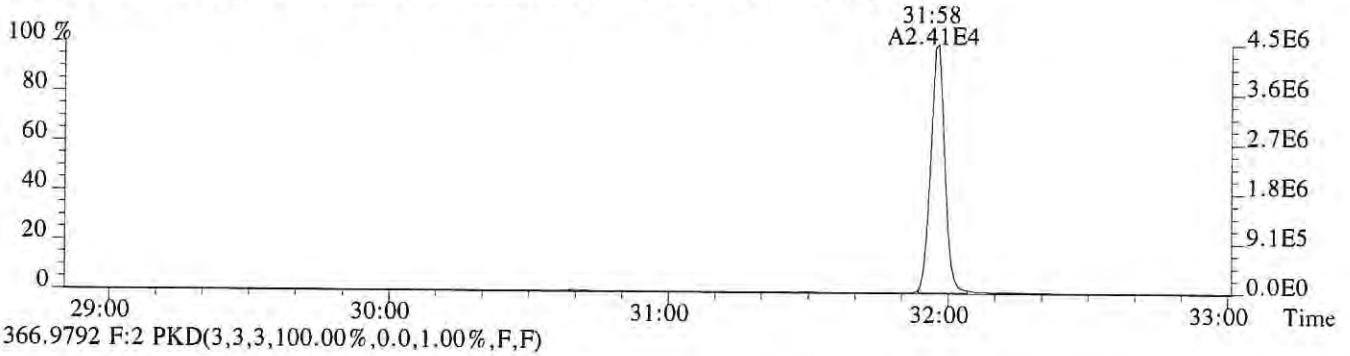
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,704.0,1.00%,F,T)



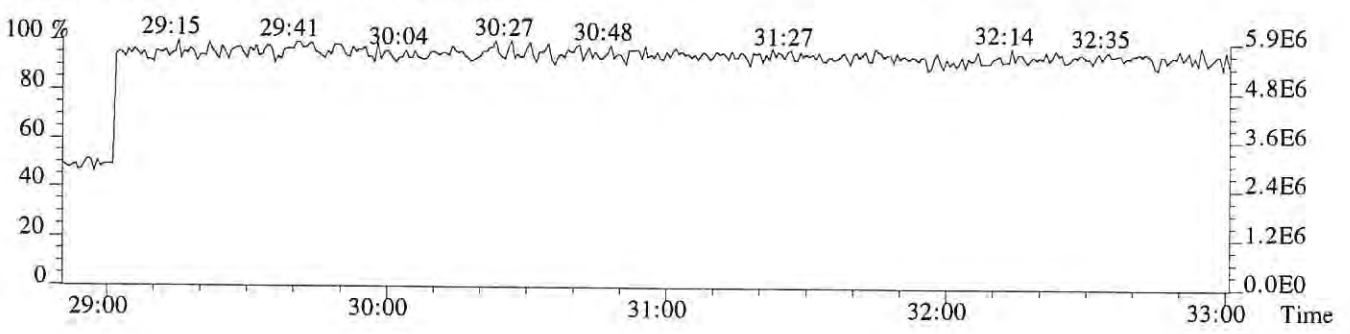
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2220.0,1.00%,F,T)



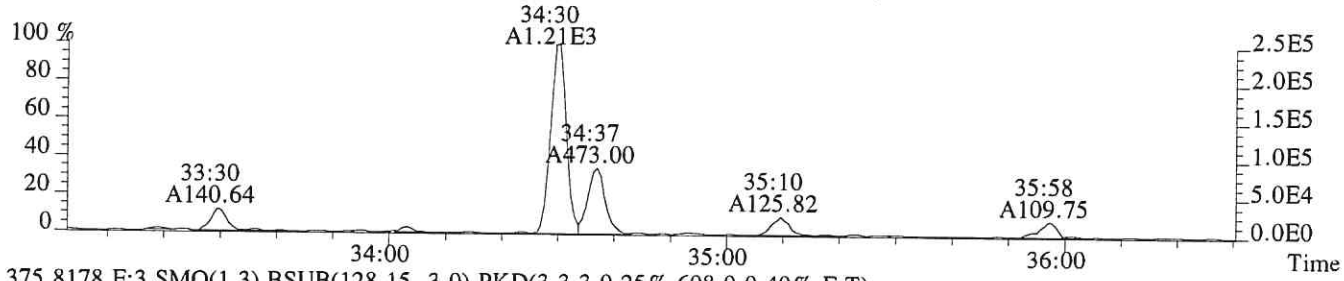
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2008.0,1.00%,F,T)



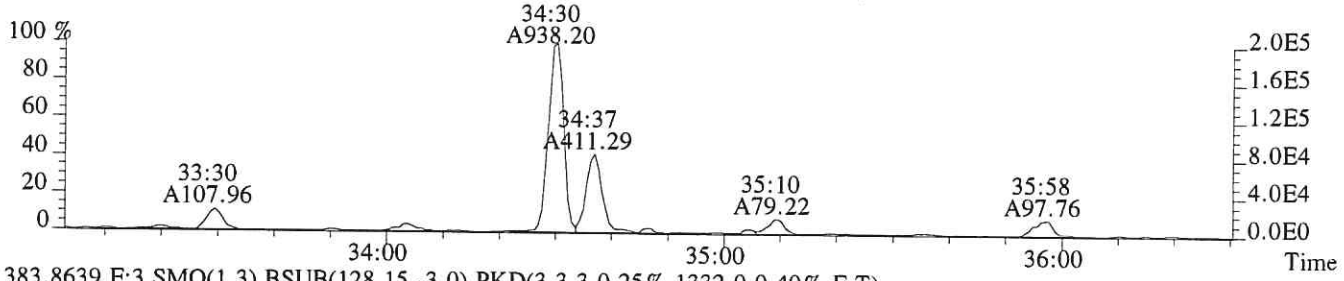
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



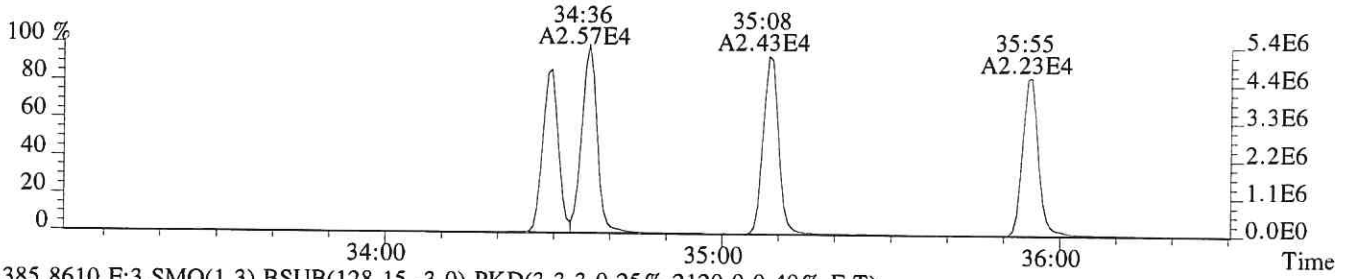
File:P616246 #1-312 Acq:28-DEC-2018 09:16:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-001DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1236.0,0.40%,F,T)



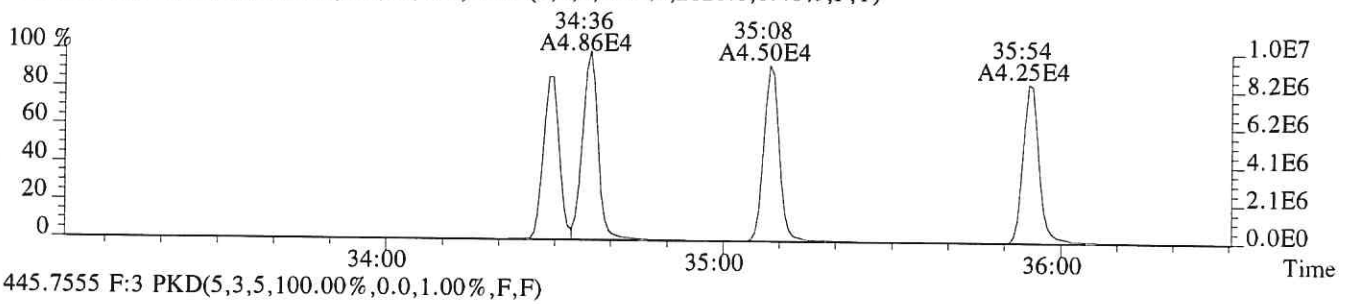
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,608.0,0.40%,F,T)



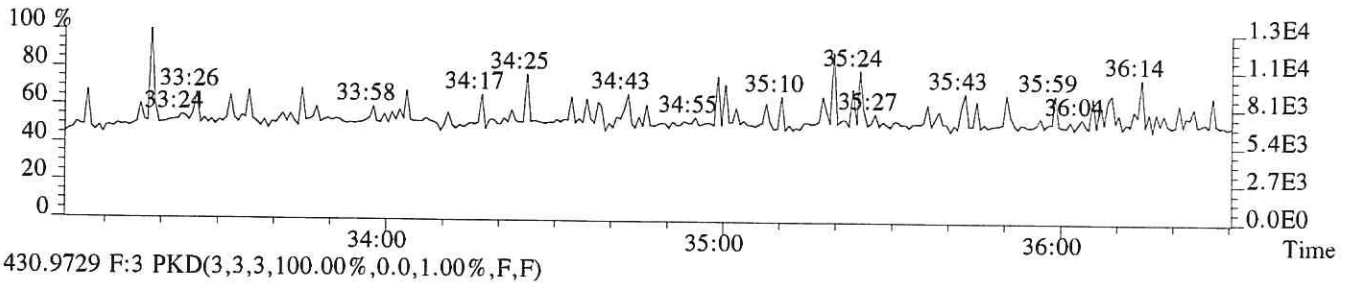
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1332.0,0.40%,F,T)



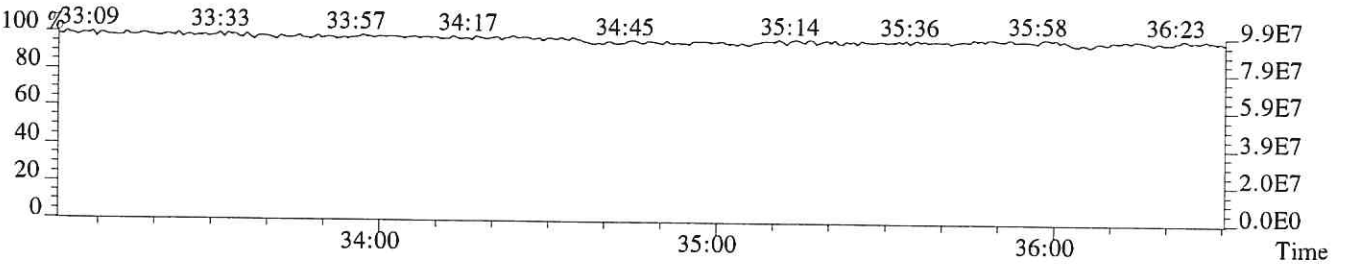
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2120.0,0.40%,F,T)



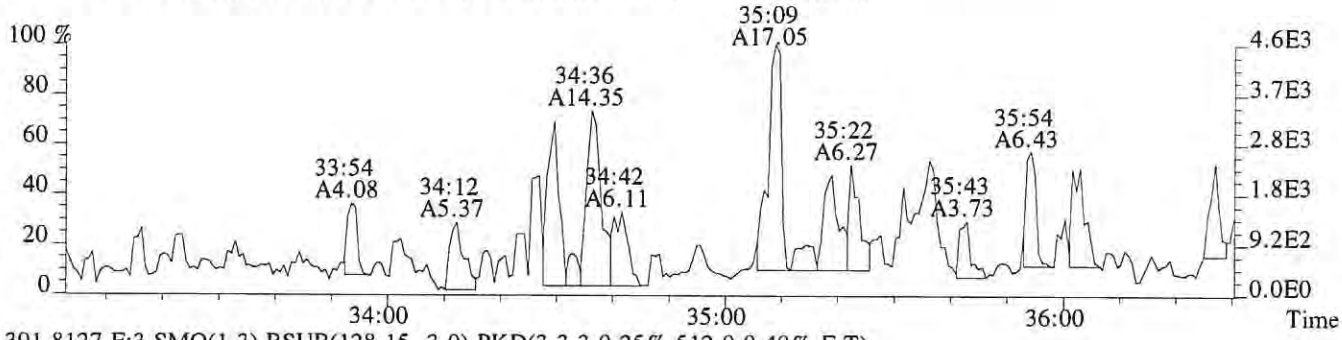
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



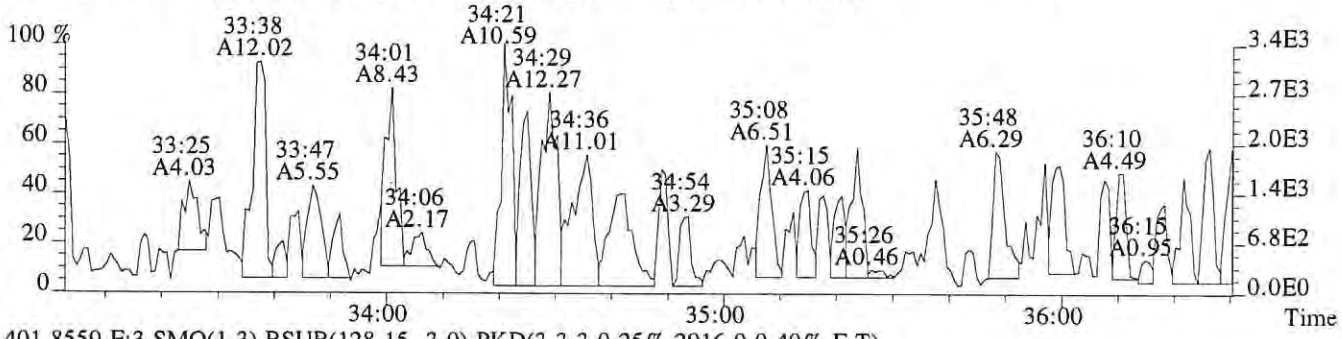
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



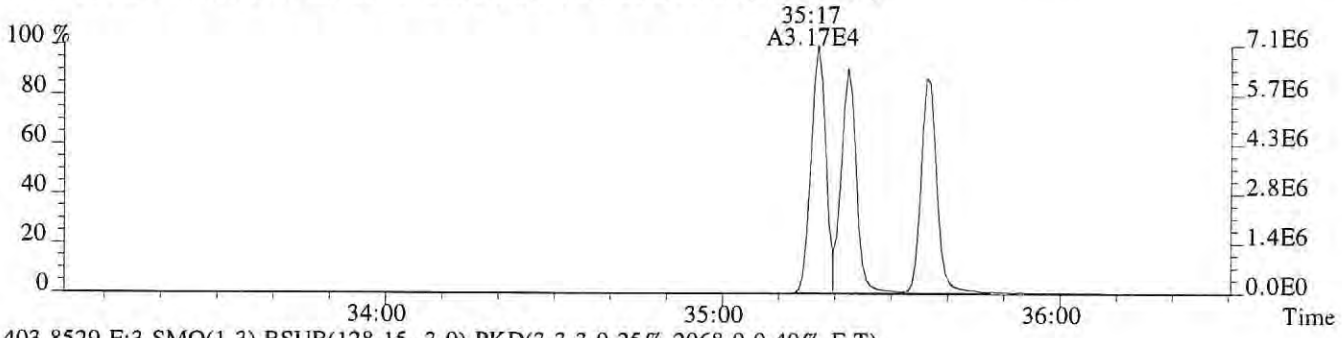
File:P616246 #1-312 Acq:28-DEC-2018 09:16:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-001DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,676.0,0.40%,F,T)



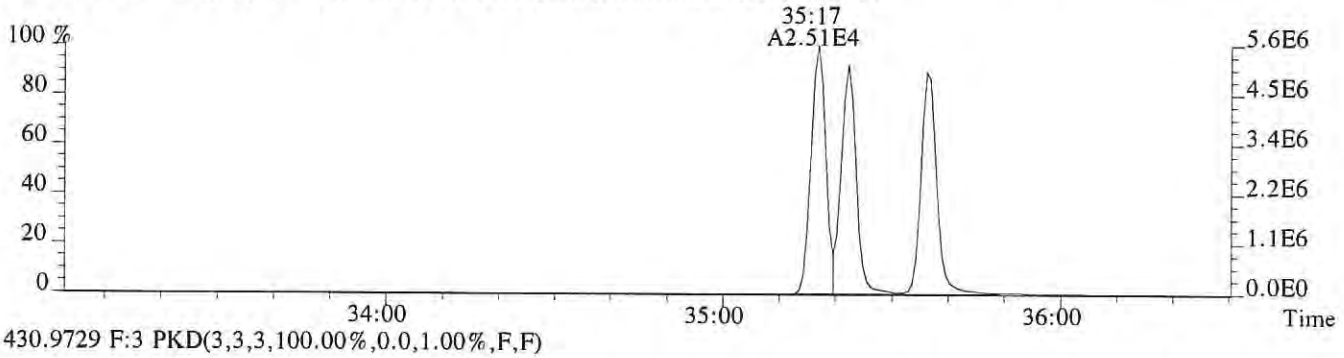
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,512.0,0.40%,F,T)



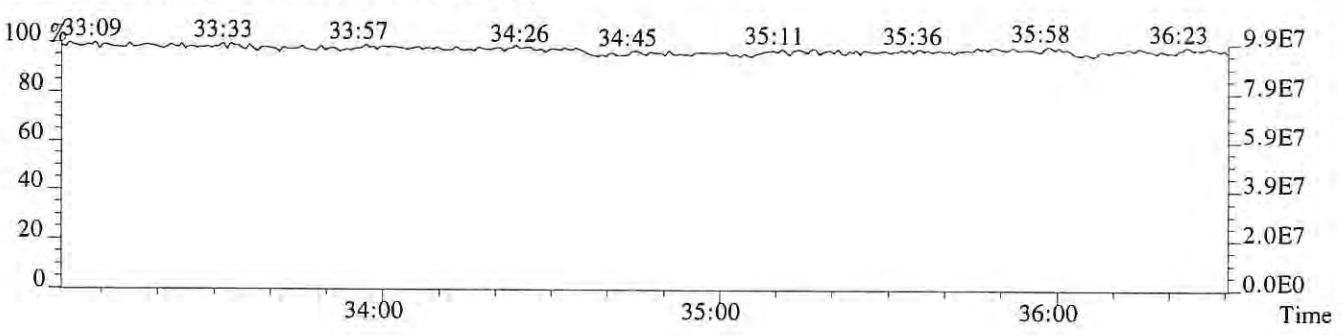
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2916.0,0.40%,F,T)



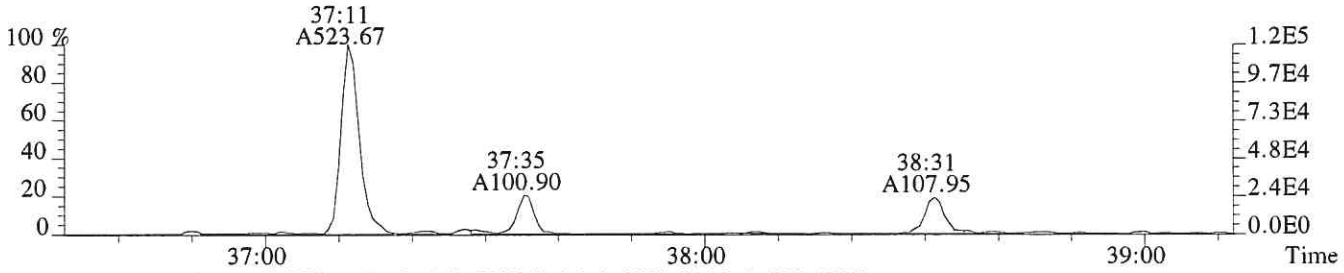
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2068.0,0.40%,F,T)



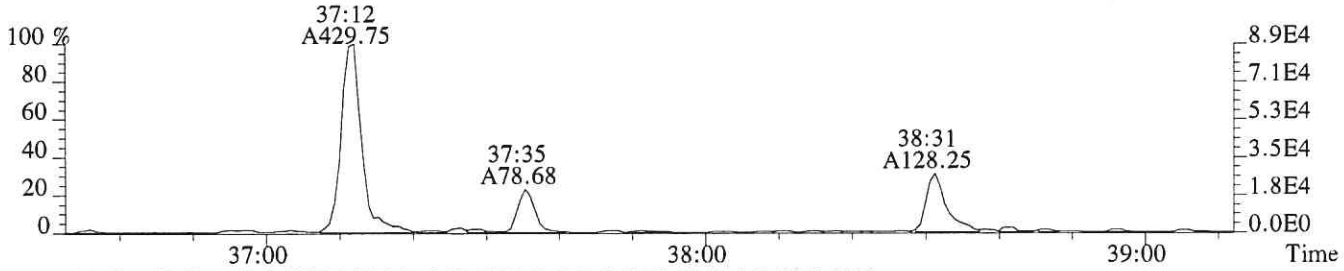
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



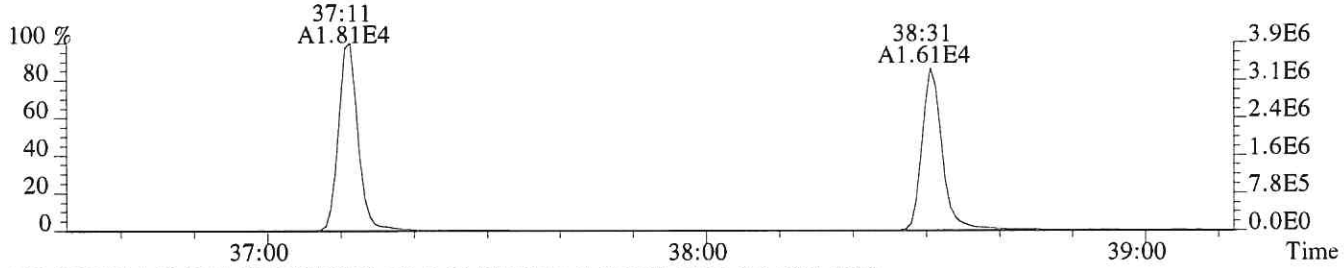
File:P616246 #1-240 Acq:28-DEC-2018 09:16:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-001DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,484.0,0.50%,F,T)



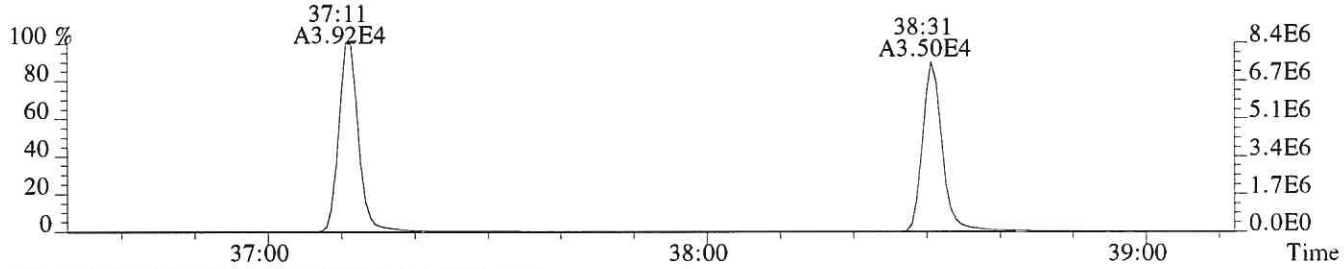
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,604.0,0.50%,F,T)



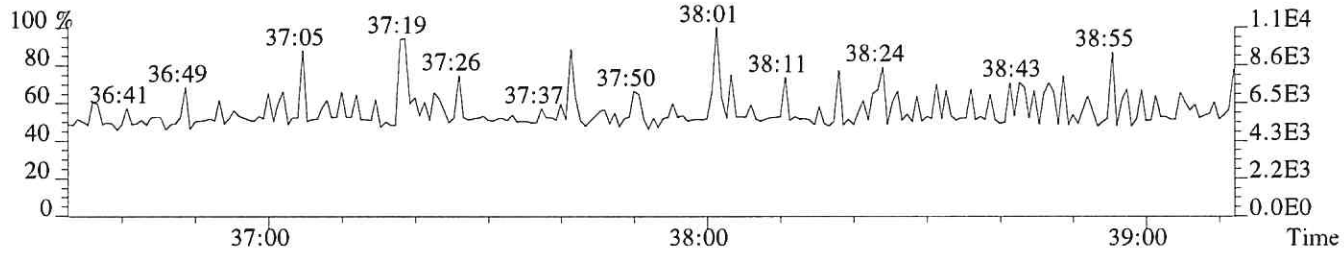
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3160.0,0.50%,F,T)



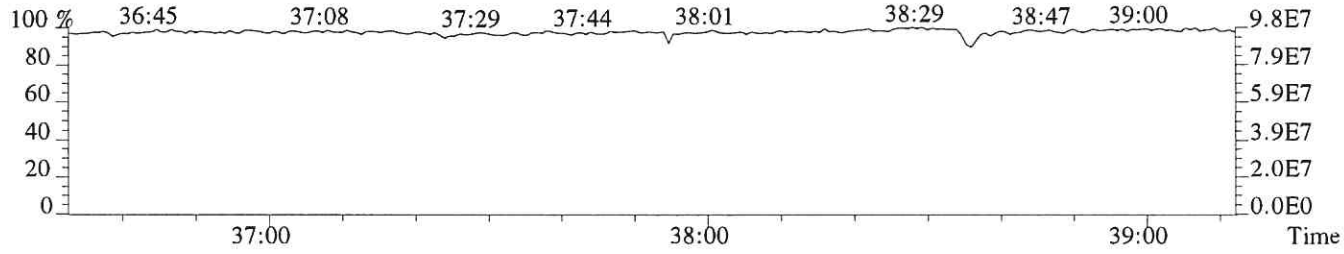
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6032.0,0.50%,F,T)



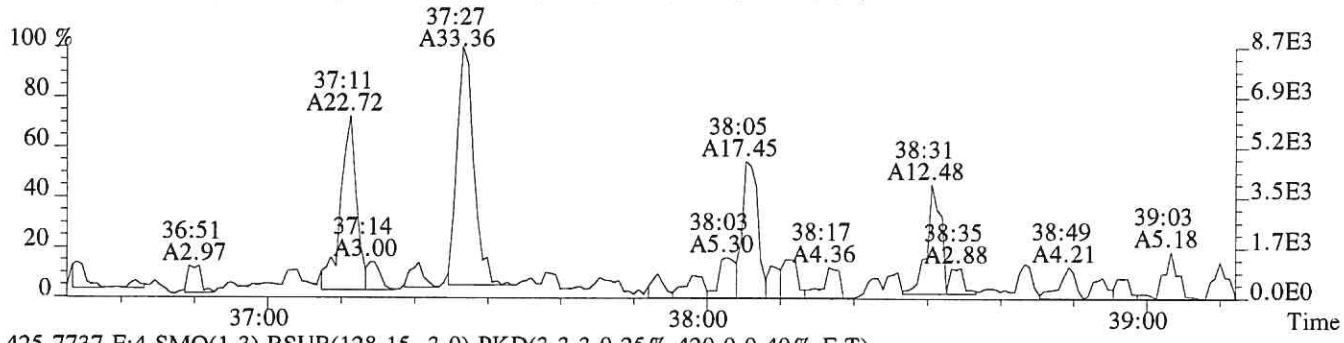
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



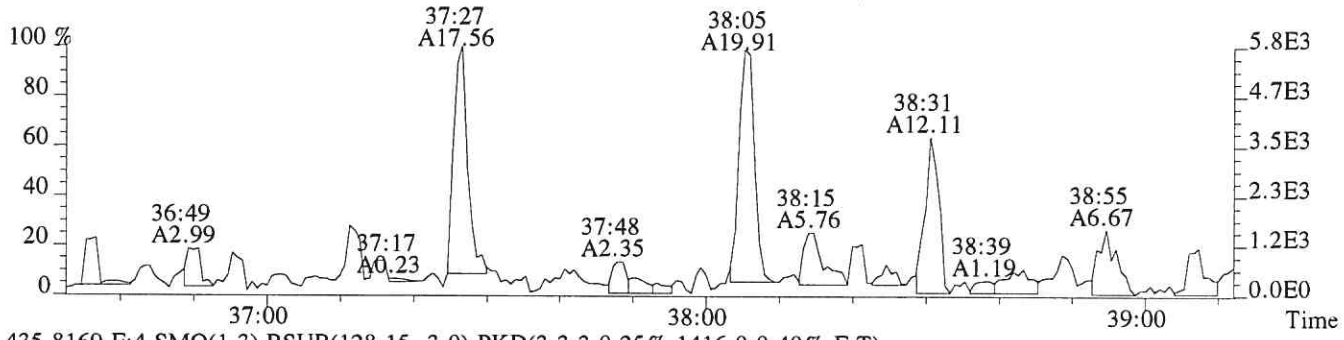
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



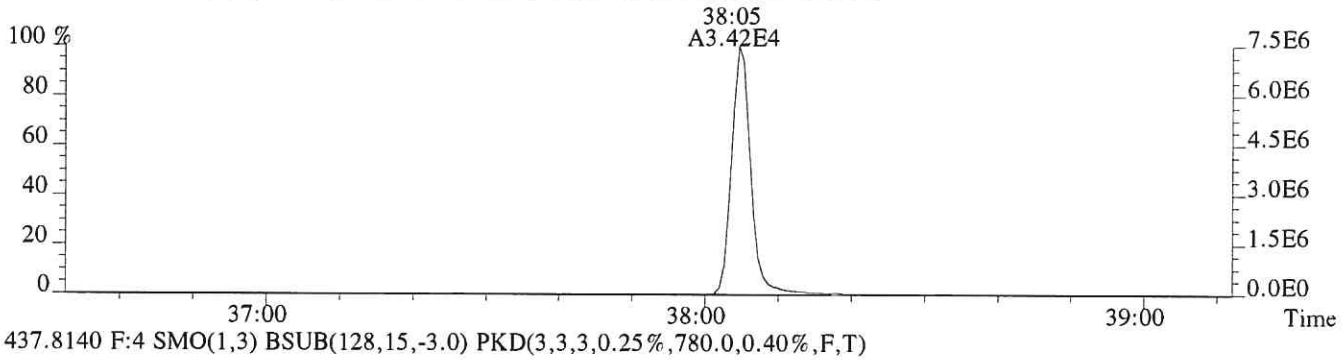
File:P616246 #1-240 Acq:28-DEC-2018 09:16:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-001DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,496.0,0.40%,F,T)



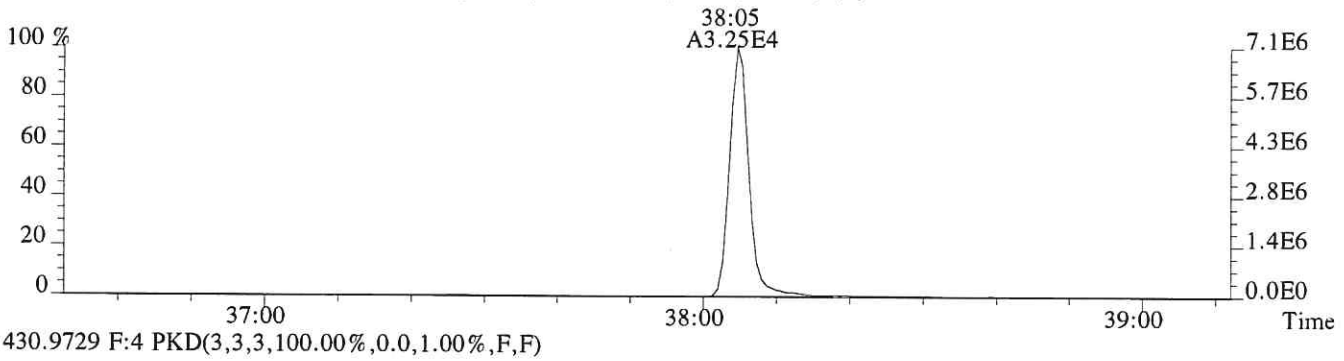
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,420.0,0.40%,F,T)



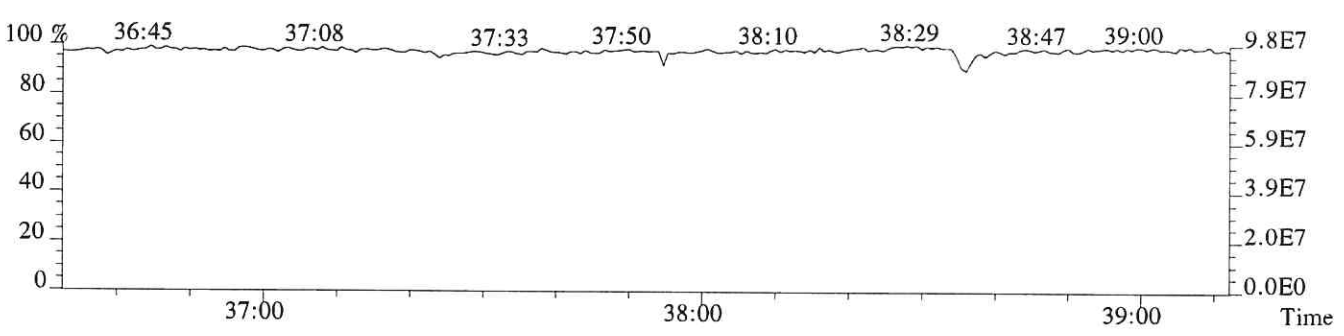
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1416.0,0.40%,F,T)



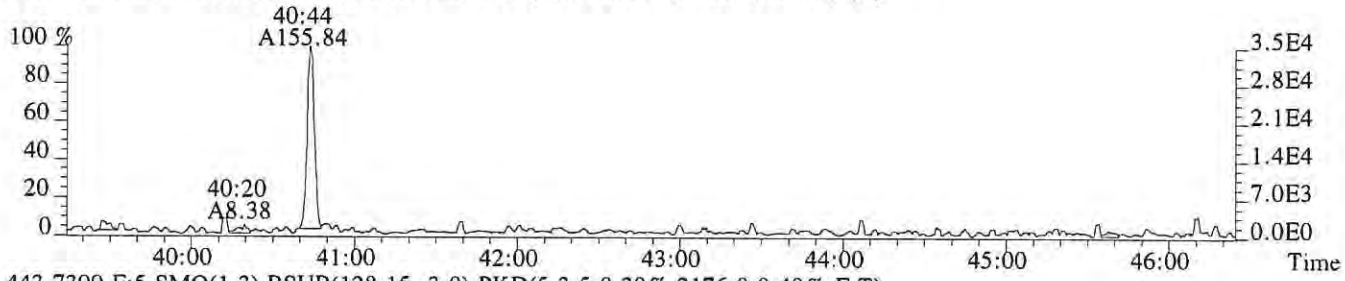
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,780.0,0.40%,F,T)



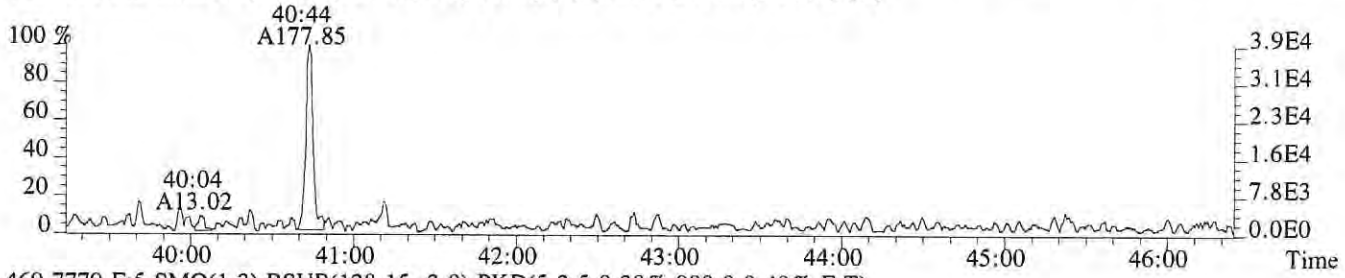
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



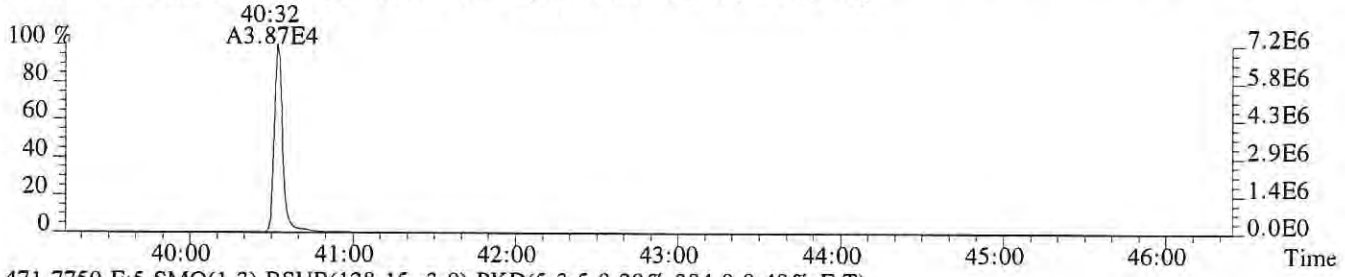
File:P616246 #1-646 Acq:28-DEC-2018 09:16:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-001DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1140.0,0.40%,F,T)



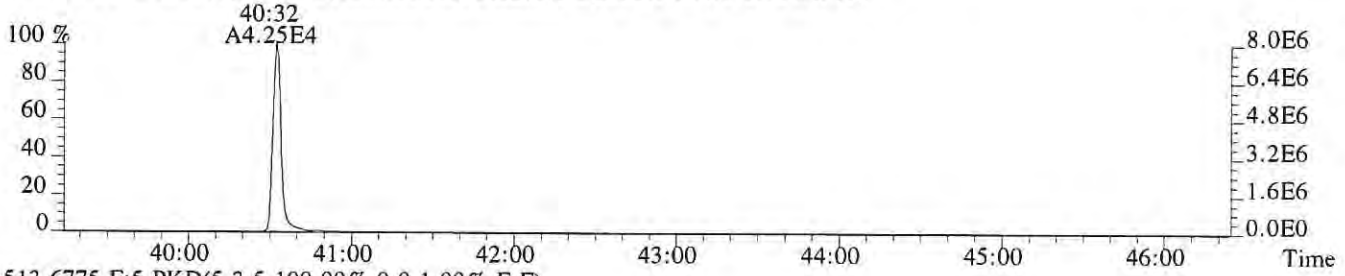
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2176.0,0.40%,F,T)



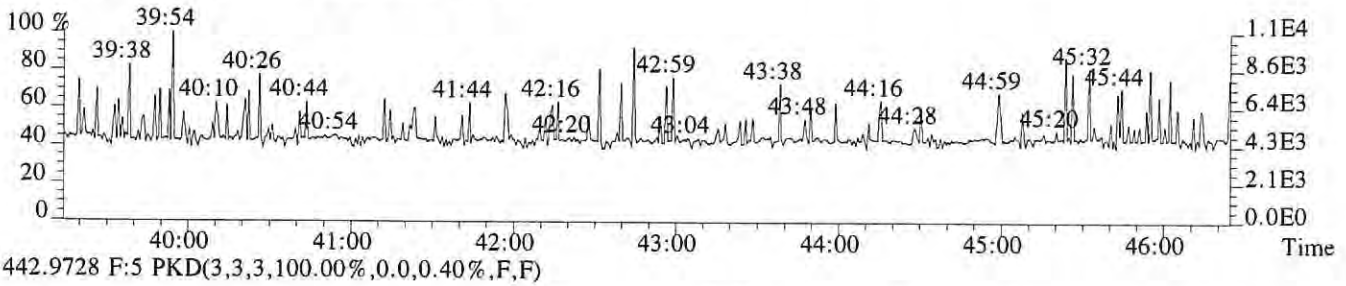
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,980.0,0.40%,F,T)



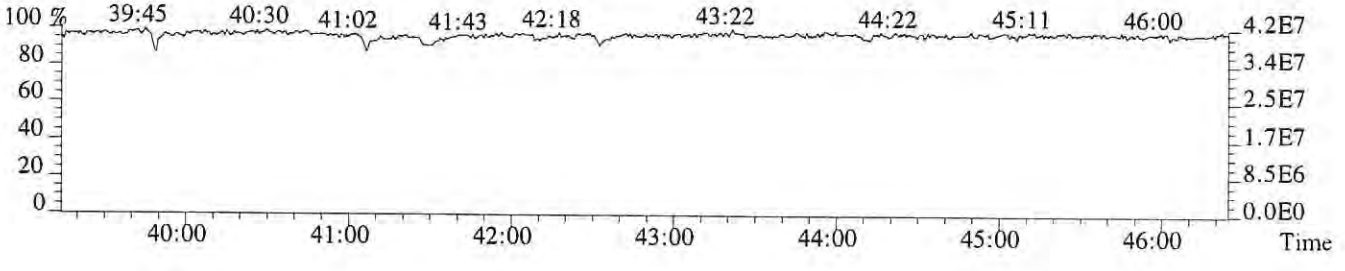
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,384.0,0.40%,F,T)



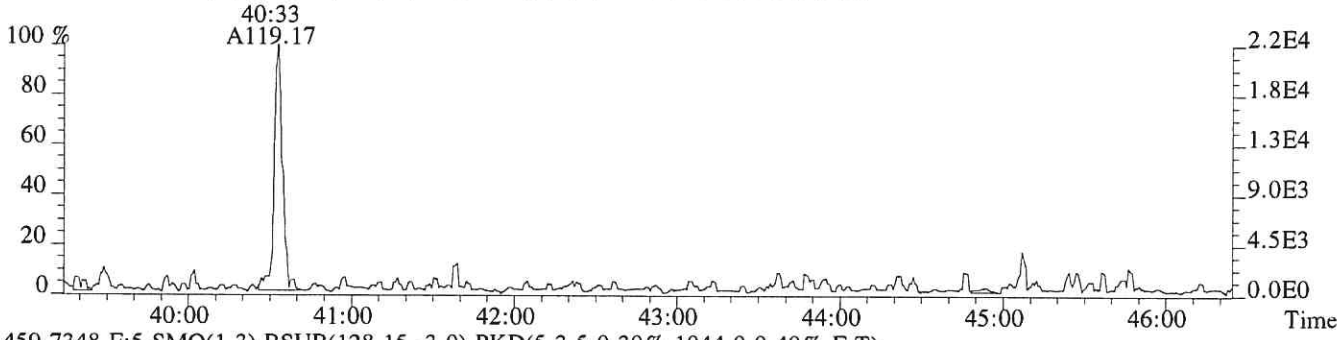
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



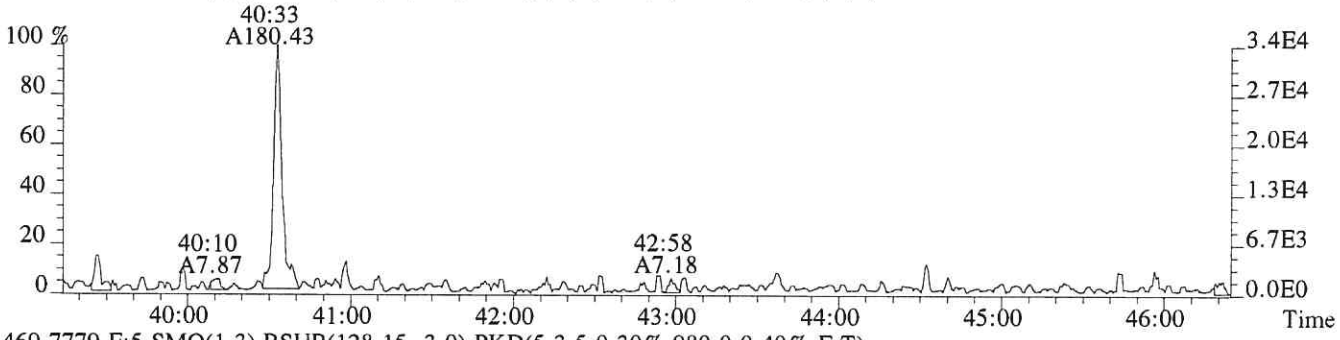
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



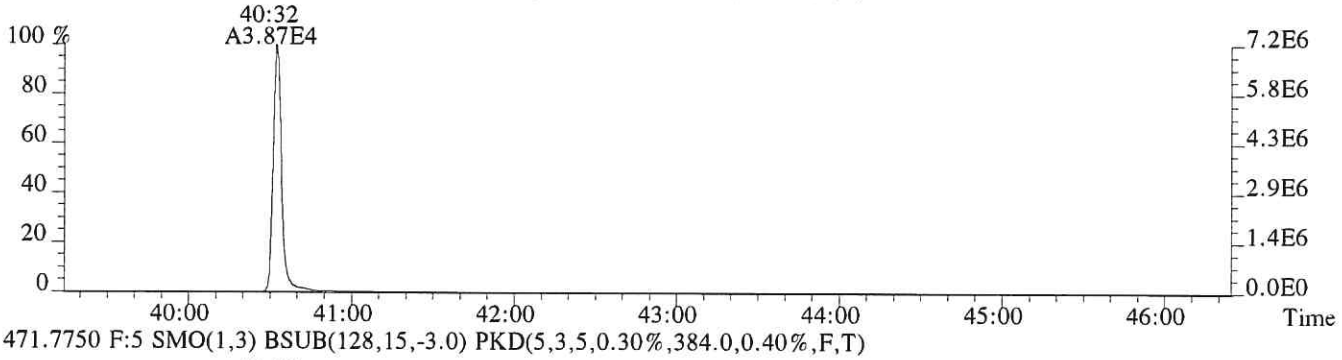
File:P616246 #1-646 Acq:28-DEC-2018 09:16:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-001DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,752.0,0.40%,F,T)



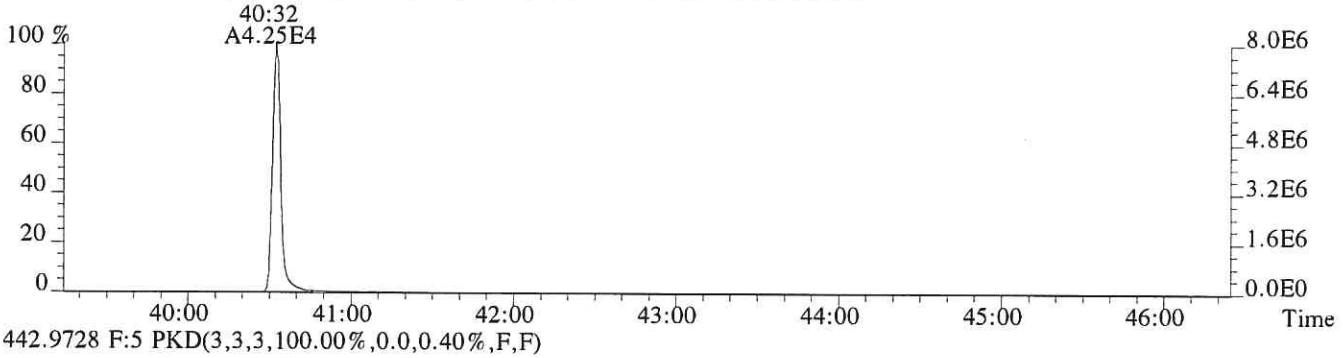
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1044.0,0.40%,F,T)



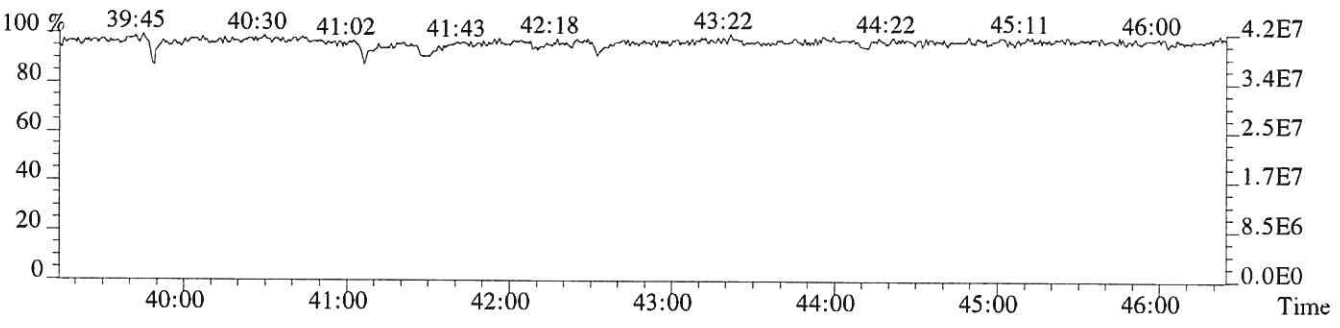
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,980.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,384.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SLO 0590

Run #17 Filename P616177 Samp: 1 Inj: 1 Acquired: 24-DEC-18 21:02:47
Processed: 28-DEC-18 08:20:25 Sample ID: E1801105-002

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:54	9.161e+04	1.152e+05	0.80	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:46	3.258e+03	2.169e+03	1.50	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:47	3.230e+03	1.897e+03	1.70	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:35	4.071e+03	3.277e+03	1.24	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:42	1.023e+03	9.439e+02	1.08	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:14	2.258e+02	1.770e+02	1.28	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	36:02	3.195e+02	2.192e+02	1.46	no	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:16	1.113e+03	1.072e+03	1.04	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:36	3.486e+02	2.888e+02	1.21	no	no	1.463
10	Unk	OCDF	40:49	3.471e+02	3.202e+02	1.08	no	no	1.571
11	Unk	2,3,7,8-TCDD	26:52	1.663e+04	2.029e+04	0.82	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	32:05	4.364e+02	3.006e+02	1.45	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:23	7.931e+01	6.276e+01	1.26	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:28	1.131e+02	1.232e+02	0.92	no	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:42	2.009e+02	1.583e+02	1.27	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:10	3.582e+03	3.292e+03	1.09	yes	no	1.112
17	Unk	OCDD	40:38	5.580e+04	6.183e+04	0.90	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:53	3.412e+04	4.356e+04	0.78	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:45	6.800e+04	4.298e+04	1.58	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:46	6.359e+04	3.952e+04	1.61	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:35	3.153e+04	5.957e+04	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:41	3.551e+04	6.677e+04	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:13	3.182e+04	6.027e+04	0.53	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:59	2.945e+04	5.634e+04	0.52	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:16	2.249e+04	4.880e+04	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:35	2.094e+04	4.617e+04	0.45	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:51	1.788e+04	2.300e+04	0.78	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	32:04	4.875e+04	3.148e+04	1.55	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:22	4.529e+04	3.591e+04	1.26	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:27	4.172e+04	3.394e+04	1.23	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:09	4.442e+04	4.226e+04	1.05	yes	no	0.857
32	IS	13C-OCDD	40:38	3.907e+04	4.266e+04	0.92	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	26:07	4.292e+04	5.487e+04	0.78	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:41	7.183e+04	5.729e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:52	2.481e+04				no	1.086

$$\text{OCDD} = \frac{(5.580e+04 + 6.183e+04) \times 4000 \text{ pg} \times 1}{(3.907e+04 + 4.266e+04) \times 10.363 \text{ g} \times 71.1 / 100 \times 1.157} = 6075.3177 \text{ ng/kg}$$

LG 12/28/18

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SLO 0590

Run #17 Filename P616177 Samp: 1 Inj: 1 Acquired: 24-DEC-18 21:02:47
Processed: 28-DEC-18 08:20:25 LAB. ID: E1801105-002

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
	2,3,7,8-TCDF	1.26e+07	3.98e+03	3.2e+03	1.57e+07	9.90e+03	1.6e+03
2	1,2,3,7,8-PeCDF	5.89e+05	1.97e+03	3.0e+02	3.68e+05	7.29e+03	5.1e+01
3	2,3,4,7,8-PeCDF	5.44e+05	1.97e+03	2.8e+02	3.24e+05	7.29e+03	4.4e+01
4	1,2,3,4,7,8-HxCDF	8.87e+05	4.15e+03	2.1e+02	7.15e+05	1.04e+03	6.9e+02
5	1,2,3,6,7,8-HxCDF	2.12e+05	4.15e+03	5.1e+01	1.78e+05	1.04e+03	1.7e+02
6	2,3,4,6,7,8-HxCDF	4.70e+04	4.15e+03	1.1e+01	3.83e+04	1.04e+03	3.7e+01
7	1,2,3,7,8,9-HxCDF	6.30e+04	4.15e+03	1.5e+01	4.31e+04	1.04e+03	4.2e+01
8	1,2,3,4,6,7,8-HpCDF	2.42e+05	2.84e+03	8.5e+01	2.39e+05	1.09e+03	2.2e+02
9	1,2,3,4,7,8,9-HpCDF	7.90e+04	2.84e+03	2.8e+01	5.80e+04	1.09e+03	5.3e+01
10	OCDF	6.44e+04	9.56e+02	6.7e+01	5.79e+04	4.74e+03	1.2e+01
11	2,3,7,8-TCDD	2.72e+06	7.60e+03	3.6e+02	3.41e+06	3.05e+03	1.1e+03
12	1,2,3,7,8-PeCDD	8.44e+04	2.23e+03	3.8e+01	5.10e+04	1.06e+03	4.8e+01
13	1,2,3,4,7,8-HxCDD	1.78e+04	2.18e+03	8.2e+00	1.37e+04	2.34e+03	5.9e+00
14	1,2,3,6,7,8-HxCDD	2.62e+04	2.18e+03	1.2e+01	3.07e+04	2.34e+03	1.3e+01
15	1,2,3,7,8,9-HxCDD	4.24e+04	2.18e+03	1.9e+01	3.06e+04	2.34e+03	1.3e+01
16	1,2,3,4,6,7,8-HpCDD	7.79e+05	4.51e+03	1.7e+02	6.97e+05	2.32e+03	3.0e+02
17	OCDD	1.01e+07	8.08e+02	1.3e+04	1.12e+07	1.11e+03	1.0e+04
18	13C-2,3,7,8-TCDF	5.08e+06	2.21e+04	2.3e+02	6.50e+06	1.67e+04	3.9e+02
19	13C-1,2,3,7,8-PeCDF	1.21e+07	1.83e+03	6.6e+03	7.60e+06	1.95e+03	3.9e+03
20	13C-2,3,4,7,8-PeCDF	1.19e+07	1.83e+03	6.5e+03	7.30e+06	1.95e+03	3.7e+03
21	13C-1,2,3,4,7,8-HxCDF	6.85e+06	3.90e+03	1.8e+03	1.29e+07	2.59e+03	5.0e+03
22	13C-1,2,3,6,7,8-HxCDF	7.28e+06	3.90e+03	1.9e+03	1.38e+07	2.59e+03	5.3e+03
23	13C-2,3,4,6,7,8-HxCDF	6.81e+06	3.90e+03	1.7e+03	1.29e+07	2.59e+03	5.0e+03
24	13C-1,2,3,7,8,9-HxCDF	6.00e+06	3.90e+03	1.5e+03	1.16e+07	2.59e+03	4.5e+03
25	13C-1,2,3,4,6,7,8-HpCDF	4.97e+06	2.98e+03	1.7e+03	1.08e+07	2.47e+03	4.4e+03
26	13C-1,2,3,4,7,8,9-HpCDF	4.44e+06	2.98e+03	1.5e+03	9.79e+06	2.47e+03	4.0e+03
27	13C-2,3,7,8-TCDD	2.98e+06	1.93e+04	1.5e+02	3.84e+06	1.21e+04	3.2e+02
28	13C-1,2,3,7,8-PeCDD	9.33e+06	3.81e+03	2.5e+03	6.04e+06	3.76e+03	1.6e+03
29	13C-1,2,3,4,7,8-HxCDD	9.93e+06	2.86e+03	3.5e+03	7.76e+06	3.44e+03	2.3e+03
30	13C-1,2,3,6,7,8-HxCDD	8.87e+06	2.86e+03	3.1e+03	7.12e+06	3.44e+03	2.1e+03
31	13C-1,2,3,4,6,7,8-HpCDD	9.58e+06	1.95e+03	4.9e+03	9.12e+06	2.26e+03	4.0e+03
32	13C-OCDD	6.97e+06	2.30e+03	3.0e+03	7.79e+06	9.64e+02	8.1e+03
33	13C-1,2,3,4-TCDD	6.72e+06	1.93e+04	3.5e+02	8.51e+06	1.21e+04	7.0e+02
34	13C-1,2,3,7,8,9-HxCDD	1.50e+07	2.86e+03	5.3e+03	1.19e+07	3.44e+03	3.5e+03
35	37Cl-2,3,7,8-TCDD	4.09e+06	5.19e+03	7.9e+02			

---Sample Calculation---

$$\text{pg/L TCDD} = \frac{2.5 \times (7.596e+03 + 3.052e+03) \times 2000}{(2.983e+06 + 3.838e+06) \times (\quad) \times 1.049} =$$

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SLO 0590

Entry: 36 Totals Name: Total Tetra-Furans

Run: 17 File: P616177 Sample:1 Injection:1 Function:1

Acquired: 24-DEC-18 21:02:47 Processed: 28-DEC-18 08:20:25

Mass: 303.9020 305.8990 Tot Response: 3.79e+05 RRF: 1.081

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
.	22:40	6.67e+02	9.34e+02	0.71	yes	1.60e+03		n	n
!	22:57	4.32e+03	5.76e+03	0.75	yes	1.01e+04		n	n
3	23:20	1.30e+03	1.80e+03	0.72	yes	3.11e+03		n	n
4	23:36	3.70e+03	4.71e+03	0.79	yes	8.41e+03		n	n
5	23:59	6.44e+02	8.31e+02	0.78	yes	1.48e+03		n	n
6	24:21	6.59e+03	8.36e+03	0.79	yes	1.50e+04		n	n
7	24:52	4.25e+04	5.37e+04	0.79	yes	9.62e+04		n	n
8	25:10	2.04e+03	2.89e+03	0.71	yes	4.92e+03		n	n
9	25:54	9.16e+04	1.15e+05	0.80	yes	2.07e+05	2,3,7,8-TCDF	n	n
10	26:19	6.44e+03	8.38e+03	0.77	yes	1.48e+04		n	n
11	28:06	7.05e+03	9.15e+03	0.77	yes	1.62e+04		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SLO 0590

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 17 File: P616177 Sample:1 Injection:1 Function:1

Acquired: 24-DEC-18 21:02:47 Processed: 28-DEC-18 08:20:25

Mass: 319.8970 321.8940 Tot Response: 4.07e+04 RRF: 1.049

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	26:32	2.54e+02	3.05e+02	0.83	yes	5.59e+02		n	n
2	26:52	1.66e+04	2.03e+04	0.82	yes	3.69e+04	2,3,7,8-TCDD	n	n
3	27:14	1.42e+03	1.78e+03	0.80	yes	3.20e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SLO 0590

Entry: 39 Totals Name: Total Penta-Furans2

Run: 17 File: P616177 Sample:1 Injection:1 Function:2

Acquired: 24-DEC-18 21:02:47 Processed: 28-DEC-18 08:20:25

Mass: 339.8600 341.8570 Tot Response: 1.53e+04 RRF: 1.130

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:44	1.44e+03	8.39e+02	1.72	yes	2.28e+03		n	n
2	30:35	4.27e+02	2.93e+02	1.46	yes	7.19e+02		n	n
3	30:46	3.26e+03	2.17e+03	1.50	yes	5.43e+03	1,2,3,7,8-PeCDF	n	n
4	31:02	1.06e+03	6.92e+02	1.52	yes	1.75e+03		n	n
5	31:47	3.23e+03	1.90e+03	1.70	yes	5.13e+03	2,3,4,7,8-PeCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SLO 0590

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 17 File: P616177 Sample:1 Injection:1 Function:2

Acquired: 24-DEC-18 21:02:47 Processed: 28-DEC-18 08:20:25

Mass: 355.8550 357.8520 Tot Response: 1.17e+03 RRF: 0.9288

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:17	1.89e+02	1.42e+02	1.33	yes	3.31e+02		n	n
2	30:58	6.64e+01	3.83e+01	1.74	yes	1.05e+02		n	n
3	32:05	4.36e+02	3.01e+02	1.45	yes	7.37e+02	1,2,3,7,8-PeCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SLO 0590

Entry: 41 Totals Name: Total Hexa-Furans

Run: 17 File: P616177 Sample:1 Injection:1 Function:3

Acquired: 24-DEC-18 21:02:47 Processed: 28-DEC-18 08:20:25

Mass: 373.8210 375.8180 Tot Response: 1.05e+04 RRF: 1.324

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:35	3.07e+02	2.78e+02	1.11	yes	5.86e+02		n	n
2	34:08	1.02e+02	9.16e+01	1.12	yes	1.94e+02		n	n
3	34:35	4.07e+03	3.28e+03	1.24	yes	7.35e+03	1,2,3,4,7,8-HxCDF	n	n
4	34:42	1.02e+03	9.44e+02	1.08	yes	1.97e+03	1,2,3,6,7,8-HxCDF	n	n
5	35:14	2.26e+02	1.77e+02	1.28	yes	4.03e+02	2,3,4,6,7,8-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SLO 0590

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 17 File: P616177 Sample:1 Injection:1 Function:3

Acquired: 24-DEC-18 21:02:47 Processed: 28-DEC-18 08:20:25

Mass: 389.8160 391.8130 Tot Response: 6.00e+03 RRF: 1.092

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:58	2.12e+03	1.59e+03 1.33	yes	3.71e+03		n	n
2	34:46	1.03e+03	7.43e+02 1.38	yes	1.77e+03		n	n
3	35:23	7.93e+01	6.28e+01 1.26	yes	1.42e+02	1,2,3,4,7,8-HxCDD	n	n
4	35:42	2.01e+02	1.58e+02 1.27	yes	3.59e+02	1,2,3,7,8,9-HxCDD	n	n
5	36:07	1.32e+01	1.16e+01 1.13	yes	2.48e+01		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SLO 0590

Entry: 43 Totals Name: Total Hepta-Furans

Run: 17 File: P616177 Sample:1 Injection:1 Function:4

Acquired: 24-DEC-18 21:02:47 Processed: 28-DEC-18 08:20:25

Mass: 407.7820 409.7790 Tot Response: 2.21e+03 RRF: 1.495

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:16	1.11e+03	1.07e+03 1.04	yes	2.18e+03	1,2,3,4,6,7,8-HpCDF	n	n
2	37:24	1.11e+01	1.20e+01 0.92	yes	2.30e+01		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SLO 0590

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 17 File: P616177 Sample:1 Injection:1 Function:4

Acquired: 24-DEC-18 21:02:47 Processed: 28-DEC-18 08:20:25

Mass: 423.7770 425.7740 Tot Response: 2.15e+04 RRF: 1.112

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:31	7.46e+03	7.15e+03	1.04	yes	1.46e+04		n	n
2	38:10	3.58e+03	3.29e+03	1.09	yes	6.87e+03	1,2,3,4,6,7,8-HpCDD	n	n

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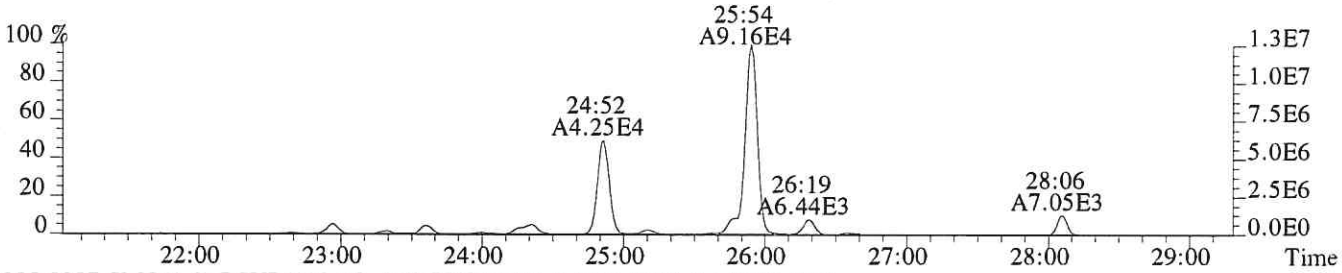
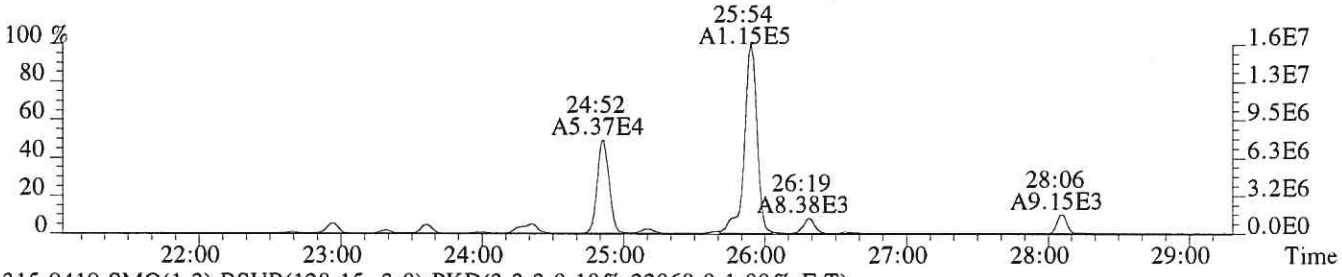
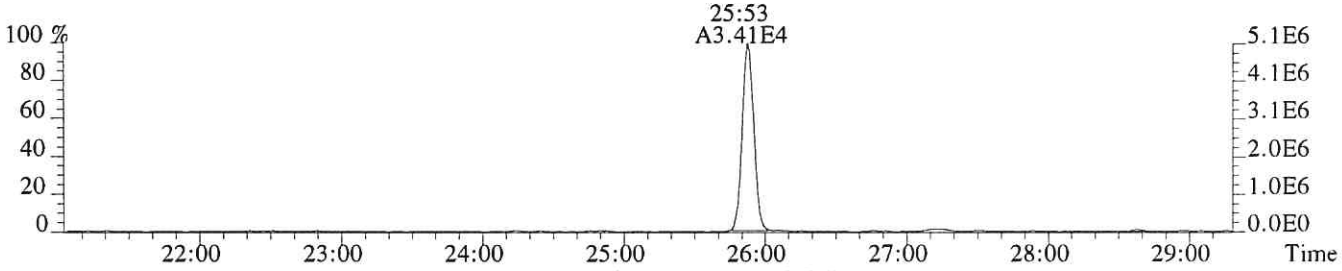
File:P616177 #1-587 Acq:24-DEC-2018 21:02:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3980.0,1.00%,F,T)



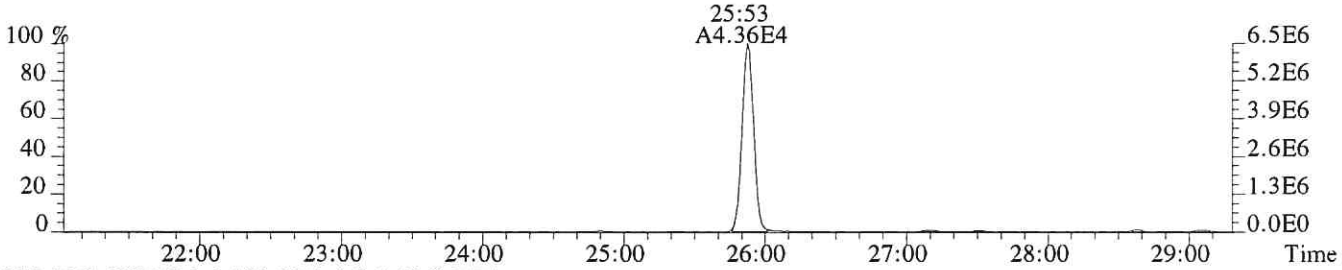
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9900.0,1.00%,F,T)



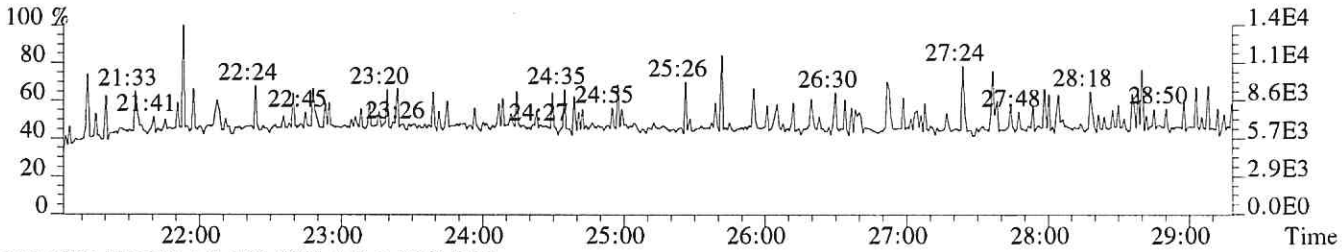
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,22068.0,1.00%,F,T)



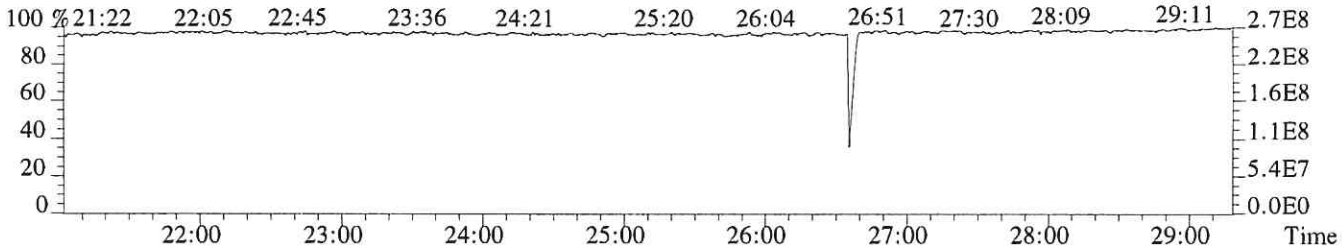
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,16668.0,1.00%,F,T)



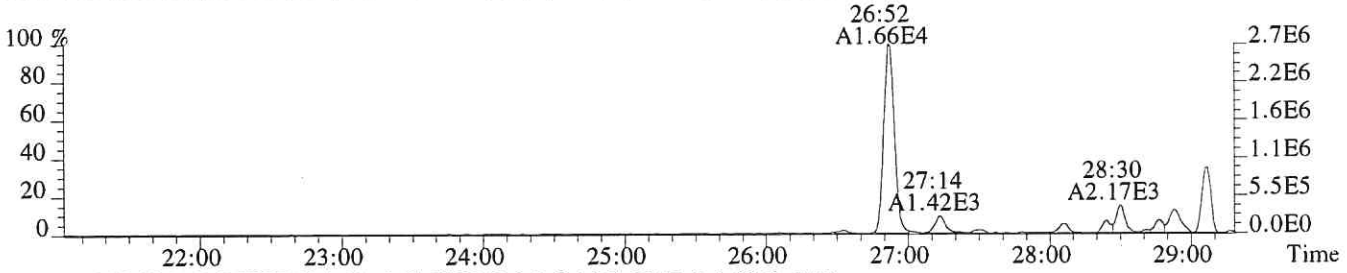
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



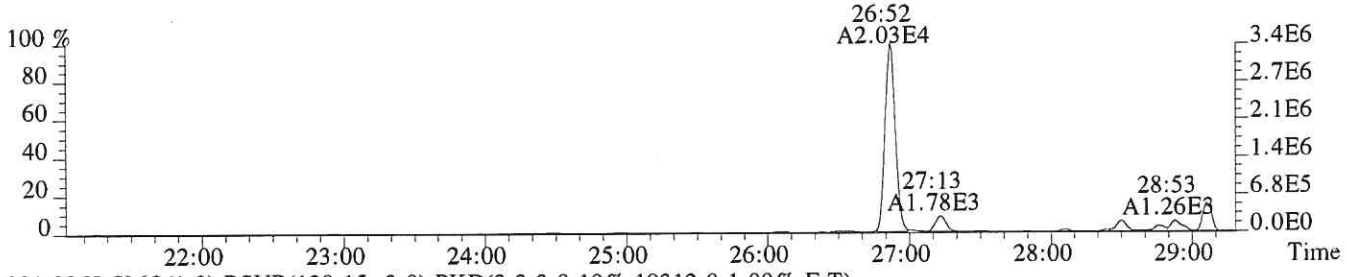
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



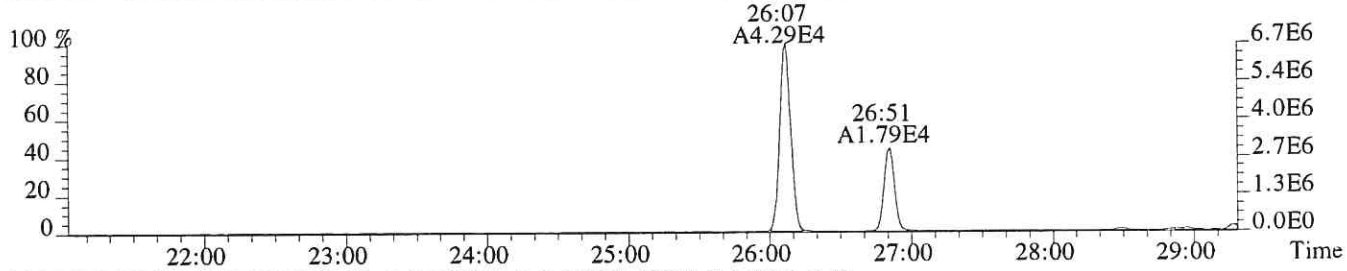
File:P616177 #1-587 Acq:24-DEC-2018 21:02:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7596.0,1.00%,F,T)



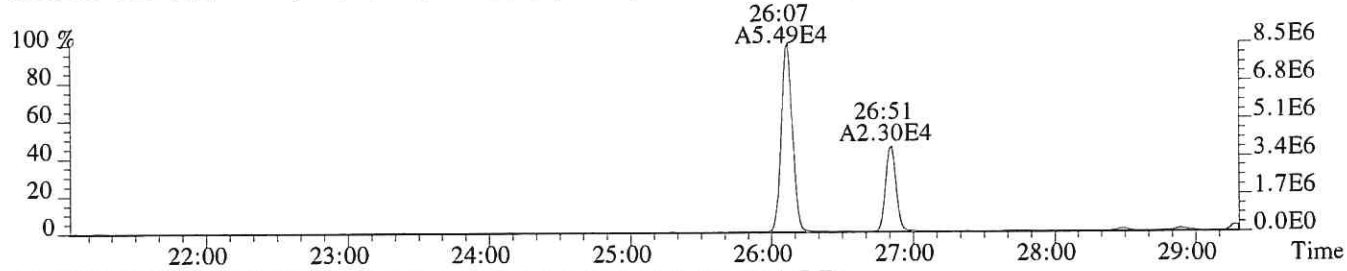
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3052.0,1.00%,F,T)



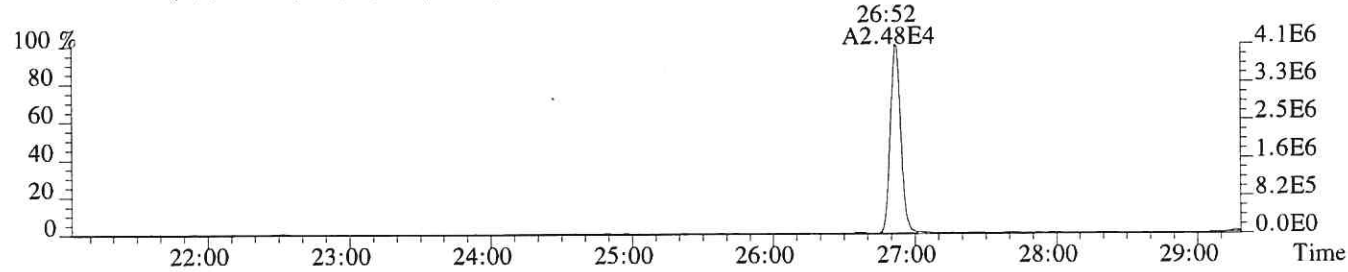
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,19312.0,1.00%,F,T)



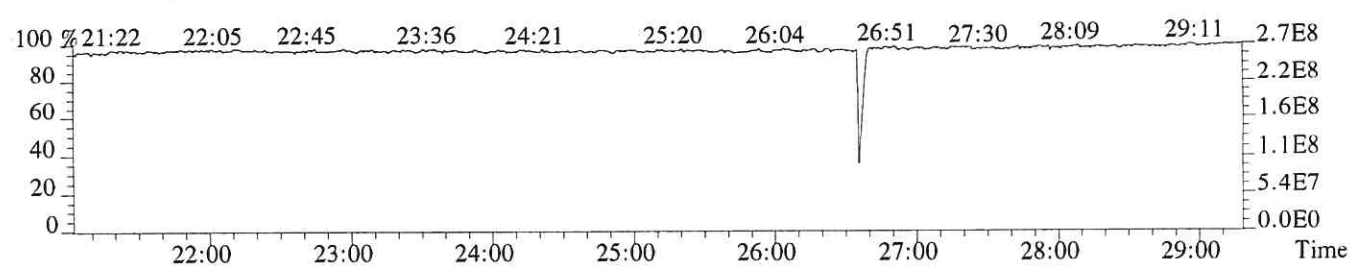
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12072.0,1.00%,F,T)



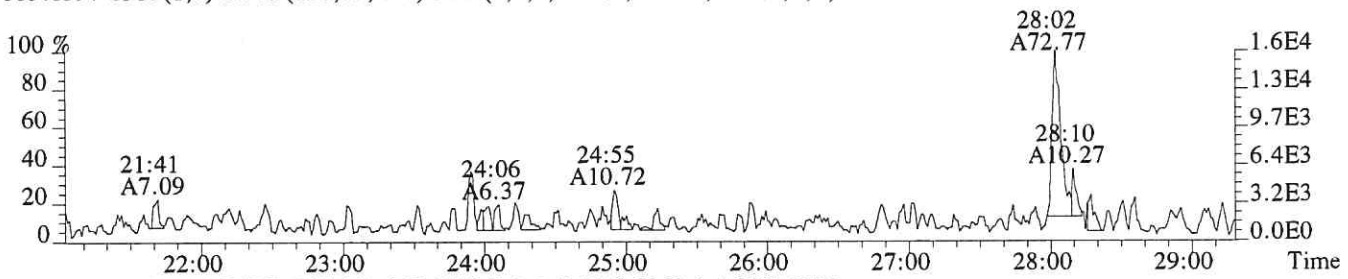
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5192.0,1.00%,F,T)



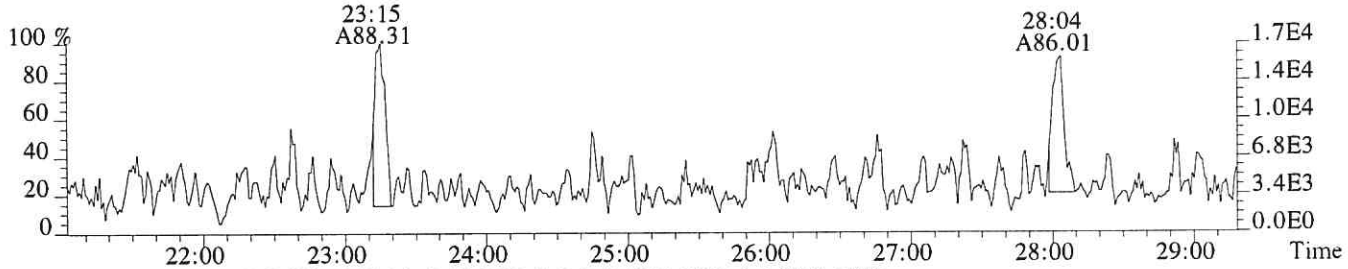
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



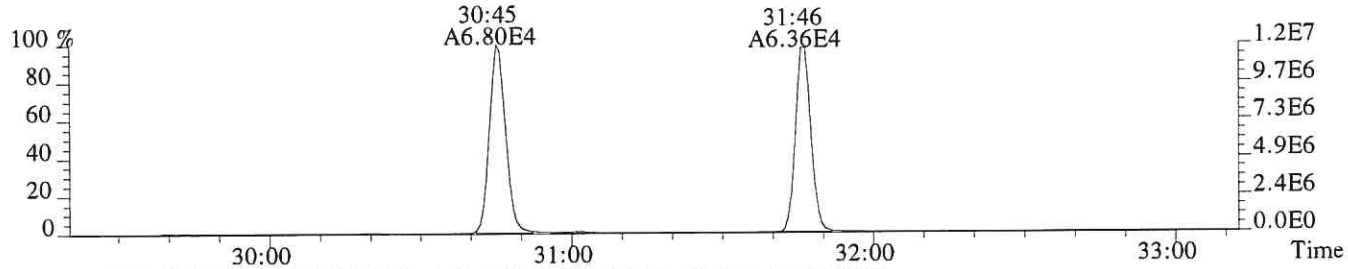
File:P616177 #1-587 Acq:24-DEC-2018 21:02:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1736.0,1.00%,F,T)



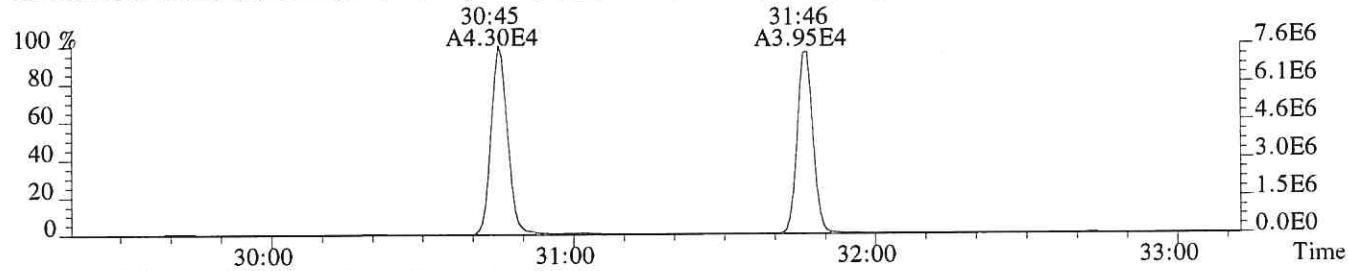
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5068.0,1.00%,F,T)



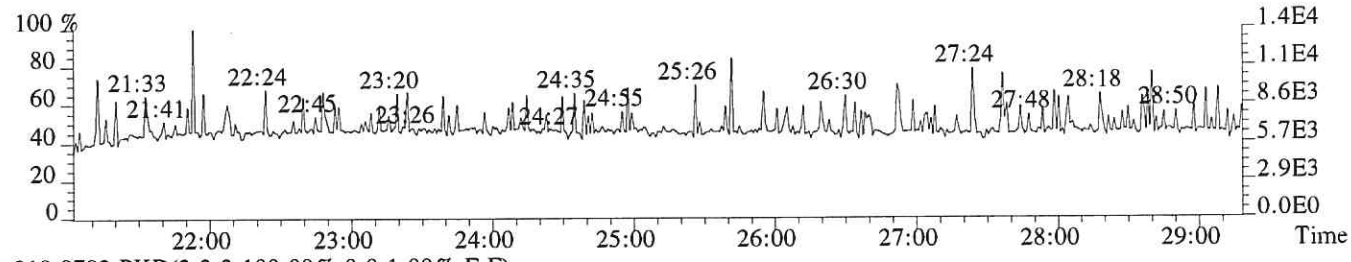
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1832.0,1.00%,F,T)



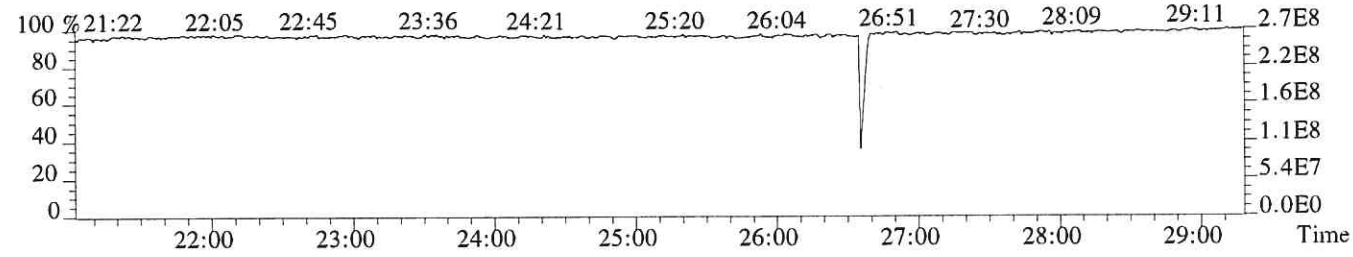
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1948.0,1.00%,F,T)



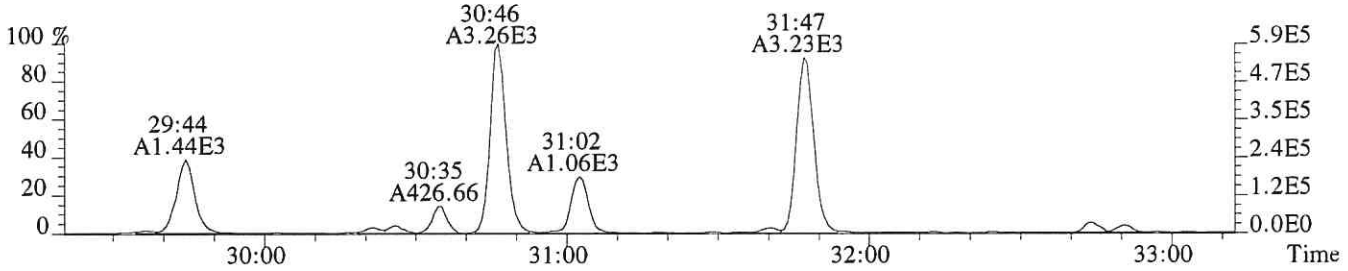
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



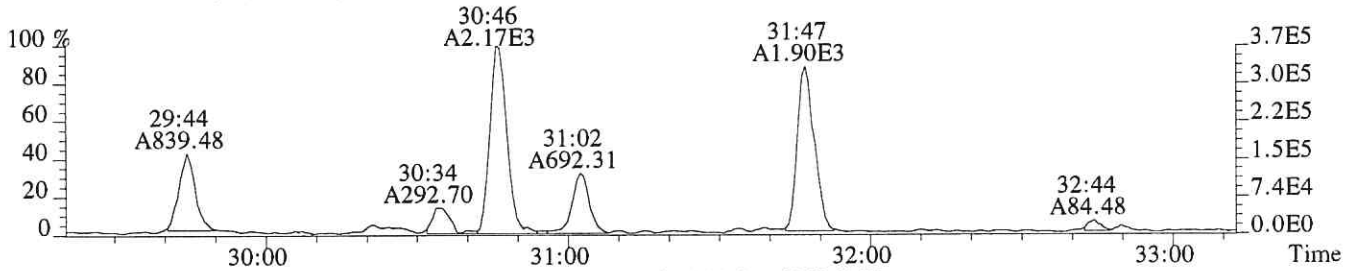
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



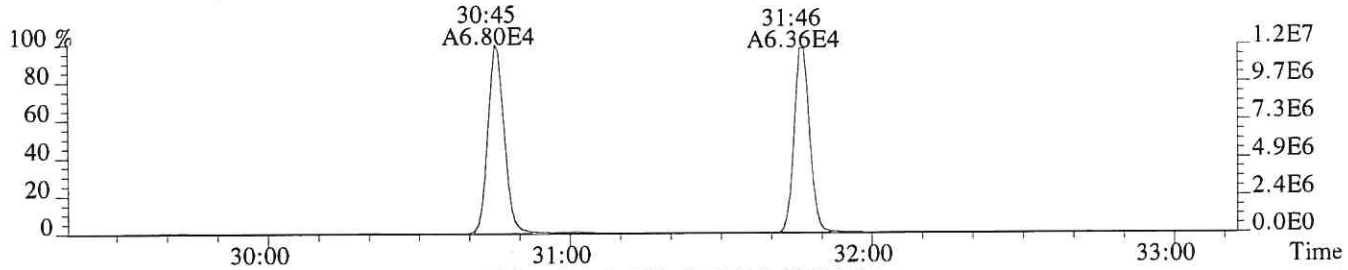
File:P616177 #1-349 Acq:24-DEC-2018 21:02:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1972.0,1.00%,F,T)



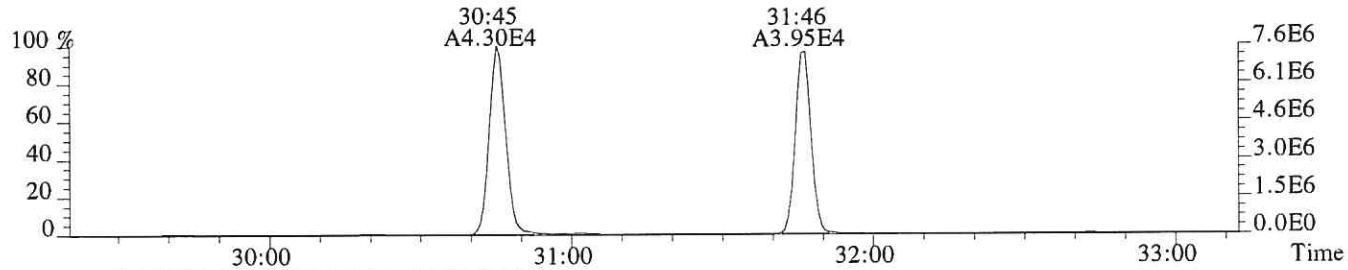
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7292.0,1.00%,F,T)



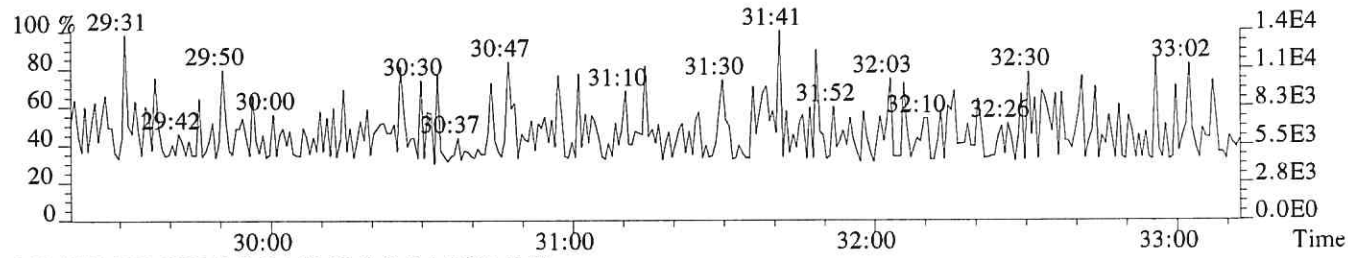
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1832.0,1.00%,F,T)



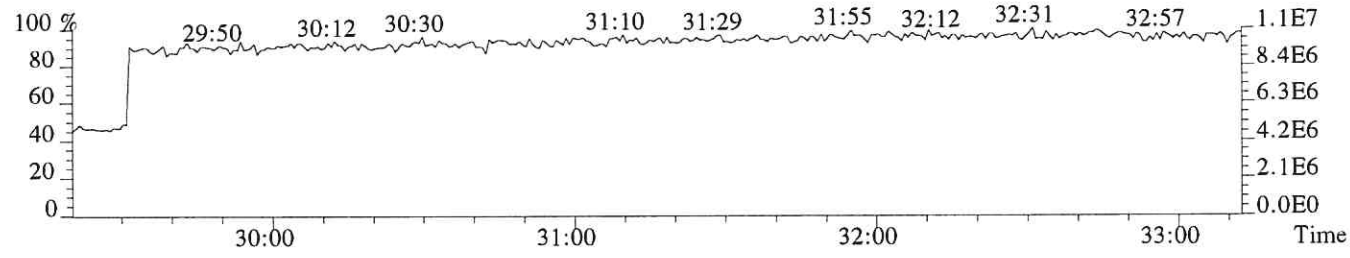
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1948.0,1.00%,F,T)



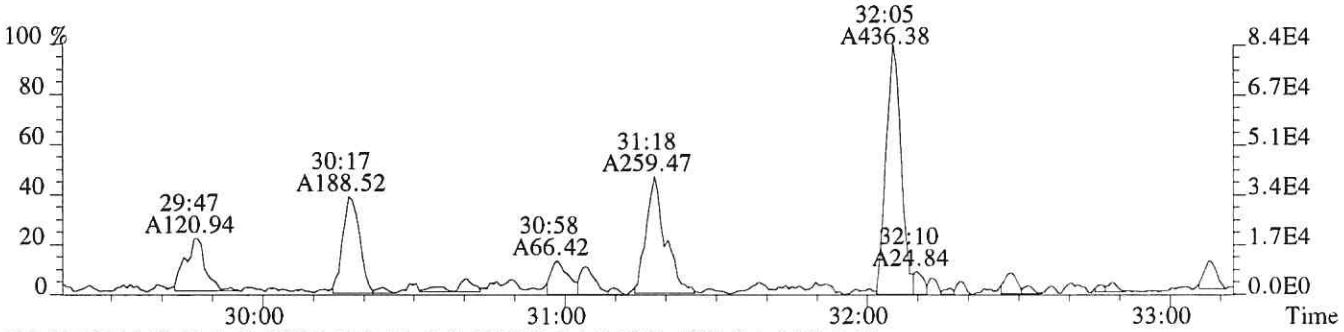
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



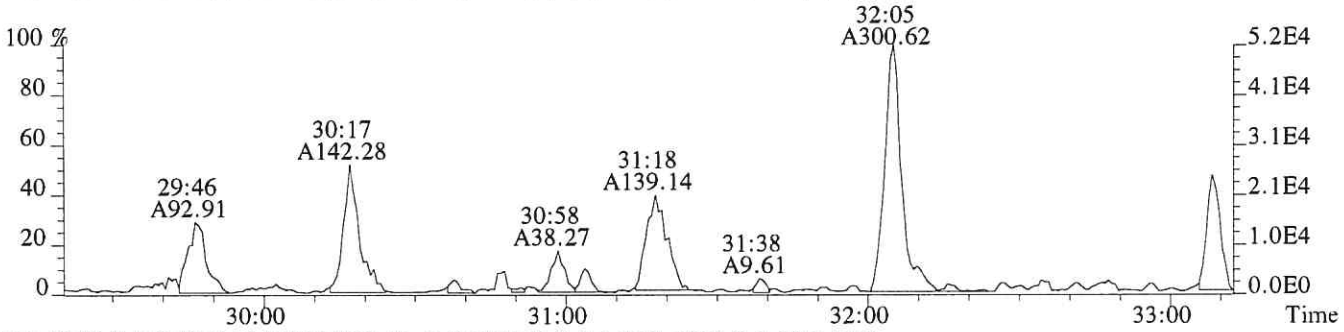
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



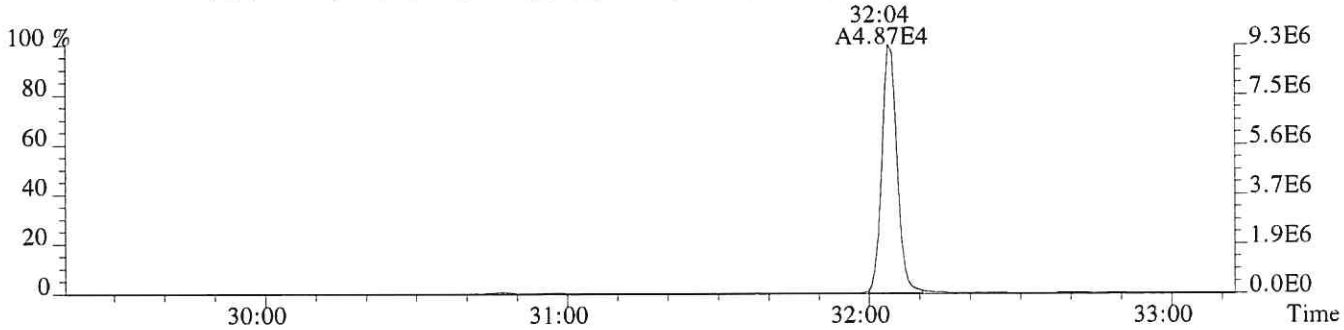
File:P616177 #1-349 Acq:24-DEC-2018 21:02:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2232.0,1.00%,F,T)



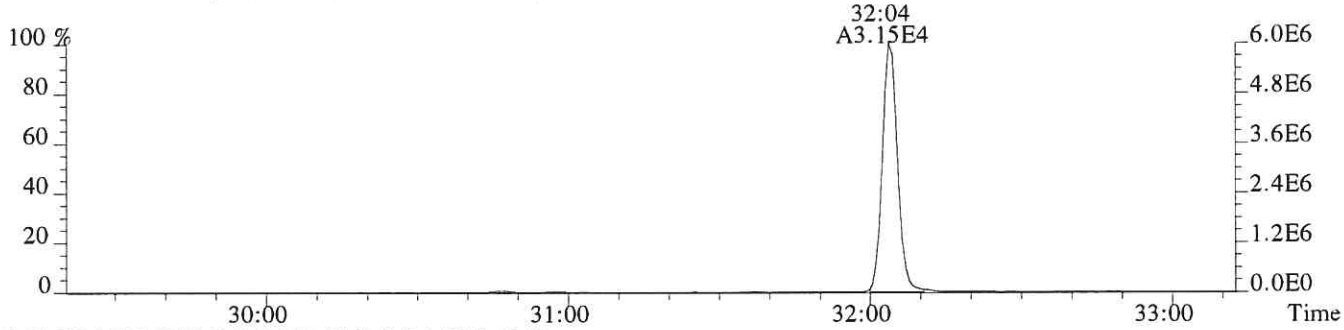
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1064.0,1.00%,F,T)



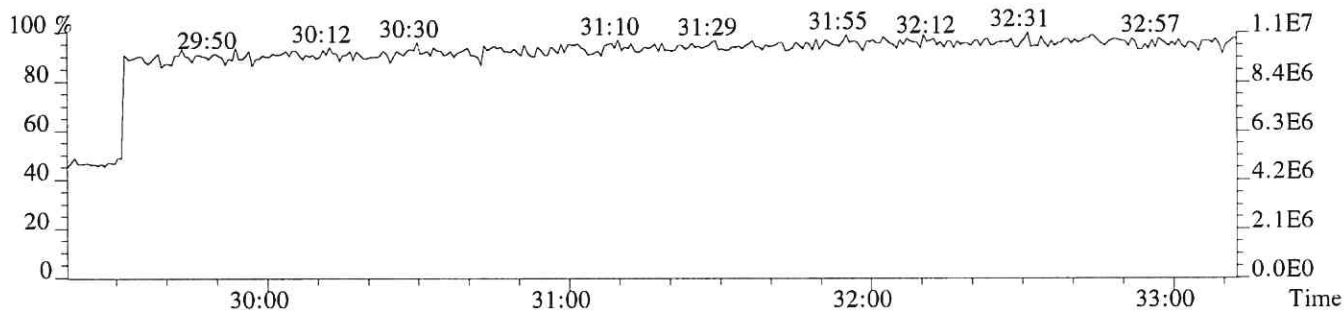
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3808.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3764.0,1.00%,F,T)

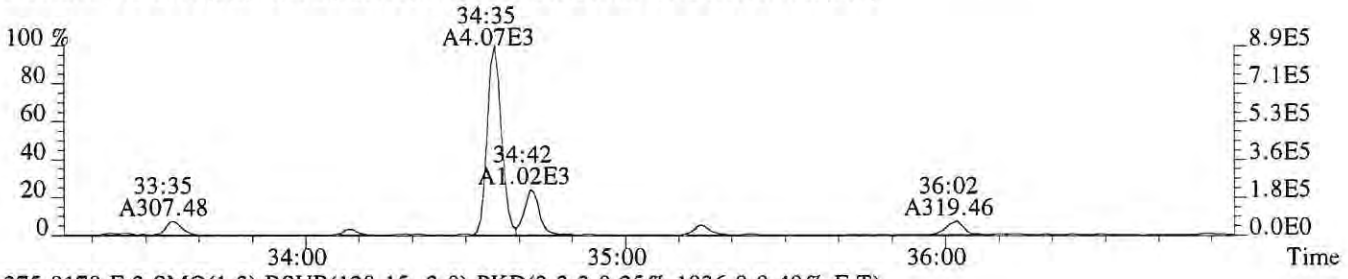


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

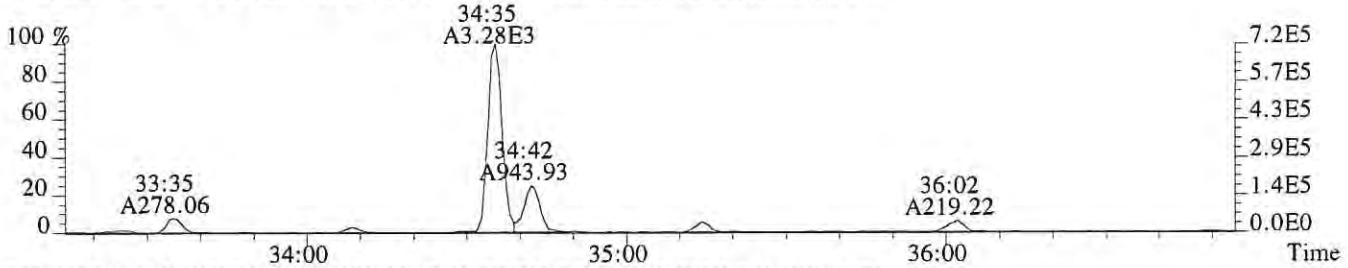


File:P616177 #1-330 Acq:24-DEC-2018 21:02:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002

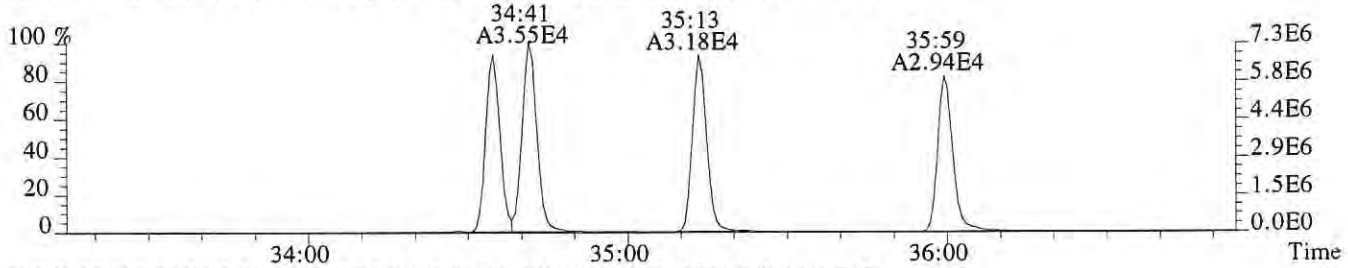
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4148.0,0.40%,F,T)



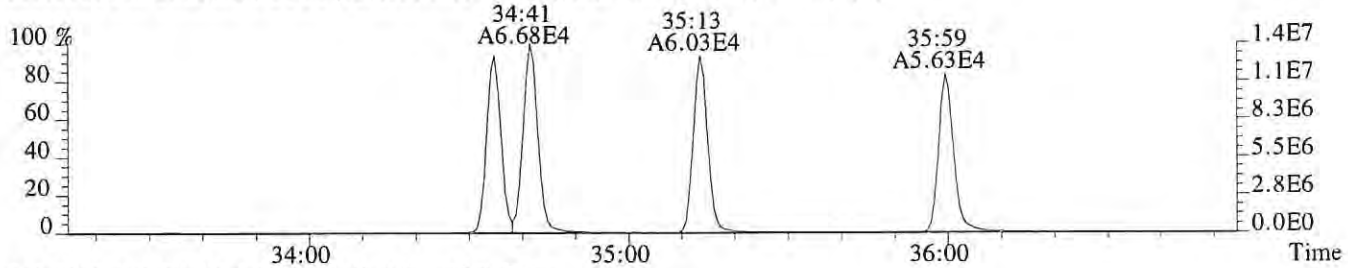
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1036.0,0.40%,F,T)



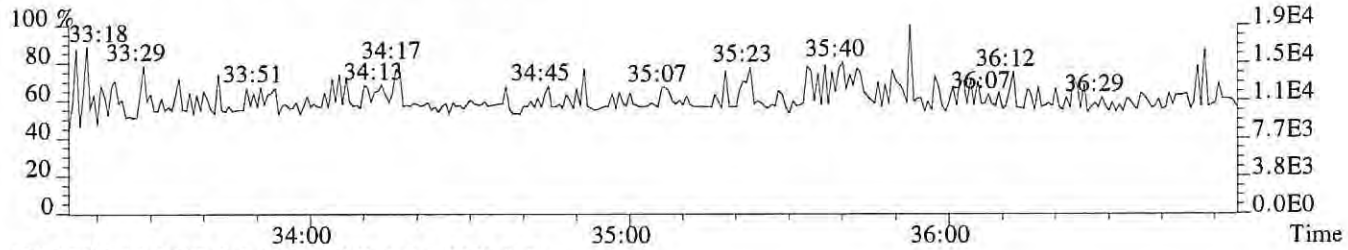
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3900.0,0.40%,F,T)



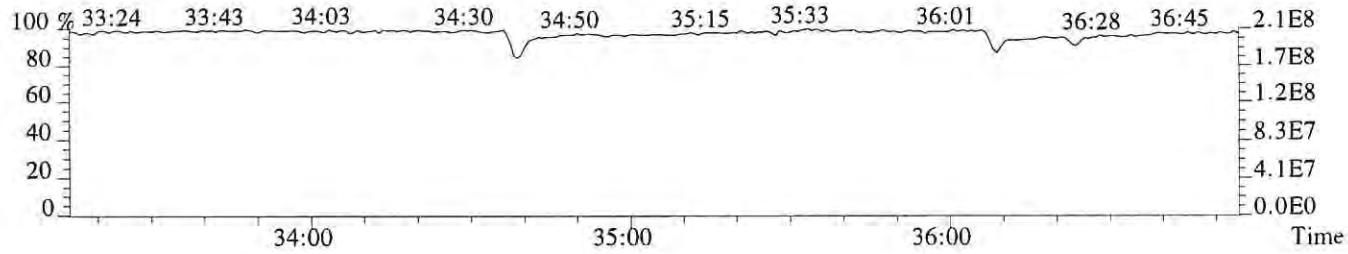
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2592.0,0.40%,F,T)



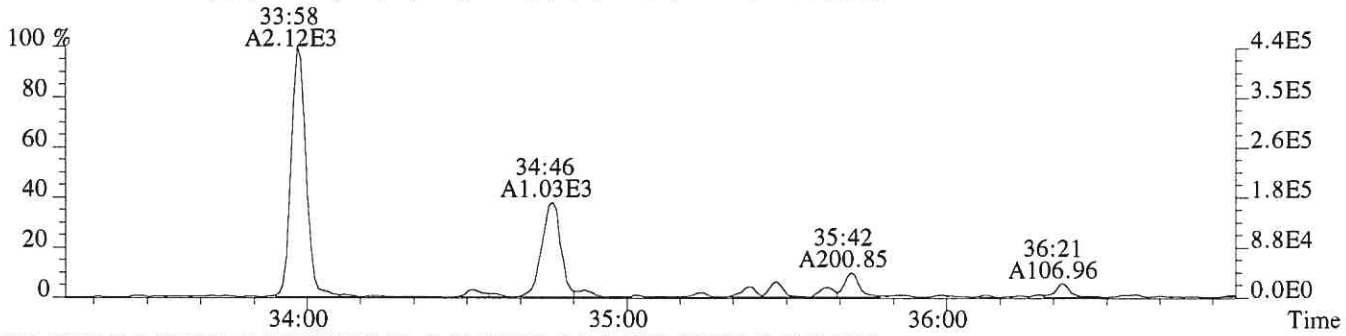
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



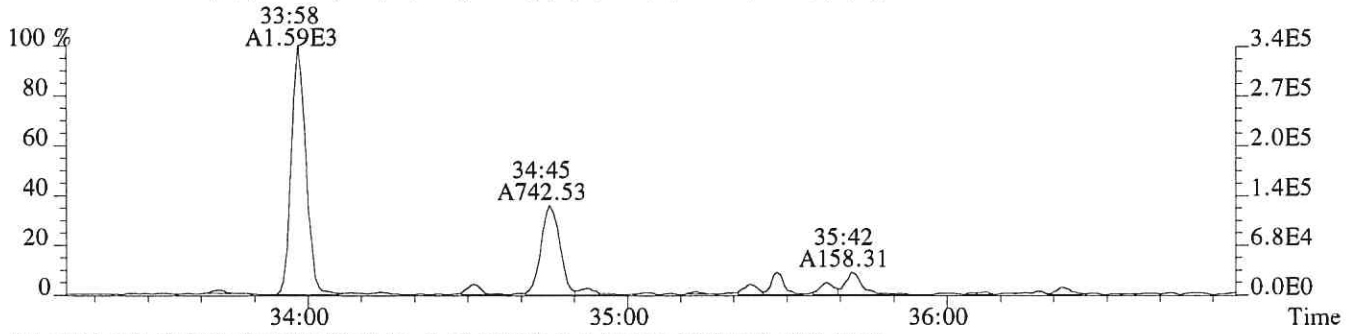
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



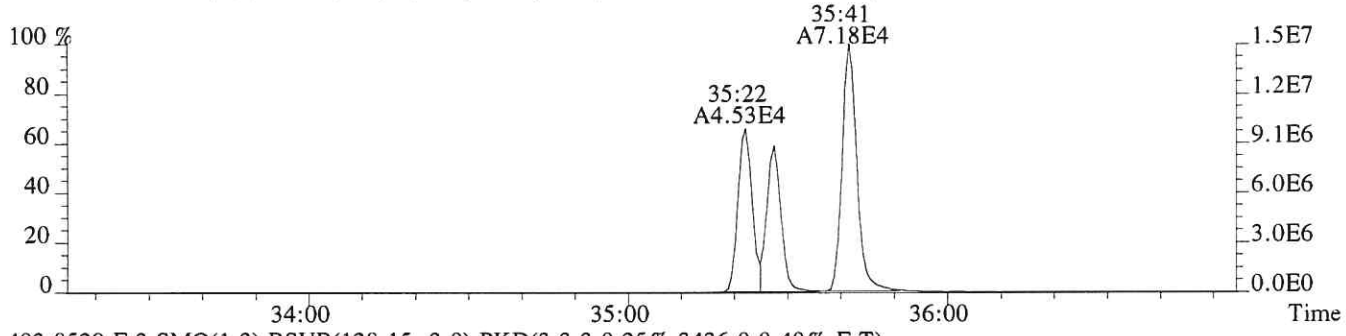
File:P616177 #1-330 Acq:24-DEC-2018 21:02:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2176.0,0.40%,F,T)



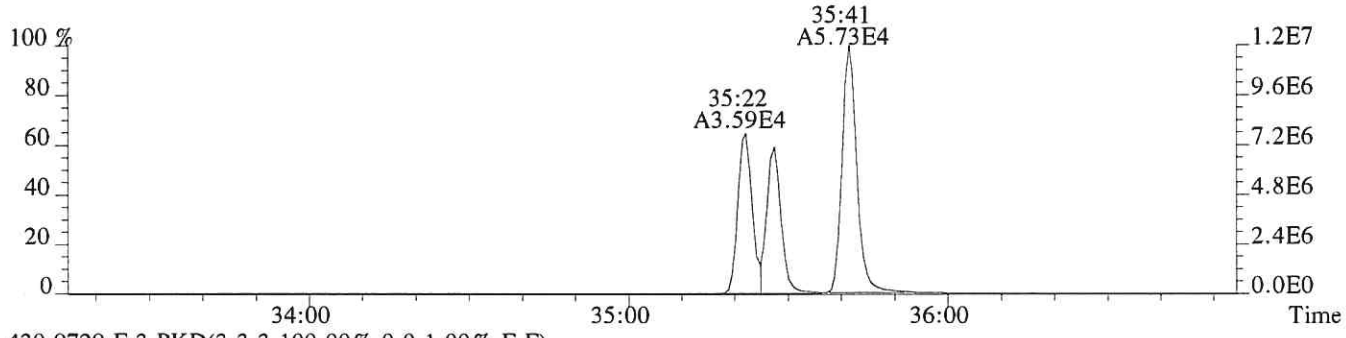
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2336.0,0.40%,F,T)



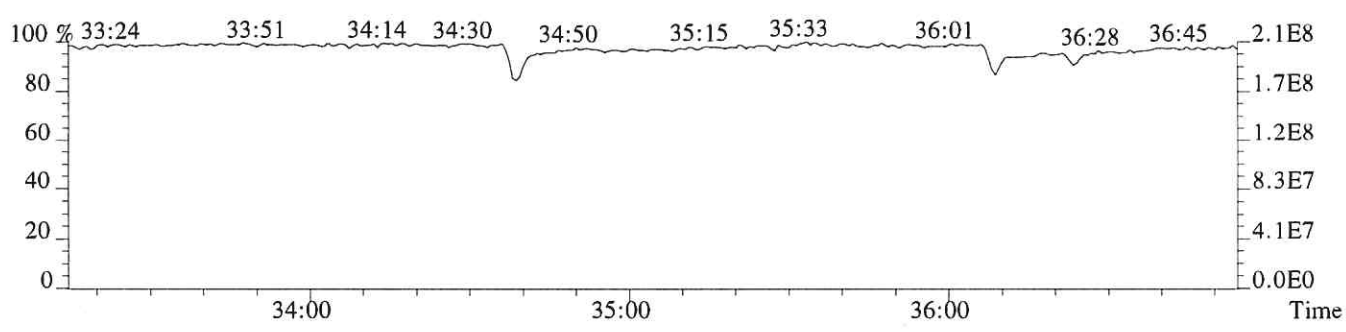
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2860.0,0.40%,F,T)



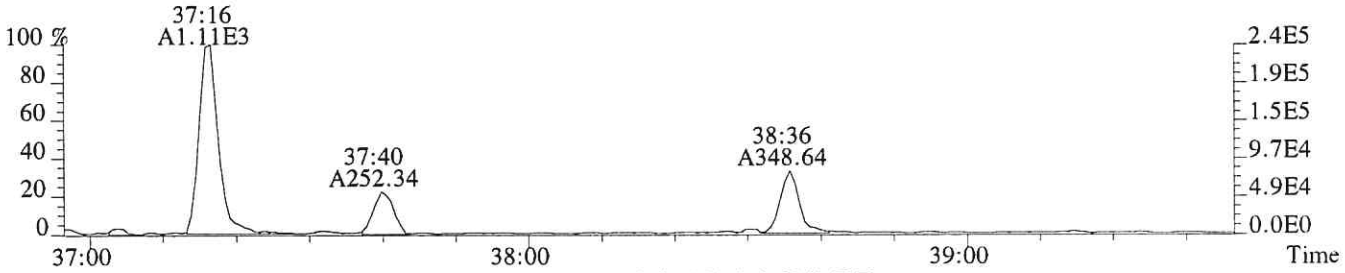
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3436.0,0.40%,F,T)



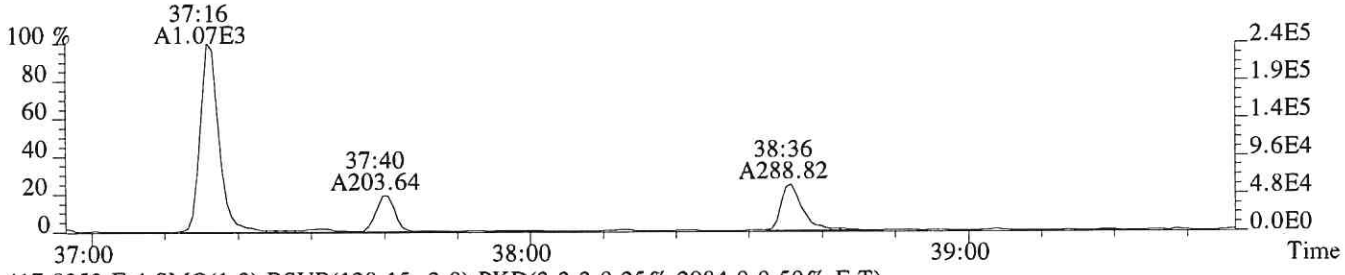
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



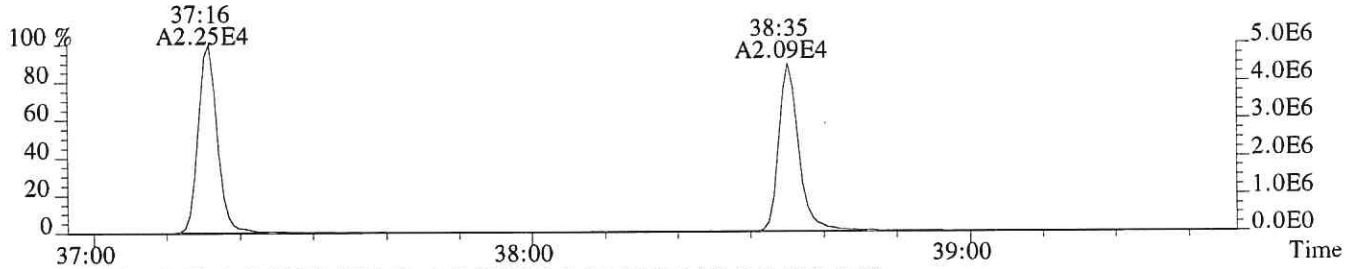
File:P616177 #1-241 Acq:24-DEC-2018 21:02:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2840.0,0.50%,F,T)



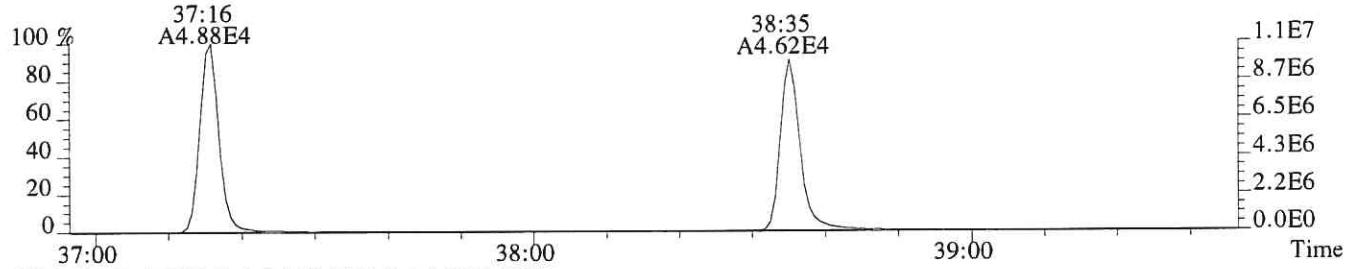
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1092.0,0.50%,F,T)



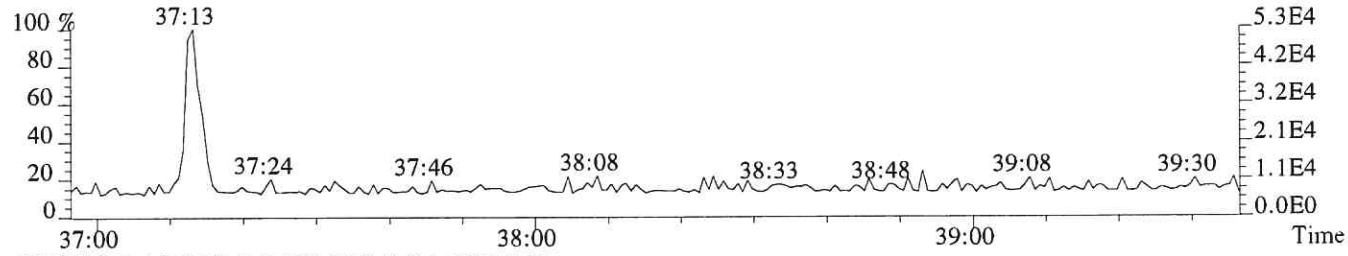
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2984.0,0.50%,F,T)



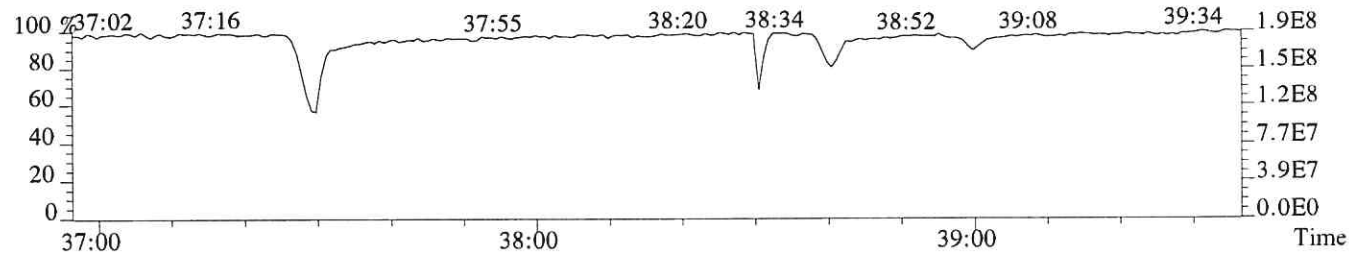
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2472.0,0.50%,F,T)



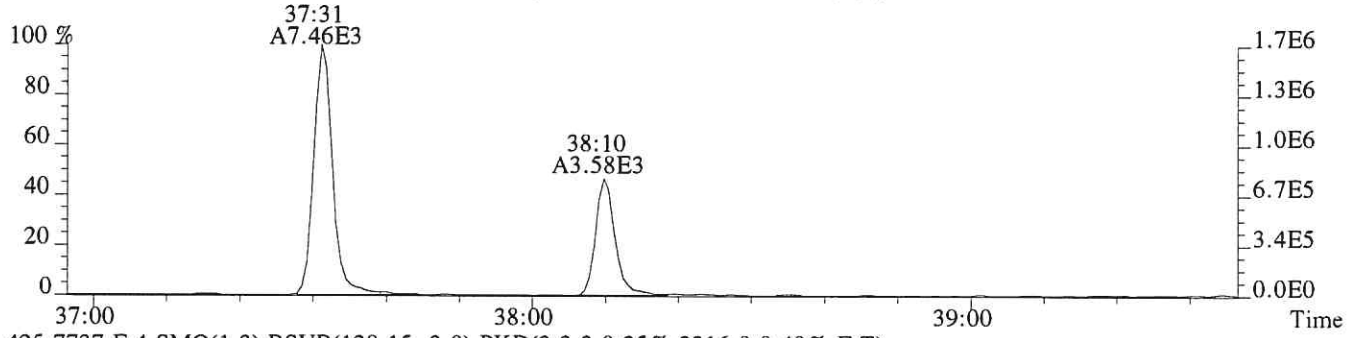
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



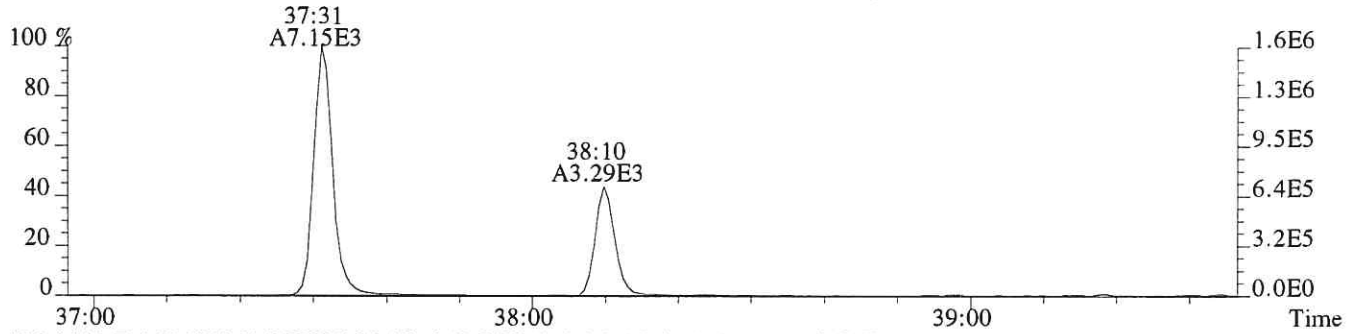
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



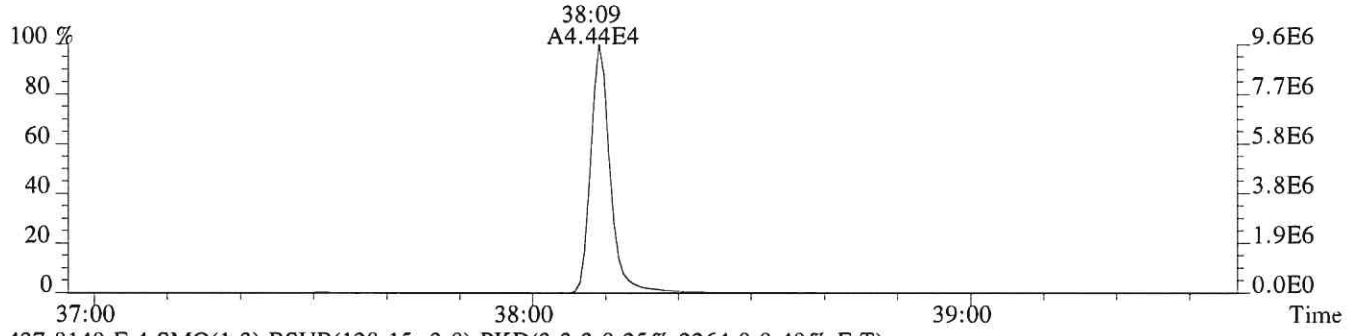
File:P616177 #1-241 Acq:24-DEC-2018 21:02:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4508.0,0.40%,F,T)



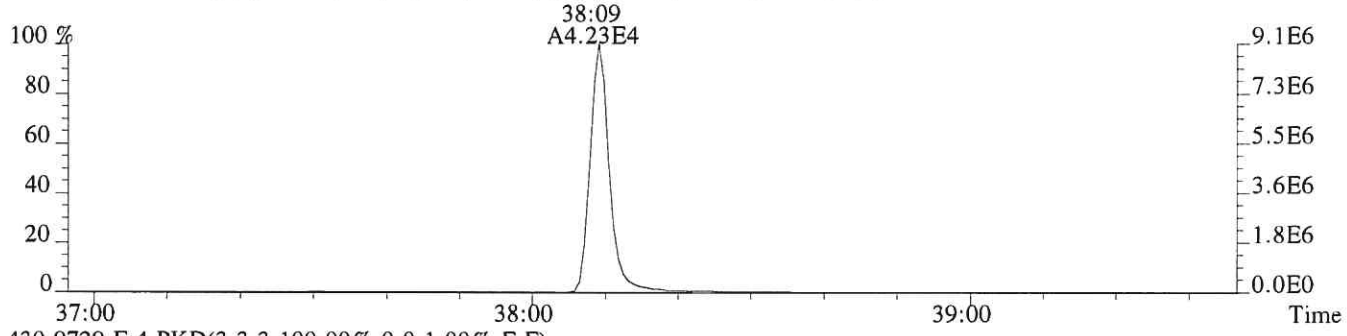
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2316.0,0.40%,F,T)



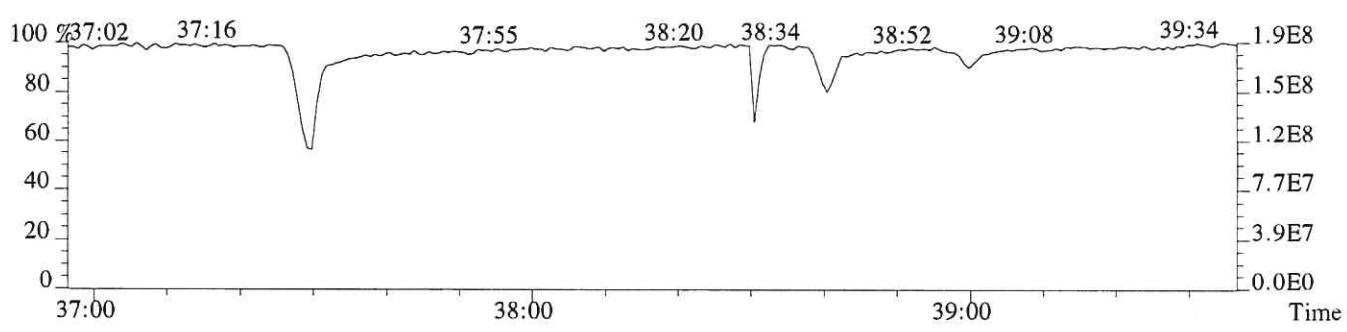
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1948.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2264.0,0.40%,F,T)

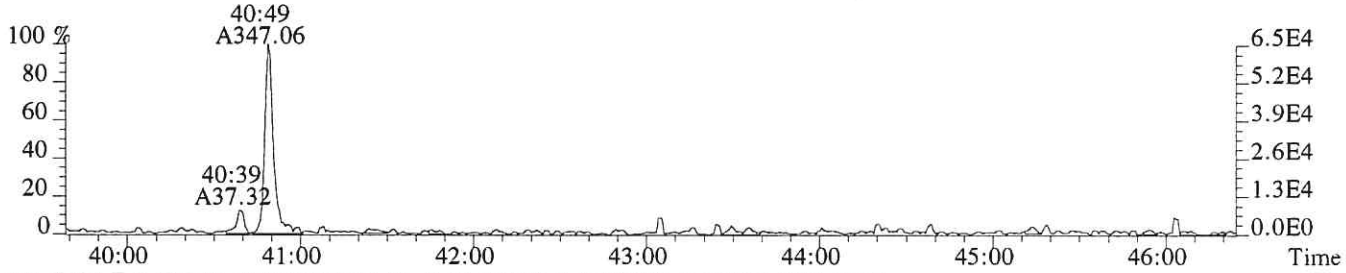


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

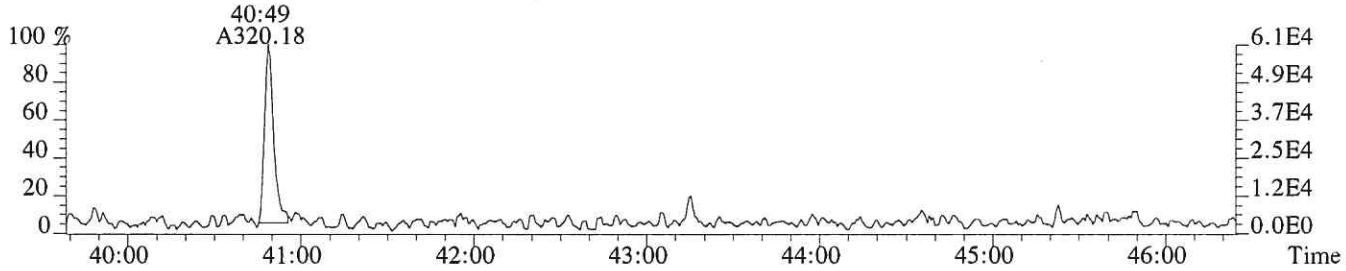


File:P616177 #1-609 Acq:24-DEC-2018 21:02:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002

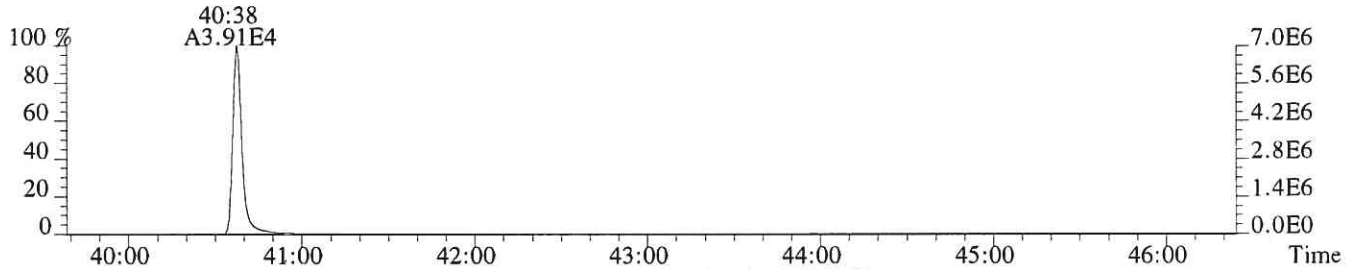
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,956.0,0.40%,F,T)



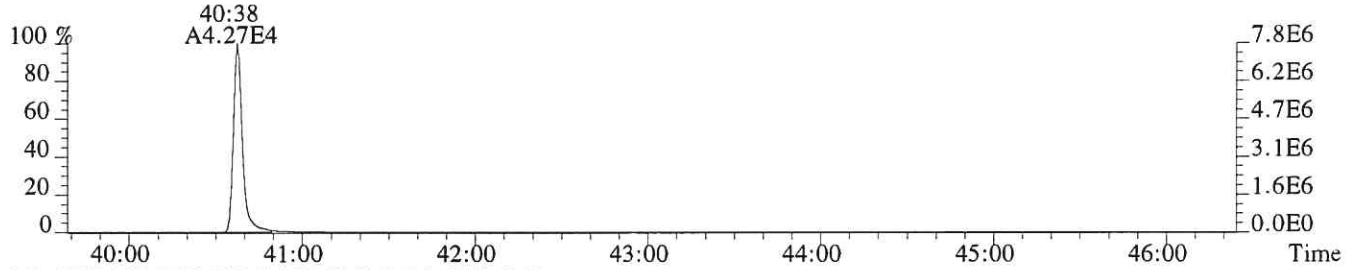
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,4744.0,0.40%,F,T)



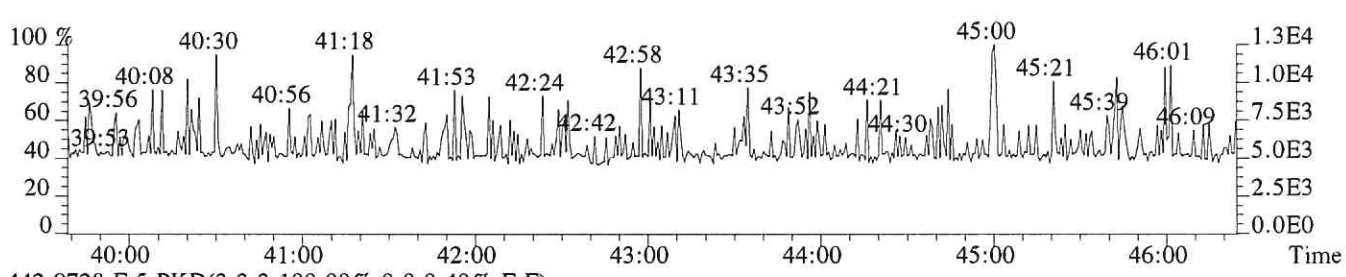
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2304.0,0.40%,F,T)



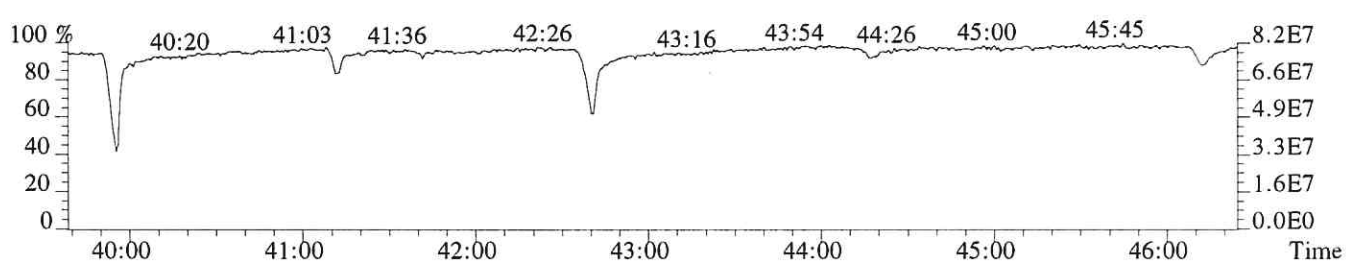
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,964.0,0.40%,F,T)



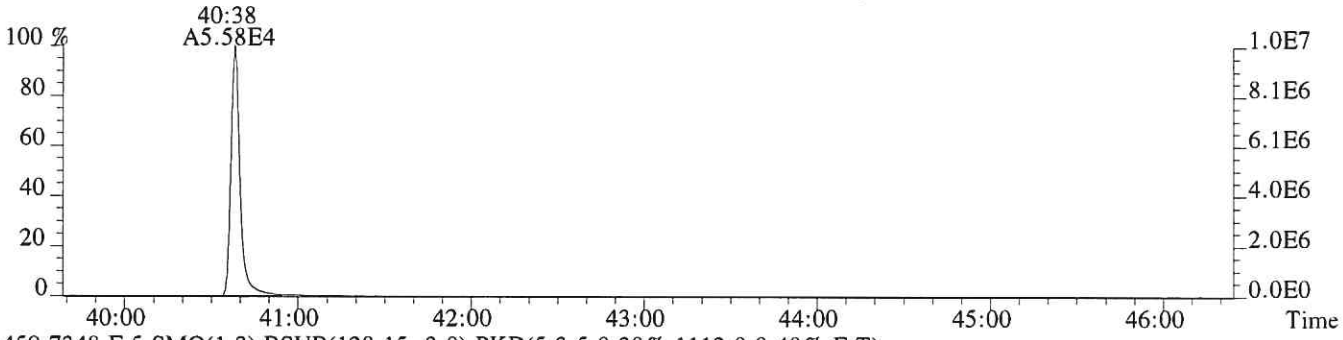
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



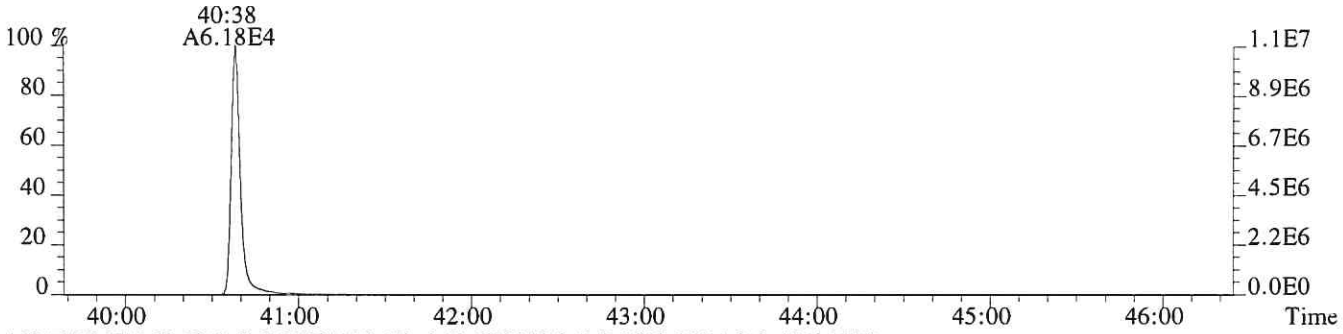
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



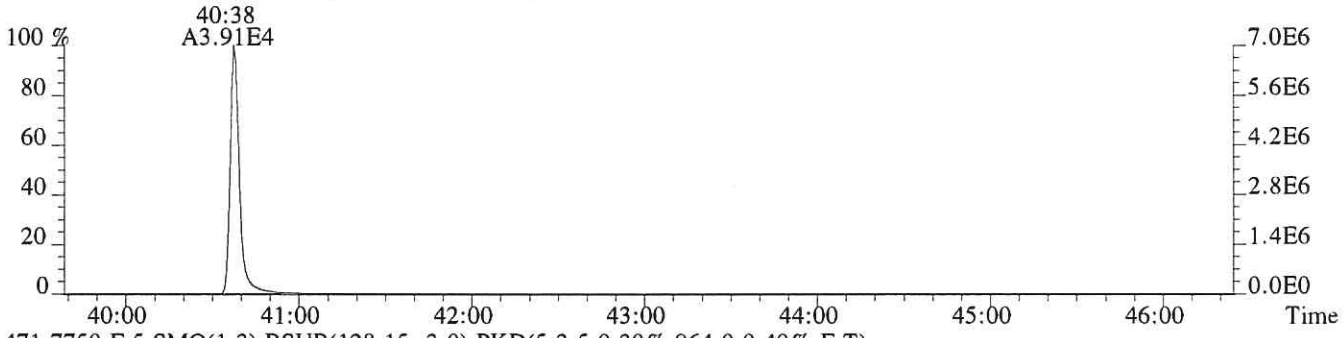
File:P616177 #1-609 Acq:24-DEC-2018 21:02:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,808.0,0.40%,F,T)



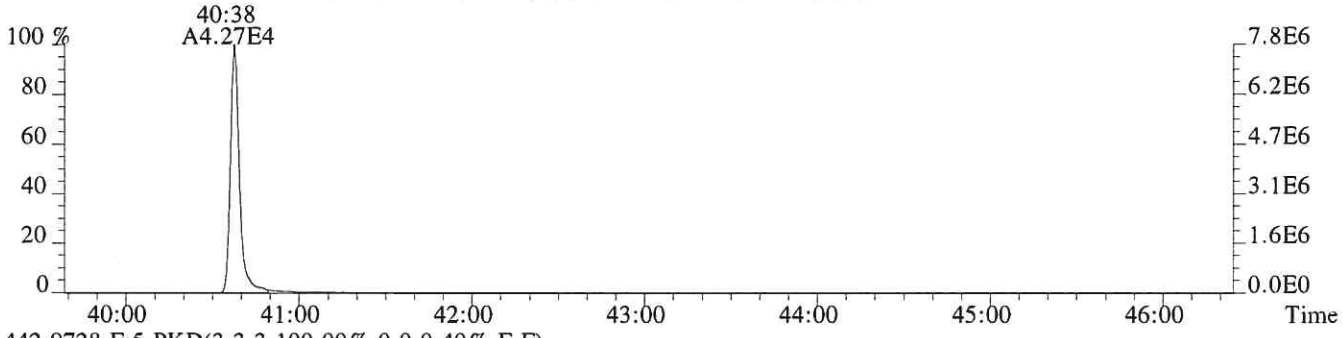
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1112.0,0.40%,F,T)



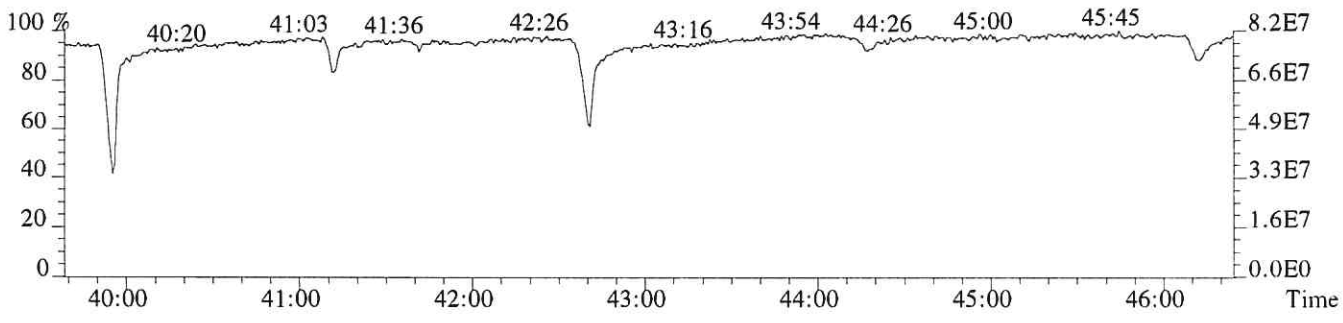
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2304.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,964.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SLO 0591

Run #11 Filename P616247 Samp: 1 Inj: 1 Acquired: 28-DEC-18 10:05:19
Processed: 29-DEC-18 08:30:27 Sample ID: E1801105-002DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:42	1.944e+04	2.313e+04	0.84	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:39	6.058e+02	3.425e+02	1.77	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:41	5.847e+02	4.166e+02	1.40	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:30	7.203e+02	5.820e+02	1.24	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:36	1.683e+02	1.863e+02	0.90	no	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:10	3.585e+01	5.111e+01	0.70	no	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:57	5.615e+01	3.520e+01	1.60	no	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:11	1.753e+02	1.755e+02	1.00	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:31	5.107e+01	4.282e+01	1.19	yes	no	1.463
10	Unk	OCDF	40:44	8.687e+01	9.835e+01	0.88	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:41	3.291e+03	4.014e+03	0.82	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:59	8.249e+01	5.161e+01	1.60	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	yes	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:22	3.241e+01	2.366e+01	1.37	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:37	2.646e+01	3.029e+01	0.87	no	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:05	6.400e+02	6.335e+02	1.01	yes	no	1.112
17	Unk	OCDD	40:33	1.085e+04	1.138e+04	0.95	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:41	3.550e+04	4.354e+04	0.82	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:38	5.631e+04	3.492e+04	1.61	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:39	5.186e+04	3.302e+04	1.57	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:29	2.376e+04	4.554e+04	0.52	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:36	2.819e+04	5.243e+04	0.54	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:08	2.604e+04	4.849e+04	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:54	2.351e+04	4.469e+04	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:11	1.913e+04	4.225e+04	0.45	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:31	1.737e+04	3.893e+04	0.45	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:40	1.708e+04	2.206e+04	0.77	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:57	3.873e+04	2.483e+04	1.56	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:16	3.402e+04	2.525e+04	1.35	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:22	3.189e+04	2.617e+04	1.22	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:05	3.669e+04	3.474e+04	1.06	yes	no	0.857
32	IS	13C-OCDD	40:32	4.100e+04	4.484e+04	0.91	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:55	2.993e+04	3.731e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:36	4.185e+04	3.376e+04	1.24	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:41	5.038e+03				no	1.086

$$\text{OCDD} = \frac{(1.085e+04 + 1.138e+04) \times 4000 \text{ pg} \times 5}{(4.100e+04 + 4.484e+04) \times 10.363 \text{ g} \times 71.1 / 100 \times 1.157} = 1265.7562 \text{ ng/kg}$$

LG 12/29/18

ALS ENVIRONMENTAL -- HOUSTON HRMS
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Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SLO 0591

Run #11 Filename P616247 Samp: 1 Inj: 1 Acquired: 28-DEC-18 10:05:19
Processed: 29-DEC-18 08:30:27 LAB. ID: E1801105-002DL

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	2.63e+06	1.67e+03	1.6e+03	3.21e+06	4.94e+03	6.5e+02
2	1,2,3,7,8-PeCDF	1.13e+05	1.12e+03	1.0e+02	5.73e+04	2.31e+03	2.5e+01
3	2,3,4,7,8-PeCDF	9.86e+04	1.12e+03	8.8e+01	7.73e+04	2.31e+03	3.3e+01
4	1,2,3,4,7,8-HxCDF	1.47e+05	9.64e+02	1.5e+02	1.18e+05	7.80e+02	1.5e+02
5	1,2,3,6,7,8-HxCDF	3.01e+04	9.64e+02	3.1e+01	4.23e+04	7.80e+02	5.4e+01
6	2,3,4,6,7,8-HxCDF	7.91e+03	9.64e+02	8.2e+00	1.08e+04	7.80e+02	1.4e+01
7	1,2,3,7,8,9-HxCDF	9.99e+03	9.64e+02	1.0e+01	6.77e+03	7.80e+02	8.7e+00
8	1,2,3,4,6,7,8-HpCDF	4.44e+04	1.17e+03	3.8e+01	3.97e+04	3.52e+02	1.1e+02
9	1,2,3,4,7,8,9-HpCDF	1.01e+04	1.17e+03	8.7e+00	1.04e+04	3.52e+02	3.0e+01
10	OCDF	1.82e+04	3.92e+02	4.7e+01	2.11e+04	2.38e+03	8.9e+00
11	2,3,7,8-TCDD	5.36e+05	4.03e+03	1.3e+02	6.32e+05	2.00e+03	3.2e+02
12	1,2,3,7,8-PeCDD	1.46e+04	1.38e+03	1.1e+01	1.11e+04	6.16e+02	1.8e+01
13	1,2,3,4,7,8-HxCDD	*	8.72e+02	*	*	1.41e+03	*
14	1,2,3,6,7,8-HxCDD	6.10e+03	8.72e+02	7.0e+00	7.04e+03	1.41e+03	5.0e+00
15	1,2,3,7,8,9-HxCDD	6.59e+03	8.72e+02	7.6e+00	7.01e+03	1.41e+03	5.0e+00
16	1,2,3,4,6,7,8-HpCDD	1.33e+05	4.96e+02	2.7e+02	1.29e+05	8.24e+02	1.6e+02
17	OCDD	2.05e+06	4.08e+02	5.0e+03	2.12e+06	4.96e+02	4.3e+03
18	13C-2,3,7,8-TCDF	5.23e+06	9.95e+03	5.3e+02	6.39e+06	8.02e+03	8.0e+02
19	13C-1,2,3,7,8-PeCDF	9.88e+06	3.04e+02	3.2e+04	6.13e+06	1.45e+03	4.2e+03
20	13C-2,3,4,7,8-PeCDF	9.81e+06	3.04e+02	3.2e+04	6.31e+06	1.45e+03	4.3e+03
21	13C-1,2,3,4,7,8-HxCDF	5.14e+06	1.56e+03	3.3e+03	9.82e+06	1.96e+03	5.0e+03
22	13C-1,2,3,6,7,8-HxCDF	5.66e+06	1.56e+03	3.6e+03	1.07e+07	1.96e+03	5.5e+03
23	13C-2,3,4,6,7,8-HxCDF	5.59e+06	1.56e+03	3.6e+03	1.04e+07	1.96e+03	5.3e+03
24	13C-1,2,3,7,8,9-HxCDF	4.86e+06	1.56e+03	3.1e+03	9.33e+06	1.96e+03	4.8e+03
25	13C-1,2,3,4,6,7,8-HpCDF	4.27e+06	2.40e+03	1.8e+03	9.53e+06	3.75e+03	2.5e+03
26	13C-1,2,3,4,7,8,9-HpCDF	3.71e+06	2.40e+03	1.5e+03	8.11e+06	3.75e+03	2.2e+03
27	13C-2,3,7,8-TCDD	2.85e+06	1.60e+04	1.8e+02	3.54e+06	7.34e+03	4.8e+02
28	13C-1,2,3,7,8-PeCDD	7.31e+06	1.54e+03	4.7e+03	4.73e+06	1.10e+03	4.3e+03
29	13C-1,2,3,4,7,8-HxCDD	7.30e+06	2.46e+03	3.0e+03	5.74e+06	1.60e+03	3.6e+03
30	13C-1,2,3,6,7,8-HxCDD	6.63e+06	2.46e+03	2.7e+03	5.24e+06	1.60e+03	3.3e+03
31	13C-1,2,3,4,6,7,8-HpCDD	8.09e+06	1.41e+03	5.7e+03	7.45e+06	5.28e+02	1.4e+04
32	13C-OCDD	7.72e+06	1.28e+03	6.0e+03	8.39e+06	1.01e+03	8.3e+03
33	13C-1,2,3,4-TCDD	4.54e+06	1.60e+04	2.8e+02	5.65e+06	7.34e+03	7.7e+02
34	13C-1,2,3,7,8,9-HxCDD	8.89e+06	2.46e+03	3.6e+03	7.02e+06	1.60e+03	4.4e+03
35	37Cl-2,3,7,8-TCDD	8.18e+05	4.50e+03	1.8e+02			

---Sample Calculation---

$$\text{pg/L TCDD} = \frac{2.5 \times (4.032e{+}03 + 2.004e{+}03) \times 2000}{(2.849e{+}06 + 3.539e{+}06) \times (\quad) \times 1.049} =$$

ALS ENVIRONMENTAL
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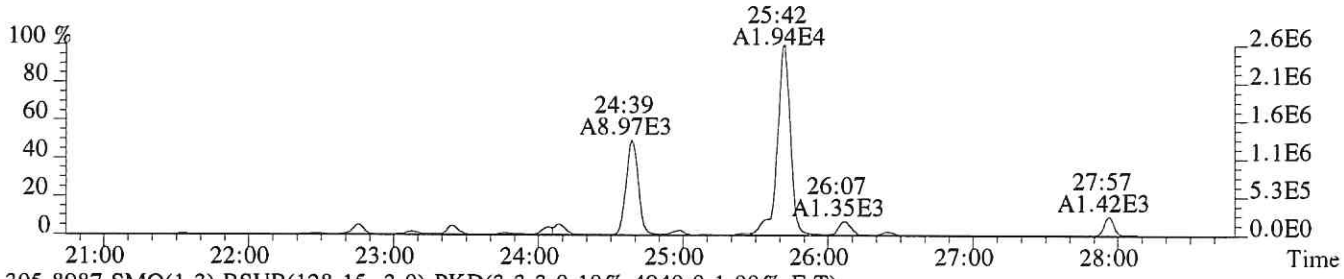
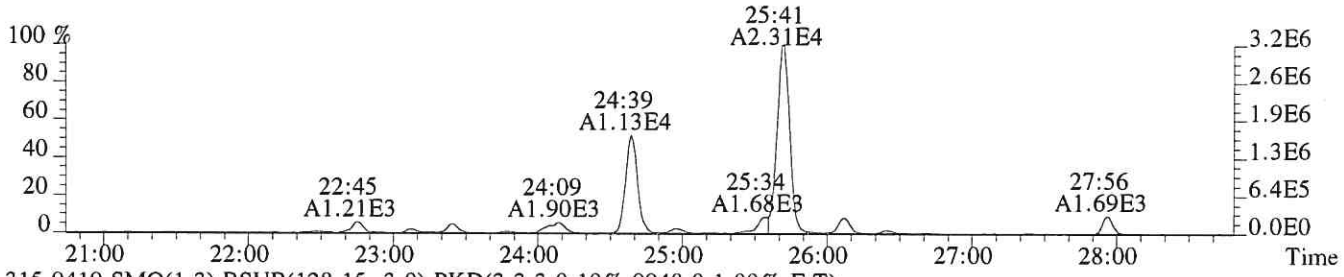
File:P616247 #1-573 Acq:28-DEC-2018 10:05:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002DL

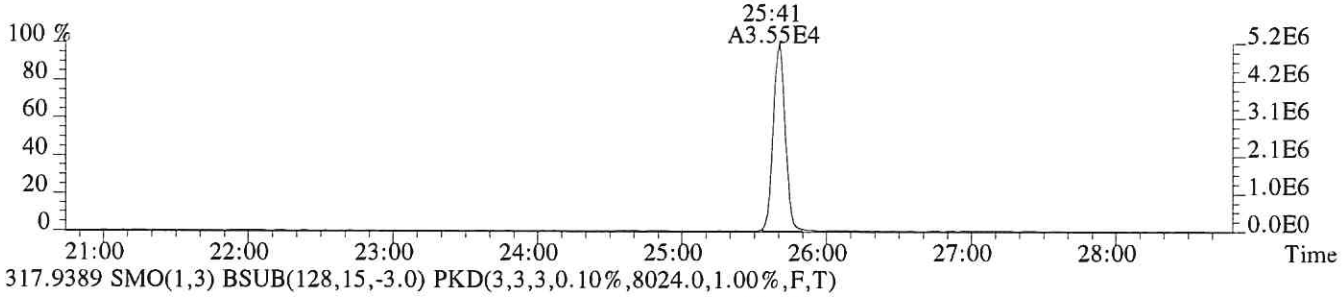
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1672.0,1.00%,F,T)



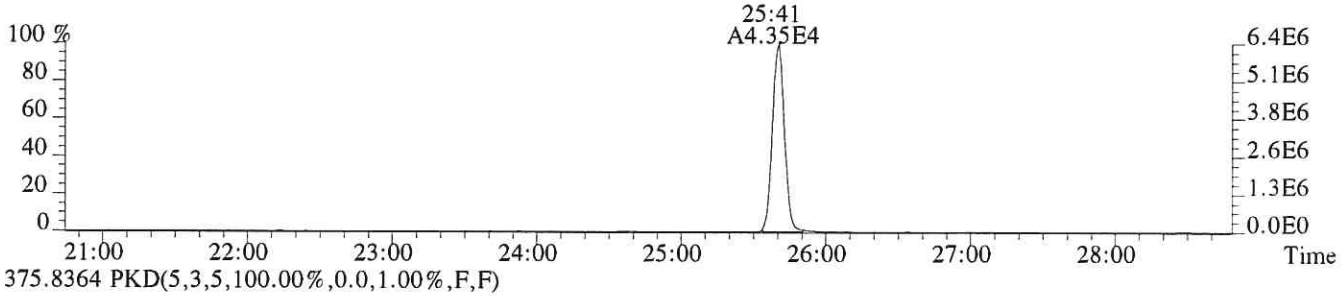
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4940.0,1.00%,F,T)



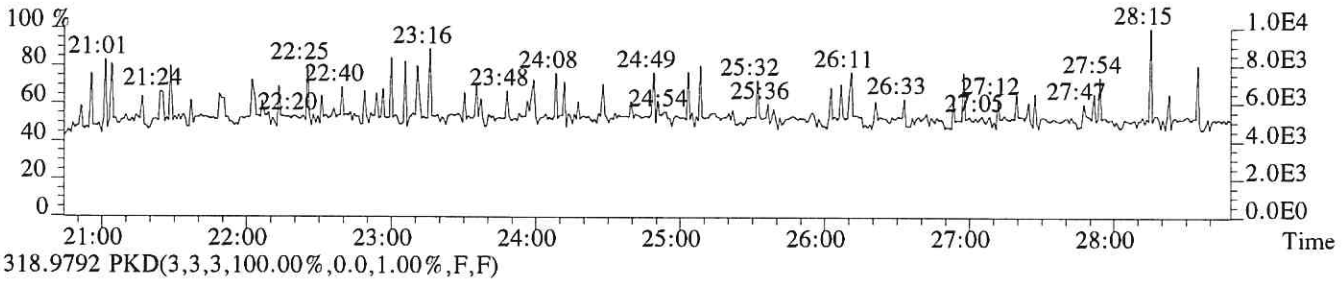
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9948.0,1.00%,F,T)



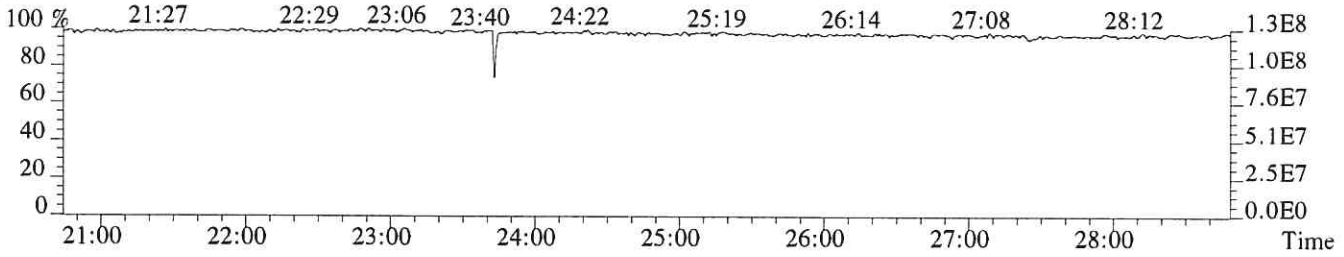
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8024.0,1.00%,F,T)



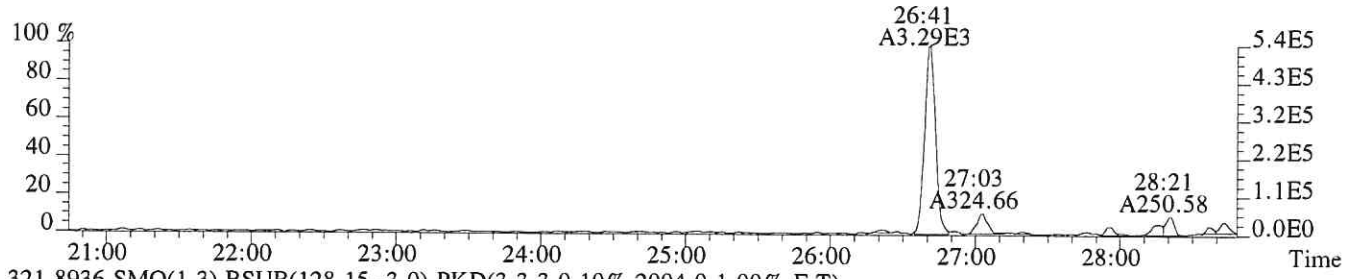
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



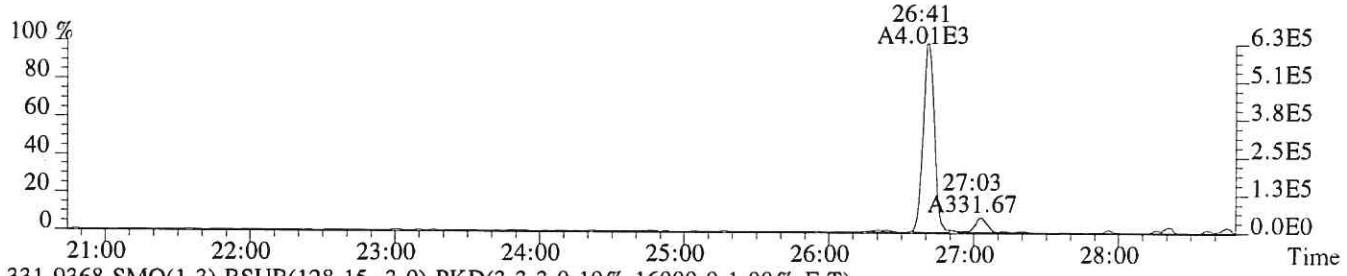
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



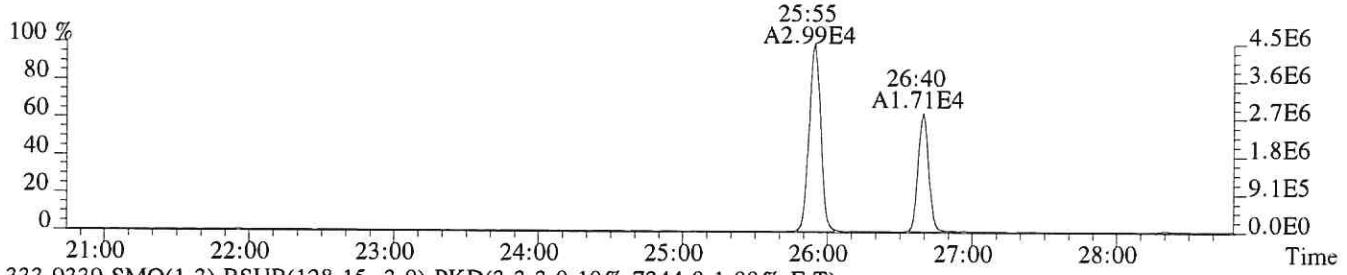
File:P616247 #1-573 Acq:28-DEC-2018 10:05:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4032.0,1.00%,F,T)



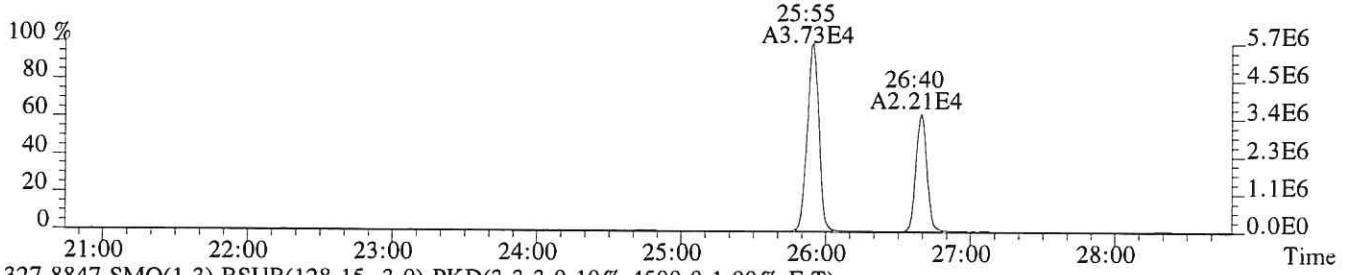
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2004.0,1.00%,F,T)



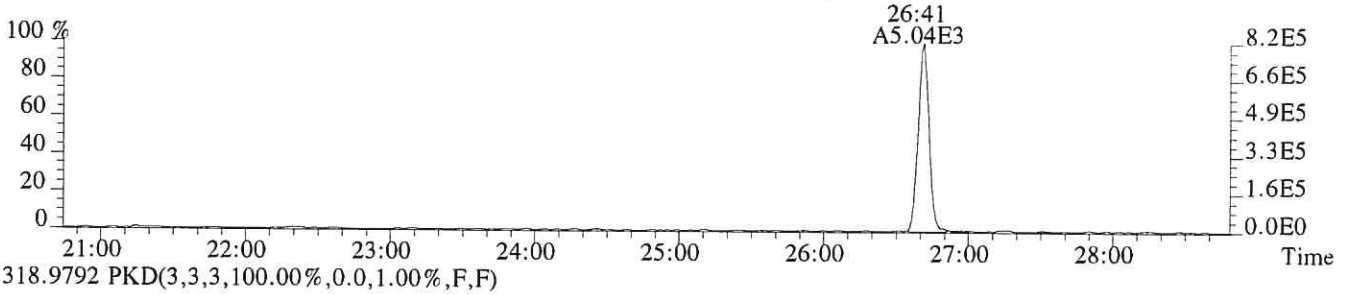
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,16000.0,1.00%,F,T)



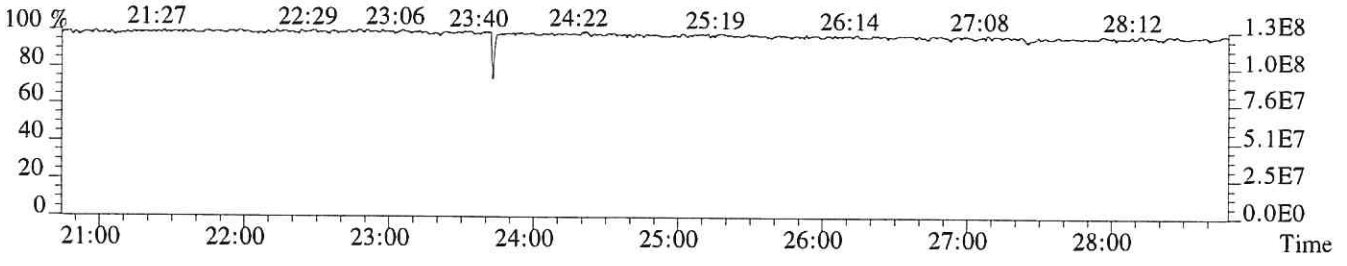
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7344.0,1.00%,F,T)



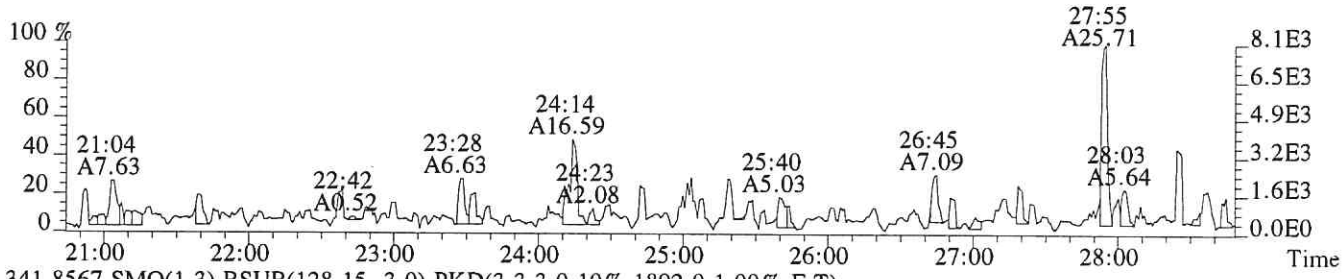
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4500.0,1.00%,F,T)



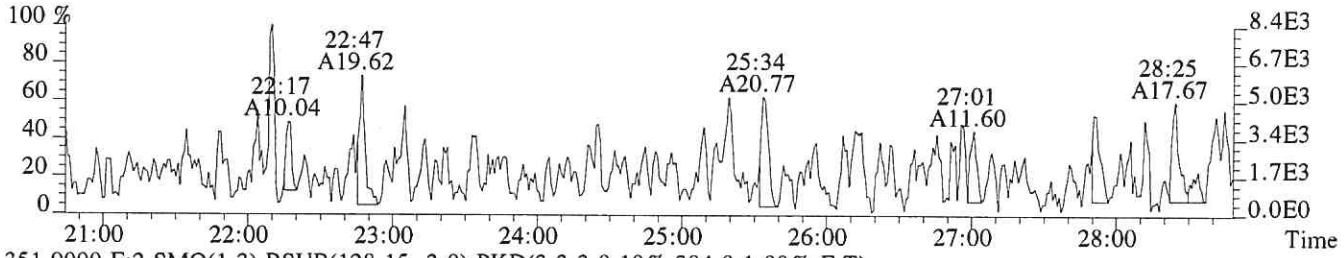
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



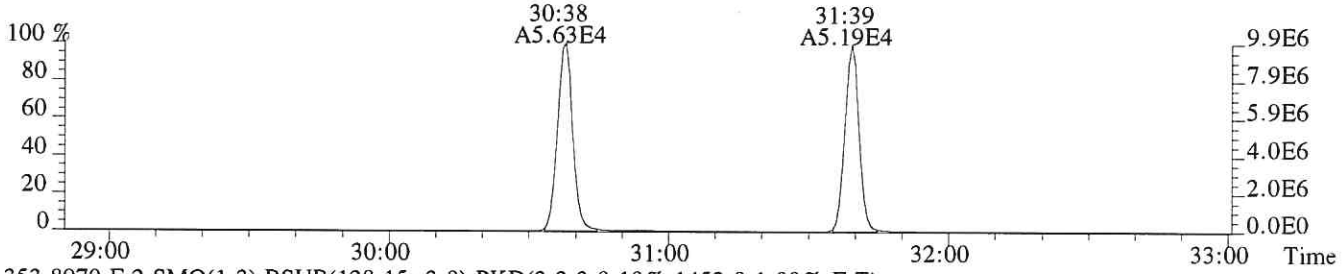
File:P616247 #1-573 Acq:28-DEC-2018 10:05:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,816.0,1.00%,F,T)



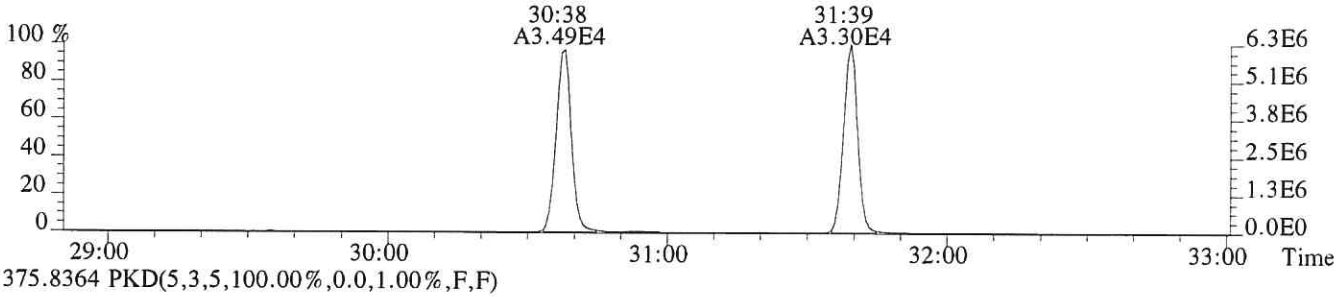
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1892.0,1.00%,F,T)



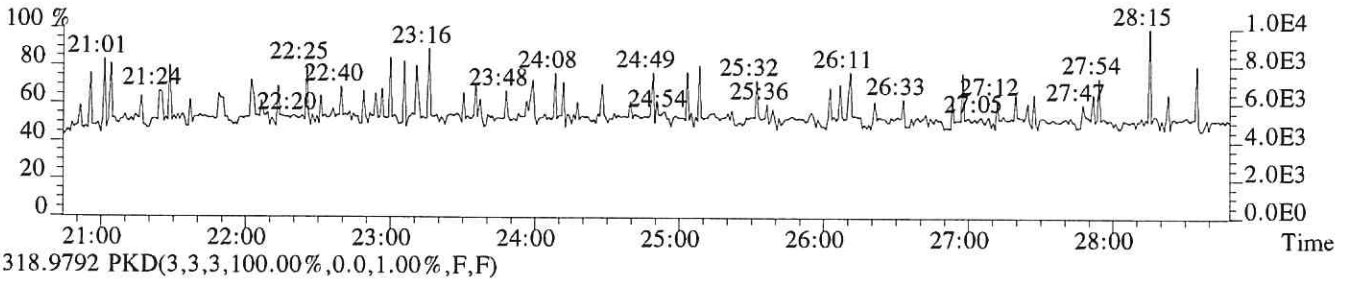
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,304.0,1.00%,F,T)



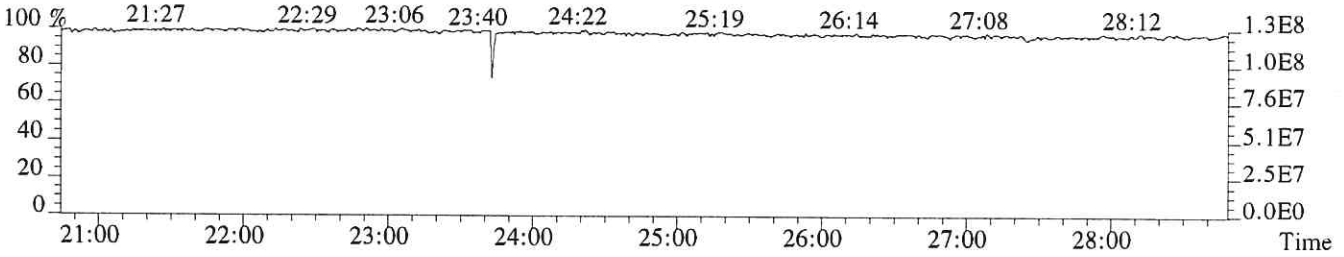
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1452.0,1.00%,F,T)



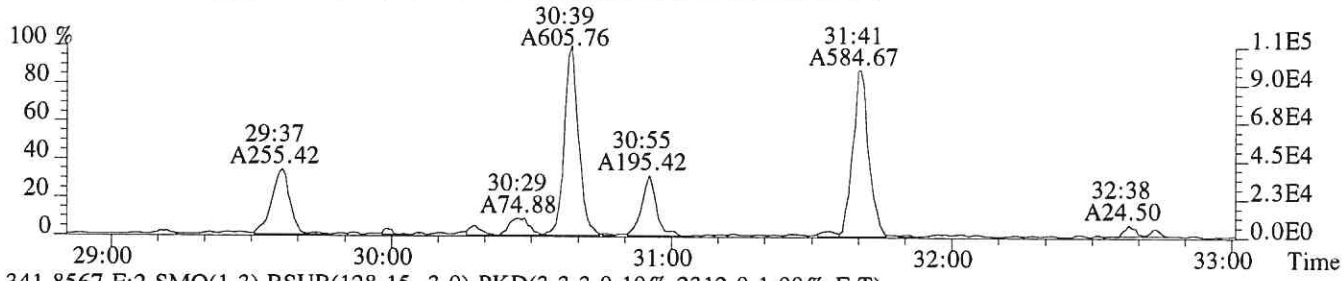
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



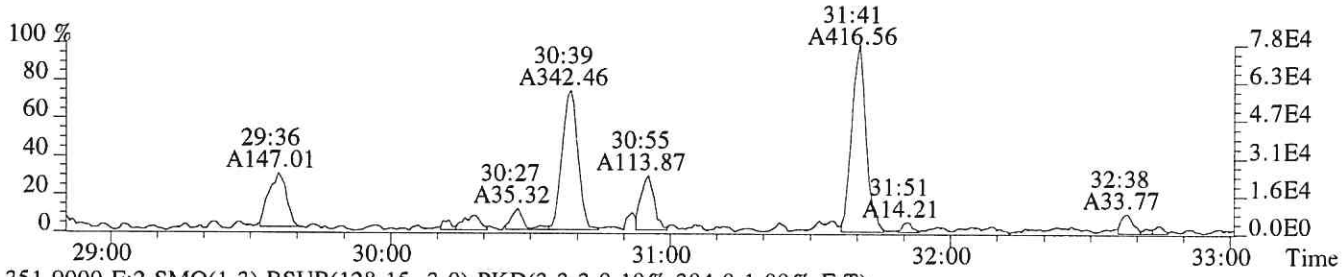
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



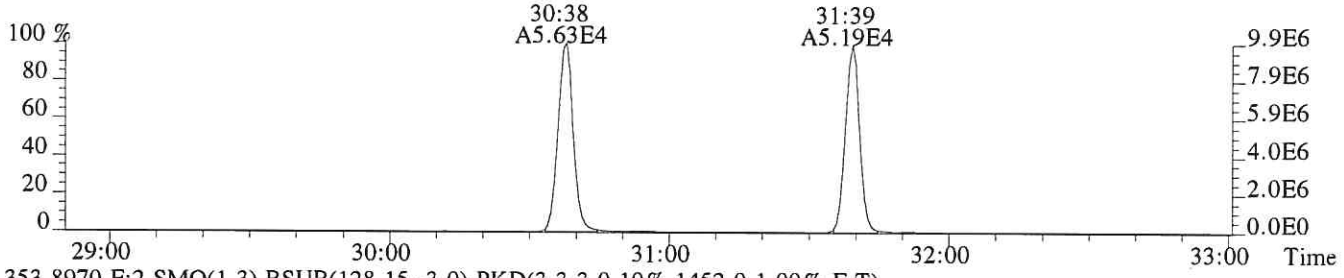
File:P616247 #1-376 Acq:28-DEC-2018 10:05:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1116.0,1.00%,F,T)



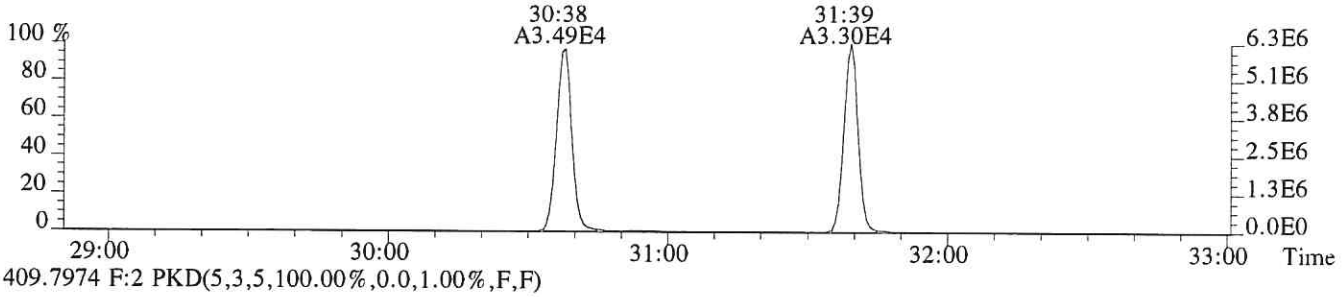
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2312.0,1.00%,F,T)



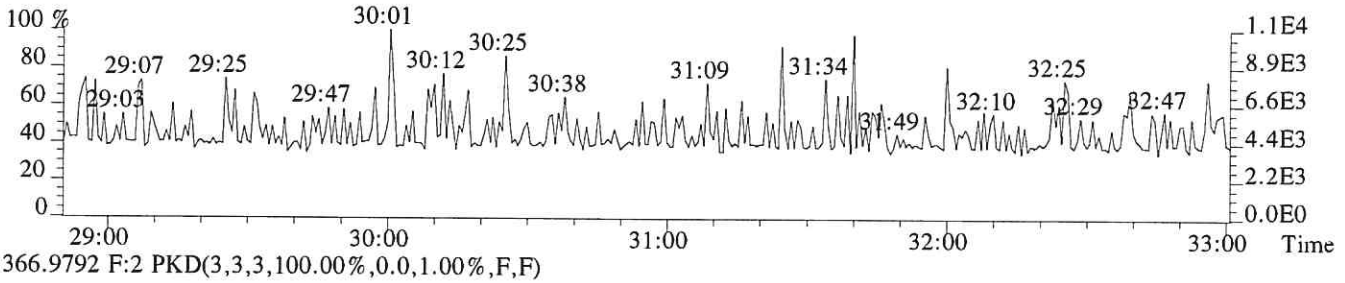
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,304.0,1.00%,F,T)



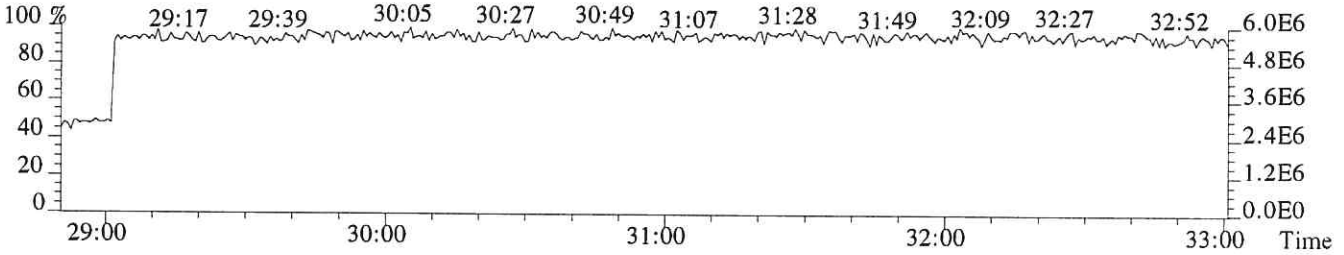
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1452.0,1.00%,F,T)



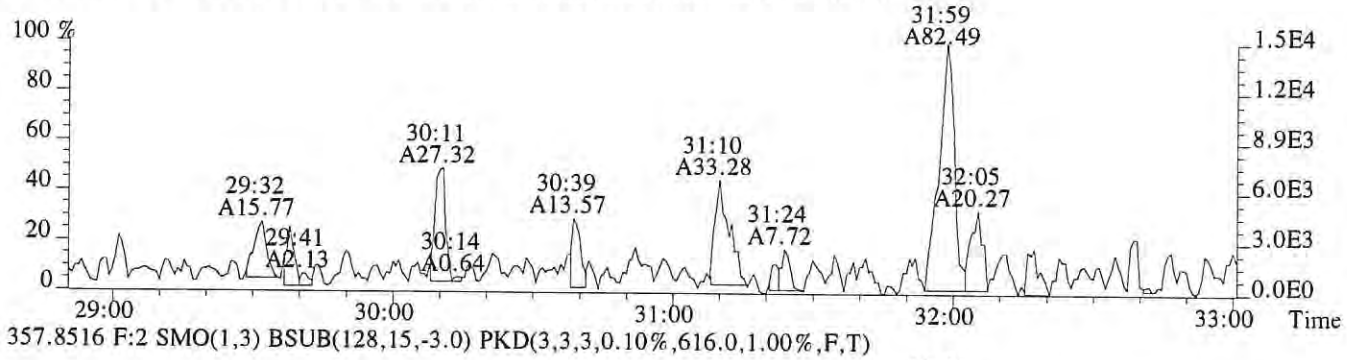
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



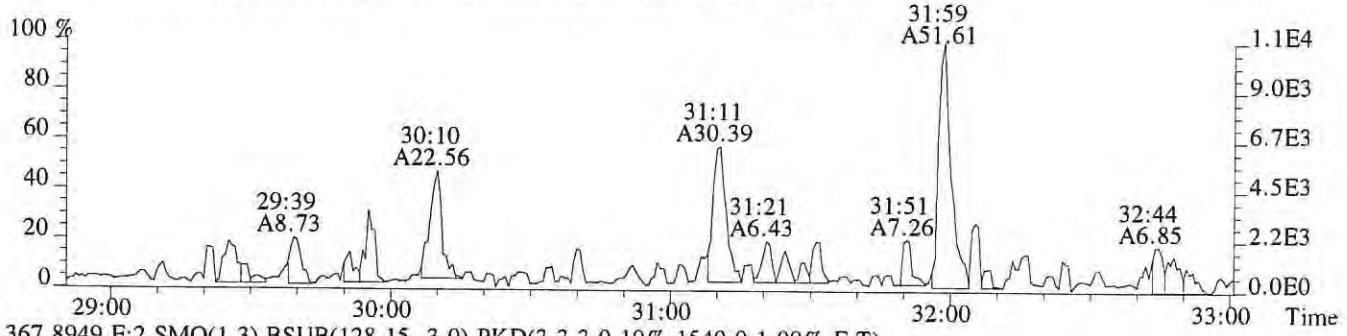
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



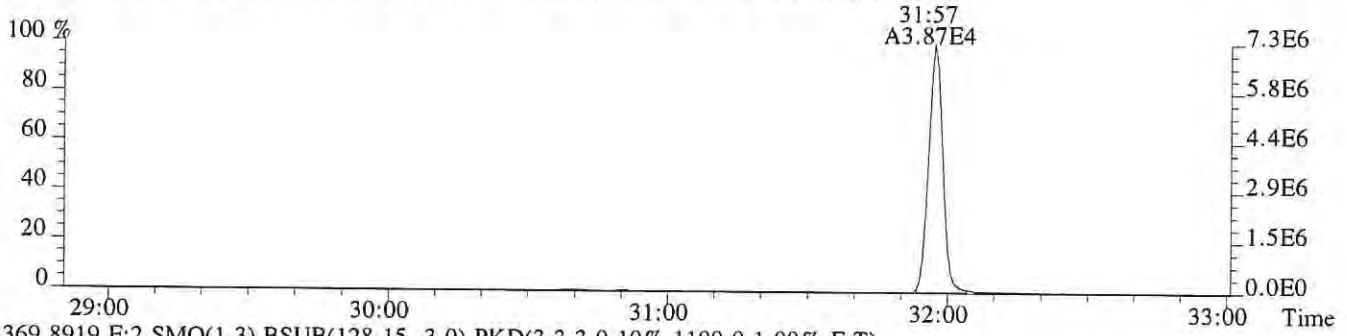
File:P616247 #1-376 Acq:28-DEC-2018 10:05:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1384.0,1.00%,F,T)



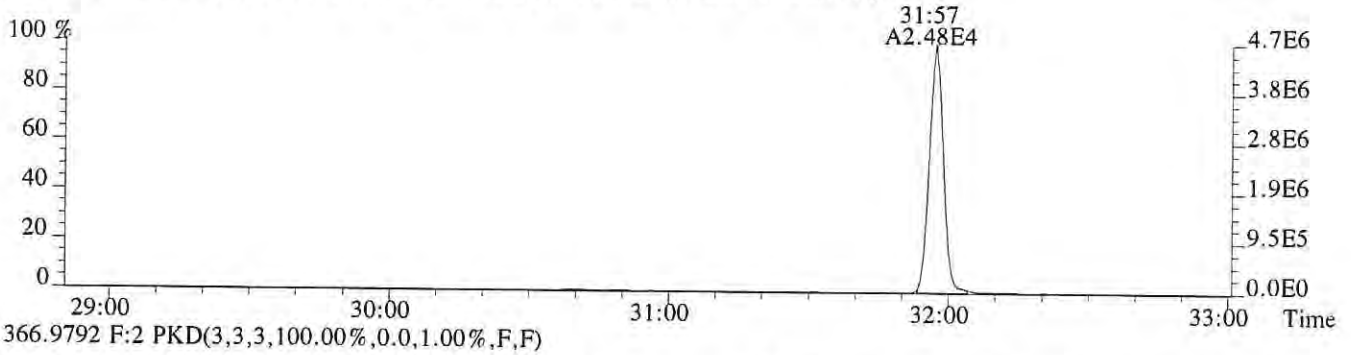
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,616.0,1.00%,F,T)



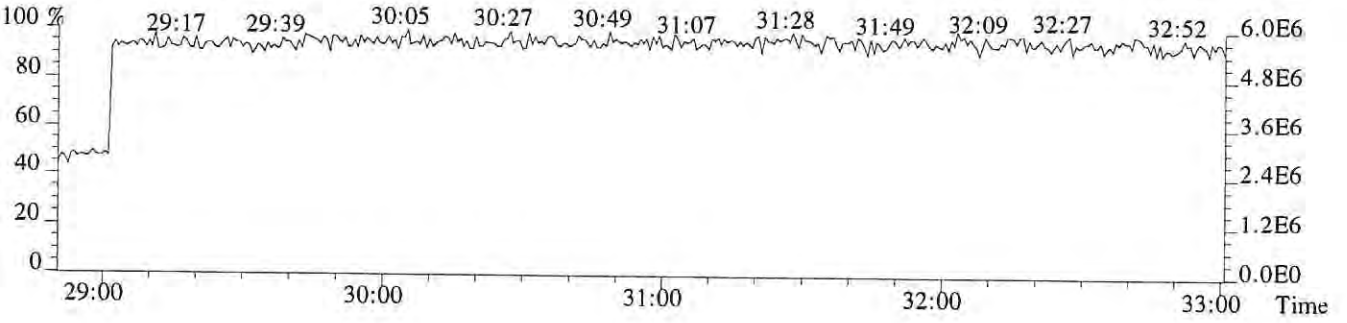
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1540.0,1.00%,F,T)



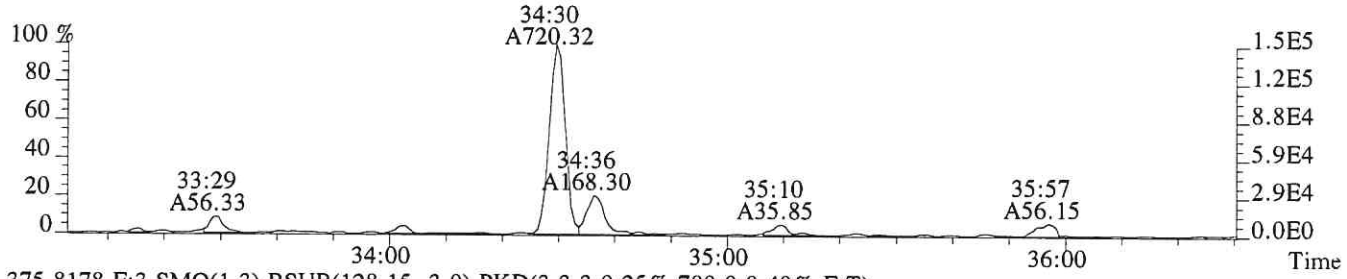
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1100.0,1.00%,F,T)



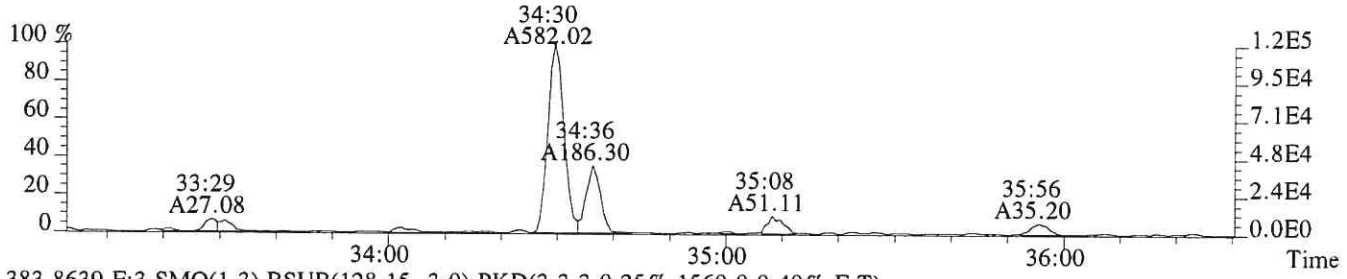
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



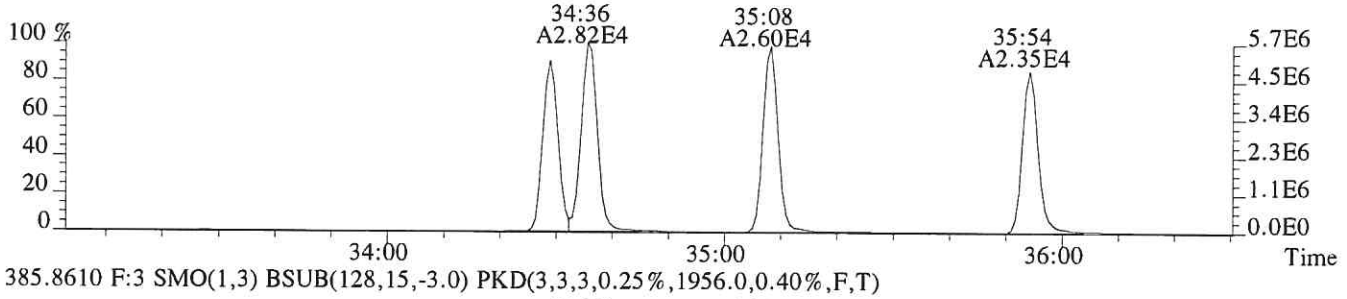
File:P616247 #1-312 Acq:28-DEC-2018 10:05:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,964.0,0.40%,F,T)



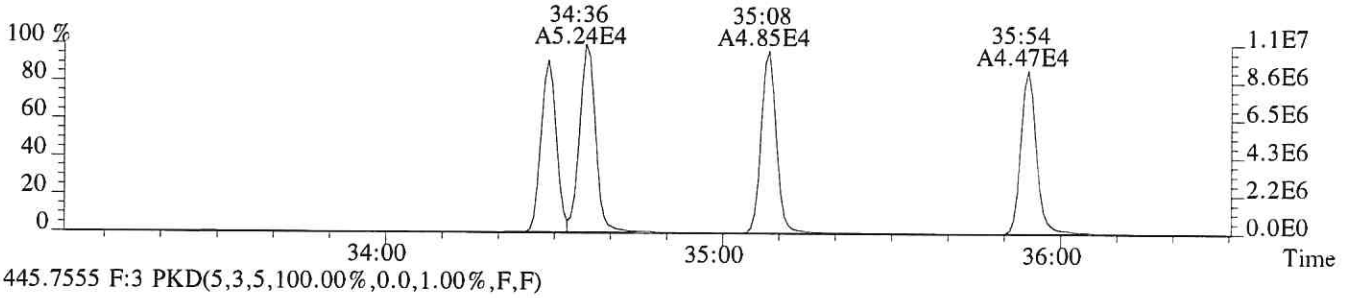
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,780.0,0.40%,F,T)



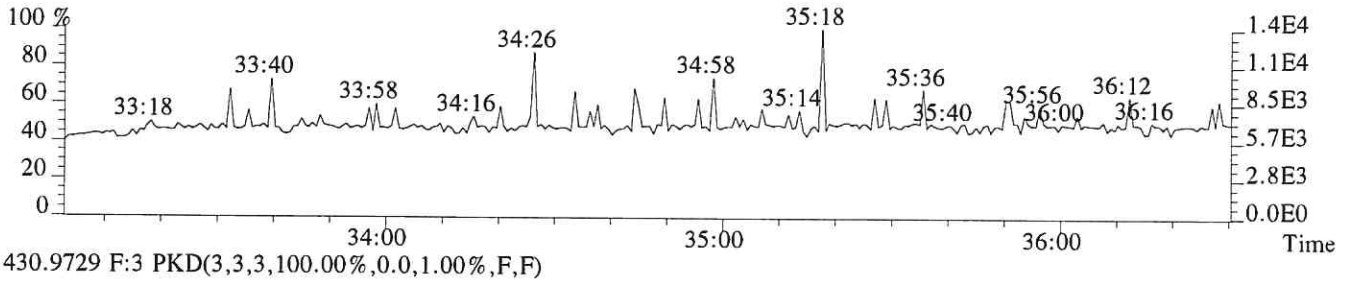
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1560.0,0.40%,F,T)



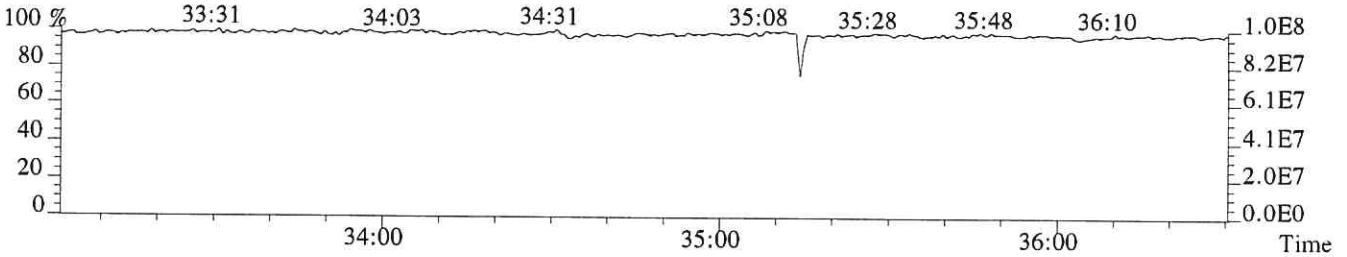
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1956.0,0.40%,F,T)



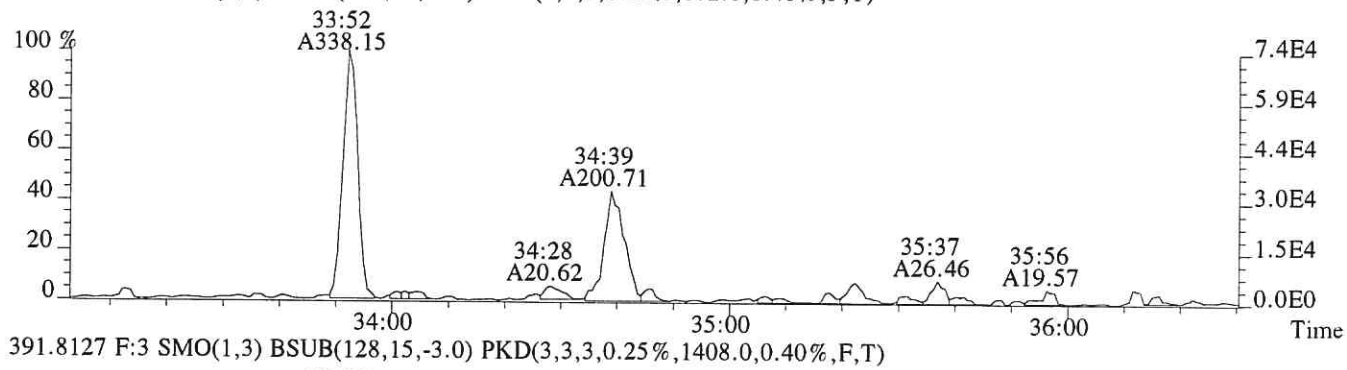
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



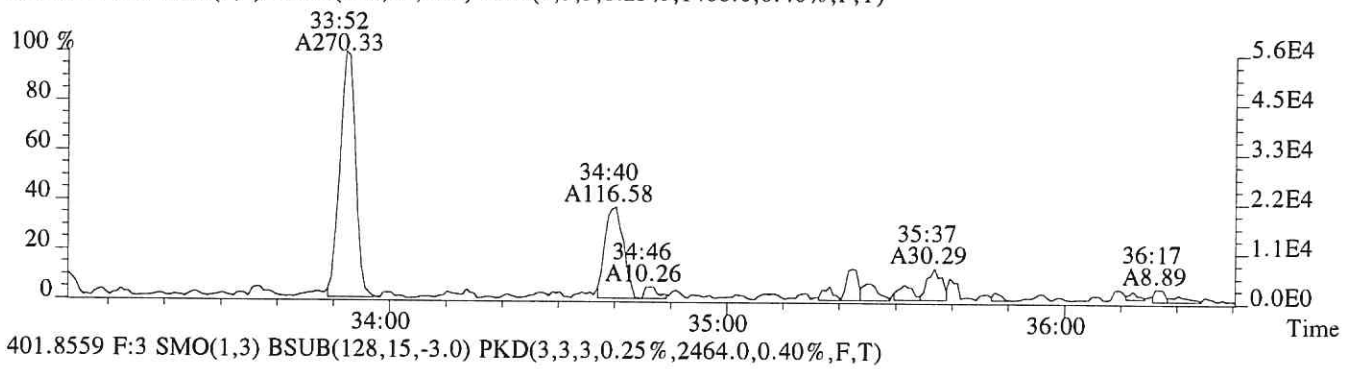
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



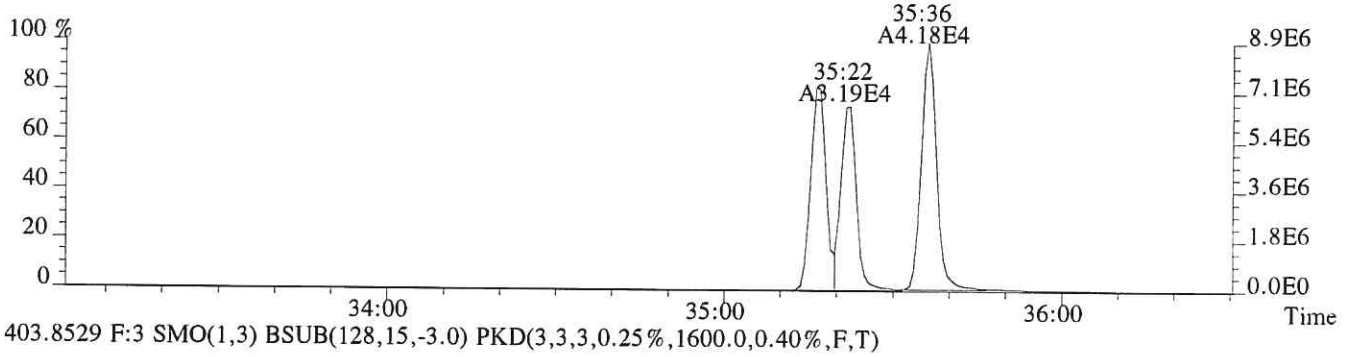
File:P616247 #1-312 Acq:28-DEC-2018 10:05:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,872.0,0.40%,F,T)



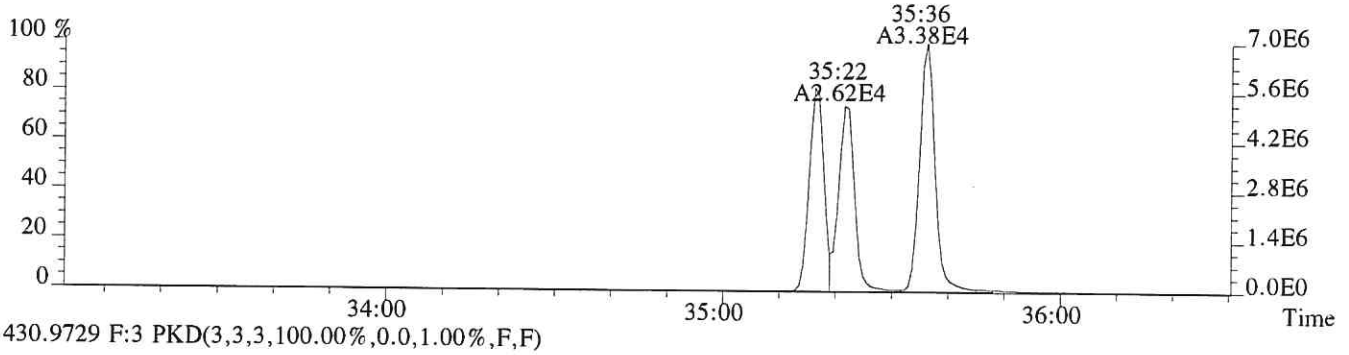
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1408.0,0.40%,F,T)



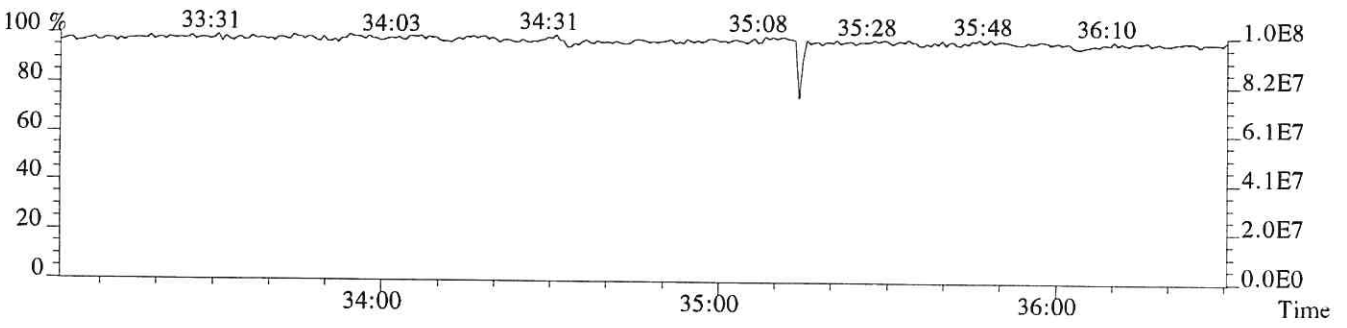
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2464.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1600.0,0.40%,F,T)

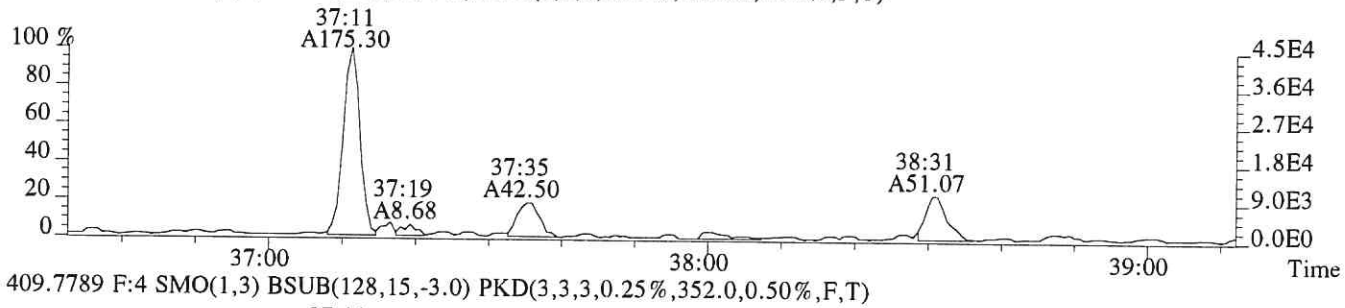


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

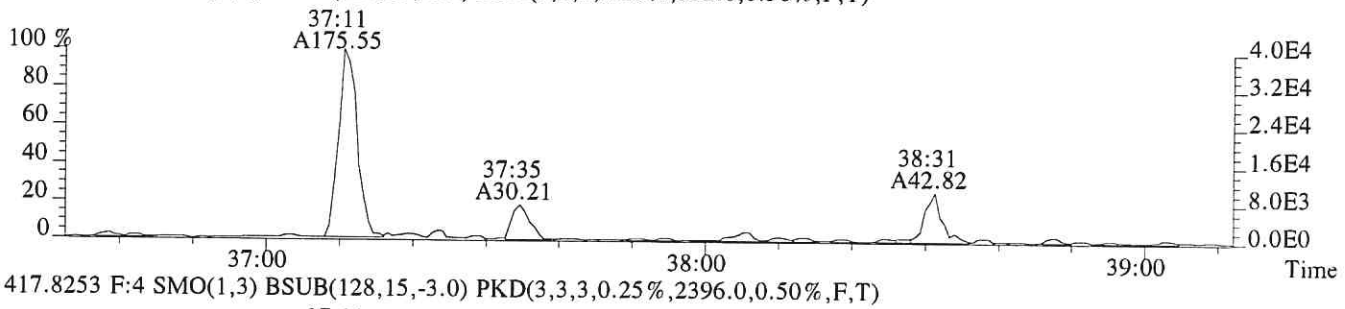


File:P616247 #1-240 Acq:28-DEC-2018 10:05:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002DL

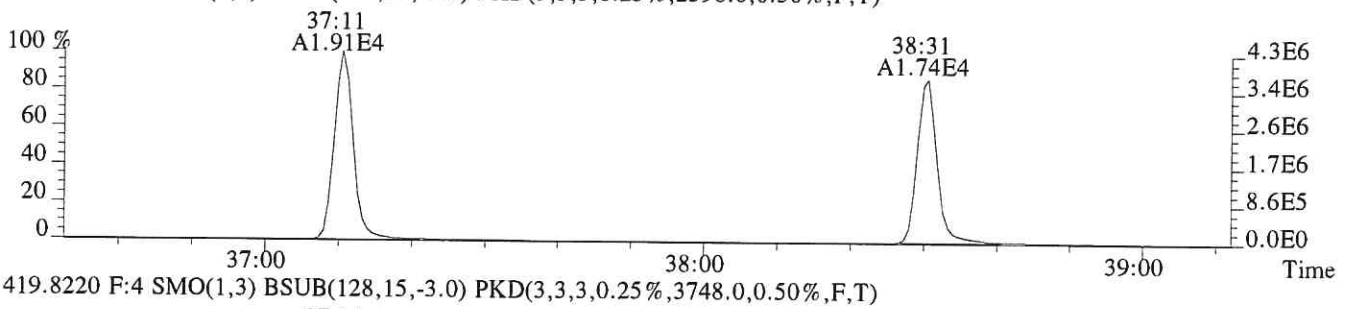
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1172.0,0.50%,F,T)



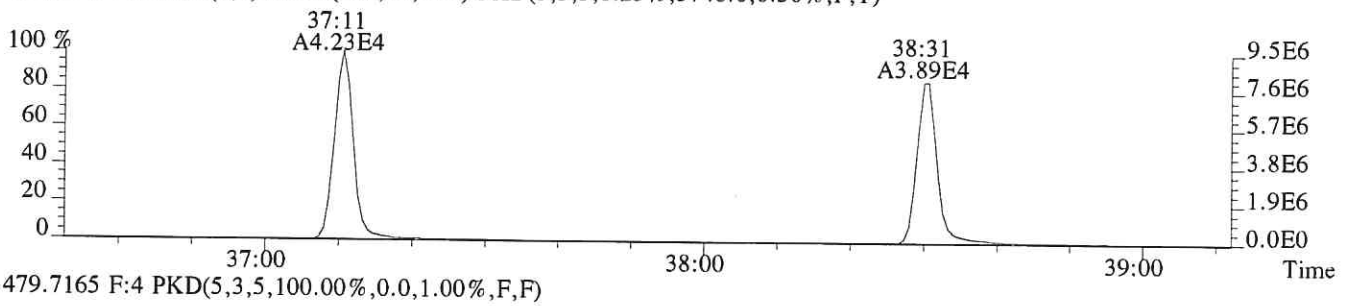
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,352.0,0.50%,F,T)



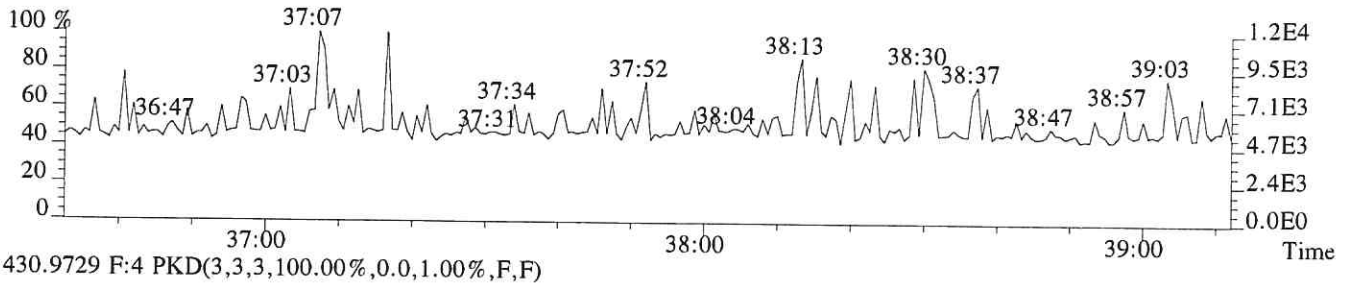
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2396.0,0.50%,F,T)



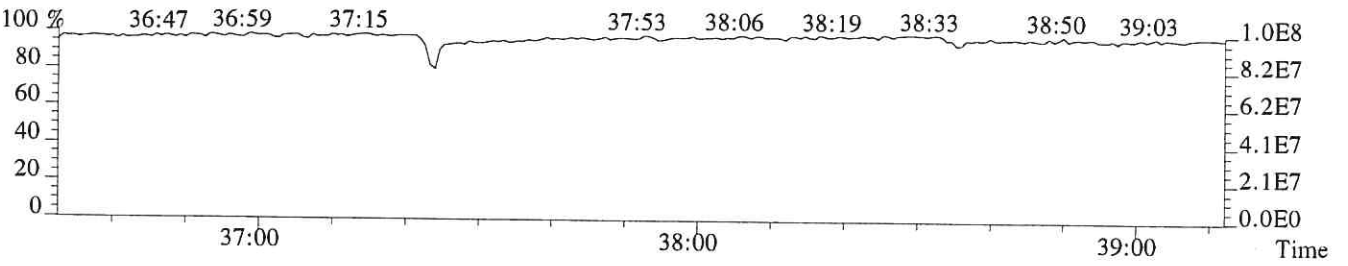
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3748.0,0.50%,F,T)



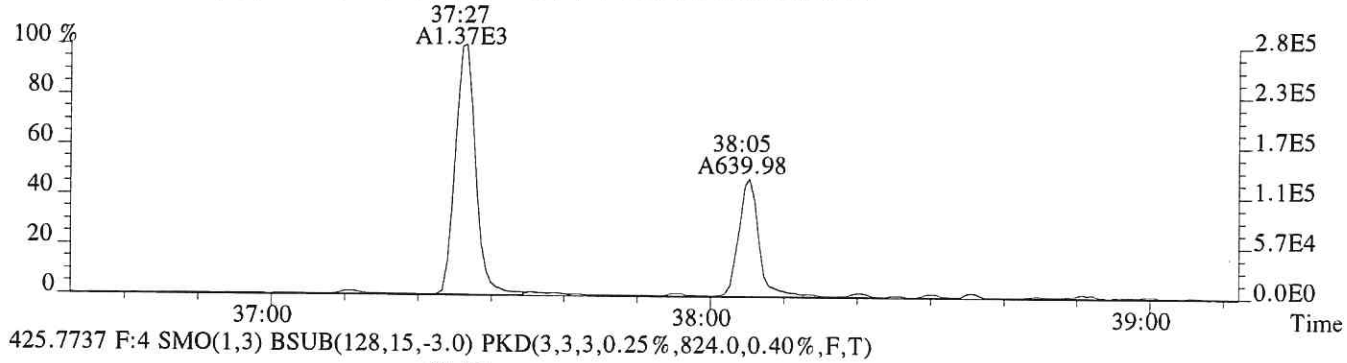
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



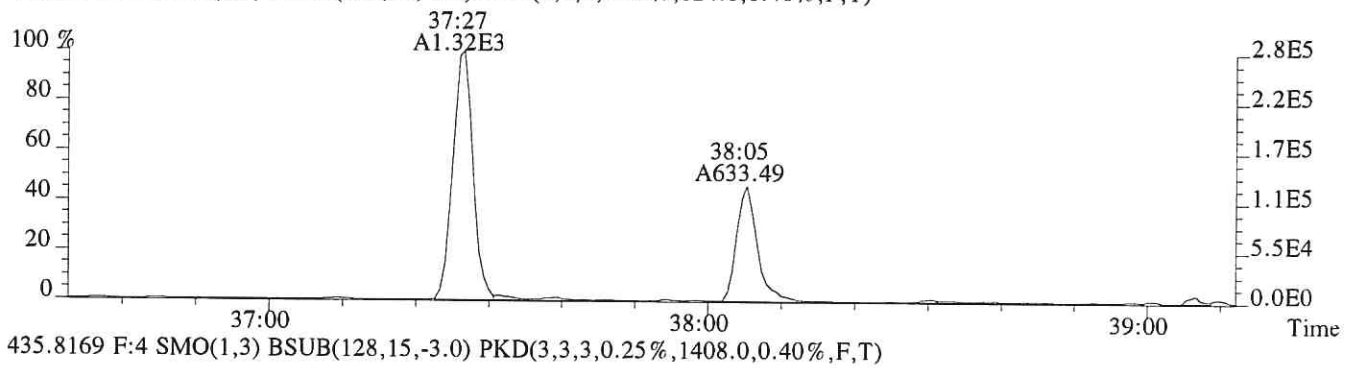
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



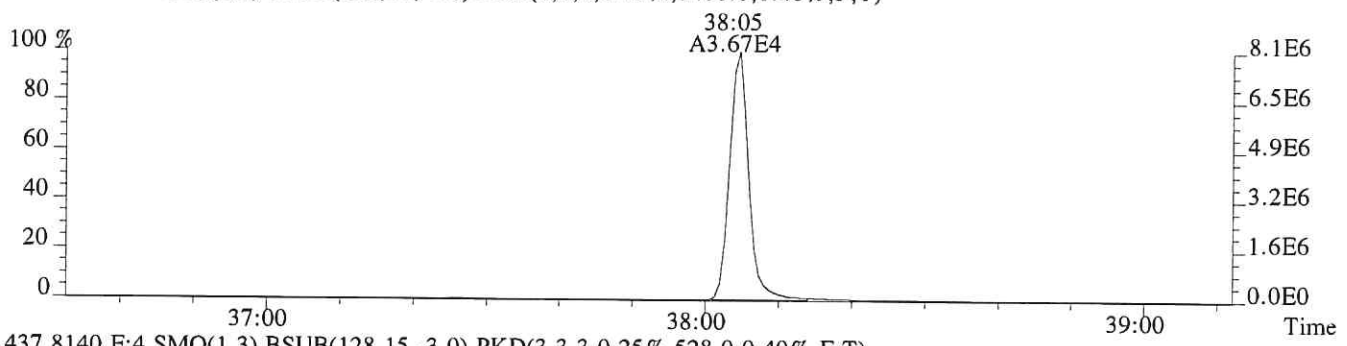
File:P616247 #1-240 Acq:28-DEC-2018 10:05:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,496.0,0.40%,F,T)



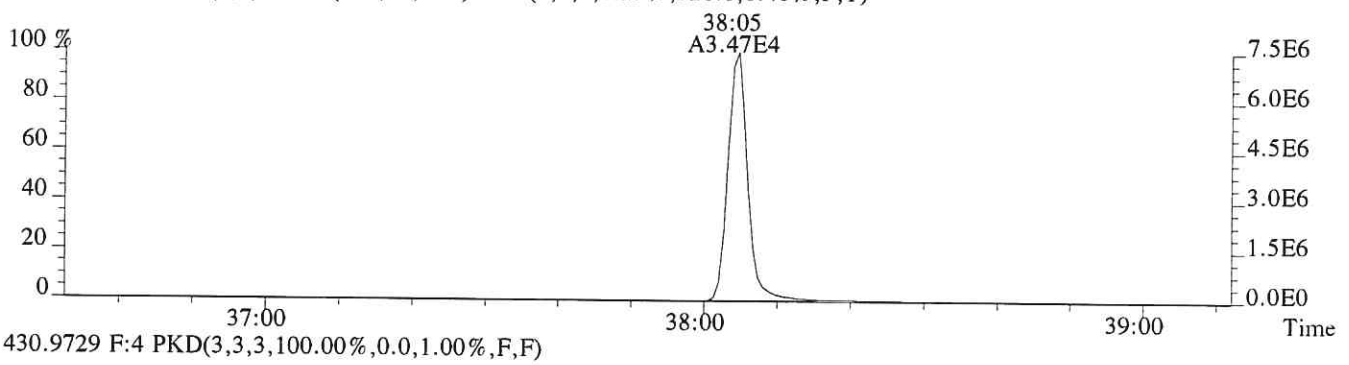
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,824.0,0.40%,F,T)



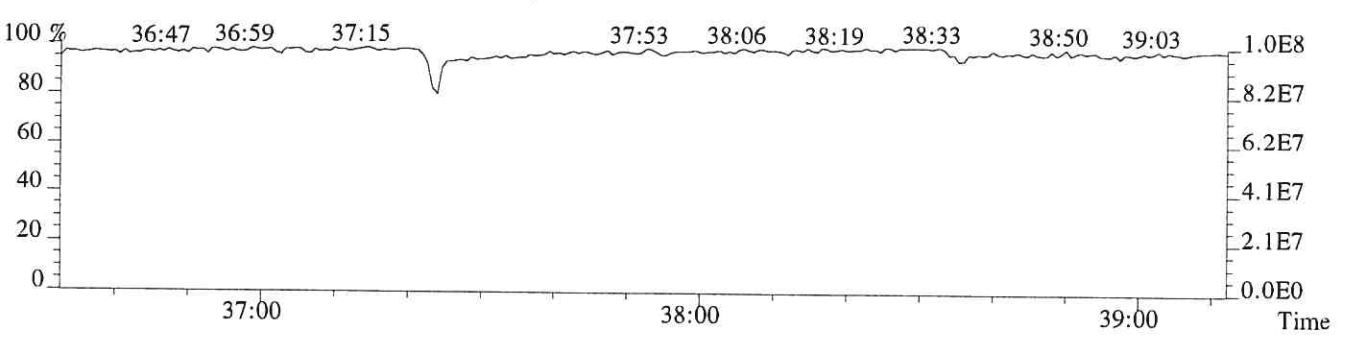
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1408.0,0.40%,F,T)



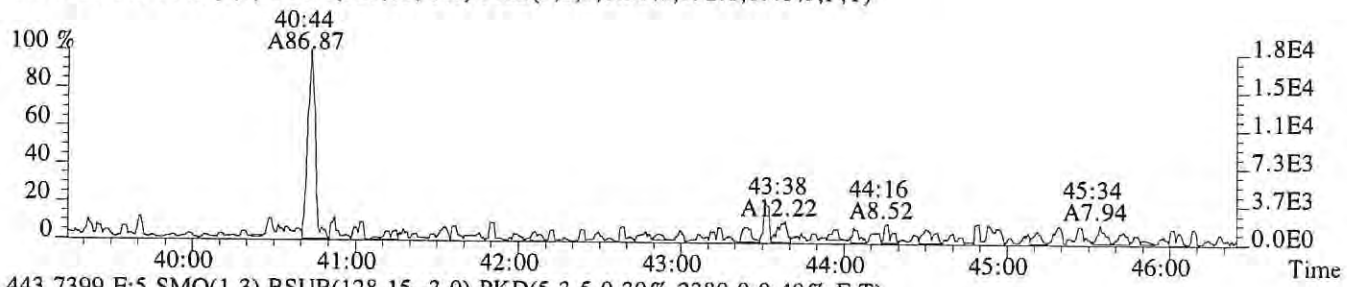
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,528.0,0.40%,F,T)



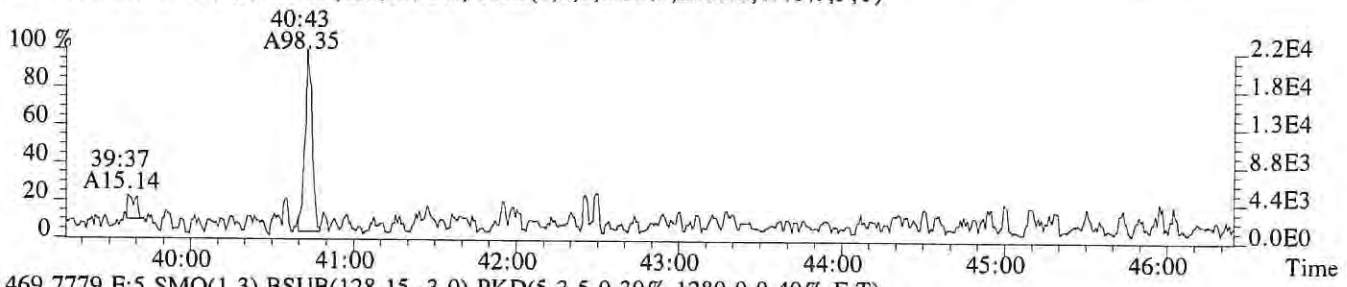
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



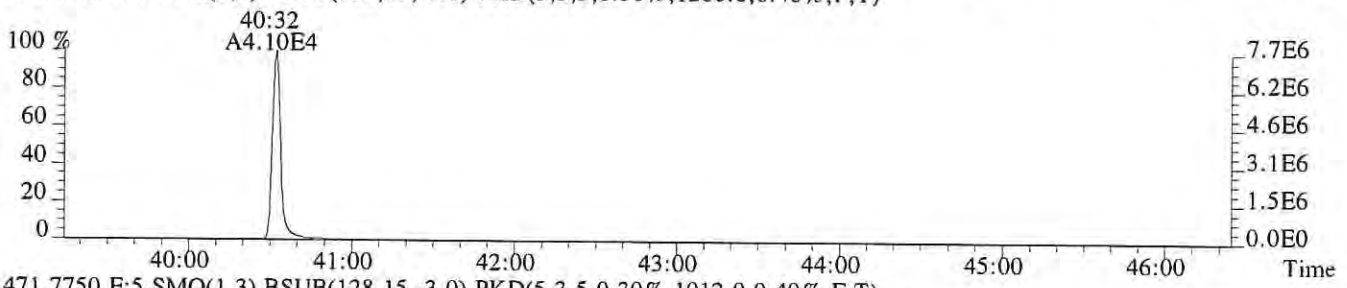
File:P616247 #1-646 Acq:28-DEC-2018 10:05:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,392.0,0.40%,F,T)



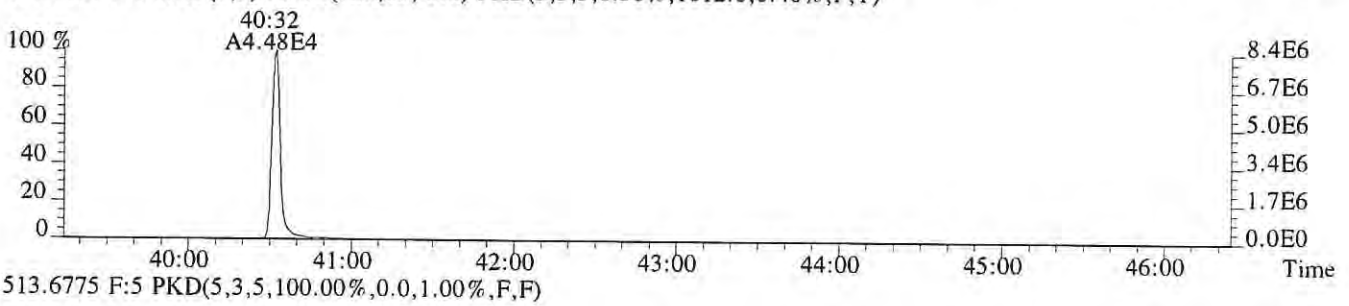
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2380.0,0.40%,F,T)



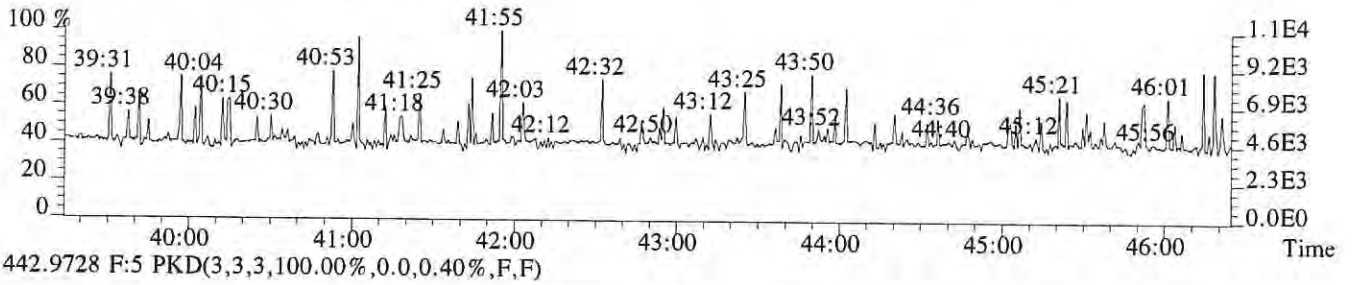
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1280.0,0.40%,F,T)



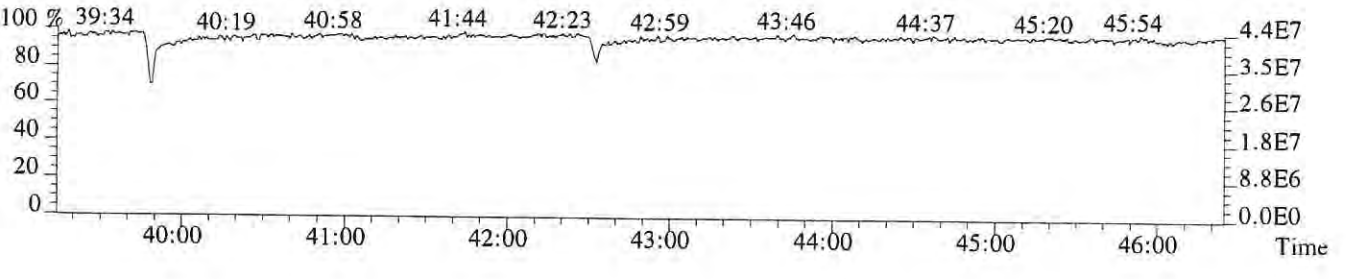
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1012.0,0.40%,F,T)



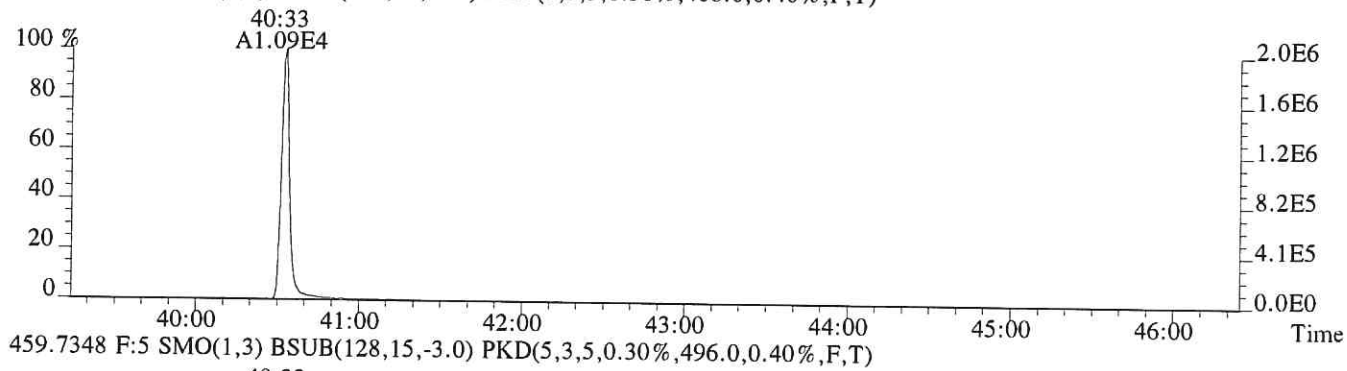
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



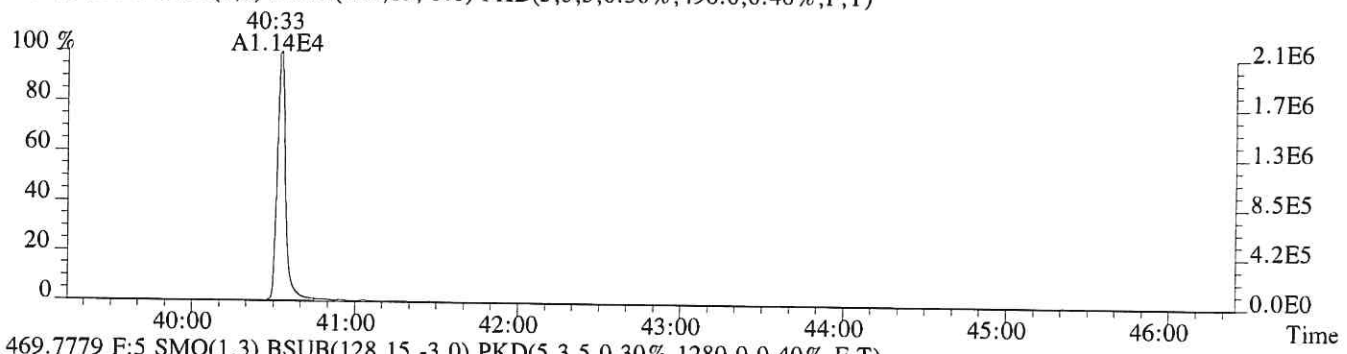
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



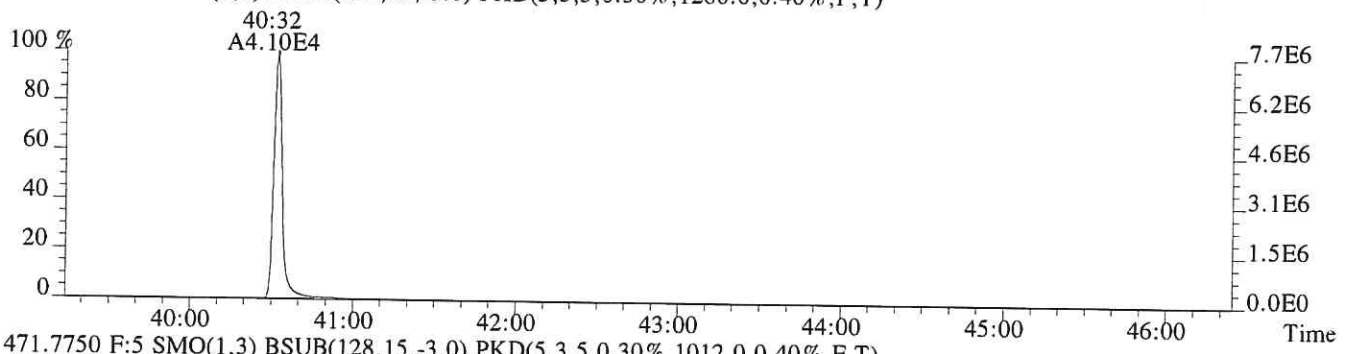
File:P616247 #1-646 Acq:28-DEC-2018 10:05:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-002DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,408.0,0.40%,F,T)



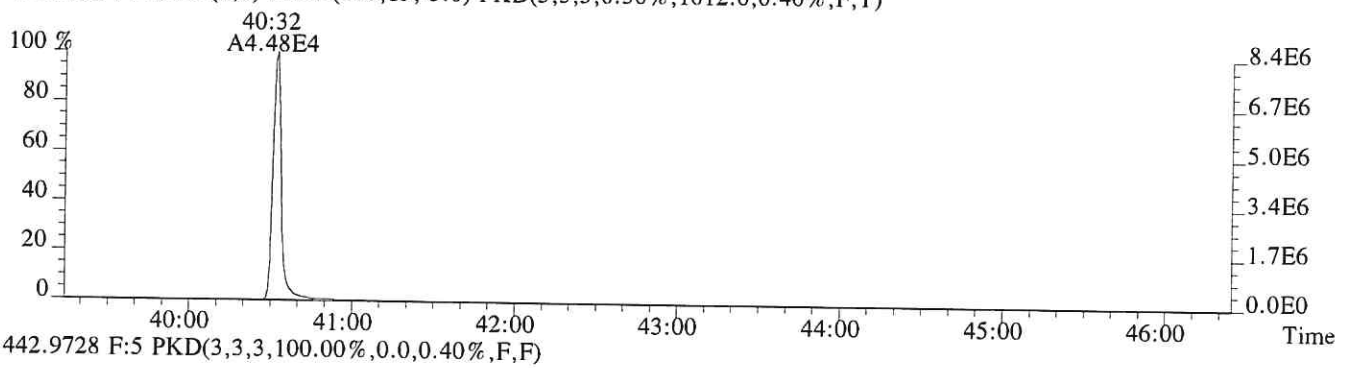
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,496.0,0.40%,F,T)



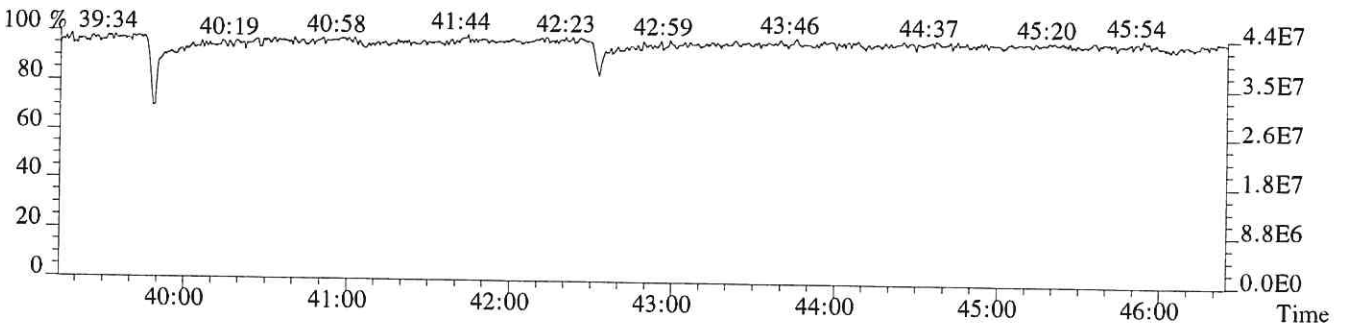
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1280.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1012.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SLO 0592

Run #9 Filename P616184 Samp: 1 Inj: 1 Acquired: 25-DEC-18 03:01:44
Processed: 28-DEC-18 11:15:41 Sample ID: E1801105-003

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:53	6.340e+04	7.758e+04	0.82	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:46	2.196e+03	1.503e+03	1.46	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:46	2.112e+03	1.390e+03	1.52	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:35	2.486e+03	1.999e+03	1.24	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:42	7.924e+02	6.298e+02	1.26	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:14	1.567e+02	1.539e+02	1.02	no	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	36:00	2.157e+02	1.885e+02	1.14	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:16	7.997e+02	7.198e+02	1.11	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:35	1.957e+02	1.881e+02	1.04	yes	no	1.463
10	Unk	OCDF	40:48	2.834e+02	2.965e+02	0.96	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:52	1.127e+04	1.391e+04	0.81	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	32:04	3.978e+02	1.832e+02	2.17	no	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:22	9.829e+01	8.193e+01	1.20	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:27	1.440e+02	1.193e+02	1.21	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:42	2.157e+02	1.925e+02	1.12	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:10	4.248e+03	4.268e+03	1.00	yes	no	1.112
17	Unk	OCDD	40:38	7.485e+04	8.402e+04	0.89	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:52	5.558e+04	6.998e+04	0.79	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:45	9.785e+04	6.181e+04	1.58	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:46	9.060e+04	5.622e+04	1.61	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:34	4.257e+04	8.010e+04	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:41	4.844e+04	9.130e+04	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:13	4.300e+04	8.054e+04	0.53	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:59	3.837e+04	7.337e+04	0.52	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:15	2.855e+04	6.253e+04	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:34	2.516e+04	5.627e+04	0.45	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:50	2.705e+04	3.528e+04	0.77	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	32:04	6.822e+04	4.342e+04	1.57	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:21	5.708e+04	4.506e+04	1.27	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:27	5.821e+04	4.575e+04	1.27	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:09	5.701e+04	5.357e+04	1.06	yes	no	0.857
32	IS	13C-OCDD	40:38	4.914e+04	5.504e+04	0.89	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	26:06	8.224e+04	1.034e+05	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:41	1.047e+05	8.586e+04	1.22	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:52	3.803e+04				no	1.086

$$OCDD = \frac{(7.485e+04 + 8.402e+04) \times 4000\ pg \times 1}{(4.914e+04 + 5.504e+04) \times 10.497\ g \times 633 / 100 \times 1.157} =$$ ~~43~~ 793.4421 ng/kg

LG 12/28/18

ALS ENVIRONMENTAL -- HOUSTON HRMS
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SLO 0592

Run #9 Filename P616184 Samp: 1 Inj: 1 Acquired: 25-DEC-18 03:01:44
Processed: 28-DEC-18 11:15:41 LAB. ID: E1801105-003

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	8.69e+06	1.91e+03	4.6e+03	1.12e+07	1.14e+04	9.8e+02
2	1,2,3,7,8-PeCDF	3.96e+05	5.24e+03	7.5e+01	2.64e+05	5.04e+03	5.2e+01
3	2,3,4,7,8-PeCDF	3.72e+05	5.24e+03	7.1e+01	2.31e+05	5.04e+03	4.6e+01
4	1,2,3,4,7,8-HxCDF	4.98e+05	4.46e+03	1.1e+02	3.90e+05	3.38e+03	1.2e+02
5	1,2,3,6,7,8-HxCDF	1.42e+05	4.46e+03	3.2e+01	1.25e+05	3.38e+03	3.7e+01
6	2,3,4,6,7,8-HxCDF	3.65e+04	4.46e+03	8.2e+00	2.87e+04	3.38e+03	8.5e+00
7	1,2,3,7,8,9-HxCDF	3.40e+04	4.46e+03	7.6e+00	2.99e+04	3.38e+03	8.9e+00
8	1,2,3,4,6,7,8-HpCDF	1.78e+05	1.12e+03	1.6e+02	1.65e+05	8.28e+02	2.0e+02
9	1,2,3,4,7,8,9-HpCDF	4.07e+04	1.12e+03	3.6e+01	3.95e+04	8.28e+02	4.8e+01
10	OCDF	4.35e+04	7.80e+02	5.6e+01	5.68e+04	3.52e+03	1.6e+01
11	2,3,7,8-TCDD	1.85e+06	5.44e+03	3.4e+02	2.22e+06	3.65e+03	6.1e+02
12	1,2,3,7,8-PeCDD	6.97e+04	1.68e+03	4.1e+01	3.61e+04	1.46e+03	2.5e+01
13	1,2,3,4,7,8-HxCDD	2.34e+04	3.20e+03	7.3e+00	1.65e+04	2.64e+03	6.2e+00
14	1,2,3,6,7,8-HxCDD	3.07e+04	3.20e+03	9.6e+00	2.23e+04	2.64e+03	8.5e+00
15	1,2,3,7,8,9-HxCDD	4.77e+04	3.20e+03	1.5e+01	4.03e+04	2.64e+03	1.5e+01
16	1,2,3,4,6,7,8-HpCDD	8.55e+05	1.09e+04	7.8e+01	8.68e+05	7.09e+03	1.2e+02
17	OCDD	1.32e+07	2.66e+04	4.9e+02	1.48e+07	1.04e+03	1.4e+04
18	13C-2,3,7,8-TCDF	8.30e+06	1.50e+04	5.5e+02	1.05e+07	1.07e+04	9.8e+02
19	13C-1,2,3,7,8-PeCDF	1.70e+07	2.29e+03	7.4e+03	1.06e+07	2.46e+03	4.3e+03
20	13C-2,3,4,7,8-PeCDF	1.71e+07	2.29e+03	7.5e+03	1.06e+07	2.46e+03	4.3e+03
21	13C-1,2,3,4,7,8-HxCDF	8.68e+06	2.30e+03	3.8e+03	1.64e+07	2.87e+03	5.7e+03
22	13C-1,2,3,6,7,8-HxCDF	9.44e+06	2.30e+03	4.1e+03	1.78e+07	2.87e+03	6.2e+03
23	13C-2,3,4,6,7,8-HxCDF	8.79e+06	2.30e+03	3.8e+03	1.63e+07	2.87e+03	5.7e+03
24	13C-1,2,3,7,8,9-HxCDF	7.58e+06	2.30e+03	3.3e+03	1.44e+07	2.87e+03	5.0e+03
25	13C-1,2,3,4,6,7,8-HpCDF	6.06e+06	6.16e+03	9.8e+02	1.34e+07	8.59e+03	1.6e+03
26	13C-1,2,3,4,7,8,9-HpCDF	5.01e+06	6.16e+03	8.1e+02	1.11e+07	8.59e+03	1.3e+03
27	13C-2,3,7,8-TCDD	4.47e+06	1.96e+04	2.3e+02	5.87e+06	7.93e+03	7.4e+02
28	13C-1,2,3,7,8-PeCDD	1.26e+07	2.05e+03	6.1e+03	8.03e+06	3.40e+03	2.4e+03
29	13C-1,2,3,4,7,8-HxCDD	1.27e+07	2.81e+03	4.5e+03	1.00e+07	2.38e+03	4.2e+03
30	13C-1,2,3,6,7,8-HxCDD	1.13e+07	2.81e+03	4.0e+03	8.93e+06	2.38e+03	3.8e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.15e+07	2.21e+03	5.2e+03	1.08e+07	1.73e+03	6.2e+03
32	13C-OCDD	8.67e+06	1.60e+03	5.4e+03	9.68e+06	1.04e+03	9.3e+03
33	13C-1,2,3,4-TCDD	1.28e+07	1.96e+04	6.6e+02	1.62e+07	7.93e+03	2.0e+03
34	13C-1,2,3,7,8,9-HxCDD	2.10e+07	2.81e+03	7.5e+03	1.65e+07	2.38e+03	6.9e+03
35	37Cl-2,3,7,8-TCDD	6.09e+06	4.70e+03	1.3e+03			

---Sample Calculation---

$$\text{D/L TCDD} = \frac{2.5 \times (5.444e{+}03 + 3.648e{+}03\ ) \times 2000}{(4.471e{+}06 + 5.872e{+}06\ ) \times (\qquad\qquad) \times 1.049} =$$

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Peak List Summary

CLIENT ID.
SLO 0592

Entry: 36 Totals Name: Total Tetra-Furans

Run: 9 File: P616184 Sample:1 Injection:1 Function:1

Acquired: 25-DEC-18 03:01:44 Processed: 28-DEC-18 11:15:41

Mass: 303.9020 305.8990 Tot Response: 2.55e+05 RRF: 1.081

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:39	4.87e+02	7.42e+02	0.66	yes	1.23e+03		n	n
2	22:56	2.93e+03	3.76e+03	0.78	yes	6.69e+03		n	n
3	23:19	8.78e+02	1.10e+03	0.80	yes	1.98e+03		n	n
4	23:36	2.40e+03	3.08e+03	0.78	yes	5.48e+03		n	n
5	24:20	4.55e+03	6.03e+03	0.76	yes	1.06e+04		n	n
6	24:51	2.81e+04	3.61e+04	0.78	yes	6.42e+04		n	n
7	25:09	1.26e+03	1.77e+03	0.72	yes	3.03e+03		n	n
8	25:53	6.34e+04	7.76e+04	0.82	yes	1.41e+05	2,3,7,8-TCDF	n	n
9	26:18	4.46e+03	6.01e+03	0.74	yes	1.05e+04		n	n
10	28:05	4.81e+03	5.85e+03	0.82	yes	1.07e+04		n	n

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Peak List Summary

CLIENT ID.

SLO 0592

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 9 File: P616184 Sample:1 Injection:1 Function:1

Acquired: 25-DEC-18 03:01:44 Processed: 28-DEC-18 11:15:41

Mass: 319.8970 321.8940 Tot Response: 2.77e+04 RRF: 1.049

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	26:05	4.83e+01	6.15e+01	0.79	yes	1.10e+02		n	n
2	26:52	1.13e+04	1.39e+04	0.81	yes	2.52e+04	2,3,7,8-TCDD	n	n
3	27:13	1.00e+03	1.41e+03	0.71	yes	2.41e+03		n	n

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Peak List Summary

CLIENT ID.
SLO 0592

Entry: 39 Totals Name: Total Penta-Furans2

Run: 9 File: P616184 Sample:1 Injection:1 Function:2

Acquired: 25-DEC-18 03:01:44 Processed: 28-DEC-18 11:15:41

Mass: 339.8600 341.8570 Tot Response: 9.31e+03 RRF: 1.130

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:44	9.80e+02	6.92e+02	1.42	yes	1.67e+03		n	n
2	30:34	2.66e+02	1.70e+02	1.56	yes	4.36e+02		n	n
3	30:46	2.20e+03	1.50e+03	1.46	yes	3.70e+03	1,2,3,7,8-PeCDF	n	n
4	31:46	2.11e+03	1.39e+03	1.52	yes	3.50e+03	2,3,4,7,8-PeCDF	n	n

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Peak List Summary

CLIENT ID.

SLO 0592

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 9 File: P616184 Sample:1 Injection:1 Function:2

Acquired: 25-DEC-18 03:01:44 Processed: 28-DEC-18 11:15:41

Mass: 355.8550 357.8520 Tot Response: 4.56e+02 RRF: 0.9288

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	31:18	2.77e+02	1.78e+02 1.55	yes	4.56e+02		n	n

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Peak List Summary

CLIENT ID.

SLO 0592

Entry: 41 Totals Name: Total Hexa-Furans

Run: 9 File: P616184 Sample:1 Injection:1 Function:3

Acquired: 25-DEC-18 03:01:44 Processed: 28-DEC-18 11:15:41

Mass: 373.8210 375.8180 Tot Response: 6.39e+03 RRF: 1.324

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:02	3.99e+01	3.51e+01 1.14	yes	7.50e+01		n	n
2	34:35	2.49e+03	2.00e+03 1.24	yes	4.49e+03	1,2,3,4,7,8-HxCDF	n	n
3	34:42	7.92e+02	6.30e+02 1.26	yes	1.42e+03	1,2,3,6,7,8-HxCDF	n	n
4	36:00	2.16e+02	1.89e+02 1.14	yes	4.04e+02	1,2,3,7,8,9-HxCDF	n	n

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Peak List Summary

CLIENT ID.
SLO 0592

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 9 File: P616184 Sample:1 Injection:1 Function:3

Acquired: 25-DEC-18 03:01:44 Processed: 28-DEC-18 11:15:41

Mass: 389.8160 391.8130 Tot Response: 9.45e+03 RRF: 1.092

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:58	3.48e+03	2.79e+03	1.25	yes	6.27e+03		n	n
2	34:31	1.00e+02	7.29e+01	1.37	yes	1.73e+02		n	n
3	34:45	1.22e+03	9.38e+02	1.30	yes	2.15e+03		n	n
4	35:22	9.83e+01	8.19e+01	1.20	yes	1.80e+02	1,2,3,4,7,8-HxCDD	n	n
5	35:27	1.44e+02	1.19e+02	1.21	yes	2.63e+02	1,2,3,6,7,8-HxCDD	n	n
6	35:42	2.16e+02	1.92e+02	1.12	yes	4.08e+02	1,2,3,7,8,9-HxCDD	n	n

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Peak List Summary

CLIENT ID.
SLO 0592

Entry: 43 Totals Name: Total Hepta-Furans

Run: 9 File: P616184 Sample:1 Injection:1 Function:4

Acquired: 25-DEC-18 03:01:44 Processed: 28-DEC-18 11:15:41

Mass: 407.7820 409.7790 Tot Response: 2.44e+03 RRF: 1.495

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:16	8.00e+02	7.20e+02	1.11	yes	1.52e+03	1,2,3,4,6,7,8-HpCDF	n	n
2	37:31	1.33e+01	1.42e+01	0.94	yes	2.75e+01		n	n
3	37:40	2.56e+02	2.52e+02	1.02	yes	5.09e+02		n	n
4	38:35	1.96e+02	1.88e+02	1.04	yes	3.84e+02	1,2,3,4,7,8,9-HpCDF	n	n

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Peak List Summary

CLIENT ID.
SLO 0592

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 9 File: P616184 Sample:1 Injection:1 Function:4

Acquired: 25-DEC-18 03:01:44 Processed: 28-DEC-18 11:15:41

Mass: 423.7770 425.7740 Tot Response: 3.00e+04 RRF: 1.112

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:31	1.10e+04	1.04e+04	1.06	yes	2.15e+04		n	n
2	38:10	4.25e+03	4.27e+03	1.00	yes	8.52e+03	1,2,3,4,6,7,8-HpCDD	n	n

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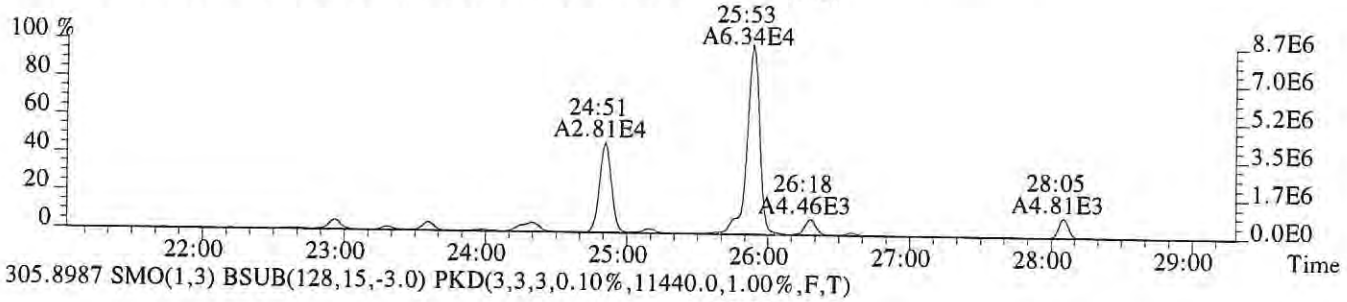
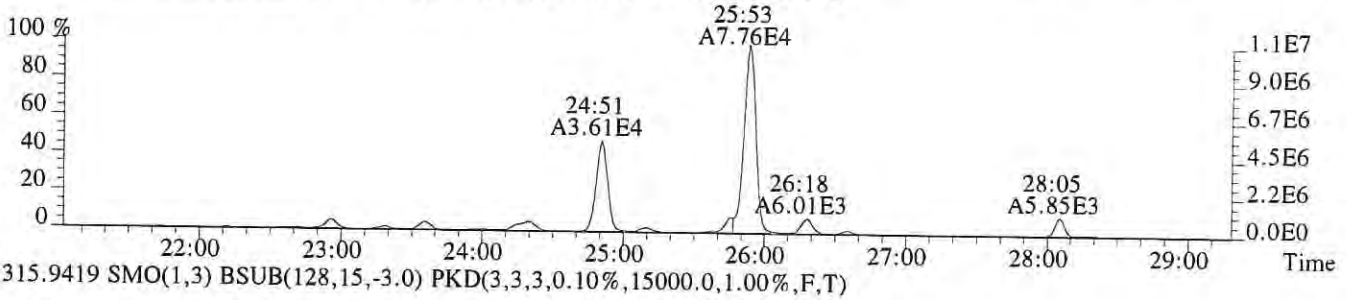
File:P616184 #1-587 Acq:25-DEC-2018 03:01:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-003

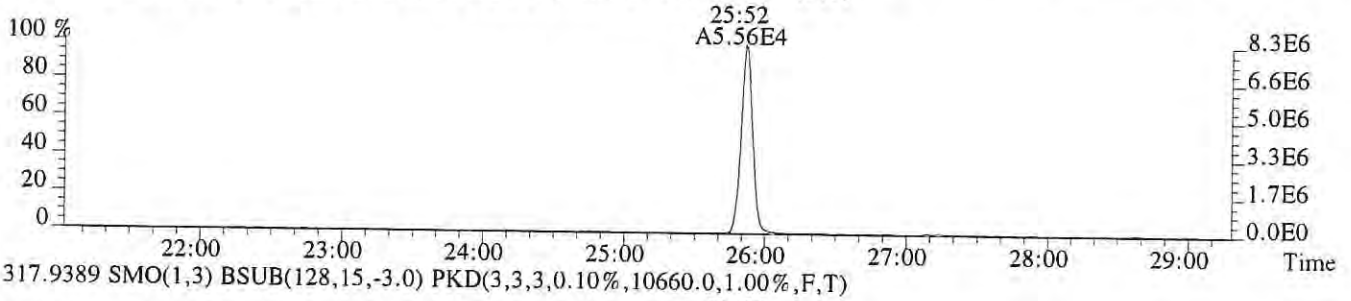
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1908.0,1.00%,F,T)



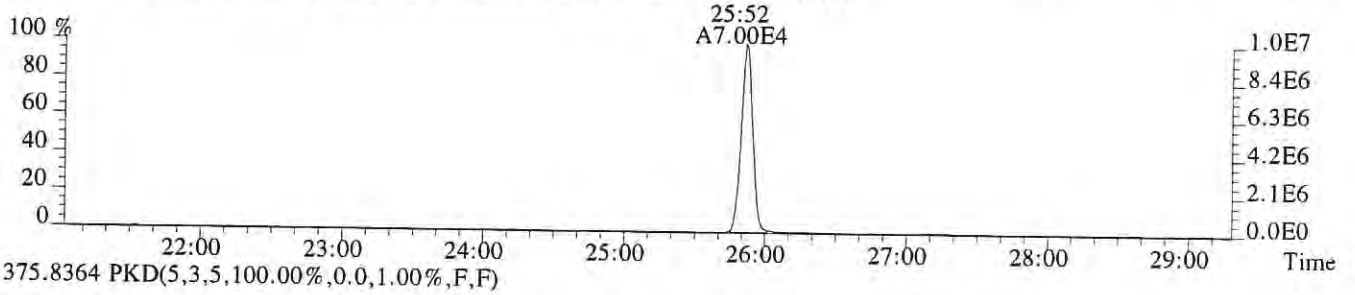
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11440.0,1.00%,F,T)



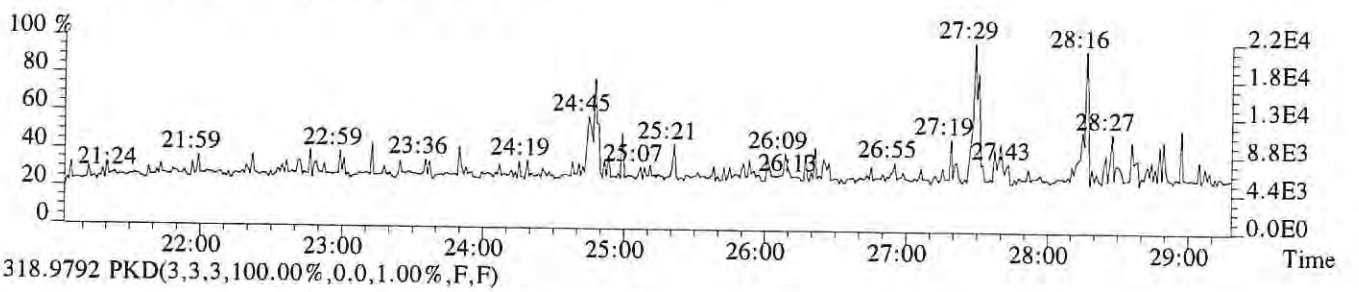
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,15000.0,1.00%,F,T)



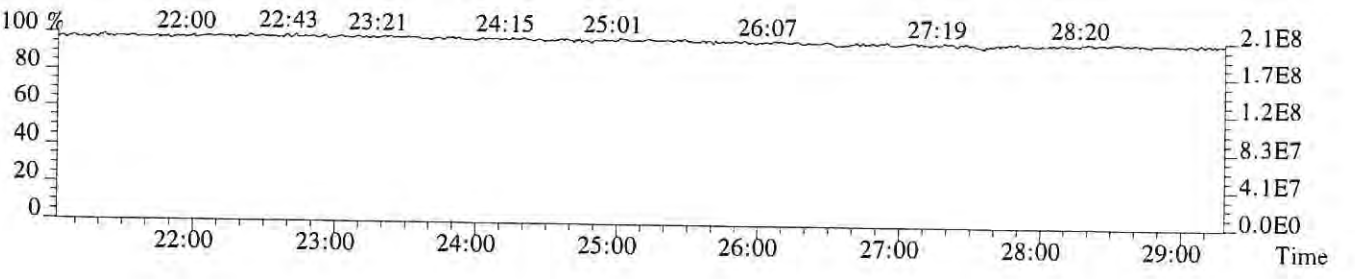
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10660.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

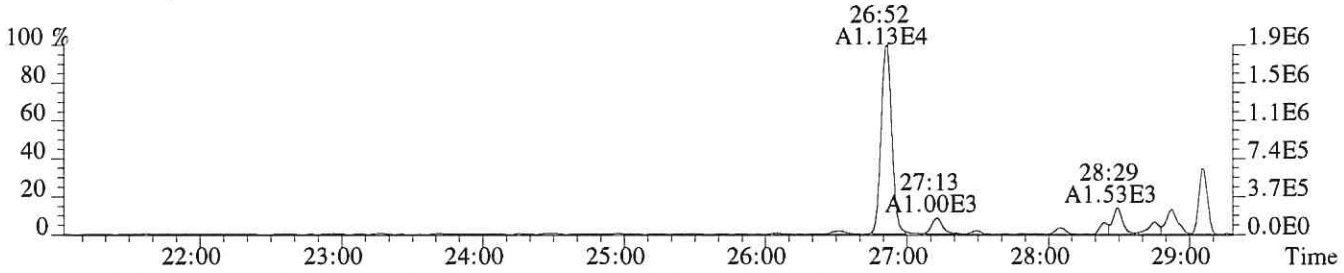


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

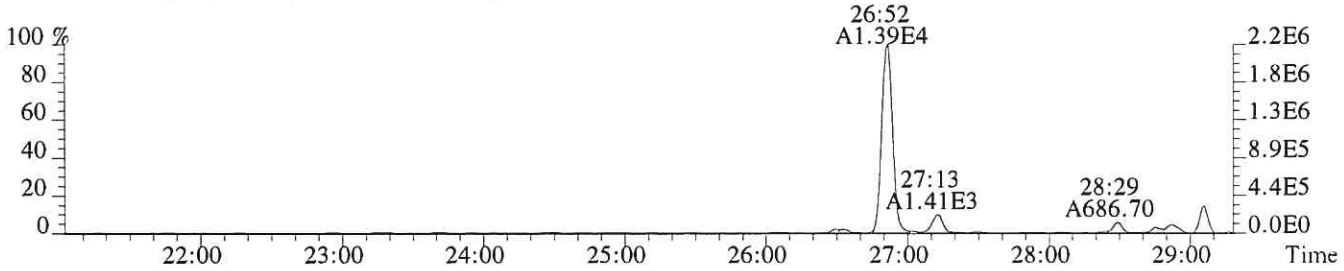


File:P616184 #1-587 Acq:25-DEC-2018 03:01:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-003

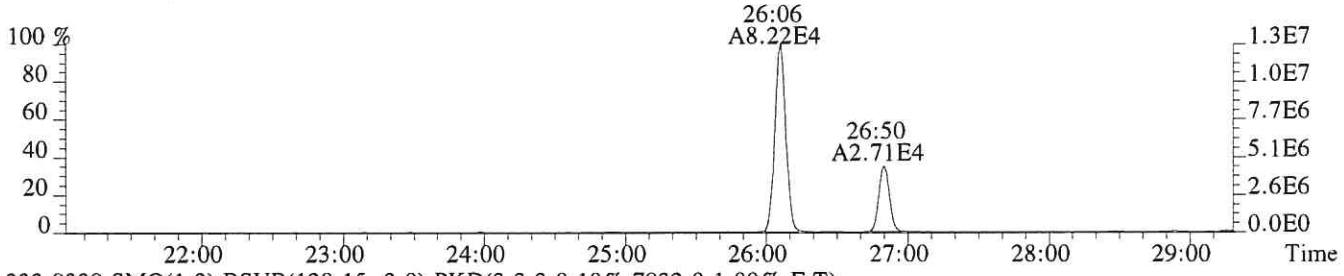
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5444.0,1.00%,F,T)



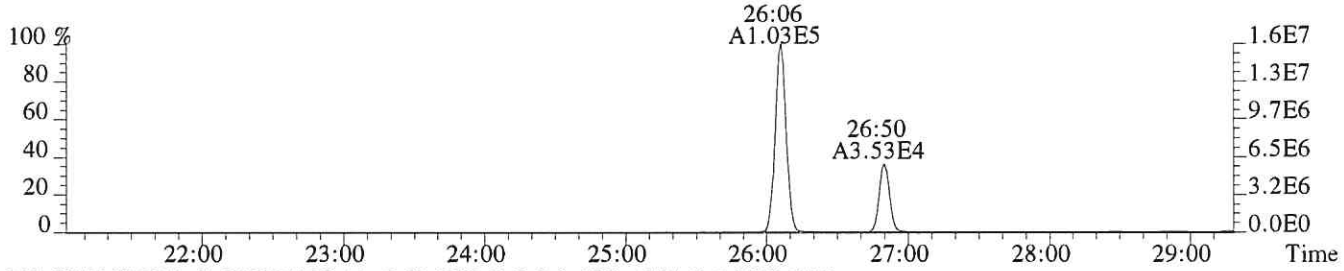
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3648.0,1.00%,F,T)



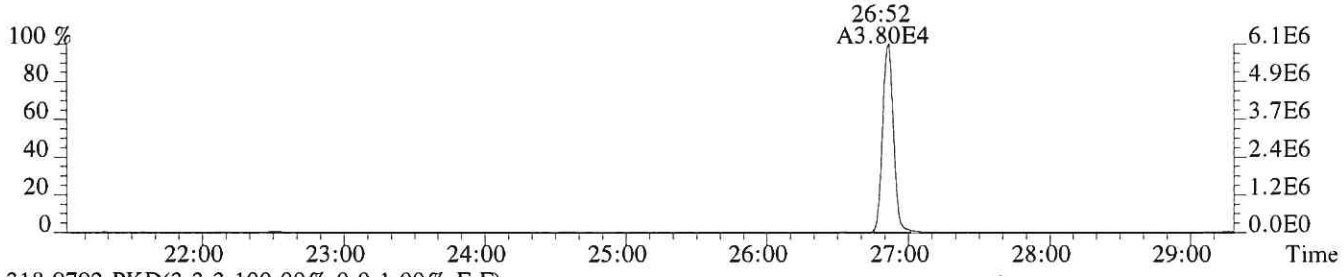
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,19572.0,1.00%,F,T)



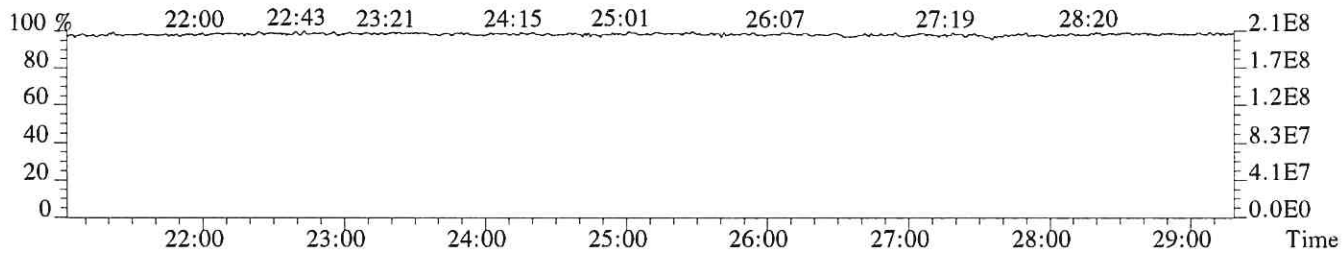
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7932.0,1.00%,F,T)



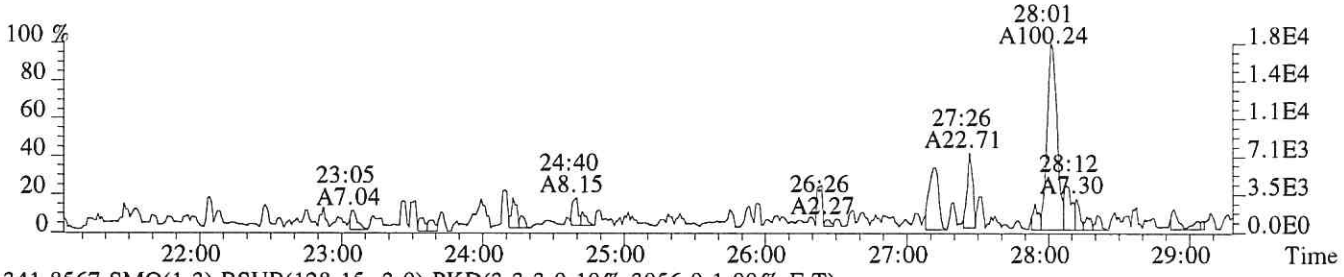
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4704.0,1.00%,F,T)



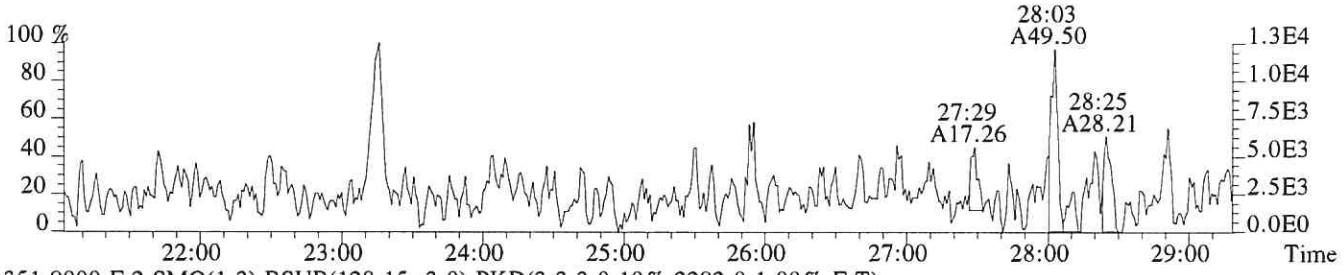
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



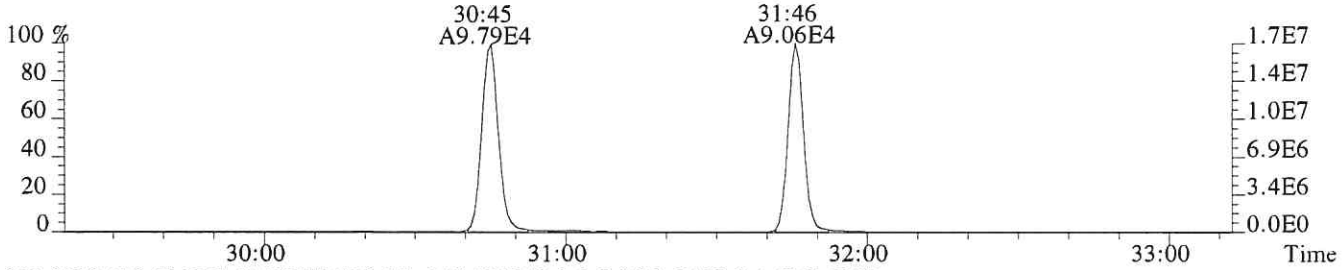
File:P616184 #1-587 Acq:25-DEC-2018 03:01:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-003
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1252.0,1.00%,F,T)



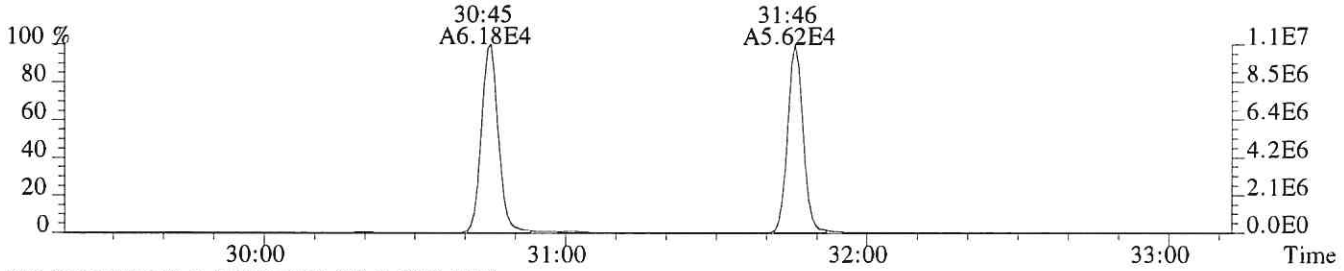
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3056.0,1.00%,F,T)



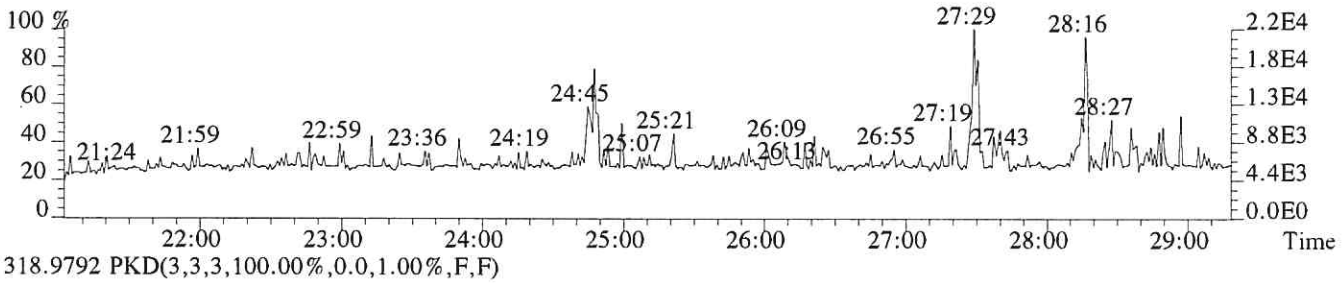
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2292.0,1.00%,F,T)



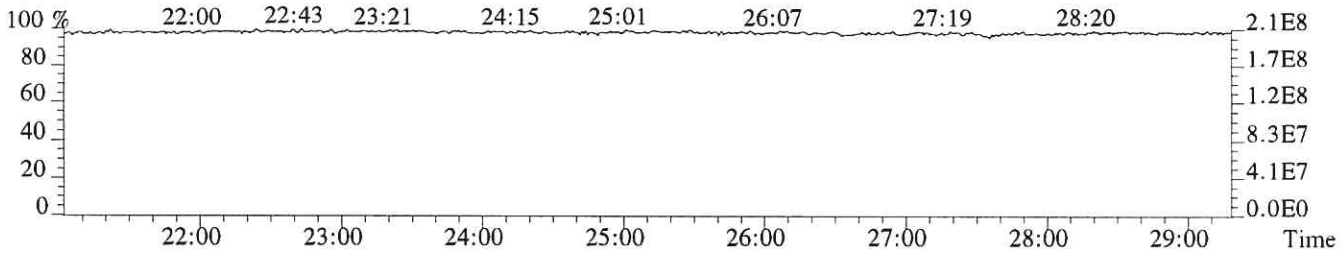
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2460.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

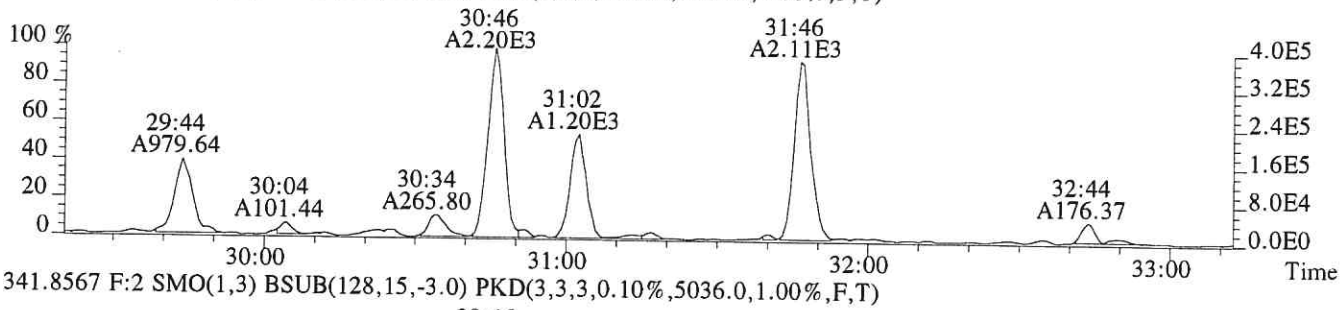


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

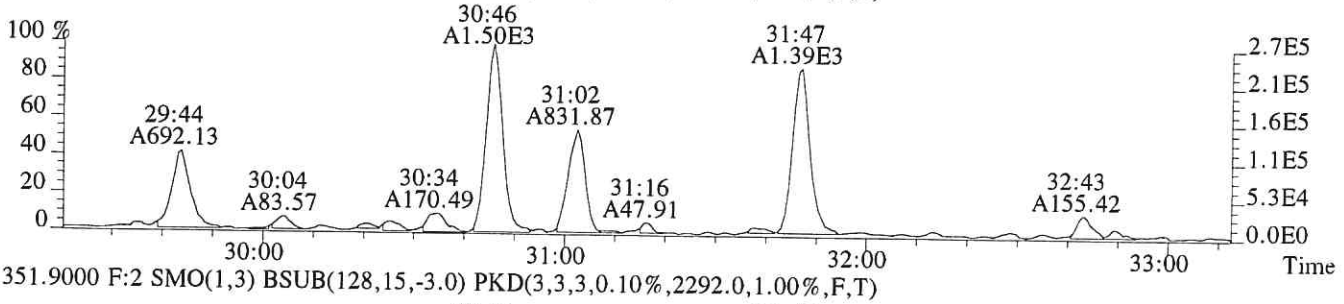


File:P616184 #1-349 Acq:25-DEC-2018 03:01:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-003

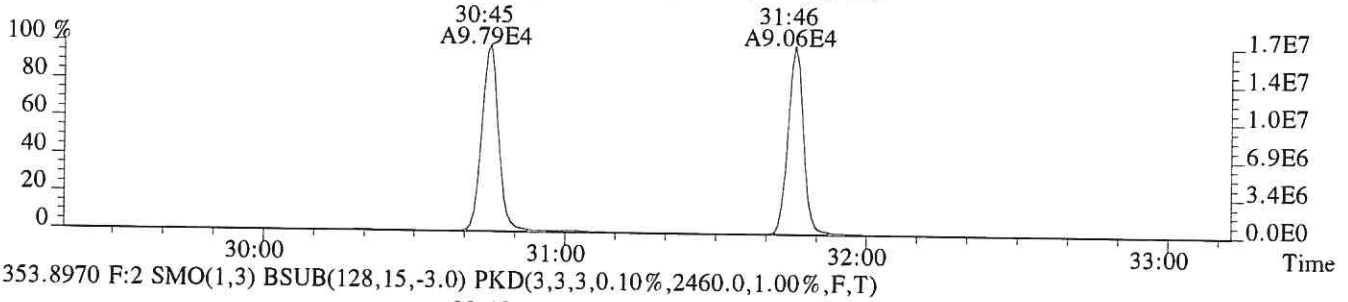
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5244.0,1.00%,F,T)



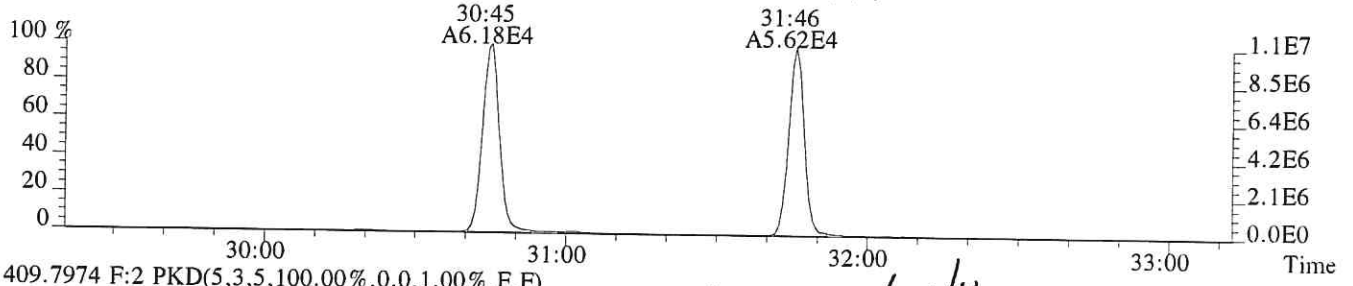
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5036.0,1.00%,F,T)



351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2292.0,1.00%,F,T)



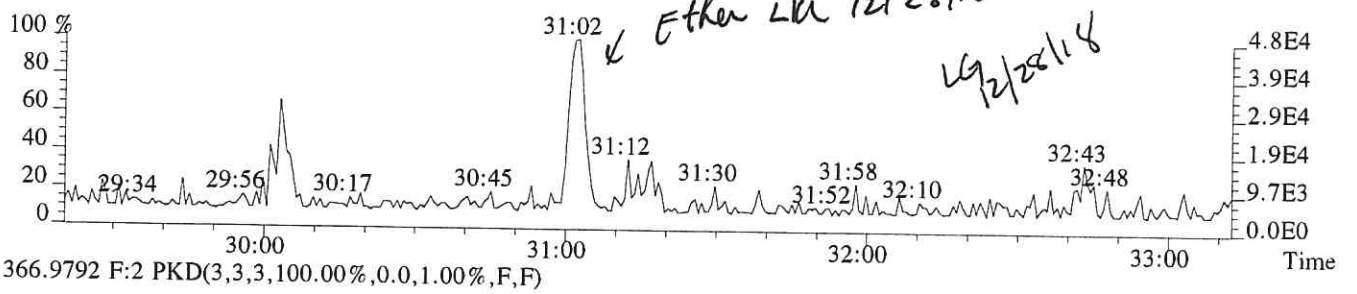
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2460.0,1.00%,F,T)



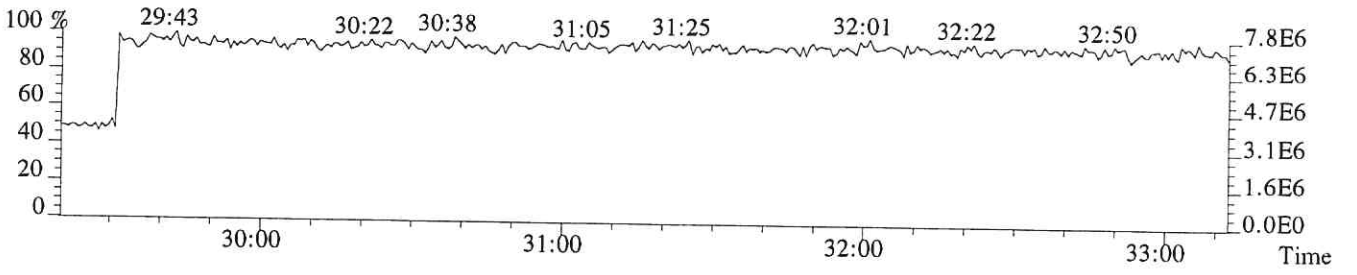
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

K Ether LCL 12/28/18

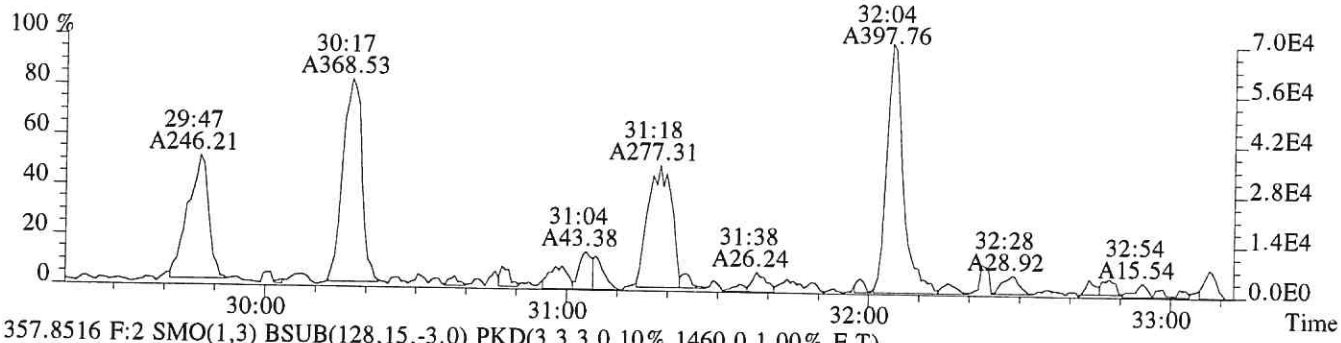
LG 12/28/18



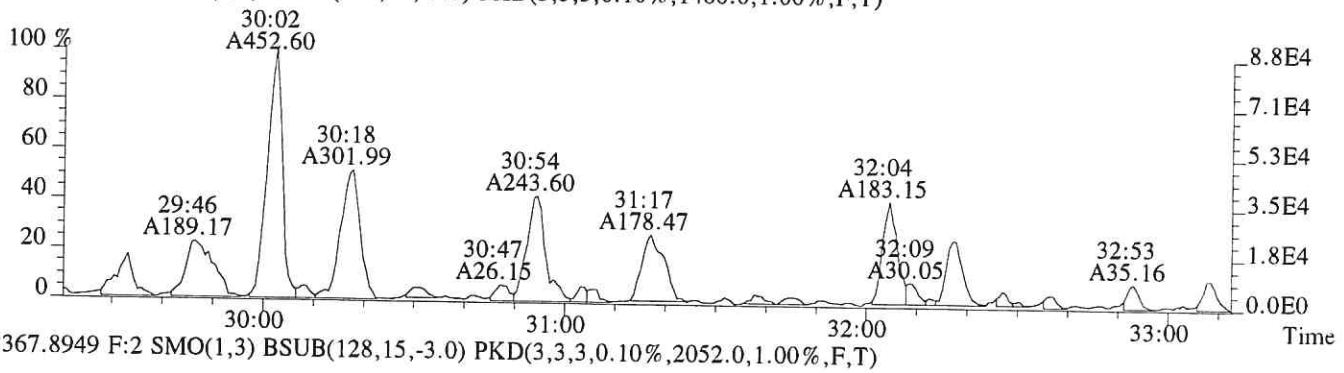
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



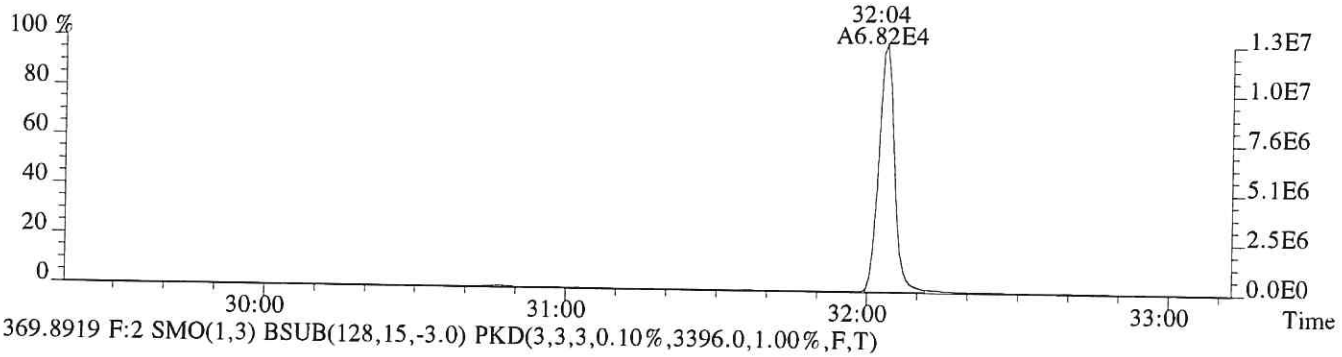
File:P616184 #1-349 Acq:25-DEC-2018 03:01:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-003
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1680.0,1.00%,F,T)



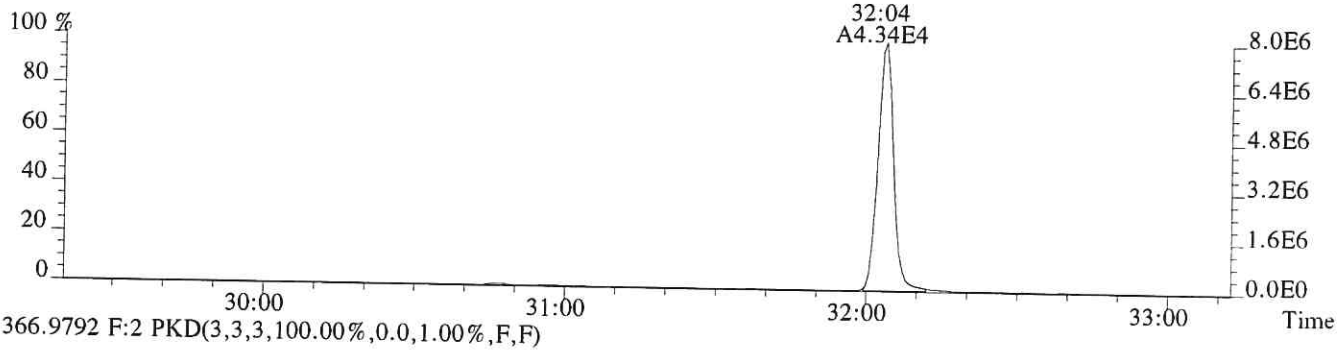
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1460.0,1.00%,F,T)



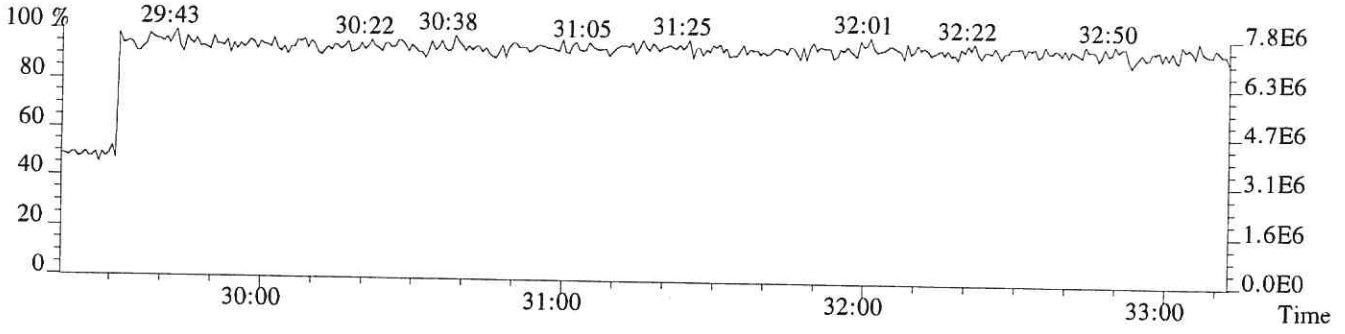
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2052.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3396.0,1.00%,F,T)

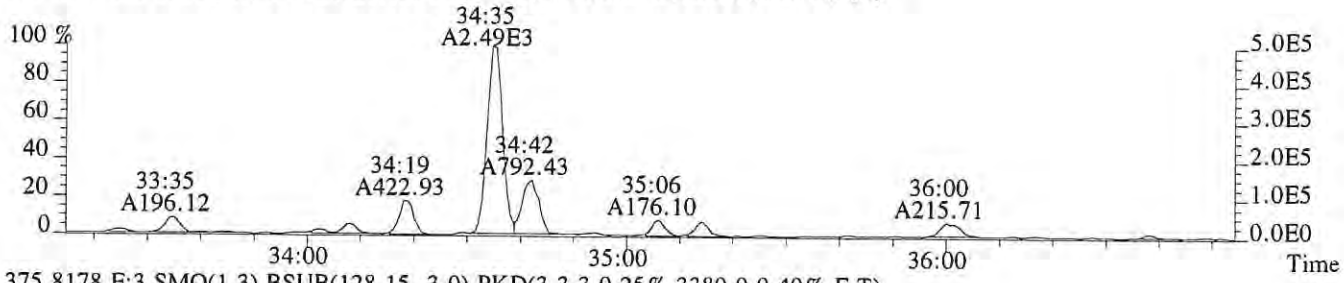


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

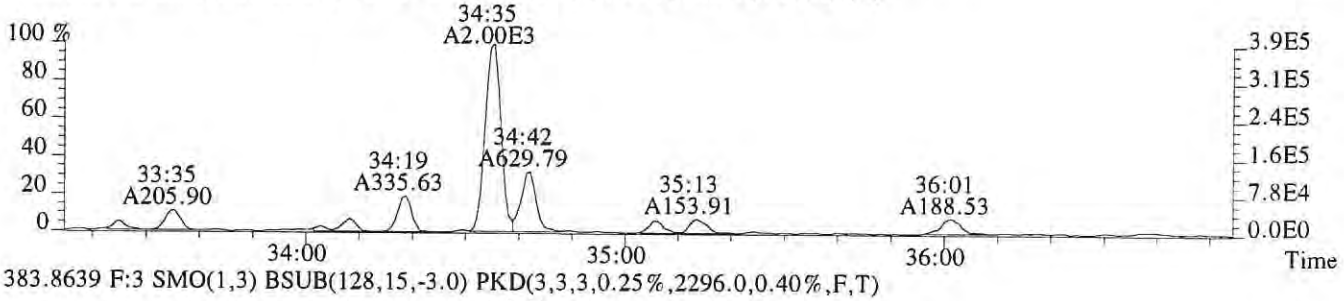


File:P616184 #1-330 Acq:25-DEC-2018 03:01:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-003

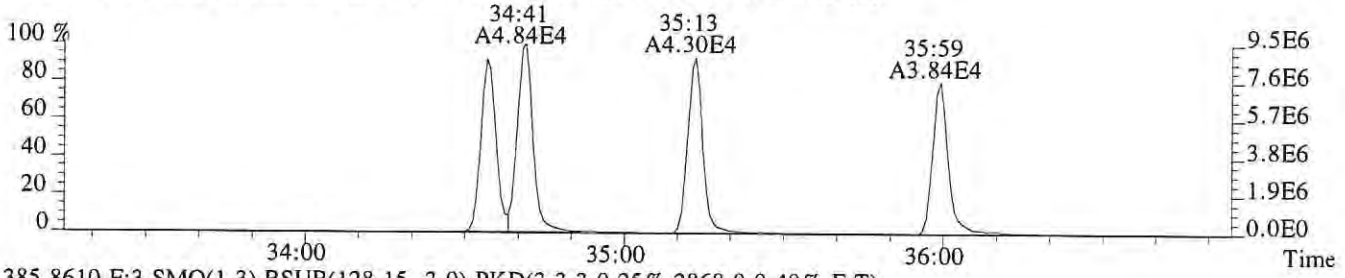
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4464.0,0.40%,F,T)



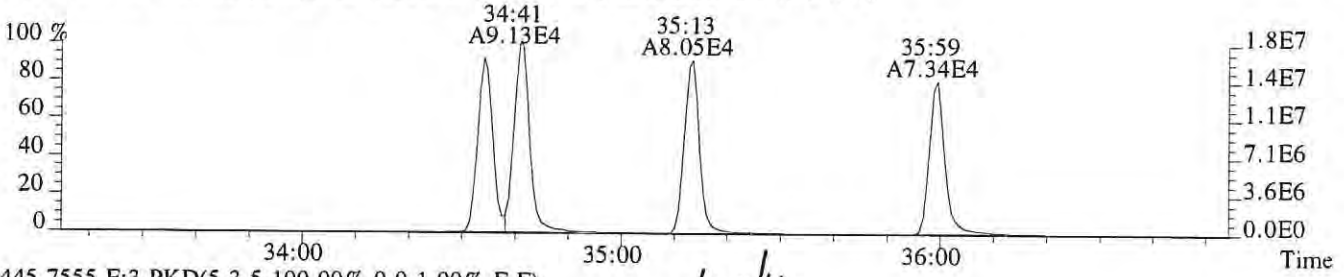
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3380.0,0.40%,F,T)



383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2296.0,0.40%,F,T)



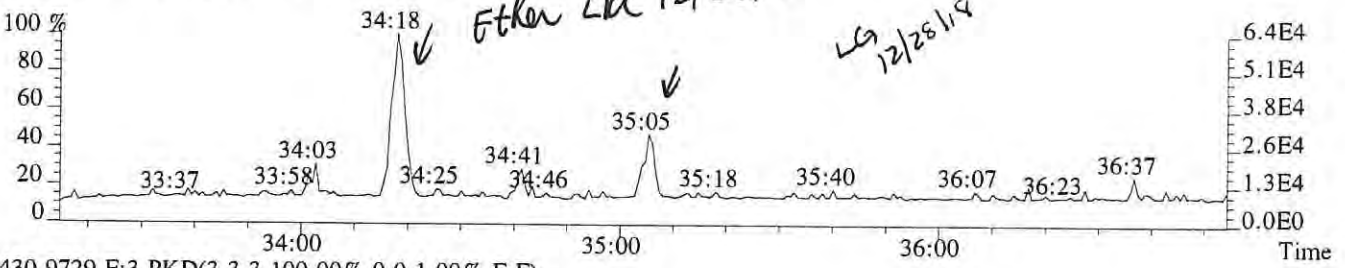
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2868.0,0.40%,F,T)



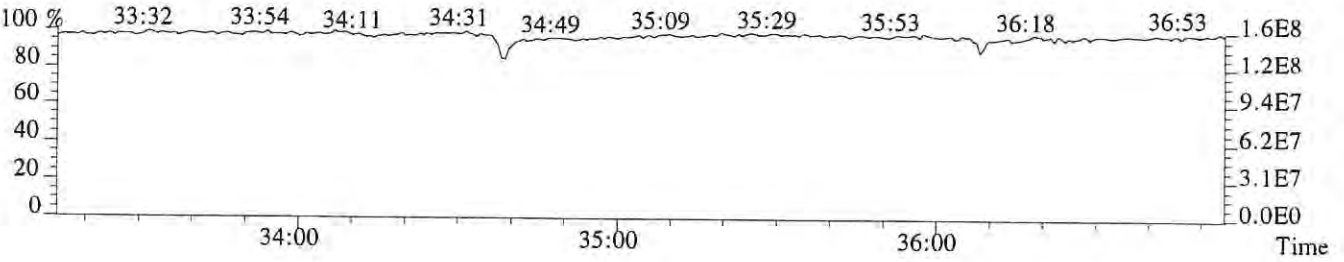
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

Ether LKU 12/28/18

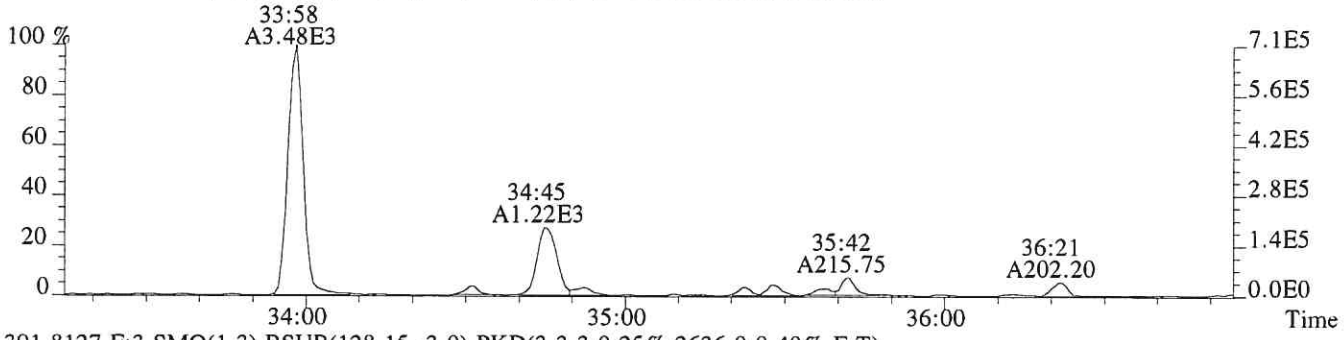
LG 12/28/18



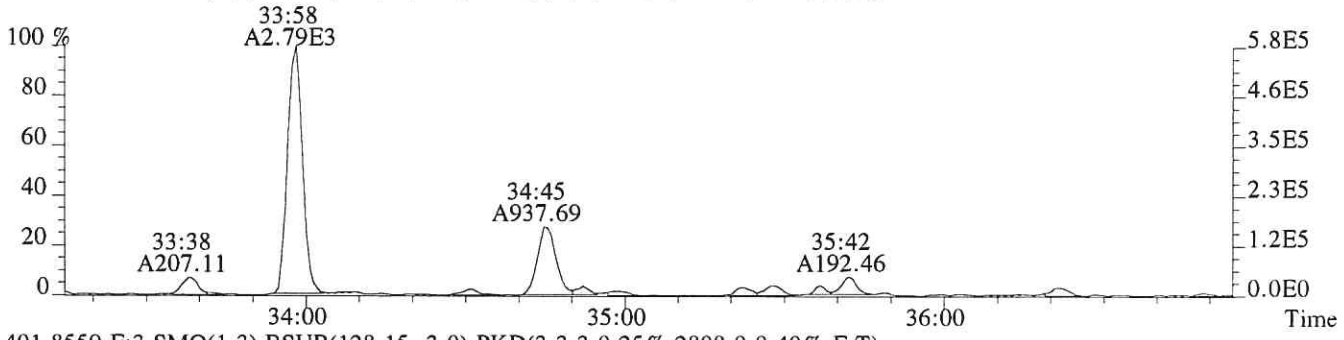
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



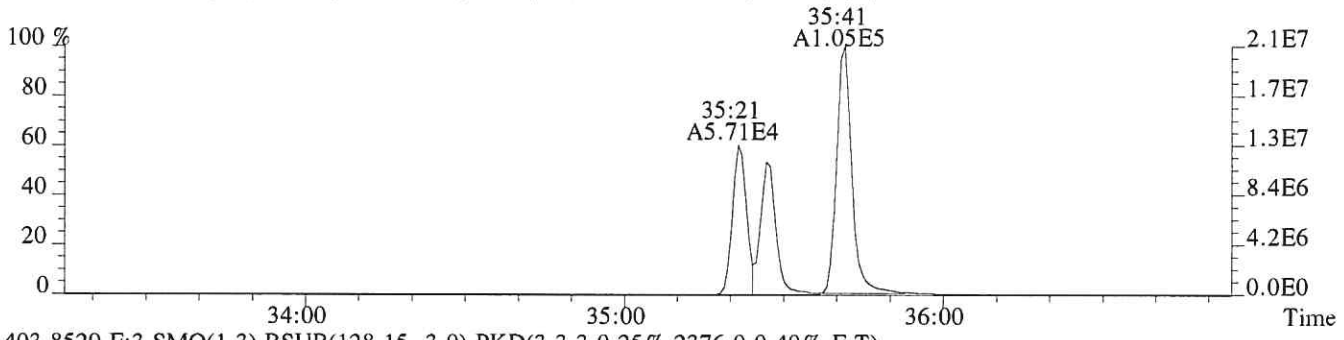
File:P616184 #1-330 Acq:25-DEC-2018 03:01:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-003
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3204.0,0.40%,F,T)



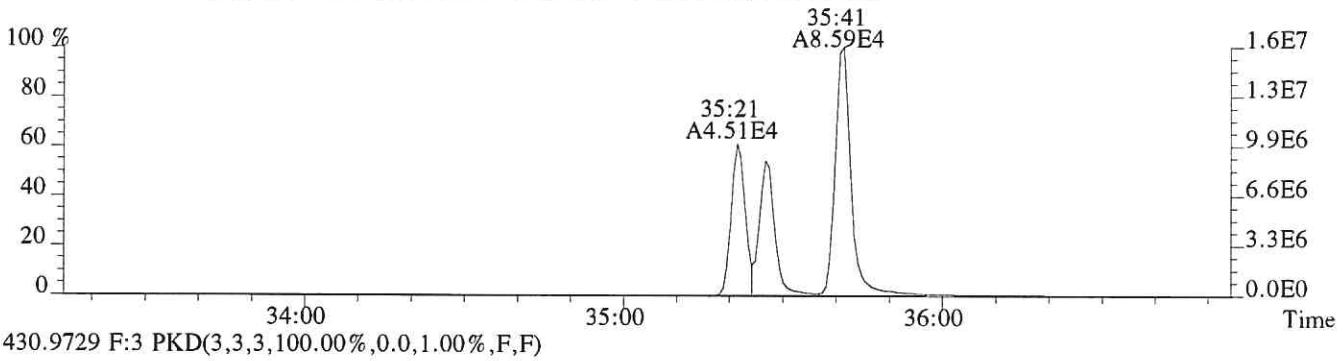
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2636.0,0.40%,F,T)



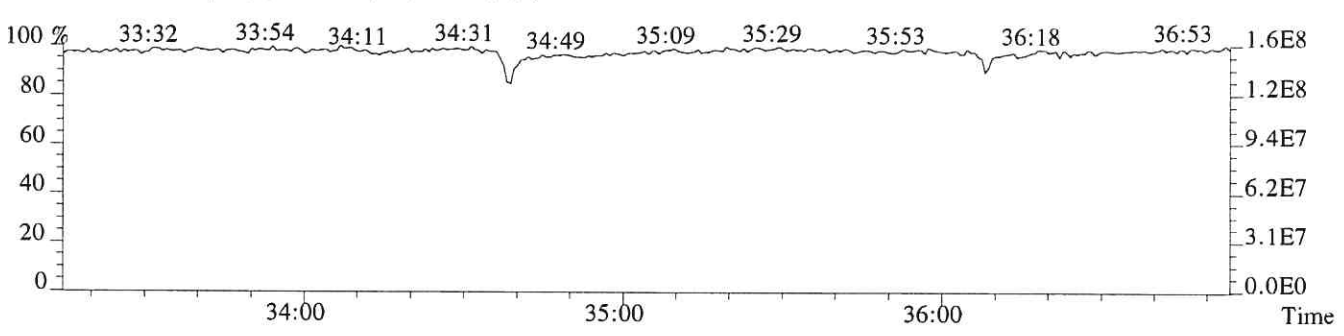
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2808.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2376.0,0.40%,F,T)

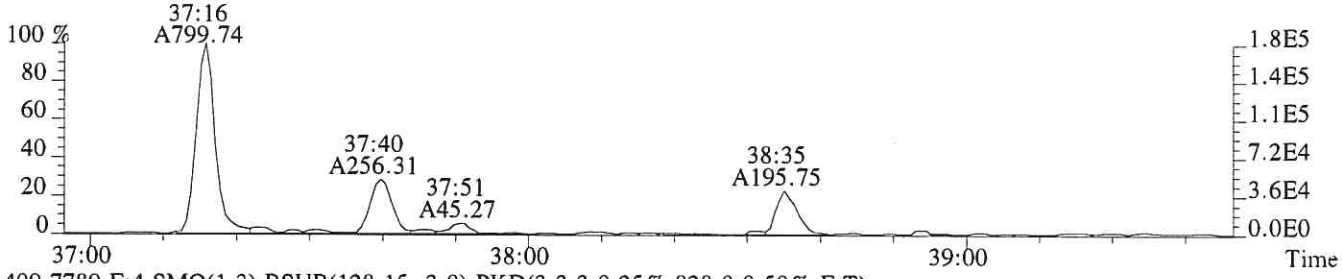


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

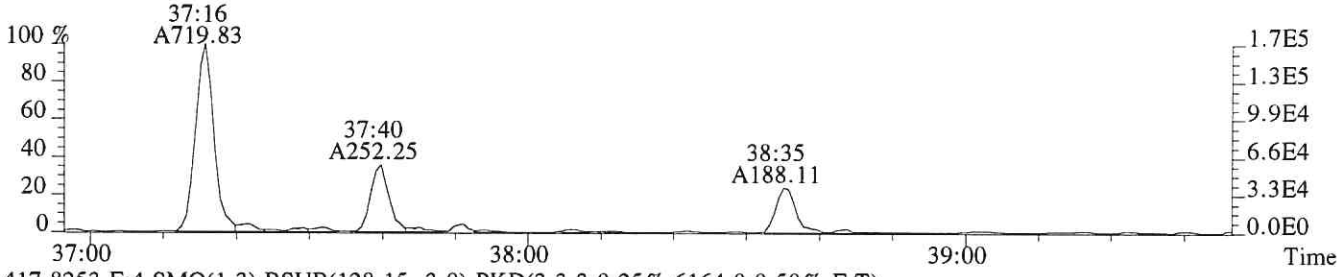


File:P616184 #1-241 Acq:25-DEC-2018 03:01:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-003

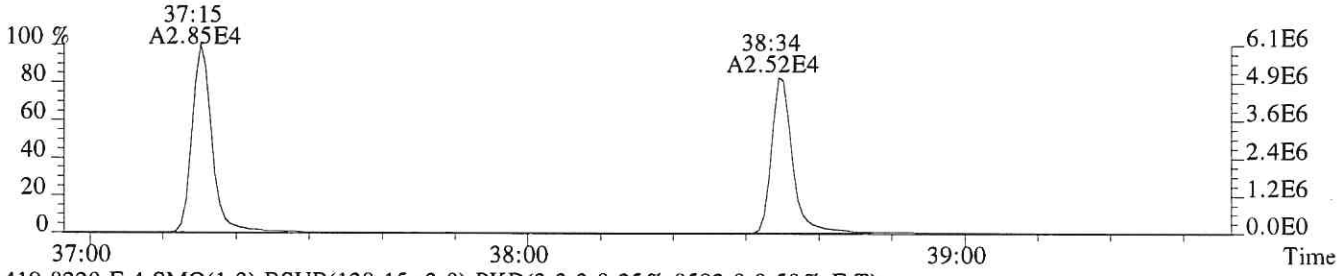
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1124.0,0.50%,F,T)



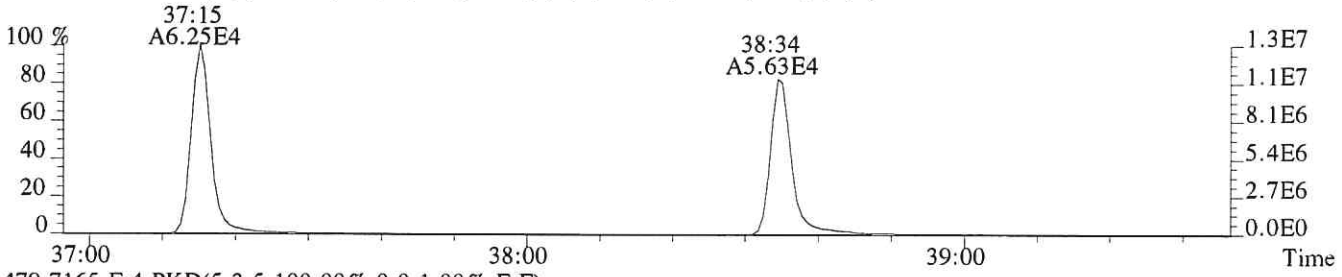
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,828.0,0.50%,F,T)



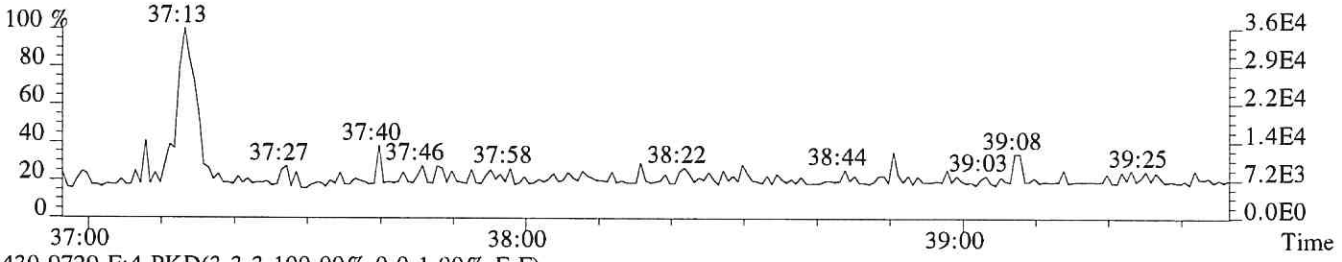
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6164.0,0.50%,F,T)



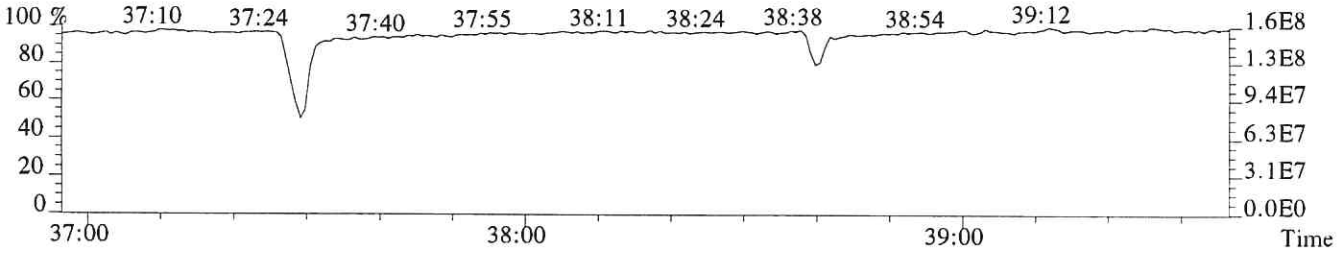
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,8592.0,0.50%,F,T)



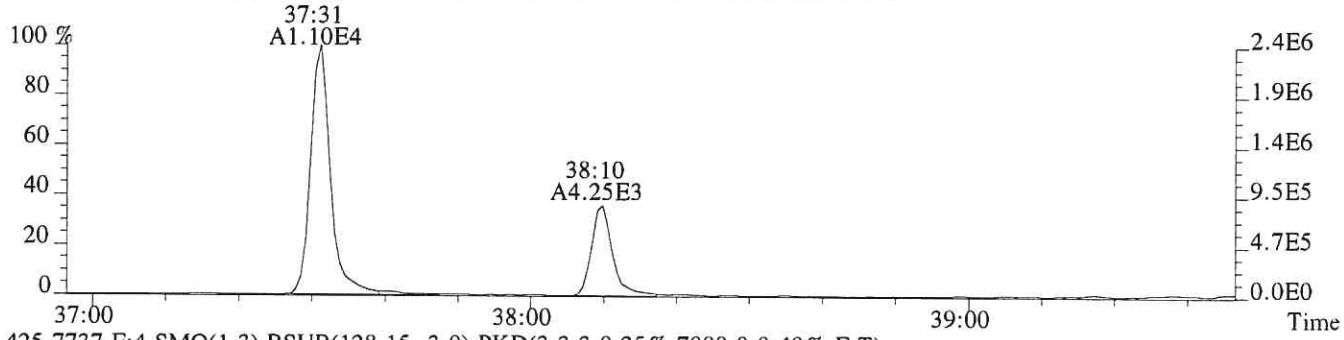
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



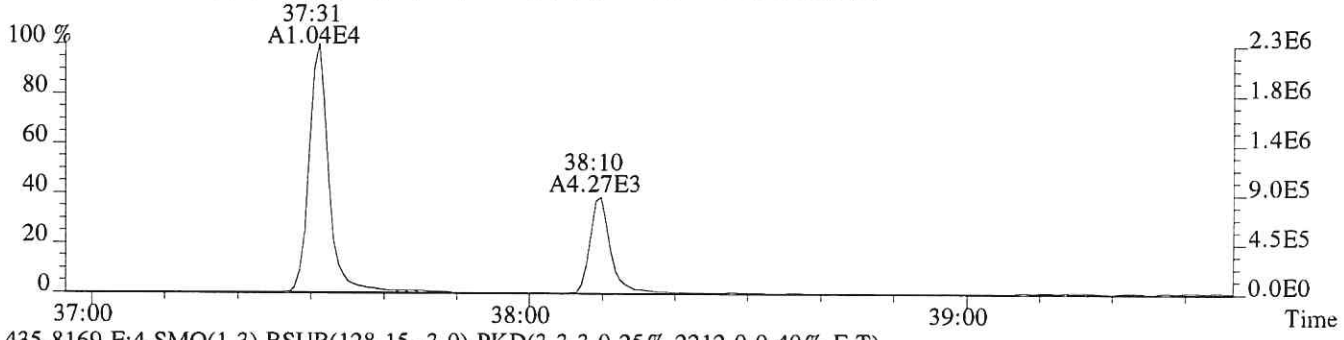
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



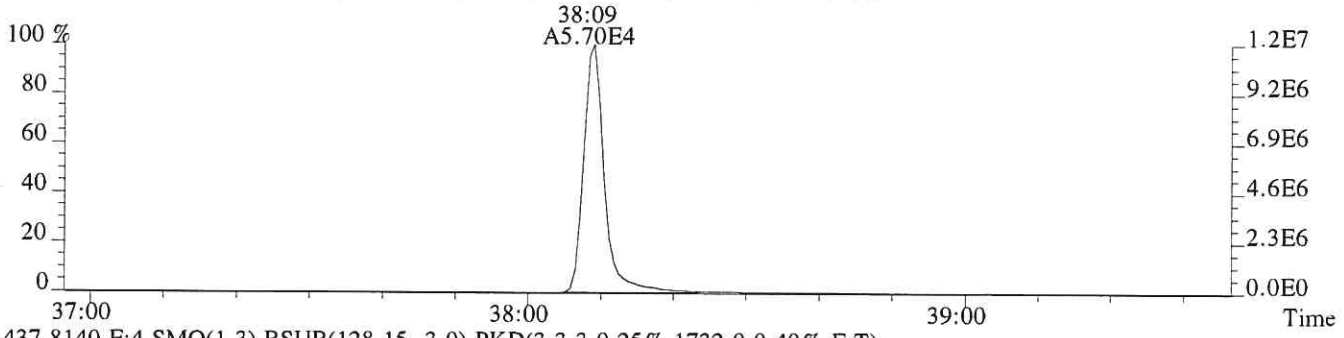
File:P616184 #1-241 Acq:25-DEC-2018 03:01:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-003
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,10932.0,0.40%,F,T)



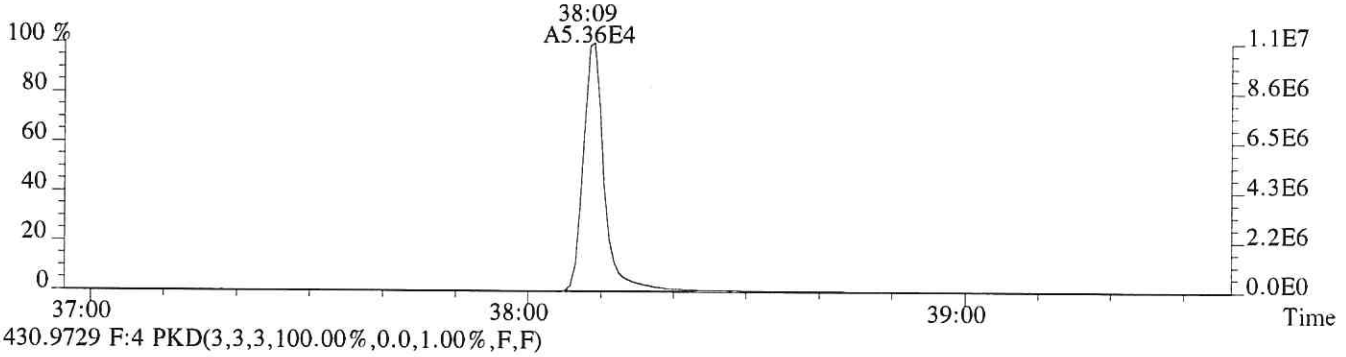
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7088.0,0.40%,F,T)



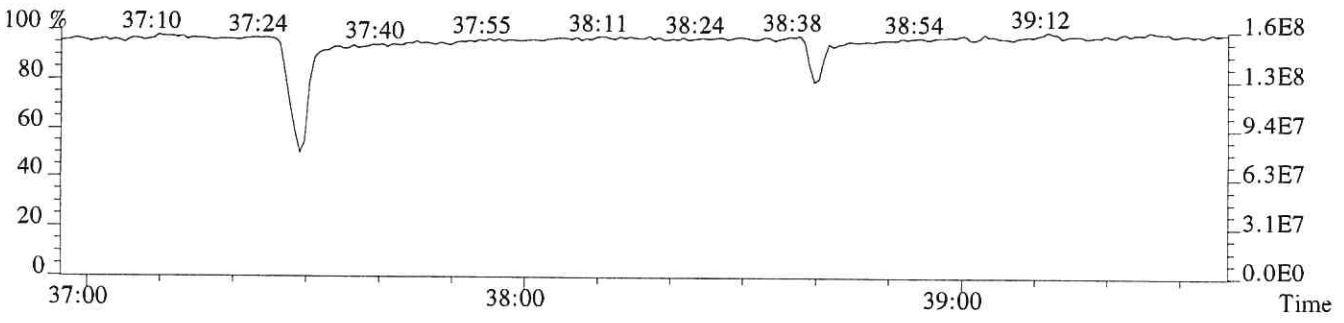
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2212.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1732.0,0.40%,F,T)

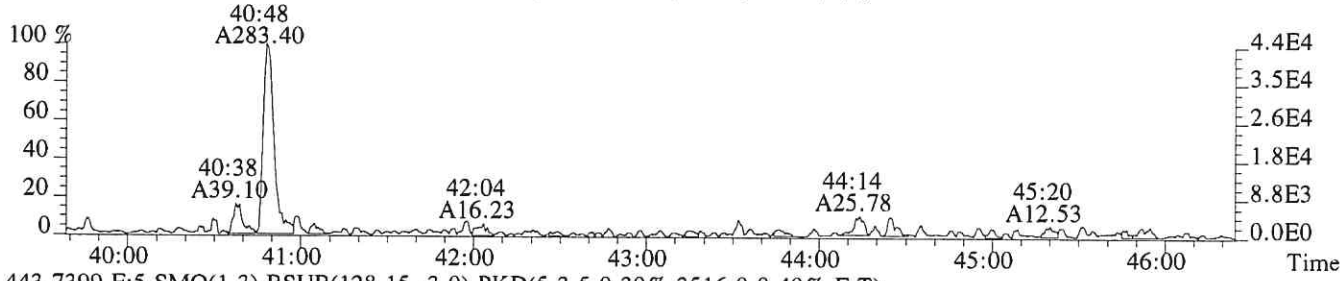


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

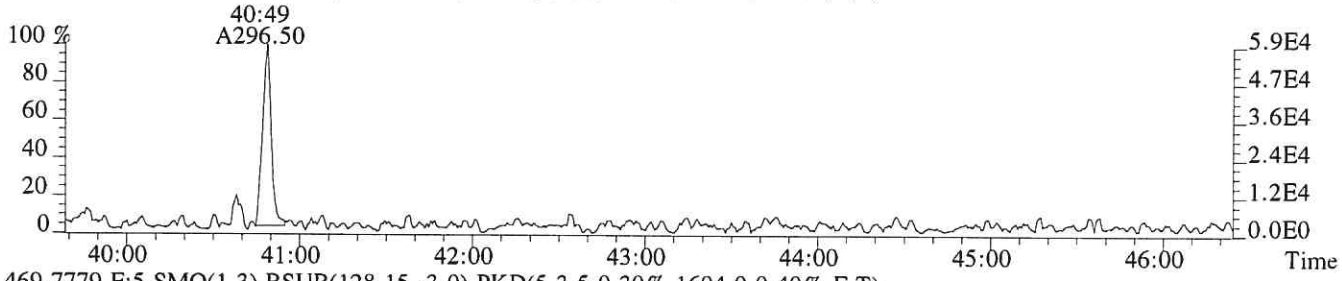


File:P616184 #1-609 Acq:25-DEC-2018 03:01:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-003

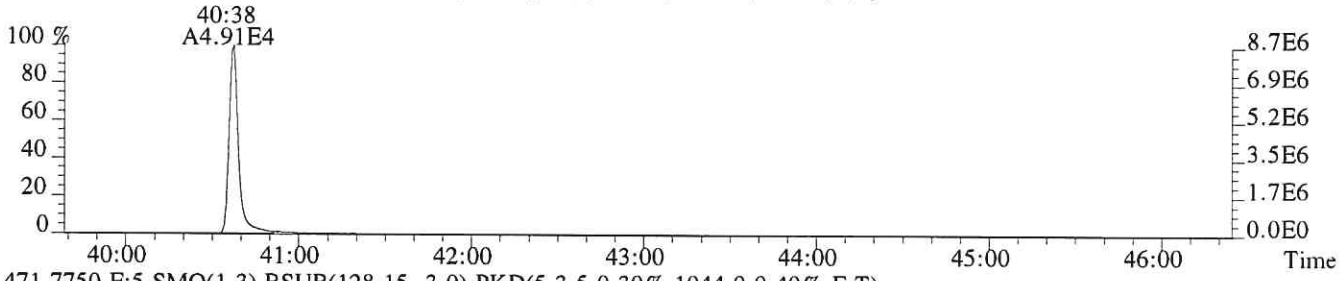
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,780.0,0.40%,F,T)



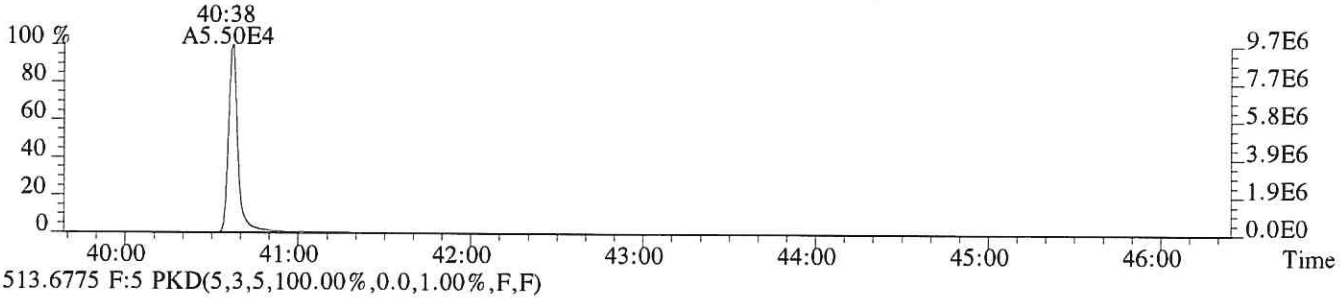
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3516.0,0.40%,F,T)



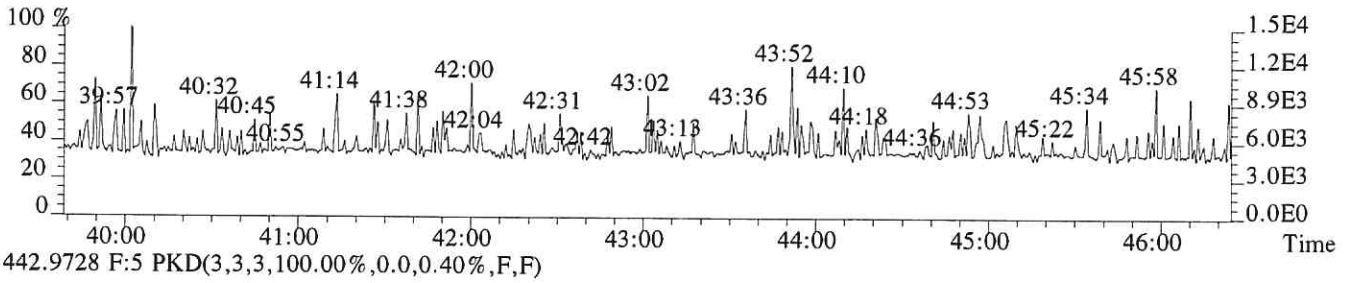
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1604.0,0.40%,F,T)



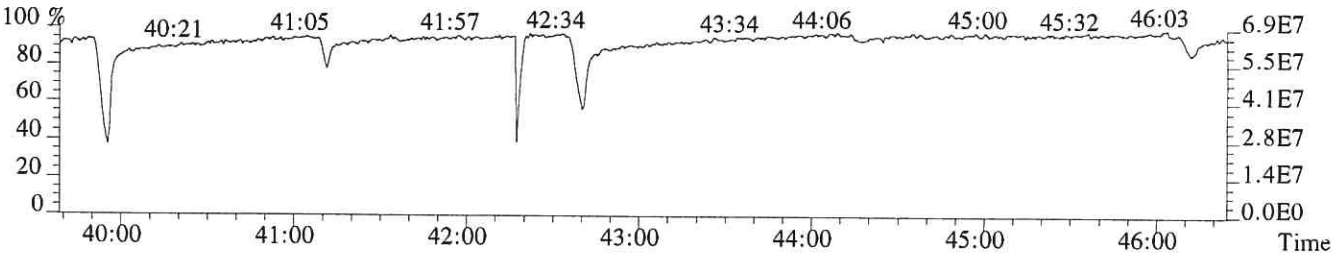
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1044.0,0.40%,F,T)



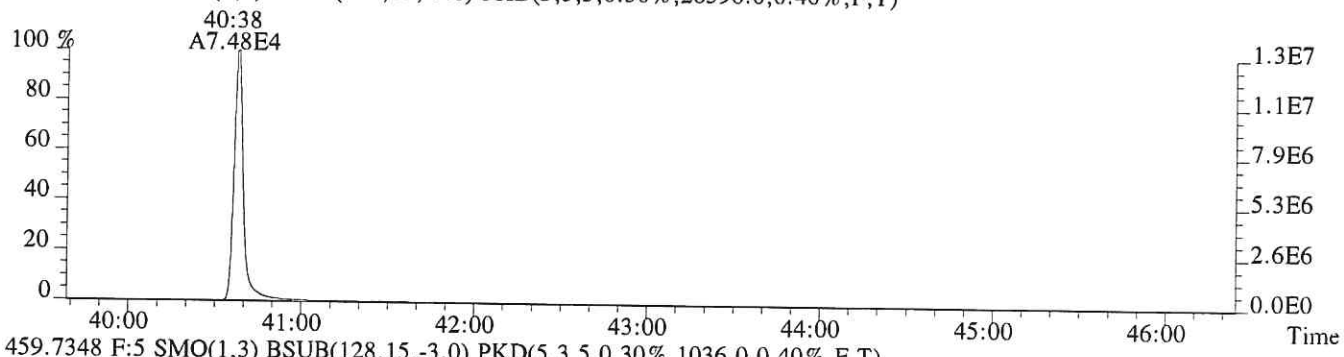
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



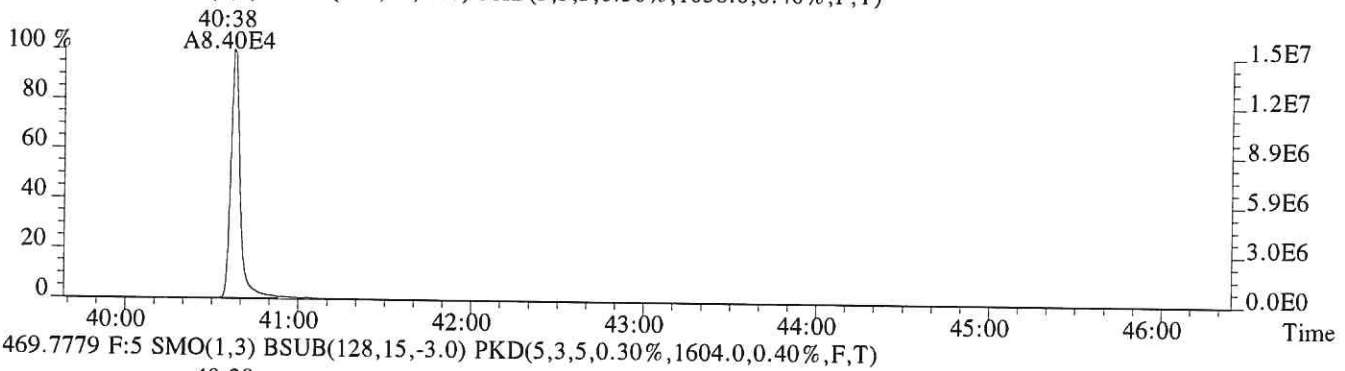
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



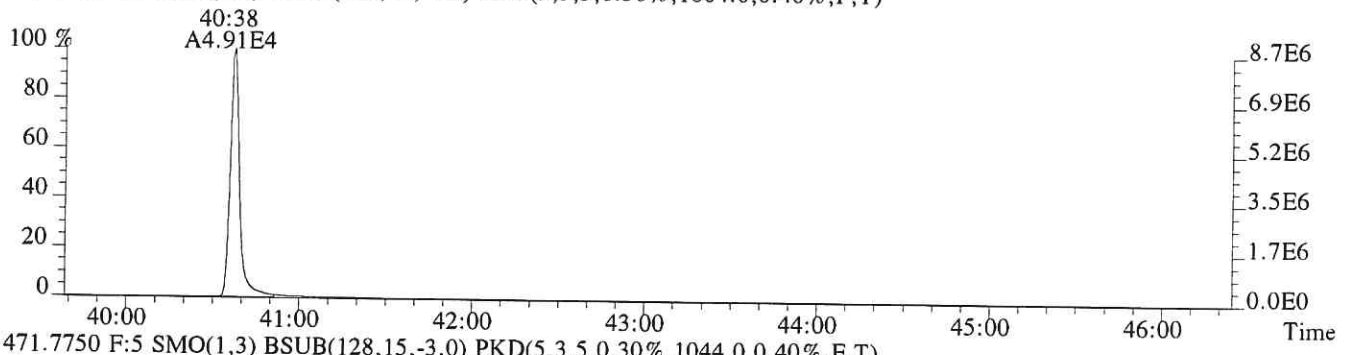
File:P616184 #1-609 Acq:25-DEC-2018 03:01:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-003
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,26596.0,0.40%,F,T)



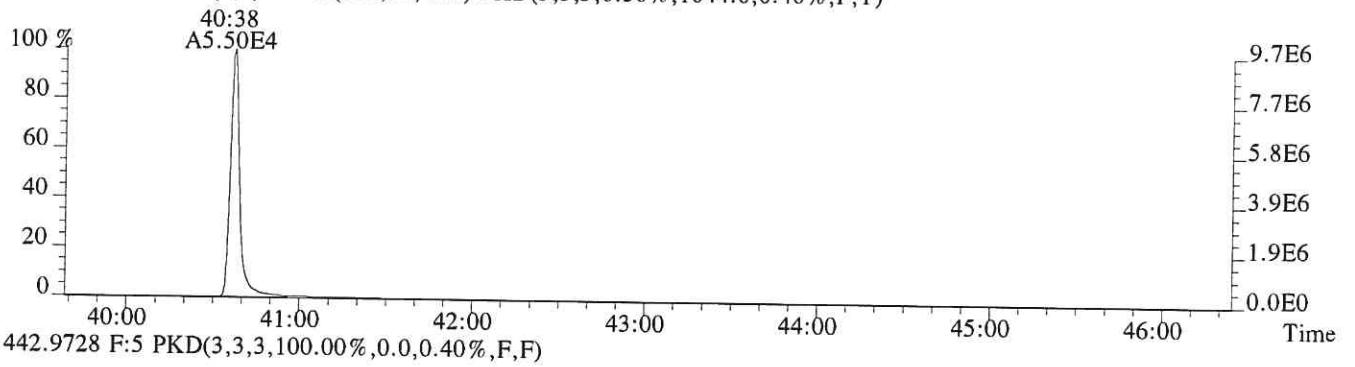
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1036.0,0.40%,F,T)



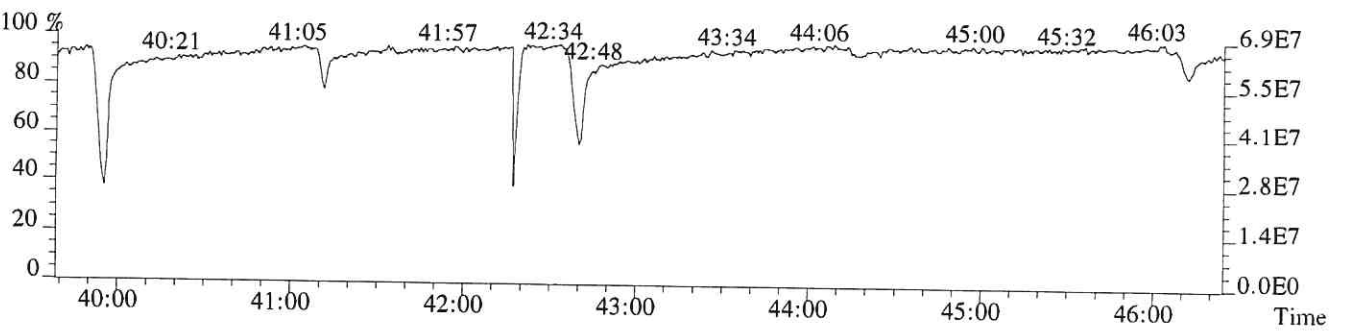
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1604.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1044.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SLO 0593

Run #10 Filename P616185 Samp: 1 Inj: 1 Acquired: 25-DEC-18 03:50:54
Processed: 28-DEC-18 11:16:58 Sample ID: E1801105-004

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:53	6.881e+02	7.738e+02	0.89	no	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:46	6.627e+01	3.886e+01	1.71	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	NotFnd	*	*	*	no	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:34	5.938e+01	5.037e+01	1.18	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:41	3.448e+01	4.263e+01	0.81	no	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	NotFnd	*	*	*	no	yes	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:59	2.711e+01	2.994e+01	0.91	no	yes	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:16	6.990e+01	7.550e+01	0.93	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:35	3.026e+01	2.311e+01	1.31	no	no	1.463
10	Unk	OCDF	40:48	2.509e+02	2.231e+02	1.12	no	no	1.571
11	Unk	2,3,7,8-TCDD	26:51	1.635e+02	2.457e+02	0.67	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	32:05	8.142e+01	5.520e+01	1.48	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:22	9.403e+01	5.571e+01	1.69	no	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:27	1.092e+02	1.047e+02	1.04	no	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:42	2.265e+02	1.992e+02	1.14	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:09	4.598e+03	4.790e+03	0.96	yes	no	1.112
17	Unk	OCDD	40:38	8.826e+04	9.935e+04	0.89	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:52	3.206e+04	4.139e+04	0.77	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:44	6.850e+04	4.306e+04	1.59	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:46	6.193e+04	3.862e+04	1.60	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:34	3.172e+04	6.025e+04	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:41	3.823e+04	7.147e+04	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:13	3.358e+04	6.315e+04	0.53	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:59	2.920e+04	5.624e+04	0.52	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:15	2.520e+04	5.509e+04	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:34	2.127e+04	4.745e+04	0.45	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:49	1.674e+04	2.173e+04	0.77	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	32:03	4.663e+04	3.010e+04	1.55	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:21	4.535e+04	3.544e+04	1.28	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:27	4.419e+04	3.458e+04	1.28	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:08	4.816e+04	4.484e+04	1.07	yes	no	0.857
32	IS	13C-OCDD	40:37	4.414e+04	4.868e+04	0.91	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	26:05	5.489e+04	6.968e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:41	7.836e+04	6.105e+04	1.28	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:51	2.380e+04				no	1.086

$$\text{OCDD} = \frac{(8.826e+04 + 9.935e+04) \times 4000\ \text{pg} \times 1}{(4.414e+04 + 4.868e+04) \times 10.063\ \text{g} \times 70.3 / 100 \times 1.157} = 987.755\ \text{ng/kg}$$

LG 12/28/18

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SLO 0593

Run #10 Filename P616185 Samp: 1 Inj: 1 Acquired: 25-DEC-18 03:50:54
Processed: 28-DEC-18 11:16:58 LAB. ID: E1801105-004

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.00e+05	2.76e+03	3.6e+01	1.19e+05	6.28e+03	1.9e+01
2	1,2,3,7,8-PeCDF	1.11e+04	1.20e+03	9.3e+00	7.94e+03	2.90e+03	2.7e+00
3	2,3,4,7,8-PeCDF	*	1.20e+03	*	*	2.90e+03	*
4	1,2,3,4,7,8-HxCDF	1.36e+04	2.00e+03	6.8e+00	1.12e+04	1.02e+03	1.1e+01
5	1,2,3,6,7,8-HxCDF	7.72e+03	2.00e+03	3.9e+00	8.22e+03	1.02e+03	8.1e+00
6	2,3,4,6,7,8-HxCDF	*	2.00e+03	*	*	1.02e+03	*
7	1,2,3,7,8,9-HxCDF	5.17e+03	2.00e+03	2.6e+00	4.96e+03	1.02e+03	4.9e+00
8	1,2,3,4,6,7,8-HpCDF	1.68e+04	7.44e+02	2.3e+01	1.69e+04	9.88e+02	1.7e+01
9	1,2,3,4,7,8,9-HpCDF	5.49e+03	7.44e+02	7.4e+00	6.73e+03	9.88e+02	6.8e+00
10	OCDF	4.89e+04	6.20e+02	7.9e+01	4.54e+04	4.04e+03	1.1e+01
11	2,3,7,8-TCDD	2.50e+04	4.72e+03	5.3e+00	3.98e+04	2.74e+03	1.5e+01
12	1,2,3,7,8-PeCDD	1.40e+04	1.58e+03	8.9e+00	7.44e+03	6.56e+02	1.1e+01
13	1,2,3,4,7,8-HxCDD	2.71e+04	1.39e+03	1.9e+01	1.29e+04	2.42e+03	5.3e+00
14	1,2,3,6,7,8-HxCDD	2.37e+04	1.39e+03	1.7e+01	2.05e+04	2.42e+03	8.5e+00
15	1,2,3,7,8,9-HxCDD	4.87e+04	1.39e+03	3.5e+01	3.65e+04	2.42e+03	1.5e+01
16	1,2,3,4,6,7,8-HpCDD	9.90e+05	3.45e+03	2.9e+02	1.02e+06	2.95e+03	3.5e+02
17	OCDD	1.59e+07	2.80e+02	5.7e+04	1.78e+07	7.80e+02	2.3e+04
18	13C-2,3,7,8-TCDF	4.69e+06	1.81e+04	2.6e+02	6.05e+06	1.11e+04	5.5e+02
19	13C-1,2,3,7,8-PeCDF	1.18e+07	1.43e+03	8.2e+03	7.37e+06	1.97e+03	3.7e+03
20	13C-2,3,4,7,8-PeCDF	1.16e+07	1.43e+03	8.1e+03	7.14e+06	1.97e+03	3.6e+03
21	13C-1,2,3,4,7,8-HxCDF	6.65e+06	1.95e+03	3.4e+03	1.26e+07	3.41e+03	3.7e+03
22	13C-1,2,3,6,7,8-HxCDF	7.58e+06	1.95e+03	3.9e+03	1.41e+07	3.41e+03	4.1e+03
23	13C-2,3,4,6,7,8-HxCDF	7.06e+06	1.95e+03	3.6e+03	1.33e+07	3.41e+03	3.9e+03
24	13C-1,2,3,7,8,9-HxCDF	5.62e+06	1.95e+03	2.9e+03	1.09e+07	3.41e+03	3.2e+03
25	13C-1,2,3,4,6,7,8-HpCDF	5.34e+06	2.79e+03	1.9e+03	1.17e+07	8.16e+03	1.4e+03
26	13C-1,2,3,4,7,8,9-HpCDF	4.27e+06	2.79e+03	1.5e+03	9.55e+06	8.16e+03	1.2e+03
27	13C-2,3,7,8-TCDD	2.74e+06	1.73e+04	1.6e+02	3.49e+06	9.80e+03	3.6e+02
28	13C-1,2,3,7,8-PeCDD	8.62e+06	2.56e+03	3.4e+03	5.57e+06	3.42e+03	1.6e+03
29	13C-1,2,3,4,7,8-HxCDD	9.91e+06	2.80e+03	3.5e+03	7.75e+06	1.93e+03	4.0e+03
30	13C-1,2,3,6,7,8-HxCDD	9.05e+06	2.80e+03	3.2e+03	7.10e+06	1.93e+03	3.7e+03
31	13C-1,2,3,4,6,7,8-HpCDD	9.85e+06	2.19e+03	4.5e+03	9.27e+06	1.85e+03	5.0e+03
32	13C-OCDD	7.85e+06	1.11e+04	7.1e+02	8.77e+06	7.00e+02	1.3e+04
33	13C-1,2,3,4-TCDD	8.52e+06	1.73e+04	4.9e+02	1.07e+07	9.80e+03	1.1e+03
34	13C-1,2,3,7,8,9-HxCDD	1.55e+07	2.80e+03	5.5e+03	1.22e+07	1.93e+03	6.3e+03
35	37Cl-2,3,7,8-TCDD	3.86e+06	5.54e+03	7.0e+02			

---Sample Calculation---

$$\text{pg/L TCDD} = \frac{2.5 \times (4.724e{+}03 + 2.744e{+}03\ ) \times 2000}{(2.737e{+}06 + 3.488e{+}06\ ) \times (\qquad\qquad) \times 1.049} =$$

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.

SLO 0593

Entry: 36 Totals Name: Total Tetra-Furans

Run: 10 File: P616185 Sample:1 Injection:1 Function:1

Acquired: 25-DEC-18 03:50:54 Processed: 28-DEC-18 11:16:58

Mass: 303.9020 305.8990 Tot Response: 9.28e+02 RRF: 1.081

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:12	3.79e+01	4.80e+01 0.79	yes	8.60e+01		n	n
2	24:51	3.62e+02	4.79e+02 0.76	yes	8.42e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.

SLO 0593

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 10 File: P616185 Sample:1 Injection:1 Function:1

Acquired: 25-DEC-18 03:50:54 Processed: 28-DEC-18 11:16:58

Mass: 319.8970 321.8940 Tot Response: 5.99e+02 RRF: 1.049

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:54	3.08e+01	3.72e+01	0.83	yes	6.80e+01		
2	26:30	5.19e+01	6.95e+01	0.75	yes	1.21e+02	n	n
3	26:51	1.63e+02	2.46e+02	0.67	yes	4.09e+02	n	n
						2,3,7,8-TCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SLO 0593

Entry: 39 Totals Name: Total Penta-Furans2

Run: 10 File: P616185 Sample:1 Injection:1 Function:2

Acquired: 25-DEC-18 03:50:54 Processed: 28-DEC-18 11:16:58

Mass: 339.8600 341.8570 Tot Response: 1.05e+02 RRF: 1.130

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:46	6.63e+01	3.89e+01 1.71	yes	1.05e+02	1,2,3,7,8-PeCDF	n	n

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SLO 0593

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 10 File: P616185 Sample:1 Injection:1 Function:2

Acquired: 25-DEC-18 03:50:54 Processed: 28-DEC-18 11:16:58

Mass: 355.8550 357.8520 Tot Response: 1.23e+03 RRF: 0.9288

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:17	3.84e+02	2.23e+02 1.72	yes	6.07e+02		n	n
2	31:16	2.86e+02	2.00e+02 1.43	yes	4.86e+02		n	n
3	32:05	8.14e+01	5.52e+01 1.48	yes	1.37e+02	1,2,3,7,8-PeCDD	n	n

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Peak List Summary

CLIENT ID.
SLO 0593

Entry: 41 Totals Name: Total Hexa-Furans

Run: 10 File: P616185 Sample:1 Injection:1 Function:3

Acquired: 25-DEC-18 03:50:54 Processed: 28-DEC-18 11:16:58

Mass: 373.8210 375.8180 Tot Response: 1.10e+02 RRF: 1.324

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:34	5.94e+01	1.18	yes	1.10e+02	1,2,3,4,7,8-HxCDF	n	n

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Peak List Summary

CLIENT ID.
SLO 0593

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 10 File: P616185 Sample:1 Injection:1 Function:3

Acquired: 25-DEC-18 03:50:54 Processed: 28-DEC-18 11:16:58

Mass: 389.8160 391.8130 Tot Response: 1.04e+04 RRF: 1.092

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:57	4.39e+03	3.41e+03	1.29	yes	7.80e+03		n	n
2	34:45	1.19e+03	9.69e+02	1.23	yes	2.16e+03		n	n
3	35:42	2.27e+02	1.99e+02	1.14	yes	4.26e+02	1,2,3,7,8,9-HxCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SLO 0593

Entry: 43 Totals Name: Total Hepta-Furans

Run: 10 File: P616185 Sample:1 Injection:1 Function:4

Acquired: 25-DEC-18 03:50:54 Processed: 28-DEC-18 11:16:58

Mass: 407.7820 409.7790 Tot Response: 2.31e+02 RRF: 1.495

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:16	6.99e+01	7.55e+01 0.93	yes	1.45e+02	1,2,3,4,6,7,8-HpCDF	n	n
2	37:39	4.12e+01	4.40e+01 0.94	yes	8.52e+01		n	n

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Peak List Summary

CLIENT ID.
SLO 0593

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 10 File: P616185 Sample:1 Injection:1 Function:4

Acquired: 25-DEC-18 03:50:54 Processed: 28-DEC-18 11:16:58

Mass: 423.7770 425.7740 Tot Response: 3.25e+04 RRF: 1.112

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:31	1.18e+04	1.14e+04 1.04	yes	2.31e+04		n	n
2	38:09	4.60e+03	4.79e+03 0.96	yes	9.39e+03	1,2,3,4,6,7,8-HpCDD	n	n

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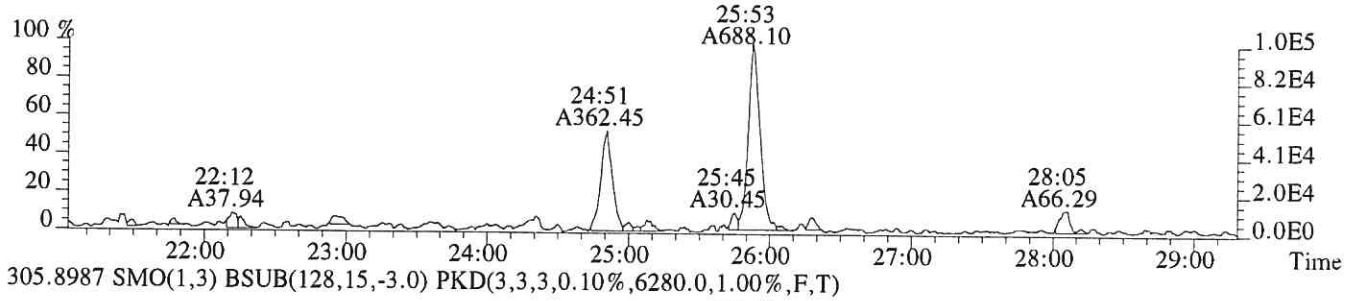
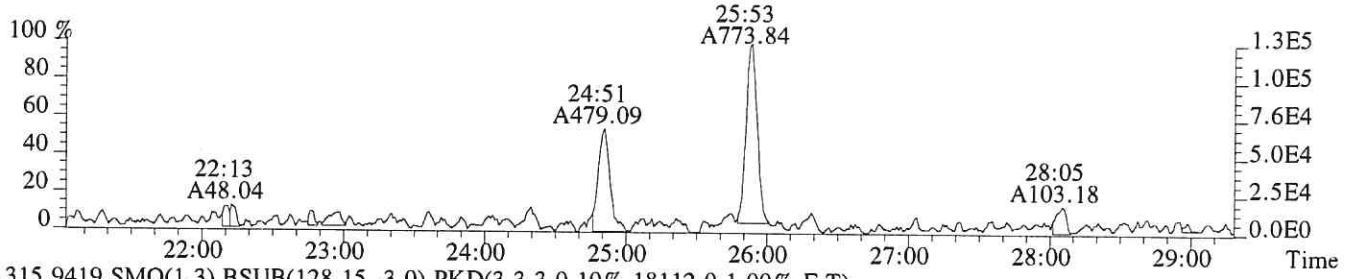
File:P616185 #1-587 Acq:25-DEC-2018 03:50:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-004

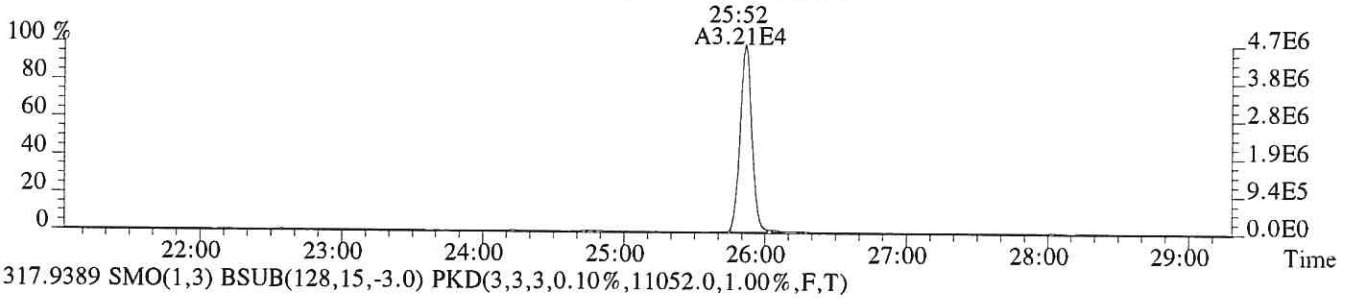
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2756.0,1.00%,F,T)



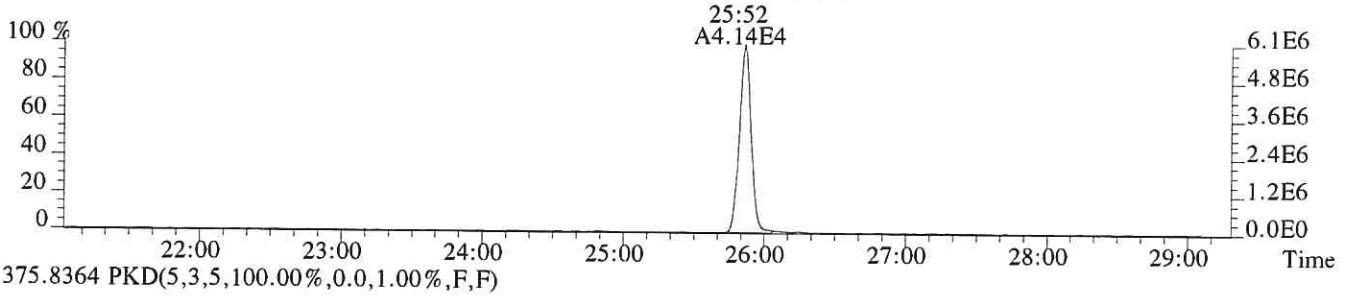
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6280.0,1.00%,F,T)



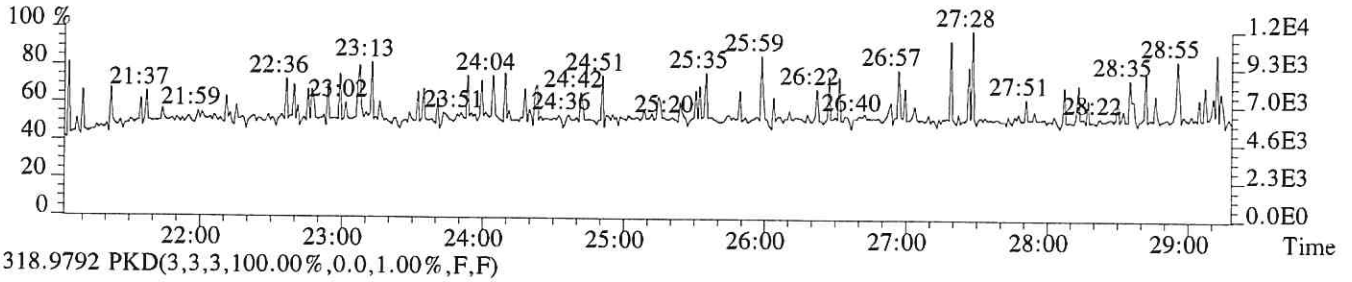
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,18112.0,1.00%,F,T)



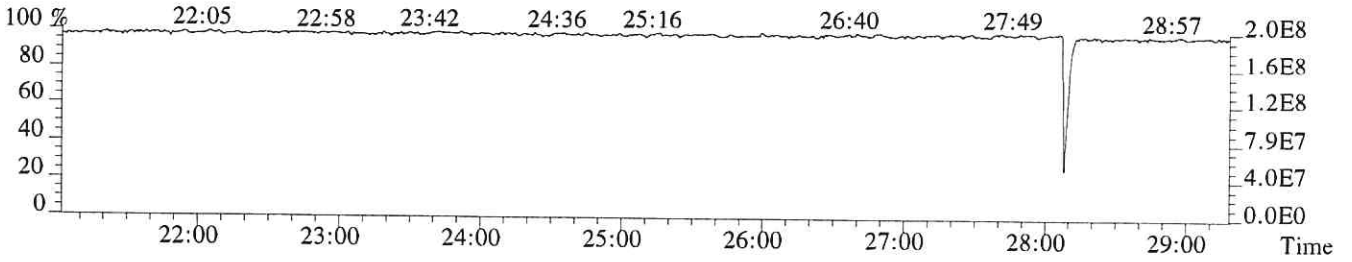
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11052.0,1.00%,F,T)



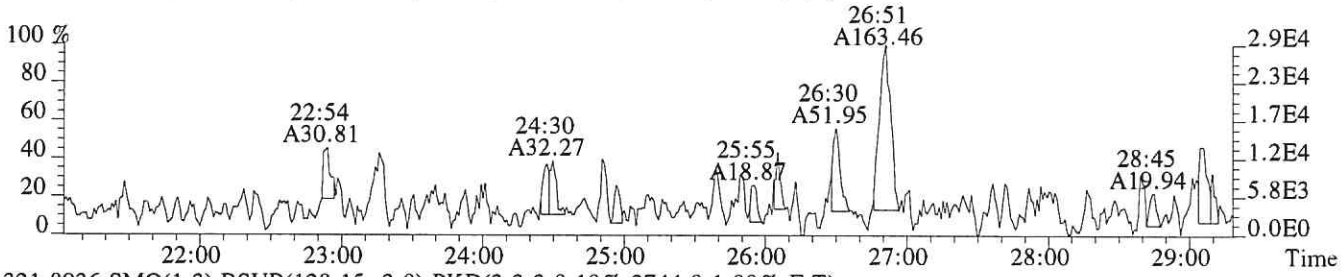
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



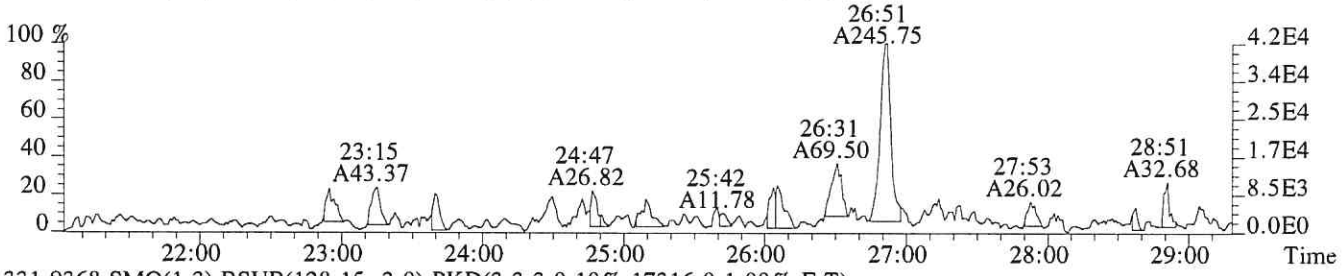
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



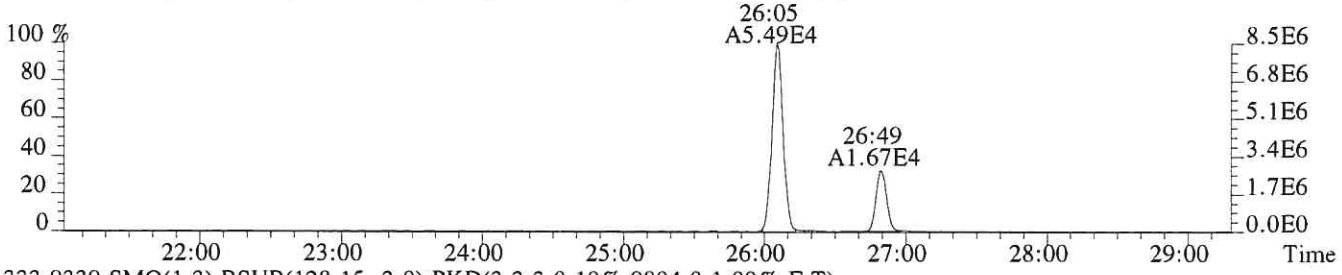
File:P616185 #1-587 Acq:25-DEC-2018 03:50:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-004
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4724.0,1.00%,F,T)



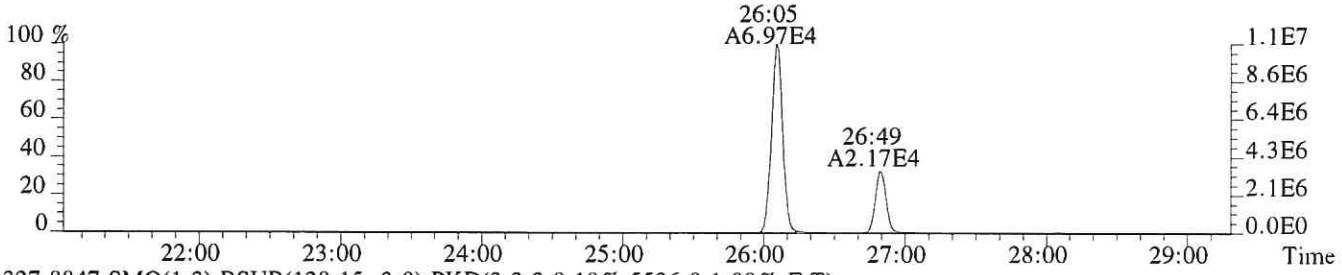
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2744.0,1.00%,F,T)



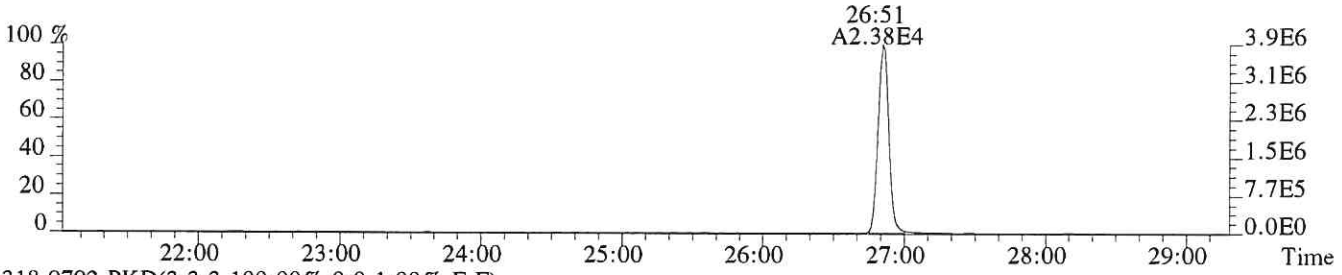
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,17316.0,1.00%,F,T)



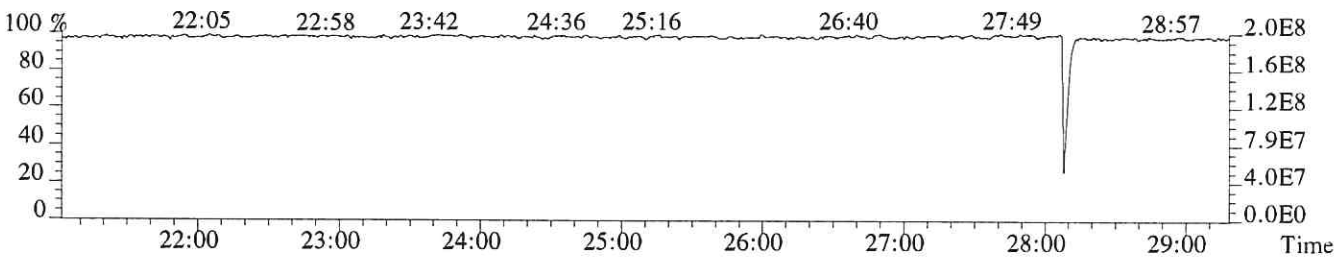
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9804.0,1.00%,F,T)



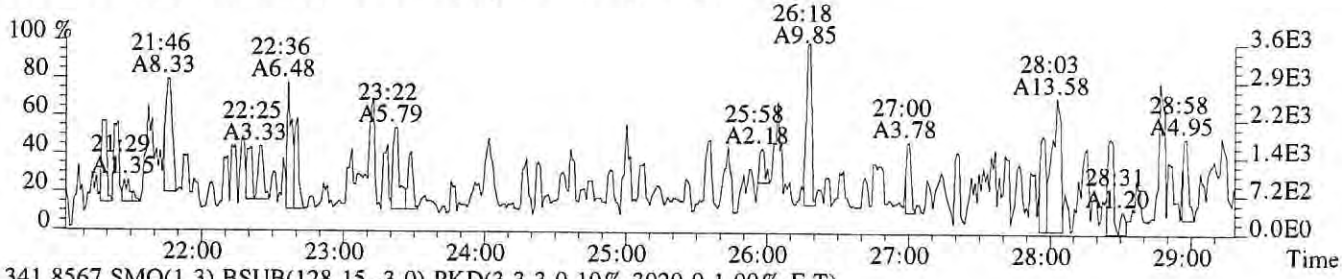
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5536.0,1.00%,F,T)



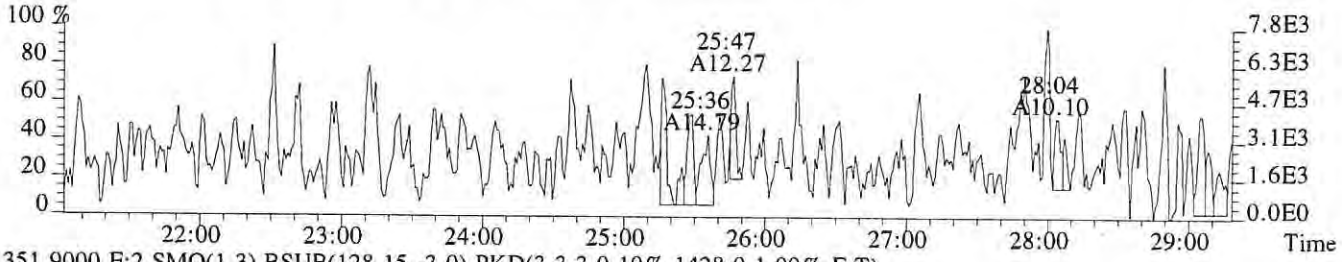
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



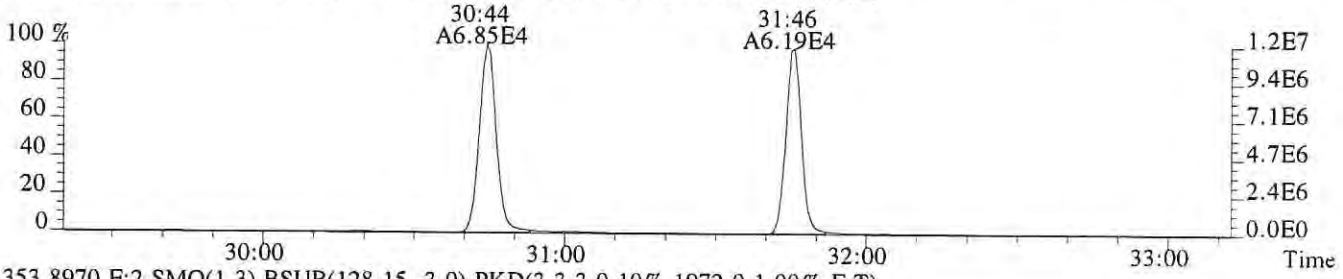
File:P616185 #1-587 Acq:25-DEC-2018 03:50:54 Probe El+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-004
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,884.0,1.00%,F,T)



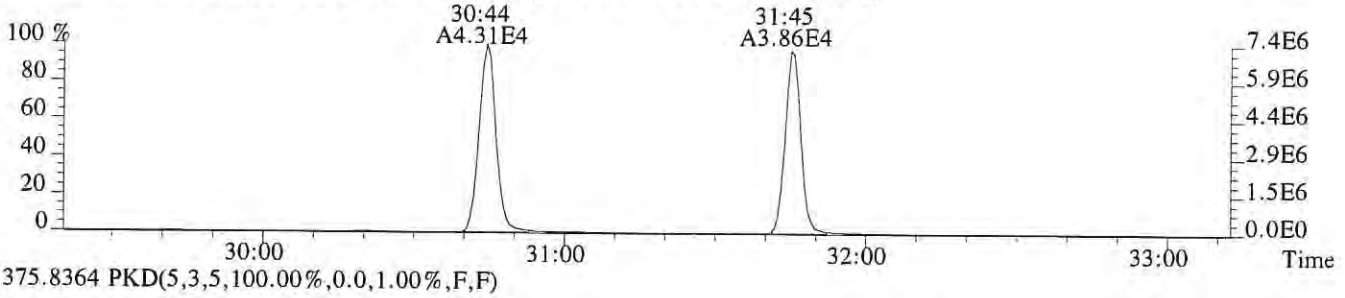
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3020.0,1.00%,F,T)



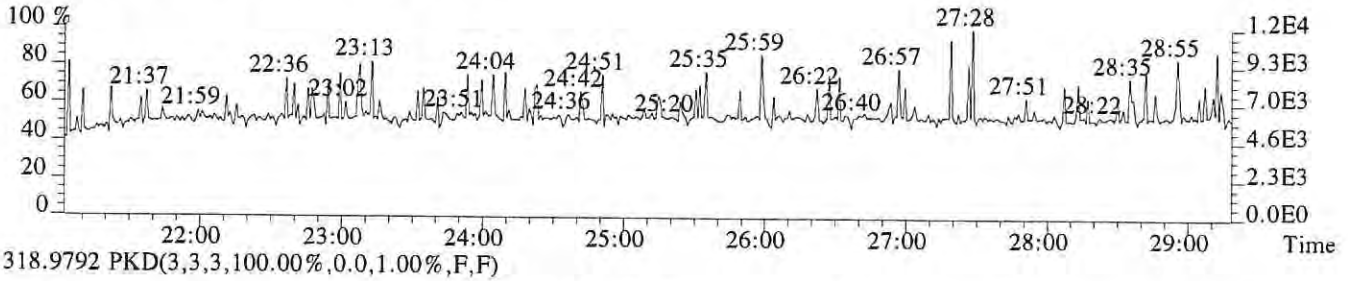
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1428.0,1.00%,F,T)



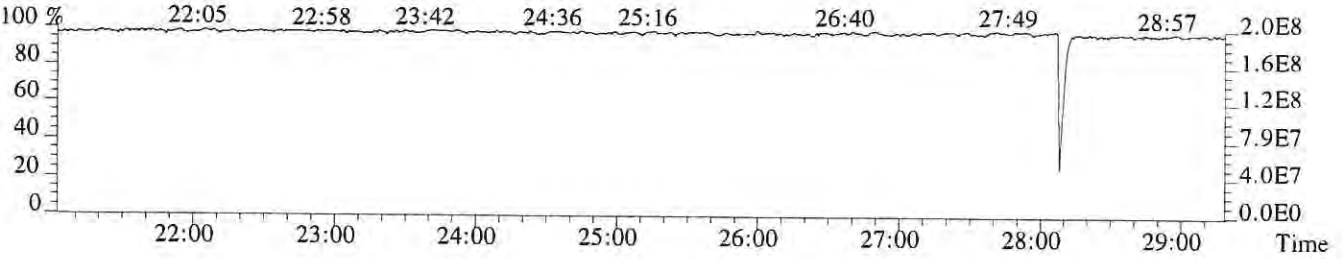
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1972.0,1.00%,F,T)



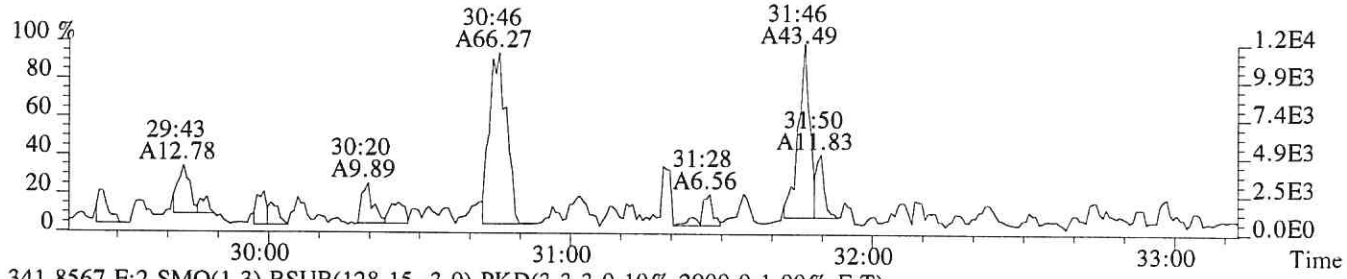
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



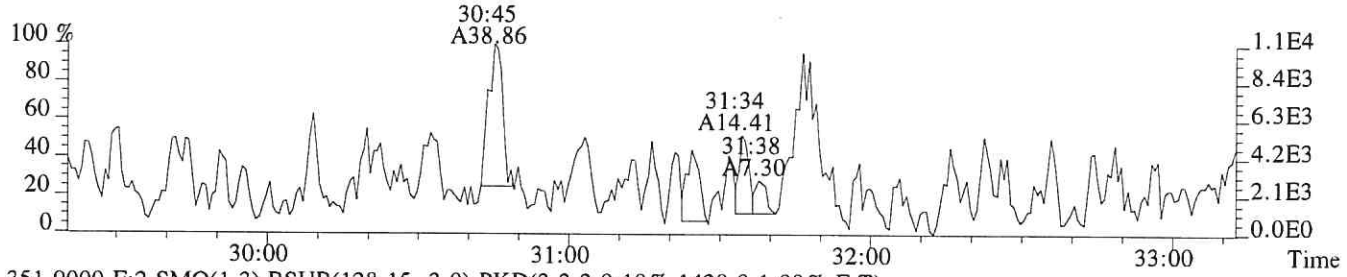
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



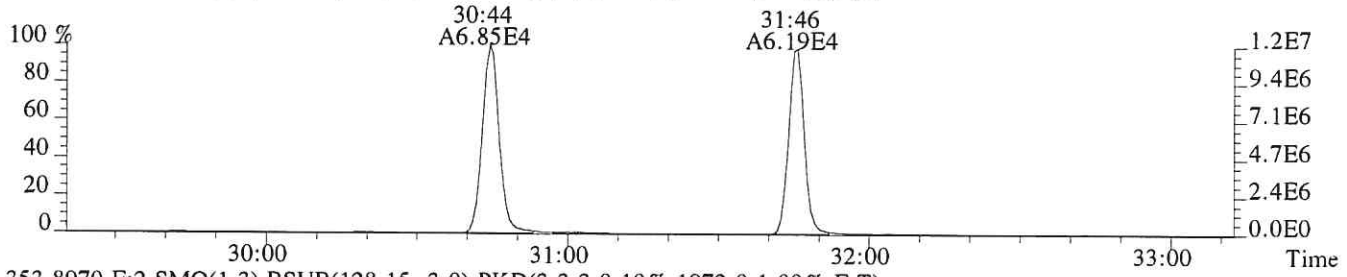
File:P616185 #1-349 Acq:25-DEC-2018 03:50:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-004
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1200.0,1.00%,F,T)



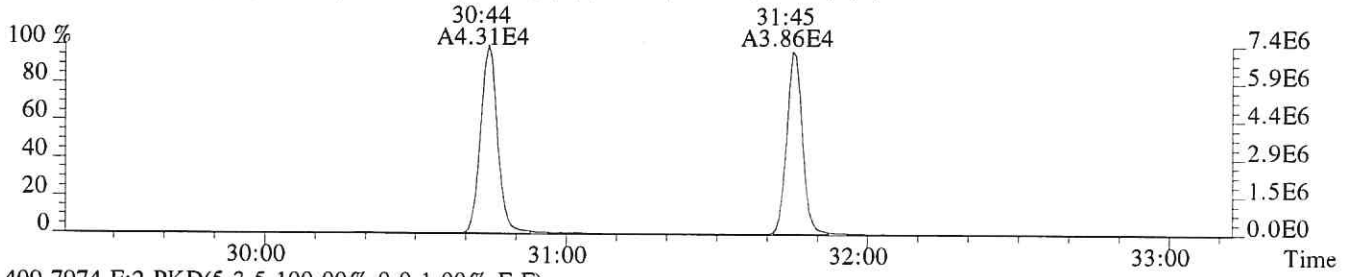
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2900.0,1.00%,F,T)



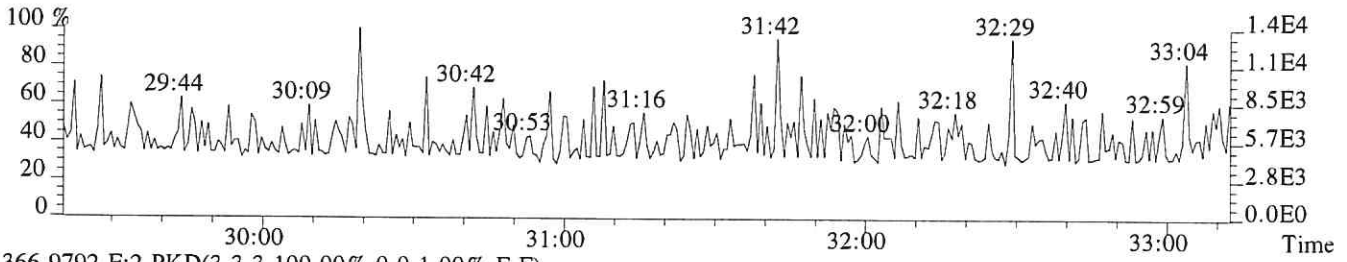
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1428.0,1.00%,F,T)



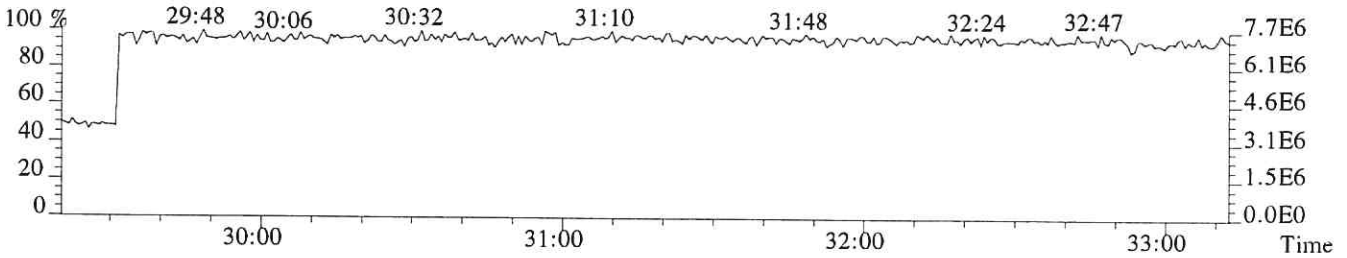
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1972.0,1.00%,F,T)



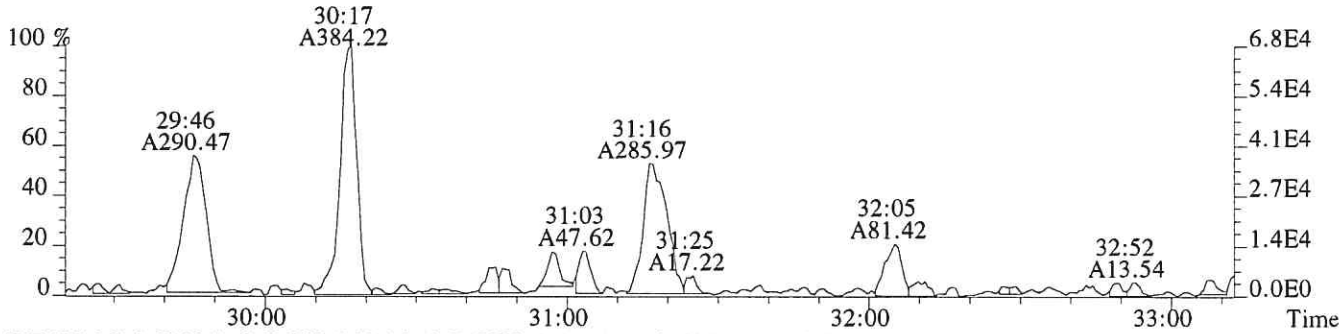
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



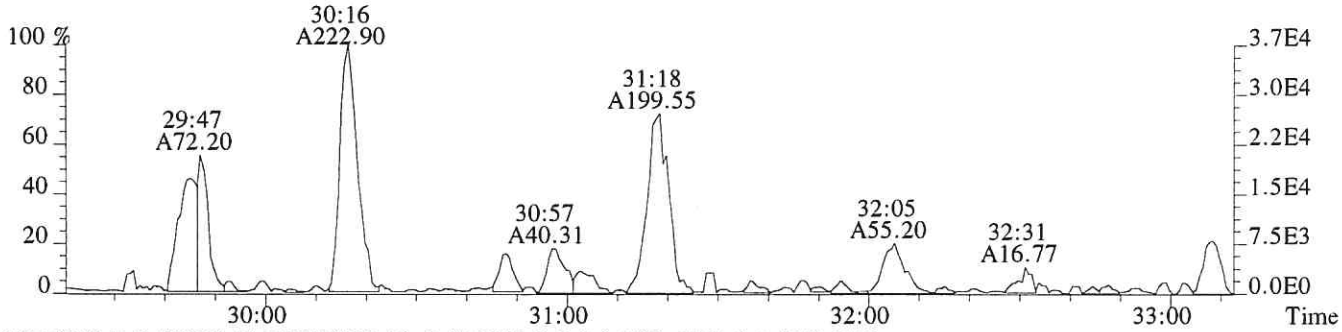
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



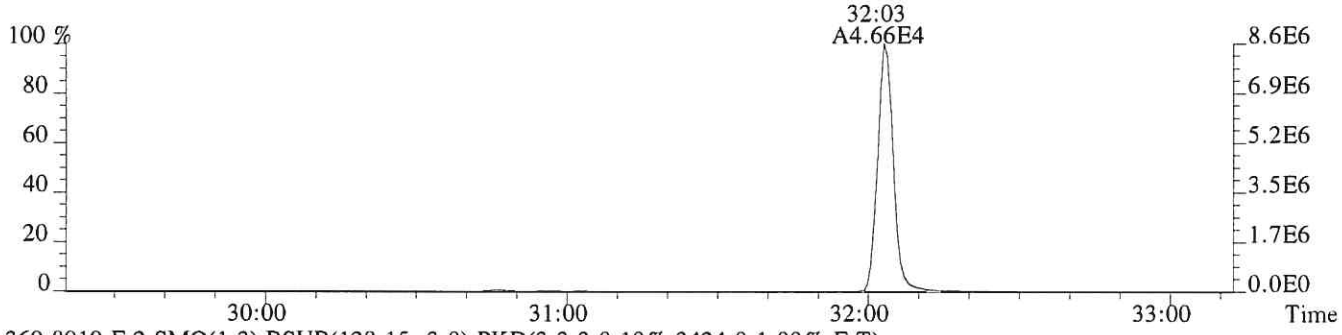
File:P616185 #1-349 Acq:25-DEC-2018 03:50:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-004
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1580.0,1.00%,F,T)



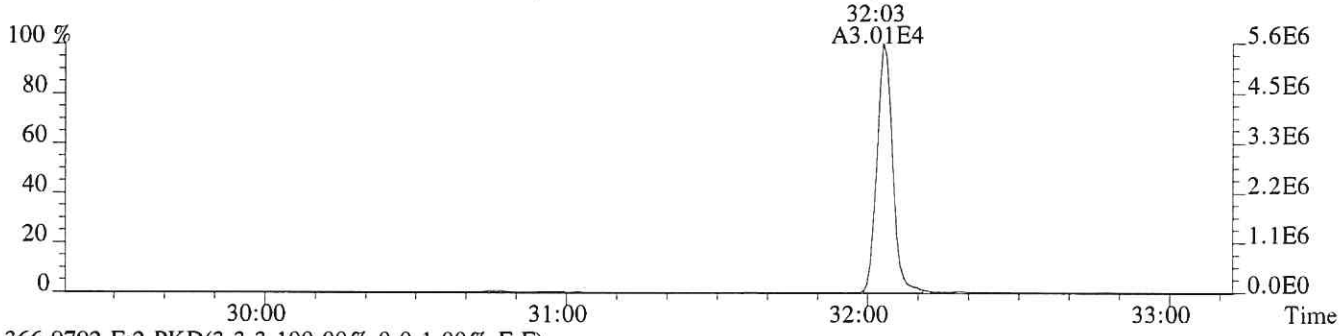
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,656.0,1.00%,F,T)



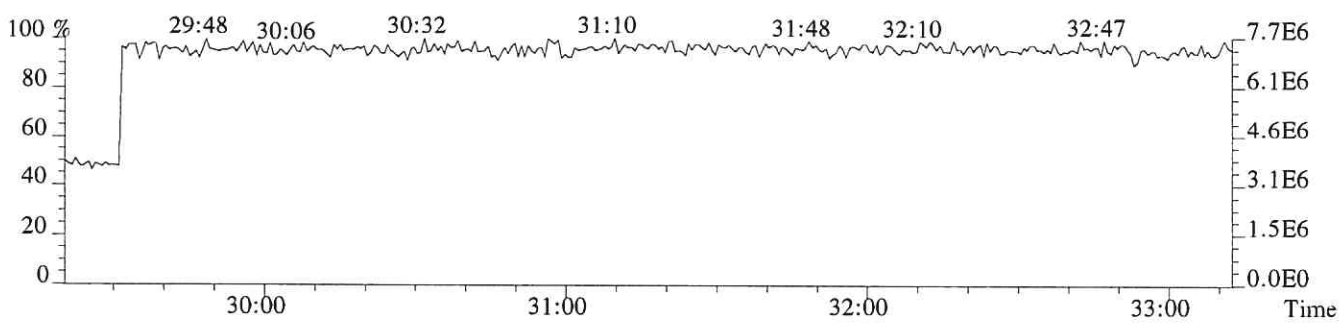
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2564.0,1.00%,F,T)



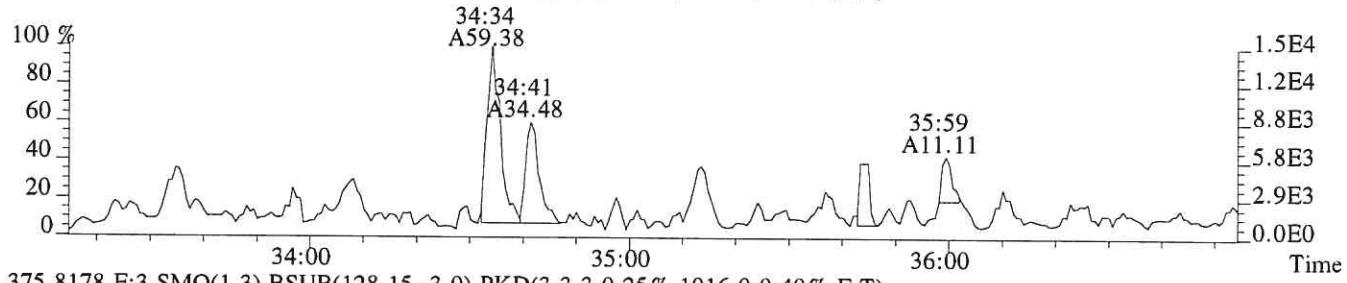
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3424.0,1.00%,F,T)



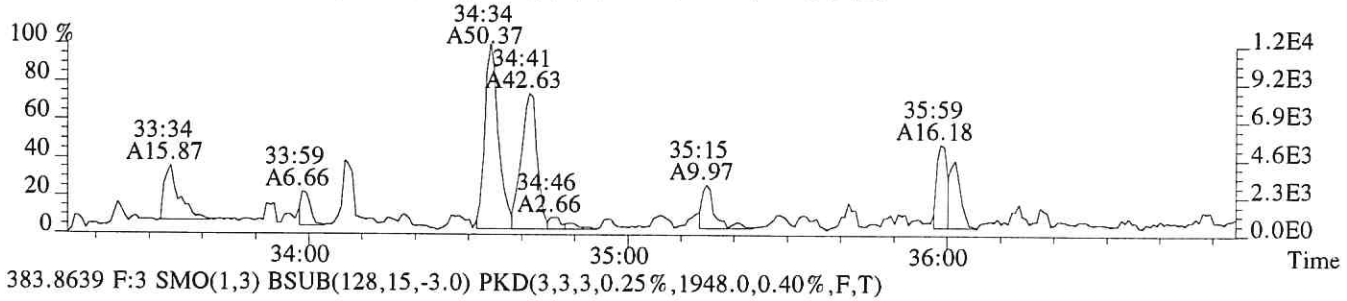
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



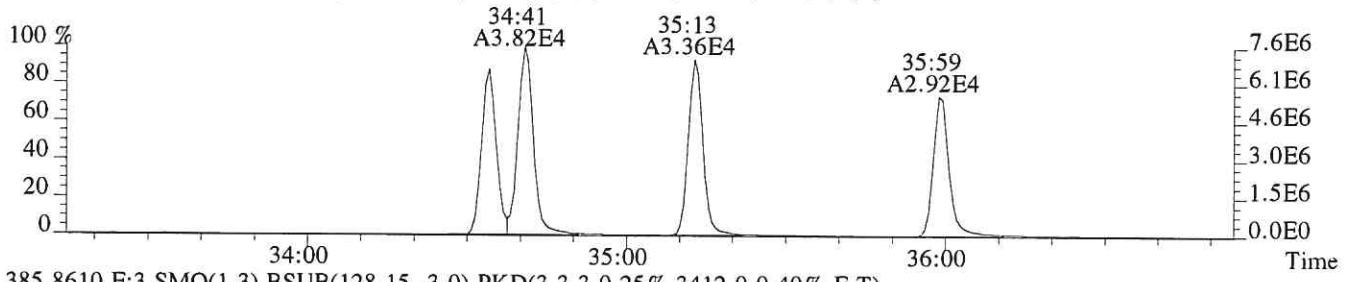
File:P616185 #1-330 Acq:25-DEC-2018 03:50:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-004
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2004.0,0.40%,F,T)



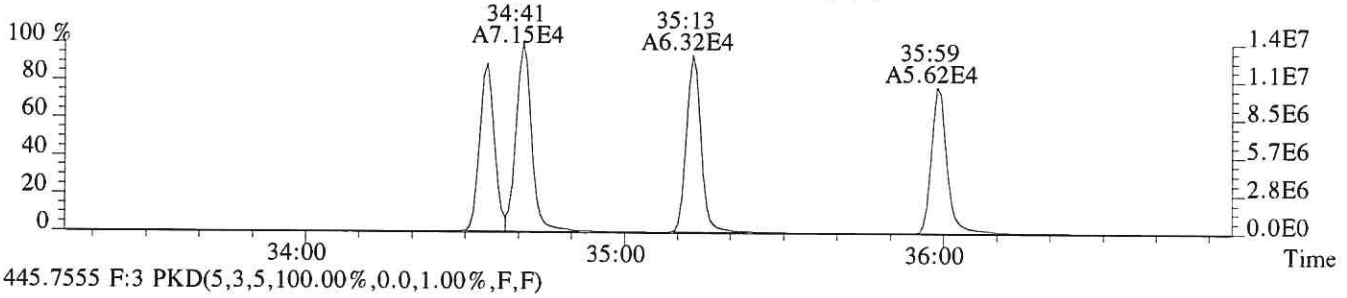
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1016.0,0.40%,F,T)



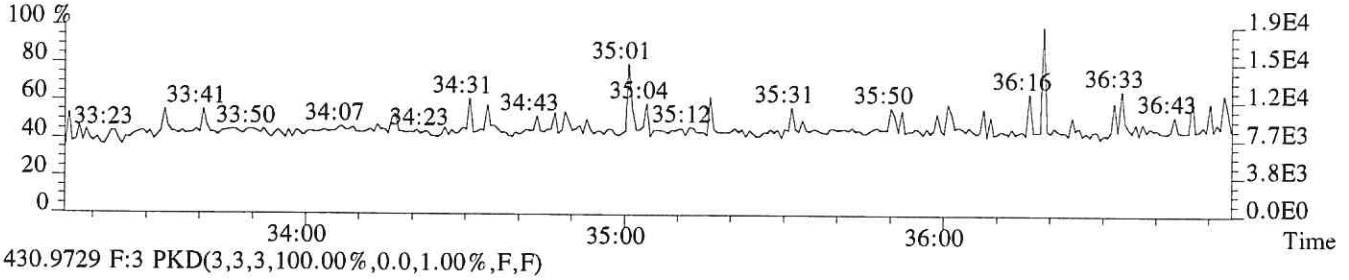
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1948.0,0.40%,F,T)



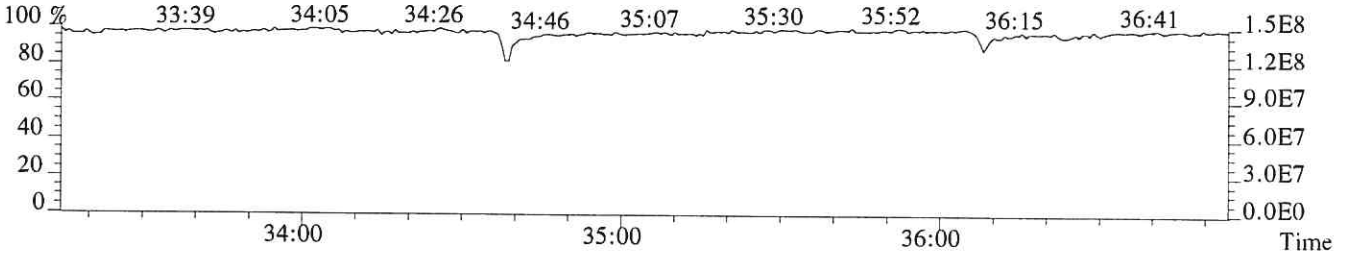
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3412.0,0.40%,F,T)



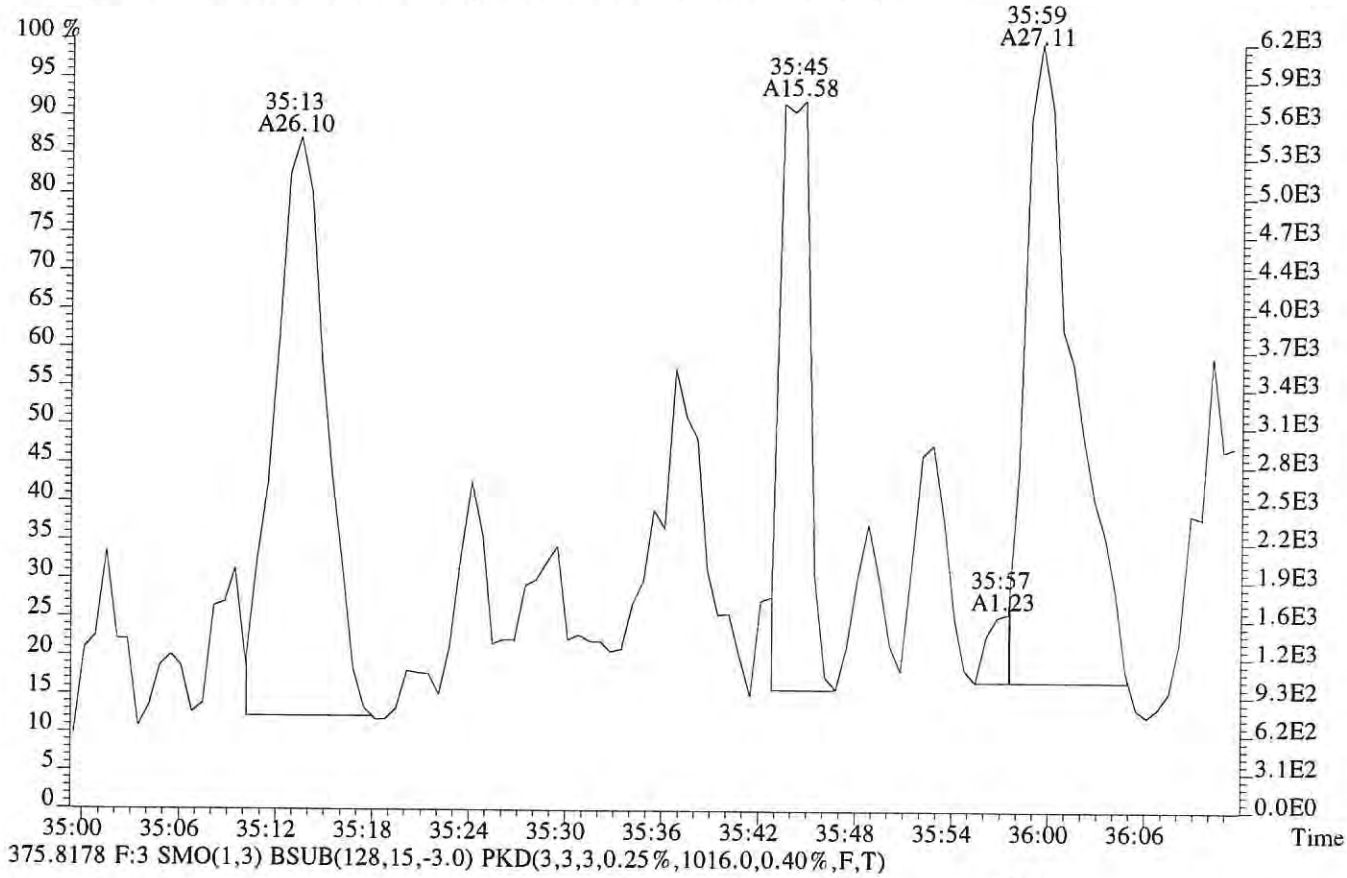
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



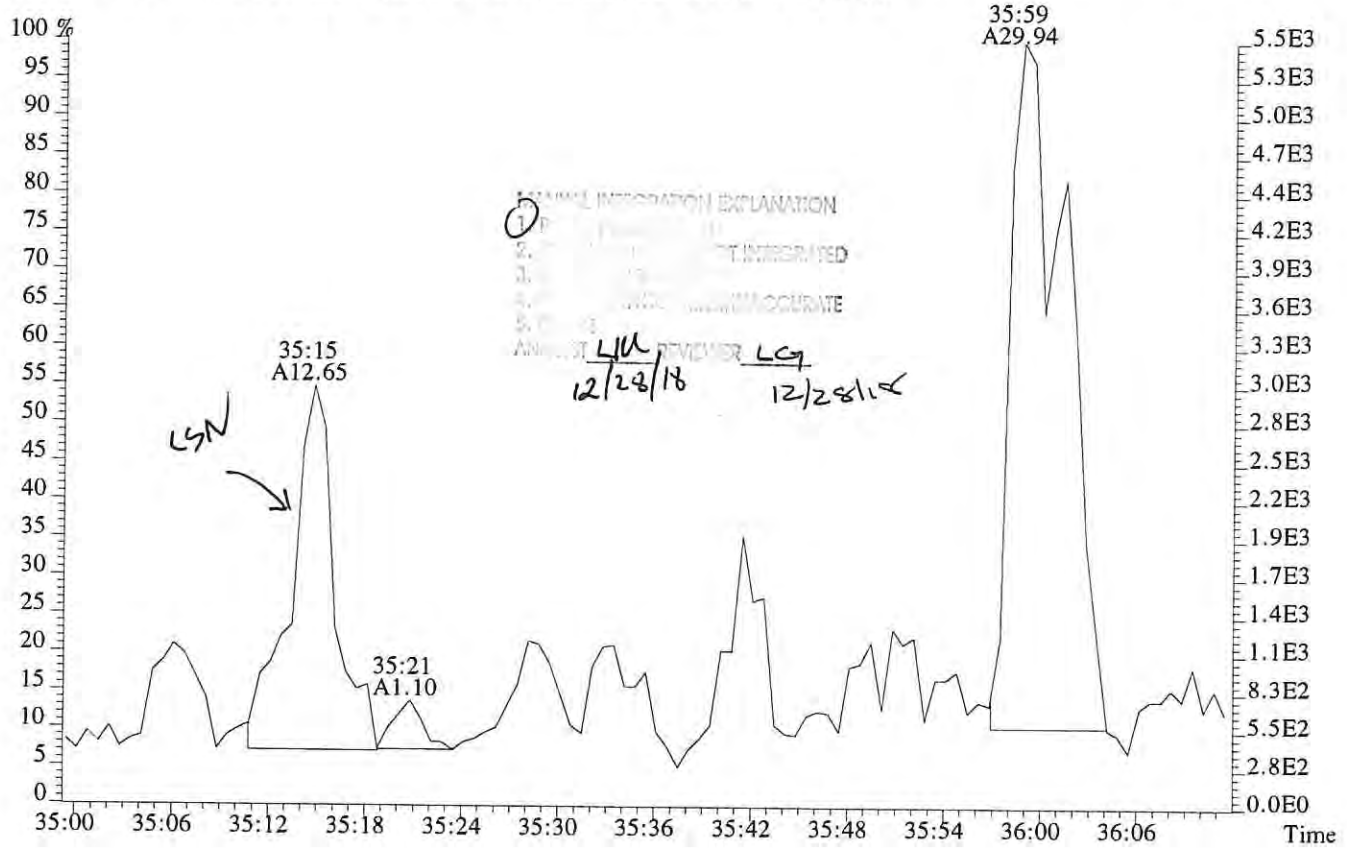
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



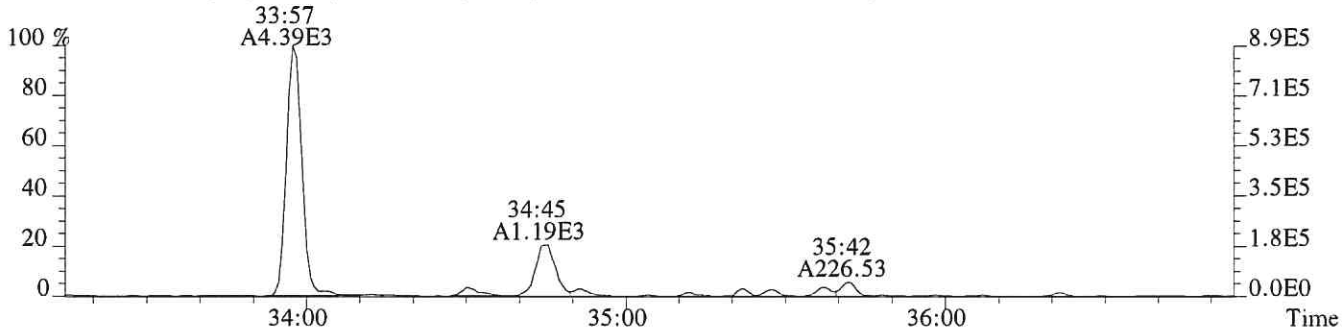
File:P616185 #1-330 Acq:25-DEC-2018 03:50:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-004
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2004.0,0.40%,F,T)



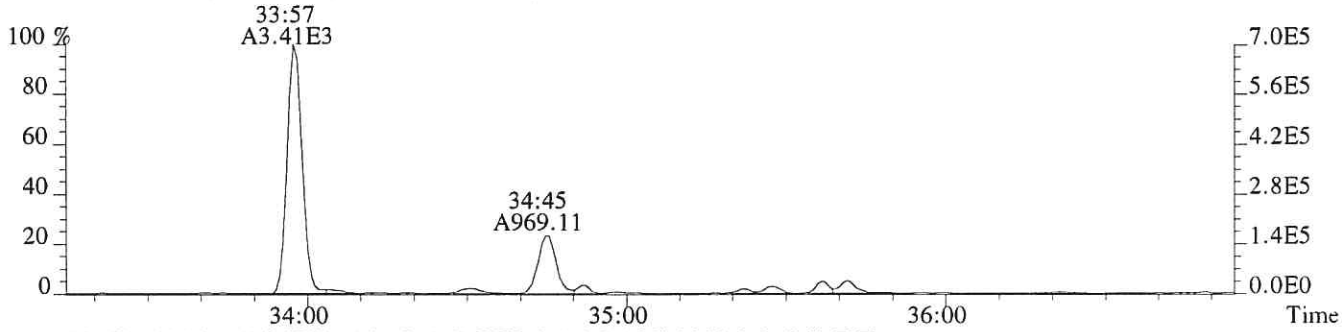
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1016.0,0.40%,F,T)



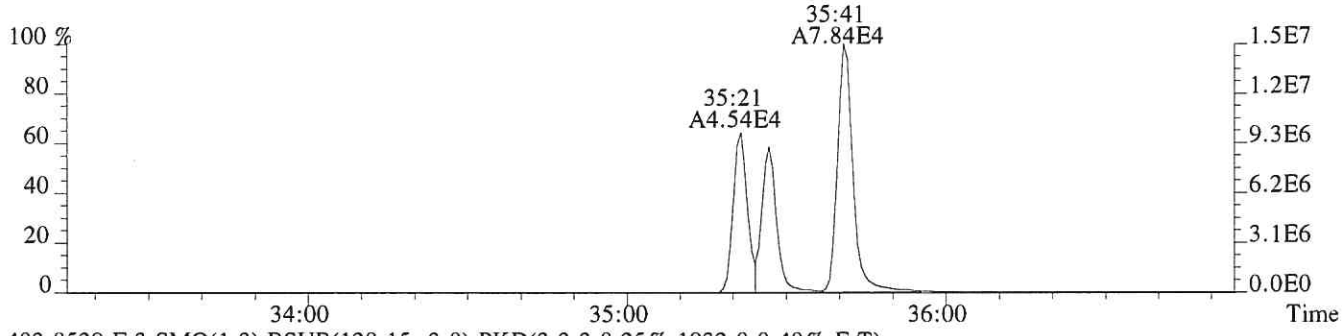
File:P616185 #1-330 Acq:25-DEC-2018 03:50:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-004
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1392.0,0.40%,F,T)



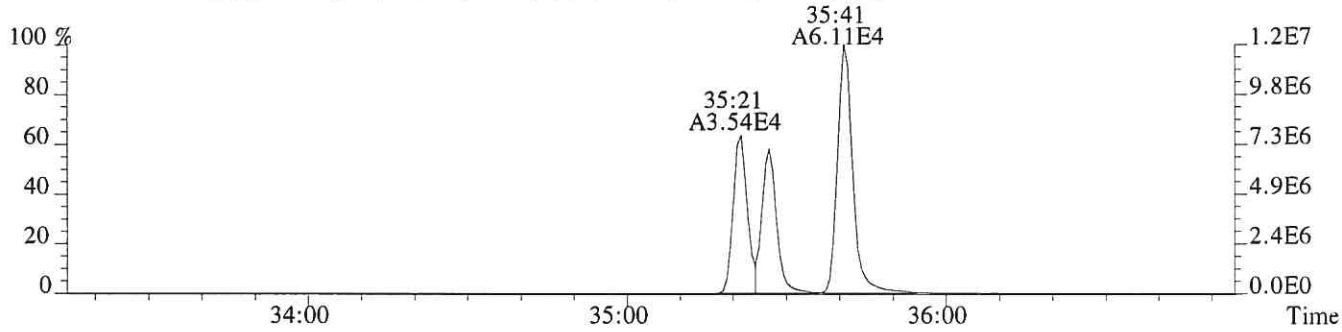
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2416.0,0.40%,F,T)



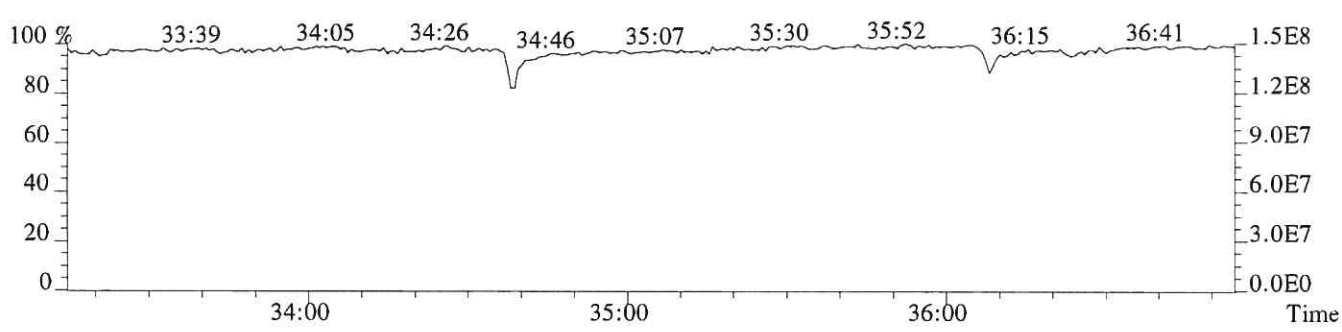
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2800.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1932.0,0.40%,F,T)

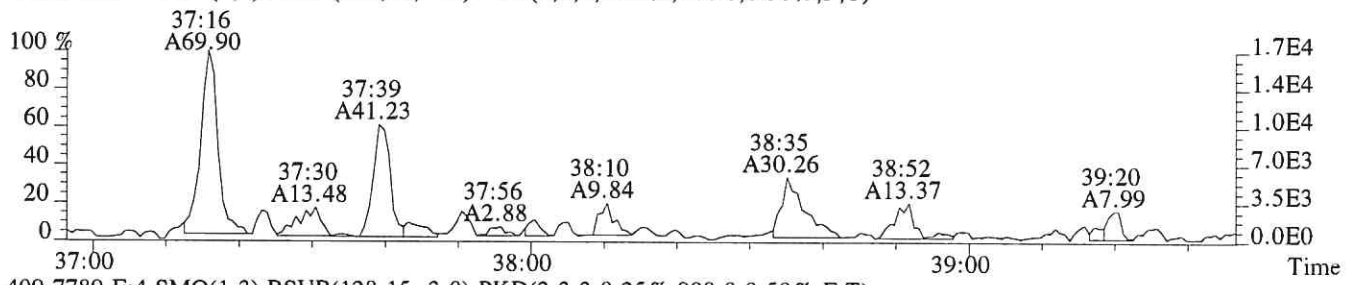


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

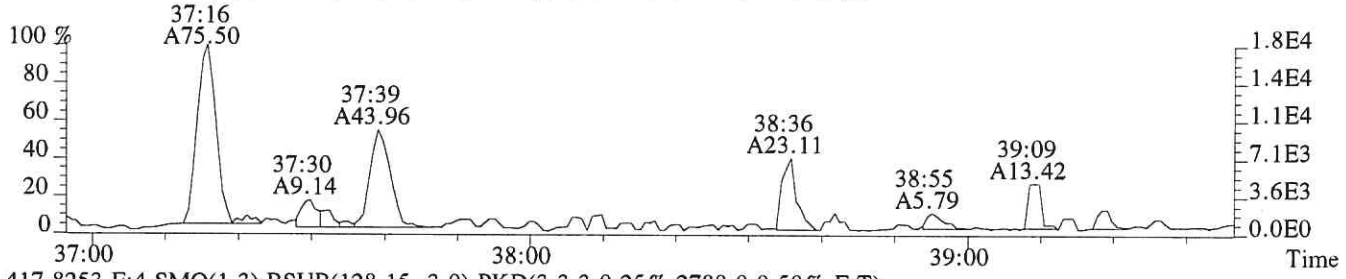


File:P616185 #1-241 Acq:25-DEC-2018 03:50:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-004

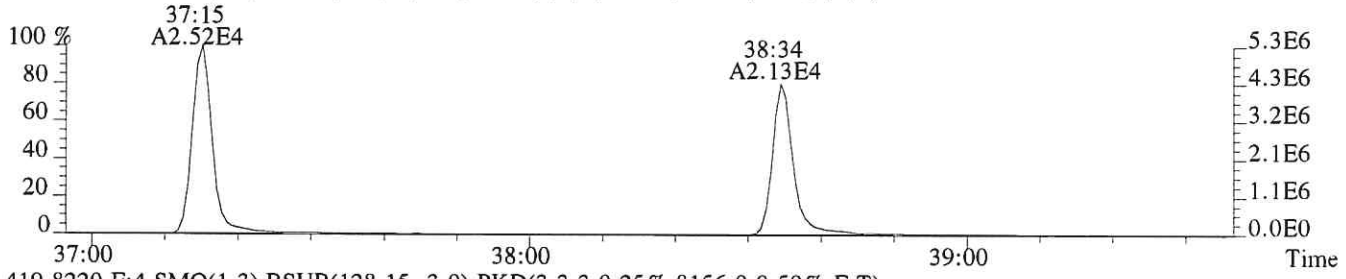
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,744.0,0.50%,F,T)



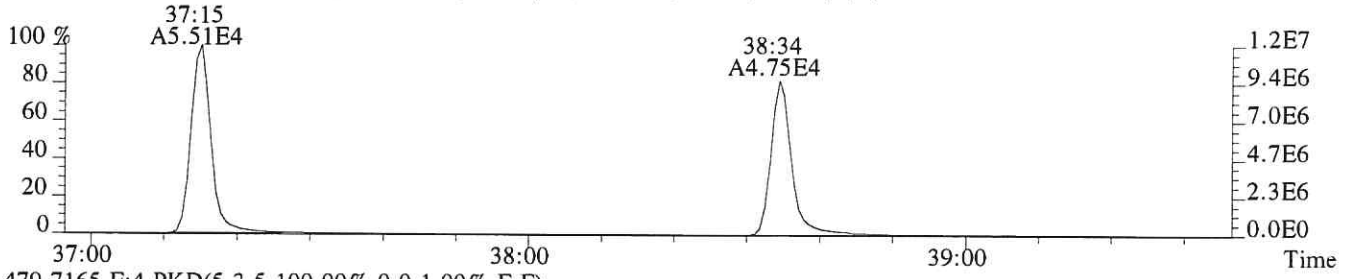
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,988.0,0.50%,F,T)



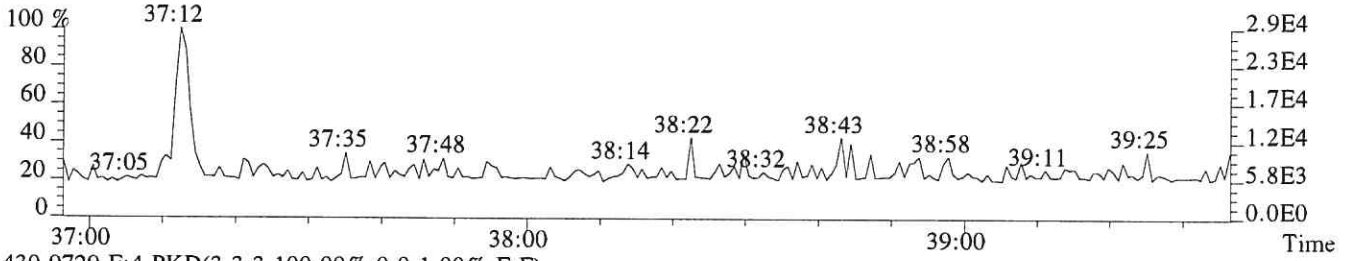
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2788.0,0.50%,F,T)



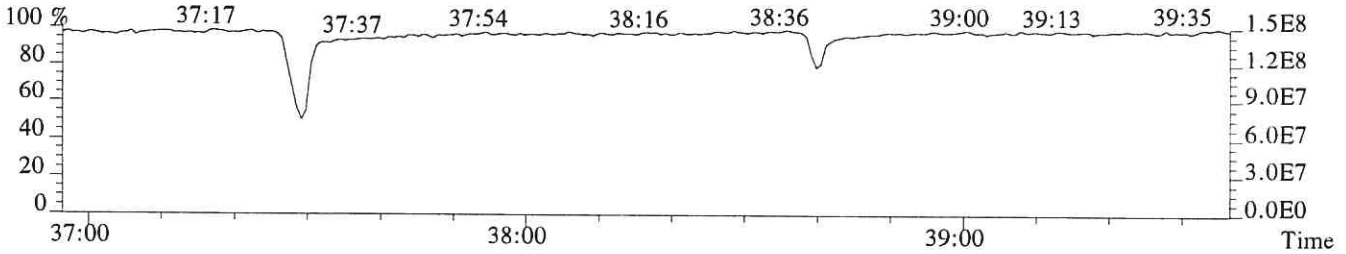
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,8156.0,0.50%,F,T)



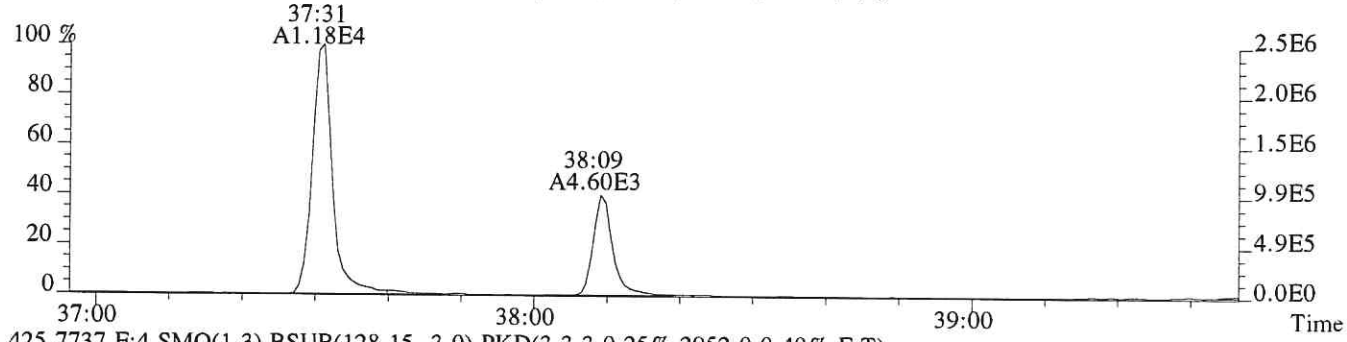
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



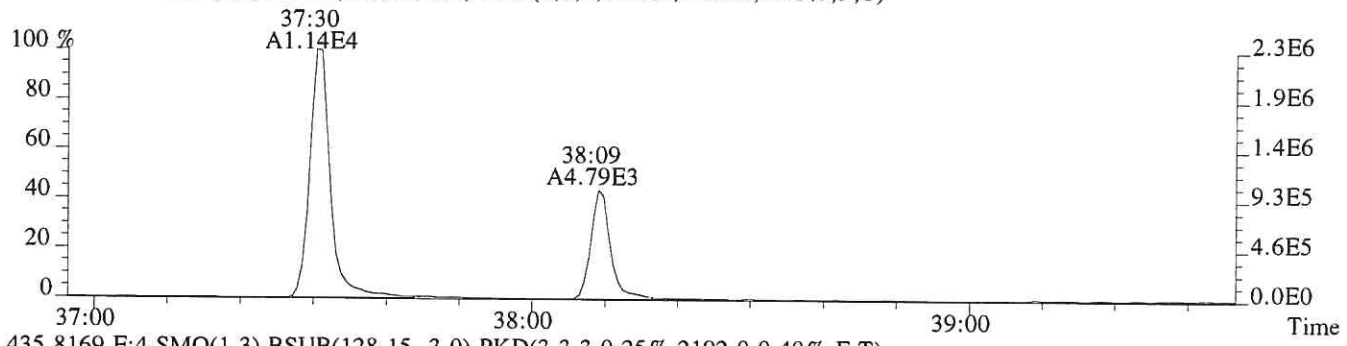
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



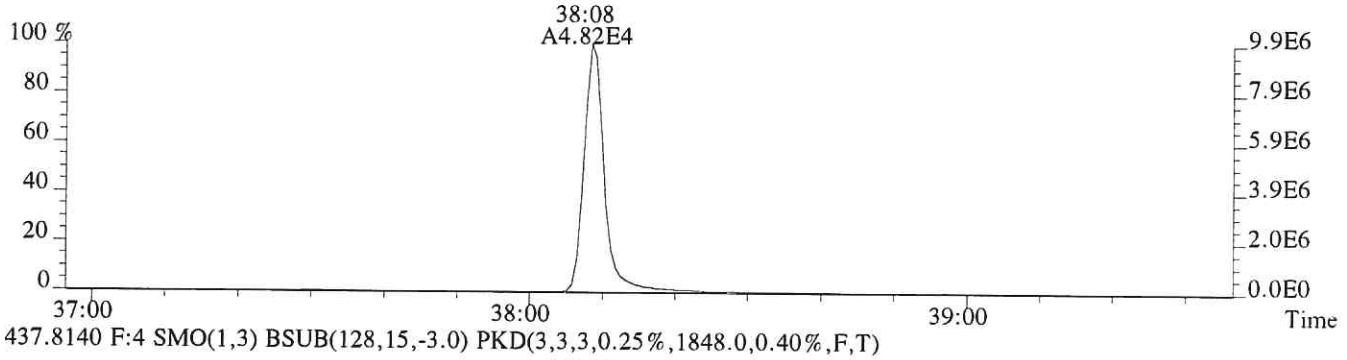
File:P616185 #1-241 Acq:25-DEC-2018 03:50:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-004
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3452.0,0.40%,F,T)



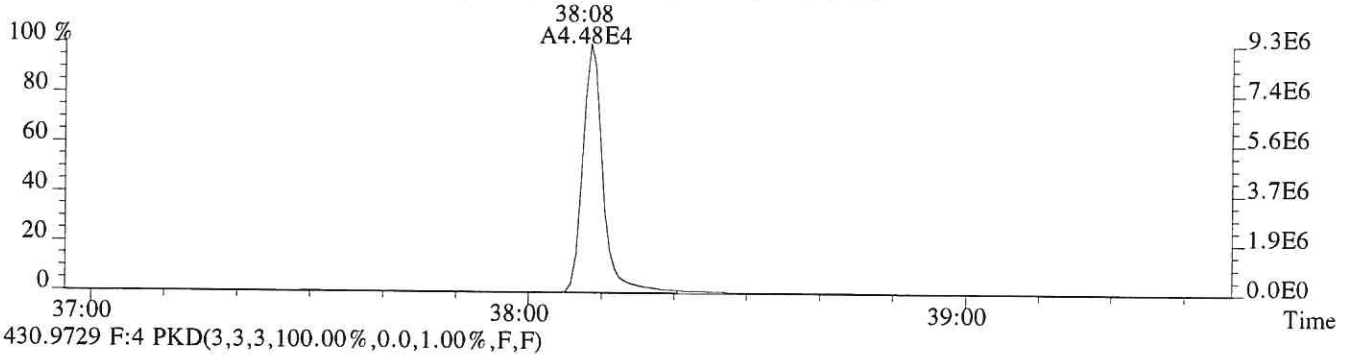
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2952.0,0.40%,F,T)



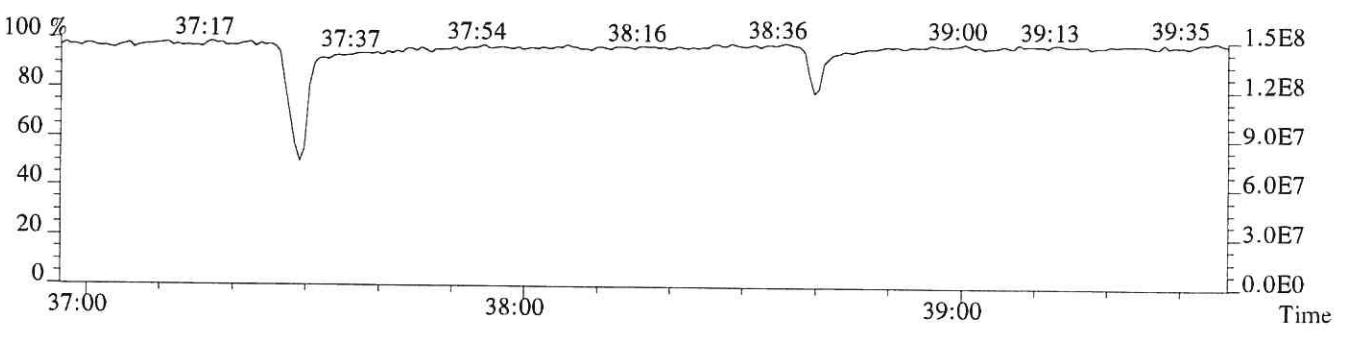
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2192.0,0.40%,F,T)



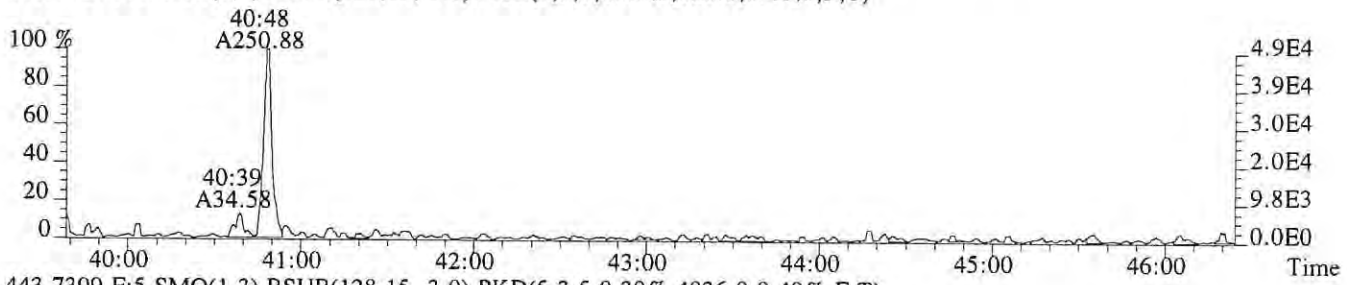
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1848.0,0.40%,F,T)



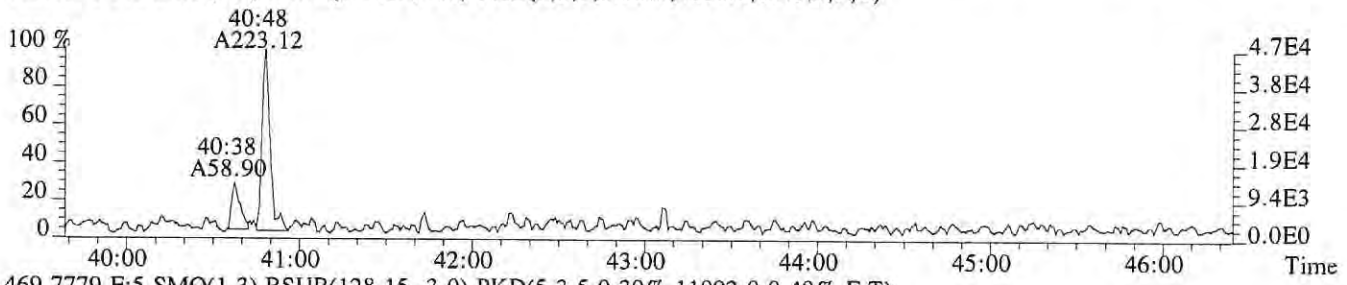
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



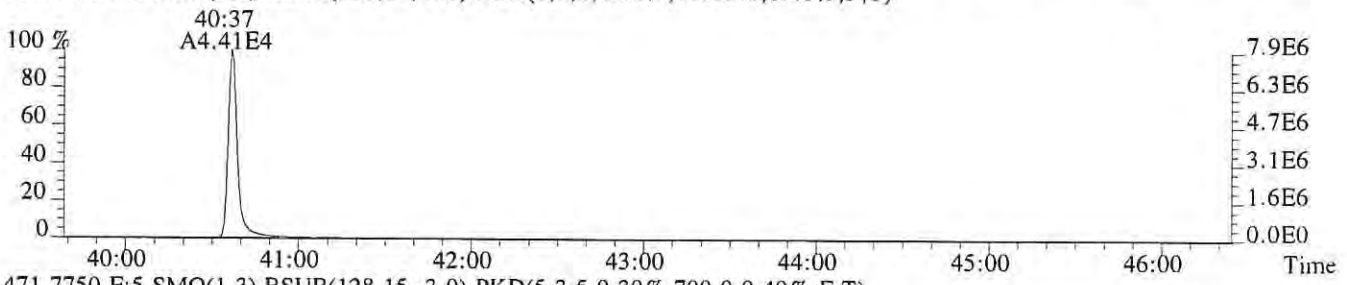
File:P616185 #1-609 Acq:25-DEC-2018 03:50:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-004
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,620.0,0.40%,F,T)



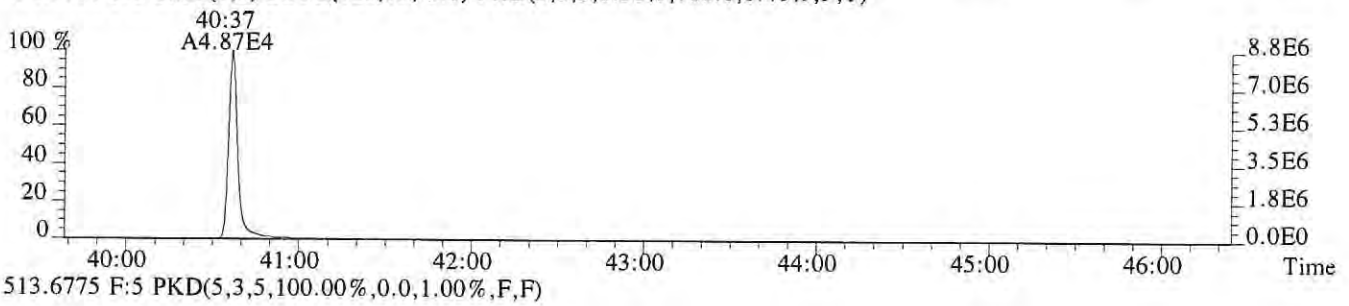
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,4036.0,0.40%,F,T)



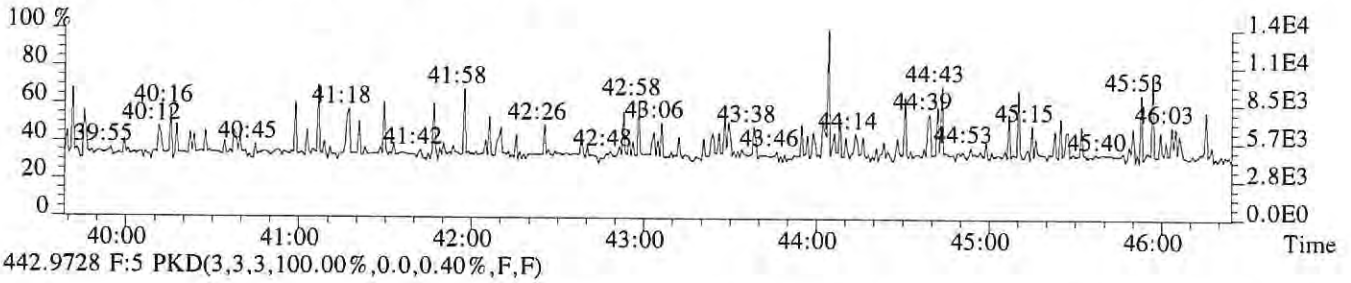
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,11092.0,0.40%,F,T)



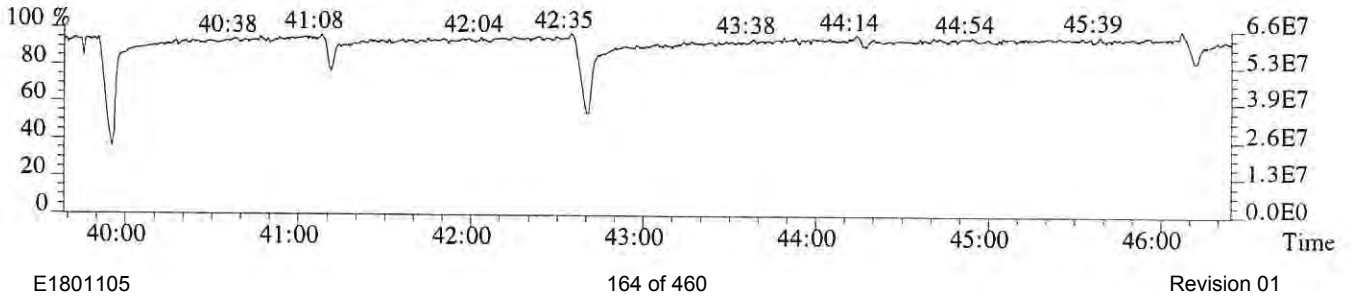
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,700.0,0.40%,F,T)



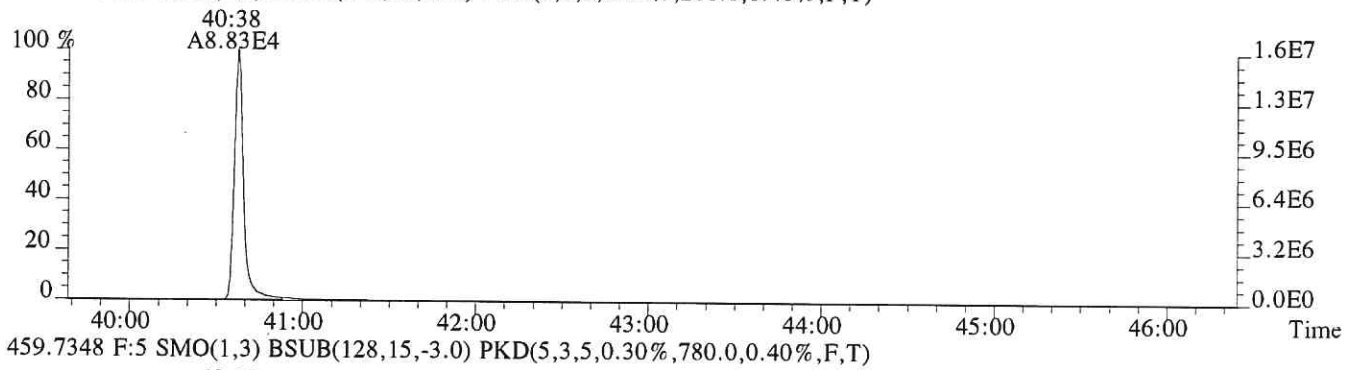
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



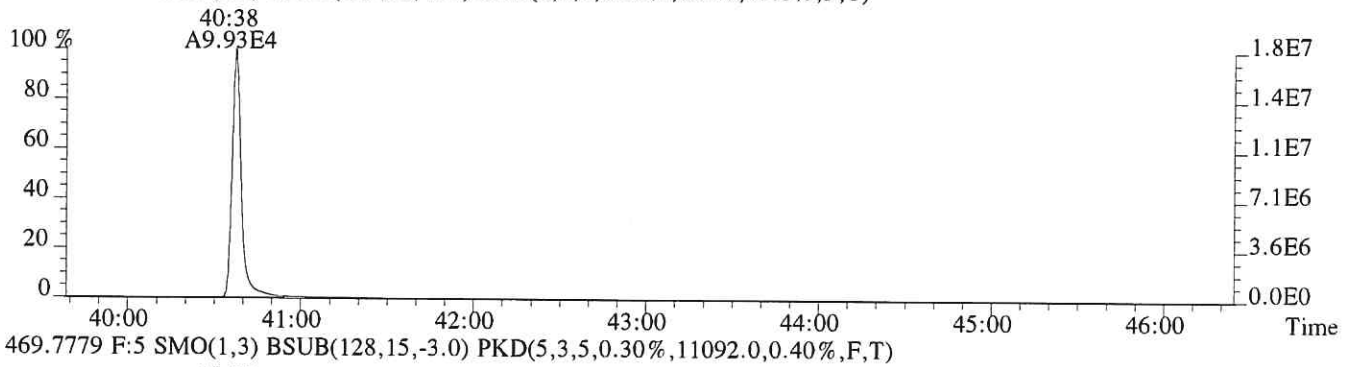
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



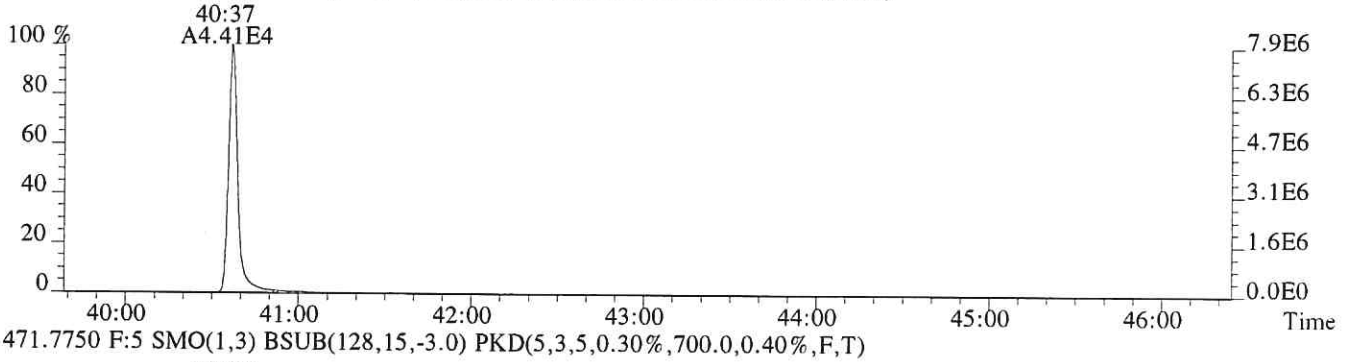
File:P616185 #1-609 Acq:25-DEC-2018 03:50:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801105-004
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,280.0,0.40%,F,T)



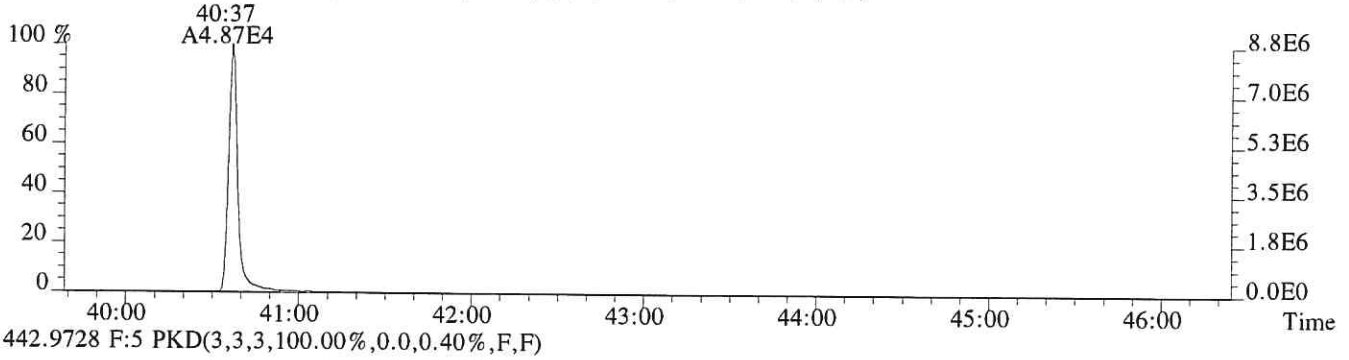
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,780.0,0.40%,F,T)



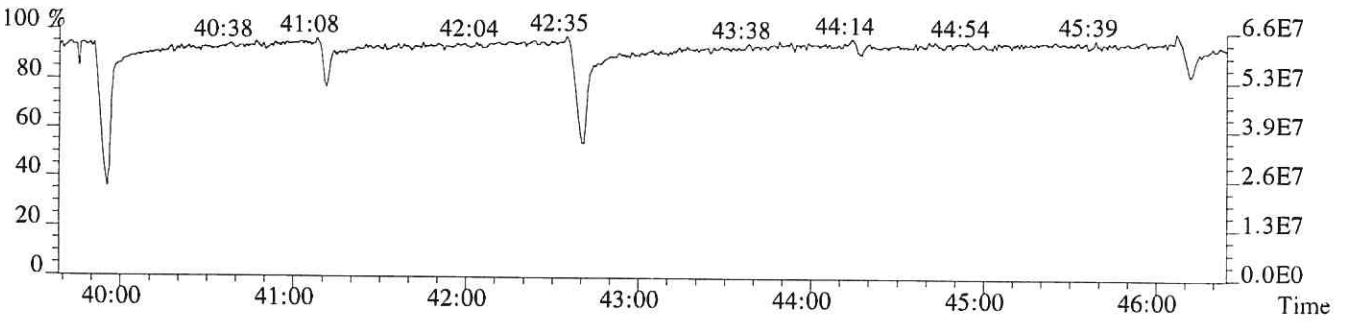
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,11092.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,700.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
METHOD BLANK

un #12 Filename P616210 Samp: 1 Inj: 1 Acquired: 26-DEC-18 14:56:54
rocessed: 27-DEC-18 15:09:51 Sample ID: EQ1800515-01

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	NotFnd	*	*	*	no	no	1.081
2	Unk	1,2,3,7,8-PeCDF	NotFnd	*	*	*	no	no	1.156
3	Unk	2,3,4,7,8-PeCDF	NotFnd	*	*	*	no	yes	1.104
4	Unk	1,2,3,4,7,8-HxCDF	NotFnd	*	*	*	no	yes	1.416
5	Unk	1,2,3,6,7,8-HxCDF	NotFnd	*	*	*	no	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	NotFnd	*	*	*	no	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	NotFnd	*	*	*	no	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:12	6.138e+01	4.751e+01	1.29	no	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:31	1.503e+01	1.062e+01	1.42	no	no	1.463
0	Unk	OCDF	40:45	1.584e+02	1.931e+02	0.82	yes	no	1.571
1	Unk	2,3,7,8-TCDD	NotFnd	*	*	*	no	no	1.049
2	Unk	1,2,3,7,8-PeCDD	NotFnd	*	*	*	no	no	0.929
3	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.071
4	Unk	1,2,3,6,7,8-HxCDD	NotFnd	*	*	*	no	yes	1.060
5	Unk	1,2,3,7,8,9-HxCDD	NotFnd	*	*	*	no	yes	1.145
6	Unk	1,2,3,4,6,7,8-HpCDD	38:07	9.933e+01	1.151e+02	0.86	no	no	1.112
7	Unk	OCDD	40:34	9.220e+02	1.042e+03	0.88	yes	no	1.157
8	IS	13C-2,3,7,8-TCDF	25:43	1.782e+04	2.261e+04	0.79	yes	no	1.417
9	IS	13C-1,2,3,7,8-PeCDF	30:40	3.702e+04	2.308e+04	1.60	yes	no	1.596
0	IS	13C-2,3,4,7,8-PeCDF	31:41	3.606e+04	2.262e+04	1.59	yes	no	1.571
1	IS	13C-1,2,3,4,7,8-HxCDF	34:31	1.819e+04	3.503e+04	0.52	yes	no	1.160
2	IS	13C-1,2,3,6,7,8-HxCDF	34:38	2.164e+04	4.064e+04	0.53	yes	no	1.336
3	IS	13C-2,3,4,6,7,8-HxCDF	35:10	1.986e+04	3.732e+04	0.53	yes	no	1.250
4	IS	13C-1,2,3,7,8,9-HxCDF	35:56	1.834e+04	3.488e+04	0.53	yes	no	1.131
5	IS	13C-1,2,3,4,6,7,8-HpCDF	37:13	1.540e+04	3.436e+04	0.45	yes	no	1.029
6	IS	13C-1,2,3,4,7,8,9-HpCDF	38:32	1.452e+04	3.215e+04	0.45	yes	no	0.907
7	IS	13C-2,3,7,8-TCDD	26:42	9.163e+03	1.119e+04	0.82	yes	no	0.983
8	IS	13C-1,2,3,7,8-PeCDD	31:59	2.776e+04	1.797e+04	1.55	yes	no	1.125
9	IS	13C-1,2,3,4,7,8-HxCDD	35:18	2.750e+04	2.135e+04	1.29	yes	no	0.903
0	IS	13C-1,2,3,6,7,8-HxCDD	35:24	2.728e+04	2.176e+04	1.25	yes	no	0.903
1	IS	13C-1,2,3,4,6,7,8-HpCDD	38:06	3.260e+04	3.016e+04	1.08	yes	no	0.857
2	IS	13C-OCDD	40:34	3.257e+04	3.603e+04	0.90	yes	no	0.659
3	RS/RT	13C-1,2,3,4-TCDD	25:57	3.083e+04	3.886e+04	0.79	yes	no	-
4	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:38	5.077e+04	3.968e+04	1.28	yes	no	-
5	C/Up	37Cl-2,3,7,8-TCDD	26:44	1.153e+04				no	1.086

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
METHOD BLANK

ın #12 Filename P616210 Samp: 1 Inj: 1 Acquired: 26-DEC-18 14:56:54
:ocessed: 27-DEC-18 15:09:51 LAB. ID: EQ1800515-01

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
	2,3,7,8-TCDF	*	1.63e+03	*	*	6.37e+03	*
	1,2,3,7,8-PeCDF	*	8.08e+02	*	*	3.13e+03	*
	2,3,4,7,8-PeCDF	*	8.08e+02	*	*	3.13e+03	*
	1,2,3,4,7,8-HxCDF	*	1.41e+03	*	*	1.04e+03	*
	1,2,3,6,7,8-HxCDF	*	1.41e+03	*	*	1.04e+03	*
	2,3,4,6,7,8-HxCDF	*	1.41e+03	*	*	1.04e+03	*
	1,2,3,7,8,9-HxCDF	*	1.41e+03	*	*	1.04e+03	*
	1,2,3,4,6,7,8-HpCDF	1.26e+04	3.88e+02	3.2e+01	1.01e+04	4.56e+02	2.2e+01
	1,2,3,4,7,8,9-HpCDF	2.95e+03	3.88e+02	7.6e+00	3.37e+03	4.56e+02	7.4e+00
0	OCDF	3.03e+04	8.20e+02	3.7e+01	3.68e+04	1.62e+03	2.3e+01
1	2,3,7,8-TCDD	*	3.85e+03	*	*	1.44e+03	*
2	1,2,3,7,8-PeCDD	*	1.23e+03	*	*	9.80e+02	*
3	1,2,3,4,7,8-HxCDD	*	1.44e+03	*	*	6.92e+02	*
4	1,2,3,6,7,8-HxCDD	*	1.44e+03	*	*	6.92e+02	*
5	1,2,3,7,8,9-HxCDD	*	1.44e+03	*	*	6.92e+02	*
6	1,2,3,4,6,7,8-HpCDD	2.52e+04	6.68e+02	3.8e+01	2.35e+04	1.26e+03	1.9e+01
7	OCDD	1.73e+05	6.04e+02	2.9e+02	1.99e+05	1.29e+03	1.5e+02
8	13C-2,3,7,8-TCDF	2.49e+06	1.38e+04	1.8e+02	3.23e+06	8.08e+03	4.0e+02
9	13C-1,2,3,7,8-PeCDF	6.47e+06	7.20e+02	9.0e+03	4.02e+06	1.26e+03	3.2e+03
0	13C-2,3,4,7,8-PeCDF	6.86e+06	7.20e+02	9.5e+03	4.23e+06	1.26e+03	3.4e+03
1	13C-1,2,3,4,7,8-HxCDF	3.87e+06	1.46e+03	2.7e+03	7.45e+06	3.99e+03	1.9e+03
2	13C-1,2,3,6,7,8-HxCDF	4.40e+06	1.46e+03	3.0e+03	8.34e+06	3.99e+03	2.1e+03
3	13C-2,3,4,6,7,8-HxCDF	4.17e+06	1.46e+03	2.9e+03	7.76e+06	3.99e+03	1.9e+03
4	13C-1,2,3,7,8,9-HxCDF	3.70e+06	1.46e+03	2.5e+03	7.01e+06	3.99e+03	1.8e+03
5	13C-1,2,3,4,6,7,8-HpCDF	3.37e+06	1.67e+03	2.0e+03	7.38e+06	3.69e+03	2.0e+03
6	13C-1,2,3,4,7,8,9-HpCDF	3.09e+06	1.67e+03	1.8e+03	6.89e+06	3.69e+03	1.9e+03
7	13C-2,3,7,8-TCDD	1.47e+06	1.74e+04	8.5e+01	1.84e+06	6.66e+03	2.8e+02
8	13C-1,2,3,7,8-PeCDD	5.18e+06	1.86e+03	2.8e+03	3.43e+06	2.26e+03	1.5e+03
9	13C-1,2,3,4,7,8-HxCDD	6.08e+06	3.67e+03	1.7e+03	4.78e+06	1.66e+03	2.9e+03
0	13C-1,2,3,6,7,8-HxCDD	5.49e+06	3.67e+03	1.5e+03	4.43e+06	1.66e+03	2.7e+03
1	13C-1,2,3,4,6,7,8-HpCDD	7.02e+06	1.65e+03	4.2e+03	6.63e+06	1.23e+03	5.4e+03
2	13C-OCDD	5.97e+06	9.04e+02	6.6e+03	6.60e+06	9.52e+02	6.9e+03
3	13C-1,2,3,4-TCDD	4.69e+06	1.74e+04	2.7e+02	5.82e+06	6.66e+03	8.7e+02
4	13C-1,2,3,7,8,9-HxCDD	1.03e+07	3.67e+03	2.8e+03	7.92e+06	1.66e+03	4.8e+03
5	37Cl-2,3,7,8-TCDD	1.85e+06	5.18e+03	3.6e+02			

---Sample Calculation---

$$\text{D/L TCDD} = \frac{2.5 \times (3.852e{+}03 + 1.436e{+}03) \times 2000}{(1.469e{+}06 + 1.839e{+}06) \times (\quad) \times 1.049} =$$

ALS ENVIRONMENTAL
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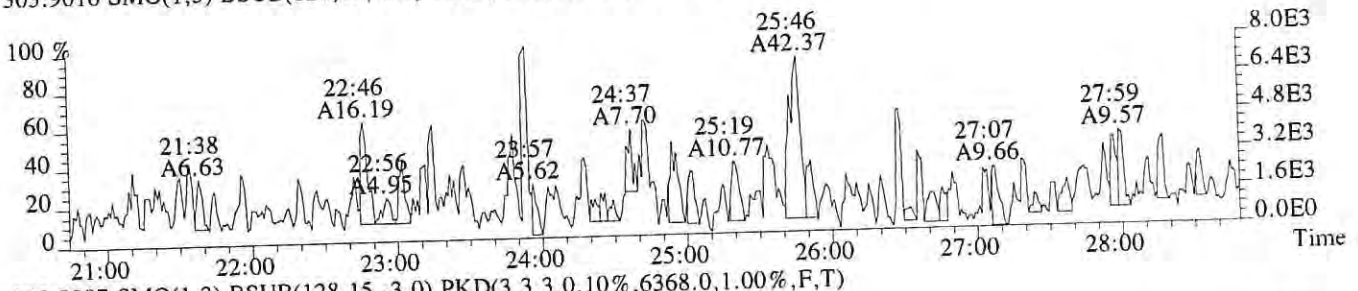
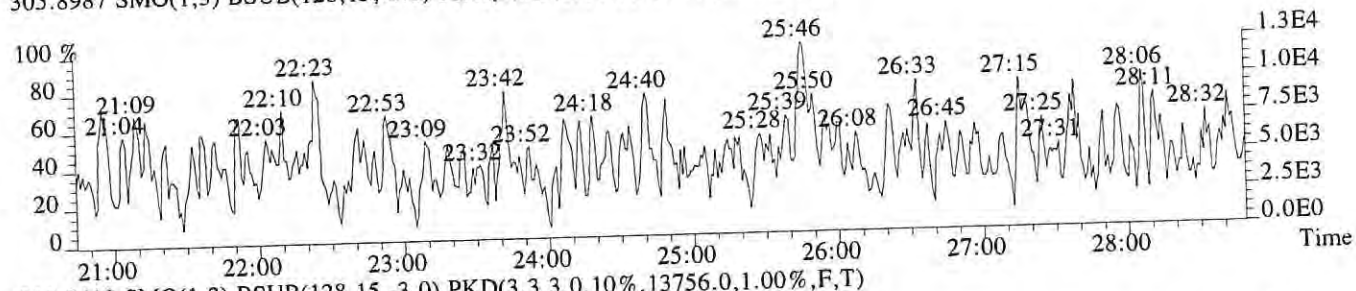
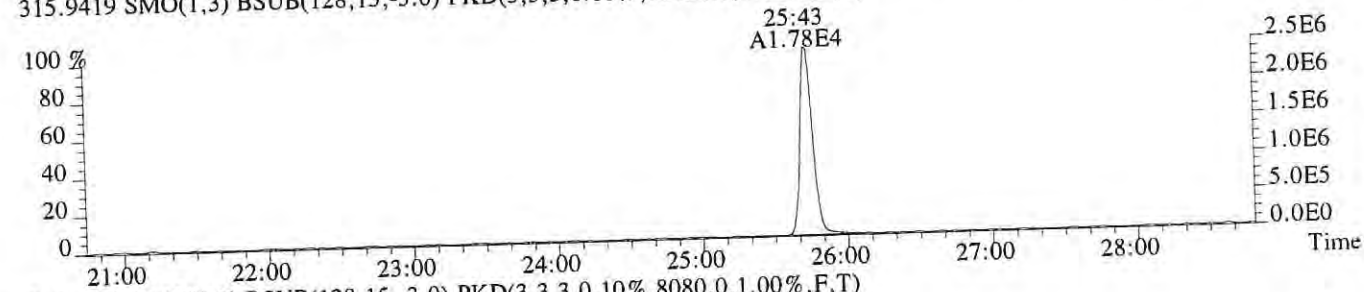
File:P616210 #1-573 Acq:26-DEC-2018 14:56:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1632.0,1.00%,F,T)



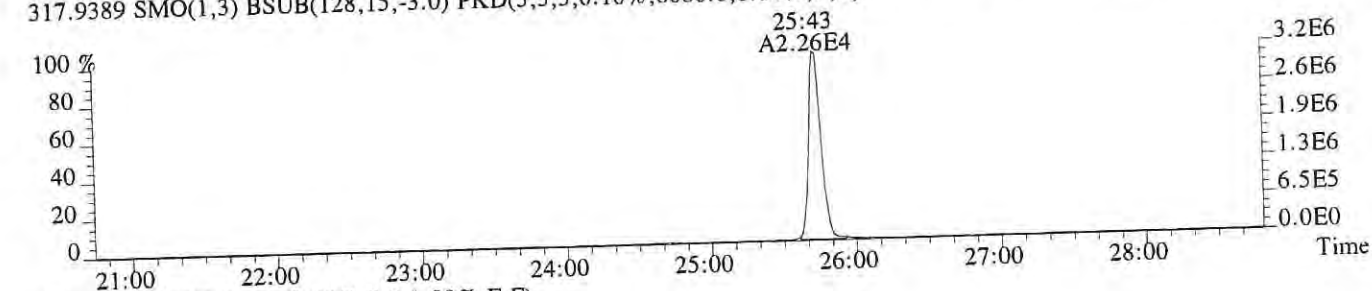
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6368.0,1.00%,F,T)



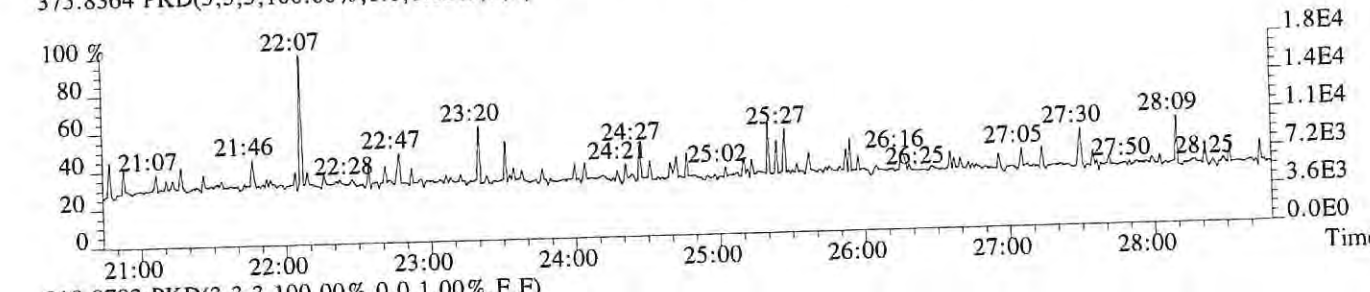
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,13756.0,1.00%,F,T)



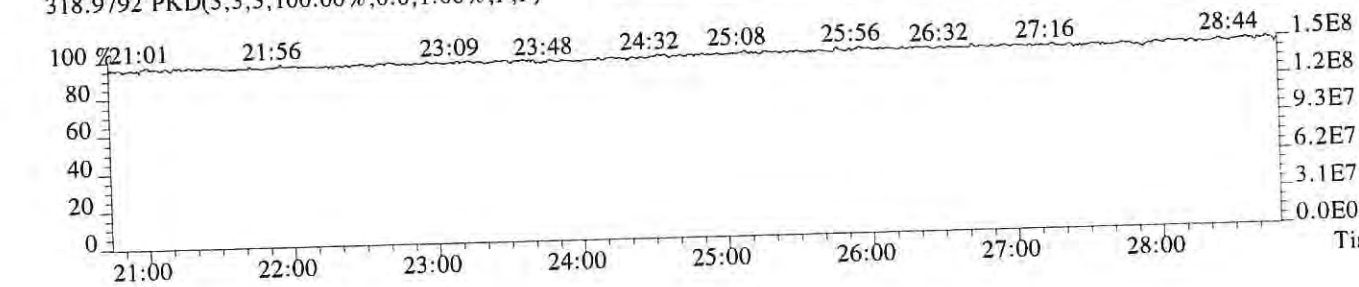
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8080.0,1.00%,F,T)



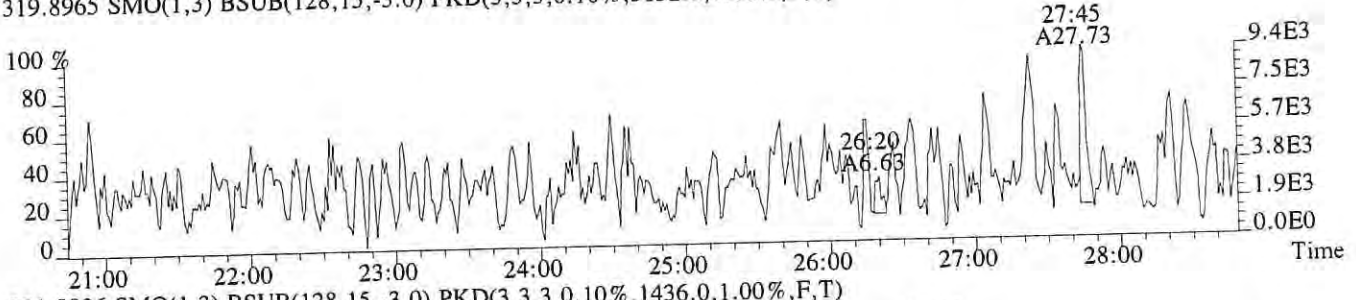
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



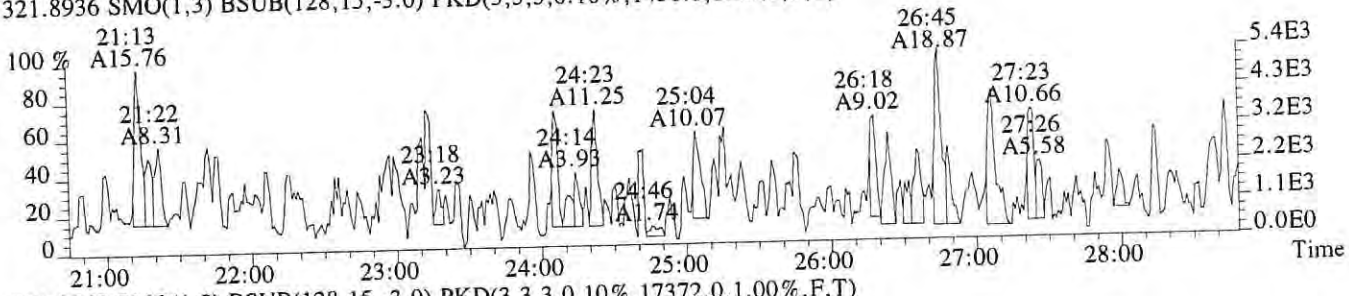
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



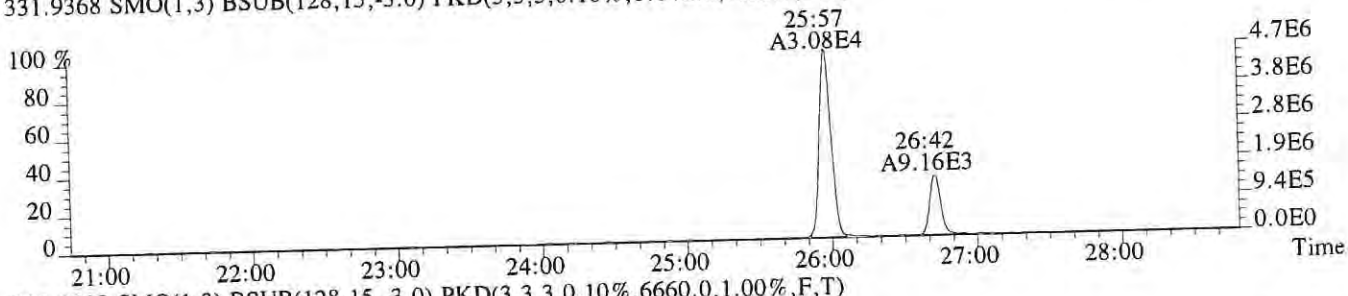
File:P616210 #1-573 Acq:26-DEC-2018 14:56:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3852.0,1.00%,F,T)



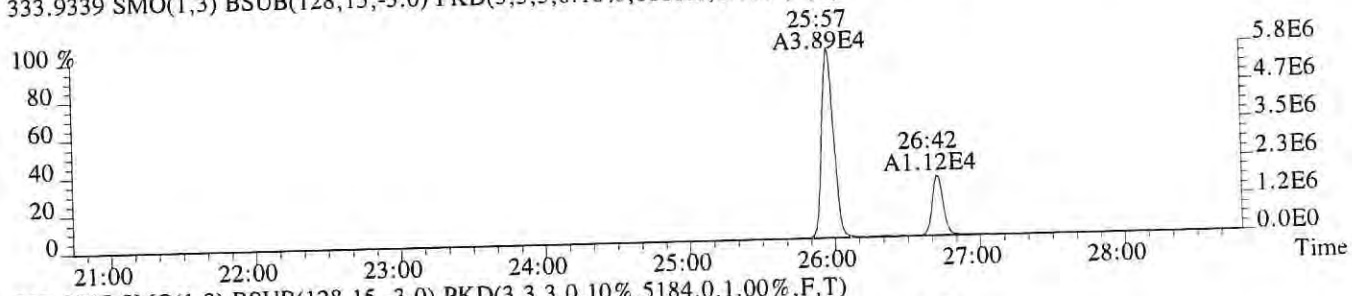
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1436.0,1.00%,F,T)



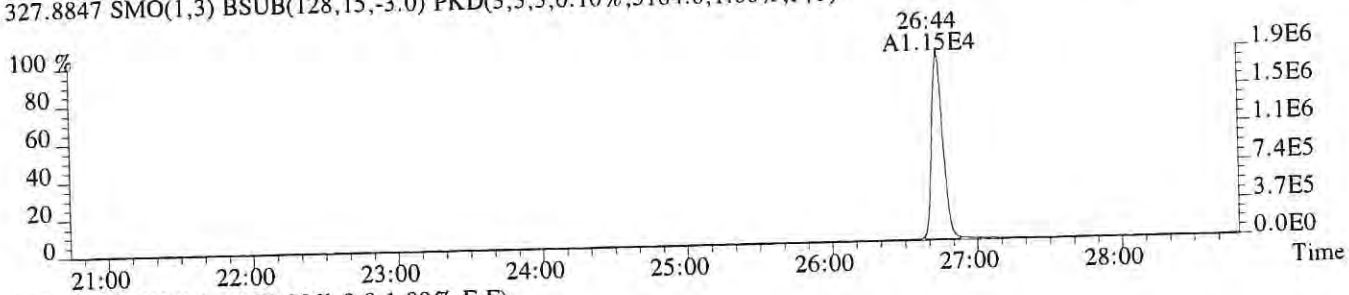
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,17372.0,1.00%,F,T)



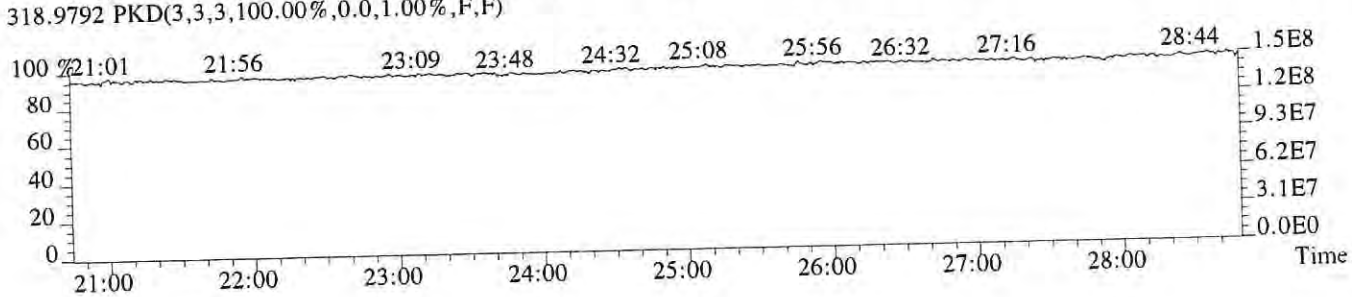
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6660.0,1.00%,F,T)



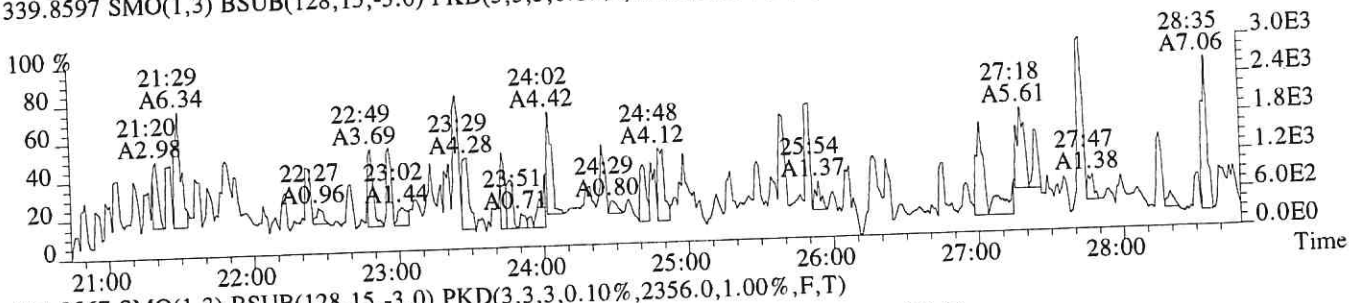
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5184.0,1.00%,F,T)



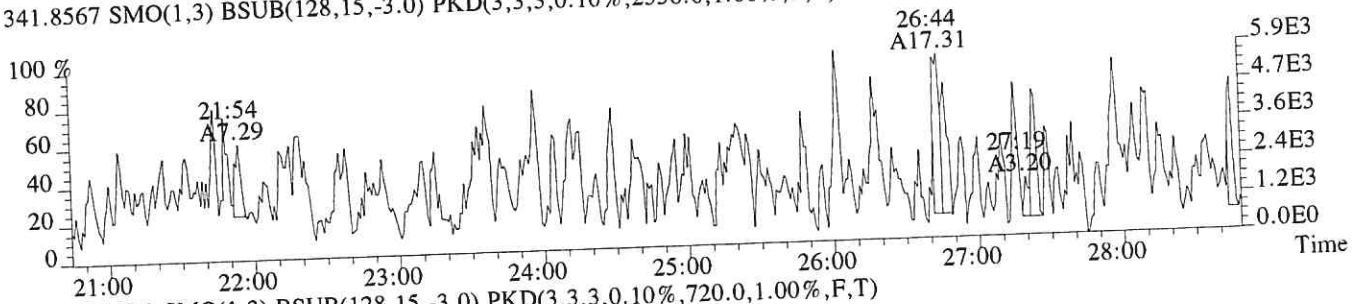
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



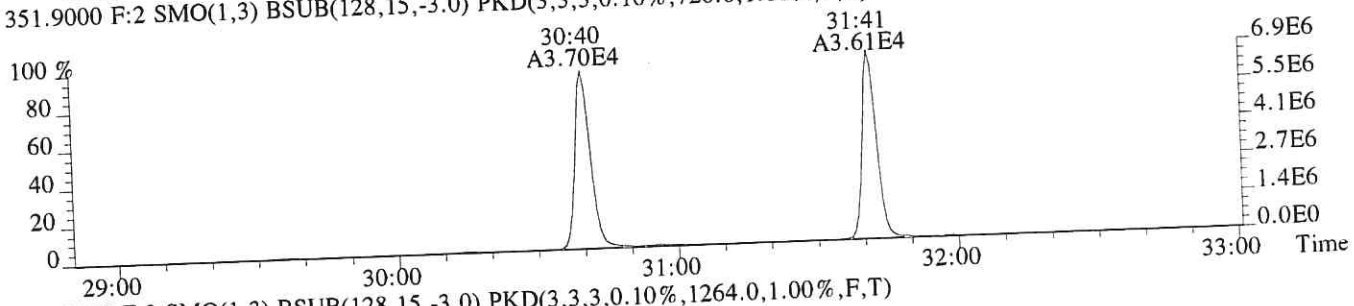
File:P616210 #1-573 Acq:26-DEC-2018 14:56:54 Probe EI+ Magnet SIR VG BioTech Mass spectf
Sample#1 Exp:MB
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,724.0,1.00%,F,T)



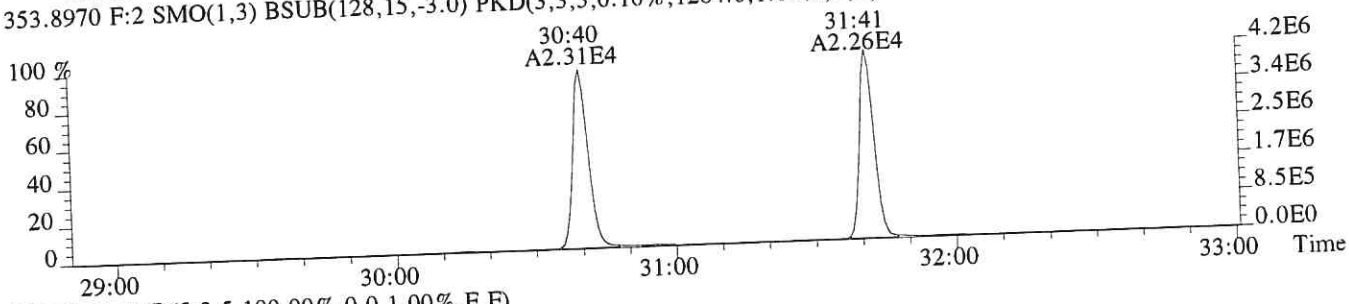
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2356.0,1.00%,F,T)



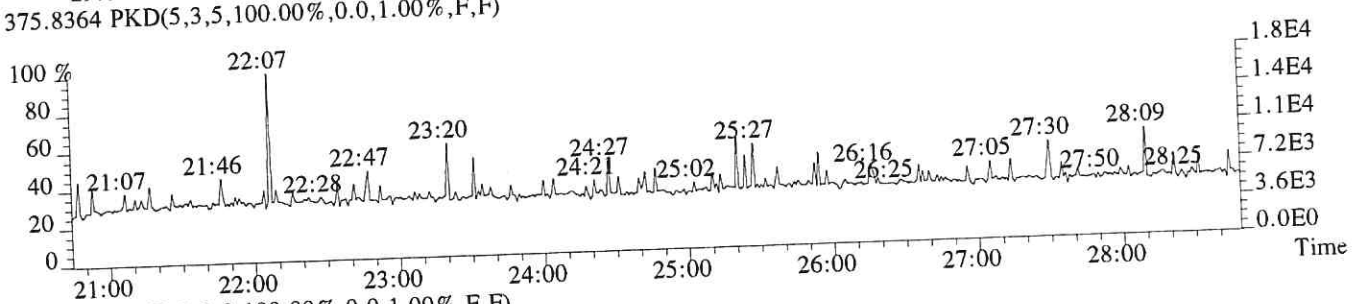
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,720.0,1.00%,F,T)



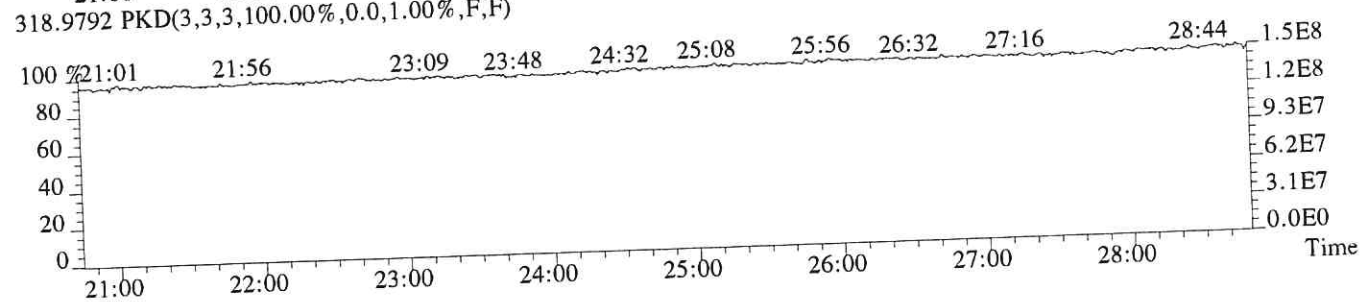
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1264.0,1.00%,F,T)



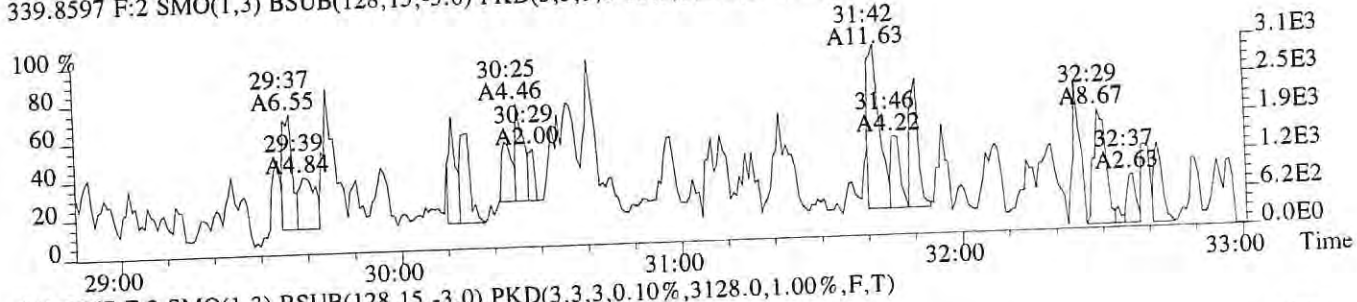
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



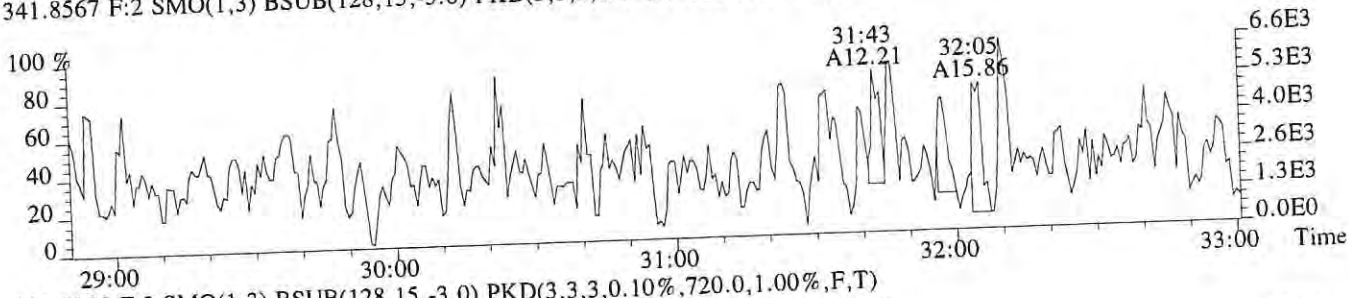
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



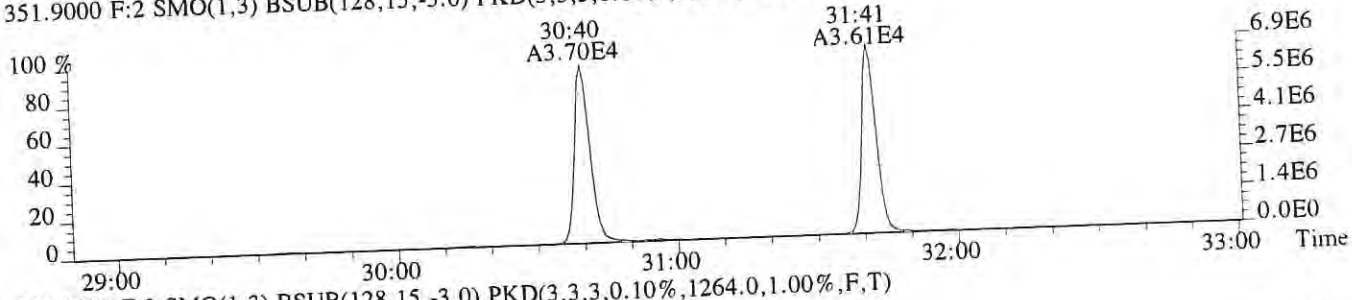
File:P616210 #1-376 Acq:26-DEC-2018 14:56:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,808.0,1.00%,F,T)



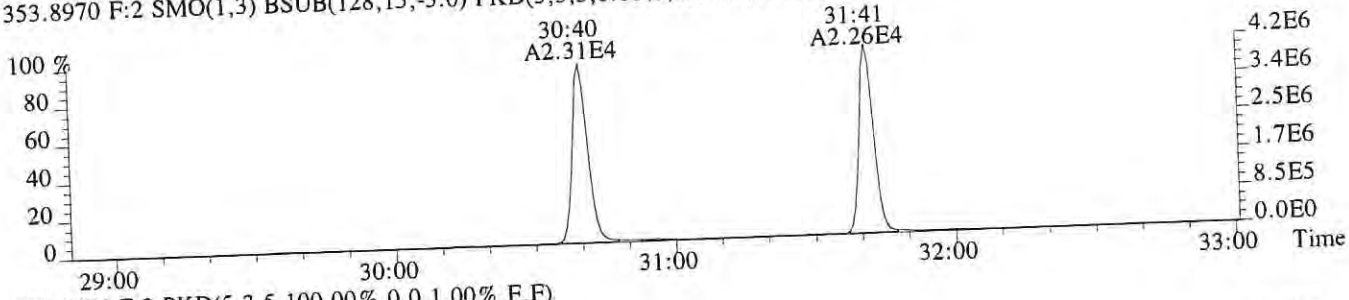
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3128.0,1.00%,F,T)



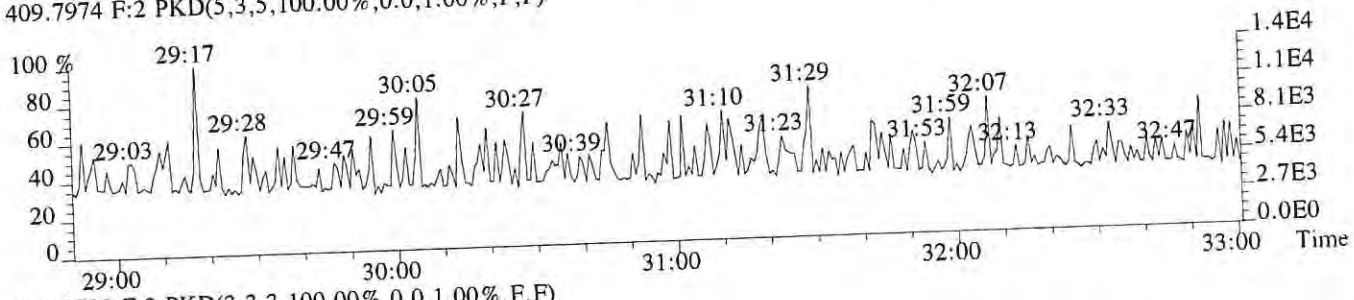
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,720.0,1.00%,F,T)



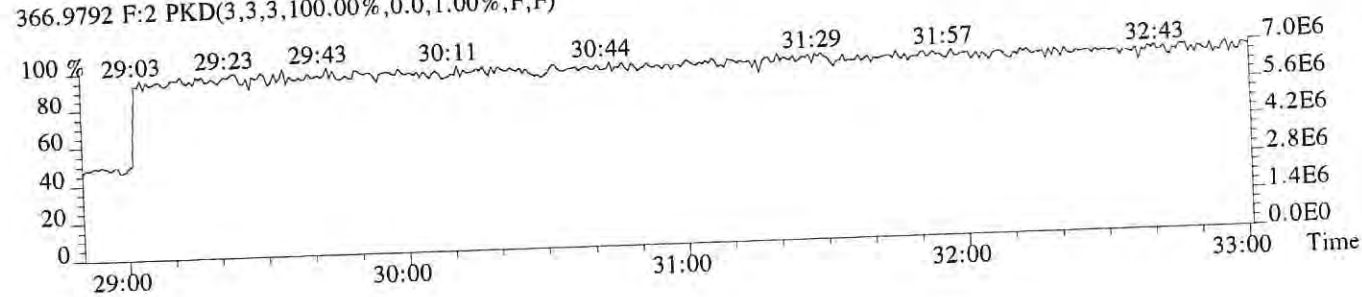
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1264.0,1.00%,F,T)



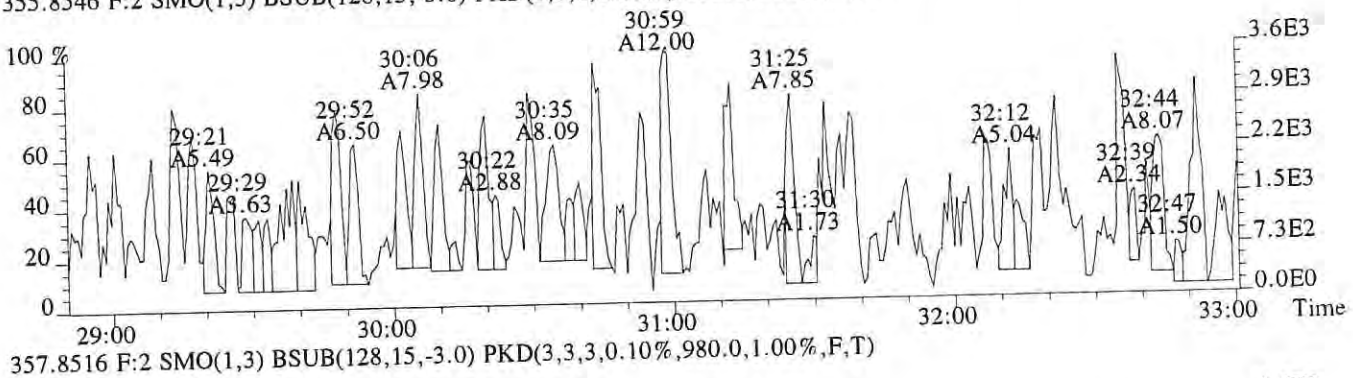
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



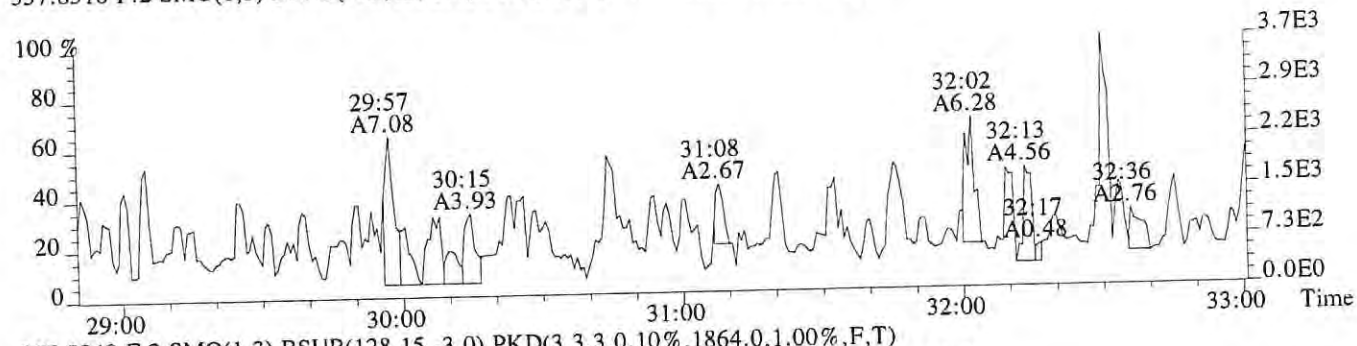
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



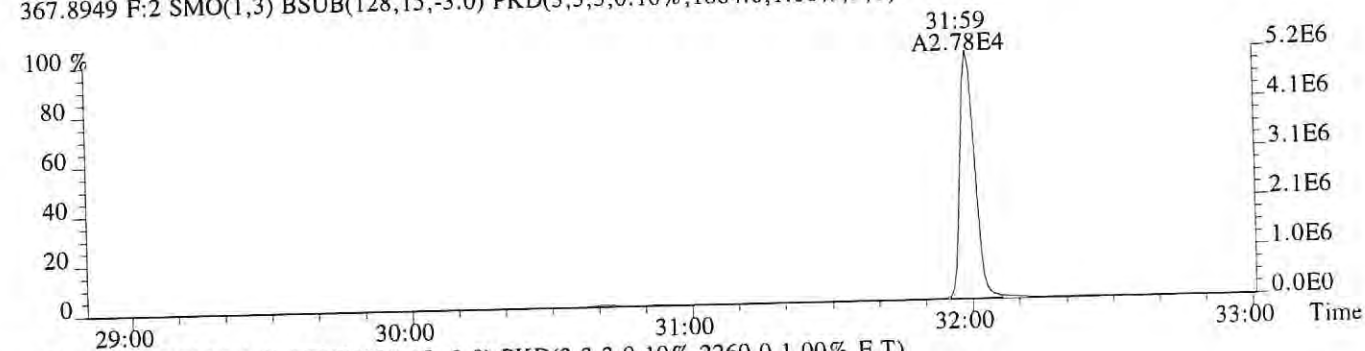
File:P616210 #1-376 Acq:26-DEC-2018 14:56:54 Probe EI+ Magnet SIR VG BioTech Mass spectf
Sample#1 Exp:MB
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1232.0,1.00%,F,T)



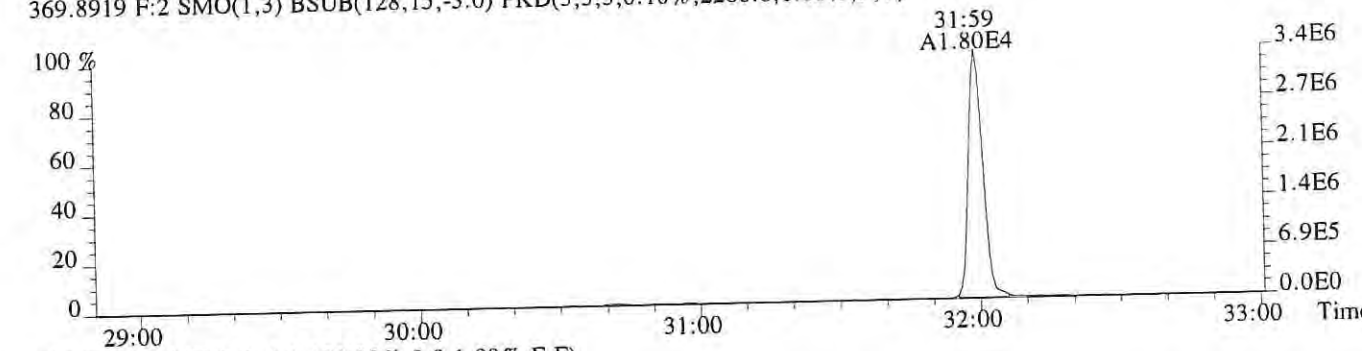
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,980.0,1.00%,F,T)



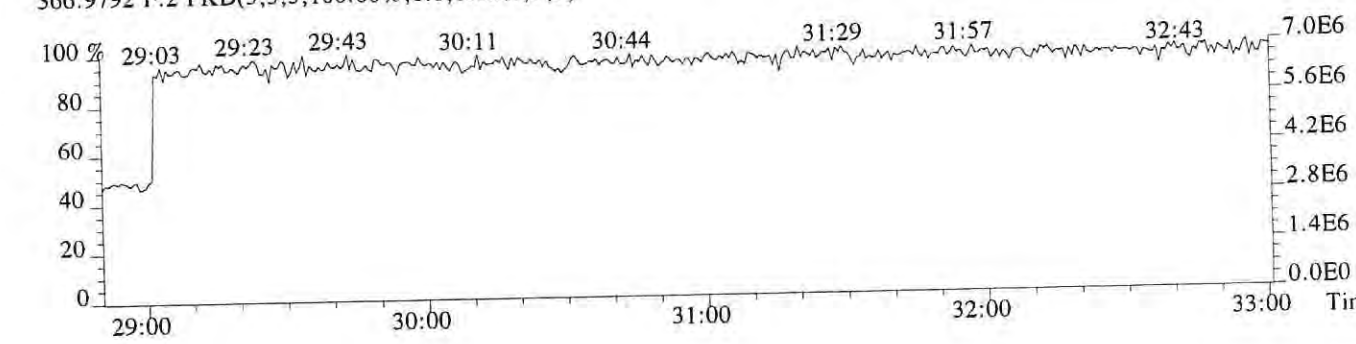
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1864.0,1.00%,F,T)



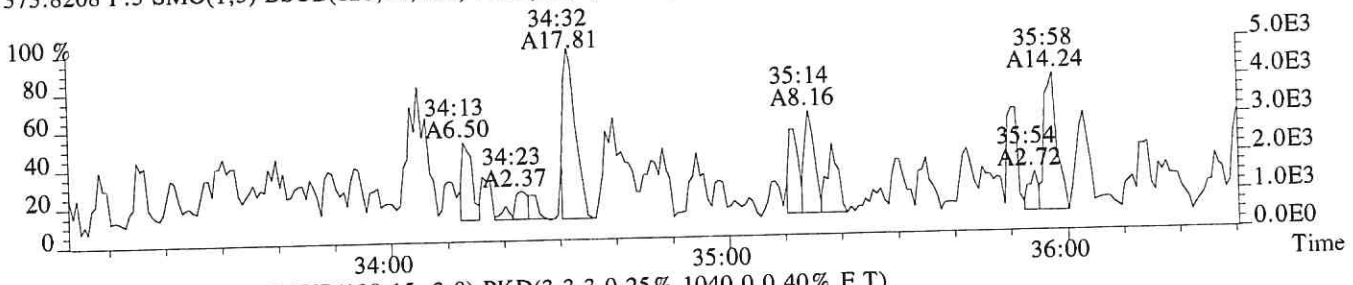
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2260.0,1.00%,F,T)



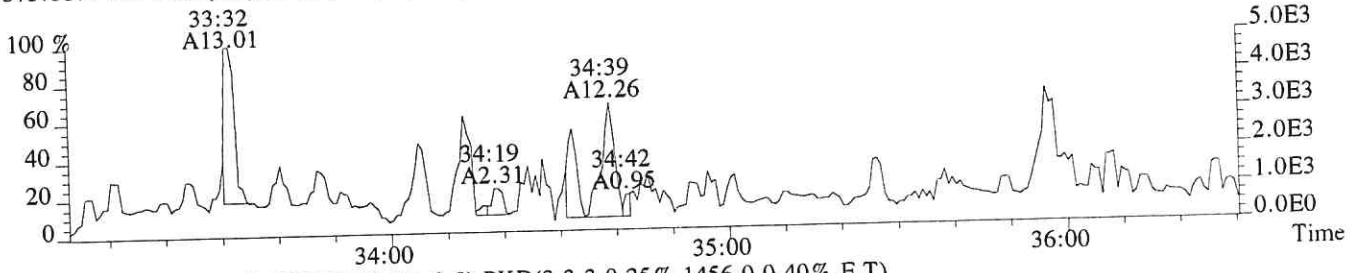
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



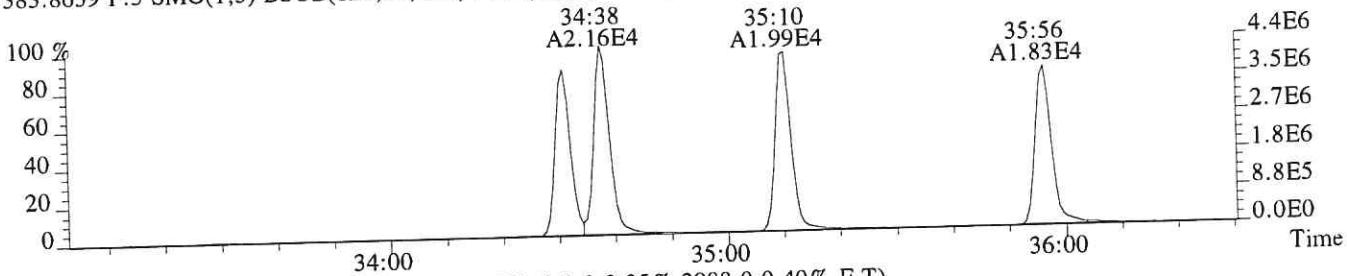
File:P616210 #1-312 Acq:26-DEC-2018 14:56:54 Probe EI+ Magnet SIR VG BioTech Mass spectf
Sample#1 Exp:MB
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1412.0,0.40%,F,T)



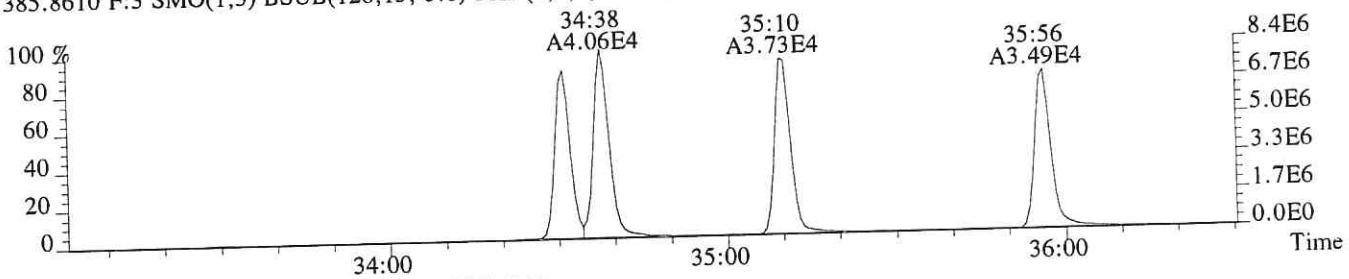
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1040.0,0.40%,F,T)



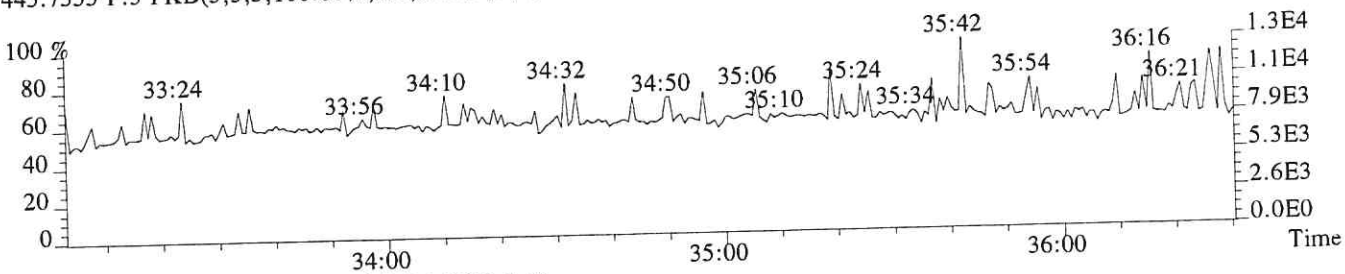
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1456.0,0.40%,F,T)



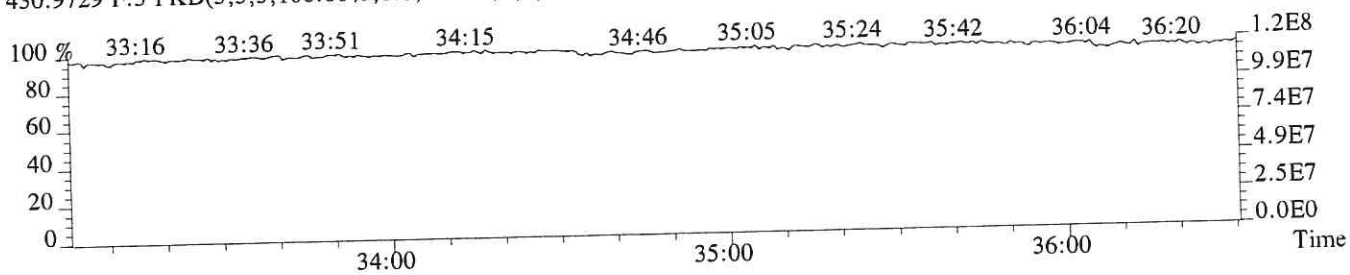
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3988.0,0.40%,F,T)



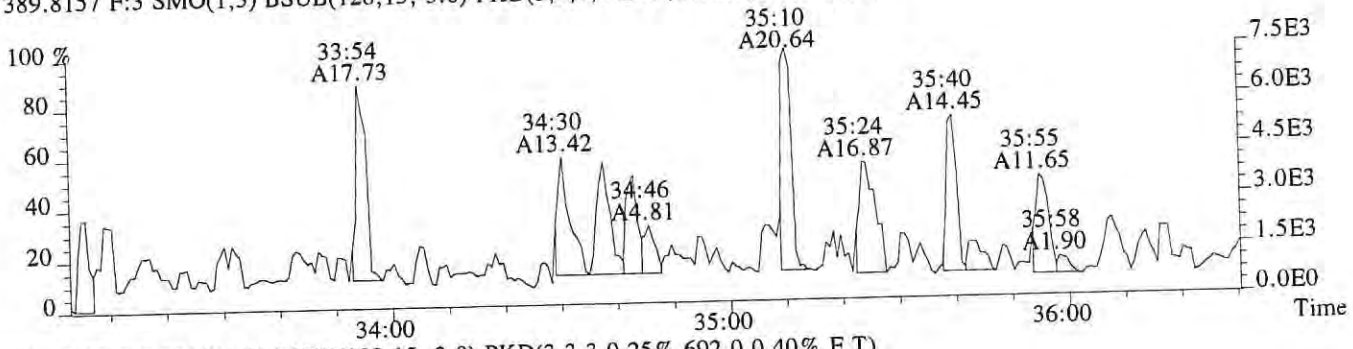
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



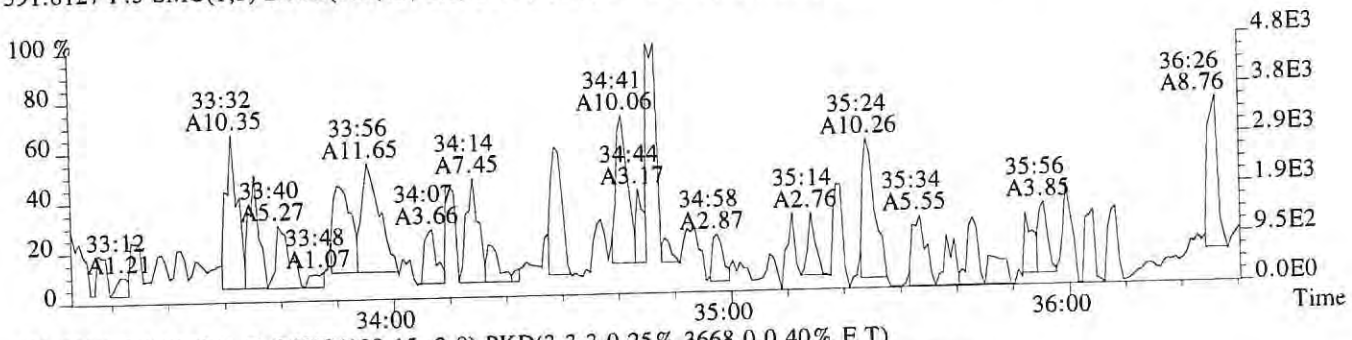
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



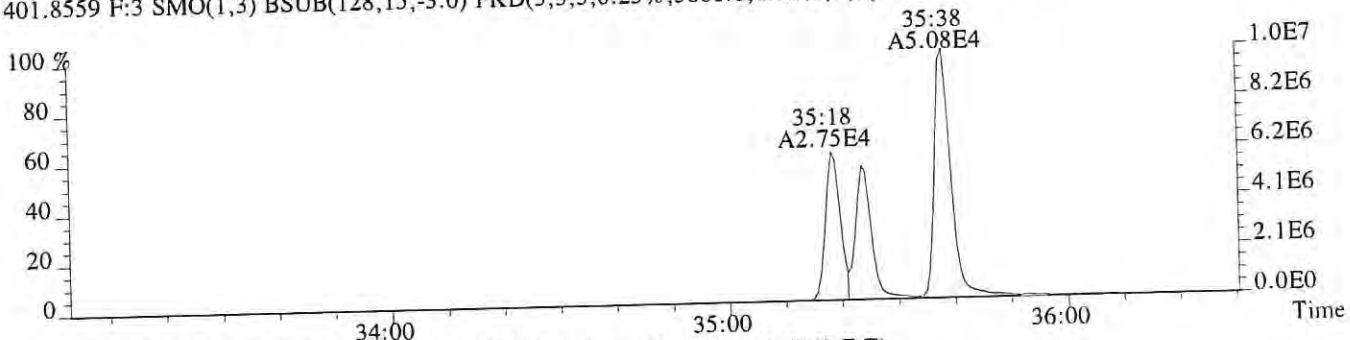
File:P616210 #1-312 Acq:26-DEC-2018 14:56:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1436.0,0.40%,F,T)



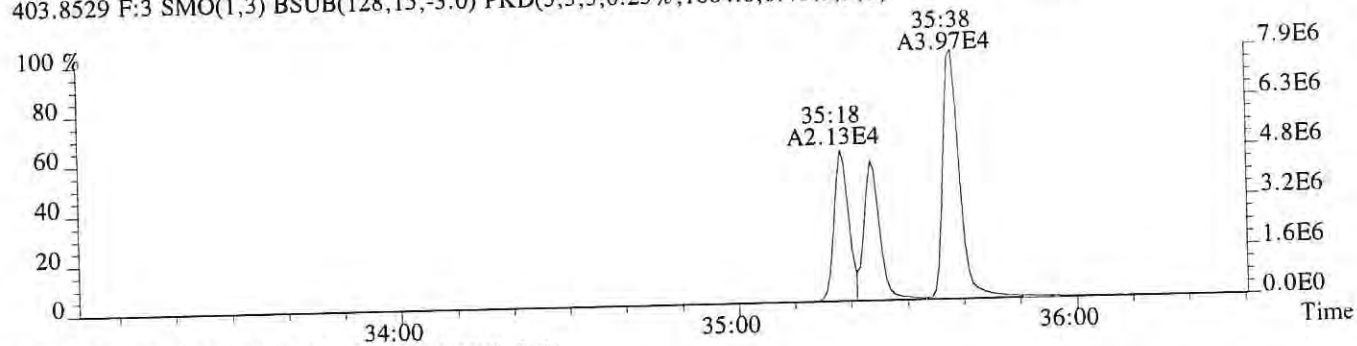
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,692.0,0.40%,F,T)



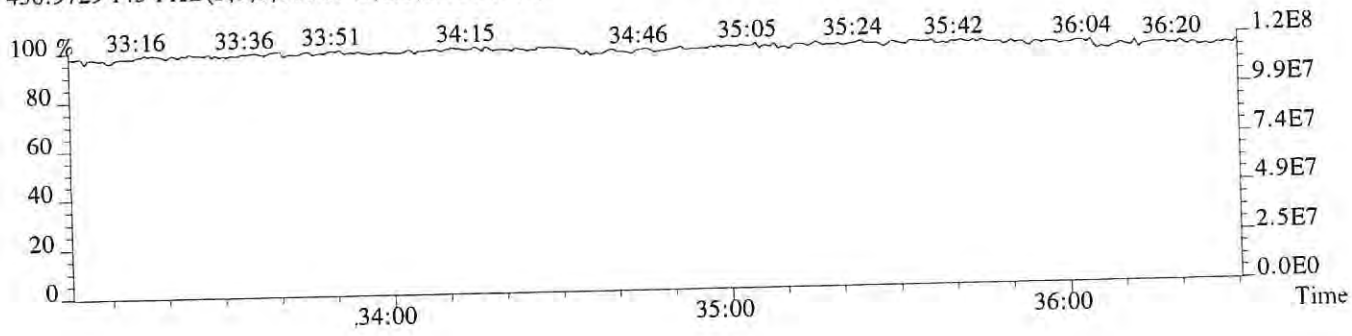
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3668.0,0.40%,F,T)



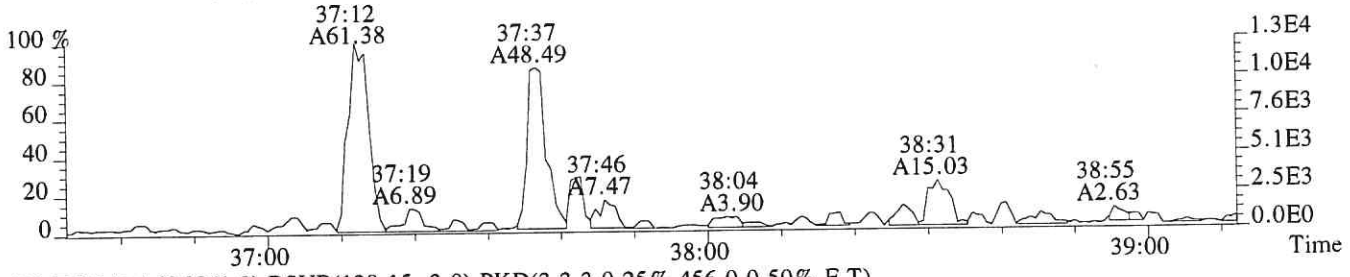
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1664.0,0.40%,F,T)



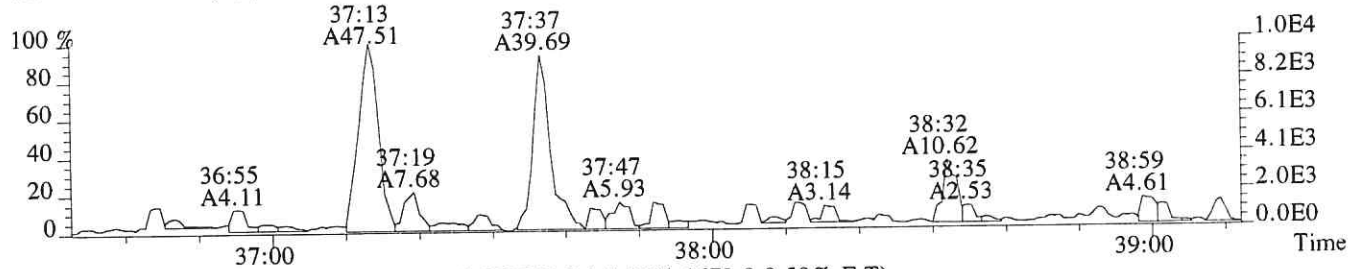
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



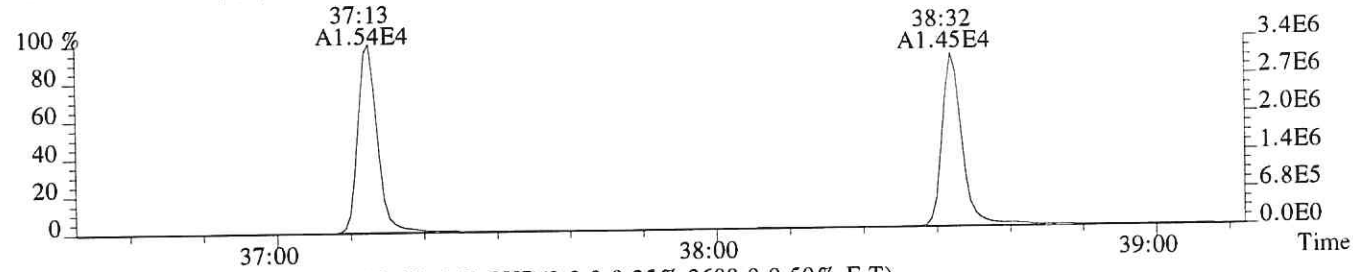
File:P616210 #1-240 Acq:26-DEC-2018 14:56:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,388.0,0.50%,F,T)



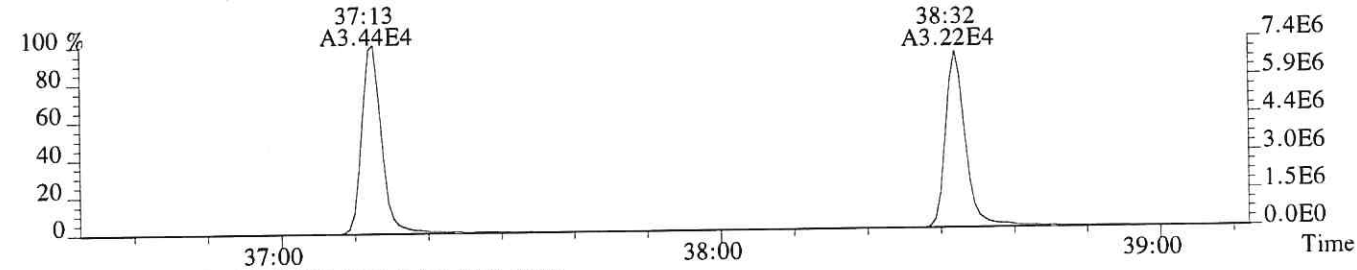
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,456.0,0.50%,F,T)



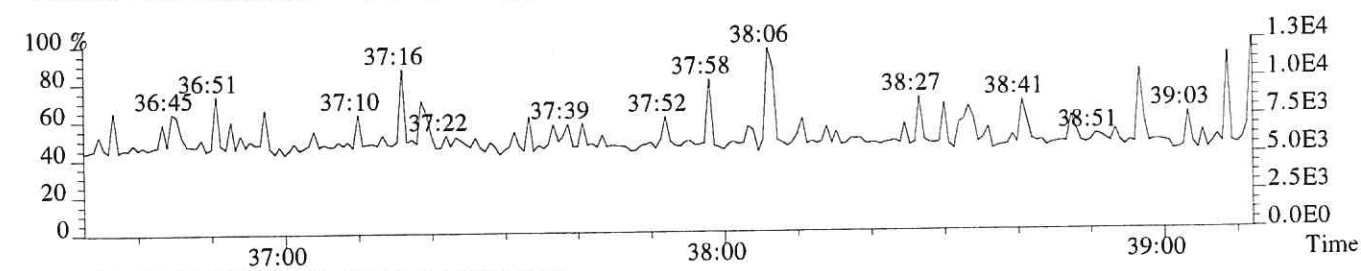
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1672.0,0.50%,F,T)



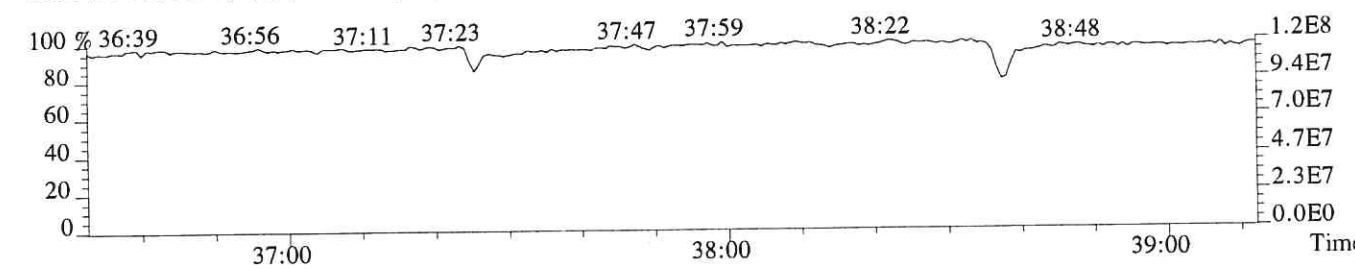
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3688.0,0.50%,F,T)



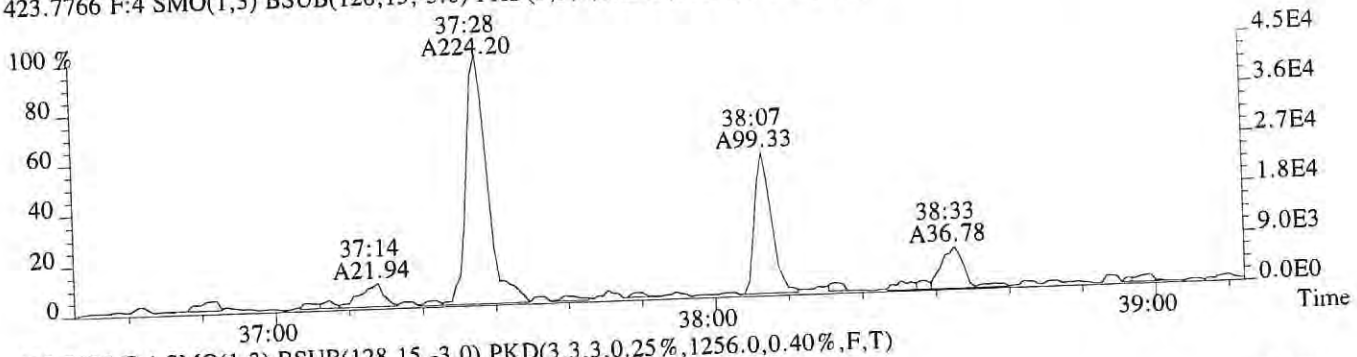
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



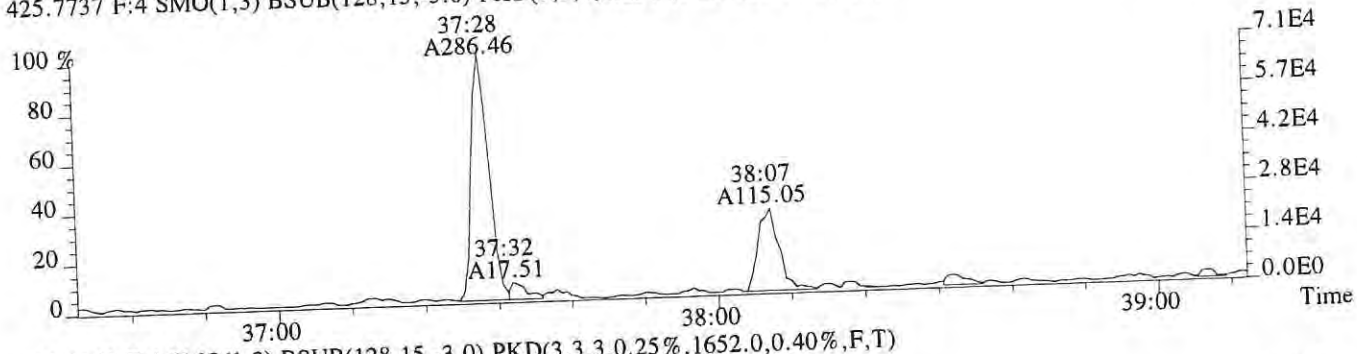
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



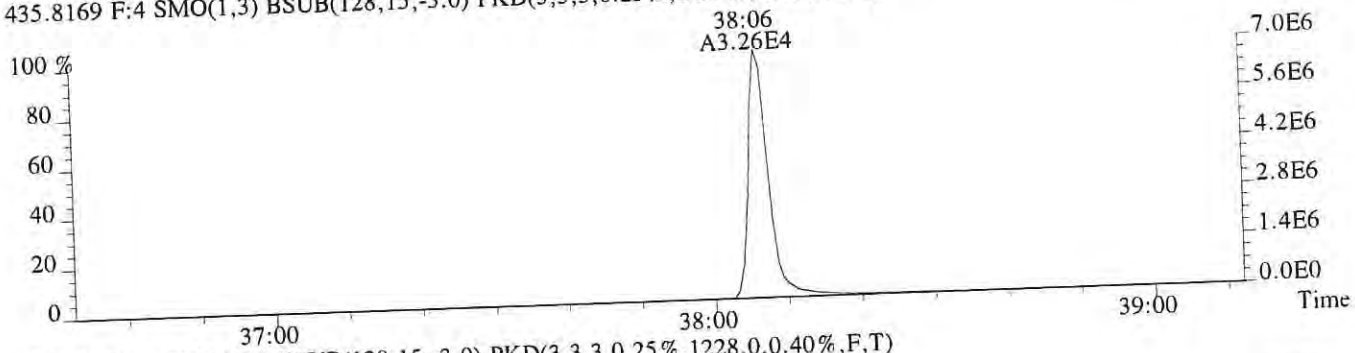
File:P616210 #1-240 Acq:26-DEC-2018 14:56:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,668.0,0.40%,F,T)



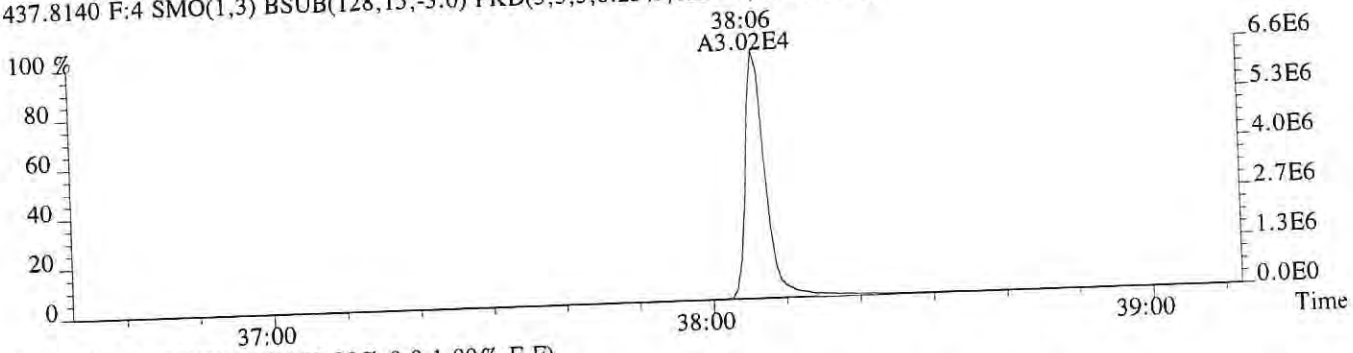
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1256.0,0.40%,F,T)



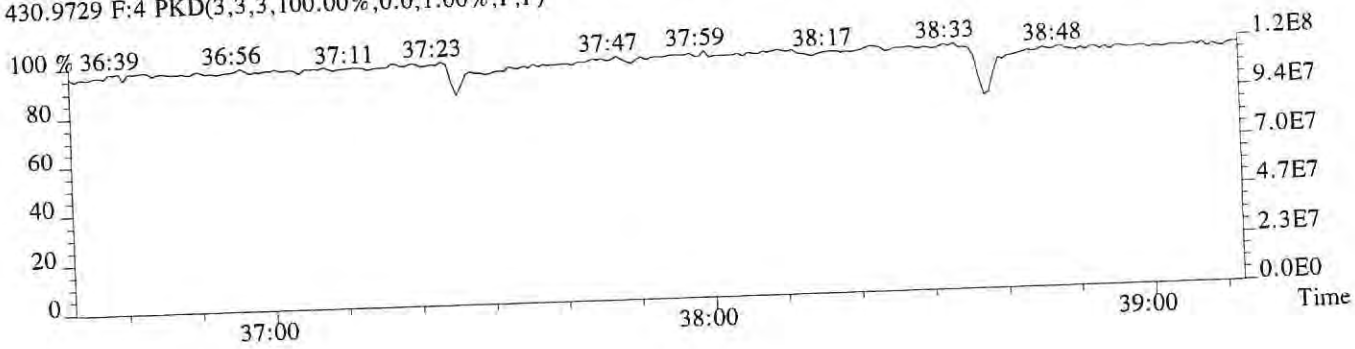
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1652.0,0.40%,F,T)



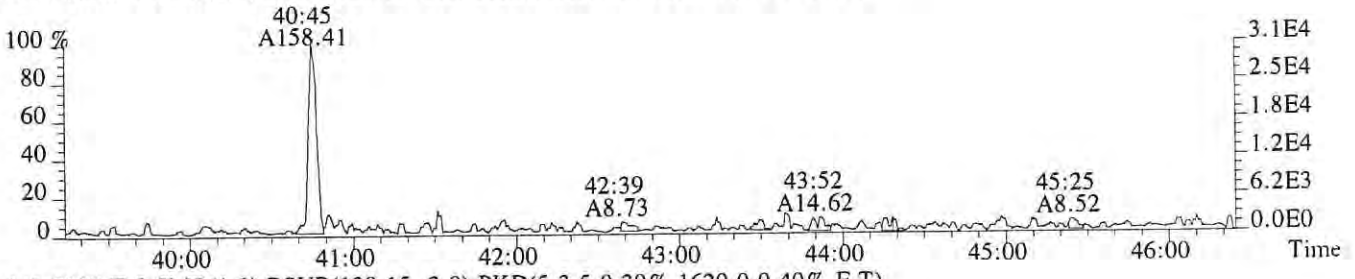
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1228.0,0.40%,F,T)



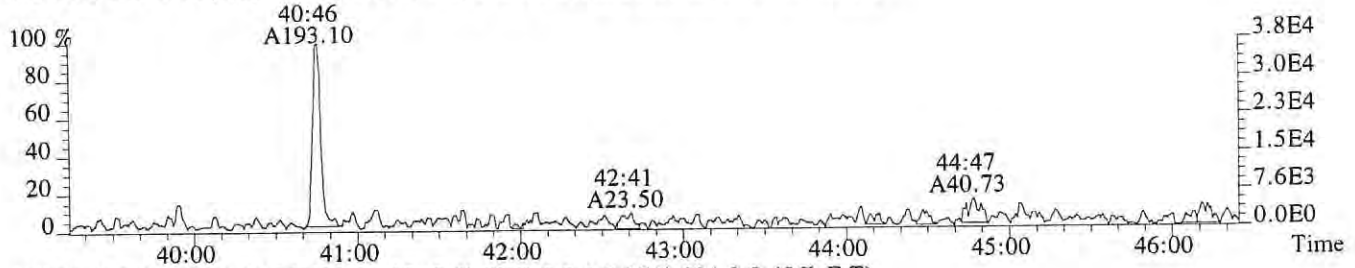
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



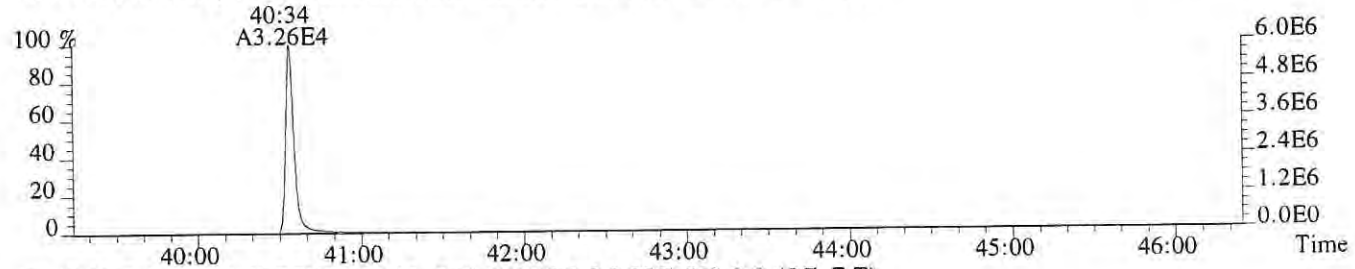
File:P616210 #1-646 Acq:26-DEC-2018 14:56:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,820.0,0.40%,F,T)



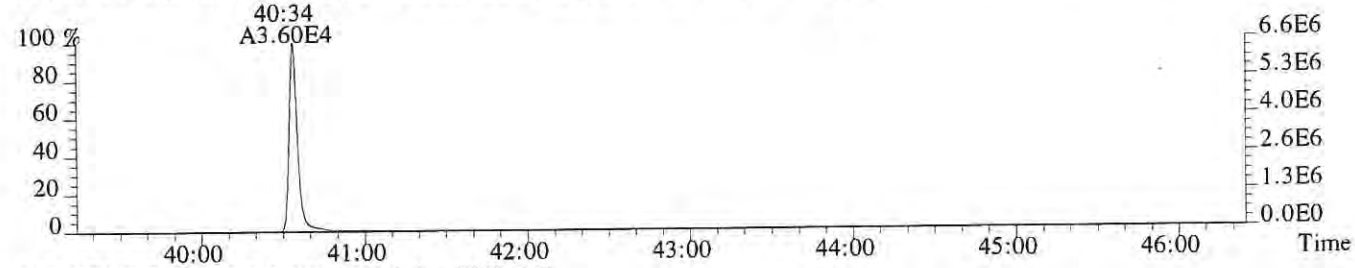
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1620.0,0.40%,F,T)



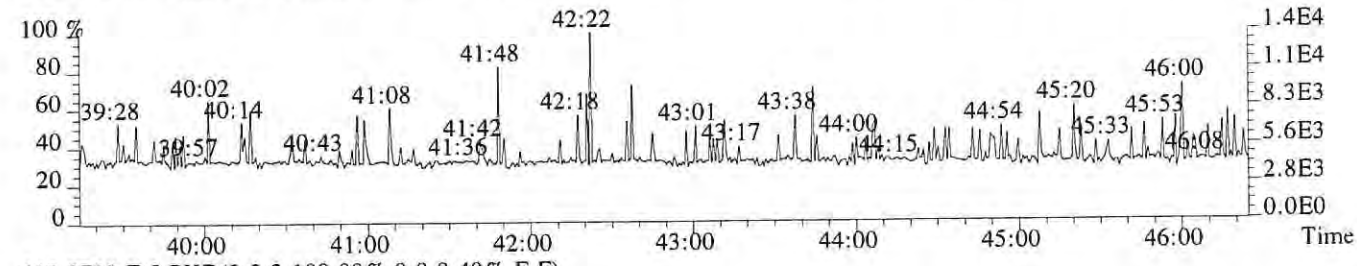
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,904.0,0.40%,F,T)



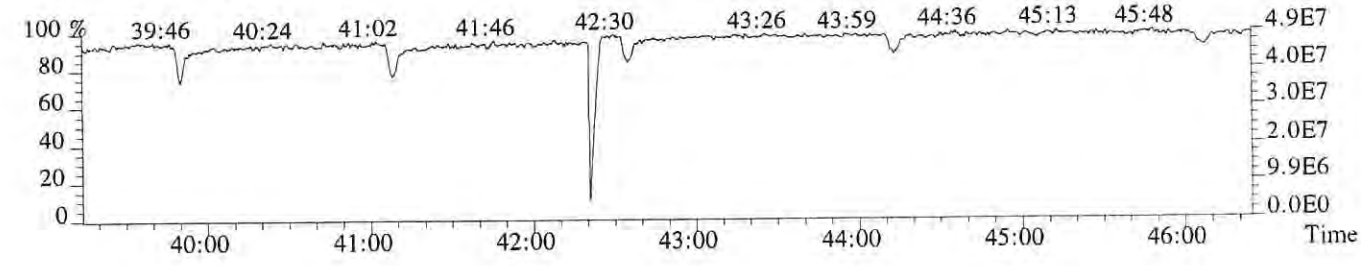
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,952.0,0.40%,F,T)



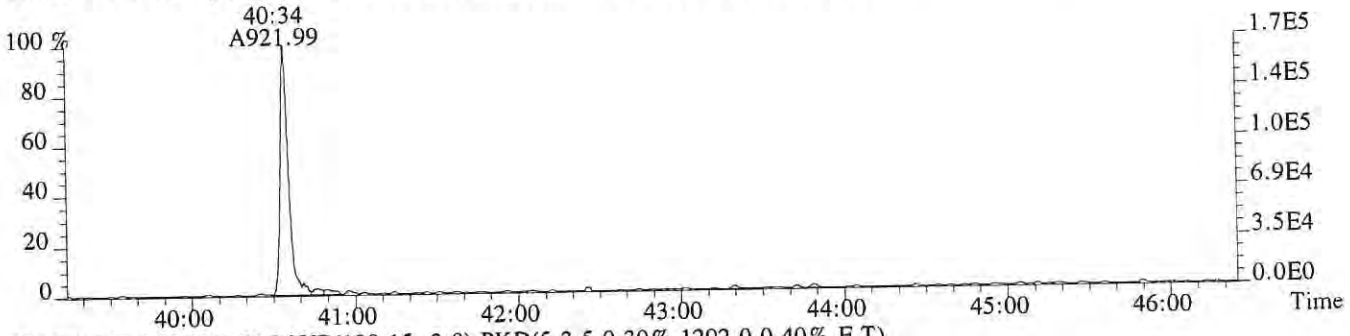
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



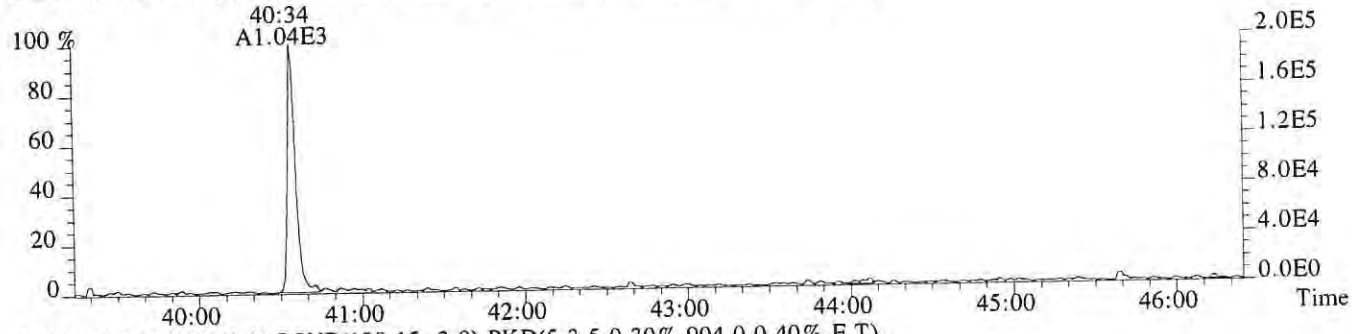
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



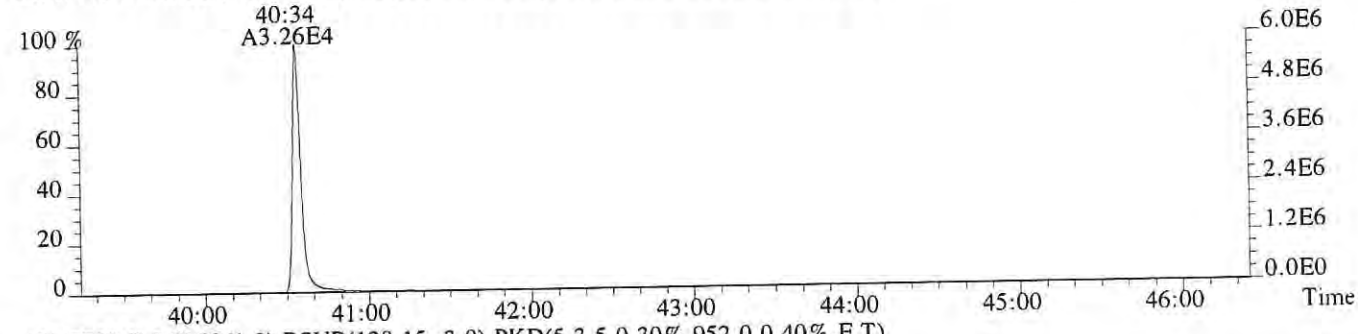
File:P616210 #1-646 Acq:26-DEC-2018 14:56:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,604.0,0.40%,F,T)



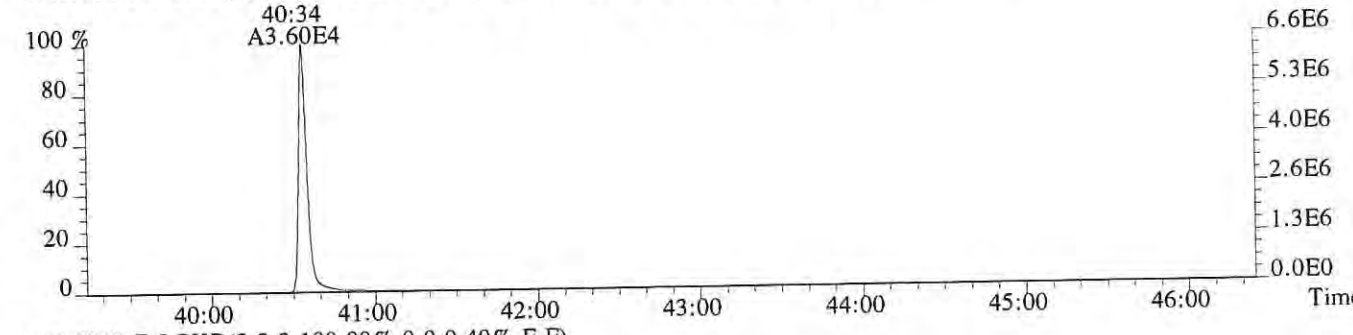
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1292.0,0.40%,F,T)



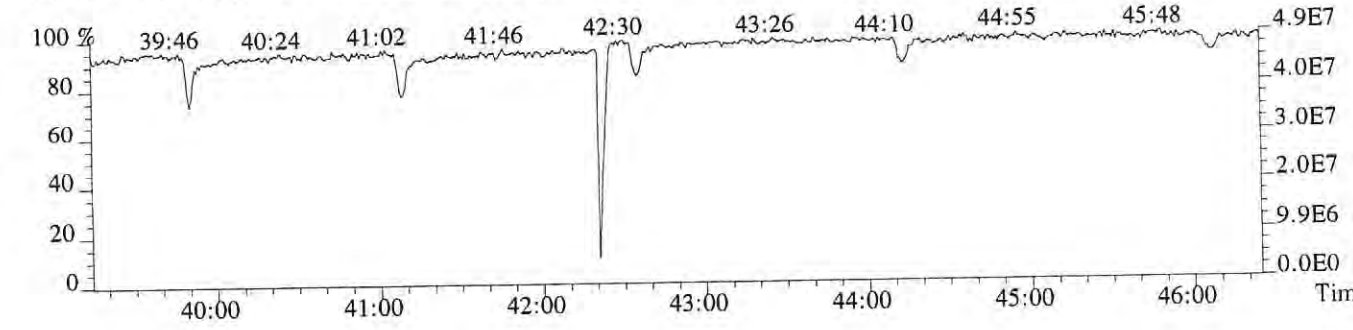
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,904.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,952.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
LCS

Run #18 Filename P616178 Samp: 1 Inj: 1 Acquired: 24-DEC-18 21:51:57
Processed: 28-DEC-18 08:21:22 Sample ID: EQ1800515-02

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:53	4.588e+03	5.563e+03	0.82	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:45	3.645e+04	2.331e+04	1.56	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:46	3.998e+04	2.521e+04	1.59	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:35	3.835e+04	3.074e+04	1.25	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:41	4.101e+04	3.294e+04	1.24	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:13	3.828e+04	3.054e+04	1.25	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:59	3.361e+04	2.676e+04	1.26	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:15	3.195e+04	2.999e+04	1.07	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:35	2.697e+04	2.653e+04	1.02	yes	no	1.463
10	Unk	OCDF	40:48	3.258e+04	3.527e+04	0.92	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:51	2.685e+03	3.334e+03	0.81	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	32:04	2.823e+04	1.827e+04	1.54	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:22	2.693e+04	2.117e+04	1.27	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:27	2.787e+04	2.259e+04	1.23	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:41	2.841e+04	2.296e+04	1.24	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:09	2.219e+04	2.095e+04	1.06	yes	no	1.112
17	Unk	OCDD	40:38	2.786e+04	3.113e+04	0.90	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:52	3.213e+04	4.132e+04	0.78	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:44	7.420e+04	4.584e+04	1.62	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:45	7.827e+04	4.908e+04	1.59	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:34	3.776e+04	7.195e+04	0.52	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:41	4.280e+04	8.007e+04	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:13	3.920e+04	7.489e+04	0.52	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:59	3.502e+04	6.748e+04	0.52	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:14	2.808e+04	6.249e+04	0.45	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:34	2.484e+04	5.416e+04	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:50	1.625e+04	2.138e+04	0.76	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	32:03	6.003e+04	3.825e+04	1.57	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:21	5.517e+04	4.356e+04	1.27	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:27	5.304e+04	4.225e+04	1.26	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:08	5.502e+04	5.245e+04	1.05	yes	no	0.857
32	IS	13C-OCDD	40:37	4.456e+04	4.912e+04	0.91	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	26:06	7.084e+04	9.011e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:41	9.939e+04	7.676e+04	1.29	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:51	2.240e+04				no	1.086

ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
LCS

Run #18 Filename P616178 Samp: 1 Inj: 1 Acquired: 24-DEC-18 21:51:57
Processed: 28-DEC-18 08:21:22 LAB. ID: EQ1800515-02

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.46e+05	2.21e+03	2.9e+02	8.04e+05	1.05e+04	7.7e+01
2	1,2,3,7,8-PeCDF	6.31e+06	1.16e+03	5.4e+03	4.03e+06	4.08e+03	9.9e+02
3	2,3,4,7,8-PeCDF	7.57e+06	1.16e+03	6.5e+03	4.70e+06	4.08e+03	1.2e+03
4	1,2,3,4,7,8-HxCDF	8.09e+06	2.89e+03	2.8e+03	6.40e+06	1.18e+03	5.4e+03
5	1,2,3,6,7,8-HxCDF	8.25e+06	2.89e+03	2.9e+03	6.64e+06	1.18e+03	5.6e+03
6	2,3,4,6,7,8-HxCDF	8.10e+06	2.89e+03	2.8e+03	6.46e+06	1.18e+03	5.5e+03
7	1,2,3,7,8,9-HxCDF	6.72e+06	2.89e+03	2.3e+03	5.39e+06	1.18e+03	4.6e+03
8	1,2,3,4,6,7,8-HpCDF	7.01e+06	4.57e+03	1.5e+03	6.54e+06	5.09e+03	1.3e+03
9	1,2,3,4,7,8,9-HpCDF	5.63e+06	4.57e+03	1.2e+03	5.42e+06	5.09e+03	1.1e+03
10	OCDF	5.94e+06	1.26e+03	4.7e+03	6.33e+06	3.04e+03	2.1e+03
11	2,3,7,8-TCDD	4.21e+05	6.35e+03	6.6e+01	5.40e+05	3.12e+03	1.7e+02
12	1,2,3,7,8-PeCDD	5.19e+06	2.45e+03	2.1e+03	3.33e+06	1.68e+03	2.0e+03
13	1,2,3,4,7,8-HxCDD	5.74e+06	1.18e+03	4.8e+03	4.48e+06	2.15e+03	2.1e+03
14	1,2,3,6,7,8-HxCDD	5.85e+06	1.18e+03	4.9e+03	4.64e+06	2.15e+03	2.2e+03
15	1,2,3,7,8,9-HxCDD	5.83e+06	1.18e+03	4.9e+03	4.60e+06	2.15e+03	2.1e+03
16	1,2,3,4,6,7,8-HpCDD	4.74e+06	1.72e+03	2.8e+03	4.45e+06	1.55e+03	2.9e+03
17	OCDD	4.92e+06	6.96e+02	7.1e+03	5.59e+06	1.22e+03	4.6e+03
18	13C-2,3,7,8-TCDF	4.86e+06	1.90e+04	2.6e+02	6.19e+06	1.45e+04	4.3e+02
19	13C-1,2,3,7,8-PeCDF	1.31e+07	1.42e+03	9.2e+03	8.02e+06	2.32e+03	3.4e+03
20	13C-2,3,4,7,8-PeCDF	1.45e+07	1.42e+03	1.0e+04	9.30e+06	2.32e+03	4.0e+03
21	13C-1,2,3,4,7,8-HxCDF	7.89e+06	3.19e+03	2.5e+03	1.51e+07	4.34e+03	3.5e+03
22	13C-1,2,3,6,7,8-HxCDF	8.72e+06	3.19e+03	2.7e+03	1.63e+07	4.34e+03	3.8e+03
23	13C-2,3,4,6,7,8-HxCDF	8.35e+06	3.19e+03	2.6e+03	1.60e+07	4.34e+03	3.7e+03
24	13C-1,2,3,7,8,9-HxCDF	7.19e+06	3.19e+03	2.3e+03	1.36e+07	4.34e+03	3.1e+03
25	13C-1,2,3,4,6,7,8-HpCDF	6.04e+06	4.32e+03	1.4e+03	1.36e+07	6.63e+03	2.0e+03
26	13C-1,2,3,4,7,8,9-HpCDF	5.26e+06	4.32e+03	1.2e+03	1.14e+07	6.63e+03	1.7e+03
27	13C-2,3,7,8-TCDD	2.62e+06	2.08e+04	1.3e+02	3.41e+06	1.21e+04	2.8e+02
28	13C-1,2,3,7,8-PeCDD	1.13e+07	3.42e+03	3.3e+03	7.13e+06	3.04e+03	2.3e+03
29	13C-1,2,3,4,7,8-HxCDD	1.19e+07	4.61e+03	2.6e+03	9.20e+06	3.30e+03	2.8e+03
30	13C-1,2,3,6,7,8-HxCDD	1.09e+07	4.61e+03	2.4e+03	8.71e+06	3.30e+03	2.6e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.17e+07	1.89e+03	6.2e+03	1.12e+07	2.07e+03	5.4e+03
32	13C-OCDD	7.86e+06	1.66e+03	4.7e+03	8.83e+06	1.68e+03	5.3e+03
33	13C-1,2,3,4-TCDD	1.09e+07	2.08e+04	5.2e+02	1.40e+07	1.21e+04	1.2e+03
34	13C-1,2,3,7,8,9-HxCDD	2.01e+07	4.61e+03	4.4e+03	1.57e+07	3.30e+03	4.8e+03
35	37Cl-2,3,7,8-TCDD	3.62e+06	7.29e+03	5.0e+02			

---Sample Calculation---

$$\text{D/L TCDD} = \frac{2.5 \times (6.348e{+}03 + 3.116e{+}03) \times 2000}{(2.616e{+}06 + 3.405e{+}06) \times (\quad) \times 1.049} =$$

ALS ENVIRONMENTAL
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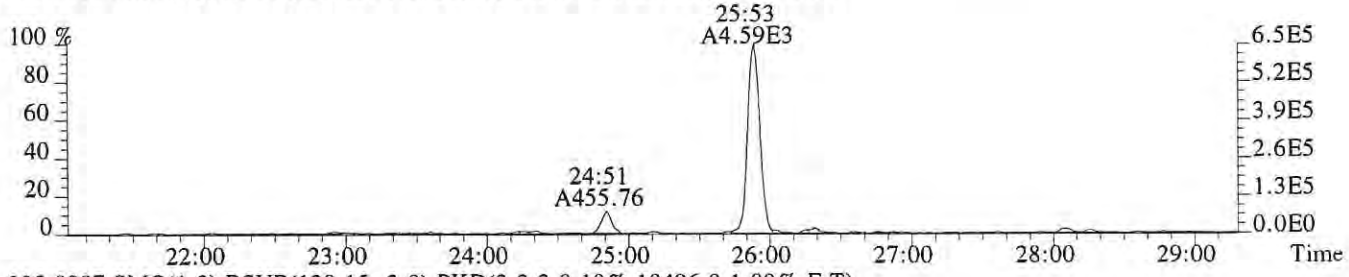
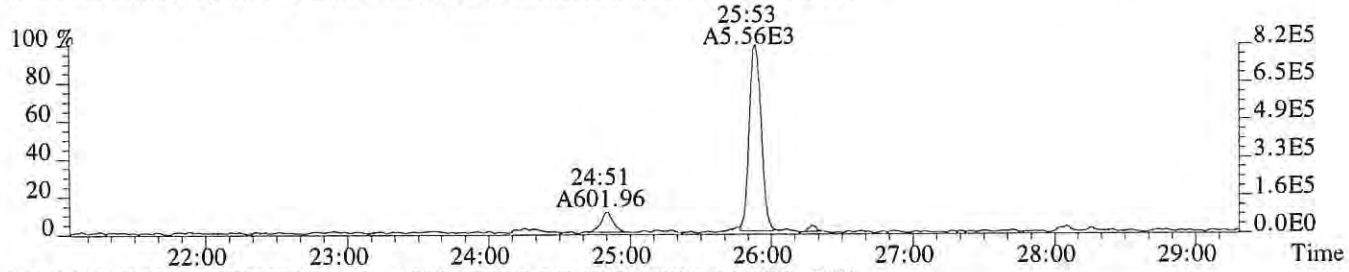
Office:(281)530-5656. Fax:(281)530-5887

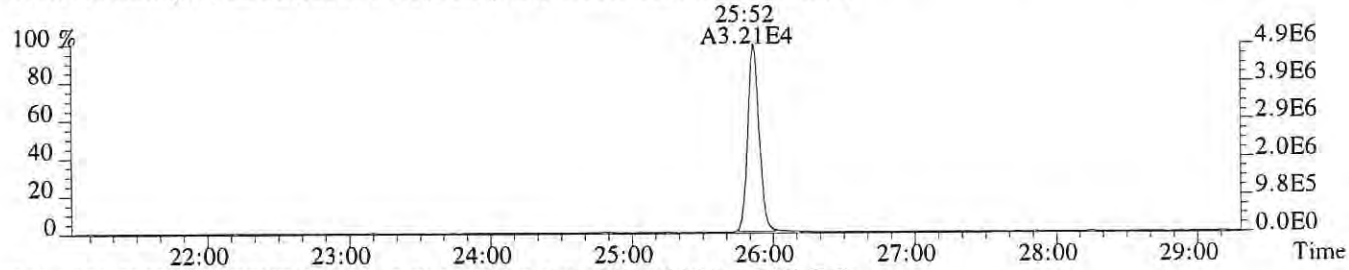
File:P616178 #1-587 Acq:24-DEC-2018 21:51:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2212.0,1.00%,F,T)



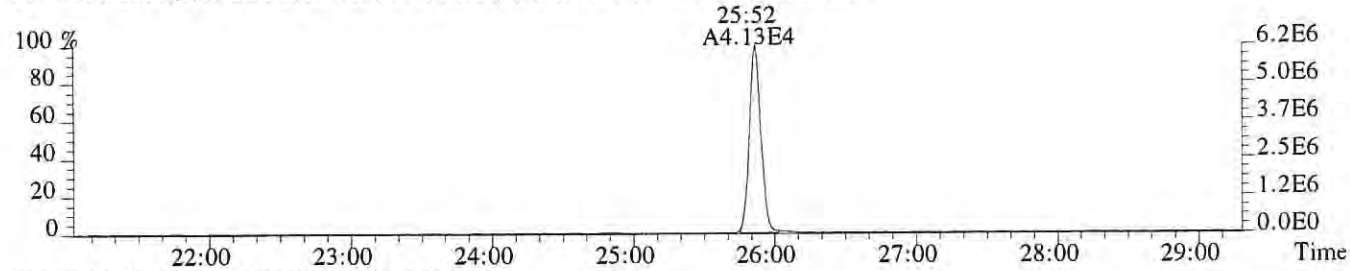
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10496.0,1.00%,F,T)



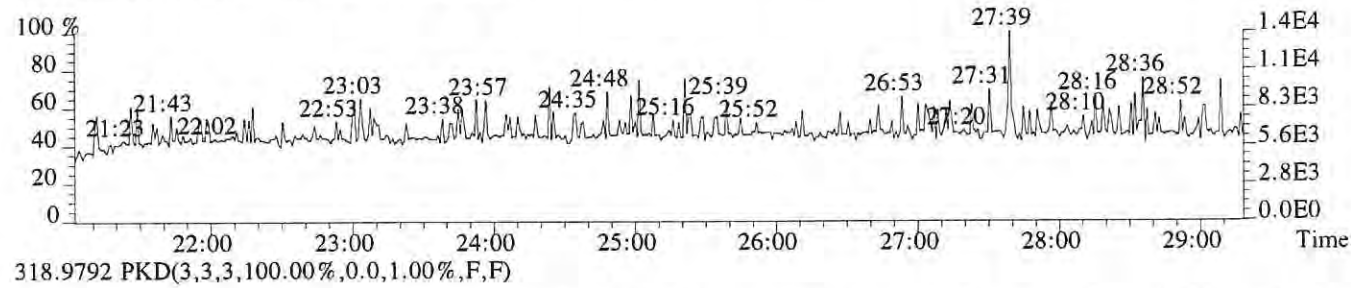
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,18964.0,1.00%,F,T)



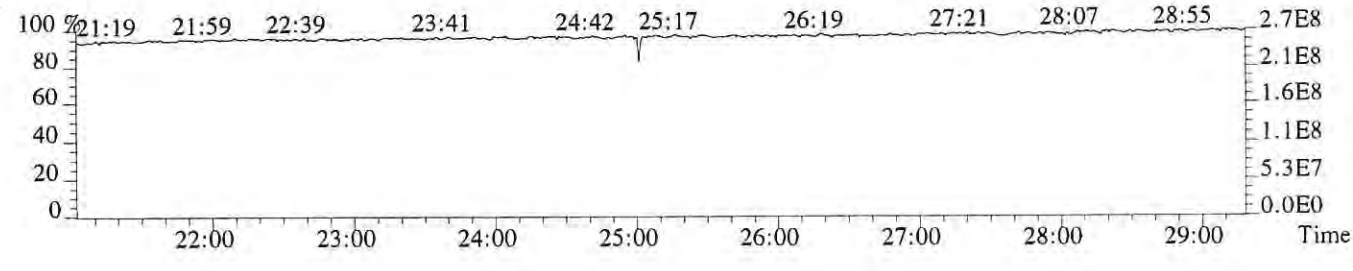
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,14536.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

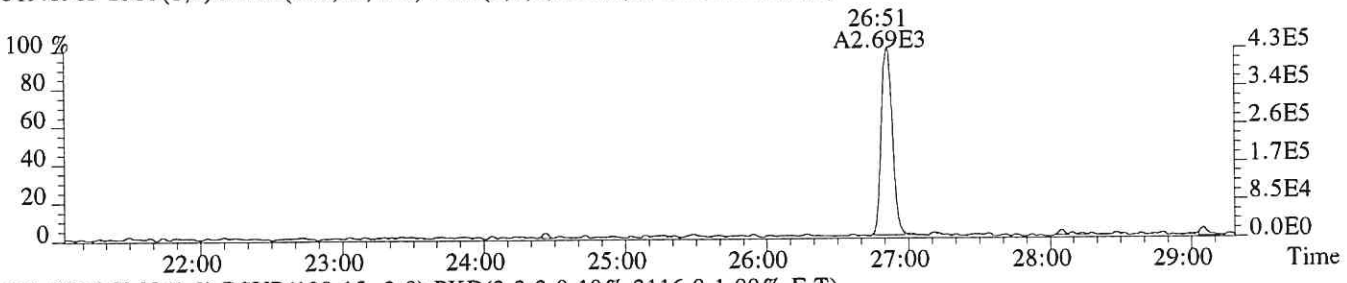


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

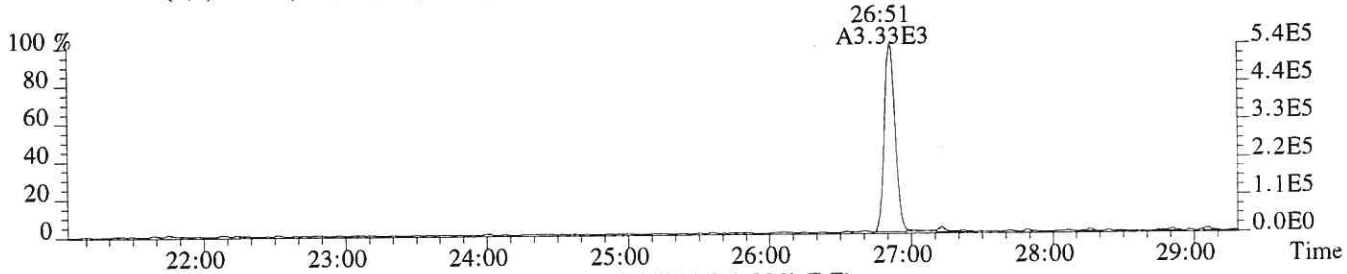


File:P616178 #1-587 Acq:24-DEC-2018 21:51:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS

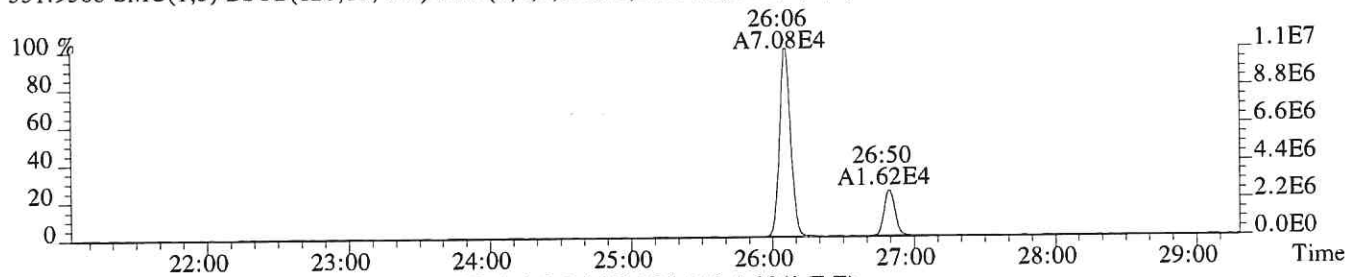
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6348.0,1.00%,F,T)



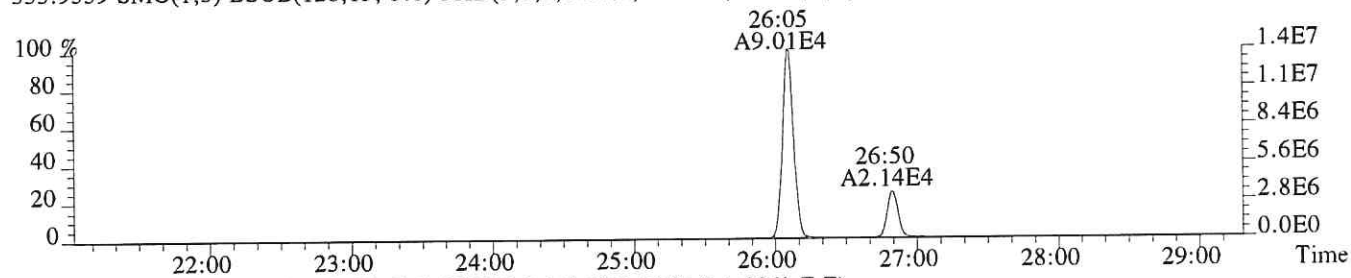
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3116.0,1.00%,F,T)



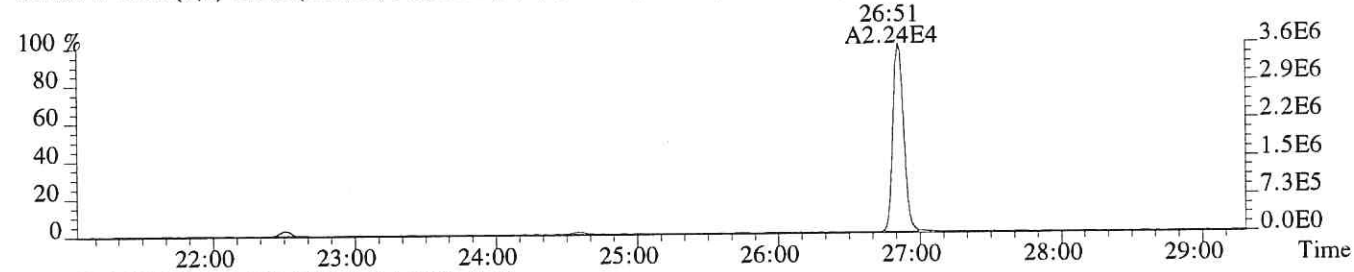
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,20844.0,1.00%,F,T)



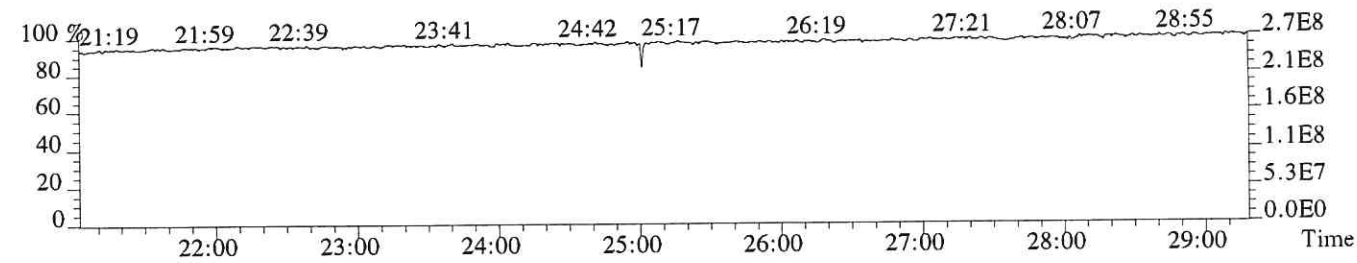
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12144.0,1.00%,F,T)



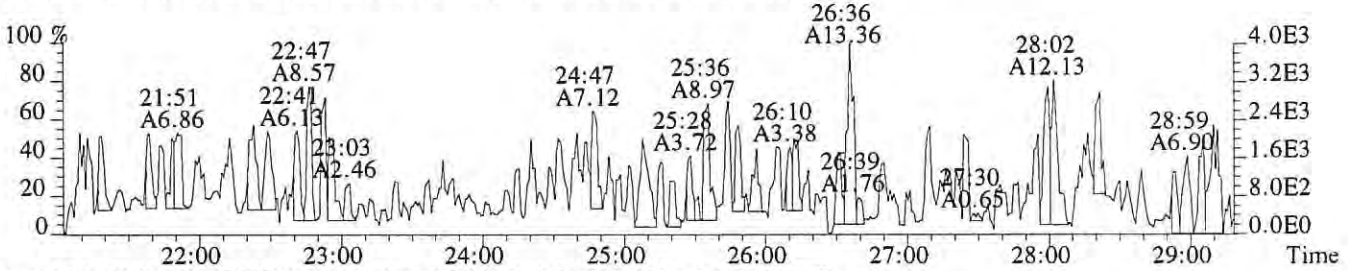
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7292.0,1.00%,F,T)



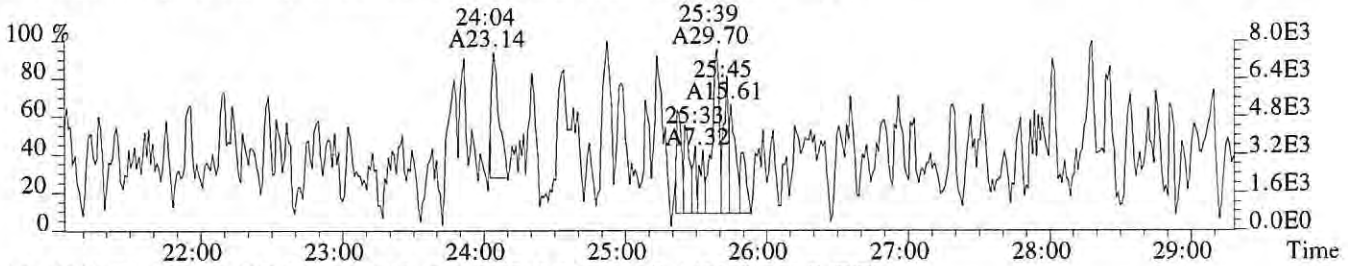
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



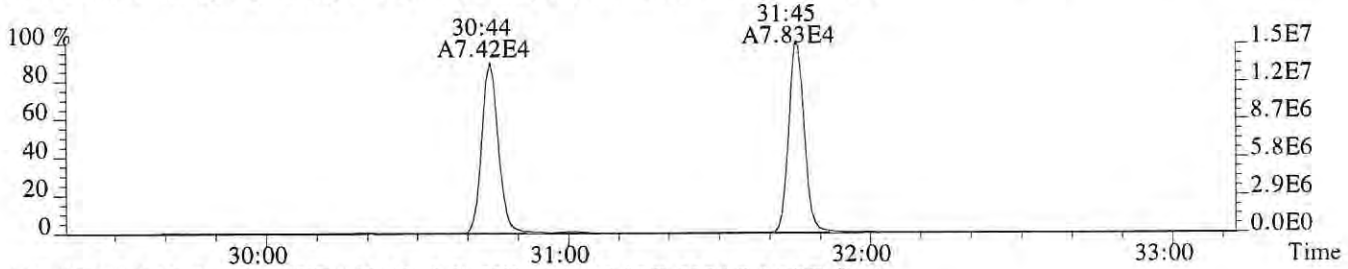
File:P616178 #1-587 Acq:24-DEC-2018 21:51:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,904.0,1.00%,F,T)



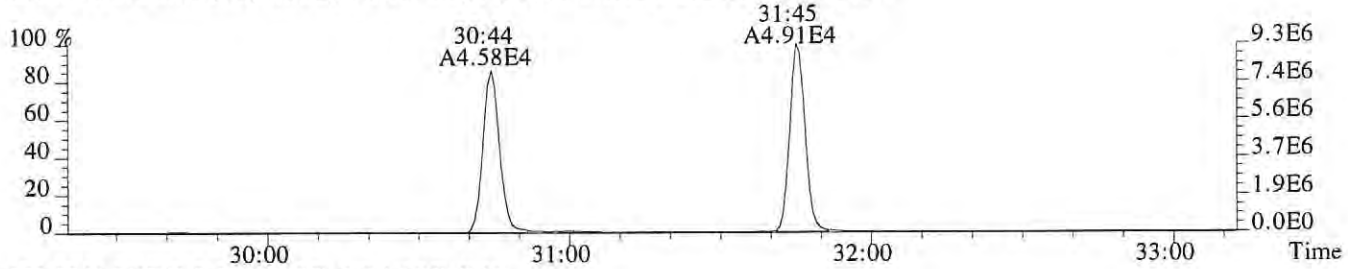
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3904.0,1.00%,F,T)



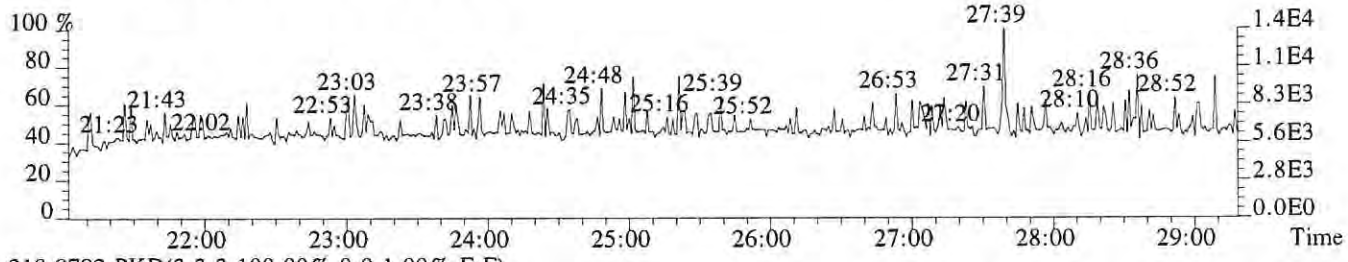
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1420.0,1.00%,F,T)



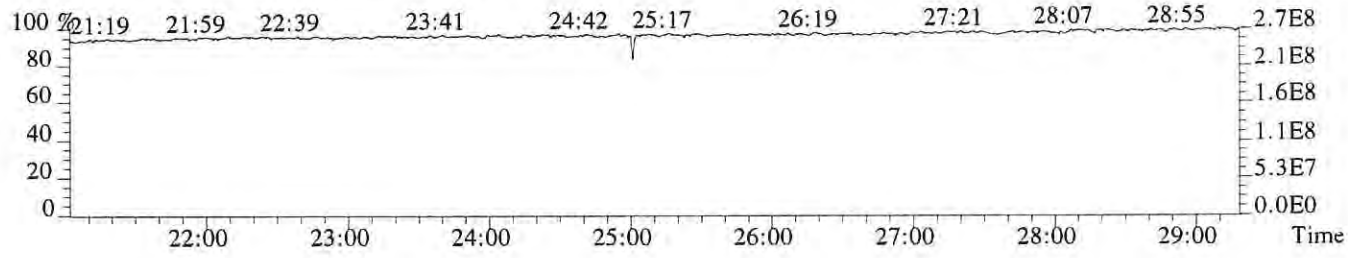
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2324.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

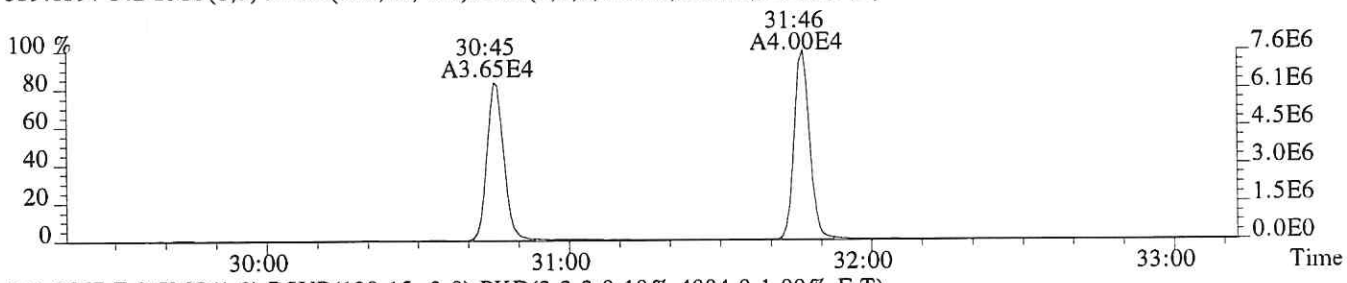


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

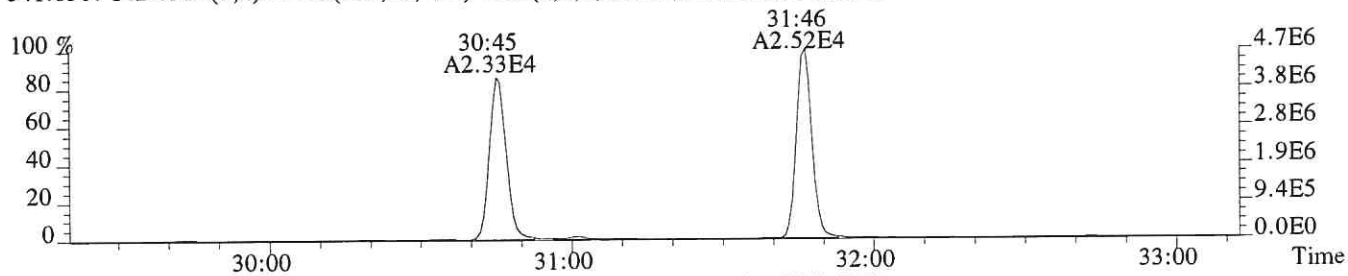


File:P616178 #1-349 Acq:24-DEC-2018 21:51:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS

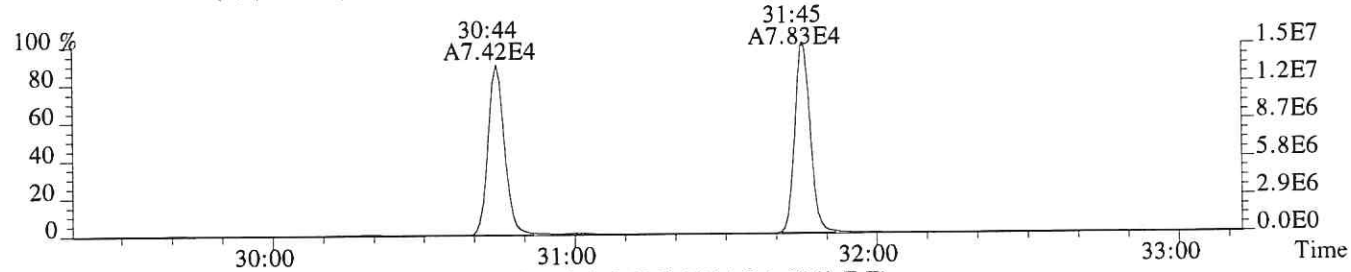
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1164.0,1.00%,F,T)



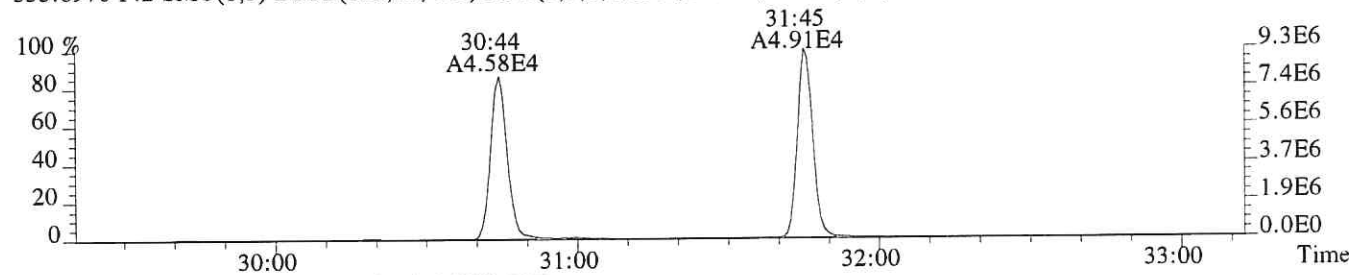
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4084.0,1.00%,F,T)



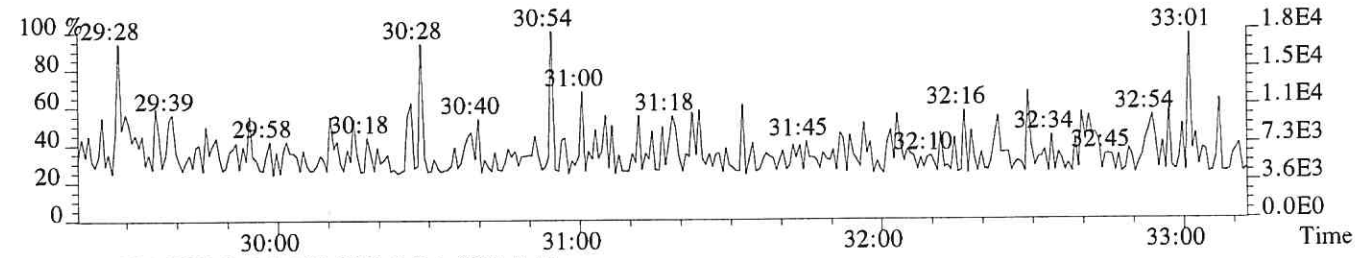
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1420.0,1.00%,F,T)



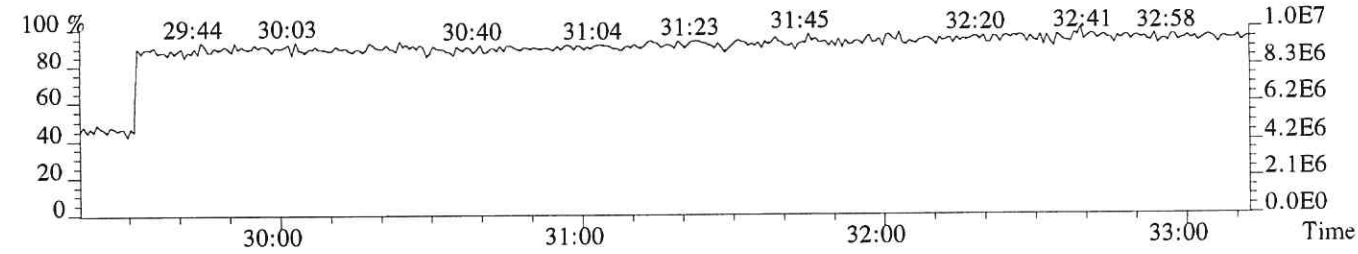
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2324.0,1.00%,F,T)



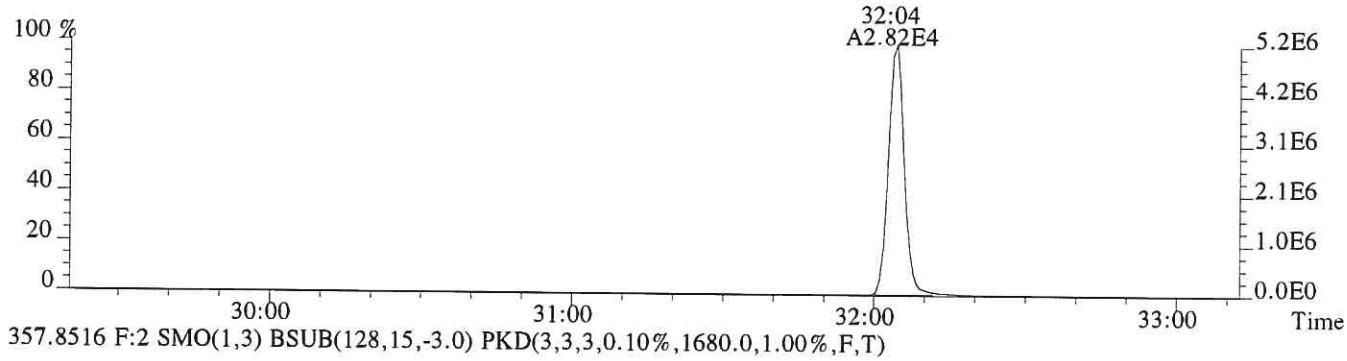
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



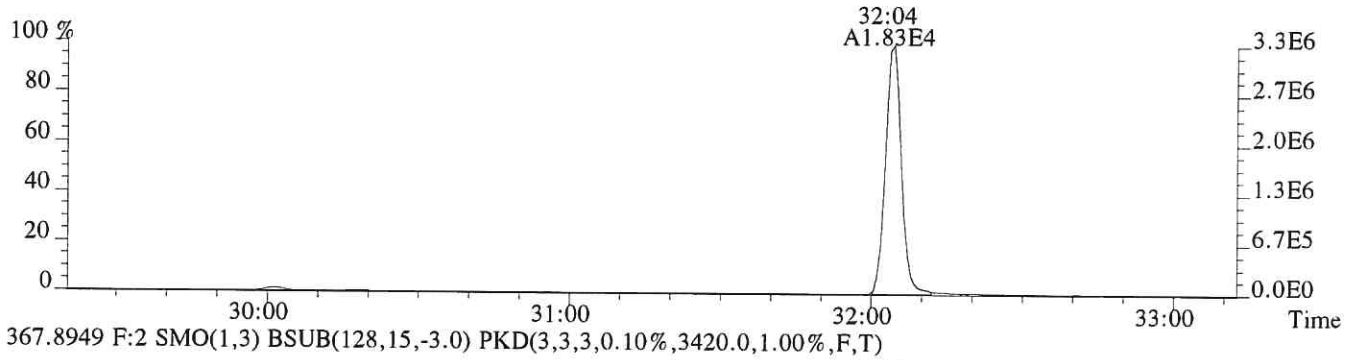
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



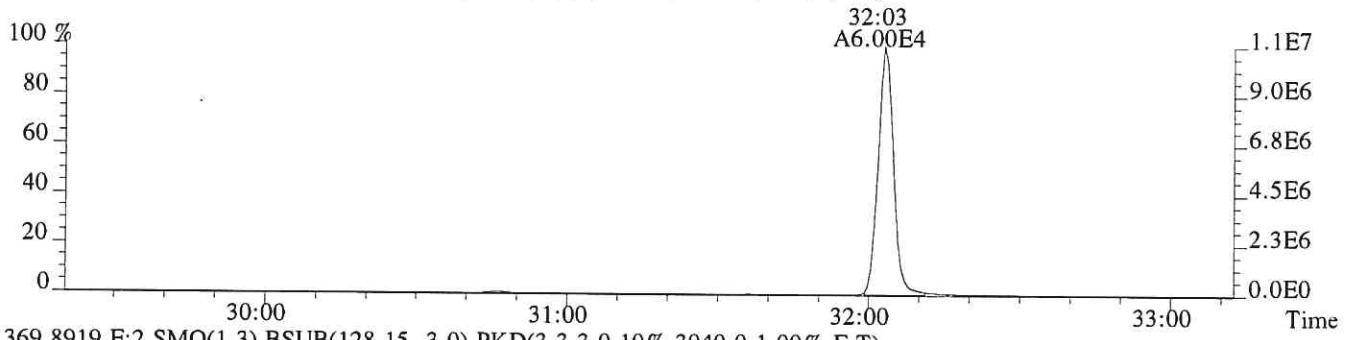
File:P616178 #1-349 Acq:24-DEC-2018 21:51:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2452.0,1.00%,F,T)



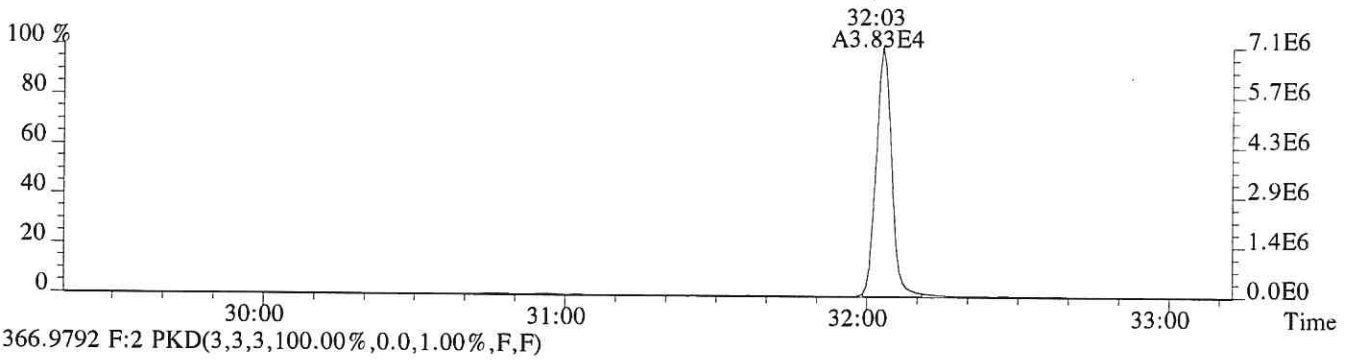
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1680.0,1.00%,F,T)



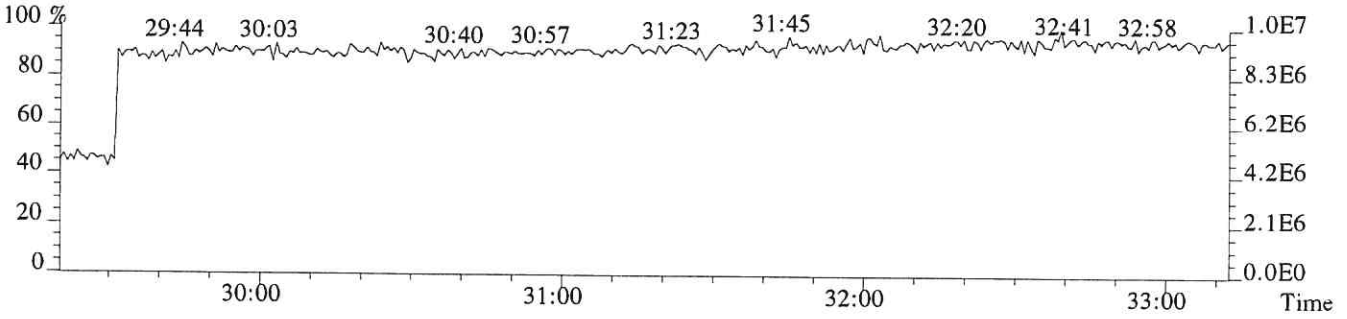
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3420.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3040.0,1.00%,F,T)

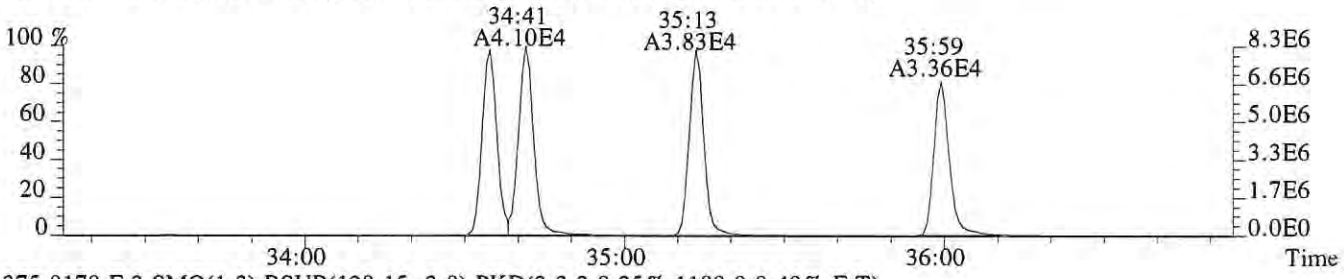


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

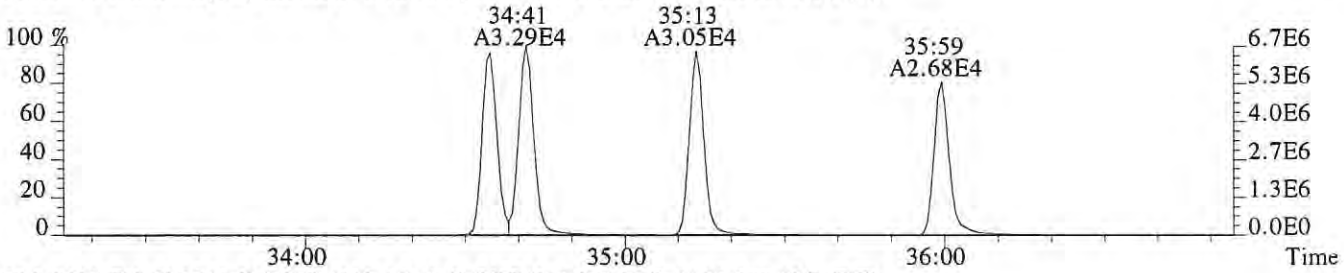


File:P616178 #1-330 Acq:24-DEC-2018 21:51:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS

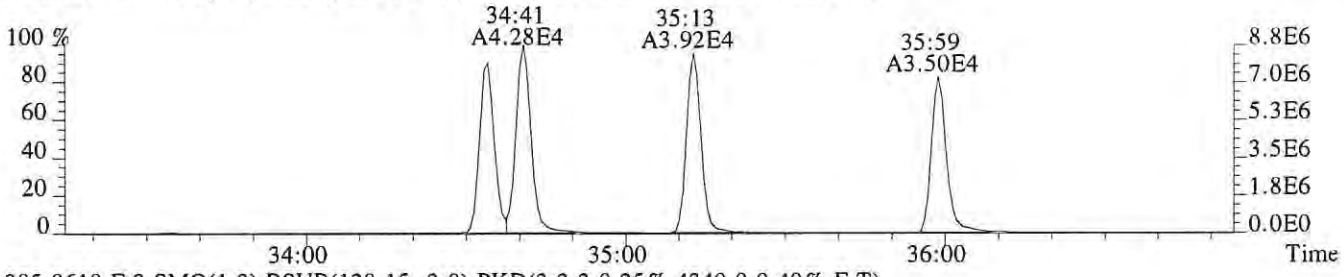
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2888.0,0.40%,F,T)



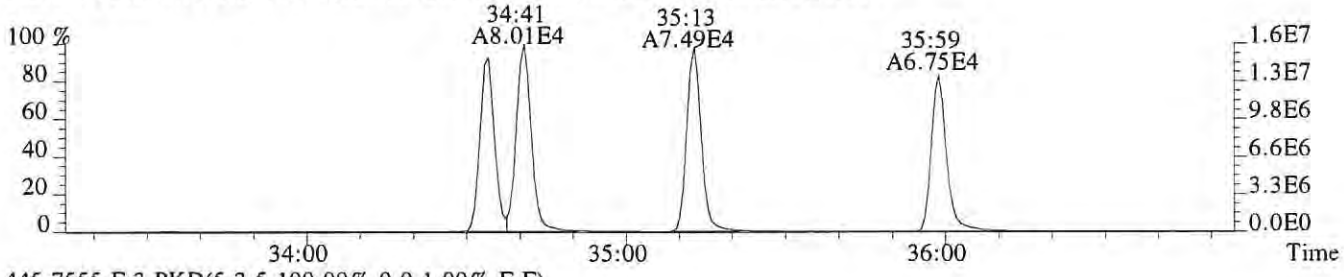
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1180.0,0.40%,F,T)



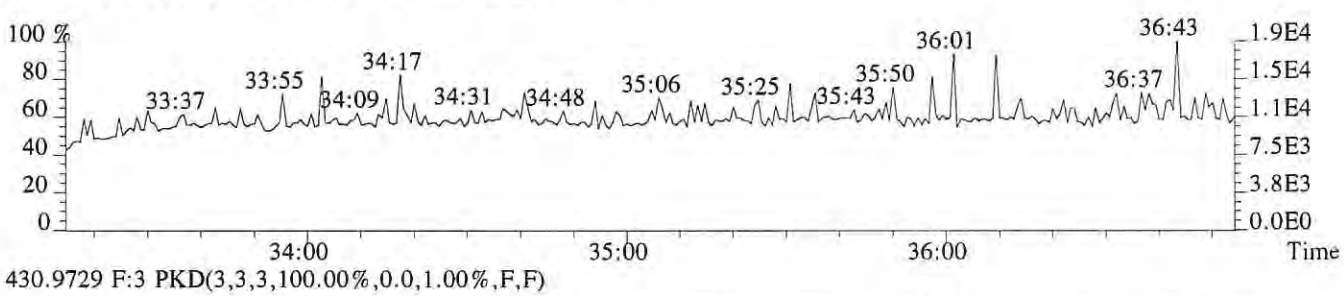
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3192.0,0.40%,F,T)



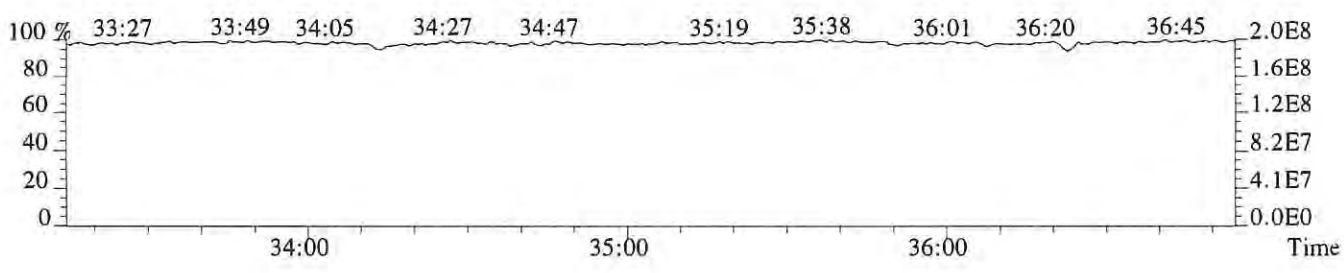
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4340.0,0.40%,F,T)



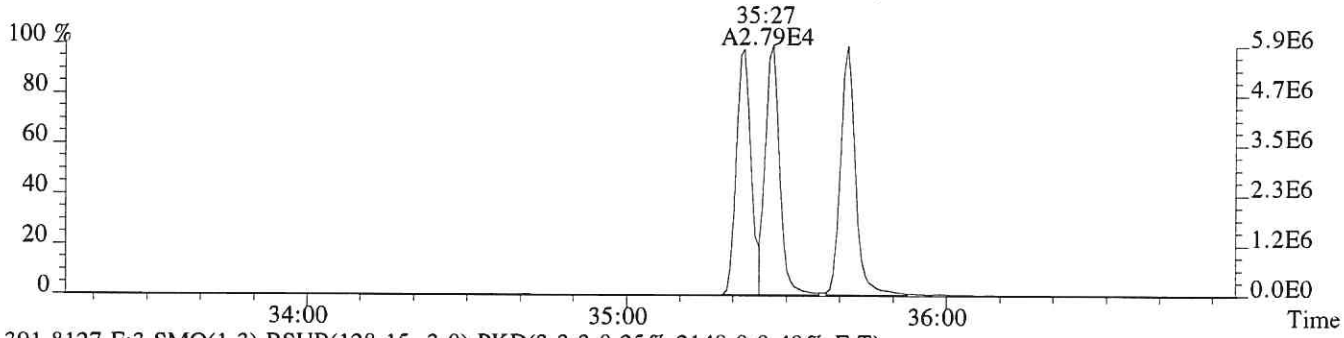
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



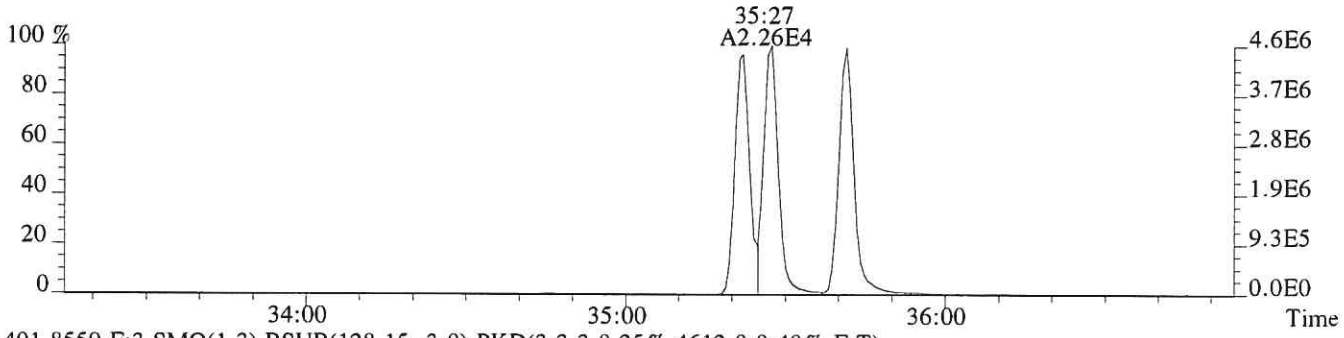
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



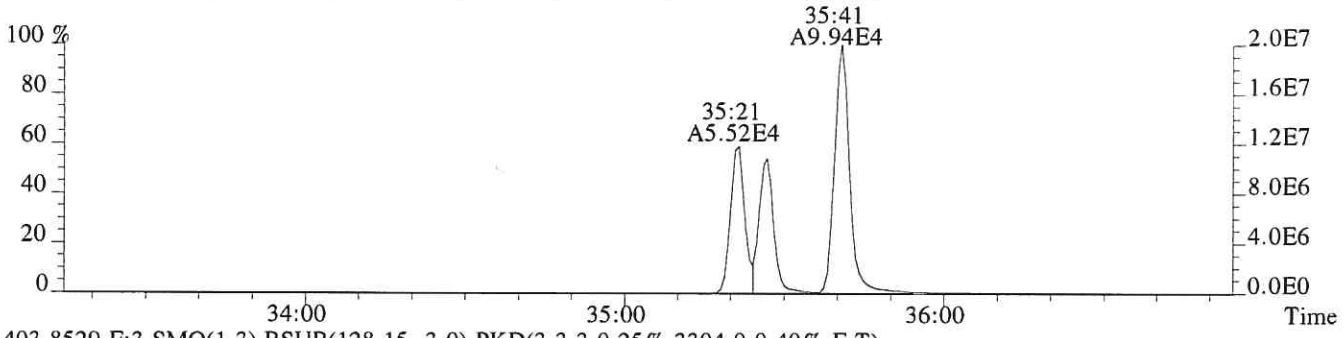
File:P616178 #1-330 Acq:24-DEC-2018 21:51:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1184.0,0.40%,F,T)



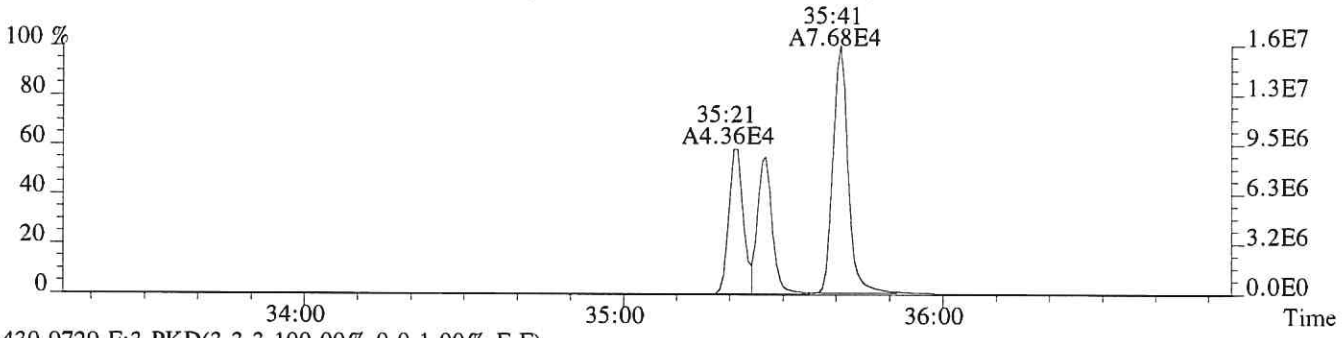
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2148.0,0.40%,F,T)



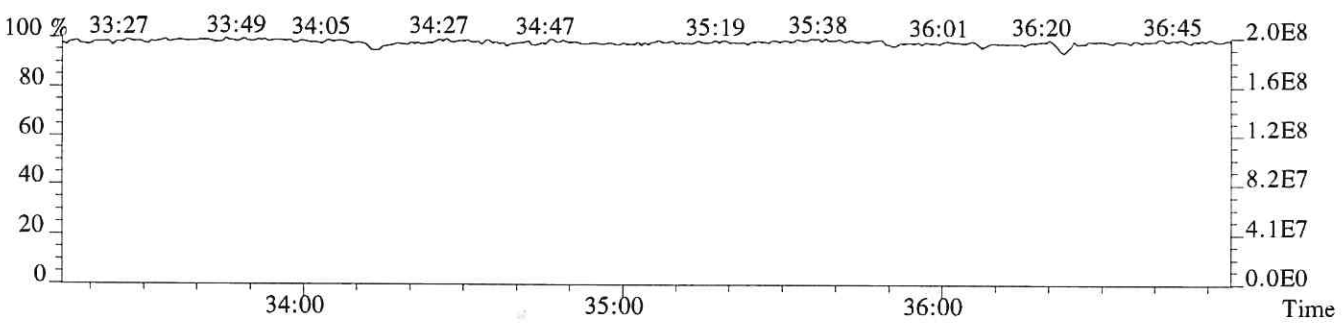
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4612.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3304.0,0.40%,F,T)

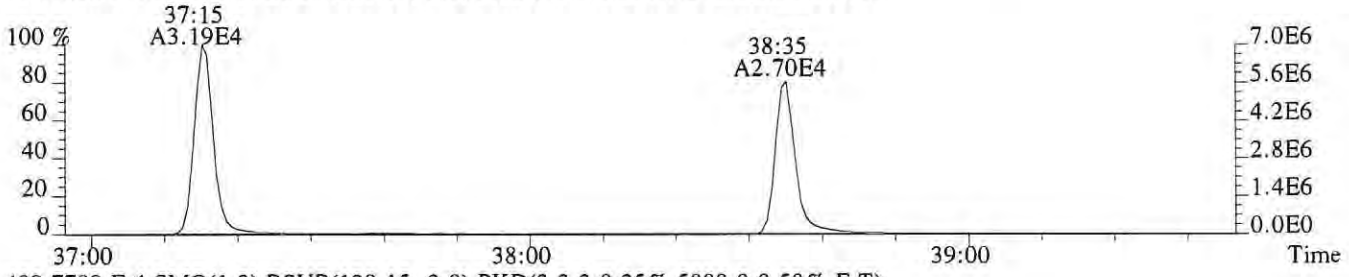


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

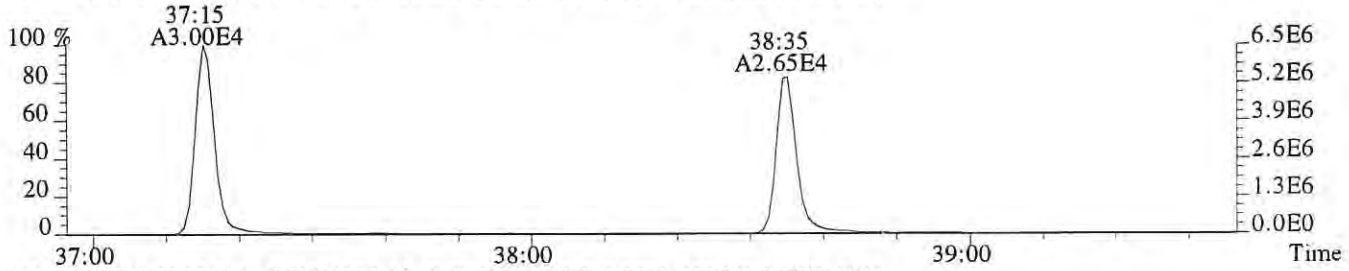


File:P616178 #1-241 Acq:24-DEC-2018 21:51:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS

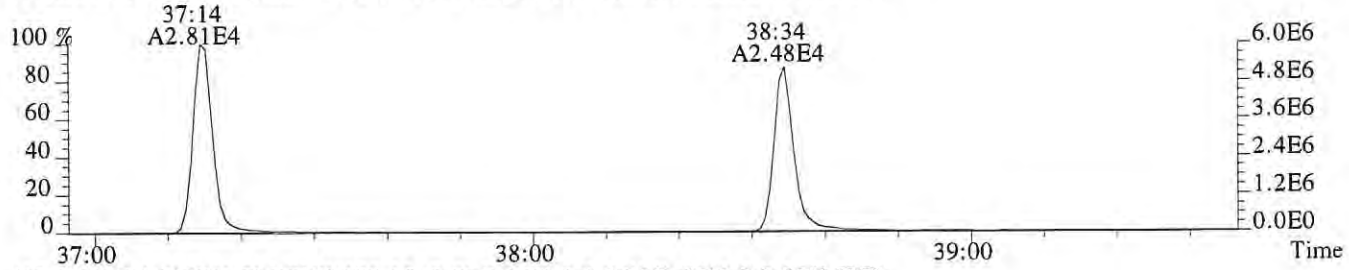
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4572.0,0.50%,F,T)



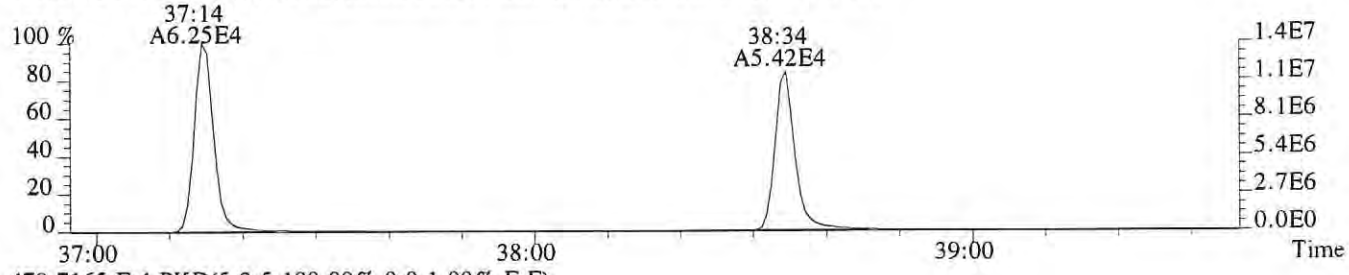
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5088.0,0.50%,F,T)



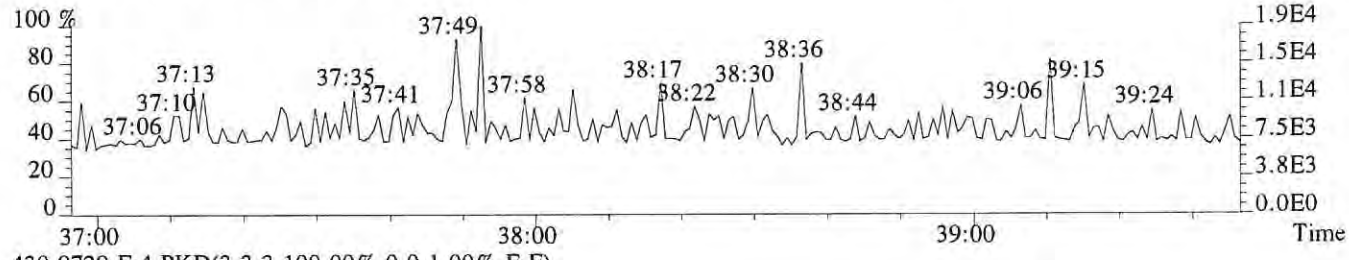
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4316.0,0.50%,F,T)



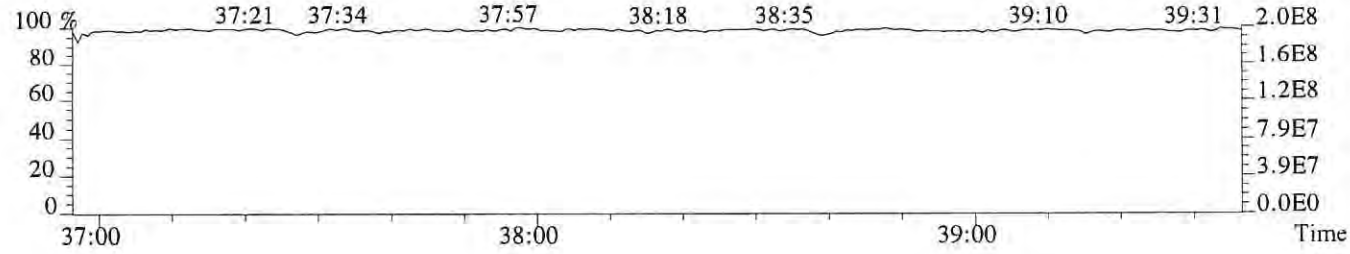
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6632.0,0.50%,F,T)



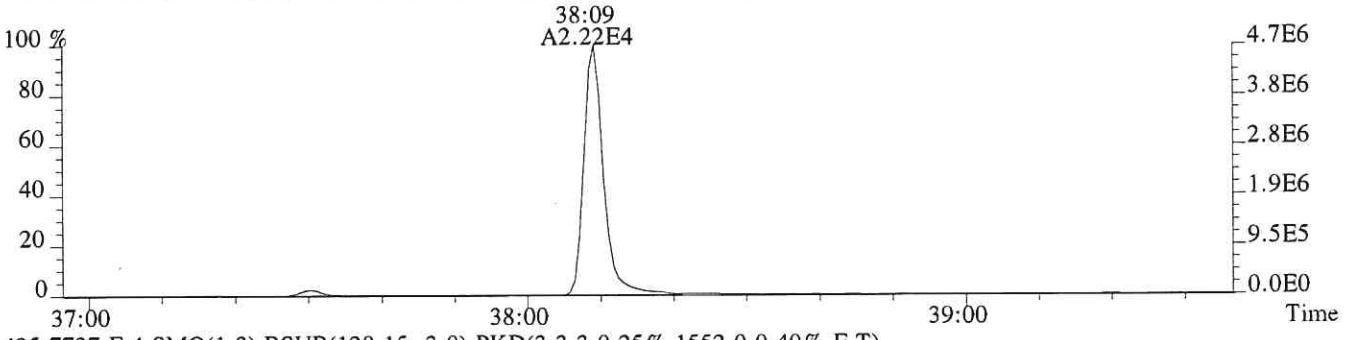
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



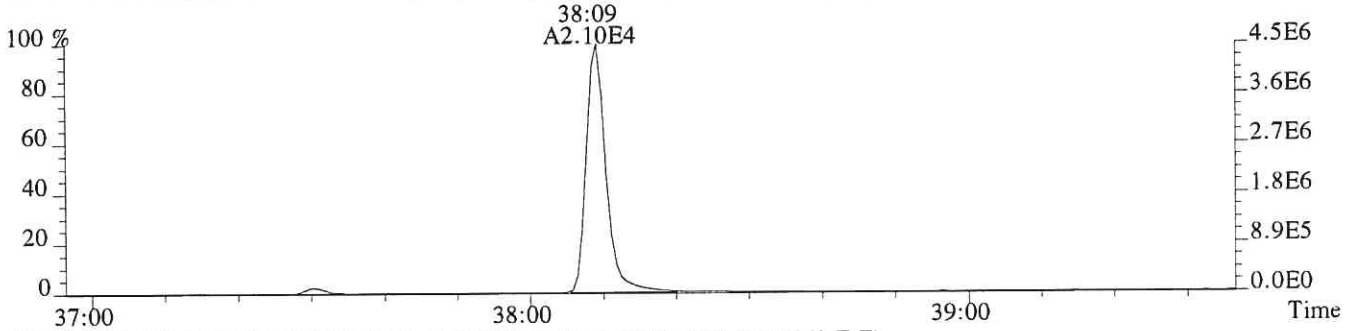
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



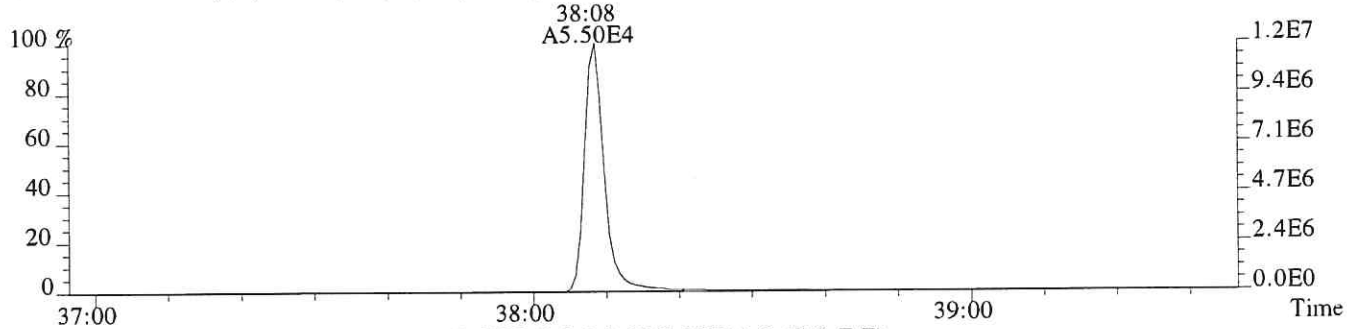
File:P616178 #1-241 Acq:24-DEC-2018 21:51:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1724.0,0.40%,F,T)



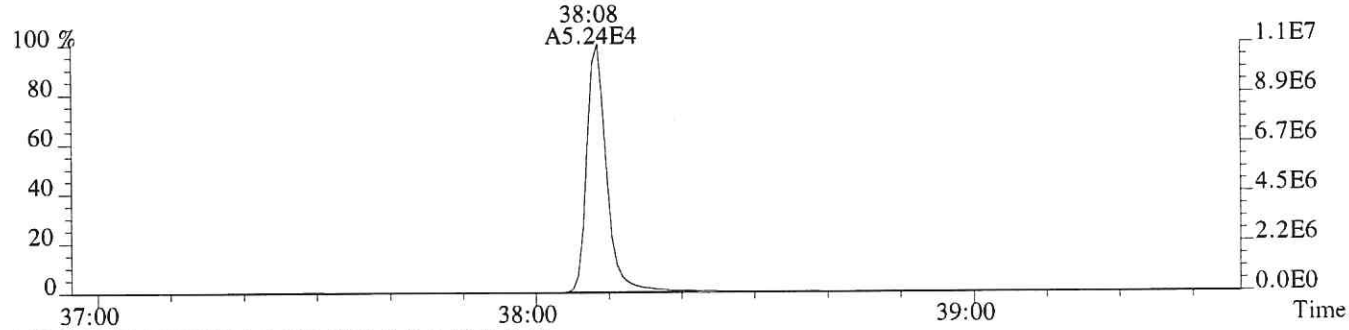
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1552.0,0.40%,F,T)



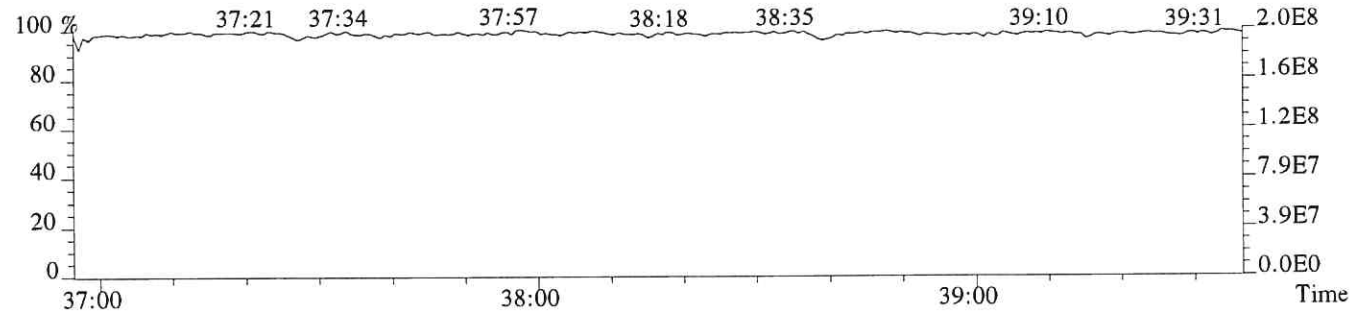
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1892.0,0.40%,F,T)



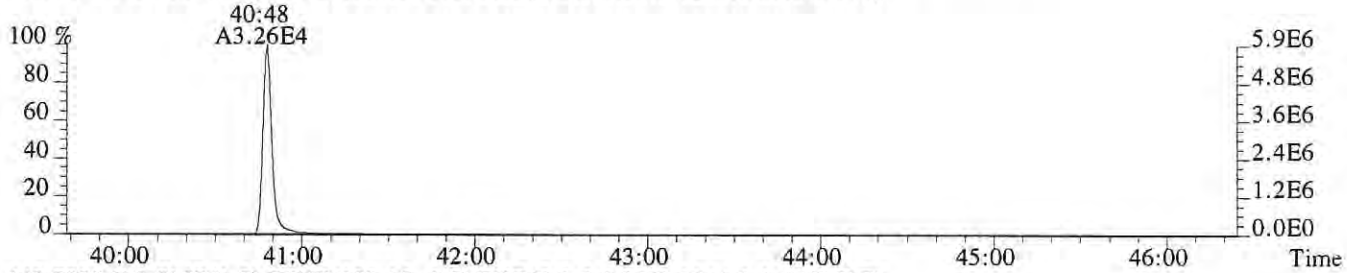
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2072.0,0.40%,F,T)



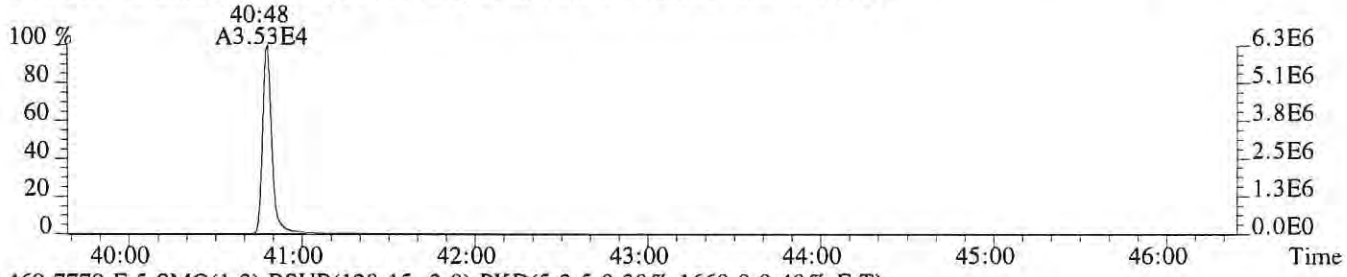
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



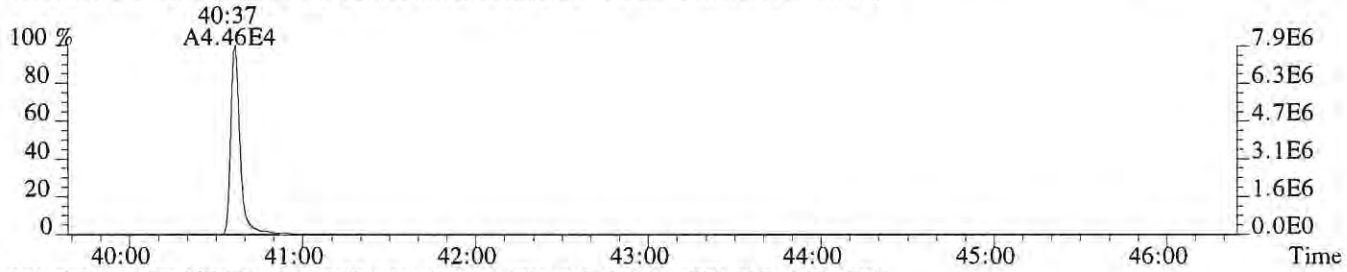
File:P616178 #1-609 Acq:24-DEC-2018 21:51:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1260.0,0.40%,F,T)



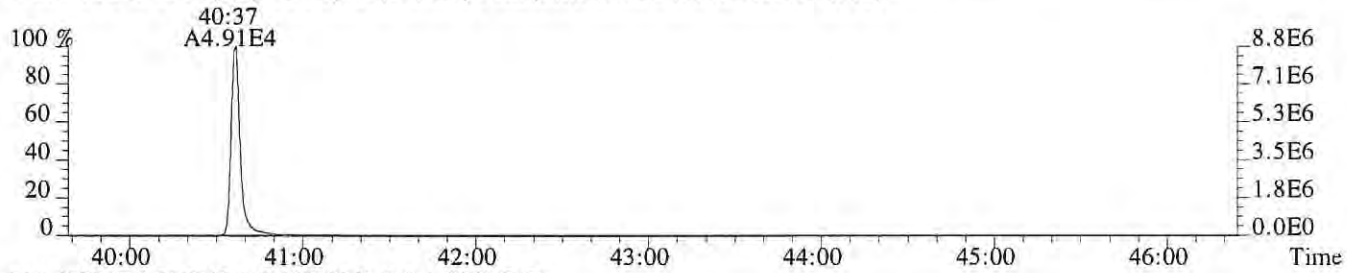
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3044.0,0.40%,F,T)



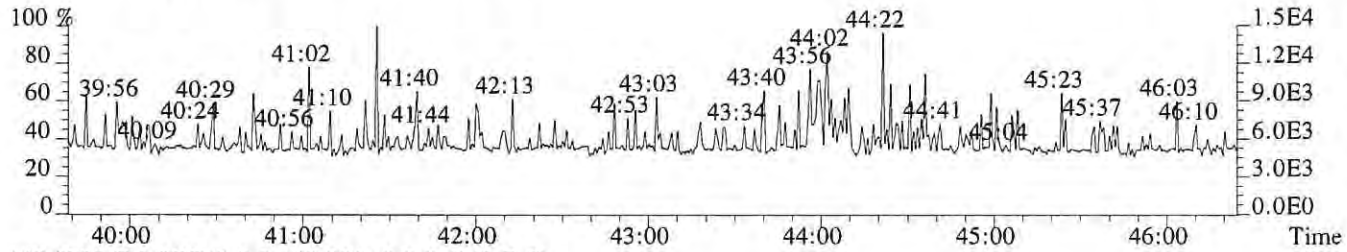
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1660.0,0.40%,F,T)



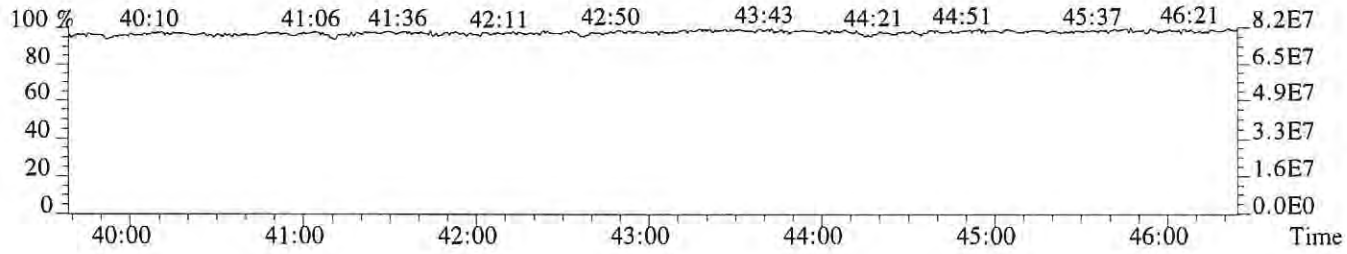
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1676.0,0.40%,F,T)



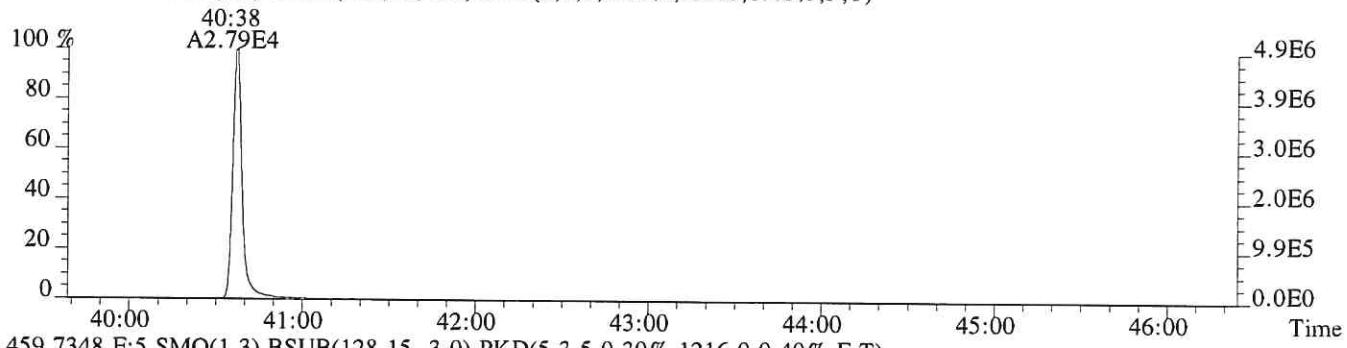
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



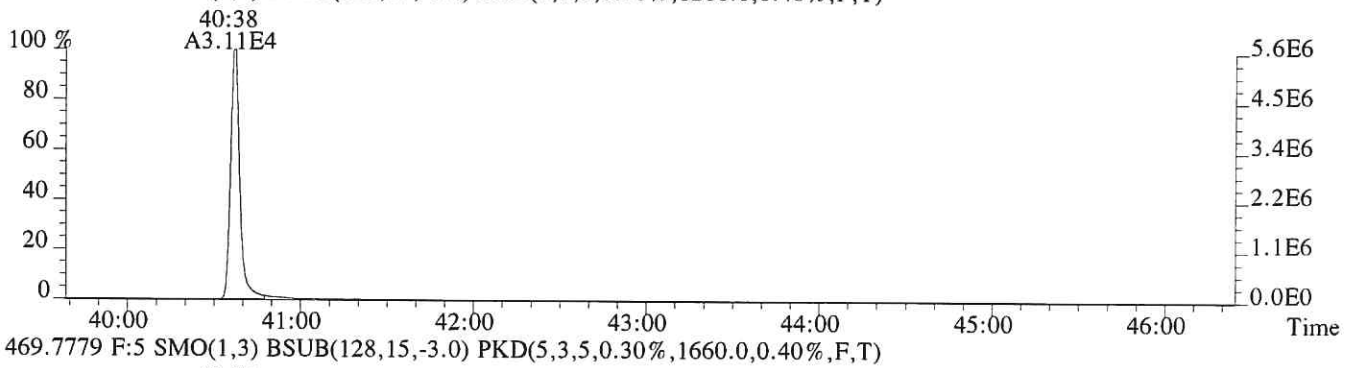
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



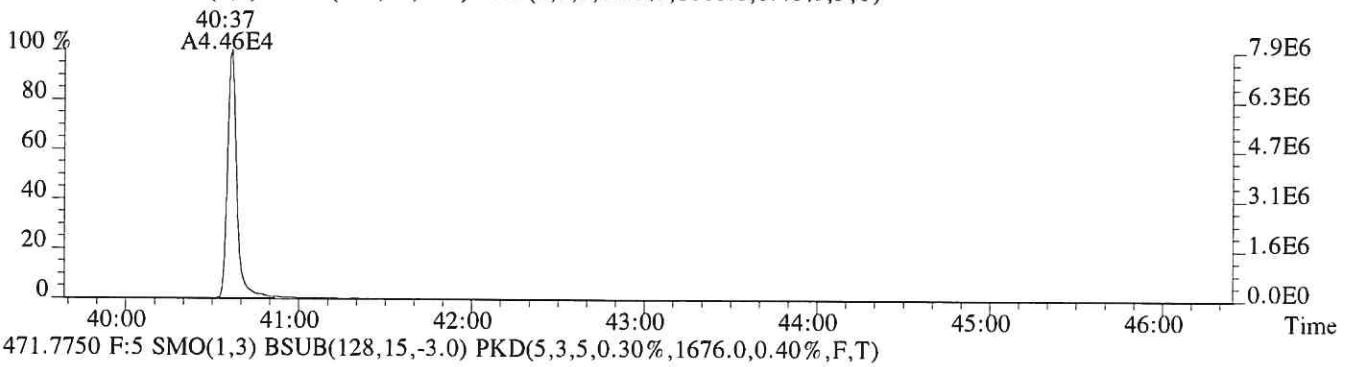
File:P616178 #1-609 Acq:24-DEC-2018 21:51:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,696.0,0.40%,F,T)



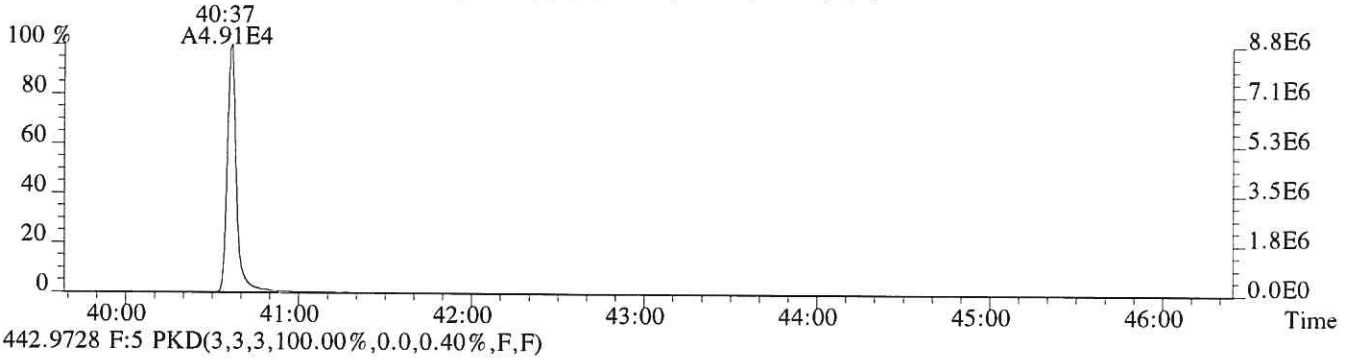
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1216.0,0.40%,F,T)



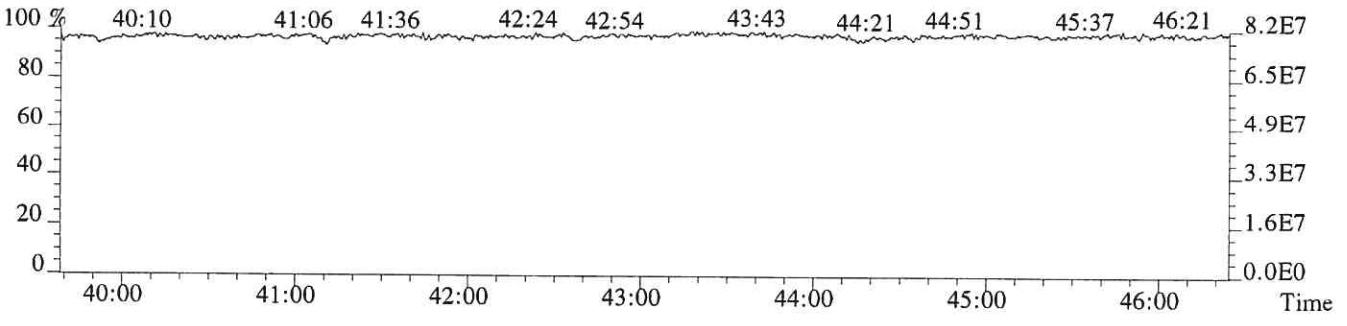
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1660.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1676.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
DLCS

Run #19 Filename P616179 Samp: 1 Inj: 1 Acquired: 24-DEC-18 22:41:08
Processed: 28-DEC-18 08:22:01 Sample ID: EQ1800515-03

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:53	2.340e+03	2.884e+03	0.81	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:45	1.984e+04	1.284e+04	1.55	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:46	2.145e+04	1.403e+04	1.53	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:34	2.231e+04	1.780e+04	1.25	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:41	2.404e+04	1.904e+04	1.26	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:13	2.090e+04	1.647e+04	1.27	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:59	1.983e+04	1.678e+04	1.18	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:15	1.922e+04	1.814e+04	1.06	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:34	1.643e+04	1.578e+04	1.04	yes	no	1.463
10	Unk	OCDF	40:48	2.069e+04	2.259e+04	0.92	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:51	1.497e+03	1.861e+03	0.80	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	32:04	1.591e+04	1.005e+04	1.58	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:21	1.568e+04	1.248e+04	1.26	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:27	1.763e+04	1.446e+04	1.22	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:41	1.756e+04	1.425e+04	1.23	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:09	1.328e+04	1.300e+04	1.02	yes	no	1.112
17	Unk	OCDD	40:37	1.624e+04	1.835e+04	0.89	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:52	1.784e+04	2.197e+04	0.81	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:44	4.004e+04	2.517e+04	1.59	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:45	4.153e+04	2.650e+04	1.57	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:33	2.213e+04	4.215e+04	0.52	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:41	2.537e+04	4.788e+04	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:12	2.273e+04	4.106e+04	0.55	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:59	2.188e+04	4.120e+04	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:14	1.707e+04	3.755e+04	0.45	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:34	1.481e+04	3.302e+04	0.45	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:49	8.770e+03	1.148e+04	0.76	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	32:03	3.316e+04	2.100e+04	1.58	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:21	3.270e+04	2.560e+04	1.28	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:26	3.334e+04	2.664e+04	1.25	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:08	3.375e+04	3.229e+04	1.05	yes	no	0.857
32	IS	13C-OCDD	40:36	2.879e+04	3.202e+04	0.90	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	26:05	6.530e+04	8.291e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:41	8.801e+04	6.823e+04	1.29	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:51	1.219e+04				no	1.086

ALS ENVIRONMENTAL
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Houston, TX 77099
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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
DLCS

Run #19 Filename P616179 Samp: 1 Inj: 1 Acquired: 24-DEC-18 22:41:08
Processed: 28-DEC-18 08:22:01 LAB. ID: EQ1800515-03

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	3.36e+05	3.07e+03	1.1e+02	4.23e+05	8.93e+03	4.7e+01
2	1,2,3,7,8-PeCDF	3.38e+06	1.08e+03	3.1e+03	2.19e+06	2.88e+03	7.6e+02
3	2,3,4,7,8-PeCDF	4.00e+06	1.08e+03	3.7e+03	2.66e+06	2.88e+03	9.2e+02
4	1,2,3,4,7,8-HxCDF	4.56e+06	1.71e+03	2.7e+03	3.59e+06	1.21e+03	3.0e+03
5	1,2,3,6,7,8-HxCDF	4.71e+06	1.71e+03	2.8e+03	3.66e+06	1.21e+03	3.0e+03
6	2,3,4,6,7,8-HxCDF	4.05e+06	1.71e+03	2.4e+03	3.18e+06	1.21e+03	2.6e+03
7	1,2,3,7,8,9-HxCDF	3.88e+06	1.71e+03	2.3e+03	3.22e+06	1.21e+03	2.7e+03
8	1,2,3,4,6,7,8-HpCDF	4.13e+06	6.35e+03	6.5e+02	3.91e+06	3.27e+03	1.2e+03
9	1,2,3,4,7,8,9-HpCDF	3.37e+06	6.35e+03	5.3e+02	3.22e+06	3.27e+03	9.8e+02
10	OCDF	3.68e+06	8.92e+02	4.1e+03	4.05e+06	2.38e+03	1.7e+03
11	2,3,7,8-TCDD	2.38e+05	6.21e+03	3.8e+01	3.03e+05	2.12e+03	1.4e+02
12	1,2,3,7,8-PeCDD	2.98e+06	1.54e+03	1.9e+03	1.87e+06	7.40e+02	2.5e+03
13	1,2,3,4,7,8-HxCDD	3.46e+06	1.13e+03	3.1e+03	2.77e+06	1.76e+03	1.6e+03
14	1,2,3,6,7,8-HxCDD	3.48e+06	1.13e+03	3.1e+03	2.91e+06	1.76e+03	1.7e+03
15	1,2,3,7,8,9-HxCDD	3.37e+06	1.13e+03	3.0e+03	2.74e+06	1.76e+03	1.6e+03
16	1,2,3,4,6,7,8-HpCDD	2.70e+06	1.04e+03	2.6e+03	2.65e+06	9.72e+02	2.7e+03
17	OCDD	2.87e+06	1.24e+03	2.3e+03	3.22e+06	6.78e+03	4.8e+02
18	13C-2,3,7,8-TCDF	2.60e+06	1.55e+04	1.7e+02	3.27e+06	1.29e+04	2.5e+02
19	13C-1,2,3,7,8-PeCDF	6.90e+06	8.60e+02	8.0e+03	4.27e+06	2.26e+03	1.9e+03
20	13C-2,3,4,7,8-PeCDF	7.88e+06	8.60e+02	9.2e+03	5.06e+06	2.26e+03	2.2e+03
21	13C-1,2,3,4,7,8-HxCDF	4.52e+06	2.13e+03	2.1e+03	8.72e+06	3.07e+03	2.8e+03
22	13C-1,2,3,6,7,8-HxCDF	4.97e+06	2.13e+03	2.3e+03	9.48e+06	3.07e+03	3.1e+03
23	13C-2,3,4,6,7,8-HxCDF	4.71e+06	2.13e+03	2.2e+03	8.44e+06	3.07e+03	2.8e+03
24	13C-1,2,3,7,8,9-HxCDF	4.28e+06	2.13e+03	2.0e+03	7.86e+06	3.07e+03	2.6e+03
25	13C-1,2,3,4,6,7,8-HpCDF	3.66e+06	5.09e+03	7.2e+02	8.12e+06	3.68e+03	2.2e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.94e+06	5.09e+03	5.8e+02	6.68e+06	3.68e+03	1.8e+03
27	13C-2,3,7,8-TCDD	1.46e+06	2.23e+04	6.6e+01	1.92e+06	8.01e+03	2.4e+02
28	13C-1,2,3,7,8-PeCDD	6.14e+06	2.30e+03	2.7e+03	3.94e+06	2.86e+03	1.4e+03
29	13C-1,2,3,4,7,8-HxCDD	7.21e+06	2.68e+03	2.7e+03	5.66e+06	1.79e+03	3.2e+03
30	13C-1,2,3,6,7,8-HxCDD	6.65e+06	2.68e+03	2.5e+03	5.41e+06	1.79e+03	3.0e+03
31	13C-1,2,3,4,6,7,8-HpCDD	6.91e+06	2.34e+03	3.0e+03	6.64e+06	8.12e+02	8.2e+03
32	13C-OCDD	5.08e+06	1.04e+03	4.9e+03	5.71e+06	8.20e+02	7.0e+03
33	13C-1,2,3,4-TCDD	1.02e+07	2.23e+04	4.6e+02	1.29e+07	8.01e+03	1.6e+03
34	13C-1,2,3,7,8,9-HxCDD	1.72e+07	2.68e+03	6.4e+03	1.33e+07	1.79e+03	7.4e+03
35	37Cl-2,3,7,8-TCDD	1.96e+06	5.06e+03	3.9e+02			

---Sample Calculation---

$$\text{D/L TCDD} = \frac{2.5 \times (6.212e+03 + 2.124e+03\ ) \times 2000}{(1.465e+06 + 1.921e+06\ ) \times (\qquad\qquad\qquad\qquad) \times 1.049} =$$

ALS ENVIRONMENTAL
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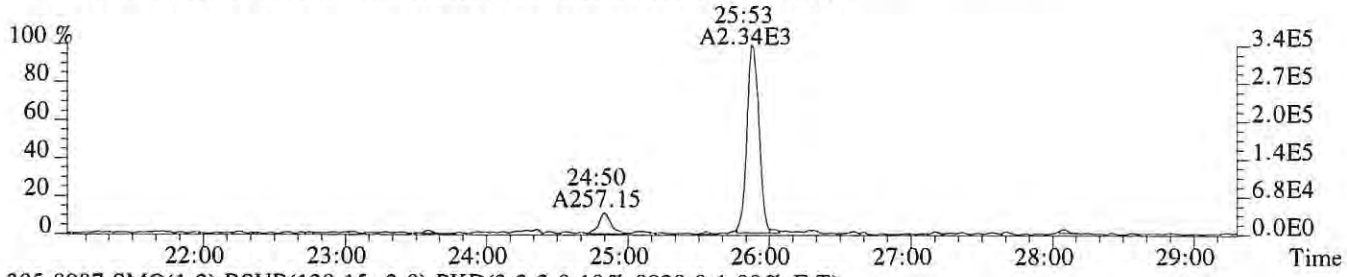
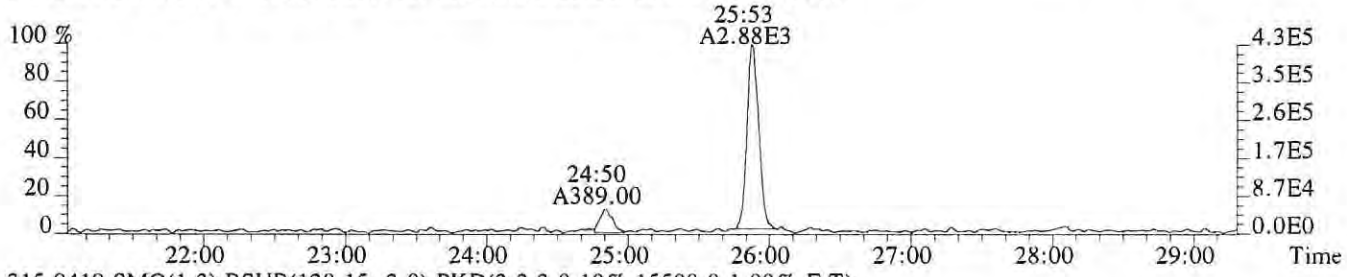
File:P616179 #1-587 Acq:24-DEC-2018 22:41:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS

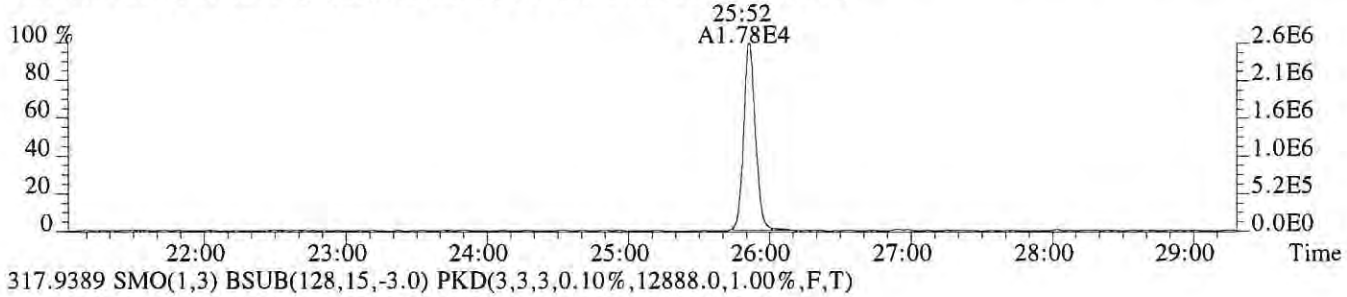
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3068.0,1.00%,F,T)



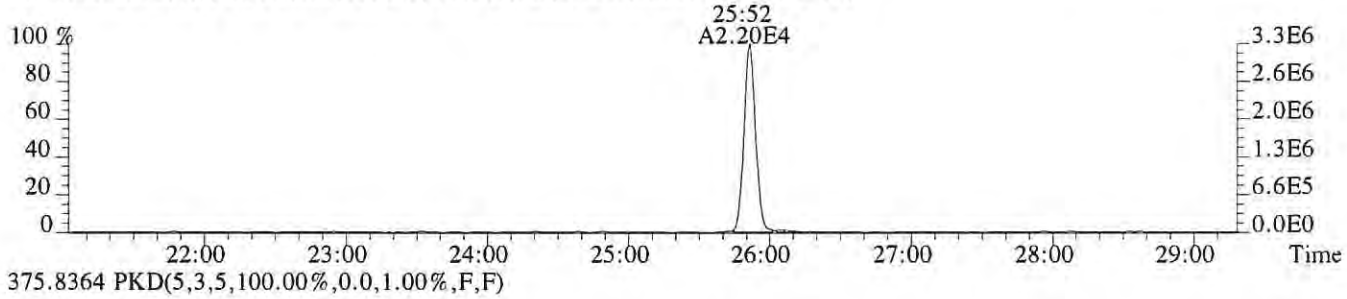
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8928.0,1.00%,F,T)



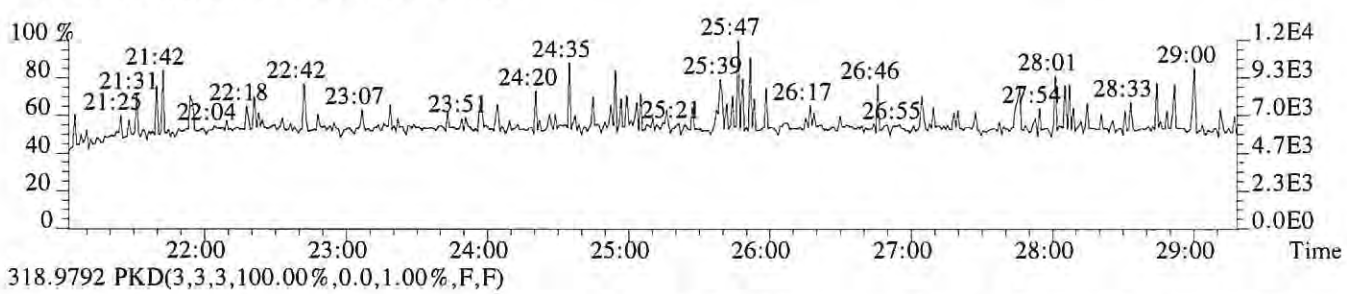
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,15508.0,1.00%,F,T)



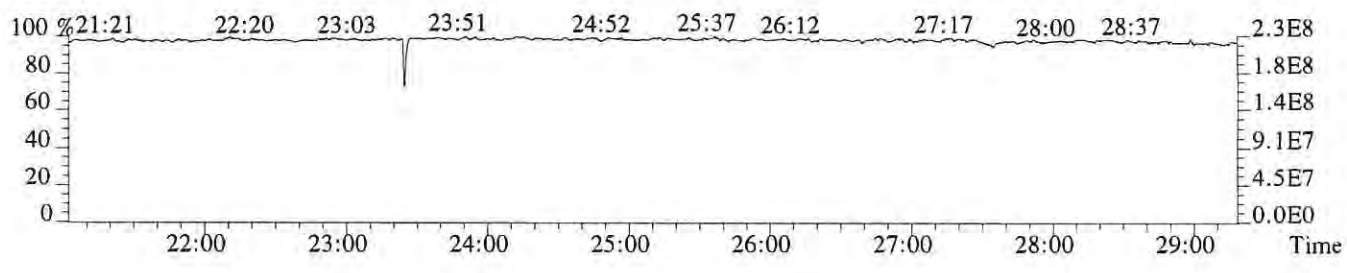
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12888.0,1.00%,F,T)



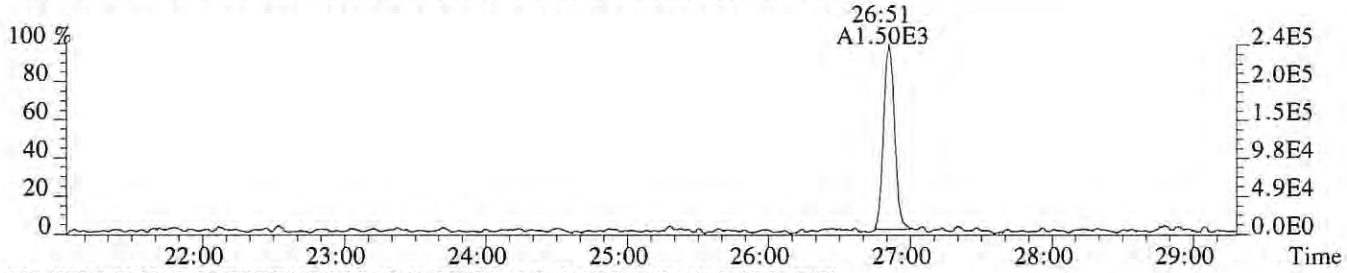
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



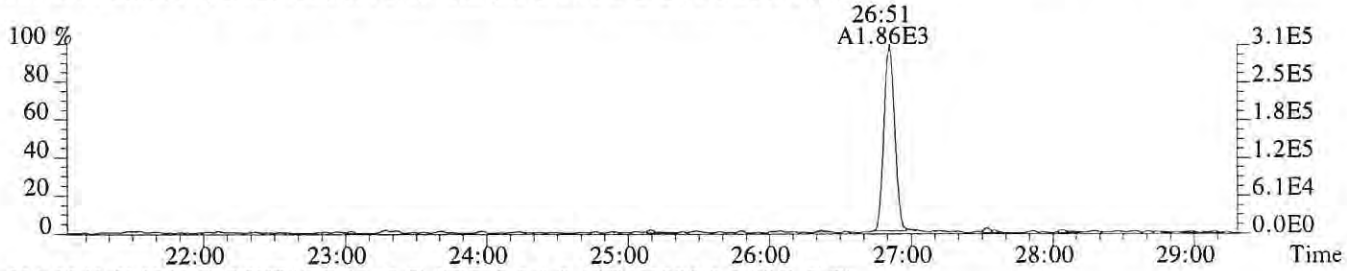
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



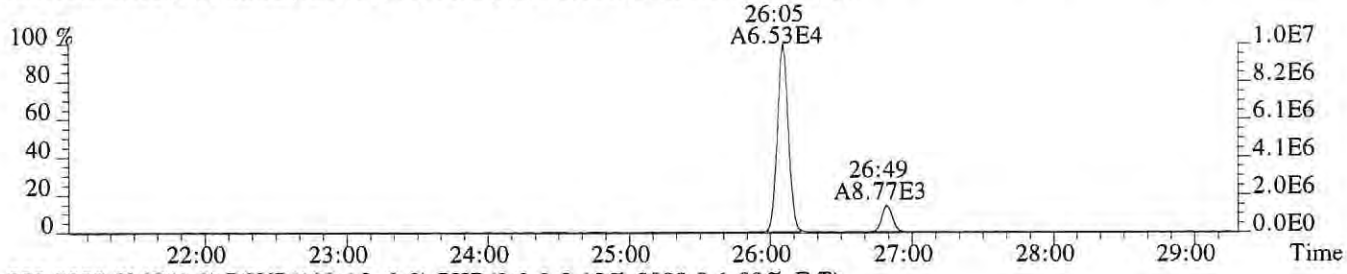
File:P616179 #1-587 Acq:24-DEC-2018 22:41:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6212.0,1.00%,F,T)



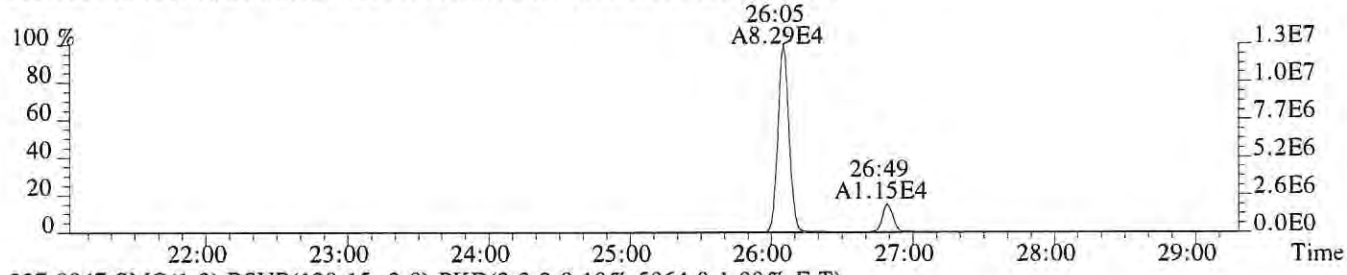
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2124.0,1.00%,F,T)



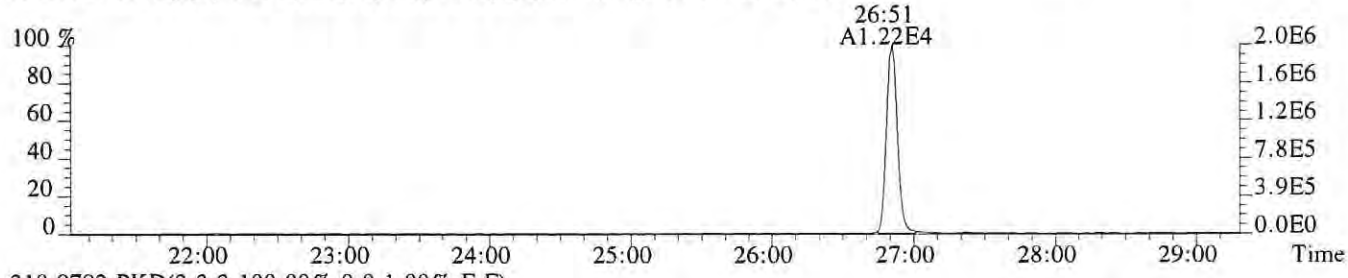
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,22296.0,1.00%,F,T)



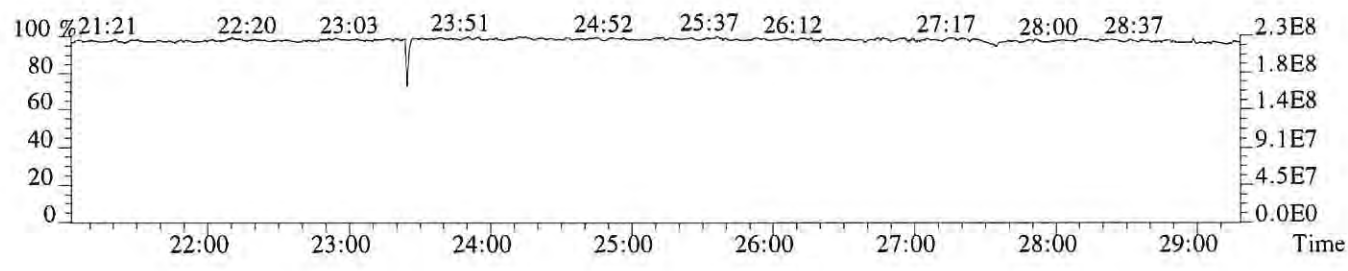
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8008.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5064.0,1.00%,F,T)

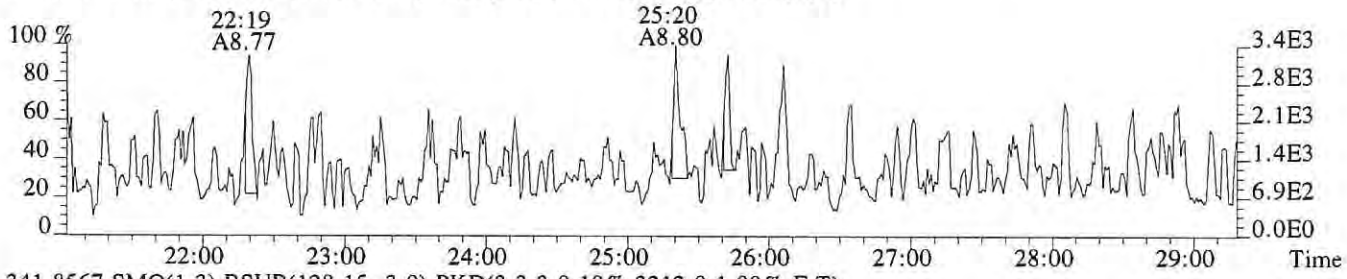


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

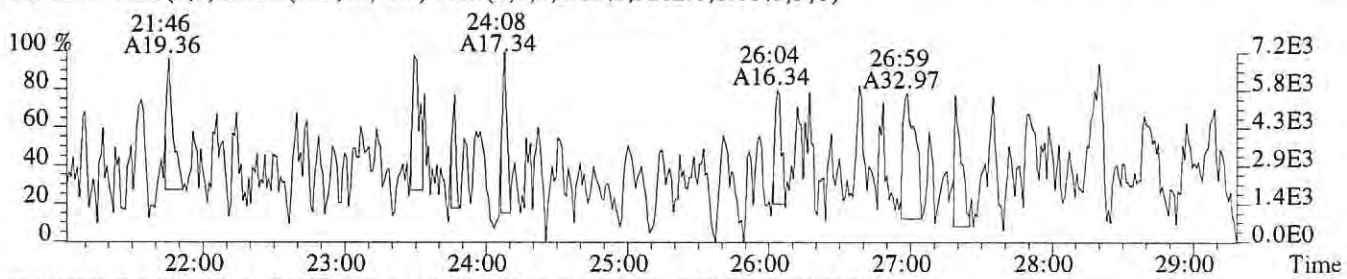


File:P616179 #1-587 Acq:24-DEC-2018 22:41:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS

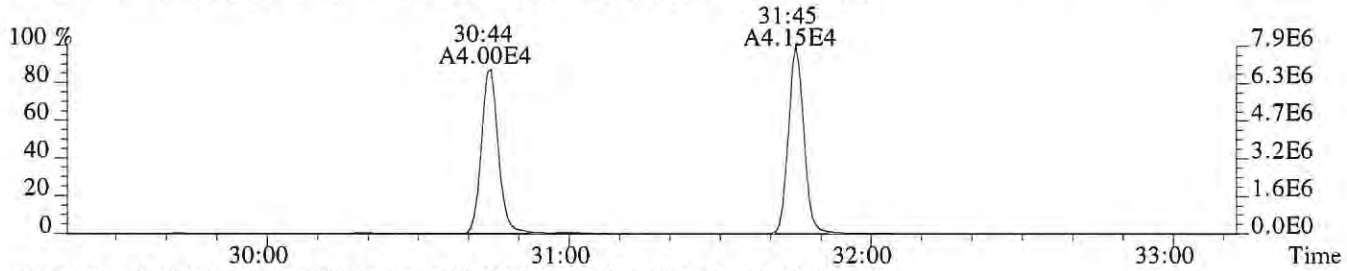
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1408.0,1.00%,F,T)



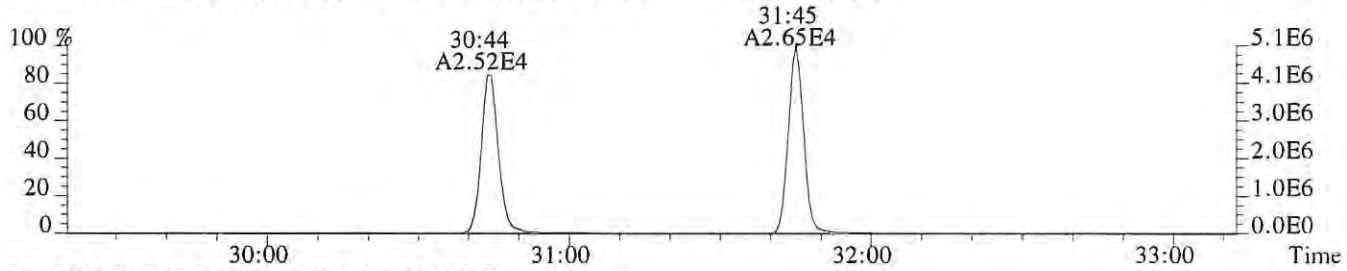
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3212.0,1.00%,F,T)



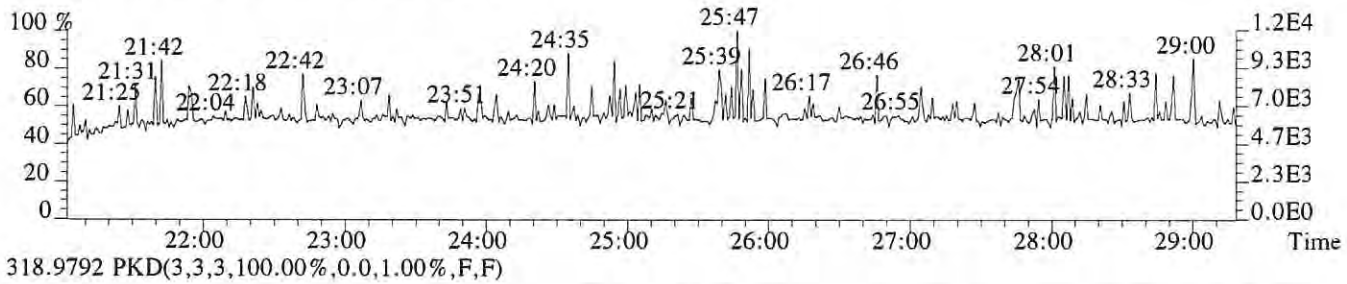
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,860.0,1.00%,F,T)



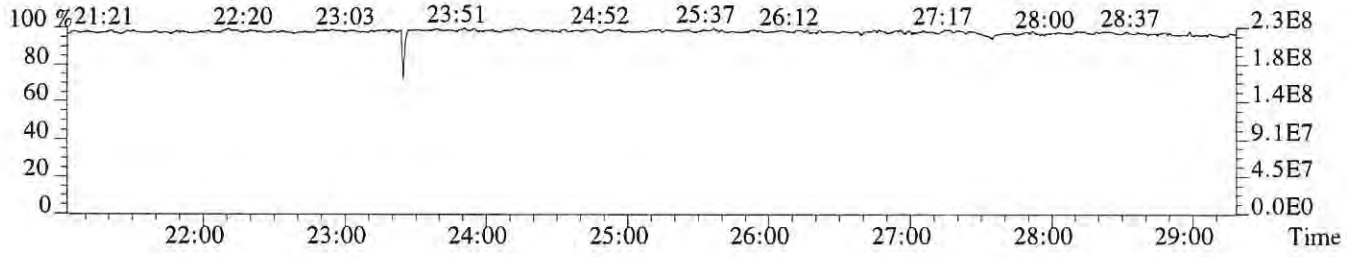
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2256.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

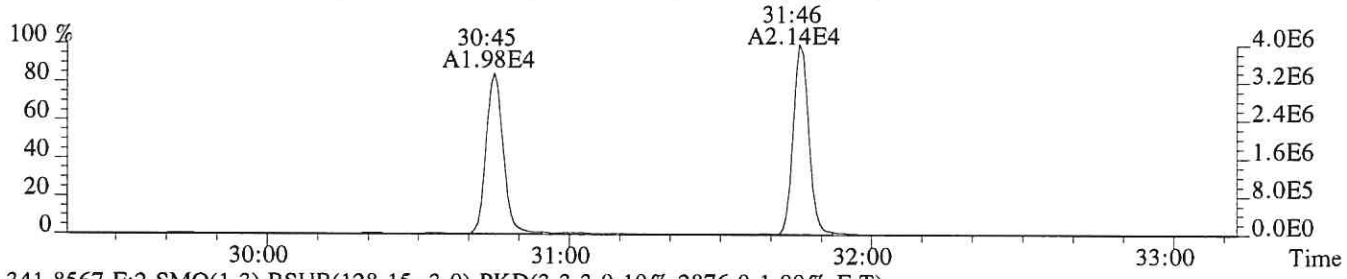


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

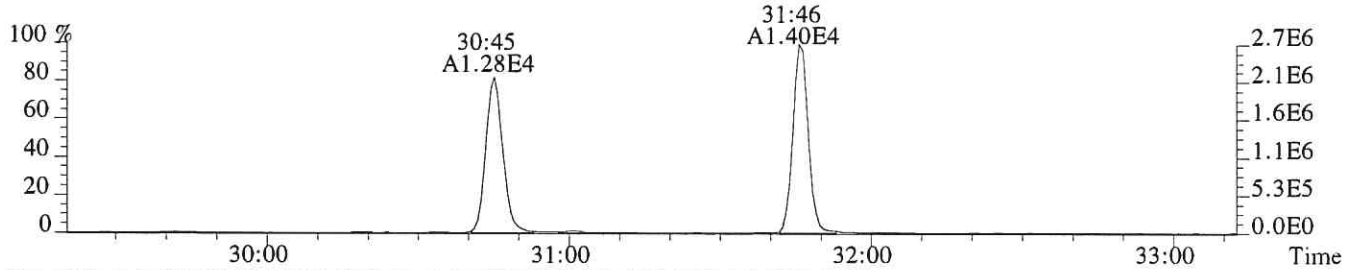


File:P616179 #1-349 Acq:24-DEC-2018 22:41:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS

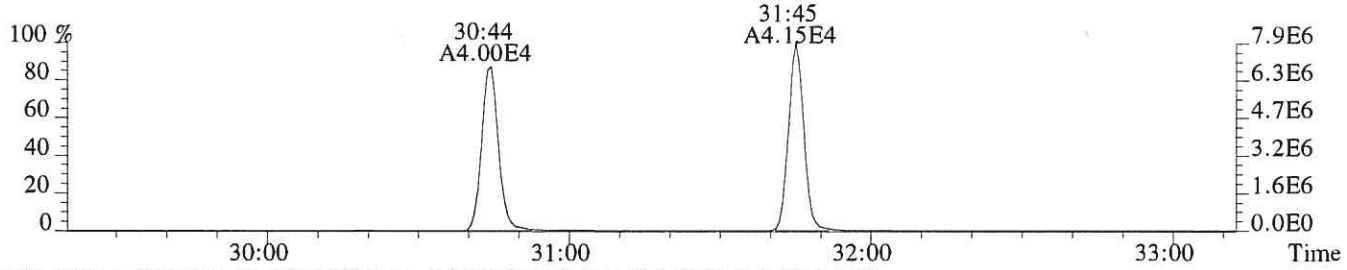
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1076.0,1.00%,F,T)



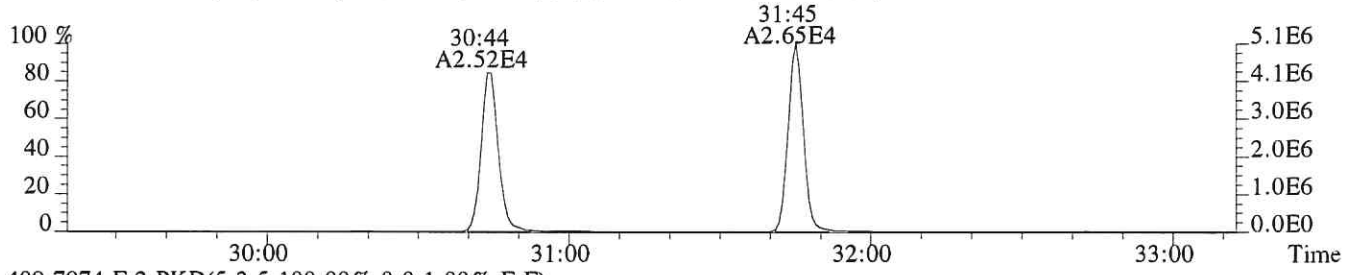
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2876.0,1.00%,F,T)



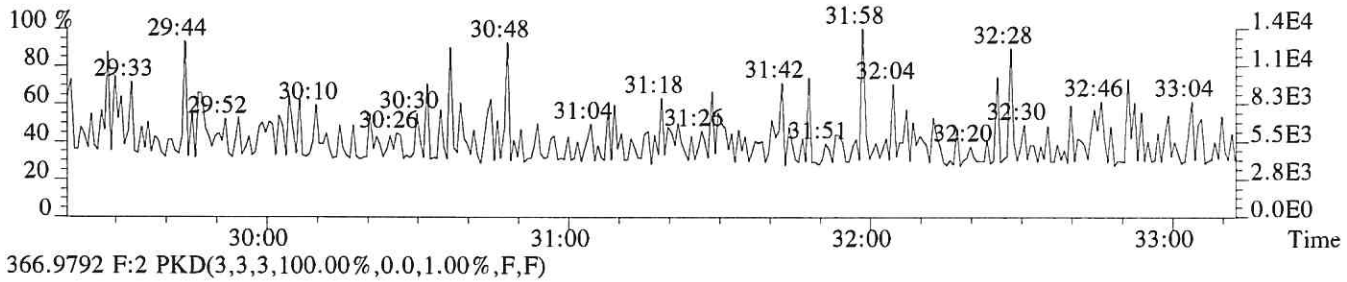
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,860.0,1.00%,F,T)



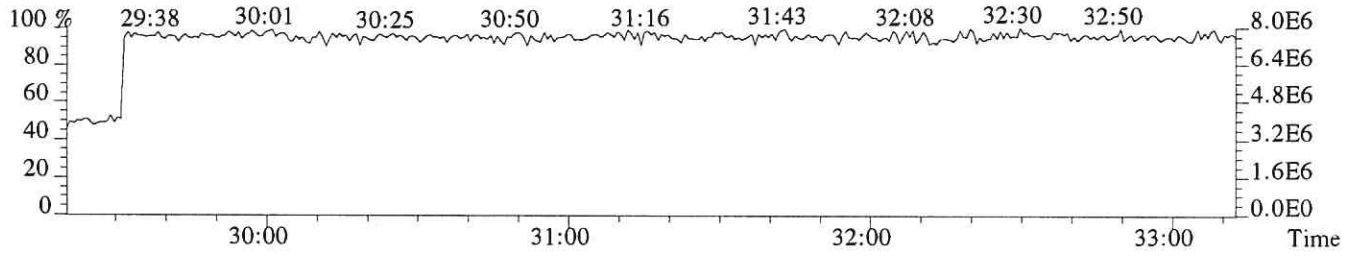
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2256.0,1.00%,F,T)



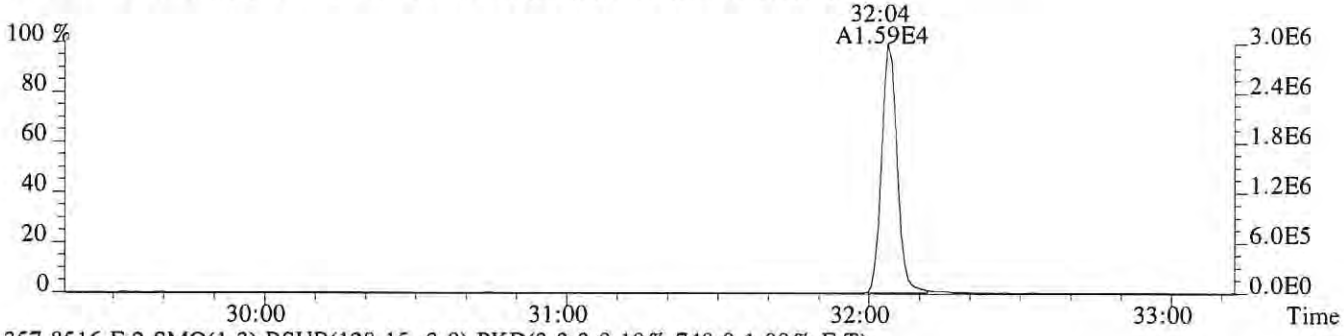
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



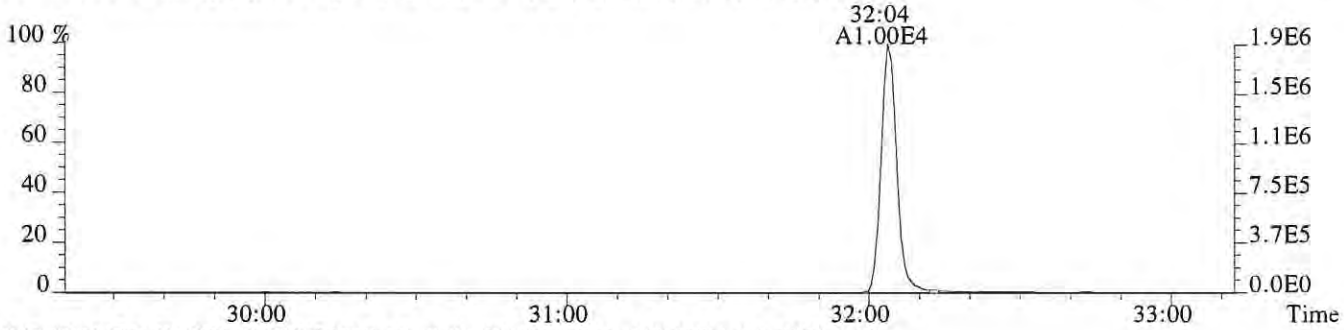
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



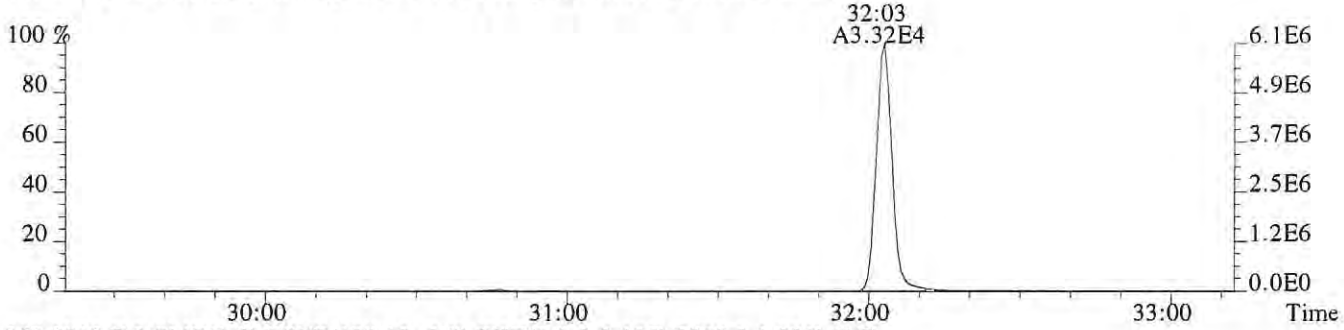
File:P616179 #1-349 Acq:24-DEC-2018 22:41:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1540.0,1.00%,F,T)



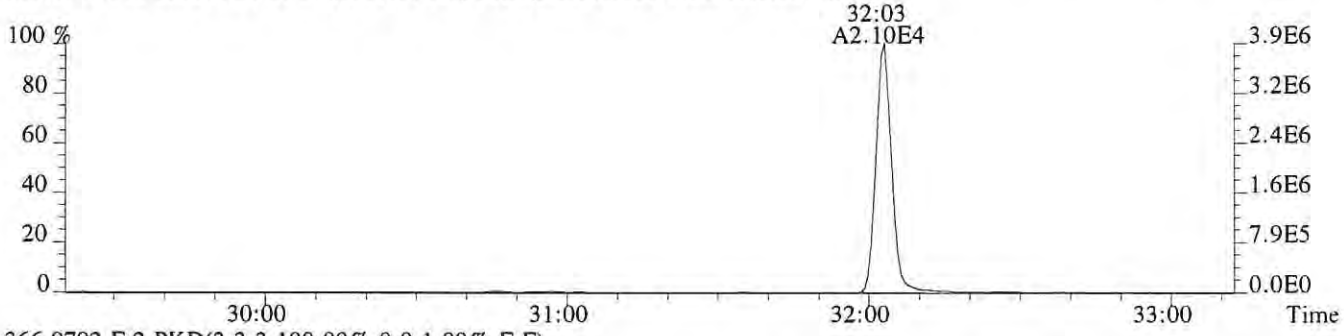
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,740.0,1.00%,F,T)



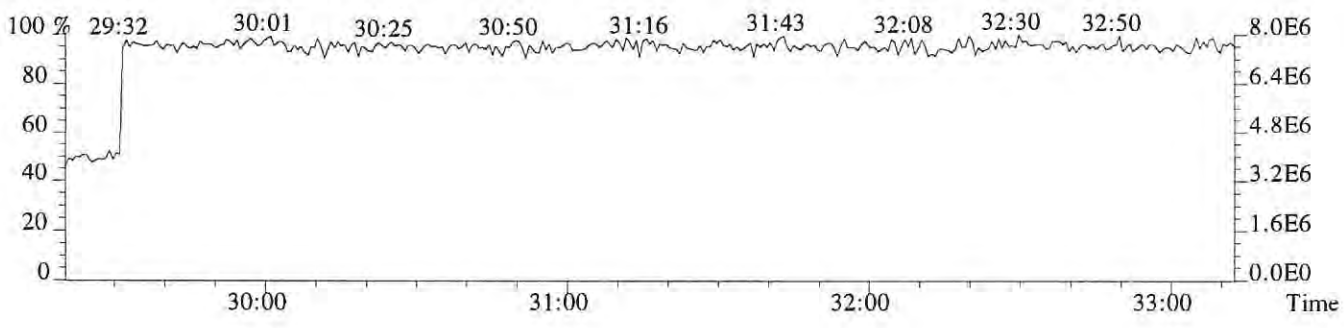
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2304.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2860.0,1.00%,F,T)

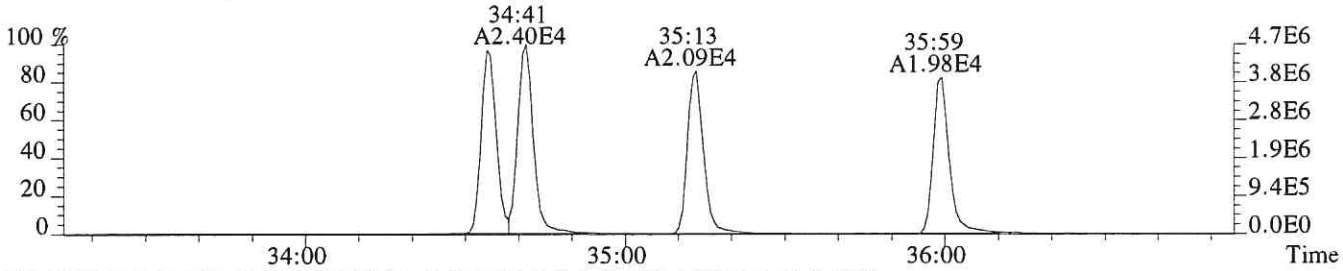


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

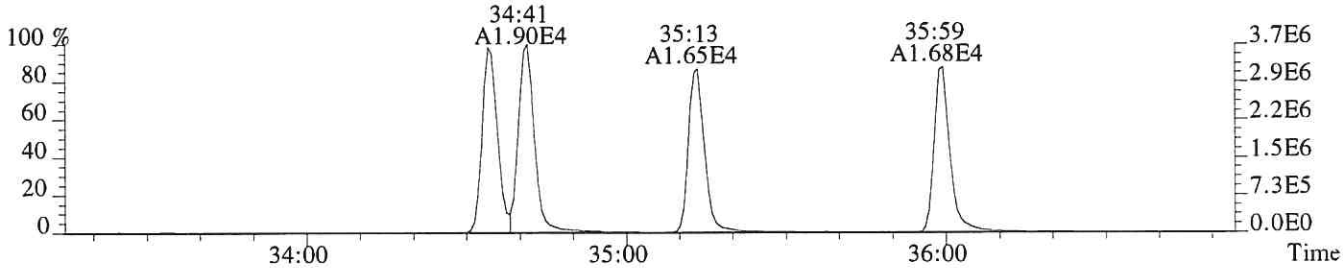


File:P616179 #1-330 Acq:24-DEC-2018 22:41:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS

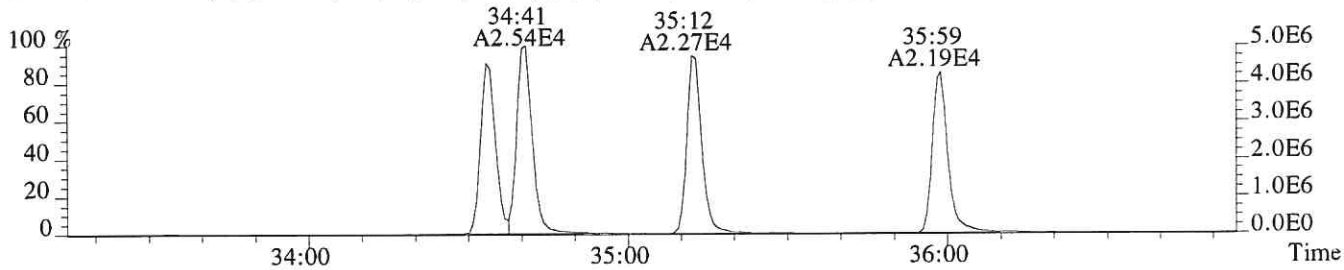
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1712.0,0.40%,F,T)



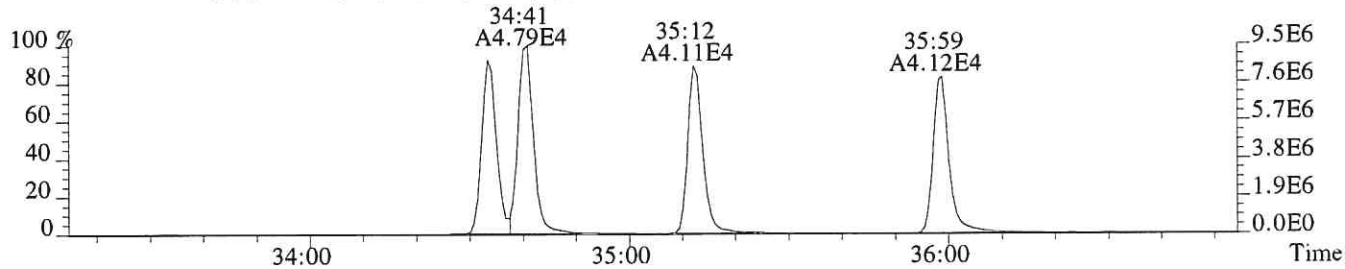
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1208.0,0.40%,F,T)



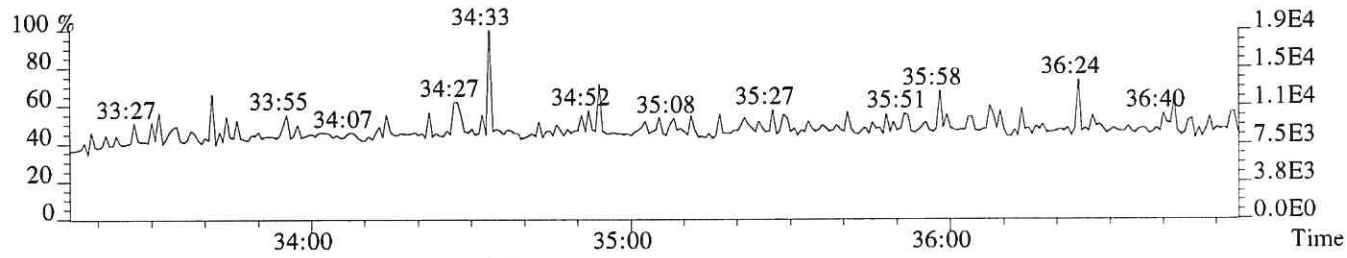
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2128.0,0.40%,F,T)



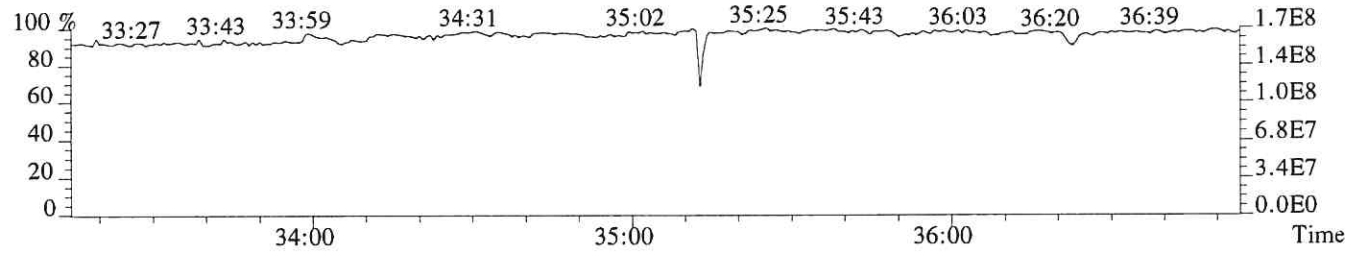
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3068.0,0.40%,F,T)



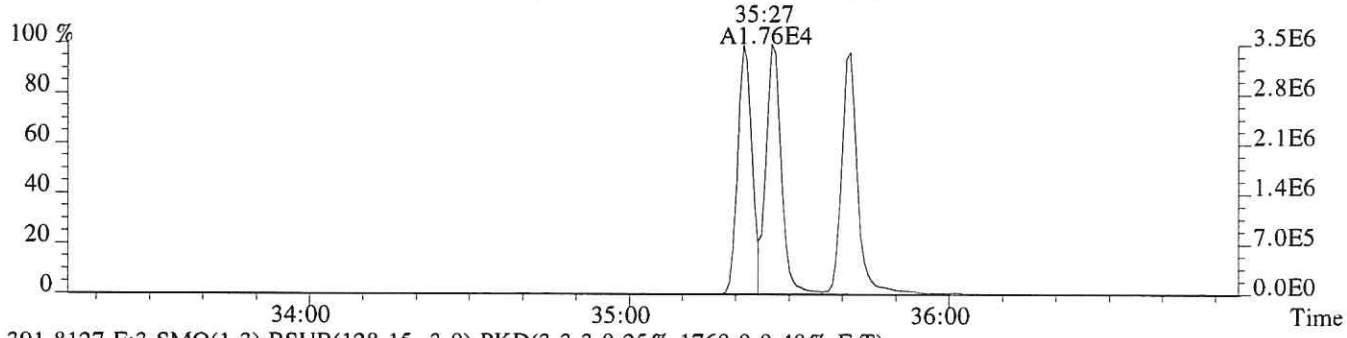
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



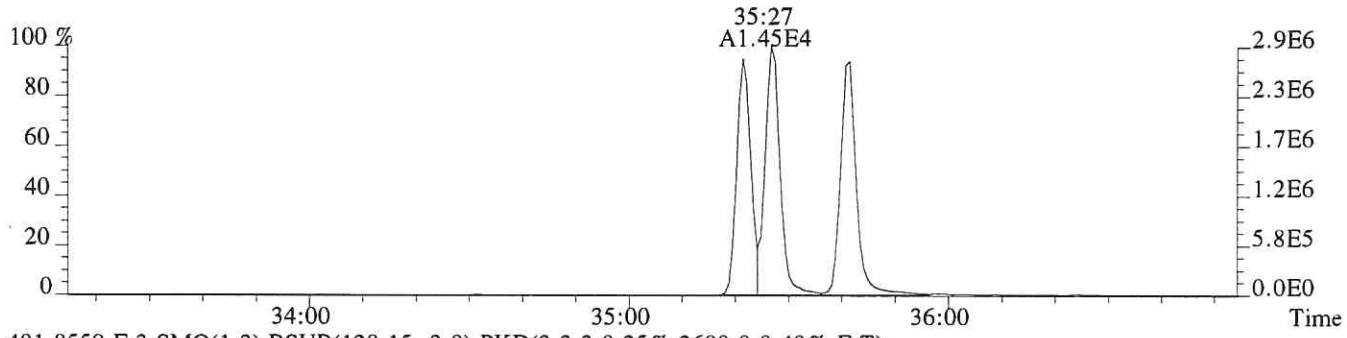
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



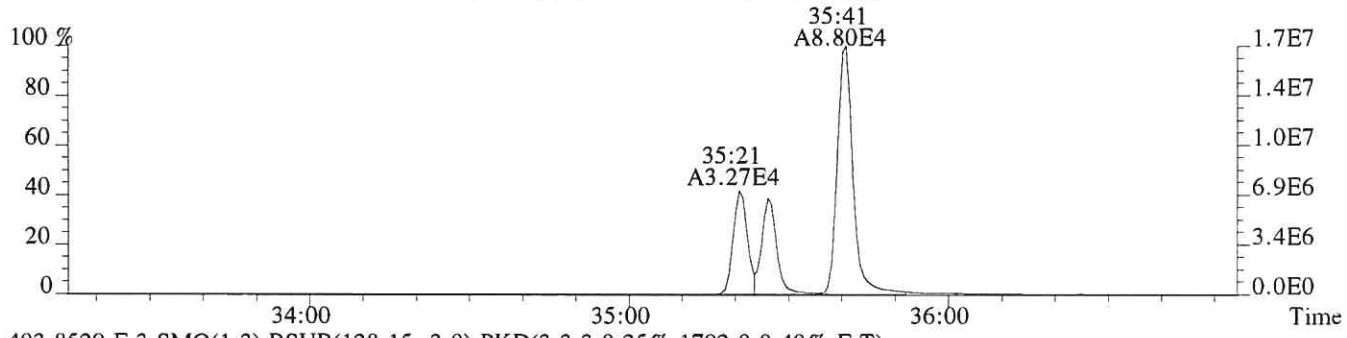
File:P616179 #1-330 Acq:24-DEC-2018 22:41:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1132.0,0.40%,F,T)



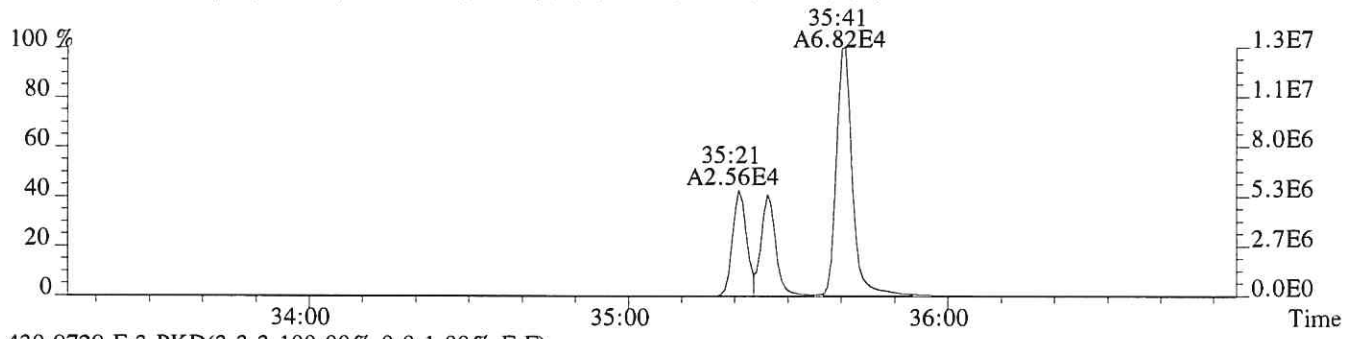
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1760.0,0.40%,F,T)



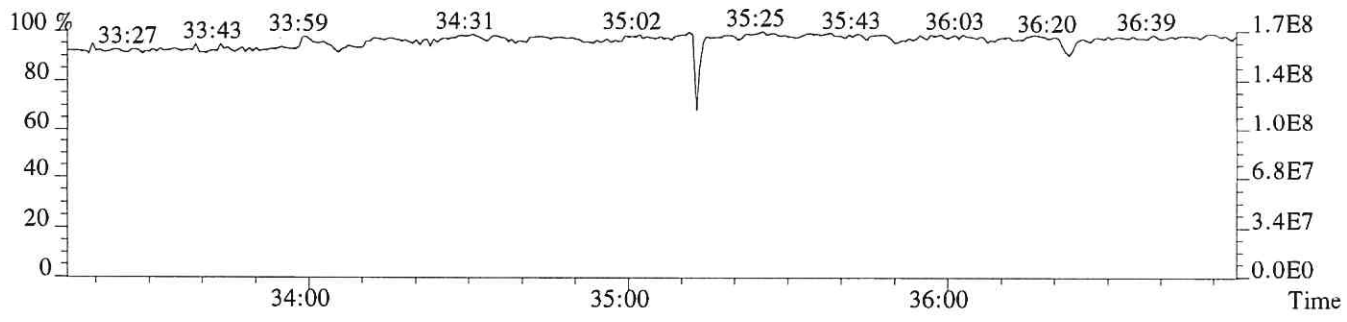
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2680.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1792.0,0.40%,F,T)

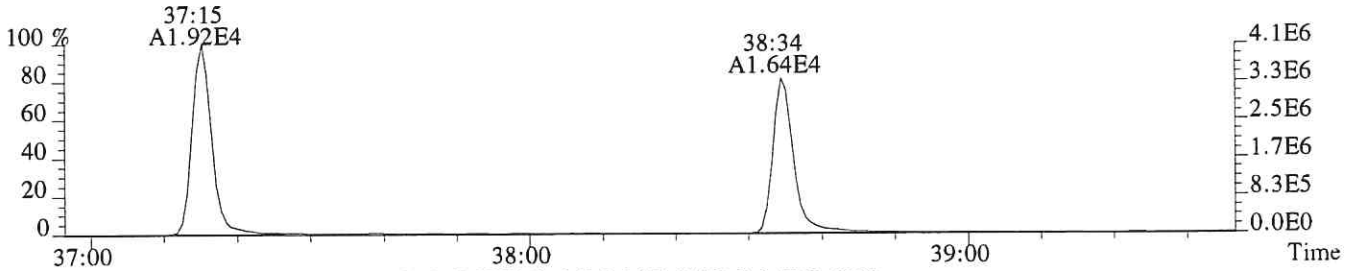


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

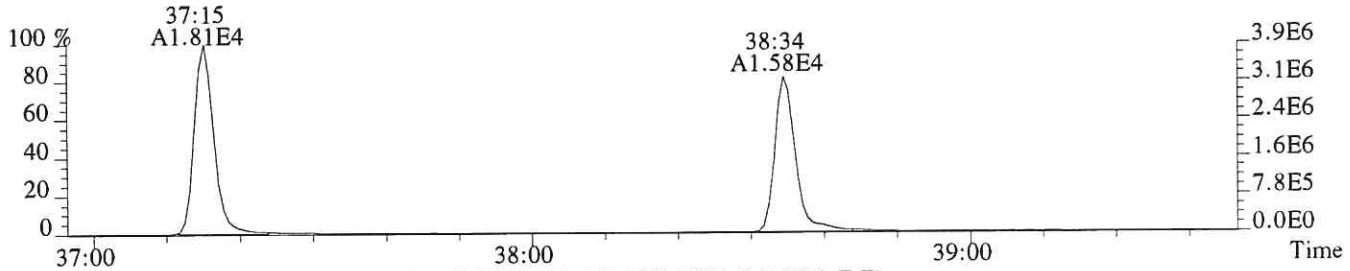


File:P616179 #1-241 Acq:24-DEC-2018 22:41:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS

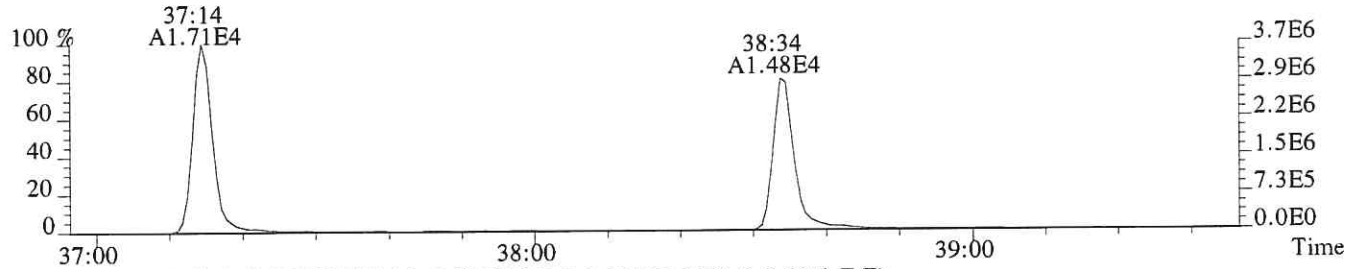
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6352.0,0.50%,F,T)



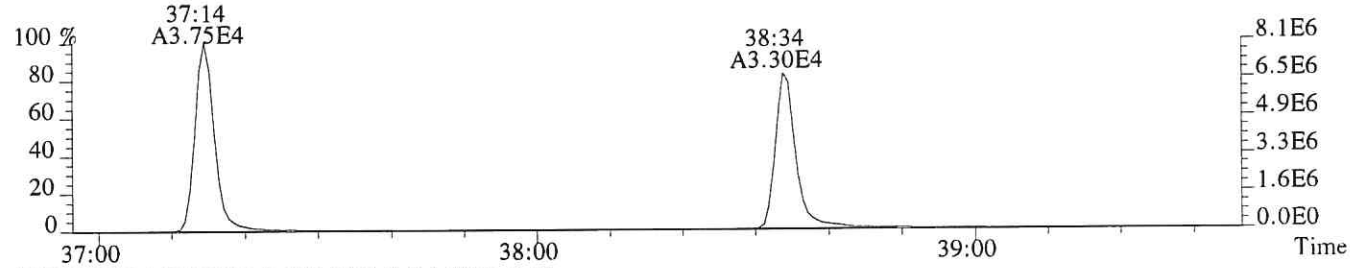
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3272.0,0.50%,F,T)



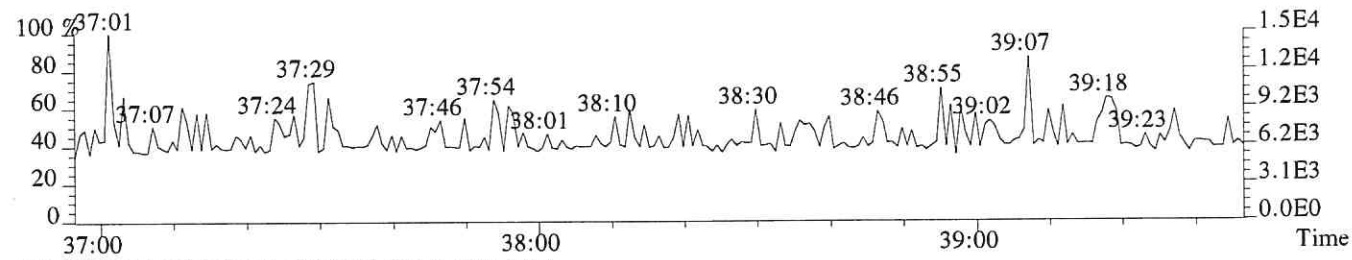
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5092.0,0.50%,F,T)



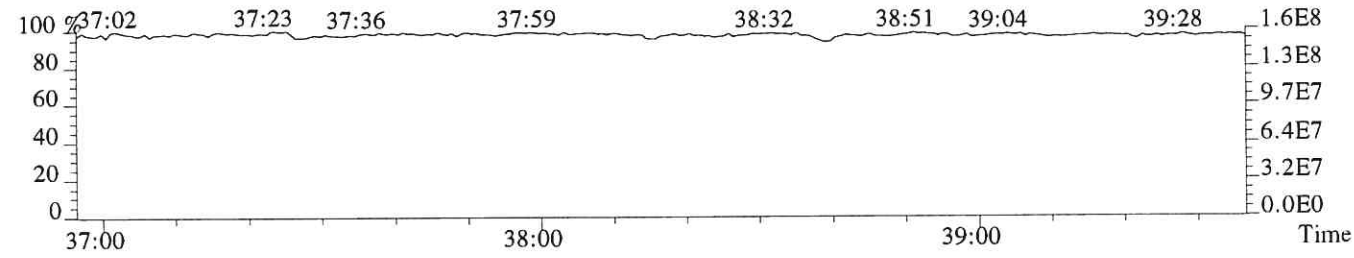
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3684.0,0.50%,F,T)



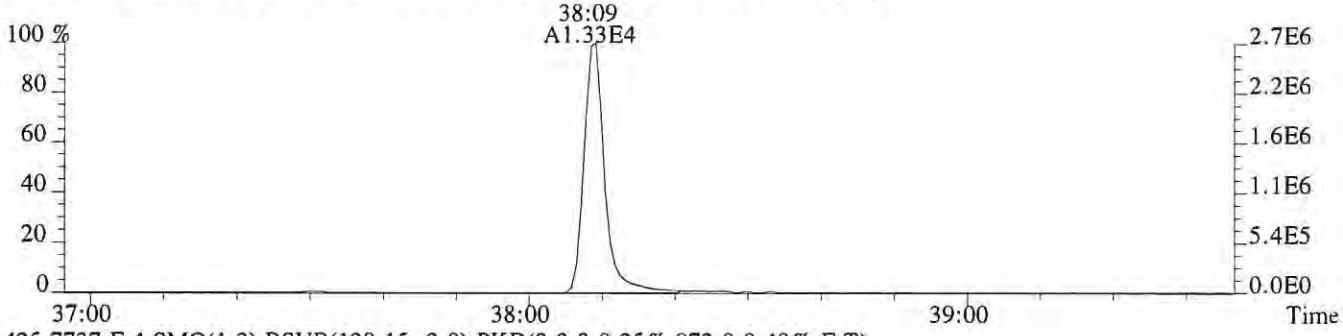
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



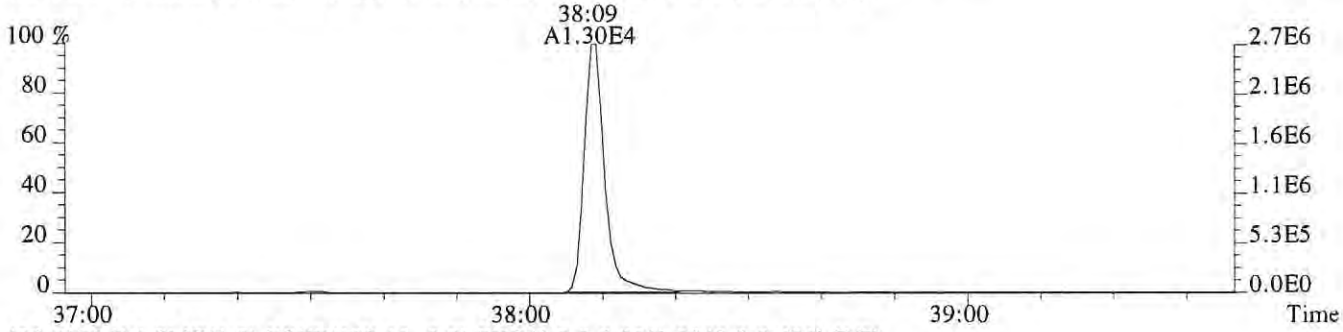
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



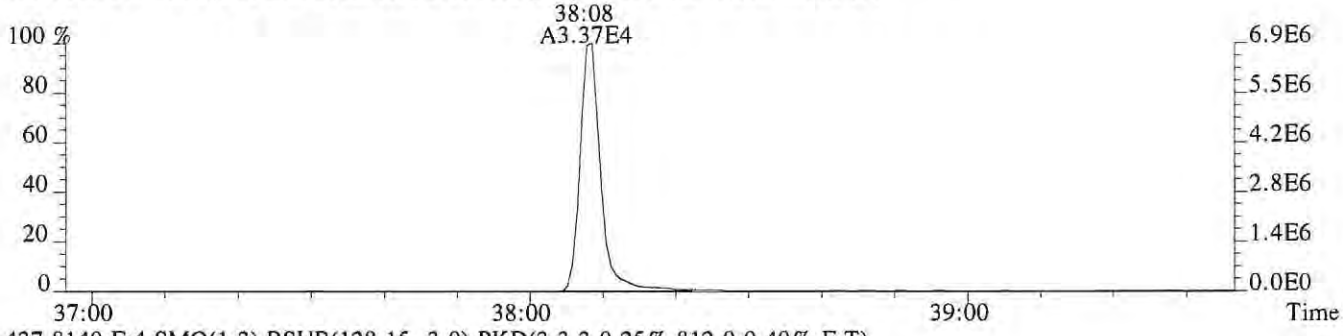
File:P616179 #1-241 Acq:24-DEC-2018 22:41:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1040.0,0.40%,F,T)



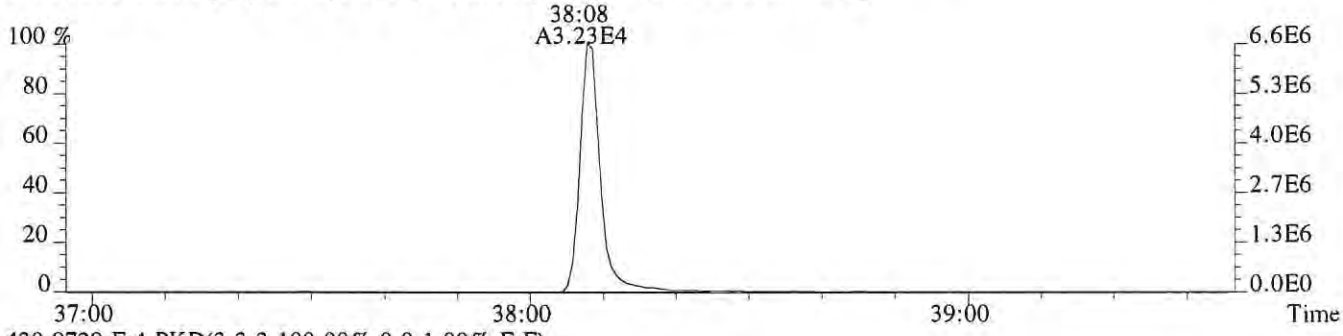
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,972.0,0.40%,F,T)



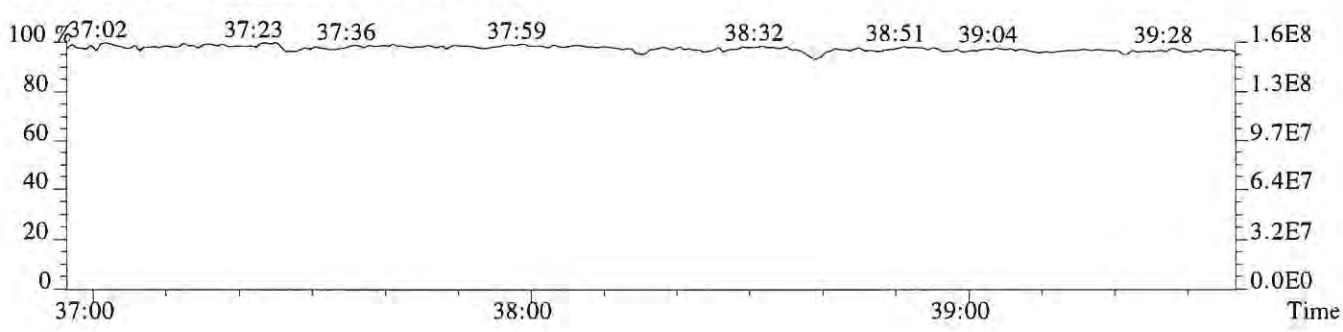
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2340.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,812.0,0.40%,F,T)

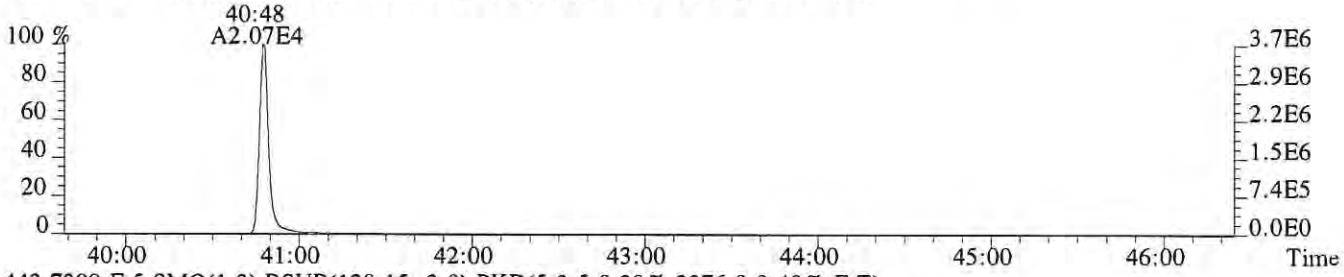


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

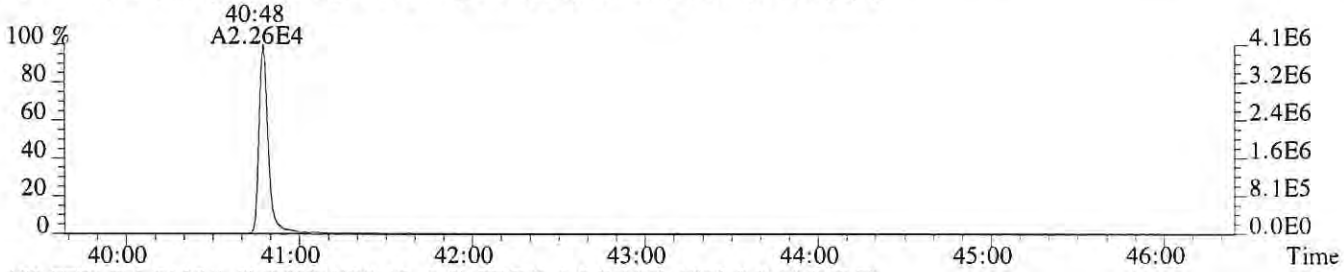


File:P616179 #1-609 Acq:24-DEC-2018 22:41:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS

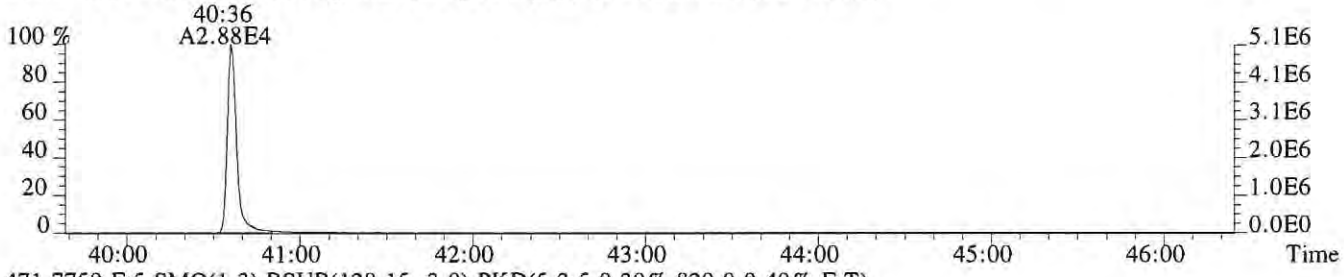
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,892.0,0.40%,F,T)



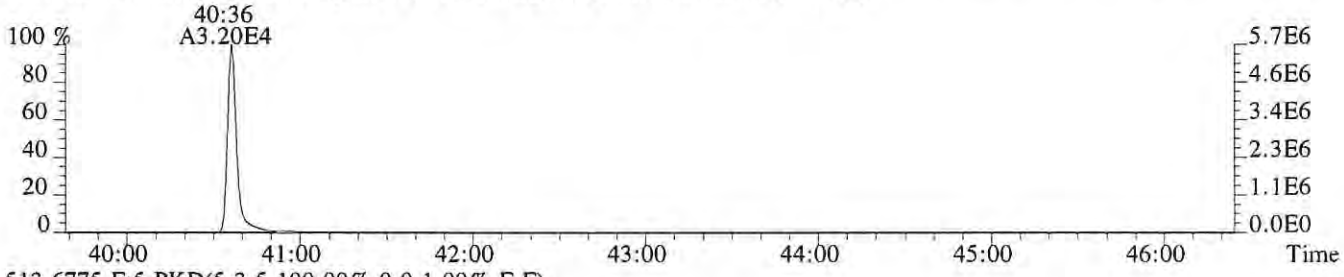
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2376.0,0.40%,F,T)



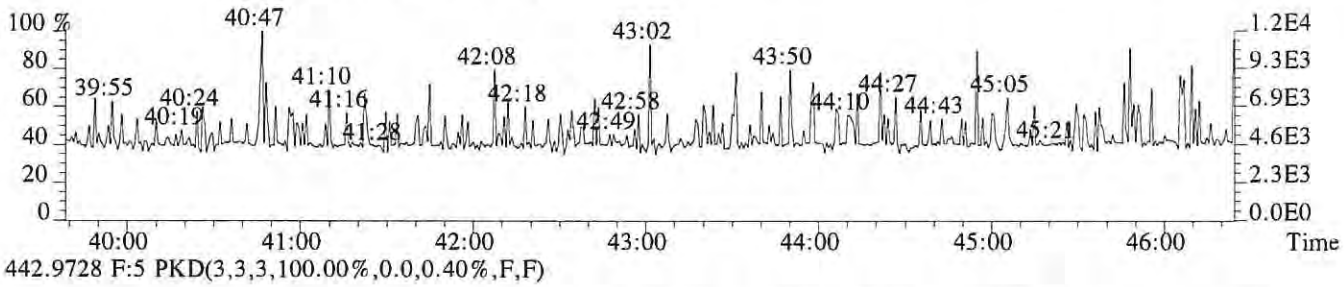
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1036.0,0.40%,F,T)



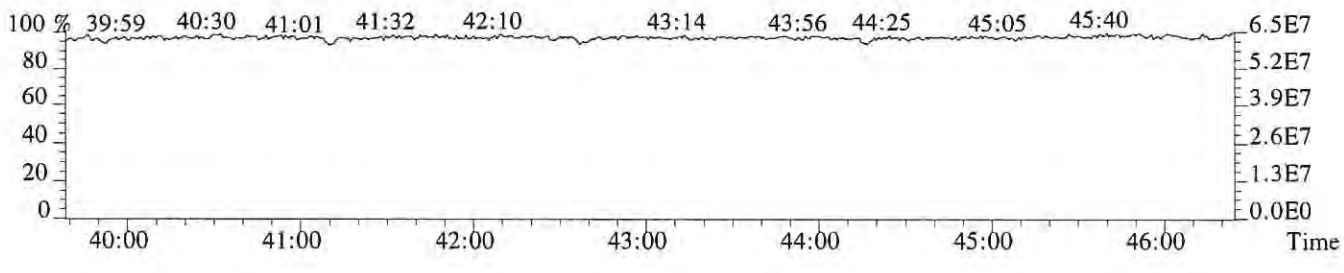
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,820.0,0.40%,F,T)



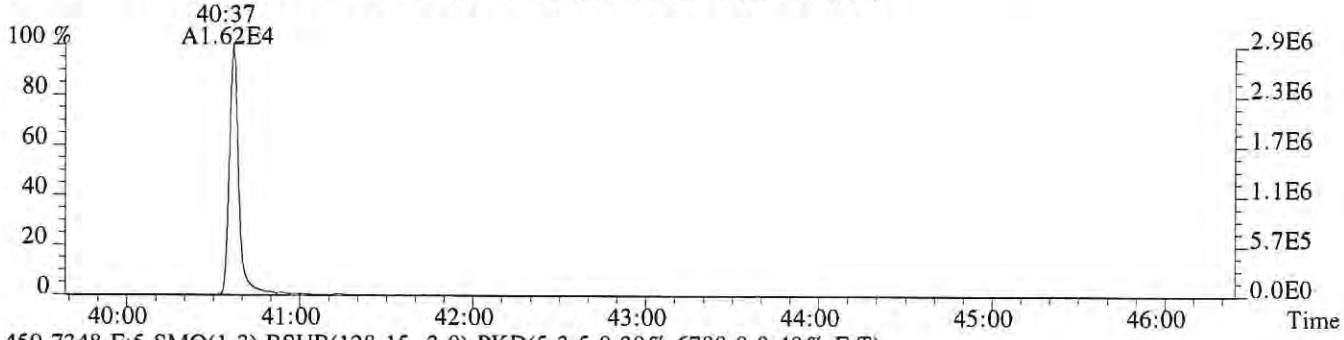
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



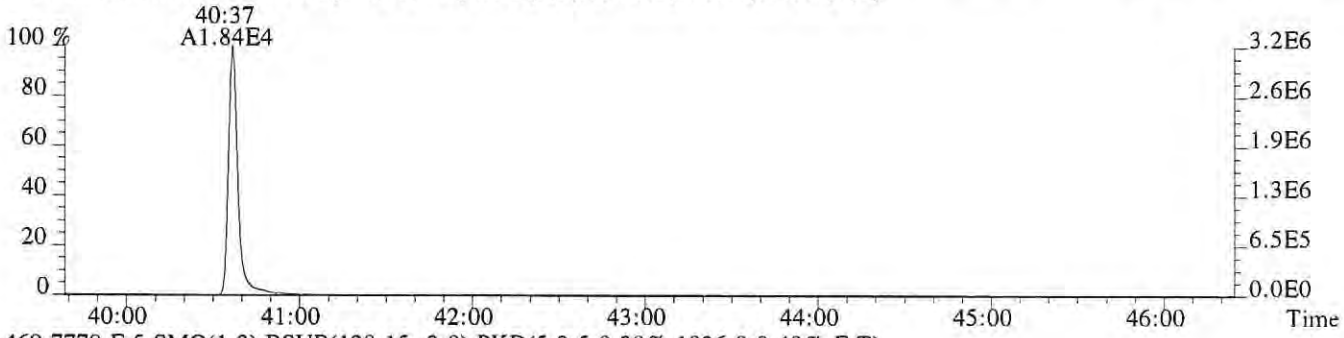
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



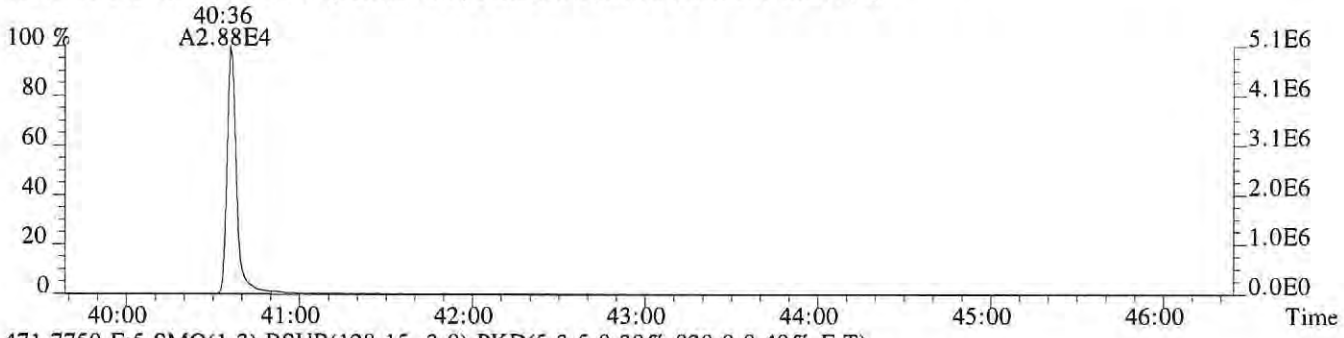
File:P616179 #1-609 Acq:24-DEC-2018 22:41:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1240.0,0.40%,F,T)



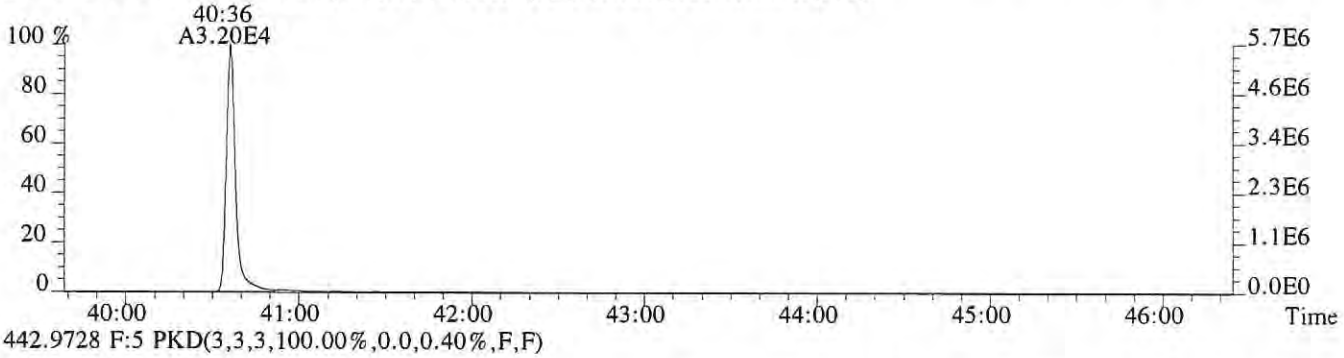
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,6780.0,0.40%,F,T)



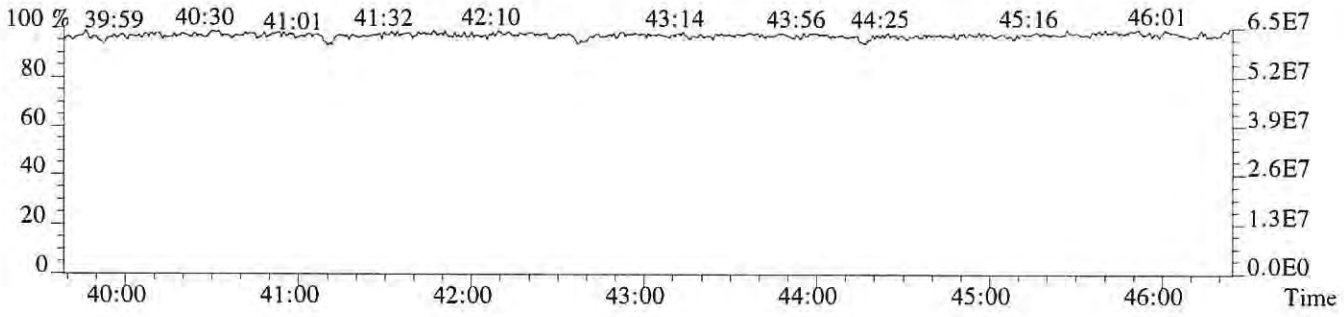
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1036.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,820.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



Continuing Calibration

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

CCAL HRCC3/CS3 Daily Calibration QC Checklist

Calibration File Name: P616166

Date: 12/24/18

Circle one: (Beginning) / Ending

Method: (1613) / 1613E / 8290/ VCP / Tetra / TCDD Only / TCDF Conf / VCP Conf / 8280 / M23 / TO-9A

Retention Window/Column Performance Check:	Analyst	Second Check
Windows in and first and last eluters labeled	✓	✓
Column Performance shows less than or equal to 25% valley between column specific 2378 isomer and its closest eluters	✓	✓
No QC ion deflections affect column specific 2378 isomer or its closest eluters (HRMS Only)	✓	✓

CS3 Continuing Calibration	Analyst	Second Check
Percent RSD within method criteria	✓	✓
All relative abundance ratios meet method criteria	✓	✓
No QC ion deflections of greater than 20% (HRMS Only)	✓	✓
Mass spectrometer resolution greater than or equal to 10,000 and documented (HRMS Only)	✓	✓
2378-TCDD elutes at 25 minutes or later on the DB-5 column / DB-5MSUI column	✓	✓
Signal-to-noise of all target analytes and their labeled standards at least 10:1	✓	✓
Valley between labeled 123478 and 123678 HxCDD peaks less than or equal to 50% (LRMS Only)	N/A	N/A
Ending Calibration injected prior to end of 12 hour clock	N/A	N/A

Analyst: _____ Second QC: LG

ccalqc.xls 07/17/12

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

Lab Code: Case No.: Client No.: SDG No.:

GC Column: DB-5MSUI ID: 0.25 (mm)

Init. Calib. Date: 09/25/18

Init. Calib.Times: 12:13

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, AND LABORATORY CONTROL SAMPLES (LCSs) IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
192977	WINDOW DEFINE	P616167	24-DEC-18	12:51:10
194503	CS3	P616166	24-DEC-18	12:02:50
METHOD BLANK	EQ1800515-01	P616168	24-DEC-18	13:40:20
RE-EXTRACT	E1801101-001	P616169	24-DEC-18	14:29:27
RE-EXTRACT	E1801102-001	P616170	24-DEC-18	15:18:36
RE-EXTRACT	E1801103-001	P616171	24-DEC-18	16:07:46
RE-EXTRACT	E1801103-002	P616172	24-DEC-18	16:56:57
RE-EXTRACT	E1801104-001	P616173	24-DEC-18	17:46:07
GP-BE-12-04-18-B4GC	J1808607-001	P616174	24-DEC-18	18:35:17
BLEACH PLANT EFFLUE	E1801112-001	P616175	24-DEC-18	19:24:28
SLO 0590	E1801105-001	P616176	24-DEC-18	20:13:37
SLO 0591	E1801105-002	P616177	24-DEC-18	21:02:47
LCS	EQ1800515-02	P616178	24-DEC-18	21:51:57
DLCS	EQ1800515-03	P616179	24-DEC-18	22:41:08

Sample List Report — **MassLynx 4.1 SCN815 SCN795**

Sample List: C:\MassLynx\EHRMS08.PRO\SampleDB\20181224A.SPL
Last Modified: Tuesday, December 25, 2018 14:50:06 Central Standard Time
Printed: Tuesday, December 25, 2018 19:57:30 Central Standard Time

Page Position (1, 1)

OPUS 5 NET: P616166 RES

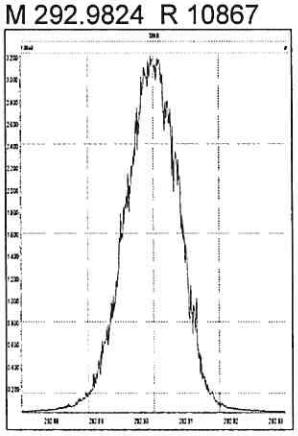
	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst	Comments
1	12/24/18	12:02	P616166	194503	CS3	EPA1613_ALS	Dioxin_ALS	Tray1:2	LG for JC	HRMS check 11:55
2		12:51	P616167	192977	WINDOW DEFINE	EPA1613_ALS	Dioxin_ALS	Tray1:1		
3		13:40	P616168	EQ1800515-01	MB	EPA1613_ALS	Dioxin_ALS	Tray1:37		
4		14:29	P616169	E1801101-001	E1801101-001	EPA1613_ALS	Dioxin_ALS	Tray1:38		
5		15:18	P616170	E1801102-001	E1801102-001	EPA1613_ALS	Dioxin_ALS	Tray1:39		
6		16:07	P616171	E1801103-001	E1801103-001	EPA1613_ALS	Dioxin_ALS	Tray1:40		
7		16:56	P616172	E1801103-002	E1801103-002	EPA1613_ALS	Dioxin_ALS	Tray1:41		
8		17:46	P616173	E1801104-001	E1801104-001	EPA1613_ALS	Dioxin_ALS	Tray1:42		
9		18:35	P616174	J1808607-001	J1808607-001	EPA1613_ALS	Dioxin_ALS	Tray1:43		
10		19:24	P616175	E1801112-001	E1801112-001	EPA1613_ALS	Dioxin_ALS	Tray1:44		
11		20:13	P616176	E1801105-001	E1801105-001	EPA1613_ALS	Dioxin_ALS	Tray1:45		
12		21:02	P616177	E1801105-002	E1801105-002	EPA1613_ALS	Dioxin_ALS	Tray1:46		
13		21:51	P616178	EQ1800515-02	LCS	EPA1613_ALS	Dioxin_ALS	Tray1:47		
14		22:41	P616179	EQ1800515-03	DLCS	EPA1613_ALS	Dioxin_ALS	Tray1:48		HRMS check 23:38

LKL 12/28/18

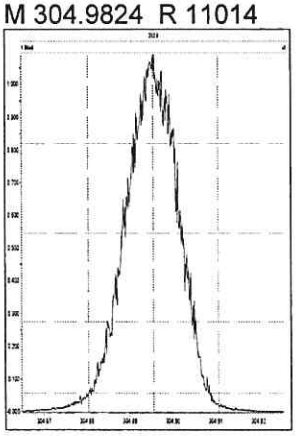
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Monday, December 24, 2018 11:55:16 Central Standard Time

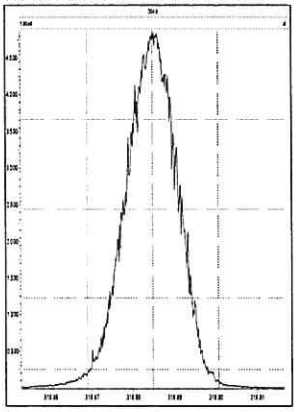
M 292.9824 R 10867



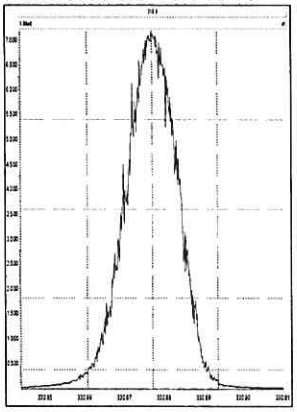
M 304.9824 R 11014



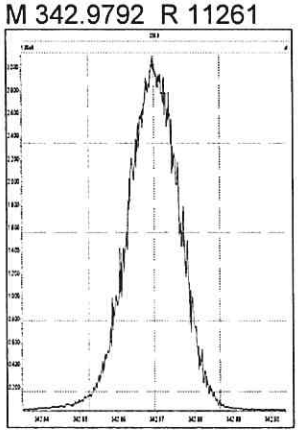
M 318.9792 R 11362



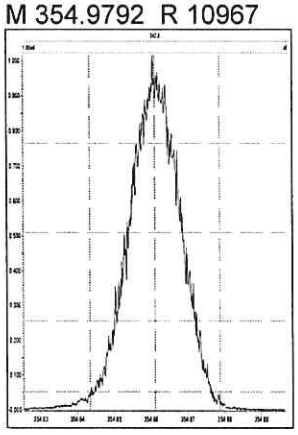
M 330.9792 R 11015



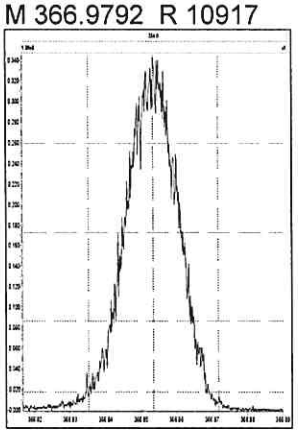
M 342.9792 R 11261



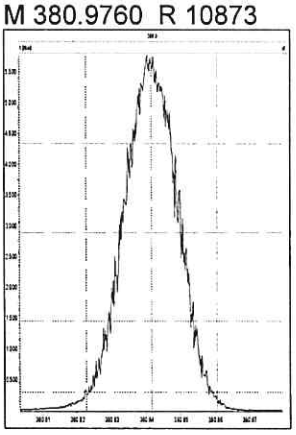
M 354.9792 R 10967



M 366.9792 R 10917



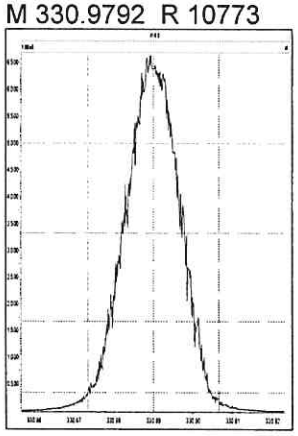
M 380.9760 R 10873



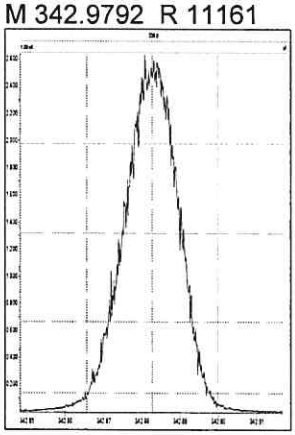
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Monday, December 24, 2018 11:56:50 Central Standard Time

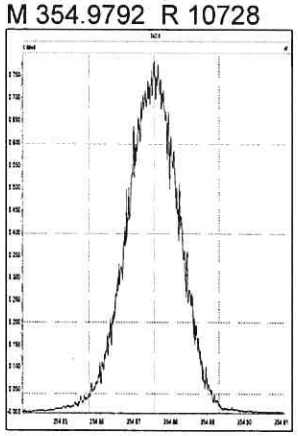
M 330.9792 R 10773



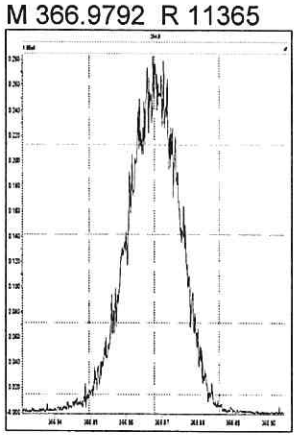
M 342.9792 R 11161



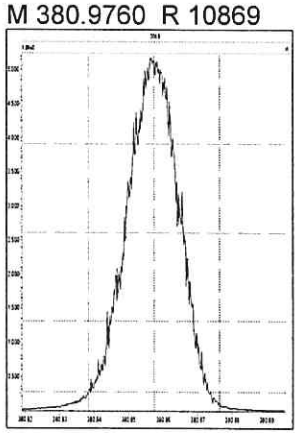
M 354.9792 R 10728



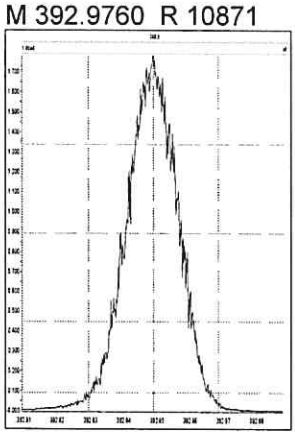
M 366.9792 R 11365



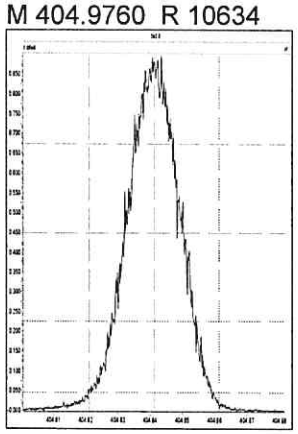
M 380.9760 R 10869



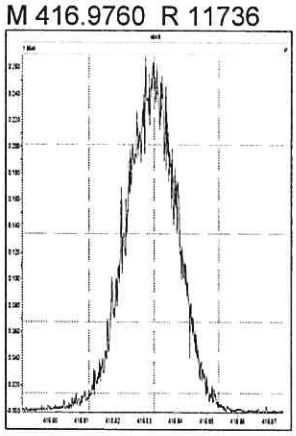
M 392.9760 R 10871



M 404.9760 R 10634



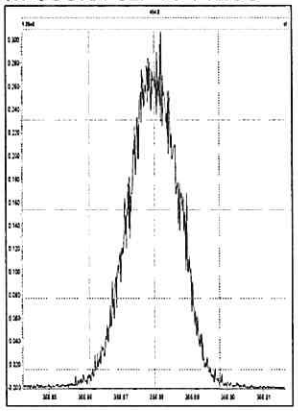
M 416.9760 R 11736



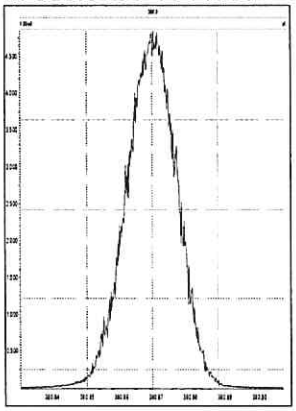
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Monday, December 24, 2018 11:59:15 Central Standard Time

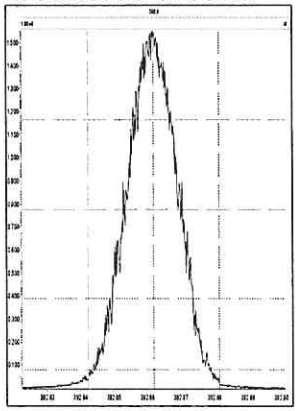
M 366.9792 R 11258



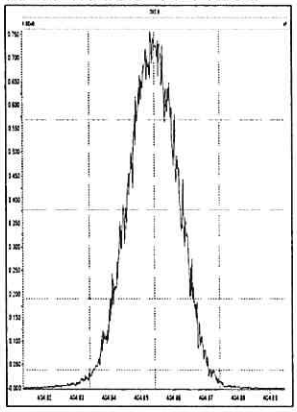
M 380.9760 R 11737



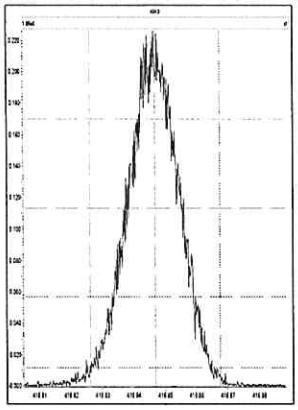
M 392.9760 R 11466



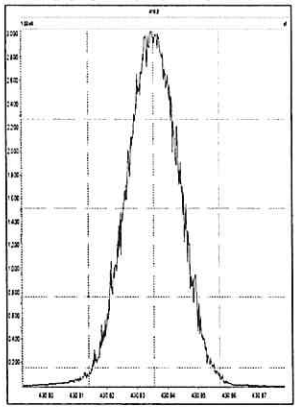
M 404.9760 R 11262



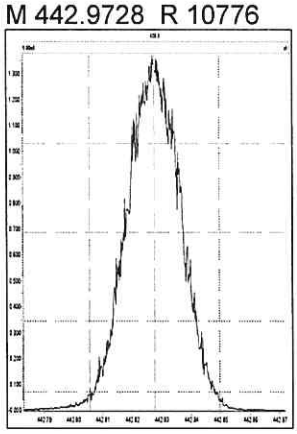
M 416.9760 R 11681



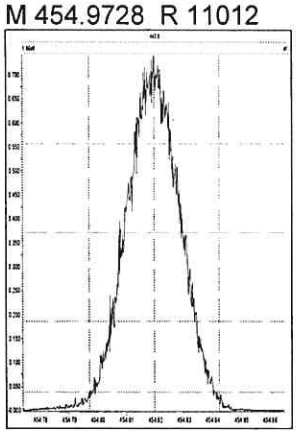
M 430.9728 R 10777



M 442.9728 R 10776



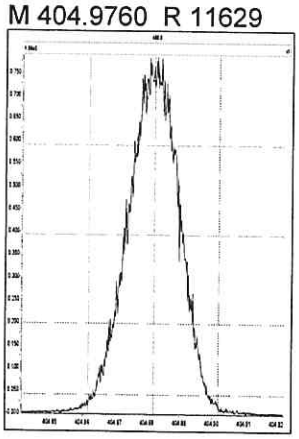
M 454.9728 R 11012



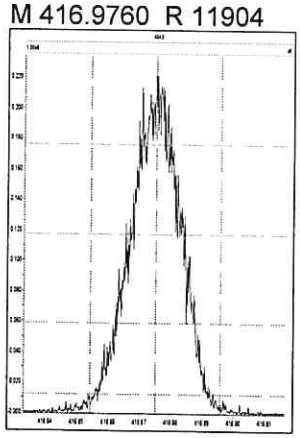
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Monday, December 24, 2018 12:00:44 Central Standard Time

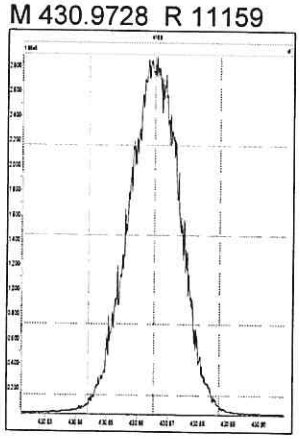
M 404.9760 R 11629



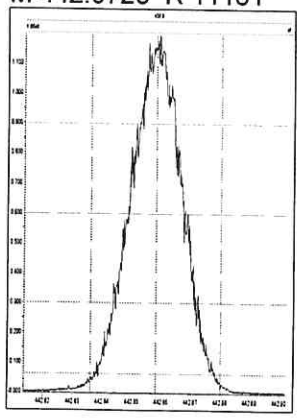
M 416.9760 R 11904



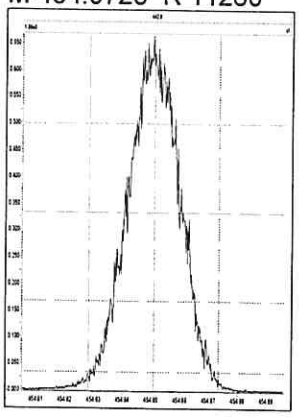
M 430.9728 R 11159



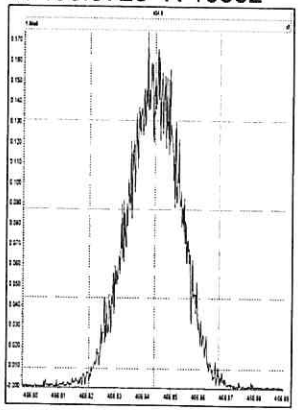
M 442.9728 R 11161



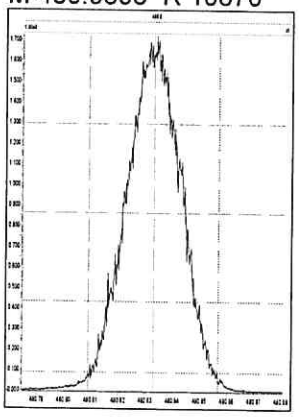
M 454.9728 R 11260



M 466.9728 R 10682



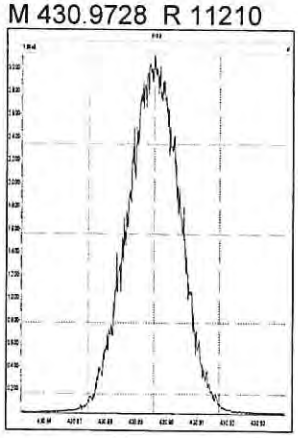
M 480.9696 R 10870



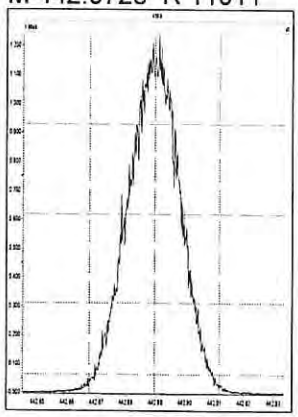
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Monday, December 24, 2018 12:01:41 Central Standard Time

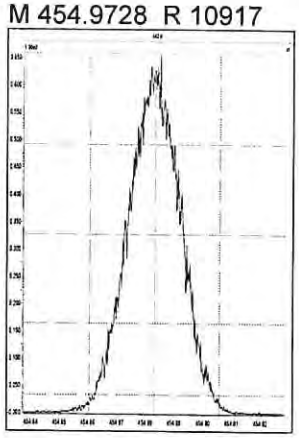
M 430.9728 R 11210



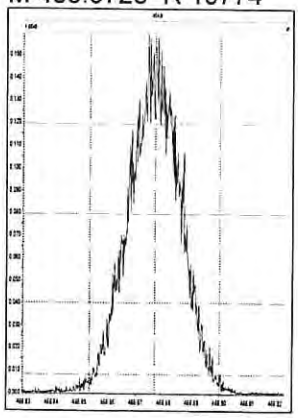
M 442.9728 R 11011



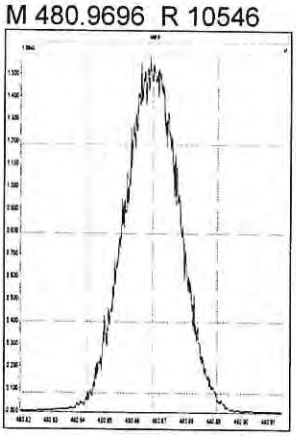
M 454.9728 R 10917



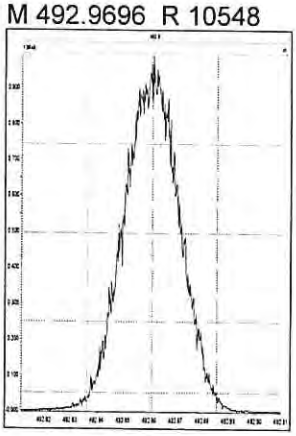
M 466.9728 R 10774



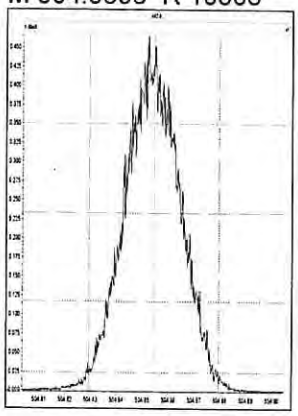
M 480.9696 R 10546



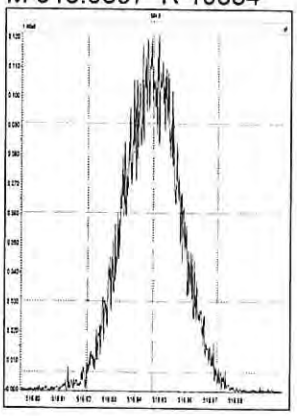
M 492.9696 R 10548



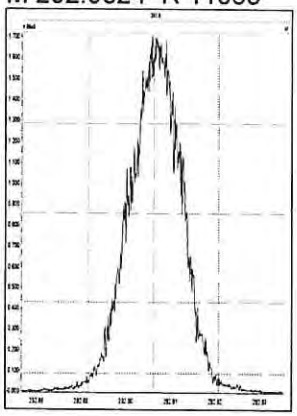
M 504.9696 R 10506



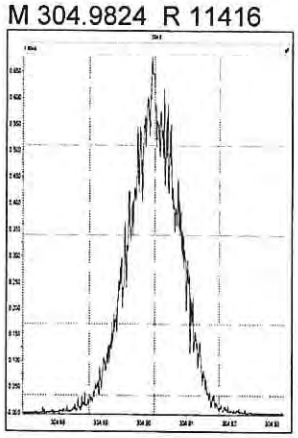
M 516.9697 R 10334



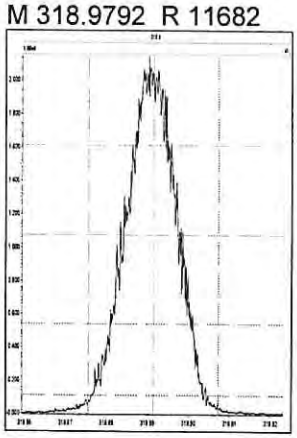
M 292.9824 R 11065



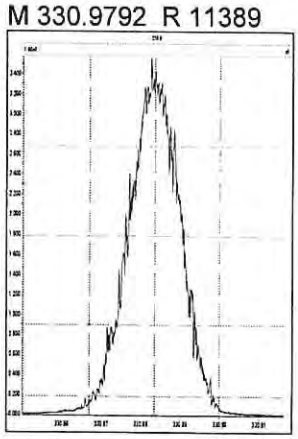
M 304.9824 R 11416



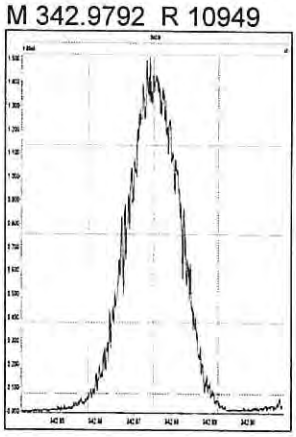
M 318.9792 R 11682



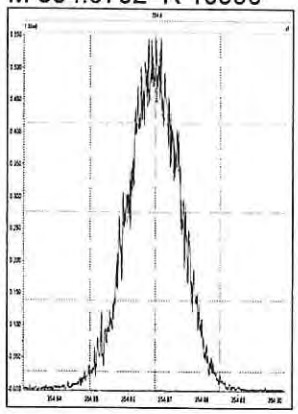
M 330.9792 R 11389



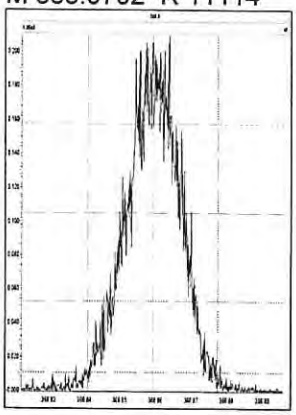
M 342.9792 R 10949



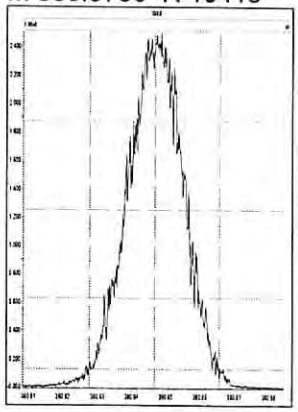
M 354.9792 R 10990



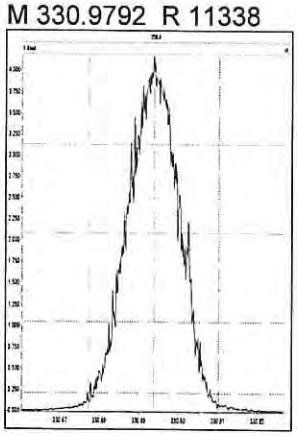
M 366.9792 R 11114



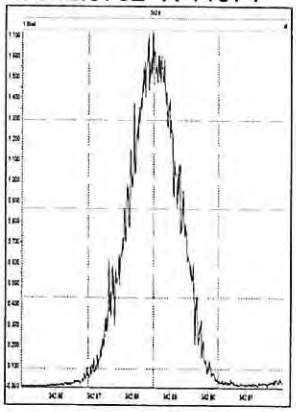
M 380.9760 R 10416



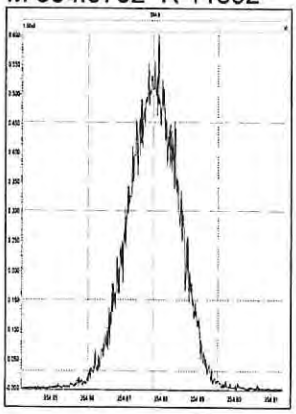
M 330.9792 R 11338



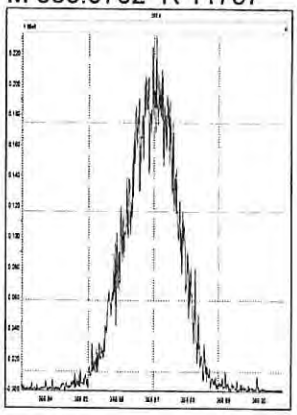
M 342.9792 R 11574



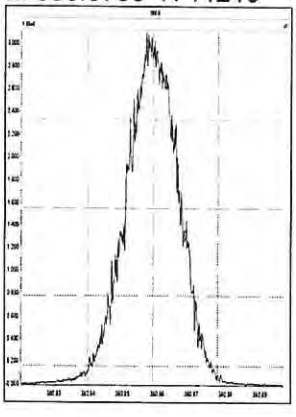
M 354.9792 R 11392



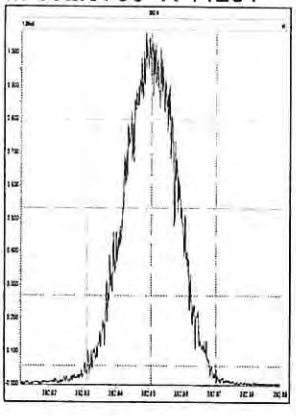
M 366.9792 R 11737



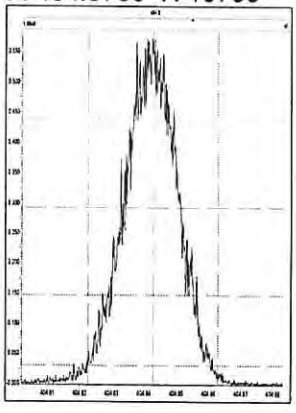
M 380.9760 R 11210



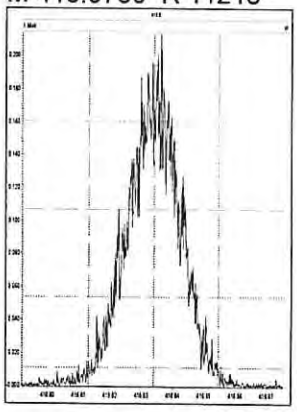
M 392.9760 R 11201



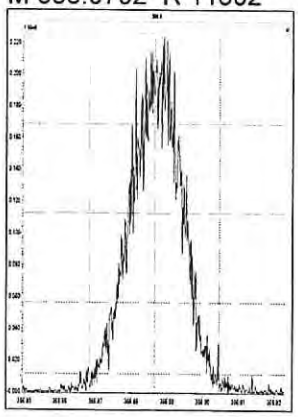
M 404.9760 R 10799



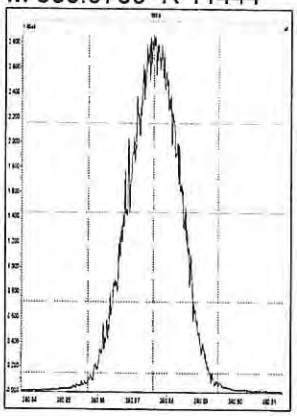
M 416.9760 R 11218



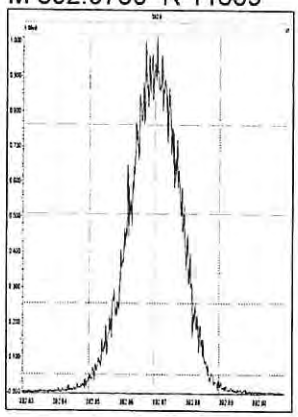
M 366.9792 R 11602



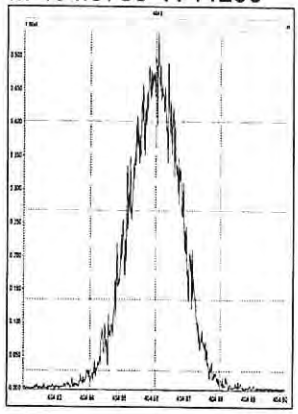
M 380.9760 R 11444



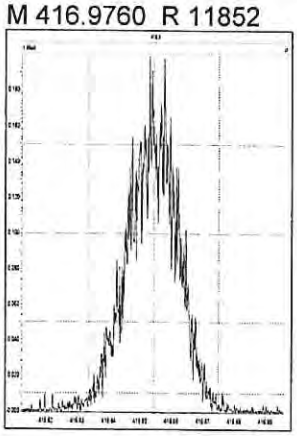
M 392.9760 R 11659



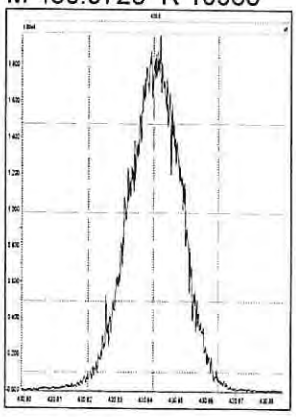
M 404.9760 R 11290



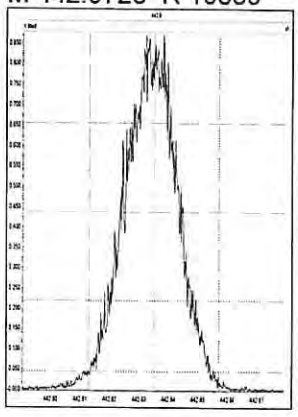
M 416.9760 R 11852



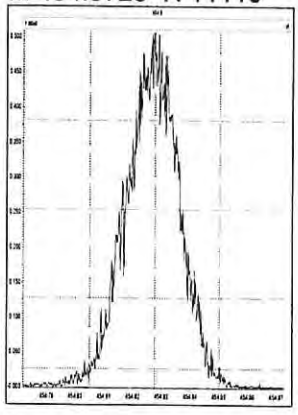
M 430.9728 R 10965



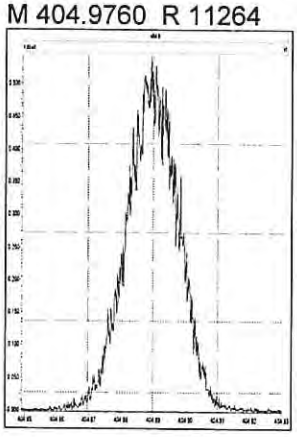
M 442.9728 R 10869



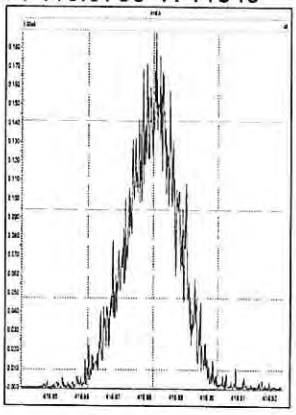
M 454.9728 R 11110



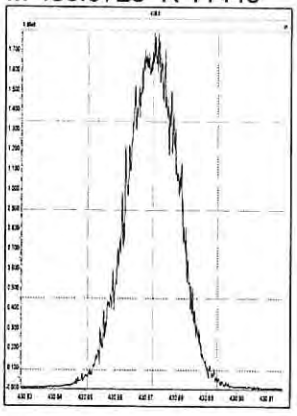
M 404.9760 R 11264



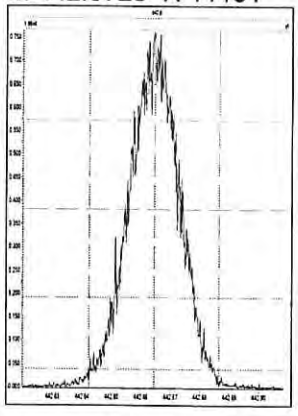
M 416.9760 R 11849



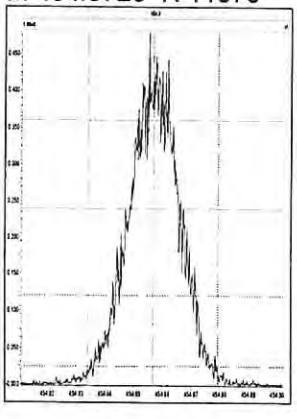
M 430.9728 R 11443



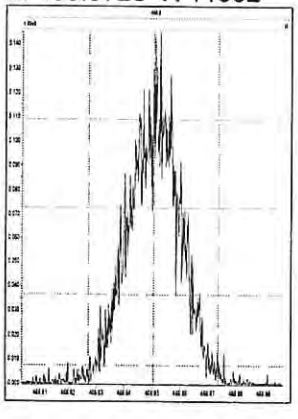
M 442.9728 R 11161



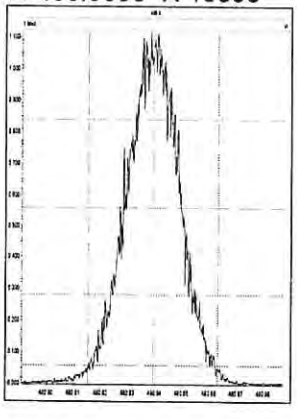
M 454.9728 R 11579



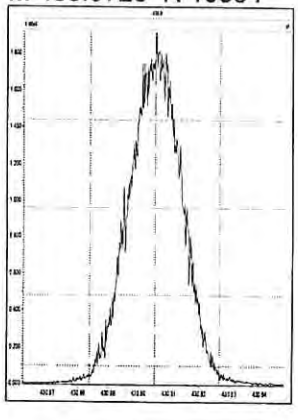
M 466.9728 R 11852



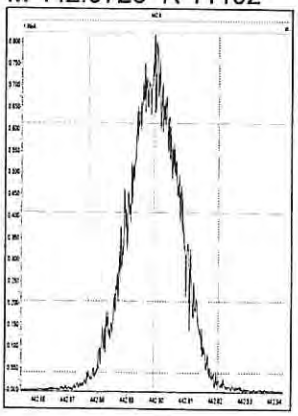
M 480.9696 R 10895



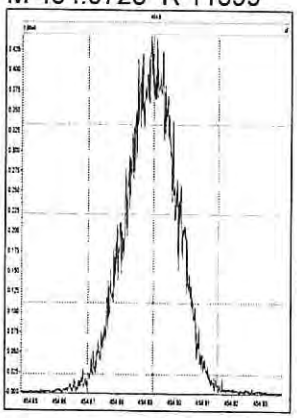
M 430.9728 R 10664



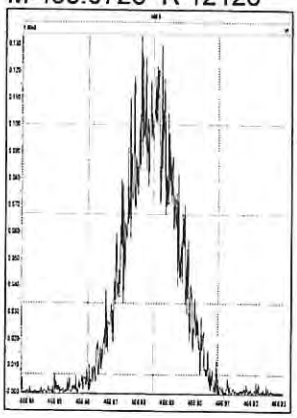
M 442.9728 R 11192



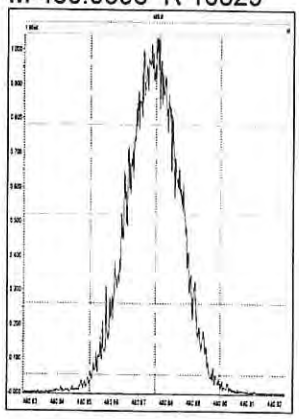
M 454.9728 R 11399



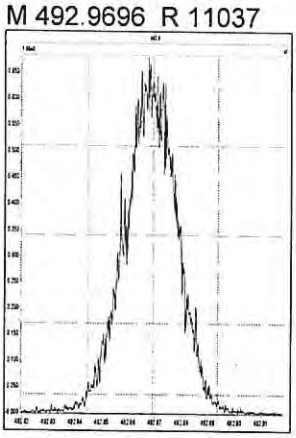
M 466.9728 R 12126



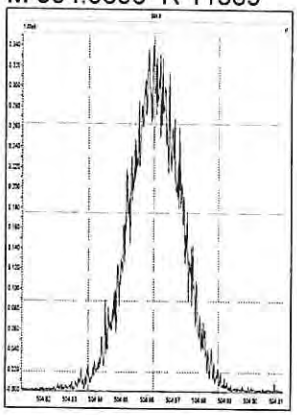
M 480.9696 R 10829



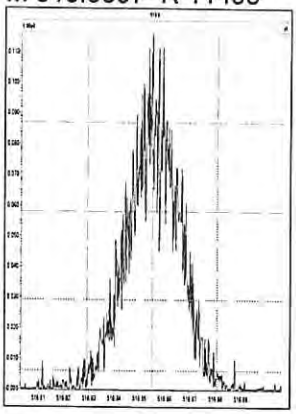
M 492.9696 R 11037



M 504.9696 R 11389



M 516.9697 R 11495



5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

WDM

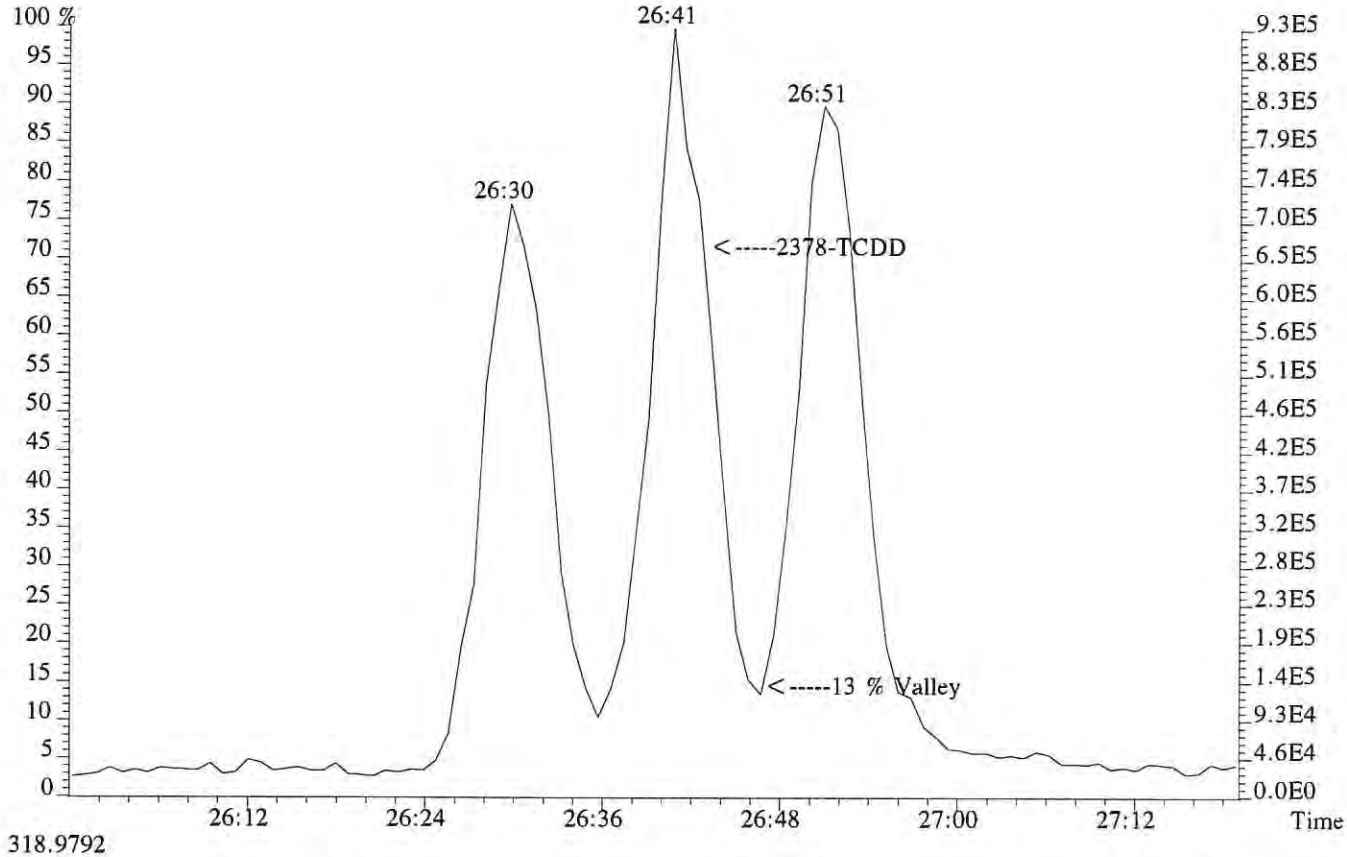
Lab Name: ALS Environmental
Lab Code: ALSTX
GC Column: DB-5MSUI

Case No.: _____ SDG No.:
ID: 0.25 (mm)
Lab File ID: P616167
Date Analyzed: 24-DEC-18
Time Analyzed: 12:51:10

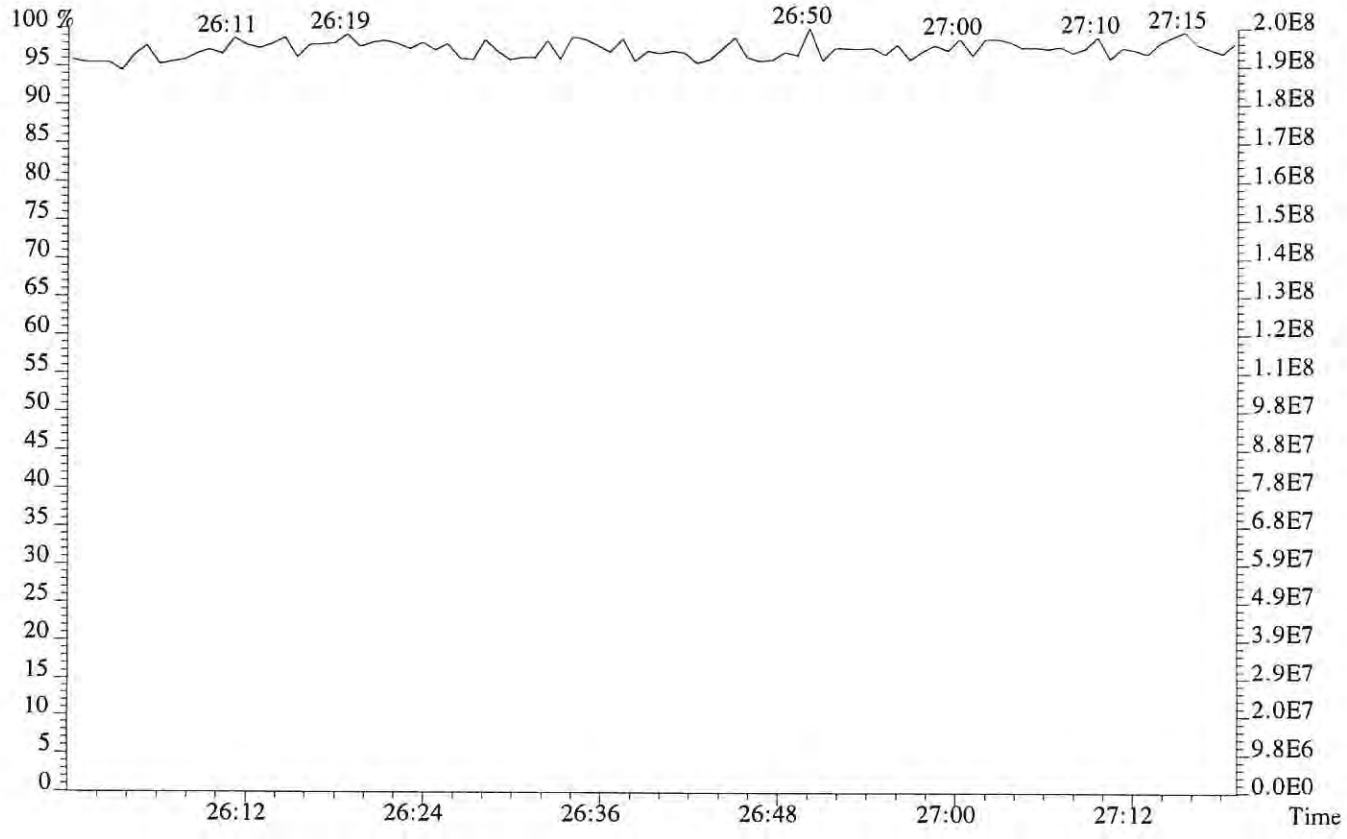
Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	21:19	28:05
TCDD	22:55	27:54
PeCDF	27:59	32:44
PeCDD	29:46	32:28
HxCDF	33:25	36:01
HxCDD	33:58	35:37
HpCDF	37:16	38:35
HpCDD	37:30	38:09

% Valley 2378-TCDD: 13 %

File:P616167 #1-587 Acq:24-DEC-2018 12:51:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
319.8965



318.9792



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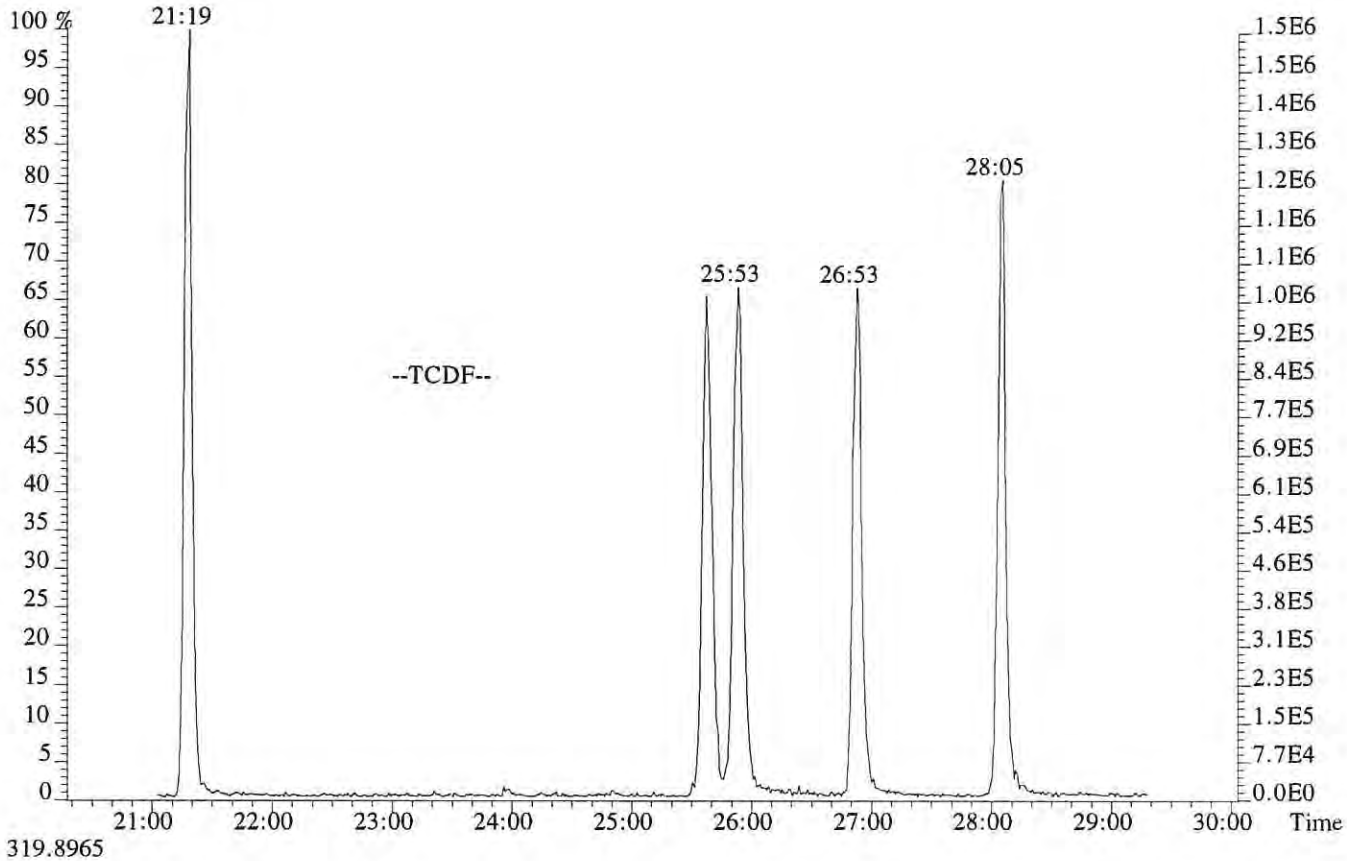
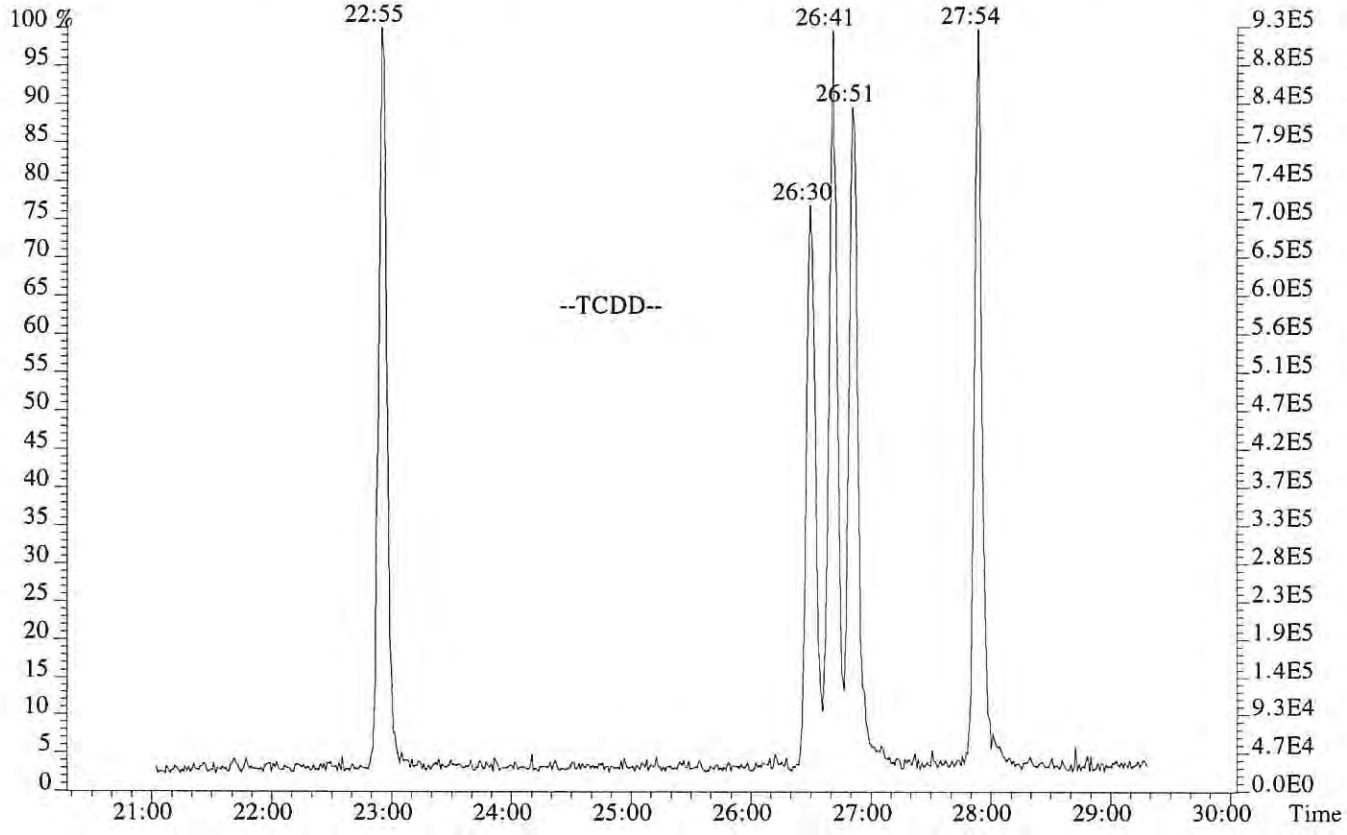
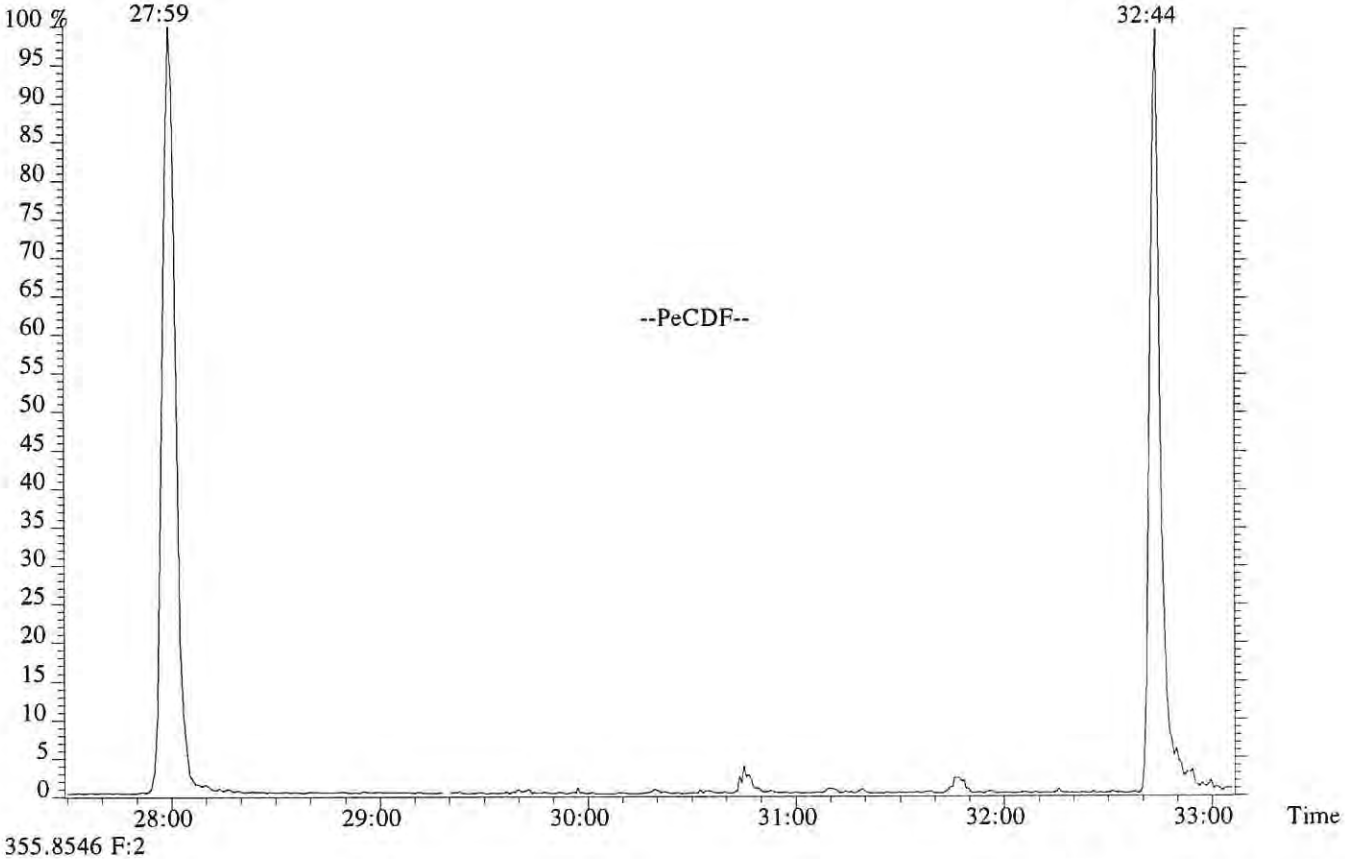
Sample#1 Exp:WINDOW DEFINE
303.9016



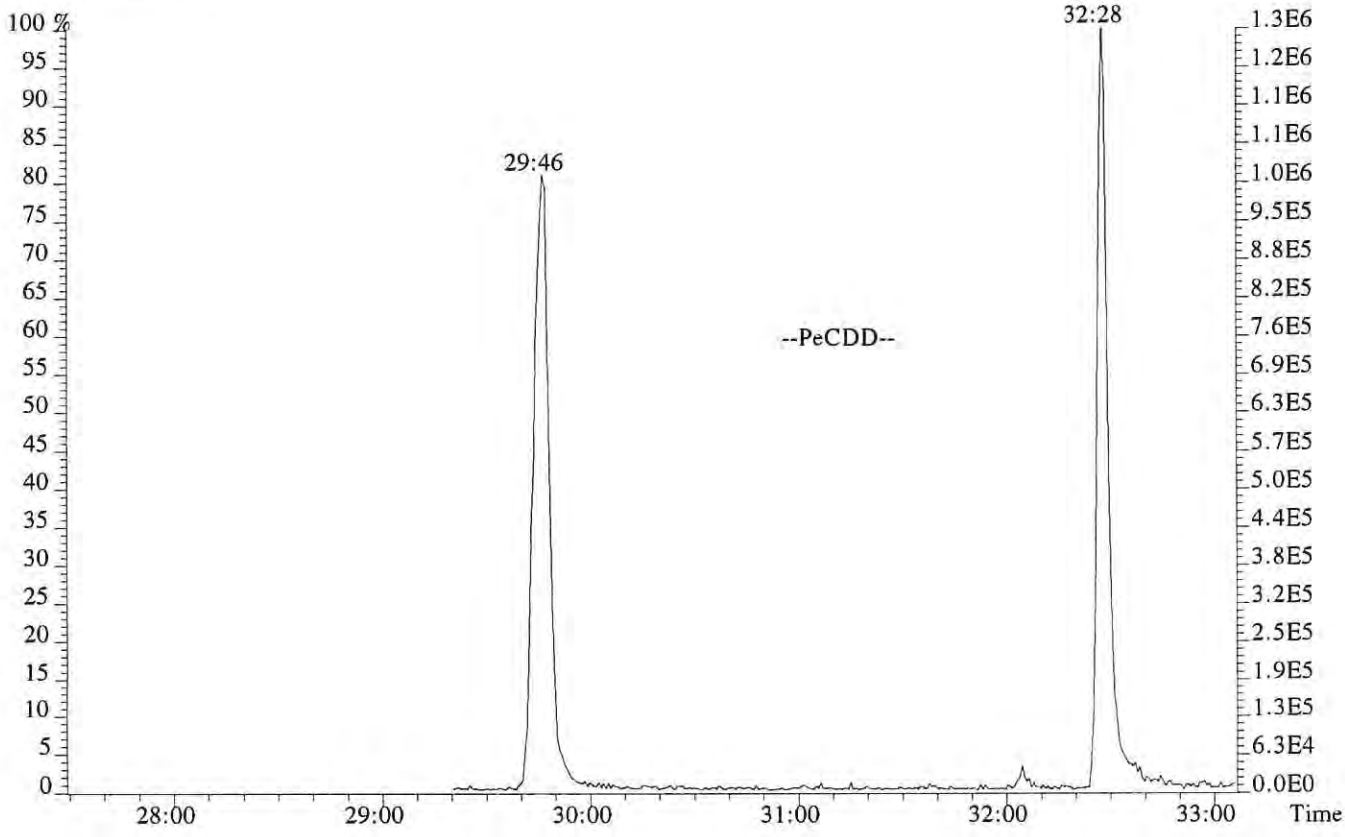
319.8965



File:P616167 #1-587 Acq:24-DEC-2018 12:51:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
339.8597,339.8597 F:2



355.8546 F:2



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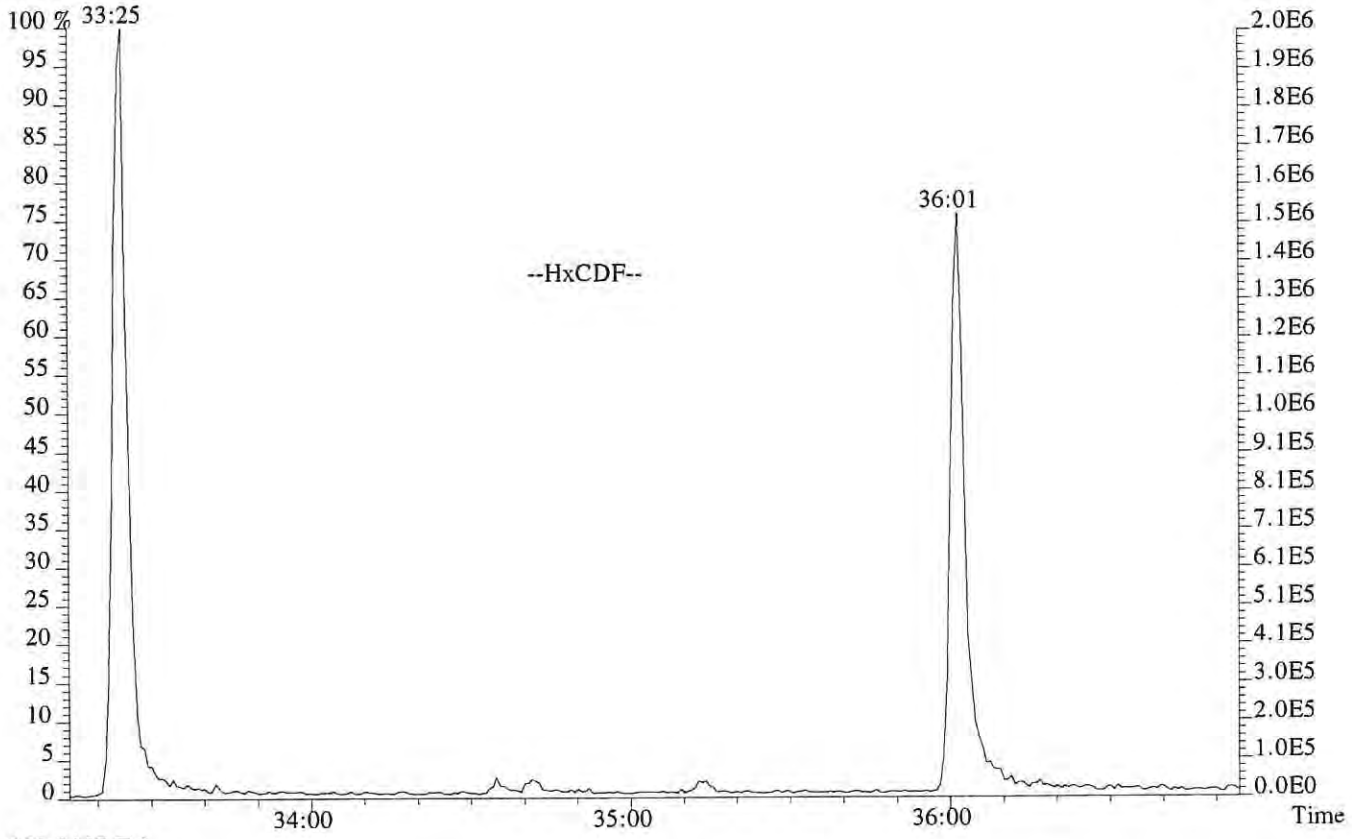
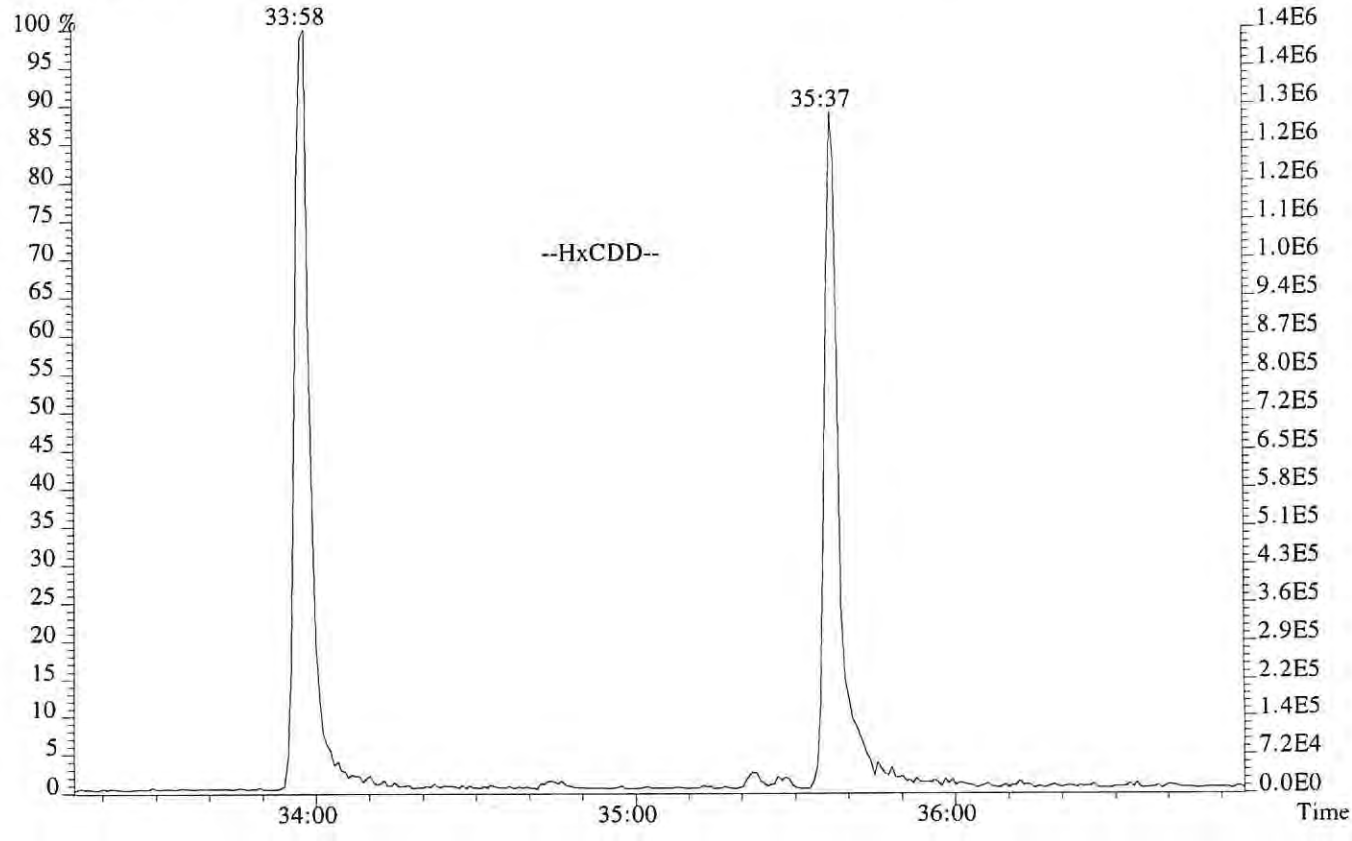
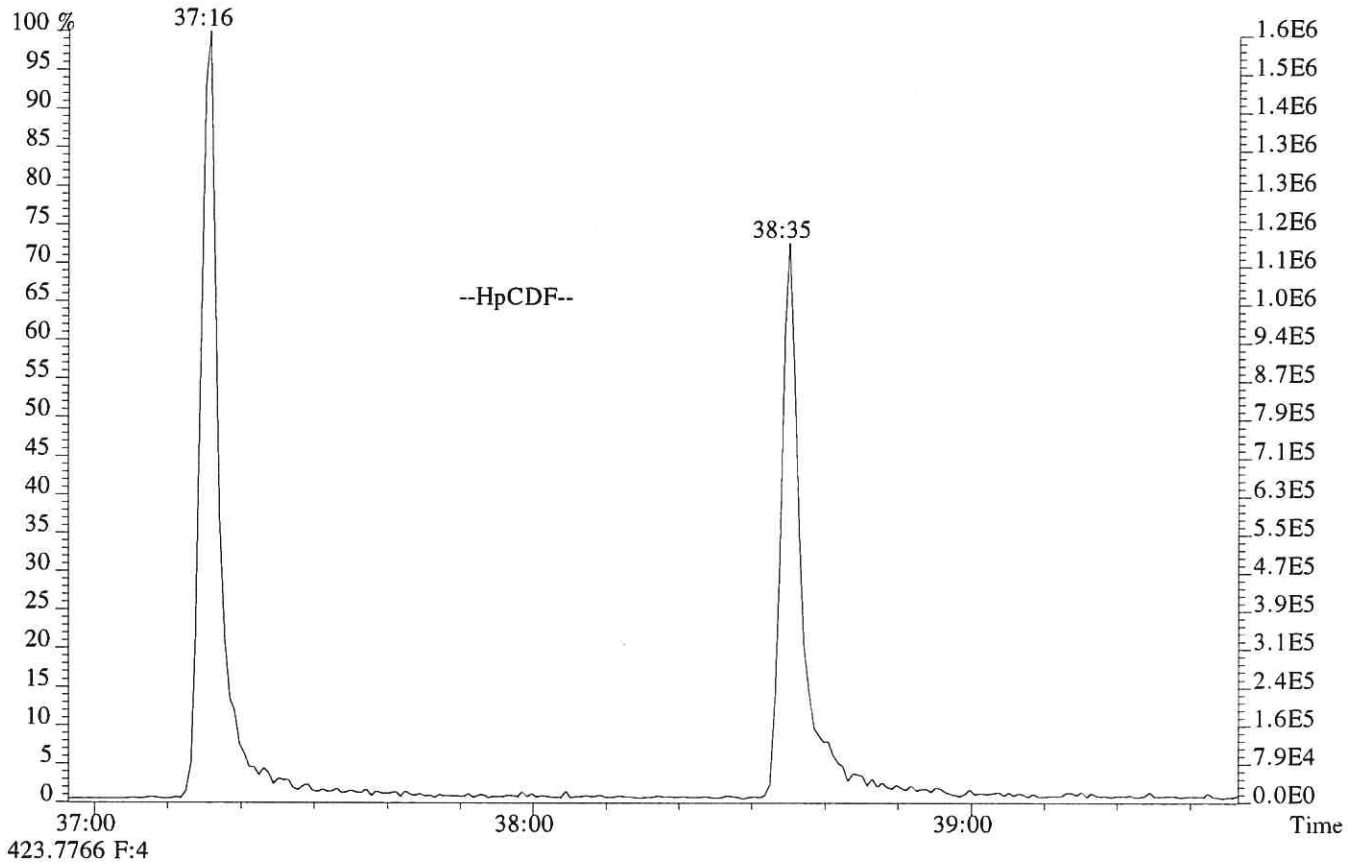
Sample#1 Exp:WINDOW DEFINE
373.8208 F:3



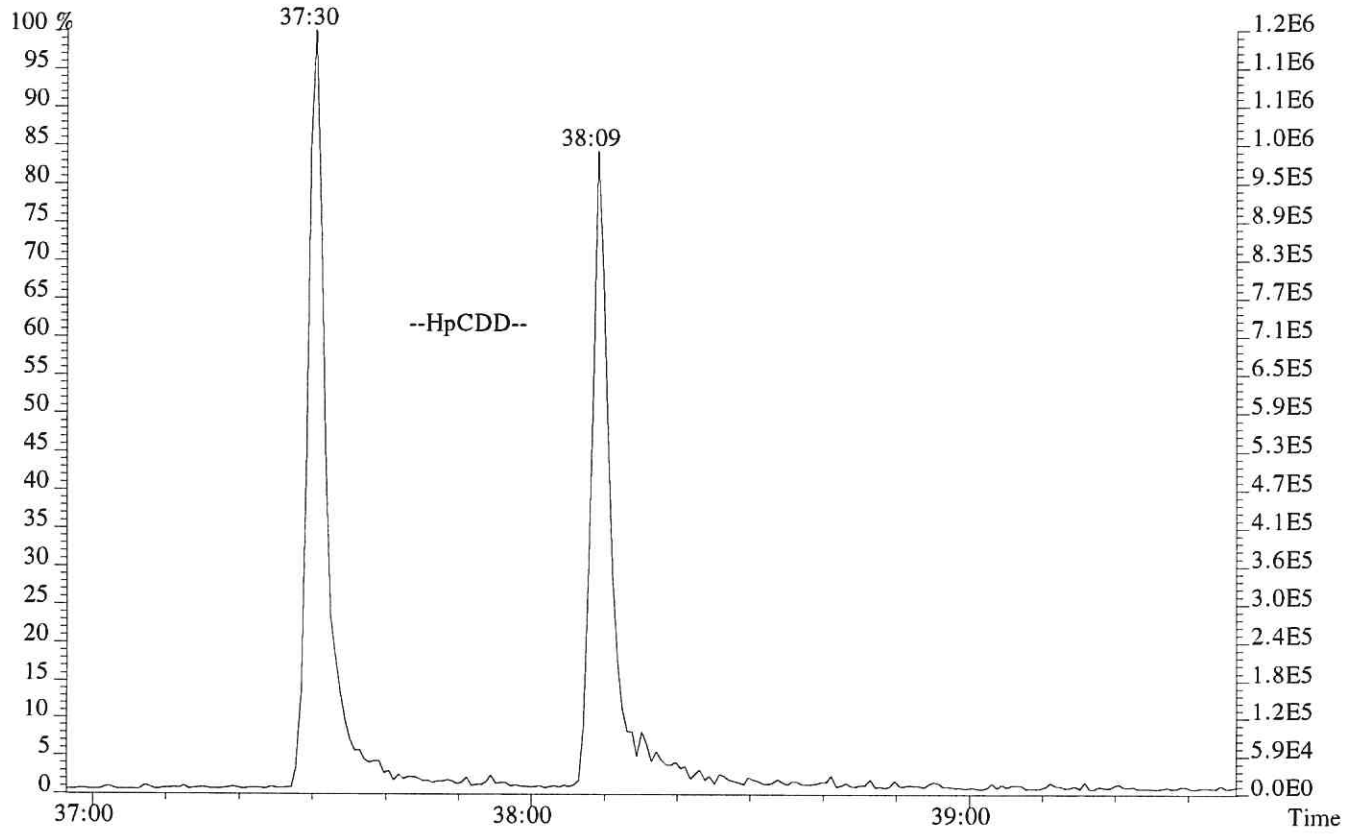
389.8157 F:3



File:P616167 #1-587 Acq:24-DEC-2018 12:51:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
407.7818 F:4



423.7766 F:4



USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

Instrument ID: E-HRMS-08 GC Column ID: DB-5MSUI

VER Data Filename: P616166 Analysis Date: 24-DEC-18 Time: 12:02:50

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	9.8	7.8 - 12.9	-2.1
1,2,3,7,8-PeCDD	M+2/M+4	1.57	1.32-1.78	51	39 - 65	1.9
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	50	39 - 64	0.5
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	49	39 - 64	-2.5
1,2,3,7,8,9-HxCDD	M+2/M+4	1.28	1.05-1.43	49	41 - 61	-2.1
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	46	43 - 58	-7.4
OCDD	M+2/M+4	0.89	0.76-1.02	97	79 - 126	-2.6
2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	9.6	8.4 - 12.0	-4.5
1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	46	41 - 60	-7.7
2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	46	41 - 61	-8.8
1,2,3,4,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	46	45 - 56	-8.4
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	47	44 - 57	-6.2
1,2,3,7,8,9-HxCDF	M+2/M+4	1.26	1.05-1.43	47	45 - 56	-6.3
2,3,4,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	46	44 - 57	-7.7
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.07	0.88-1.20	48	45 - 55	-4.2
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.04	0.88-1.20	46	43 - 58	-7.8
OCDF	M+2/M+4	0.91	0.76-1.02	87	63 - 159	-13.3

(1) See Table 8, Method 1613B, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.

(3) Contract-required concentration range as specified in Table 6, Method 1613B, under VER.

(4) The beginning CCAL %RSD for the 17 unlabeled standard must not exceed +/- 20%, Section 7.7.4.1. The ending CCAL must not exceed +/-25%, Section 8.3.2.4, Method 8290

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

Instrument ID: E-HRMS-08 GC Column ID: DB-5MSUI

VER Data Filename: P616166 Analysis Date: 24-DEC-18 Time: 12:02:50

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	93	82 - 121	-7.2
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.58	1.32-1.78	101	62 - 160	0.9
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.32	1.05-1.43	96	85 - 117	-4.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.19	1.05-1.43	108	85 - 118	7.6
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	100	72 - 138	0.3
13C-OCDD	M+2/M+4	0.89	0.76-1.02	201	96 - 415	0.3
13C-2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	89	71 - 140	-10.5
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	102	76 - 130	1.7
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	102	77 - 130	2.4
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	90	76 - 131	-9.7
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	103	70 - 143	3.3
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	83	74 - 135	-17.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	97	73 - 137	-3.5
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.44	0.37-0.51	97	78 - 129	-3.2
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.44	0.37-0.51	87	77 - 129	-13.0
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD	M+2/M+4			8.9	7.8 - 12.7	-11.1

(1) See Table 8, Method 1613B, for m/z specifications.
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.
(3) Contract-required concentration range, as specified in Table 6, Method 1613B, under VER.
(4) No ion abundance ratio; report concentration found.
(5) The beginnning CCAL %RSD for the labeled standard must not exceed +/- 30% Section 7.7.4.2. The ending CCAL must not exceed +/- 35%, Sec 8.3.2.4 (8290)

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
194503

Run #7 Filename P616166 Samp: 1 Inj: 1 Acquired: 24-DEC-18 12:02:50
Processed: 28-DEC-18 09:39:35 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:54	5.269e+03	6.850e+03	0.77	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:46	4.911e+04	3.110e+04	1.58	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:47	4.579e+04	2.913e+04	1.57	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:35	4.202e+04	3.340e+04	1.26	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:42	5.177e+04	4.121e+04	1.26	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:14	4.375e+04	3.550e+04	1.23	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	36:00	3.575e+04	2.840e+04	1.26	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:16	4.171e+04	3.904e+04	1.07	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:36	3.015e+04	2.890e+04	1.04	yes	no	1.463
10	Unk	OCDF	40:49	4.769e+04	5.223e+04	0.91	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:53	3.739e+03	4.927e+03	0.76	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	32:05	3.038e+04	1.934e+04	1.57	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:22	2.903e+04	2.280e+04	1.27	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:28	3.118e+04	2.454e+04	1.27	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:42	3.211e+04	2.511e+04	1.28	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:10	2.515e+04	2.405e+04	1.05	yes	no	1.112
17	Unk	OCDD	40:38	3.890e+04	4.382e+04	0.89	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:53	5.199e+04	6.539e+04	0.80	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:45	9.205e+04	5.822e+04	1.58	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:46	9.133e+04	5.759e+04	1.59	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:35	3.994e+04	7.636e+04	0.52	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:41	5.335e+04	9.993e+04	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:13	4.666e+04	8.734e+04	0.53	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:59	3.569e+04	6.856e+04	0.52	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:15	3.399e+04	7.670e+04	0.44	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:35	2.697e+04	6.064e+04	0.44	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:51	3.680e+04	4.759e+04	0.77	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	32:04	6.440e+04	4.063e+04	1.58	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:21	5.481e+04	4.147e+04	1.32	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:27	5.871e+04	4.921e+04	1.19	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:09	4.914e+04	4.635e+04	1.06	yes	no	0.857
32	IS	13C-OCDD	40:37	6.925e+04	7.749e+04	0.89	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	26:07	4.120e+04	5.138e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:41	6.193e+04	4.914e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:53	8.938e+03				no	1.086

ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
194503

Run #7 Filename P616166 Samp: 1 Inj: 1 Acquired: 24-DEC-18 12:02:50
Processed: 28-DEC-18 09:39:35 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	7.52e+05	3.98e+03	1.9e+02	9.66e+05	1.03e+04	9.4e+01
2	1,2,3,7,8-PeCDF	7.84e+06	1.52e+03	5.2e+03	4.95e+06	5.56e+03	8.9e+02
3	2,3,4,7,8-PeCDF	8.13e+06	1.52e+03	5.4e+03	5.03e+06	5.56e+03	9.0e+02
4	1,2,3,4,7,8-HxCDF	8.35e+06	3.82e+03	2.2e+03	6.54e+06	2.82e+03	2.3e+03
5	1,2,3,6,7,8-HxCDF	8.94e+06	3.82e+03	2.3e+03	7.31e+06	2.82e+03	2.6e+03
6	2,3,4,6,7,8-HxCDF	8.58e+06	3.82e+03	2.2e+03	6.92e+06	2.82e+03	2.5e+03
7	1,2,3,7,8,9-HxCDF	6.35e+06	3.82e+03	1.7e+03	5.02e+06	2.82e+03	1.8e+03
8	1,2,3,4,6,7,8-HpCDF	7.95e+06	1.07e+04	7.4e+02	7.60e+06	6.05e+03	1.3e+03
9	1,2,3,4,7,8,9-HpCDF	5.23e+06	1.07e+04	4.9e+02	5.09e+06	6.05e+03	8.4e+02
10	OCDF	7.46e+06	1.92e+03	3.9e+03	8.17e+06	3.35e+03	2.4e+03
11	2,3,7,8-TCDD	6.20e+05	8.62e+03	7.2e+01	7.38e+05	4.24e+03	1.7e+02
12	1,2,3,7,8-PeCDD	5.25e+06	2.80e+03	1.9e+03	3.28e+06	5.84e+02	5.6e+03
13	1,2,3,4,7,8-HxCDD	5.95e+06	1.54e+03	3.9e+03	4.62e+06	2.57e+03	1.8e+03
14	1,2,3,6,7,8-HxCDD	5.82e+06	1.54e+03	3.8e+03	4.60e+06	2.57e+03	1.8e+03
15	1,2,3,7,8,9-HxCDD	5.50e+06	1.54e+03	3.6e+03	4.36e+06	2.57e+03	1.7e+03
16	1,2,3,4,6,7,8-HpCDD	4.69e+06	3.20e+03	1.5e+03	4.38e+06	2.30e+03	1.9e+03
17	OCDD	6.34e+06	9.68e+02	6.5e+03	7.02e+06	1.06e+03	6.6e+03
18	13C-2,3,7,8-TCDF	7.30e+06	2.66e+04	2.7e+02	9.24e+06	2.33e+04	4.0e+02
19	13C-1,2,3,7,8-PeCDF	1.49e+07	2.50e+03	6.0e+03	9.41e+06	2.75e+03	3.4e+03
20	13C-2,3,4,7,8-PeCDF	1.57e+07	2.50e+03	6.3e+03	1.00e+07	2.75e+03	3.6e+03
21	13C-1,2,3,4,7,8-HxCDF	7.86e+06	4.39e+03	1.8e+03	1.50e+07	4.08e+03	3.7e+03
22	13C-1,2,3,6,7,8-HxCDF	9.50e+06	4.39e+03	2.2e+03	1.78e+07	4.08e+03	4.4e+03
23	13C-2,3,4,6,7,8-HxCDF	9.00e+06	4.39e+03	2.0e+03	1.71e+07	4.08e+03	4.2e+03
24	13C-1,2,3,7,8,9-HxCDF	6.33e+06	4.39e+03	1.4e+03	1.21e+07	4.08e+03	3.0e+03
25	13C-1,2,3,4,6,7,8-HpCDF	6.60e+06	5.02e+03	1.3e+03	1.48e+07	2.47e+04	6.0e+02
26	13C-1,2,3,4,7,8,9-HpCDF	4.64e+06	5.02e+03	9.3e+02	1.02e+07	2.47e+04	4.1e+02
27	13C-2,3,7,8-TCDD	5.85e+06	2.09e+04	2.8e+02	7.50e+06	8.12e+03	9.2e+02
28	13C-1,2,3,7,8-PeCDD	1.11e+07	4.34e+03	2.6e+03	7.17e+06	5.22e+03	1.4e+03
29	13C-1,2,3,4,7,8-HxCDD	1.12e+07	6.42e+03	1.7e+03	8.98e+06	3.51e+03	2.6e+03
30	13C-1,2,3,6,7,8-HxCDD	1.09e+07	6.42e+03	1.7e+03	8.64e+06	3.51e+03	2.5e+03
31	13C-1,2,3,4,6,7,8-HpCDD	8.88e+06	3.68e+03	2.4e+03	8.30e+06	2.59e+03	3.2e+03
32	13C-OCDD	1.09e+07	5.13e+04	2.1e+02	1.23e+07	9.88e+02	1.2e+04
33	13C-1,2,3,4-TCDD	6.27e+06	2.09e+04	3.0e+02	7.86e+06	8.12e+03	9.7e+02
34	13C-1,2,3,7,8,9-HxCDD	1.08e+07	6.42e+03	1.7e+03	8.35e+06	3.51e+03	2.4e+03
35	37Cl-2,3,7,8-TCDD	1.40e+06	4.95e+03	2.8e+02			

---Sample Calculation---

$$\text{D/L TCDD} = \frac{2.5 \times (8.624e+03 + 4.236e+03) \times 100}{(5.849e+06 + 7.500e+06) \times (\quad) \times 1.049} =$$

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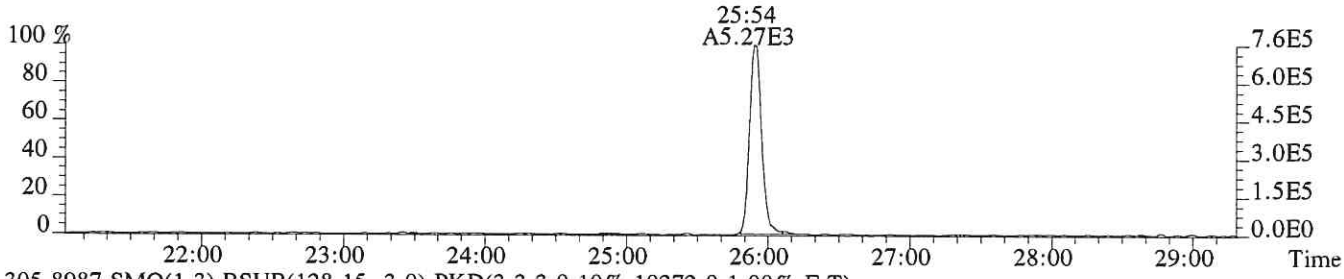
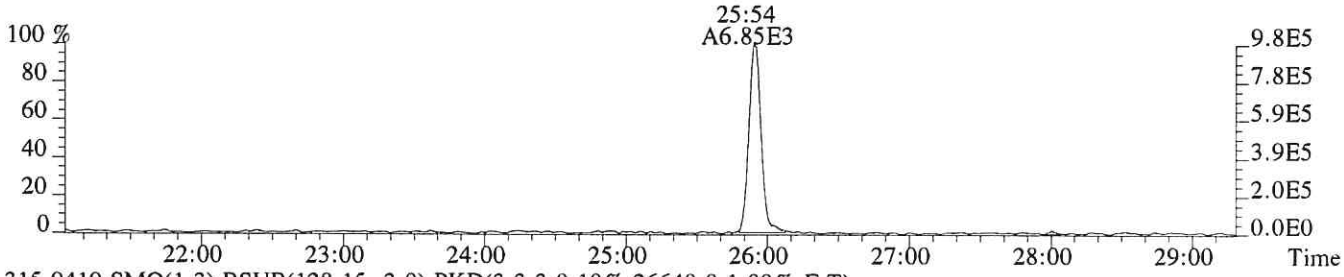
File:P616166 #1-587 Acq:24-DEC-2018 12:02:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

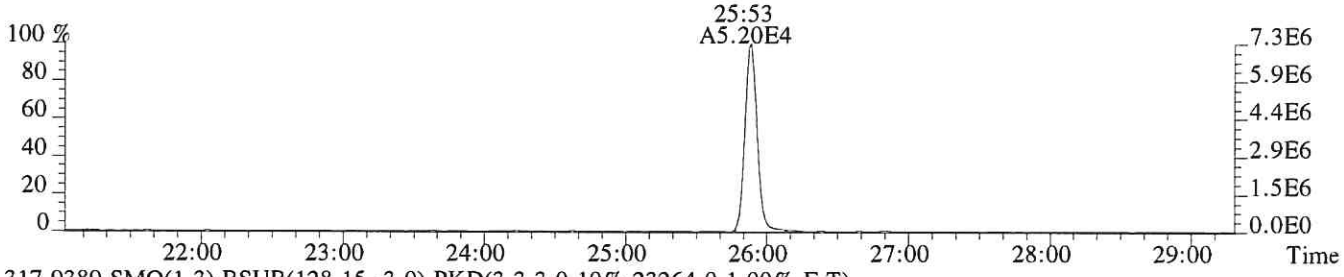
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3980.0,1.00%,F,T)



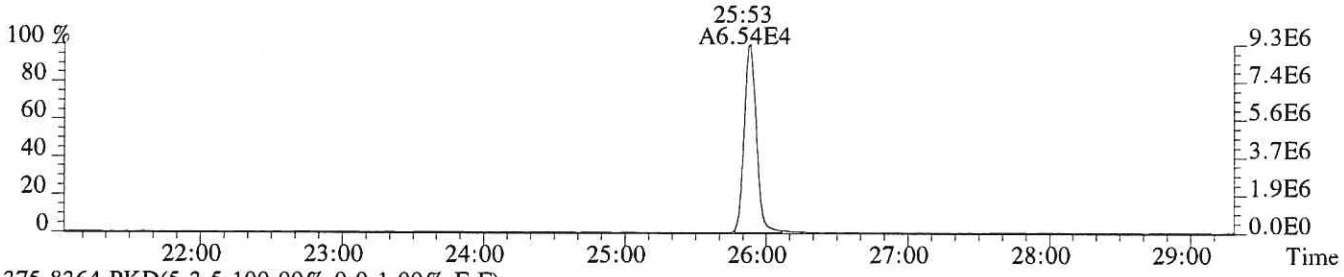
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10272.0,1.00%,F,T)



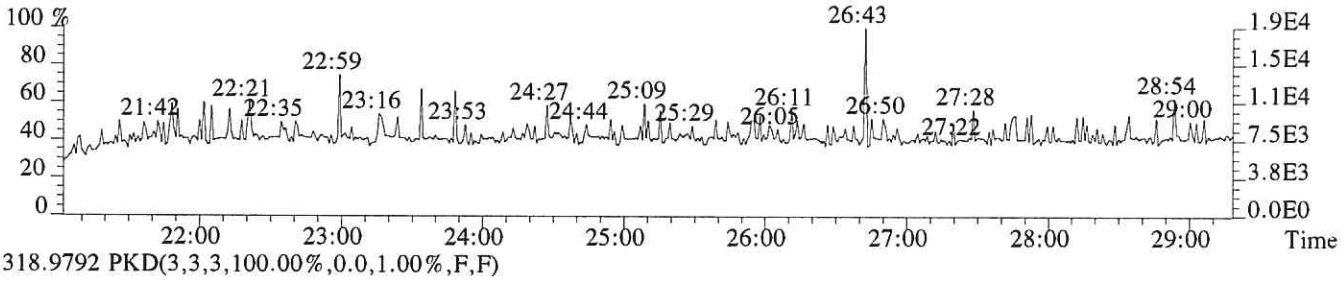
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,26640.0,1.00%,F,T)



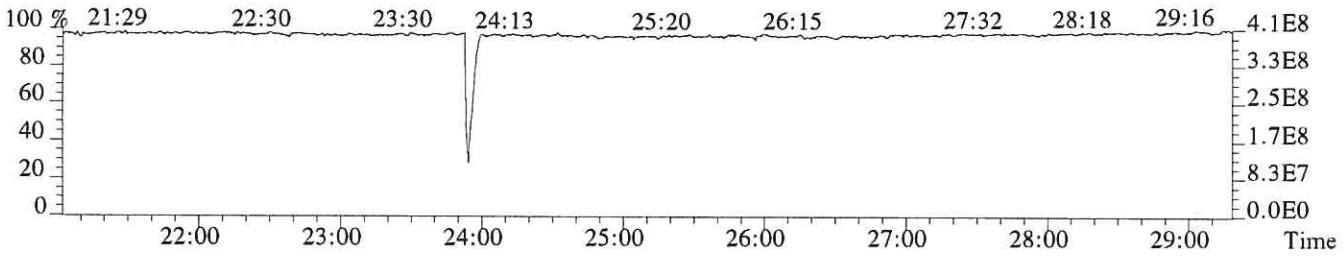
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,23264.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

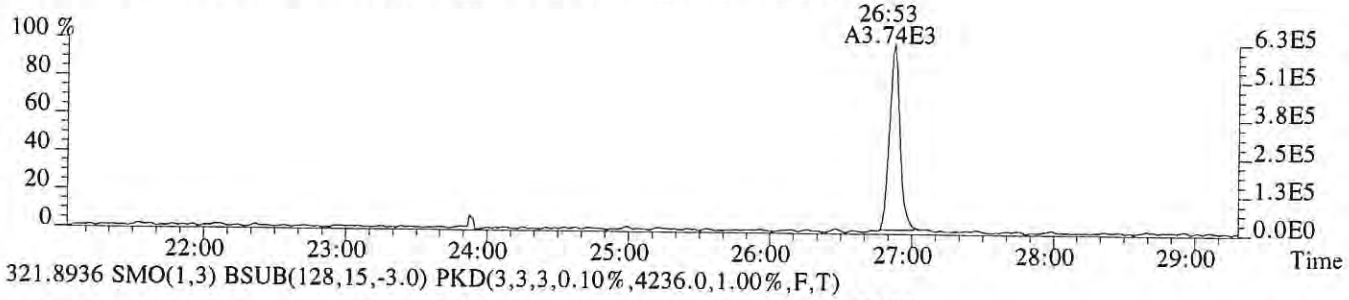


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

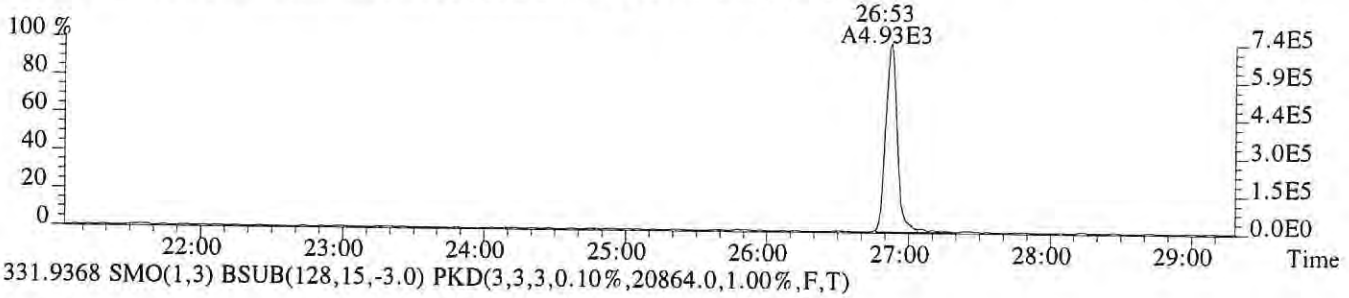


File:P616166 #1-587 Acq:24-DEC-2018 12:02:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

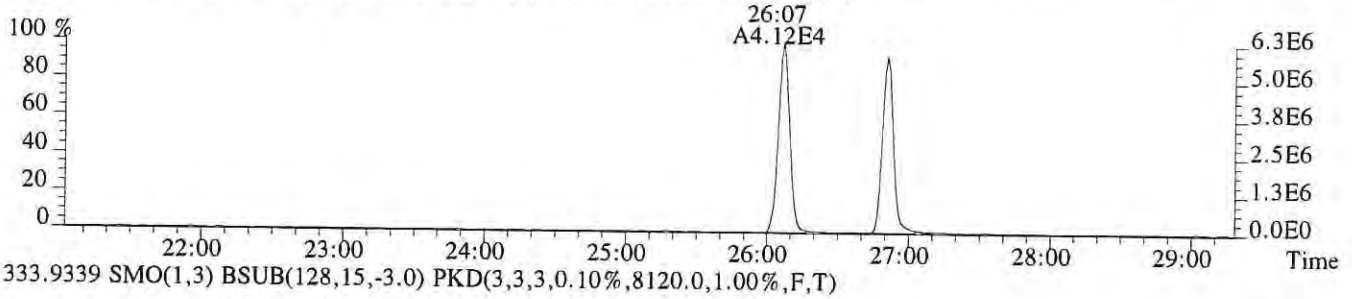
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8624.0,1.00%,F,T)



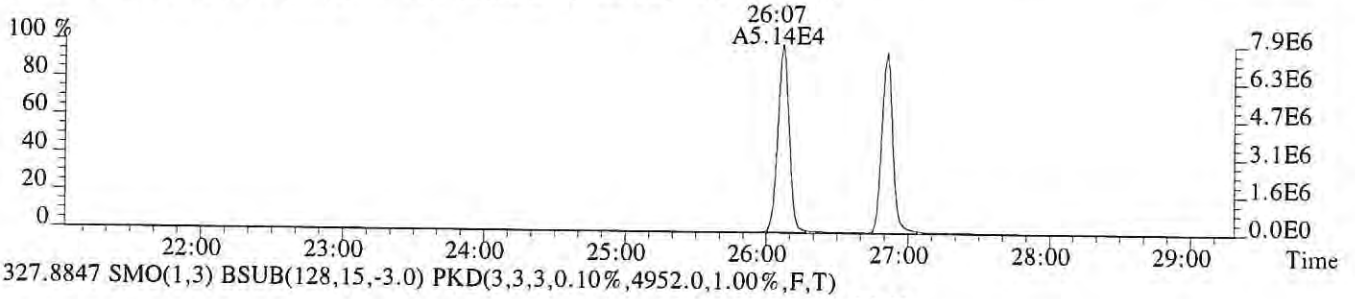
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4236.0,1.00%,F,T)



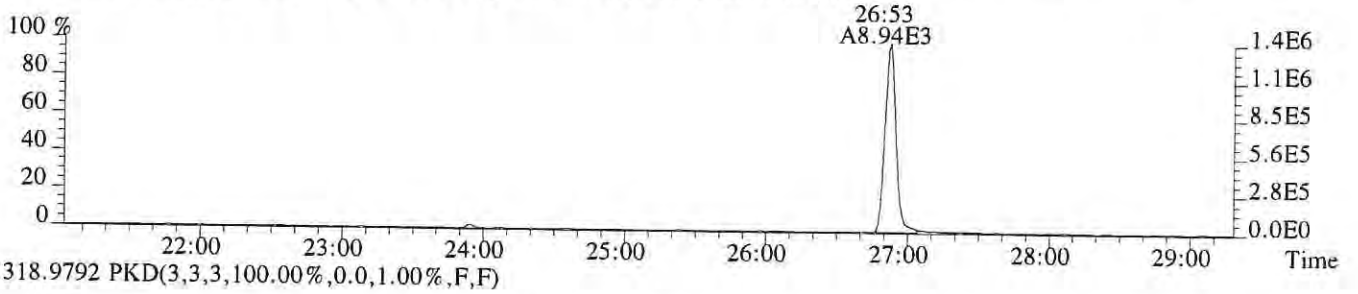
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,20864.0,1.00%,F,T)



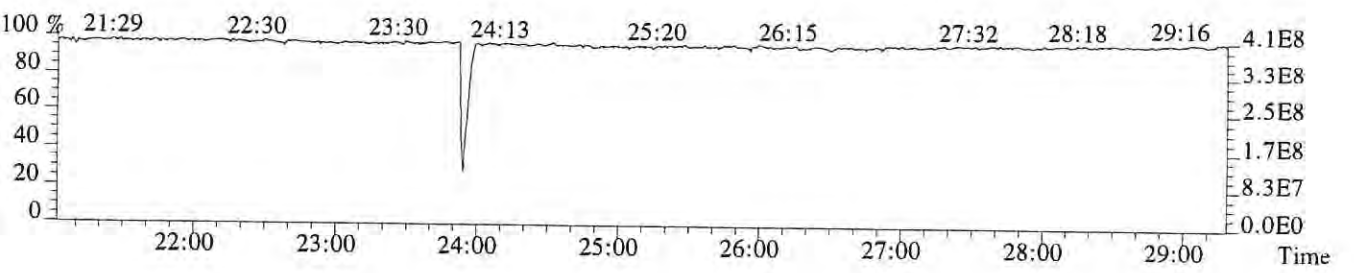
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8120.0,1.00%,F,T)



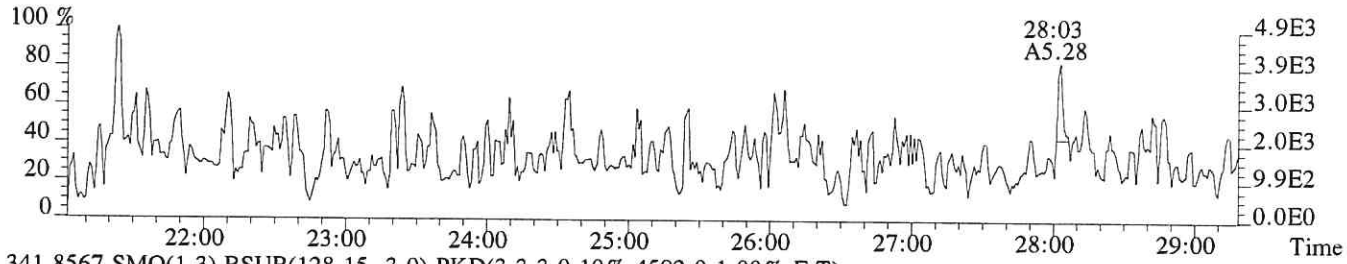
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4952.0,1.00%,F,T)



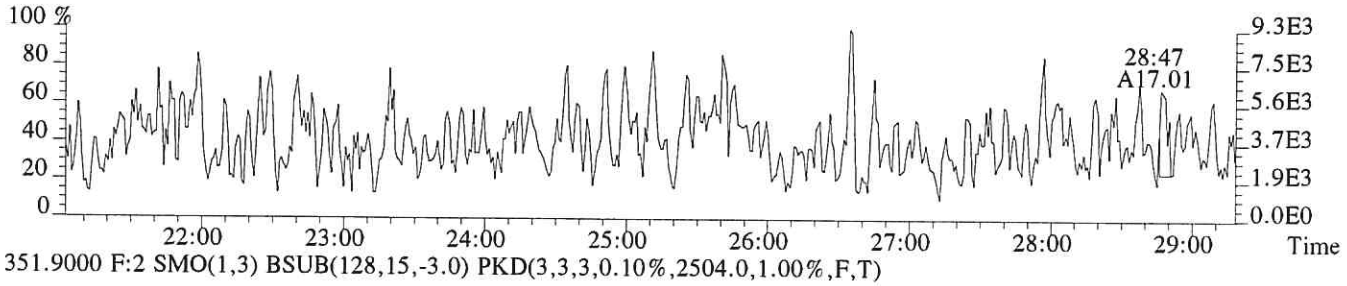
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



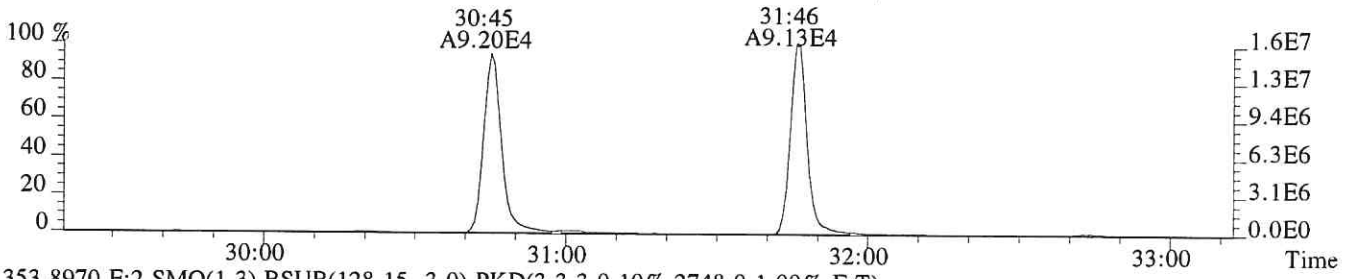
File:P616166 #1-587 Acq:24-DEC-2018 12:02:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2052.0,1.00%,F,T)



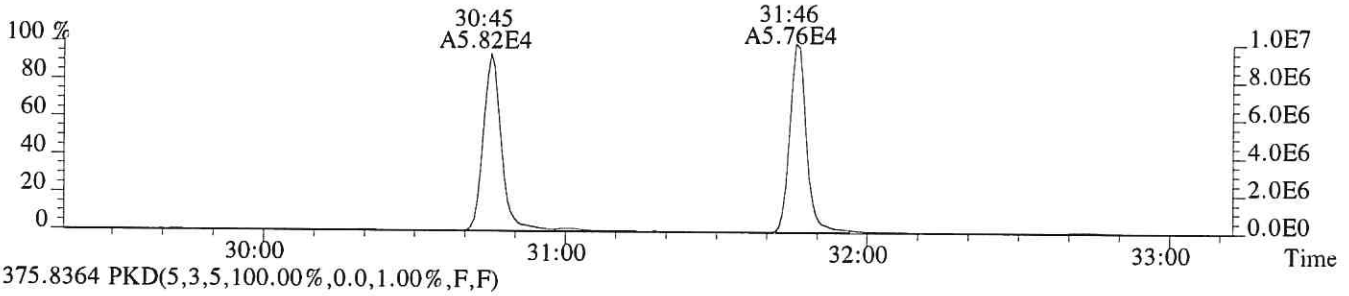
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4592.0,1.00%,F,T)



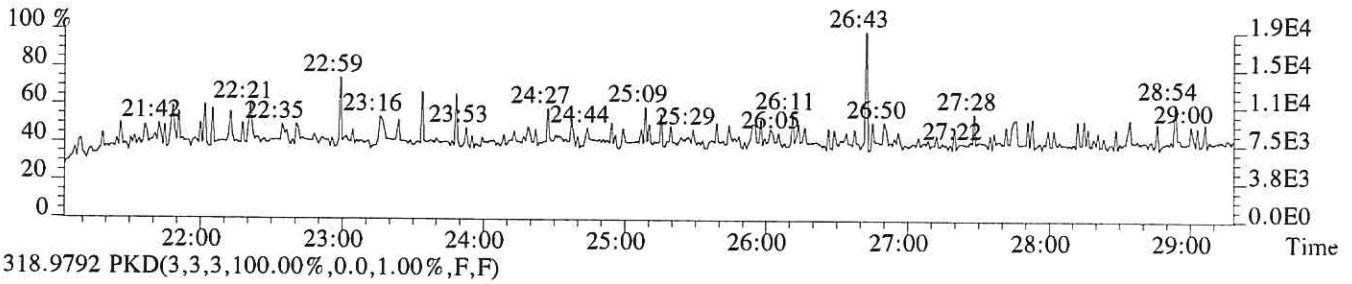
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2504.0,1.00%,F,T)



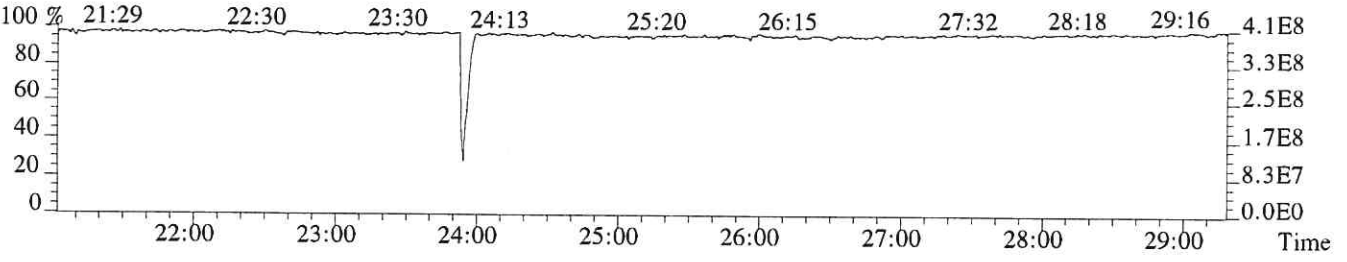
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2748.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

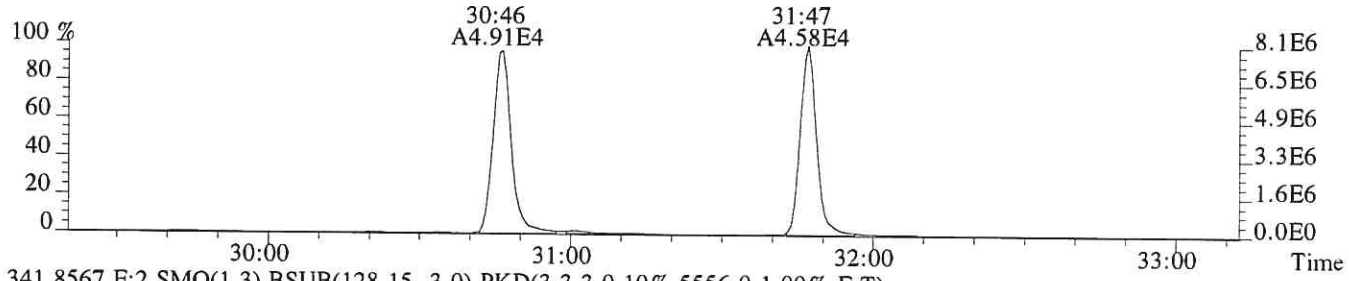


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

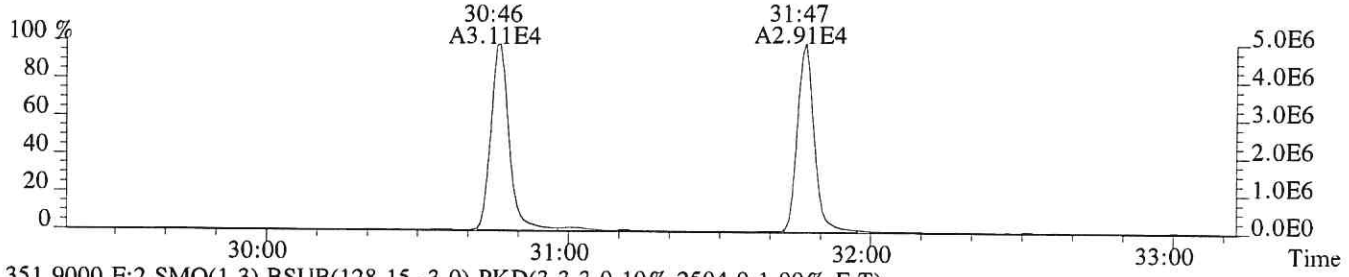


File:P616166 #1-349 Acq:24-DEC-2018 12:02:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

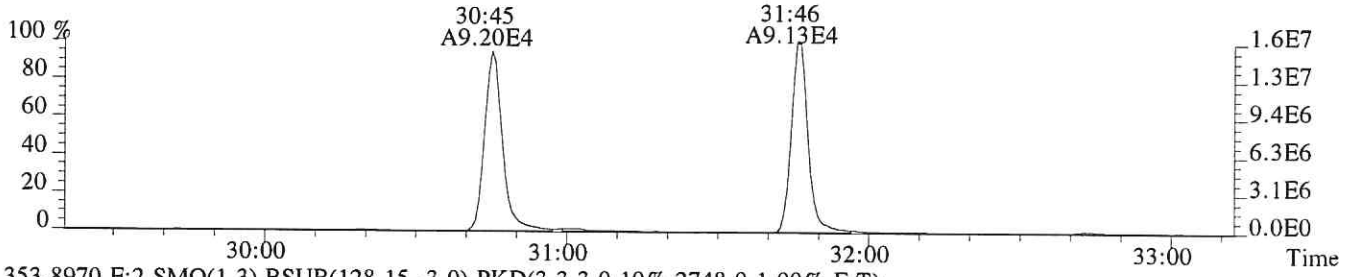
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1516.0,1.00%,F,T)



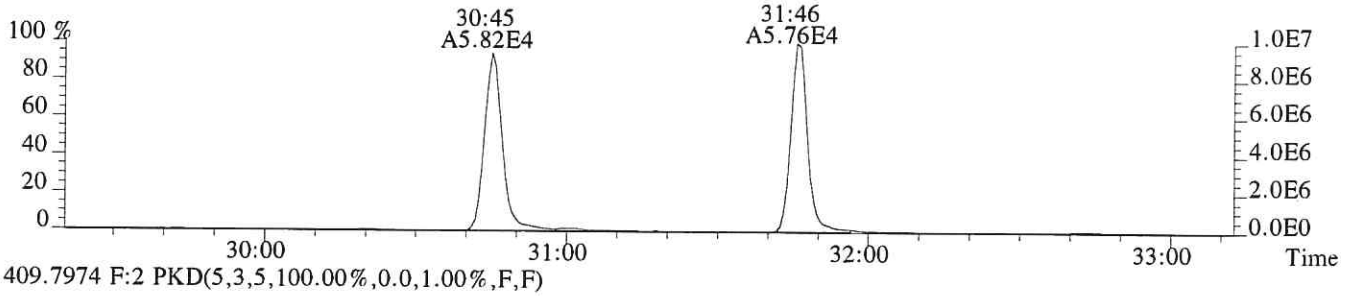
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5556.0,1.00%,F,T)



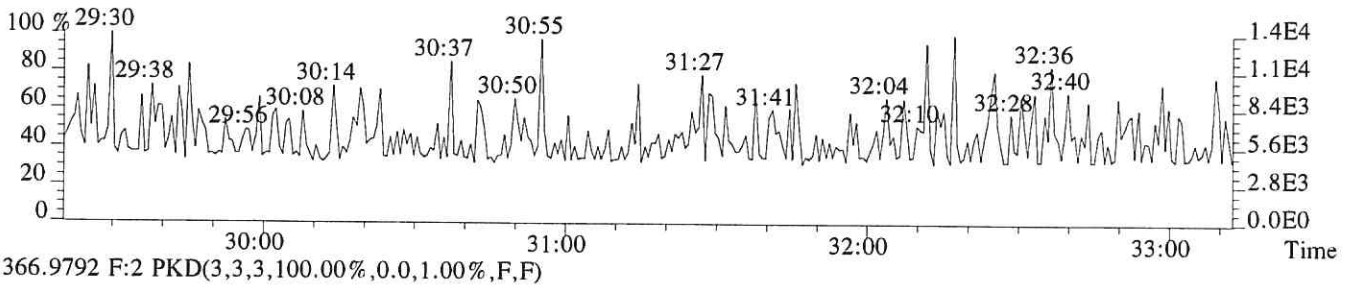
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2504.0,1.00%,F,T)



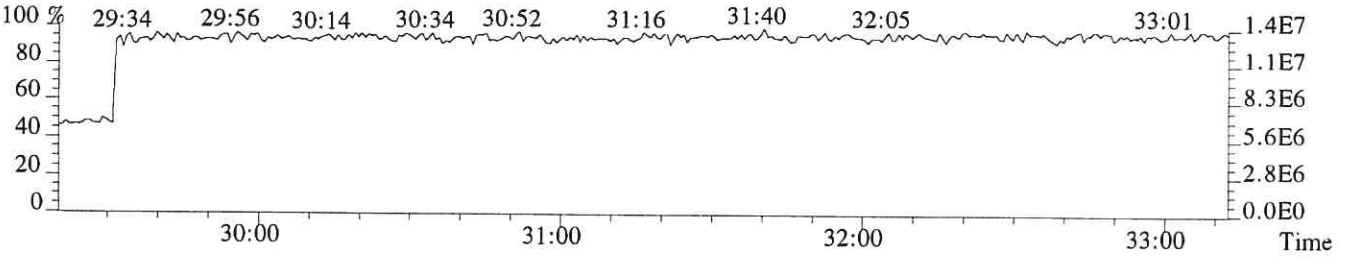
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2748.0,1.00%,F,T)



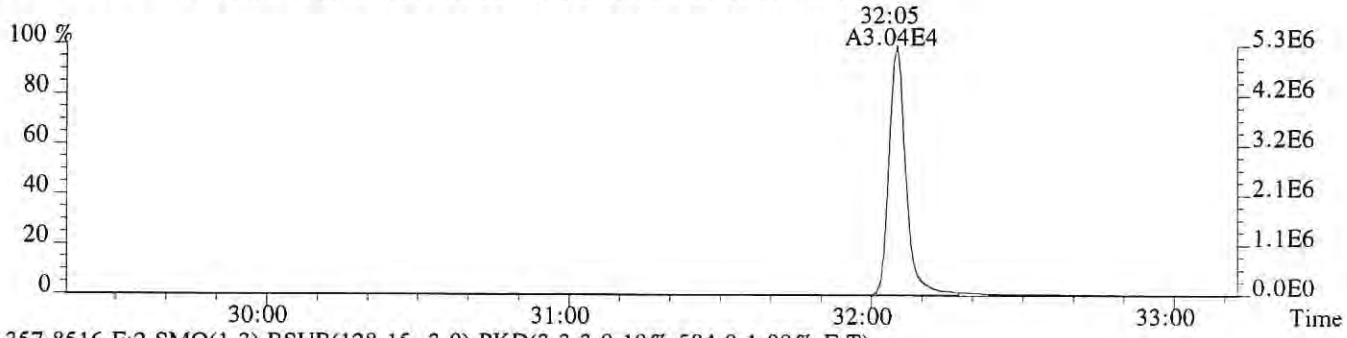
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



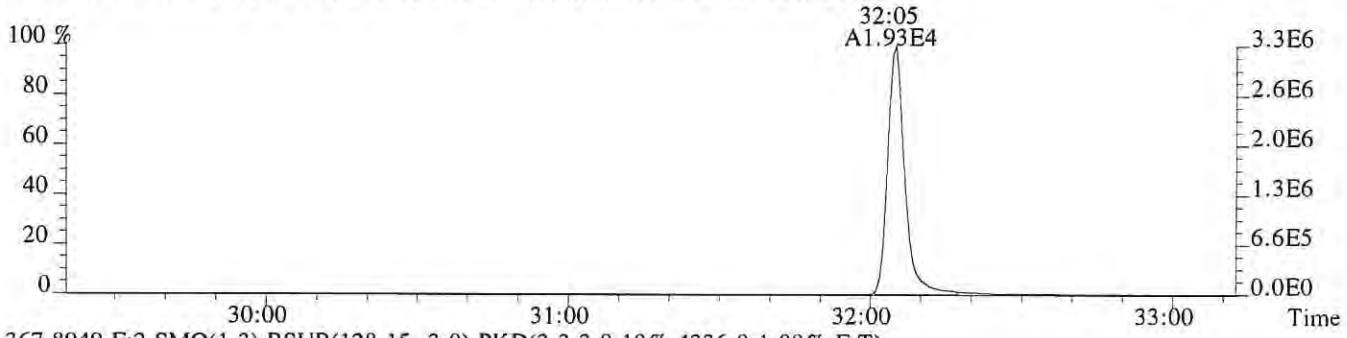
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



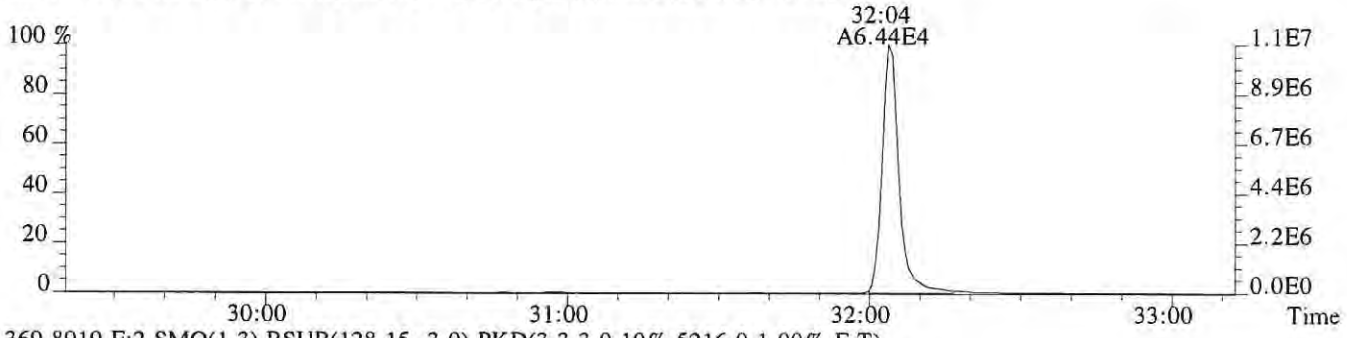
File:P616166 #1-349 Acq:24-DEC-2018 12:02:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2800.0,1.00%,F,T)



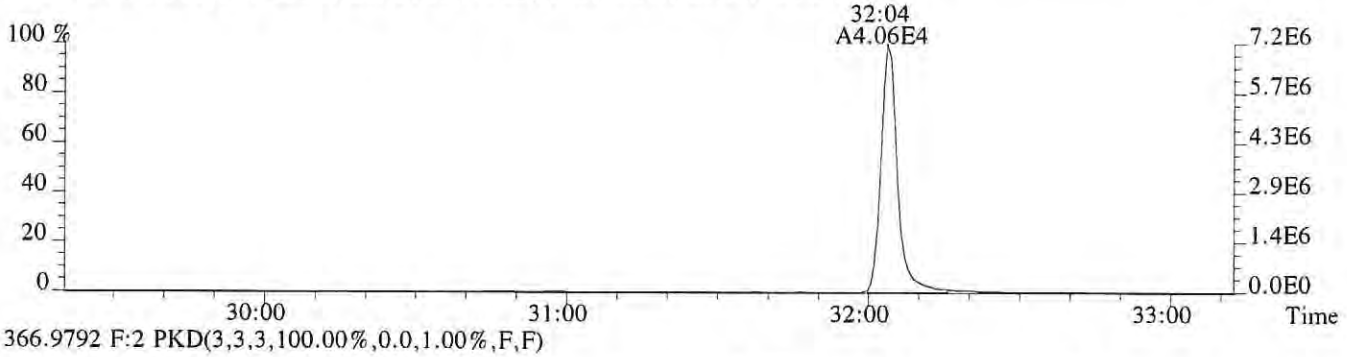
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,584.0,1.00%,F,T)



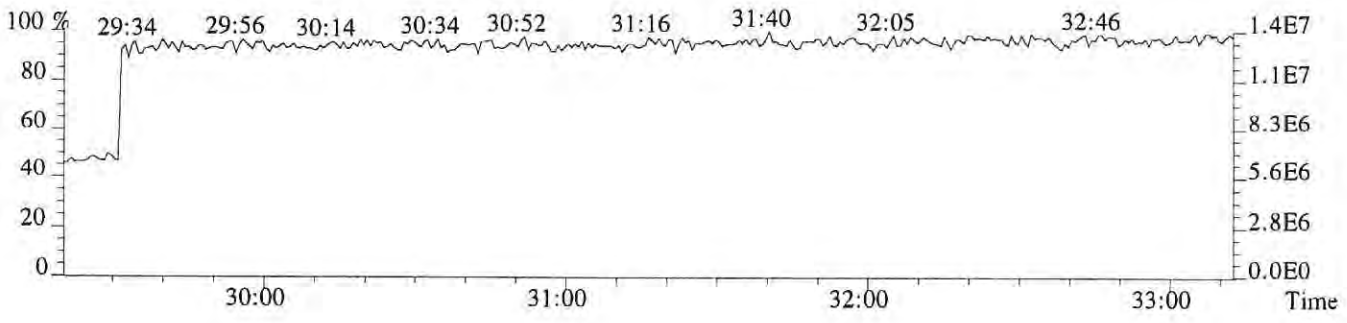
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4336.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5216.0,1.00%,F,T)

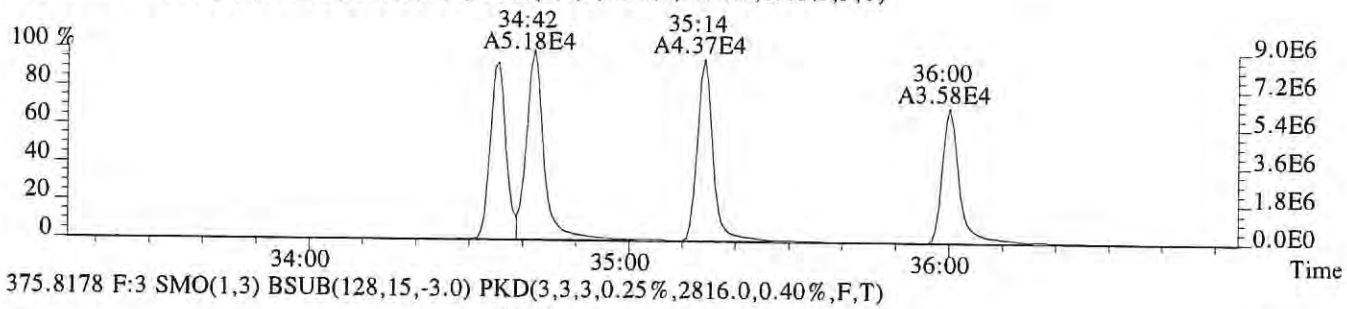


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

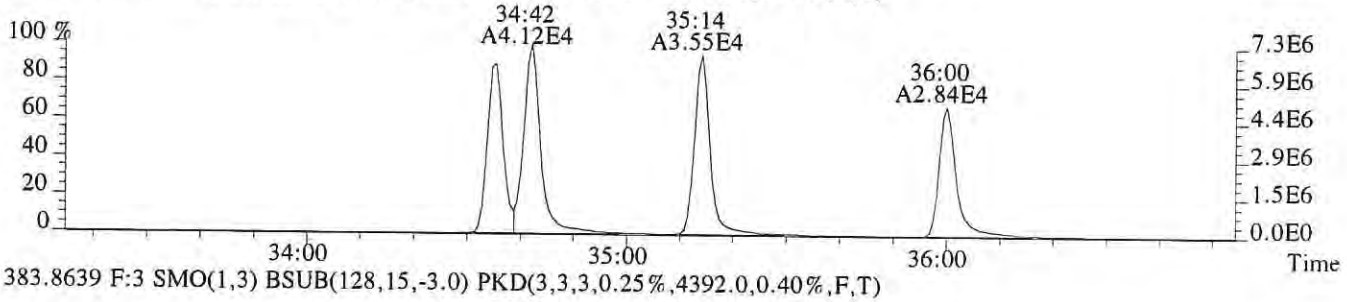


File:P616166 #1-330 Acq:24-DEC-2018 12:02:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

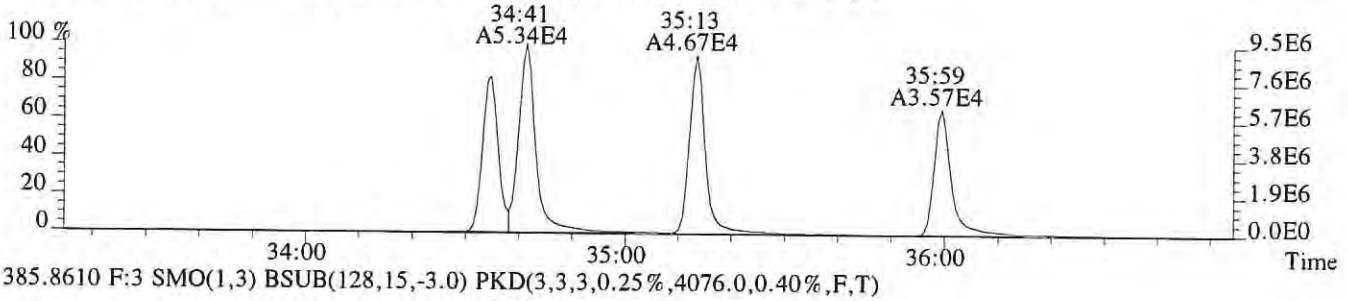
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3820.0,0.40%,F,T)



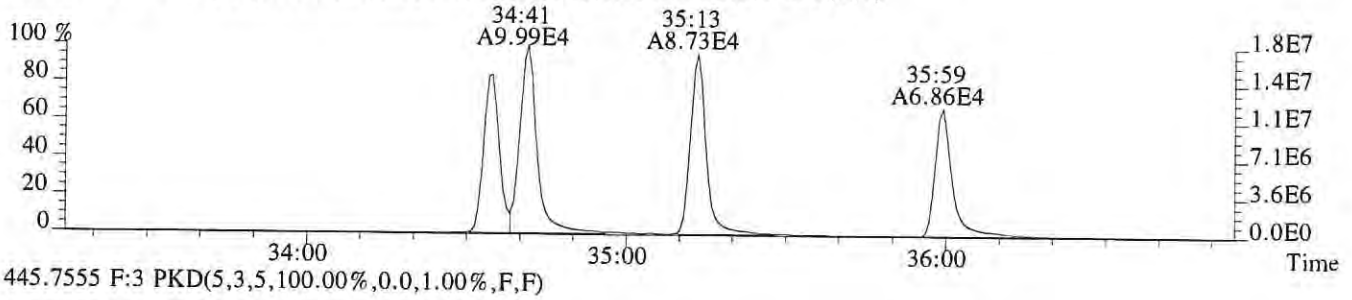
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2816.0,0.40%,F,T)



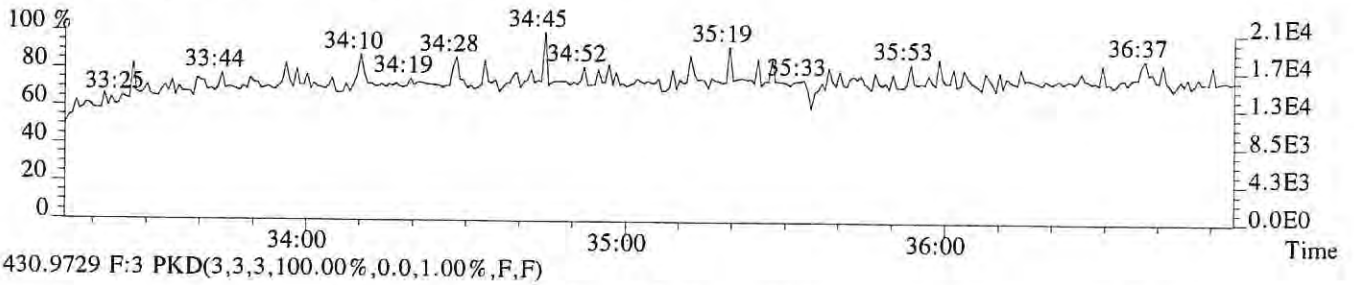
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4392.0,0.40%,F,T)



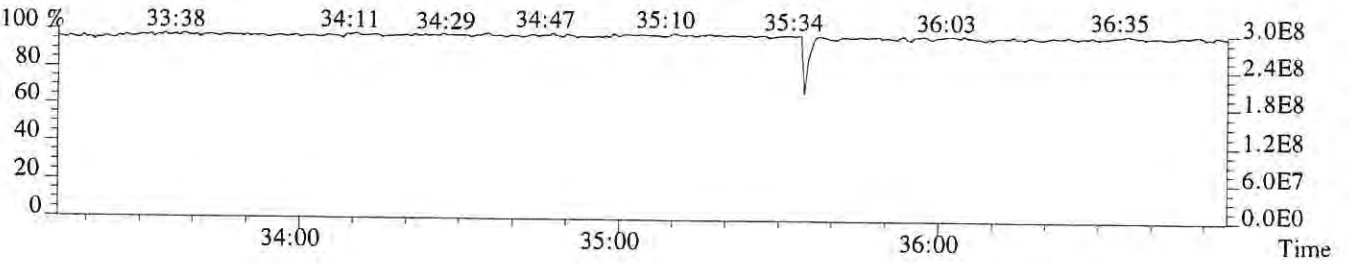
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4076.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

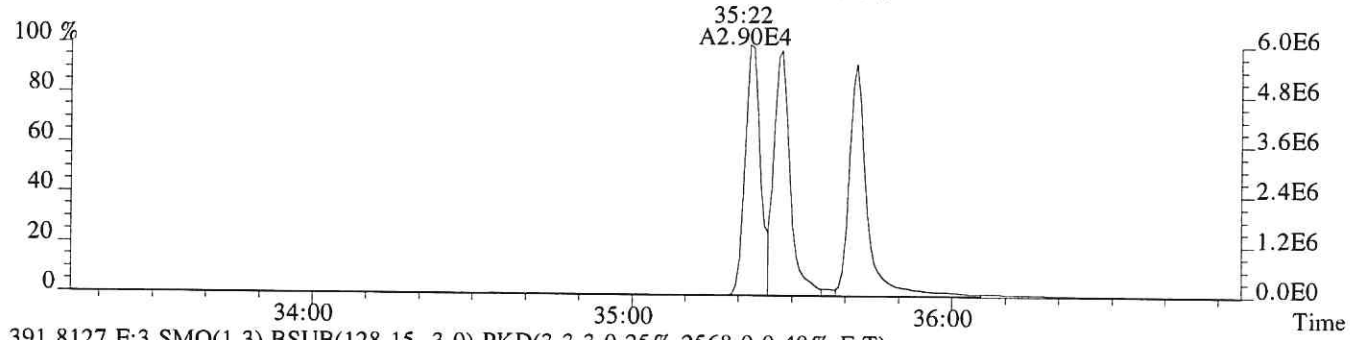


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

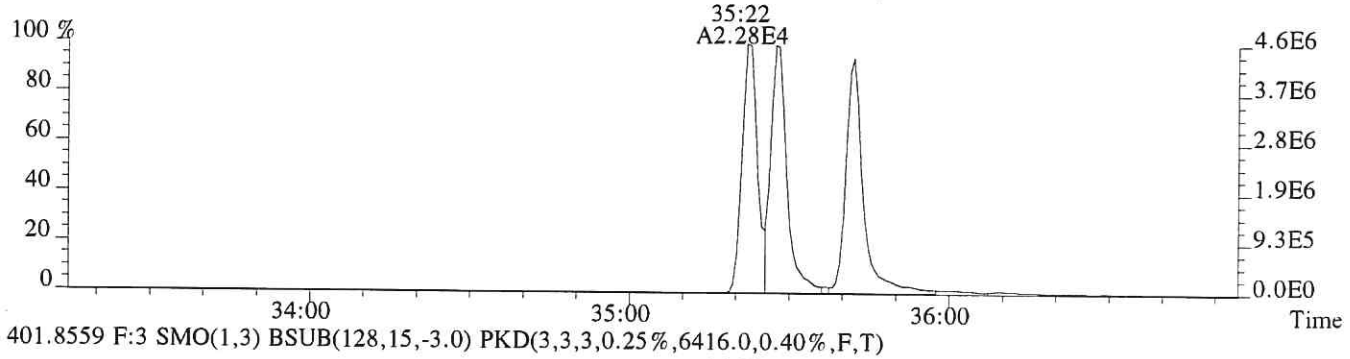


File:P616166 #1-330 Acq:24-DEC-2018 12:02:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

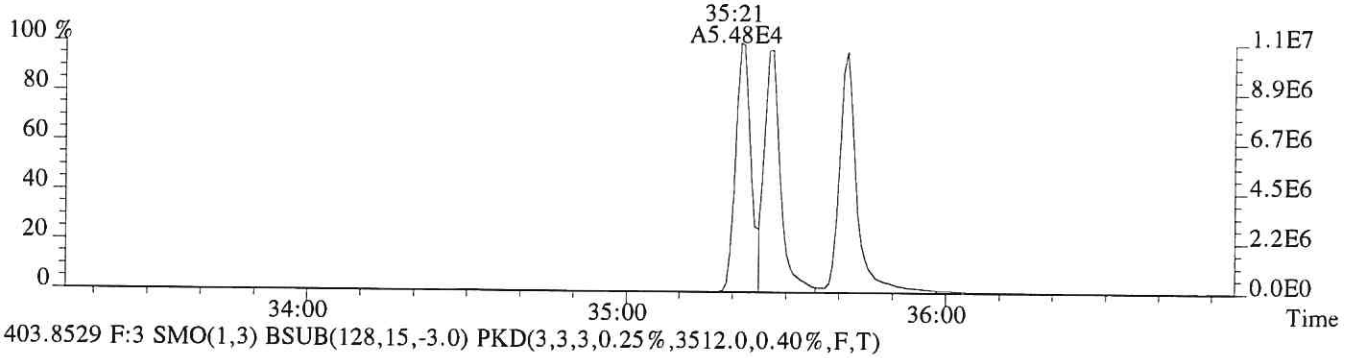
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1540.0,0.40%,F,T)



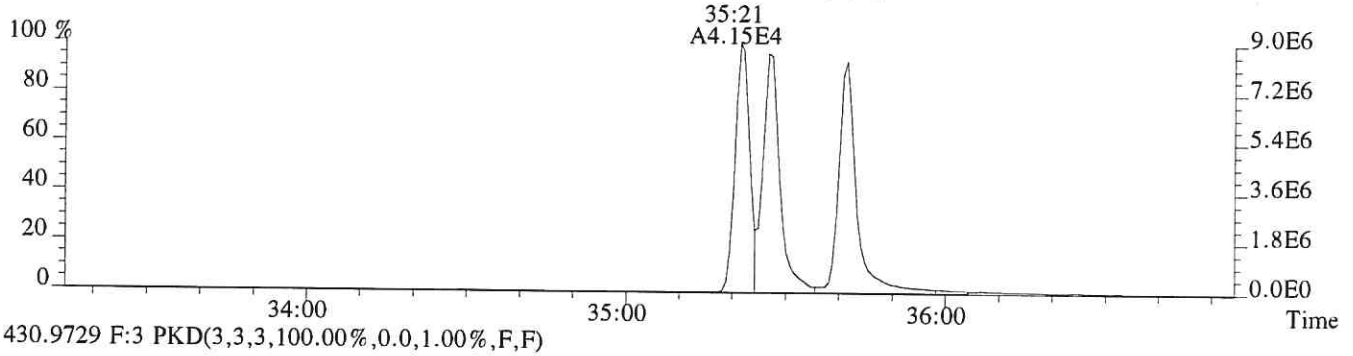
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2568.0,0.40%,F,T)



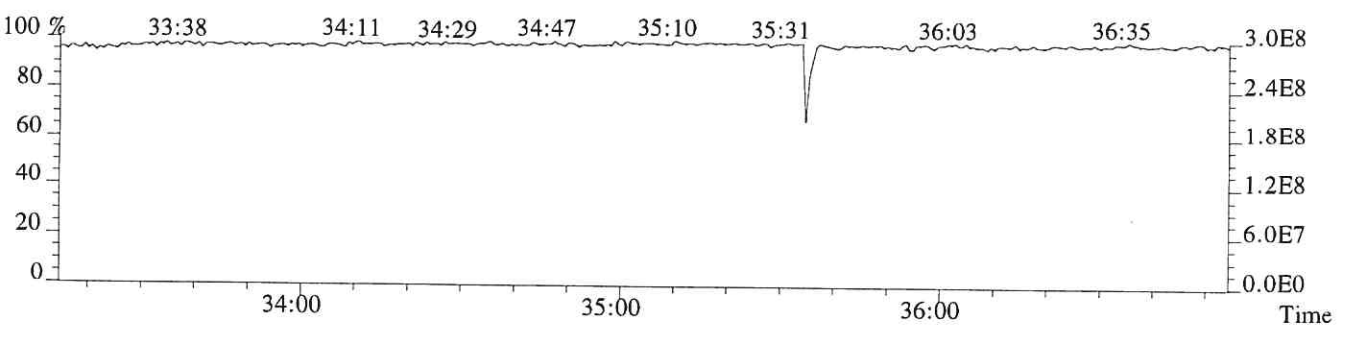
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6416.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3512.0,0.40%,F,T)

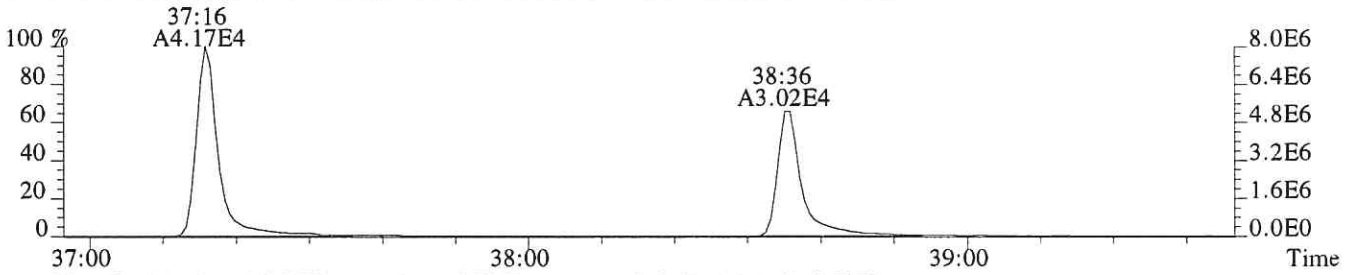


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

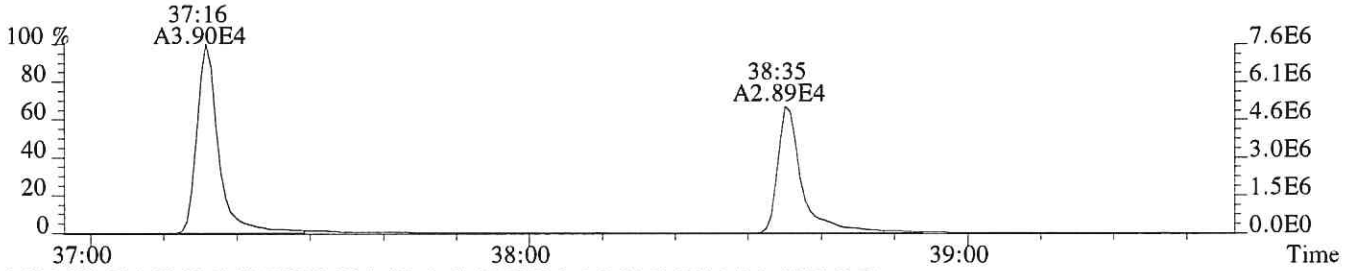


File:P616166 #1-241 Acq:24-DEC-2018 12:02:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

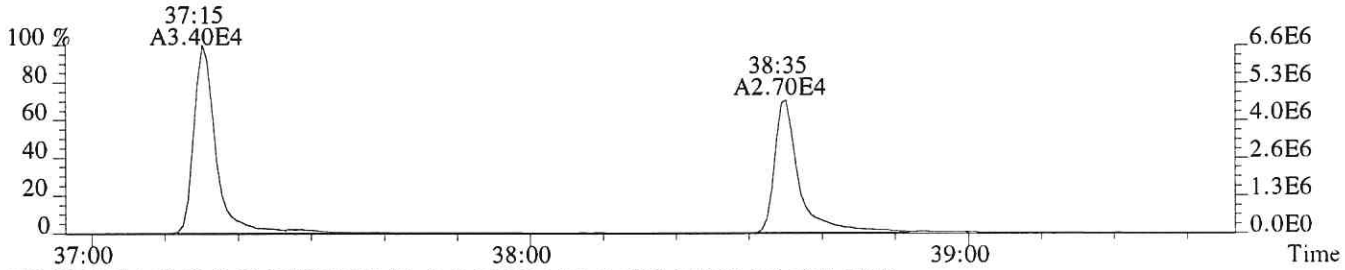
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,10724.0,0.50%,F,T)



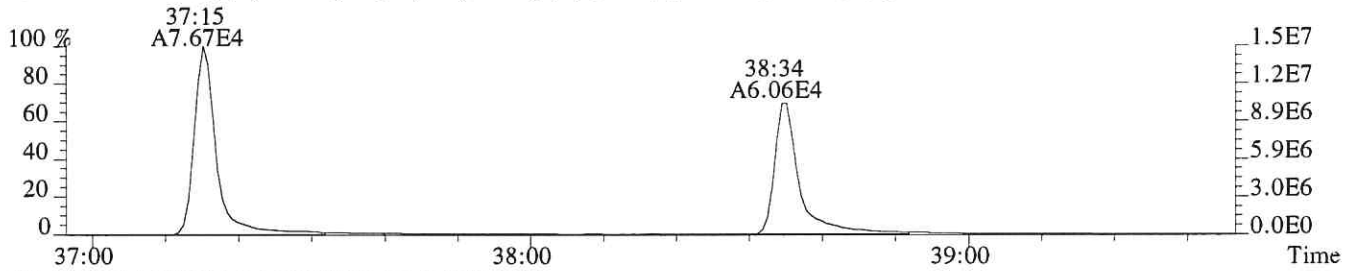
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6048.0,0.50%,F,T)



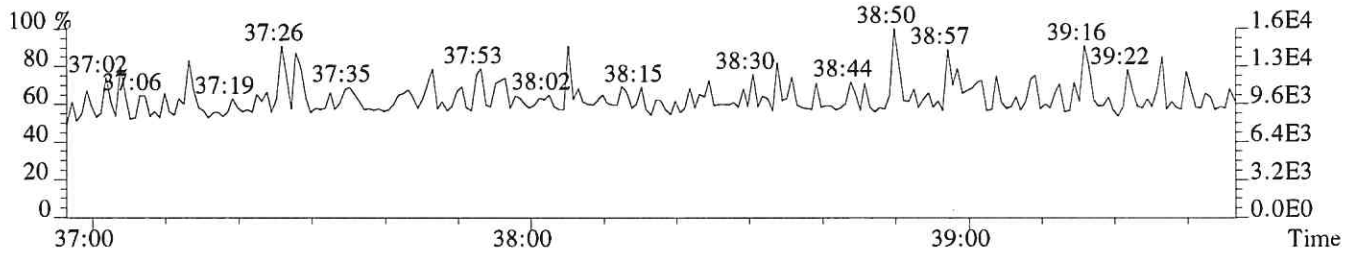
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5016.0,0.50%,F,T)



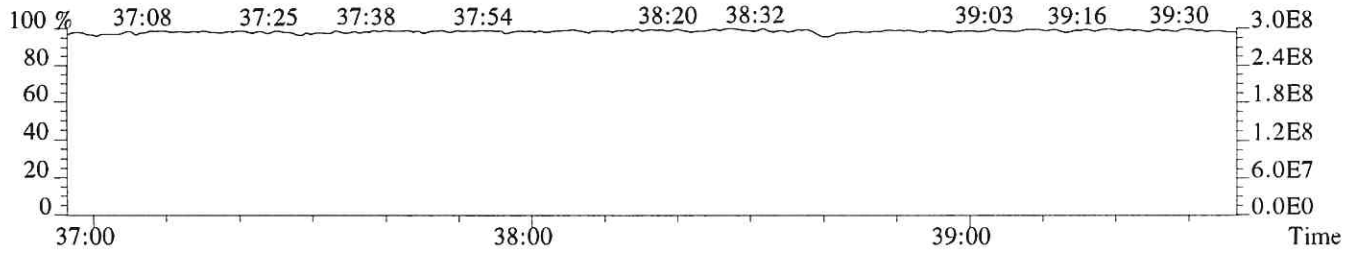
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,24660.0,0.50%,F,T)



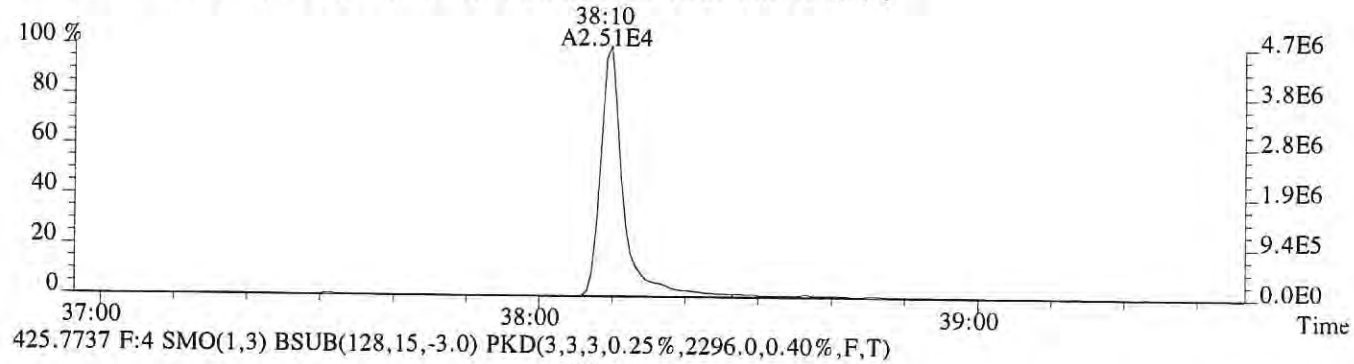
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



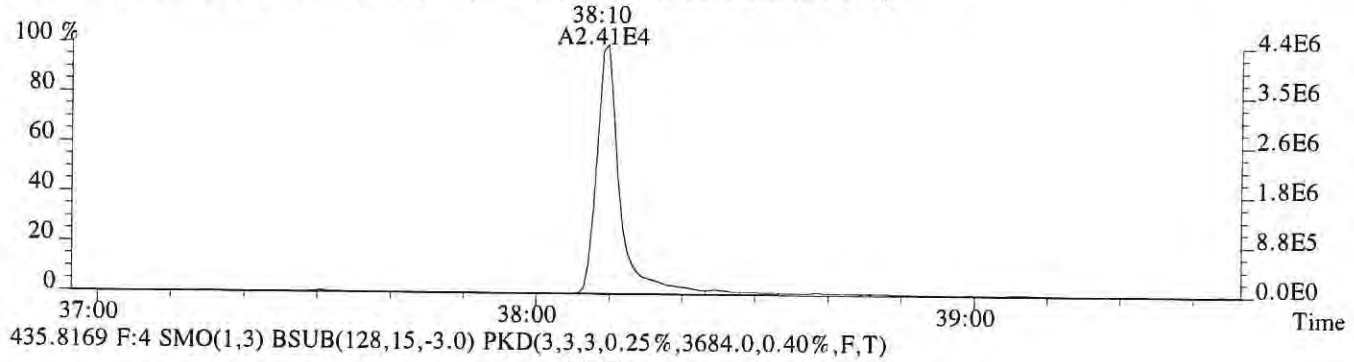
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



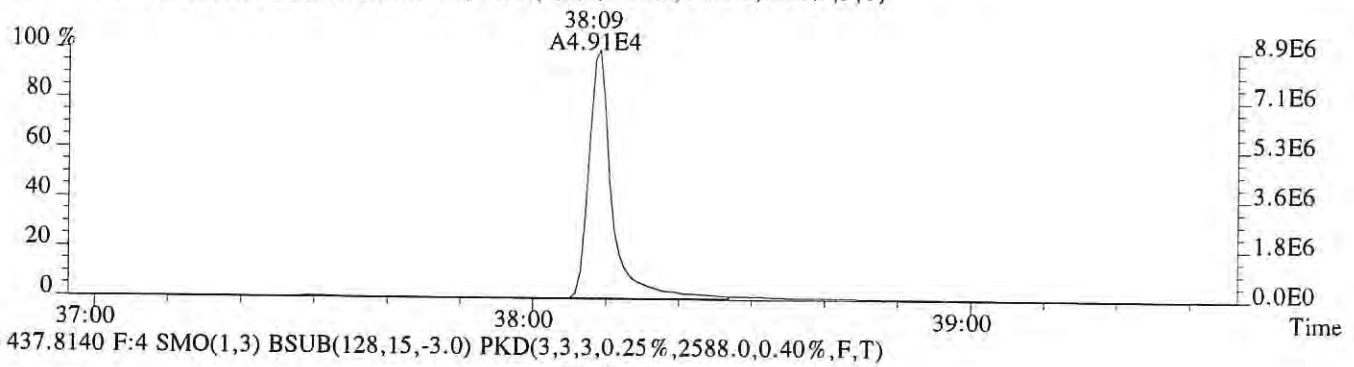
File:P616166 #1-241 Acq:24-DEC-2018 12:02:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3200.0,0.40%,F,T)



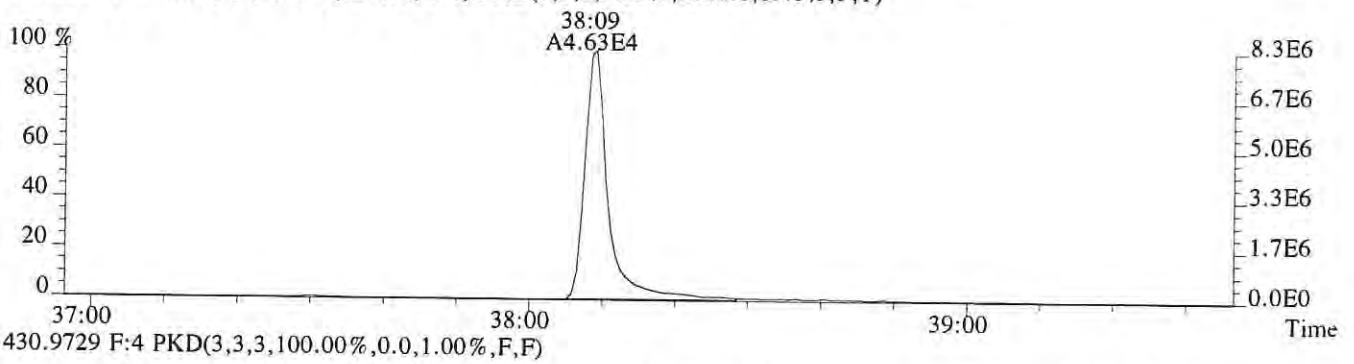
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2296.0,0.40%,F,T)



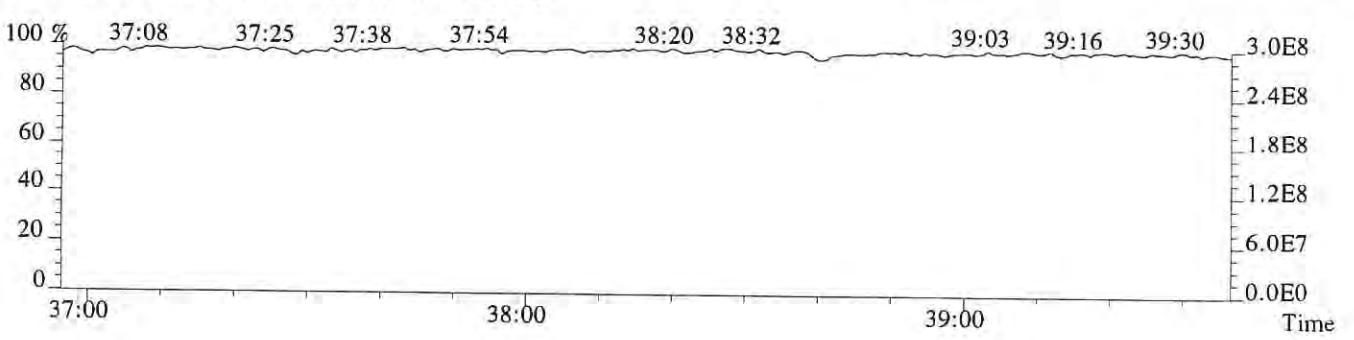
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3684.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2588.0,0.40%,F,T)

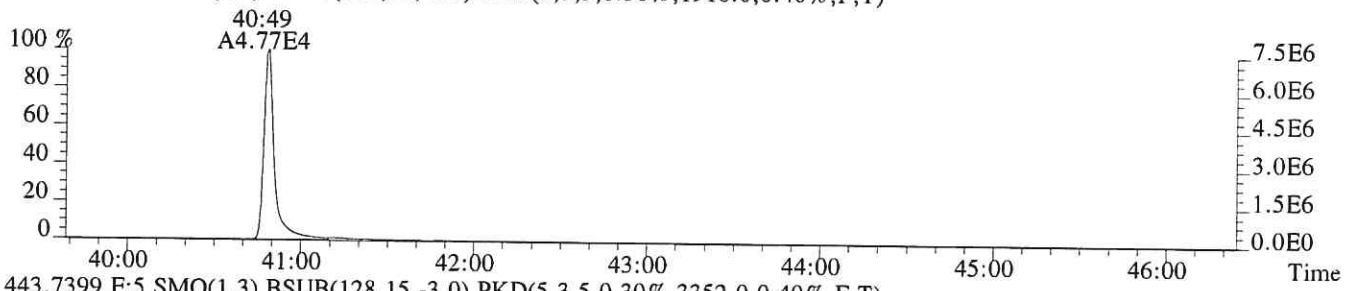


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

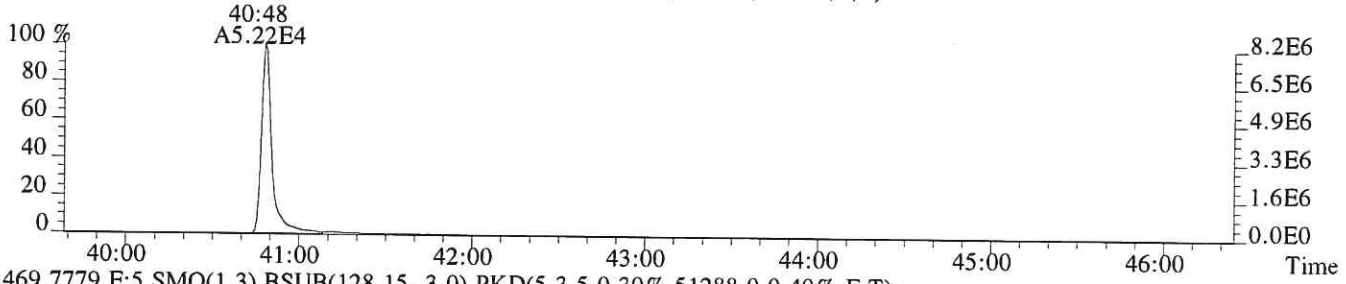


File:P616166 #1-609 Acq:24-DEC-2018 12:02:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

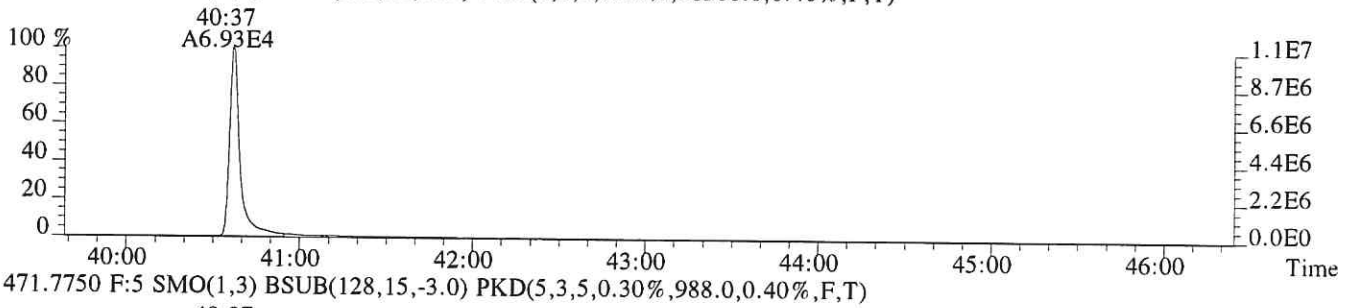
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1916.0,0.40%,F,T)



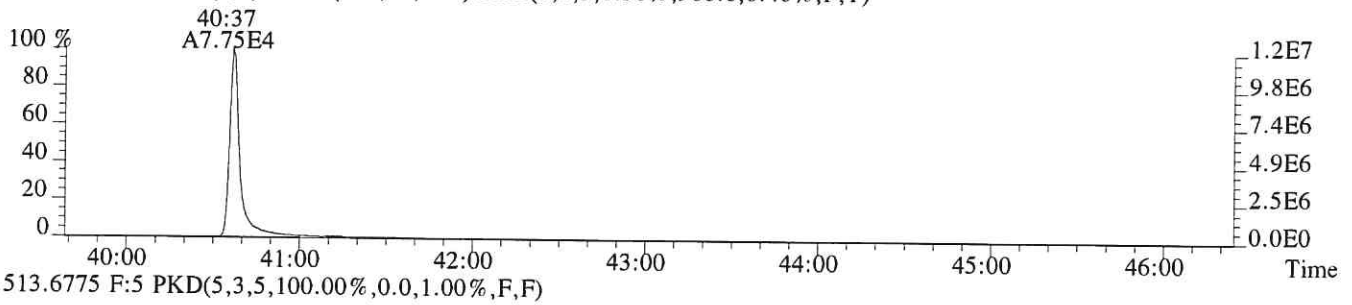
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3352.0,0.40%,F,T)



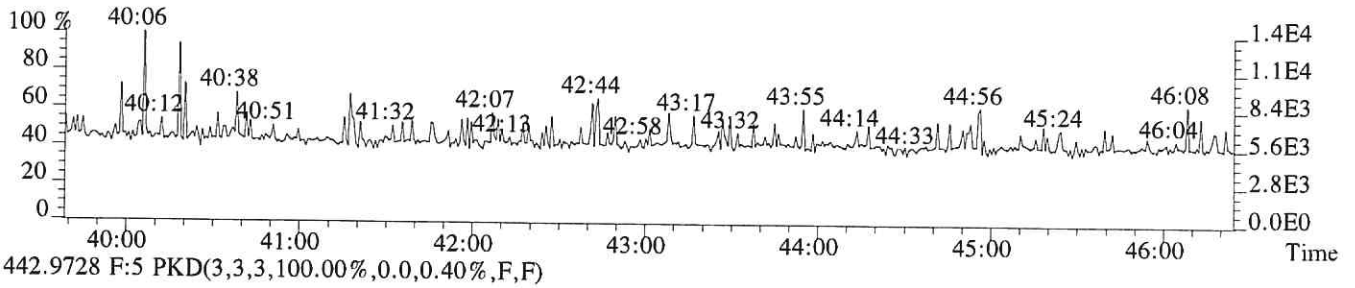
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,51288.0,0.40%,F,T)



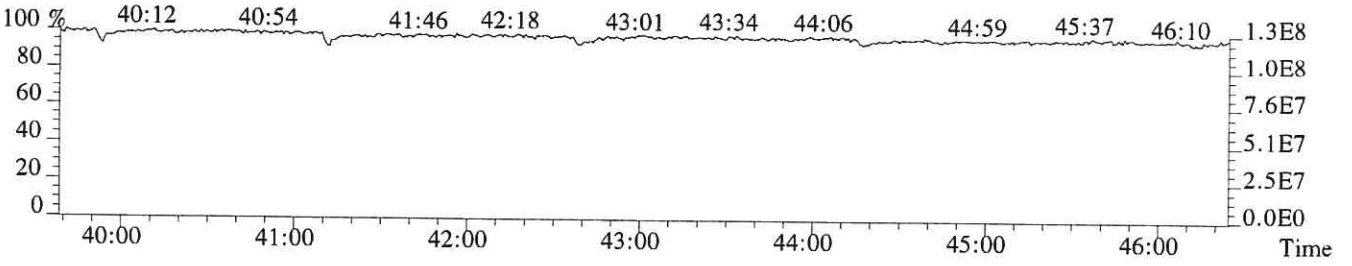
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,988.0,0.40%,F,T)



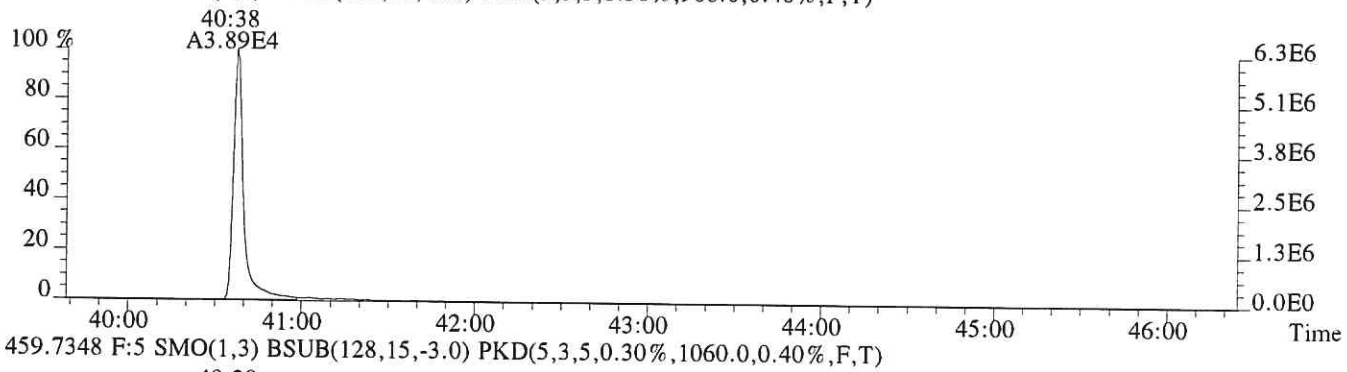
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



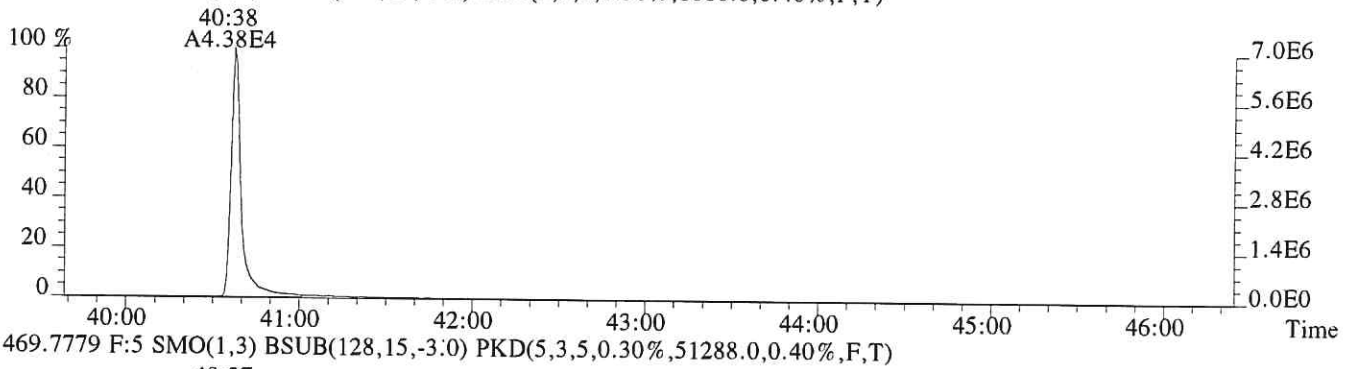
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



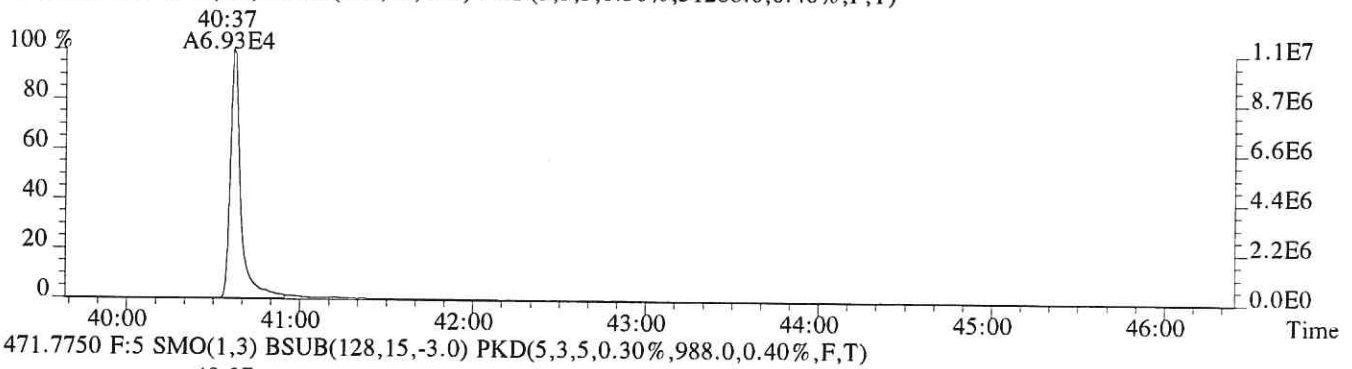
File:P616166 #1-609 Acq:24-DEC-2018 12:02:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,968.0,0.40%,F,T)



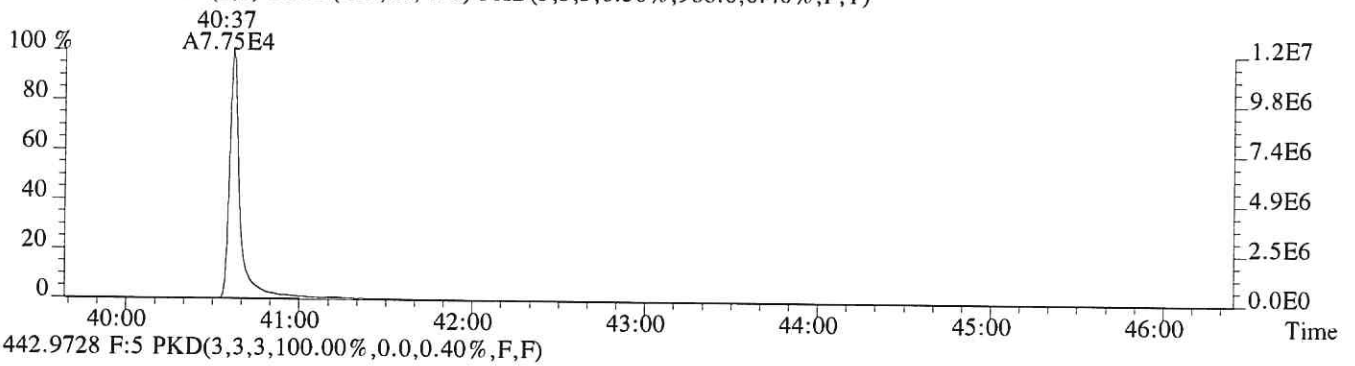
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1060.0,0.40%,F,T)



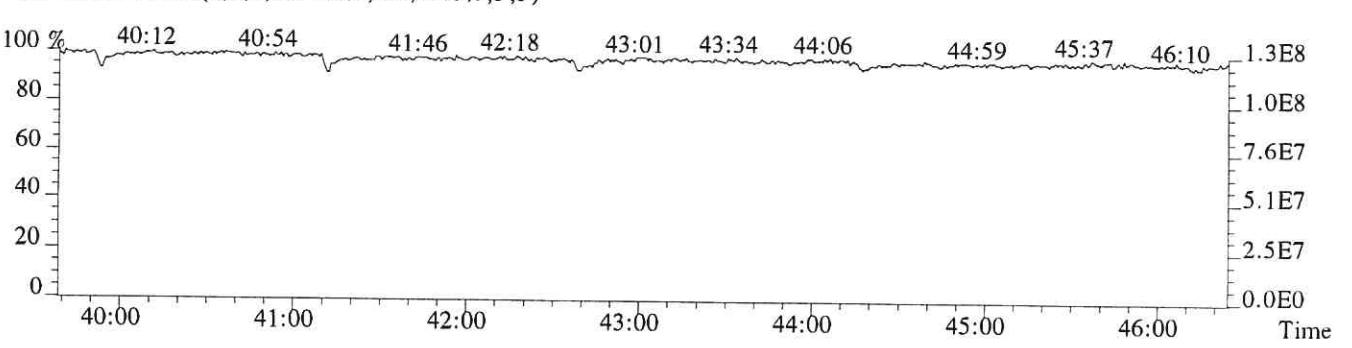
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,51288.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,988.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



CCAL HRCC3/CS3 Daily Calibration QC Checklist

Calibration File Name: P6l6l81

Date: 12/25/18

Circle one: (Beginning) / Ending

Method: (1613) / 1613E / 8290/ VCP / Tetra / TCDD Only / TCDF Conf / VCP Conf / 8280 / M23 / TO-9A

Retention Window/Column Performance Check:	Analyst	Second Check
Windows in and first and last eluters labeled	✓	✓
Column Performance shows less than or equal to 25% valley between column specific 2378 isomer and its closest eluters	✓	✓
No QC ion deflections affect column specific 2378 isomer or its closest eluters (HRMS Only)	✓	✓

CS3 Continuing Calibration	Analyst	Second Check
Percent RSD within method criteria	✓	✓
All relative abundance ratios meet method criteria	✓	✓
No QC ion deflections of greater than 20% (HRMS Only)	✓	✓
Mass spectrometer resolution greater than or equal to 10,000 and documented (HRMS Only)	✓	✓
2378-TCDD elutes at 25 minutes or later on the DB-5 column / DB-5MSUI column	✓	✓
Signal-to-noise of all target analytes and their labeled standards at least 10:1	✓	✓
Valley between labeled 123478 and 123678 HxCDD peaks less than or equal to 50% (LRMS Only)	N/A	N/A
Ending Calibration injected prior to end of 12 hour clock	N/A	N/A

Analyst: LKL

Second QC: LG

ccalqc.xls 07/17/12

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

Lab Code: Case No.: Client No.: SDG No.:

GC Column: DB-5MSUI ID: 0.25 (mm)

Init. Calib. Date: 09/25/18

Init. Calib.Times: 12:13

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, AND LABORATORY CONTROL SAMPLES (LCSs) IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
192977	WINDOW DEFINE	P616182	25-DEC-18	01:23:23
194503	CS3	P616181	25-DEC-18	00:35:05
METHOD BLANK	EQ1800517-01	P616183	25-DEC-18	02:12:33
SLO 0592	E1801105-003	P616184	25-DEC-18	03:01:44
SLO 0593	E1801105-004	P616185	25-DEC-18	03:50:54
CCWRF-EFFLUENT	E1801022-001RE	P616186	25-DEC-18	04:40:03
ALKALINE SEWER (OU╗	K1811797-001RE	P616187	25-DEC-18	05:29:14
ACID SEWER (OUTFAL╗	K1811797-002RE	P616188	25-DEC-18	06:18:23
BLEACH PLANT "A"	E1801107-001	P616189	25-DEC-18	07:07:33
66674-OS0003-MS1	E1801109-001	P616190	25-DEC-18	07:56:44
66674-OS0003-MS3	E1801109-002	P616191	25-DEC-18	08:45:54

Sample List Report **MassLynx 4.1 SCN815 SCN795**

Sample List: C:\MassLynx\EHRMS08.PRO\SampleDB\20181224B.SPL
Last Modified: Thursday, December 27, 2018 11:36:42 Central Standard Time
Printed: Thursday, December 27, 2018 11:36:44 Central Standard Time

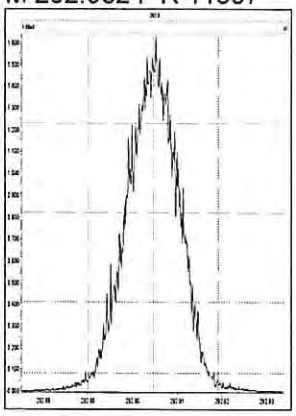
Page Position (1, 1)

OPUS SNET: P616181 RES

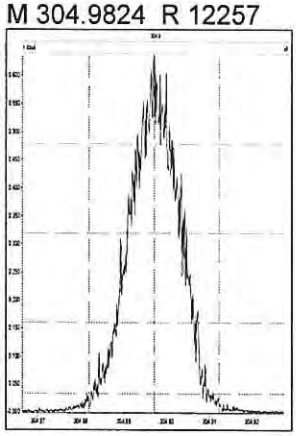
	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst	Comments
									LG for	
1	12/25/18	00:35	P616181	194503	CS3	EPA1613_ALS	Dioxin_ALS	Tray1:2	JC	HRMS check 00:35
2		01:23	P616182	192977	WINDOW DEFINE	EPA1613_ALS	Dioxin_ALS	Tray1:1		
3		02:12	P616183	EQ1800517-01	MB	EPA1613_ALS	Dioxin_ALS	Tray1:49		
4		03:01	P616184	E1801105-003	E1801105-003	EPA1613_ALS	Dioxin_ALS	Tray1:50		
5		03:50	P616185	E1801105-004	E1801105-004	EPA1613_ALS	Dioxin_ALS	Tray1:51		
6		04:40	P616186	E1801022-001RE	E1801022-001RE	EPA1613_ALS	Dioxin_ALS	Tray1:52		
7		05:29	P616187	K1811797-001RE	K1811797-001RE	EPA1613_ALS	Dioxin_ALS	Tray1:53		
8		06:18	P616188	K1811797-002RE	K1811797-002RE	EPA1613_ALS	Dioxin_ALS	Tray1:54		
9		07:07	P616189	E1801107-001	E1801107-001	EPA1613_ALS	Dioxin_ALS	Tray1:55		
10		07:56	P616190	E1801109-001	E1801109-001	EPA1613_ALS	Dioxin_ALS	Tray1:56		
11		08:45	P616191	E1801109-002	E1801109-002	EPA1613_ALS	Dioxin_ALS	Tray1:57		HRMS check 09:43

LKL 12/28/18

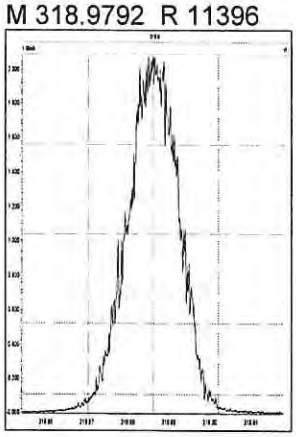
M 292.9824 R 11657



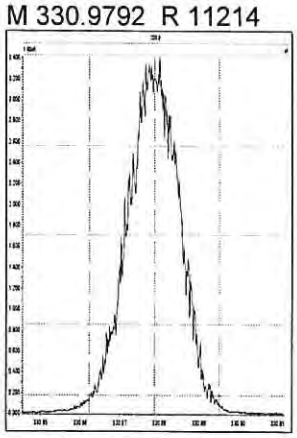
M 304.9824 R 12257



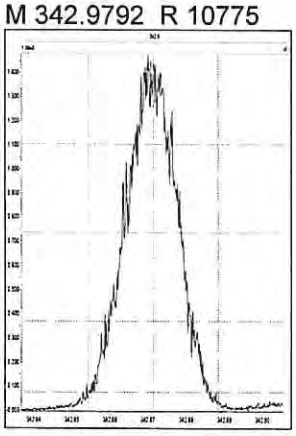
M 318.9792 R 11396



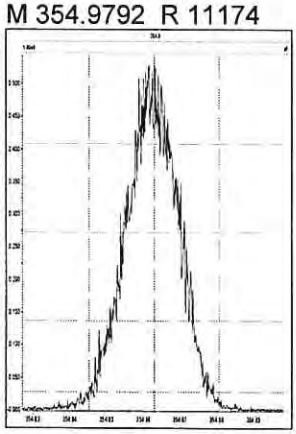
M 330.9792 R 11214



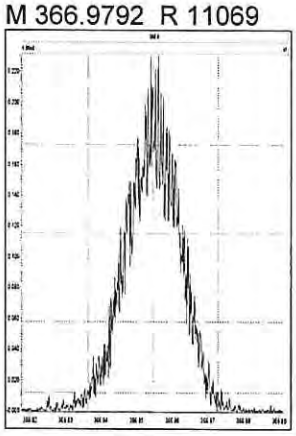
M 342.9792 R 10775



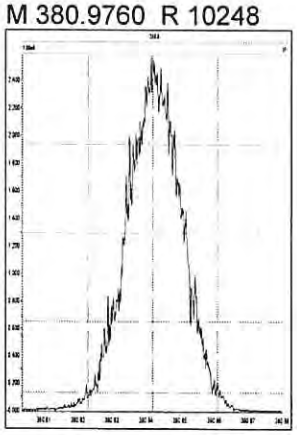
M 354.9792 R 11174



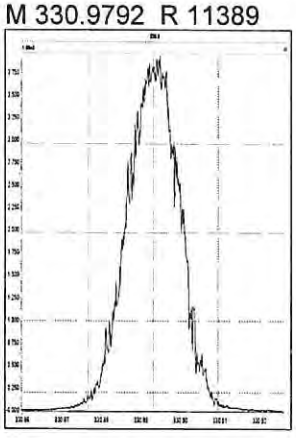
M 366.9792 R 11069



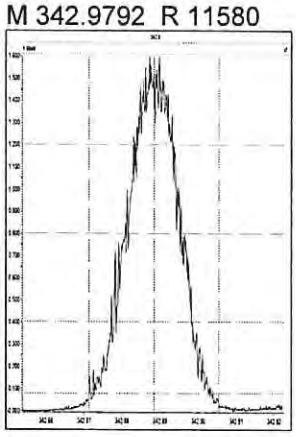
M 380.9760 R 10248



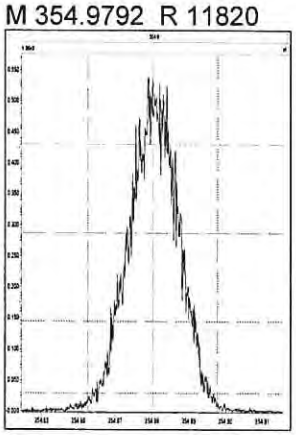
M 330.9792 R 11389



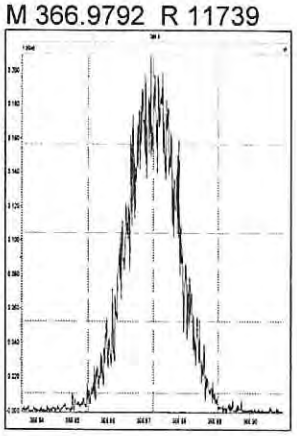
M 342.9792 R 11580



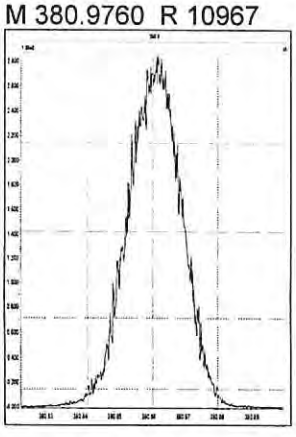
M 354.9792 R 11820



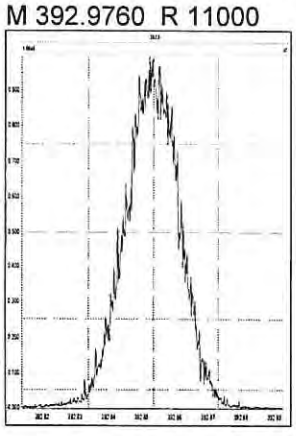
M 366.9792 R 11739



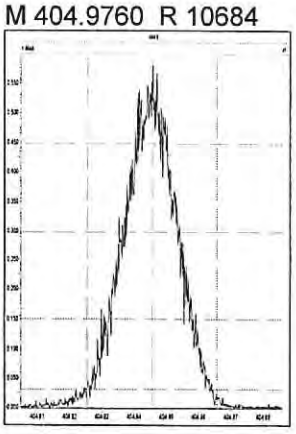
M 380.9760 R 10967



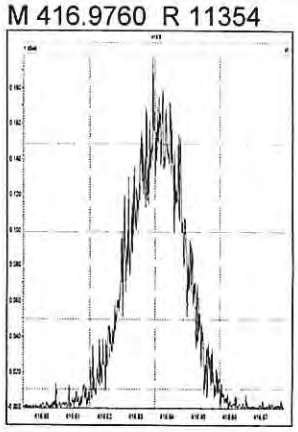
M 392.9760 R 11000



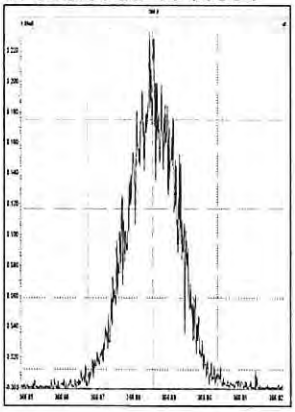
M 404.9760 R 10684



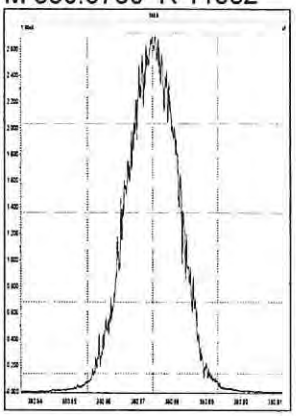
M 416.9760 R 11354



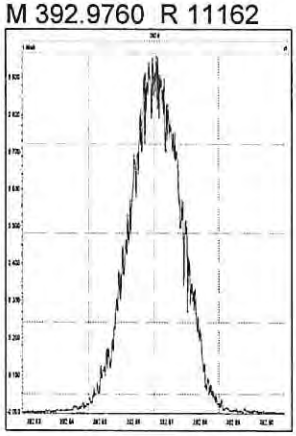
M 366.9792 R 11654



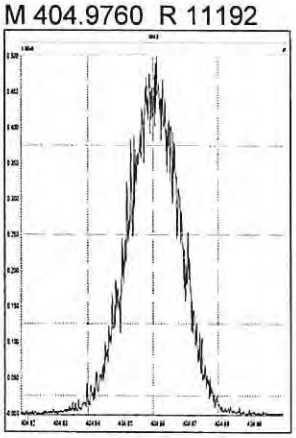
M 380.9760 R 11532



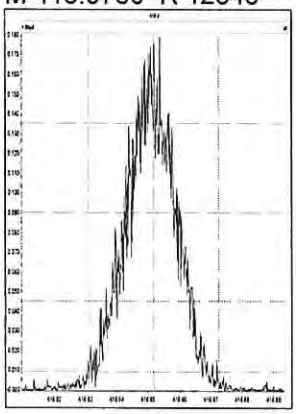
M 392.9760 R 11162



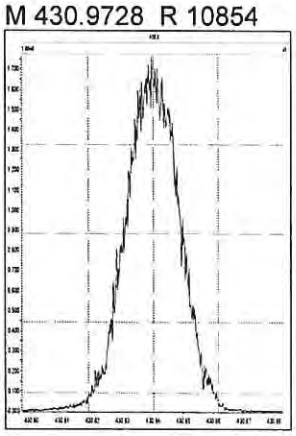
M 404.9760 R 11192



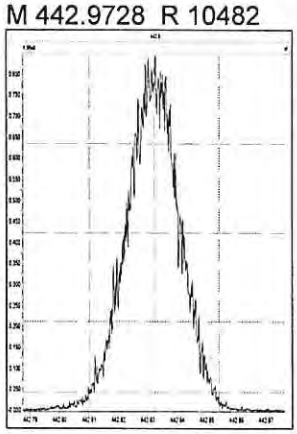
M 416.9760 R 12345



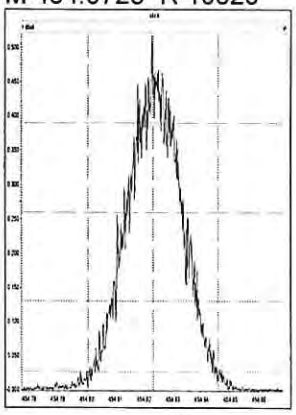
M 430.9728 R 10854



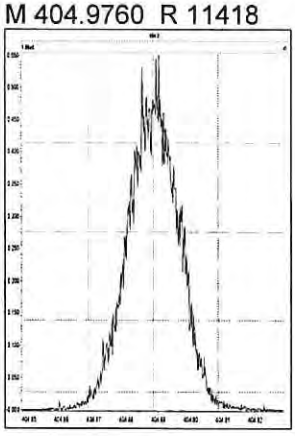
M 442.9728 R 10482



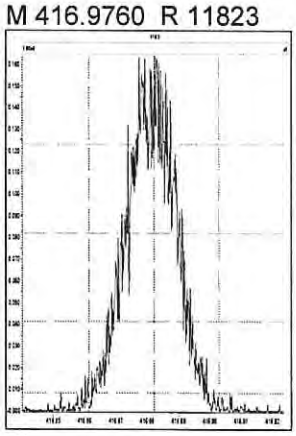
M 454.9728 R 10529



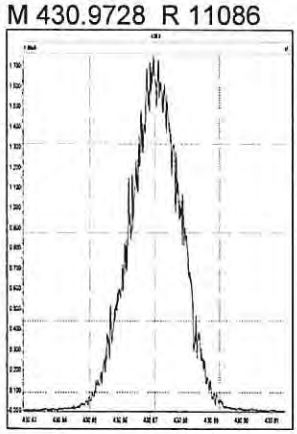
M 404.9760 R 11418



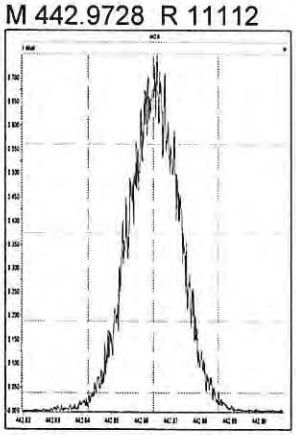
M 416.9760 R 11823



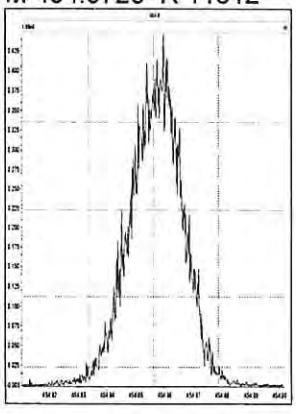
M 430.9728 R 11086



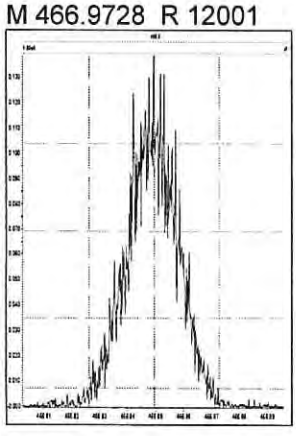
M 442.9728 R 11112



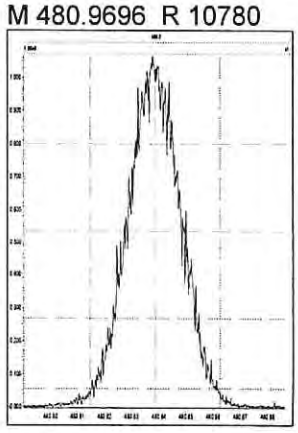
M 454.9728 R 11312



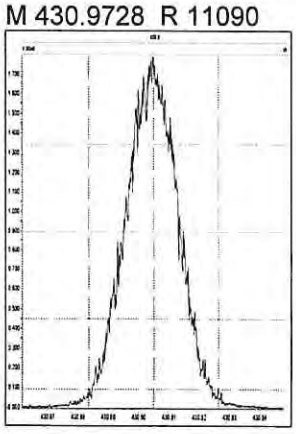
M 466.9728 R 12001



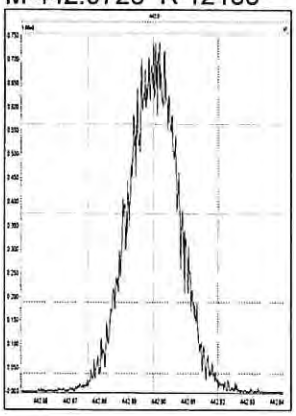
M 480.9696 R 10780



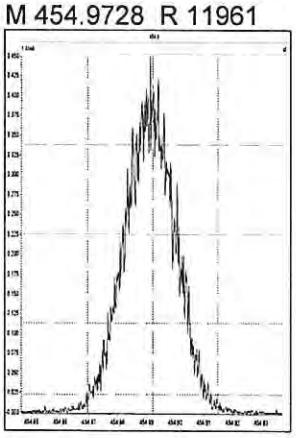
M 430.9728 R 11090



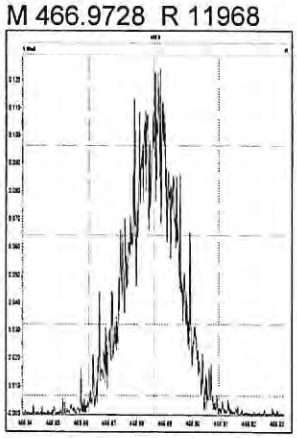
M 442.9728 R 12138



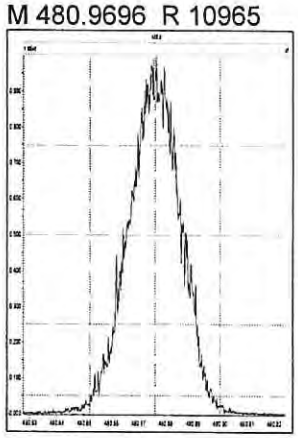
M 454.9728 R 11961



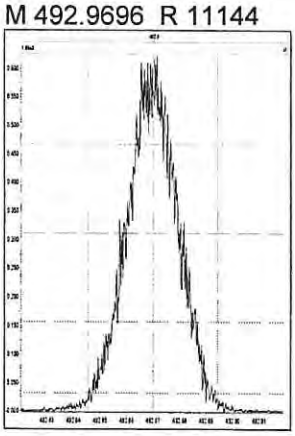
M 466.9728 R 11968



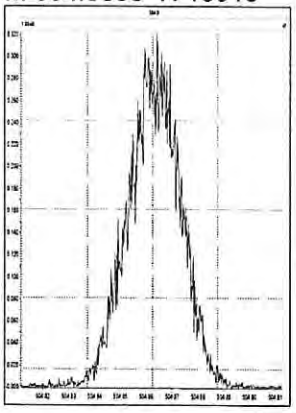
M 480.9696 R 10965



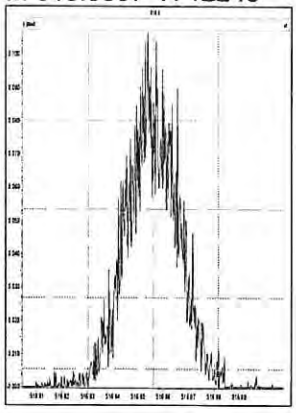
M 492.9696 R 11144



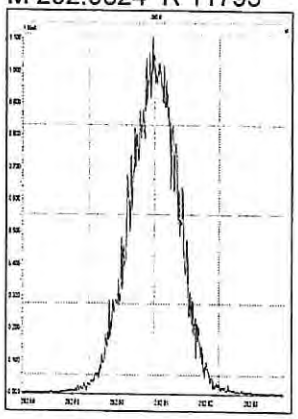
M 504.9696 R 10916



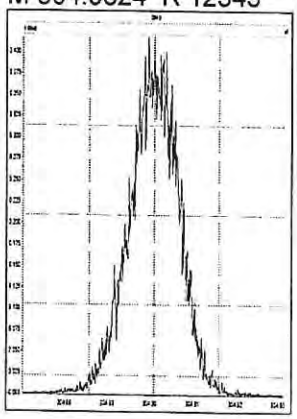
M 516.9697 R 12246



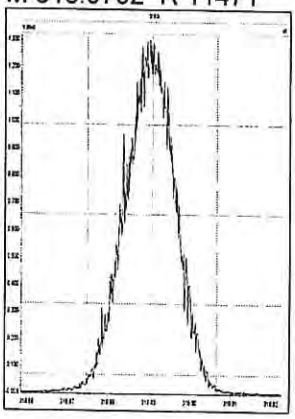
M 292.9824 R 11793



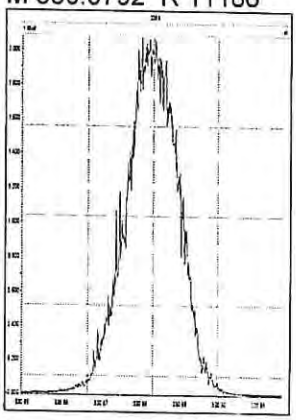
M 304.9824 R 12345



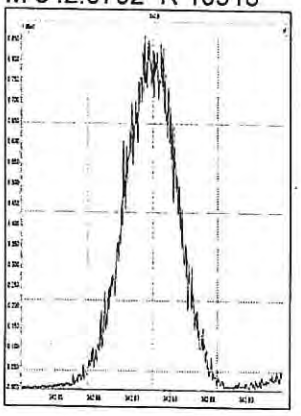
M 318.9792 R 11471



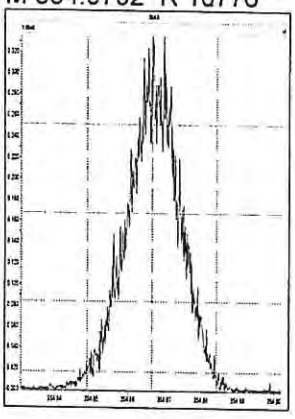
M 330.9792 R 11186



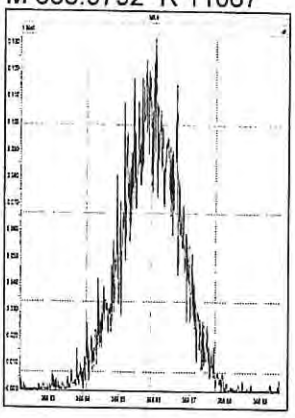
M 342.9792 R 10918



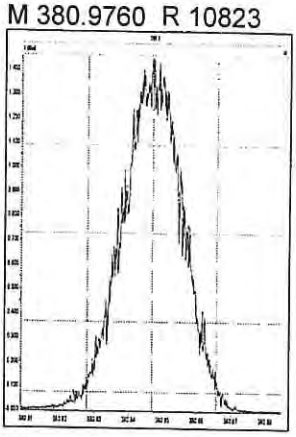
M 354.9792 R 10776



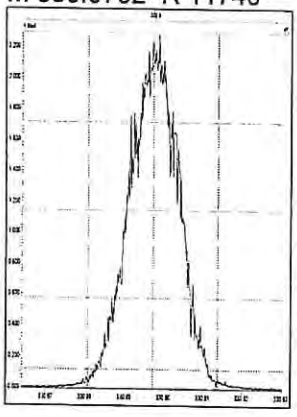
M 366.9792 R 11067



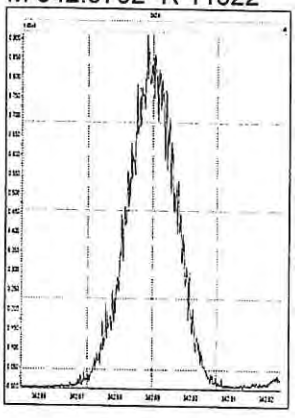
M 380.9760 R 10823



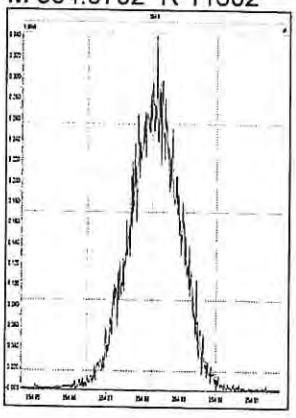
M 330.9792 R 11740



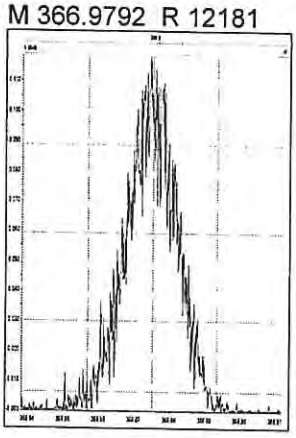
M 342.9792 R 11522



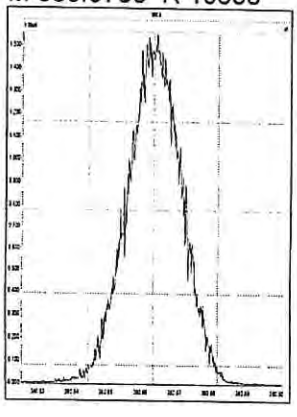
M 354.9792 R 11602



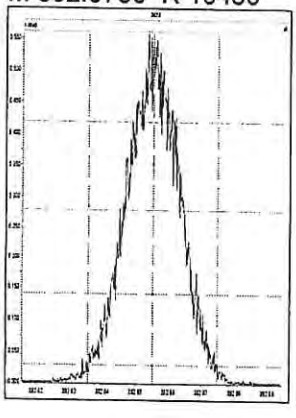
M 366.9792 R 12181



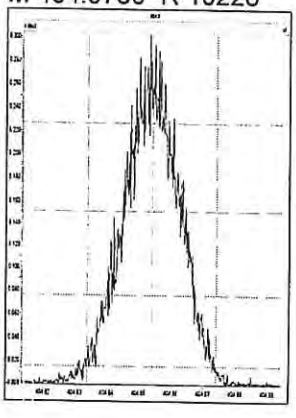
M 380.9760 R 10638



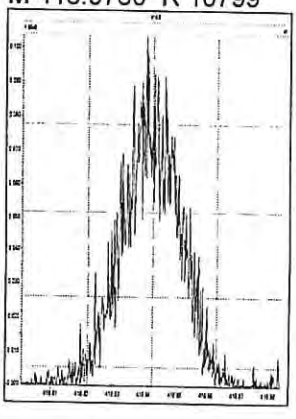
M 392.9760 R 10460



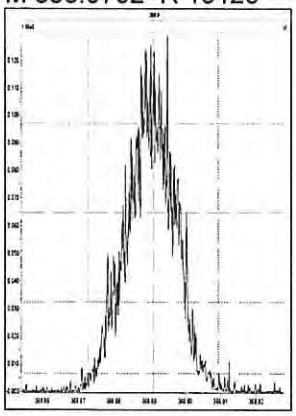
M 404.9760 R 10226



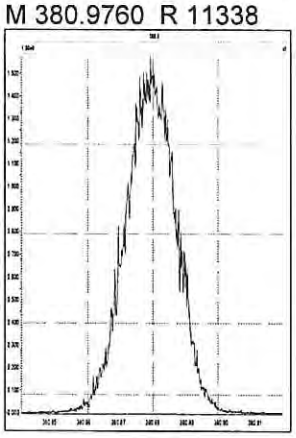
M 416.9760 R 10799



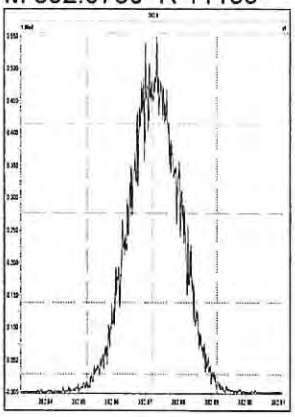
M 366.9792 R 13125



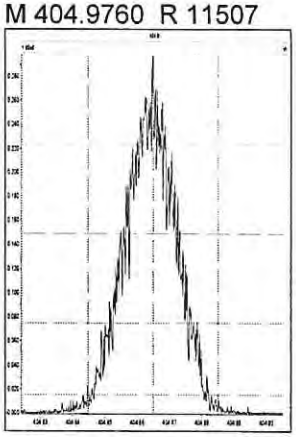
M 380.9760 R 11338



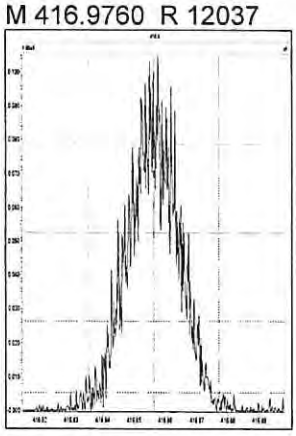
M 392.9760 R 11135



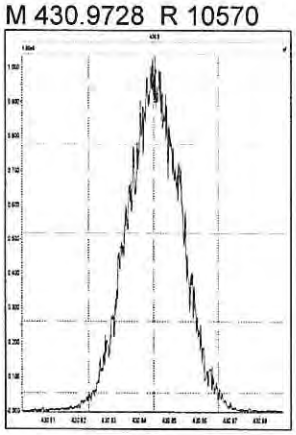
M 404.9760 R 11507



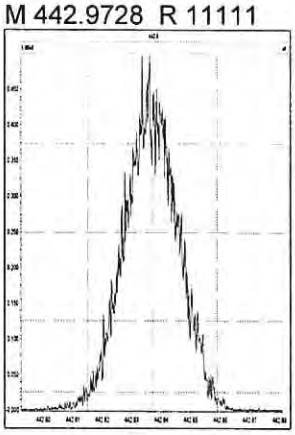
M 416.9760 R 12037



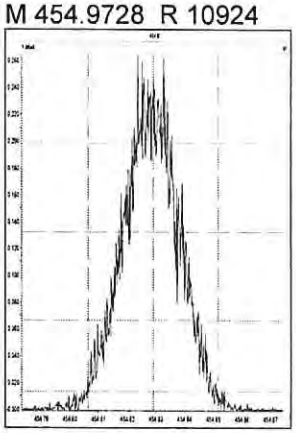
M 430.9728 R 10570



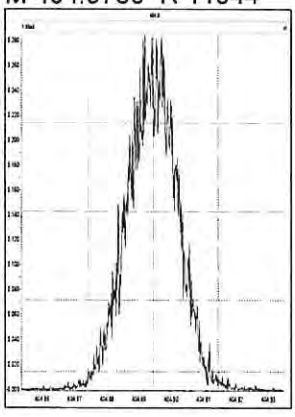
M 442.9728 R 11111



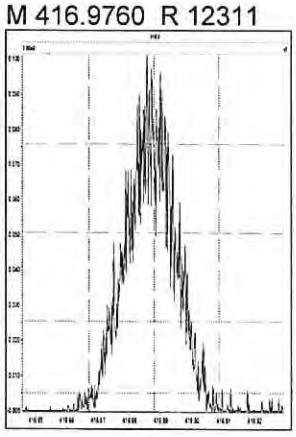
M 454.9728 R 10924



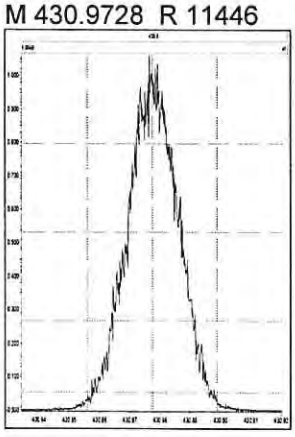
M 404.9760 R 11944



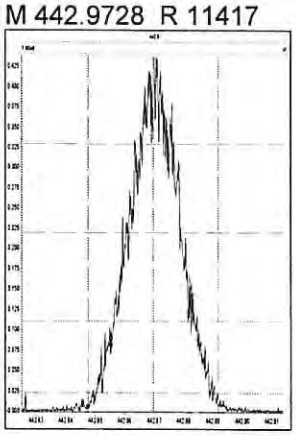
M 416.9760 R 12311



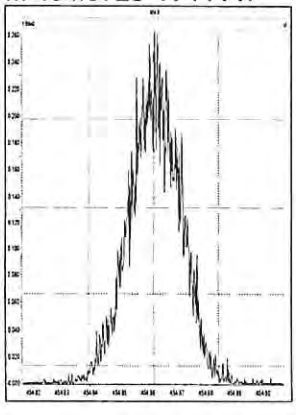
M 430.9728 R 11446



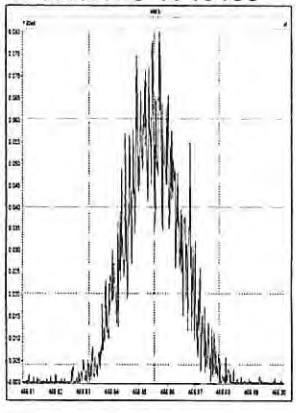
M 442.9728 R 11417



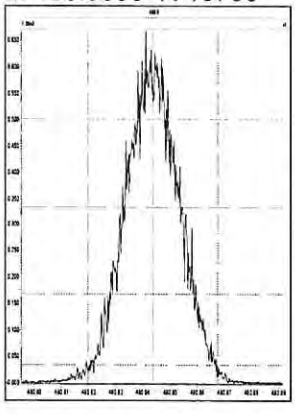
M 454.9728 R 11147



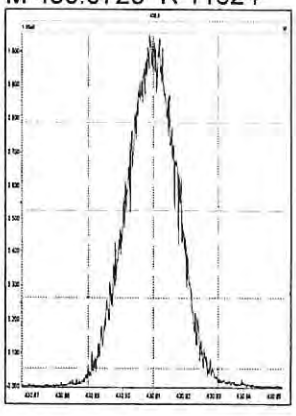
M 466.9728 R 13158



M 480.9696 R 10706

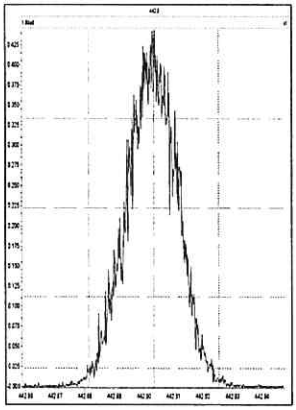


M 430.9728 R 11524

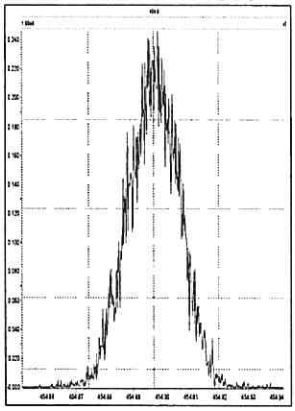


Printed: Tuesday, December 25, 2018 09:43:15 Central Standard Time

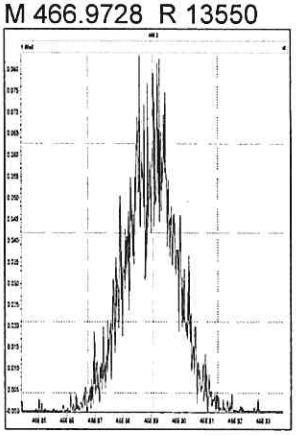
M 442.9728 R 11354



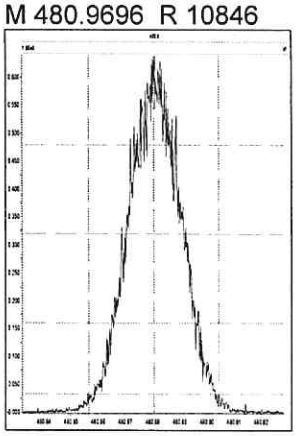
M 454.9728 R 11350



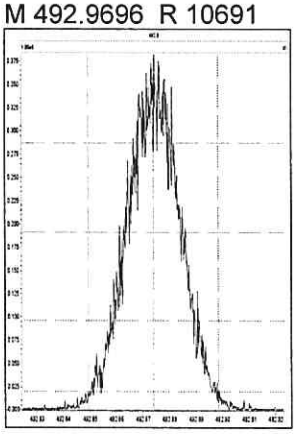
M 466.9728 R 13550



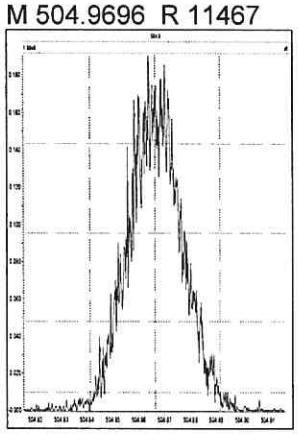
M 480.9696 R 10846



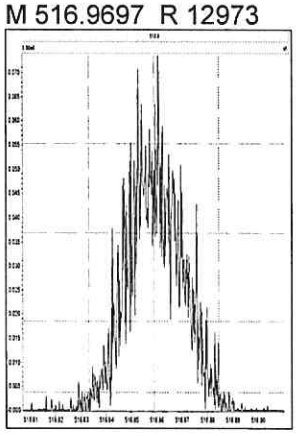
M 492.9696 R 10691



M 504.9696 R 11467



M 516.9697 R 12973



5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

WDM

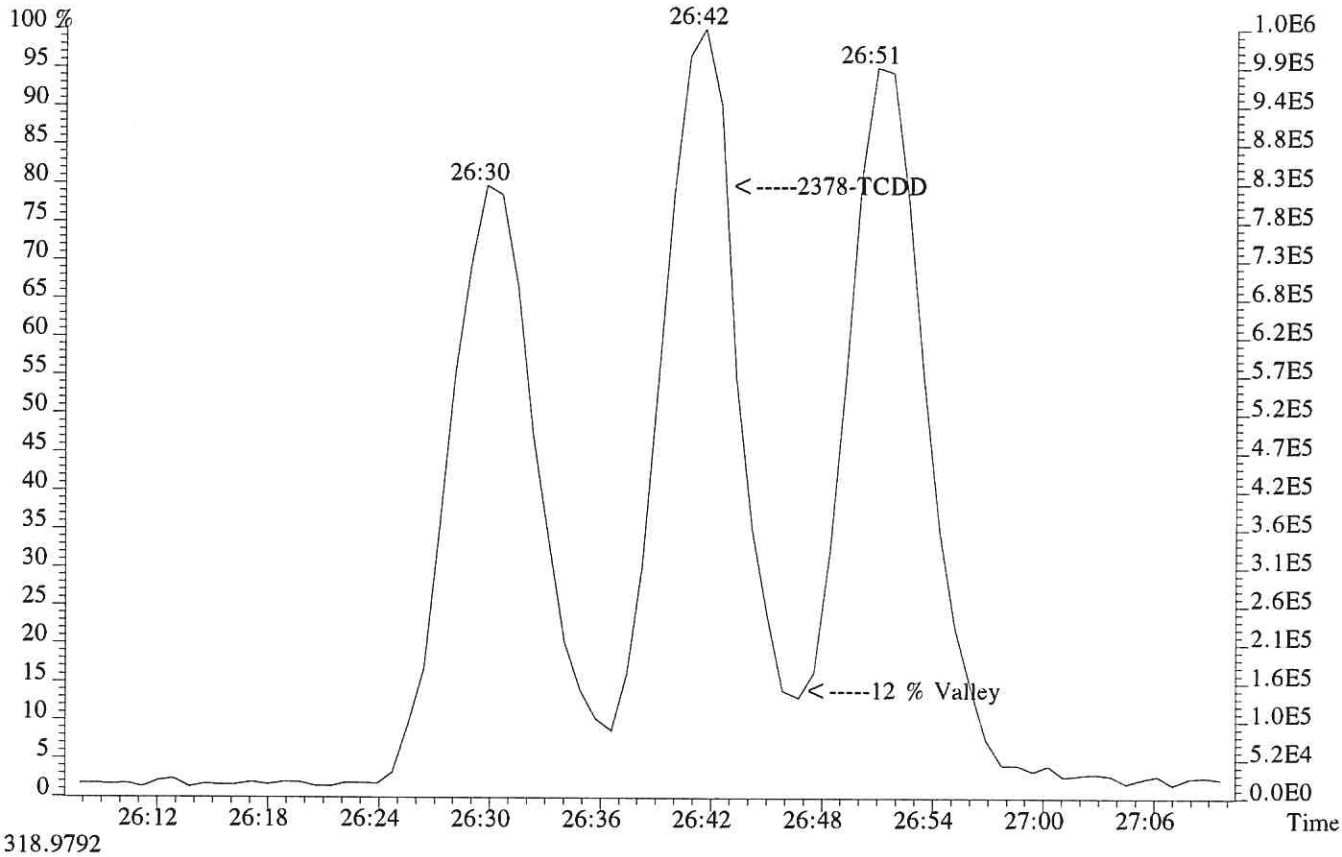
Lab Name: ALS Environmental
Lab Code: ALSTX
GC Column: DB-5MSUI

Case No.: _____ SDG No.:
ID: 0.25 (mm) Lab File ID: P616182
Date Analyzed: 25-DEC-18
Time Analyzed: 01:23:23

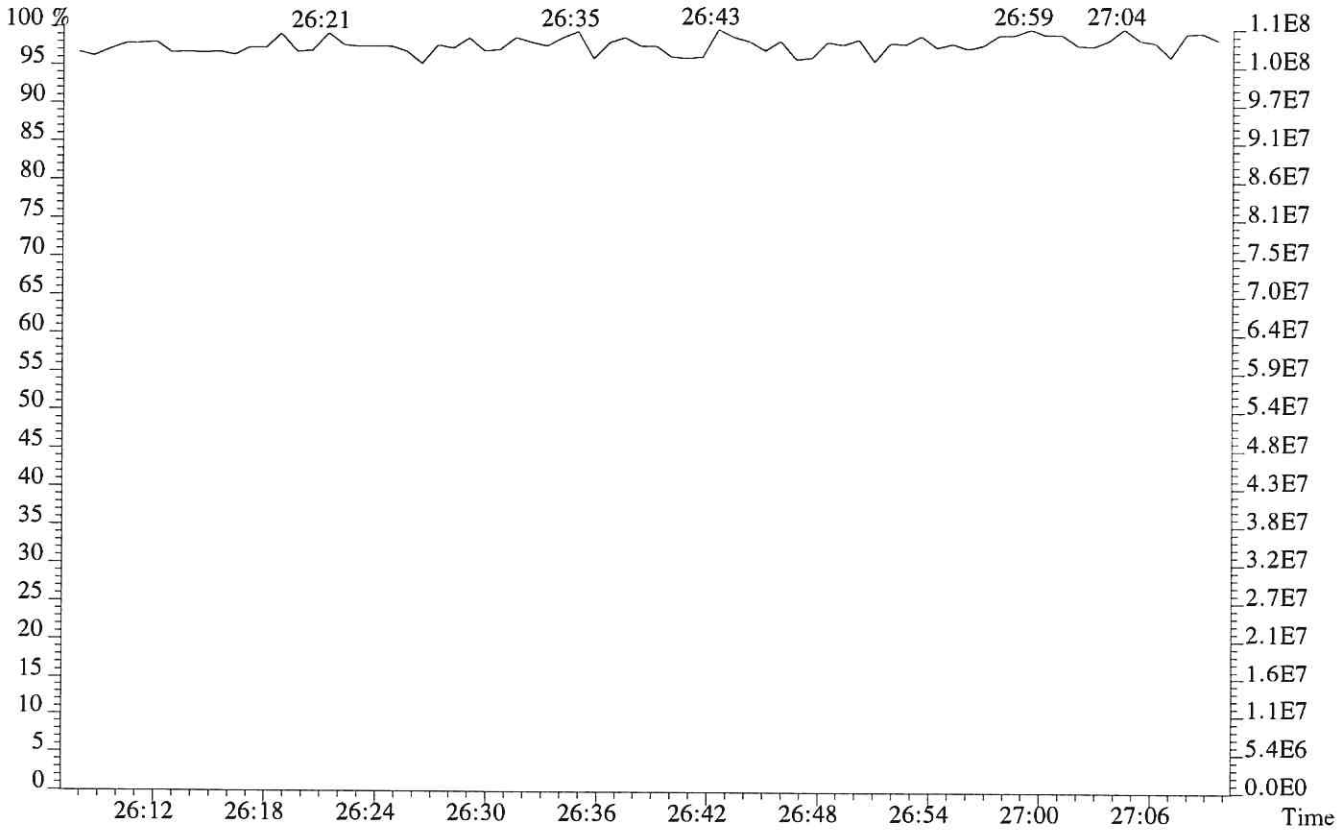
Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	21:19	28:05
TCDD	22:56	27:54
PeCDF	28:00	32:44
PeCDD	29:46	32:28
HxCDF	33:25	36:01
HxCDD	33:58	35:37
HpCDF	37:16	38:35
HpCDD	37:30	38:10

% Valley 2378-TCDD: 12 %

File:P616182 #1-587 Acq:25-DEC-2018 01:23:23 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
319.8965



318.9792



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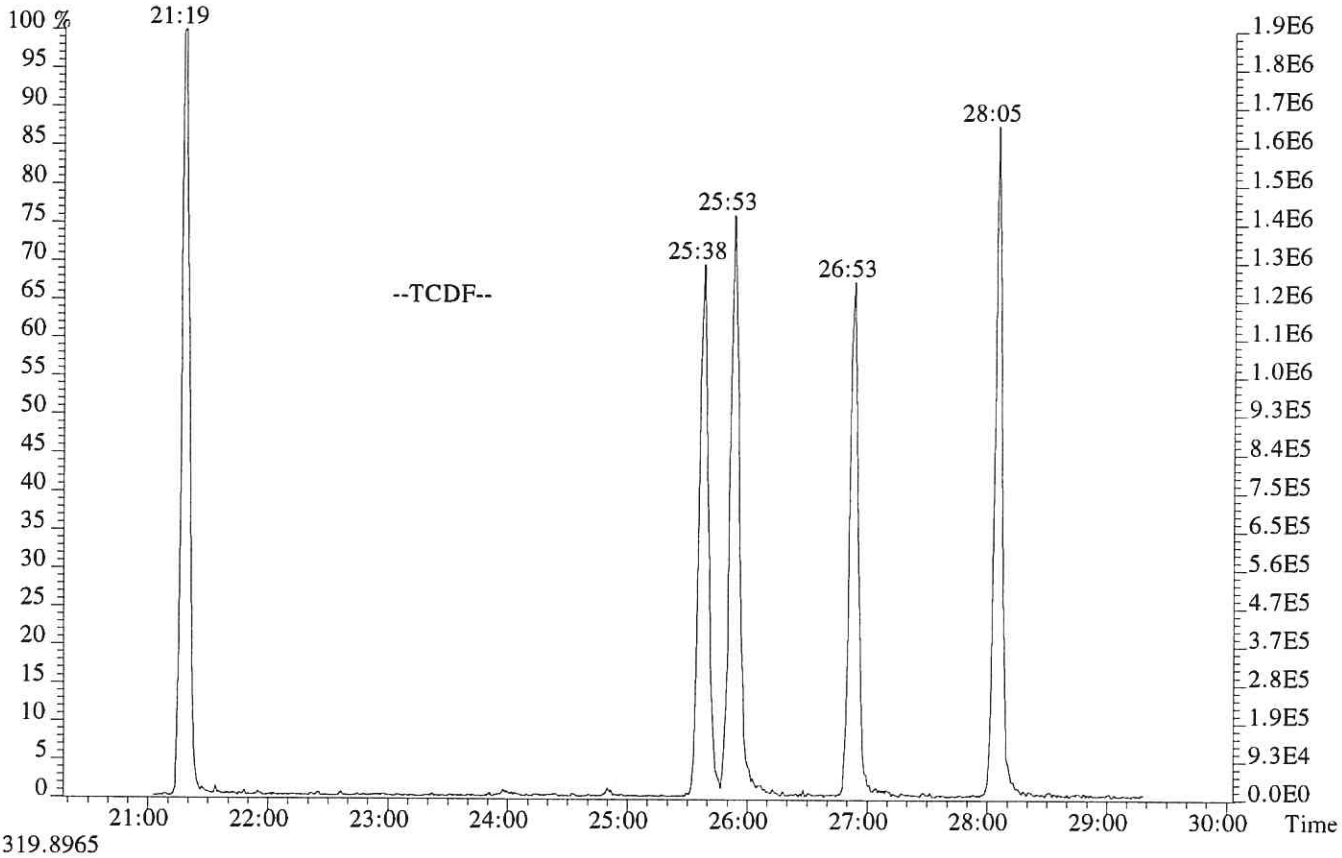
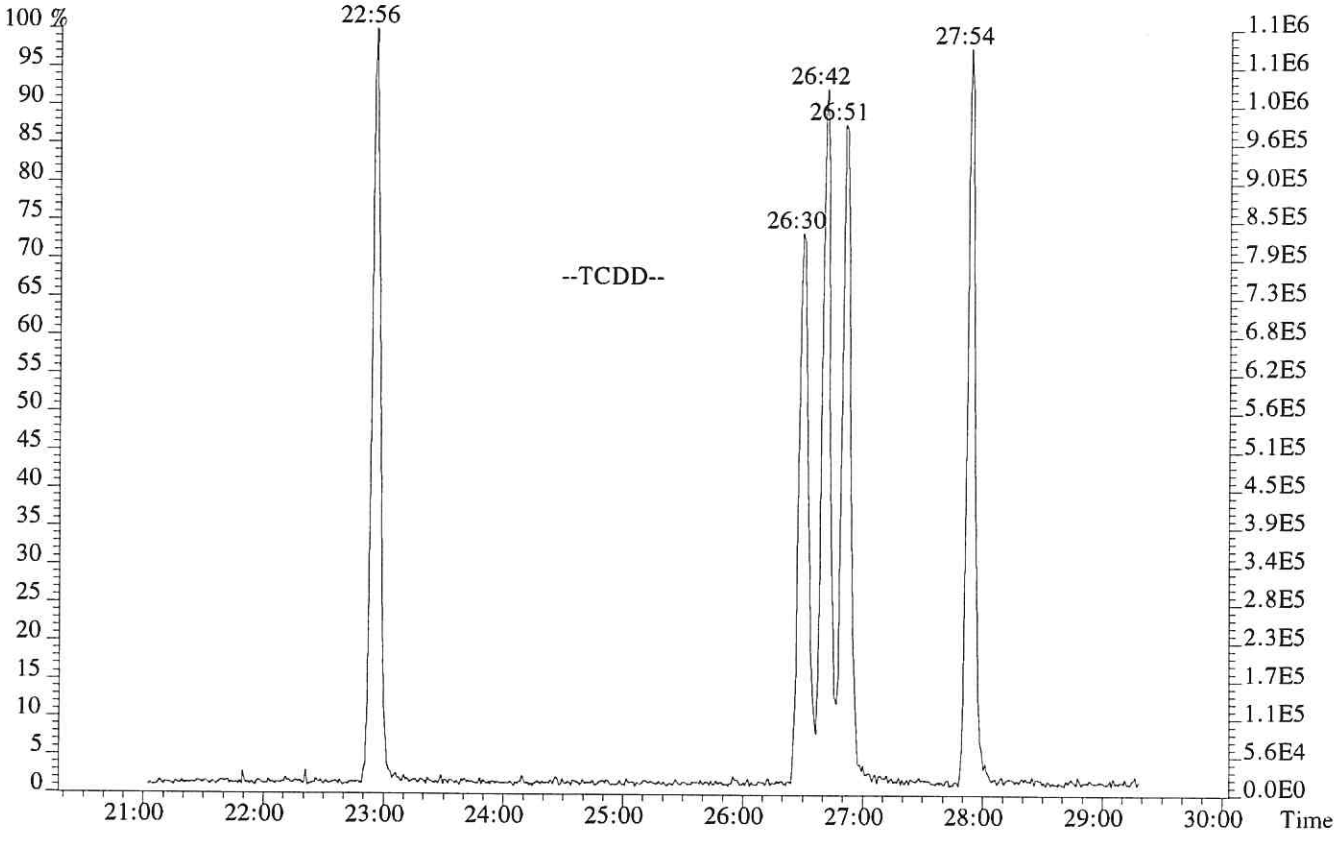
Sample#1 Exp:WINDOW DEFINE
303.9016



319.8965



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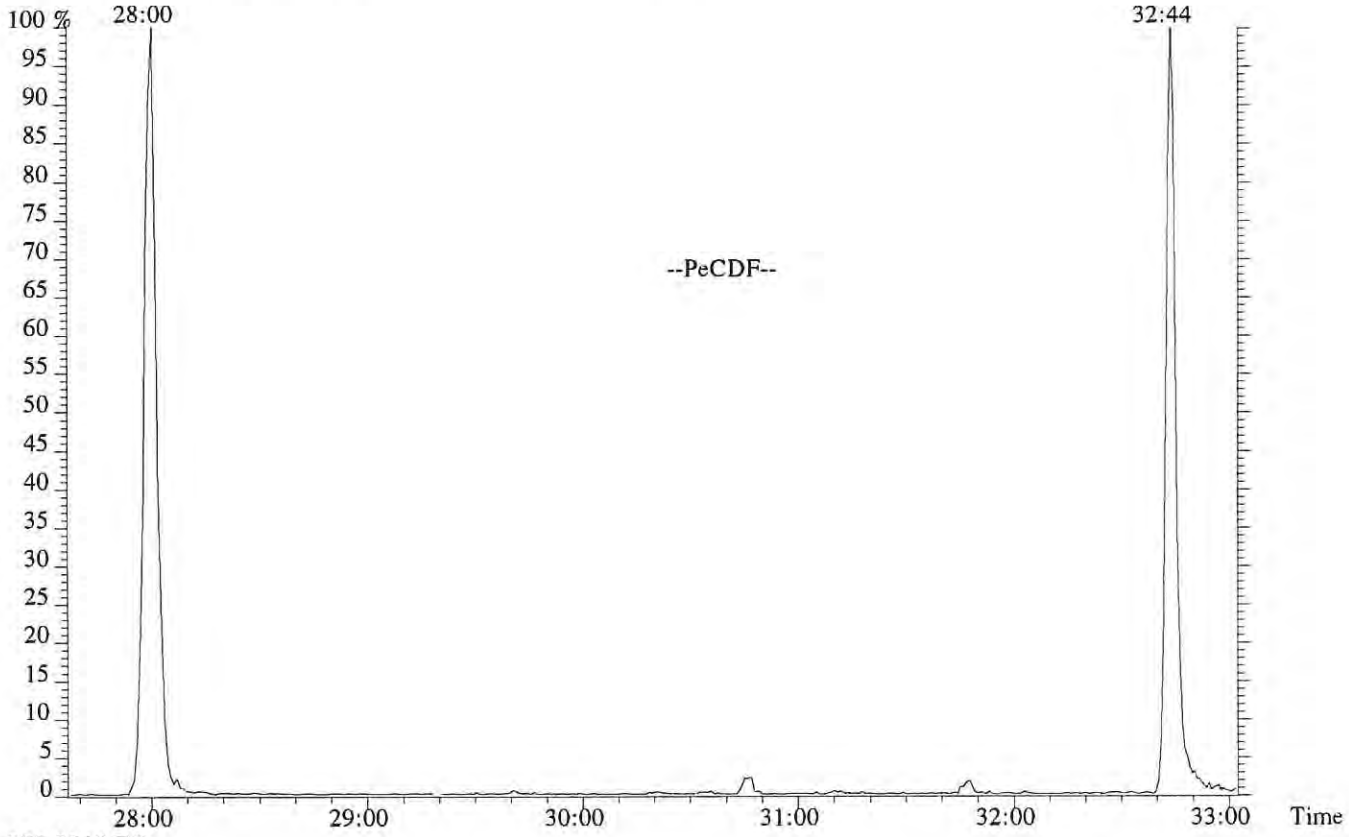
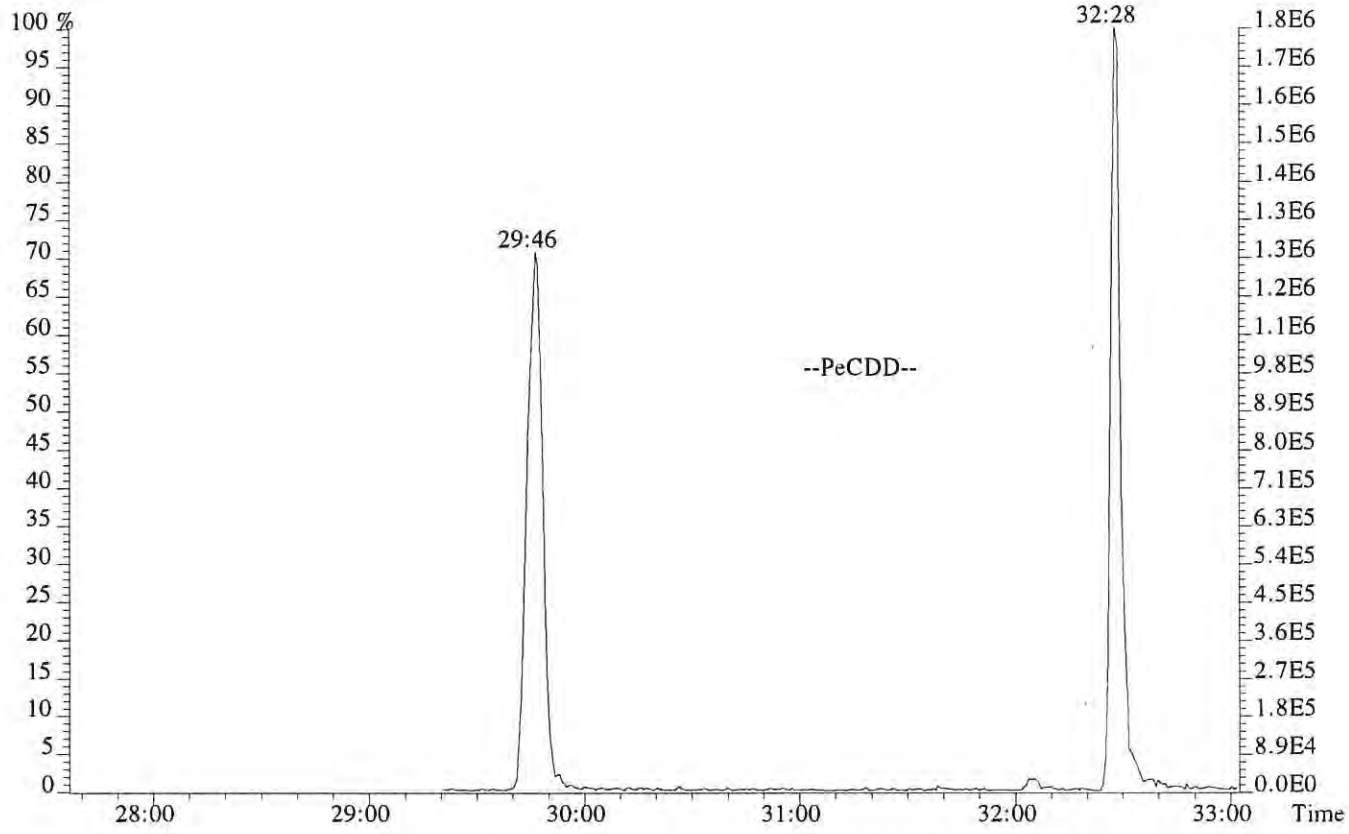
Sample#1 Exp:WINDOW DEFINE
339.8597,339.8597 F:2



355.8546 F:2



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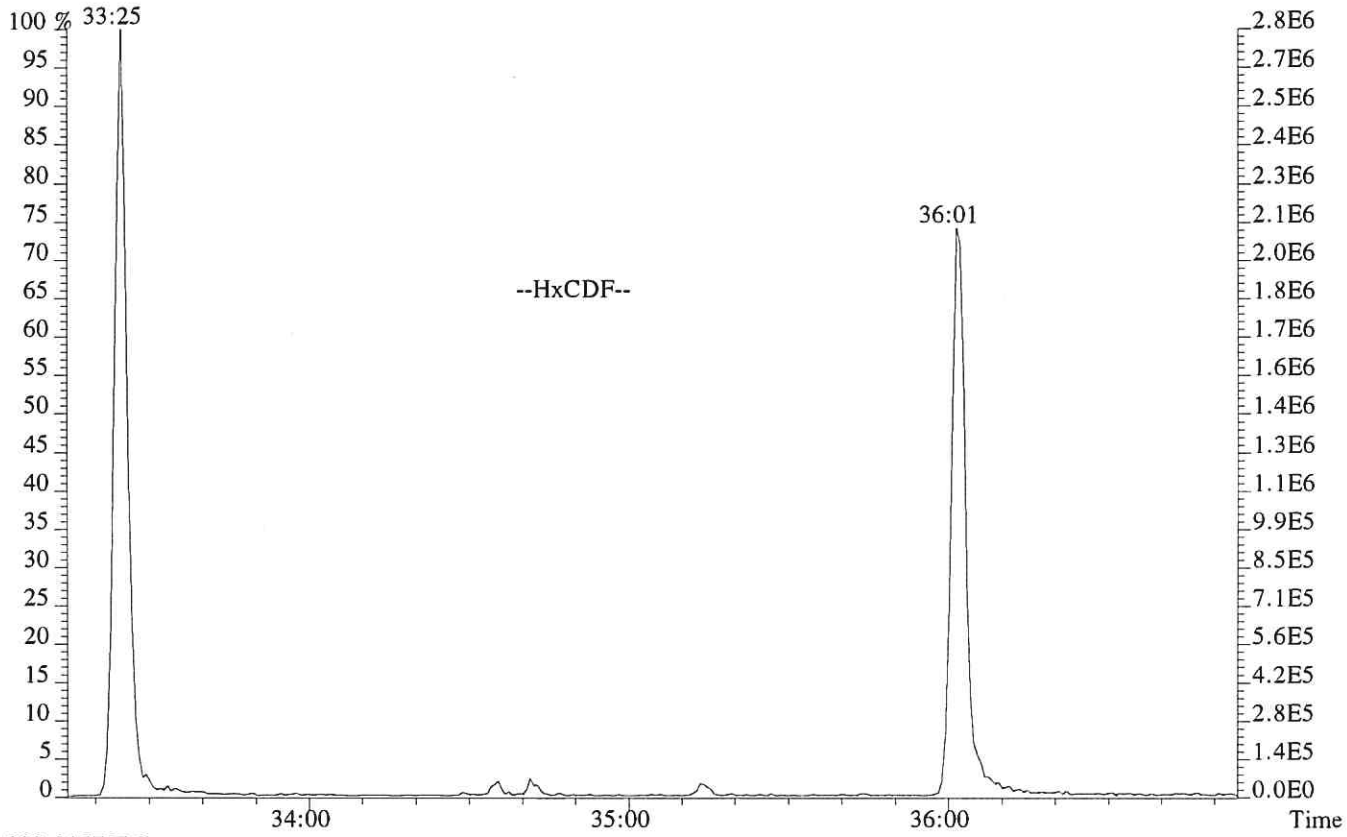
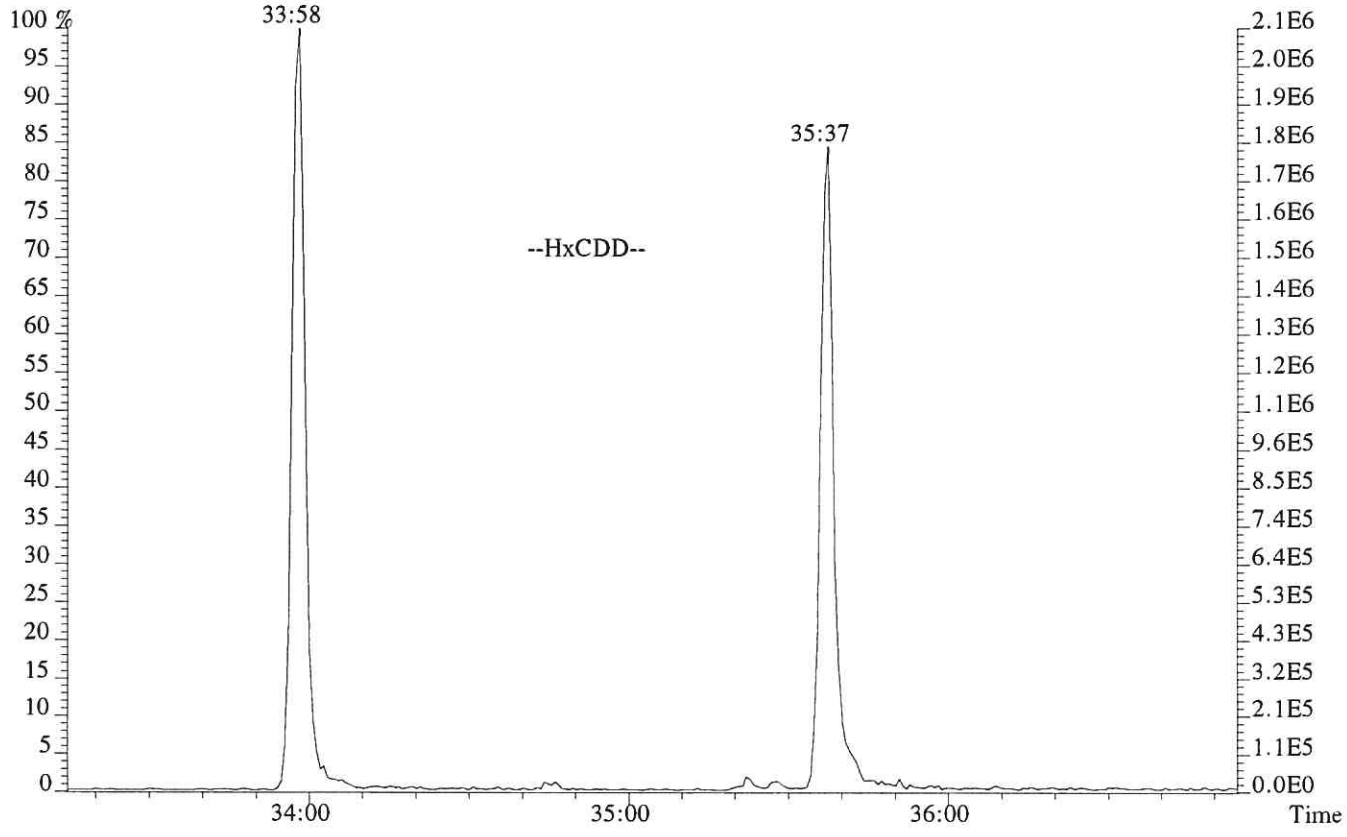
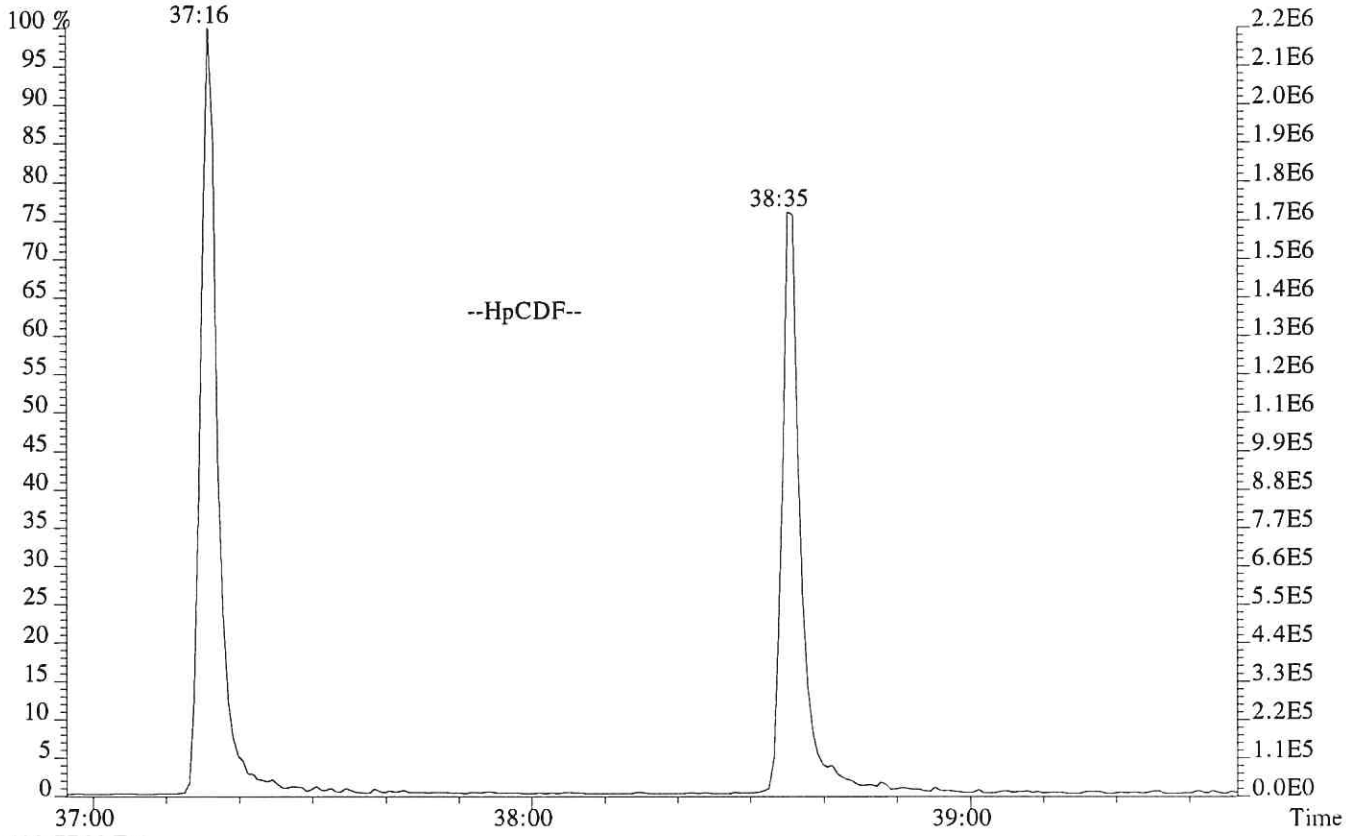
Sample#1 Exp:WINDOW DEFINE
373.8208 F:3



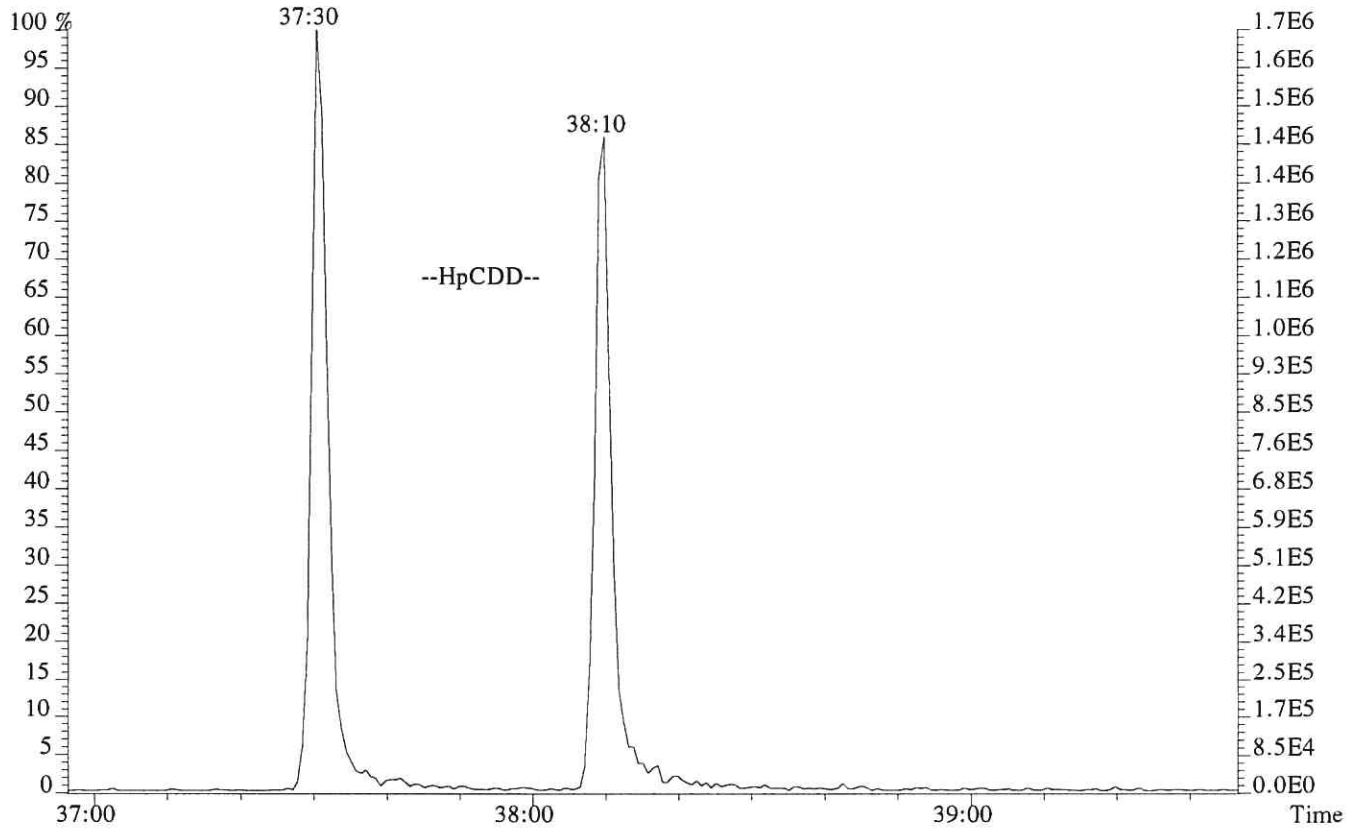
389.8157 F:3



File:P616182 #1-587 Acq:25-DEC-2018 01:23:23 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
407.7818 F:4



423.7766 F:4



USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

Instrument ID: E-HRMS-08 GC Column ID: DB-5MSUI

VER Data Filename: P616181 Analysis Date: 25-DEC-18 Time: 00:35:05

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	9.7	7.8 - 12.9	-2.6
1,2,3,7,8-PeCDD	M+2/M+4	1.55	1.32-1.78	51	39 - 65	2.7
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	50	39 - 64	-0.5
1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	50	39 - 64	-0.1
1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	49	41 - 61	-1.3
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.01	0.88-1.20	43	43 - 58	-14.8
OCDD	M+2/M+4	0.91	0.76-1.02	98	79 - 126	-2.4
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	9.2	8.4 - 12.0	-7.8
1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	47	41 - 60	-5.7
2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	46	41 - 61	-7.5
1,2,3,4,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	45	45 - 56	-9.2
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	46	44 - 57	-8.1
1,2,3,7,8,9-HxCDF	M+2/M+4	1.26	1.05-1.43	46	45 - 56	-7.5
2,3,4,6,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	46	44 - 57	-7.3
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.07	0.88-1.20	47	45 - 55	-5.4
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.08	0.88-1.20	46	43 - 58	-7.3
OCDF	M+2/M+4	0.91	0.76-1.02	86	63 - 159	-14.1

(1) See Table 8, Method 1613B, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.

(3) Contract-required concentration range as specified in Table 6, Method 1613B, under VER.

(4) The beginning CCAL %RSD for the 17 unlabeled standard must not exceed +/- 20%, Section 7.7.4.1. The ending CCAL must not exceed +/-25%, Section 8.3.2.4, Method 8290

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

Instrument ID: E-HRMS-08 GC Column ID: DB-5MSUI

VER Data Filename: P616181 Analysis Date: 25-DEC-18 Time: 00:35:05

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	95	82 - 121	-4.7
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.56	1.32-1.78	102	62 - 160	2.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	102	85 - 117	2.3
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	107	85 - 118	6.7
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.09	0.88-1.20	89	72 - 138	-10.9
13C-OCDD	M+2/M+4	0.89	0.76-1.02	217	96 - 415	8.3
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	91	71 - 140	-8.8
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	101	76 - 130	0.5
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	102	77 - 130	1.7
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	94	76 - 131	-6.2
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	100	70 - 143	0.3
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.54	0.43-0.59	90	74 - 135	-10.2
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	97	73 - 137	-2.8
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	102	78 - 129	1.6
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	95	77 - 129	-5.1
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD	M+2/M+4			9.2	7.8 - 12.7	-7.6

(1) See Table 8, Method 1613B, for m/z specifications.
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.
(3) Contract-required concentration range, as specified in Table 6, Method 1613B, under VER.
(4) No ion abundance ratio; report concentration found.
(5) The beginnning CCAL %RSD for the labeled standard must not exceed +/- 30% Section 7.7.4.2. The ending CCAL must not exceed +/- 35%, Sec 8.3.2.4 (8290)

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
194503

Run #7 Filename P616181 Samp: 1 Inj: 1 Acquired: 25-DEC-18 00:35:05
Processed: 28-DEC-18 11:07:20 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:54	7.383e+03	9.406e+03	0.78	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:46	6.952e+04	4.449e+04	1.56	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:47	6.481e+04	4.141e+04	1.57	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:35	6.103e+04	4.830e+04	1.26	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:42	6.898e+04	5.527e+04	1.25	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:14	6.329e+04	4.943e+04	1.28	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	36:00	5.381e+04	4.254e+04	1.26	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:16	6.082e+04	5.681e+04	1.07	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:36	4.733e+04	4.385e+04	1.08	yes	no	1.463
10	Unk	OCDF	40:49	7.159e+04	7.893e+04	0.91	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:52	5.485e+03	6.982e+03	0.79	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	32:05	4.331e+04	2.800e+04	1.55	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:23	4.286e+04	3.410e+04	1.26	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:28	4.445e+04	3.523e+04	1.26	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:42	4.657e+04	3.675e+04	1.27	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:10	2.844e+04	2.815e+04	1.01	yes	no	1.112
17	Unk	OCDD	40:38	5.990e+04	6.600e+04	0.91	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:53	7.420e+04	9.422e+04	0.79	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:45	1.287e+05	8.030e+04	1.60	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:46	1.281e+05	8.009e+04	1.60	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:35	5.850e+04	1.115e+05	0.52	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:41	7.252e+04	1.366e+05	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:13	6.547e+04	1.243e+05	0.53	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:59	5.541e+04	1.032e+05	0.54	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:16	5.066e+04	1.127e+05	0.45	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:35	4.152e+04	9.291e+04	0.45	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:50	5.399e+04	6.801e+04	0.79	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	32:04	9.114e+04	5.839e+04	1.56	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:22	8.132e+04	6.303e+04	1.29	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:27	8.393e+04	6.666e+04	1.26	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:09	6.218e+04	5.720e+04	1.09	yes	no	0.857
32	IS	13C-OCDD	40:38	1.052e+05	1.177e+05	0.89	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	26:07	5.717e+04	7.314e+04	0.78	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:41	8.507e+04	7.114e+04	1.20	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:52	1.308e+04				no	1.086

ALS ENVIRONMENTAL
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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
194503

Run #7 Filename P616181 Samp: 1 Inj: 1 Acquired: 25-DEC-18 00:35:05
Processed: 28-DEC-18 11:07:20 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.10e+06	2.97e+03	3.7e+02	1.37e+06	9.77e+03	1.4e+02
2	1,2,3,7,8-PeCDF	1.17e+07	1.61e+03	7.3e+03	7.45e+06	3.08e+03	2.4e+03
3	2,3,4,7,8-PeCDF	1.19e+07	1.61e+03	7.4e+03	7.52e+06	3.08e+03	2.4e+03
4	1,2,3,4,7,8-HxCDF	1.28e+07	2.42e+03	5.3e+03	1.00e+07	1.89e+03	5.3e+03
5	1,2,3,6,7,8-HxCDF	1.34e+07	2.42e+03	5.5e+03	1.07e+07	1.89e+03	5.7e+03
6	2,3,4,6,7,8-HxCDF	1.33e+07	2.42e+03	5.5e+03	1.04e+07	1.89e+03	5.5e+03
7	1,2,3,7,8,9-HxCDF	1.05e+07	2.42e+03	4.4e+03	8.30e+06	1.89e+03	4.4e+03
8	1,2,3,4,6,7,8-HpCDF	1.24e+07	9.40e+03	1.3e+03	1.19e+07	1.19e+04	1.0e+03
9	1,2,3,4,7,8,9-HpCDF	9.40e+06	9.40e+03	1.0e+03	8.73e+06	1.19e+04	7.3e+02
10	OCDF	1.27e+07	8.52e+02	1.5e+04	1.38e+07	4.19e+03	3.3e+03
11	2,3,7,8-TCDD	8.93e+05	7.20e+03	1.2e+02	1.12e+06	1.46e+03	7.7e+02
12	1,2,3,7,8-PeCDD	7.96e+06	1.91e+03	4.2e+03	5.13e+06	4.60e+02	1.1e+04
13	1,2,3,4,7,8-HxCDD	9.22e+06	1.21e+03	7.6e+03	7.23e+06	2.51e+03	2.9e+03
14	1,2,3,6,7,8-HxCDD	8.81e+06	1.21e+03	7.3e+03	6.97e+06	2.51e+03	2.8e+03
15	1,2,3,7,8,9-HxCDD	9.16e+06	1.21e+03	7.6e+03	7.22e+06	2.51e+03	2.9e+03
16	1,2,3,4,6,7,8-HpCDD	4.72e+06	2.46e+03	1.9e+03	4.74e+06	1.54e+03	3.1e+03
17	OCDD	1.04e+07	4.60e+02	2.3e+04	1.13e+07	8.44e+02	1.3e+04
18	13C-2,3,7,8-TCDF	1.10e+07	1.24e+04	8.9e+02	1.39e+07	1.54e+04	9.1e+02
19	13C-1,2,3,7,8-PeCDF	2.20e+07	1.93e+03	1.1e+04	1.38e+07	2.97e+03	4.7e+03
20	13C-2,3,4,7,8-PeCDF	2.32e+07	1.93e+03	1.2e+04	1.45e+07	2.97e+03	4.9e+03
21	13C-1,2,3,4,7,8-HxCDF	1.21e+07	2.08e+03	5.8e+03	2.31e+07	4.33e+03	5.3e+03
22	13C-1,2,3,6,7,8-HxCDF	1.41e+07	2.08e+03	6.8e+03	2.65e+07	4.33e+03	6.1e+03
23	13C-2,3,4,6,7,8-HxCDF	1.37e+07	2.08e+03	6.6e+03	2.59e+07	4.33e+03	6.0e+03
24	13C-1,2,3,7,8,9-HxCDF	1.09e+07	2.08e+03	5.2e+03	2.03e+07	4.33e+03	4.7e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.04e+07	2.14e+03	4.9e+03	2.28e+07	1.24e+04	1.8e+03
26	13C-1,2,3,4,7,8,9-HpCDF	8.33e+06	2.14e+03	3.9e+03	1.84e+07	1.24e+04	1.5e+03
27	13C-2,3,7,8-TCDD	8.53e+06	1.77e+04	4.8e+02	1.09e+07	1.03e+04	1.1e+03
28	13C-1,2,3,7,8-PeCDD	1.67e+07	2.46e+03	6.8e+03	1.07e+07	2.44e+03	4.4e+03
29	13C-1,2,3,4,7,8-HxCDD	1.73e+07	4.61e+03	3.7e+03	1.32e+07	3.96e+03	3.3e+03
30	13C-1,2,3,6,7,8-HxCDD	1.66e+07	4.61e+03	3.6e+03	1.32e+07	3.96e+03	3.3e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.13e+07	3.87e+03	2.9e+03	1.02e+07	1.08e+03	9.4e+03
32	13C-OCDD	1.86e+07	1.81e+03	1.0e+04	2.05e+07	1.96e+03	1.0e+04
33	13C-1,2,3,4-TCDD	8.70e+06	1.77e+04	4.9e+02	1.12e+07	1.03e+04	1.1e+03
34	13C-1,2,3,7,8,9-HxCDD	1.73e+07	4.61e+03	3.7e+03	1.38e+07	3.96e+03	3.5e+03
35	37Cl-2,3,7,8-TCDD	2.04e+06	5.78e+03	3.5e+02			

---Sample Calculation---

$$\text{)/L TCDD} = \frac{2.5 \times (7.196e+03 + 1.456e+03\ ) \times 100}{(8.529e+06 + 1.085e+07\ ) \times (\qquad\qquad\qquad\qquad\qquad\qquad) \times 1.049} =$$

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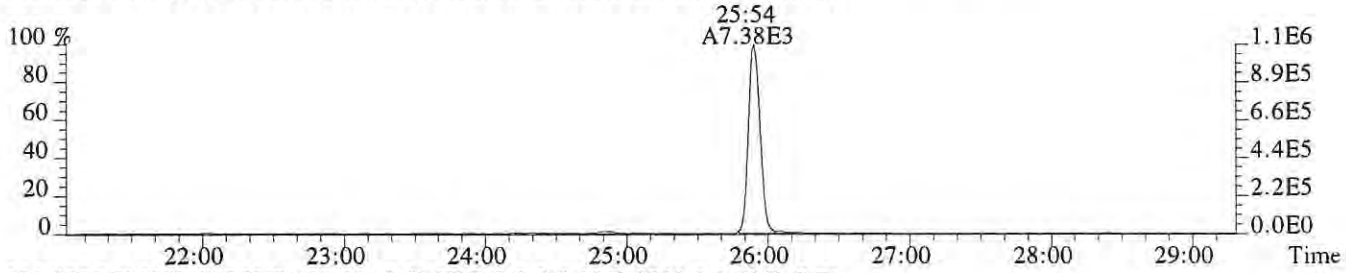
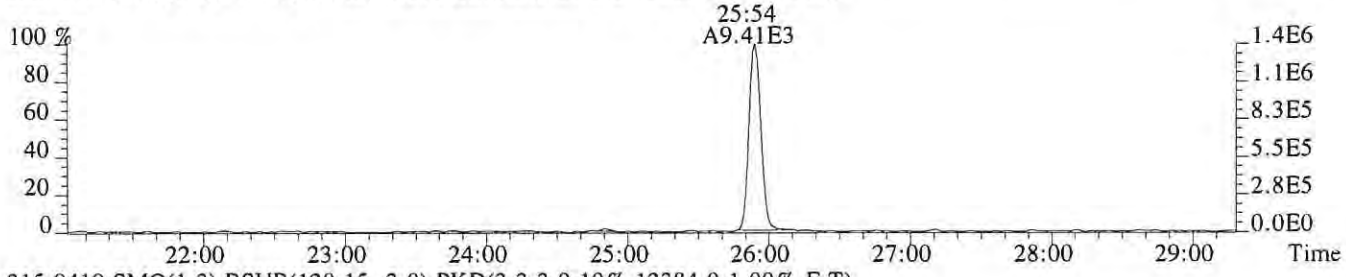
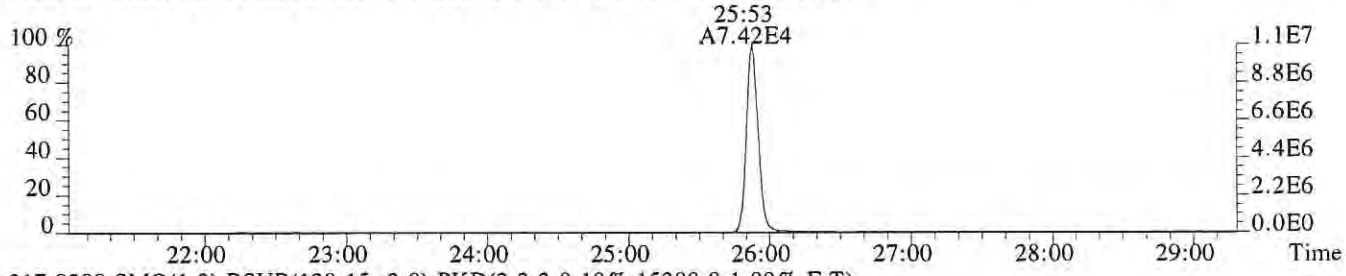
File:P616181 #1-587 Acq:25-DEC-2018 00:35:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2972.0,1.00%,F,T)



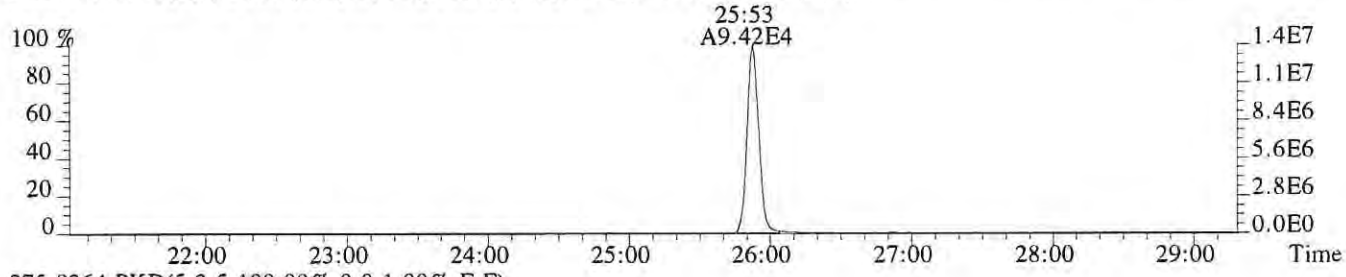
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9768.0,1.00%,F,T)



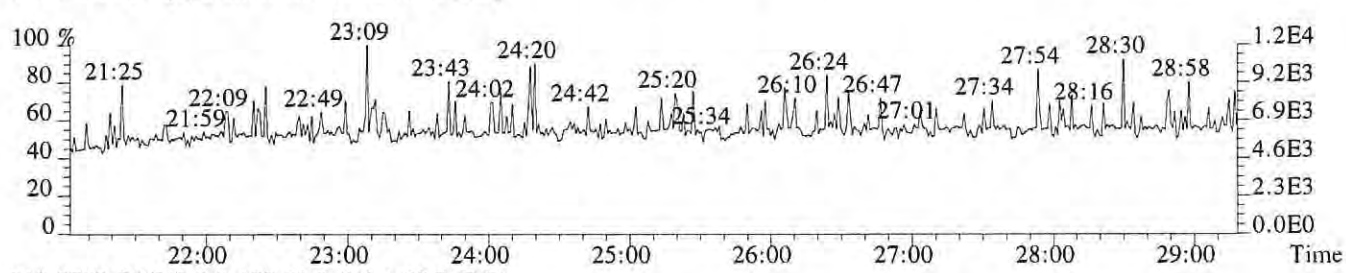
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12384.0,1.00%,F,T)



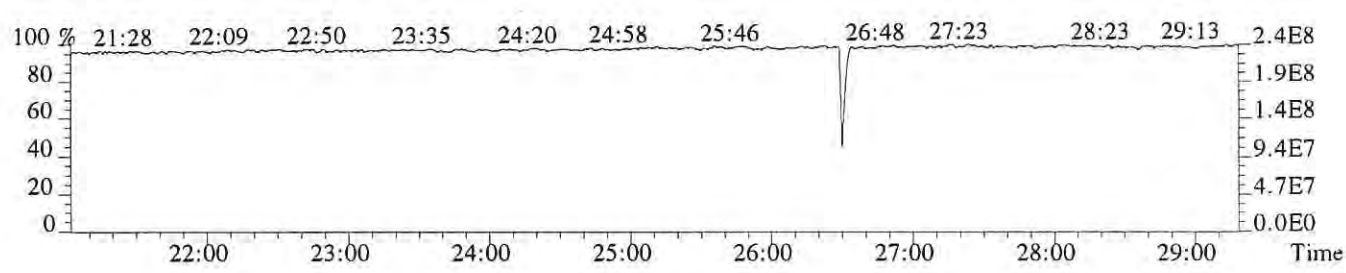
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,15380.0,1.00%,F,T)



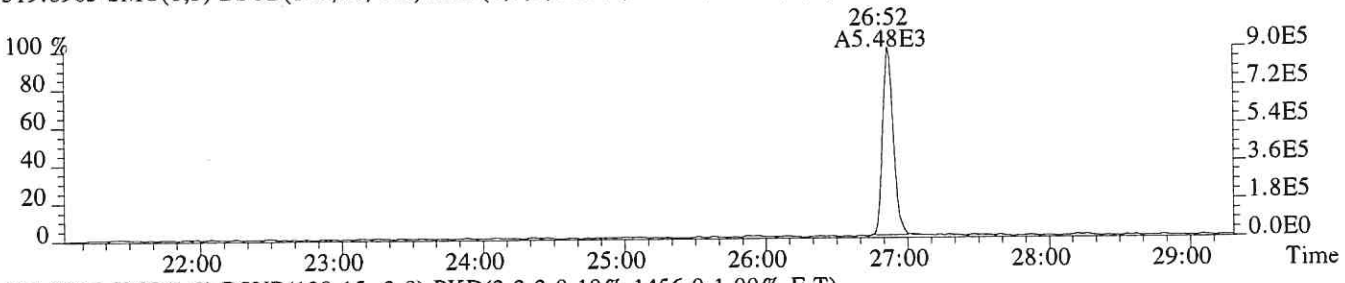
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



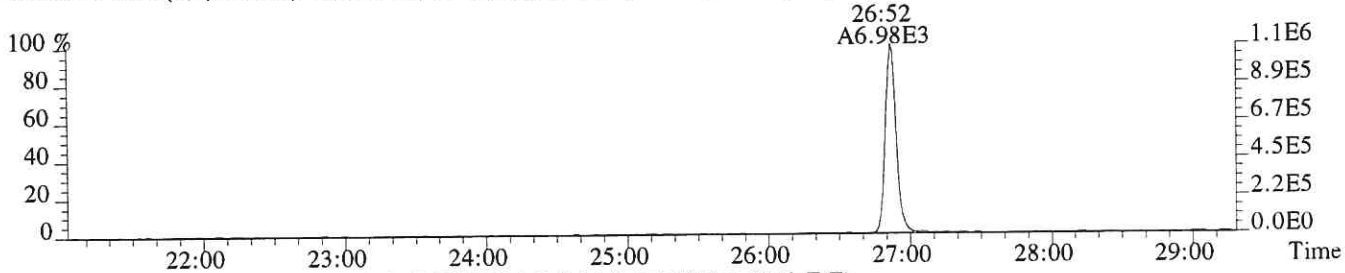
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



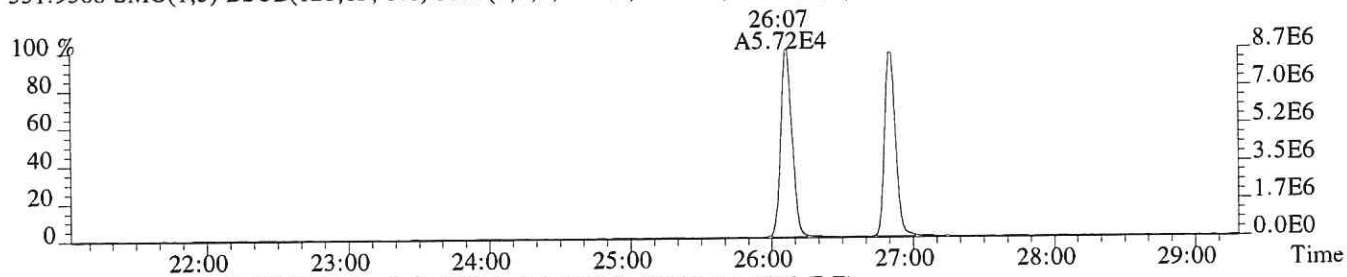
File:P616181 #1-587 Acq:25-DEC-2018 00:35:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7196.0,1.00%,F,T)



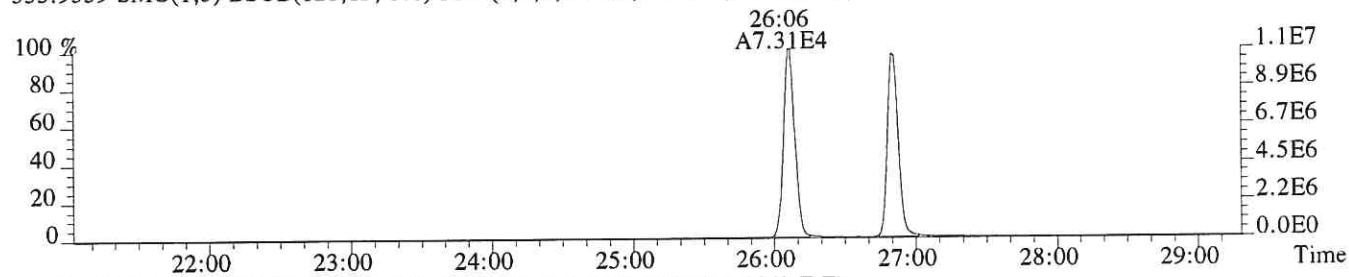
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1456.0,1.00%,F,T)



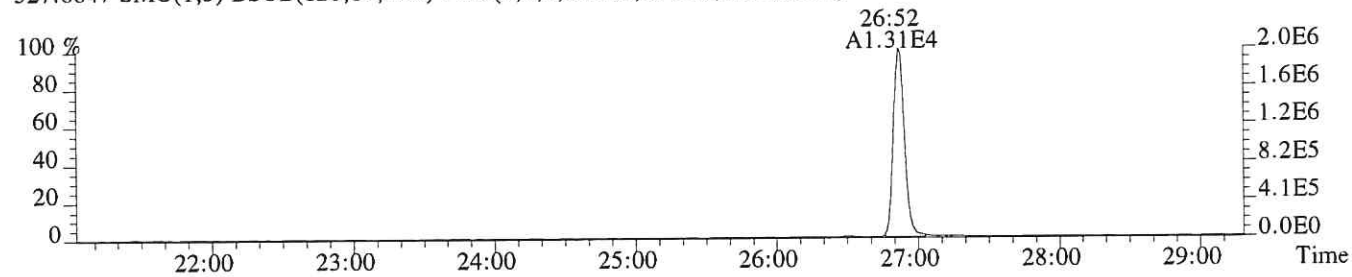
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,17748.0,1.00%,F,T)



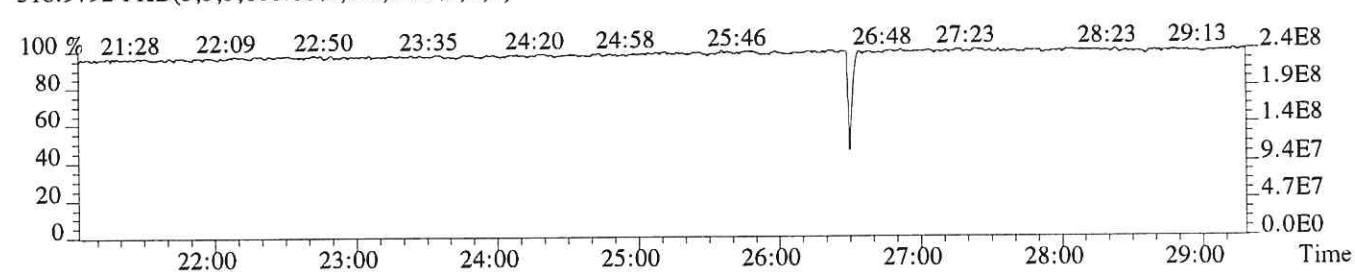
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10296.0,1.00%,F,T)



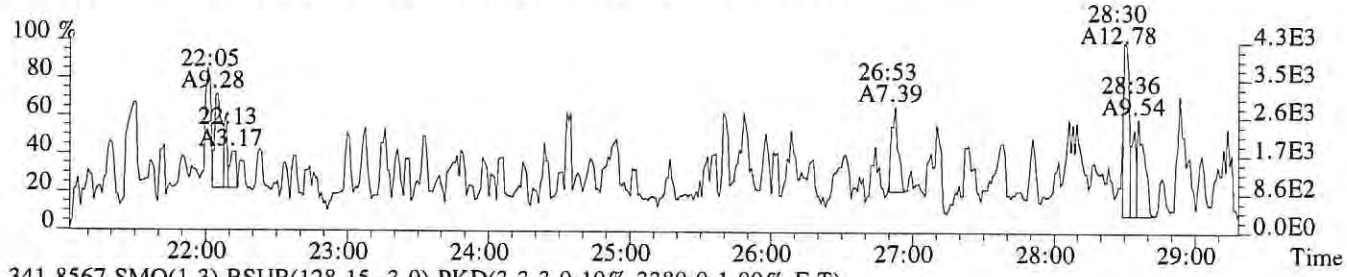
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5776.0,1.00%,F,T)



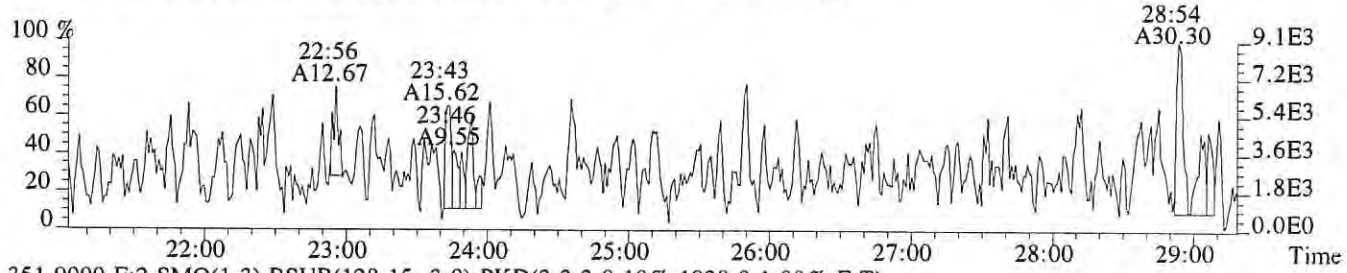
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



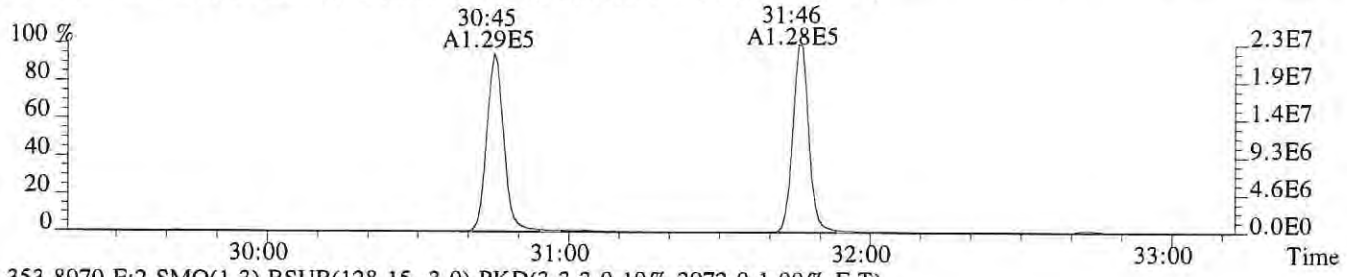
File:P616181 #1-587 Acq:25-DEC-2018 00:35:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1504.0,1.00%,F,T)



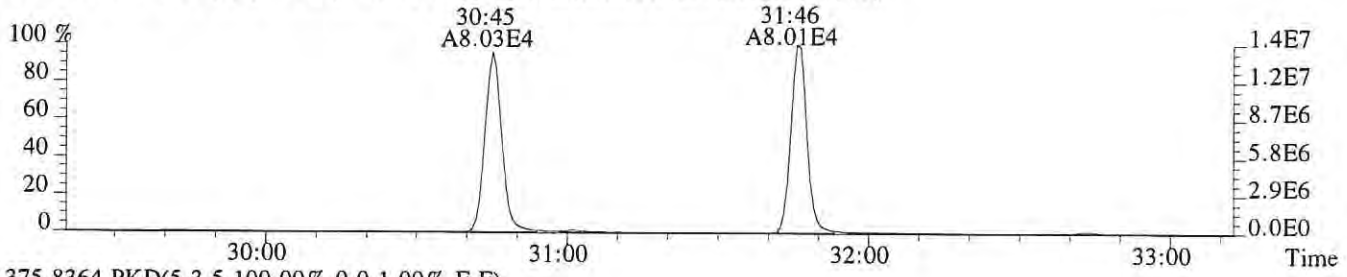
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3380.0,1.00%,F,T)



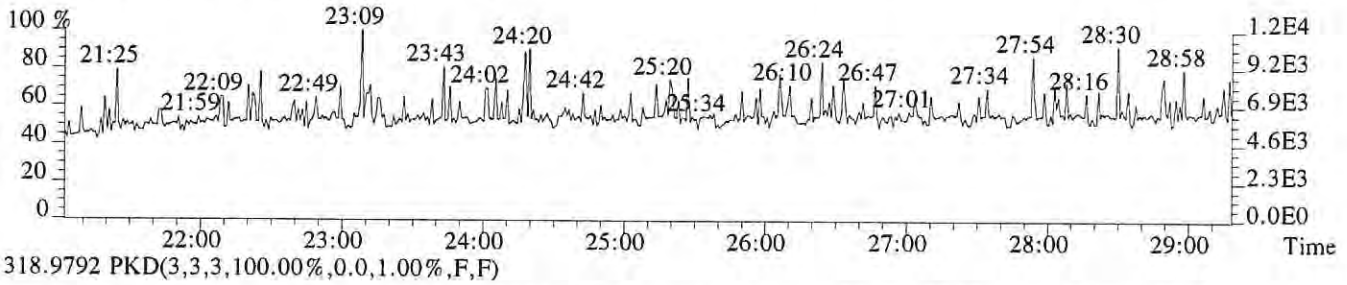
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1928.0,1.00%,F,T)



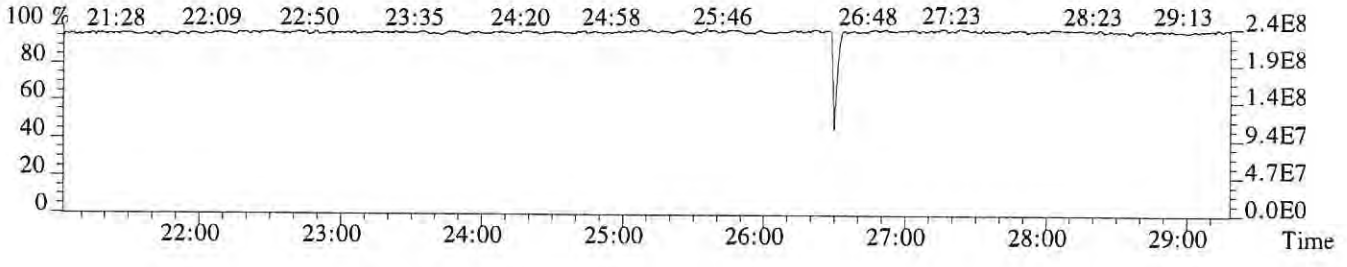
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2972.0,1.00%,F,T)



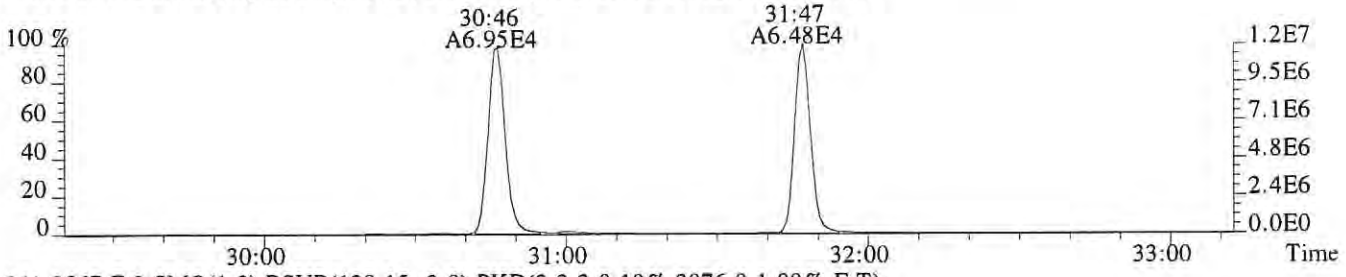
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



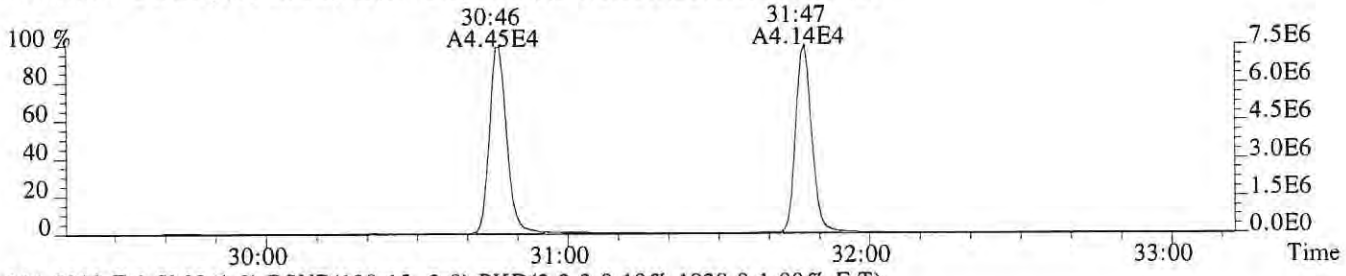
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



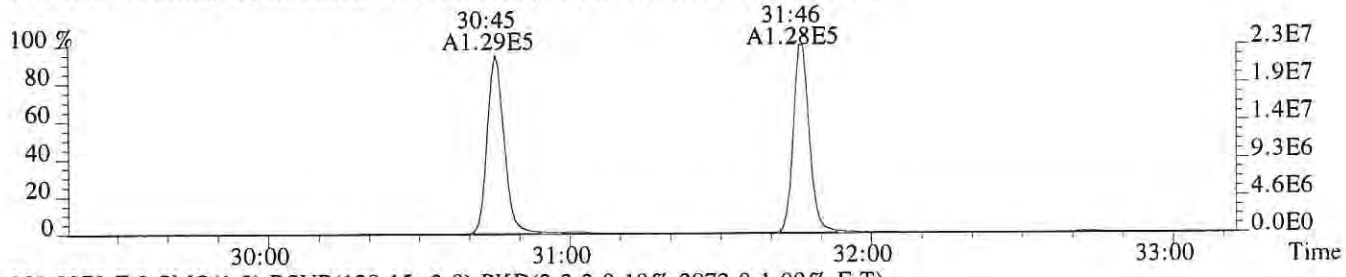
File:P616181 #1-349 Acq:25-DEC-2018 00:35:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1612.0,1.00%,F,T)



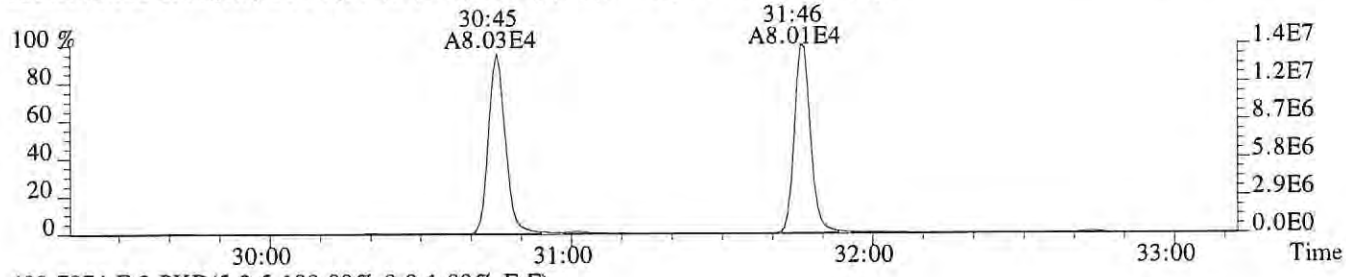
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3076.0,1.00%,F,T)



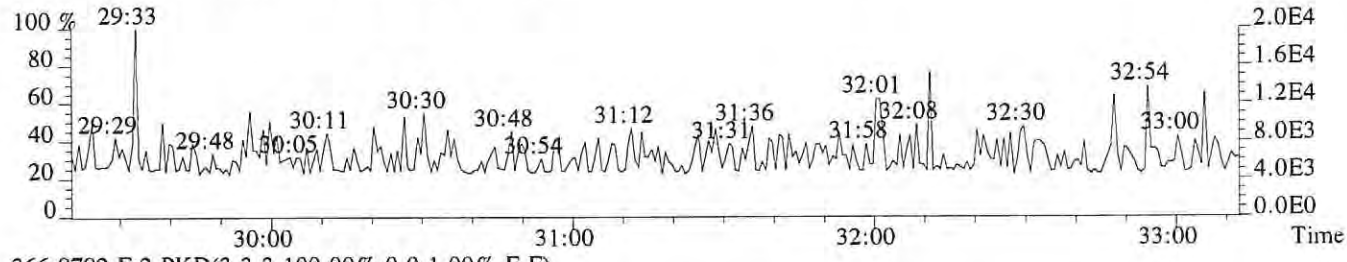
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1928.0,1.00%,F,T)



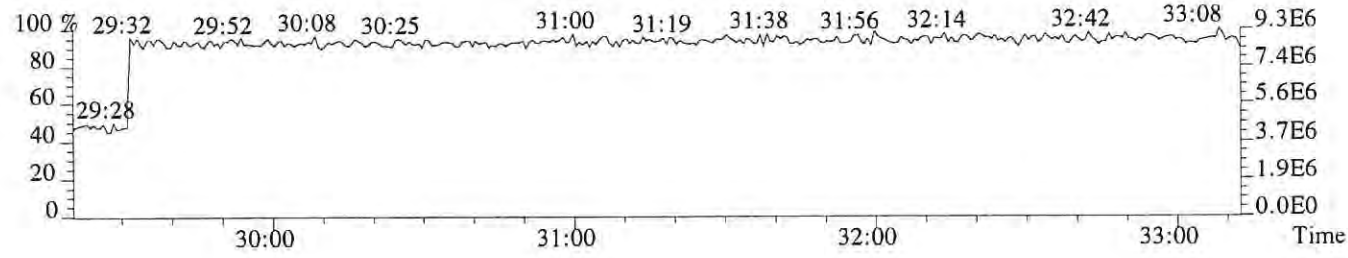
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2972.0,1.00%,F,T)



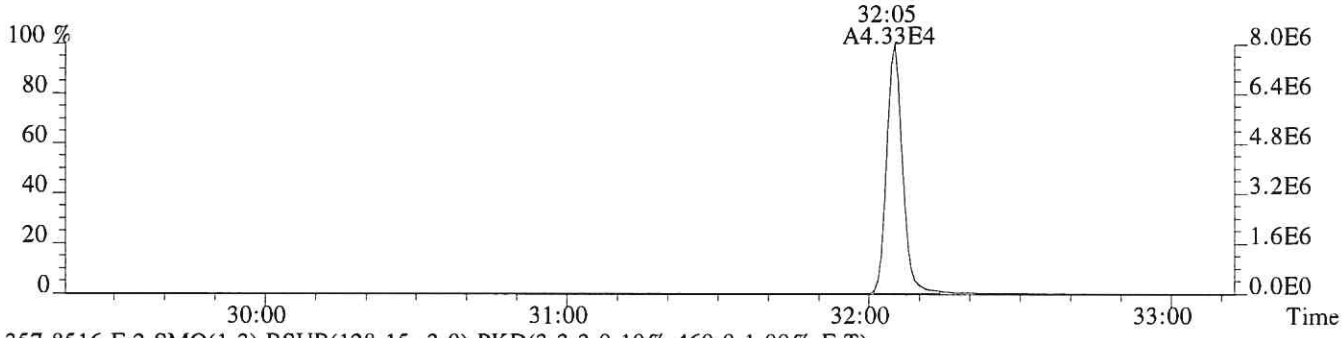
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



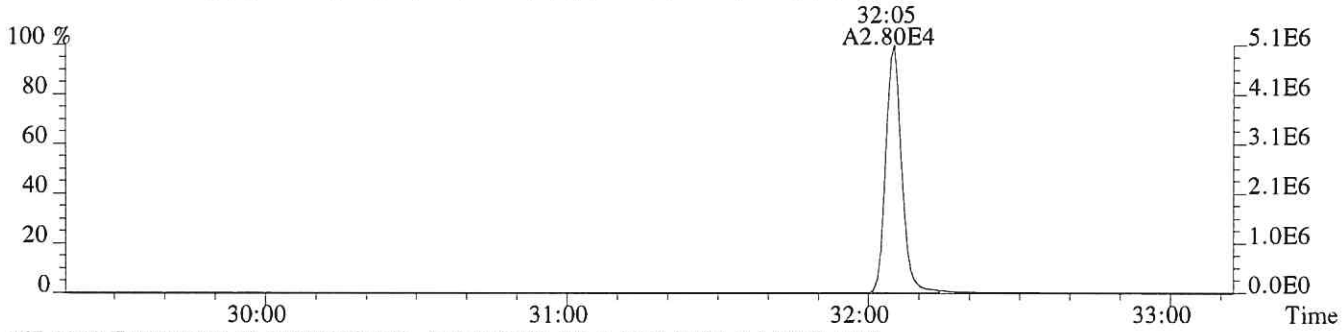
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



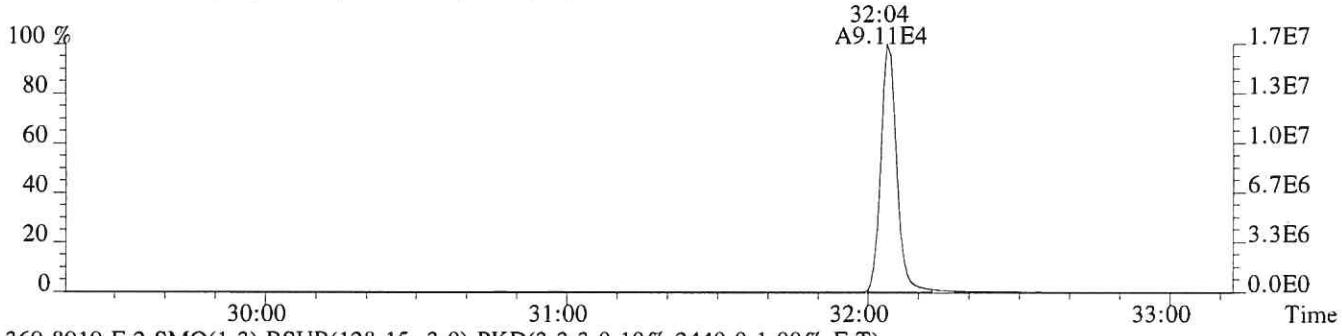
File:P616181 #1-349 Acq:25-DEC-2018 00:35:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1908.0,1.00%,F,T)



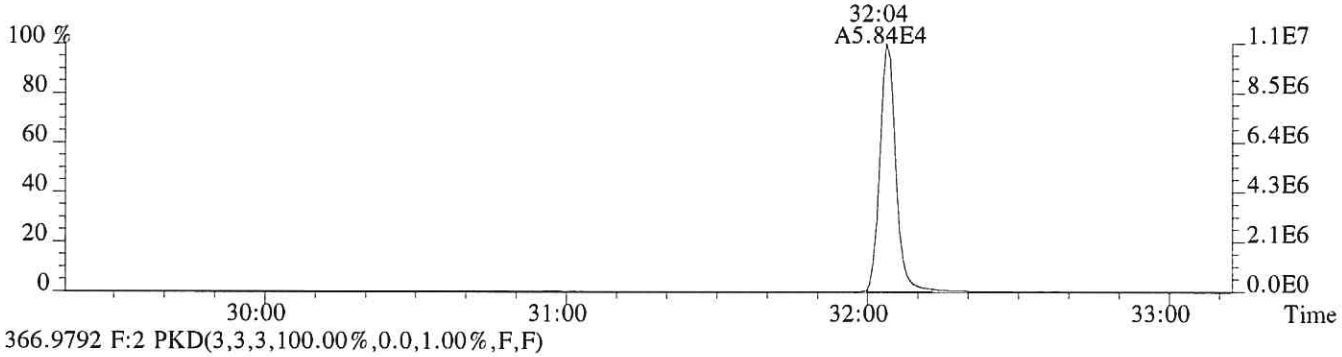
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,460.0,1.00%,F,T)



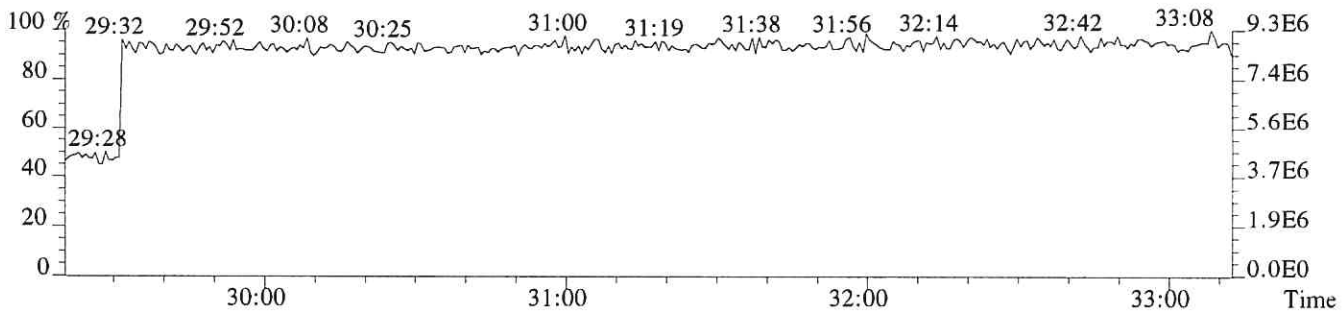
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2456.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2440.0,1.00%,F,T)

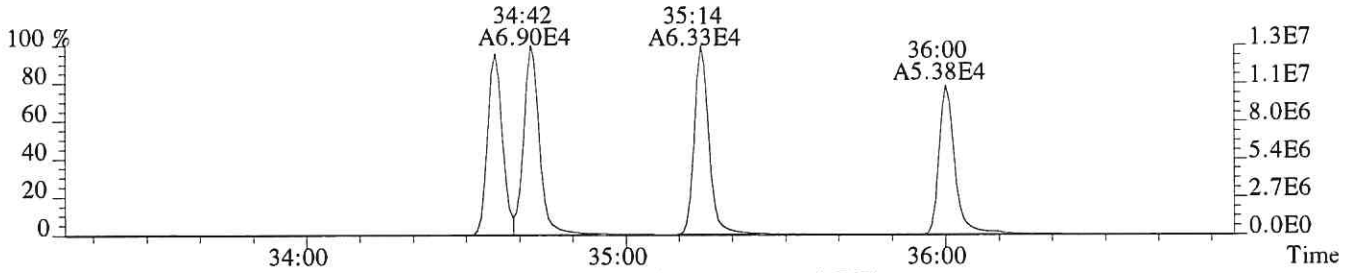


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

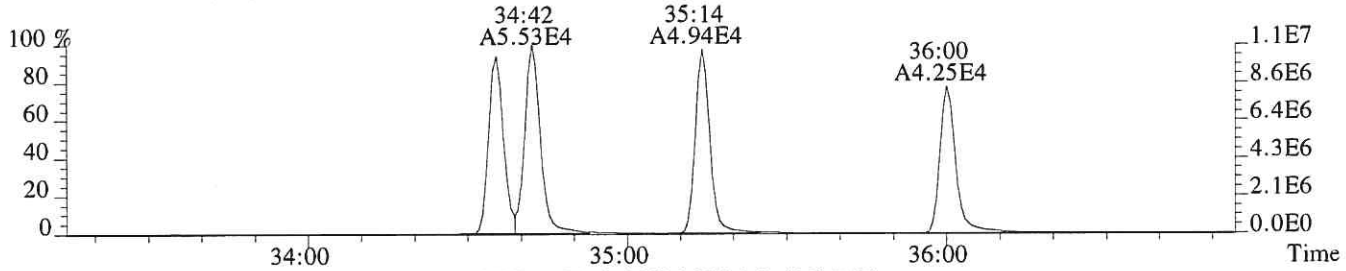


File:P616181 #1-330 Acq:25-DEC-2018 00:35:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

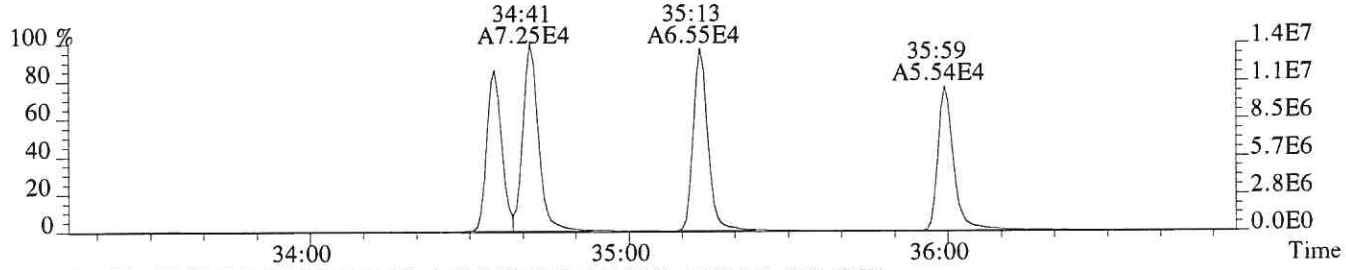
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2420.0,0.40%,F,T)



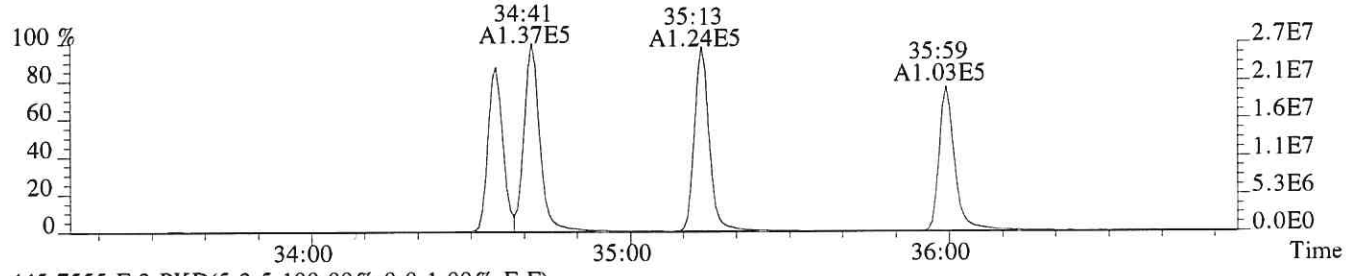
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1888.0,0.40%,F,T)



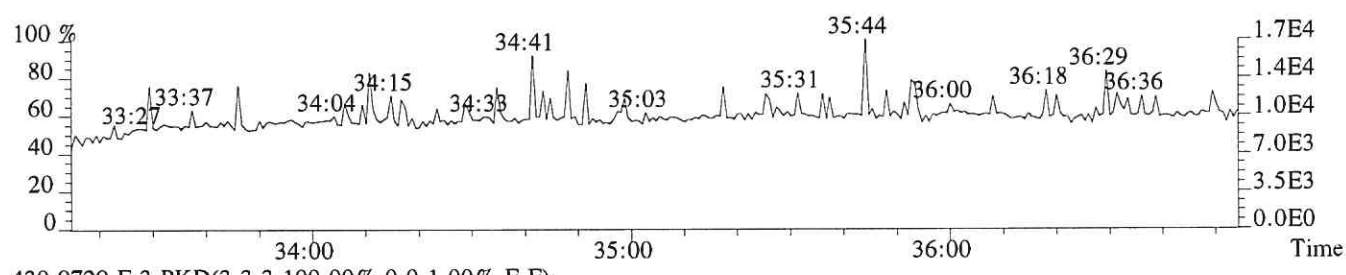
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2084.0,0.40%,F,T)



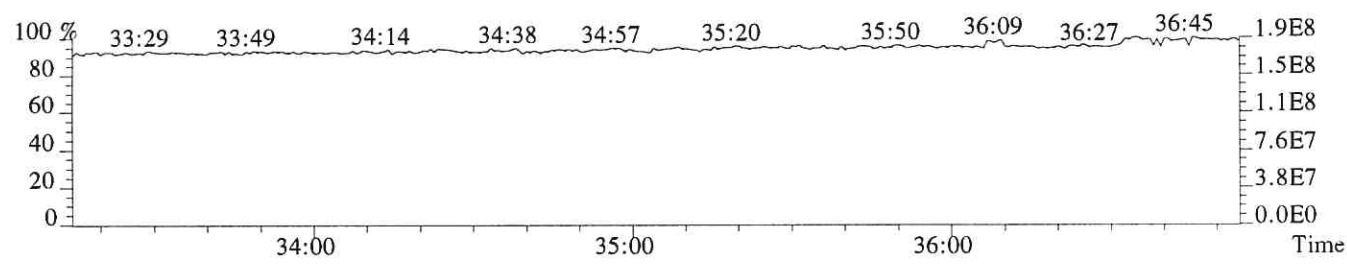
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4328.0,0.40%,F,T)



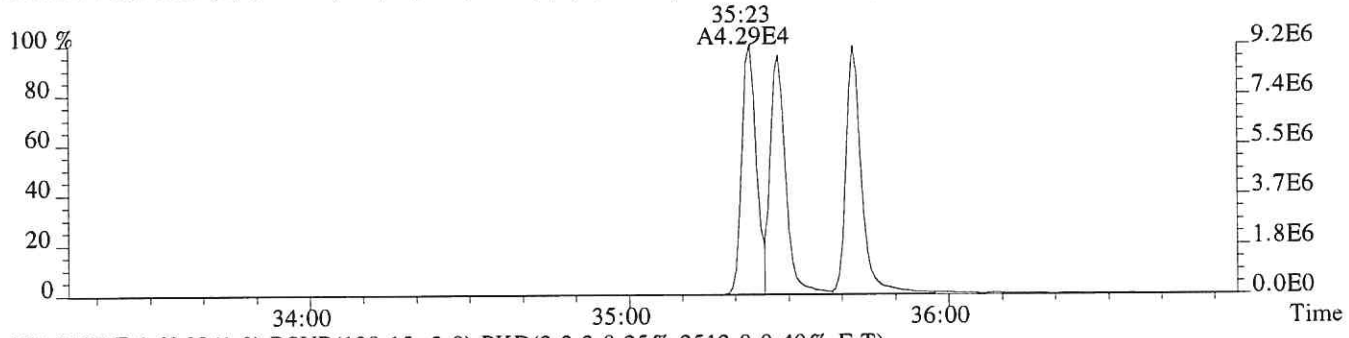
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



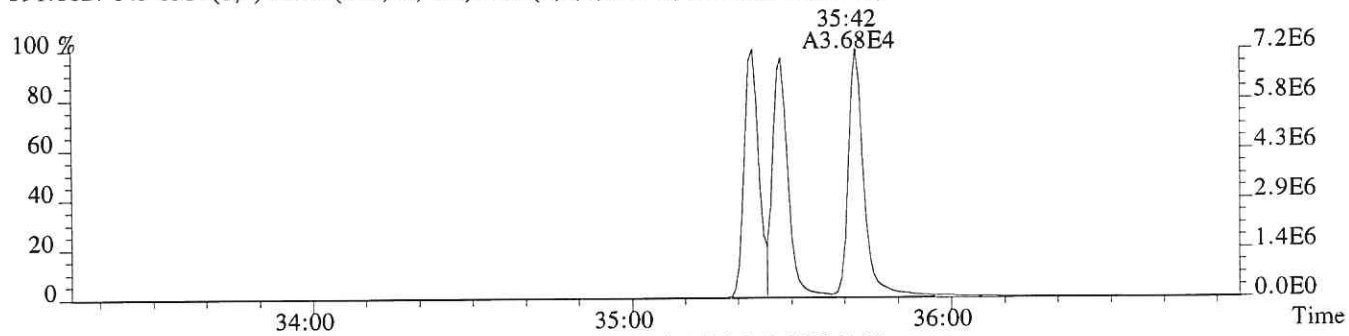
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



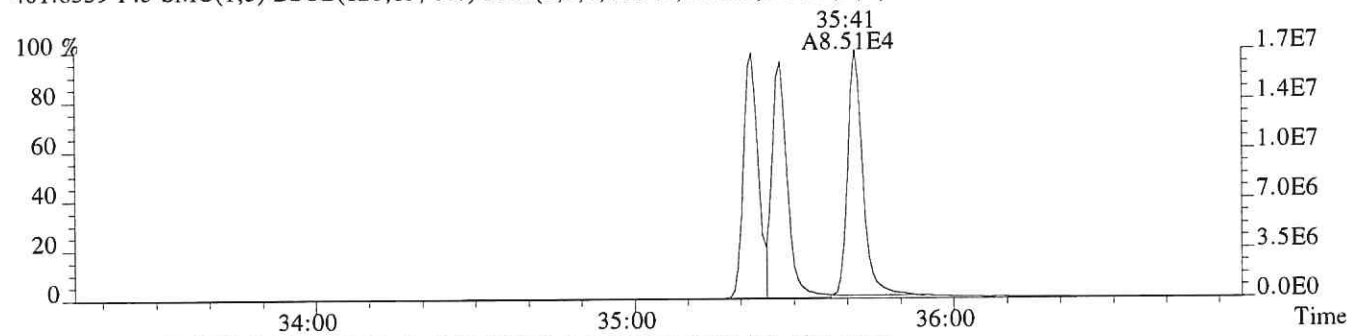
File:P616181 #1-330 Acq:25-DEC-2018 00:35:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1212.0,0.40%,F,T)



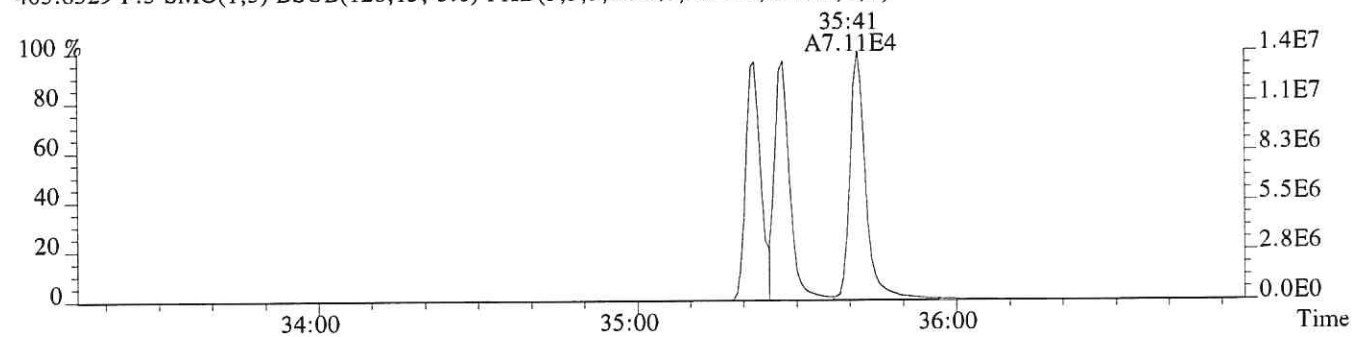
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2512.0,0.40%,F,T)



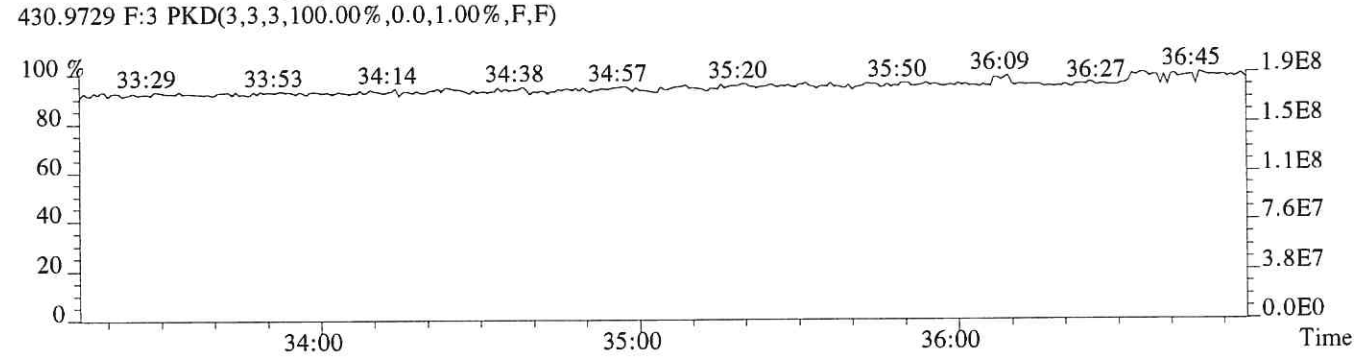
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4612.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3960.0,0.40%,F,T)

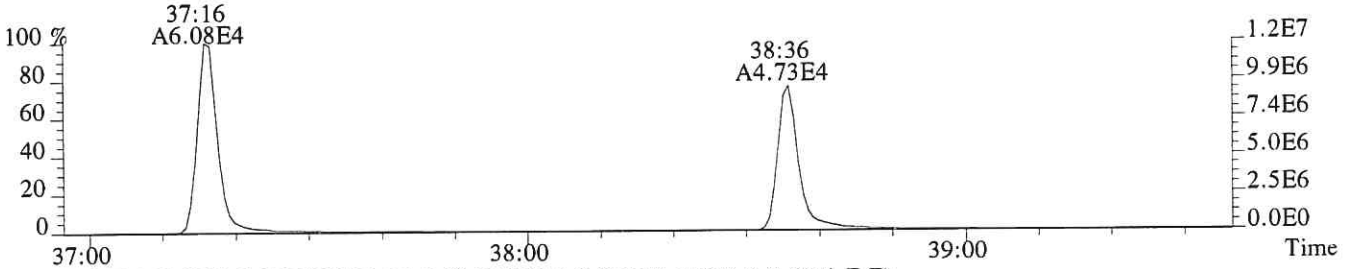


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

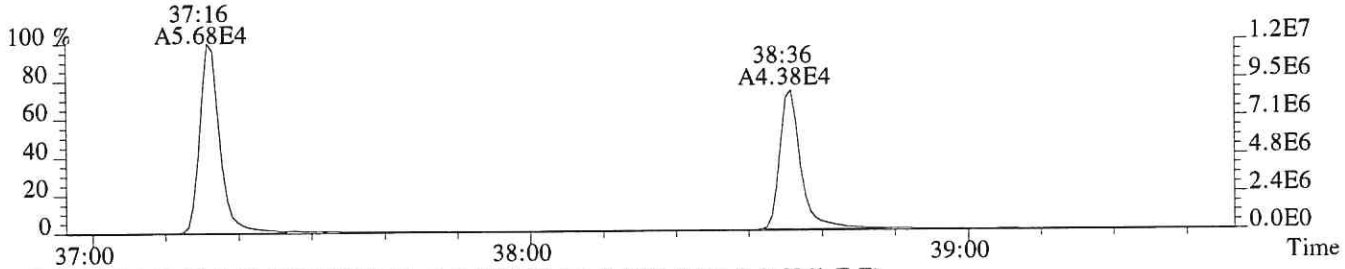


File:P616181 #1-241 Acq:25-DEC-2018 00:35:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

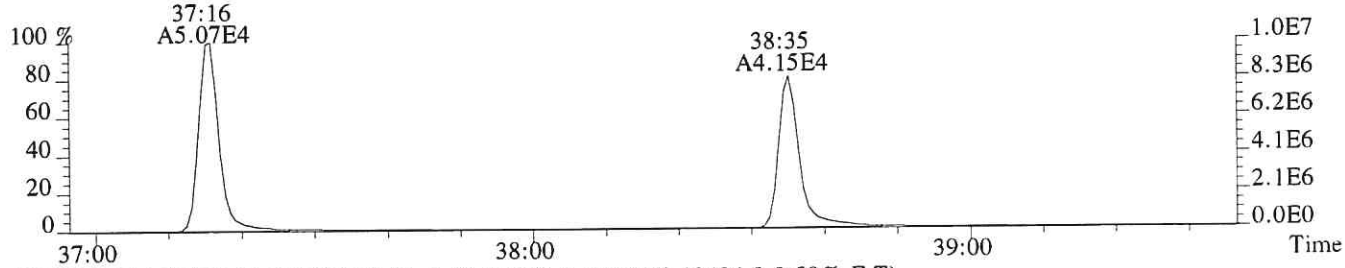
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,9396.0,0.50%,F,T)



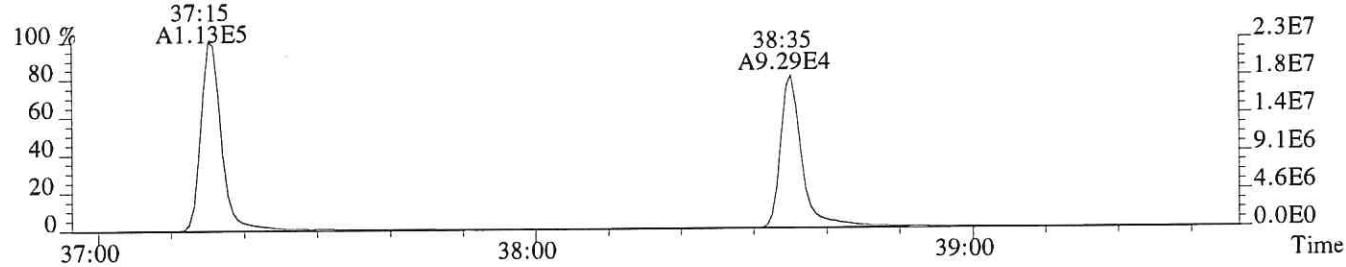
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,11904.0,0.50%,F,T)



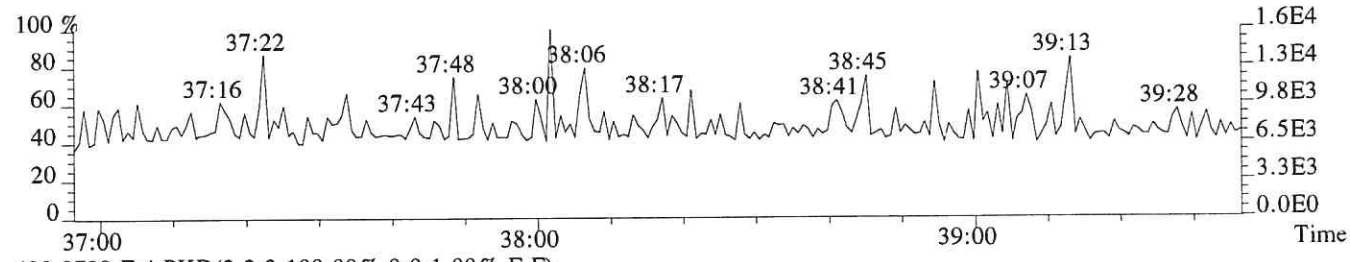
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2136.0,0.50%,F,T)



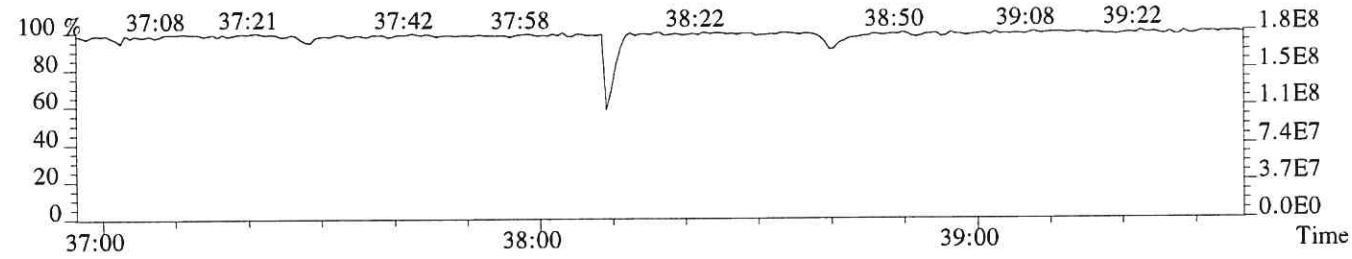
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,12424.0,0.50%,F,T)



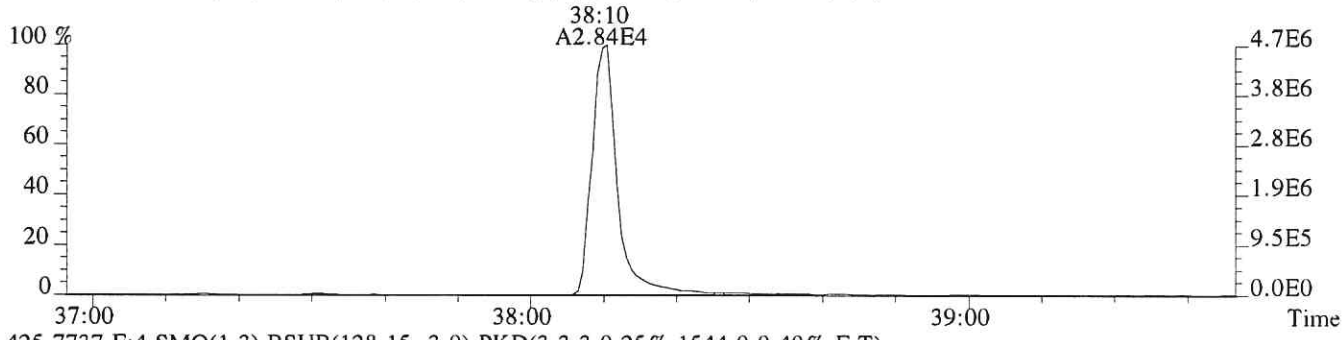
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



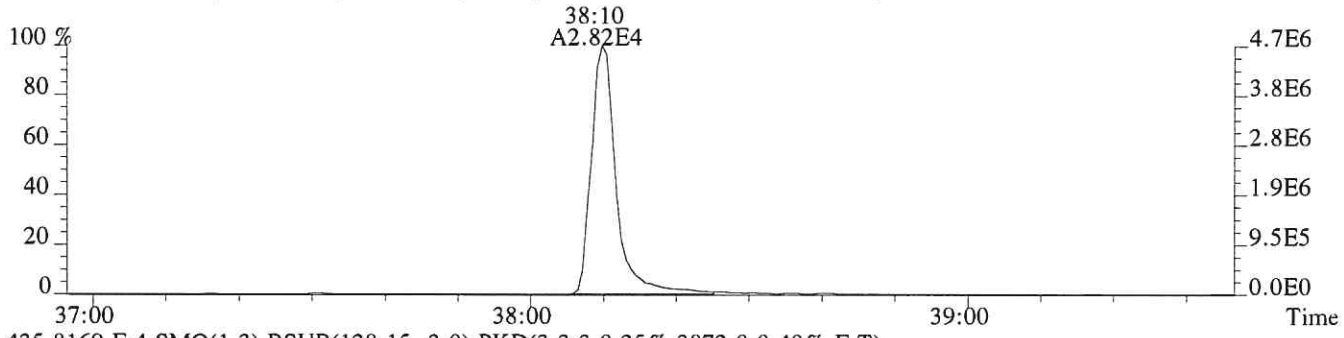
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



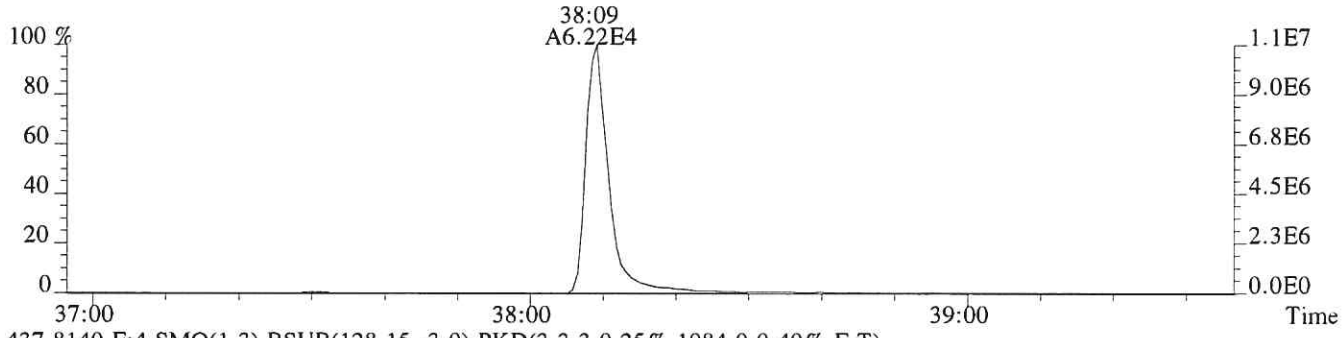
File:P616181 #1-241 Acq:25-DEC-2018 00:35:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2464.0,0.40%,F,T)



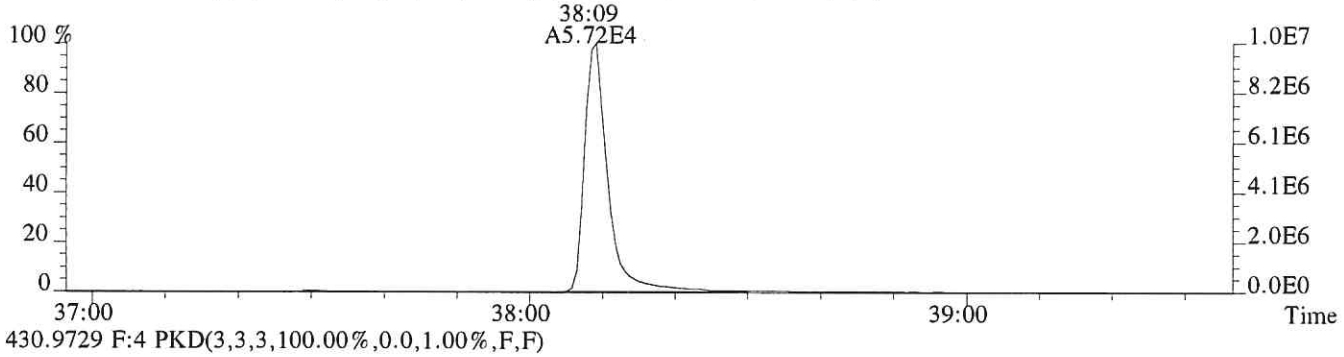
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1544.0,0.40%,F,T)



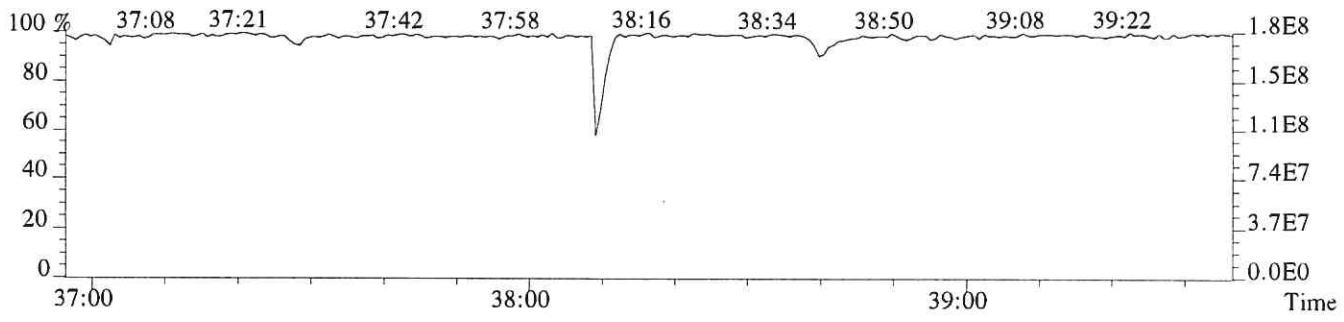
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3872.0,0.40%,F,T)



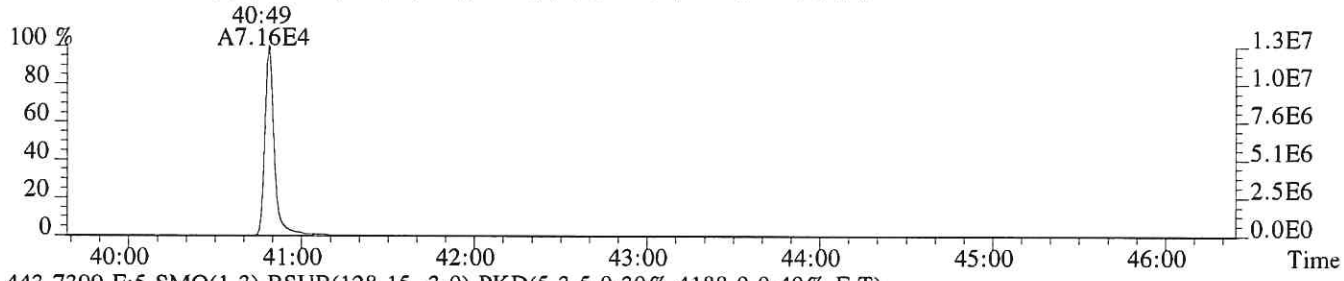
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1084.0,0.40%,F,T)



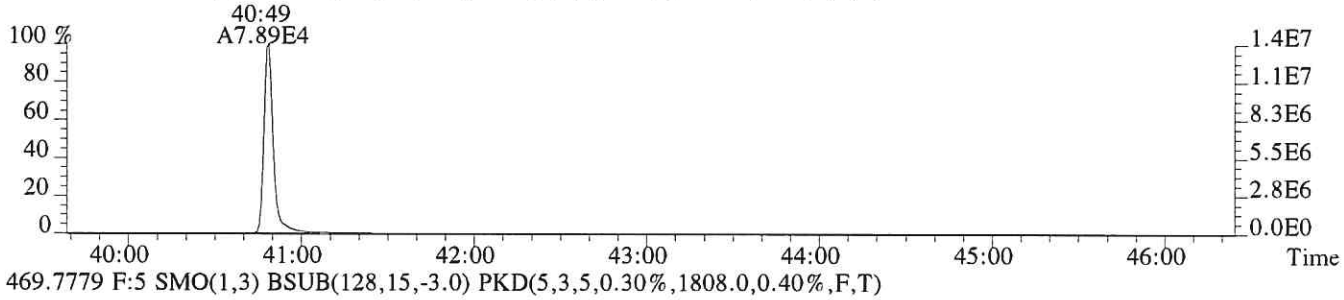
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



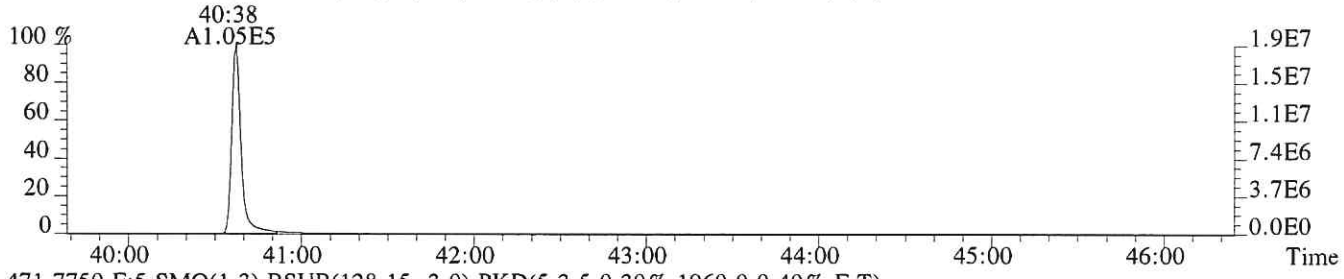
File:P616181 #1-609 Acq:25-DEC-2018 00:35:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,852.0,0.40%,F,T)



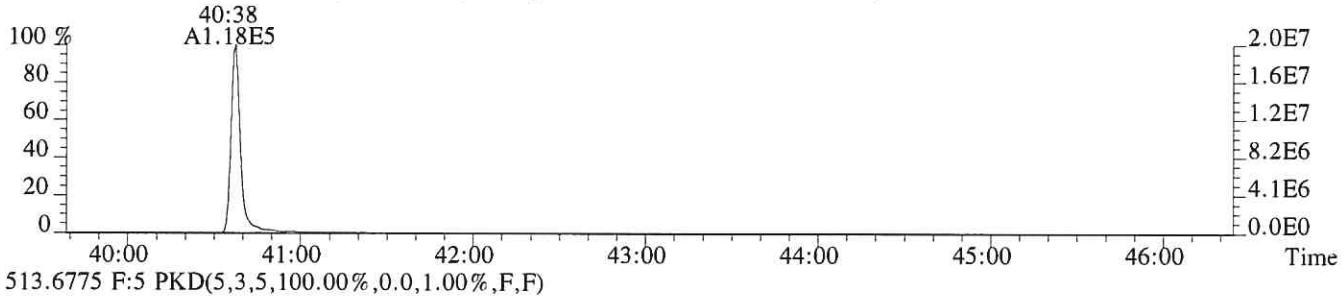
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,4188.0,0.40%,F,T)



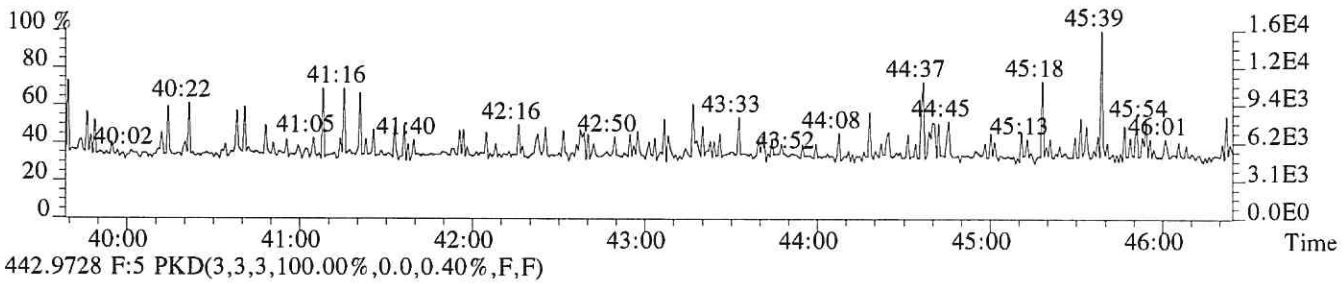
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1808.0,0.40%,F,T)



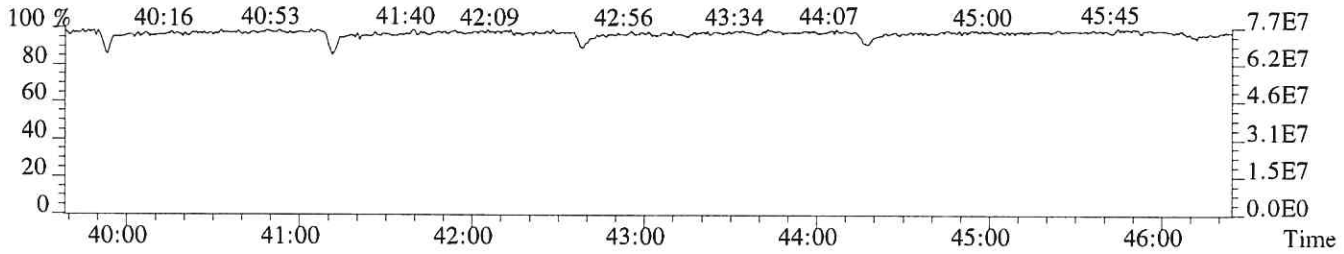
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1960.0,0.40%,F,T)



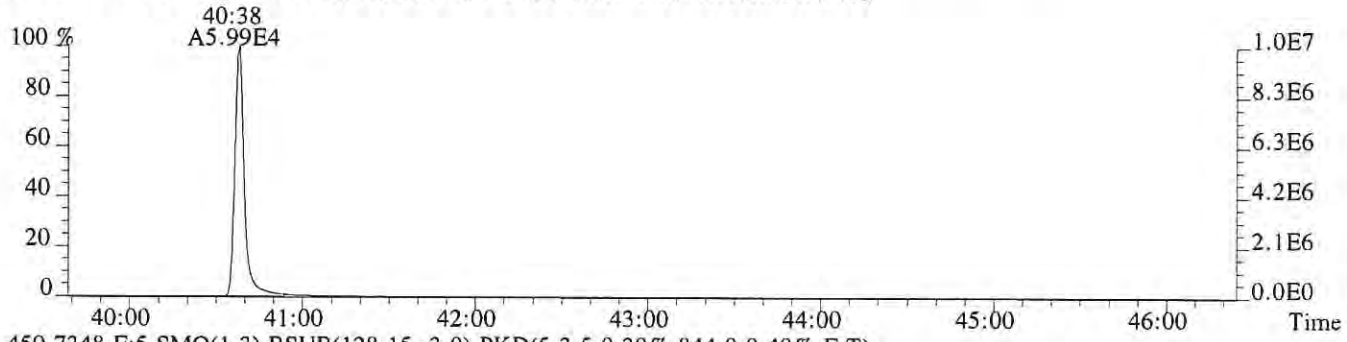
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



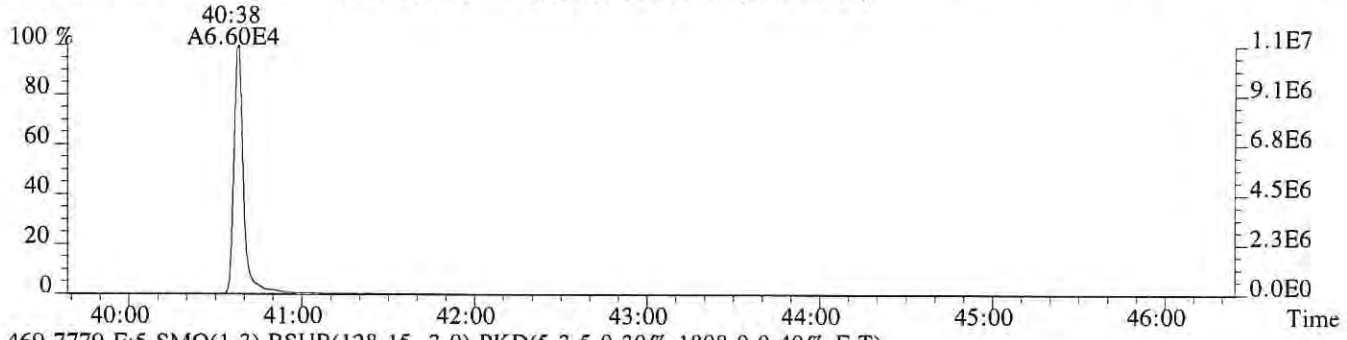
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



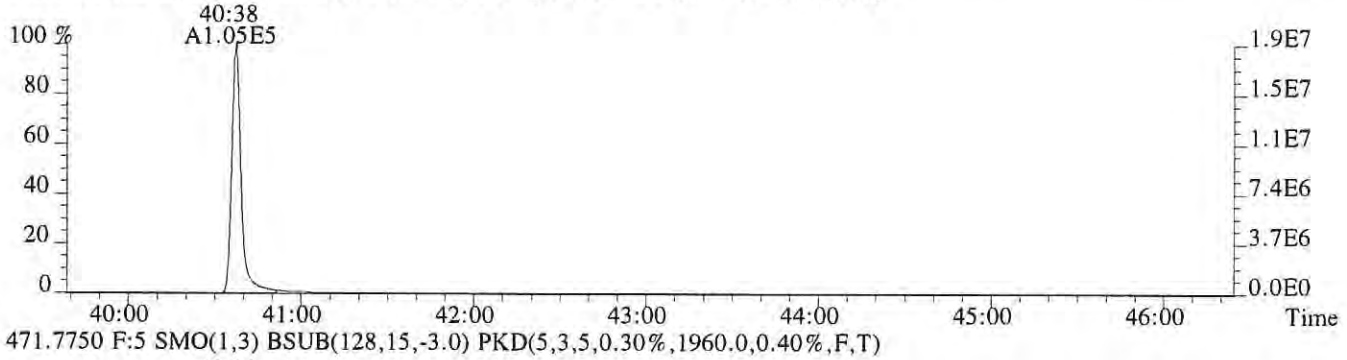
File:P616181 #1-609 Acq:25-DEC-2018 00:35:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,460.0,0.40%,F,T)



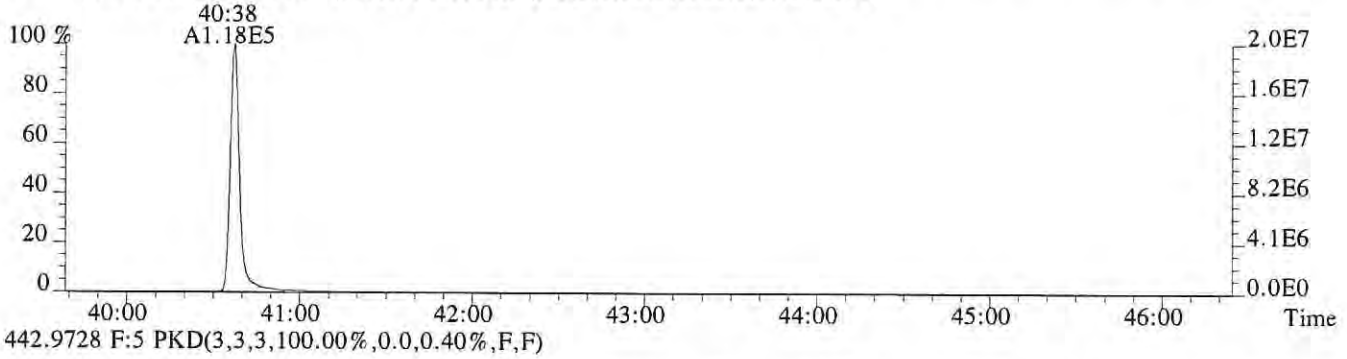
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,844.0,0.40%,F,T)



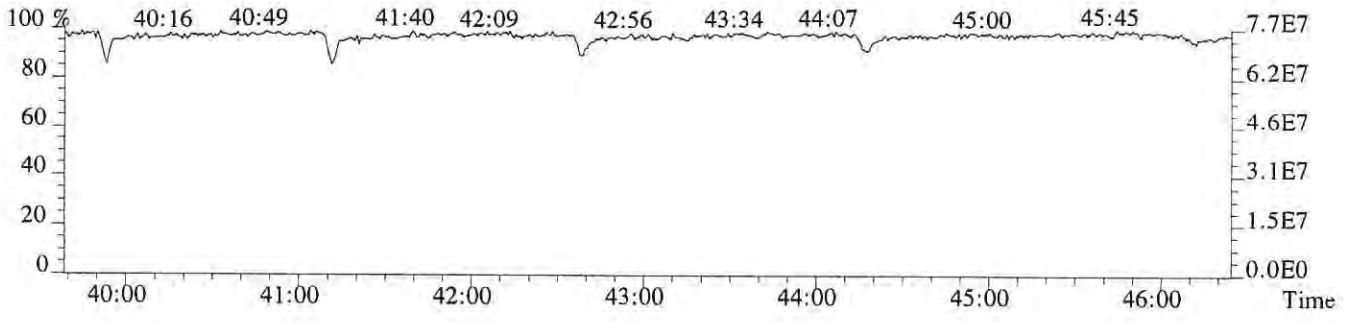
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1808.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1960.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



CCAL HRCC3/CS3 Daily Calibration QC Checklist

Calibration File Name: P616205 - P616216

Circle one: (Beginning) / (Ending)

Date: 12/26/18

Method: (1613) 1613E / (8290) VCP / Tetra / TCDD Only / TCDF Conf / VCP Conf / 8280 / M23 / TO-9A

Retention Window/Column Performance Check:	Analyst	Second Check
Windows in and first and last eluters labeled	✓	✓
Column Performance shows less than or equal to 25% valley between column specific 2378 isomer and its closest eluters	✓	✓
No QC ion deflections affect column specific 2378 isomer or its closest eluters (HRMS Only)	✓	✓

CS3 Continuing Calibration	Analyst	Second Check
Percent RSD within method criteria	✓	✓
All relative abundance ratios meet method criteria	✓	✓
No QC ion deflections of greater than 20% (HRMS Only)	✓	✓
Mass spectrometer resolution greater than or equal to 10,000 and documented (HRMS Only)	✓	✓
2378-TCDD elutes at 25 minutes or later on the DB-5 column / DB-5MSUI column	✓	✓
Signal-to-noise of all target analytes and their labeled standards at least 10:1	✓	✓
Valley between labeled 123478 and 123678 HxCDD peaks less than or equal to 50% (LRMS Only)	N/A	N/A
Ending Calibration injected prior to end of 12 hour clock	✓	✓

Analyst: LKL

Second QC: LG

ccalqc.xls 07/17/12

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

Lab Code: Case No.: Client No.: SDG No.:

GC Column: DB-5MSUI ID: 0.25 (mm)

Init. Calib. Date: 09/25/18

Init. Calib.Times: 12:13

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, AND LABORATORY CONTROL SAMPLES (LCSs) IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
192977	WINDOW DEFINE	P616206	26-DEC-18	11:39:54
194503	CS3	P616205	26-DEC-18	10:41:31
194503	CS3	P616216	26-DEC-18	20:05:20
METHOD BLANK	EQ1800506-01	P616207	26-DEC-18	12:29:11
METHOD BLANK	EQ1800512-01	P616208	26-DEC-18	13:19:31
METHOD BLANK	EQ1800516-01	P616209	26-DEC-18	14:08:12
METHOD BLANK	EQ1800515-01	P616210	26-DEC-18	14:56:54
METHOD BLANK	EQ1800513-01	P616211	26-DEC-18	15:52:12
METHOD BLANK	EQ1800511-01	P616212	26-DEC-18	16:40:30
METHOD BLANK	EQ1800514-01	P616213	26-DEC-18	17:29:39
METHOD BLANK	EQ1800518-01	P616214	26-DEC-18	18:18:50
18125121-01A(TE-CS╗	E1801091-001	P616215	26-DEC-18	19:07:58

Sample List Report **MassLynx 4.1 SCN815 SCN795**

Sample List: C:\MassLynx\EHRMS08.PRO\SampleDB\20181226A.SPL
Last Modified: Thursday, December 27, 2018 06:46:27 Central Standard Time
Printed: Thursday, December 27, 2018 06:46:30 Central Standard Time

Page Position (1, 1)

OPUS 5 NET: P616205 RES

	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst	Comments
1	12/26/18	10:41	P616205	194503	CS3	EPA1613_ALS	Dioxin_ALS	Tray1:2	LG	HRMS check 10:36
2	"	11:39	P616206	192977	WINDOW DEFINE	EPA1613_ALS	Dioxin_ALS	Tray1:1	"	"
3	"	12:29	P616207	EQ1800506-01	MB	EPA1613_ALS	Dioxin_ALS	Tray1:3	"	"
4	"	13:19	P616208	EQ1800512-01	MB	EPA1613_ALS	Dioxin_ALS	Tray1:4	"	"
5	"	14:08	P616209	EQ1800516-01	MB	EPA1613_ALS	Dioxin_ALS	Tray1:5	"	"
6	"	14:56	P616210	EQ1800515-01	MB	EPA1613_ALS	Dioxin_ALS	Tray1:6	"	"
7	"	15:52	P616211	EQ1800513-01	MB	EPA1613_ALS	Dioxin_ALS	Tray1:7	"	"
8	"	16:40	P616212	EQ1800511-01	MB	EPA1613_ALS	Dioxin_ALS	Tray1:8	"	"
9	"	17:29	P616213	EQ1800514-01	MB	EPA1613_ALS	Dioxin_ALS	Tray1:9	"	"
10	"	18:18	P616214	EQ1800518-01	MB	EPA1613_ALS	Dioxin_ALS	Tray1:10	"	"
11	"	19:07	P616215	E1801091-001	E1801091-001	EPA1613_ALS	Dioxin_ALS	Tray1:11	"	"
12	"	20:05	P616216	194503	CS3	EPA1613_ALS	Dioxin_ALS	Tray1:2	"	HRMS check 20:05
13	↓	21:01	P616217	194503	CS3	EPA1613_ALS	Dioxin_ALS	Tray1:2	↓	unattended HRMS LG 12/27/18
14	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:14	---	---
15	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:15	---	---
16	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:16	---	---
17	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:17	---	---
18	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:18	---	---
19	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:19	---	---

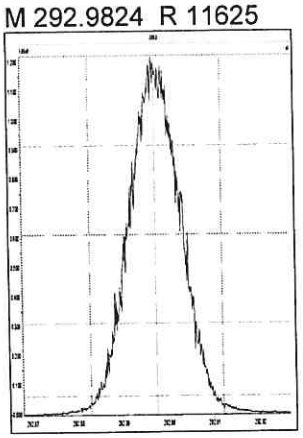
LKL 12/27/18

Experiment Calibration Report **MassLynx 4.1 SCN815 SCN795**

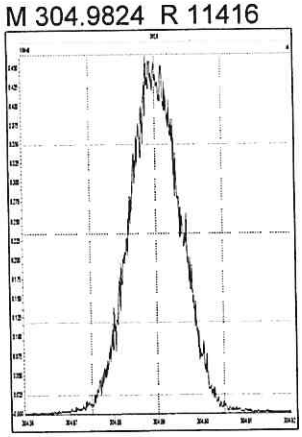
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Wednesday, December 26, 2018 10:36:48 Central Standard Time

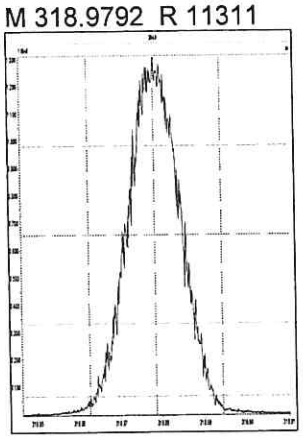
M 292.9824 R 11625



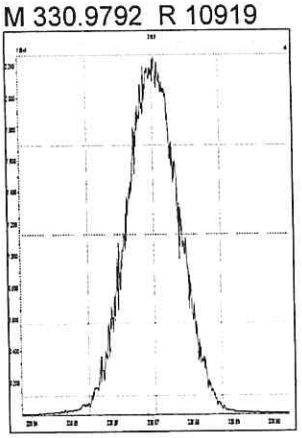
M 304.9824 R 11416



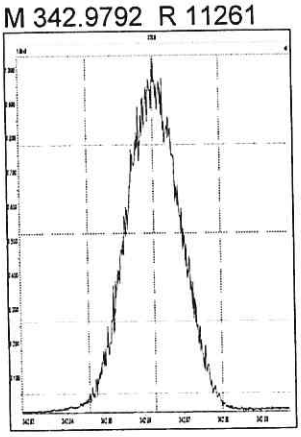
M 318.9792 R 11311



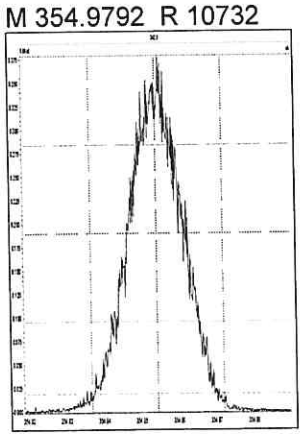
M 330.9792 R 10919



M 342.9792 R 11261



M 354.9792 R 10732



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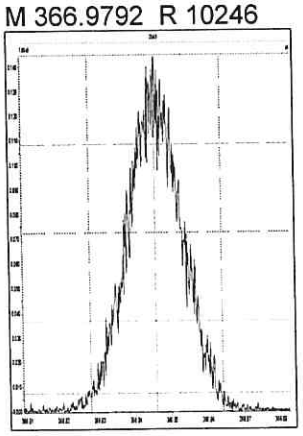
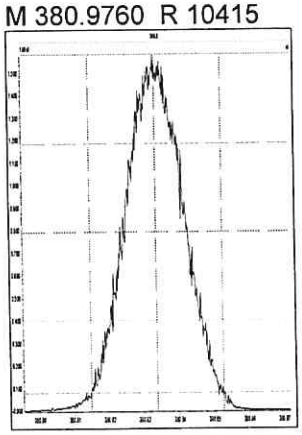


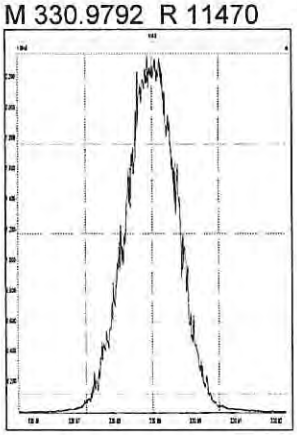
M 380.9760 R 10415



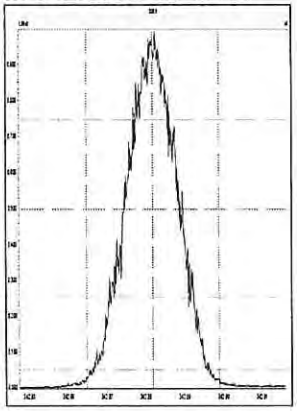
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Wednesday, December 26, 2018 10:37:49 Central Standard Time

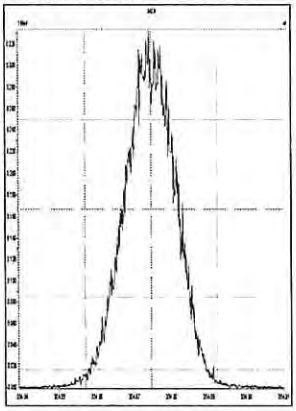
M 330.9792 R 11470



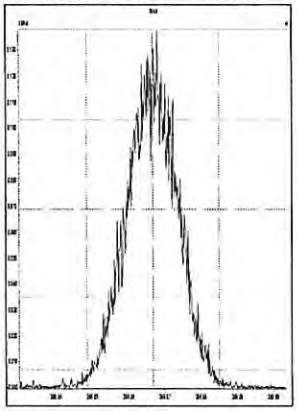
M 342.9792 R 11737



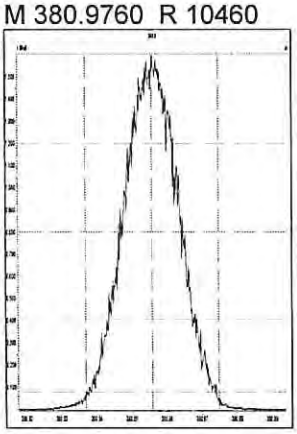
M 354.9792 R 11418



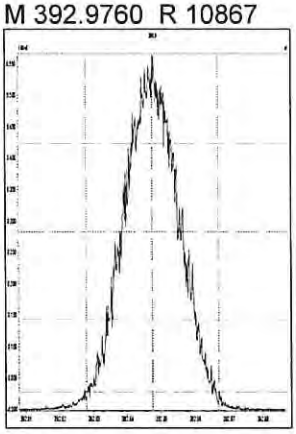
M 366.9792 R 11063



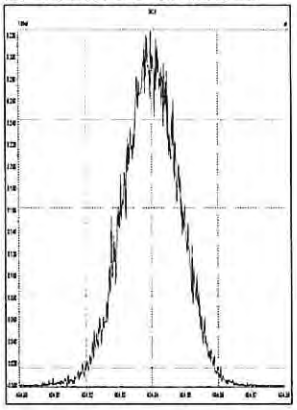
M 380.9760 R 10460



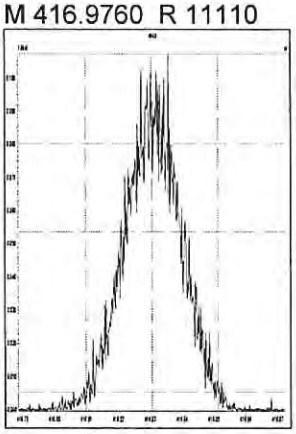
M 392.9760 R 10867



M 404.9760 R 10549



M 416.9760 R 11110



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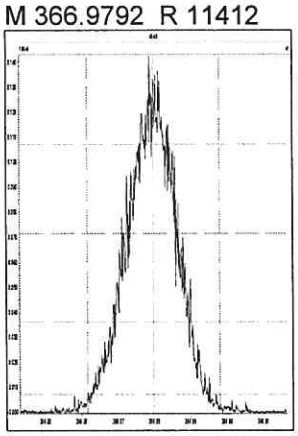
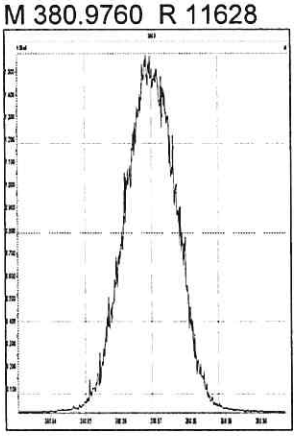
Printed: Wednesday, December 26, 2018 10:38:37 Central Standard Time

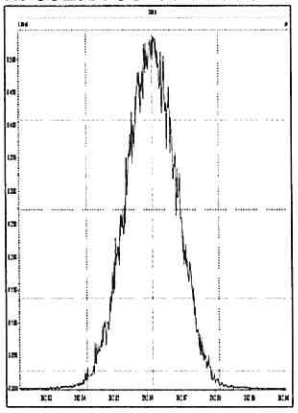
M 366.9792 R 11412



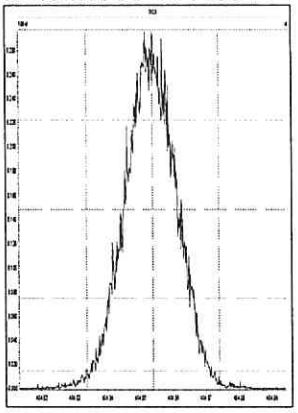
M 380.9760 R 11628



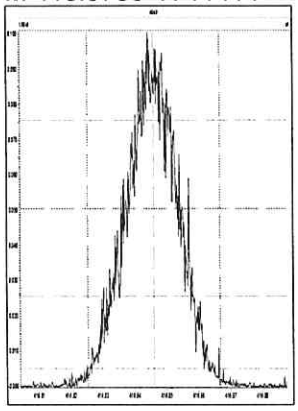
M 392.9760 R 11414



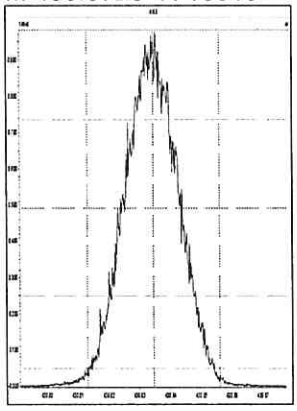
M 404.9760 R 11364



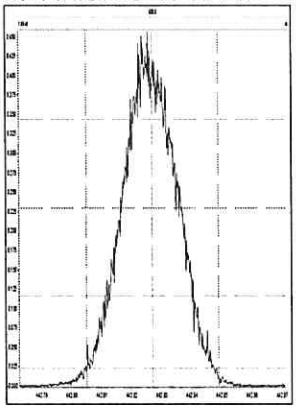
M 416.9760 R 11414



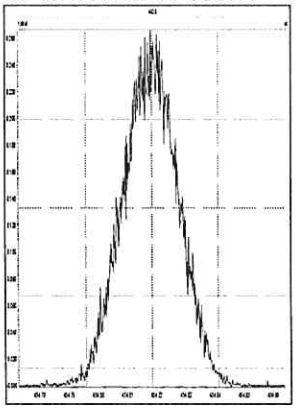
M 430.9728 R 10919



M 442.9728 R 10417



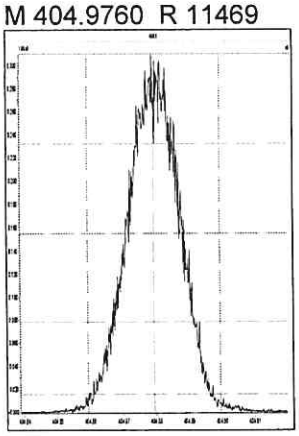
M 454.9728 R 10821



File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Wednesday, December 26, 2018 10:39:31 Central Standard Time

M 404.9760 R 11469



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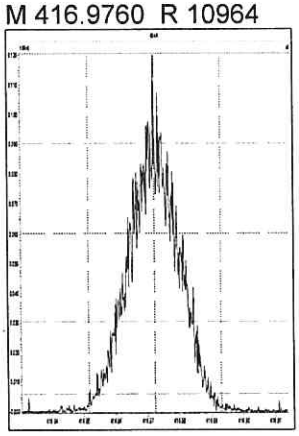
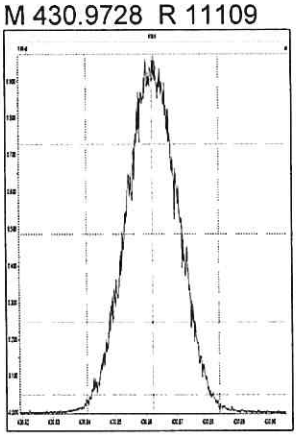
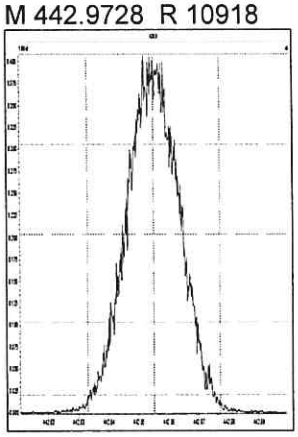


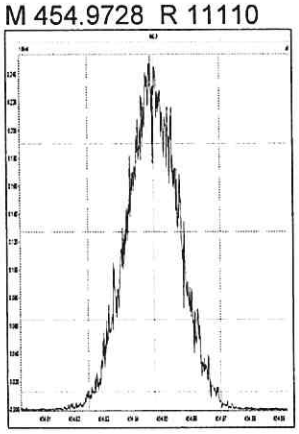
M 430.9728 R 11109



M 442.9728 R 10918



M 454.9728 R 11110



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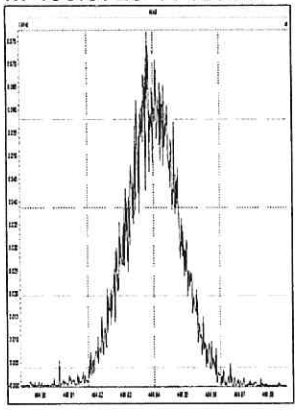
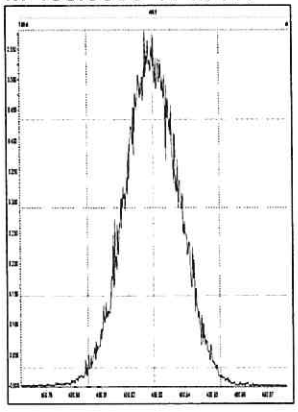


M 480.9696 R 10417



File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Wednesday, December 26, 2018 10:40:22 Central Standard Time

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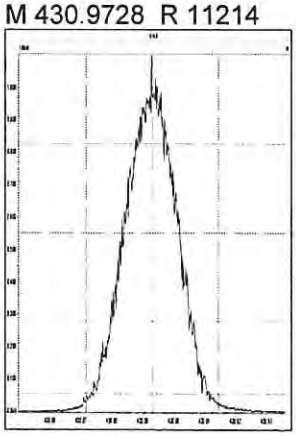

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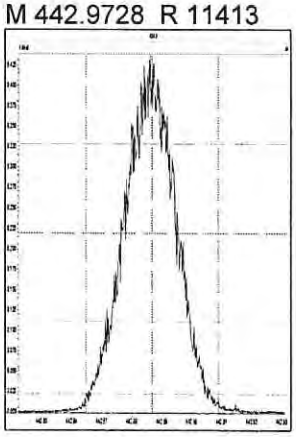

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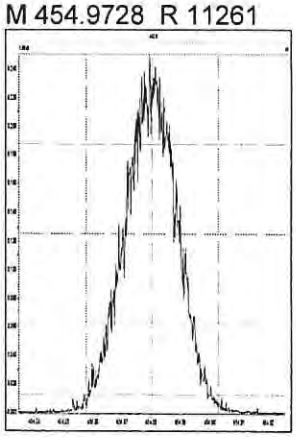

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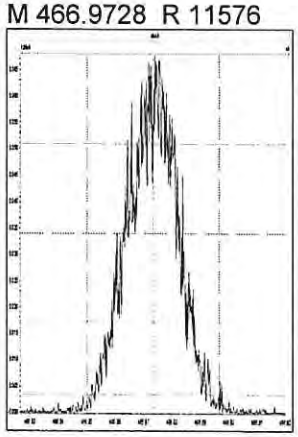

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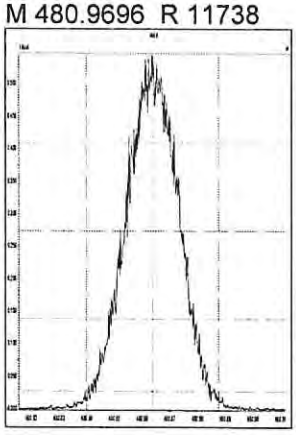

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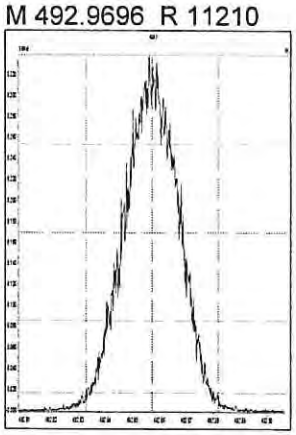

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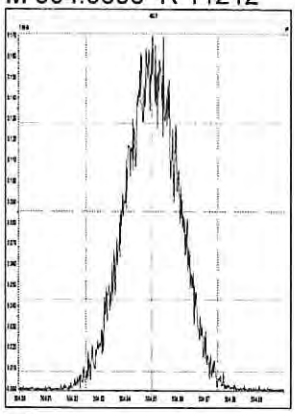

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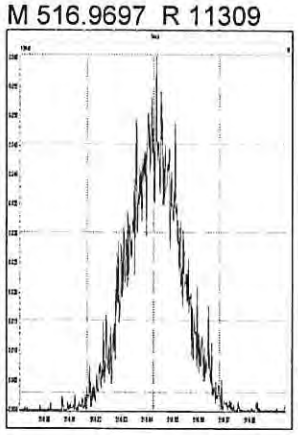

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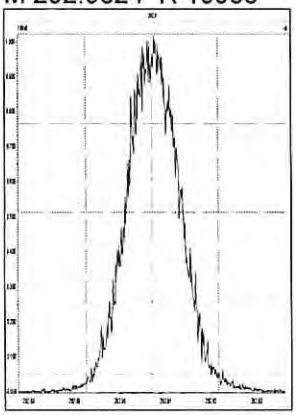

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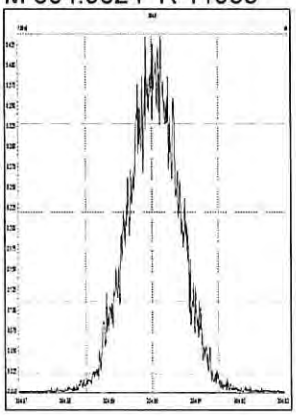

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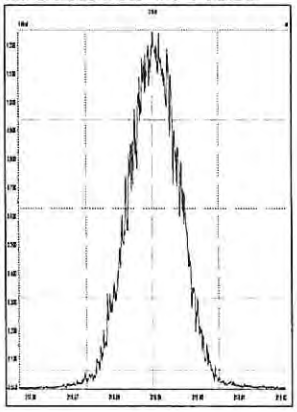

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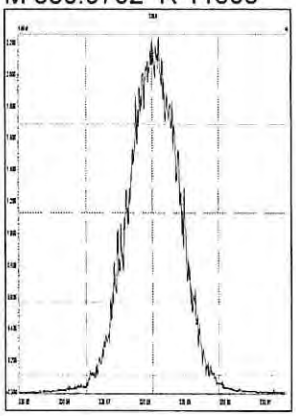
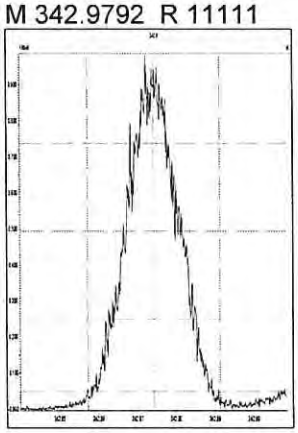


M 342.9792 R 11111



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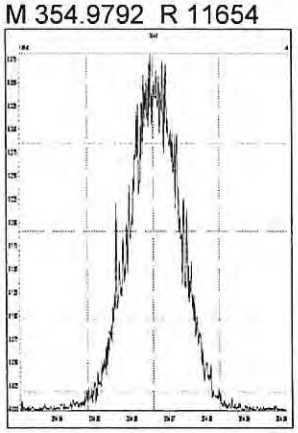

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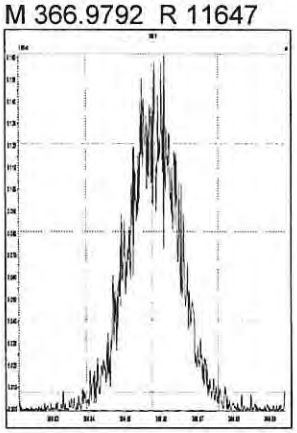

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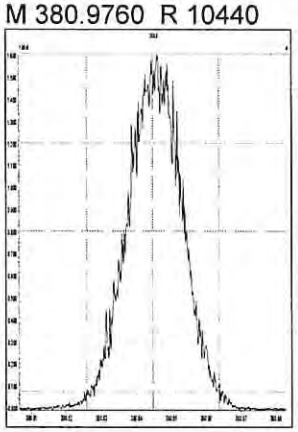

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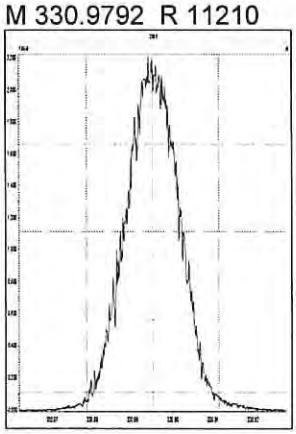

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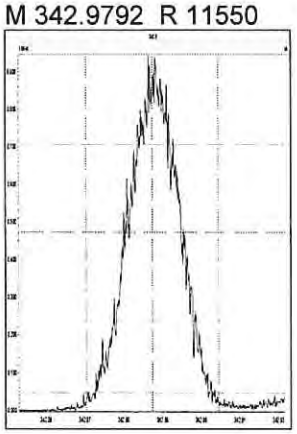

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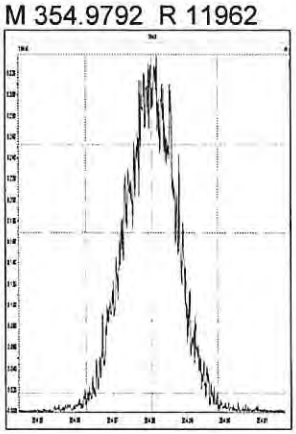

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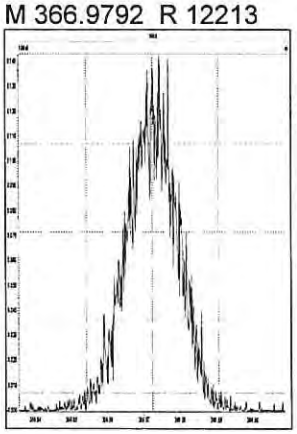

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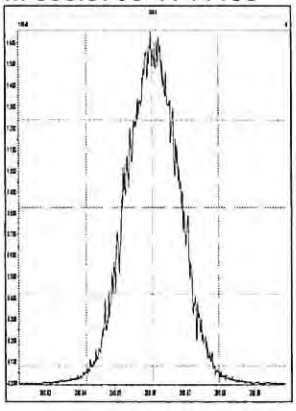

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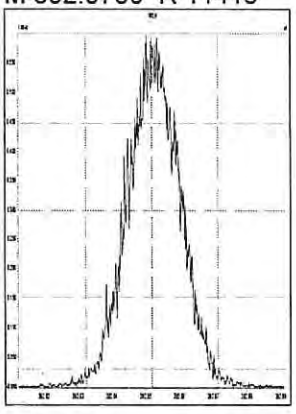

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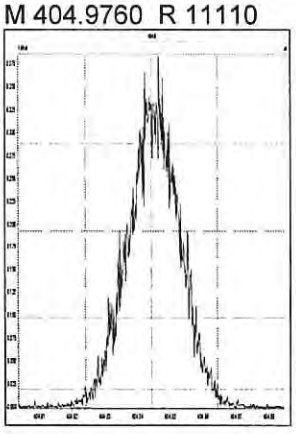

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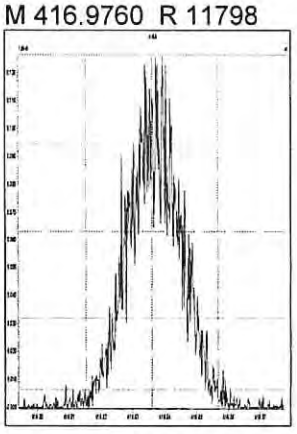

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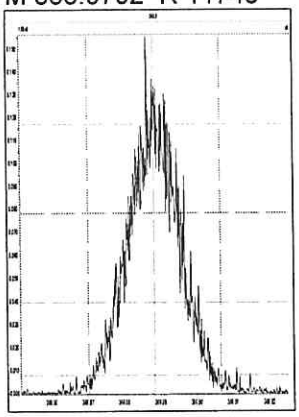

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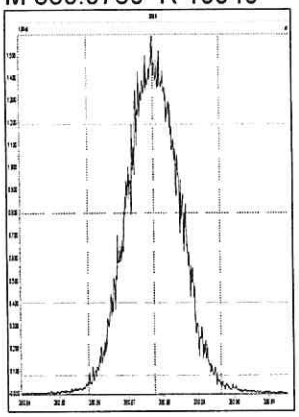

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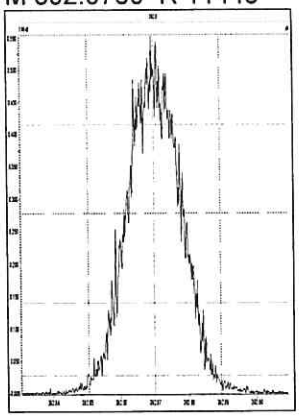

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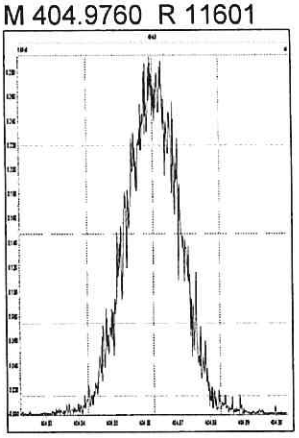

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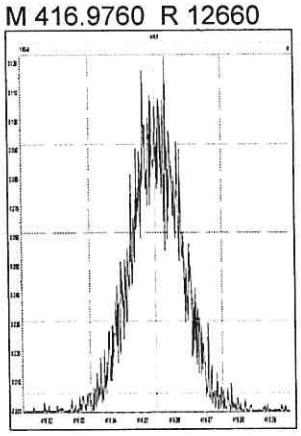
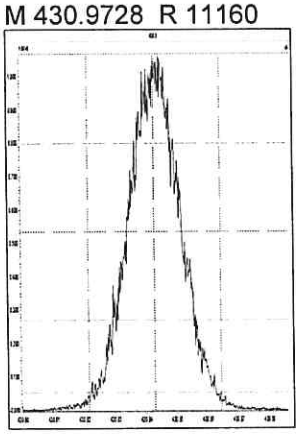


M 430.9728 R 11160



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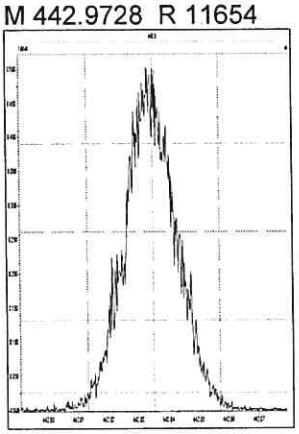

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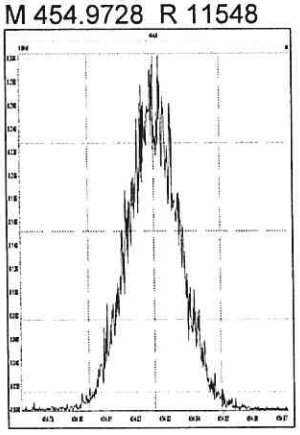

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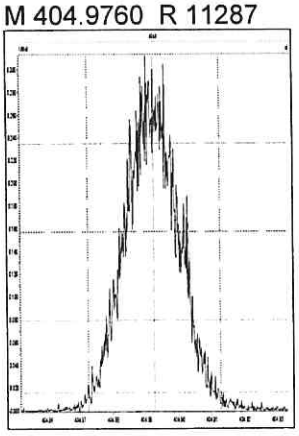

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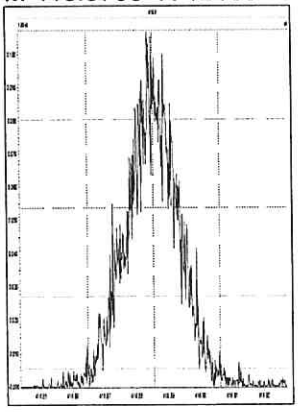

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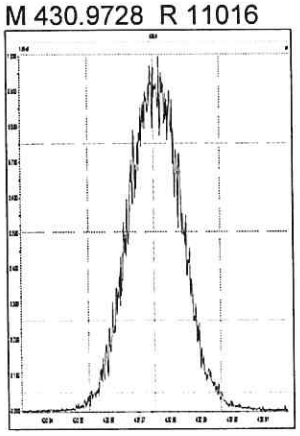

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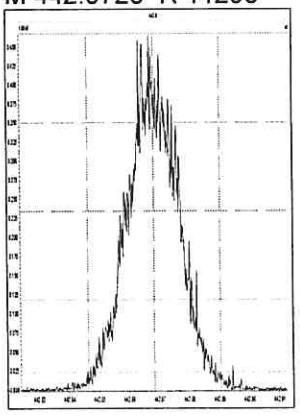

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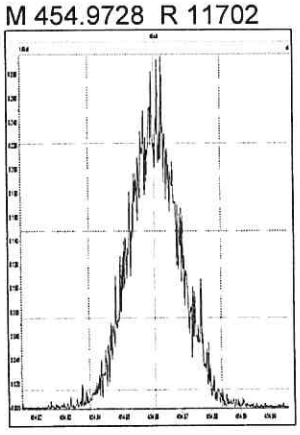

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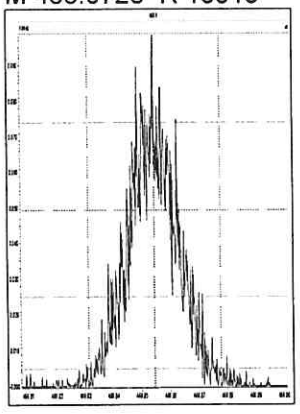
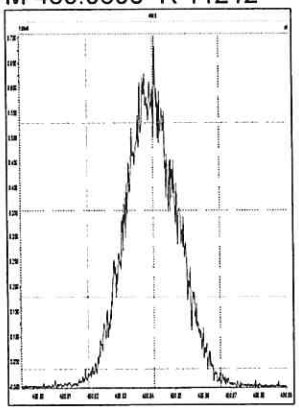


M 480.9696 R 11212



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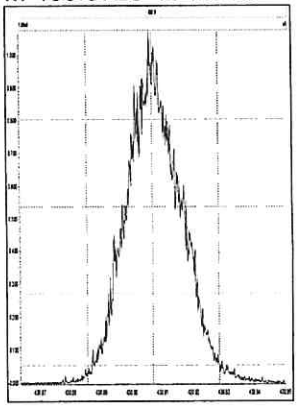

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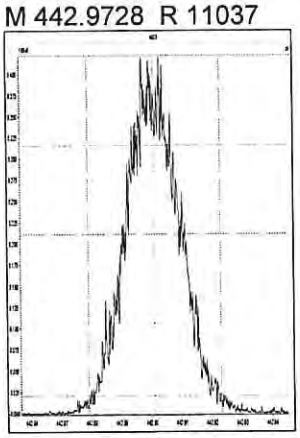

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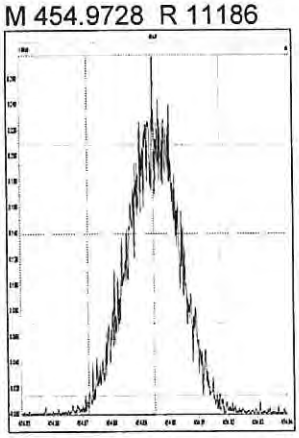

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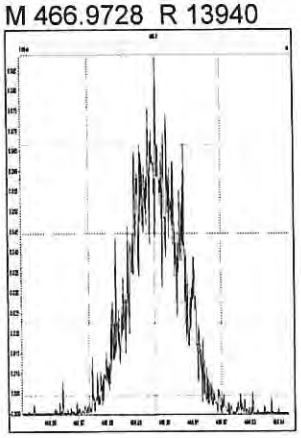

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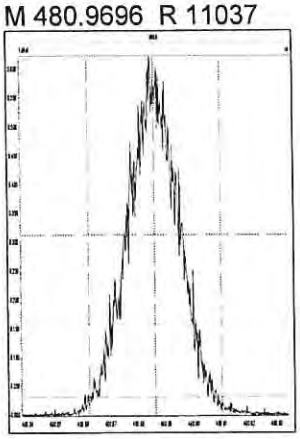

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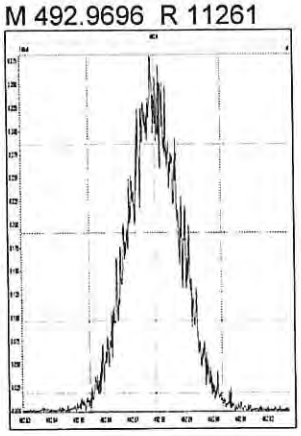
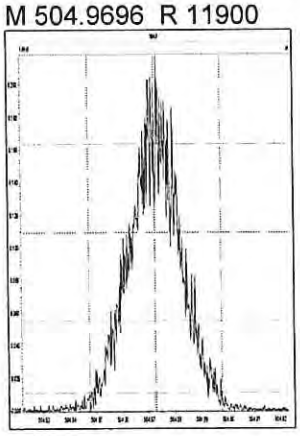


M 504.9696 R 11900



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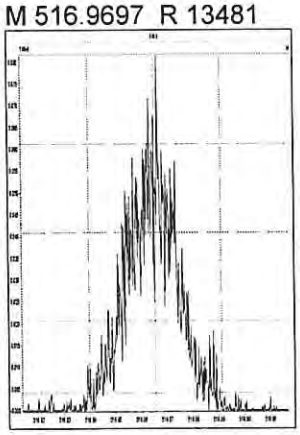


5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

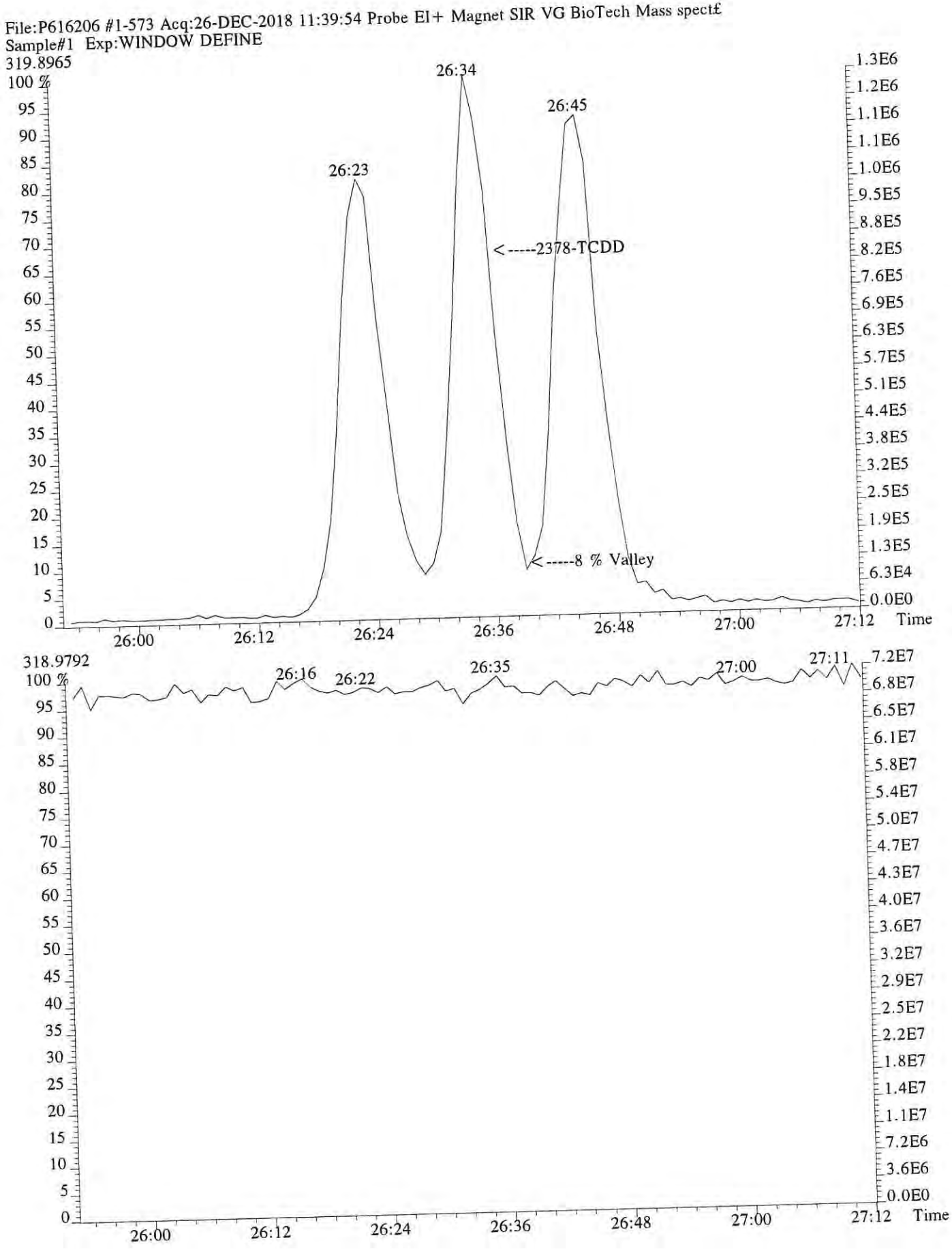
WDM

Lab Name: ALS Environmental
Lab Code: ALSTX
GC Column: DB-5MSUI

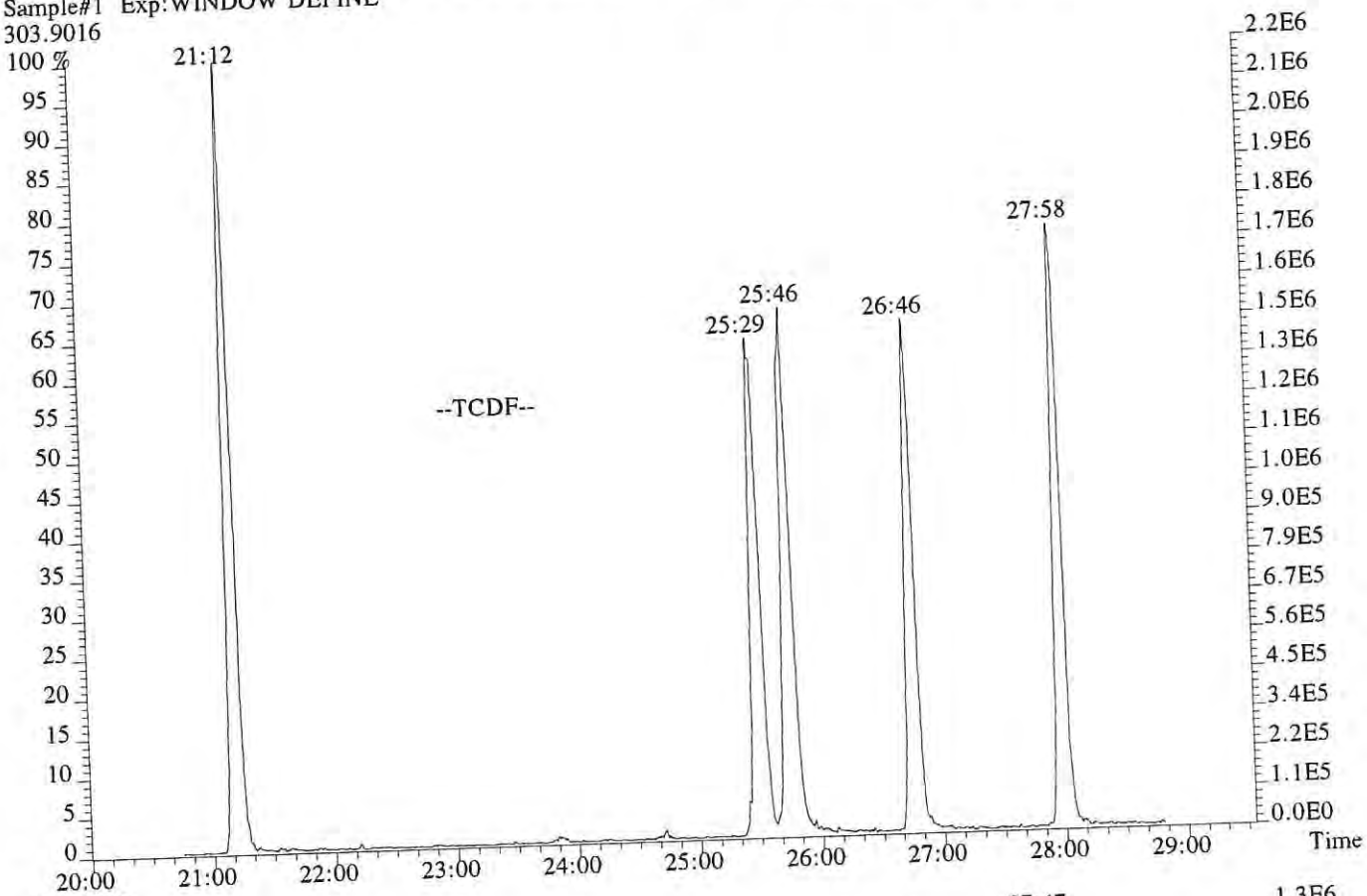
Case No.: _____ SDG No.:
ID: 0.25 (mm) Lab File ID: P616206
Date Analyzed: 26-DEC-18
Time Analyzed: 11:39:54

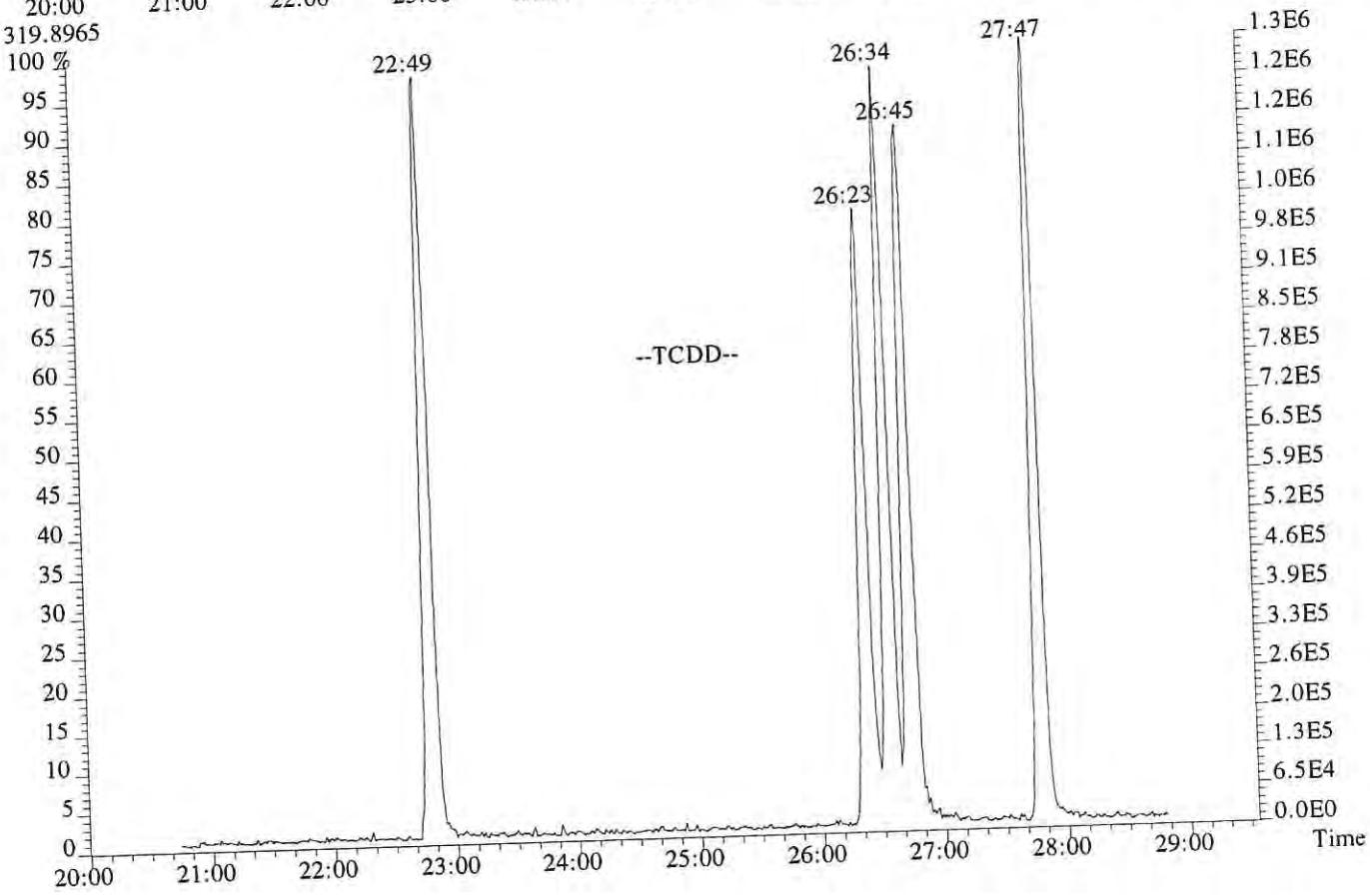
Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	21:12	27:58
TCDD	22:49	27:47
PeCDF	27:53	32:40
PeCDD	29:42	32:24
HxCDF	33:21	35:58
HxCDD	33:54	35:34
HpCDF	37:13	38:33
HpCDD	37:28	38:07

% Valley 2378-TCDD: 8 %

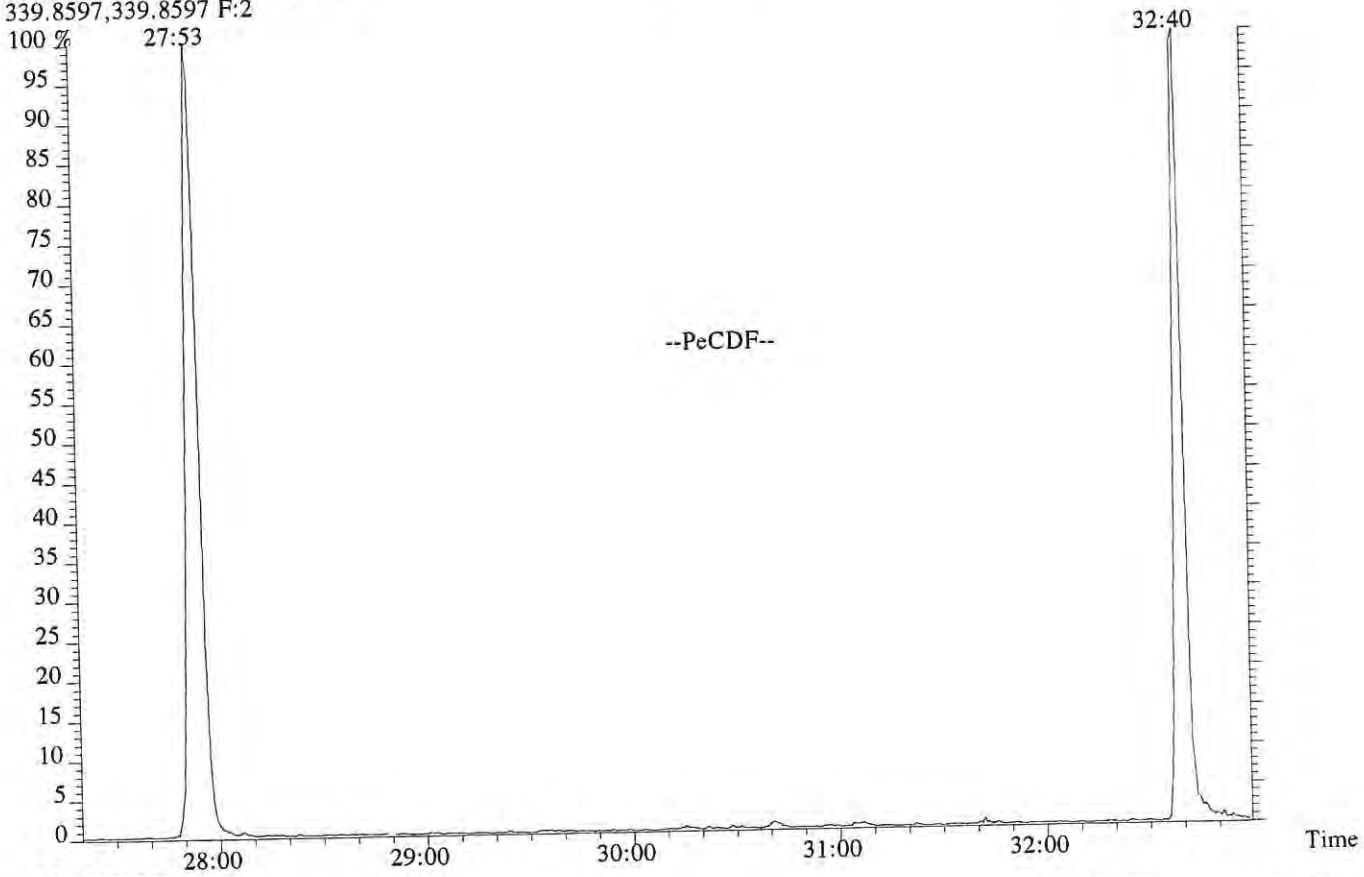

File:P616206 #1-573 Acq:26-DEC-2018 11:39:54 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:WINDOW DEFINE
319.8965
100 %
26:34
26:45
26:23
<-----2378-TCDD
<-----8 % Valley
Time
318.9792
100 %
26:16
26:22
26:35
27:00
27:11
Time

File:P616206 #1-573 Acq:26-DEC-2018 11:39:54 Probe EI+ Magnet SIR VG BioTech Mass spectf
Sample#1 Exp:WINDOW DEFINE

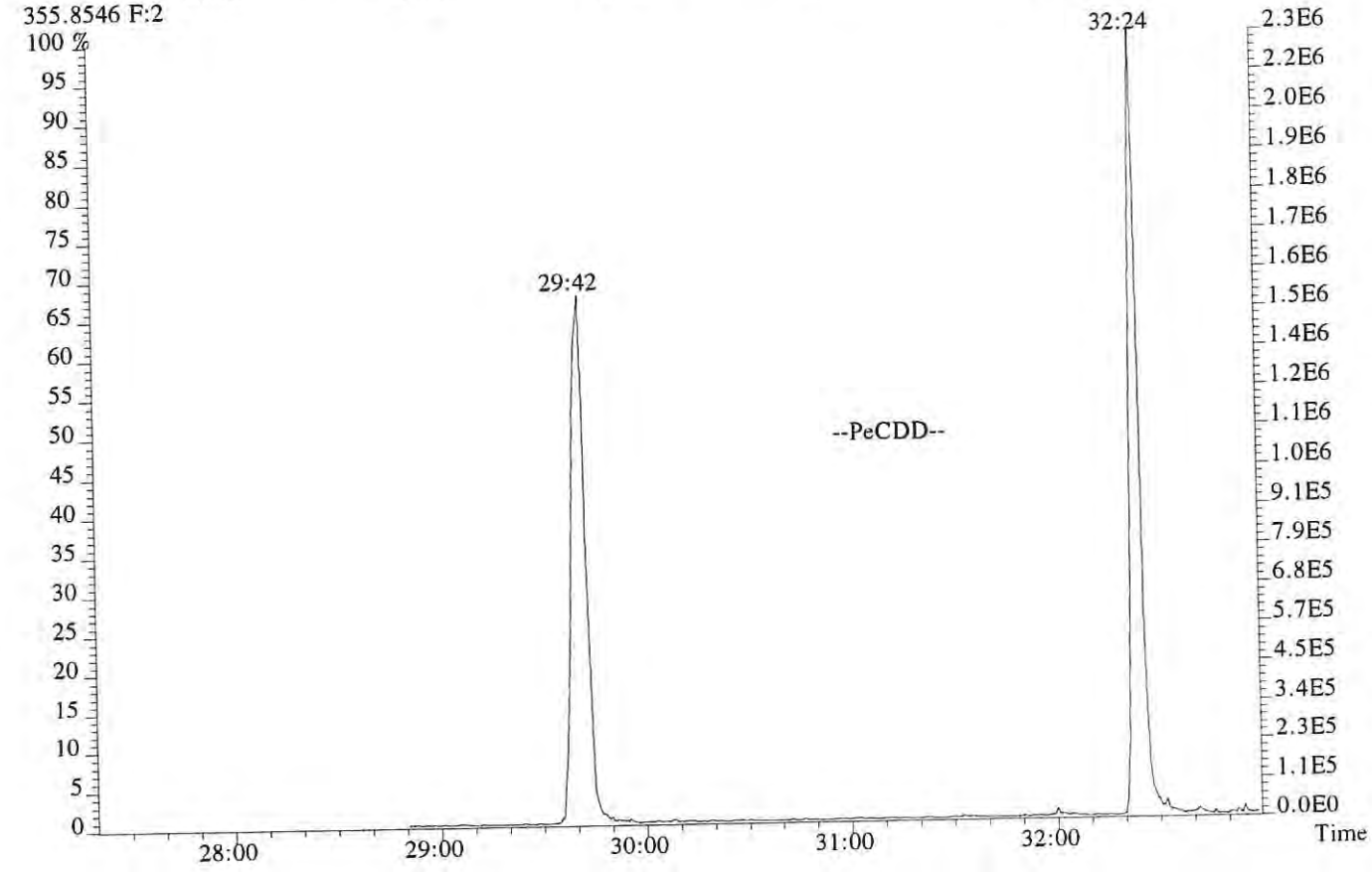




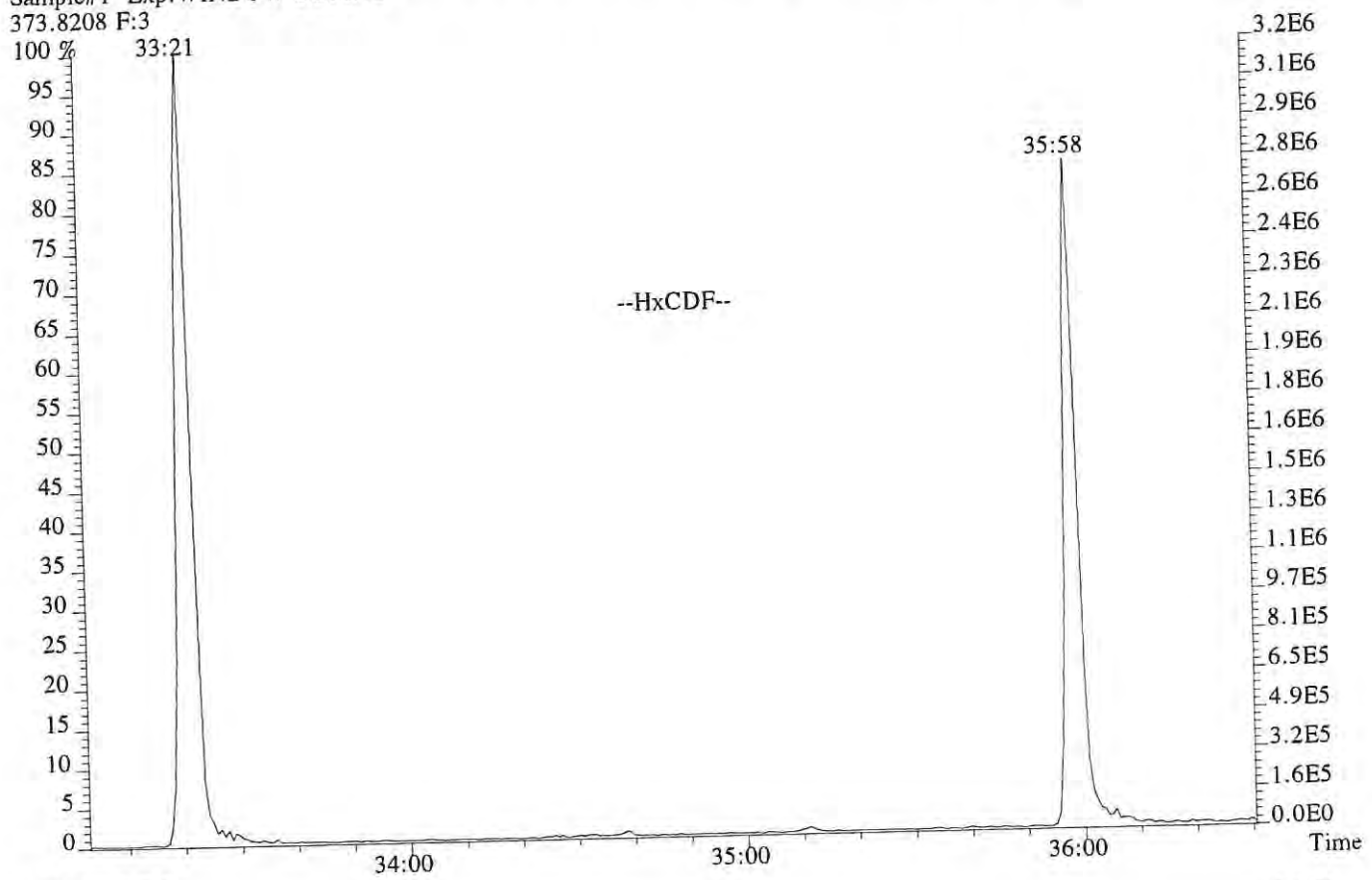
File:P616206 #1-573 Acq:26-DEC-2018 11:39:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
339.8597,339.8597 F:2

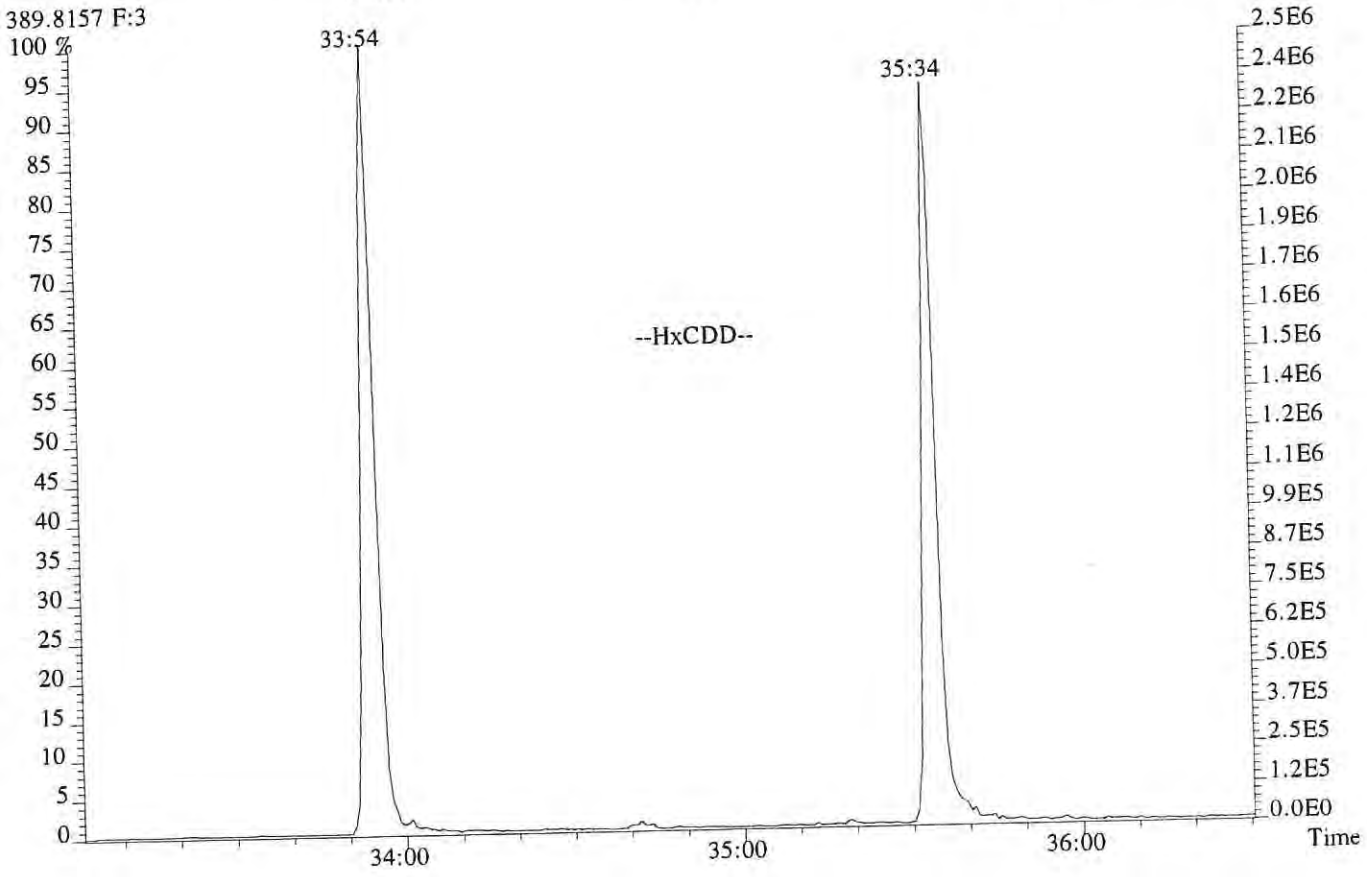


355.8546 F:2

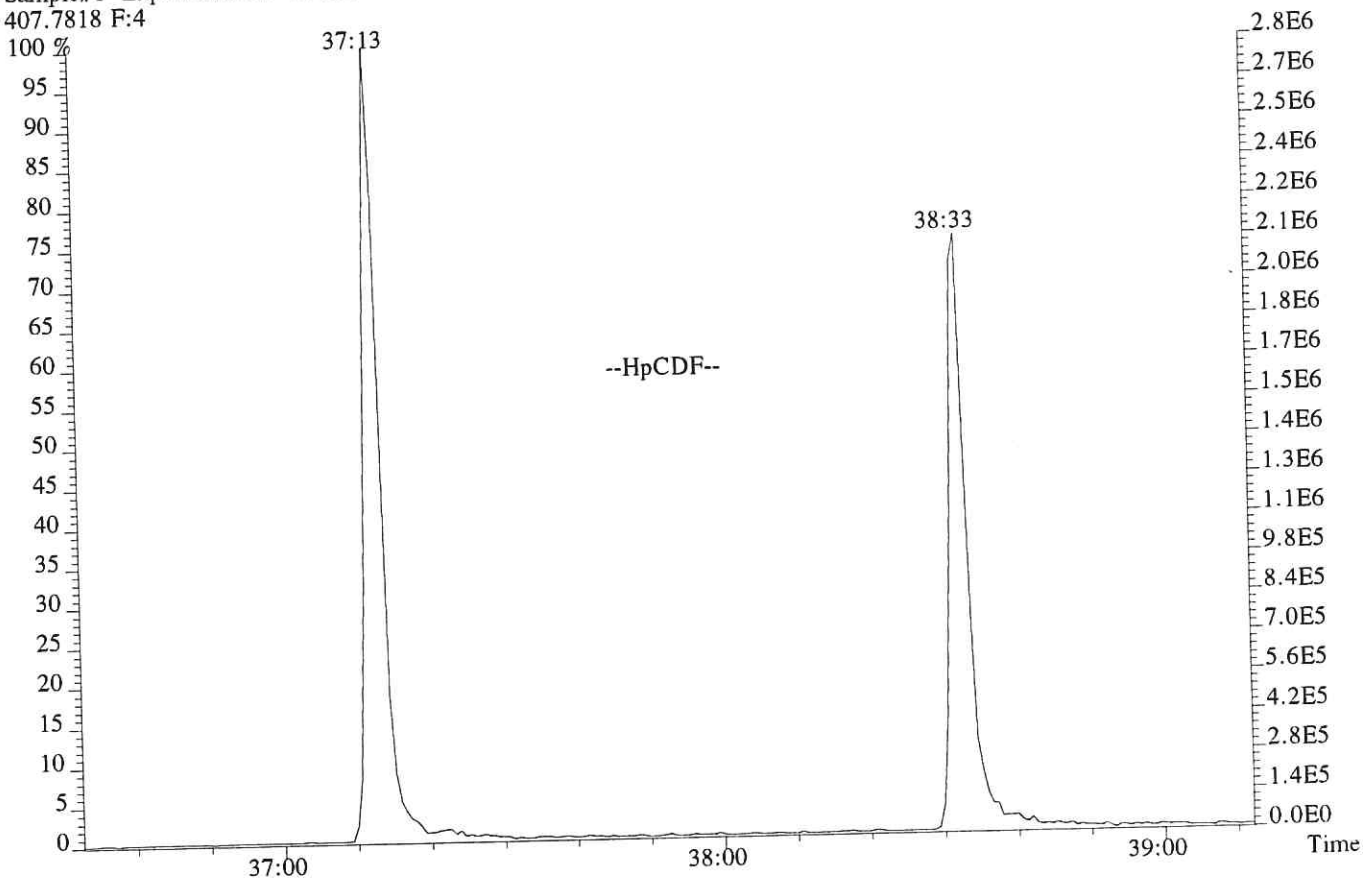


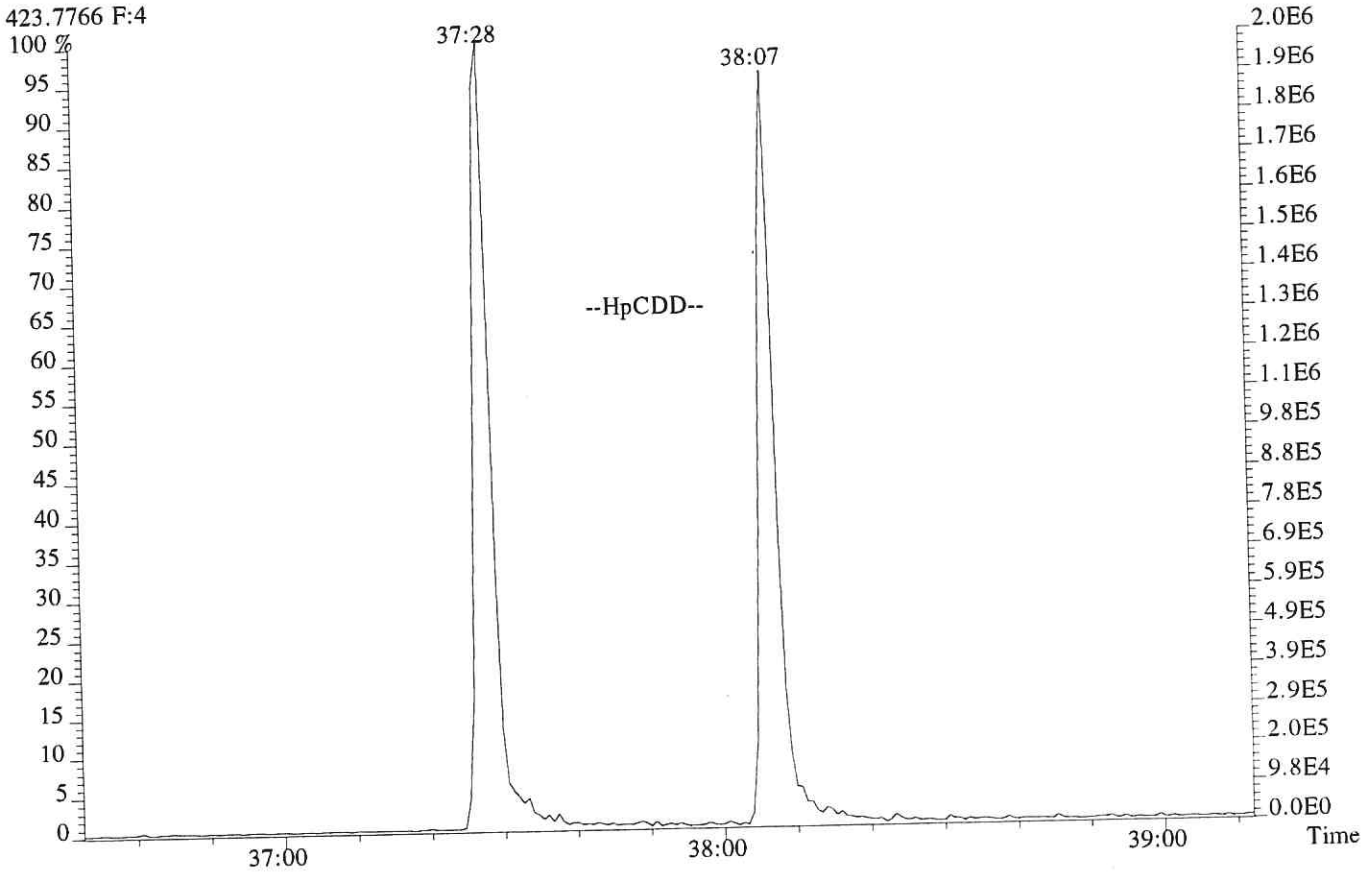
File:P616206 #1-573 Acq:26-DEC-2018 11:39:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE





File:P616206 #1-573 Acq:26-DEC-2018 11:39:54 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE





USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

Instrument ID: E-HRMS-08 GC Column ID: DB-5MSUI

VER Data Filename: P616205 Analysis Date: 26-DEC-18 Time: 10:41:31

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.81	0.65-0.89	9.8	7.8 - 12.9	-2.4
1,2,3,7,8-PeCDD	M+2/M+4	1.55	1.32-1.78	51	39 - 65	1.9
1,2,3,4,7,8-HxCDD	M+2/M+4	1.32	1.05-1.43	49	39 - 64	-2.2
1,2,3,6,7,8-HxCDD	M+2/M+4	1.19	1.05-1.43	49	39 - 64	-1.5
1,2,3,7,8,9-HxCDD	M+2/M+4	1.24	1.05-1.43	50	41 - 61	-0.8
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	47	43 - 58	-6.0
OCDD	M+2/M+4	0.90	0.76-1.02	97	79 - 126	-3.4
2,3,7,8-TCDF	M/M+2	0.75	0.65-0.89	9.3	8.4 - 12.0	-6.9
1,2,3,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	46	41 - 60	-7.8
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	46	41 - 61	-8.5
1,2,3,4,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	45	45 - 56	-9.9
1,2,3,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	46	44 - 57	-7.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	46	45 - 56	-8.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	47	44 - 57	-6.7
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.04	0.88-1.20	47	45 - 55	-5.9
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	46	43 - 58	-8.8
OCDF	M+2/M+4	0.91	0.76-1.02	86	63 - 159	-13.7

(1) See Table 8, Method 1613B, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.

(3) Contract-required concentration range as specified in Table 6, Method 1613B, under VER.

(4) The beginning CCAL %RSD for the 17 unlabeled standard must not exceed +/- 20%, Section 7.7.4.1. The ending CCAL must not exceed +/-25%, Section 8.3.2.4, Method 8290

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

Instrument ID: E-HRMS-08 GC Column ID: DB-5MSUI

VER Data Filename: P616205 Analysis Date: 26-DEC-18 Time: 10:41:31

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	103	82 - 121	3.3
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.56	1.32-1.78	98	62 - 160	-2.2
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.32	1.05-1.43	99	85 - 117	-0.9
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	103	85 - 118	2.9
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	102	72 - 138	2.2
13C-OCDD	M+2/M+4	0.92	0.76-1.02	201	96 - 415	0.3
13C-2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	99	71 - 140	-1.3
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	97	76 - 130	-3.2
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	97	77 - 130	-3.3
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	93	76 - 131	-7.1
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	96	70 - 143	-4.4
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	89	74 - 135	-10.9
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	95	73 - 137	-5.3
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	89	78 - 129	-10.6
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.46	0.37-0.51	89	77 - 129	-10.5
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD	M+2/M+4			9.7	7.8 - 12.7	-3.1

(1) See Table 8, Method 1613B, for m/z specifications.
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.
(3) Contract-required concentration range, as specified in Table 6, Method 1613B, under VER.
(4) No ion abundance ratio; report concentration found.
(5) The beginnning CCAL %RSD for the labeled standard must not exceed +/- 30% Section 7.7.4.2. The ending CCAL must not exceed +/- 35%, Sec 8.3.2.4 (8290)

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
194503

un #7 Filename P616205 Samp: 1 Inj: 1 Acquired: 26-DEC-18 10:41:31
rocessed: 27-DEC-18 14:23:08 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:46	6.491e+03	8.679e+03	0.75	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:41	5.387e+04	3.489e+04	1.54	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:42	5.073e+04	3.198e+04	1.59	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:31	4.417e+04	3.513e+04	1.26	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:38	4.946e+04	3.909e+04	1.27	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:10	4.531e+04	3.630e+04	1.25	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:56	3.930e+04	3.092e+04	1.27	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:13	3.873e+04	3.730e+04	1.04	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:32	3.200e+04	3.043e+04	1.05	yes	no	1.463
.0	Unk	OCDF	40:44	4.939e+04	5.398e+04	0.91	yes	no	1.571
.1	Unk	2,3,7,8-TCDD	26:44	5.021e+03	6.185e+03	0.81	yes	no	1.049
.2	Unk	1,2,3,7,8-PeCDD	31:60	3.413e+04	2.198e+04	1.55	yes	no	0.929
.3	Unk	1,2,3,4,7,8-HxCDD	35:18	3.079e+04	2.326e+04	1.32	yes	no	1.071
.4	Unk	1,2,3,6,7,8-HxCDD	35:24	3.040e+04	2.553e+04	1.19	yes	no	1.060
.5	Unk	1,2,3,7,8,9-HxCDD	35:38	3.312e+04	2.665e+04	1.24	yes	no	1.145
.6	Unk	1,2,3,4,6,7,8-HpCDD	38:06	2.686e+04	2.596e+04	1.03	yes	no	1.112
.7	Unk	OCDD	40:34	4.032e+04	4.490e+04	0.90	yes	no	1.157
.8	IS	13C-2,3,7,8-TCDF	25:44	6.688e+04	8.394e+04	0.80	yes	no	1.417
.9	IS	13C-1,2,3,7,8-PeCDF	30:40	1.025e+05	6.397e+04	1.60	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:41	1.005e+05	6.330e+04	1.59	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:30	4.224e+04	8.204e+04	0.51	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:37	5.072e+04	9.658e+04	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:10	4.705e+04	8.952e+04	0.53	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:56	3.998e+04	7.632e+04	0.52	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:12	3.288e+04	7.325e+04	0.45	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:31	2.938e+04	6.424e+04	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:42	4.817e+04	6.126e+04	0.79	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:59	7.225e+04	4.628e+04	1.56	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:18	5.868e+04	4.451e+04	1.32	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:24	5.907e+04	4.814e+04	1.23	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:05	5.186e+04	4.921e+04	1.05	yes	no	0.857
32	IS	13C-OCDD	40:33	7.302e+04	7.941e+04	0.92	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:58	4.802e+04	5.978e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:38	6.598e+04	4.940e+04	1.34	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:44	1.135e+04				no	1.086

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Houston, TX 77099
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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
194503

an #7 Filename P616205 Samp: 1 Inj: 1 Acquired: 26-DEC-18 10:41:31
rocessed: 27-DEC-18 14:23:08 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
	2,3,7,8-TCDF	9.00e+05	1.40e+03	6.4e+02	1.22e+06	3.61e+03	3.4e+02
	1,2,3,7,8-PeCDF	9.46e+06	8.60e+02	1.1e+04	6.03e+06	2.28e+03	2.6e+03
	2,3,4,7,8-PeCDF	9.56e+06	8.60e+02	1.1e+04	5.96e+06	2.28e+03	2.6e+03
	1,2,3,4,7,8-HxCDF	9.43e+06	2.18e+03	4.3e+03	7.46e+06	9.12e+02	8.2e+03
	1,2,3,6,7,8-HxCDF	9.65e+06	2.18e+03	4.4e+03	7.60e+06	9.12e+02	8.3e+03
	2,3,4,6,7,8-HxCDF	9.58e+06	2.18e+03	4.4e+03	7.60e+06	9.12e+02	8.3e+03
	1,2,3,7,8,9-HxCDF	7.96e+06	2.18e+03	3.7e+03	6.36e+06	9.12e+02	7.0e+03
	1,2,3,4,6,7,8-HpCDF	8.34e+06	6.49e+03	1.3e+03	7.81e+06	6.96e+03	1.1e+03
	1,2,3,4,7,8,9-HpCDF	6.76e+06	6.49e+03	1.0e+03	6.49e+06	6.96e+03	9.3e+02
0	OCDF	9.04e+06	6.32e+02	1.4e+04	1.01e+07	1.77e+03	5.7e+03
1	2,3,7,8-TCDD	7.99e+05	3.89e+03	2.1e+02	9.91e+05	1.37e+03	7.2e+02
2	1,2,3,7,8-PeCDD	6.57e+06	1.28e+03	5.1e+03	4.19e+06	8.92e+02	4.7e+03
3	1,2,3,4,7,8-HxCDD	6.48e+06	7.20e+02	9.0e+03	5.25e+06	1.36e+03	3.9e+03
4	1,2,3,6,7,8-HxCDD	6.22e+06	7.20e+02	8.6e+03	4.96e+06	1.36e+03	3.6e+03
5	1,2,3,7,8,9-HxCDD	6.82e+06	7.20e+02	9.5e+03	5.38e+06	1.36e+03	3.9e+03
6	1,2,3,4,6,7,8-HpCDD	5.67e+06	1.96e+03	2.9e+03	5.42e+06	1.42e+03	3.8e+03
7	OCDD	7.40e+06	6.28e+02	1.2e+04	8.34e+06	7.32e+02	1.1e+04
18	13C-2,3,7,8-TCDF	9.62e+06	1.47e+04	6.6e+02	1.20e+07	1.11e+04	1.1e+03
19	13C-1,2,3,7,8-PeCDF	1.76e+07	1.94e+03	9.1e+03	1.10e+07	1.94e+03	5.7e+03
20	13C-2,3,4,7,8-PeCDF	1.87e+07	1.94e+03	9.6e+03	1.19e+07	1.94e+03	6.1e+03
21	13C-1,2,3,4,7,8-HxCDF	9.14e+06	1.62e+03	5.7e+03	1.78e+07	2.44e+03	7.3e+03
22	13C-1,2,3,6,7,8-HxCDF	9.93e+06	1.62e+03	6.1e+03	1.92e+07	2.44e+03	7.9e+03
23	13C-2,3,4,6,7,8-HxCDF	9.79e+06	1.62e+03	6.1e+03	1.86e+07	2.44e+03	7.6e+03
24	13C-1,2,3,7,8,9-HxCDF	8.15e+06	1.62e+03	5.0e+03	1.55e+07	2.44e+03	6.4e+03
25	13C-1,2,3,4,6,7,8-HpCDF	7.04e+06	2.55e+03	2.8e+03	1.56e+07	7.46e+03	2.1e+03
26	13C-1,2,3,4,7,8,9-HpCDF	6.17e+06	2.55e+03	2.4e+03	1.34e+07	7.46e+03	1.8e+03
27	13C-2,3,7,8-TCDD	7.75e+06	1.48e+04	5.2e+02	9.72e+06	6.96e+03	1.4e+03
28	13C-1,2,3,7,8-PeCDD	1.35e+07	1.68e+03	8.1e+03	8.57e+06	1.59e+03	5.4e+03
29	13C-1,2,3,4,7,8-HxCDD	1.25e+07	2.48e+03	5.0e+03	9.98e+06	1.28e+03	7.8e+03
30	13C-1,2,3,6,7,8-HxCDD	1.20e+07	2.48e+03	4.8e+03	9.42e+06	1.28e+03	7.3e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.07e+07	1.97e+03	5.5e+03	1.05e+07	1.78e+03	5.9e+03
32	13C-OCDD	1.33e+07	1.54e+03	8.6e+03	1.44e+07	9.64e+02	1.5e+04
33	13C-1,2,3,4-TCDD	7.22e+06	1.48e+04	4.9e+02	8.89e+06	6.96e+03	1.3e+03
34	13C-1,2,3,7,8,9-HxCDD	1.34e+07	2.48e+03	5.4e+03	1.04e+07	1.28e+03	8.1e+03
35	37Cl-2,3,7,8-TCDD	1.84e+06	3.36e+03	5.5e+02			

---Sample Calculation---

$$\text{D/L TCDD} = \frac{2.5 \times (3.892e+03 + 1.372e+03\ ) \times 100}{(7.754e+06 + 9.723e+06\ ) \times (\qquad\qquad) \times 1.049} =$$

ALS ENVIRONMENTAL
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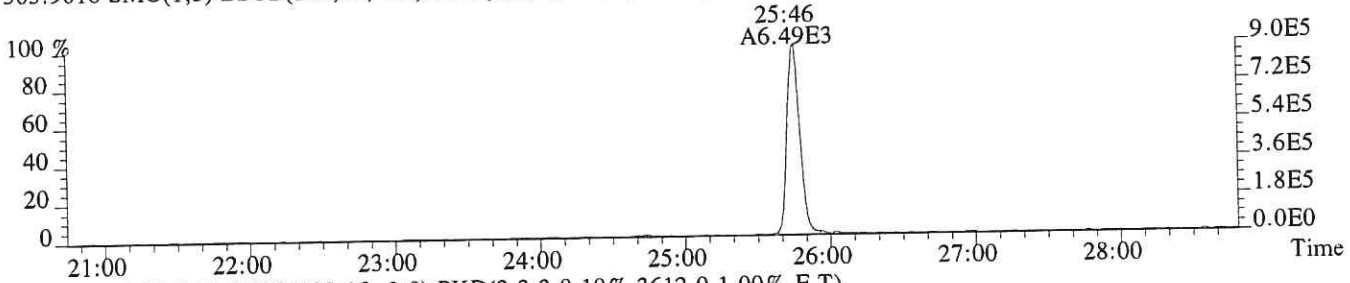
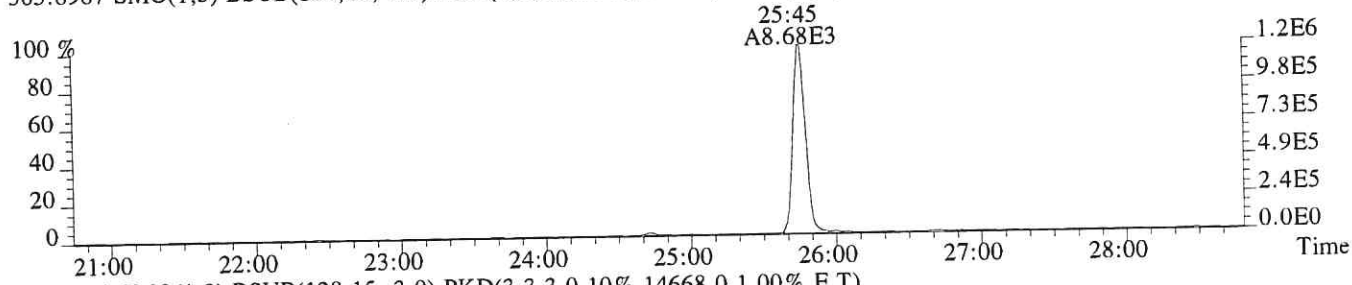
File:P616205 #1-573 Acq:26-DEC-2018 10:41:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

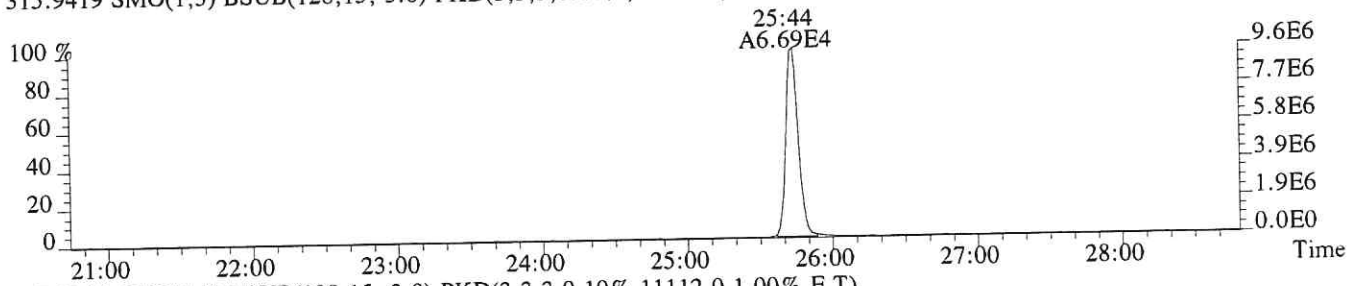
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1404.0,1.00%,F,T)



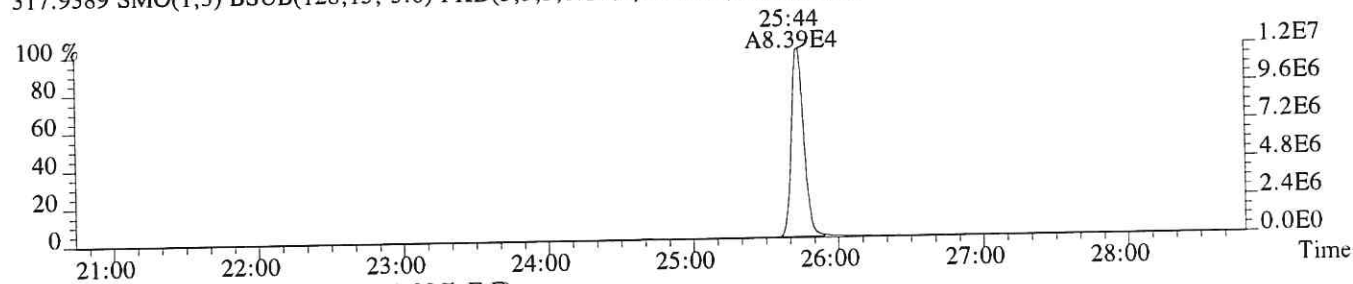
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3612.0,1.00%,F,T)



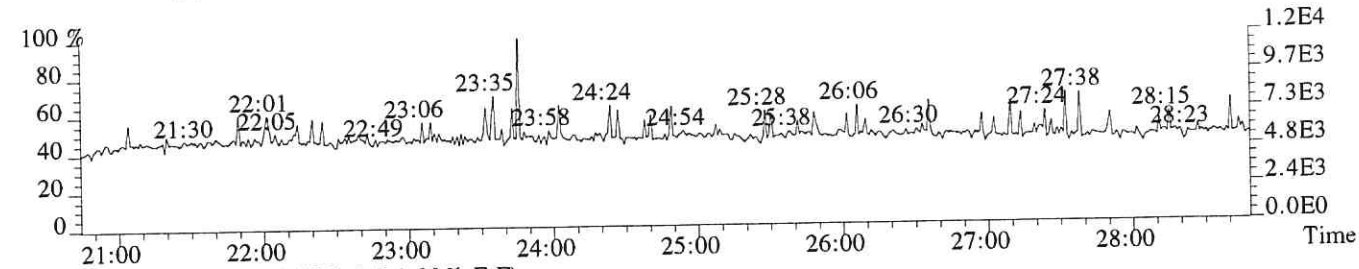
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,14668.0,1.00%,F,T)



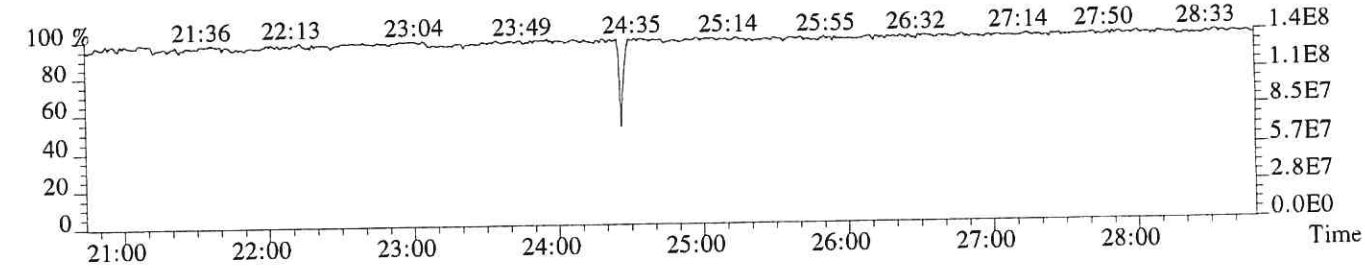
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11112.0,1.00%,F,T)



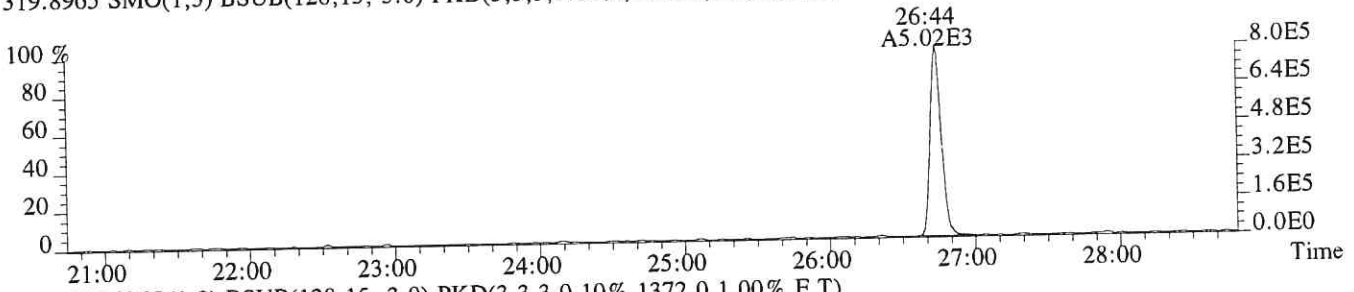
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



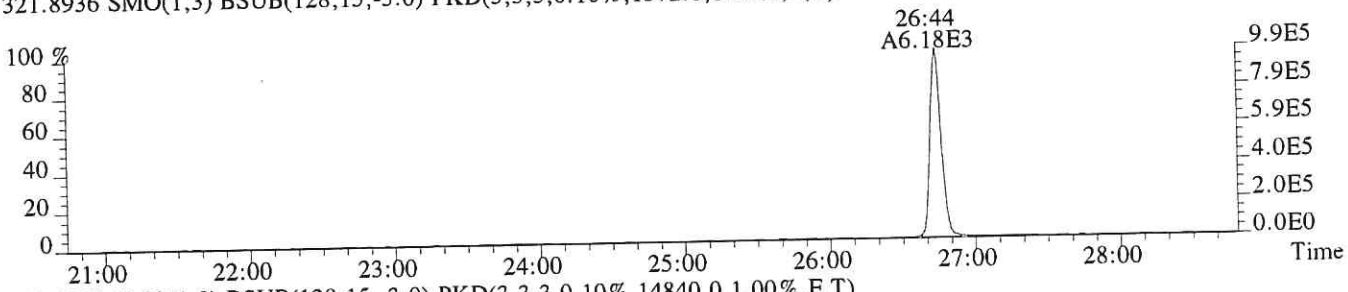
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



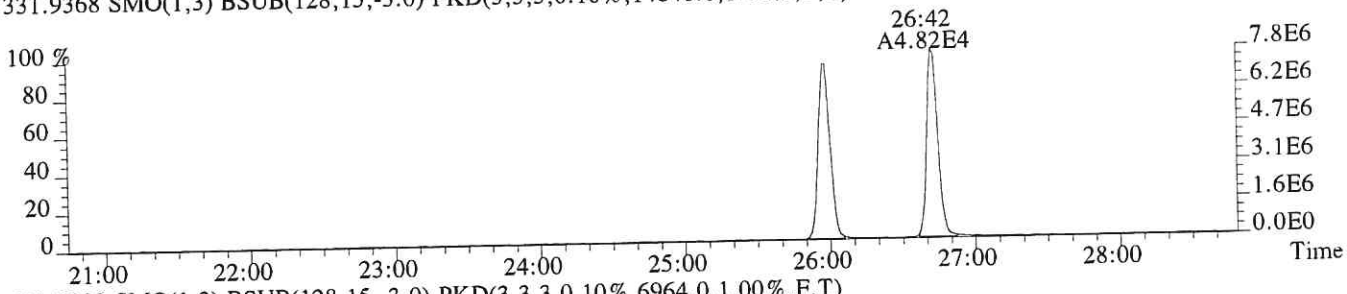
File:P616205 #1-573 Acq:26-DEC-2018 10:41:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3892.0,1.00%,F,T)



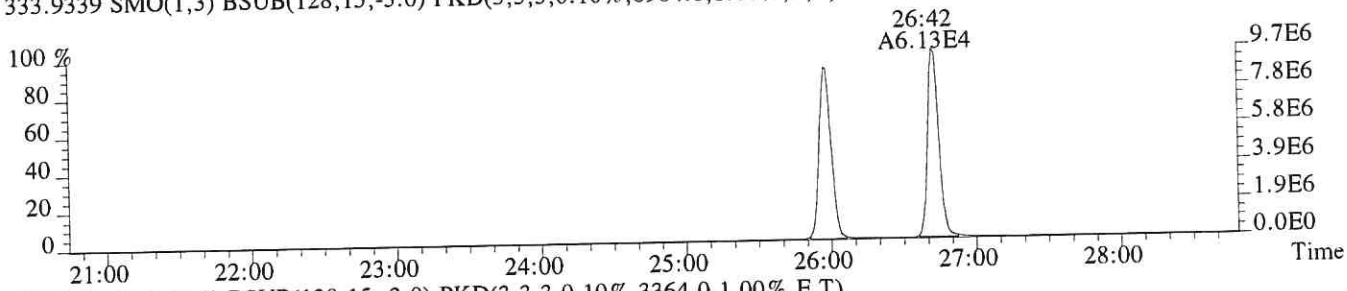
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1372.0,1.00%,F,T)



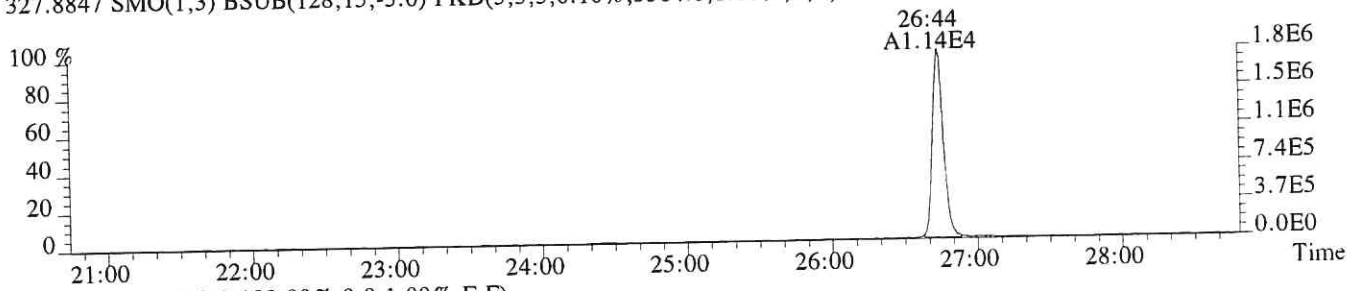
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,14840.0,1.00%,F,T)



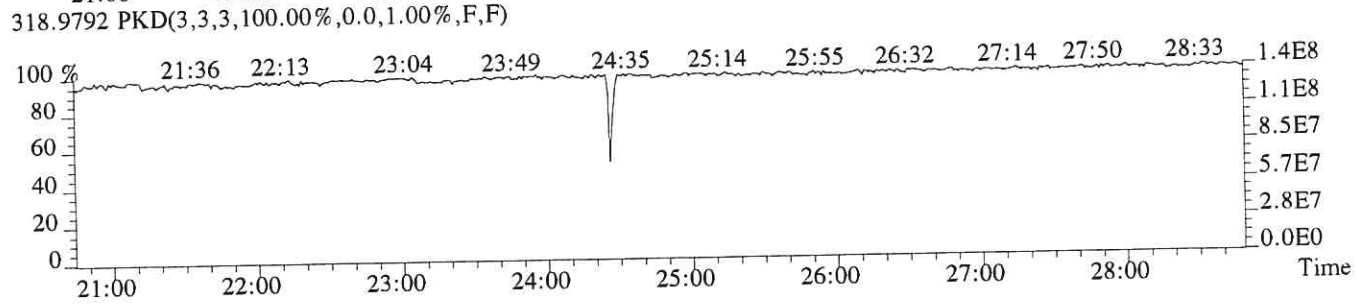
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6964.0,1.00%,F,T)



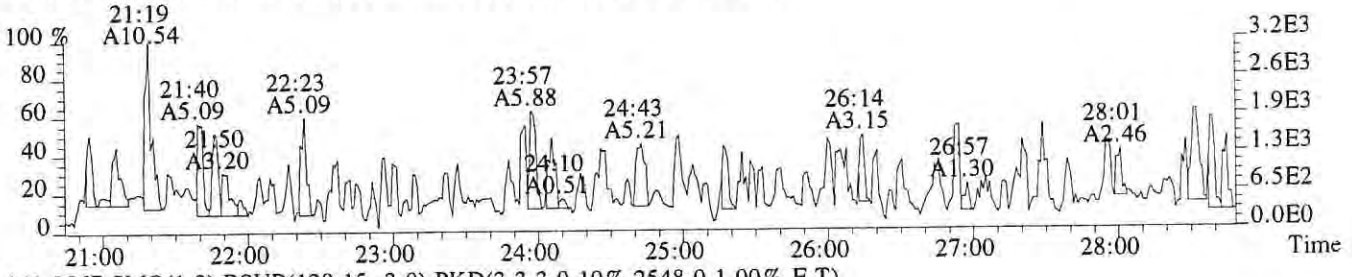
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3364.0,1.00%,F,T)



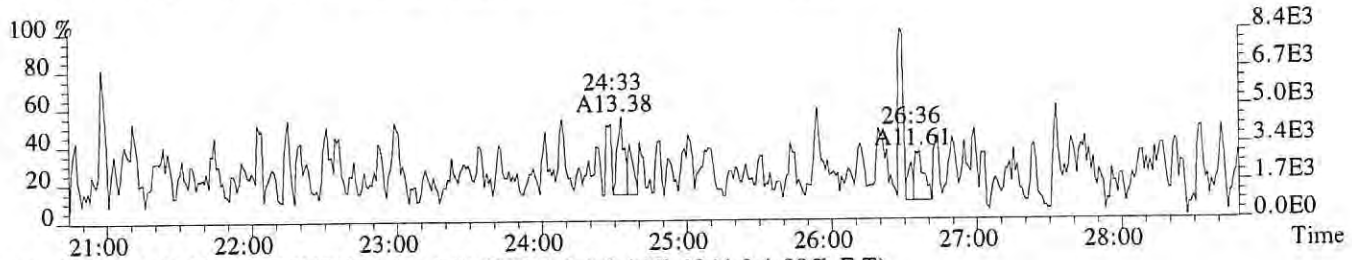
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



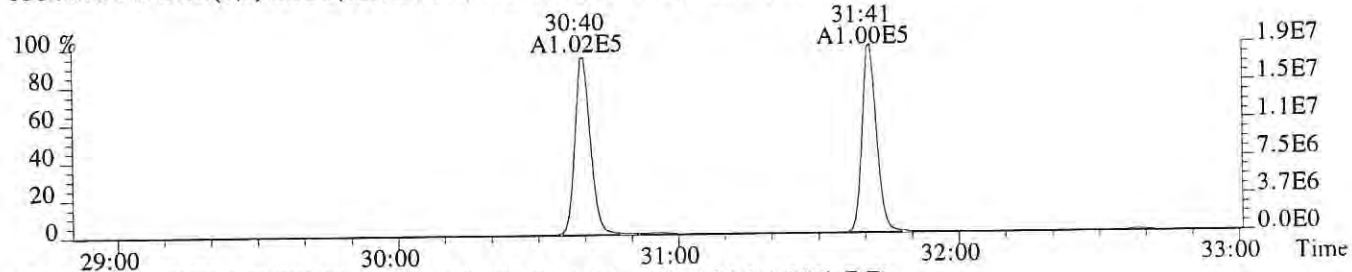
File:P616205 #1-573 Acq:26-DEC-2018 10:41:31 Probe EI+ Magnet SIR VG BioTech Mass spectf
Sample#1 Exp:CS3
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,692.0,1.00%,F,T)



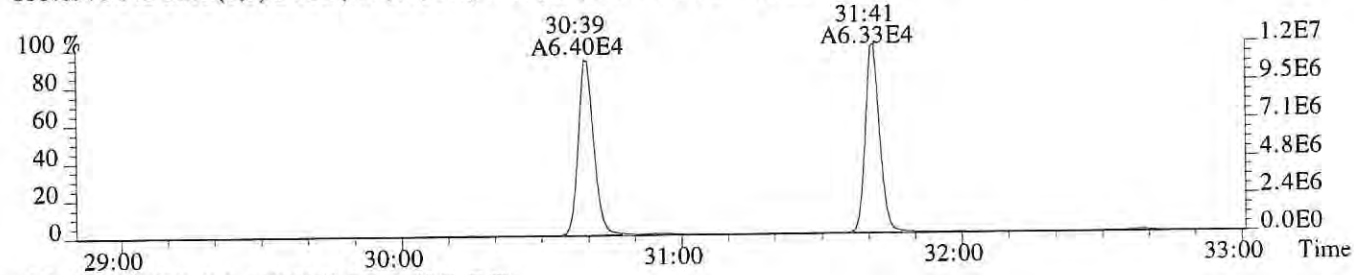
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2548.0,1.00%,F,T)



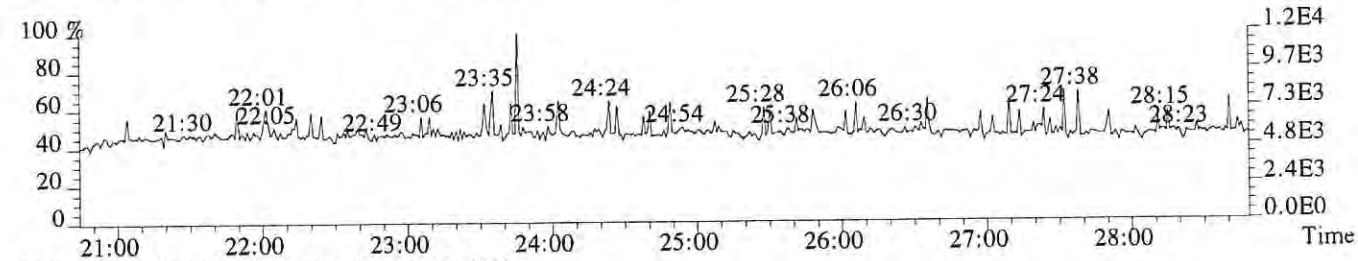
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1944.0,1.00%,F,T)



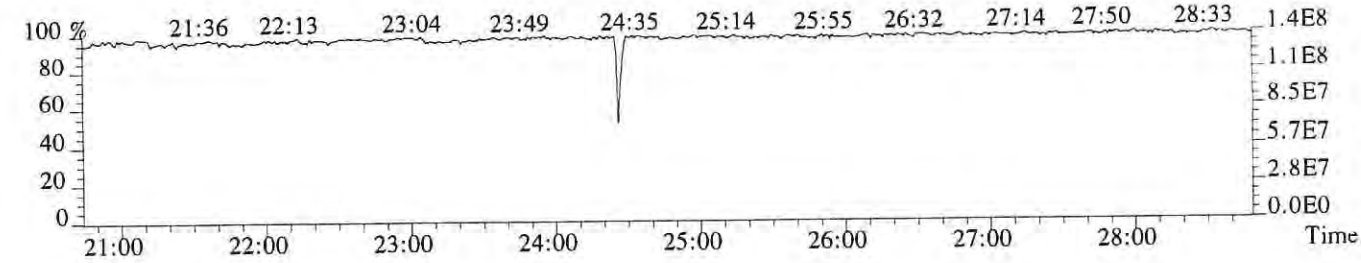
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1936.0,1.00%,F,T)



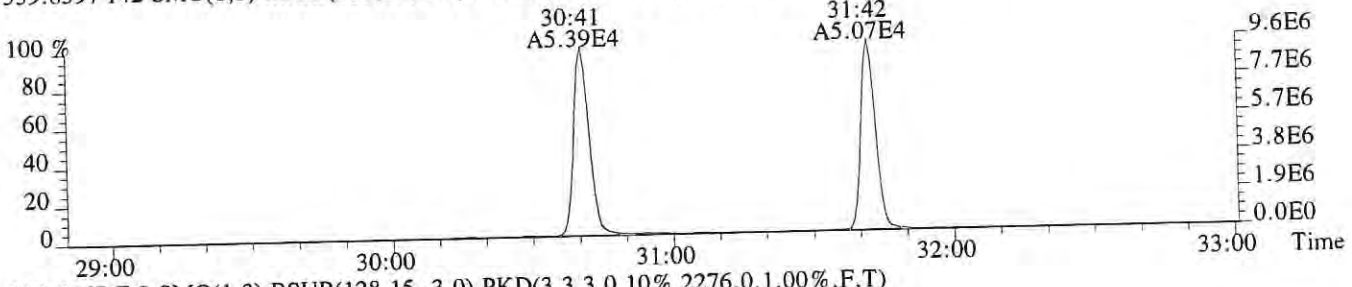
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



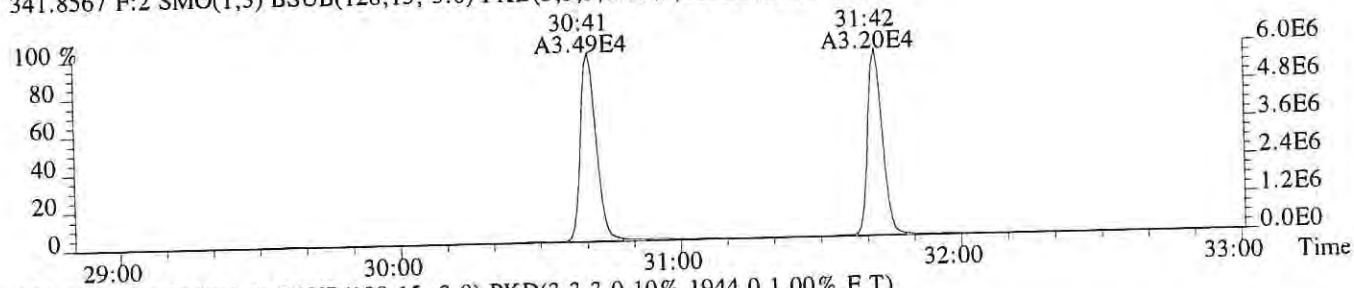
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



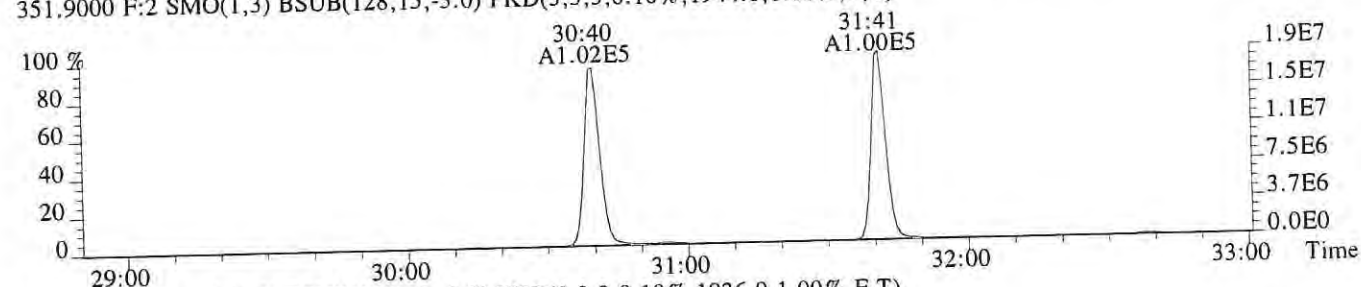
File:P616205 #1-376 Acq:26-DEC-2018 10:41:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,860.0,1.00%,F,T)



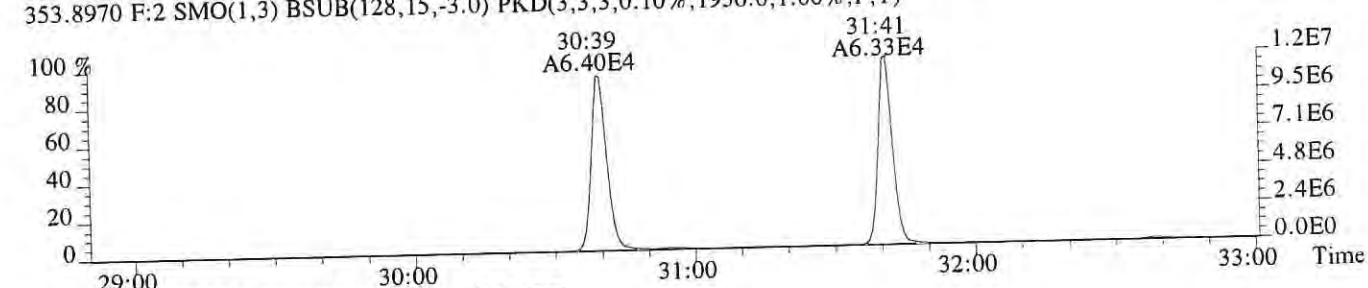
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2276.0,1.00%,F,T)



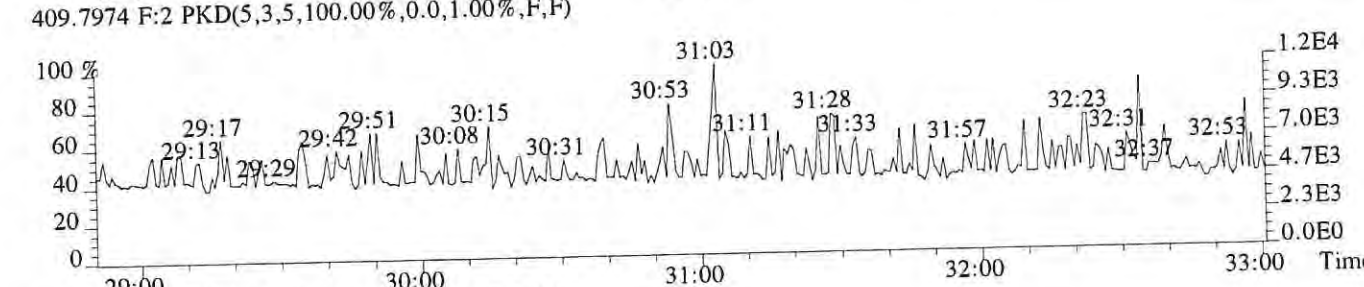
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1944.0,1.00%,F,T)



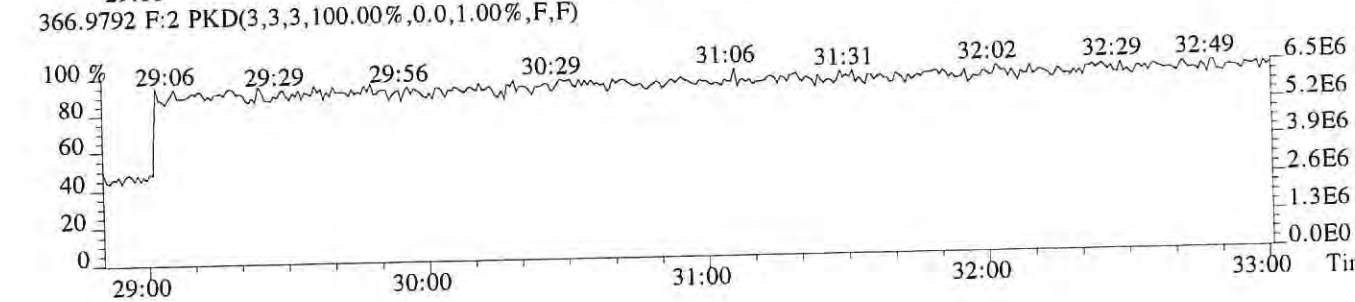
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1936.0,1.00%,F,T)



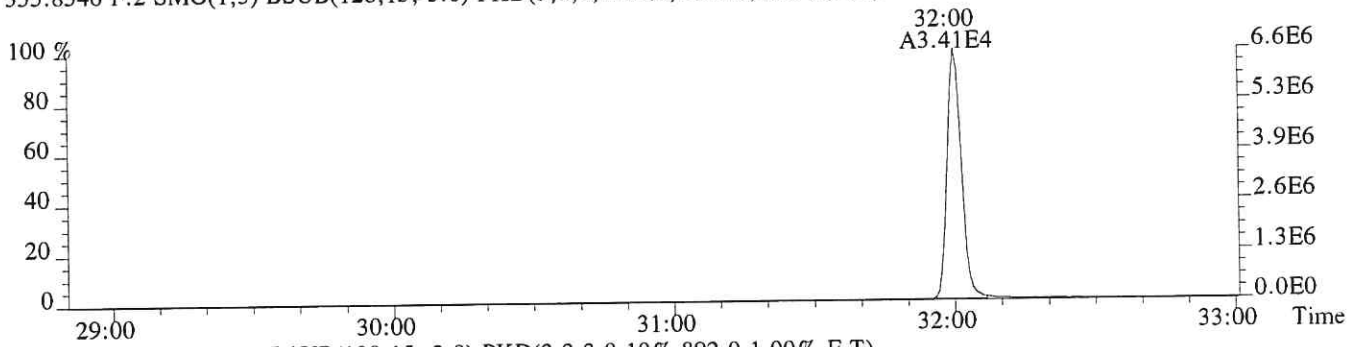
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



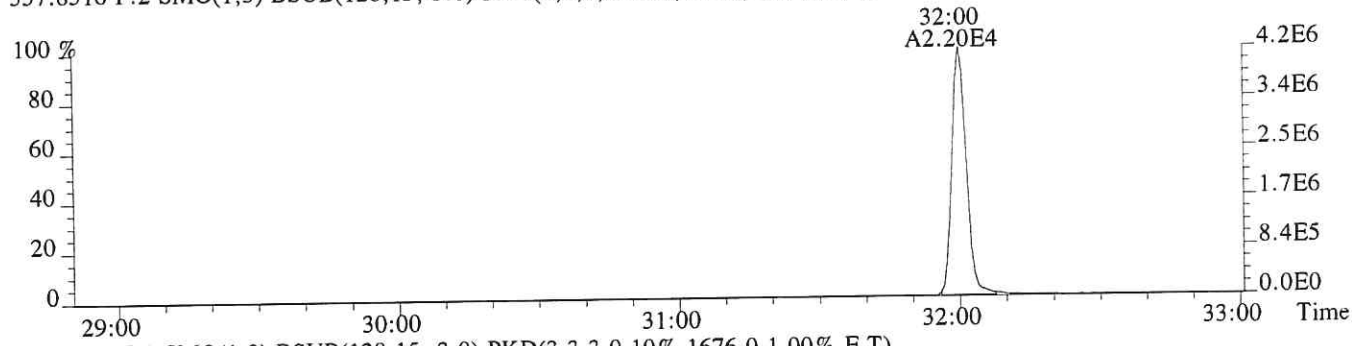
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



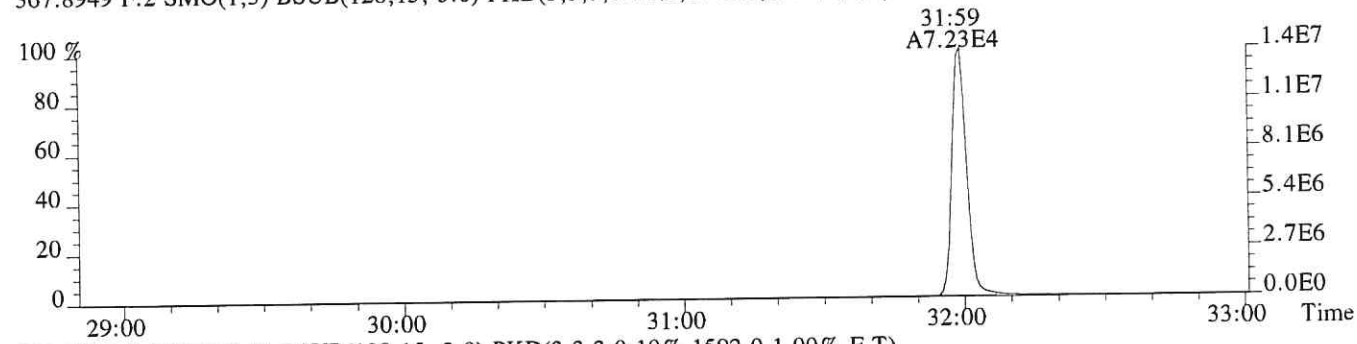
File:P616205 #1-376 Acq:26-DEC-2018 10:41:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1284.0,1.00%,F,T)



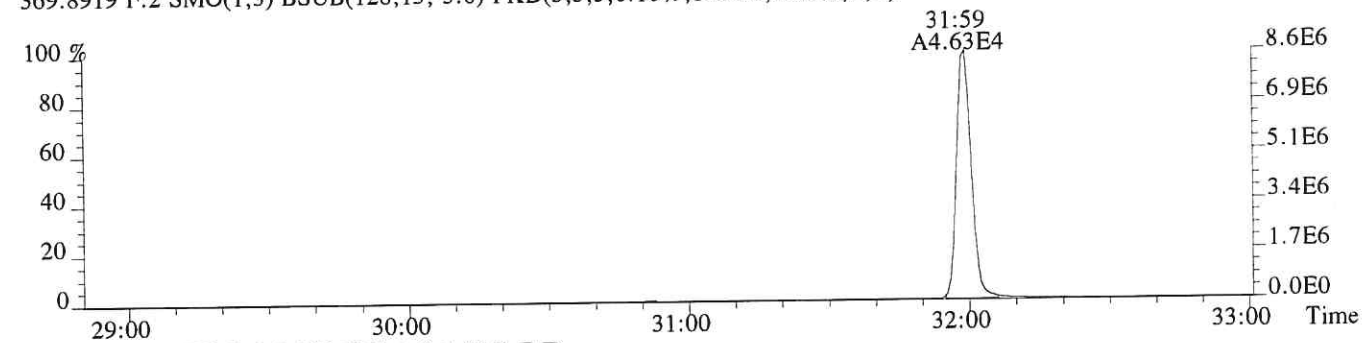
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,892.0,1.00%,F,T)



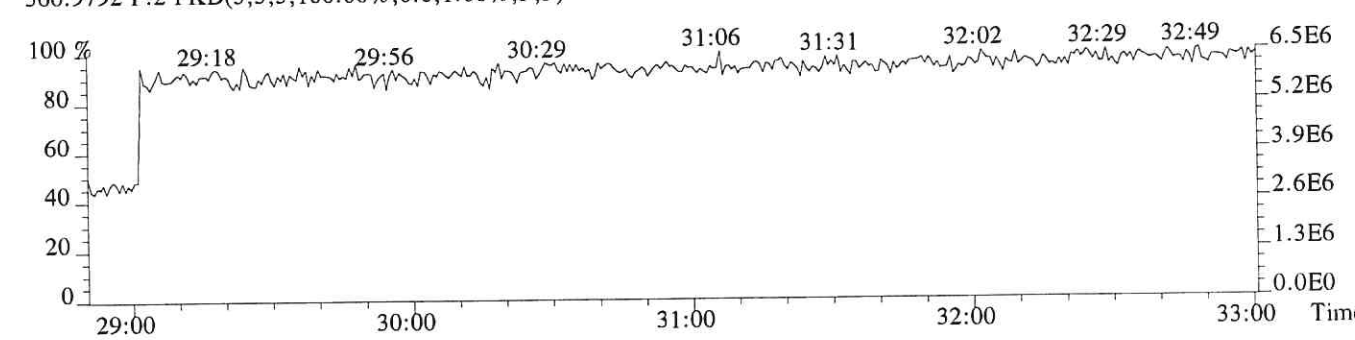
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1676.0,1.00%,F,T)



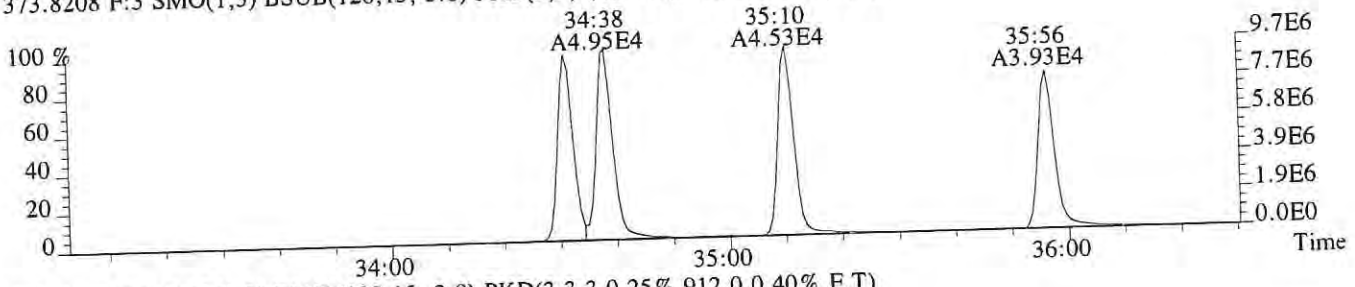
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1592.0,1.00%,F,T)



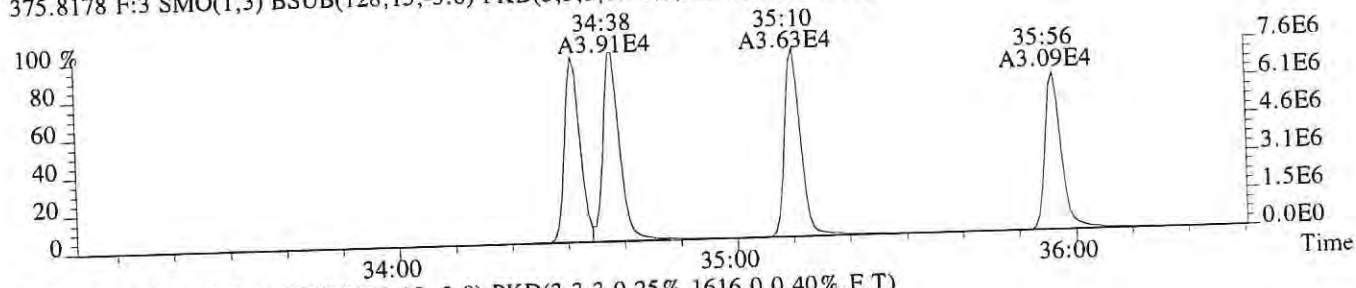
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



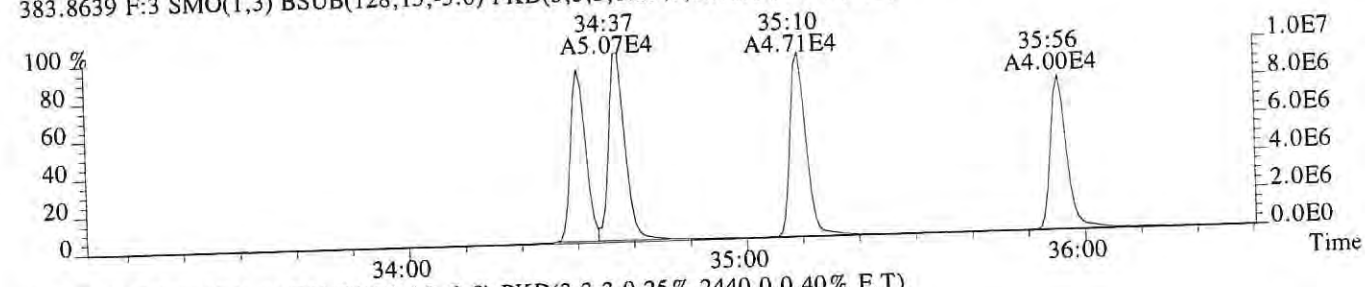
File:P616205 #1-312 Acq:26-DEC-2018 10:41:31 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:CS3
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2176.0,0.40%,F,T)



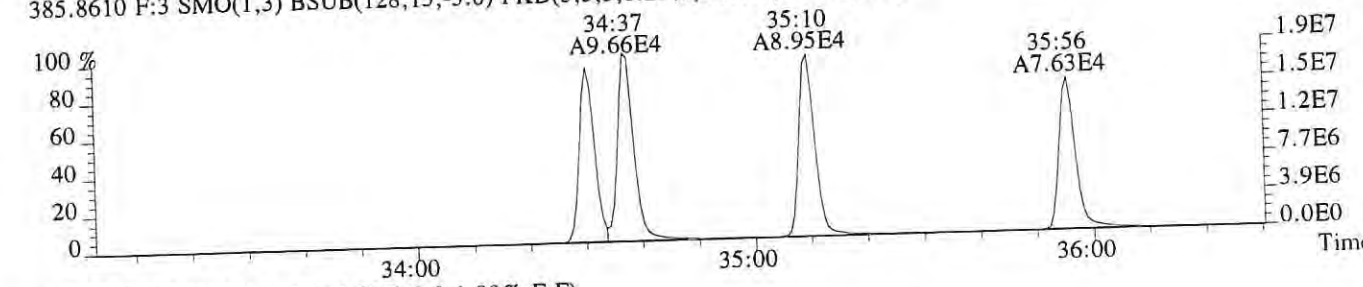
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,912.0,0.40%,F,T)



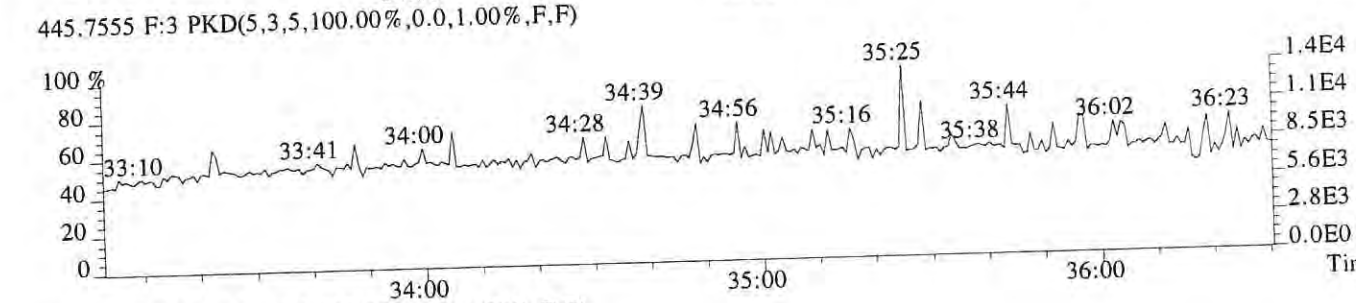
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1616.0,0.40%,F,T)



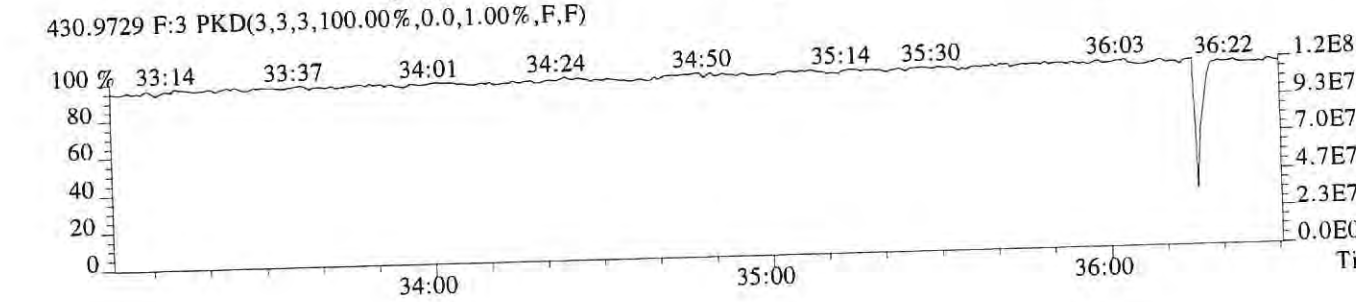
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2440.0,0.40%,F,T)



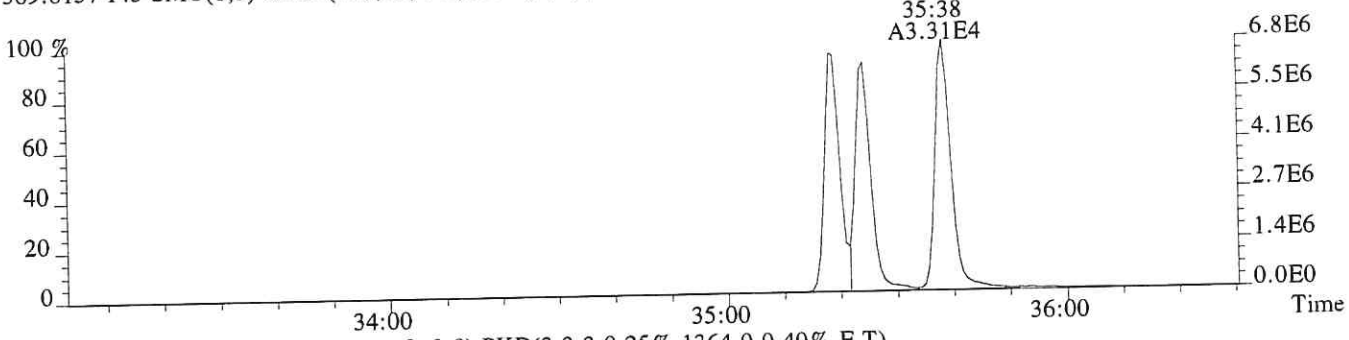
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



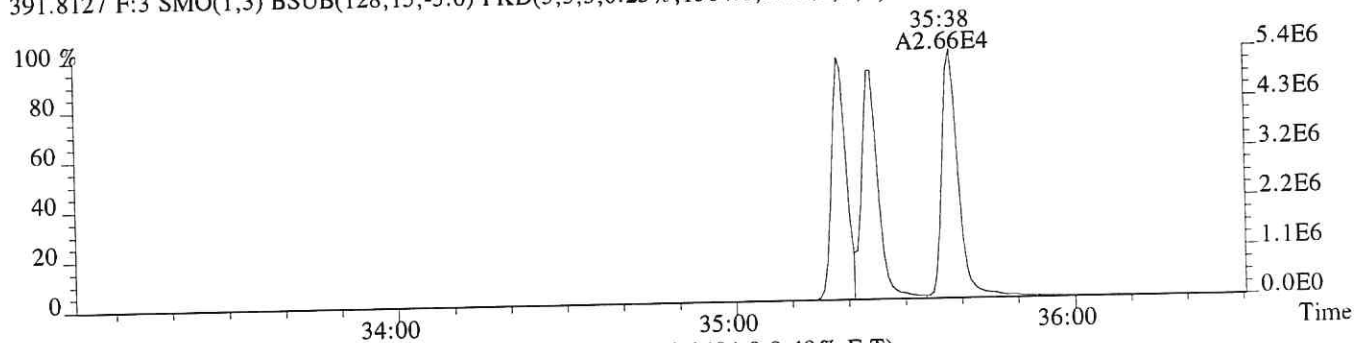
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



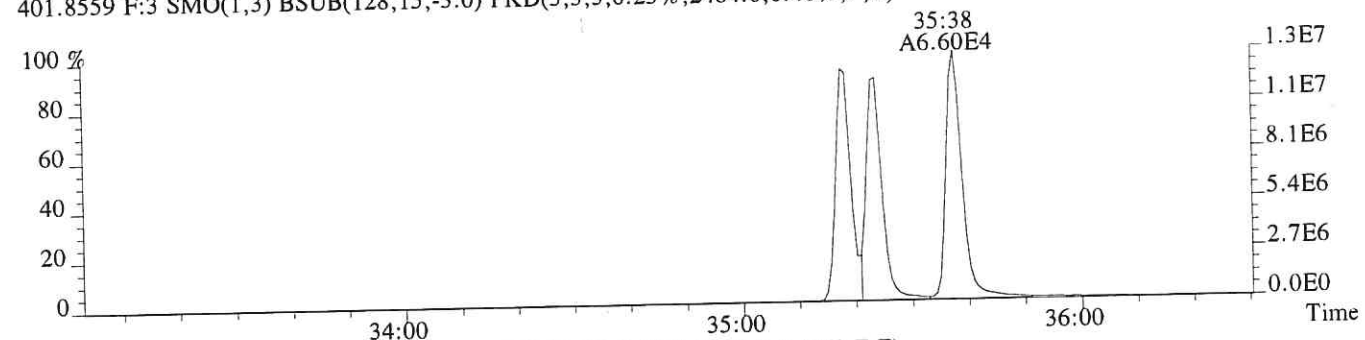
File:P616205 #1-312 Acq:26-DEC-2018 10:41:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,720.0,0.40%,F,T)



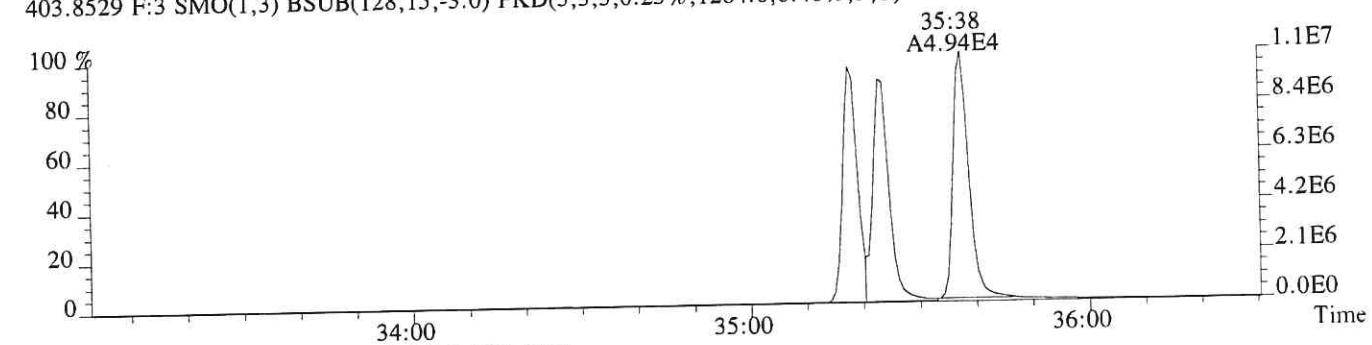
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1364.0,0.40%,F,T)



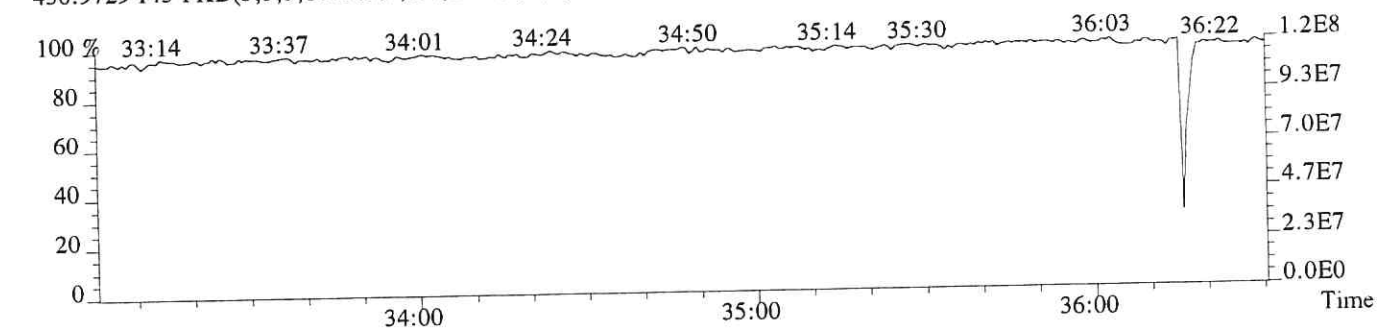
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2484.0,0.40%,F,T)



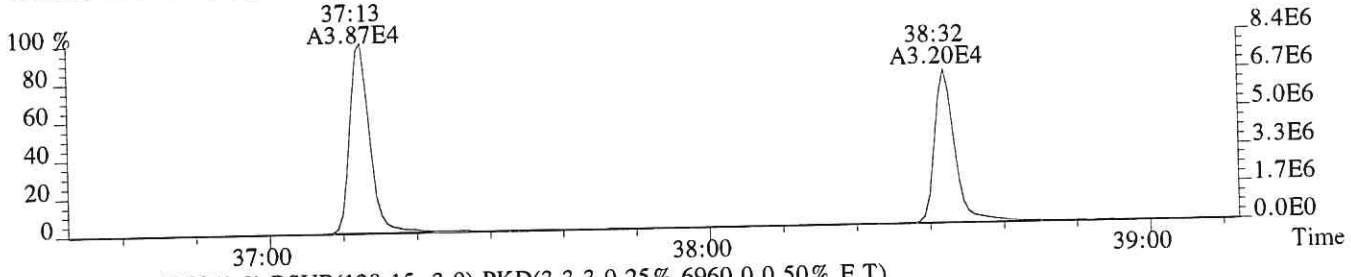
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1284.0,0.40%,F,T)



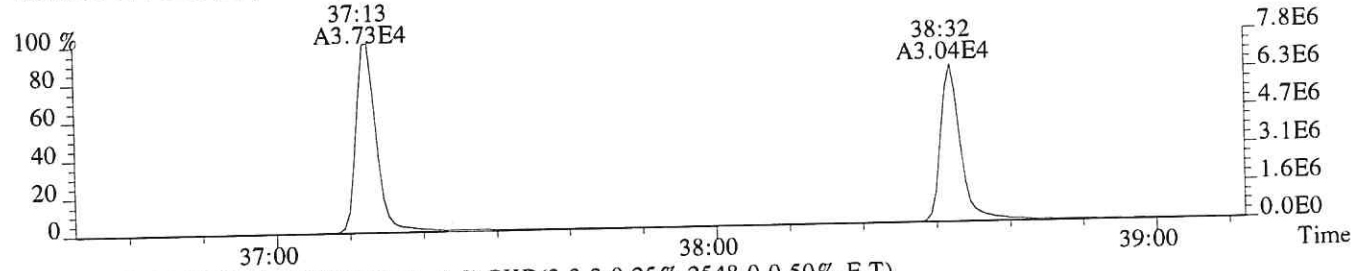
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



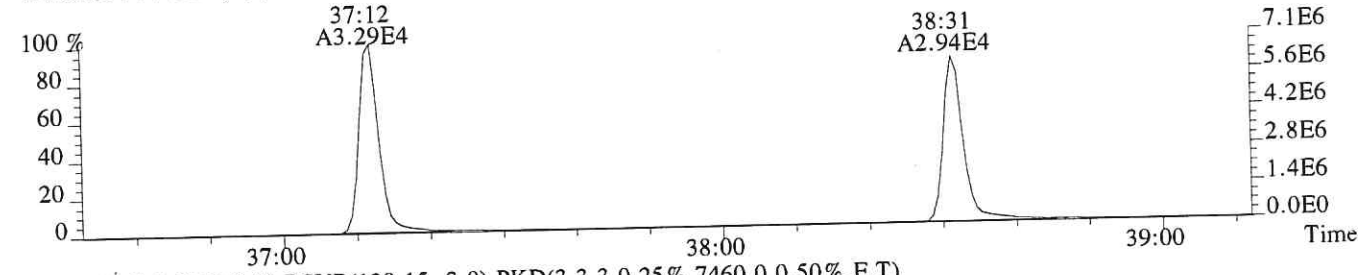
File:P616205 #1-240 Acq:26-DEC-2018 10:41:31 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:CS3
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6488.0,0.50%,F,T)



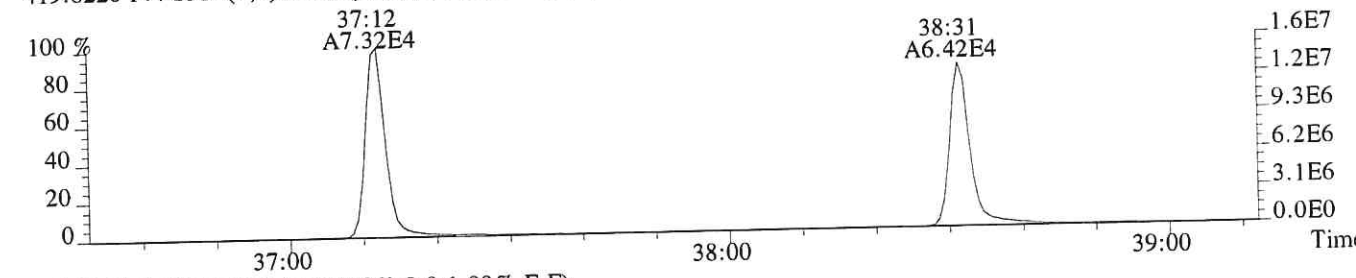
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6960.0,0.50%,F,T)



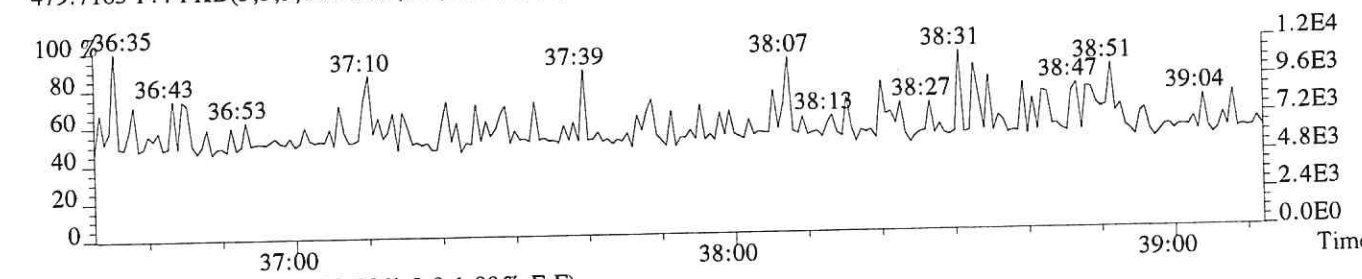
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2548.0,0.50%,F,T)



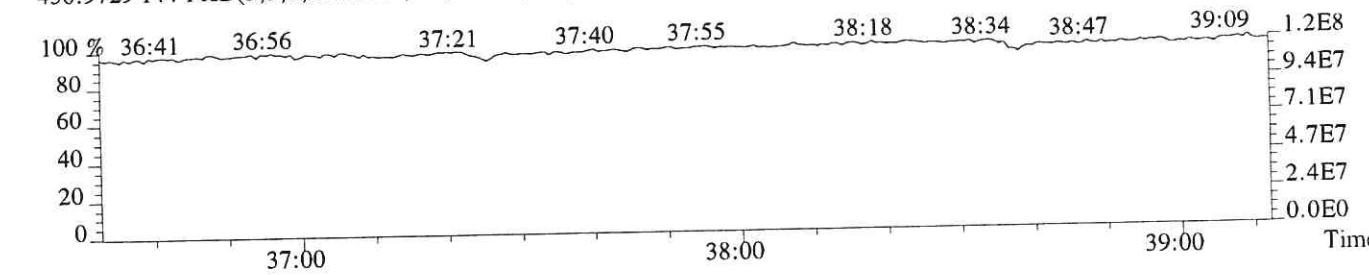
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7460.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

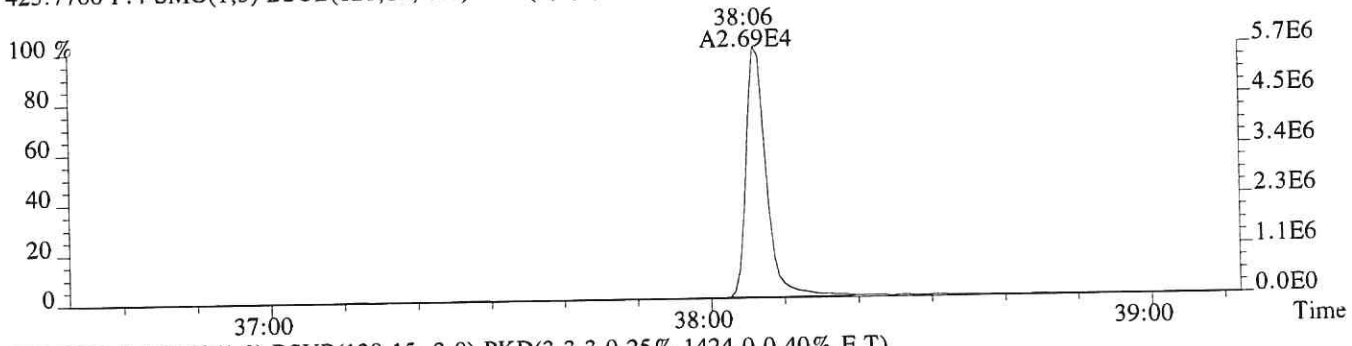


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

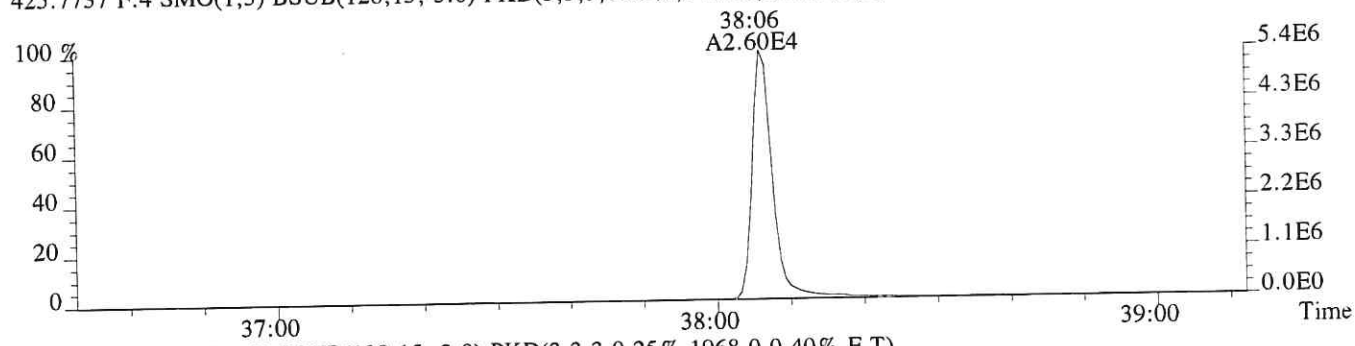


File:P616205 #1-240 Acq:26-DEC-2018 10:41:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

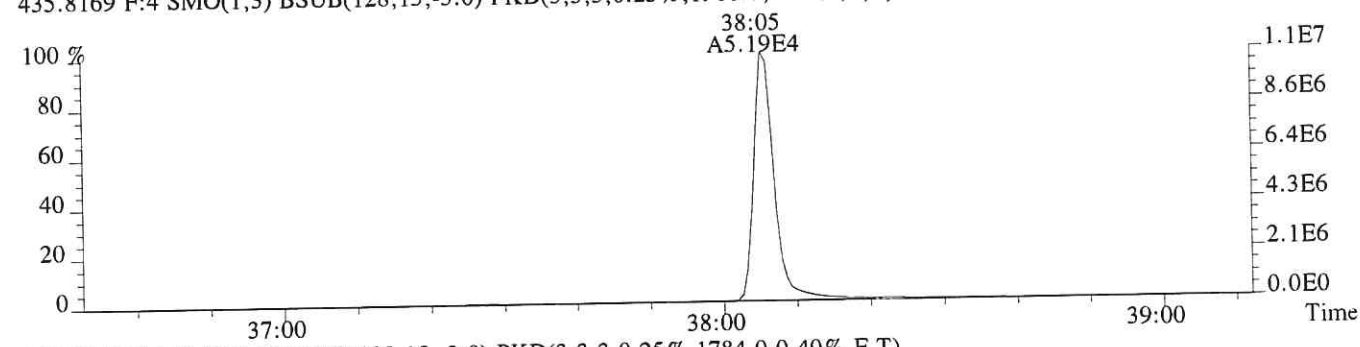
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1956.0,0.40%,F,T)



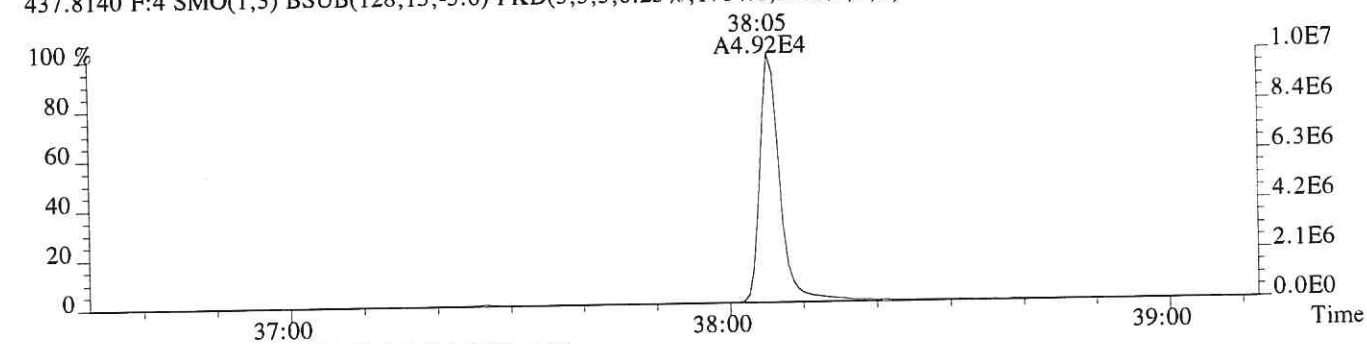
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1424.0,0.40%,F,T)



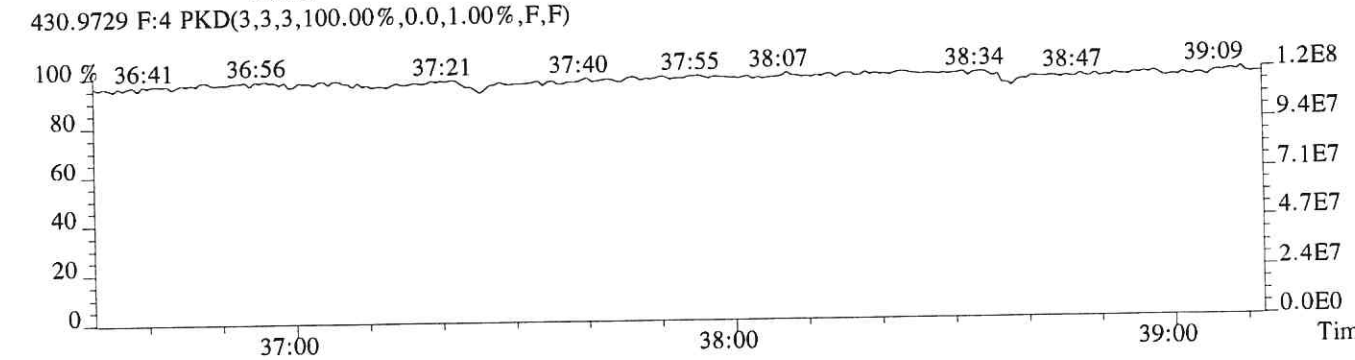
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1968.0,0.40%,F,T)



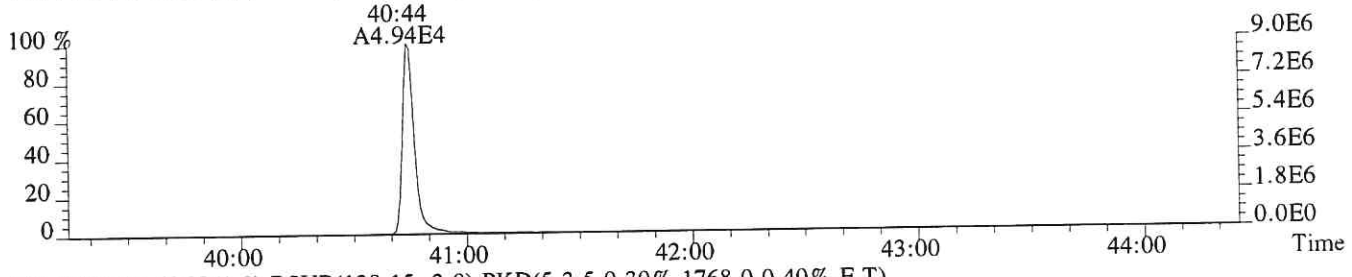
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1784.0,0.40%,F,T)



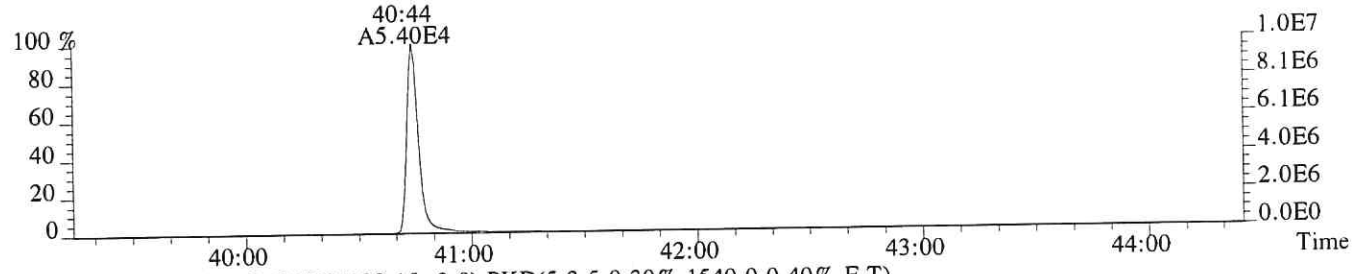
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



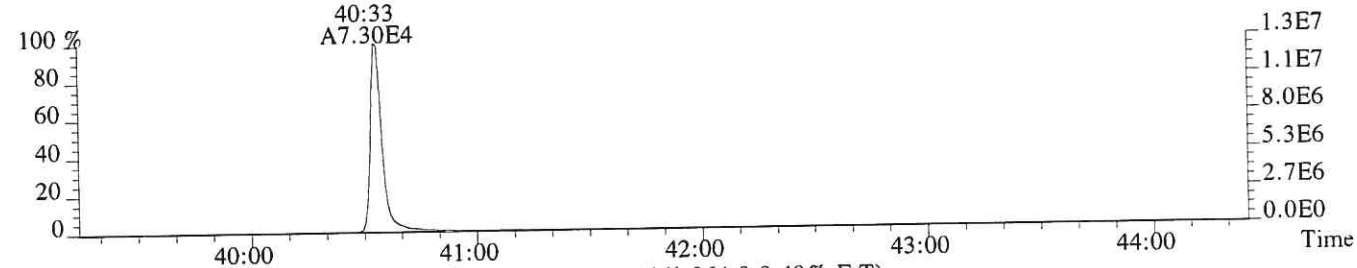
File:P616205 #1-467 Acq:26-DEC-2018 10:41:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,632.0,0.40%,F,T)



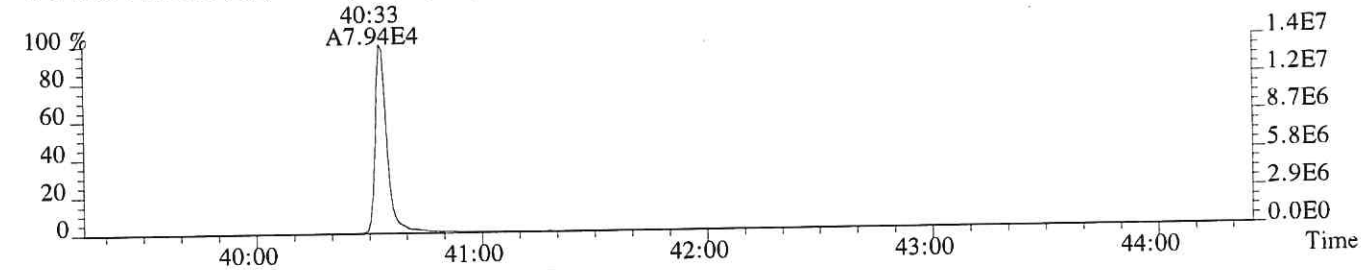
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1768.0,0.40%,F,T)



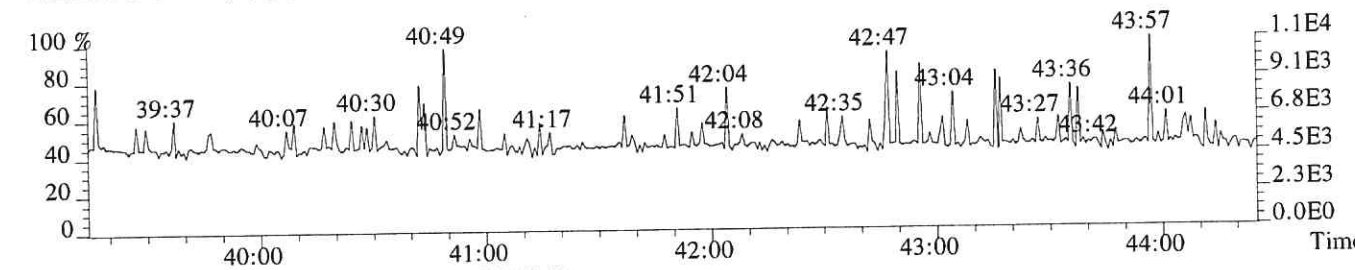
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1540.0,0.40%,F,T)



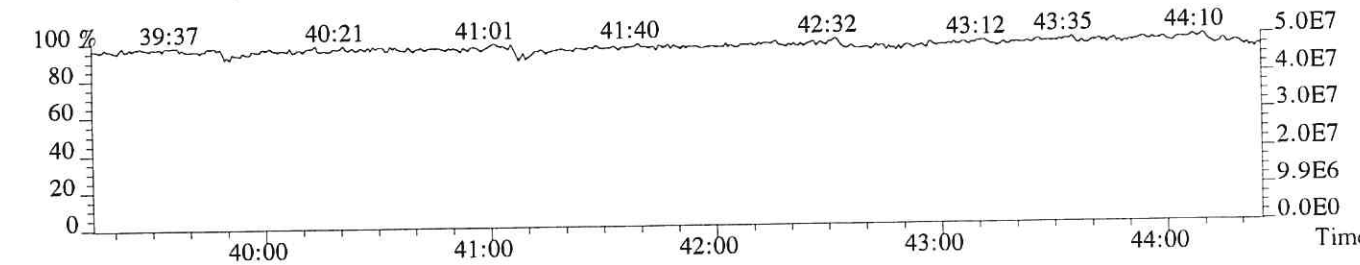
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,964.0,0.40%,F,T)



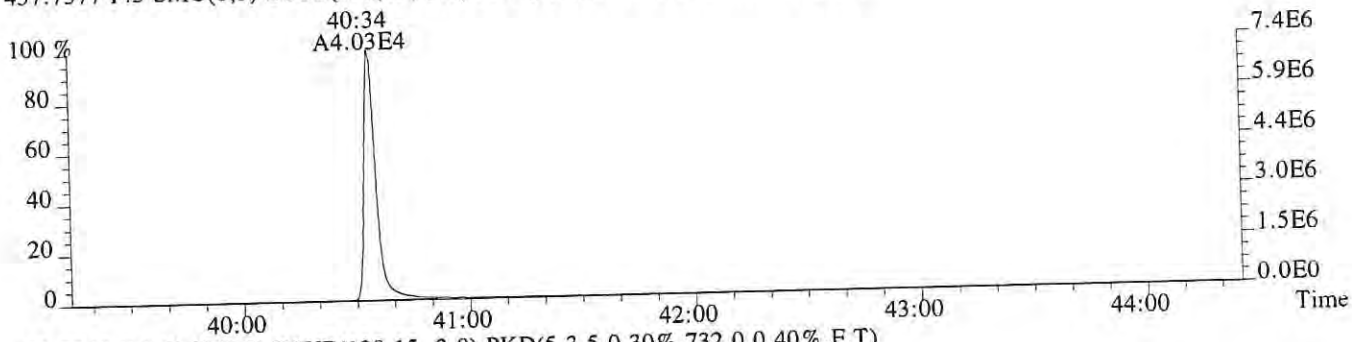
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



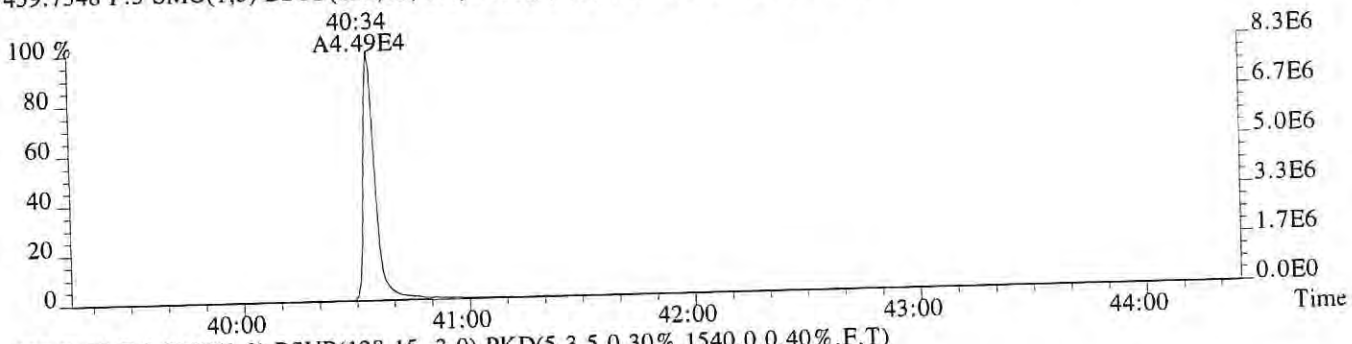
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



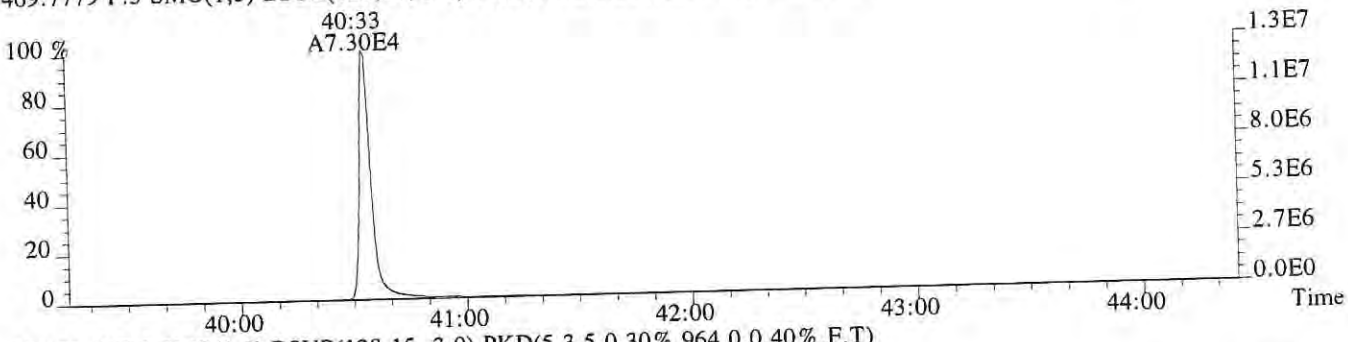
File:P616205 #1-467 Acq:26-DEC-2018 10:41:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,628.0,0.40%,F,T)



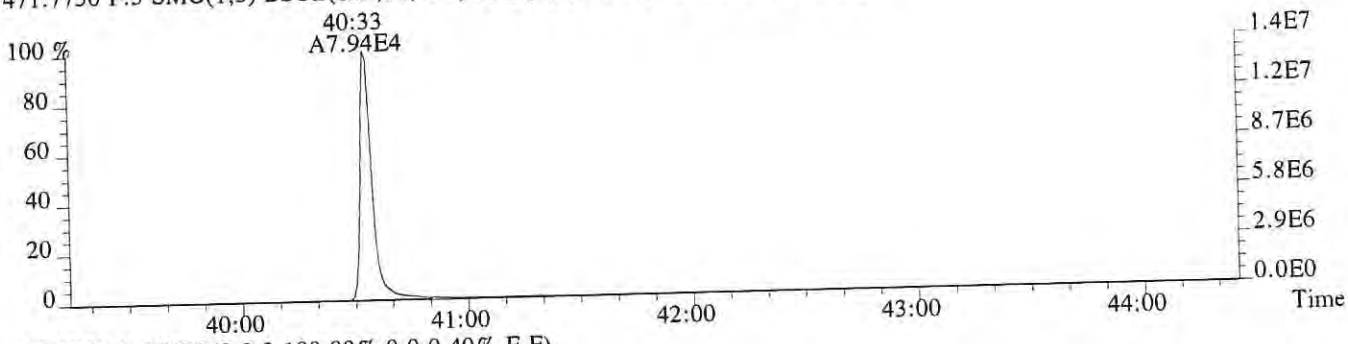
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,732.0,0.40%,F,T)



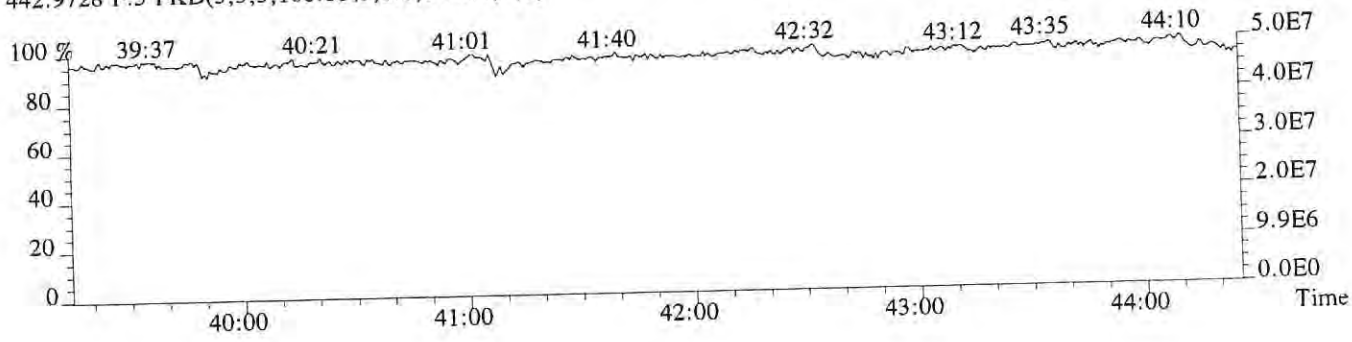
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1540.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,964.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

Instrument ID: E-HRMS-08 GC Column ID: DB-5MSUI

VER Data Filename: P616216 Analysis Date: 26-DEC-18 Time: 20:05:20

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	9.6	7.8 - 12.9	-3.6
1,2,3,7,8-PeCDD	M+2/M+4	1.55	1.32-1.78	50	39 - 65	0.3
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	48	39 - 64	-3.7
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	49	39 - 64	-1.1
1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	50	41 - 61	-0.3
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	47	43 - 58	-5.6
OCDD	M+2/M+4	0.89	0.76-1.02	95	79 - 126	-4.6
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	9.2	8.4 - 12.0	-8.2
1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	46	41 - 60	-8.8
2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	45	41 - 61	-9.2
1,2,3,4,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	45	45 - 56	-9.6
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	46	44 - 57	-7.3
1,2,3,7,8,9-HxCDF	M+2/M+4	1.26	1.05-1.43	46	45 - 56	-7.6
2,3,4,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	46	44 - 57	-7.6
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.03	0.88-1.20	46	45 - 55	-7.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.04	0.88-1.20	46	43 - 58	-8.3
OCDF	M+2/M+4	0.90	0.76-1.02	85	63 - 159	-14.9

(1) See Table 8, Method 1613B, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.

(3) Contract-required concentration range as specified in Table 6, Method 1613B, under VER.

(4) The beginning CCAL %RSD for the 17 unlabeled standard must not exceed +/- 20%, Section 7.7.4.1. The ending CCAL must not exceed +/-25%, Section 8.3.2.4, Method 8290

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

Instrument ID: E-HRMS-08 GC Column ID: DB-5MSUI

VER Data Filename: P616216 Analysis Date: 26-DEC-18 Time: 20:05:20

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	103	82 - 121	3.3
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.56	1.32-1.78	104	62 - 160	3.8
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	97	85 - 117	-2.9
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	100	85 - 118	0.4
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	98	72 - 138	-2.0
13C-OCDD	M+2/M+4	0.92	0.76-1.02	189	96 - 415	-5.3
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	97	71 - 140	-2.9
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	98	76 - 130	-1.9
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	100	77 - 130	0.4
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	91	76 - 131	-9.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	90	70 - 143	-10.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.54	0.43-0.59	89	74 - 135	-10.7
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	92	73 - 137	-8.3
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.44	0.37-0.51	86	78 - 129	-14.5
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	79	77 - 129	-21.2
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD	M+2/M+4			10.0	7.8 - 12.7	-0.1

(1) See Table 8, Method 1613B, for m/z specifications.
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.
(3) Contract-required concentration range, as specified in Table 6, Method 1613B, under VER.
(4) No ion abundance ratio; report concentration found.
(5) The beginnning CCAL %RSD for the labeled standard must not exceed +/- 30% Section 7.7.4.2. The ending CCAL must not exceed +/- 35%, Sec 8.3.2.4 (8290)

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
194503

ın #8 Filename P616216 Samp: 1 Inj: 1 Acquired: 26-DEC-18 20:05:20
:ocessed: 27-DEC-18 14:36:27 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
l	Unk	2,3,7,8-TCDF	25:46	7.155e+03	9.175e+03	0.78	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:41	6.008e+04	3.862e+04	1.56	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:42	5.748e+04	3.696e+04	1.56	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:32	5.271e+04	4.216e+04	1.25	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:38	5.641e+04	4.480e+04	1.26	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:11	5.308e+04	4.228e+04	1.26	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:57	4.810e+04	3.808e+04	1.26	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:13	4.445e+04	4.313e+04	1.03	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:33	3.433e+04	3.298e+04	1.04	yes	no	1.463
0	Unk	OCDF	40:45	5.559e+04	6.155e+04	0.90	yes	no	1.571
1	Unk	2,3,7,8-TCDD	26:44	5.411e+03	6.864e+03	0.79	yes	no	1.049
2	Unk	1,2,3,7,8-PeCDD	32:01	3.948e+04	2.552e+04	1.55	yes	no	0.929
3	Unk	1,2,3,4,7,8-HxCDD	35:19	3.549e+04	2.803e+04	1.27	yes	no	1.071
4	Unk	1,2,3,6,7,8-HxCDD	35:24	3.737e+04	2.937e+04	1.27	yes	no	1.060
5	Unk	1,2,3,7,8,9-HxCDD	35:39	4.002e+04	3.152e+04	1.27	yes	no	1.145
6	Unk	1,2,3,4,6,7,8-HpCDD	38:07	3.130e+04	3.074e+04	1.02	yes	no	1.112
7	Unk	OCDD	40:34	4.553e+04	5.125e+04	0.89	yes	no	1.157
8	IS	13C-2,3,7,8-TCDF	25:44	7.249e+04	9.204e+04	0.79	yes	no	1.417
9	IS	13C-1,2,3,7,8-PeCDF	30:40	1.151e+05	7.207e+04	1.60	yes	no	1.596
0	IS	13C-2,3,4,7,8-PeCDF	31:41	1.157e+05	7.283e+04	1.59	yes	no	1.571
1	IS	13C-1,2,3,4,7,8-HxCDF	34:31	5.133e+04	9.700e+04	0.53	yes	no	1.160
2	IS	13C-1,2,3,6,7,8-HxCDF	34:38	5.842e+04	1.105e+05	0.53	yes	no	1.336
3	IS	13C-2,3,4,6,7,8-HxCDF	35:10	5.582e+04	1.052e+05	0.53	yes	no	1.250
4	IS	13C-1,2,3,7,8,9-HxCDF	35:56	4.961e+04	9.243e+04	0.54	yes	no	1.131
5	IS	13C-1,2,3,4,6,7,8-HpCDF	37:12	3.801e+04	8.567e+04	0.44	yes	no	1.029
6	IS	13C-1,2,3,4,7,8,9-HpCDF	38:32	3.098e+04	6.937e+04	0.45	yes	no	0.907
7	IS	13C-2,3,7,8-TCDD	26:43	5.397e+04	6.738e+04	0.80	yes	no	0.983
8	IS	13C-1,2,3,7,8-PeCDD	31:59	8.510e+04	5.445e+04	1.56	yes	no	1.125
9	IS	13C-1,2,3,4,7,8-HxCDD	35:18	6.930e+04	5.390e+04	1.29	yes	no	0.903
0	IS	13C-1,2,3,6,7,8-HxCDD	35:24	7.120e+04	5.623e+04	1.27	yes	no	0.903
1	IS	13C-1,2,3,4,6,7,8-HpCDD	38:06	6.085e+04	5.727e+04	1.06	yes	no	0.857
2	IS	13C-OCDD	40:34	8.382e+04	9.146e+04	0.92	yes	no	0.659
3	RS/RT	13C-1,2,3,4-TCDD	25:58	5.276e+04	6.678e+04	0.79	yes	no	-
4	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:38	7.932e+04	6.120e+04	1.30	yes	no	-
5	C/Up	37Cl-2,3,7,8-TCDD	26:44	1.298e+04				no	1.086

ALS ENVIRONMENTAL
.0450 Stancliff Rd., Suite 115
Houston, TX 77099
)ffice(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
194503

Run #8 Filename P616216 Samp: 1 Inj: 1 Acquired: 26-DEC-18 20:05:20
Processed: 27-DEC-18 14:36:27 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.03e+06	1.84e+03	5.6e+02	1.34e+06	5.37e+03	2.5e+02
2	1,2,3,7,8-PeCDF	1.04e+07	4.76e+02	2.2e+04	6.76e+06	3.33e+03	2.0e+03
3	2,3,4,7,8-PeCDF	1.08e+07	4.76e+02	2.3e+04	6.92e+06	3.33e+03	2.1e+03
4	1,2,3,4,7,8-HxCDF	1.15e+07	1.36e+03	8.4e+03	9.12e+06	1.14e+03	8.0e+03
5	1,2,3,6,7,8-HxCDF	1.17e+07	1.36e+03	8.6e+03	9.42e+06	1.14e+03	8.3e+03
6	2,3,4,6,7,8-HxCDF	1.15e+07	1.36e+03	8.4e+03	8.89e+06	1.14e+03	7.8e+03
7	1,2,3,7,8,9-HxCDF	9.85e+06	1.36e+03	7.2e+03	7.74e+06	1.14e+03	6.8e+03
8	1,2,3,4,6,7,8-HpCDF	9.74e+06	5.56e+03	1.8e+03	9.49e+06	3.37e+03	2.8e+03
9	1,2,3,4,7,8,9-HpCDF	7.30e+06	5.56e+03	1.3e+03	7.06e+06	3.37e+03	2.1e+03
10	OCDF	1.05e+07	1.03e+03	1.0e+04	1.18e+07	2.07e+03	5.7e+03
11	2,3,7,8-TCDD	8.37e+05	3.67e+03	2.3e+02	1.10e+06	1.96e+03	5.6e+02
12	1,2,3,7,8-PeCDD	7.58e+06	1.72e+03	4.4e+03	4.90e+06	9.80e+02	5.0e+03
13	1,2,3,4,7,8-HxCDD	8.08e+06	5.44e+02	1.5e+04	6.31e+06	1.42e+03	4.5e+03
14	1,2,3,6,7,8-HxCDD	7.81e+06	5.44e+02	1.4e+04	6.24e+06	1.42e+03	4.4e+03
15	1,2,3,7,8,9-HxCDD	8.25e+06	5.44e+02	1.5e+04	6.54e+06	1.42e+03	4.6e+03
16	1,2,3,4,6,7,8-HpCDD	6.95e+06	6.24e+02	1.1e+04	6.78e+06	1.39e+03	4.9e+03
17	OCDD	8.68e+06	1.13e+03	7.7e+03	9.78e+06	9.56e+02	1.0e+04
18	13C-2,3,7,8-TCDF	1.07e+07	1.13e+04	9.4e+02	1.36e+07	7.78e+03	1.7e+03
19	13C-1,2,3,7,8-PeCDF	2.04e+07	1.14e+03	1.8e+04	1.29e+07	9.52e+02	1.4e+04
20	13C-2,3,4,7,8-PeCDF	2.23e+07	1.14e+03	2.0e+04	1.41e+07	9.52e+02	1.5e+04
21	13C-1,2,3,4,7,8-HxCDF	1.11e+07	1.46e+03	7.6e+03	2.08e+07	3.15e+03	6.6e+03
22	13C-1,2,3,6,7,8-HxCDF	1.23e+07	1.46e+03	8.4e+03	2.35e+07	3.15e+03	7.5e+03
23	13C-2,3,4,6,7,8-HxCDF	1.18e+07	1.46e+03	8.1e+03	2.24e+07	3.15e+03	7.1e+03
24	13C-1,2,3,7,8,9-HxCDF	1.02e+07	1.46e+03	7.0e+03	1.90e+07	3.15e+03	6.0e+03
25	13C-1,2,3,4,6,7,8-HpCDF	8.28e+06	4.12e+03	2.0e+03	1.88e+07	3.27e+03	5.7e+03
26	13C-1,2,3,4,7,8,9-HpCDF	6.75e+06	4.12e+03	1.6e+03	1.51e+07	3.27e+03	4.6e+03
27	13C-2,3,7,8-TCDD	8.67e+06	1.94e+04	4.5e+02	1.08e+07	6.38e+03	1.7e+03
28	13C-1,2,3,7,8-PeCDD	1.64e+07	9.92e+02	1.7e+04	1.05e+07	2.25e+03	4.7e+03
29	13C-1,2,3,4,7,8-HxCDD	1.57e+07	3.35e+03	4.7e+03	1.23e+07	1.98e+03	6.2e+03
30	13C-1,2,3,6,7,8-HxCDD	1.50e+07	3.35e+03	4.5e+03	1.19e+07	1.98e+03	6.0e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.34e+07	3.35e+03	4.0e+03	1.27e+07	9.28e+02	1.4e+04
32	13C-OCDD	1.58e+07	1.22e+03	1.3e+04	1.74e+07	1.08e+03	1.6e+04
33	13C-1,2,3,4-TCDD	8.07e+06	1.94e+04	4.2e+02	1.03e+07	6.38e+03	1.6e+03
34	13C-1,2,3,7,8,9-HxCDD	1.62e+07	3.35e+03	4.8e+03	1.26e+07	1.98e+03	6.4e+03
35	37Cl-2,3,7,8-TCDD	2.08e+06	2.65e+03	7.8e+02			

---Sample Calculation---

$$\text{D/L TCDD} = \frac{2.5 \times (3.672e{+}03 + 1.956e{+}03\ ) \times 100}{(8.669e{+}06 + 1.080e{+}07\ ) \times (\qquad\qquad) \times 1.049} =$$

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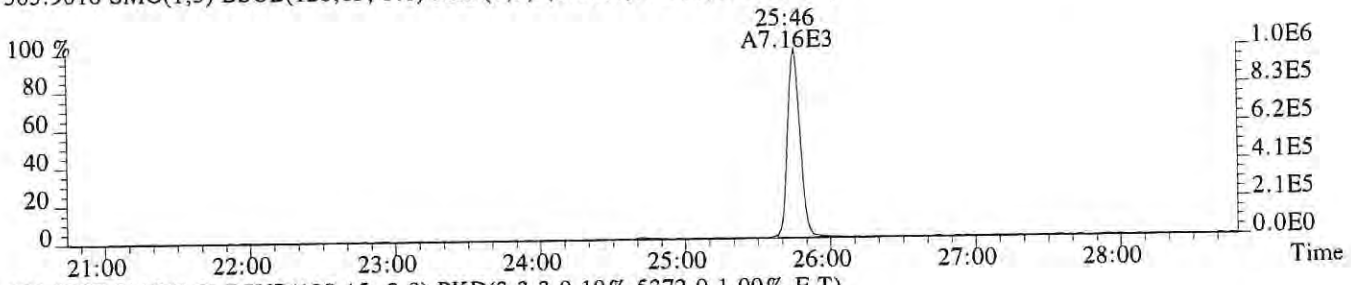
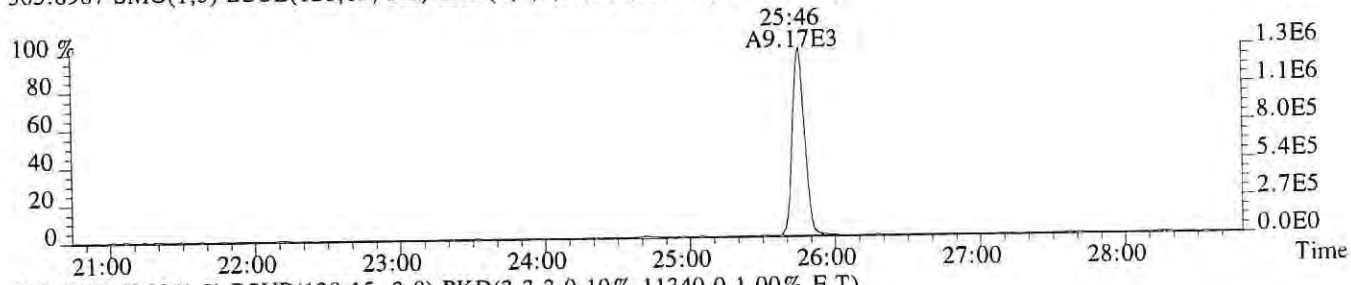
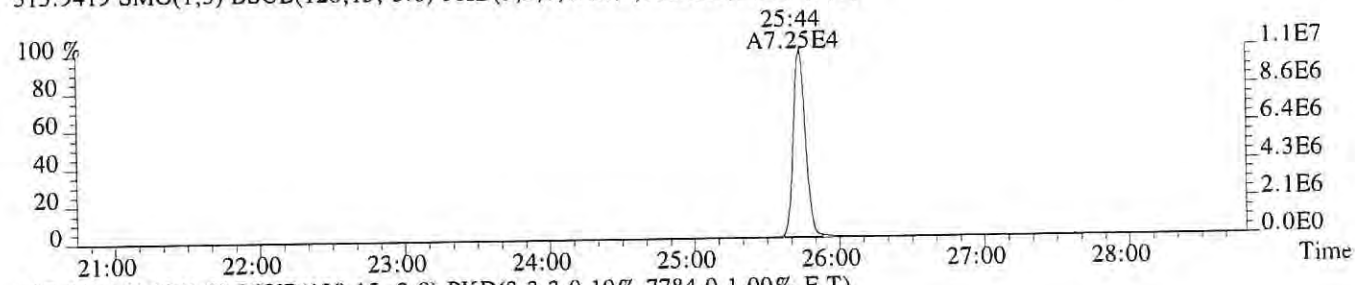
File:P616216 #1-573 Acq:26-DEC-2018 20:05:20 Probe El+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:CS3
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1840.0,1.00%,F,T)



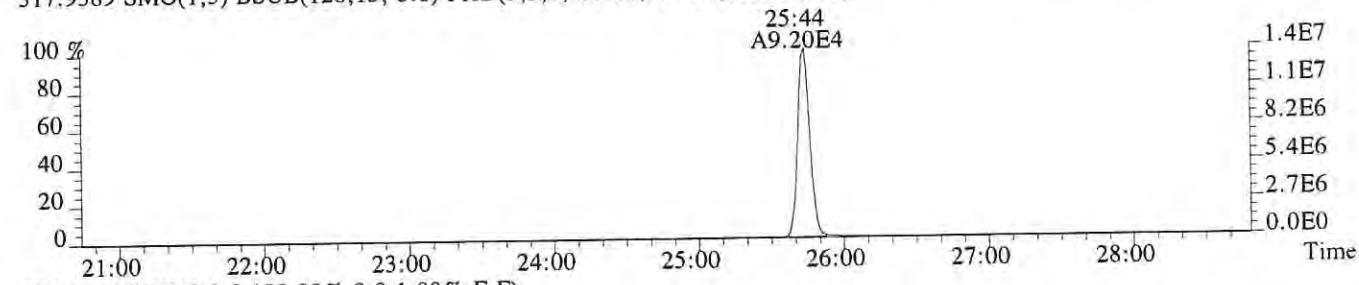
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5372.0,1.00%,F,T)



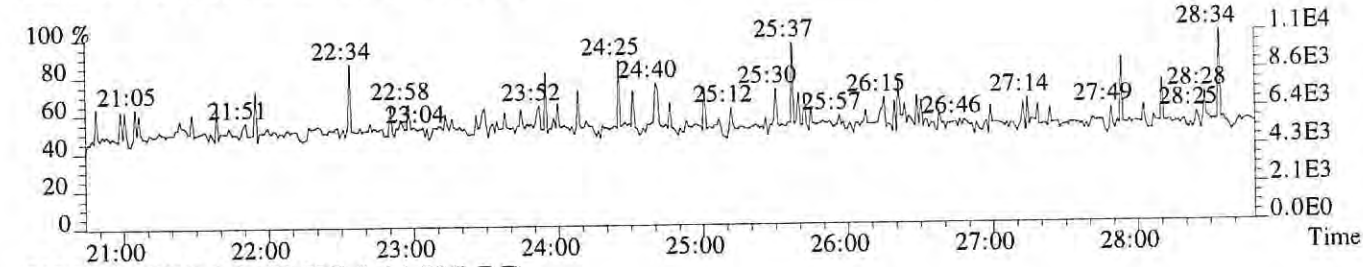
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11340.0,1.00%,F,T)



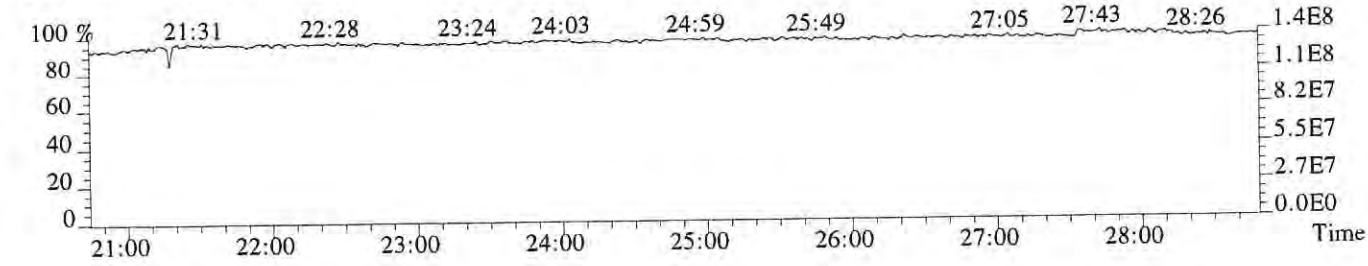
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7784.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

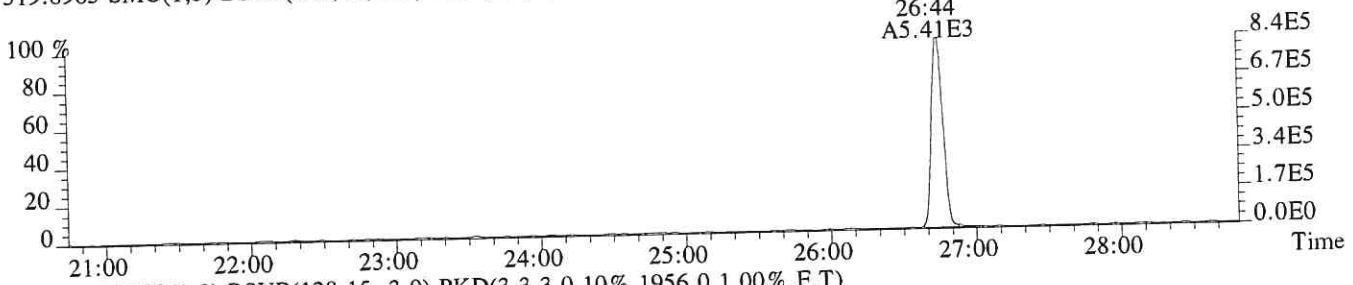


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

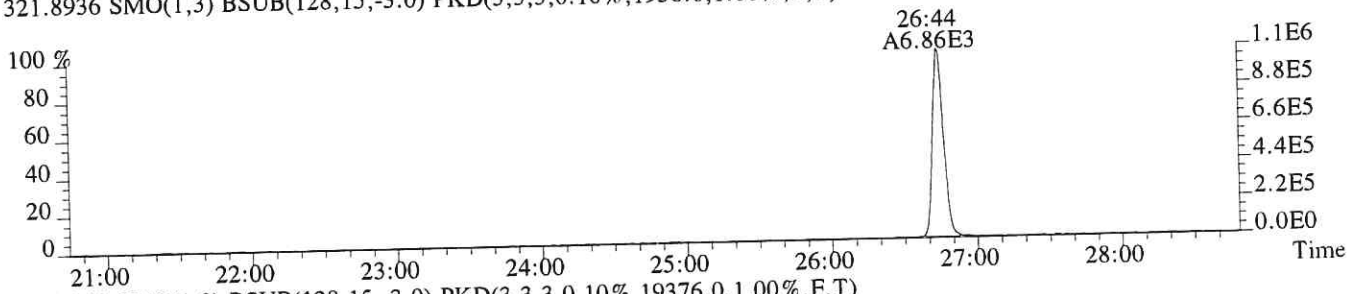


File:P616216 #1-573 Acq:26-DEC-2018 20:05:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

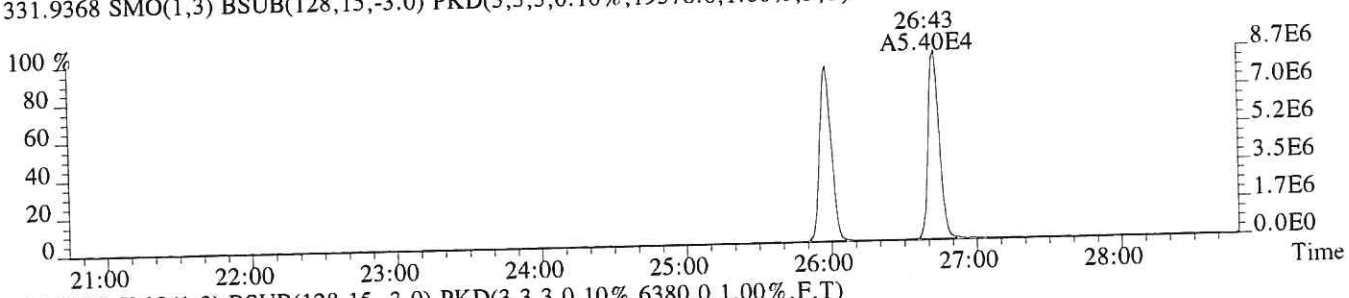
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3672.0,1.00%,F,T)



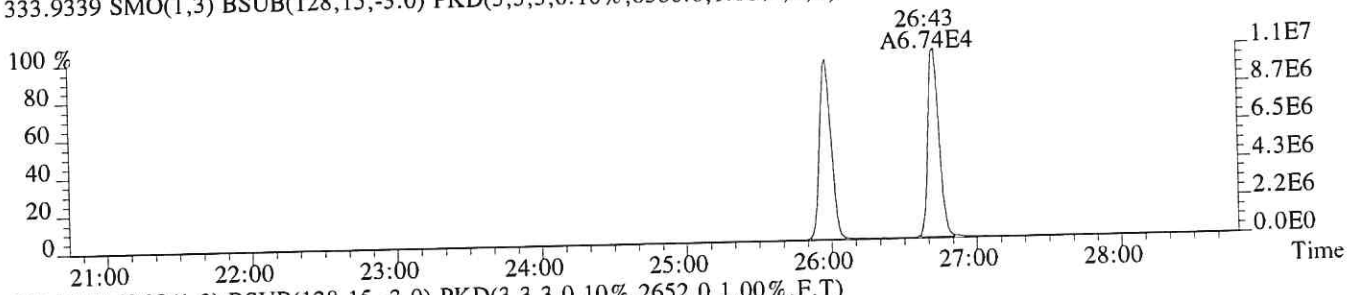
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1956.0,1.00%,F,T)



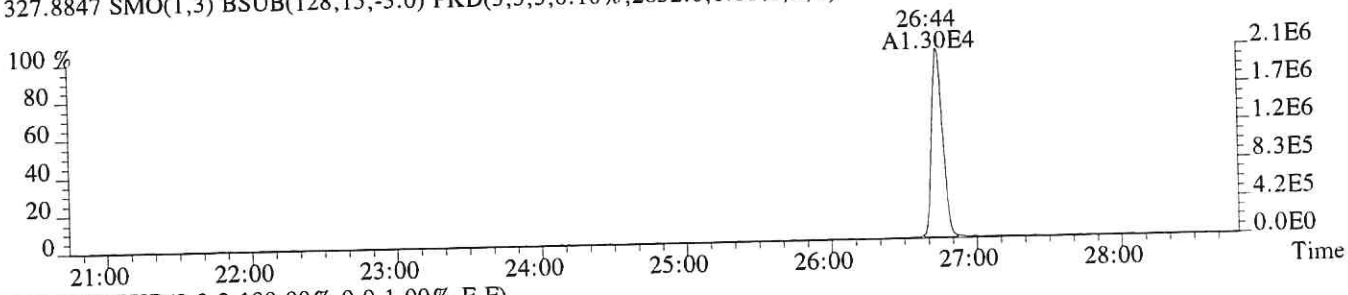
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,19376.0,1.00%,F,T)



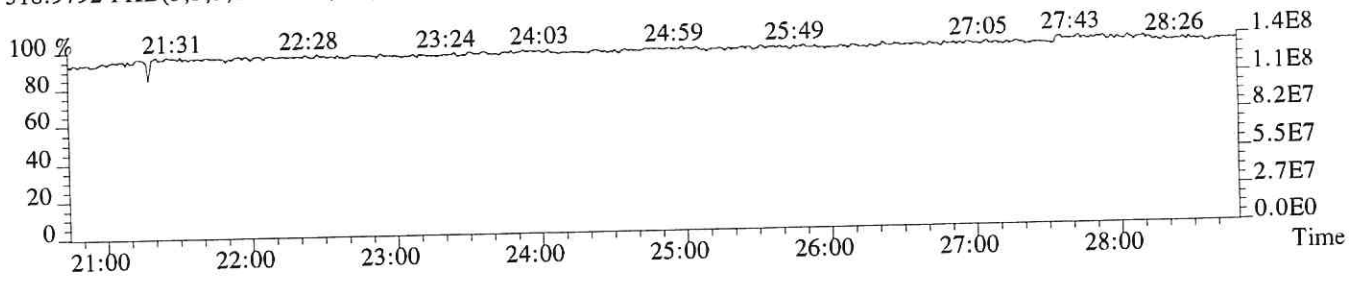
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6380.0,1.00%,F,T)



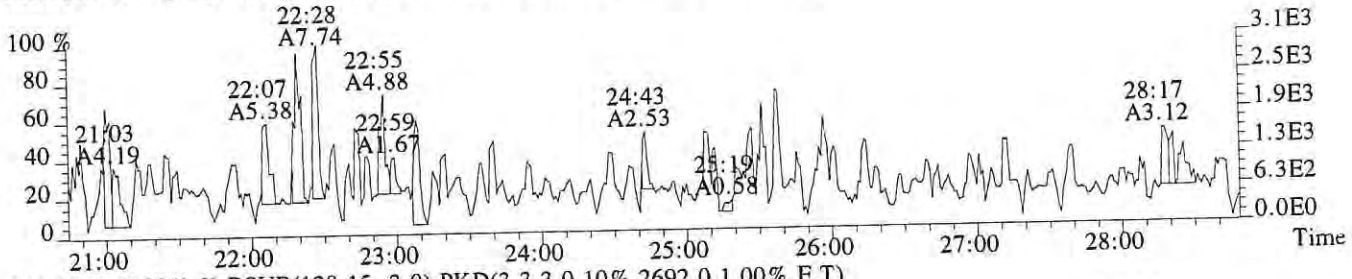
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2652.0,1.00%,F,T)



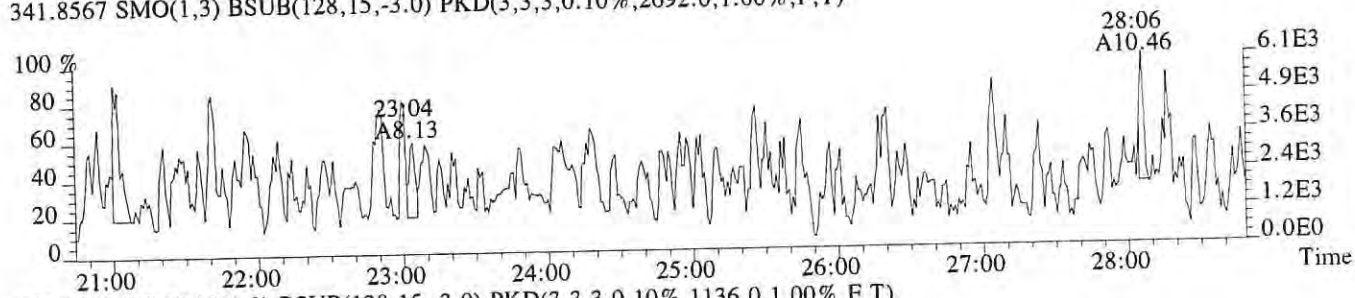
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



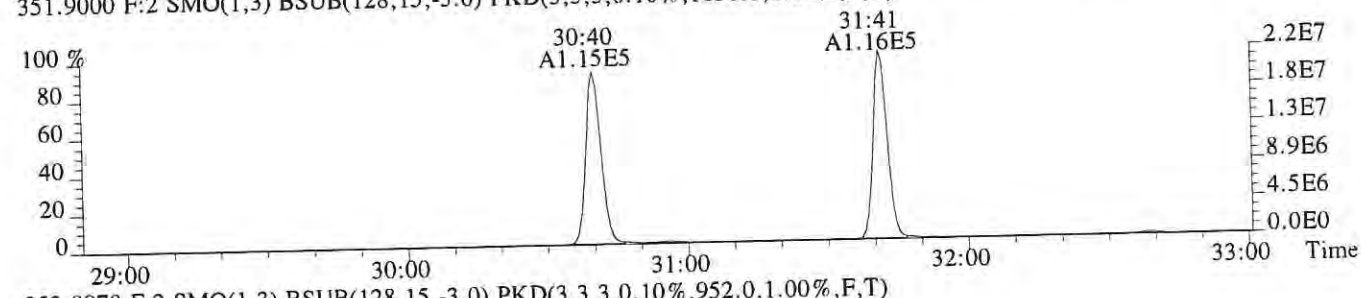
File:P616216 #1-573 Acq:26-DEC-2018 20:05:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,864.0,1.00%,F,T)



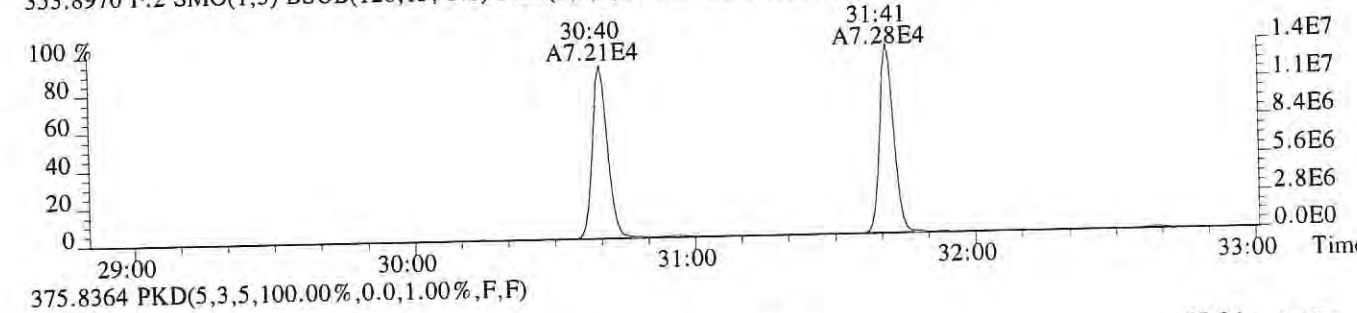
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2692.0,1.00%,F,T)



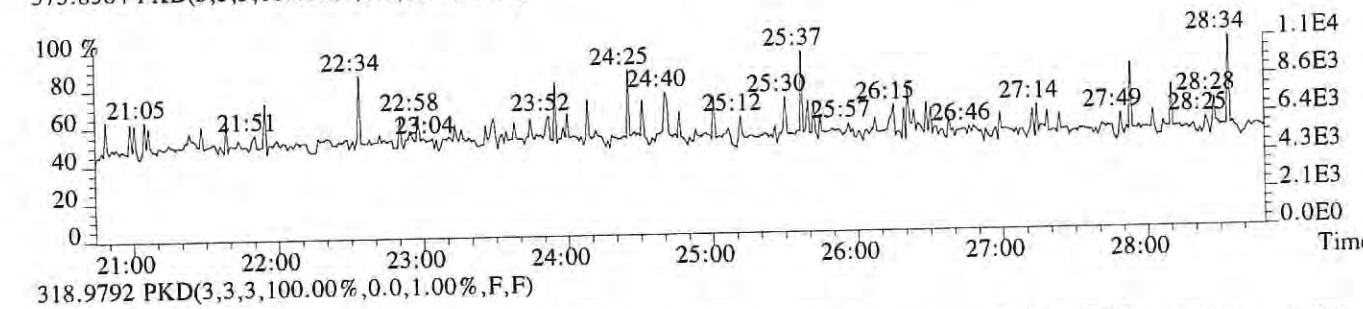
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1136.0,1.00%,F,T)



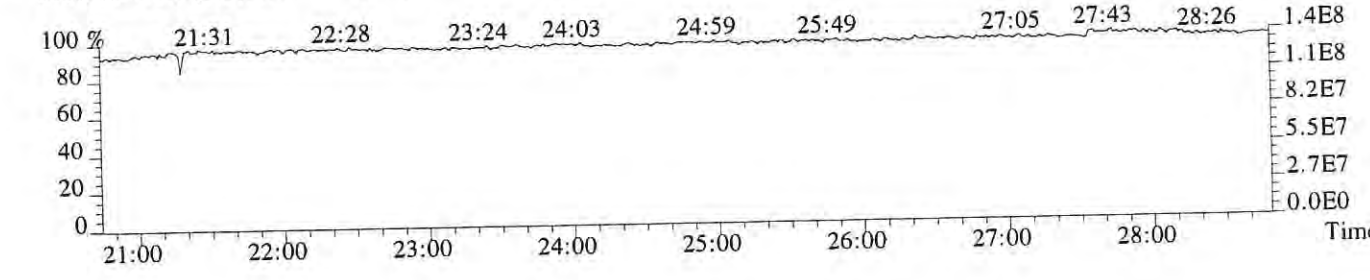
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,952.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

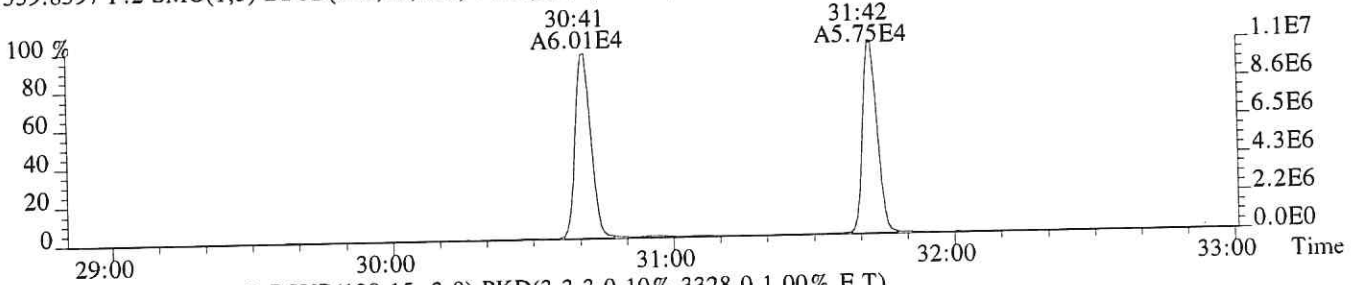


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

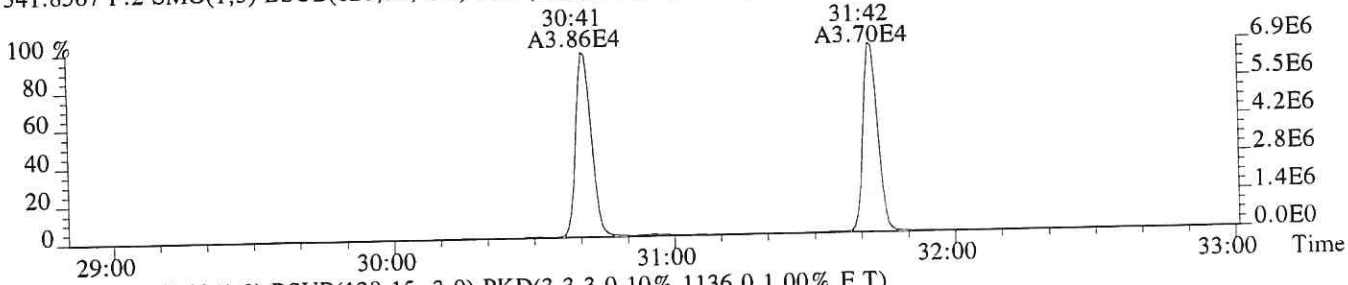


File:P616216 #1-376 Acq:26-DEC-2018 20:05:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

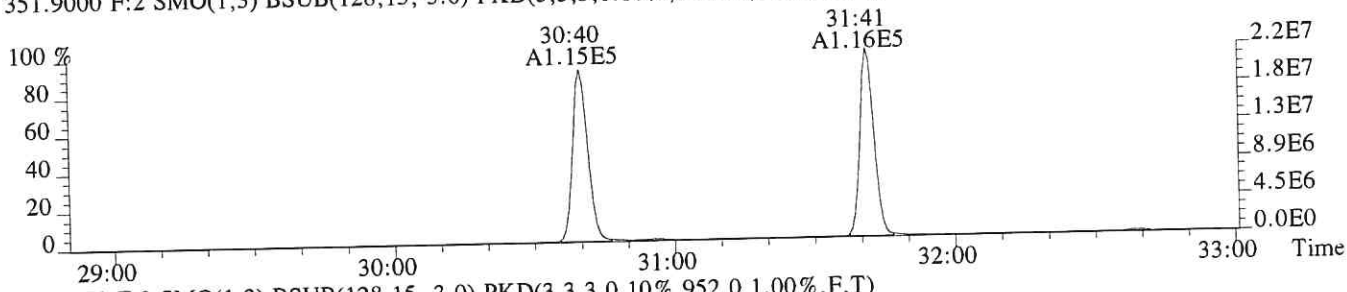
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,476.0,1.00%,F,T)



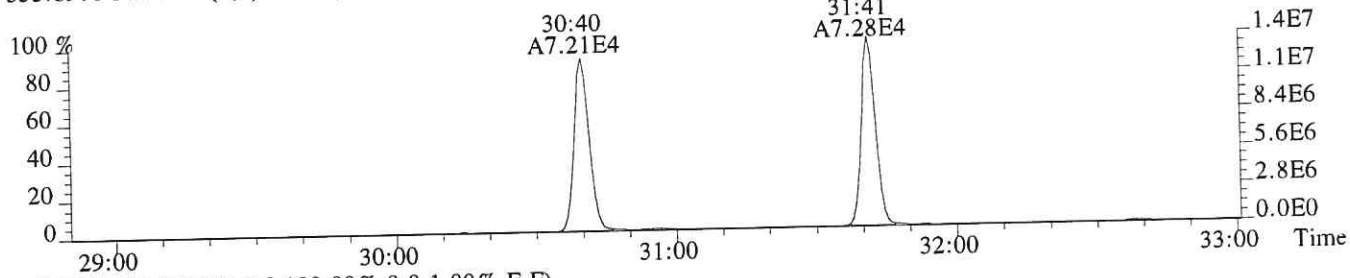
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3328.0,1.00%,F,T)



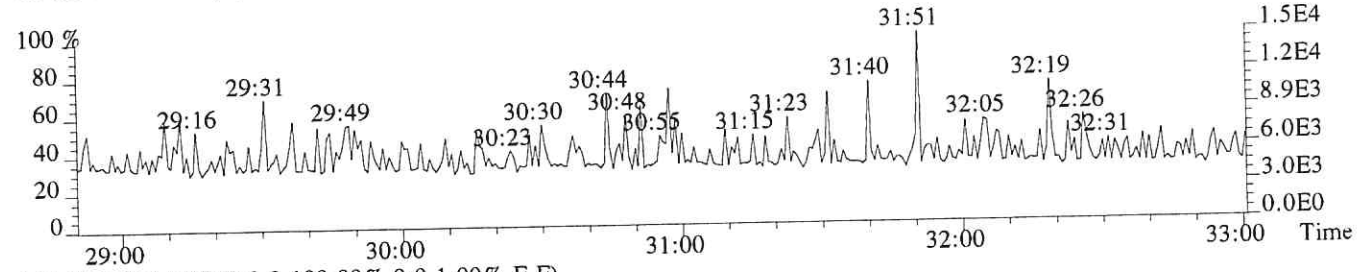
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1136.0,1.00%,F,T)



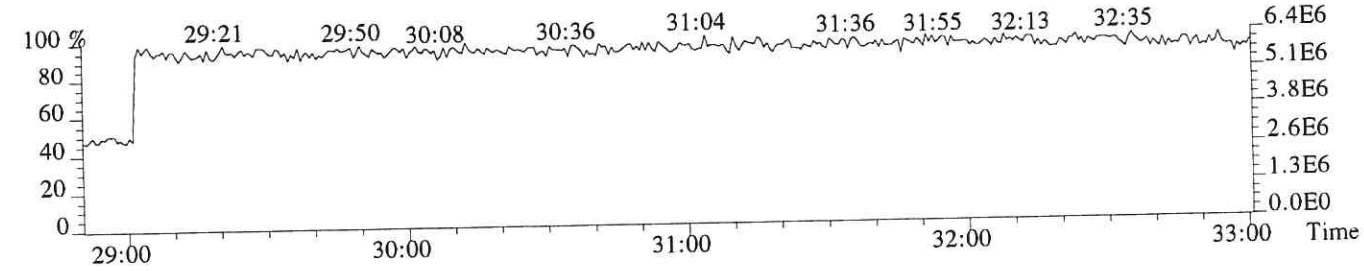
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,952.0,1.00%,F,T)



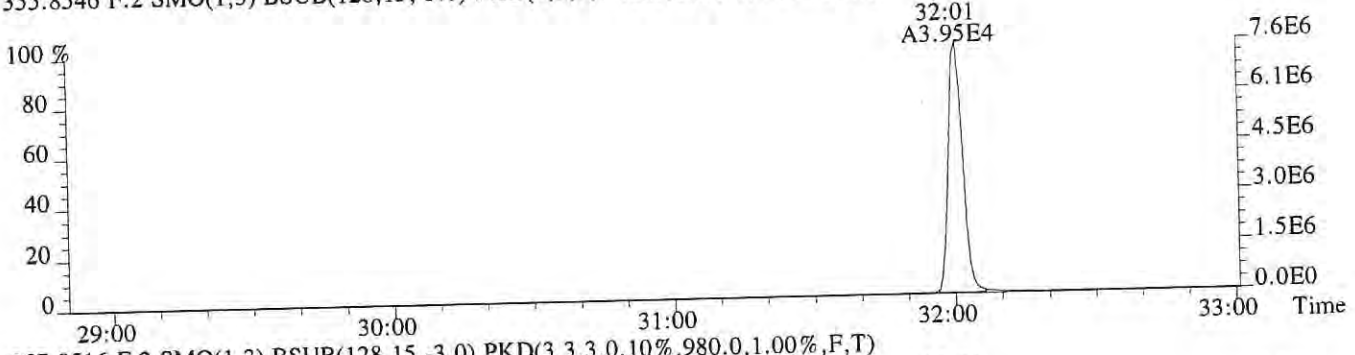
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



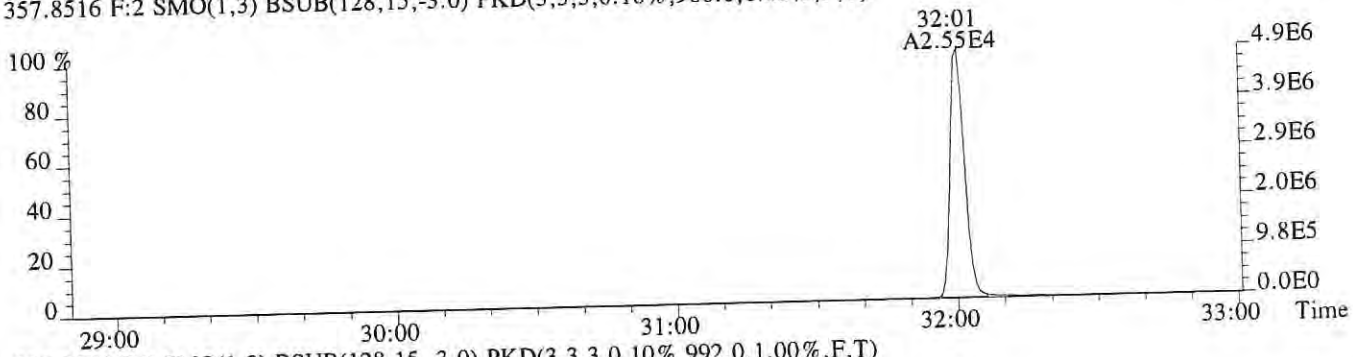
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



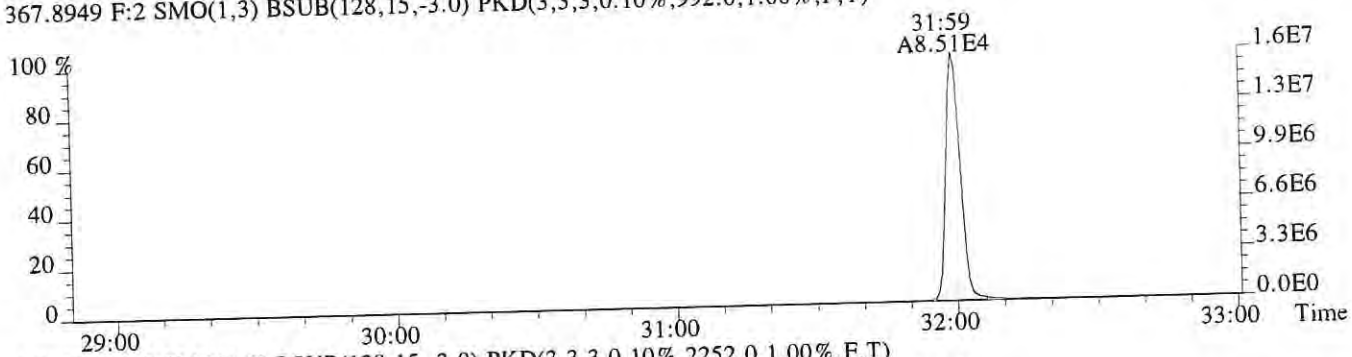
File:P616216 #1-376 Acq:26-DEC-2018 20:05:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1720.0,1.00%,F,T)



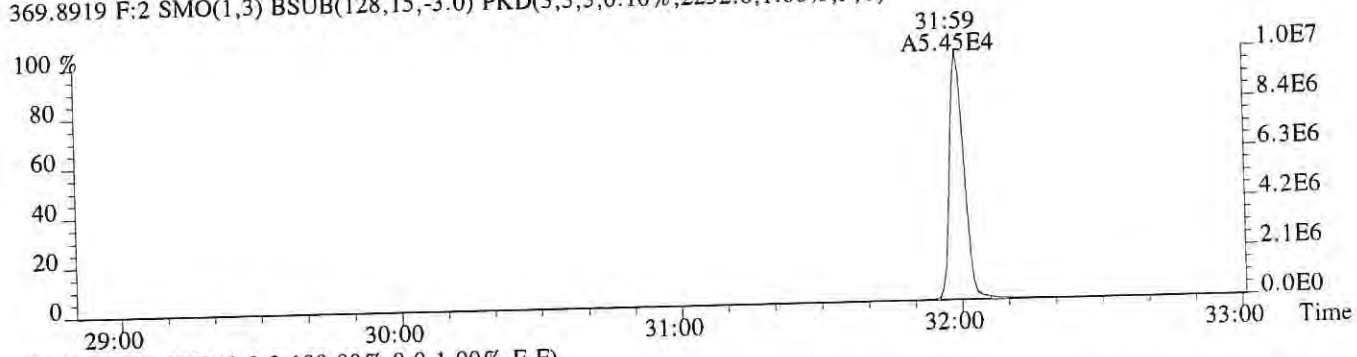
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,980.0,1.00%,F,T)



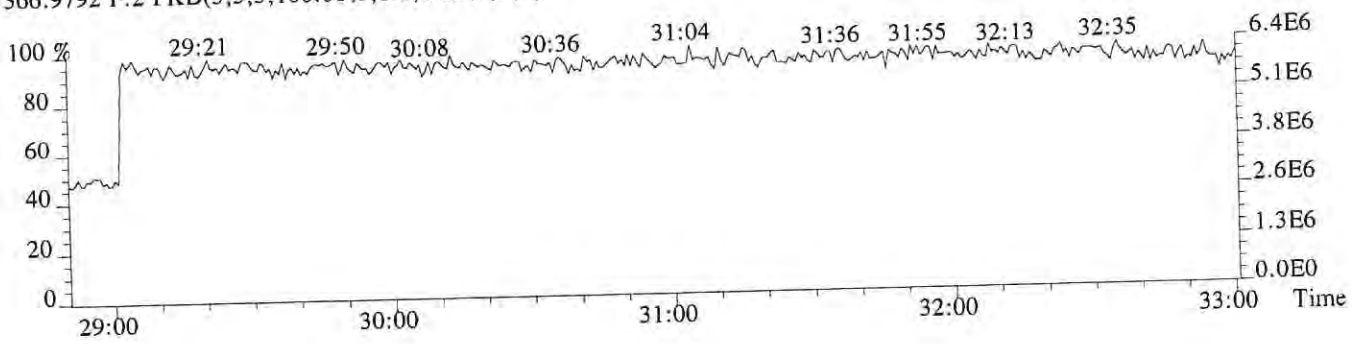
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,992.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2252.0,1.00%,F,T)

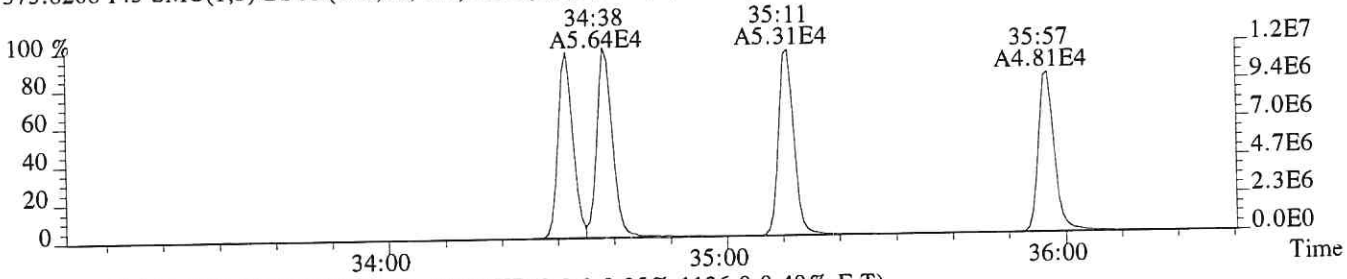


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

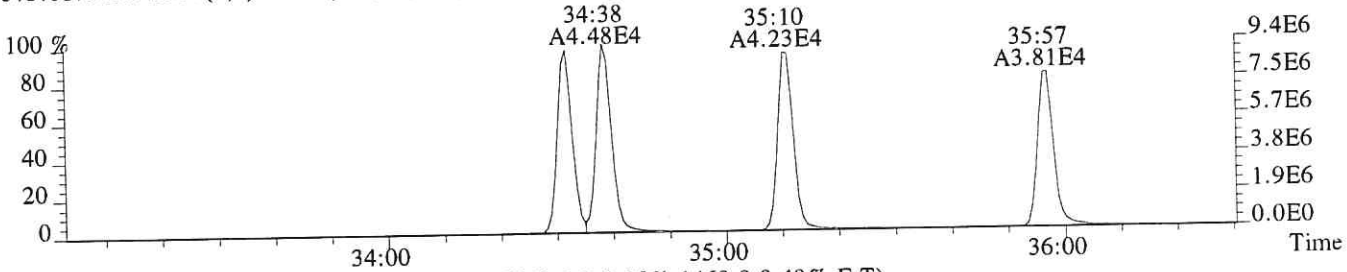


File:P616216 #1-312 Acq:26-DEC-2018 20:05:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

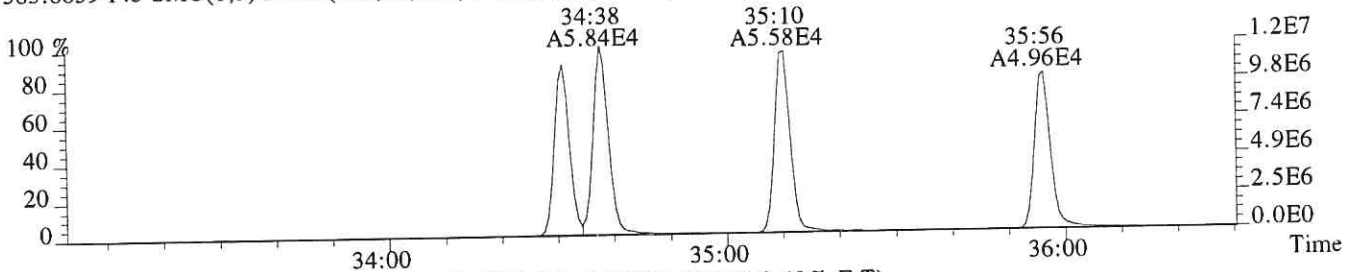
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1360.0,0.40%,F,T)



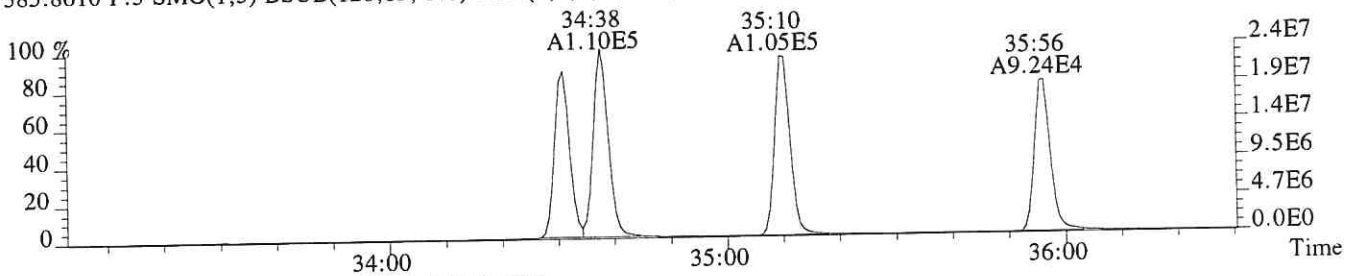
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1136.0,0.40%,F,T)



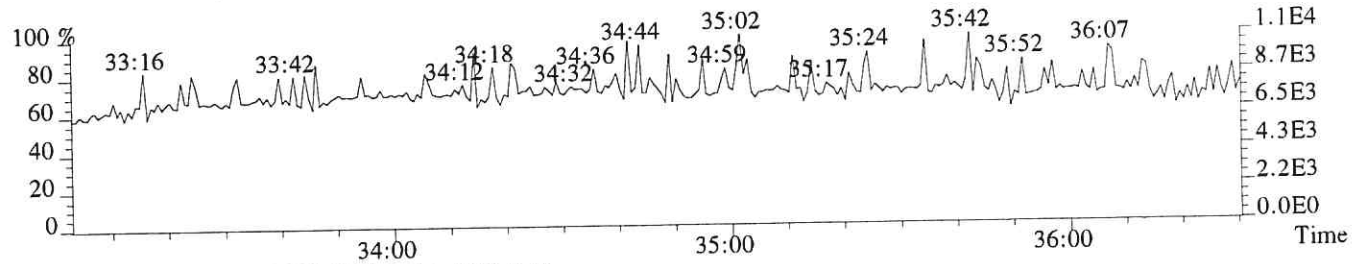
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1460.0,0.40%,F,T)



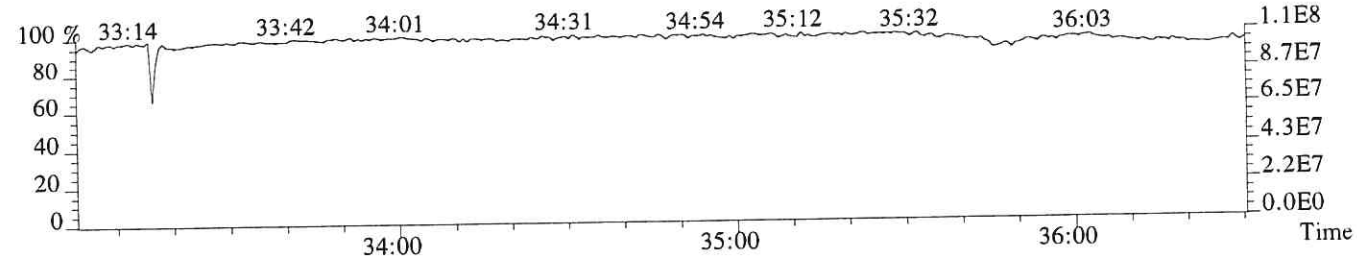
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3152.0,0.40%,F,T)



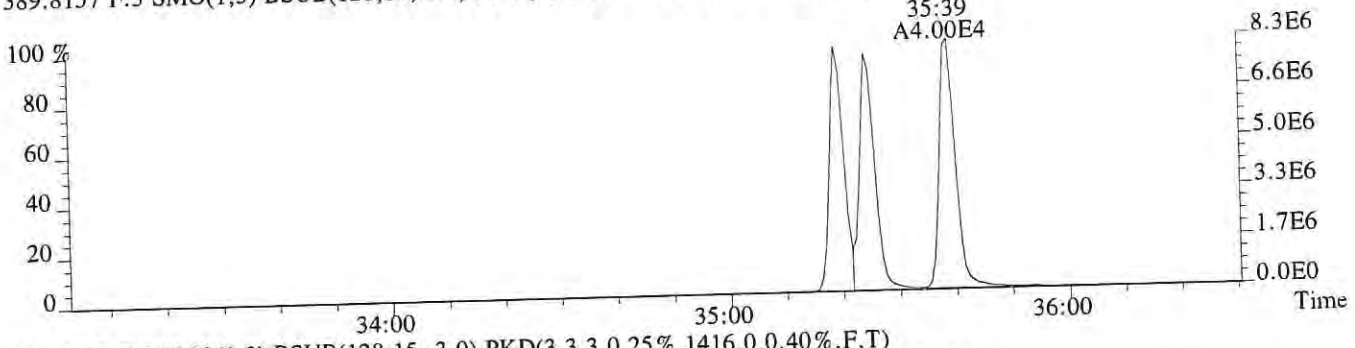
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



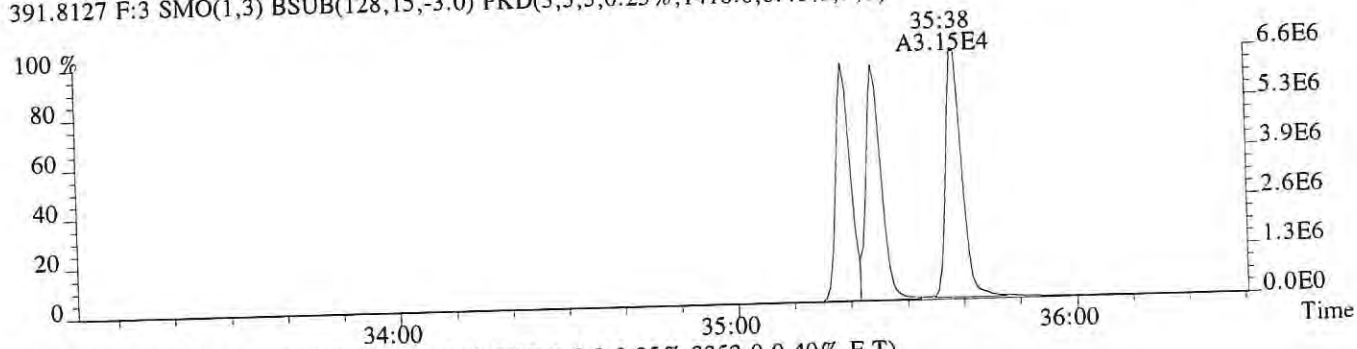
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



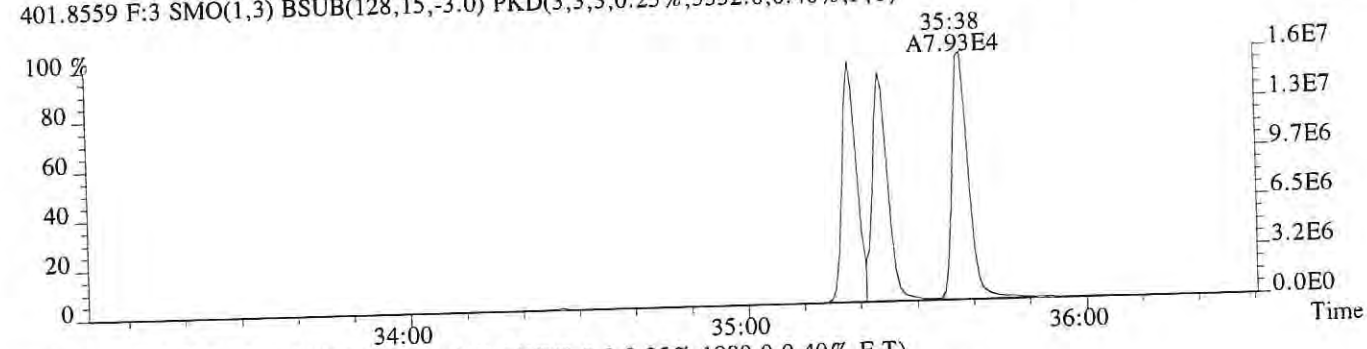
File:P616216 #1-312 Acq:26-DEC-2018 20:05:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,544.0,0.40%,F,T)



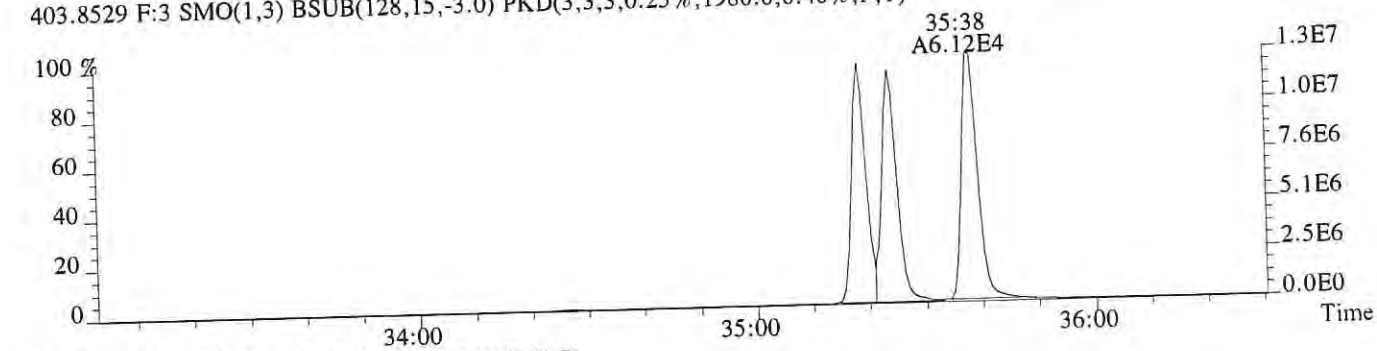
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1416.0,0.40%,F,T)



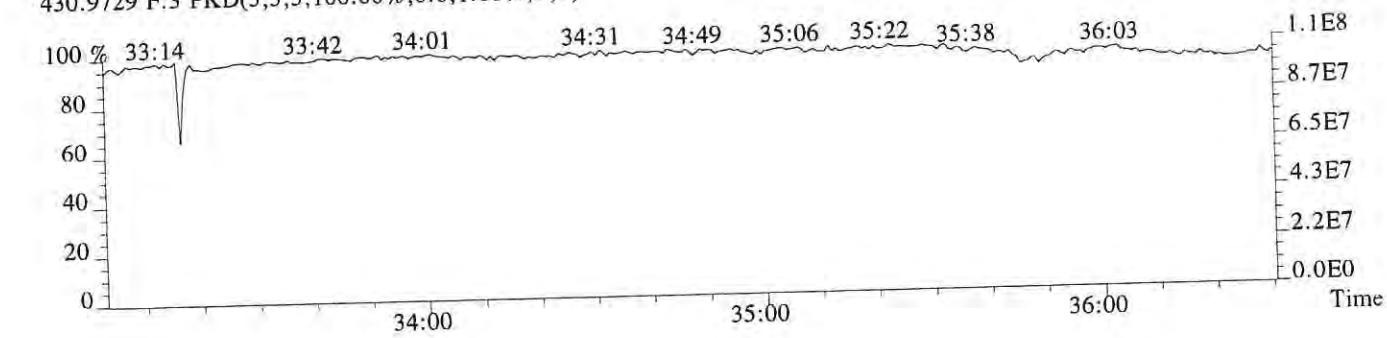
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3352.0,0.40%,F,T)



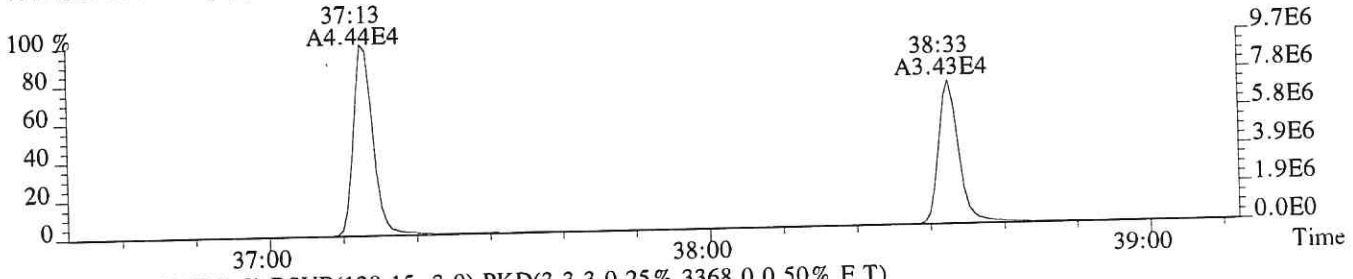
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1980.0,0.40%,F,T)



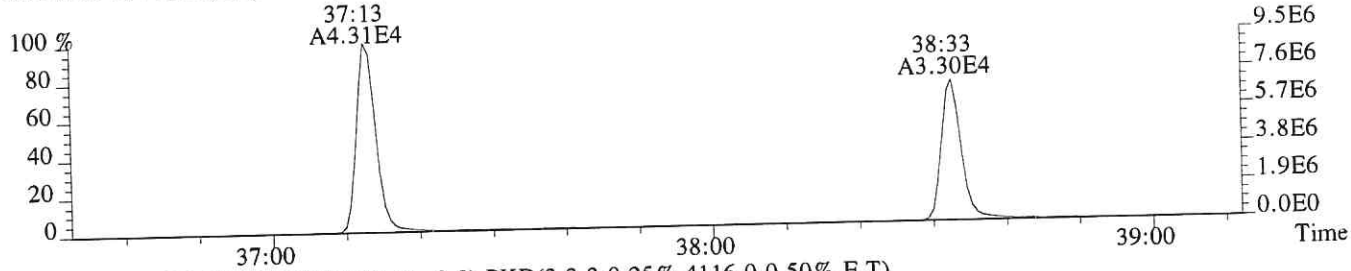
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



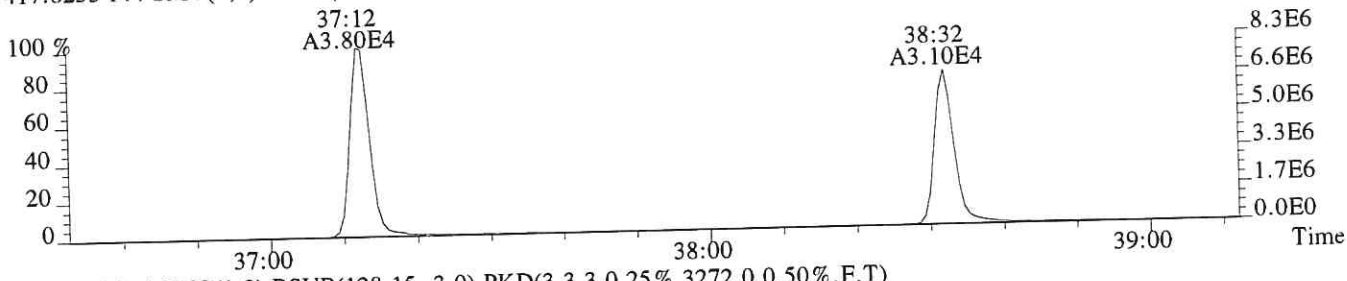
File:P616216 #1-240 Acq:26-DEC-2018 20:05:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5564.0,0.50%,F,T)



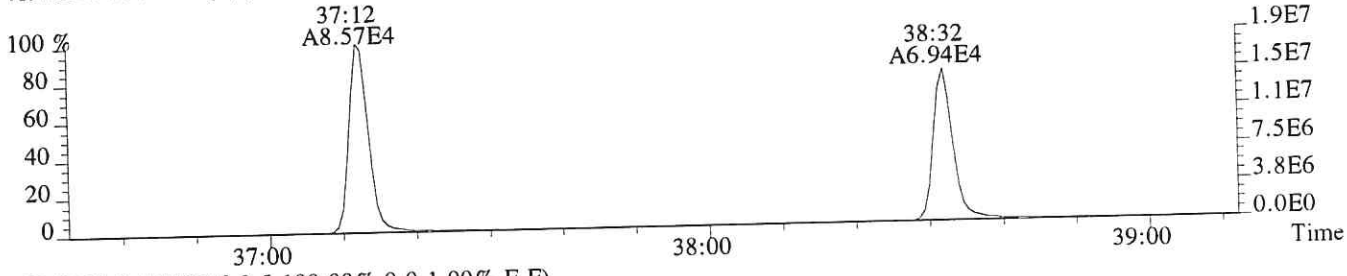
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3368.0,0.50%,F,T)



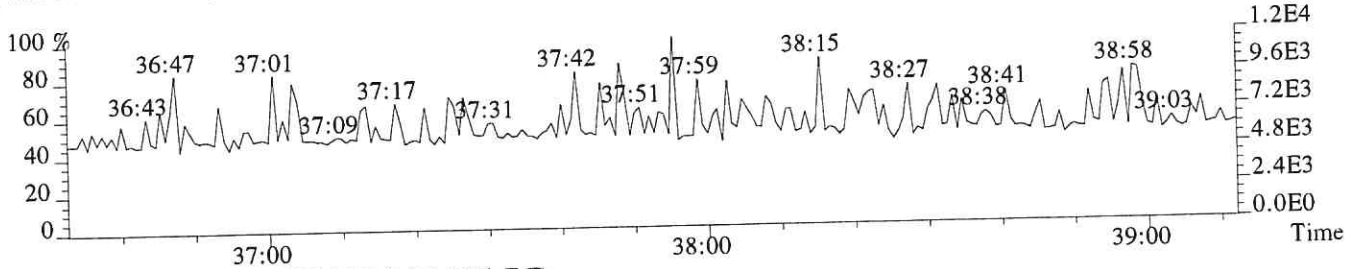
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4116.0,0.50%,F,T)



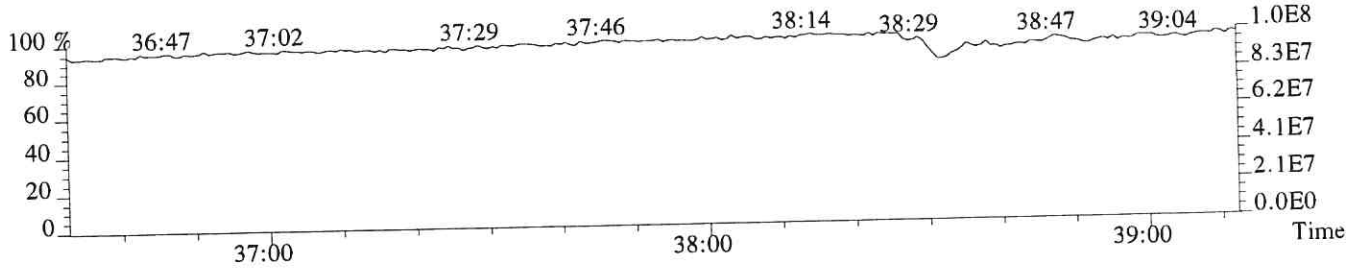
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3272.0,0.50%,F,T)



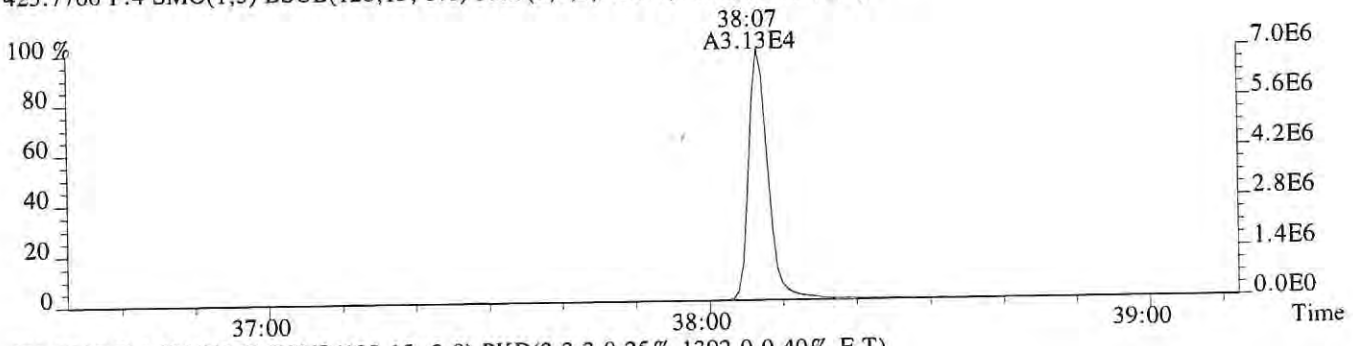
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



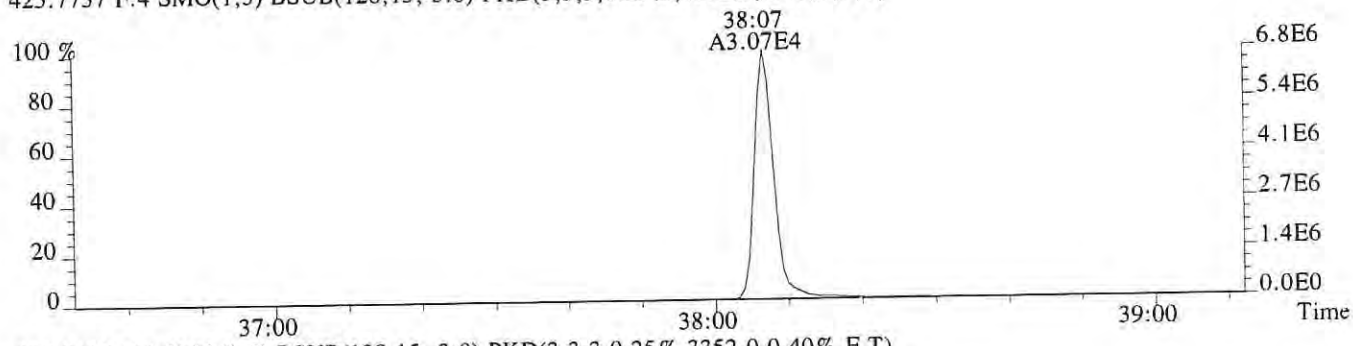
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



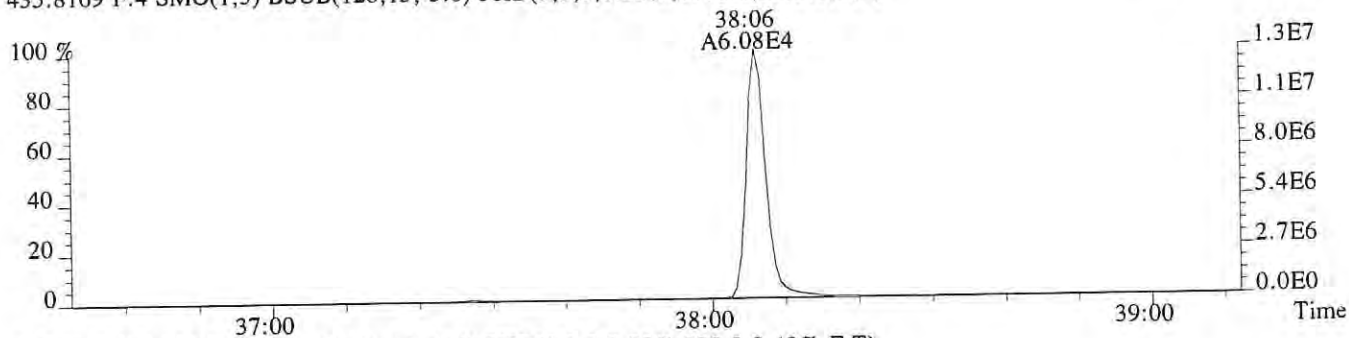
File:P616216 #1-240 Acq:26-DEC-2018 20:05:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,624.0,0.40%,F,T)



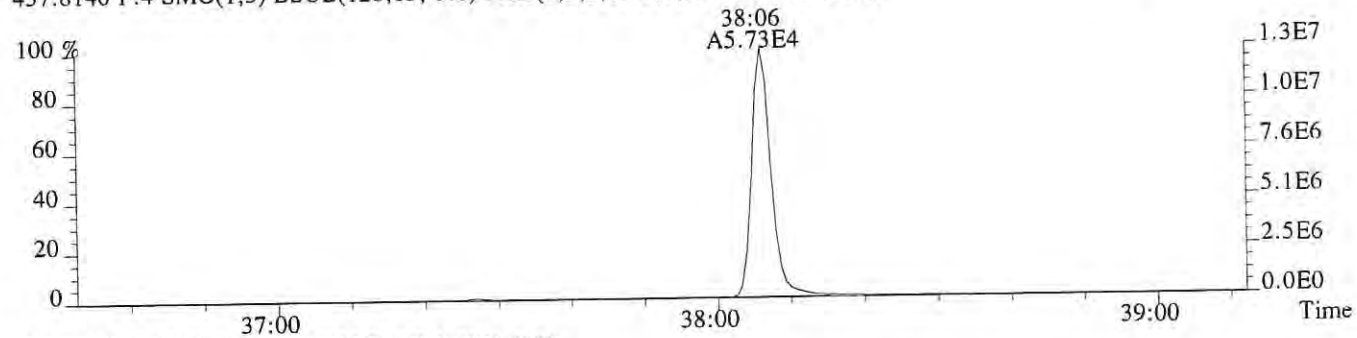
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1392.0,0.40%,F,T)



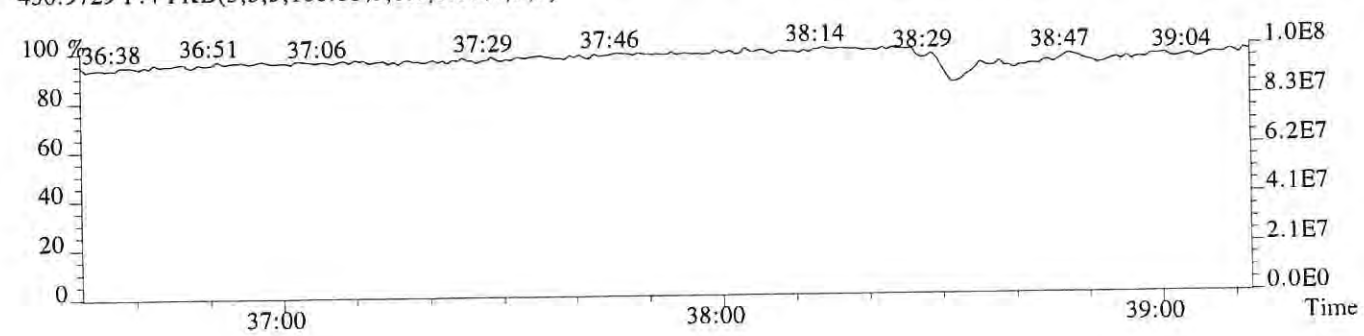
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3352.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,928.0,0.40%,F,T)

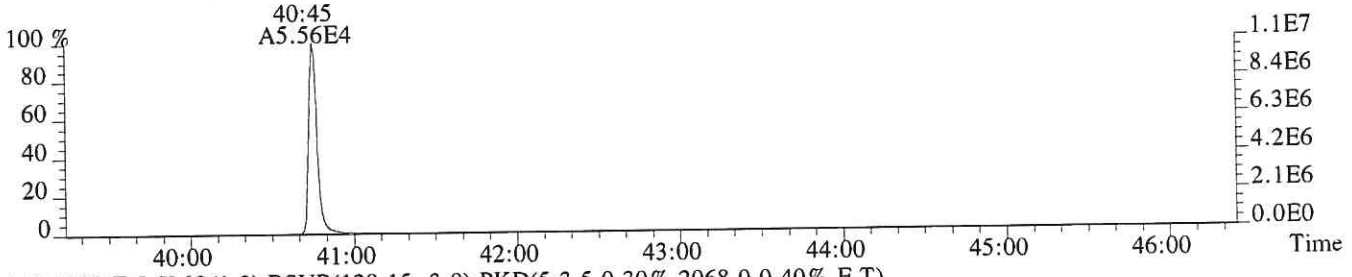


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

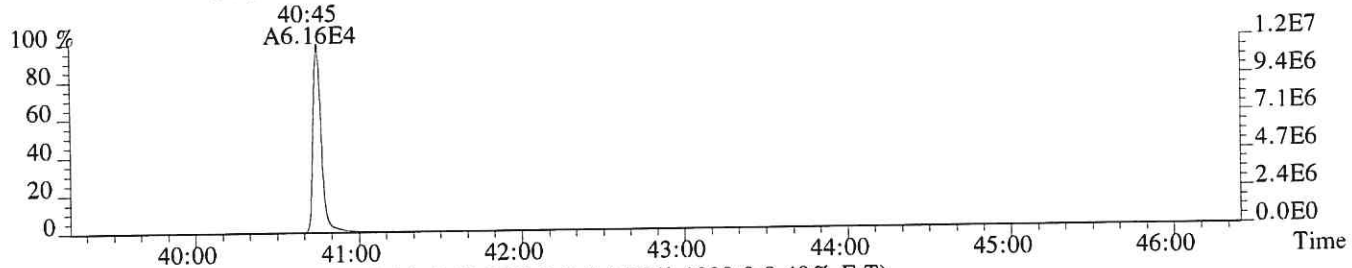


File:P616216 #1-646 Acq:26-DEC-2018 20:05:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

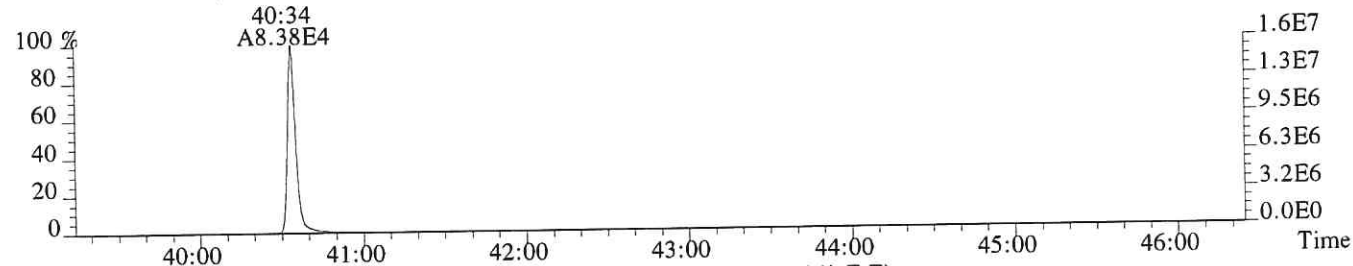
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1028.0,0.40%,F,T)



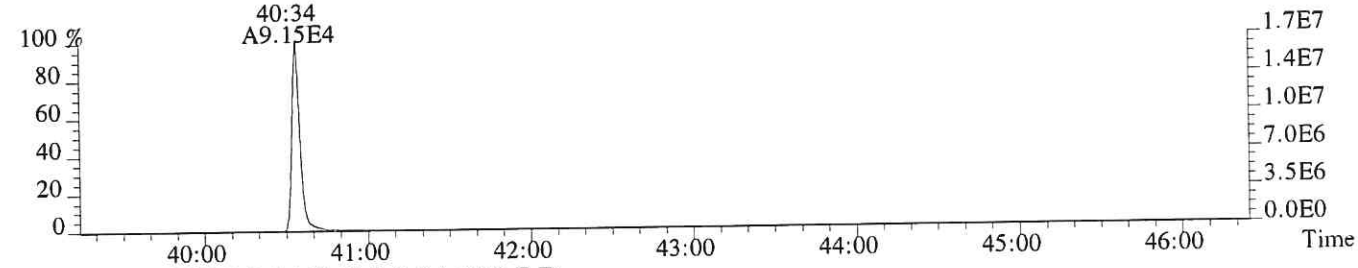
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2068.0,0.40%,F,T)



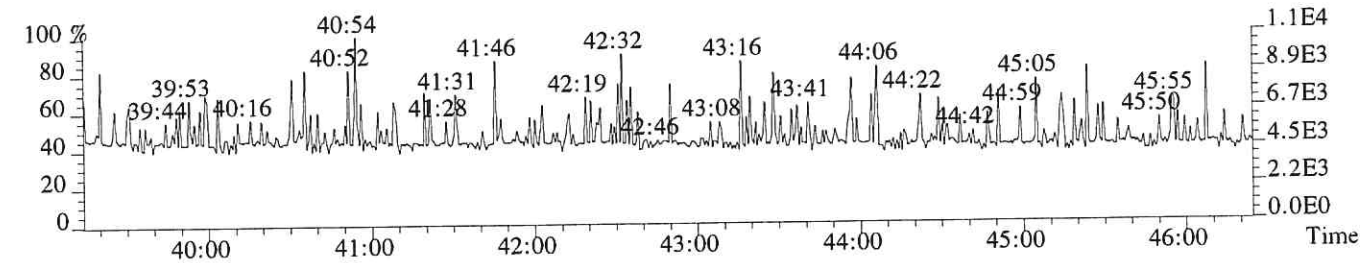
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1220.0,0.40%,F,T)



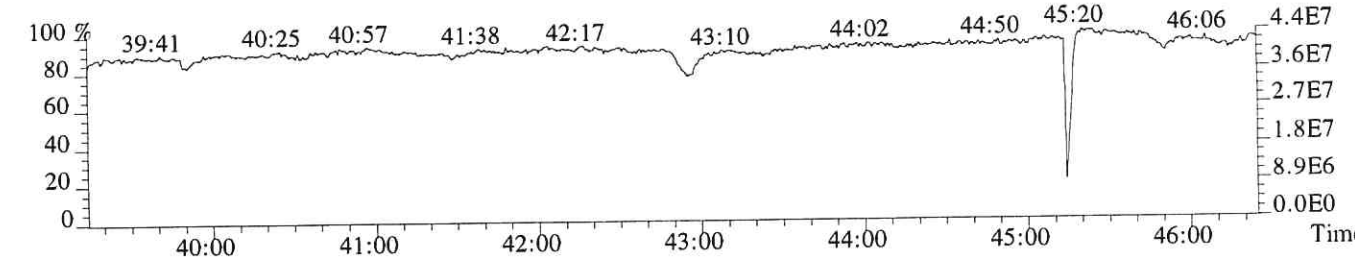
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1084.0,0.40%,F,T)



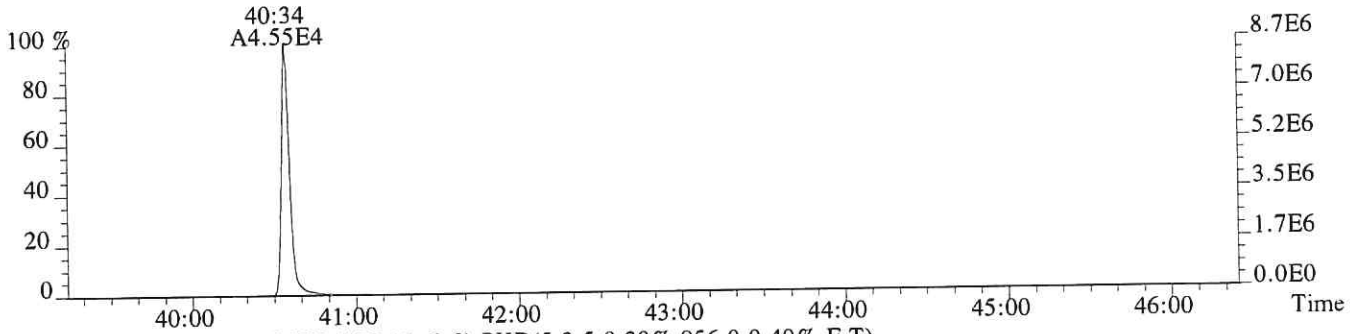
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



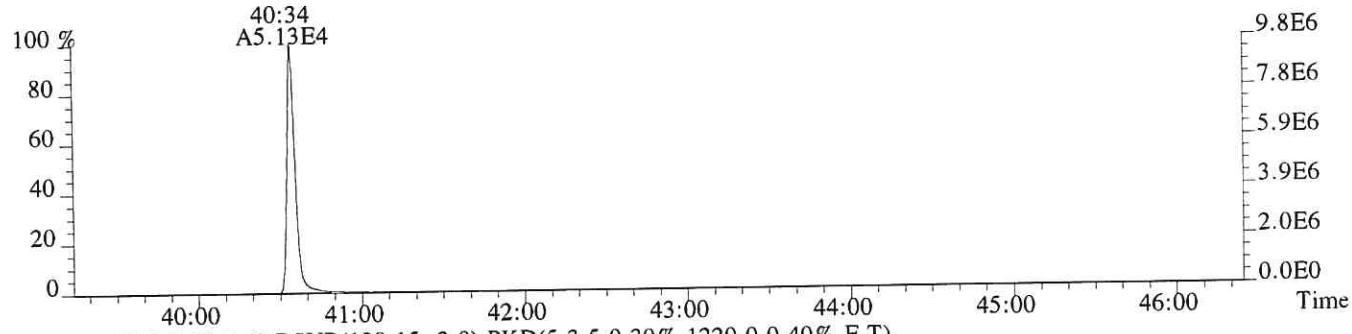
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



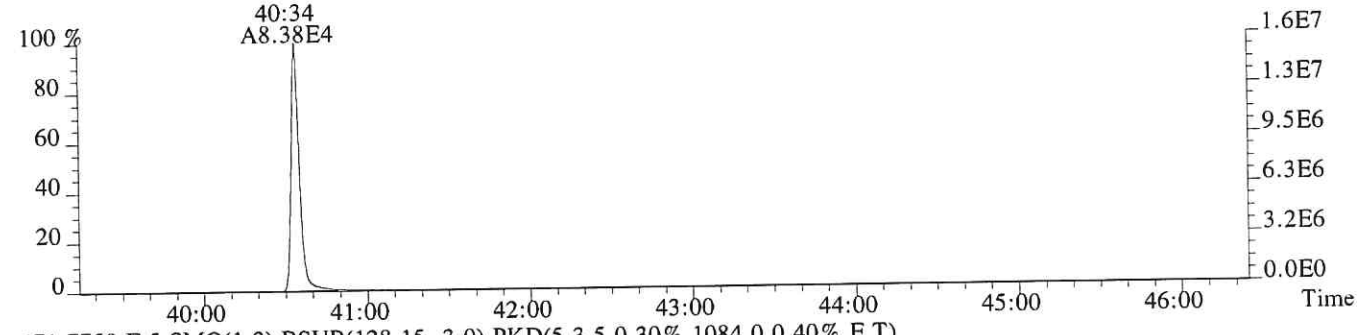
File:P616216 #1-646 Acq:26-DEC-2018 20:05:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1132.0,0.40%,F,T)



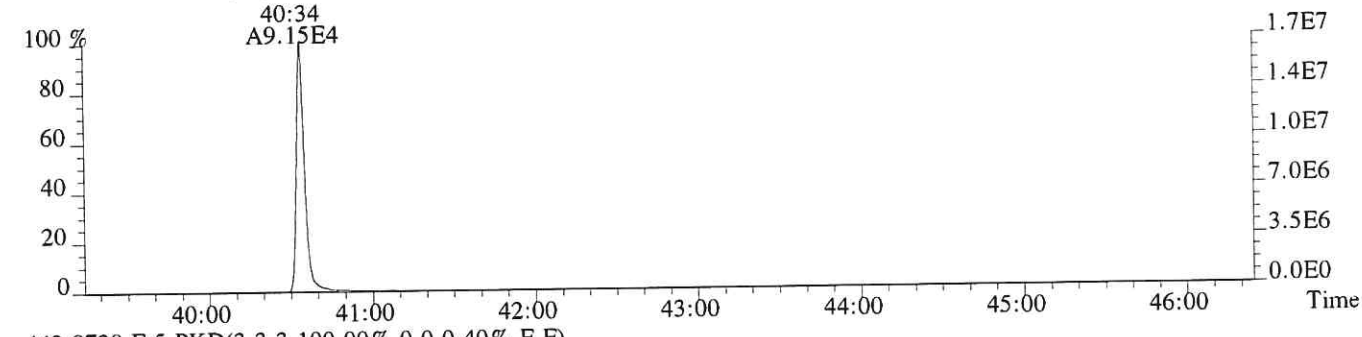
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,956.0,0.40%,F,T)



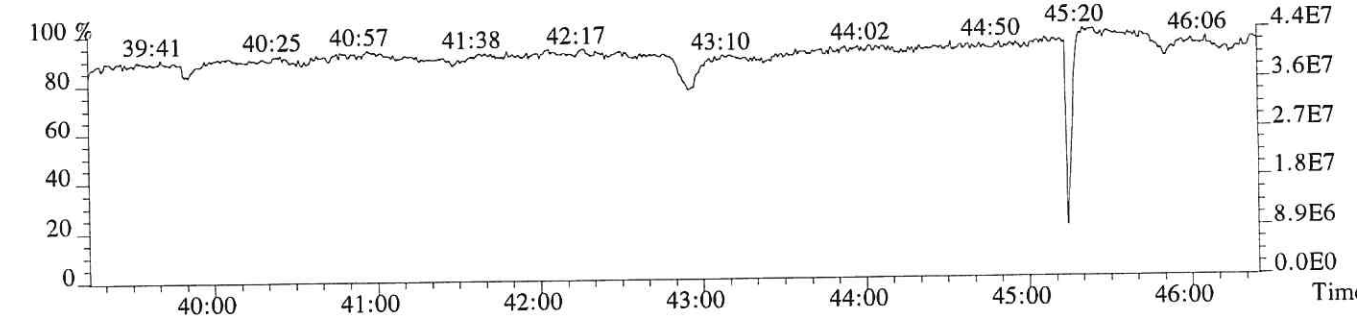
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1220.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1084.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



CCAL HRCC3/CS3 Daily Calibration QC Checklist

Calibration File Name: P616242

Date: 12/28/18

Circle one: (Beginning) / Ending

Method: (1613) 1613E / 8290/ VCP / Tetra / TCDD Only / TCDF Conf / VCP Conf / 8280 / M23 / TO-9A

Retention Window/Column Performance Check:	Analyst	Second Check
Windows in and first and last eluters labeled	✓	✓
Column Performance shows less than or equal to 25% valley between column specific 2378 isomer and its closest eluters	✓	✓
No QC ion deflections affect column specific 2378 isomer or its closest eluters (HRMS Only)	✓	✓

CS3 Continuing Calibration	Analyst	Second Check
Percent RSD within method criteria	✓	✓
All relative abundance ratios meet method criteria	✓	✓
No QC ion deflections of greater than 20% (HRMS Only)	✓	✓
Mass spectrometer resolution greater than or equal to 10,000 and documented (HRMS Only)	✓	✓
2378-TCDD elutes at 25 minutes or later on the DB-5 column / DB-5MSUI column	✓	✓
Signal-to-noise of all target analytes and their labeled standards at least 10:1	✓	✓
Valley between labeled 123478 and 123678 HxCDD peaks less than or equal to 50% (LRMS Only)	N/A	N/A
Ending Calibration injected prior to end of 12 hour clock	N/A	N/A

Analyst: LKL

Second QC: LG

ccalqc.xls 07/17/12

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

Lab Code: Case No.: Client No.: SDG No.:

GC Column: DB-5MSUI ID: 0.25 (mm)

Init. Calib. Date: 09/25/18

Init. Calib.Times: 12:13

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, AND LABORATORY CONTROL SAMPLES (LCSs) IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
192977	WINDOW DEFINE	P616243	28-DEC-18	06:49:31
194503	CS3	P616242	28-DEC-18	05:48:30
METHOD BLANK	EQ1800506-01	P616244	28-DEC-18	07:37:51
DO NOT USE	E1801114-001	P616245	28-DEC-18	08:27:00
SLO 0590	E1801105-001DL	P616246	28-DEC-18	09:16:10
SLO 0591	E1801105-002DL	P616247	28-DEC-18	10:05:19
EFFLUENT	K1812312-001	P616248	28-DEC-18	10:54:29
DITCF-1	K1812209-001	P616249	28-DEC-18	11:43:38
OS6-DS-20181211	J1808796-003	P616250	28-DEC-18	12:32:48
OS5-DS-20181211	J1808796-004	P616251	28-DEC-18	13:31:19
OS5-FD-20181211	J1808796-005	P616252	28-DEC-18	14:19:39
OS4-DS-20181211	J1808796-006	P616253	28-DEC-18	15:12:05

Sample List Report — **MassLynx 4.1 SCN815 SCN795**

Sample List: C:\MassLynx\EHRMS08.PRO\SampleDB\20181228A.SPL
Last Modified: Friday, December 28, 2018 16:10:32 Central Standard Time
Printed: Friday, December 28, 2018 16:10:34 Central Standard Time

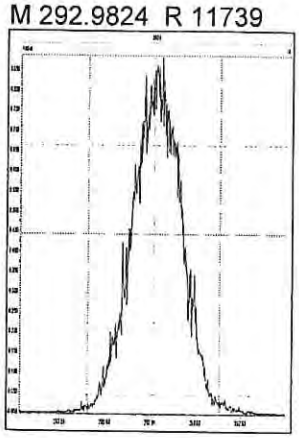
Page Position (1, 1)

OPUS 5 NET: P616242 RES

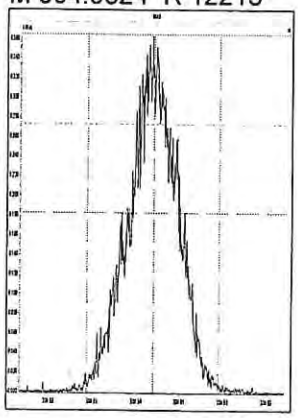
	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst	Comments
1	12/28/18	05:48	P616242	194503	CS3	EPA1613_ALS	Dioxin_ALS	Tray1:2	LG	HRMS check 05:48
2		06:49	P616243	192977	WINDOW DEFINE	EPA1613_ALS	Dioxin_ALS	Tray1:1		
3		07:37	P616244	EQ1800506-01	MB	EPA1613_ALS	Dioxin_ALS	Tray1:3		
4		08:27	P616245	E1801114-001	E1801114-001	EPA1613_ALS	Dioxin_ALS	Tray1:4		
5		09:16	P616246	E1801105-001DL	E1801105-001DL	EPA1613_ALS	Dioxin_ALS	Tray1:5		
6		10:05	P616247	E1801105-002DL	E1801105-002DL	EPA1613_ALS	Dioxin_ALS	Tray1:6		
7		10:54	P616248	K1812312-001	K1812312-001	EPA1613_ALS	Dioxin_ALS	Tray1:7		
8		11:43	P616249	K1812209-001	K1812209-001	EPA1613_ALS	Dioxin_ALS	Tray1:8		
9		12:32	P616250	J1808796-003	J1808796-003	EPA1613_ALS	Dioxin_ALS	Tray1:9		
10		13:31	P616251	J1808796-004	J1808796-004	EPA1613_ALS	Dioxin_ALS	Tray1:10		
11		14:19	P616252	J1808796-005	J1808796-005	EPA1613_ALS	Dioxin_ALS	Tray1:11		
12	√	15:12	P616253	J1808796-006	J1808796-006	EPA1613_ALS	Dioxin_ALS	Tray1:12	√	HRMS check 16:05
13	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:2	---	---
14	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:14	---	---
15	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:15	---	---
16	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:16	---	---
17	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:17	---	---
18	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:18	---	---
19	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:19	---	---
20	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:20	---	---

LKL 12/29/18

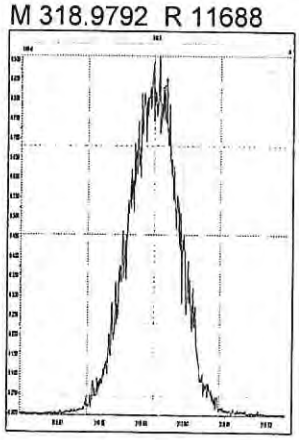
M 292.9824 R 11739



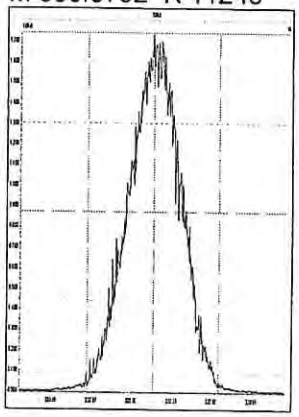
M 304.9824 R 12213



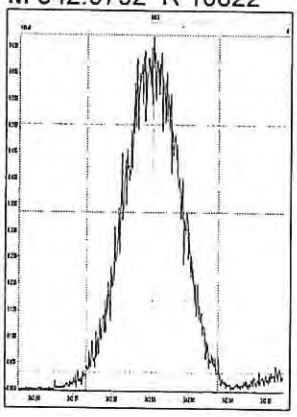
M 318.9792 R 11688



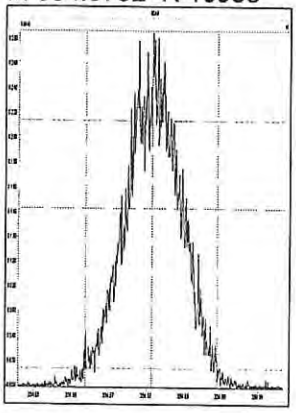
M 330.9792 R 11248



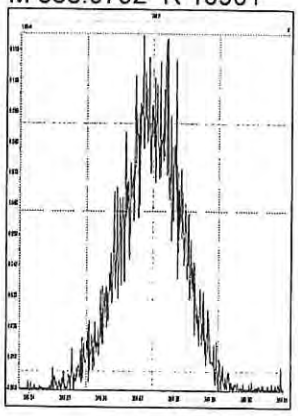
M 342.9792 R 10822



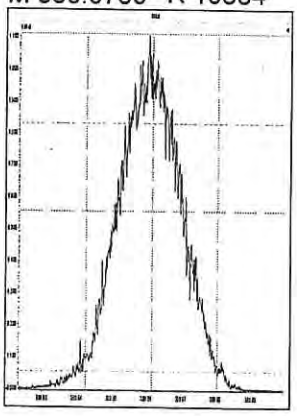
M 354.9792 R 10963



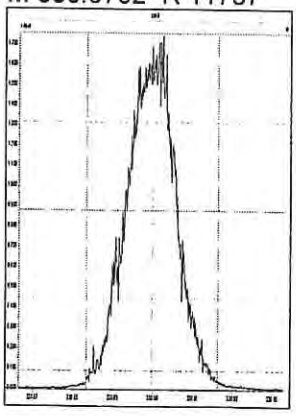
M 366.9792 R 10901



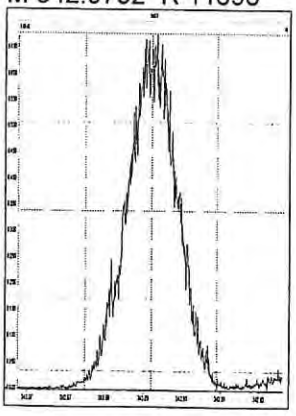
M 380.9760 R 10684



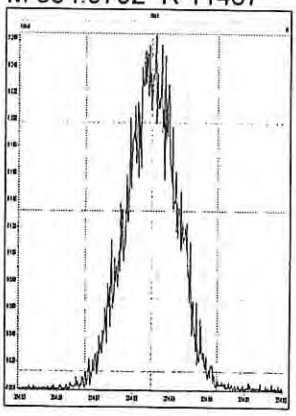
M 330.9792 R 11737



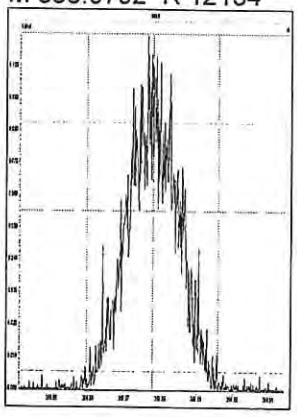
M 342.9792 R 11698



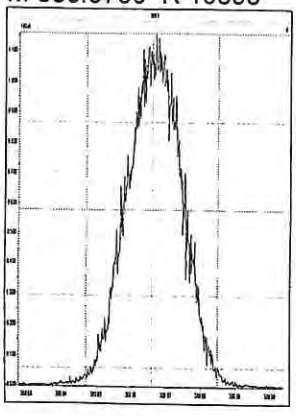
M 354.9792 R 11467



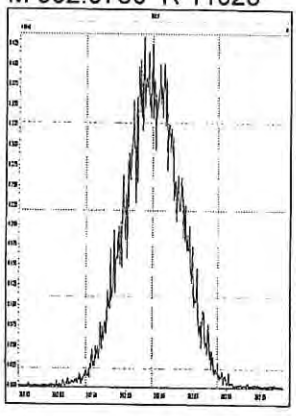
M 366.9792 R 12154



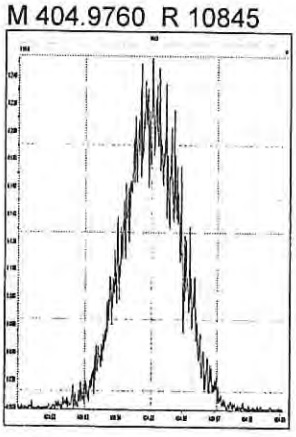
M 380.9760 R 10893



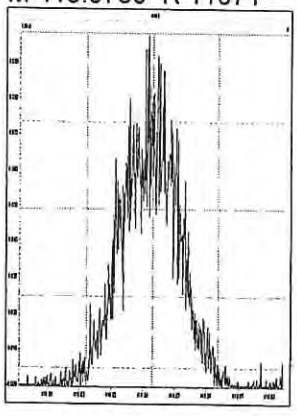
M 392.9760 R 11023



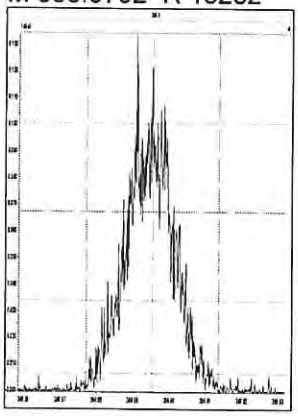
M 404.9760 R 10845



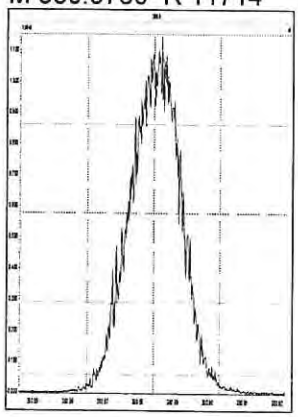
M 416.9760 R 11071



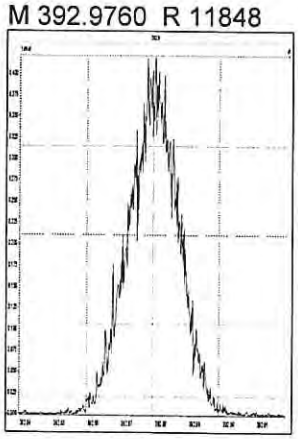
M 366.9792 R 13232



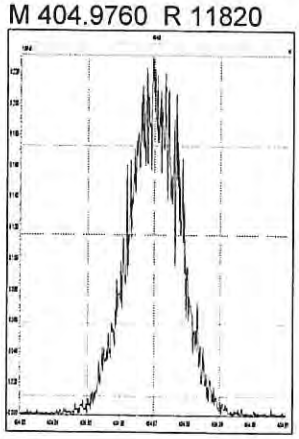
M 380.9760 R 11714



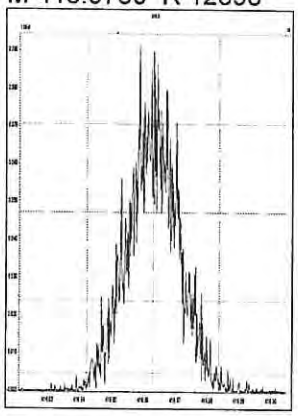
M 392.9760 R 11848



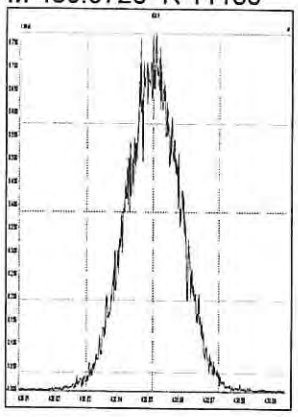
M 404.9760 R 11820



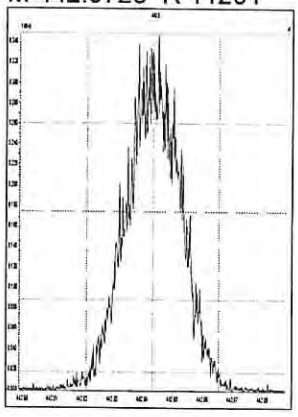
M 416.9760 R 12898



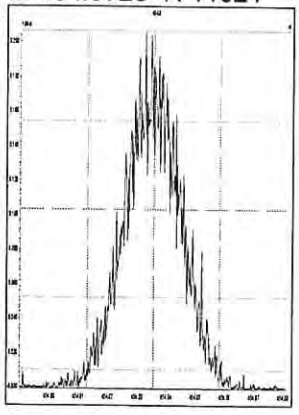
M 430.9728 R 11135



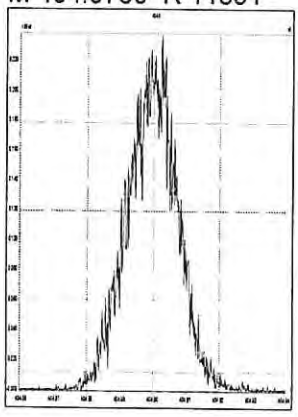
M 442.9728 R 11201



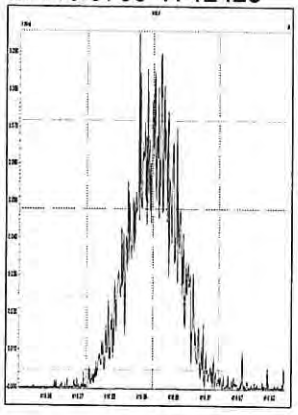
M 454.9728 R 11021



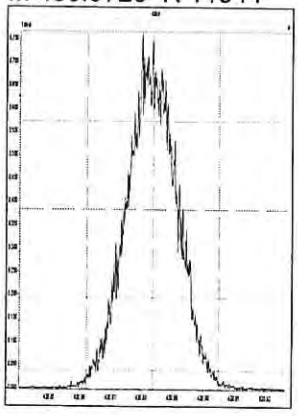
M 404.9760 R 11891



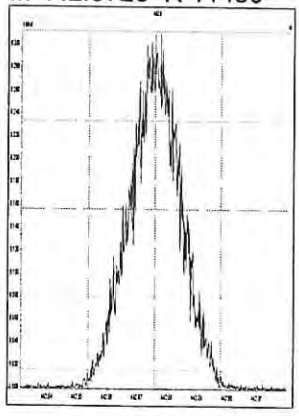
M 416.9760 R 12423



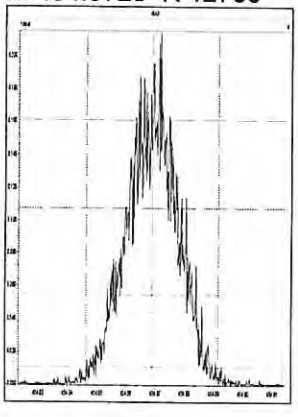
M 430.9728 R 11344



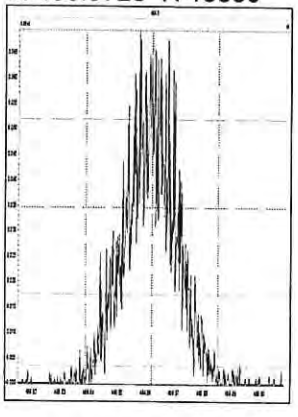
M 442.9728 R 11430



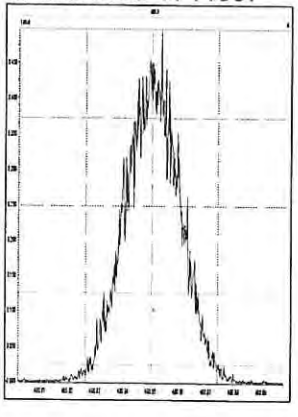
M 454.9728 R 12766



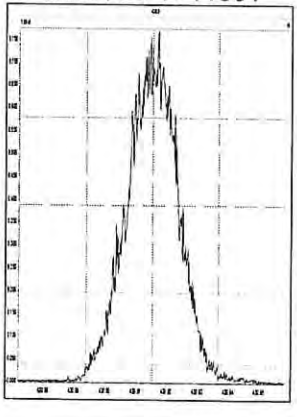
M 466.9728 R 13830



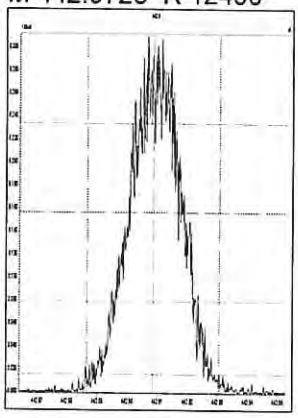
M 480.9696 R 11037



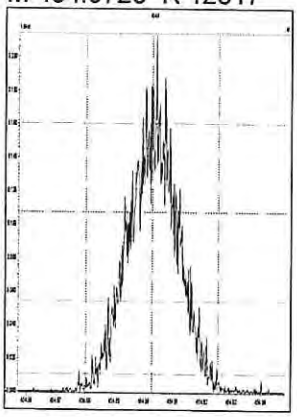
M 430.9728 R 11601



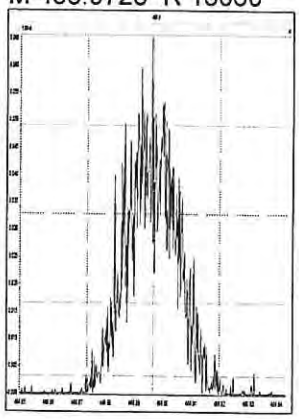
M 442.9728 R 12490



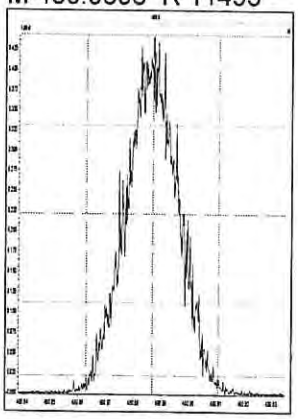
M 454.9728 R 12317



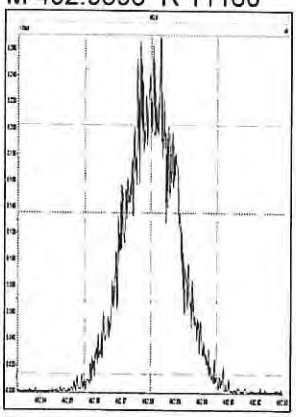
M 466.9728 R 13060



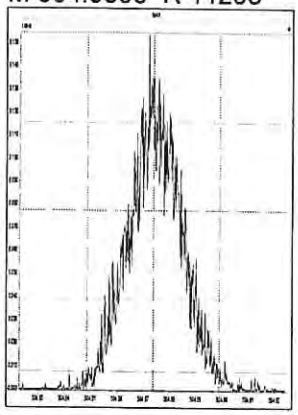
M 480.9696 R 11493



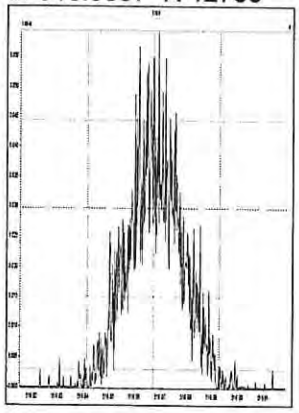
M 492.9696 R 11160



M 504.9696 R 11293



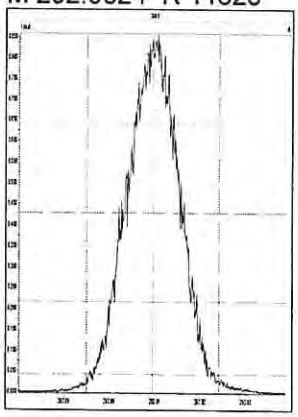
M 516.9697 R 12755



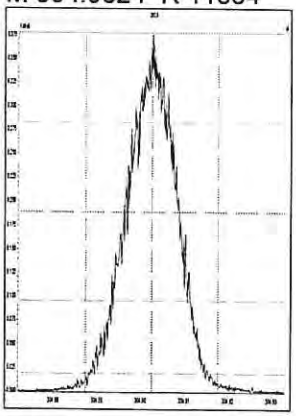
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Friday, December 28, 2018 16:05:08 Central Standard Time

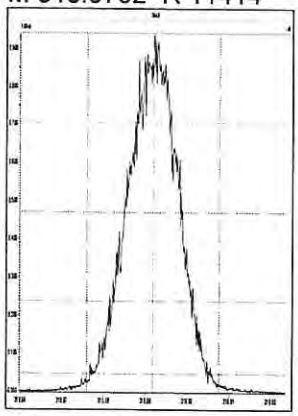
M 292.9824 R 11625



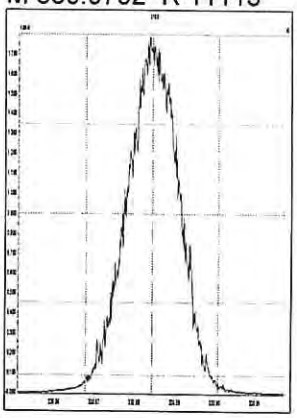
M 304.9824 R 11364



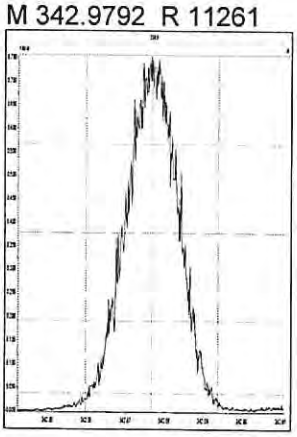
M 318.9792 R 11414



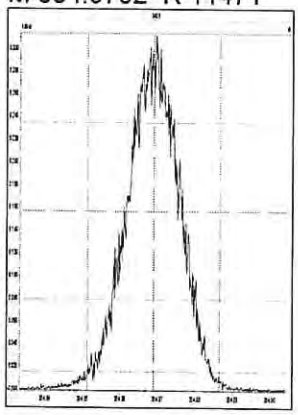
M 330.9792 R 11113



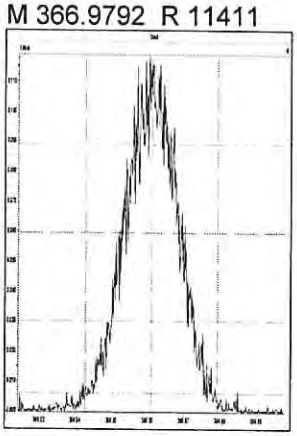
M 342.9792 R 11261



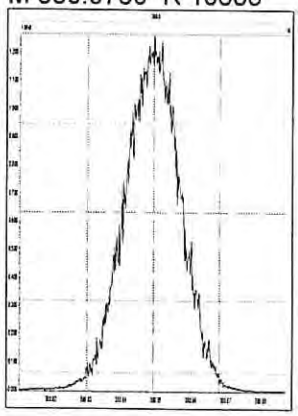
M 354.9792 R 11471



M 366.9792 R 11411



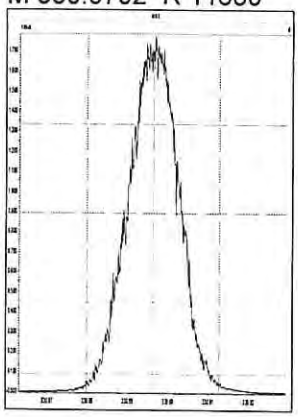
M 380.9760 R 10683



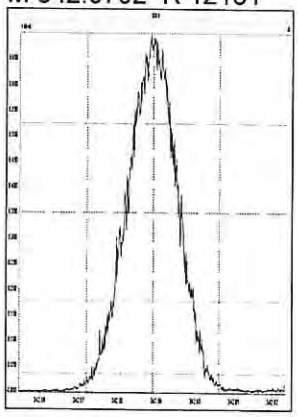
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Friday, December 28, 2018 16:06:00 Central Standard Time

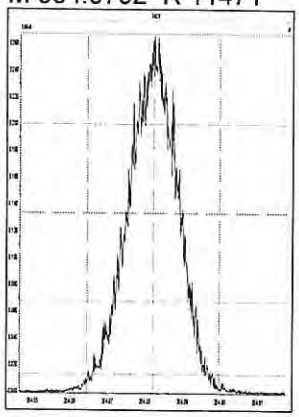
M 330.9792 R 11630



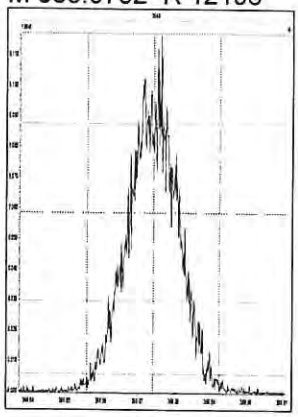
M 342.9792 R 12131



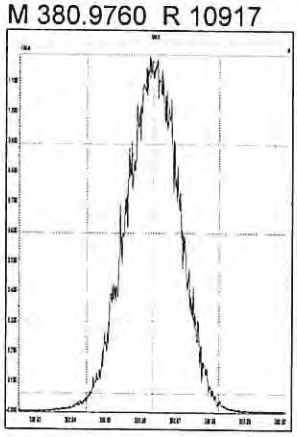
M 354.9792 R 11471



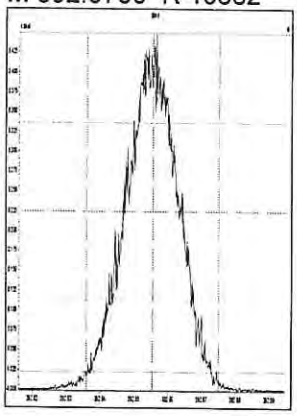
M 366.9792 R 12196



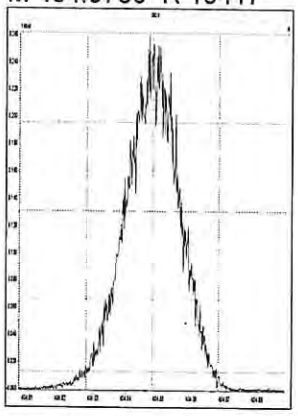
M 380.9760 R 10917



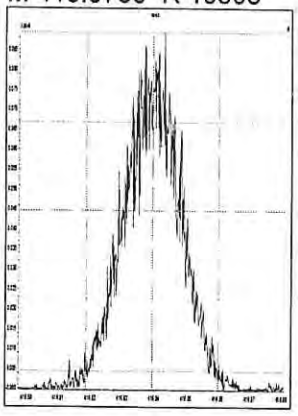
M 392.9760 R 10682



M 404.9760 R 10417



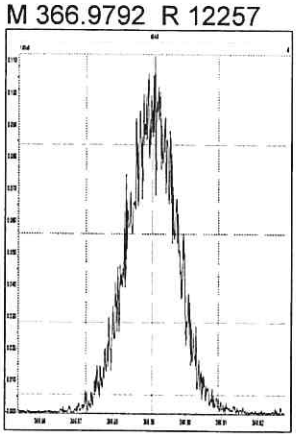
M 416.9760 R 10503



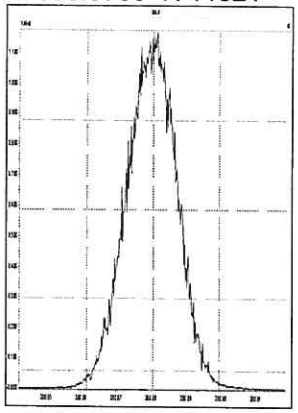
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Friday, December 28, 2018 16:06:48 Central Standard Time

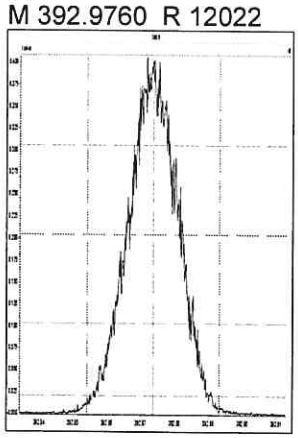
M 366.9792 R 12257



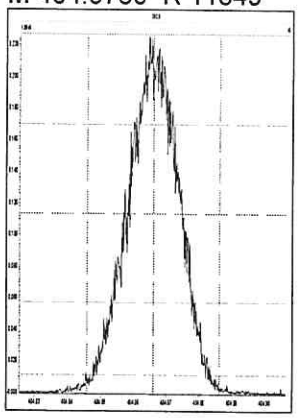
M 380.9760 R 11521



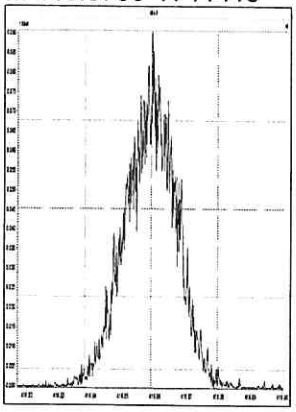
M 392.9760 R 12022



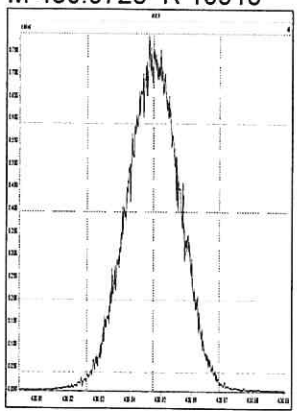
M 404.9760 R 11849



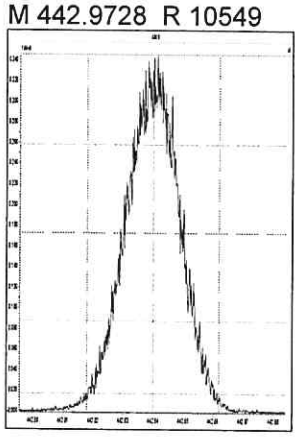
M 416.9760 R 11415



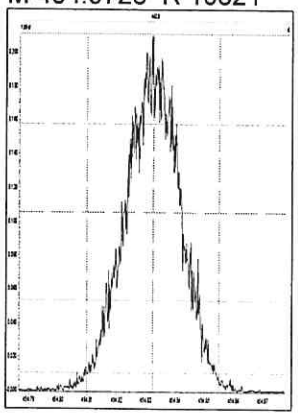
M 430.9728 R 10915



M 442.9728 R 10549



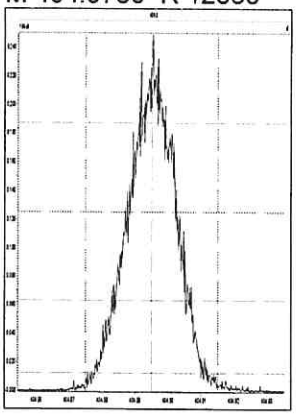
M 454.9728 R 10821



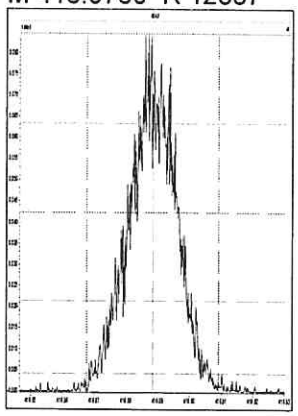
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Friday, December 28, 2018 16:07:42 Central Standard Time

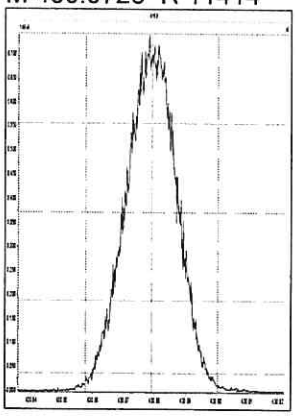
M 404.9760 R 12565



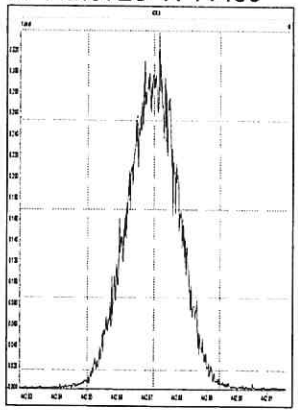
M 416.9760 R 12887



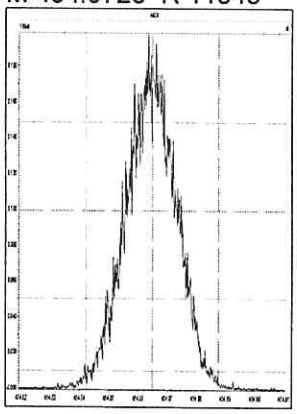
M 430.9728 R 11414



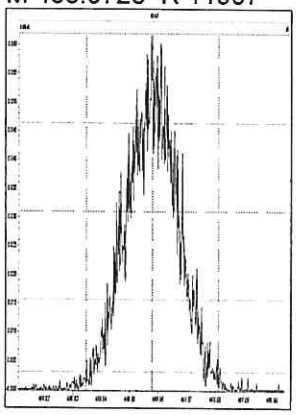
M 442.9728 R 11469



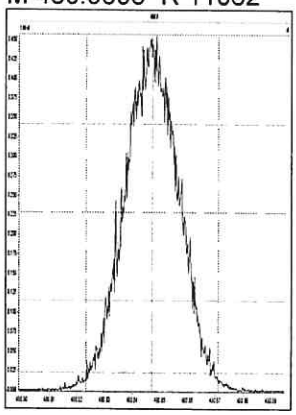
M 454.9728 R 11848



M 466.9728 R 11907



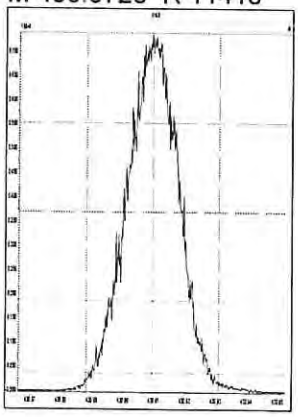
M 480.9696 R 11062



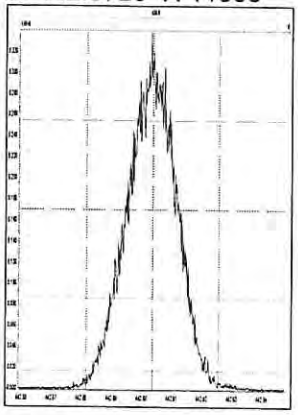
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Friday, December 28, 2018 16:08:29 Central Standard Time

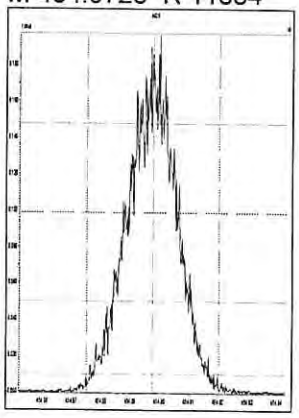
M 430.9728 R 11415



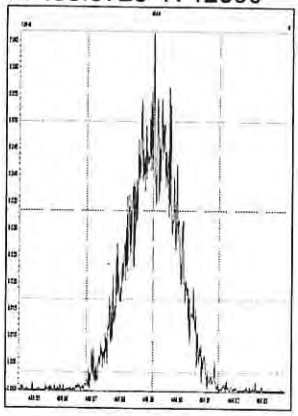
M 442.9728 R 11366



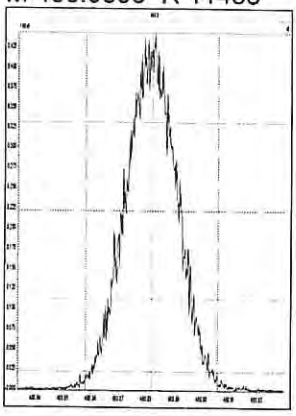
M 454.9728 R 11364



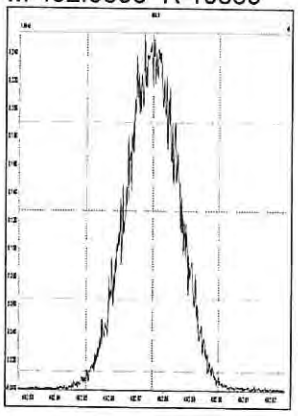
M 466.9728 R 12890



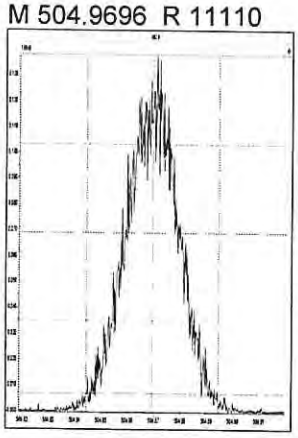
M 480.9696 R 11466



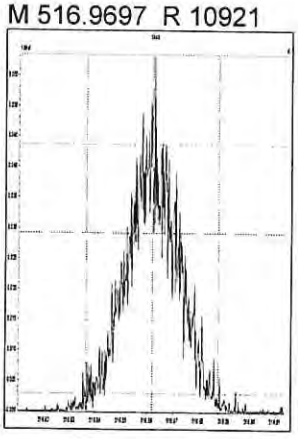
M 492.9696 R 10869



M 504.9696 R 11110



M 516.9697 R 10921



5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

WDM

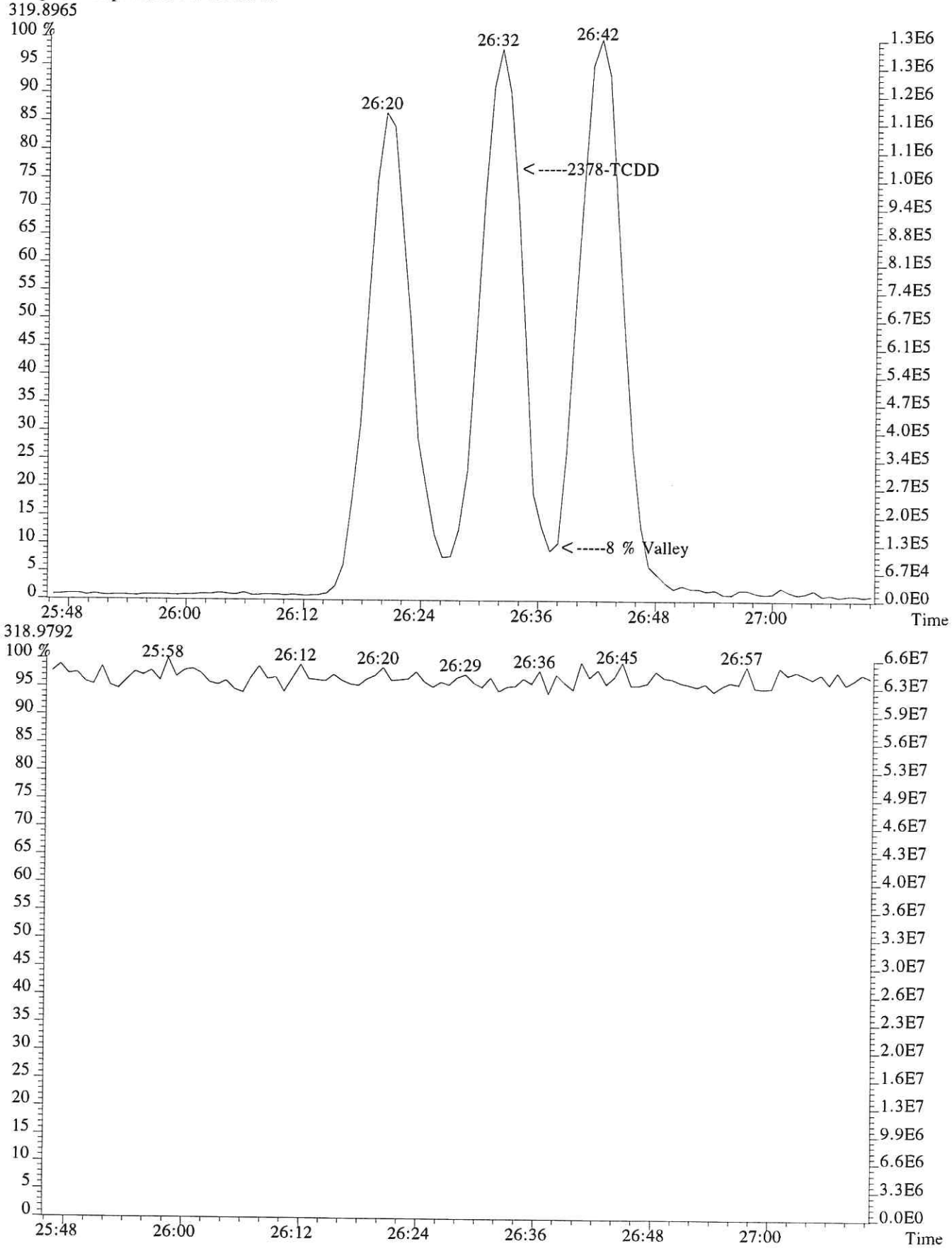
Lab Name: ALS Environmental
Lab Code: ALSTX
GC Column: DB-5MSUI

Case No.: _____ SDG No.:
ID: 0.25 (mm) Lab File ID: P616243
Date Analyzed: 28-DEC-18
Time Analyzed: 06:49:31

Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	21:10	27:58
TCDD	22:46	27:46
PeCDF	27:52	32:38
PeCDD	29:40	32:23
HxCDF	33:20	35:57
HxCDD	33:53	35:32
HpCDF	37:11	38:31
HpCDD	37:27	38:05

% Valley 2378-TCDD: 8 %

File:P616243 #1-573 Acq:28-DEC-2018 06:49:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE



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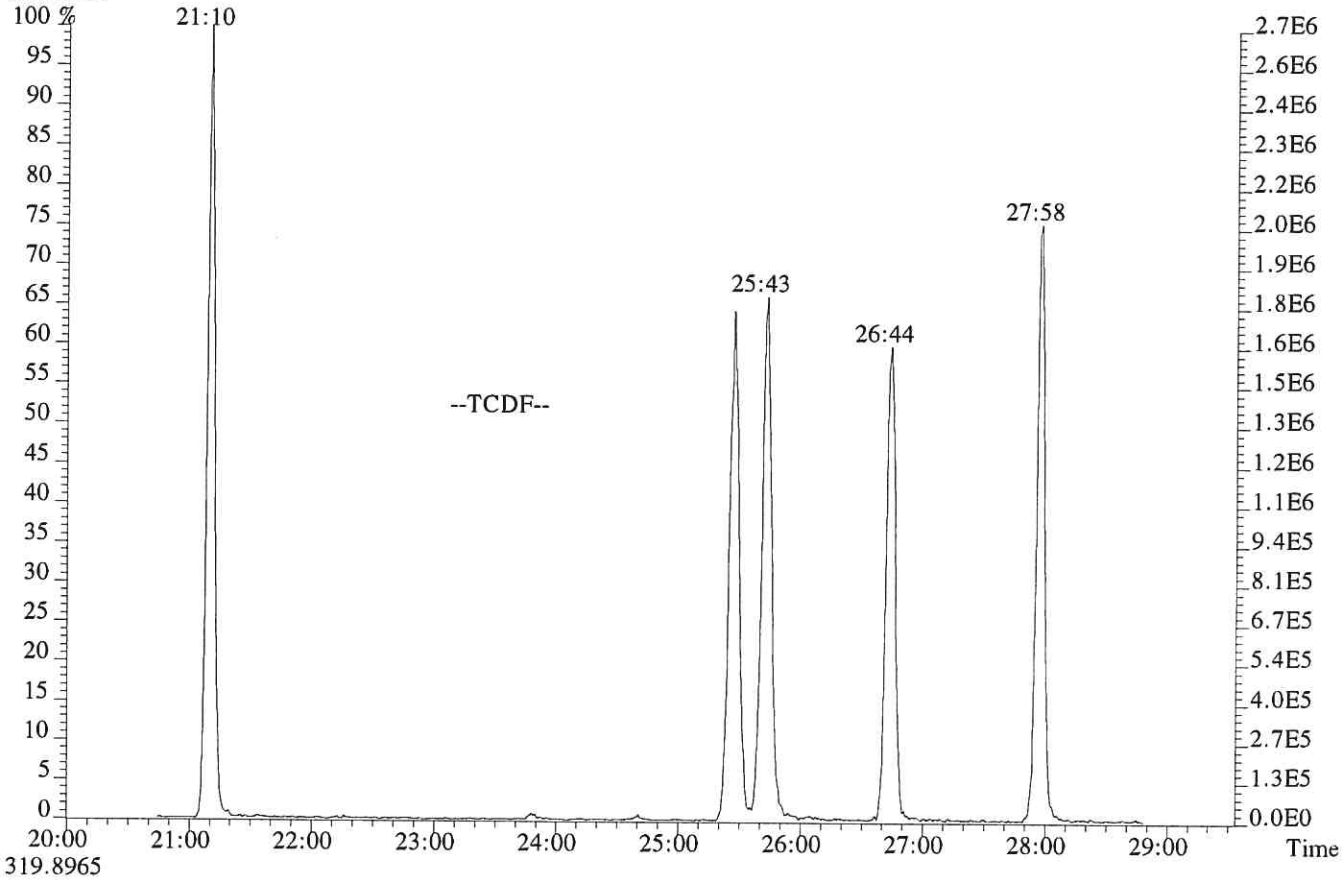
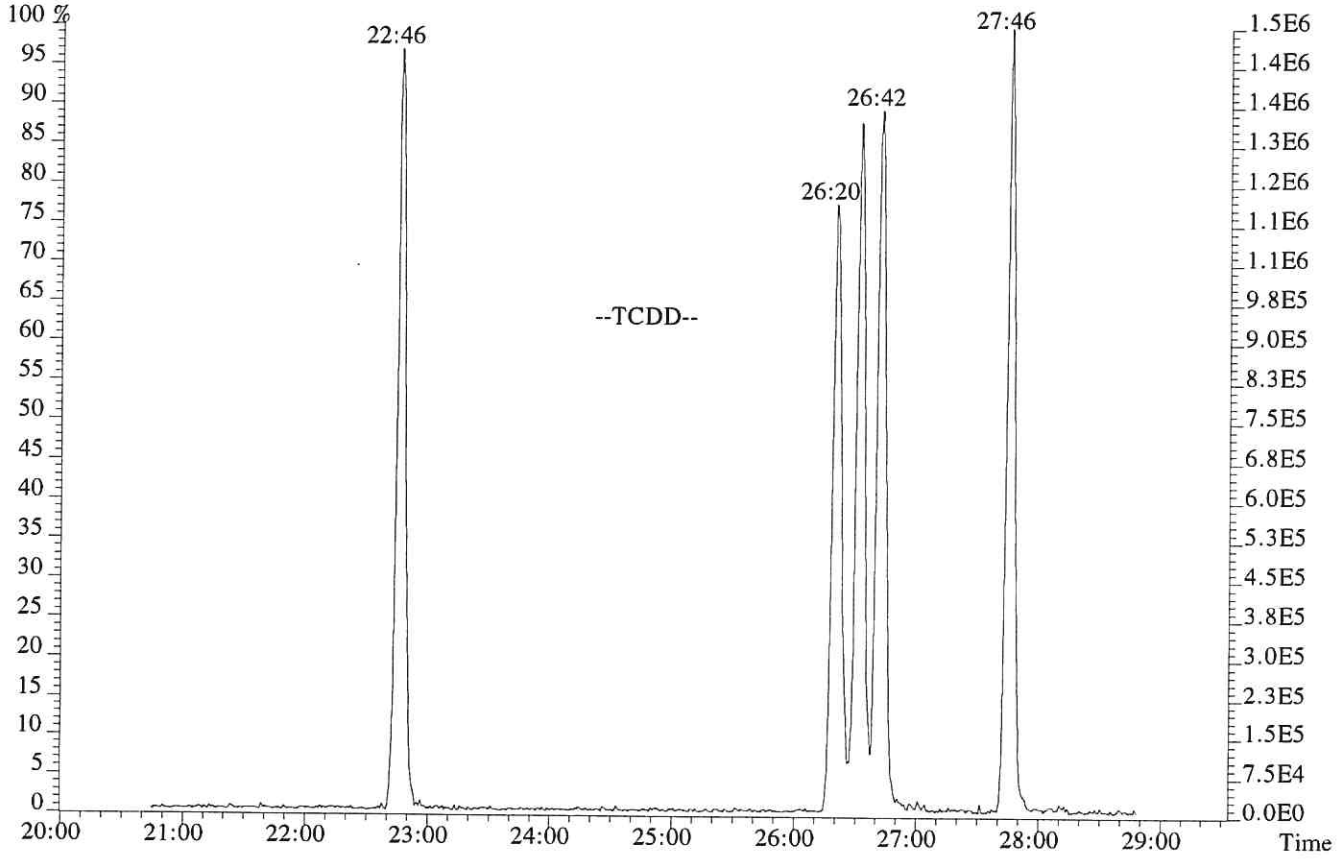
Sample#1 Exp:WINDOW DEFINE

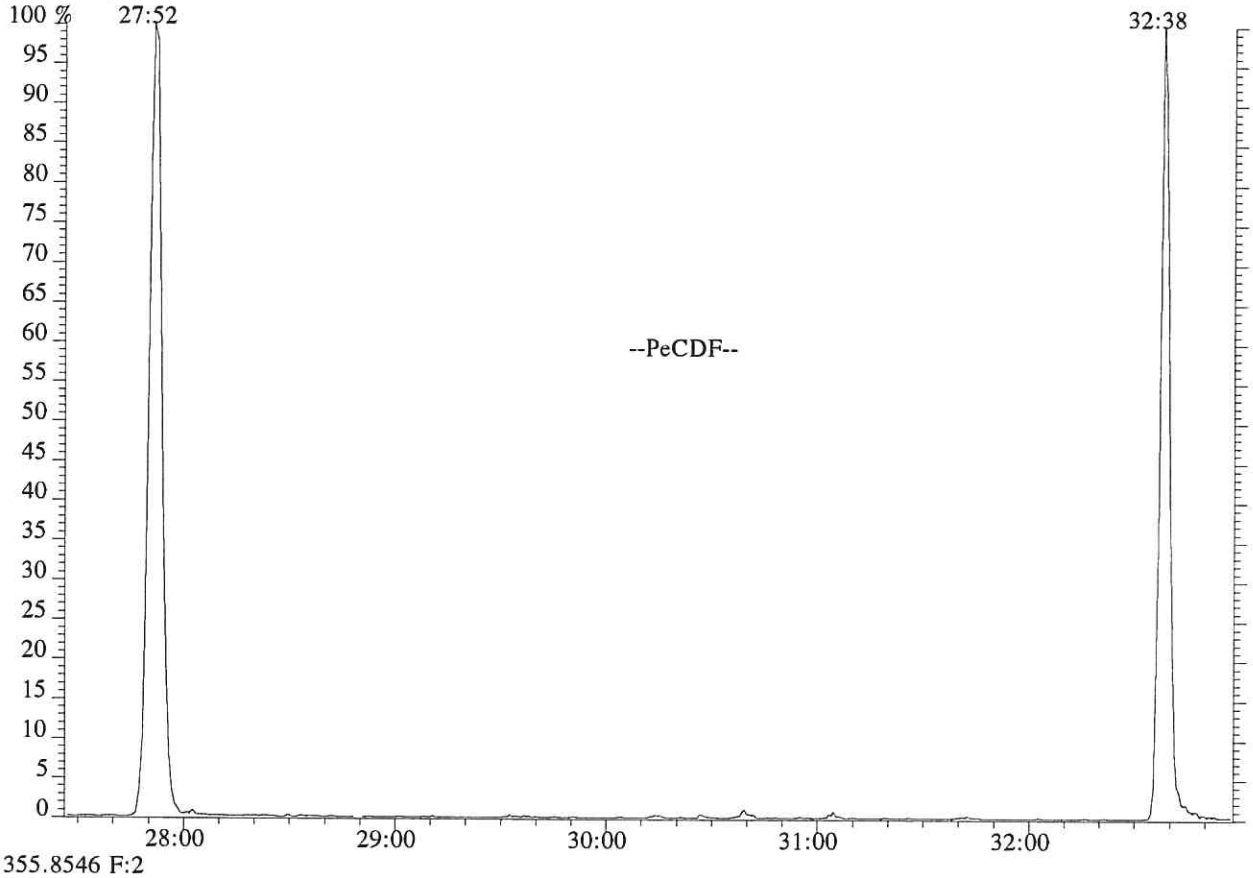
303.9016



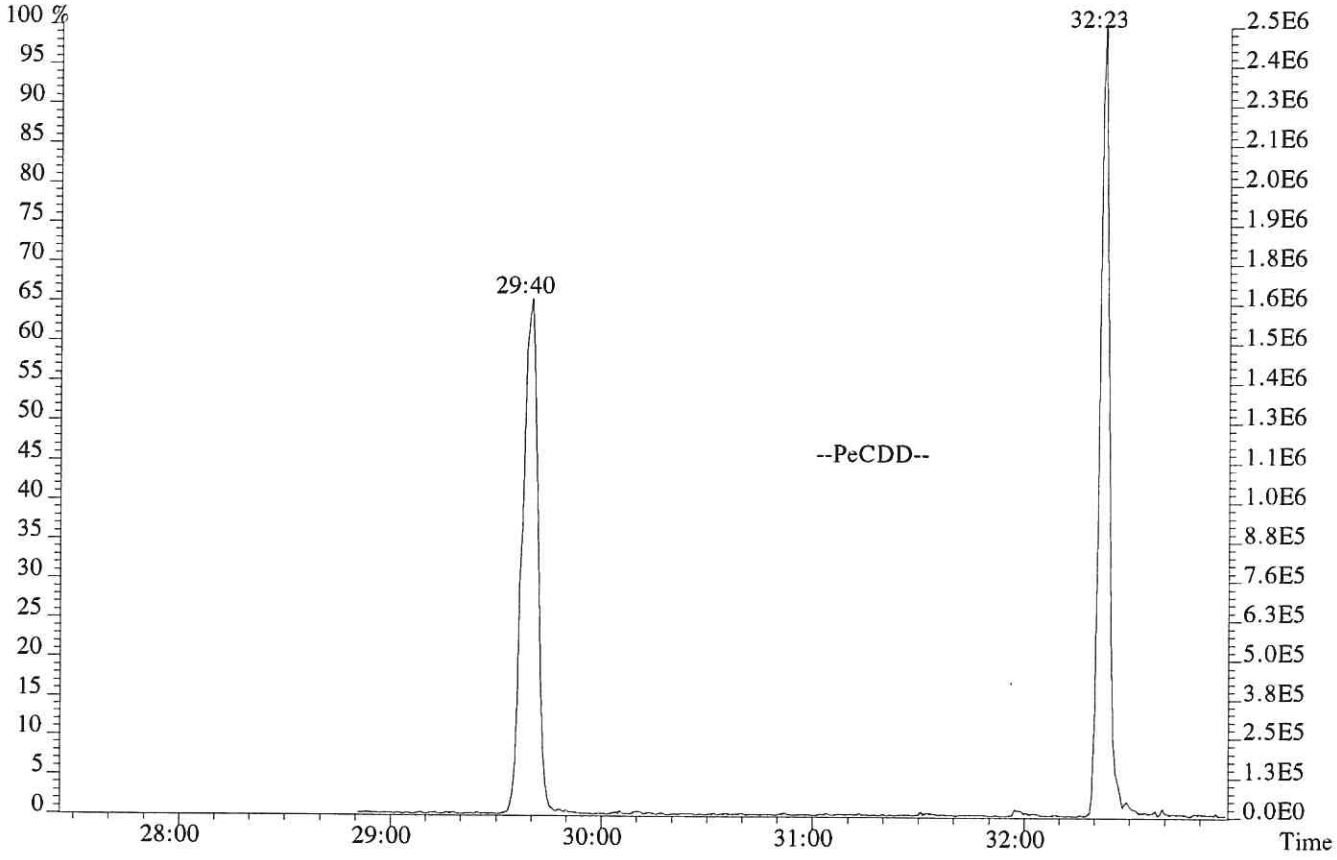
319.8965



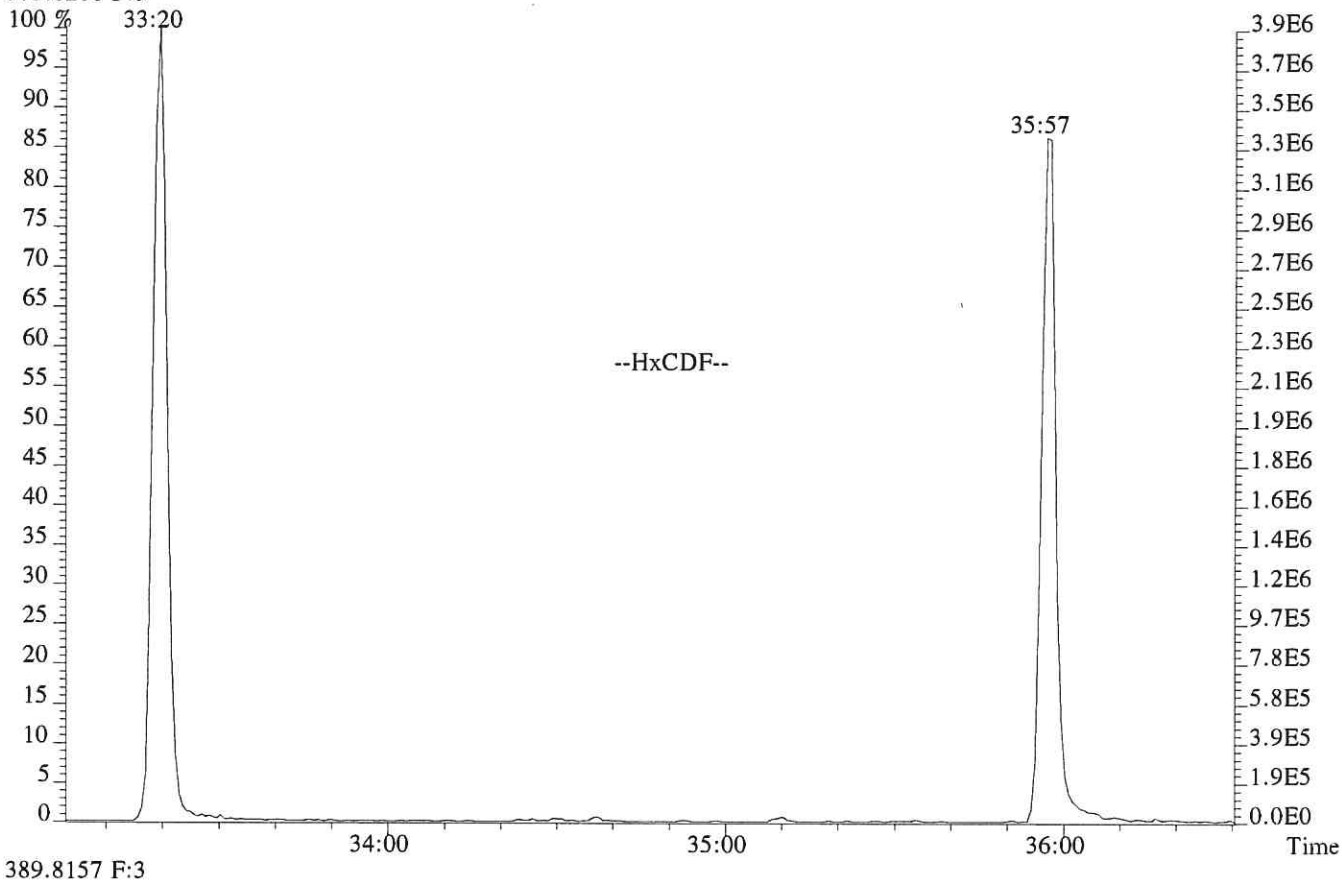
File:P616243 #1-573 Acq:28-DEC-2018 06:49:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
339.8597,339.8597 F:2

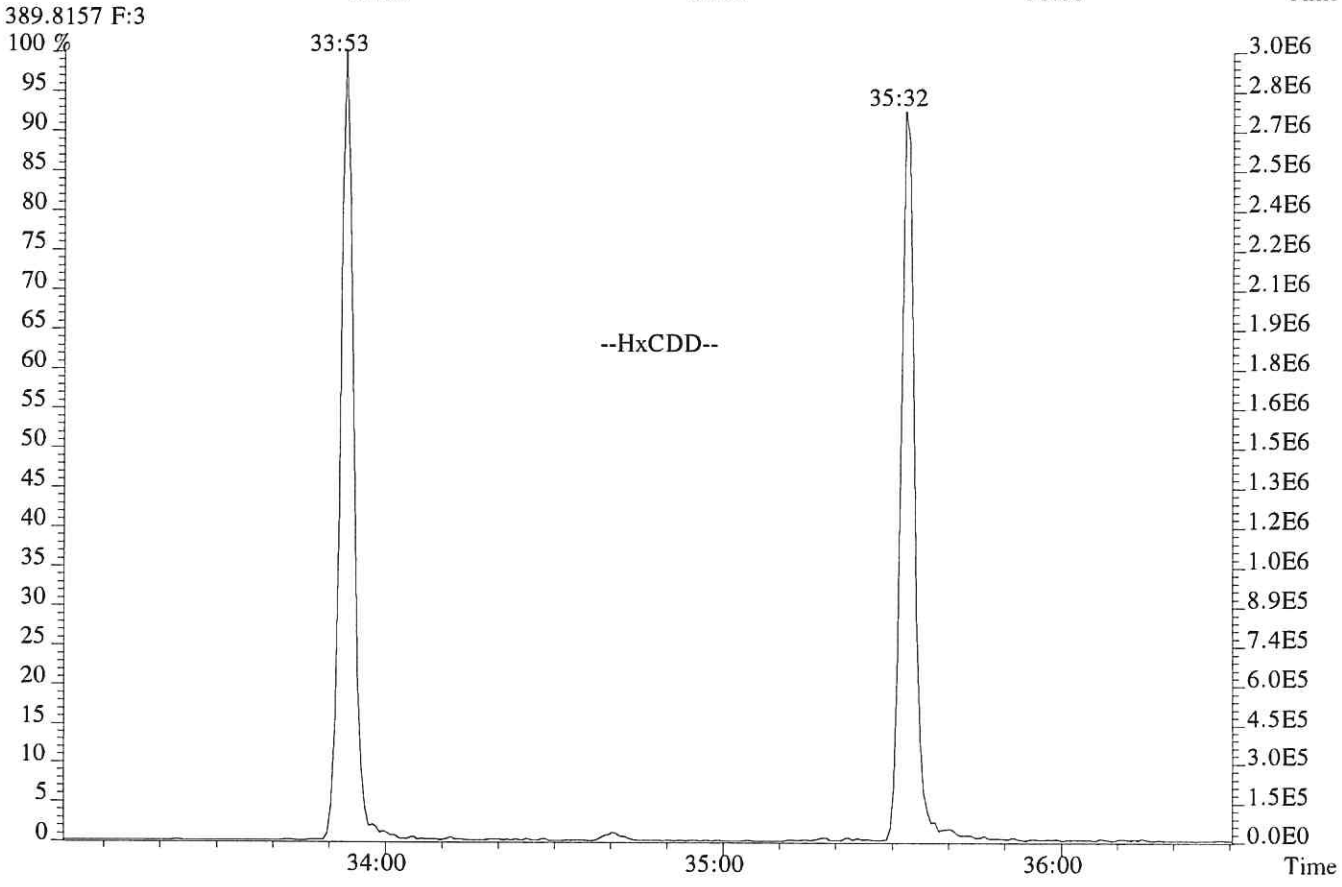


355.8546 F:2

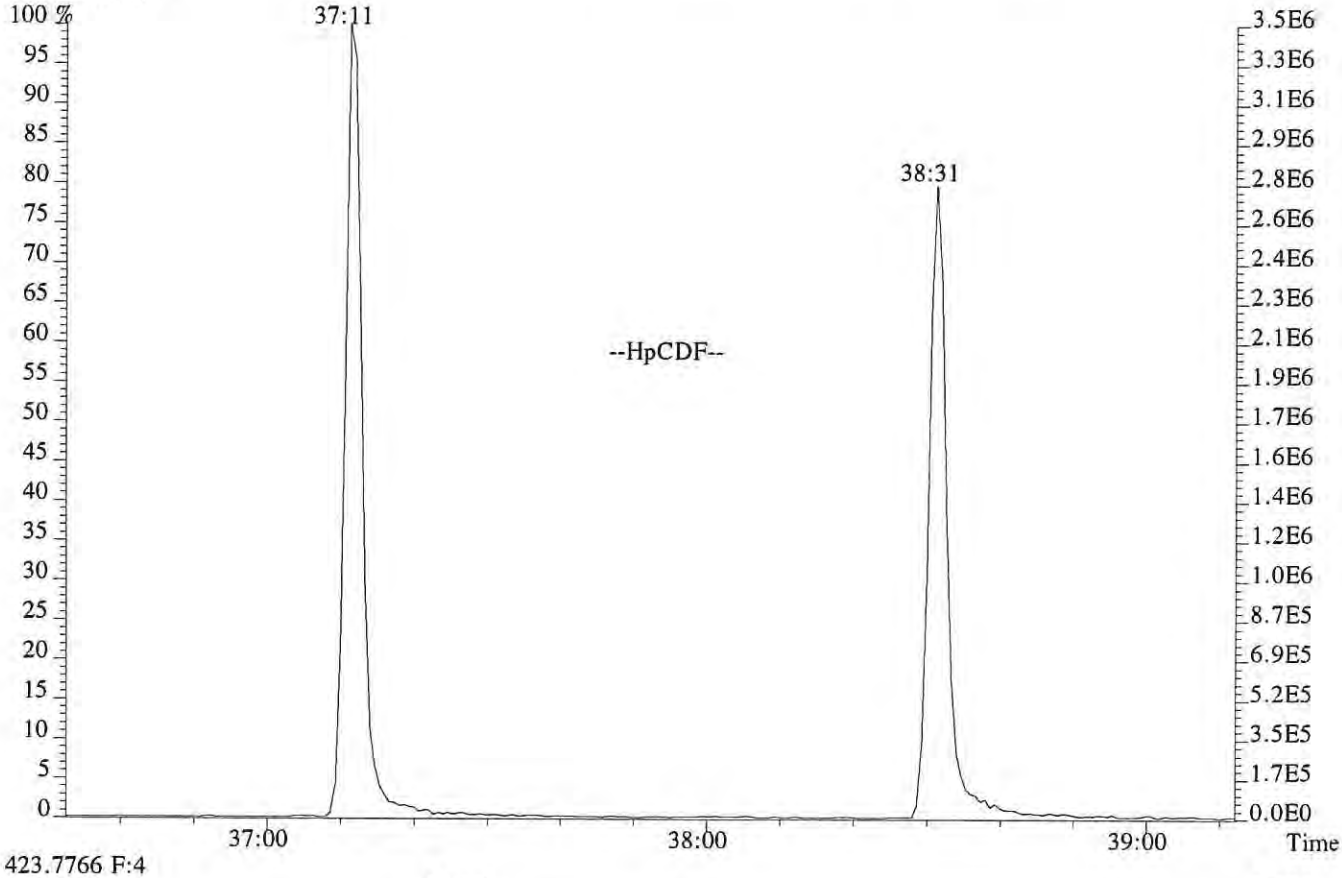


File:P616243 #1-573 Acq:28-DEC-2018 06:49:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE

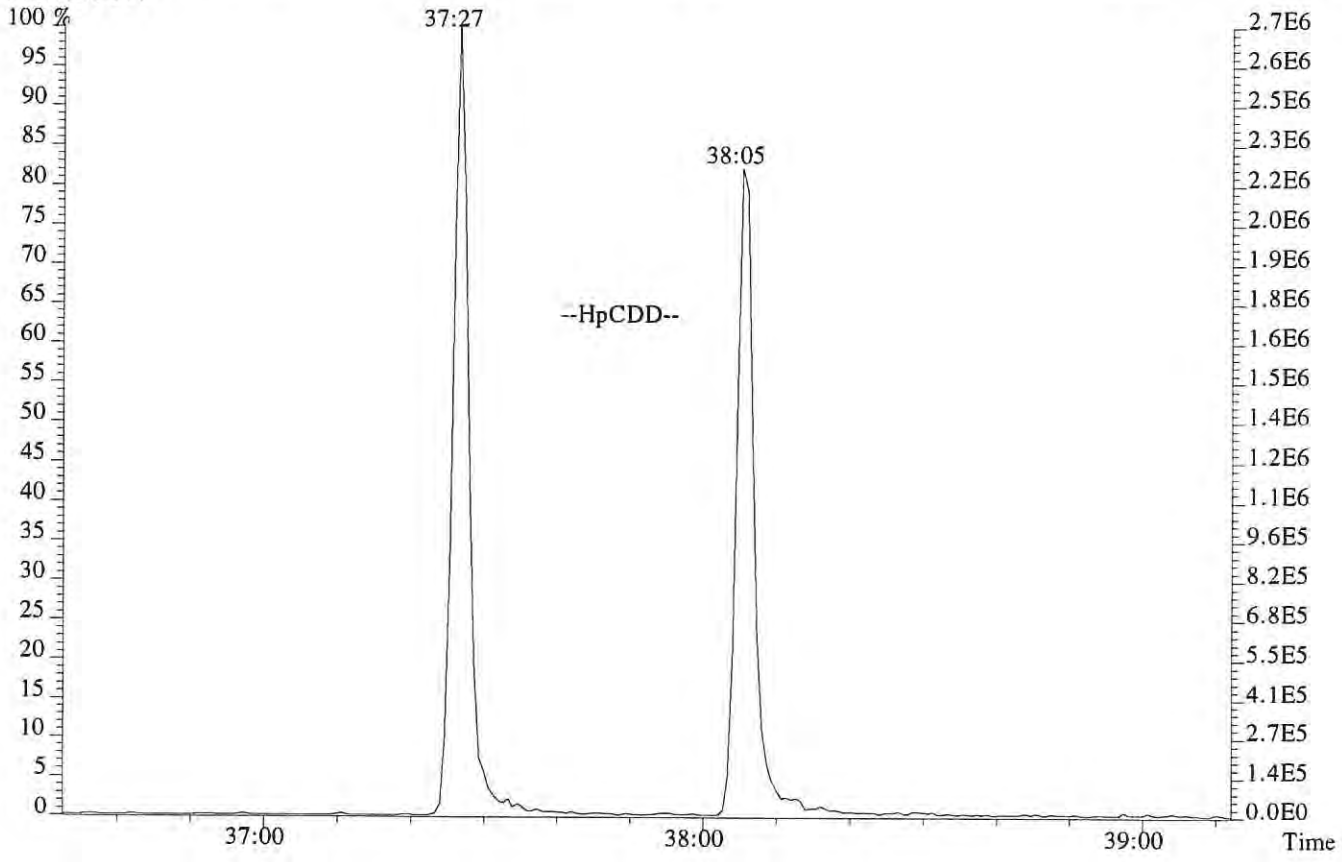




File:P616243 #1-573 Acq:28-DEC-2018 06:49:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
407.7818 F:4



423.7766 F:4



USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

Instrument ID: E-HRMS-08 GC Column ID: DB-5MSUI

VER Data Filename: P616242 Analysis Date: 28-DEC-18 Time: 05:48:30

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	9.8	7.8 - 12.9	-1.6
1,2,3,7,8-PeCDD	M+2/M+4	1.56	1.32-1.78	51	39 - 65	2.8
1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	49	39 - 64	-1.6
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	49	39 - 64	-1.6
1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	49	41 - 61	-2.4
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	48	43 - 58	-4.8
OCDD	M+2/M+4	0.89	0.76-1.02	97	79 - 126	-3.2
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	9.4	8.4 - 12.0	-6.1
1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	47	41 - 60	-6.3
2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	46	41 - 61	-7.7
1,2,3,4,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	46	45 - 56	-8.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	47	44 - 57	-6.8
1,2,3,7,8,9-HxCDF	M+2/M+4	1.22	1.05-1.43	48	45 - 56	-4.4
2,3,4,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	46	44 - 57	-7.2
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.04	0.88-1.20	47	45 - 55	-5.9
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.03	0.88-1.20	46	43 - 58	-7.3
OCDF	M+2/M+4	0.90	0.76-1.02	88	63 - 159	-12.2

(1) See Table 8, Method 1613B, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.

(3) Contract-required concentration range as specified in Table 6, Method 1613B, under VER.

(4) The beginning CCAL %RSD for the 17 unlabeled standard must not exceed +/- 20%, Section 7.7.4.1. The ending CCAL must not exceed +/-25%, Section 8.3.2.4, Method 8290

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

Instrument ID: E-HRMS-08 GC Column ID: DB-5MSUI

VER Data Filename: P616242 Analysis Date: 28-DEC-18 Time: 05:48:30

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	102	82 - 121	1.7
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.58	1.32-1.78	93	62 - 160	-7.2
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	98	85 - 117	-1.6
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	104	85 - 118	4.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	101	72 - 138	0.6
13C-OCDD	M+2/M+4	0.90	0.76-1.02	219	96 - 415	9.6
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	100	71 - 140	-0.5
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.62	1.32-1.78	94	76 - 130	-5.6
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	95	77 - 130	-4.8
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	96	76 - 131	-4.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	97	70 - 143	-3.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	94	74 - 135	-6.3
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	97	73 - 137	-2.6
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	93	78 - 129	-6.8
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.46	0.37-0.51	95	77 - 129	-5.1
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD	M+2/M+4			9.8	7.8 - 12.7	-1.9

(1) See Table 8, Method 1613B, for m/z specifications.
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.
(3) Contract-required concentration range, as specified in Table 6, Method 1613B, under VER.
(4) No ion abundance ratio; report concentration found.
(5) The beginnning CCAL %RSD for the labeled standard must not exceed +/- 30% Section 7.7.4.2. The ending CCAL must not exceed +/- 35%, Sec 8.3.2.4 (8290)

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
194503

Run #7 Filename P616242 Samp: 1 Inj: 1 Acquired: 28-DEC-18 05:48:30
Processed: 29-DEC-18 08:25:03 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:43	7.165e+03	9.223e+03	0.78	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:39	5.727e+04	3.620e+04	1.58	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:41	5.314e+04	3.400e+04	1.56	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:30	4.791e+04	3.809e+04	1.26	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:37	5.166e+04	4.101e+04	1.26	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:10	4.837e+04	3.748e+04	1.29	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:56	4.337e+04	3.566e+04	1.22	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:12	4.164e+04	3.993e+04	1.04	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:31	3.513e+04	3.409e+04	1.03	yes	no	1.463
10	Unk	OCDF	40:44	5.587e+04	6.235e+04	0.90	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:42	5.219e+03	6.596e+03	0.79	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:59	3.479e+04	2.229e+04	1.56	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:18	3.088e+04	2.466e+04	1.25	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:23	3.252e+04	2.556e+04	1.27	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:38	3.338e+04	2.719e+04	1.23	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:06	2.798e+04	2.624e+04	1.07	yes	no	1.112
17	Unk	OCDD	40:33	4.512e+04	5.089e+04	0.89	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:41	7.128e+04	9.026e+04	0.79	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:39	1.066e+05	6.599e+04	1.62	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:40	1.051e+05	6.611e+04	1.59	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:30	4.562e+04	8.649e+04	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:36	5.345e+04	1.004e+05	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:09	5.011e+04	9.433e+04	0.53	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:55	4.331e+04	8.255e+04	0.52	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:11	3.593e+04	7.791e+04	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:31	3.218e+04	6.992e+04	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:41	5.087e+04	6.360e+04	0.80	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:58	7.311e+04	4.642e+04	1.58	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:17	5.930e+04	4.613e+04	1.29	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:22	6.236e+04	4.906e+04	1.27	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:05	5.261e+04	4.975e+04	1.06	yes	no	0.857
32	IS	13C-OCDD	40:32	8.125e+04	9.017e+04	0.90	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:56	5.103e+04	6.349e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:37	6.535e+04	5.332e+04	1.23	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:42	1.220e+04				no	1.086

ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
194503

Run #7 Filename P616242 Samp: 1 Inj: 1 Acquired: 28-DEC-18 05:48:30
Processed: 29-DEC-18 08:25:03 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.05e+06	1.05e+03	9.9e+02	1.33e+06	3.70e+03	3.6e+02
2	1,2,3,7,8-PeCDF	1.01e+07	6.28e+02	1.6e+04	6.38e+06	2.04e+03	3.1e+03
3	2,3,4,7,8-PeCDF	1.01e+07	6.28e+02	1.6e+04	6.52e+06	2.04e+03	3.2e+03
4	1,2,3,4,7,8-HxCDF	1.03e+07	5.52e+02	1.9e+04	8.20e+06	6.72e+02	1.2e+04
5	1,2,3,6,7,8-HxCDF	1.06e+07	5.52e+02	1.9e+04	8.40e+06	6.72e+02	1.3e+04
6	2,3,4,6,7,8-HxCDF	1.03e+07	5.52e+02	1.9e+04	7.95e+06	6.72e+02	1.2e+04
7	1,2,3,7,8,9-HxCDF	9.13e+06	5.52e+02	1.7e+04	7.36e+06	6.72e+02	1.1e+04
8	1,2,3,4,6,7,8-HpCDF	9.01e+06	3.96e+03	2.3e+03	8.63e+06	4.69e+03	1.8e+03
9	1,2,3,4,7,8,9-HpCDF	7.68e+06	3.96e+03	1.9e+03	7.40e+06	4.69e+03	1.6e+03
10	OCDF	1.05e+07	4.32e+02	2.4e+04	1.18e+07	1.36e+03	8.7e+03
11	2,3,7,8-TCDD	8.26e+05	2.62e+03	3.1e+02	1.02e+06	9.96e+02	1.0e+03
12	1,2,3,7,8-PeCDD	6.55e+06	1.76e+03	3.7e+03	4.20e+06	3.60e+02	1.2e+04
13	1,2,3,4,7,8-HxCDD	7.03e+06	6.88e+02	1.0e+04	5.59e+06	9.72e+02	5.8e+03
14	1,2,3,6,7,8-HxCDD	6.63e+06	6.88e+02	9.6e+03	5.23e+06	9.72e+02	5.4e+03
15	1,2,3,7,8,9-HxCDD	7.01e+06	6.88e+02	1.0e+04	5.52e+06	9.72e+02	5.7e+03
16	1,2,3,4,6,7,8-HpCDD	6.11e+06	7.96e+02	7.7e+03	5.65e+06	4.72e+02	1.2e+04
17	OCDD	8.60e+06	4.40e+02	2.0e+04	9.66e+06	7.44e+02	1.3e+04
18	13C-2,3,7,8-TCDF	1.04e+07	8.94e+03	1.2e+03	1.33e+07	4.75e+03	2.8e+03
19	13C-1,2,3,7,8-PeCDF	1.85e+07	7.64e+02	2.4e+04	1.14e+07	9.20e+02	1.2e+04
20	13C-2,3,4,7,8-PeCDF	2.01e+07	7.64e+02	2.6e+04	1.26e+07	9.20e+02	1.4e+04
21	13C-1,2,3,4,7,8-HxCDF	9.84e+06	1.00e+03	9.8e+03	1.84e+07	2.04e+03	9.0e+03
22	13C-1,2,3,6,7,8-HxCDF	1.09e+07	1.00e+03	1.1e+04	2.07e+07	2.04e+03	1.0e+04
23	13C-2,3,4,6,7,8-HxCDF	1.06e+07	1.00e+03	1.1e+04	1.98e+07	2.04e+03	9.7e+03
24	13C-1,2,3,7,8,9-HxCDF	9.05e+06	1.00e+03	9.1e+03	1.72e+07	2.04e+03	8.4e+03
25	13C-1,2,3,4,6,7,8-HpCDF	7.88e+06	3.31e+03	2.4e+03	1.70e+07	3.54e+03	4.8e+03
26	13C-1,2,3,4,7,8,9-HpCDF	6.87e+06	3.31e+03	2.1e+03	1.51e+07	3.54e+03	4.3e+03
27	13C-2,3,7,8-TCDD	8.36e+06	1.46e+04	5.7e+02	1.04e+07	5.14e+03	2.0e+03
28	13C-1,2,3,7,8-PeCDD	1.40e+07	8.68e+02	1.6e+04	8.87e+06	7.44e+02	1.2e+04
29	13C-1,2,3,4,7,8-HxCDD	1.34e+07	2.22e+03	6.0e+03	1.05e+07	1.10e+03	9.5e+03
30	13C-1,2,3,6,7,8-HxCDD	1.28e+07	2.22e+03	5.8e+03	1.01e+07	1.10e+03	9.2e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.13e+07	1.66e+03	6.8e+03	1.08e+07	5.60e+02	1.9e+04
32	13C-OCDD	1.52e+07	1.06e+03	1.4e+04	1.71e+07	9.12e+02	1.9e+04
33	13C-1,2,3,4-TCDD	7.87e+06	1.46e+04	5.4e+02	9.68e+06	5.14e+03	1.9e+03
34	13C-1,2,3,7,8,9-HxCDD	1.37e+07	2.22e+03	6.2e+03	1.09e+07	1.10e+03	9.9e+03
35	37Cl-2,3,7,8-TCDD	1.98e+06	3.46e+03	5.7e+02			

---Sample Calculation---

$$\text{)/L TCDD} = \frac{2.5 \times (2.624e{+}03 + 9.960e{+}02\ ) \times 100}{(8.359e{+}06 + 1.035e{+}07\ ) \times (\qquad\qquad\qquad\qquad) \times 1.049} =$$

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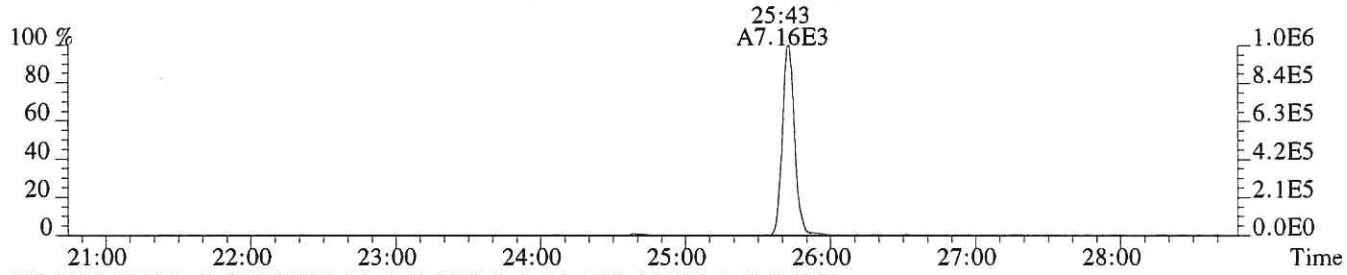
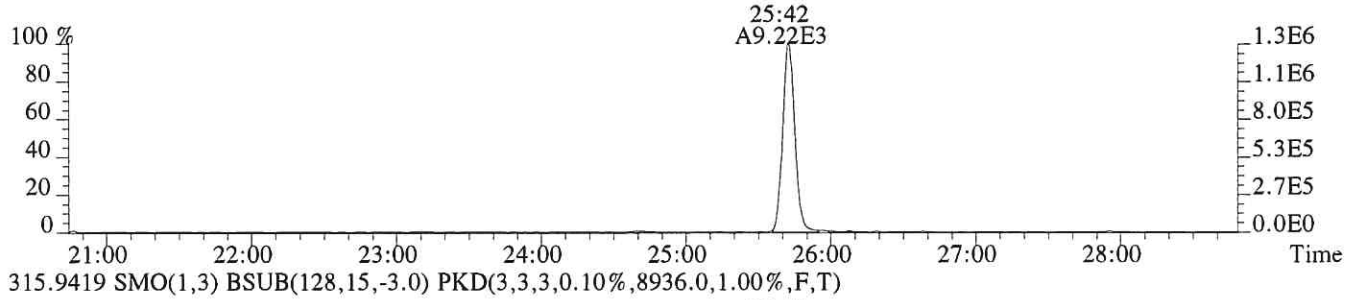
File:P616242 #1-573 Acq:28-DEC-2018 05:48:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

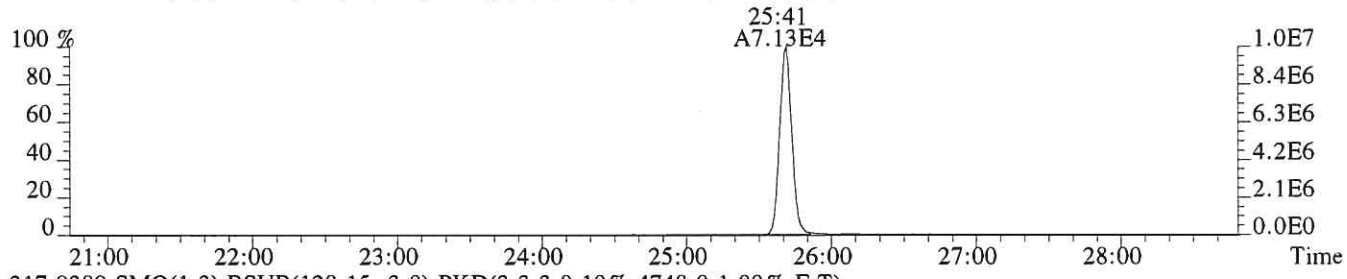
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1052.0,1.00%,F,T)



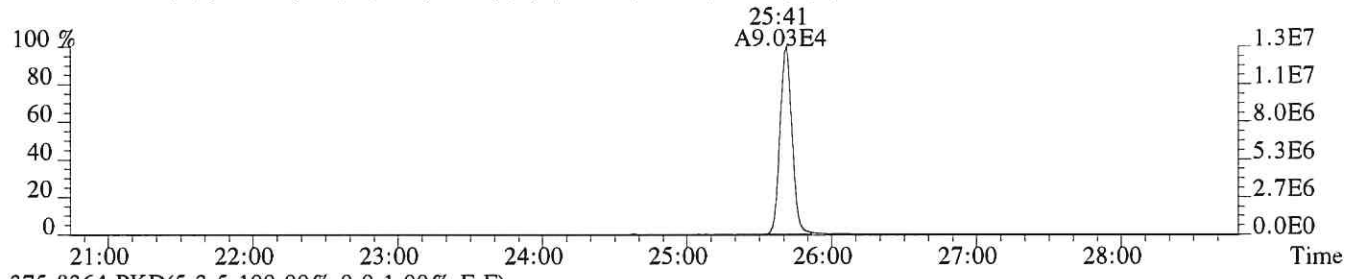
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3696.0,1.00%,F,T)



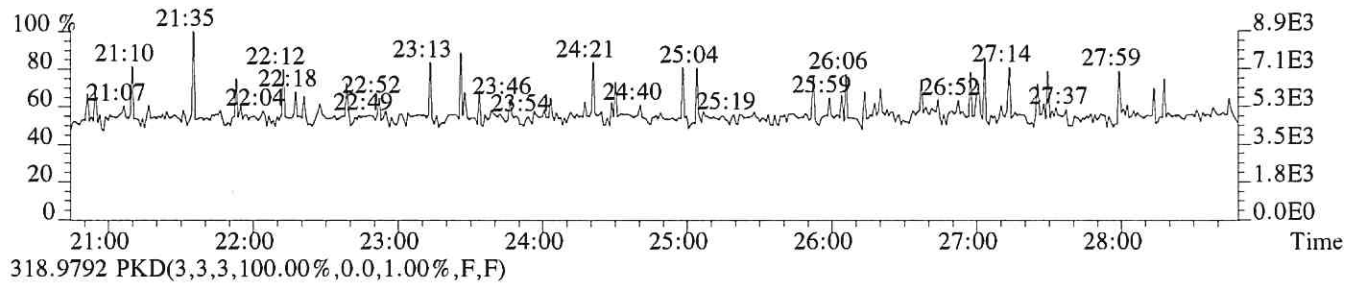
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8936.0,1.00%,F,T)



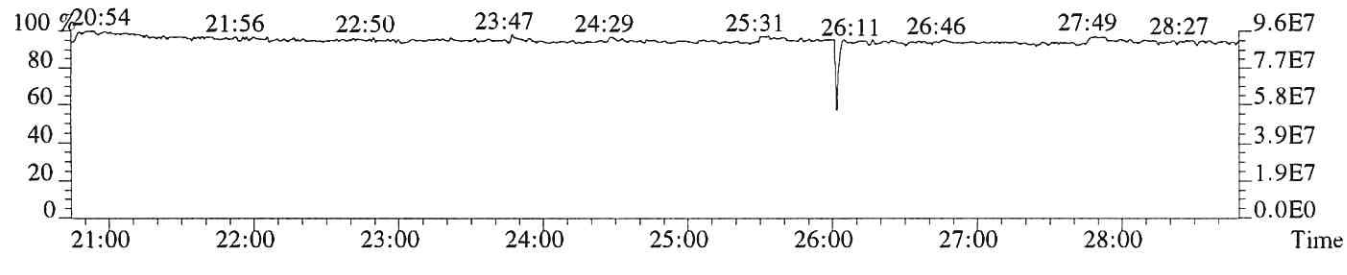
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4748.0,1.00%,F,T)



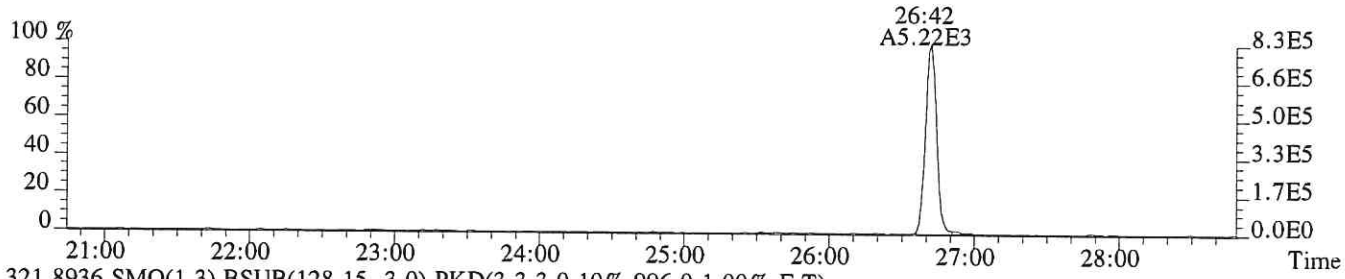
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



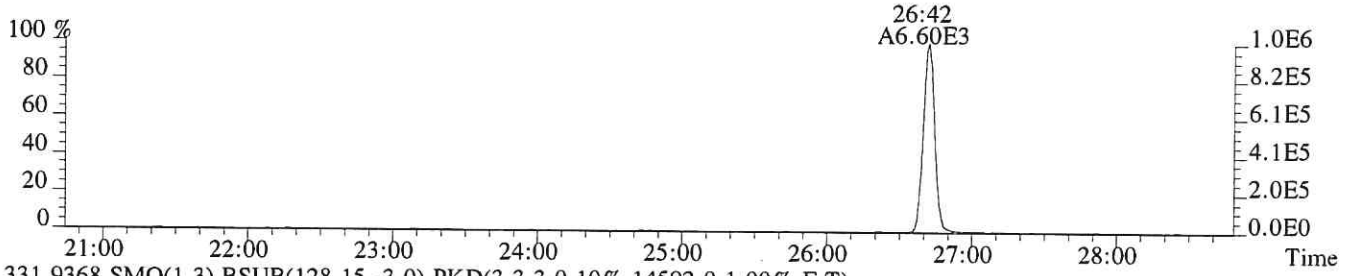
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



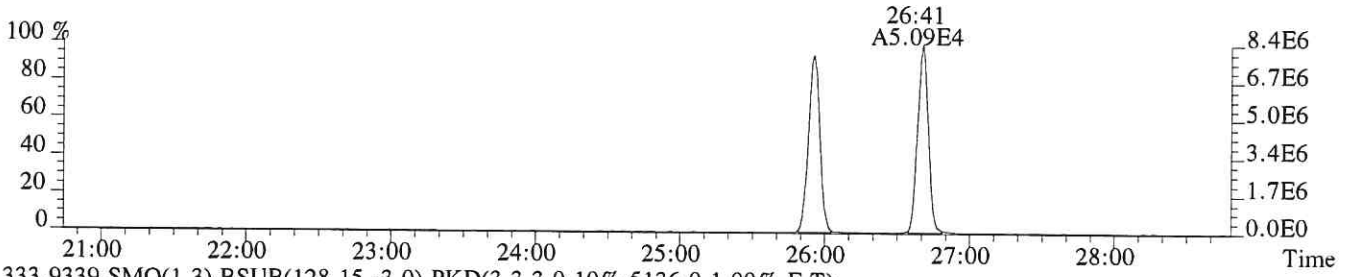
File:P616242 #1-573 Acq:28-DEC-2018 05:48:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2624.0,1.00%,F,T)



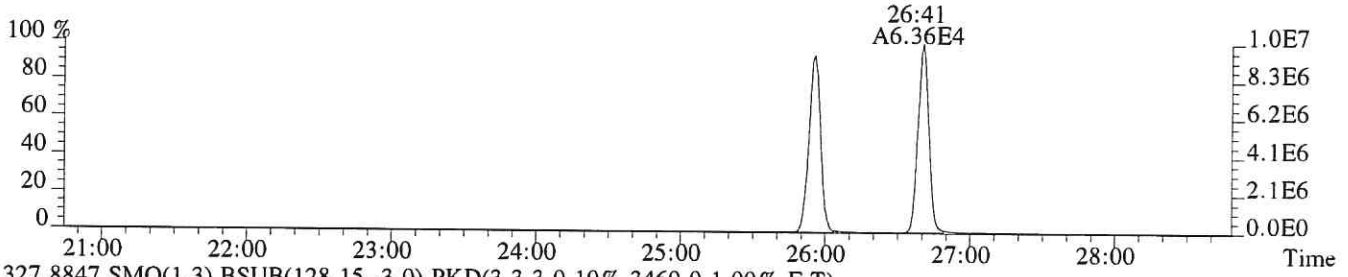
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,996.0,1.00%,F,T)



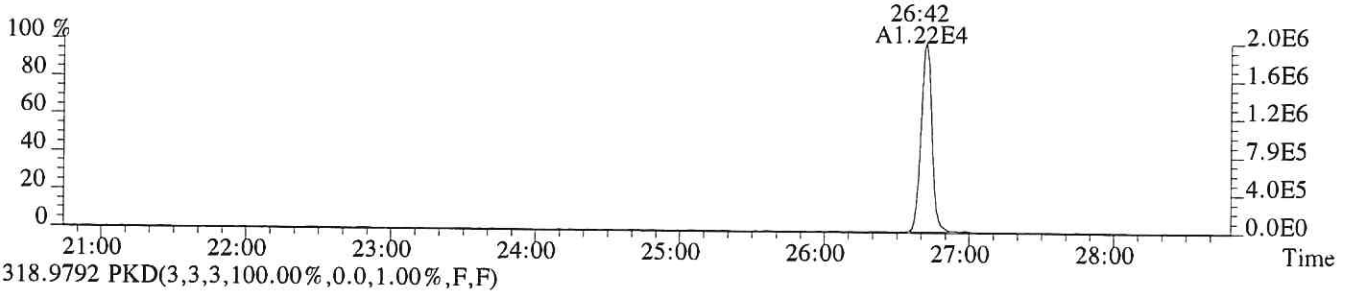
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,14592.0,1.00%,F,T)



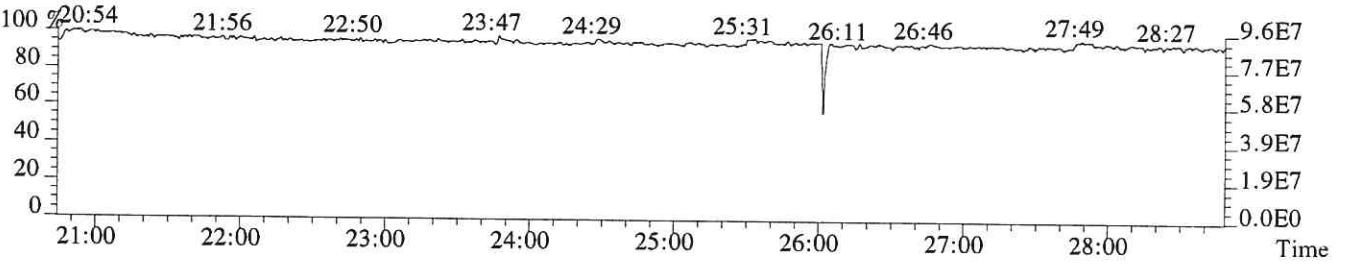
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5136.0,1.00%,F,T)



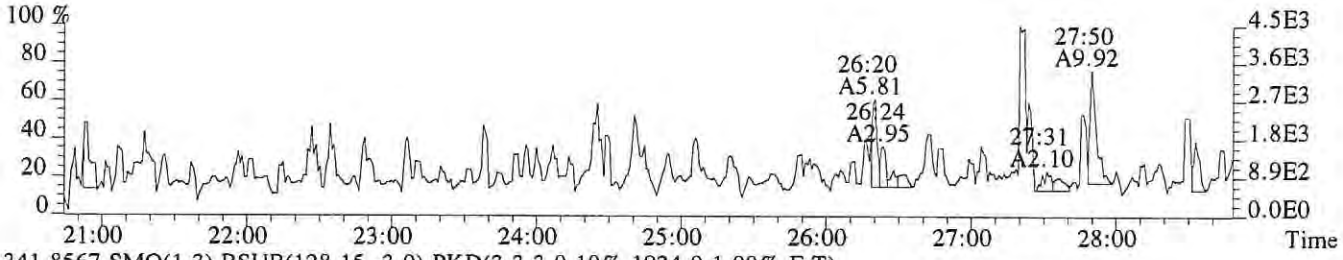
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3460.0,1.00%,F,T)



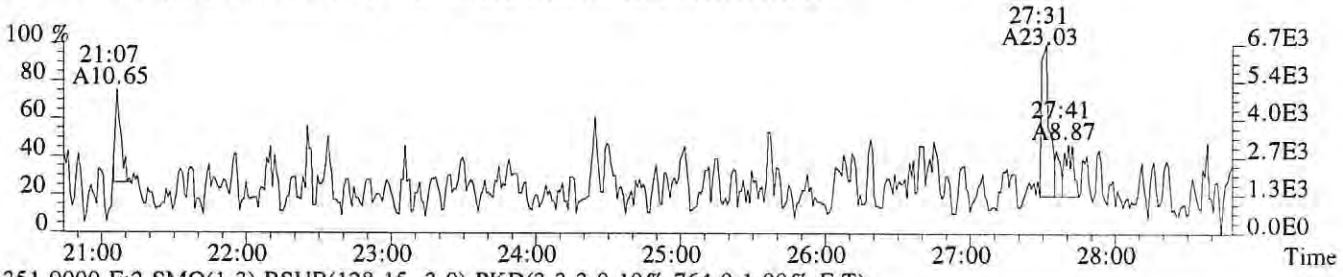
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



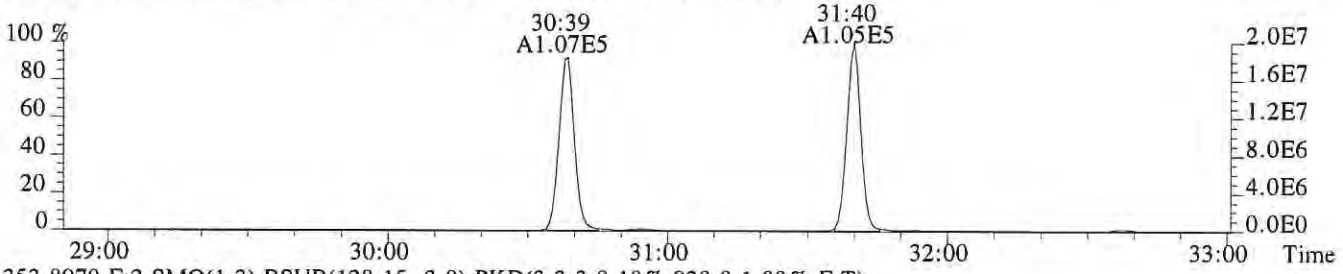
File:P616242 #1-573 Acq:28-DEC-2018 05:48:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1240.0,1.00%,F,T)



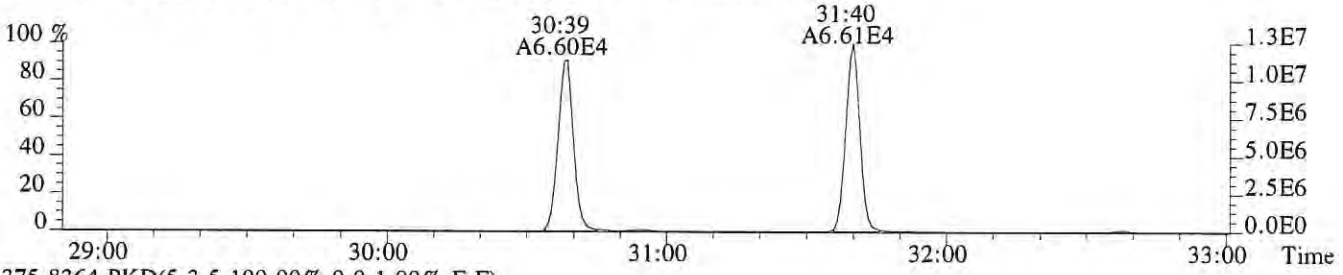
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1924.0,1.00%,F,T)



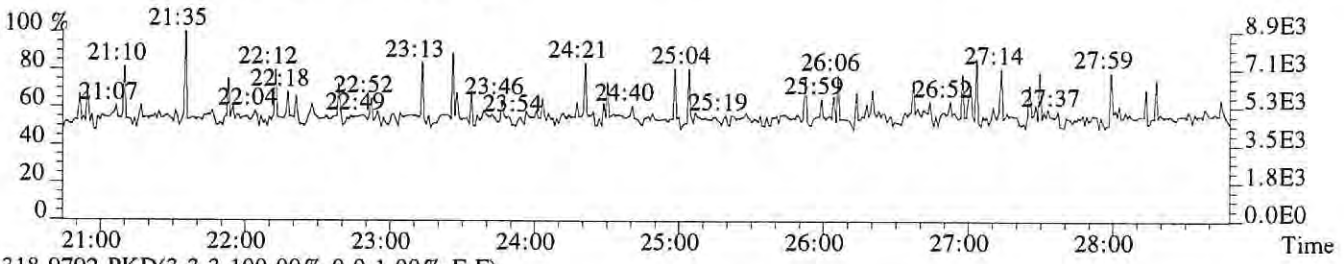
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,764.0,1.00%,F,T)



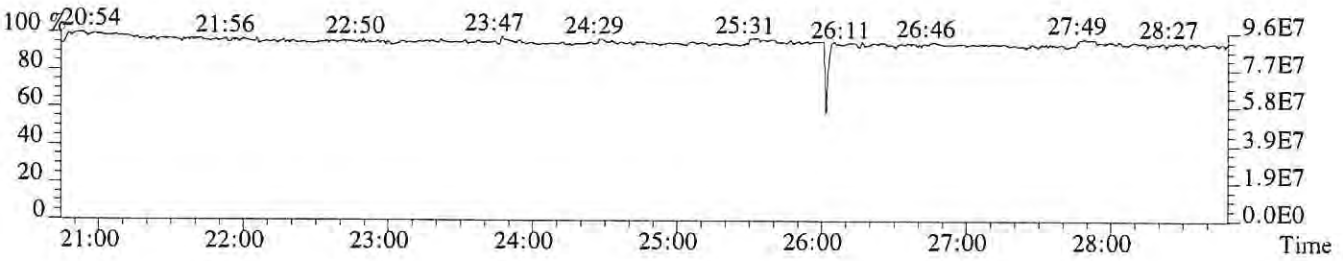
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,920.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

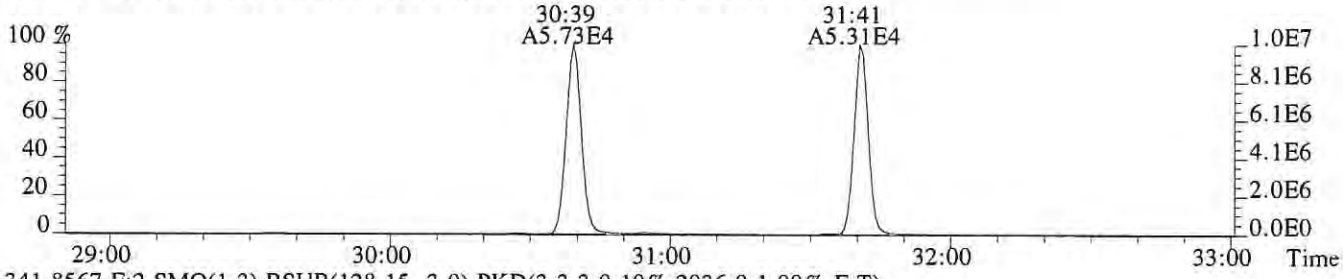


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

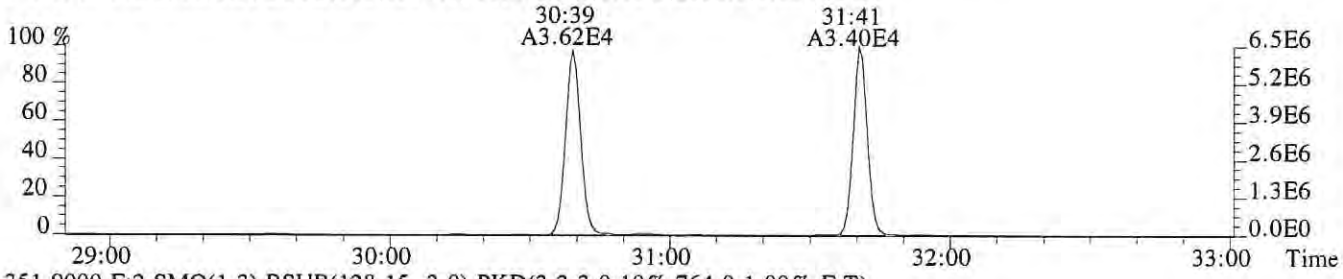


File:P616242 #1-376 Acq:28-DEC-2018 05:48:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

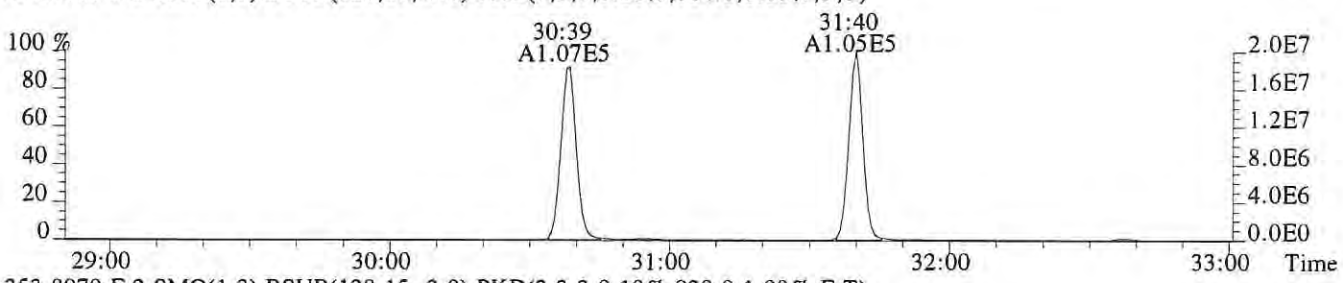
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,628.0,1.00%,F,T)



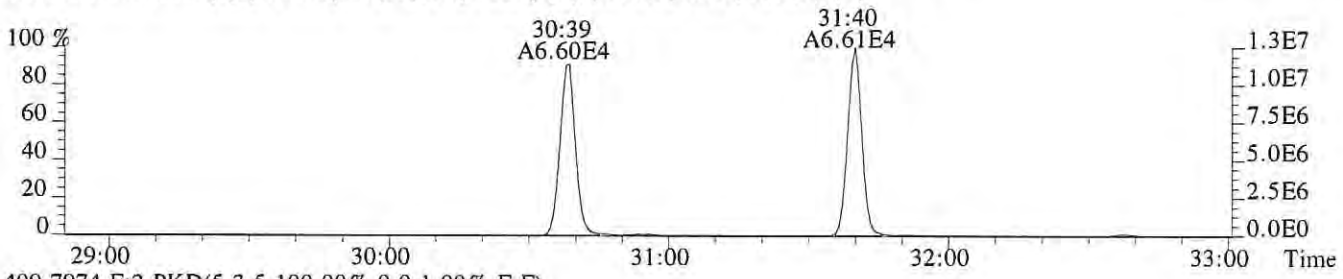
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2036.0,1.00%,F,T)



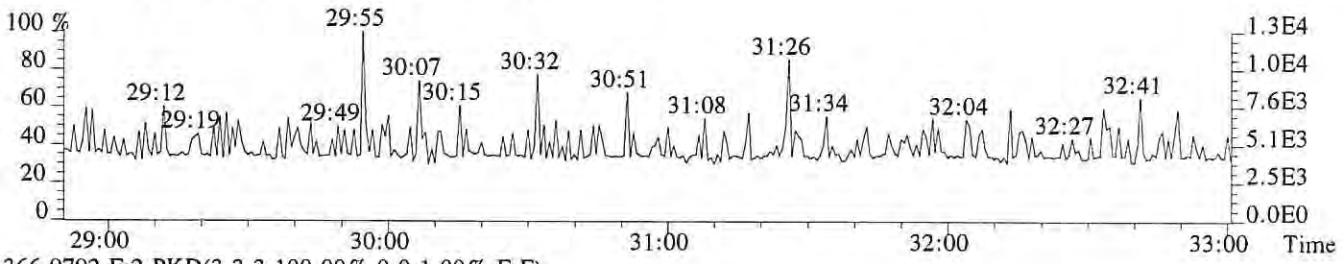
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,764.0,1.00%,F,T)



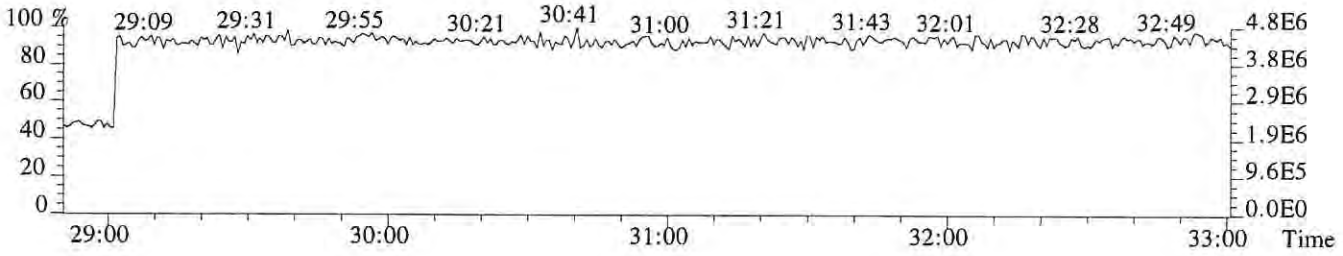
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,920.0,1.00%,F,T)



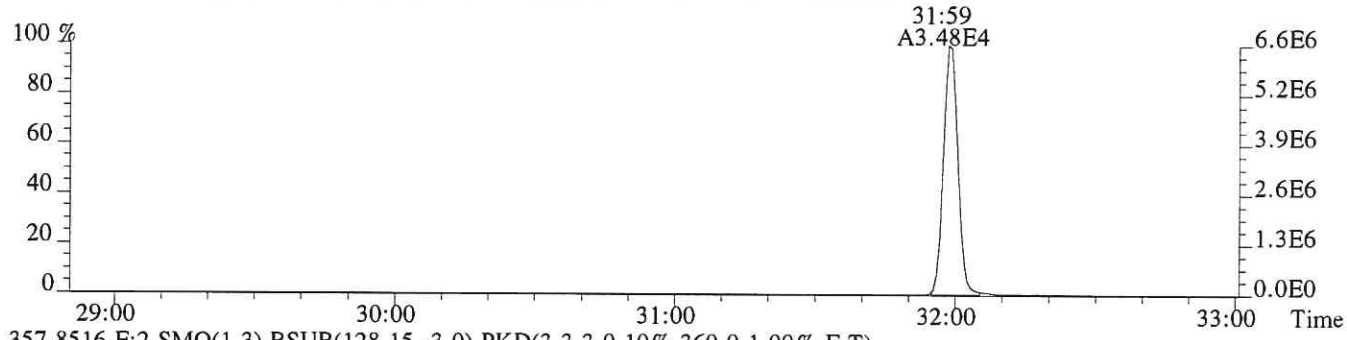
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



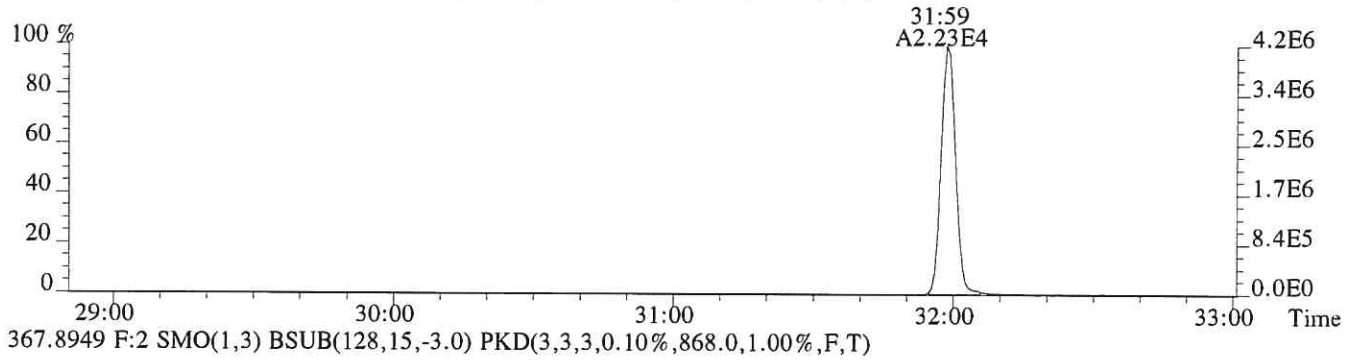
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



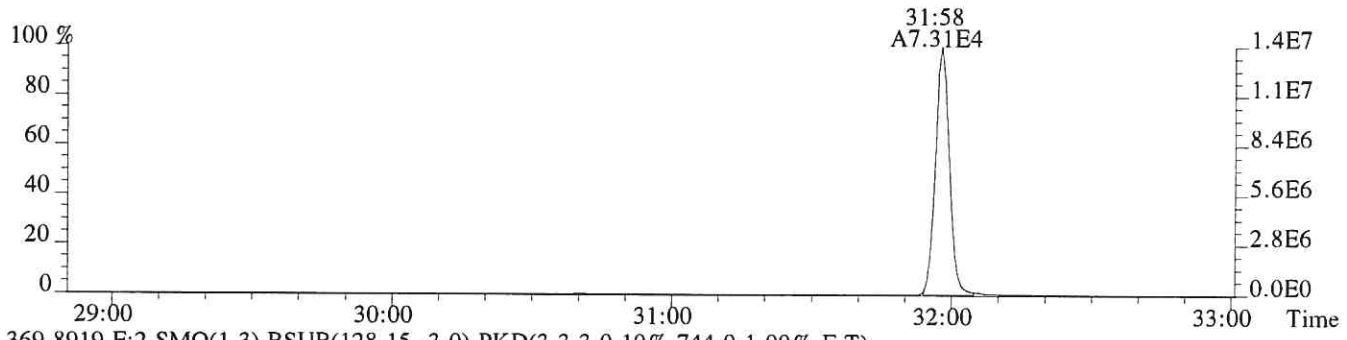
File:P616242 #1-376 Acq:28-DEC-2018 05:48:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1760.0,1.00%,F,T)



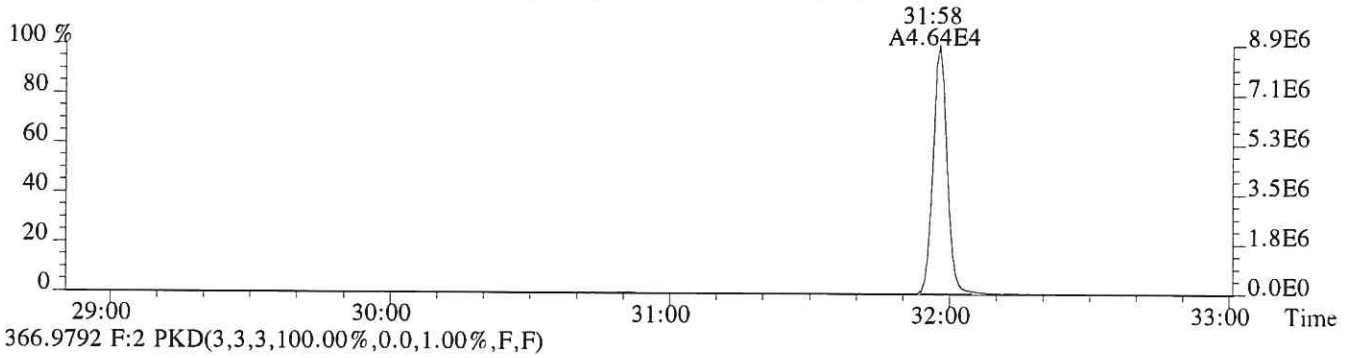
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,360.0,1.00%,F,T)



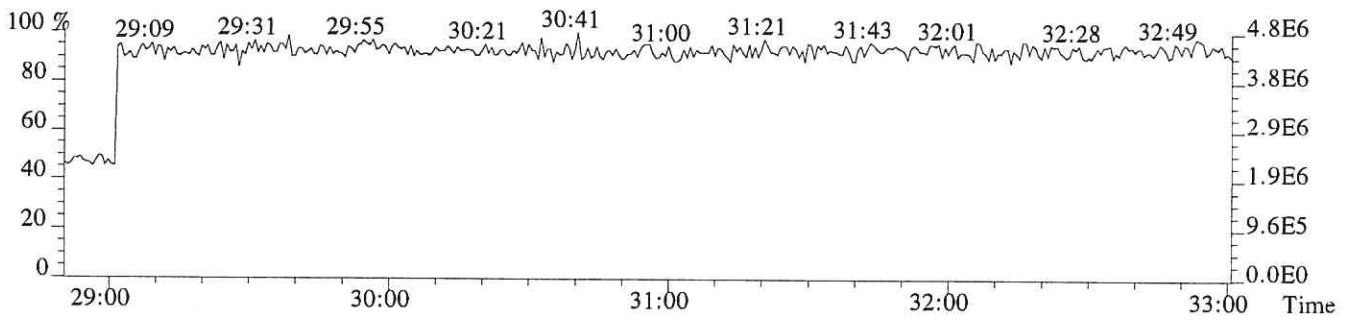
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,868.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,744.0,1.00%,F,T)

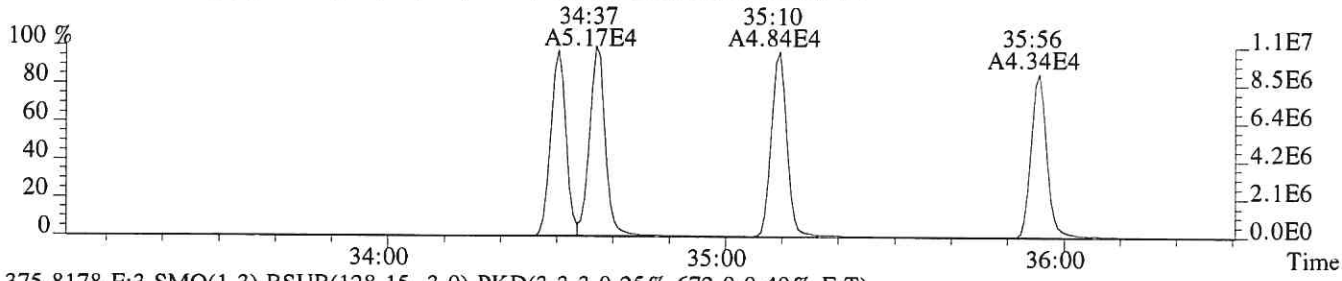


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

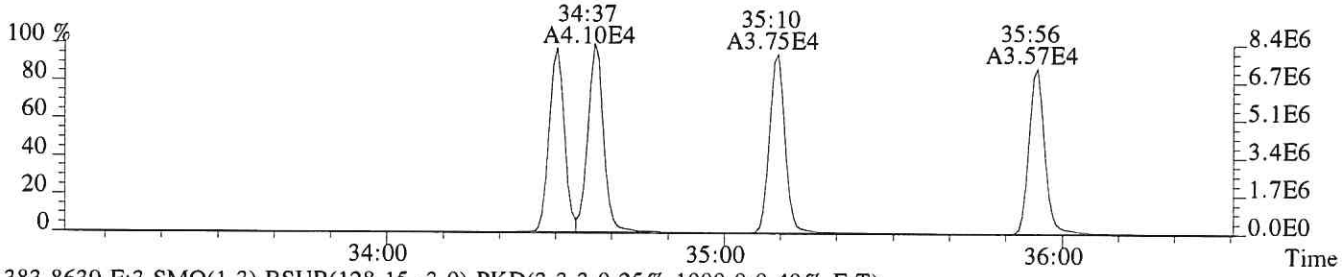


File:P616242 #1-312 Acq:28-DEC-2018 05:48:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

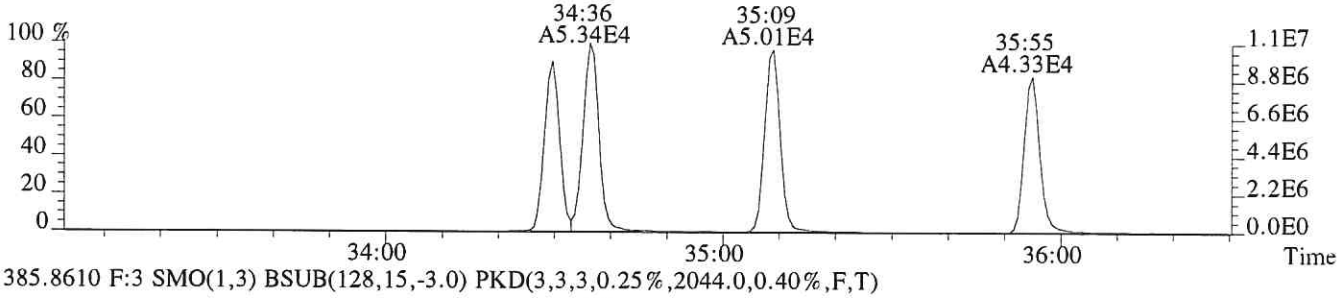
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,552.0,0.40%,F,T)



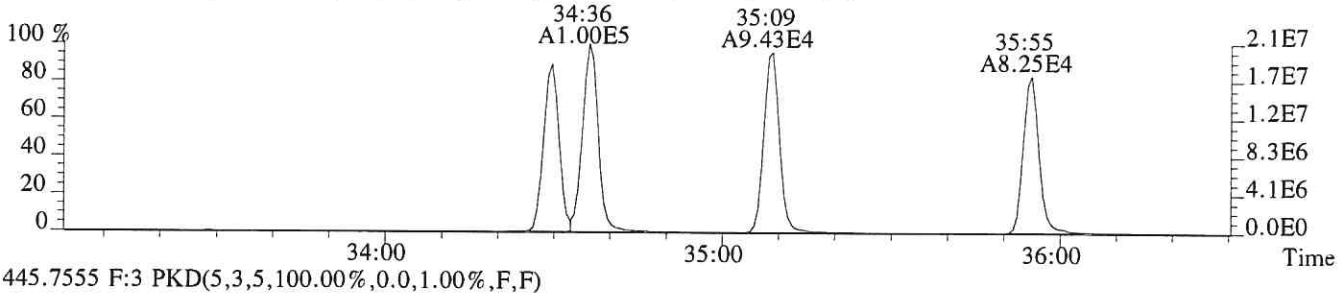
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,672.0,0.40%,F,T)



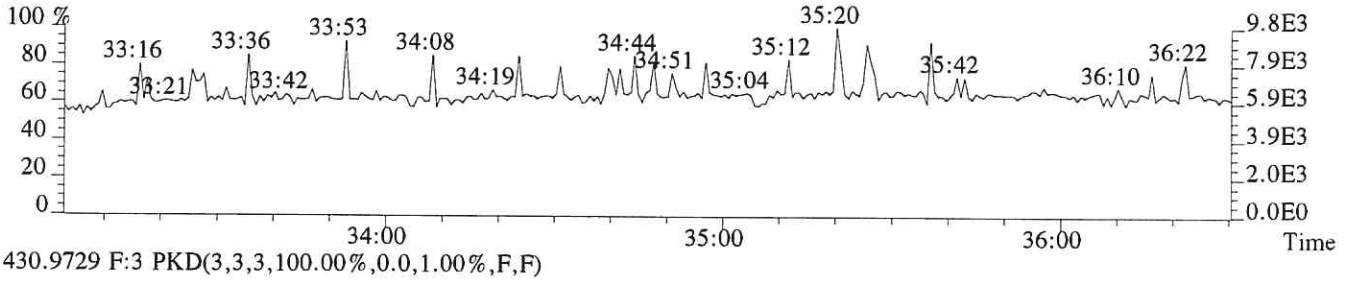
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1000.0,0.40%,F,T)



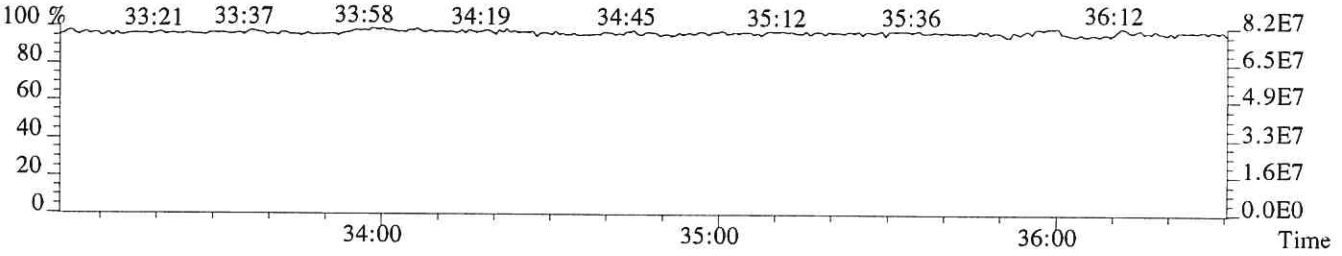
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2044.0,0.40%,F,T)



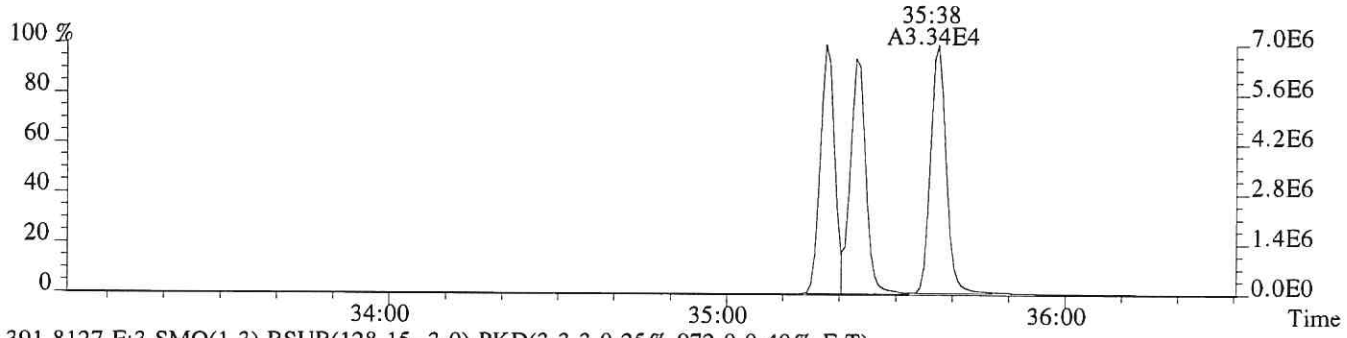
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



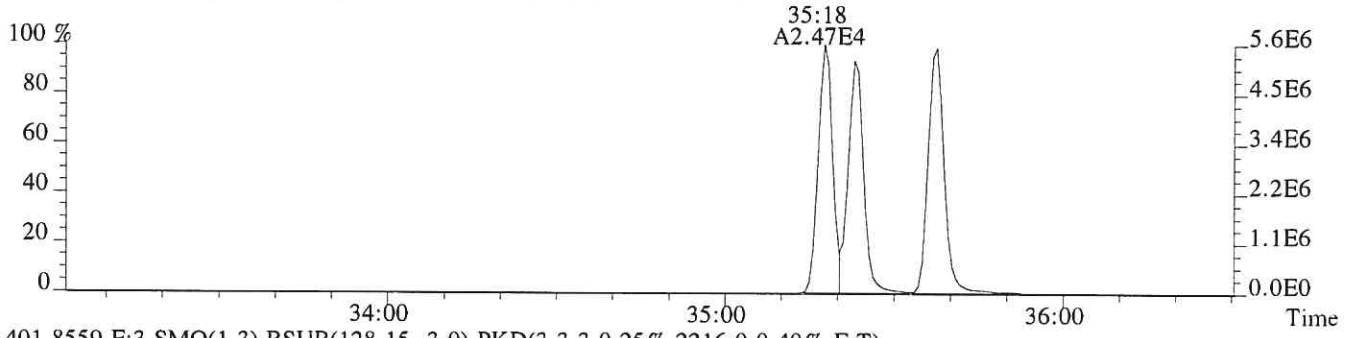
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



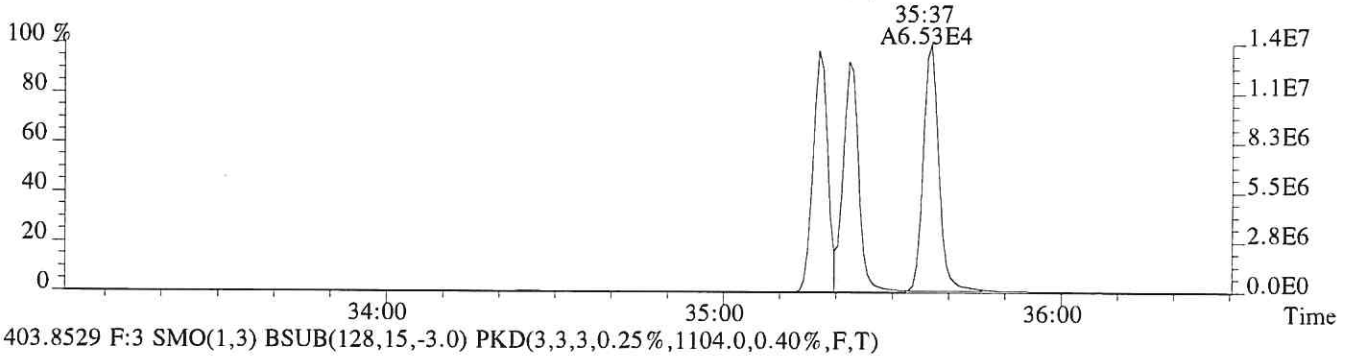
File:P616242 #1-312 Acq:28-DEC-2018 05:48:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,688.0,0.40%,F,T)



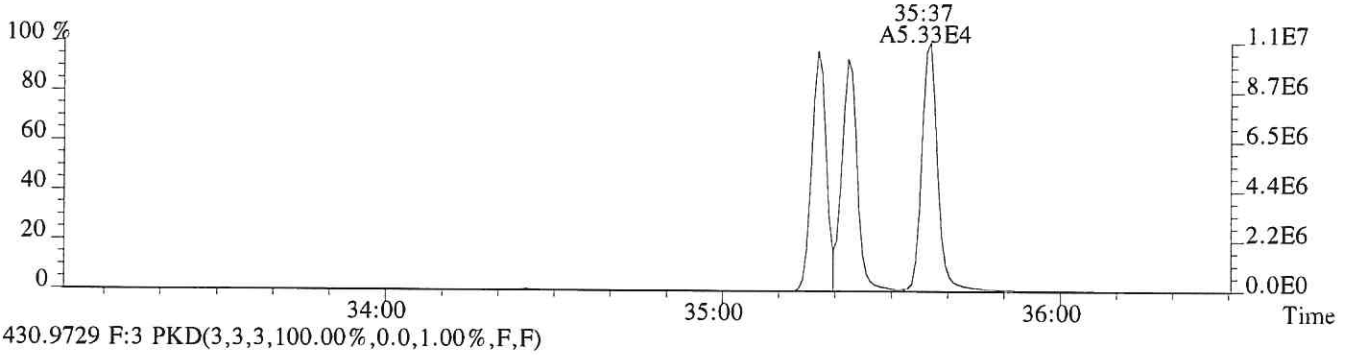
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,972.0,0.40%,F,T)



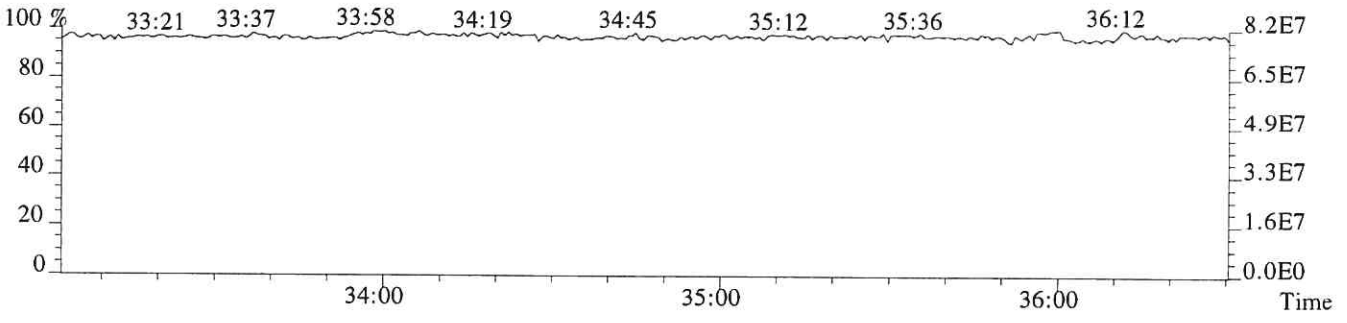
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2216.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1104.0,0.40%,F,T)

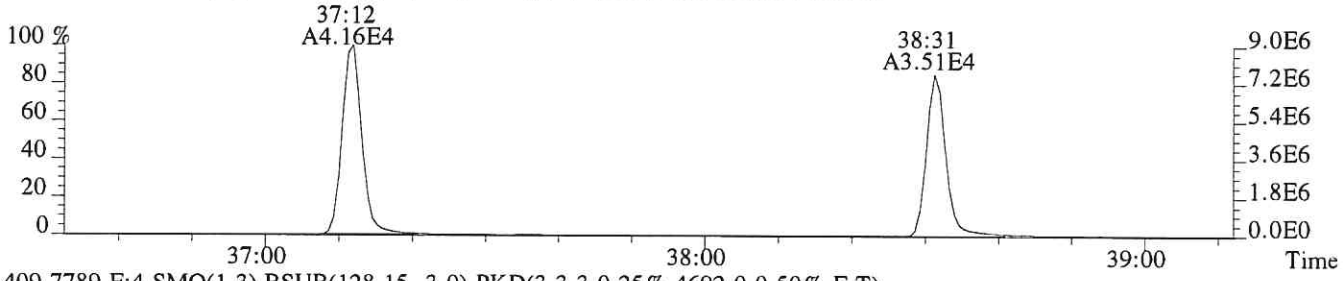


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

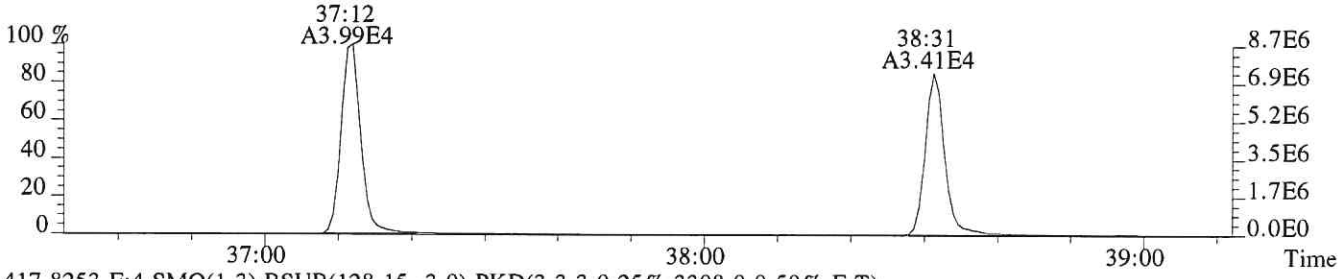


File:P616242 #1-240 Acq:28-DEC-2018 05:48:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

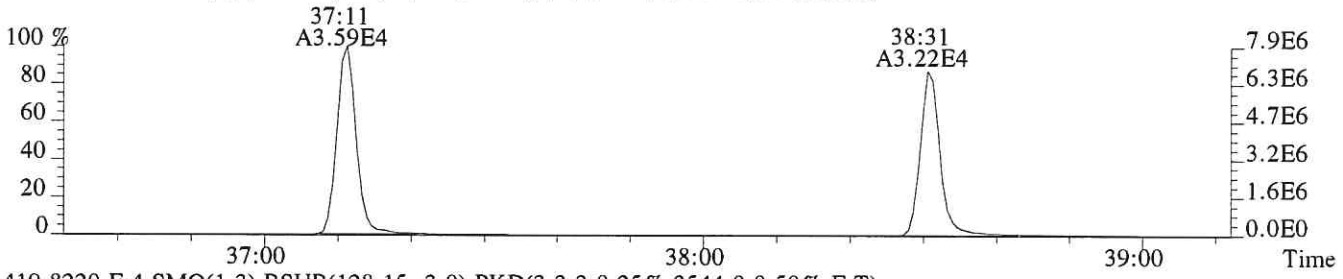
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3956.0,0.50%,F,T)



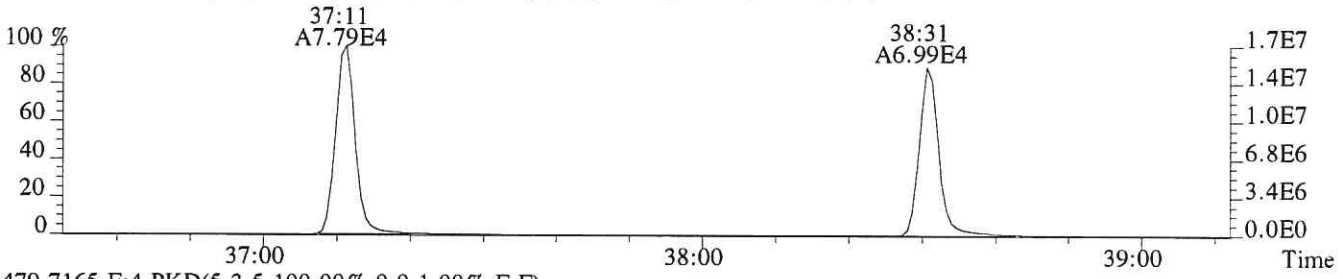
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4692.0,0.50%,F,T)



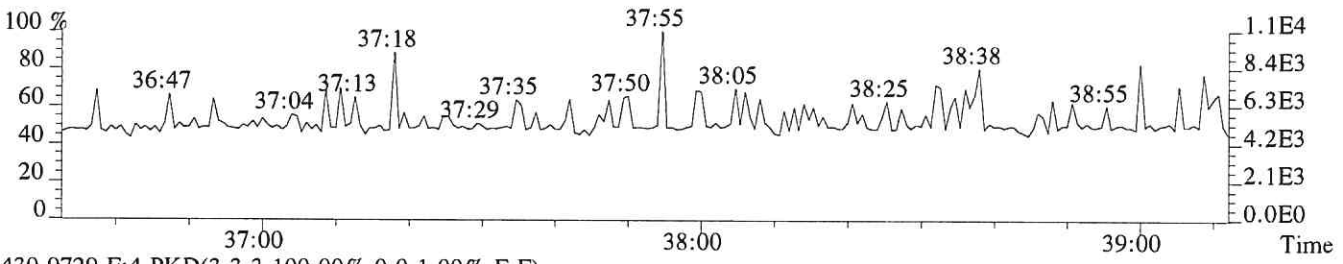
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3308.0,0.50%,F,T)



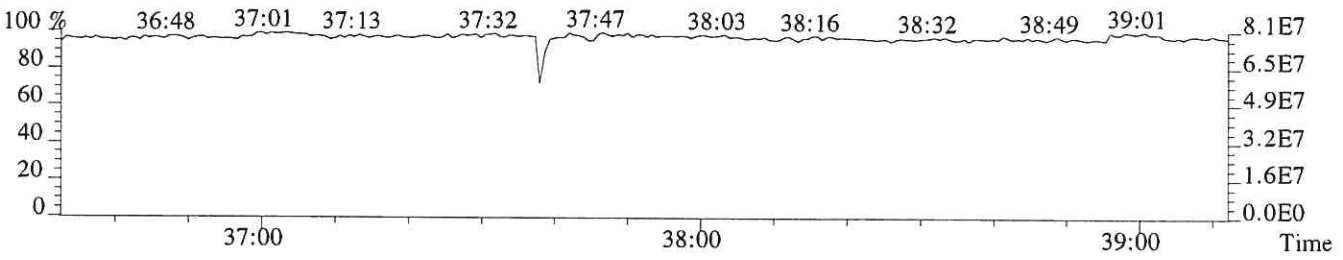
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3544.0,0.50%,F,T)



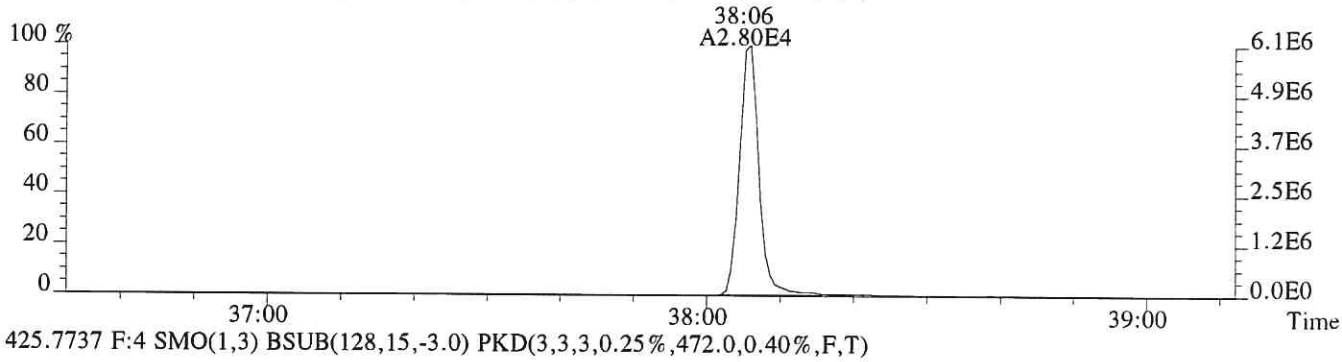
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



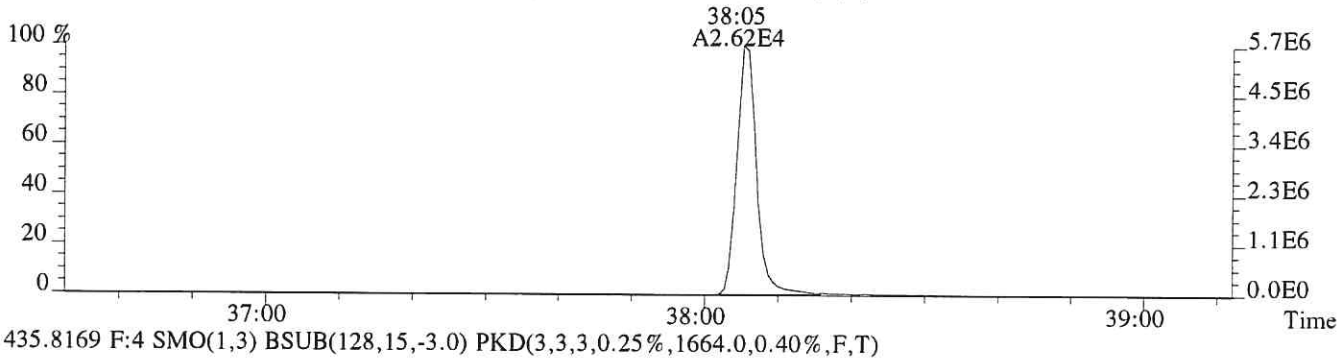
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



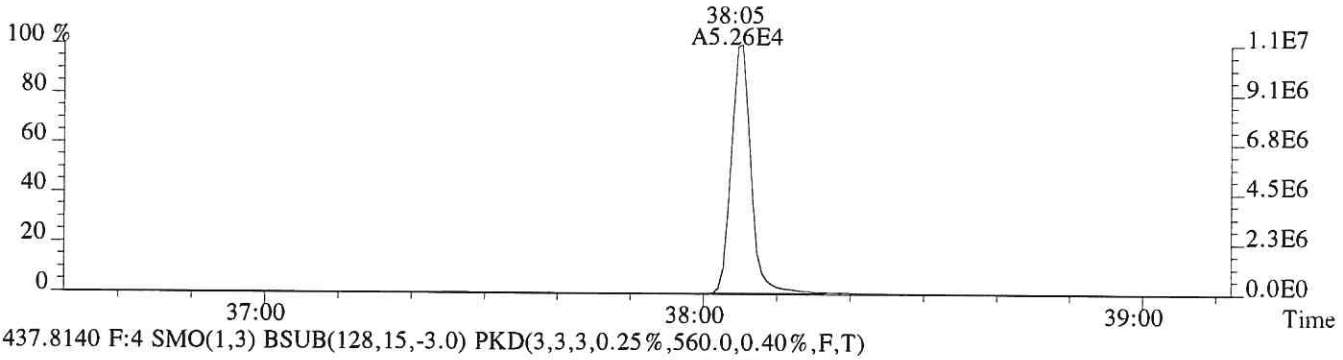
File:P616242 #1-240 Acq:28-DEC-2018 05:48:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,796.0,0.40%,F,T)



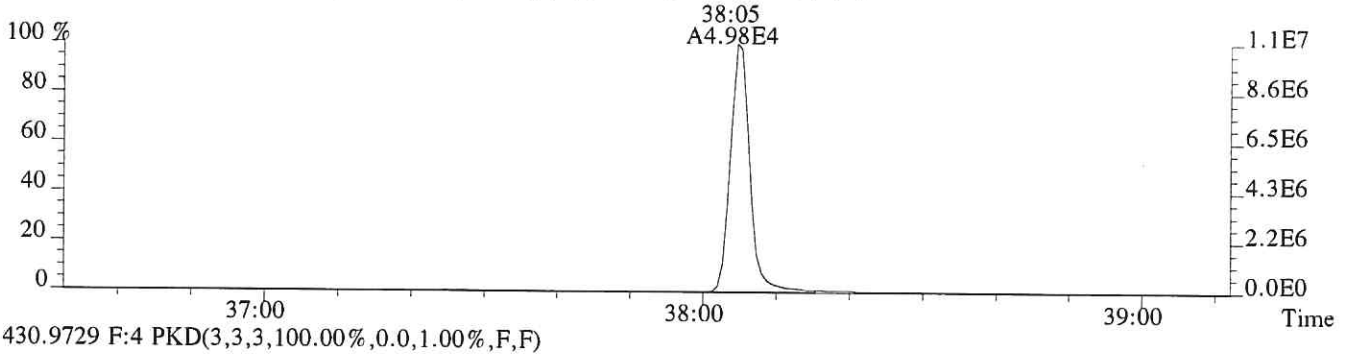
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,472.0,0.40%,F,T)



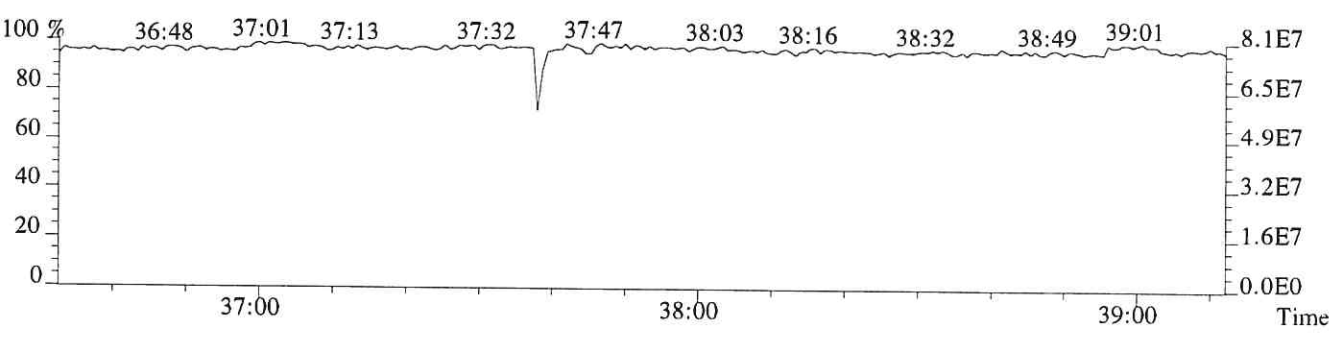
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1664.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,560.0,0.40%,F,T)

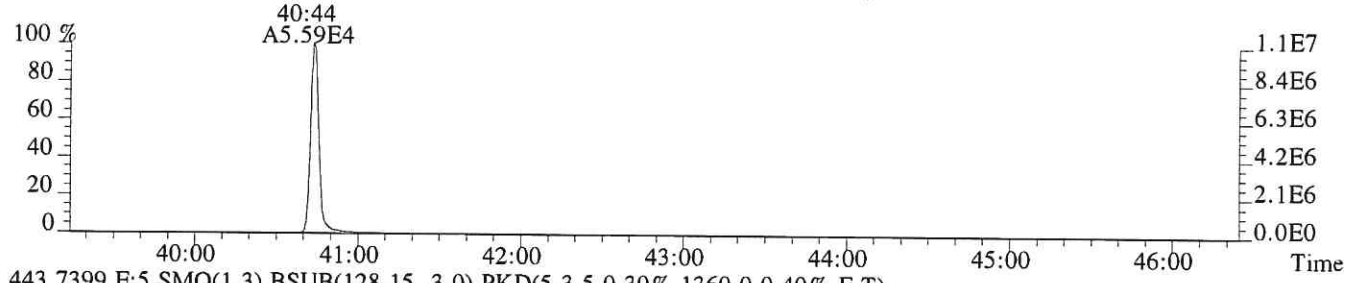


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

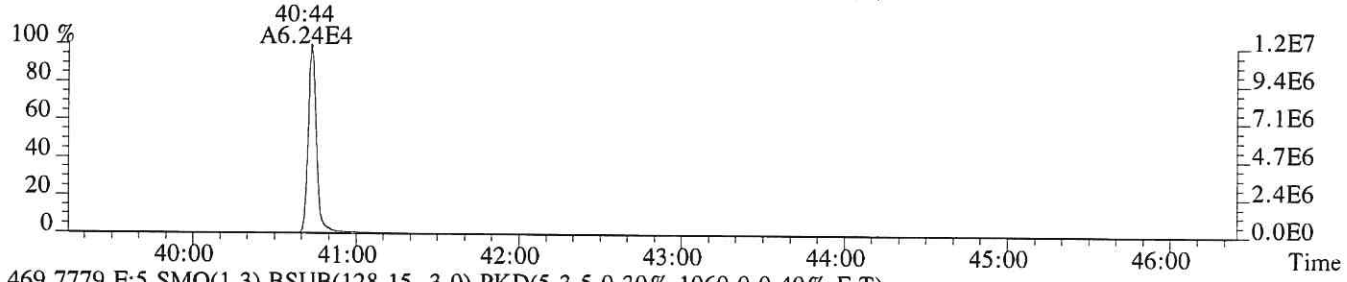


File:P616242 #1-646 Acq:28-DEC-2018 05:48:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

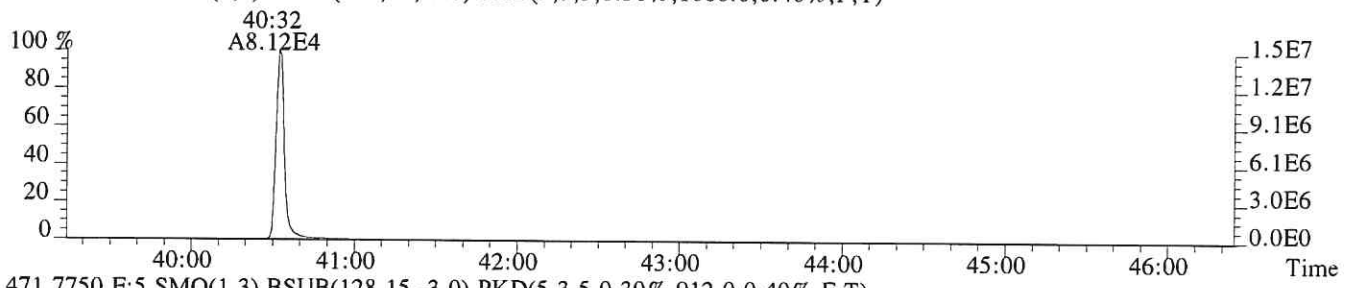
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,432.0,0.40%,F,T)



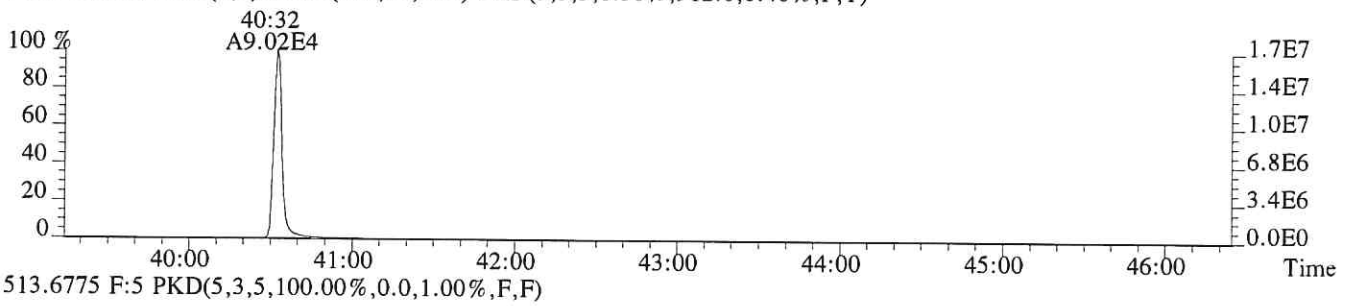
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1360.0,0.40%,F,T)



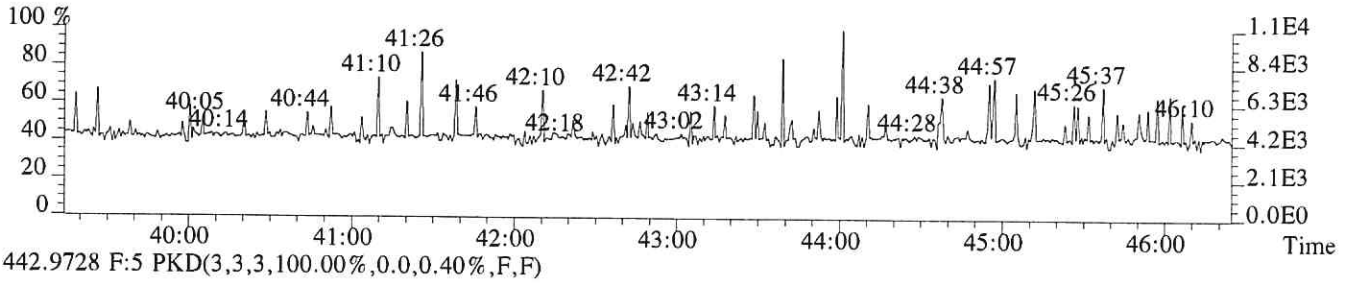
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1060.0,0.40%,F,T)



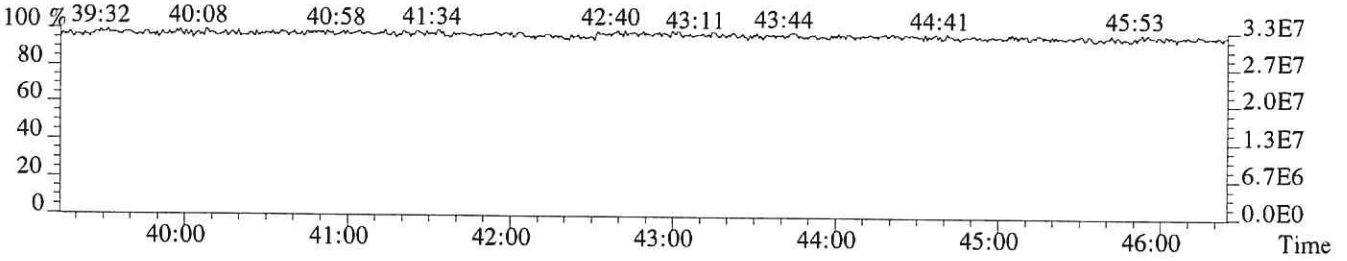
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,912.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

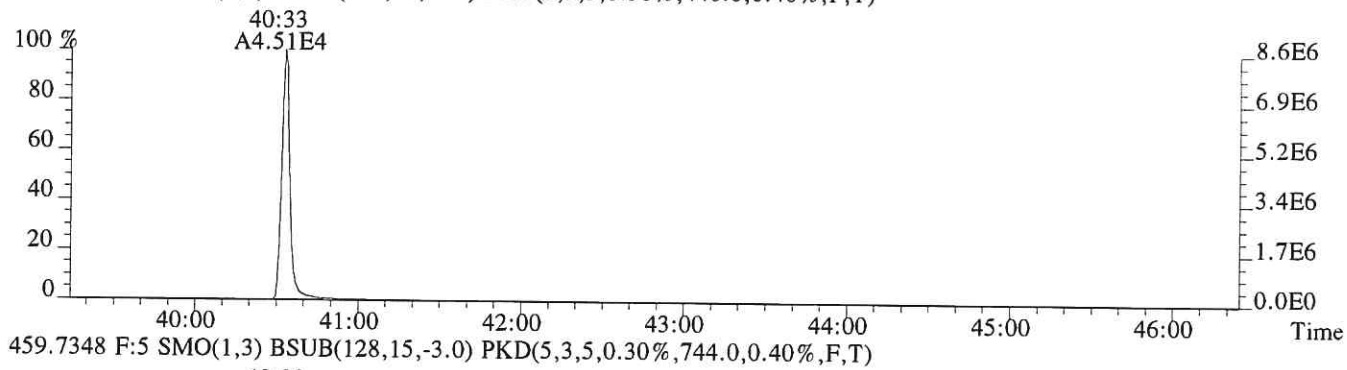


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

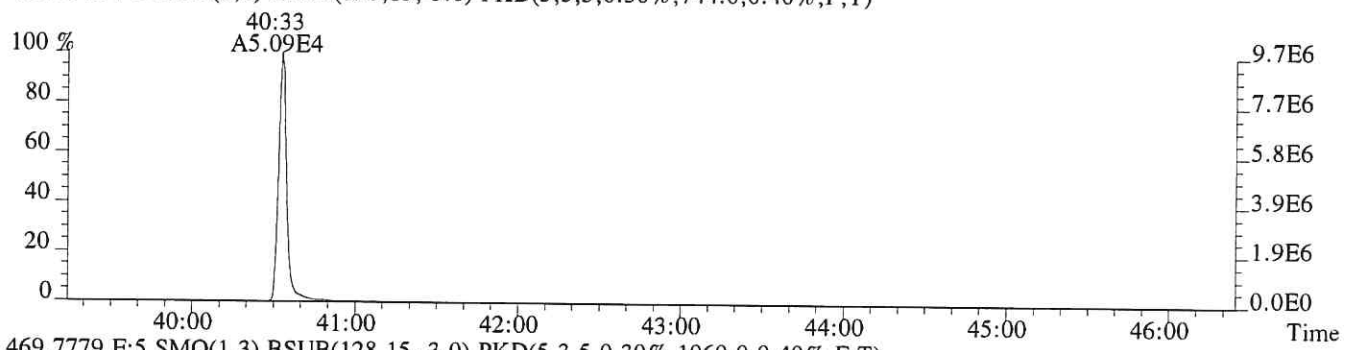


File:P616242 #1-646 Acq:28-DEC-2018 05:48:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

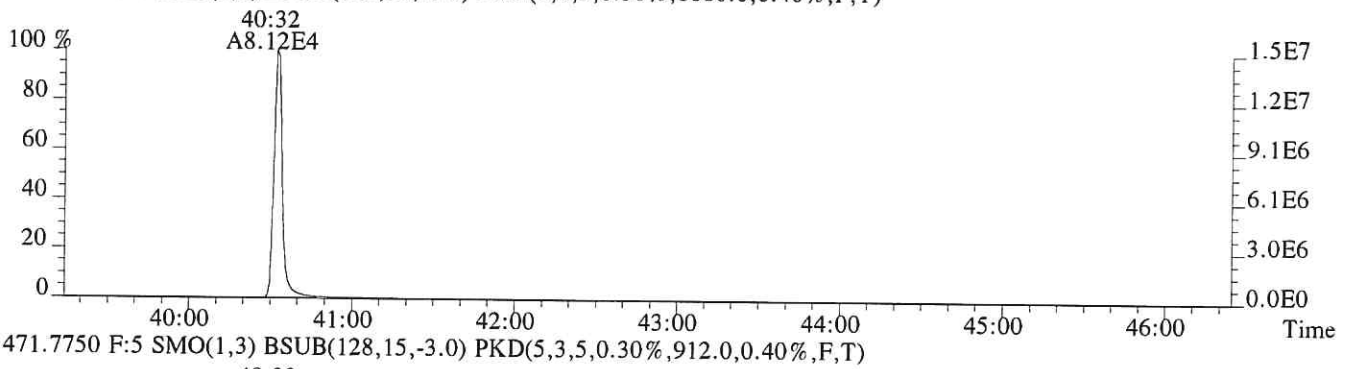
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,440.0,0.40%,F,T)



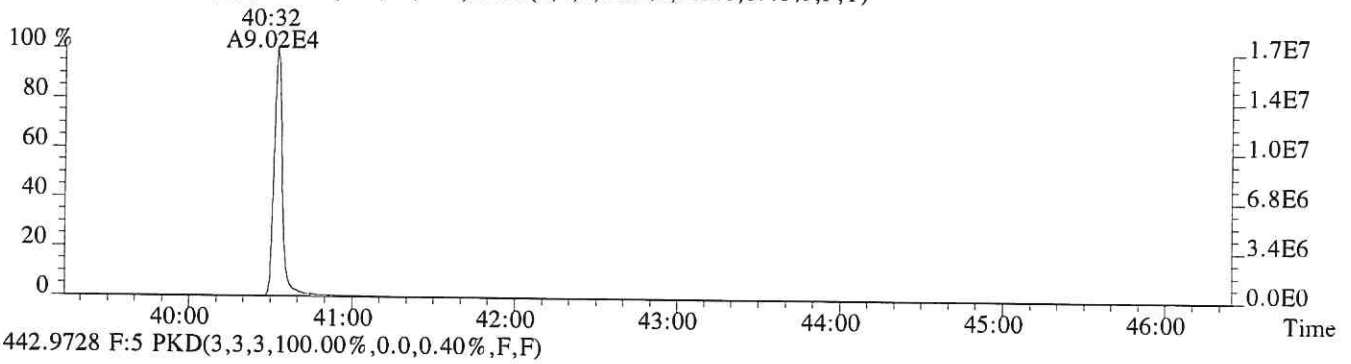
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,744.0,0.40%,F,T)



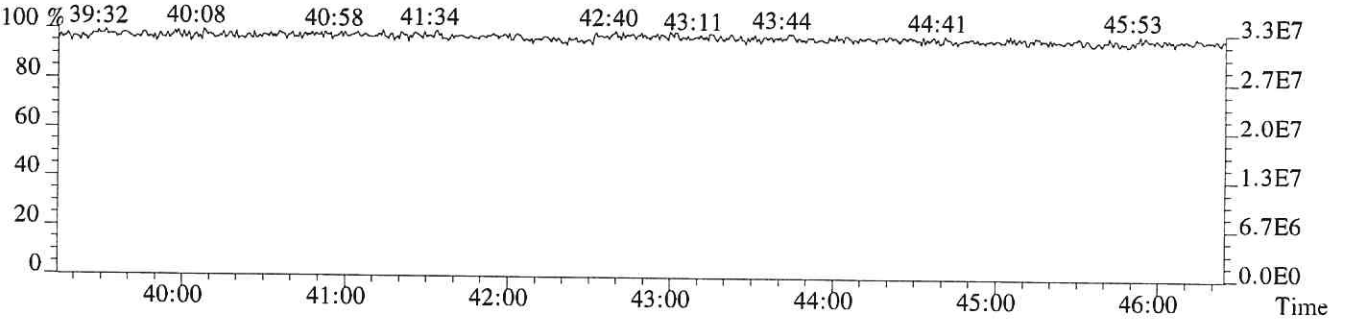
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1060.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,912.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



Initial Calibration

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Laboratory Review Checklist: HRMS Initial Calibration

Method: 1613/8290		Process Date: 09/26/2018				
Instrument Name: E-HRMS-08		Calibration File Name: P6-18092516131				
Processor Name: Gisela Cruz		Reviewer Name: Loan Luong				
Supervisor Signature: Kristin Neir		Yes	No	NA	NR	ER#
Description						
Analytical Sequence						
Does the analytical sequence summary accurately reflect the instrument run log, including ICV?		√				
Was a Mass Resolution Check performed at the beginning and end of the 12-hour sequence?		√				
Were all calibration standards and the ICV analyzed within the same 12-hour sequence?		√				
Were all calibration standards analyzed only once?		√				
Was the ICV analyzed after the ICAL, before analyzing samples?		√				
Mass Resolution Check						
Are beginning and ending resolution checks provided and legible?		√				
Were all target masses >10,000 resolving power at the beginning of the sequence?		√				
Were all target masses >10,000 resolving power at the end of the sequence?		√				
For PCB analysis, were masses at the low and high end of each function mass range >8,000?				√		
Where automatic printout of the mass resolution were not >10,000, was the resolution inspected by a trained analyst, including manual calculation of the resolution, if warranted?				√		
Window Define/209						
Is the window defining mix summary present, and accompanied by SICPs/Chromatograms for the WDM?		√				
Was the WDM/Column Performance/209 solution analyzed prior to the analysis of the calibration standards?		√				
Was 2,3,7,8-TCDD peak valley <25% to any other TCDD?		√				
Were all first and last eluters adequately resolved in each function?		√				
If first and last eluters were not resolved, was corrective action performed and documented, followed by a reanalysis of the WDM?				√		
Was the retention time of PCB 209 >55 min?				√		
Were the following congeners uniquely resolved (valley height <40% of the shortest peak)? PCB-34 and PCB-23 PCB-187 and PCB-182				√		
Did PCB 156/157 co-elute within 2 seconds at peak maximum?				√		
Calibration Standards						
Were there at least 5 calibration standards analyzed?		√				
If not all calibration standards were used, were the omitted standards either the lowest or highest calibration standard?				√		
Are all sample response summaries, S/N height summaries, and SICPs included (and legible) for the entire sequence?		√				

Laboratory Review Checklist: HRMS Initial Calibration

Method: 1613/8290	Process Date: 09/26/2018
Instrument Name: E-HRMS-08	Calibration File Name: P6-18092516131
Processor Name: Gisela Cruz	Reviewer Name: Loan Luong
Supervisor Signature: Kristin Weir	

Description	Yes	No	NA	NR	ER#
Did each calibration point meet method criteria for Ion Abundance Ratio for all analytes and labeled standards?	√				
Did each calibration point meet method criteria for signal-to-noise ratios (S/N)?	√				
Were area counts for the highest calibration standard below levels of saturation?	√				
Were manual integrations technically justified to correct for poor software integration?			√		
Response Factors					
Is the ICAL Response Factor Summary present, including RR/RF values for each native/labeled analyte at each level of calibration?	√				
Were all calibration standards used in determining response factors?	√				
Were relative response factors (RR) for each native analyte calculated at each calibration point?	√				
Did the RSD for RRFs for each native analyte meet method criteria?	√				
Were response factors (RF) for each native analyte not having a corresponding labeled compound calculated at each calibration point?	√				
Were RFs for each labeled compound calculated for each calibration point?	√				
Did the RSD for RF for each labeled compound meet method criteria?	√				
Initial Calibration Verification					
Is the calibration verification present, including form 4A/B reflecting results for the ICV (Conc. or %D)	√				
Did all analytes meet method criteria for the ICV.	√				

Laboratory Review Checklist: Initial Calibration

Method: 1613/8290	Process Date: 09/26/2018
Instrument Name: E-HRMS-08	Calibration File Name: P6-18092516131
Processor Name: Gisela Cruz	Reviewer Name: Loan Luong

ER#[5]	Description

NA = Not Applicable;
NR = Not Reviewed;
R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

Lab Code: TX01411 Episode No.: SDG No.:

GC Column: DB-5MSUI ID: 0.25 (mm) Instrument ID: E-HRMS-08

Init. Calib. Date: 09/25/18

Init. Calib.Times: 12:13

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, SPIKES AND DUPLICATES IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
192977	WINDOW DEFINE	P614680	25-SEP-18	12:13:01
76554	CS0.5	P614682	25-SEP-18	14:18:27
82614	CS1	P614683	25-SEP-18	15:08:49
193434	CS2	P614684	25-SEP-18	15:59:37
76557	CS3	P614685	25-SEP-18	16:52:47
82167	CS4	P614686	25-SEP-18	17:41:03
185657	CS5	P614687	25-SEP-18	18:30:08
188969	2ND SOURCE	P614690	25-SEP-18	20:57:19

Sample List Report **MassLynx 4.1 SCN815 SCN795**

Sample List: C:\MassLynx\EHRMS08.PRO\SampleDB\20180925A.SPL
Last Modified: Wednesday, September 26, 2018 06:14:12 Central Daylight Time
Printed: Wednesday, September 26, 2018 06:14:14 Central Daylight Time

Page Position (1, 1)

OPUS4: P6-180925161 3I
P614690 res

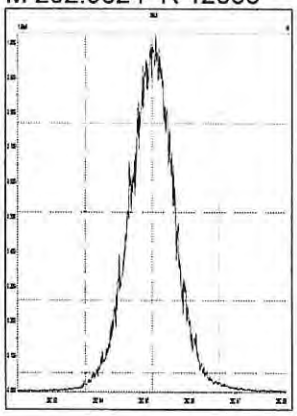
	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst	Comments
1	9/25/18	12:13	P614680	192977	WINDOW DEFINE	EPA1613_ALS	Dioxin_ALS	Tray1:1	LG	HRMScheck 12:08
2		13:01	P614681	192807	CS3	EPA1613_ALS	Dioxin_ALS	Tray1:2		
3		14:18	P614682	76554	CS0.5	EPA1613_ALS	Dioxin_ALS	Tray1:3		
4		15:08	P614683	82614	CS1	EPA1613_ALS	Dioxin_ALS	Tray1:4		
5		15:59	P614684	193434	CS2	EPA1613_ALS	Dioxin_ALS	Tray1:5		
6		16:52	P614685	76557	CS3	EPA1613_ALS	Dioxin_ALS	Tray1:6		
7		17:41	P614686	82167	CS4	EPA1613_ALS	Dioxin_ALS	Tray1:7		
8		18:30	P614687	185657	CS5	EPA1613_ALS	Dioxin_ALS	Tray1:8		
9		19:19	P614688	NONANE	NONANE	EPA1613_ALS	Dioxin_ALS	Tray1:9		
10		20:08	P614689	188969	2ND SOURCE	EPA1613_ALS	Dioxin_ALS	Tray1:10		Do not use.
11		20:57	P614690	188969	2ND SOURCE	EPA1613_ALS	Dioxin_ALS	Tray1:11		
12		21:52	P614691	NONANE	NONANE	EPA1613_ALS	Dioxin_ALS	Tray1:12		HRMScheck 22:51
13	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:13	---	---
14	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:14	---	---
15	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:15	---	---
16	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:16	---	---
17	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:17	---	---
18	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:18	---	---
19	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:19	---	---
20	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:20	---	---
21	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:21	---	---

gc 09/26/18

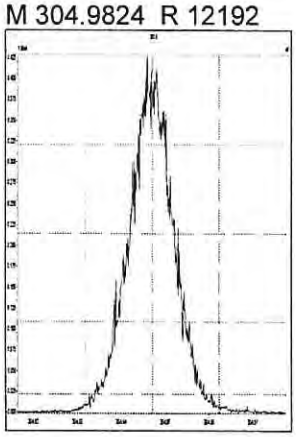
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Tuesday, September 25, 2018 12:08:26 Central Daylight Time

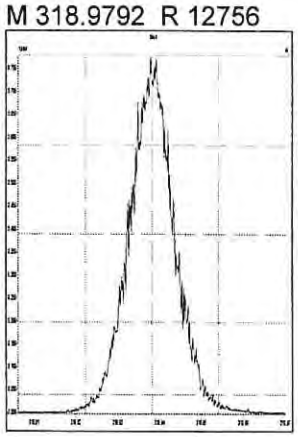
M 292.9824 R 12568



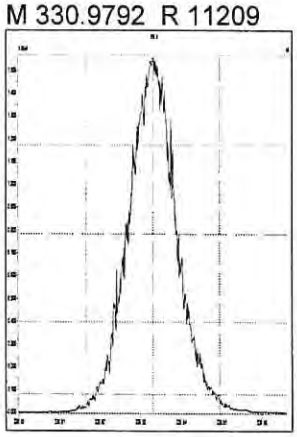
M 304.9824 R 12192



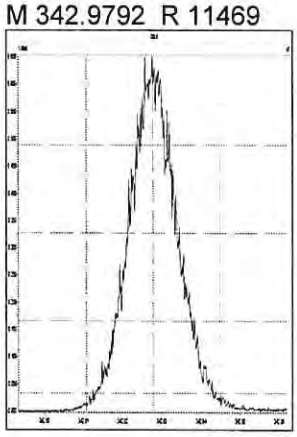
M 318.9792 R 12756



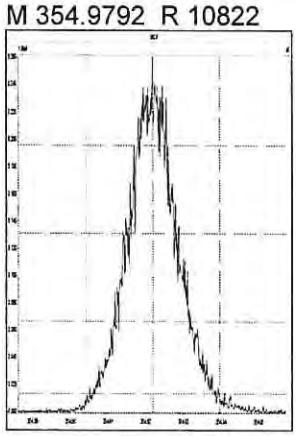
M 330.9792 R 11209



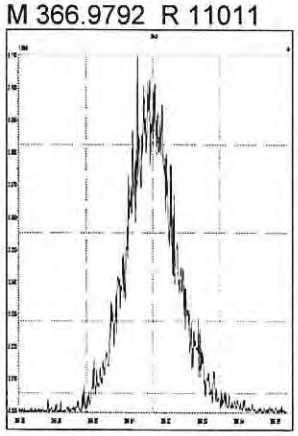
M 342.9792 R 11469



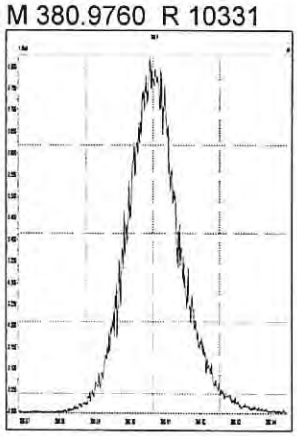
M 354.9792 R 10822



M 366.9792 R 11011



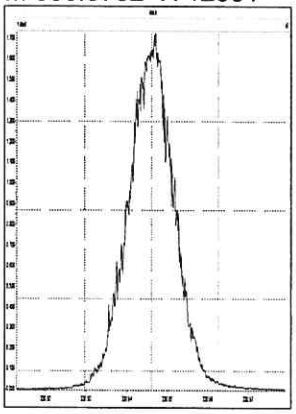
M 380.9760 R 10331



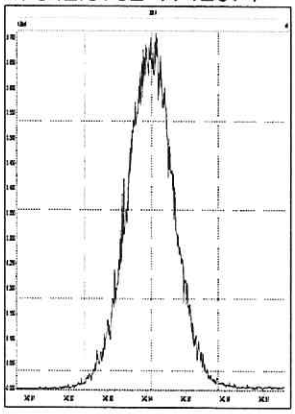
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Tuesday, September 25, 2018 12:09:22 Central Daylight Time

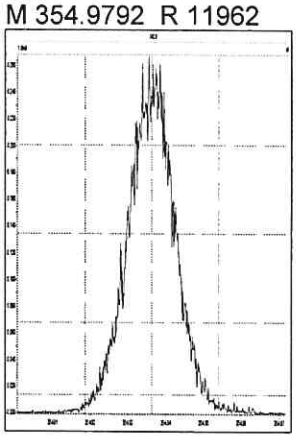
M 330.9792 R 12381



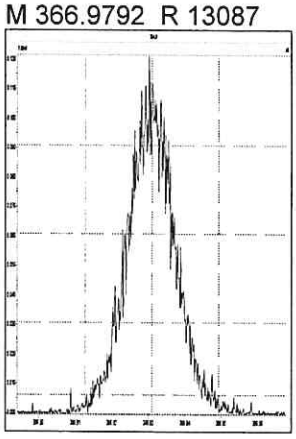
M 342.9792 R 12074



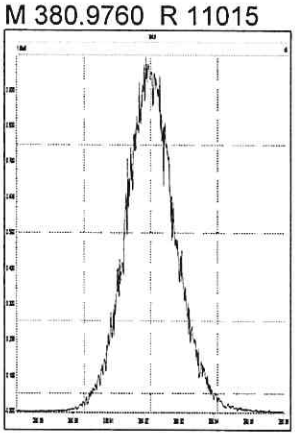
M 354.9792 R 11962



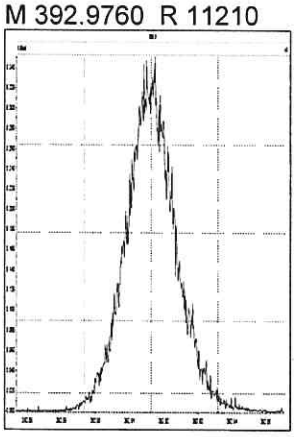
M 366.9792 R 13087



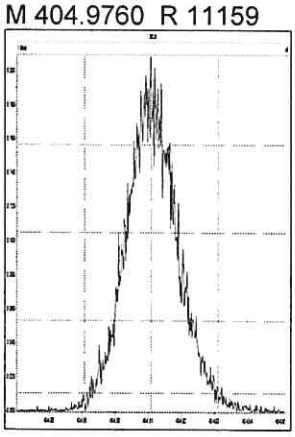
M 380.9760 R 11015



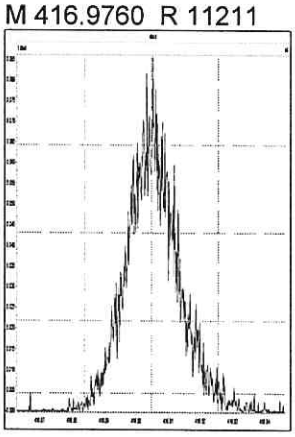
M 392.9760 R 11210



M 404.9760 R 11159



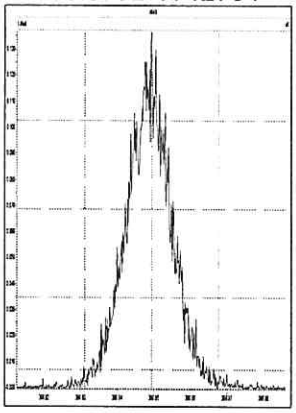
M 416.9760 R 11211



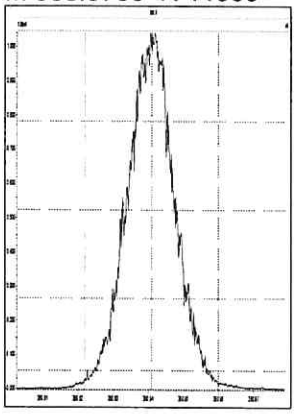
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Tuesday, September 25, 2018 12:10:10 Central Daylight Time

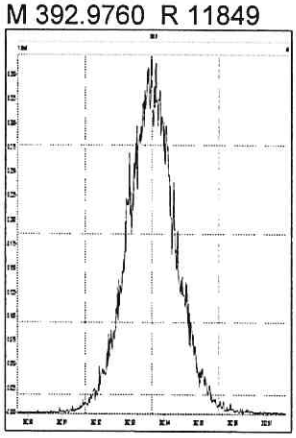
M 366.9792 R 12754



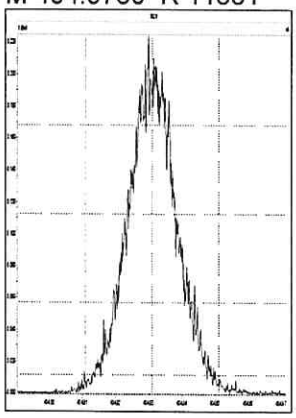
M 380.9760 R 11959



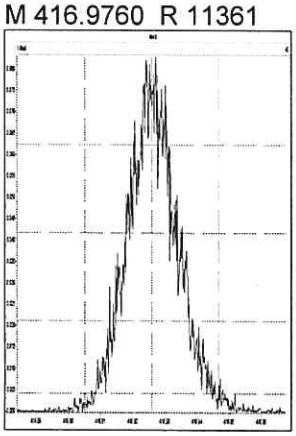
M 392.9760 R 11849



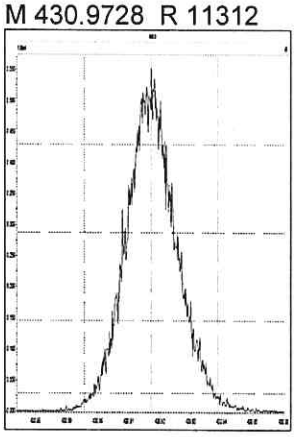
M 404.9760 R 11681



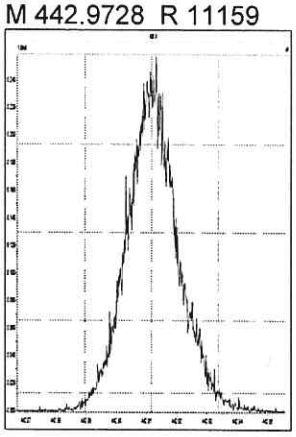
M 416.9760 R 11361



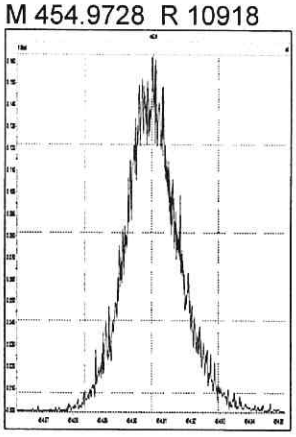
M 430.9728 R 11312



M 442.9728 R 11159



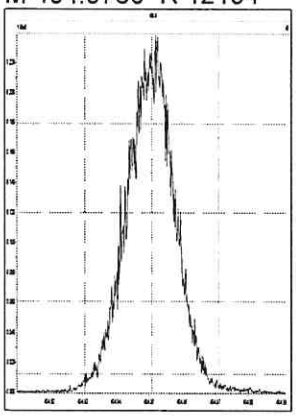
M 454.9728 R 10918



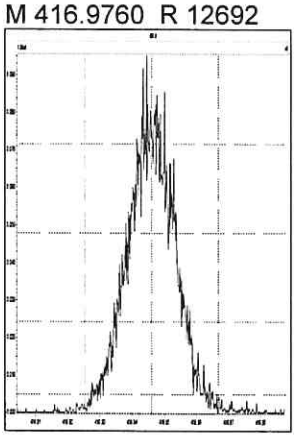
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Tuesday, September 25, 2018 12:10:51 Central Daylight Time

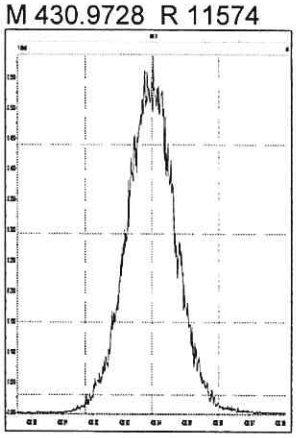
M 404.9760 R 12194



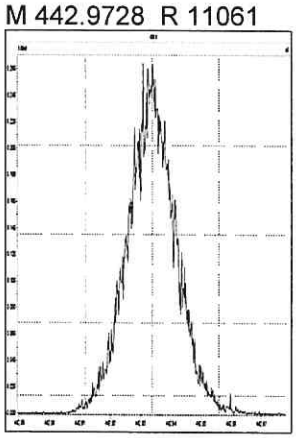
M 416.9760 R 12692



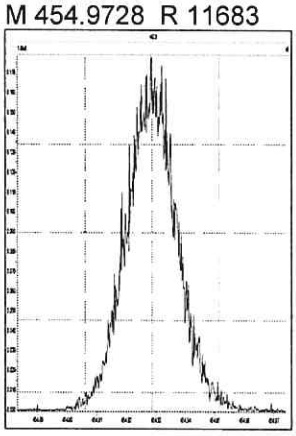
M 430.9728 R 11574



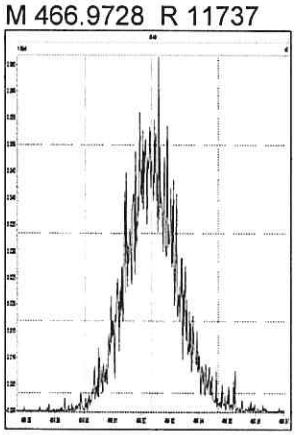
M 442.9728 R 11061



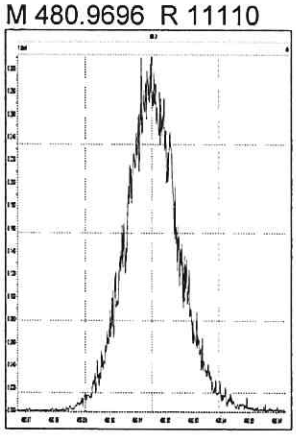
M 454.9728 R 11683



M 466.9728 R 11737



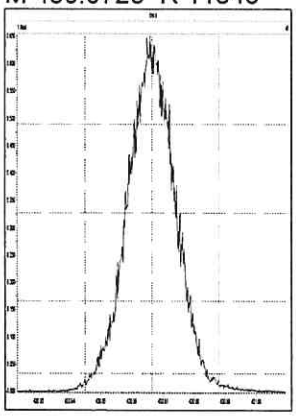
M 480.9696 R 11110



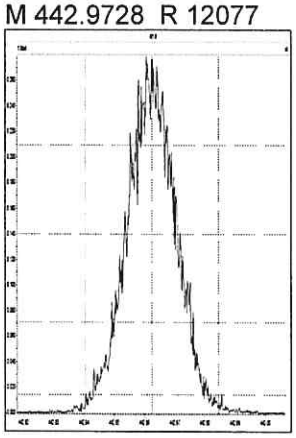
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Tuesday, September 25, 2018 12:11:41 Central Daylight Time

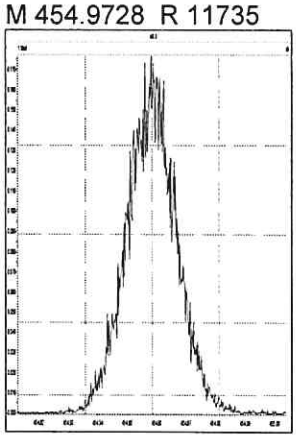
M 430.9728 R 11845



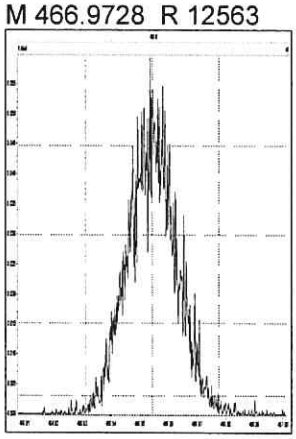
M 442.9728 R 12077



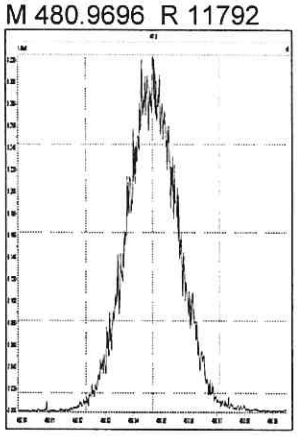
M 454.9728 R 11735



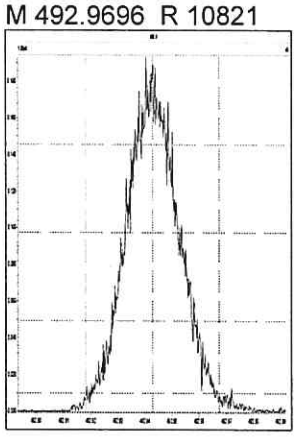
M 466.9728 R 12563



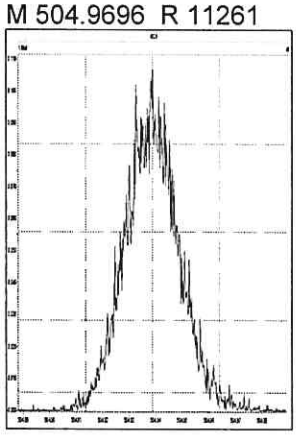
M 480.9696 R 11792



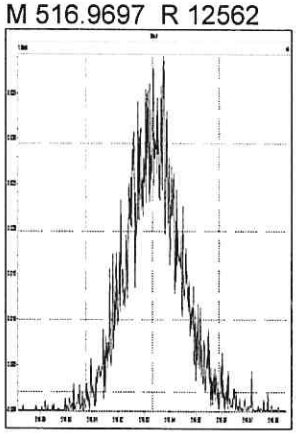
M 492.9696 R 10821



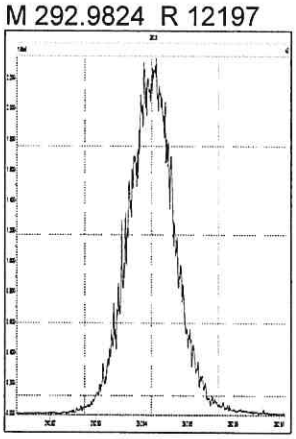
M 504.9696 R 11261



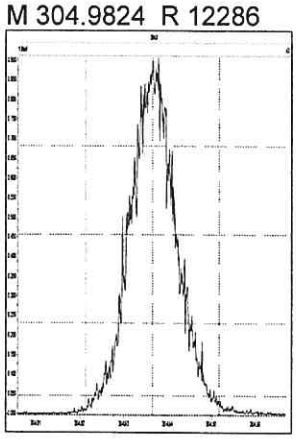
M 516.9697 R 12562



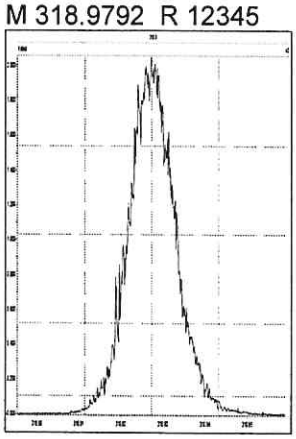
M 292.9824 R 12197



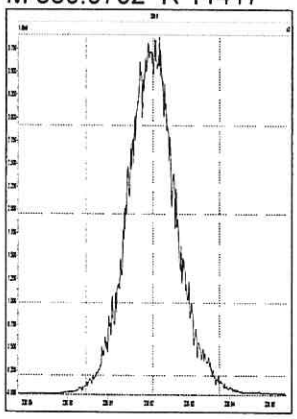
M 304.9824 R 12286



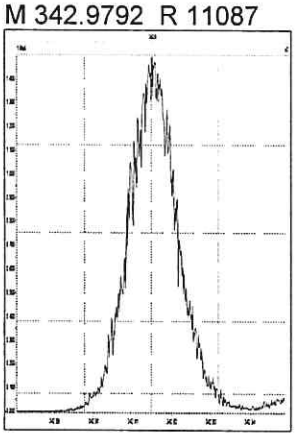
M 318.9792 R 12345



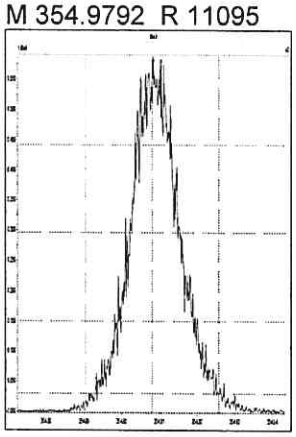
M 330.9792 R 11417



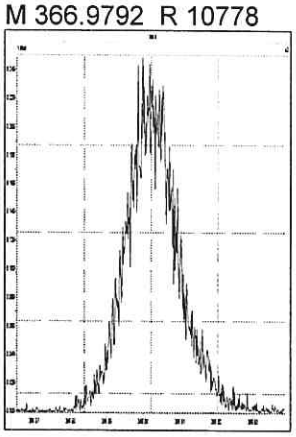
M 342.9792 R 11087



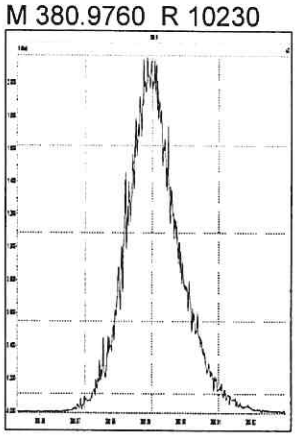
M 354.9792 R 11095



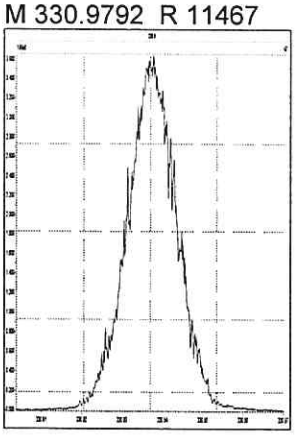
M 366.9792 R 10778



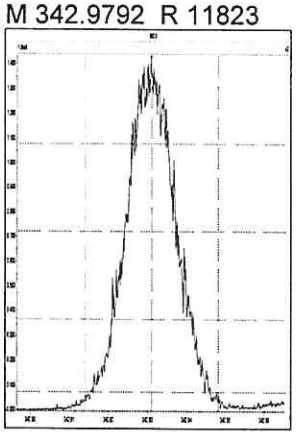
M 380.9760 R 10230



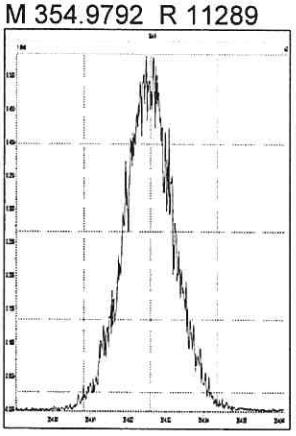
M 330.9792 R 11467



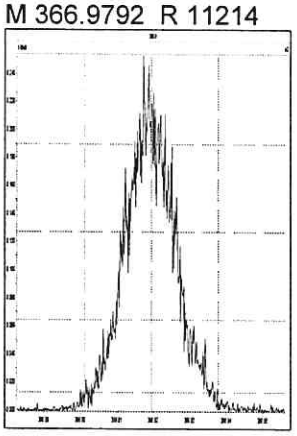
M 342.9792 R 11823



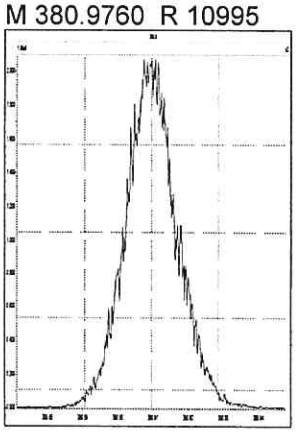
M 354.9792 R 11289



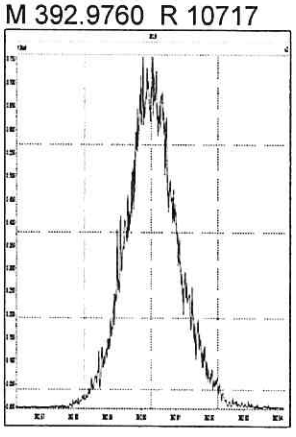
M 366.9792 R 11214



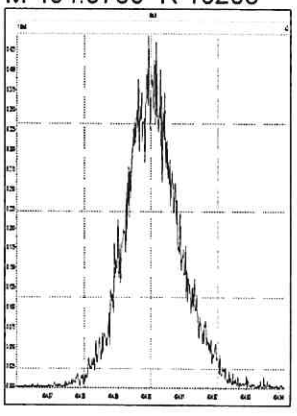
M 380.9760 R 10995



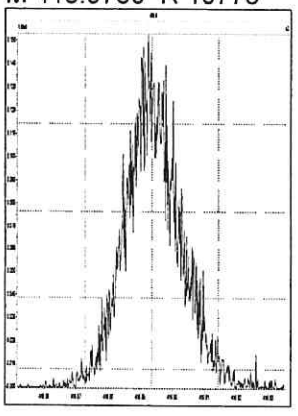
M 392.9760 R 10717



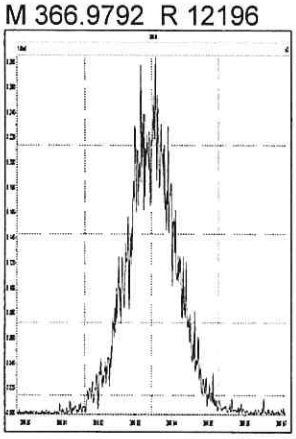
M 404.9760 R 10203



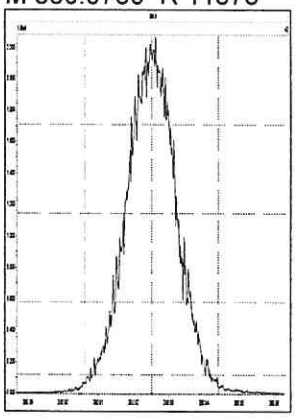
M 416.9760 R 10776



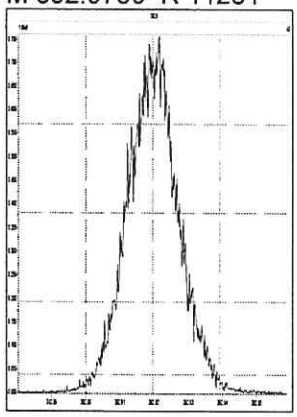
M 366.9792 R 12196



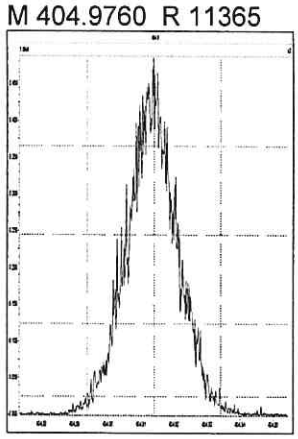
M 380.9760 R 11576



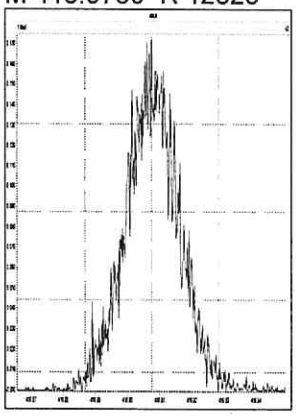
M 392.9760 R 11261



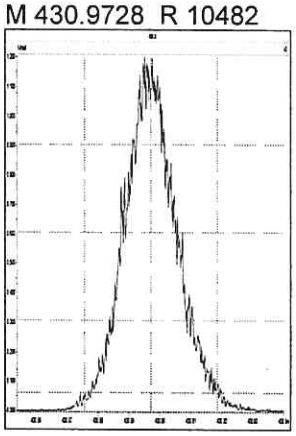
M 404.9760 R 11365



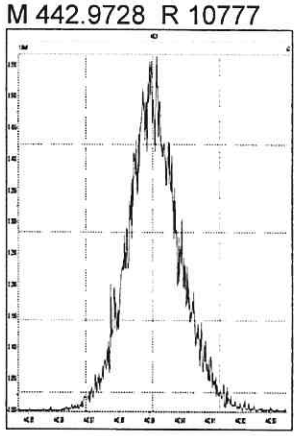
M 416.9760 R 12325



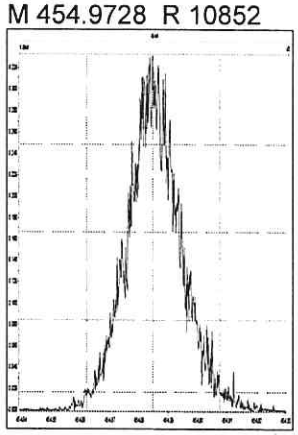
M 430.9728 R 10482



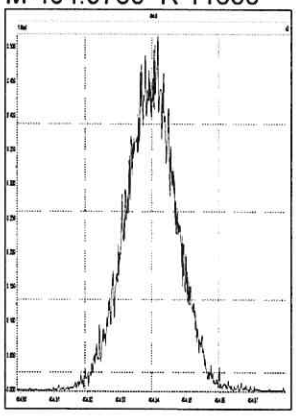
M 442.9728 R 10777



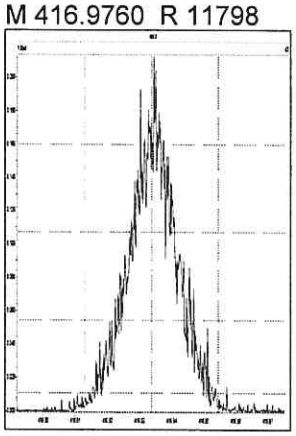
M 454.9728 R 10852



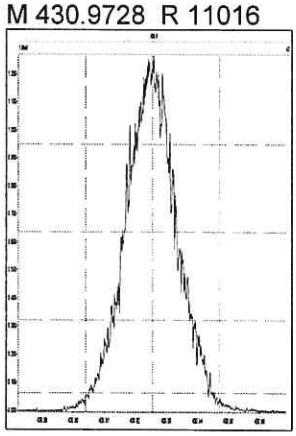
M 404.9760 R 11655



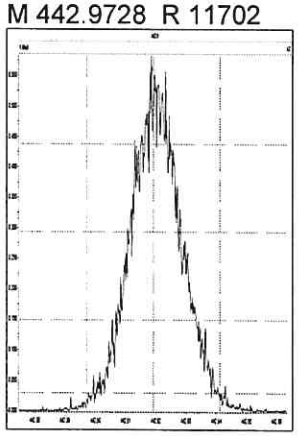
M 416.9760 R 11798



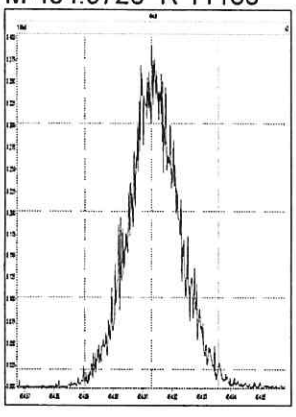
M 430.9728 R 11016



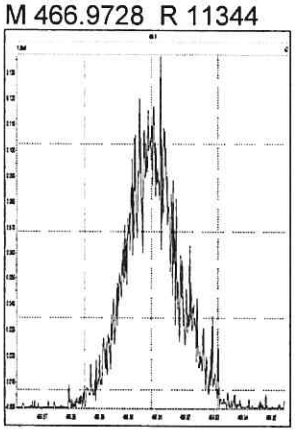
M 442.9728 R 11702



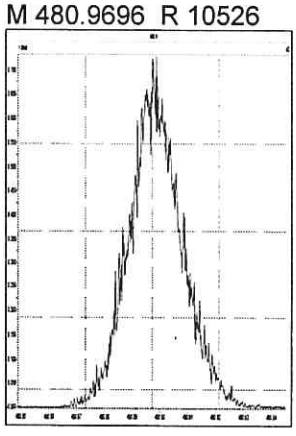
M 454.9728 R 11188



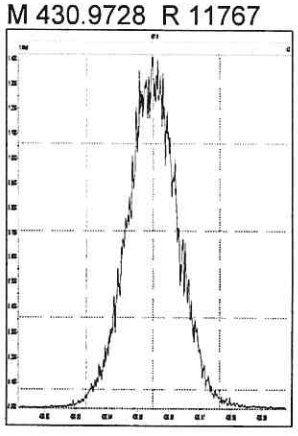
M 466.9728 R 11344



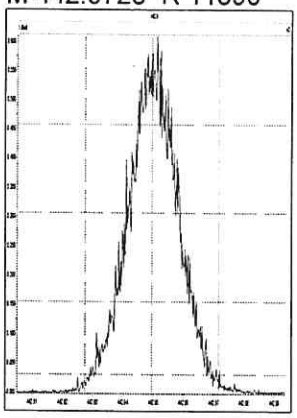
M 480.9696 R 10526



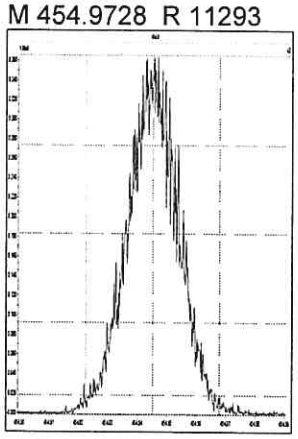
M 430.9728 R 11767



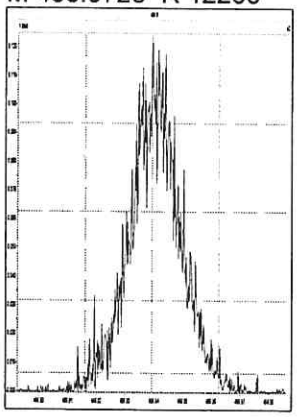
M 442.9728 R 11390



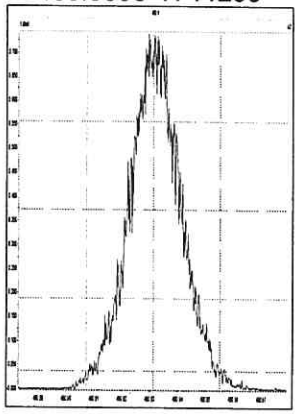
M 454.9728 R 11293



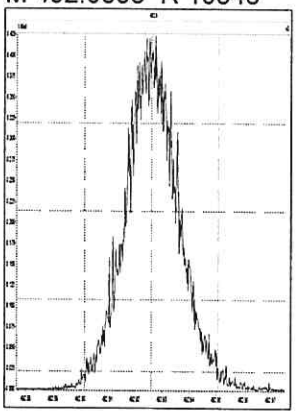
M 466.9728 R 12265



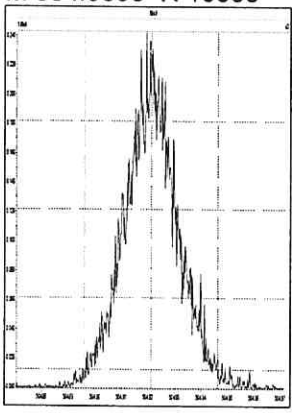
M 480.9696 R 11266



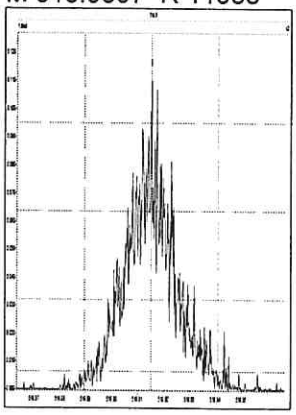
M 492.9696 R 10848



M 504.9696 R 10555



M 516.9697 R 11933



5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

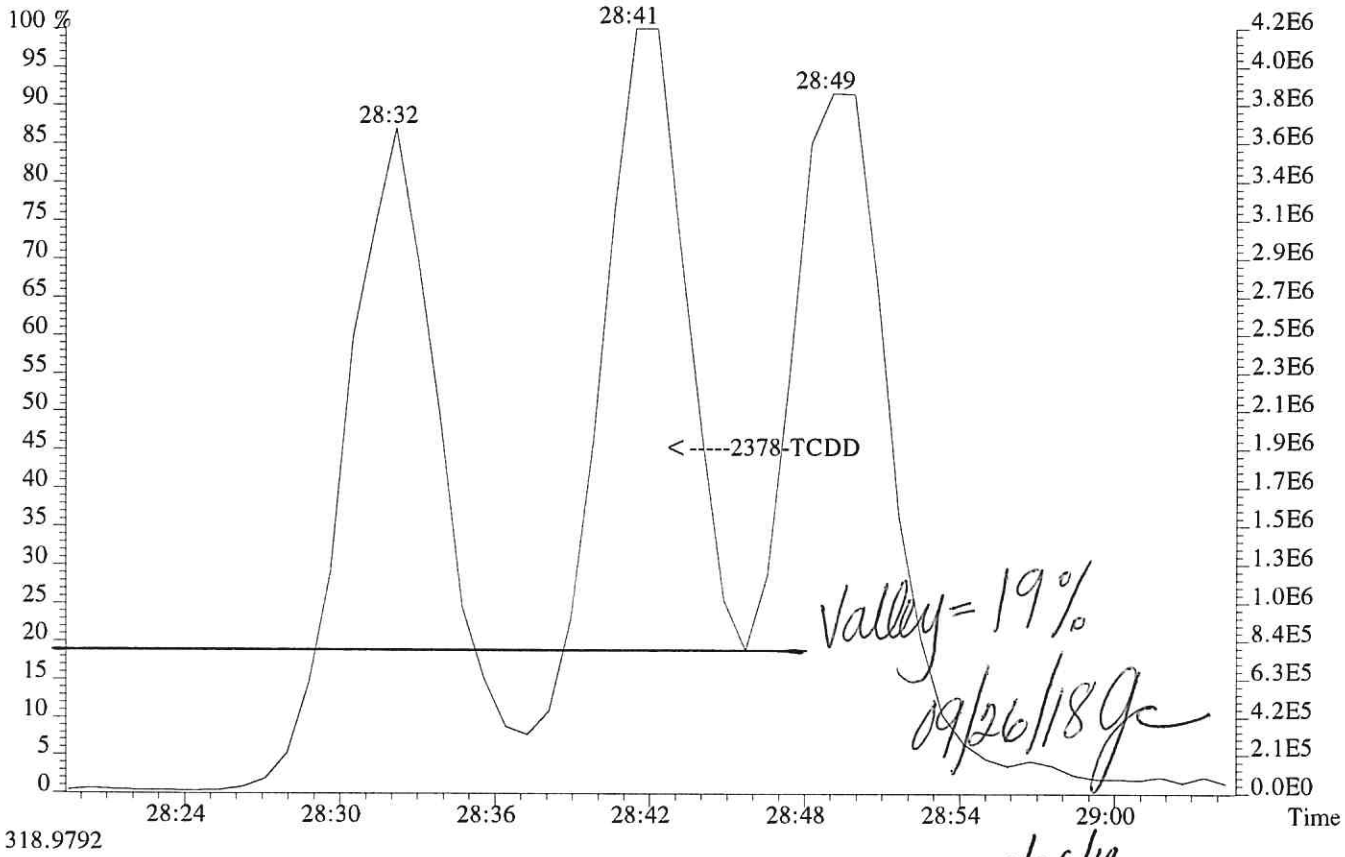
WDM

Lab Name: ALS Environmental
Lab Code: ALSTX Case No.: _____ SDG No.:
GC Column: DB-5MSUI ID: 0.25 (mm) Lab File ID: P614680
Date Analyzed: 25-SEP-18
Time Analyzed: 12:13:01

Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	23:28	29:52
TCDD	25:18	29:42
PeCDF	29:48	34:04
PeCDD	31:21	33:49
HxCDF	34:43	37:12
HxCDD	35:14	36:49
HpCDF	38:24	39:46
HpCDD	38:39	39:18

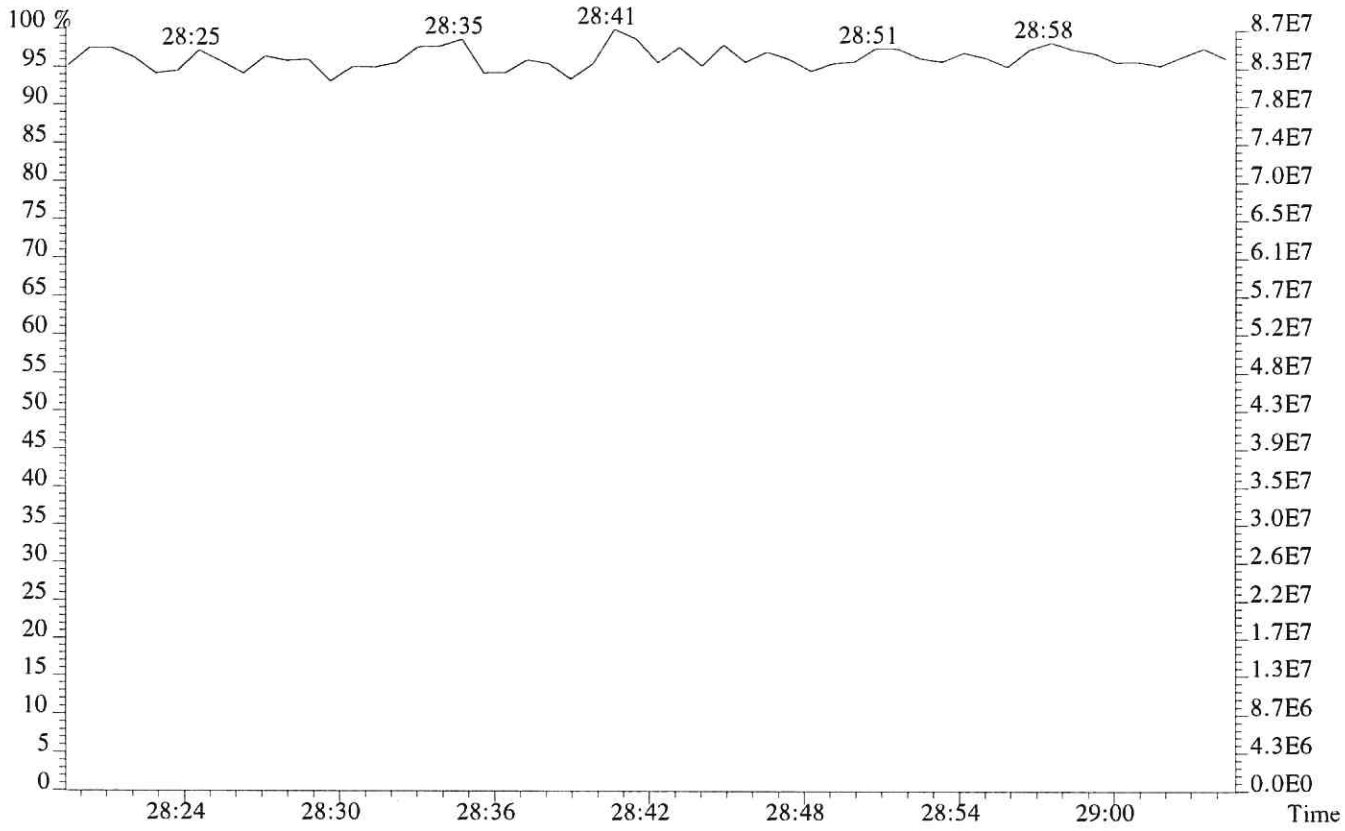
% Valley 2378-TCDD: 19 %

File:P614680 #1-552 Acq:25-SEP-2018 12:13:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
319.8965

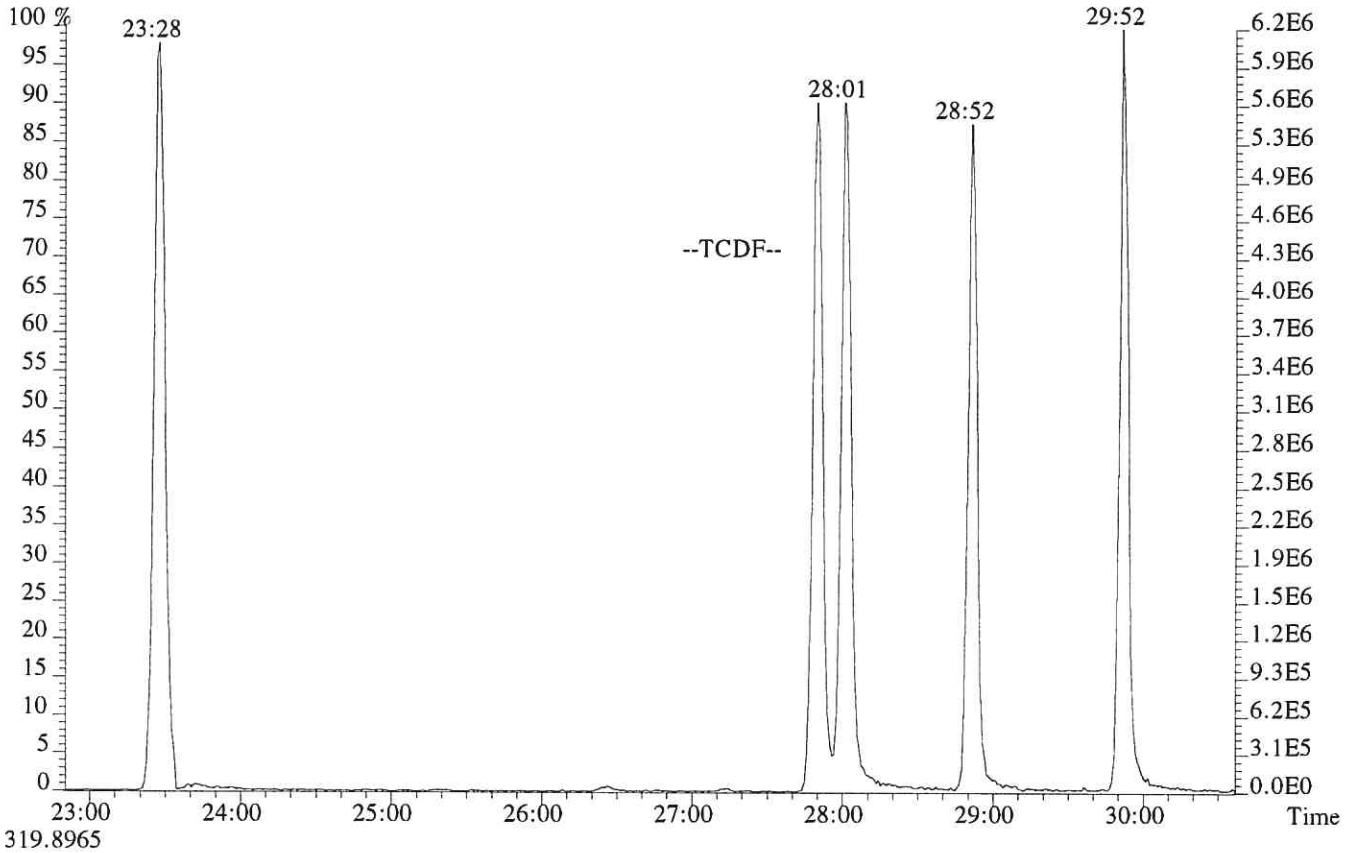


318.9792

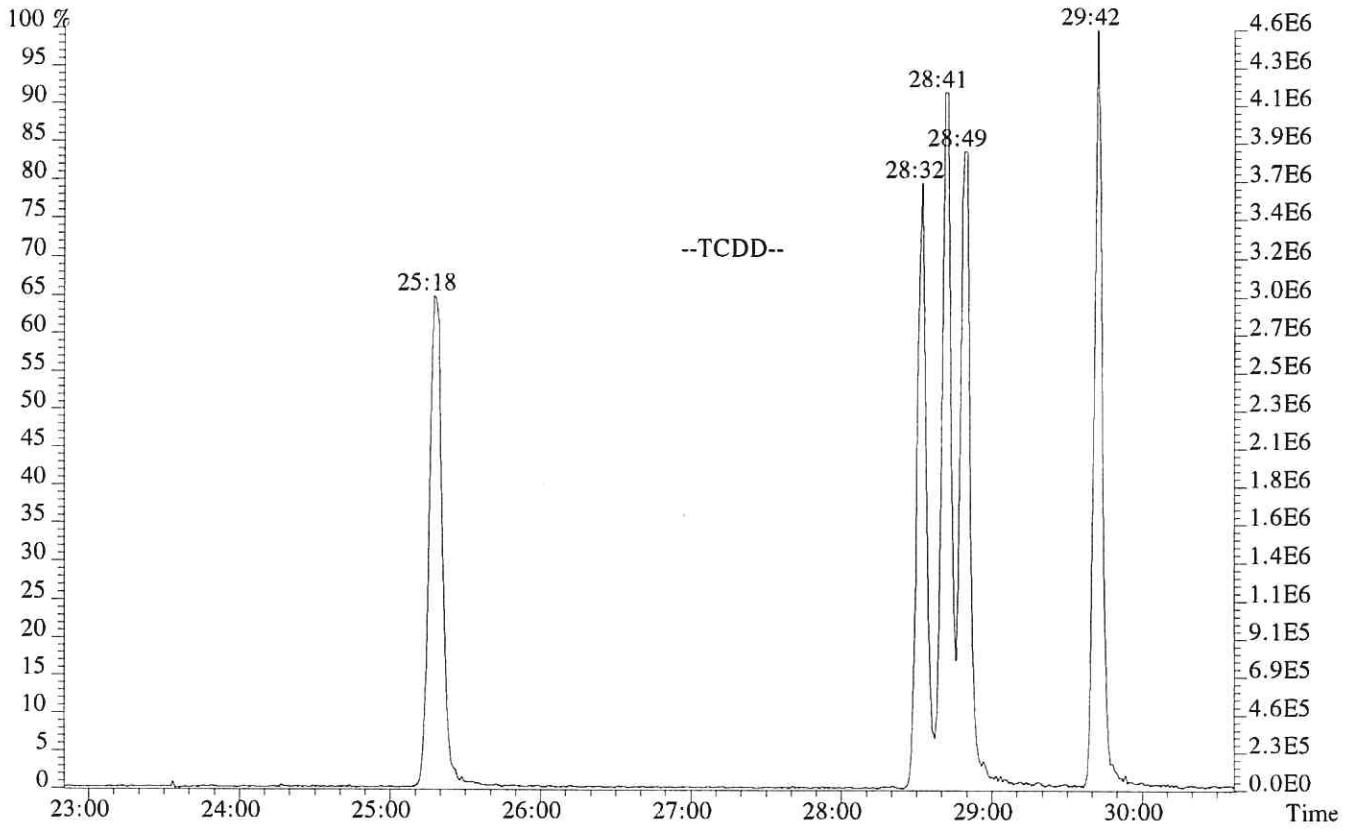
LKL 09/26/18



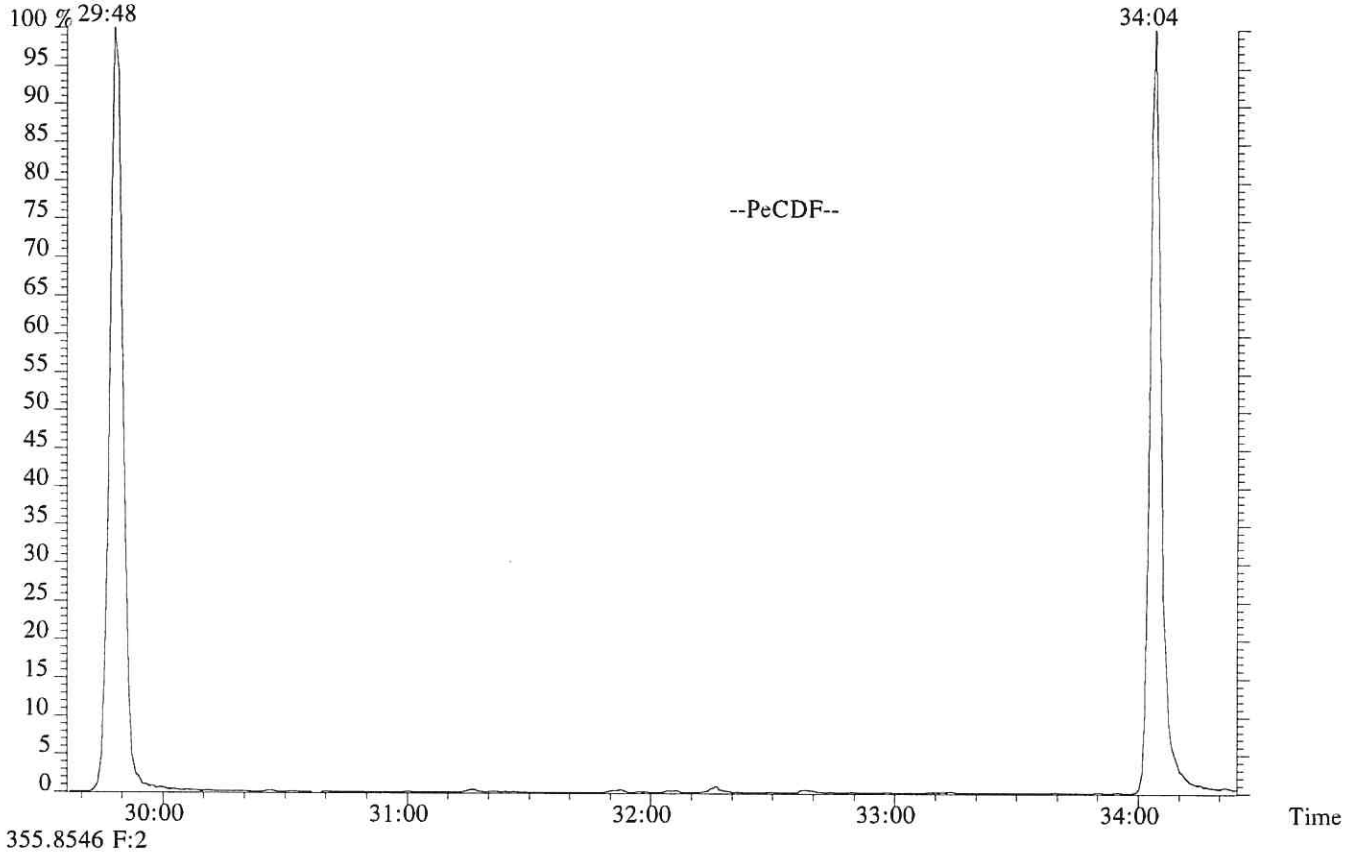
File:P614680 #1-552 Acq:25-SEP-2018 12:13:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
303.9016



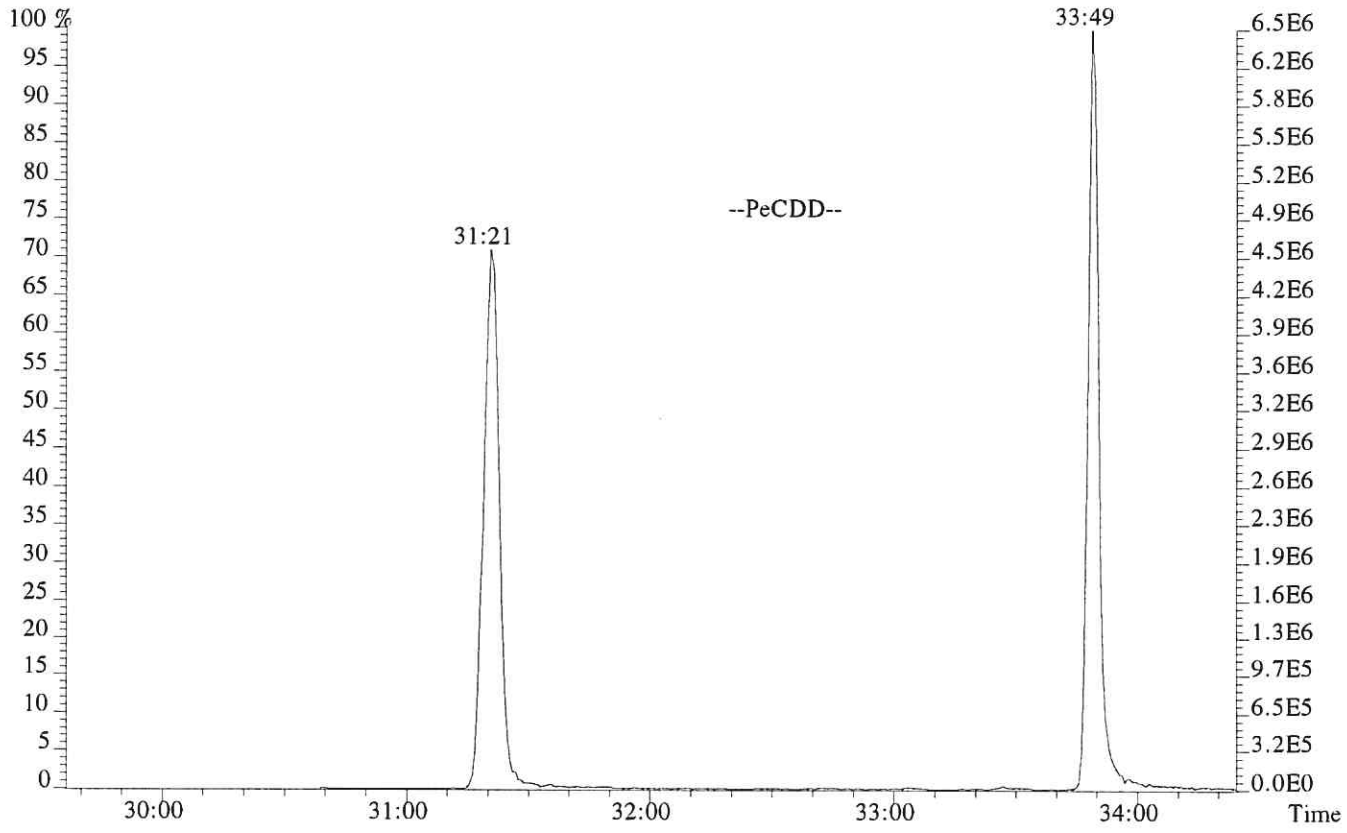
319.8965



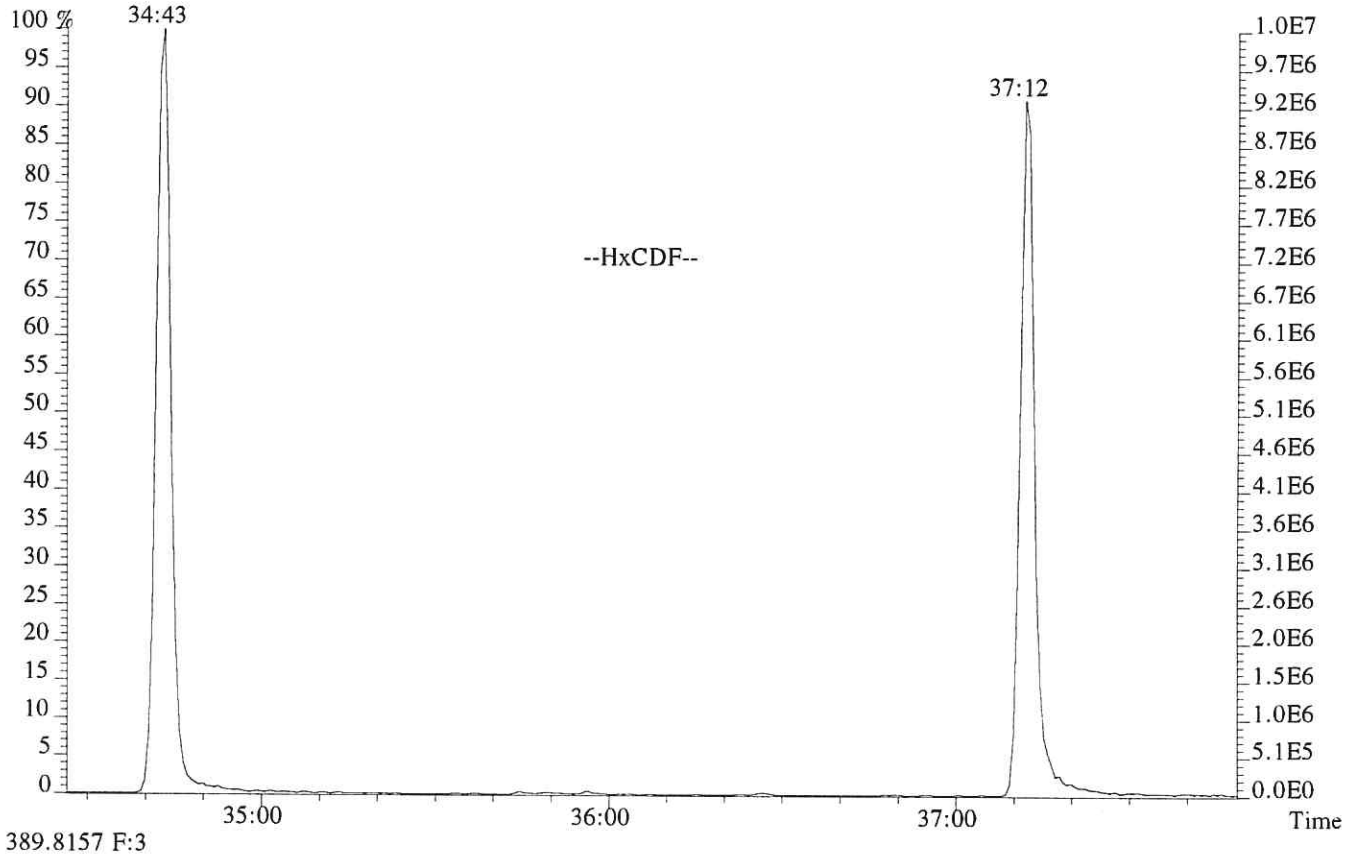
File:P614680 #1-552 Acq:25-SEP-2018 12:13:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
339.8597,339.8597 F:2



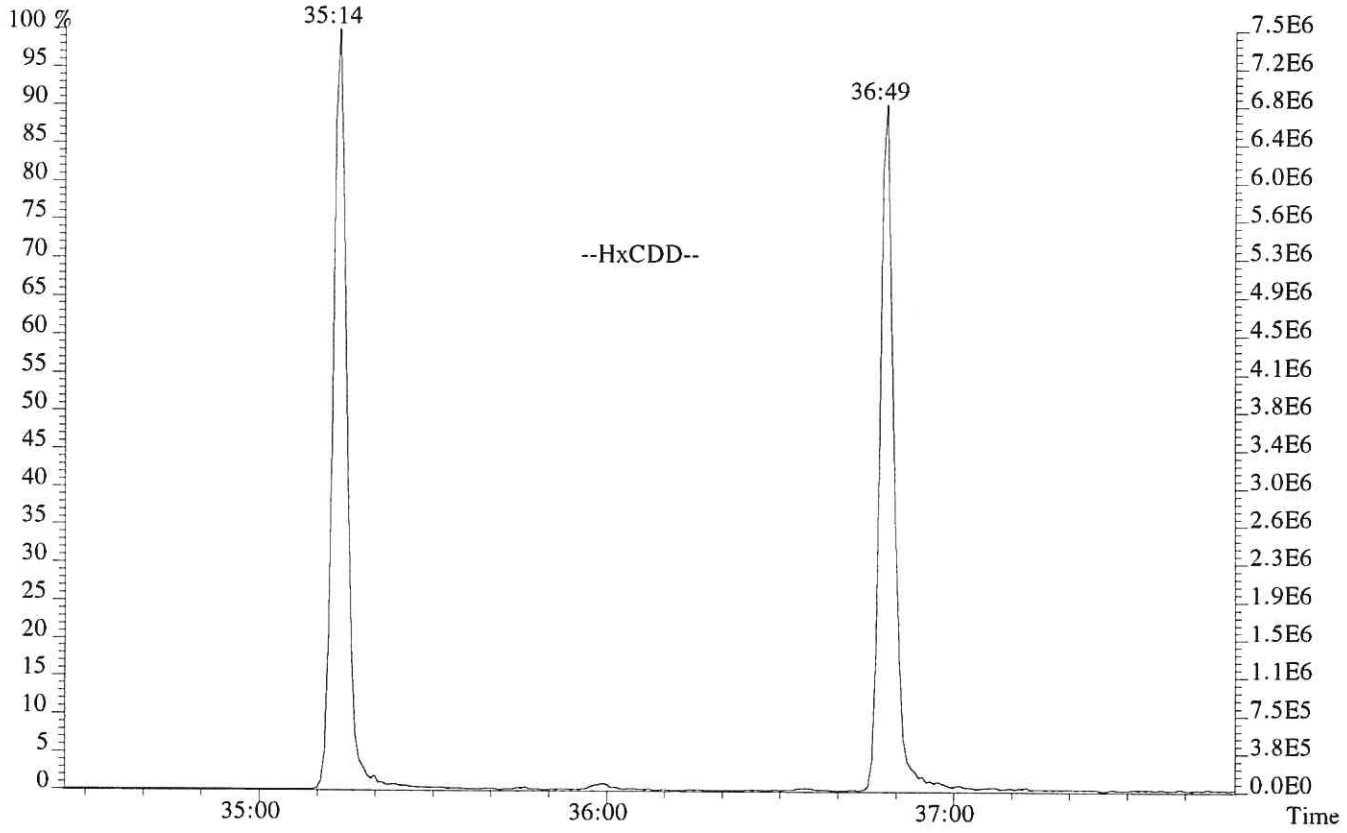
355.8546 F:2



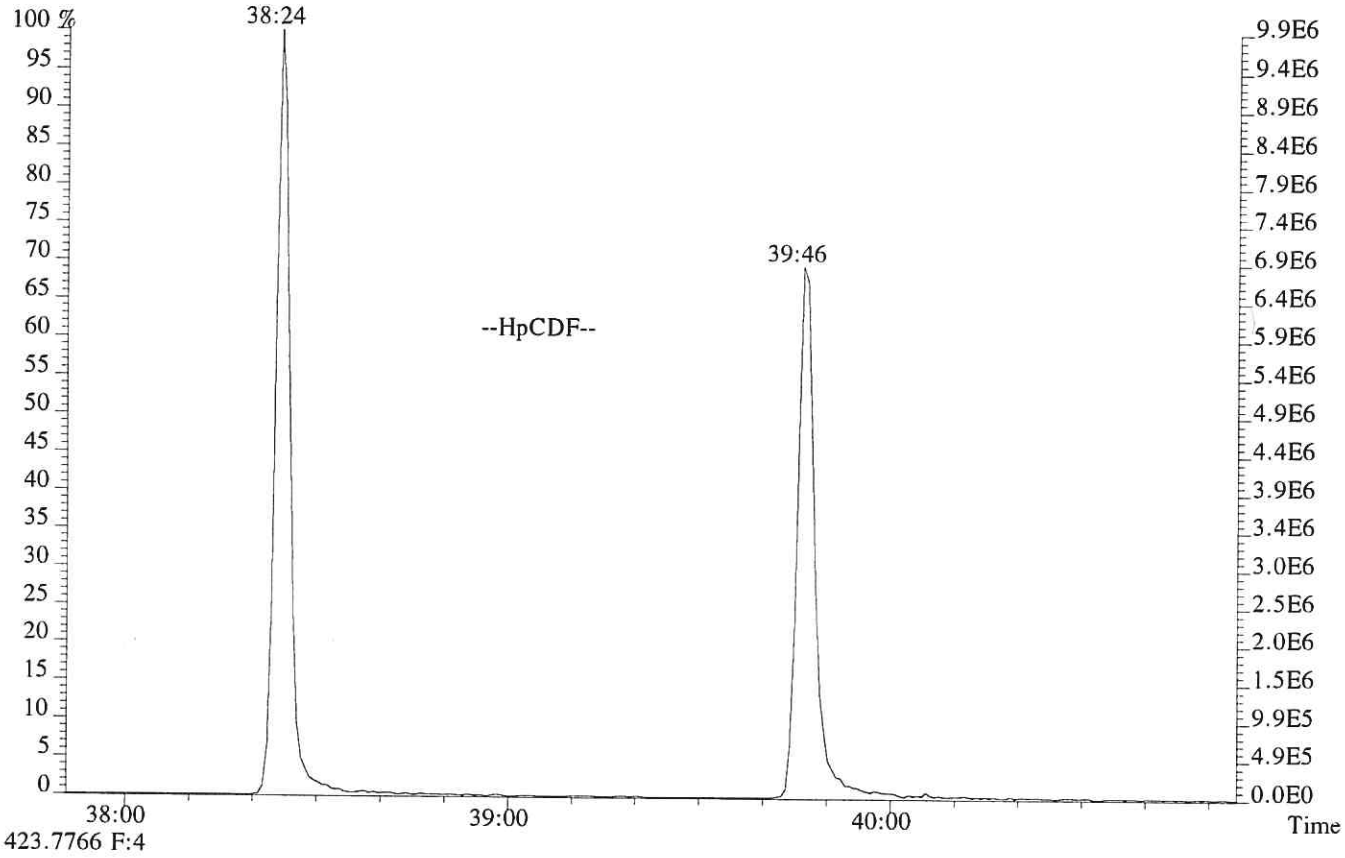
File:P614680 #1-304 Acq:25-SEP-2018 12:13:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
373.8208 F:3



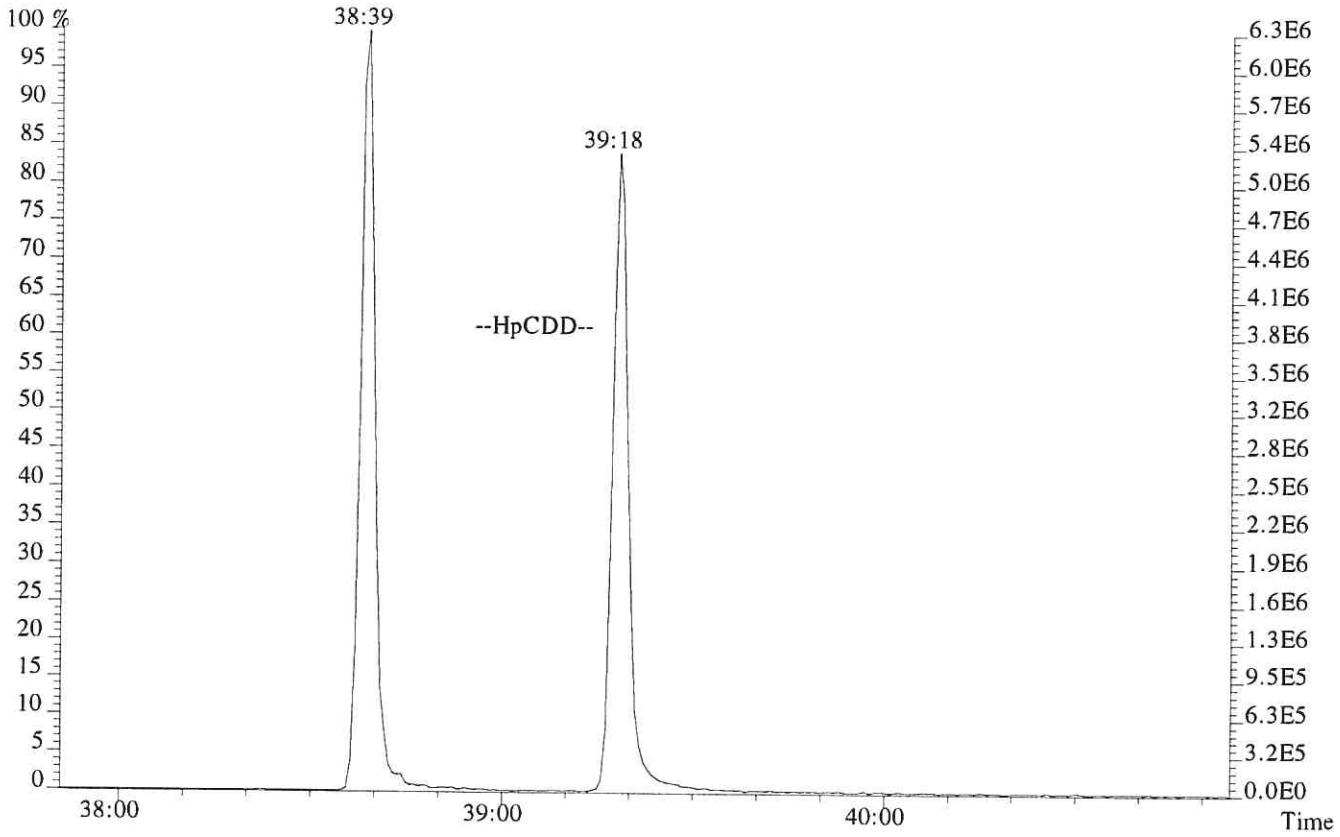
389.8157 F:3



File:P614680 #1-276 Acq:25-SEP-2018 12:13:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
407.7818 F:4



423.7766 F:4



USEPA - CLP
6DFA6
CDD/CDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
HIGH RESOLUTION

Lab Name: ALS Environmental Contract No.:
Lab Code: ALSTX Case No.: TO No.: SDG No.:
GC Column: DB-5MSUI ID: 0.25(mm) Instrument ID: E-HRMS-08
Init. Calib. Date(s).: 09/25/18 Method 1613/8290
Init. Calib. Time.: 12:13

	RR/RRF						MEAN		
Target Analytes	CS0.5	CS1	CS2	CS3	CS4	CS5	RR/RRF	%RSD	QC LIMITS
2,3,7,8-TCDD	1.15	1.00	1.00	1.03	1.05	1.06	1.05	5.38	+/-20%
2,3,7,8-TCDF	1.13	1.08	1.12	1.05	1.06	1.05	1.08	3.07	+/-20%
1,2,3,7,8-PeCDF	1.16	1.17	1.12	1.15	1.16	1.18	1.16	1.72	+/-20%
1,2,3,7,8-PeCDD	0.89	0.95	0.95	0.91	0.93	0.93	0.93	2.61	+/-20%
2,3,4,7,8-PeCDF	1.10	1.13	1.10	1.08	1.10	1.11	1.10	1.49	+/-20%
1,2,3,4,7,8-HxCDF	1.47	1.46	1.39	1.36	1.38	1.42	1.42	3.10	+/-20%
1,2,3,6,7,8-HxCDF	1.27	1.36	1.30	1.28	1.28	1.28	1.29	2.52	+/-20%
1,2,3,4,7,8-HxCDD	1.11	1.11	1.04	1.06	1.05	1.06	1.07	3.00	+/-20%
1,2,3,6,7,8-HxCDD	1.06	1.07	1.06	1.06	1.06	1.05	1.06	0.70	+/-20%
1,2,3,7,8,9-HxCDD	1.17	1.18	1.12	1.13	1.14	1.12	1.15	2.24	+/-20%
2,3,4,6,7,8-HxCDF	1.27	1.32	1.29	1.28	1.27	1.27	1.28	1.52	+/-20%
1,2,3,7,8,9-HxCDF	1.34	1.34	1.29	1.30	1.30	1.30	1.31	1.68	+/-20%
1,2,3,4,6,7,8-HpCDF	1.56	1.60	1.46	1.50	1.51	1.51	1.52	3.15	+/-20%
1,2,3,4,6,7,8-HpCDD	1.14	1.13	1.09	1.10	1.10	1.11	1.11	1.85	+/-20%
1,2,3,4,7,8,9-HpCDF	1.47	1.54	1.46	1.45	1.43	1.43	1.46	2.80	+/-20%
OCDD	1.22	1.21	1.10	1.14	1.14	1.14	1.16	4.23	+/-20%
OCDF	1.60	1.61	1.49	1.57	1.57	1.59	1.57	2.60	+/-20%
Labeled Compounds									
13C-2,3,7,8-TCDD	0.96	0.98	0.97	0.97	1.00	1.01	0.98	2.13	+/-35%
13C-1,2,3,7,8-PeCDD	1.09	1.05	1.16	1.13	1.16	1.15	1.12	3.77	+/-35%
13C-1,2,3,4,7,8-HxCDD	0.91	0.90	0.91	0.90	0.90	0.89	0.90	0.67	+/-35%
13C-1,2,3,6,7,8-HxCDD	0.92	0.92	0.89	0.89	0.91	0.90	0.90	1.52	+/-35%
13C-1,2,3,4,6,7,8-HpCDD	0.86	0.88	0.85	0.86	0.84	0.84	0.86	1.91	+/-35%
13C-OCDD	0.65	0.69	0.65	0.67	0.65	0.65	0.66	2.45	+/-35%
13C-2,3,7,8-TCDF	1.40	1.41	1.42	1.44	1.40	1.43	1.42	1.24	+/-35%
13C-1,2,3,7,8-PeCDF	1.52	1.54	1.61	1.61	1.65	1.63	1.60	3.24	+/-35%
13C-2,3,4,7,8-PeCDF	1.52	1.49	1.60	1.57	1.63	1.61	1.57	3.42	+/-35%
13C-1,2,3,4,7,8-HxCDF	1.18	1.19	1.14	1.21	1.18	1.06	1.16	4.58	+/-35%
13C-1,2,3,6,7,8-HxCDF	1.39	1.34	1.33	1.35	1.31	1.29	1.34	2.46	+/-35%
13C-2,3,4,6,7,8-HxCDF	1.27	1.25	1.24	1.24	1.25	1.24	1.25	1.06	+/-35%
13C-1,2,3,7,8,9-HxCDF	1.13	1.13	1.12	1.15	1.15	1.10	1.13	1.66	+/-35%
13C-1,2,3,4,6,7,8-HpCDF	1.04	1.06	1.02	1.04	1.01	1.01	1.03	1.93	+/-35%
13C-1,2,3,4,7,8,9-HpCDF	0.94	0.95	0.90	0.86	0.90	0.88	0.91	3.64	+/-35%
37Cl-2,3,7,8-TCDD	1.06	1.11	1.07	1.05	1.11	1.13	1.09	3.15	+/-35%

1.123789-HxCDD Relative Response (RR) is calculated based on the labeled analog of the other two HxCDDs.
2. OCDF RR is calculated based on the labeled analog of OCDD

USEPA - CLP
6DFB6
CDD/CDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY
HIGH RESOLUTION

Lab Name: ALS Environmental Contract No.:
Lab Code: ALSTX Case No.: TO No.: SDG No.:
GC Column: DB-5MSUI ID: 0.25(mm) Instrument ID: E-HRMS-08
Init. Calib. Date(s).: 09/25/18 Method 1613/8290
Init. Calib. Time.: 12:13

Target Analytes	SELECTED IONS	ION ABUNDANCE RATIO CS0.5	CS1	CS2	CS3	CS4	CS5	FLAG	ION RATIO QC LIMITS
2,3,7,8-TCDF	304/306	0.75	0.75	0.83	0.80	0.79	0.80		0.65-0.89
2,3,7,8-TCDD	320/322	0.78	0.83	0.80	0.78	0.79	0.77		0.65-0.89
1,2,3,7,8-PeCDF	340/342	1.65	1.58	1.57	1.58	1.60	1.60		1.32-1.78
2,3,4,7,8-PeCDF	340/342	1.57	1.61	1.57	1.58	1.59	1.59		1.32-1.78
1,2,3,7,8-PeCDD	356/358	1.56	1.52	1.53	1.55	1.55	1.57		1.32-1.78
1,2,3,4,7,8-HxCDF	374/376	1.26	1.29	1.25	1.26	1.28	1.29		1.05-1.43
1,2,3,6,7,8-HxCDF	374/376	1.29	1.24	1.25	1.27	1.27	1.27		1.05-1.43
2,3,4,6,7,8-HxCDF	374/376	1.29	1.25	1.28	1.28	1.26	1.26		1.05-1.43
1,2,3,7,8,9-HxCDF	374/376	1.22	1.29	1.23	1.28	1.28	1.27		1.05-1.43
1,2,3,4,7,8-HxCDD	390/392	1.21	1.20	1.26	1.33	1.26	1.27		1.05-1.43
1,2,3,6,7,8-HxCDD	390/392	1.41	1.27	1.25	1.23	1.27	1.26		1.05-1.43
1,2,3,7,8,9-HxCDD	390/392	1.20	1.22	1.25	1.24	1.27	1.26		1.05-1.43
1,2,3,4,6,7,8-HpCDF	408/410	1.04	1.02	1.06	1.05	1.04	1.05		0.88-1.20
1,2,3,4,7,8,9-HpCDF	408/410	0.89	1.07	1.05	1.04	1.05	1.05		0.88-1.20
1,2,3,4,6,7,8-HpCDD	424/426	1.10	1.07	1.07	1.06	1.06	1.06		0.88-1.20
OCDF	442/444	0.90	0.87	0.91	0.92	0.93	0.92		0.76-1.02
OCDD	458/460	0.93	0.89	0.88	0.90	0.90	0.90		0.76-1.02
13C-2,3,7,8-TCDD	332/334	0.79	0.80	0.80	0.80	0.80	0.79		0.65-0.89
13C-1,2,3,7,8-PeCDD	368/370	1.58	1.58	1.57	1.58	1.56	1.57		1.32-1.78
13C-1,2,3,4,7,8-HxCDD	402/404	1.27	1.26	1.26	1.32	1.25	1.26		1.05-1.43
13C-1,2,3,6,7,8-HxCDD	402/404	1.27	1.26	1.26	1.20	1.25	1.26		1.05-1.43
13C-1,2,3,4,6,7,8-HpCDD	436/438	1.06	1.06	1.04	1.06	1.05	1.05		0.88-1.20
13C-OCDD	470/472	0.90	0.90	0.90	0.91	0.90	0.89		0.76-1.02
13C-2,3,7,8-TCDF	316/318	0.78	0.80	0.79	0.79	0.79	0.79		0.65-0.89
13C-1,2,3,7,8-PeCDF	352/354	1.61	1.62	1.60	1.60	1.60	1.60		1.32-1.78
13C-2,3,4,7,8-PeCDF	352/354	1.59	1.59	1.62	1.61	1.59	1.61		1.32-1.78
13C-1,2,3,4,7,8-HxCDF	384/386	0.54	0.53	0.53	0.53	0.53	0.54		0.43-0.59
13C-1,2,3,6,7,8-HxCDF	384/386	0.53	0.54	0.53	0.54	0.54	0.54		0.43-0.59
13C-2,3,4,6,7,8-HxCDF	384/386	0.54	0.54	0.53	0.54	0.54	0.53		0.43-0.59
13C-1,2,3,7,8,9-HxCDF	384/386	0.52	0.53	0.53	0.54	0.53	0.53		0.43-0.59
13C-1,2,3,4,6,7,8-HpCDF	418/420	0.46	0.46	0.46	0.46	0.46	0.46		0.37-0.51
13C-1,2,3,4,7,8,9-HpCDF	418/420	0.46	0.46	0.45	0.46	0.45	0.46		0.37-0.51
13C-1,2,3,4-TCDD	332/334	0.81	0.81	0.81	0.80	0.79	0.81		0.65-0.89
13C-1,2,3,7,8,9-HxCDD	402/404	1.24	1.26	1.26	1.24	1.25	1.25		1.05-1.43

Quality Control (QC) limits represent +/- 15% window around the theoretical ion abundance ratio. The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterisk in the flag column.

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76554

Run #1 Filename P614682 Samp: 1 Inj: 1 Acquired: 25-SEP-18 14:18:27
Processed: 26-SEP-18 07:39:04 Sample ID: CS0.5

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:01	3.991e+02	5.332e+02	0.75	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	32:15	3.245e+03	1.970e+03	1.65	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	33:10	3.017e+03	1.917e+03	1.57	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	35:49	2.964e+03	2.360e+03	1.26	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	35:55	3.032e+03	2.349e+03	1.29	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	36:25	2.788e+03	2.154e+03	1.29	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	37:10	2.544e+03	2.080e+03	1.22	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	38:24	2.520e+03	2.421e+03	1.04	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	39:46	1.988e+03	2.226e+03	0.89	yes	no	1.463
10	Unk	OCDF	42:13	3.006e+03	3.322e+03	0.90	yes	no	1.571
11	Unk	2,3,7,8-TCDD	28:49	2.873e+02	3.690e+02	0.78	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	33:26	1.757e+03	1.126e+03	1.56	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	36:33	1.695e+03	1.402e+03	1.21	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	36:39	1.736e+03	1.234e+03	1.41	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	36:53	1.790e+03	1.494e+03	1.20	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	39:18	1.575e+03	1.438e+03	1.10	yes	no	1.112
17	Unk	OCDD	42:01	2.333e+03	2.510e+03	0.93	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	28:00	1.453e+05	1.860e+05	0.78	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	32:14	2.225e+05	1.378e+05	1.61	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	33:08	2.208e+05	1.389e+05	1.59	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	35:49	1.017e+05	1.873e+05	0.54	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	35:55	1.172e+05	2.227e+05	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	36:25	1.097e+05	2.020e+05	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	37:09	9.463e+04	1.814e+05	0.52	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:24	7.990e+04	1.736e+05	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:46	7.243e+04	1.569e+05	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	28:47	1.005e+05	1.270e+05	0.79	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	33:26	1.588e+05	1.004e+05	1.58	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	36:33	1.251e+05	9.838e+04	1.27	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	36:38	1.252e+05	9.893e+04	1.27	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:18	1.083e+05	1.026e+05	1.06	yes	no	0.857
32	IS	13C-OCDD	42:01	1.503e+05	1.668e+05	0.90	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	28:14	1.058e+05	1.311e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:52	1.355e+05	1.094e+05	1.24	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	28:49	6.272e+02				no	1.086

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
76554

Run #1 Filename P614682 Samp: 1 Inj: 1 Acquired: 25-SEP-18 14:18:27
Processed: 26-SEP-18 07:39:04 LAB. ID: CS0.5

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.55e+04	1.79e+03	3.7e+01	1.00e+05	4.41e+03	2.3e+01
2	1,2,3,7,8-PeCDF	5.99e+05	1.18e+03	5.1e+02	3.57e+05	4.28e+03	8.3e+01
3	2,3,4,7,8-PeCDF	5.69e+05	1.18e+03	4.8e+02	3.70e+05	4.28e+03	8.7e+01
4	1,2,3,4,7,8-HxCDF	6.38e+05	3.25e+03	2.0e+02	4.85e+05	1.42e+03	3.4e+02
5	1,2,3,6,7,8-HxCDF	6.38e+05	3.25e+03	2.0e+02	4.95e+05	1.42e+03	3.5e+02
6	2,3,4,6,7,8-HxCDF	6.03e+05	3.25e+03	1.9e+02	4.83e+05	1.42e+03	3.4e+02
7	1,2,3,7,8,9-HxCDF	4.97e+05	3.25e+03	1.5e+02	4.13e+05	1.42e+03	2.9e+02
8	1,2,3,4,6,7,8-HpCDF	5.62e+05	1.66e+03	3.4e+02	5.47e+05	1.04e+03	5.3e+02
9	1,2,3,4,7,8,9-HpCDF	4.02e+05	1.66e+03	2.4e+02	4.51e+05	1.04e+03	4.3e+02
10	OCDF	5.23e+05	1.34e+03	3.9e+02	5.81e+05	4.02e+03	1.4e+02
11	2,3,7,8-TCDD	6.18e+04	5.07e+03	1.2e+01	6.68e+04	2.40e+03	2.8e+01
12	1,2,3,7,8-PeCDD	3.47e+05	2.36e+03	1.5e+02	2.20e+05	2.64e+02	8.3e+02
13	1,2,3,4,7,8-HxCDD	3.95e+05	1.84e+03	2.1e+02	3.18e+05	1.66e+03	1.9e+02
14	1,2,3,6,7,8-HxCDD	3.64e+05	1.84e+03	2.0e+02	2.60e+05	1.66e+03	1.6e+02
15	1,2,3,7,8,9-HxCDD	4.06e+05	1.84e+03	2.2e+02	3.23e+05	1.66e+03	1.9e+02
16	1,2,3,4,6,7,8-HpCDD	3.19e+05	2.32e+03	1.4e+02	3.31e+05	1.19e+03	2.8e+02
17	OCDD	4.28e+05	8.48e+02	5.0e+02	4.37e+05	1.30e+03	3.4e+02
18	13C-2,3,7,8-TCDF	2.54e+07	1.52e+04	1.7e+03	3.22e+07	1.06e+04	3.1e+03
19	13C-1,2,3,7,8-PeCDF	4.04e+07	2.12e+03	1.9e+04	2.49e+07	3.13e+03	8.0e+03
20	13C-2,3,4,7,8-PeCDF	4.23e+07	2.12e+03	2.0e+04	2.67e+07	3.13e+03	8.5e+03
21	13C-1,2,3,4,7,8-HxCDF	2.18e+07	3.28e+03	6.7e+03	4.05e+07	3.71e+03	1.1e+04
22	13C-1,2,3,6,7,8-HxCDF	2.40e+07	3.28e+03	7.3e+03	4.55e+07	3.71e+03	1.2e+04
23	13C-2,3,4,6,7,8-HxCDF	2.42e+07	3.28e+03	7.4e+03	4.44e+07	3.71e+03	1.2e+04
24	13C-1,2,3,7,8,9-HxCDF	1.91e+07	3.28e+03	5.8e+03	3.68e+07	3.71e+03	9.9e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.81e+07	5.66e+03	3.2e+03	3.90e+07	2.05e+04	1.9e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.45e+07	5.66e+03	2.6e+03	3.15e+07	2.05e+04	1.5e+03
27	13C-2,3,7,8-TCDD	1.84e+07	1.55e+04	1.2e+03	2.34e+07	5.32e+03	4.4e+03
28	13C-1,2,3,7,8-PeCDD	3.10e+07	3.24e+03	9.6e+03	1.95e+07	2.82e+03	6.9e+03
29	13C-1,2,3,4,7,8-HxCDD	2.85e+07	5.20e+03	5.5e+03	2.24e+07	3.08e+03	7.3e+03
30	13C-1,2,3,6,7,8-HxCDD	2.65e+07	5.20e+03	5.1e+03	2.10e+07	3.08e+03	6.8e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.26e+07	2.60e+03	8.7e+03	2.13e+07	2.03e+03	1.1e+04
32	13C-OCDD	2.73e+07	1.56e+03	1.8e+04	2.99e+07	4.32e+02	6.9e+04
33	13C-1,2,3,4-TCDD	1.96e+07	1.55e+04	1.3e+03	2.41e+07	5.32e+03	4.5e+03
34	13C-1,2,3,7,8,9-HxCDD	3.00e+07	5.20e+03	5.8e+03	2.40e+07	3.08e+03	7.8e+03
35	37Cl-2,3,7,8-TCDD	1.12e+05	4.66e+03	2.4e+01			

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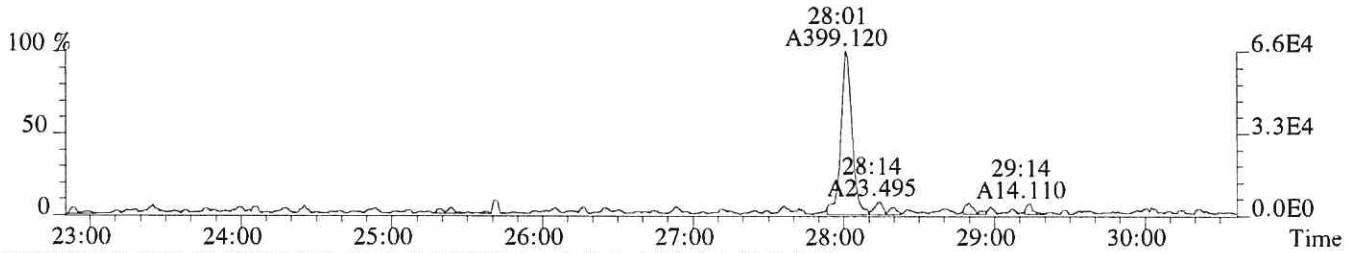
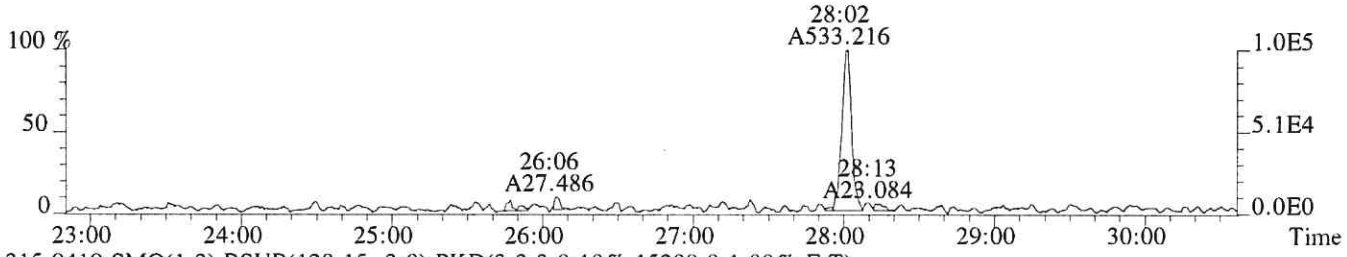
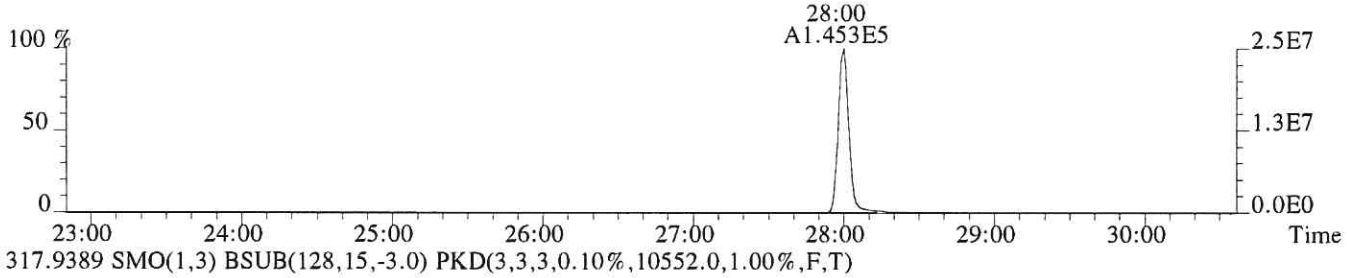
File:P614682 #1-552 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1788.0,1.00%,F,T)



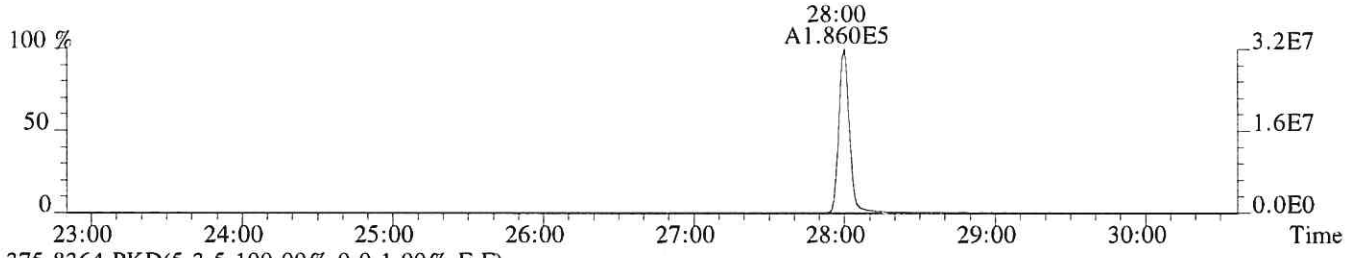
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4408.0,1.00%,F,T)



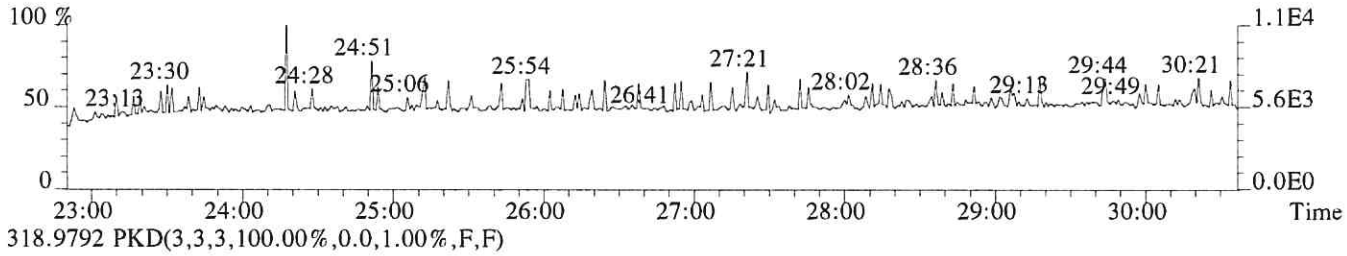
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,15208.0,1.00%,F,T)



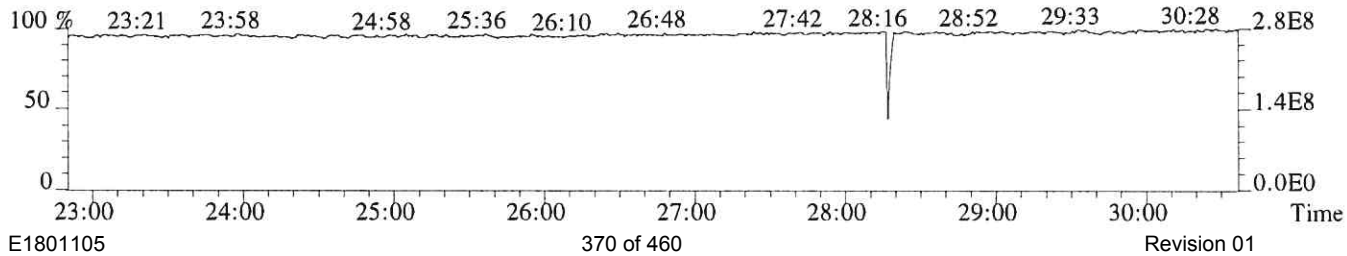
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10552.0,1.00%,F,T)



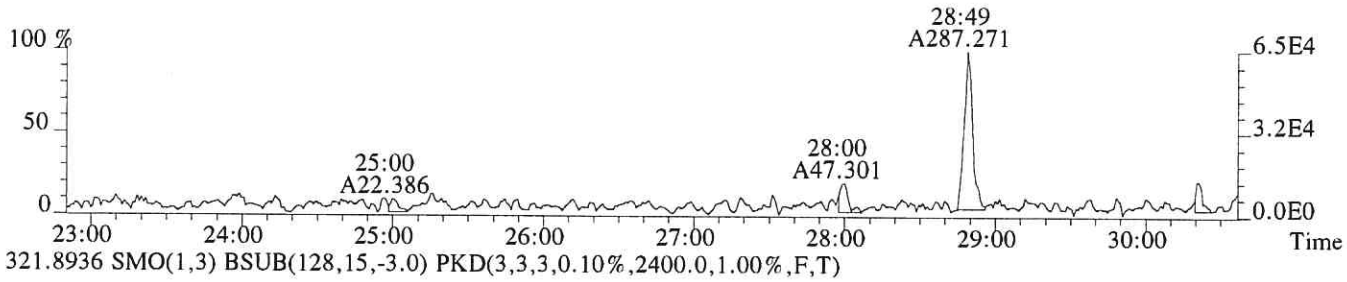
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



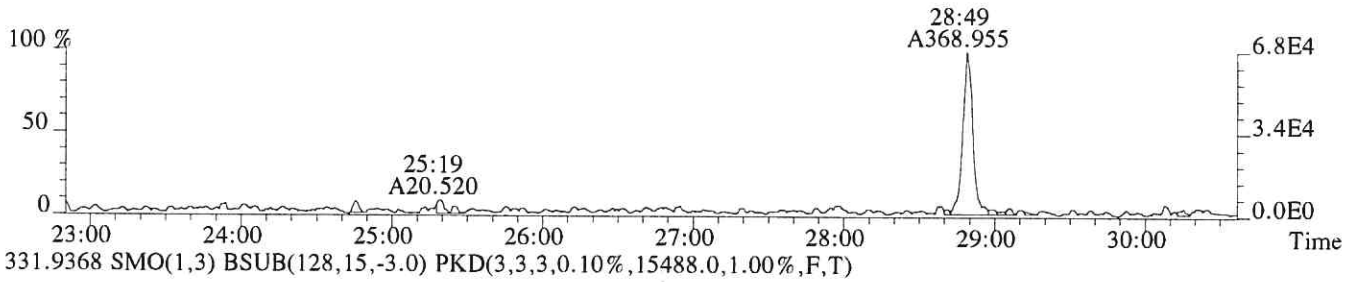
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



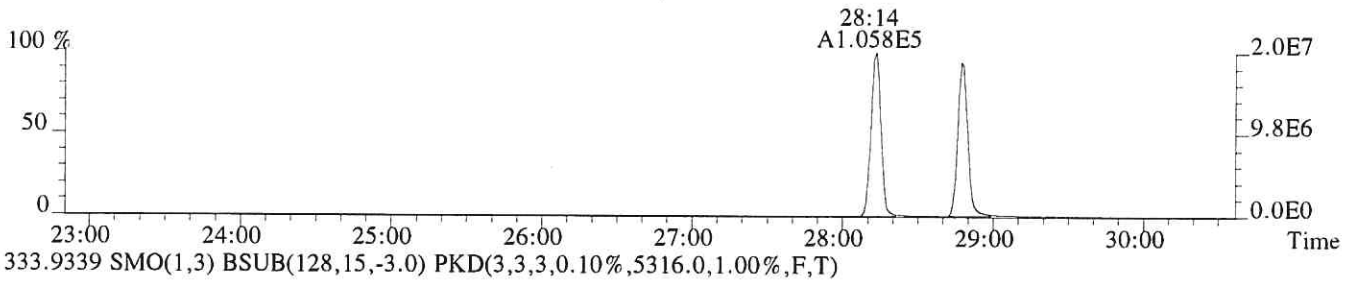
File:P614682 #1-552 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5072.0,1.00%,F,T)



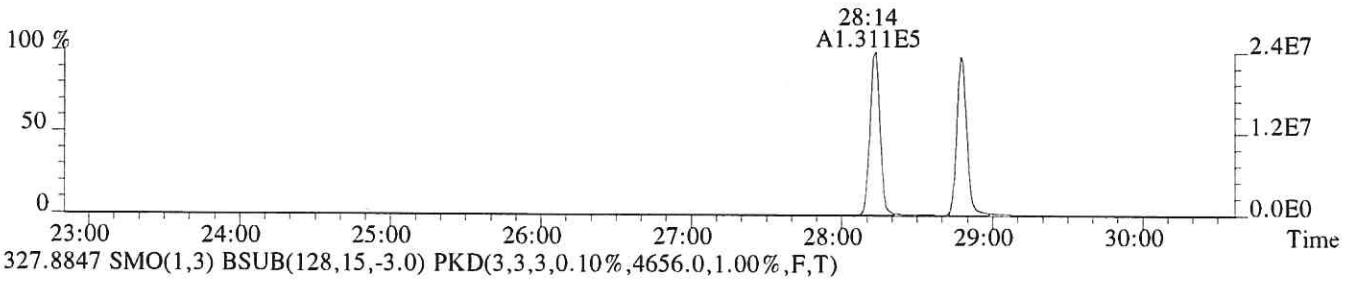
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2400.0,1.00%,F,T)



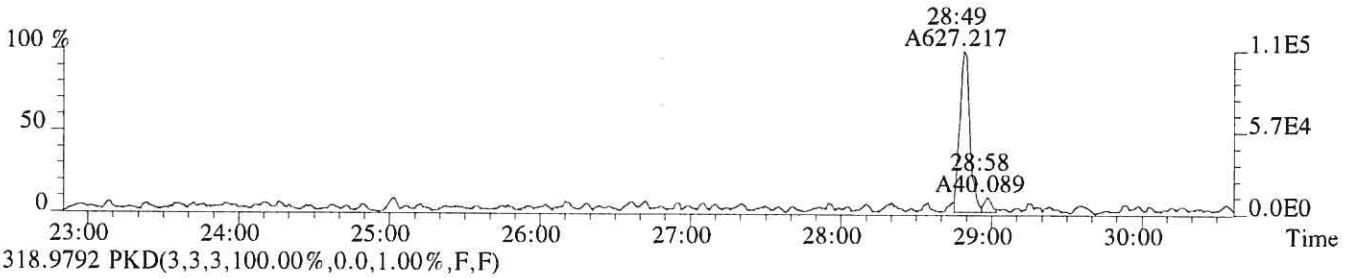
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,15488.0,1.00%,F,T)



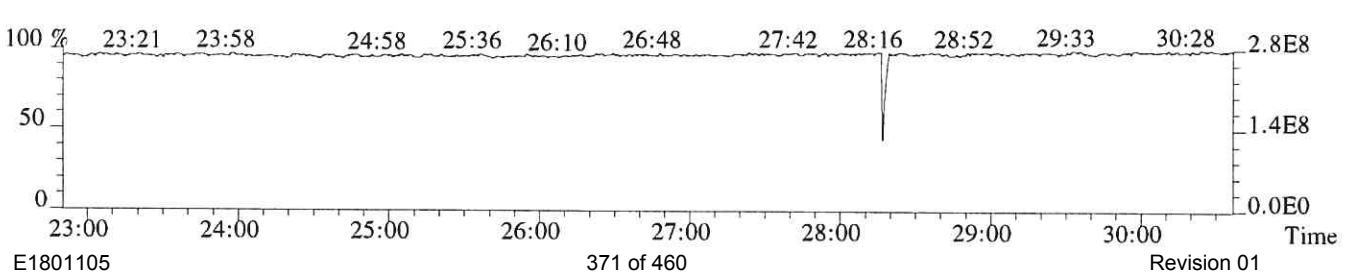
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5316.0,1.00%,F,T)



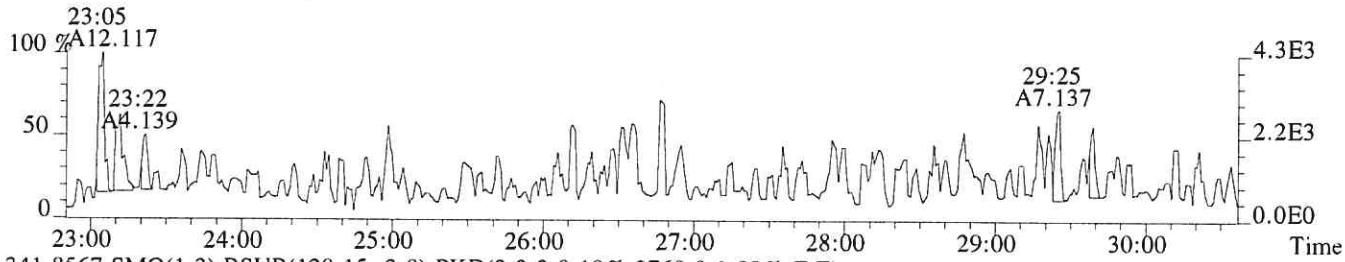
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4656.0,1.00%,F,T)



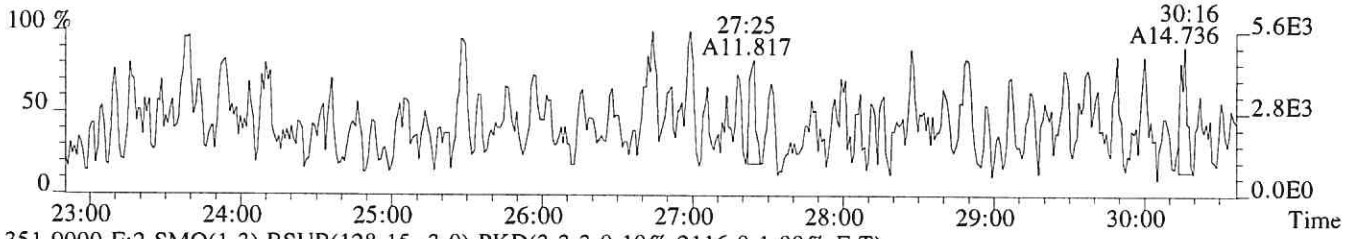
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



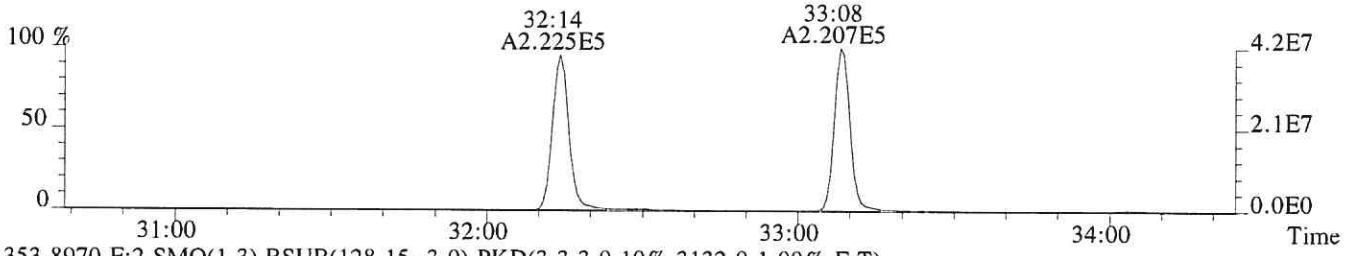
File:P614682 #1-552 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1072.0,1.00%,F,T)



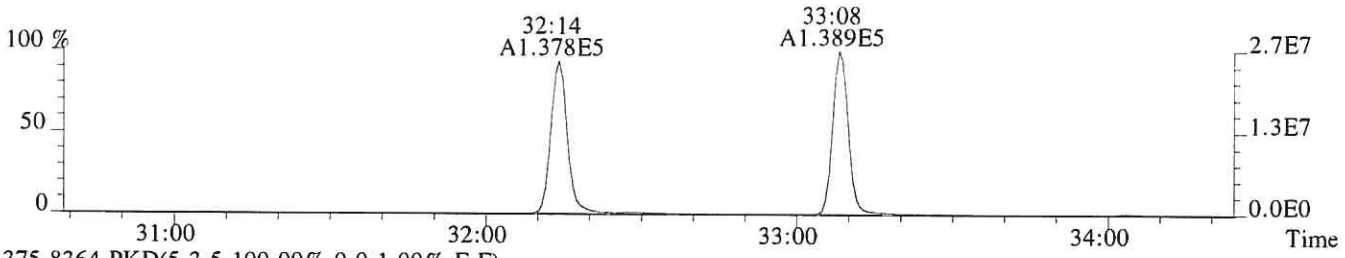
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2760.0,1.00%,F,T)



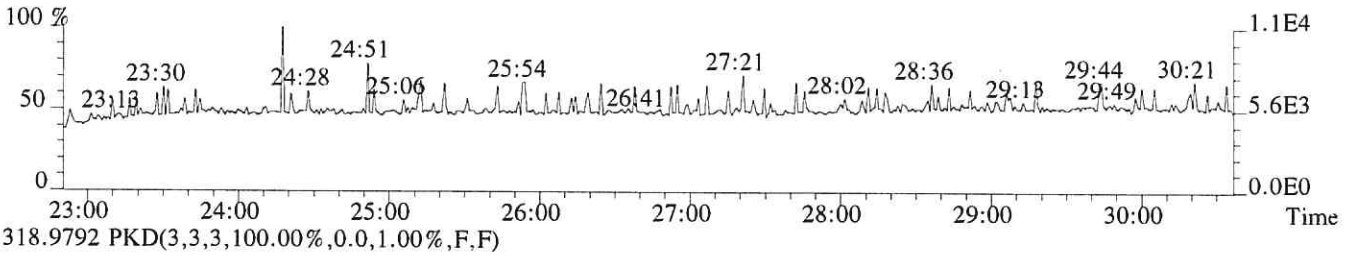
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2116.0,1.00%,F,T)



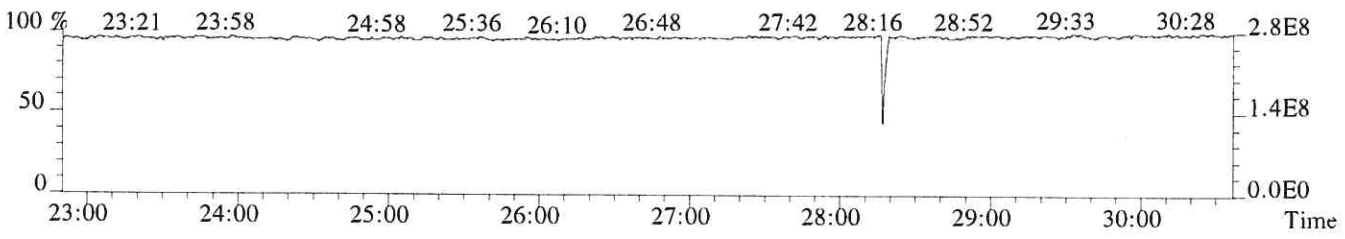
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3132.0,1.00%,F,T)



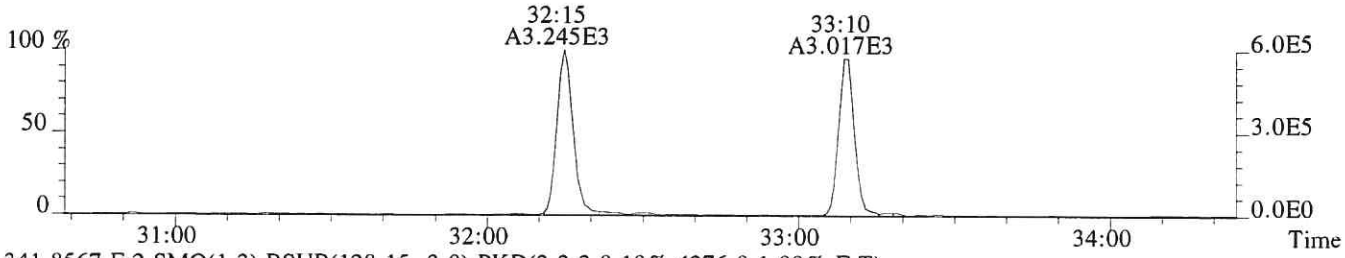
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



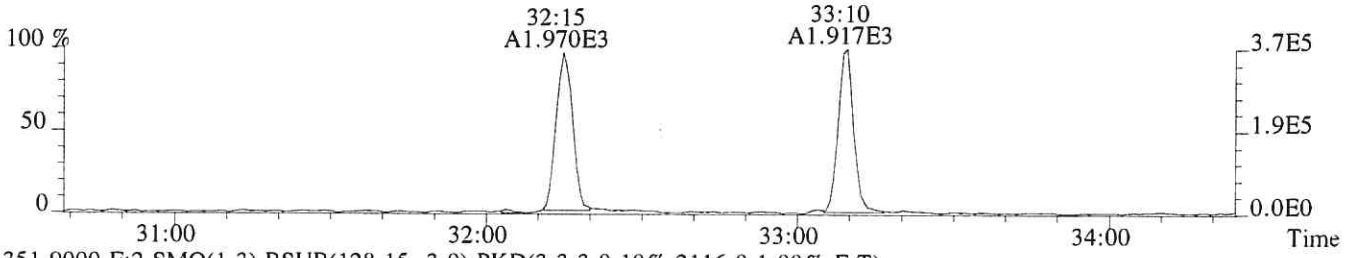
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



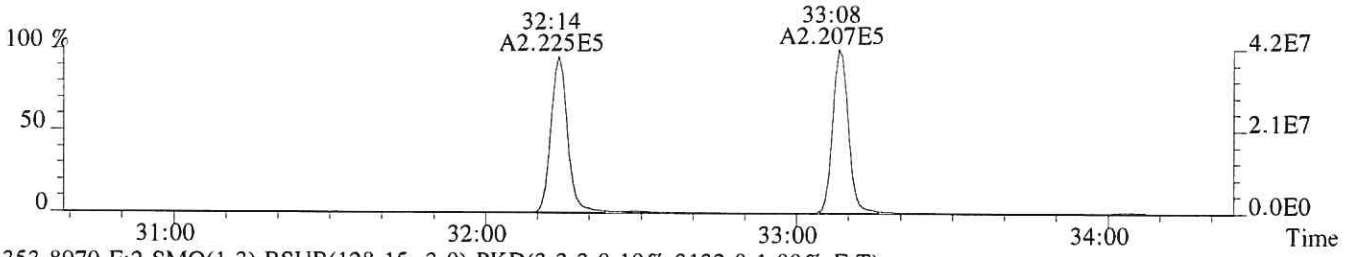
File:P614682 #1-339 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1180.0,1.00%,F,T)



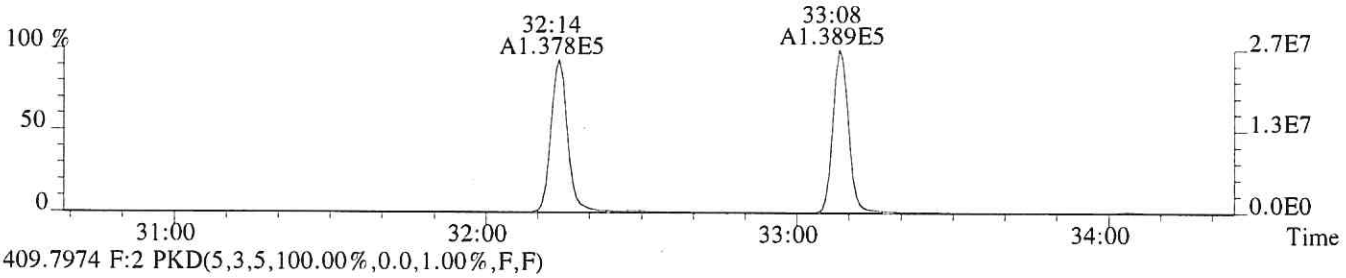
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4276.0,1.00%,F,T)



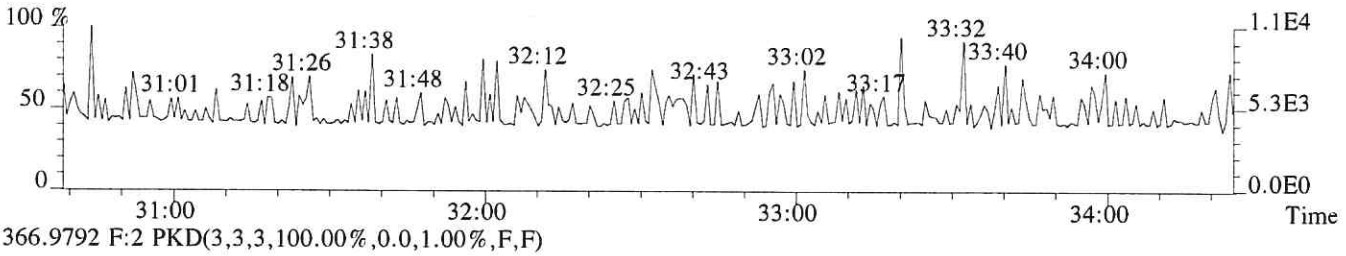
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2116.0,1.00%,F,T)



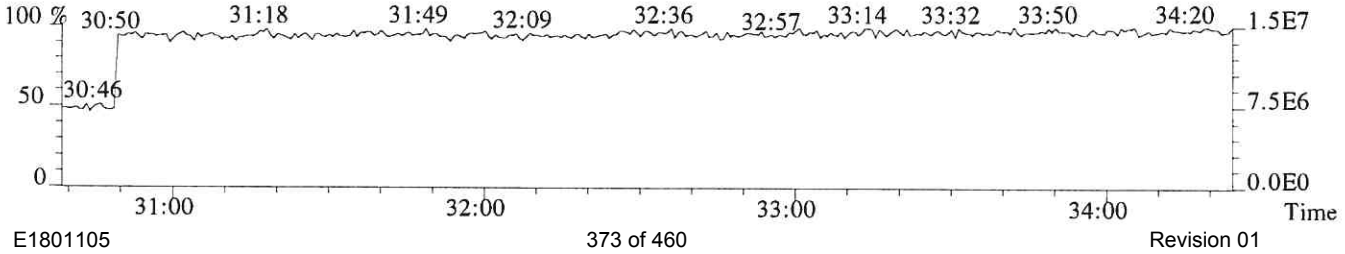
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3132.0,1.00%,F,T)



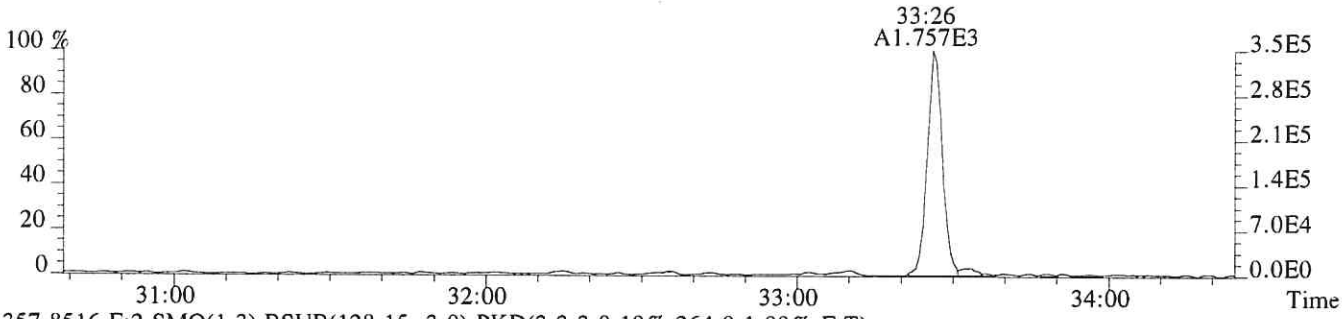
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



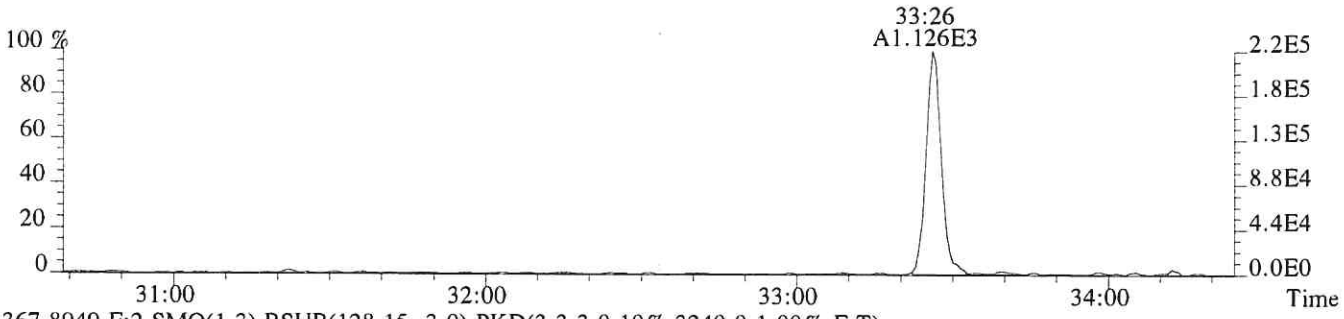
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



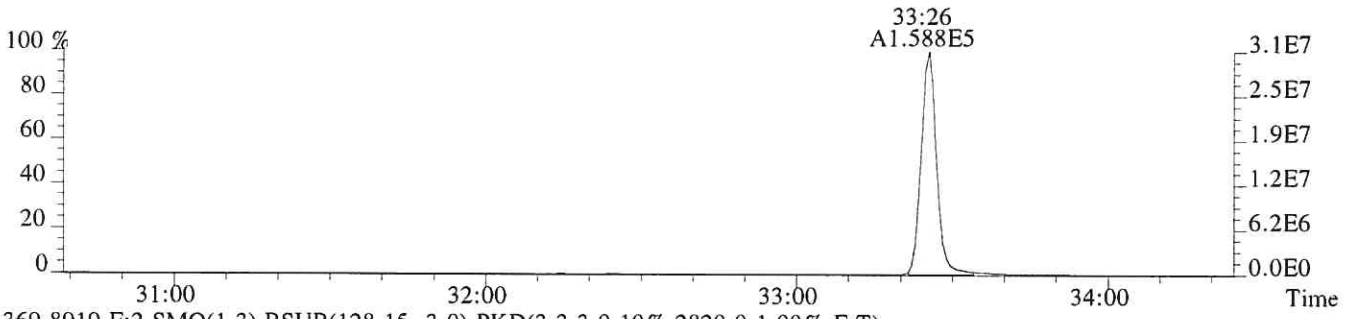
File:P614682 #1-339 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2356.0,1.00%,F,T)



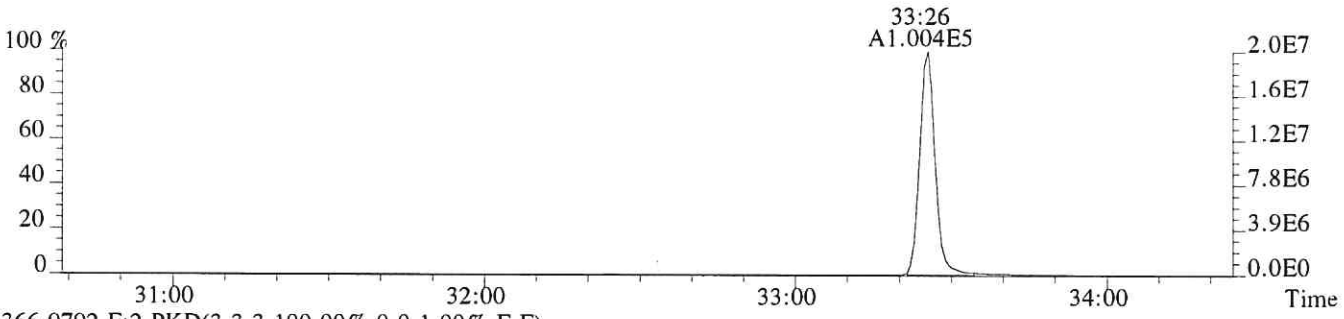
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,264.0,1.00%,F,T)



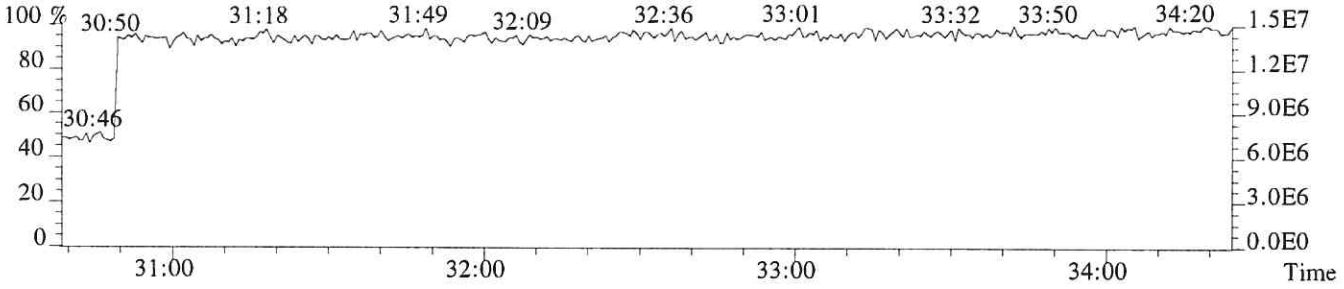
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3240.0,1.00%,F,T)



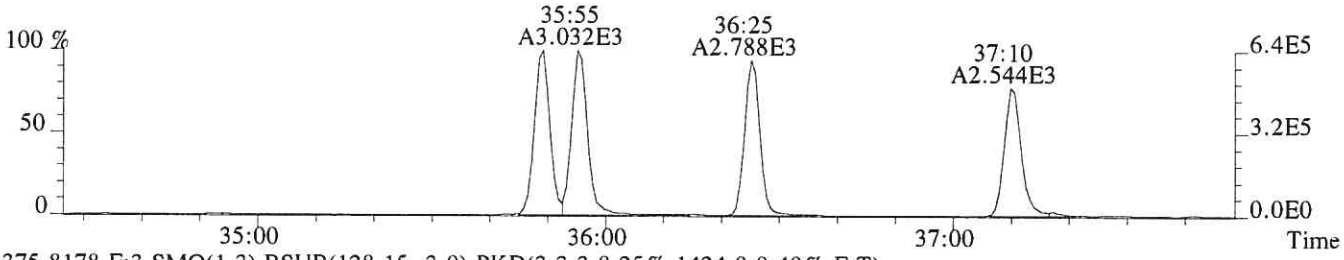
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2820.0,1.00%,F,T)



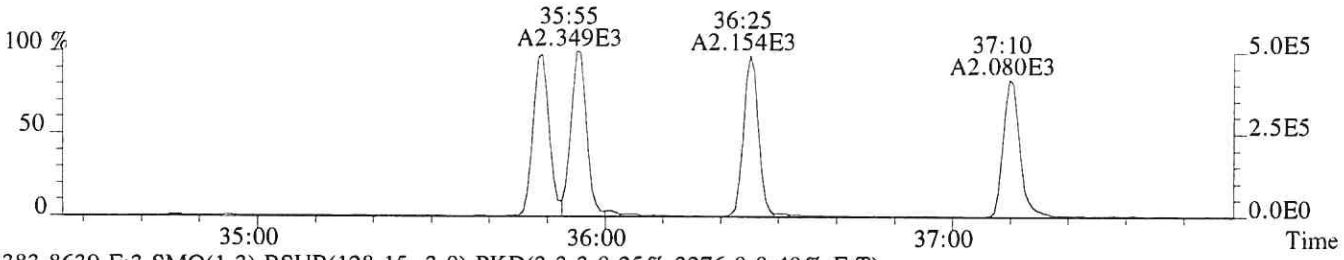
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



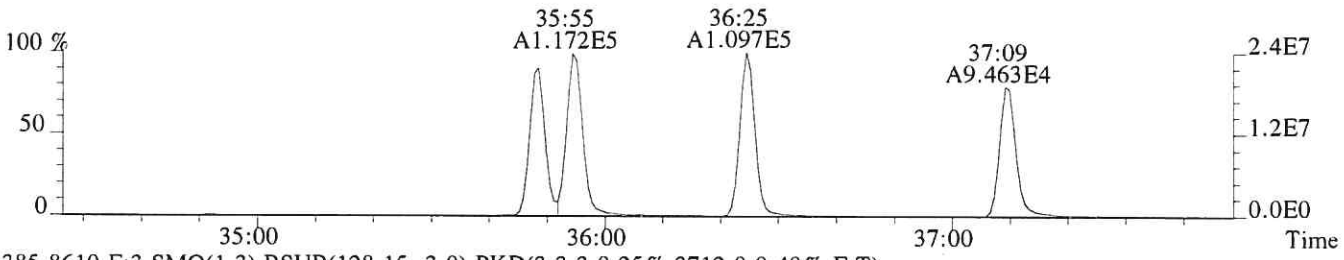
File:P614682 #1-304 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3252.0,0.40%,F,T)



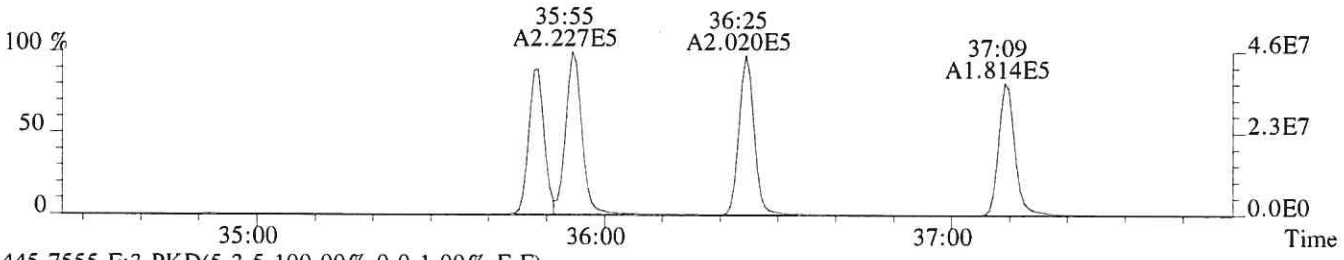
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1424.0,0.40%,F,T)



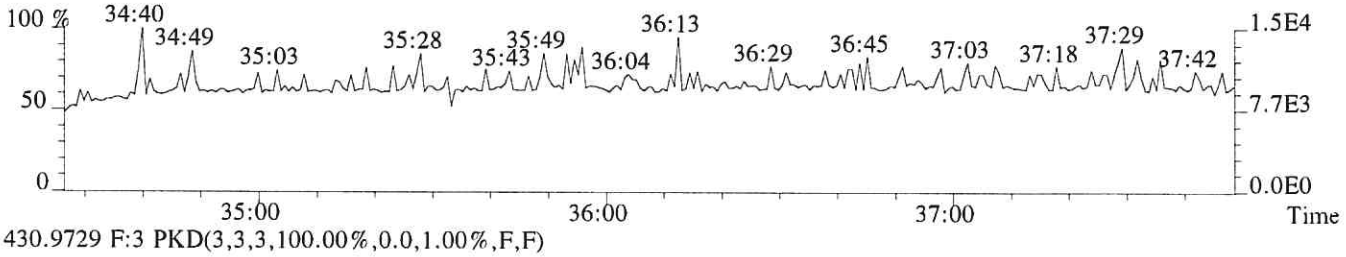
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3276.0,0.40%,F,T)



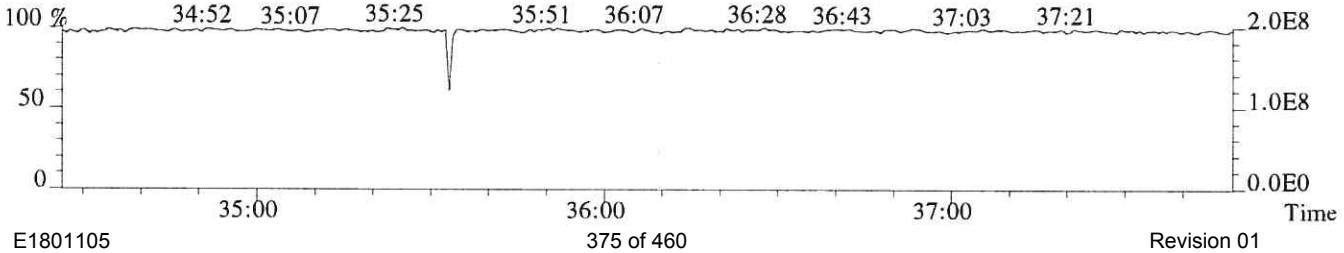
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3712.0,0.40%,F,T)



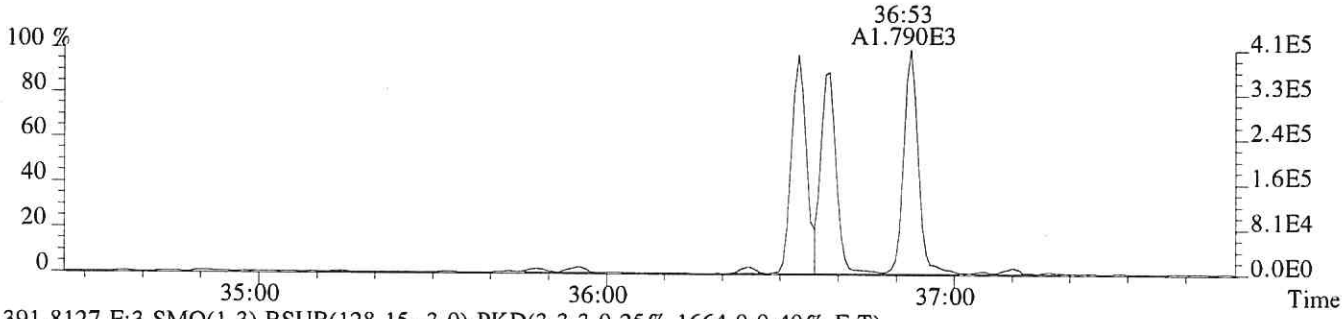
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



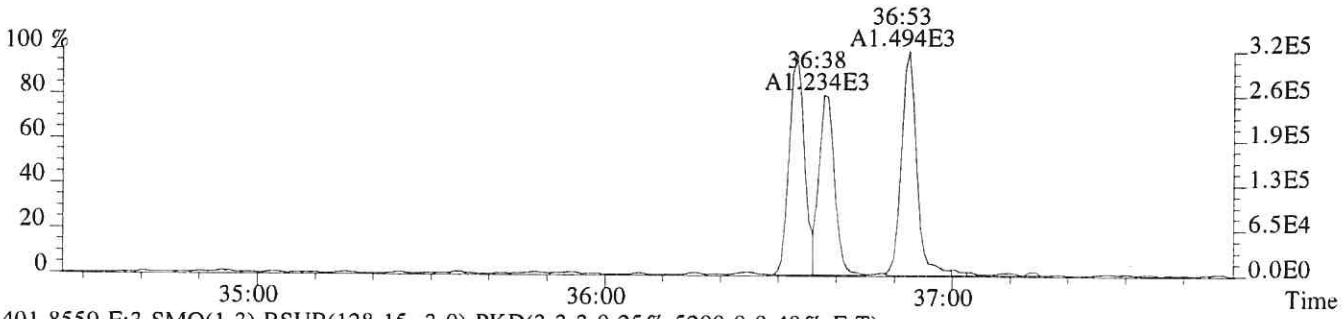
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



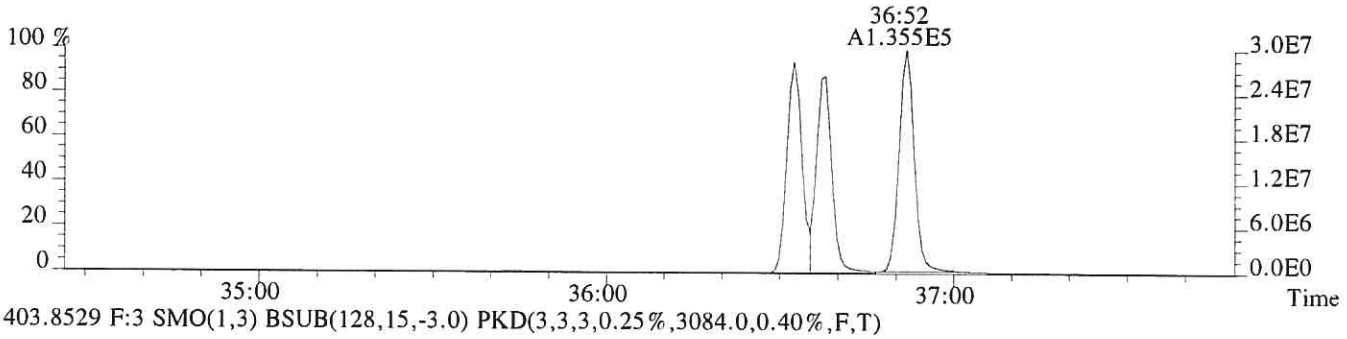
File:P614682 #1-304 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1840.0,0.40%,F,T)



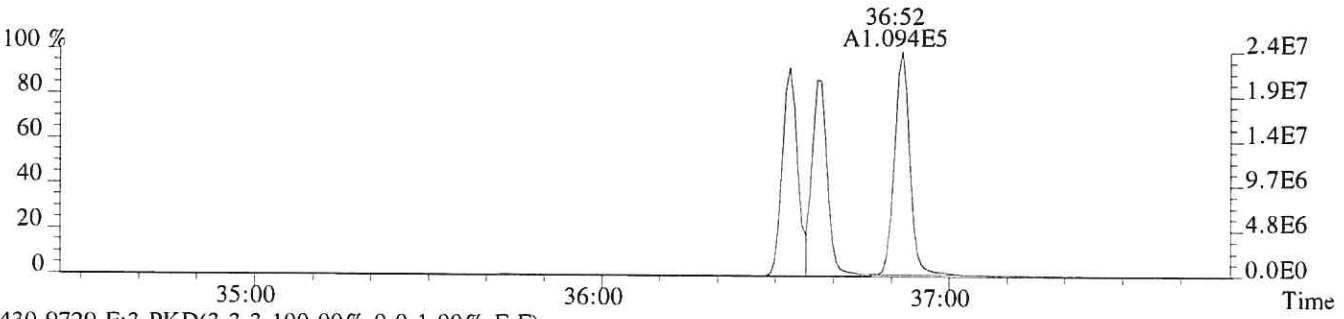
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1664.0,0.40%,F,T)



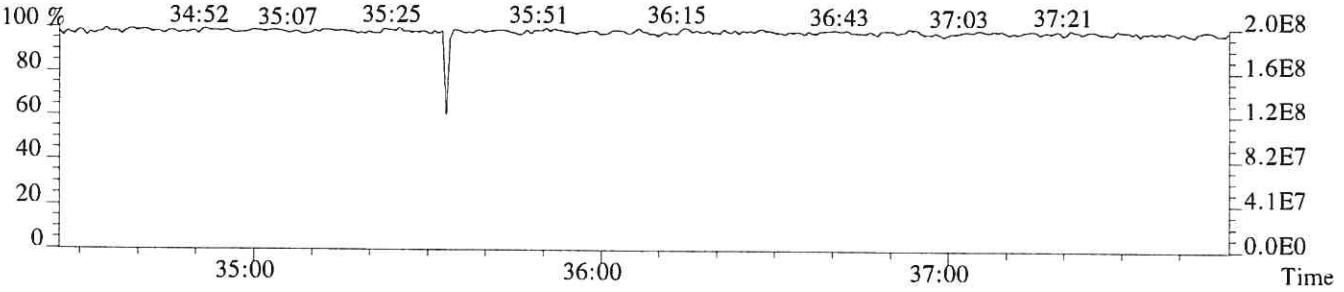
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5200.0,0.40%,F,T)



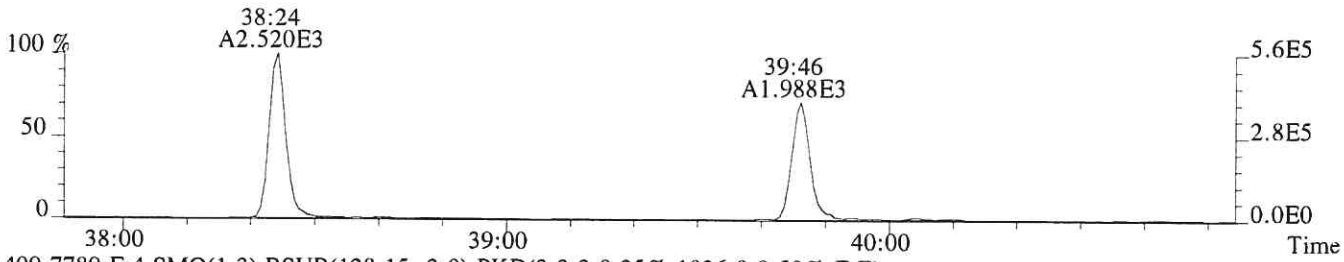
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3084.0,0.40%,F,T)



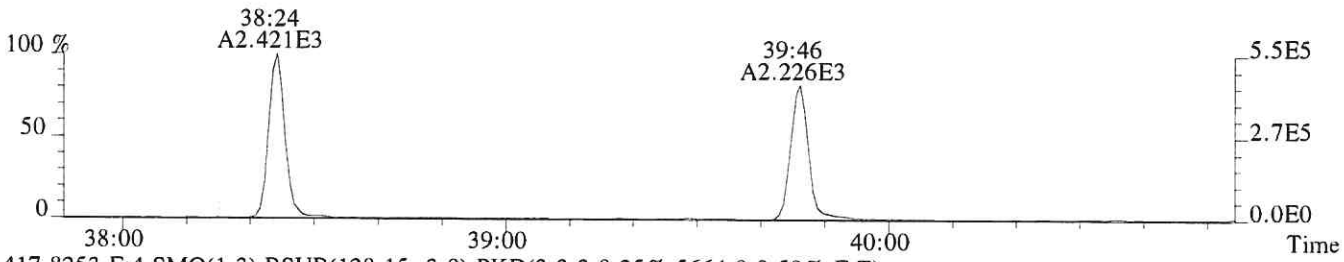
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



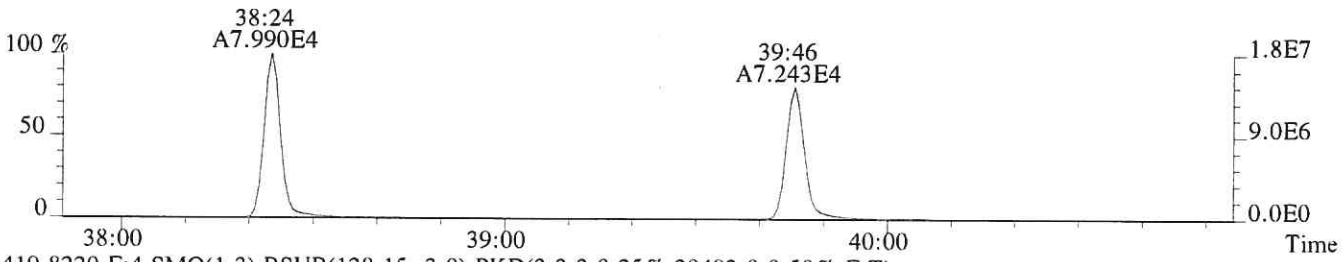
File:P614682 #1-276 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1664.0,0.50%,F,T)



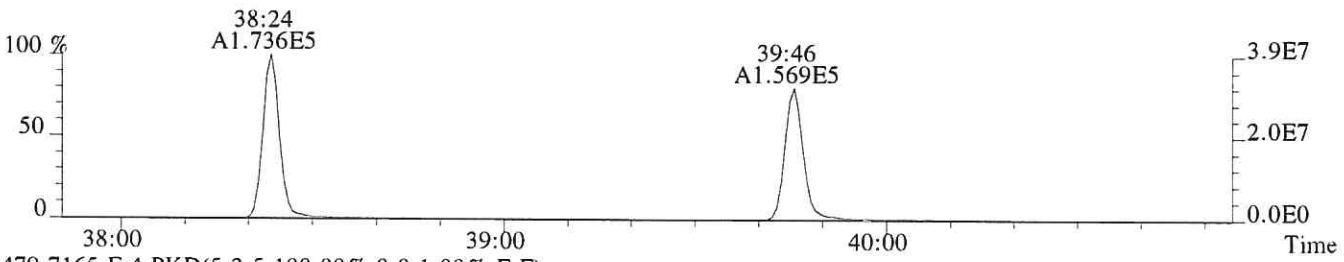
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1036.0,0.50%,F,T)



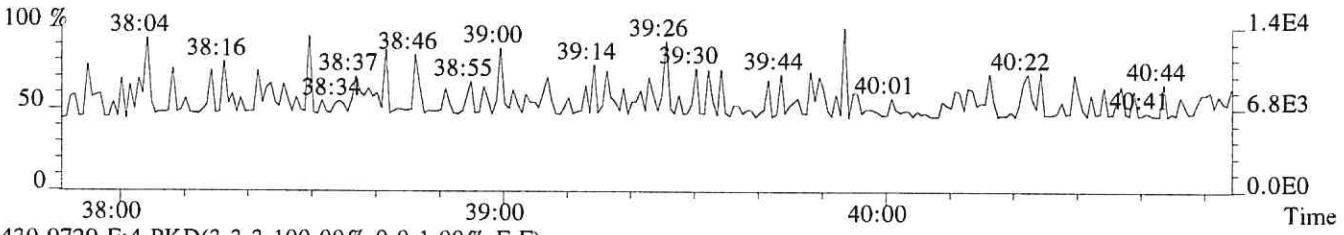
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5664.0,0.50%,F,T)



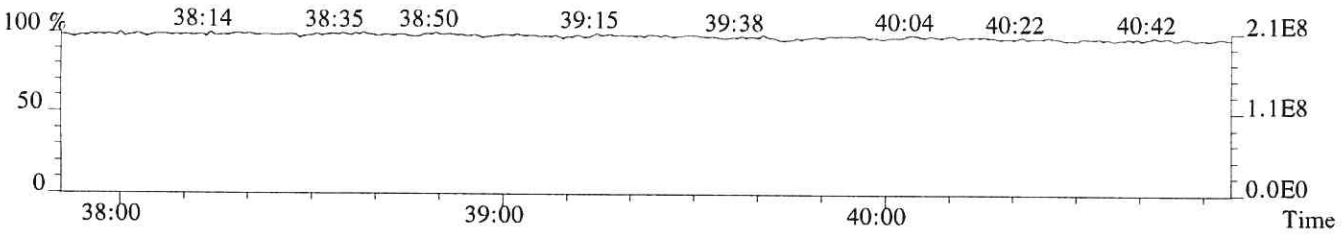
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,20492.0,0.50%,F,T)



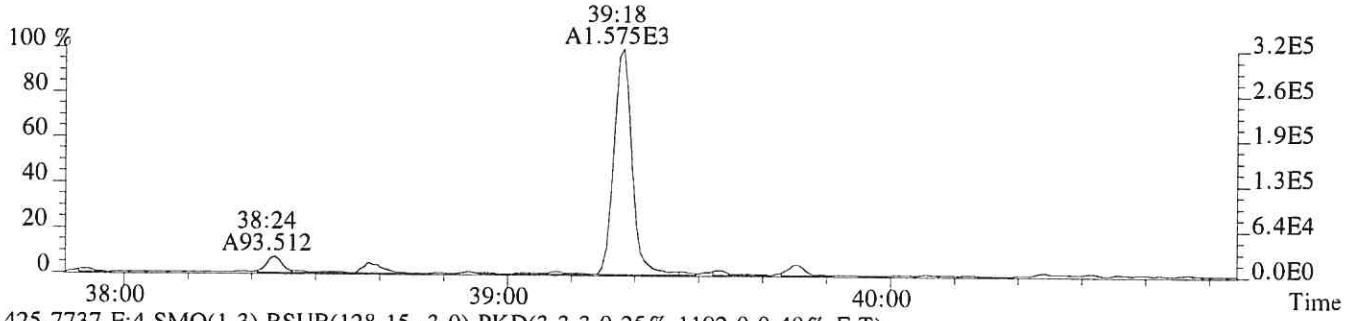
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



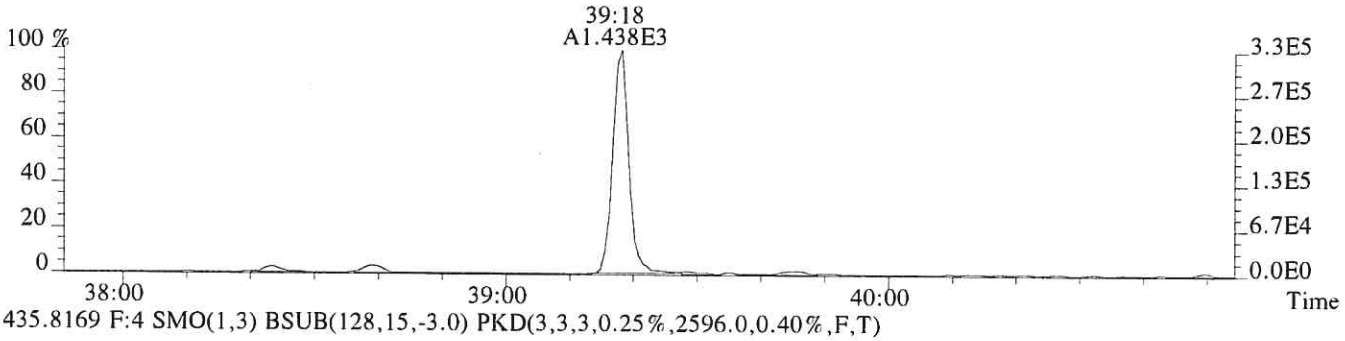
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



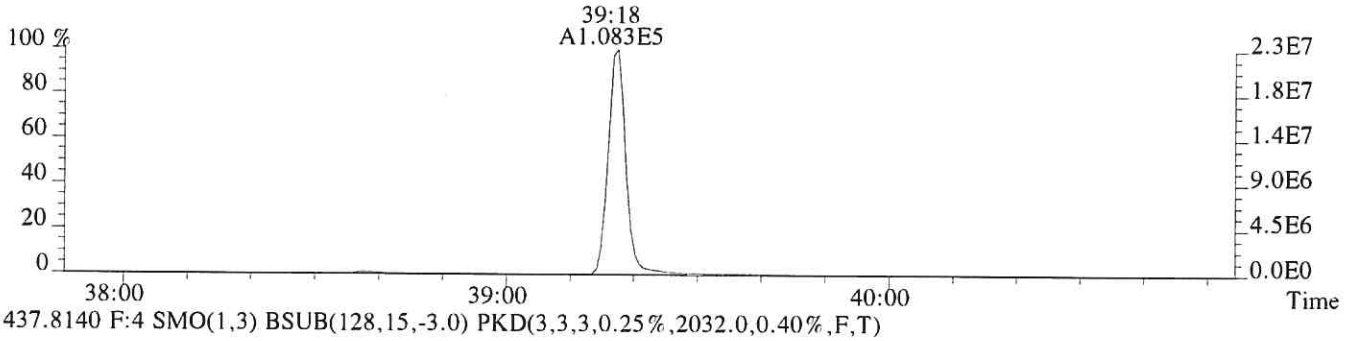
File:P614682 #1-276 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2320.0,0.40%,F,T)



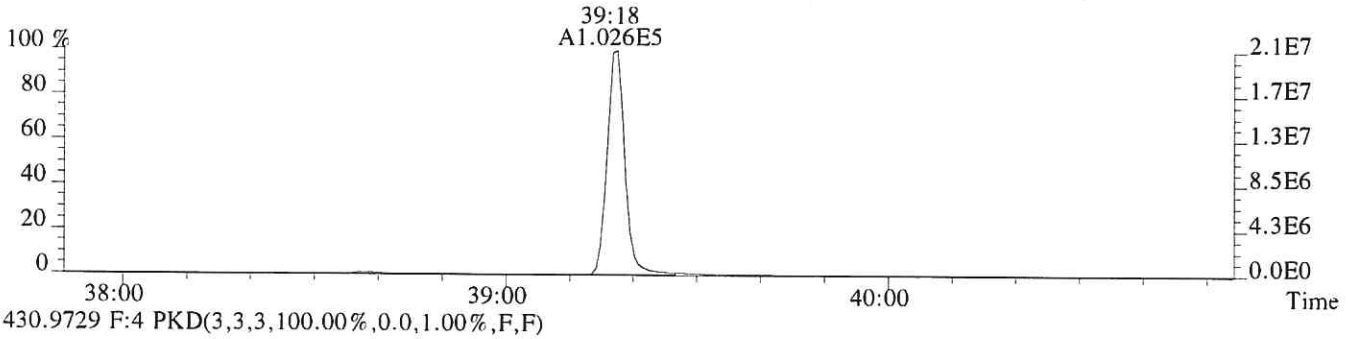
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1192.0,0.40%,F,T)



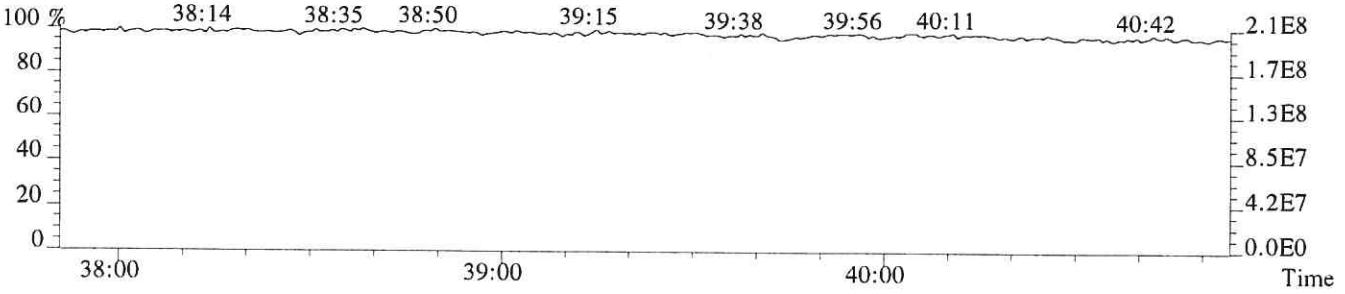
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2596.0,0.40%,F,T)



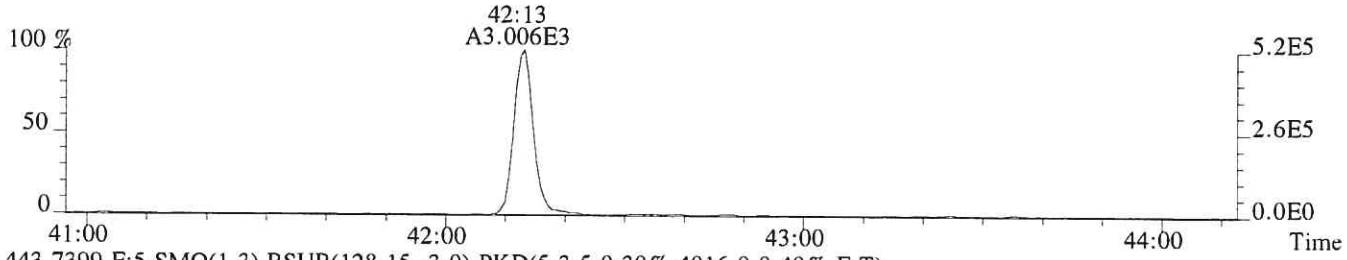
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2032.0,0.40%,F,T)



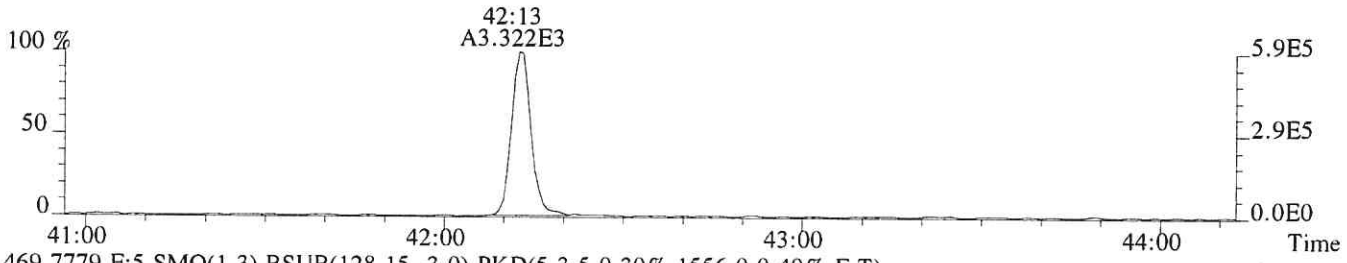
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



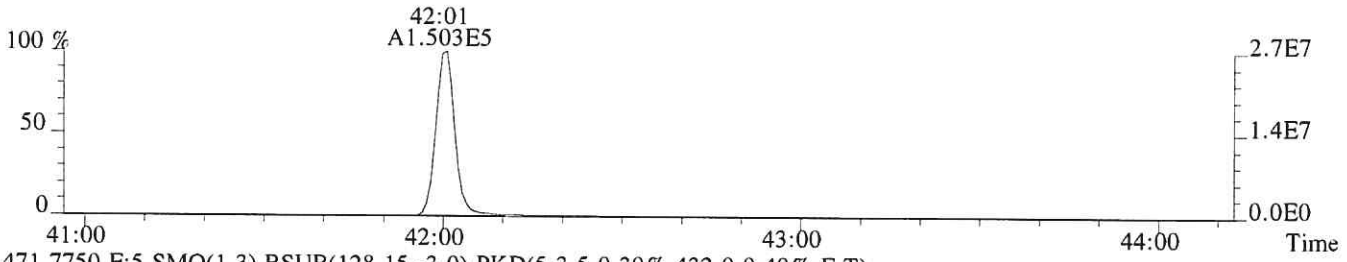
File:P614682 #1-295 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1340.0,0.40%,F,T)



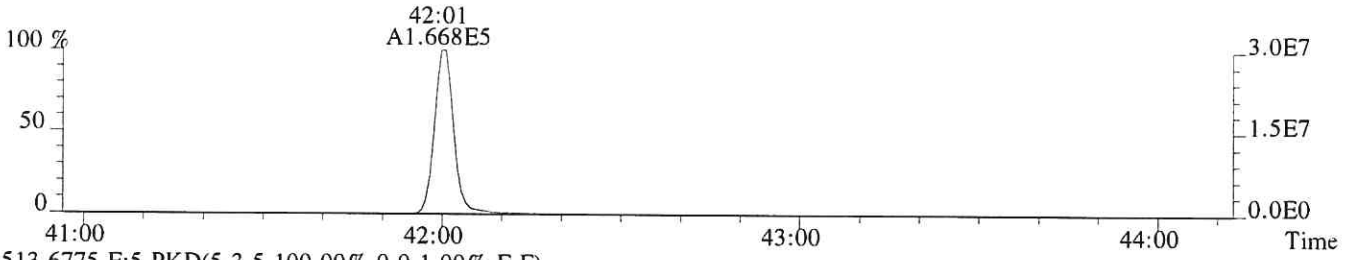
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,4016.0,0.40%,F,T)



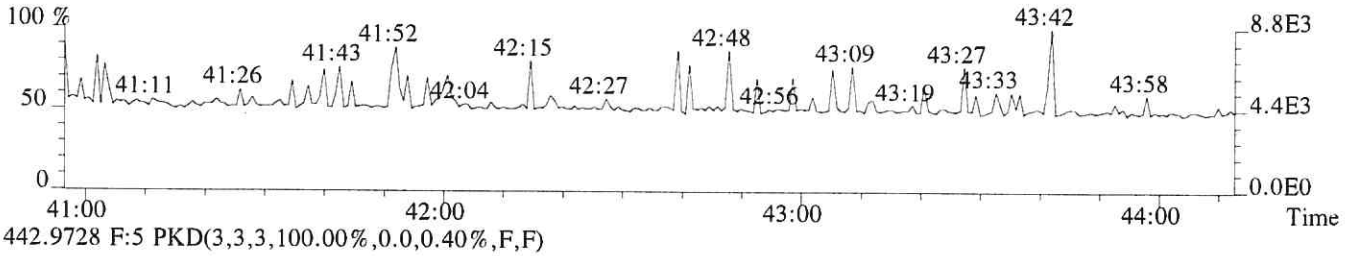
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1556.0,0.40%,F,T)



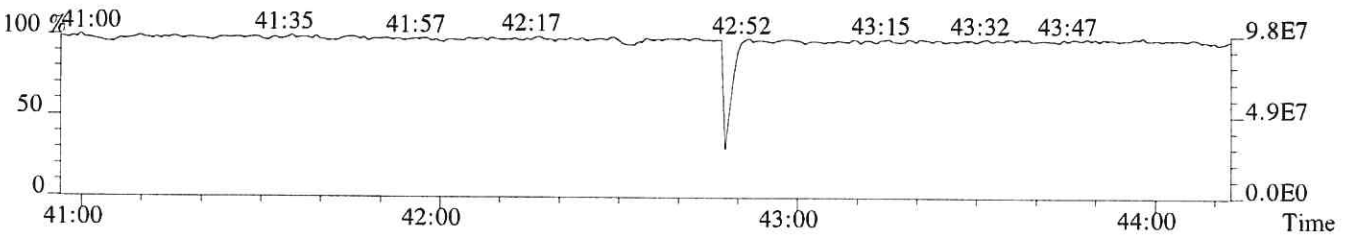
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,432.0,0.40%,F,T)



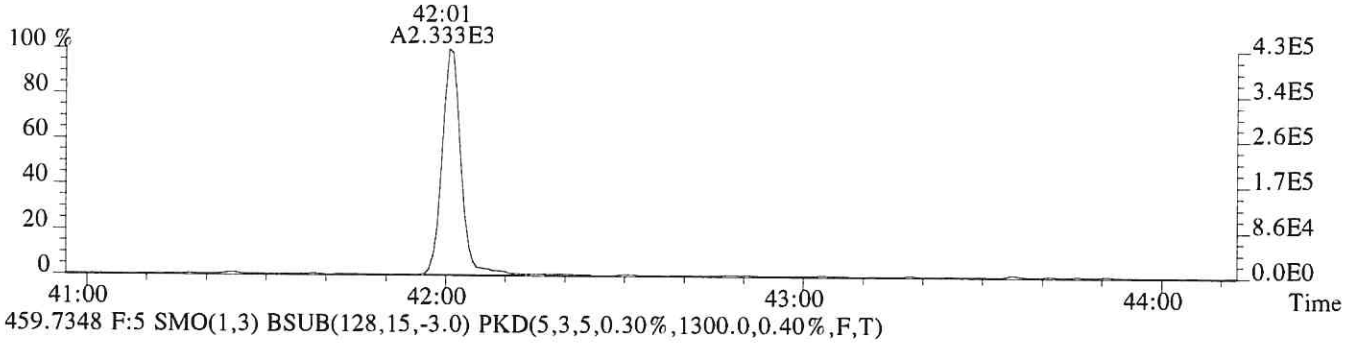
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



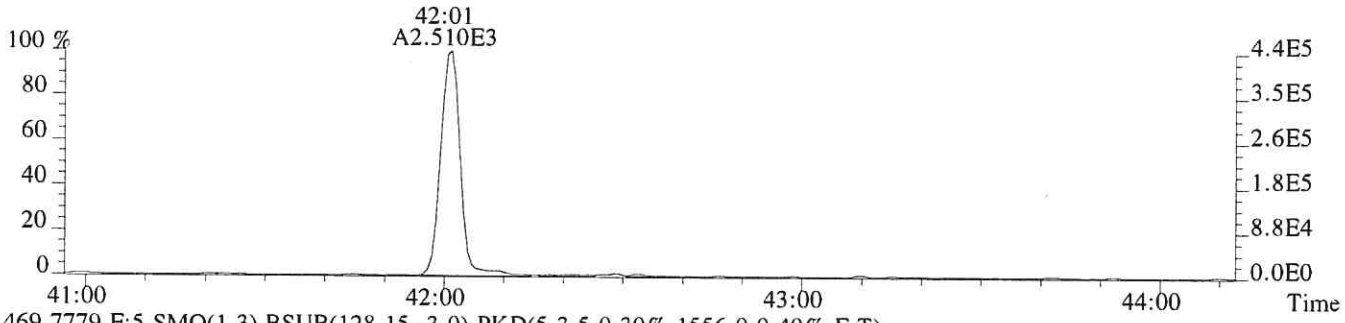
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



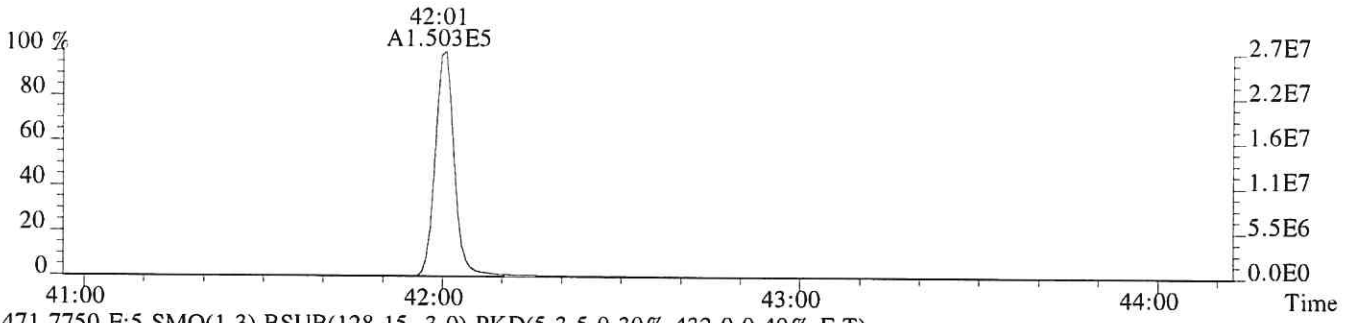
File:P614682 #1-295 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,848.0,0.40%,F,T)



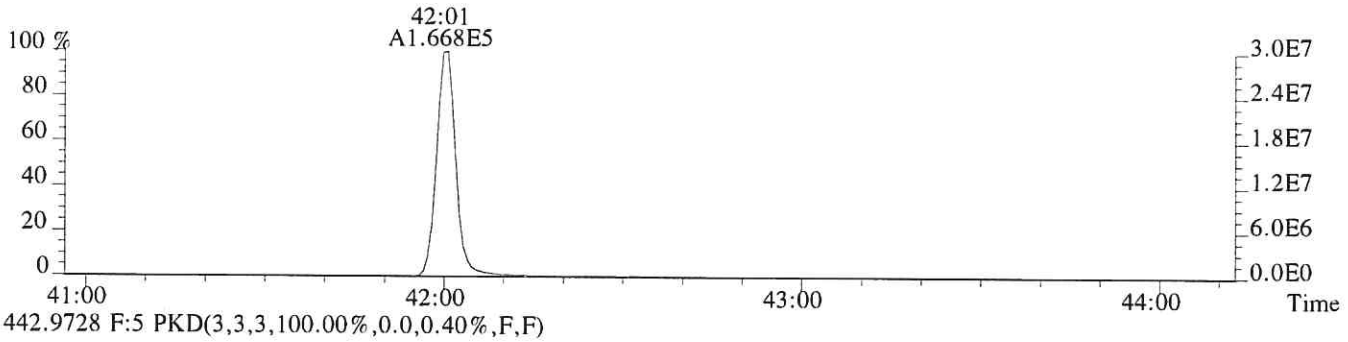
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1300.0,0.40%,F,T)



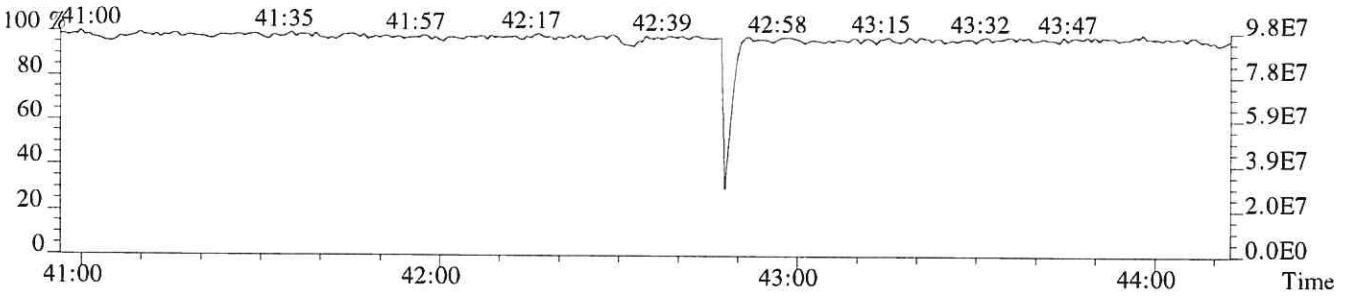
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1556.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,432.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
82614

Run #2 Filename P614683 Samp: 1 Inj: 1 Acquired: 25-SEP-18 15:08:49
Processed: 26-SEP-18 07:39:06 Sample ID: CS1

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:00	9.696e+02	1.301e+03	0.75	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	32:14	8.209e+03	5.211e+03	1.58	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	33:09	7.782e+03	4.847e+03	1.61	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	35:49	7.580e+03	5.860e+03	1.29	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	35:55	7.826e+03	6.295e+03	1.24	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	36:25	7.149e+03	5.707e+03	1.25	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	37:10	6.633e+03	5.137e+03	1.29	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	38:24	6.668e+03	6.509e+03	1.02	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	39:46	5.874e+03	5.515e+03	1.07	yes	no	1.463
10	Unk	OCDF	42:13	7.957e+03	9.190e+03	0.87	yes	no	1.571
11	Unk	2,3,7,8-TCDD	28:48	6.591e+02	7.969e+02	0.83	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	33:26	4.521e+03	2.979e+03	1.52	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	36:33	4.250e+03	3.535e+03	1.20	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	36:38	4.303e+03	3.394e+03	1.27	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	36:52	4.586e+03	3.767e+03	1.22	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	39:18	4.011e+03	3.764e+03	1.07	yes	no	1.112
17	Unk	OCDD	42:01	6.097e+03	6.815e+03	0.89	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	27:59	1.863e+05	2.330e+05	0.80	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	32:14	2.845e+05	1.757e+05	1.62	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	33:08	2.739e+05	1.718e+05	1.59	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	35:48	1.281e+05	2.407e+05	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	35:55	1.461e+05	2.703e+05	0.54	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	36:25	1.362e+05	2.538e+05	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	37:09	1.215e+05	2.294e+05	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:23	1.041e+05	2.259e+05	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:45	9.345e+04	2.024e+05	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	28:47	1.293e+05	1.616e+05	0.80	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	33:25	1.924e+05	1.218e+05	1.58	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	36:32	1.556e+05	1.239e+05	1.26	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	36:37	1.601e+05	1.267e+05	1.26	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:17	1.414e+05	1.336e+05	1.06	yes	no	0.857
32	IS	13C-OCDD	42:00	2.022e+05	2.237e+05	0.90	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	28:13	1.337e+05	1.646e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:51	1.731e+05	1.377e+05	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	28:48	1.653e+03				no	1.086

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
82614

Run #2 Filename P614683 Samp: 1 Inj: 1 Acquired: 25-SEP-18 15:08:49
Processed: 26-SEP-18 07:39:06 LAB. ID: CS1

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.73e+05	2.52e+03	6.9e+01	2.26e+05	4.68e+03	4.8e+01
2	1,2,3,7,8-PeCDF	1.49e+06	1.07e+03	1.4e+03	9.88e+05	5.47e+03	1.8e+02
3	2,3,4,7,8-PeCDF	1.55e+06	1.07e+03	1.5e+03	9.81e+05	5.47e+03	1.8e+02
4	1,2,3,4,7,8-HxCDF	1.64e+06	3.19e+03	5.1e+02	1.29e+06	1.24e+03	1.0e+03
5	1,2,3,6,7,8-HxCDF	1.65e+06	3.19e+03	5.2e+02	1.30e+06	1.24e+03	1.0e+03
6	2,3,4,6,7,8-HxCDF	1.53e+06	3.19e+03	4.8e+02	1.19e+06	1.24e+03	9.6e+02
7	1,2,3,7,8,9-HxCDF	1.37e+06	3.19e+03	4.3e+02	1.06e+06	1.24e+03	8.5e+02
8	1,2,3,4,6,7,8-HpCDF	1.48e+06	1.97e+03	7.5e+02	1.45e+06	1.25e+03	1.2e+03
9	1,2,3,4,7,8,9-HpCDF	1.19e+06	1.97e+03	6.0e+02	1.11e+06	1.25e+03	8.9e+02
10	OCDF	1.45e+06	1.15e+03	1.3e+03	1.64e+06	2.28e+03	7.2e+02
11	2,3,7,8-TCDD	1.20e+05	6.88e+03	1.7e+01	1.48e+05	2.99e+03	5.0e+01
12	1,2,3,7,8-PeCDD	8.64e+05	2.37e+03	3.6e+02	5.83e+05	1.39e+03	4.2e+02
13	1,2,3,4,7,8-HxCDD	9.60e+05	1.02e+03	9.4e+02	8.07e+05	1.68e+03	4.8e+02
14	1,2,3,6,7,8-HxCDD	9.46e+05	1.02e+03	9.3e+02	7.52e+05	1.68e+03	4.5e+02
15	1,2,3,7,8,9-HxCDD	1.01e+06	1.02e+03	9.9e+02	8.34e+05	1.68e+03	5.0e+02
16	1,2,3,4,6,7,8-HpCDD	8.38e+05	1.17e+03	7.2e+02	8.29e+05	4.84e+02	1.7e+03
17	OCDD	1.16e+06	3.14e+03	3.7e+02	1.30e+06	1.96e+03	6.6e+02
18	13C-2,3,7,8-TCDF	3.28e+07	1.64e+04	2.0e+03	4.11e+07	1.27e+04	3.2e+03
19	13C-1,2,3,7,8-PeCDF	5.29e+07	3.44e+03	1.5e+04	3.26e+07	2.57e+03	1.3e+04
20	13C-2,3,4,7,8-PeCDF	5.43e+07	3.44e+03	1.6e+04	3.38e+07	2.57e+03	1.3e+04
21	13C-1,2,3,4,7,8-HxCDF	2.86e+07	3.47e+03	8.3e+03	5.39e+07	4.48e+03	1.2e+04
22	13C-1,2,3,6,7,8-HxCDF	3.07e+07	3.47e+03	8.8e+03	5.68e+07	4.48e+03	1.3e+04
23	13C-2,3,4,6,7,8-HxCDF	2.95e+07	3.47e+03	8.5e+03	5.46e+07	4.48e+03	1.2e+04
24	13C-1,2,3,7,8,9-HxCDF	2.51e+07	3.47e+03	7.2e+03	4.72e+07	4.48e+03	1.1e+04
25	13C-1,2,3,4,6,7,8-HpCDF	2.28e+07	1.29e+04	1.8e+03	4.99e+07	2.56e+04	2.0e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.87e+07	1.29e+04	1.5e+03	4.06e+07	2.56e+04	1.6e+03
27	13C-2,3,7,8-TCDD	2.37e+07	1.79e+04	1.3e+03	2.98e+07	7.48e+03	4.0e+03
28	13C-1,2,3,7,8-PeCDD	3.81e+07	3.05e+03	1.3e+04	2.43e+07	1.79e+03	1.4e+04
29	13C-1,2,3,4,7,8-HxCDD	3.53e+07	4.99e+03	7.1e+03	2.84e+07	2.28e+03	1.2e+04
30	13C-1,2,3,6,7,8-HxCDD	3.46e+07	4.99e+03	6.9e+03	2.73e+07	2.28e+03	1.2e+04
31	13C-1,2,3,4,6,7,8-HpCDD	3.08e+07	3.94e+03	7.8e+03	2.93e+07	1.60e+03	1.8e+04
32	13C-OCDD	3.85e+07	1.12e+03	3.4e+04	4.22e+07	1.86e+03	2.3e+04
33	13C-1,2,3,4-TCDD	2.49e+07	1.79e+04	1.4e+03	3.07e+07	7.48e+03	4.1e+03
34	13C-1,2,3,7,8,9-HxCDD	3.76e+07	4.99e+03	7.5e+03	3.01e+07	2.28e+03	1.3e+04
35	37Cl-2,3,7,8-TCDD	3.03e+05	3.87e+03	7.8e+01			

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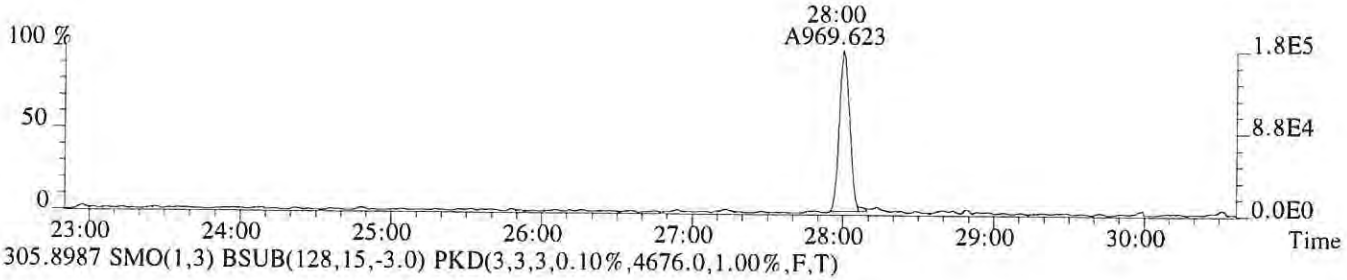
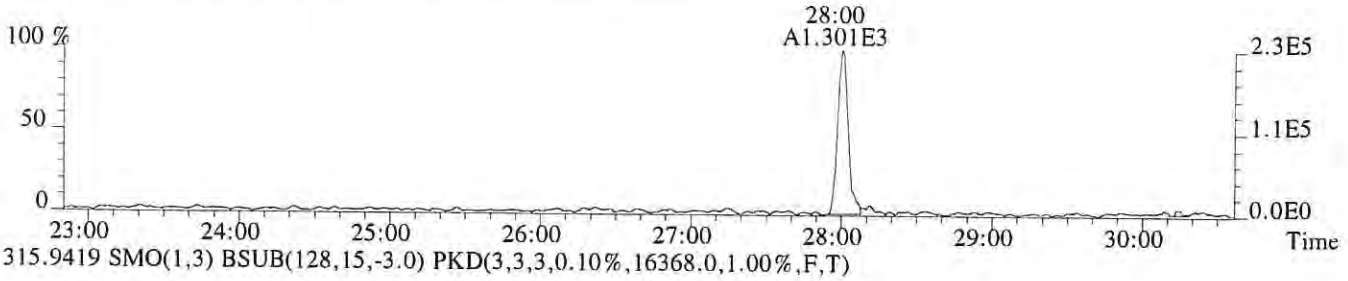
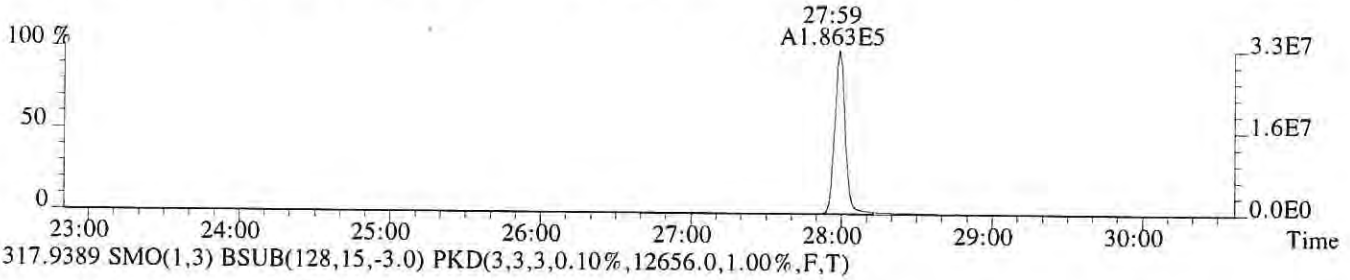
File:P614683 #1-552 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2516.0,1.00%,F,T)



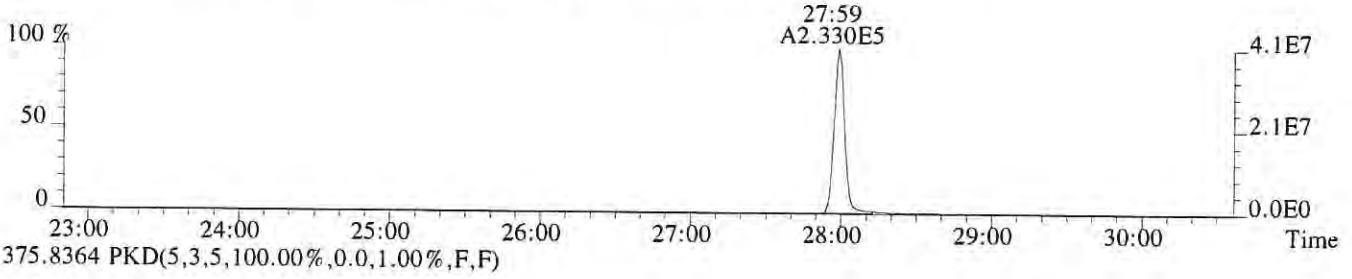
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4676.0,1.00%,F,T)



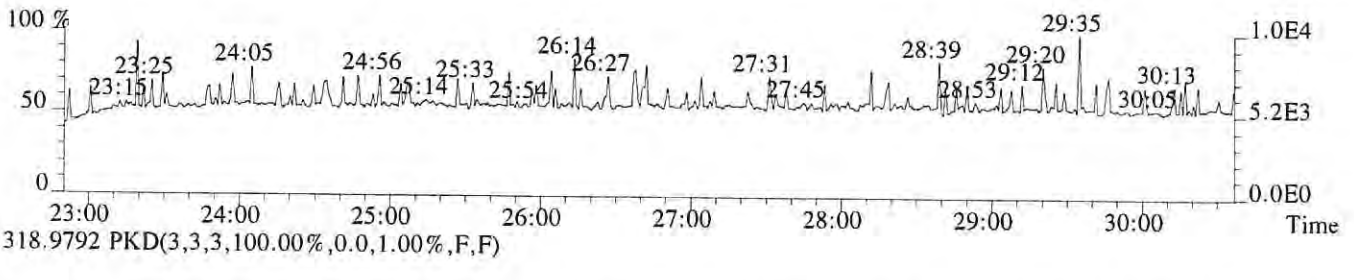
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,16368.0,1.00%,F,T)



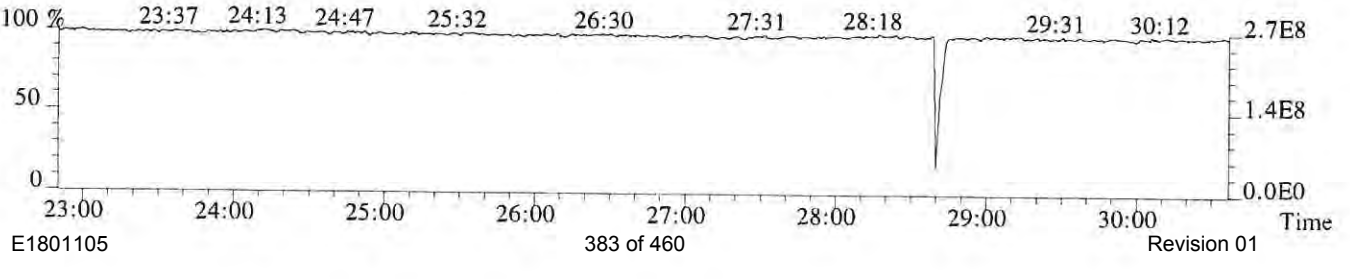
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12656.0,1.00%,F,T)



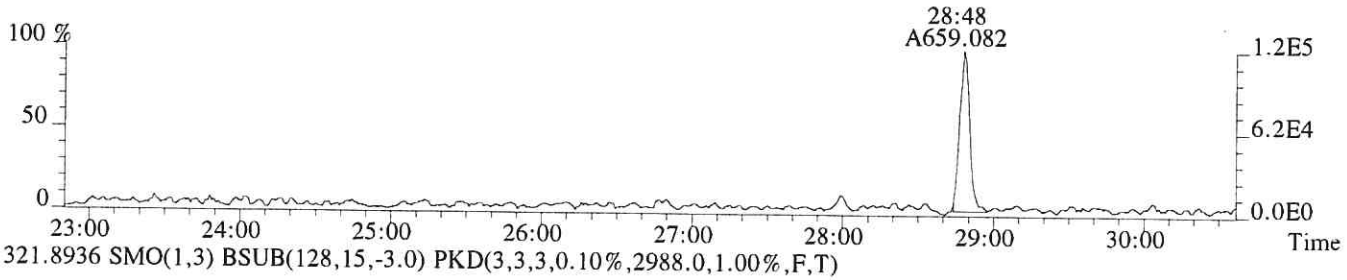
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



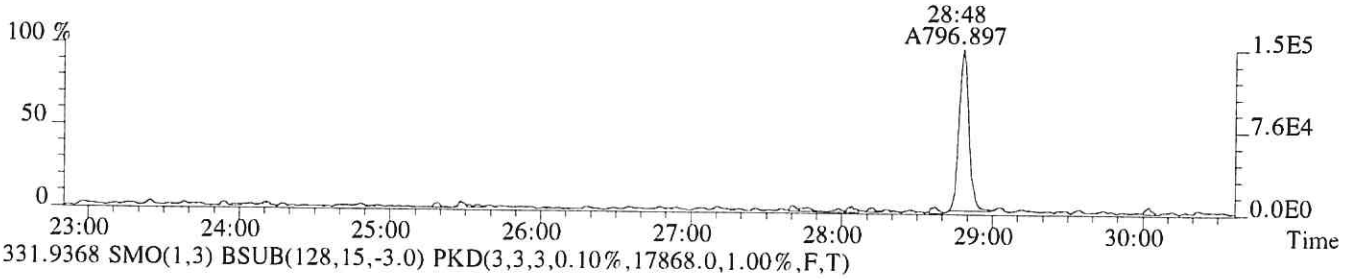
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



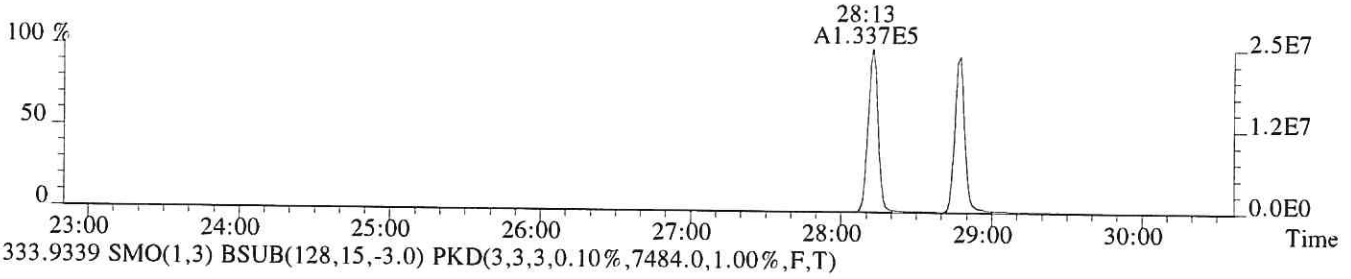
File:P614683 #1-552 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6880.0,1.00%,F,T)



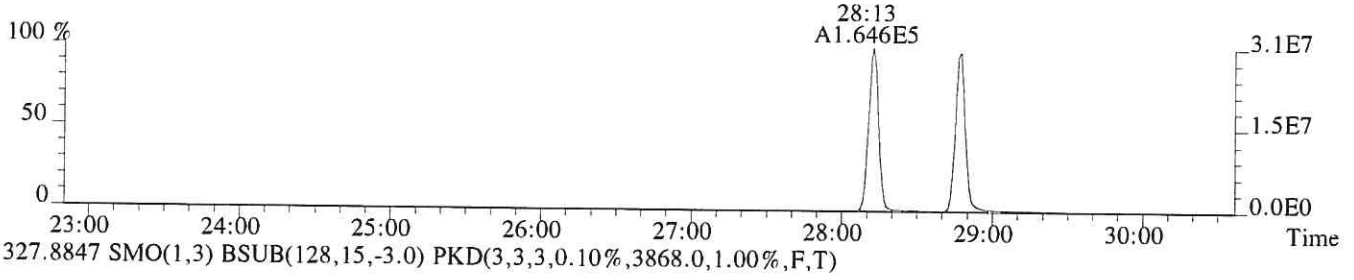
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2988.0,1.00%,F,T)



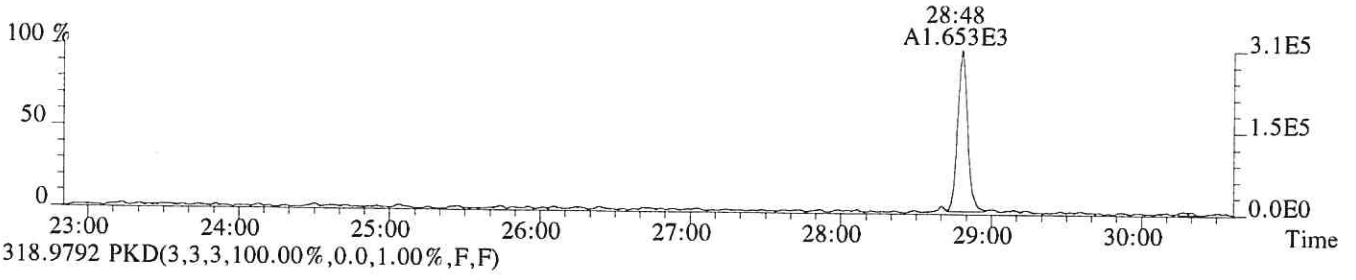
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,17868.0,1.00%,F,T)



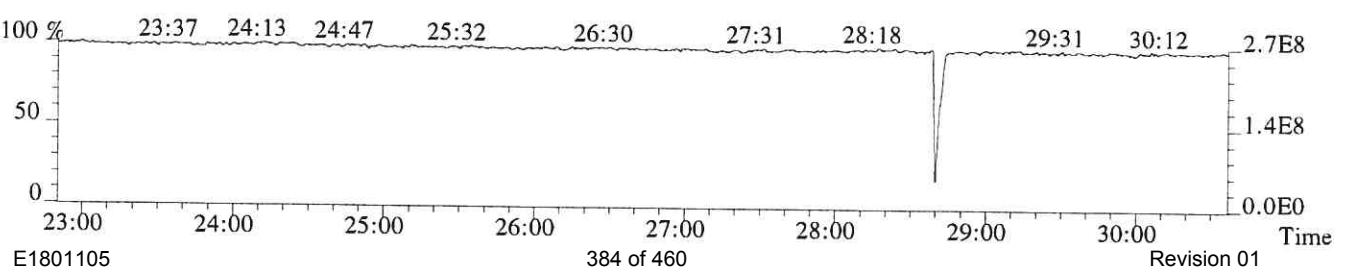
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7484.0,1.00%,F,T)



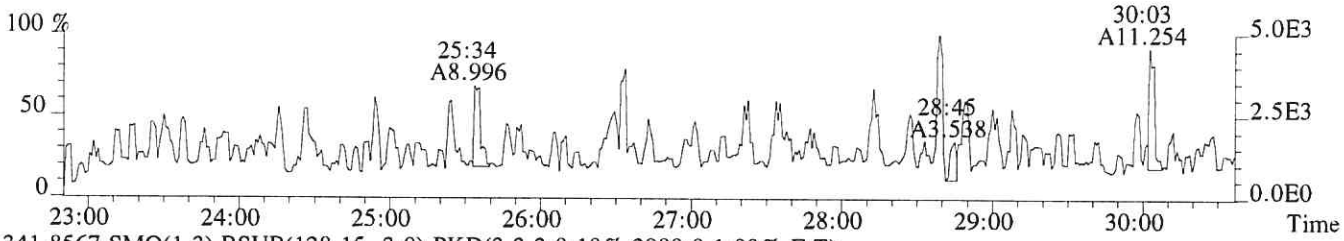
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3868.0,1.00%,F,T)



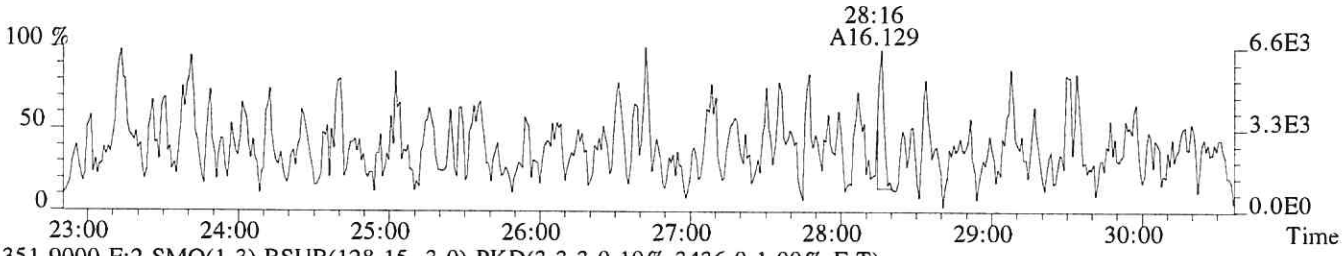
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



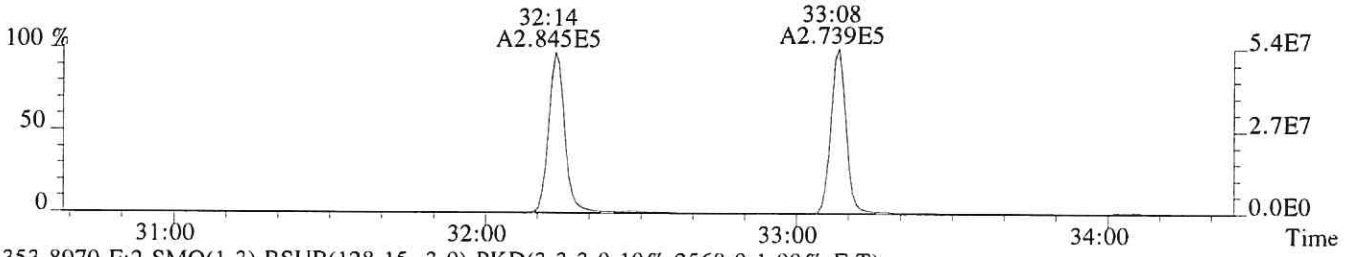
File:P614683 #1-552 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1796.0,1.00%,F,T)



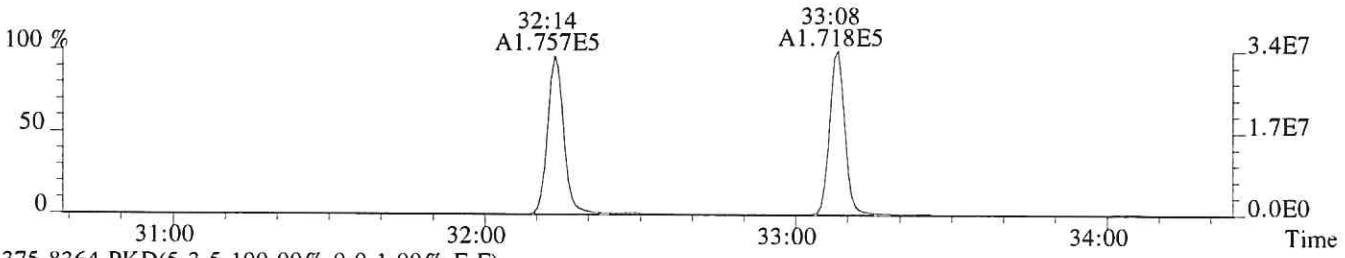
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2980.0,1.00%,F,T)



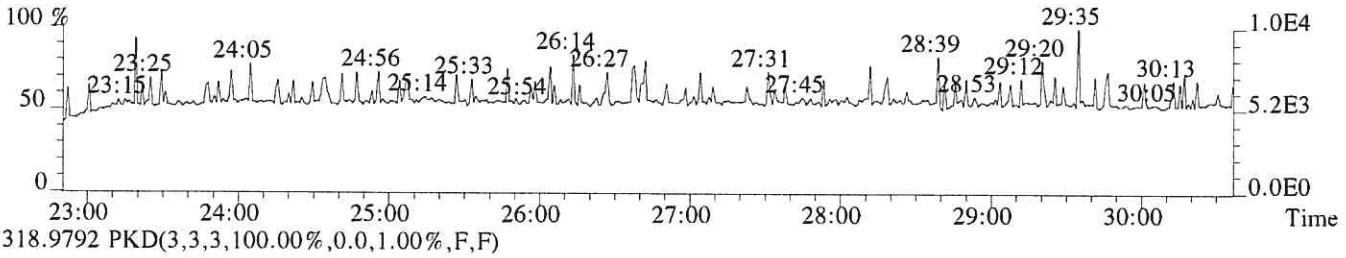
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3436.0,1.00%,F,T)



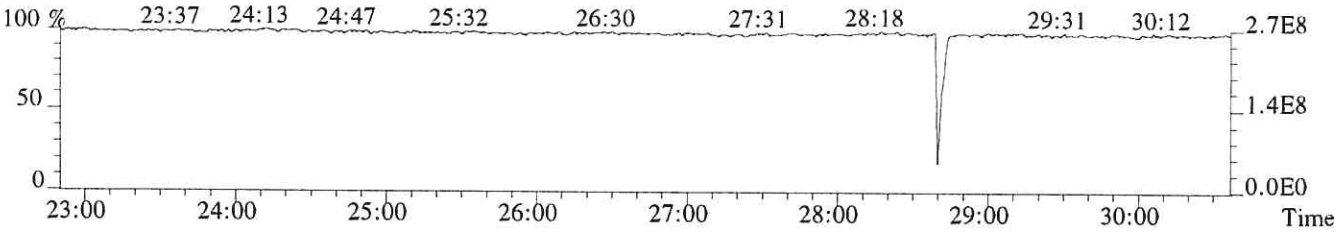
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2568.0,1.00%,F,T)



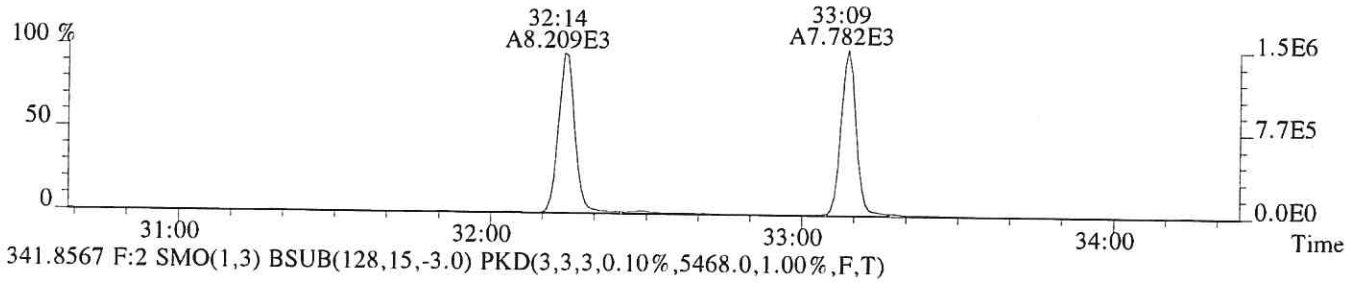
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



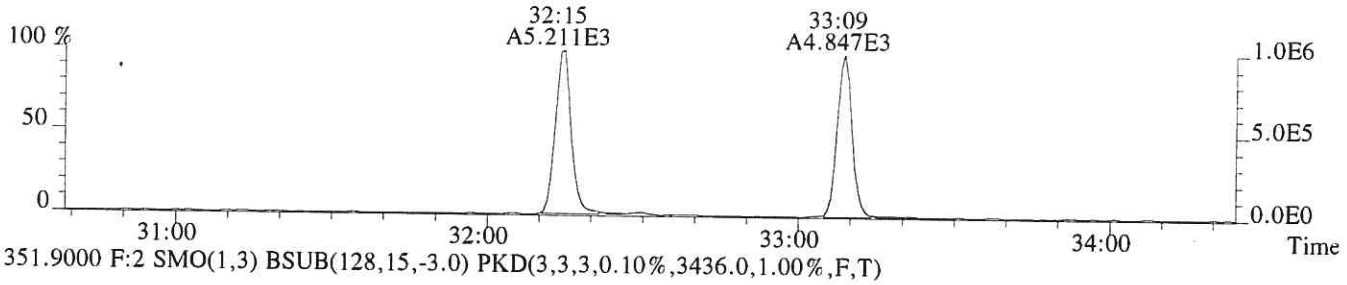
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



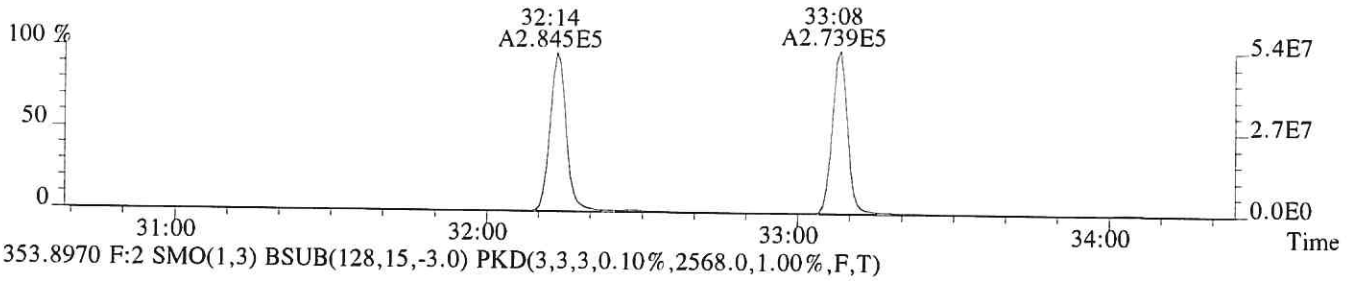
File:P614683 #1-339 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1068.0,1.00%,F,T)



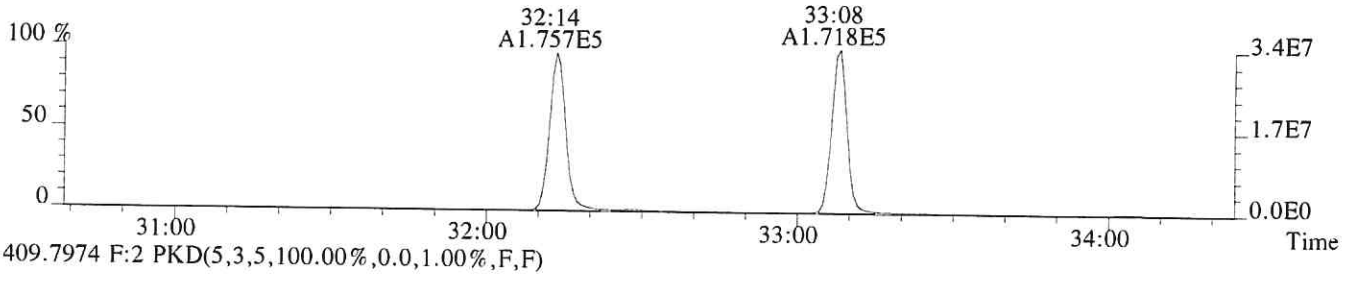
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5468.0,1.00%,F,T)



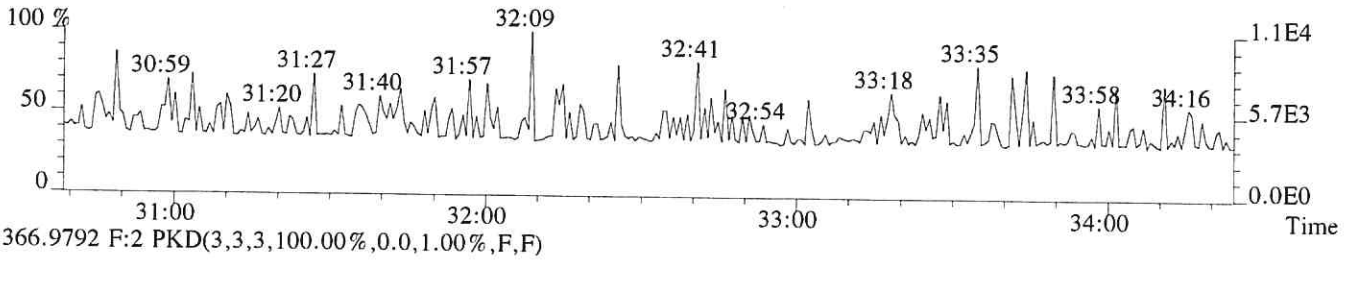
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3436.0,1.00%,F,T)



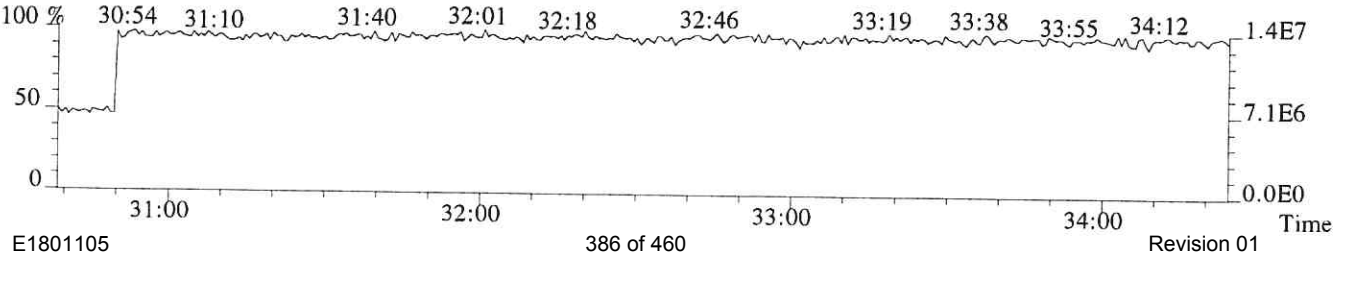
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2568.0,1.00%,F,T)



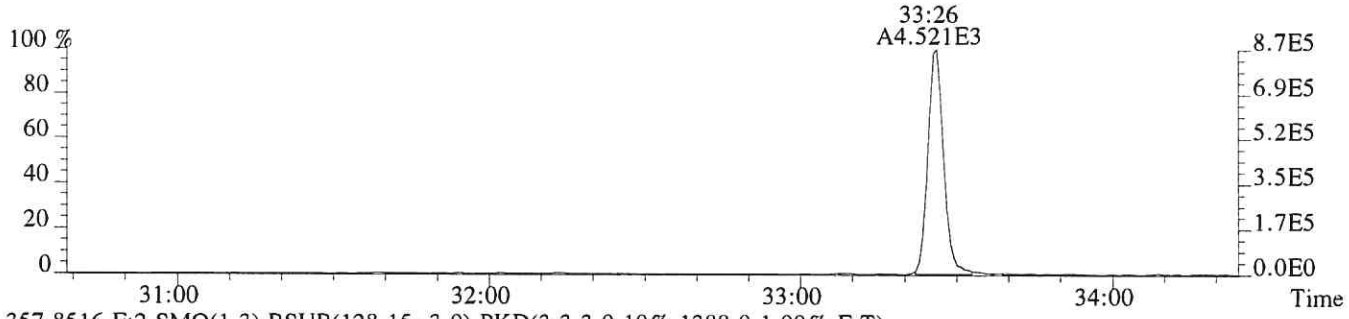
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



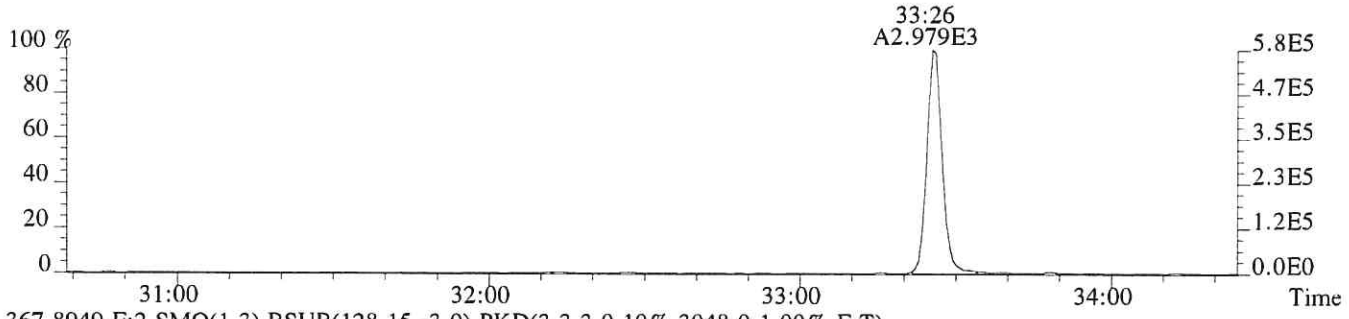
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



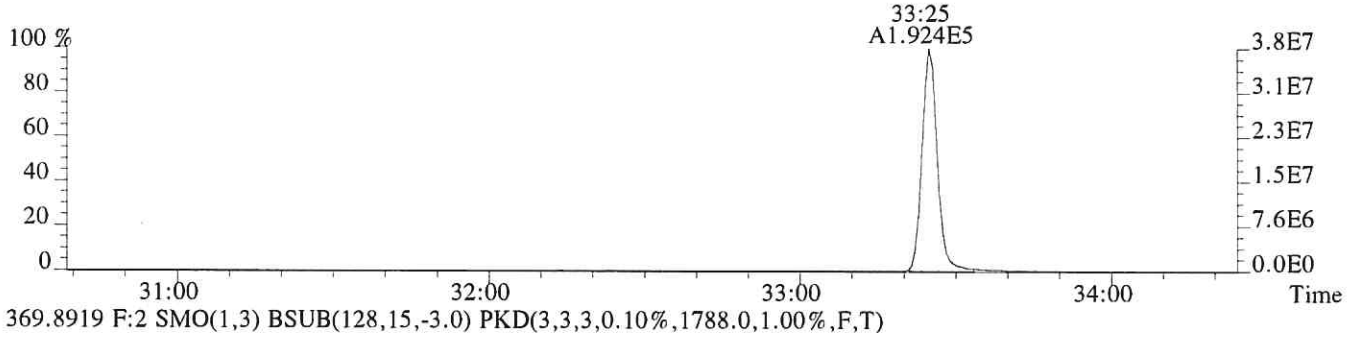
File:P614683 #1-339 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2368.0,1.00%,F,T)



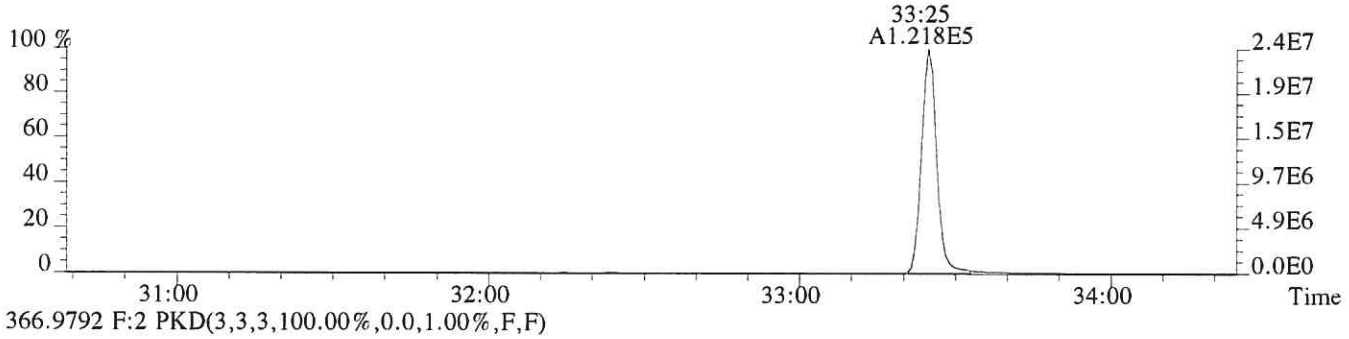
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1388.0,1.00%,F,T)



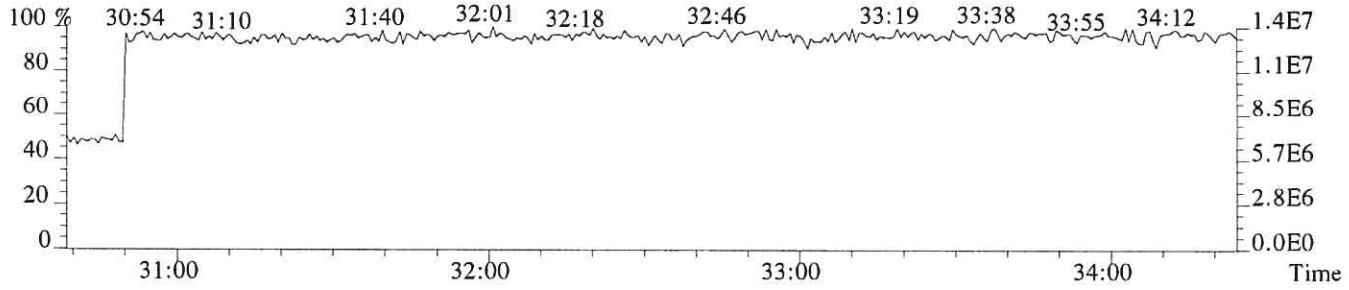
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3048.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1788.0,1.00%,F,T)

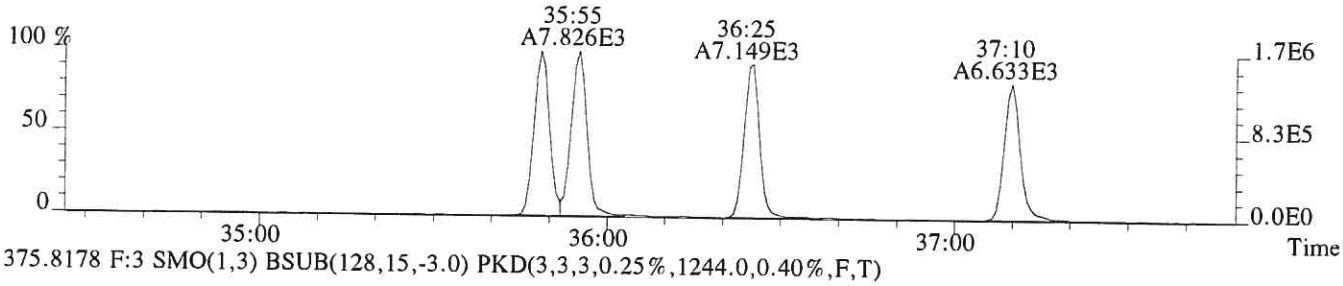


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

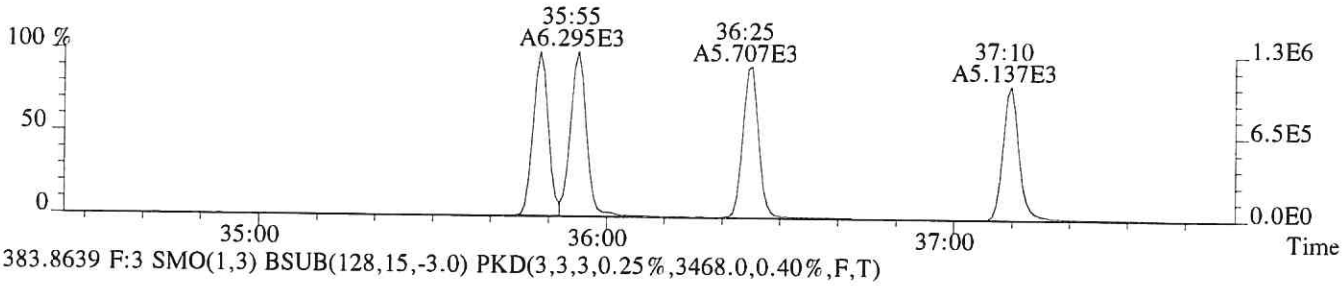


File:P614683 #1-304 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1

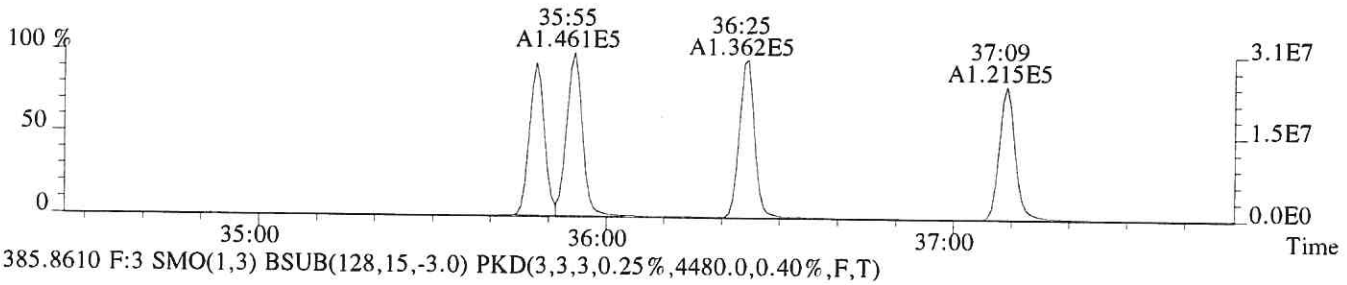
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3192.0,0.40%,F,T)



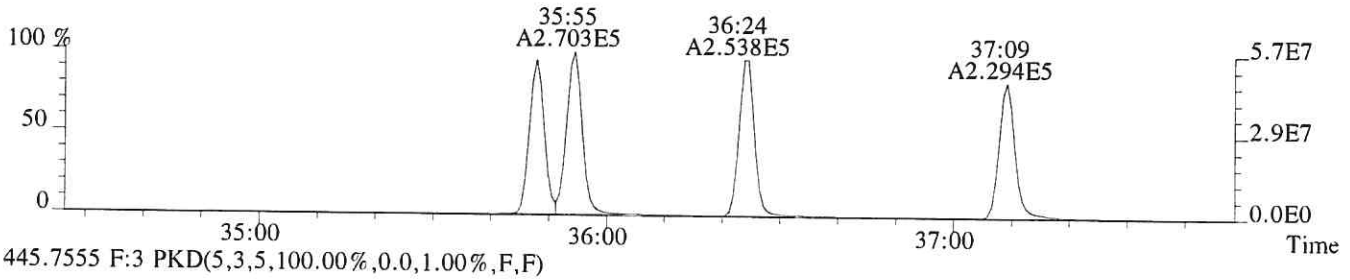
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1244.0,0.40%,F,T)



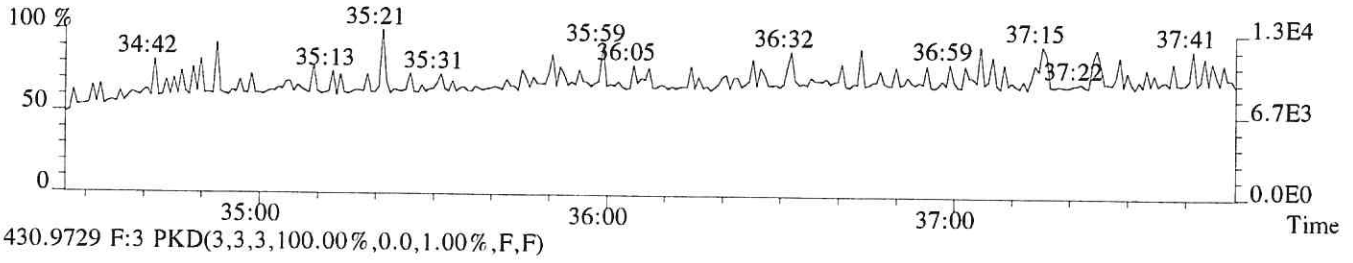
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3468.0,0.40%,F,T)



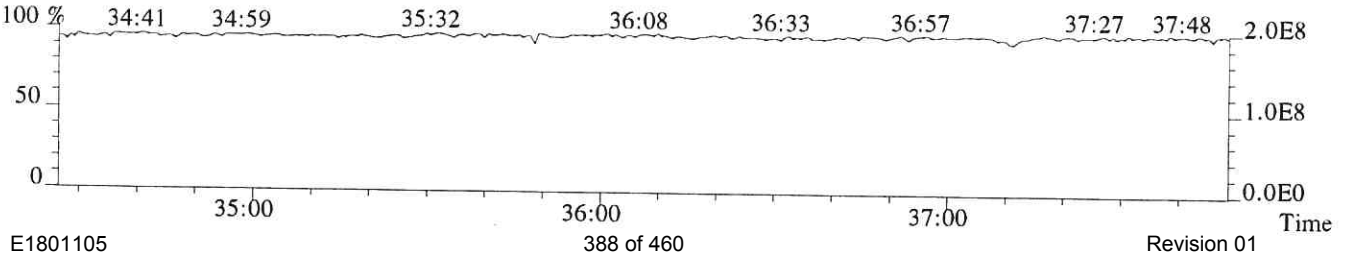
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4480.0,0.40%,F,T)



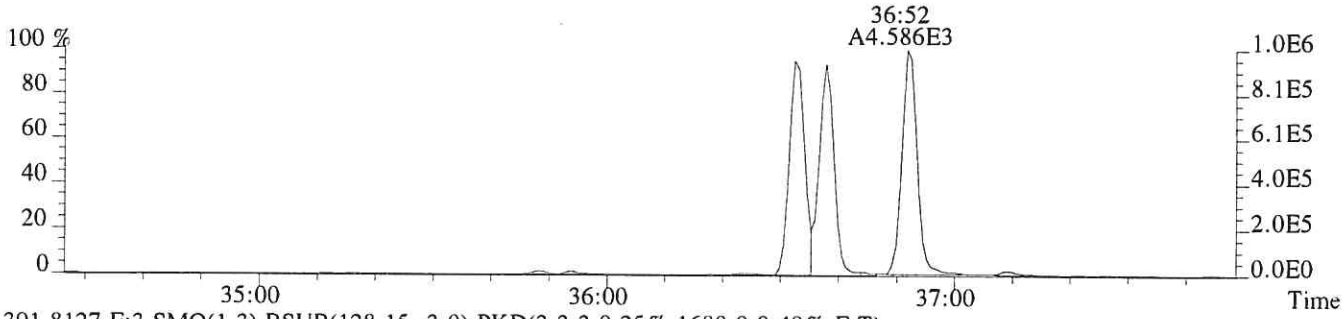
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



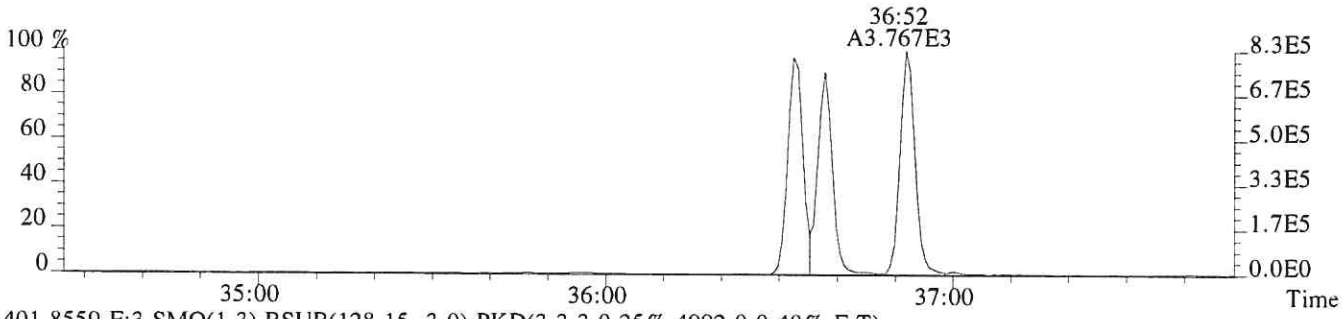
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



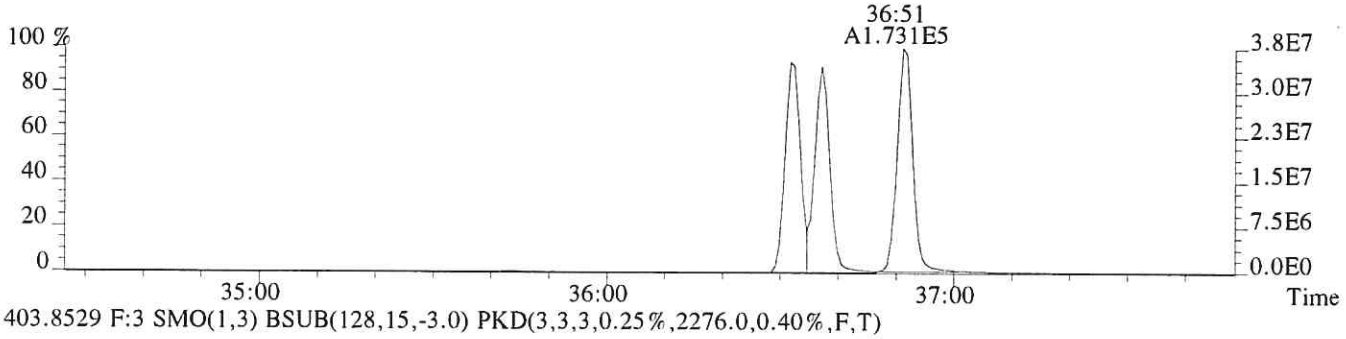
File:P614683 #1-304 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1020.0,0.40%,F,T)



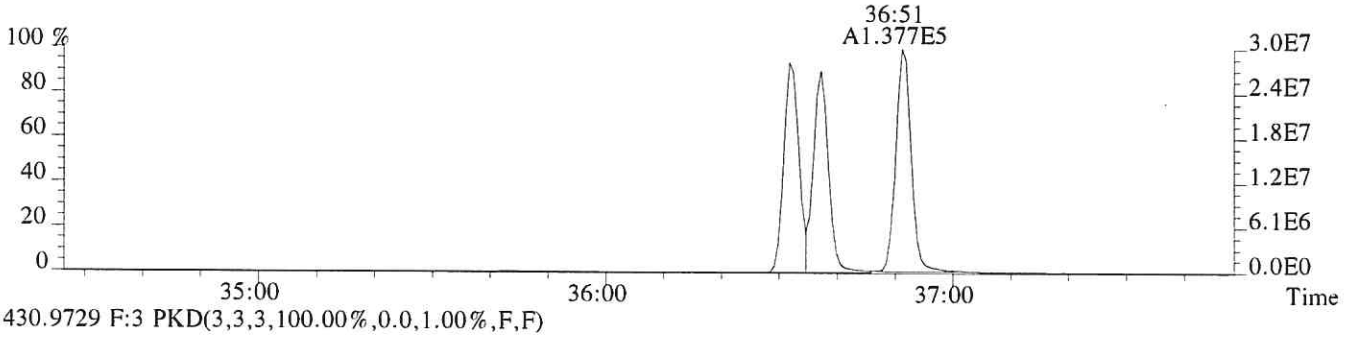
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1680.0,0.40%,F,T)



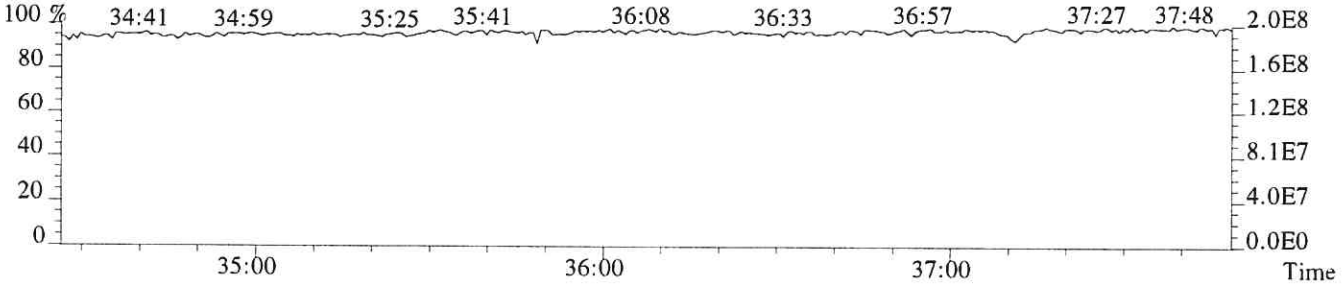
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4992.0,0.40%,F,T)



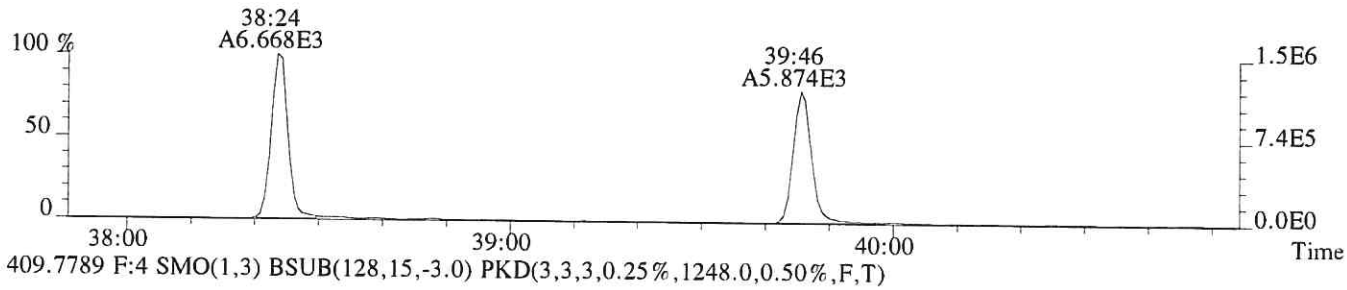
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2276.0,0.40%,F,T)



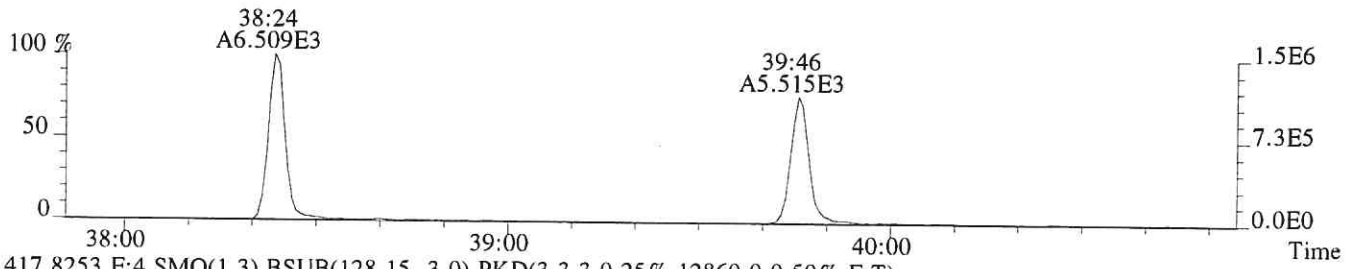
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



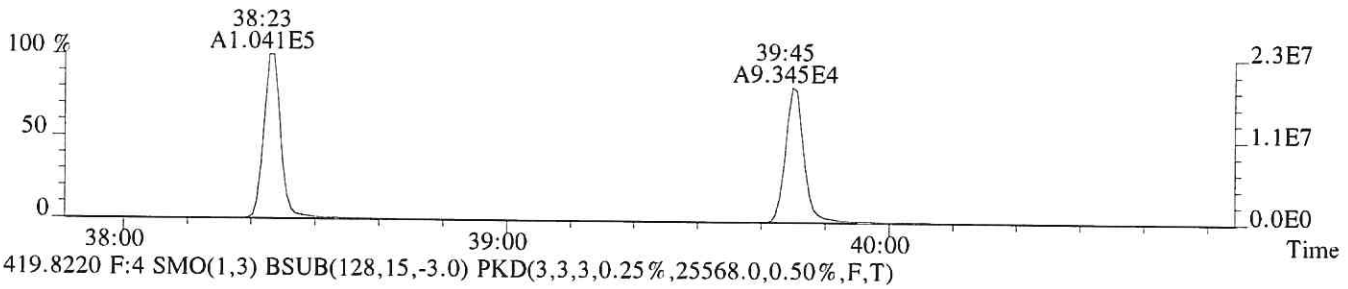
File:P614683 #1-276 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1968.0,0.50%,F,T)



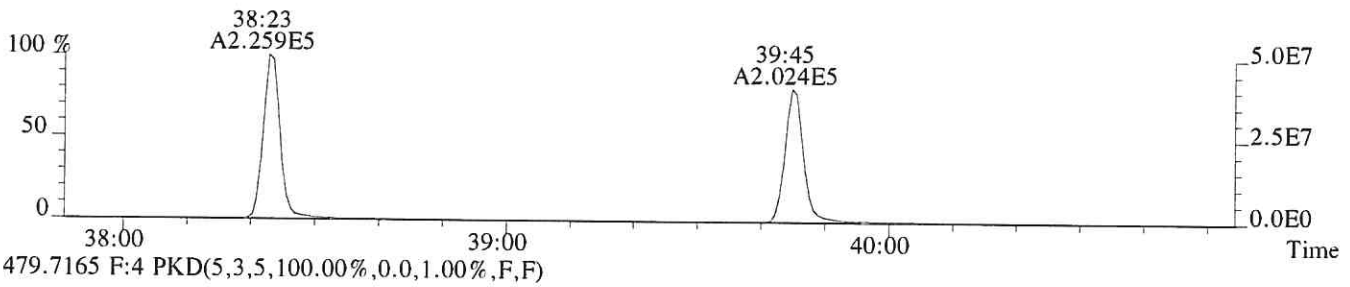
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1248.0,0.50%,F,T)



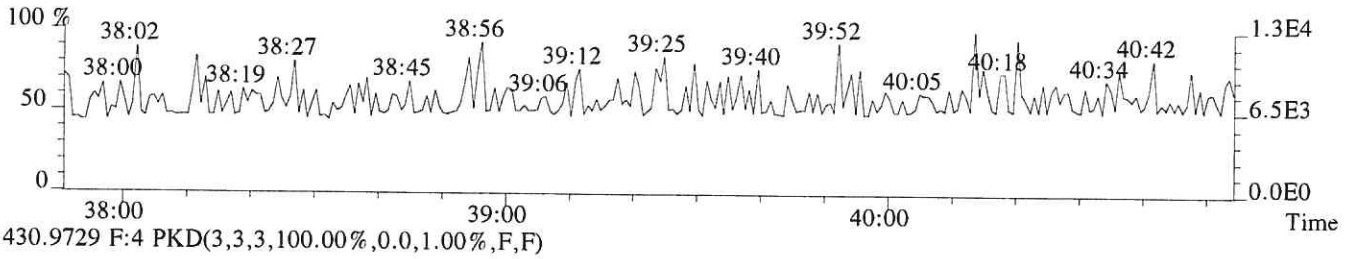
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,12860.0,0.50%,F,T)



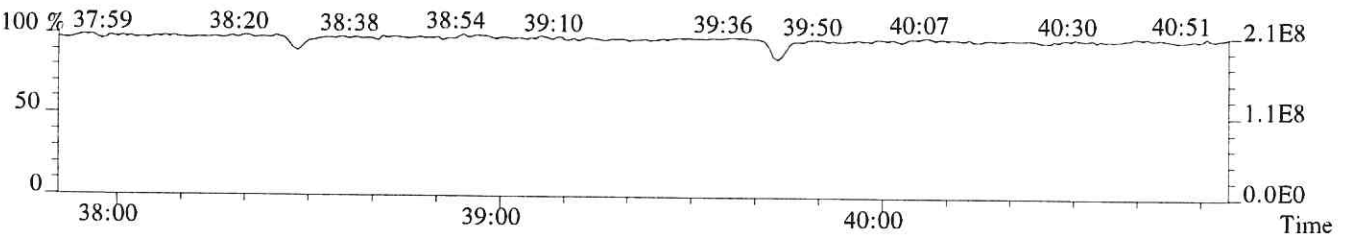
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,25568.0,0.50%,F,T)



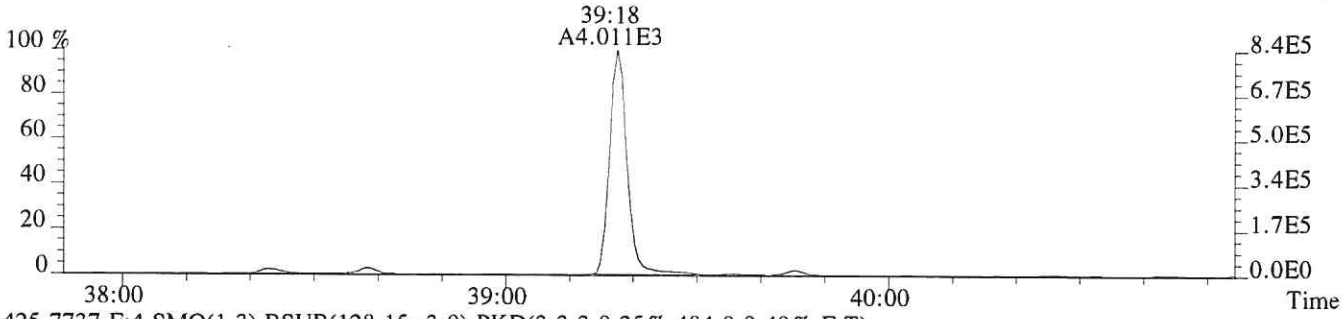
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



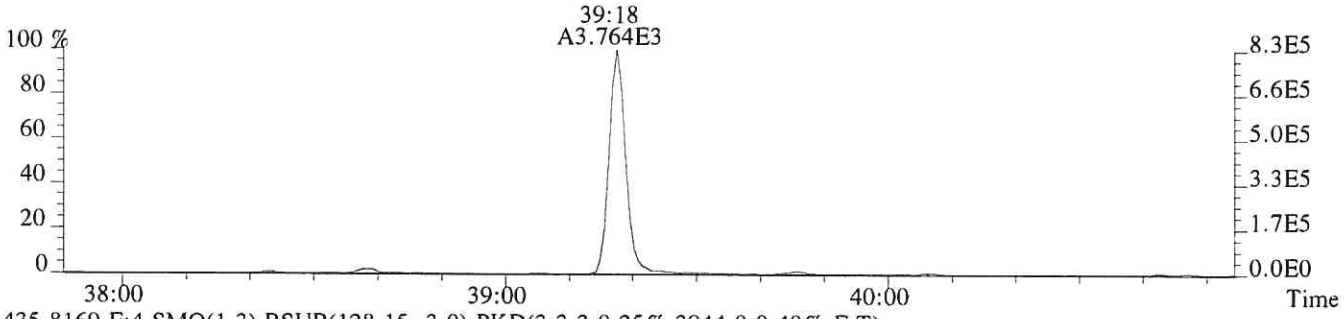
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



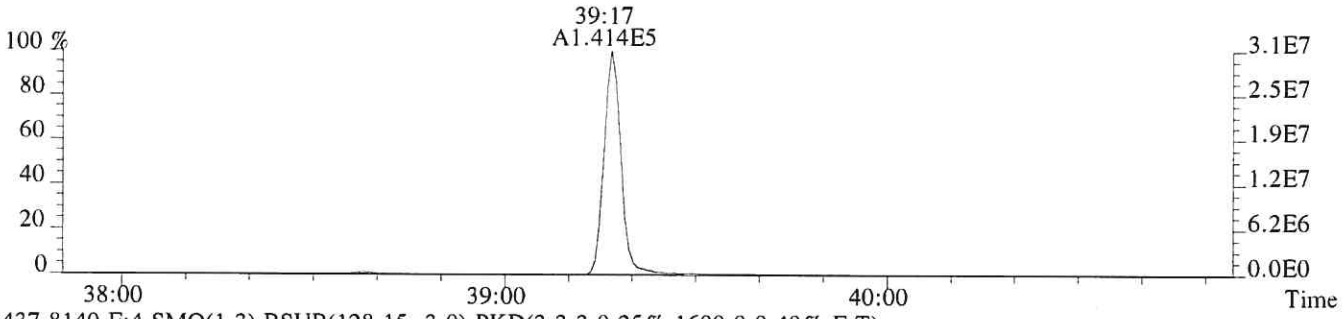
File:P614683 #1-276 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1168.0,0.40%,F,T)



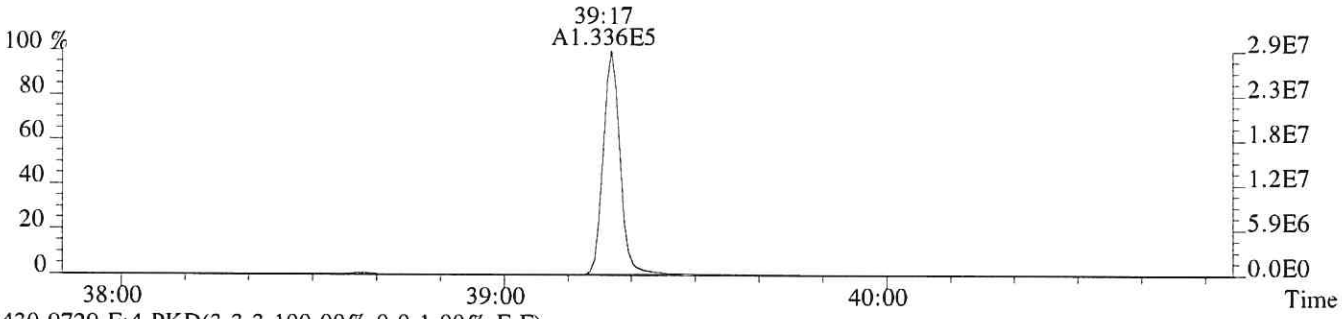
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,484.0,0.40%,F,T)



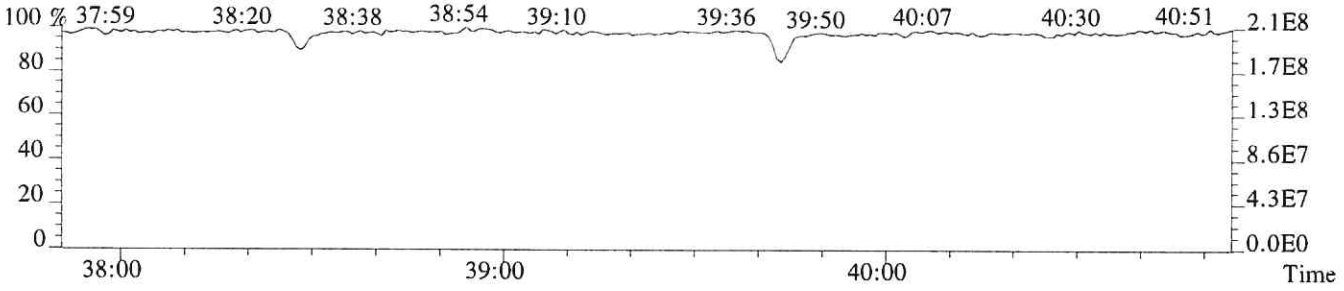
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3944.0,0.40%,F,T)



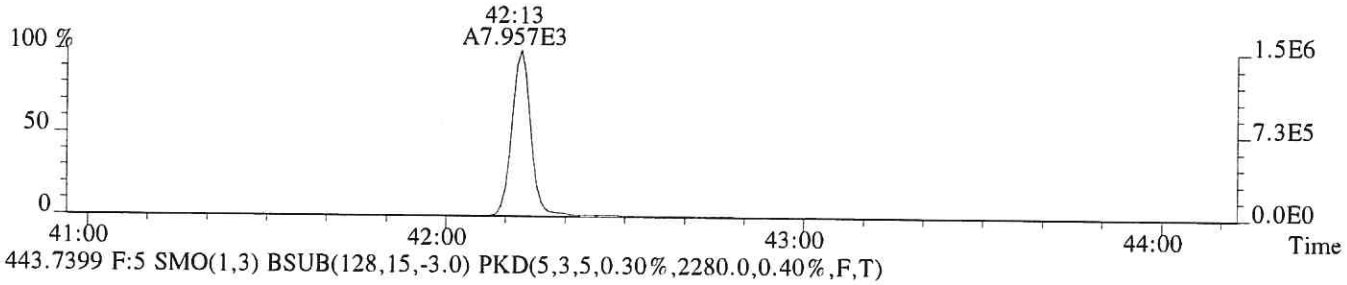
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1600.0,0.40%,F,T)



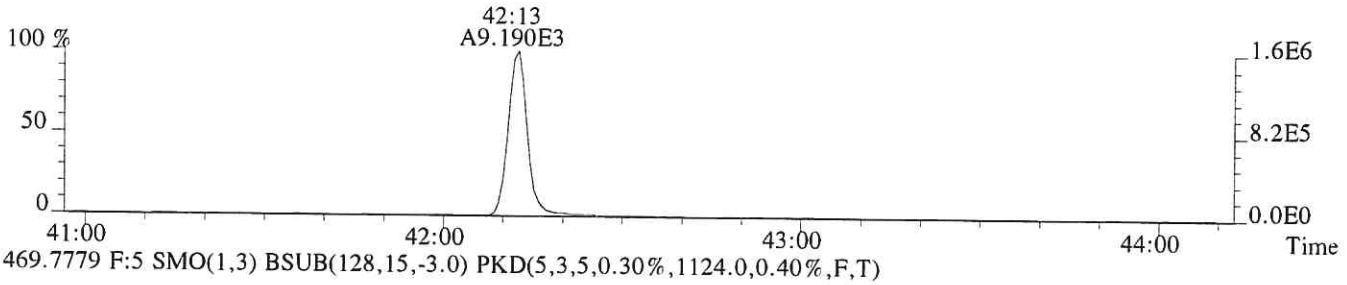
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



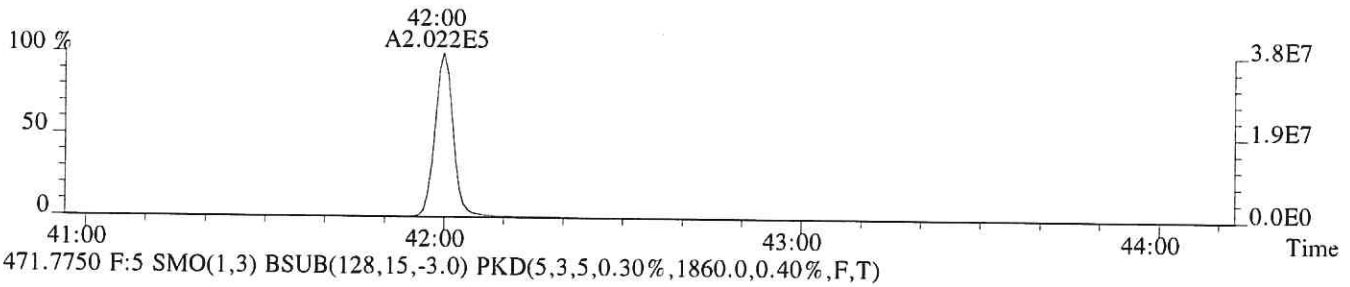
File:P614683 #1-295 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1152.0,0.40%,F,T)



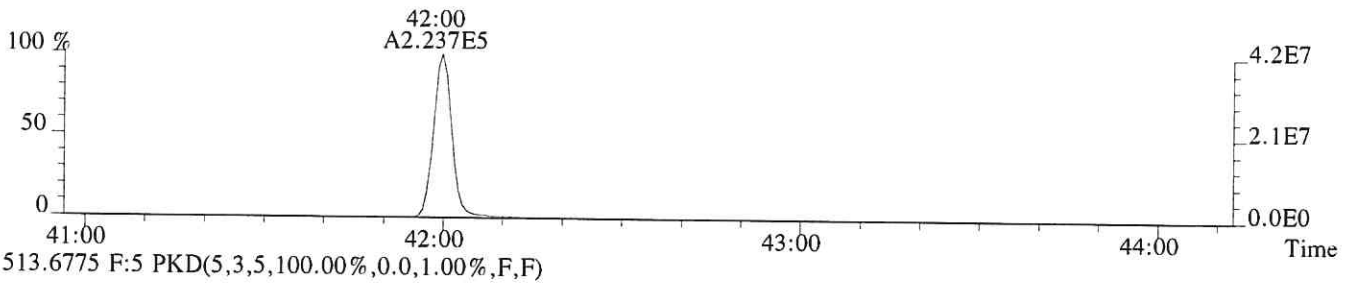
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2280.0,0.40%,F,T)



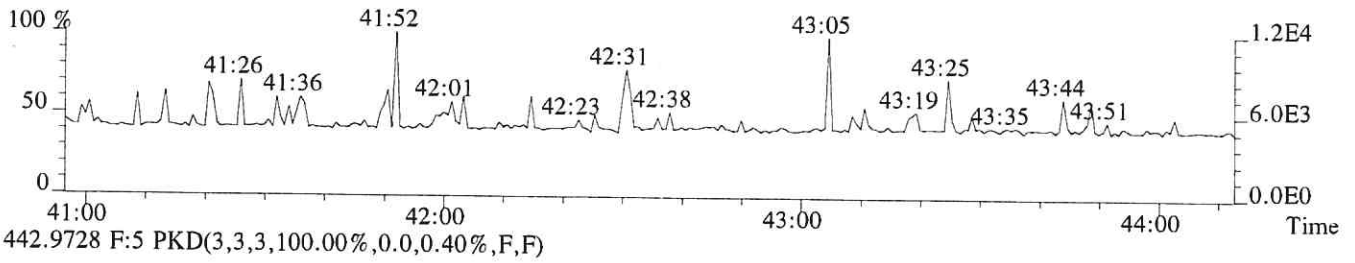
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1124.0,0.40%,F,T)



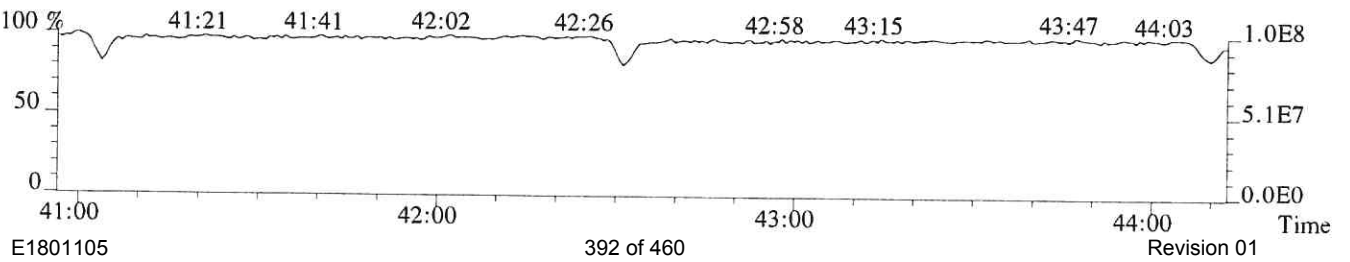
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1860.0,0.40%,F,T)



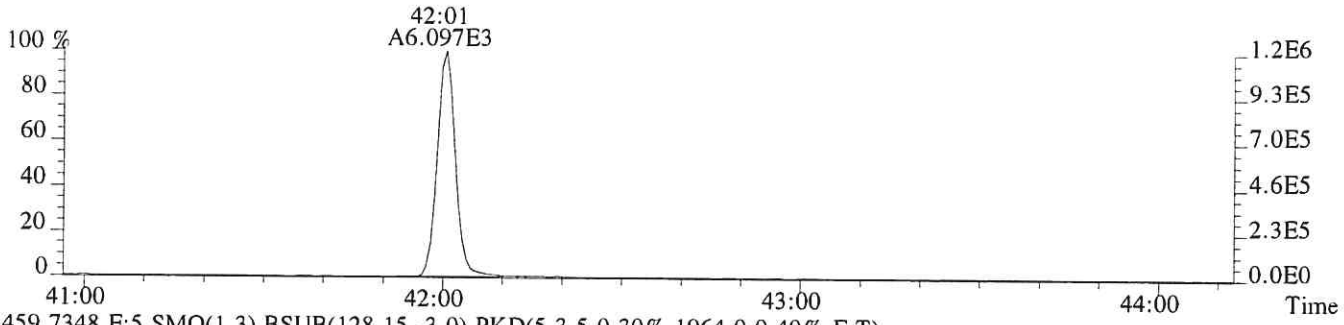
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



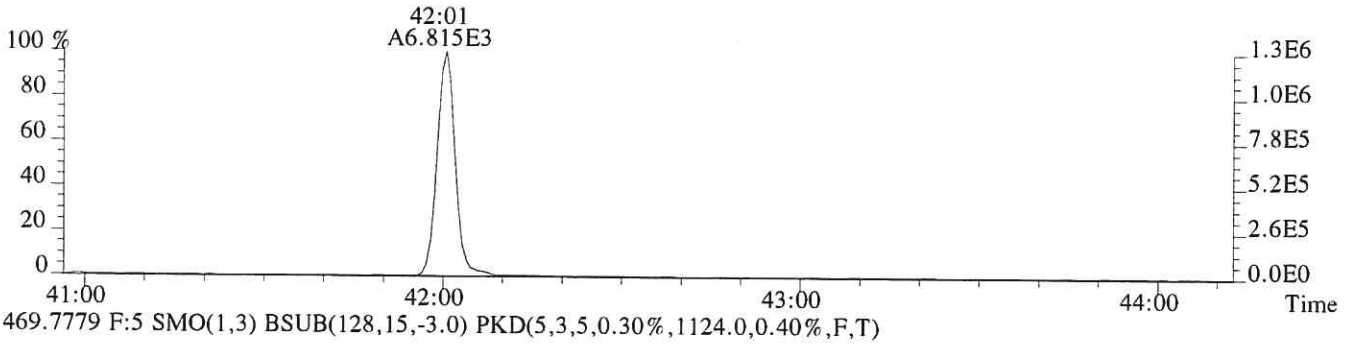
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



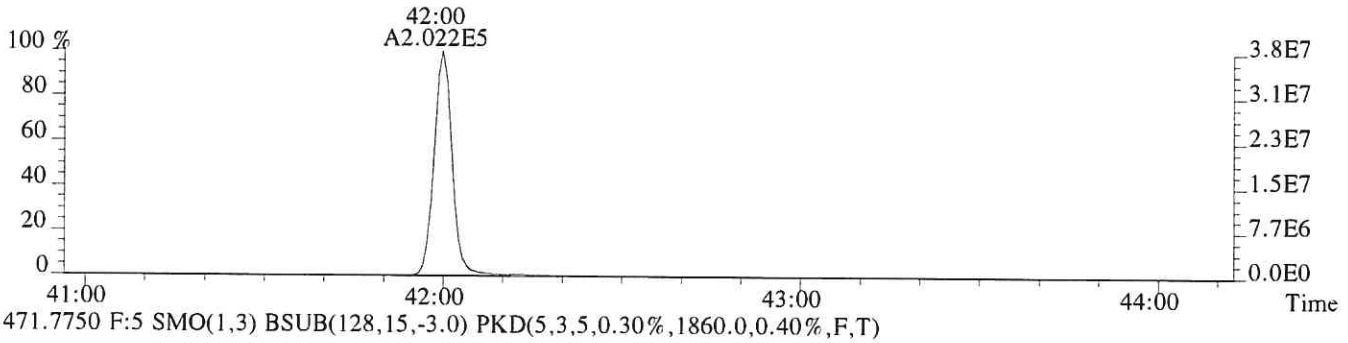
File:P614683 #1-295 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3136.0,0.40%,F,T)



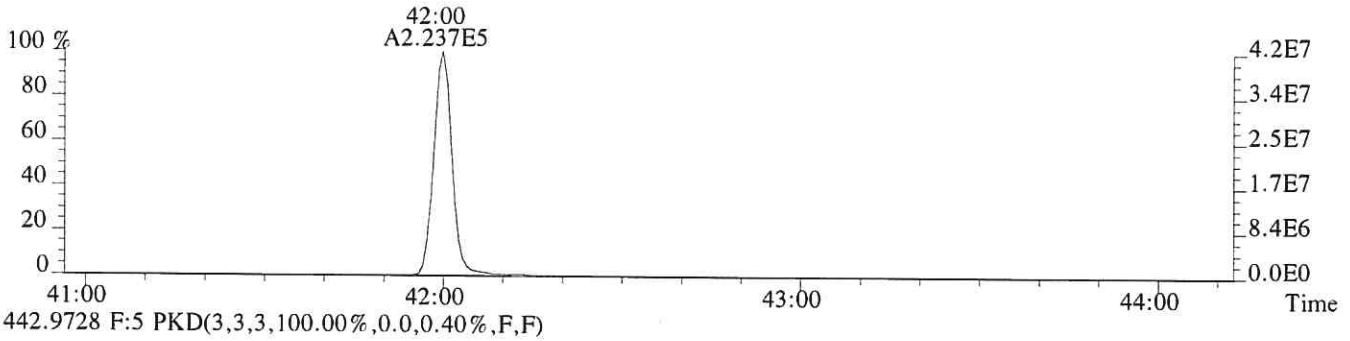
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1964.0,0.40%,F,T)



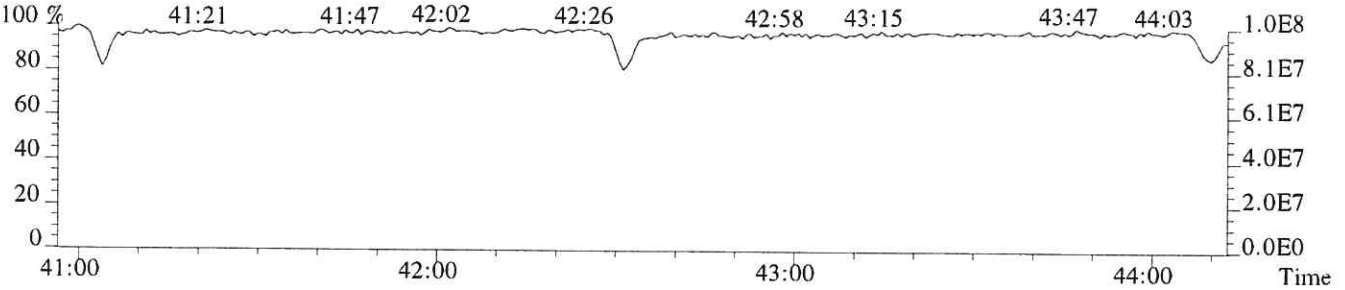
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1124.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1860.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
193434

Run #3 Filename P614684 Samp: 1 Inj: 1 Acquired: 25-SEP-18 15:59:37
Processed: 26-SEP-18 07:39:08 Sample ID: CS2

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:00	3.102e+03	3.732e+03	0.83	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	32:14	2.387e+04	1.519e+04	1.57	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	33:08	2.329e+04	1.484e+04	1.57	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	35:49	2.143e+04	1.713e+04	1.25	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	35:55	2.340e+04	1.874e+04	1.25	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	36:25	2.188e+04	1.713e+04	1.28	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	37:09	1.950e+04	1.588e+04	1.23	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	38:24	1.863e+04	1.764e+04	1.06	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	39:46	1.650e+04	1.567e+04	1.05	yes	no	1.463
10	Unk	OCDF	42:12	2.250e+04	2.478e+04	0.91	yes	no	1.571
11	Unk	2,3,7,8-TCDD	28:48	1.874e+03	2.328e+03	0.80	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	33:26	1.440e+04	9.416e+03	1.53	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	36:33	1.279e+04	1.013e+04	1.26	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	36:38	1.275e+04	1.020e+04	1.25	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	36:52	1.359e+04	1.091e+04	1.25	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	39:18	1.169e+04	1.088e+04	1.07	yes	no	1.112
17	Unk	OCDD	42:01	1.626e+04	1.848e+04	0.88	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	27:59	1.350e+05	1.713e+05	0.79	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	32:14	2.144e+05	1.340e+05	1.60	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	33:08	2.142e+05	1.318e+05	1.62	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	35:47	9.603e+04	1.811e+05	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	35:54	1.132e+05	2.120e+05	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	36:24	1.055e+05	1.978e+05	0.53	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	37:09	9.513e+04	1.787e+05	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:23	7.767e+04	1.706e+05	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:45	6.849e+04	1.521e+05	0.45	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	28:47	9.327e+04	1.167e+05	0.80	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	33:25	1.531e+05	9.729e+04	1.57	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	36:32	1.232e+05	9.748e+04	1.26	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	36:37	1.208e+05	9.608e+04	1.26	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:17	1.060e+05	1.018e+05	1.04	yes	no	0.857
32	IS	13C-OCDD	42:00	1.501e+05	1.663e+05	0.90	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	28:12	9.647e+04	1.194e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:51	1.360e+05	1.078e+05	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	28:48	4.600e+03				no	1.086

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
193434

Run #3 Filename P614684 Samp: 1 Inj: 1 Acquired: 25-SEP-18 15:59:37
Processed: 26-SEP-18 07:39:08 LAB. ID: CS2

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	5.46e+05	1.35e+03	4.0e+02	6.81e+05	4.17e+03	1.6e+02
2	1,2,3,7,8-PeCDF	4.40e+06	1.19e+03	3.7e+03	2.83e+06	5.62e+03	5.0e+02
3	2,3,4,7,8-PeCDF	4.45e+06	1.19e+03	3.7e+03	2.83e+06	5.62e+03	5.0e+02
4	1,2,3,4,7,8-HxCDF	4.64e+06	2.66e+03	1.7e+03	3.65e+06	1.33e+03	2.7e+03
5	1,2,3,6,7,8-HxCDF	4.85e+06	2.66e+03	1.8e+03	3.88e+06	1.33e+03	2.9e+03
6	2,3,4,6,7,8-HxCDF	4.77e+06	2.66e+03	1.8e+03	3.75e+06	1.33e+03	2.8e+03
7	1,2,3,7,8,9-HxCDF	3.92e+06	2.66e+03	1.5e+03	3.16e+06	1.33e+03	2.4e+03
8	1,2,3,4,6,7,8-HpCDF	4.16e+06	4.06e+03	1.0e+03	3.98e+06	5.19e+03	7.7e+02
9	1,2,3,4,7,8,9-HpCDF	3.43e+06	4.06e+03	8.5e+02	3.23e+06	5.19e+03	6.2e+02
10	OCDF	4.02e+06	1.02e+03	3.9e+03	4.45e+06	3.18e+03	1.4e+03
11	2,3,7,8-TCDD	3.59e+05	5.08e+03	7.1e+01	4.49e+05	2.84e+03	1.6e+02
12	1,2,3,7,8-PeCDD	2.79e+06	2.23e+03	1.3e+03	1.83e+06	1.03e+03	1.8e+03
13	1,2,3,4,7,8-HxCDD	2.90e+06	1.16e+03	2.5e+03	2.30e+06	2.22e+03	1.0e+03
14	1,2,3,6,7,8-HxCDD	2.75e+06	1.16e+03	2.4e+03	2.20e+06	2.22e+03	9.9e+02
15	1,2,3,7,8,9-HxCDD	2.97e+06	1.16e+03	2.6e+03	2.38e+06	2.22e+03	1.1e+03
16	1,2,3,4,6,7,8-HpCDD	2.45e+06	1.22e+03	2.0e+03	2.30e+06	1.43e+03	1.6e+03
17	OCDD	3.03e+06	8.24e+02	3.7e+03	3.48e+06	2.34e+03	1.5e+03
18	13C-2,3,7,8-TCDF	2.30e+07	1.44e+04	1.6e+03	2.91e+07	8.40e+03	3.5e+03
19	13C-1,2,3,7,8-PeCDF	3.88e+07	2.39e+03	1.6e+04	2.43e+07	1.71e+03	1.4e+04
20	13C-2,3,4,7,8-PeCDF	4.22e+07	2.39e+03	1.8e+04	2.60e+07	1.71e+03	1.5e+04
21	13C-1,2,3,4,7,8-HxCDF	2.07e+07	2.16e+03	9.6e+03	3.93e+07	5.29e+03	7.4e+03
22	13C-1,2,3,6,7,8-HxCDF	2.36e+07	2.16e+03	1.1e+04	4.45e+07	5.29e+03	8.4e+03
23	13C-2,3,4,6,7,8-HxCDF	2.32e+07	2.16e+03	1.1e+04	4.39e+07	5.29e+03	8.3e+03
24	13C-1,2,3,7,8,9-HxCDF	1.94e+07	2.16e+03	8.9e+03	3.69e+07	5.29e+03	7.0e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.76e+07	7.69e+03	2.3e+03	3.85e+07	2.07e+04	1.9e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.41e+07	7.69e+03	1.8e+03	3.12e+07	2.07e+04	1.5e+03
27	13C-2,3,7,8-TCDD	1.74e+07	1.66e+04	1.0e+03	2.17e+07	7.77e+03	2.8e+03
28	13C-1,2,3,7,8-PeCDD	2.92e+07	3.94e+03	7.4e+03	1.87e+07	3.45e+03	5.4e+03
29	13C-1,2,3,4,7,8-HxCDD	2.82e+07	5.37e+03	5.3e+03	2.21e+07	2.98e+03	7.4e+03
30	13C-1,2,3,6,7,8-HxCDD	2.61e+07	5.37e+03	4.9e+03	2.11e+07	2.98e+03	7.1e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.24e+07	3.06e+03	7.3e+03	2.12e+07	2.68e+03	7.9e+03
32	13C-OCDD	2.74e+07	2.09e+03	1.3e+04	3.02e+07	1.61e+03	1.9e+04
33	13C-1,2,3,4-TCDD	1.78e+07	1.66e+04	1.1e+03	2.20e+07	7.77e+03	2.8e+03
34	13C-1,2,3,7,8,9-HxCDD	2.99e+07	5.37e+03	5.6e+03	2.35e+07	2.98e+03	7.9e+03
35	37Cl-2,3,7,8-TCDD	8.73e+05	3.54e+03	2.5e+02			

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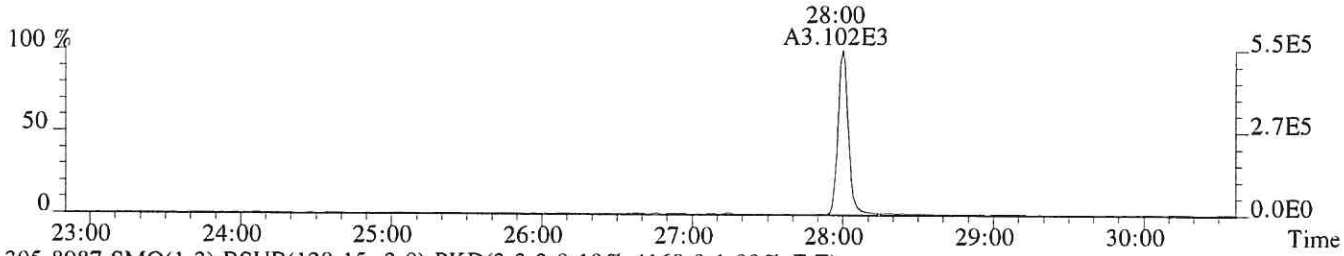
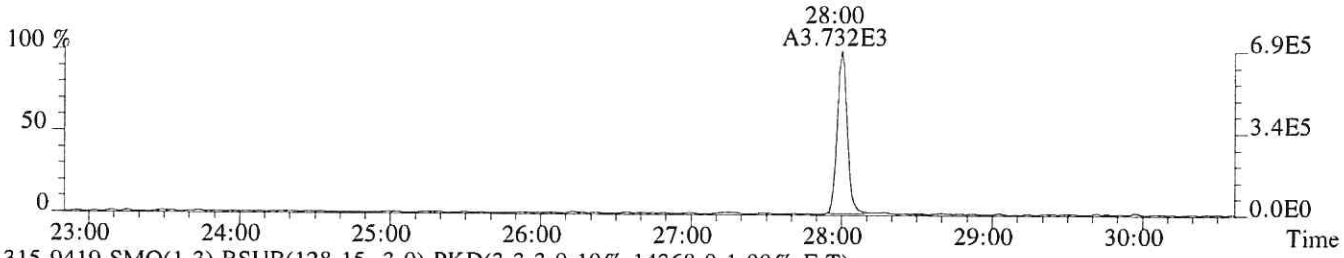
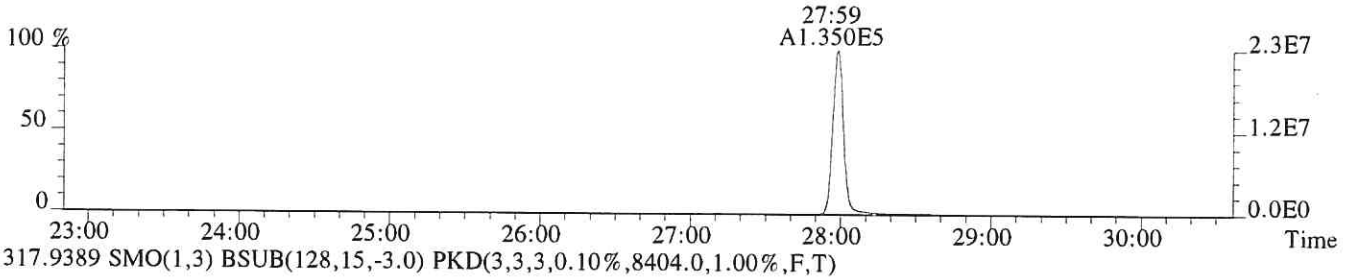
File:P614684 #1-552 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1352.0,1.00%,F,T)



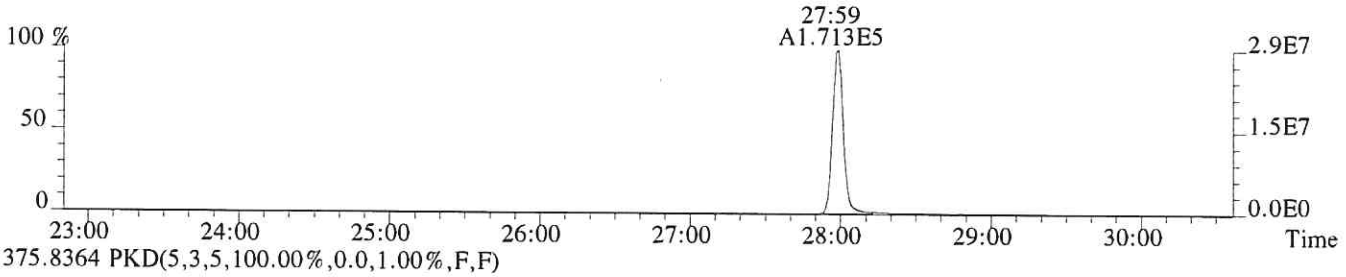
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4168.0,1.00%,F,T)



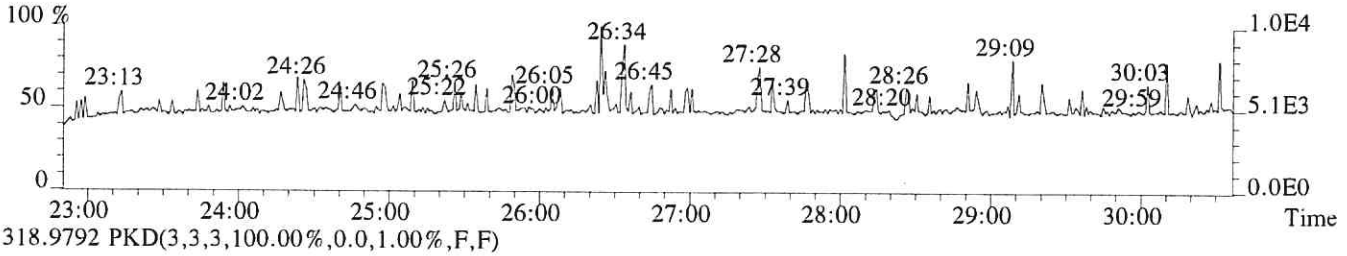
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,14368.0,1.00%,F,T)



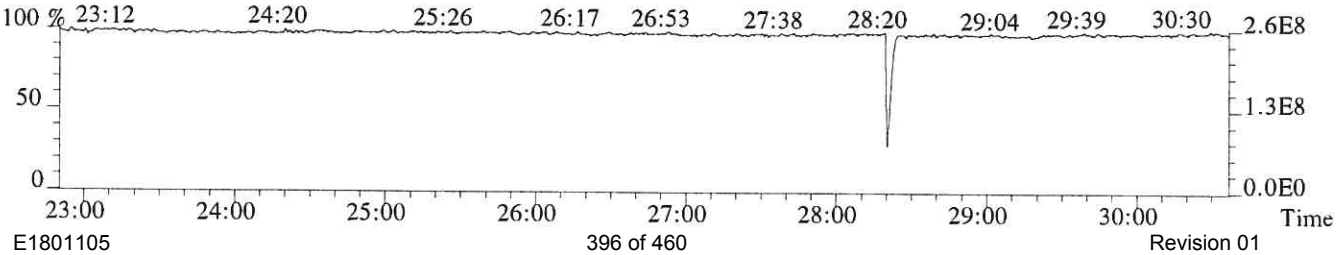
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8404.0,1.00%,F,T)



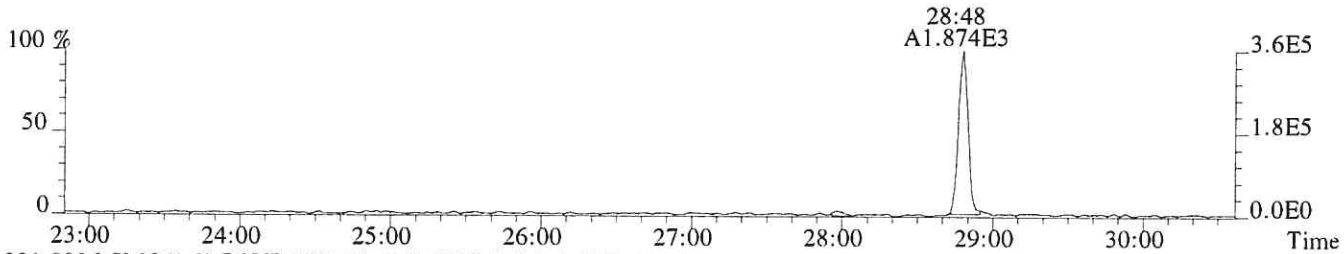
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



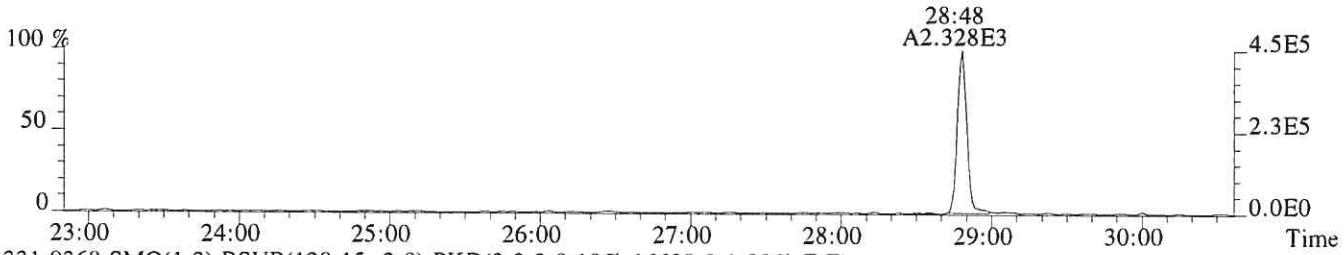
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



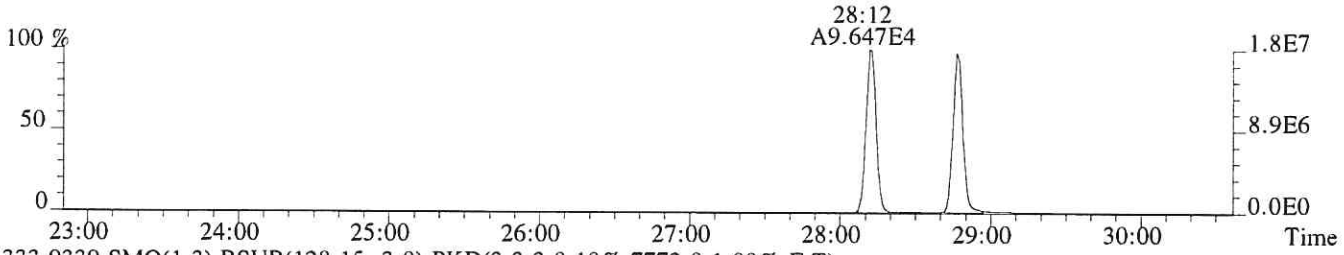
File:P614684 #1-552 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5080.0,1.00%,F,T)



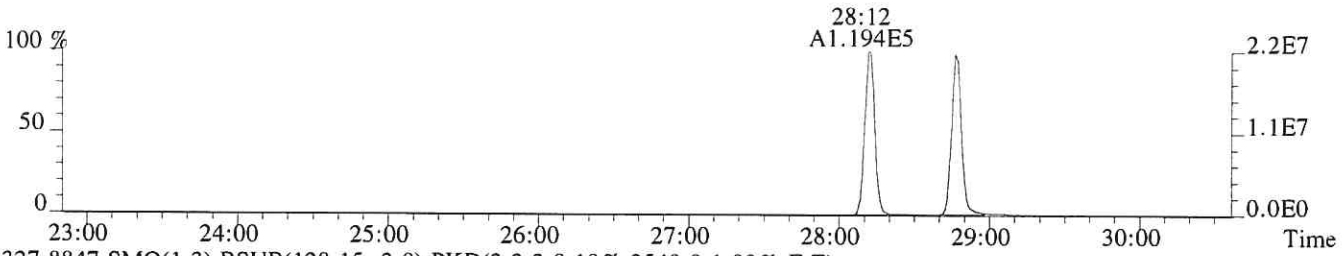
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2836.0,1.00%,F,T)



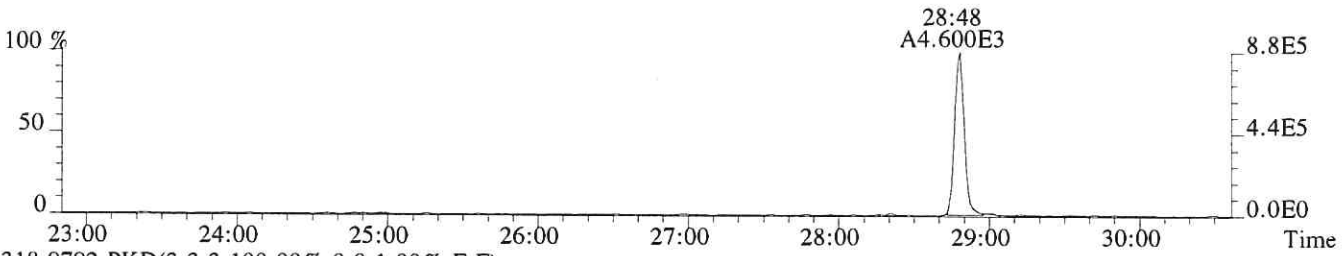
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,16628.0,1.00%,F,T)



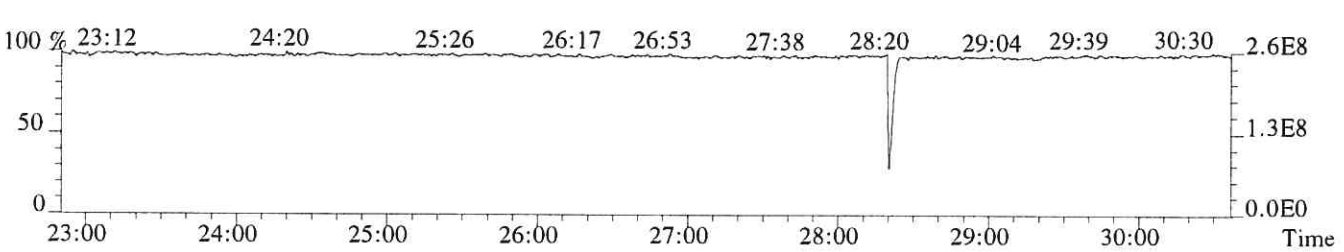
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7772.0,1.00%,F,T)



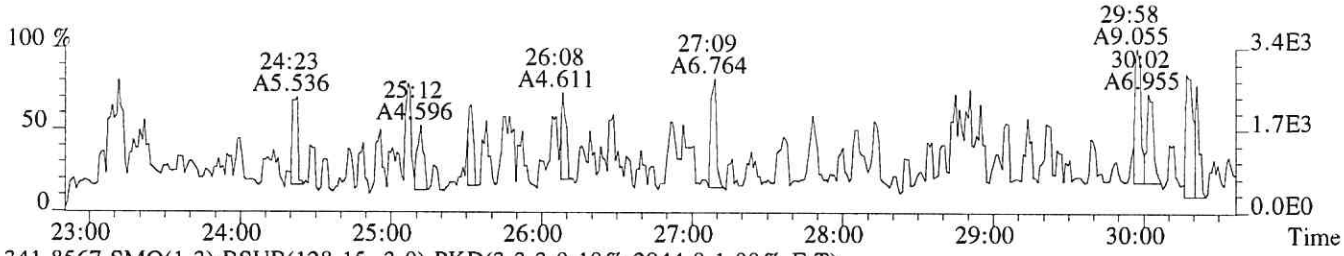
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3540.0,1.00%,F,T)



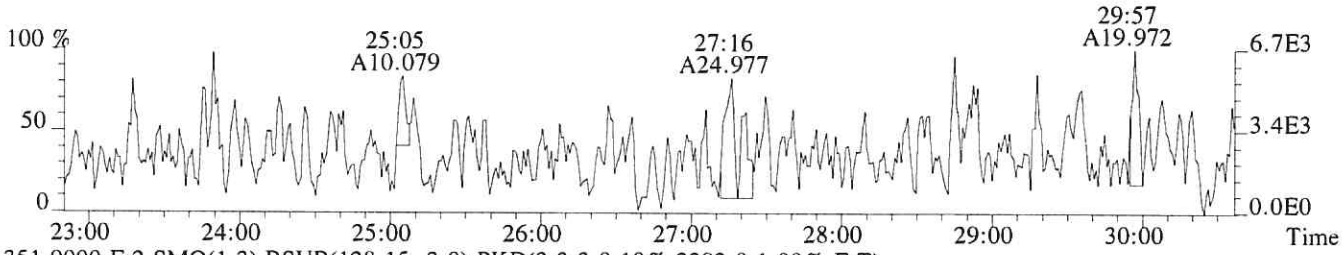
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



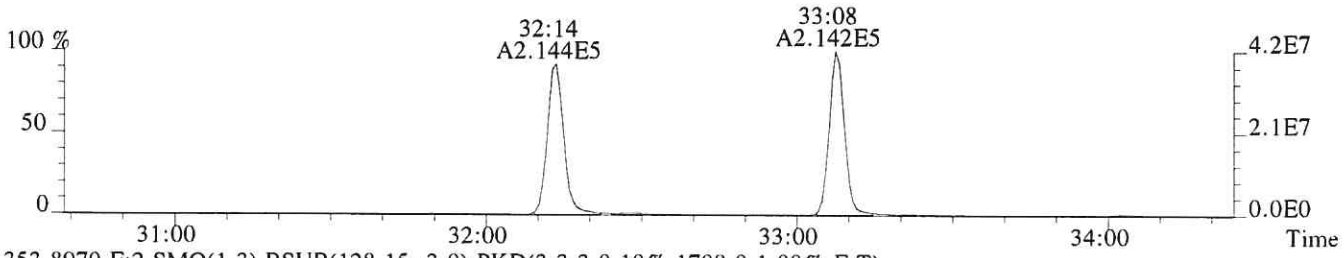
File:P614684 #1-552 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1084.0,1.00%,F,T)



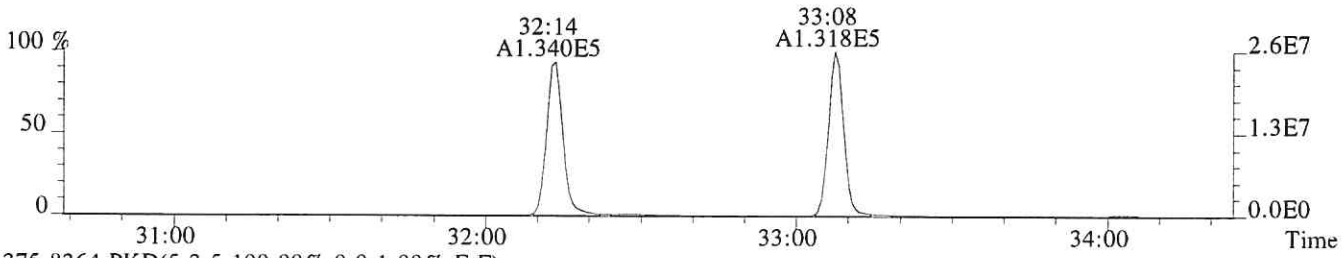
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2944.0,1.00%,F,T)



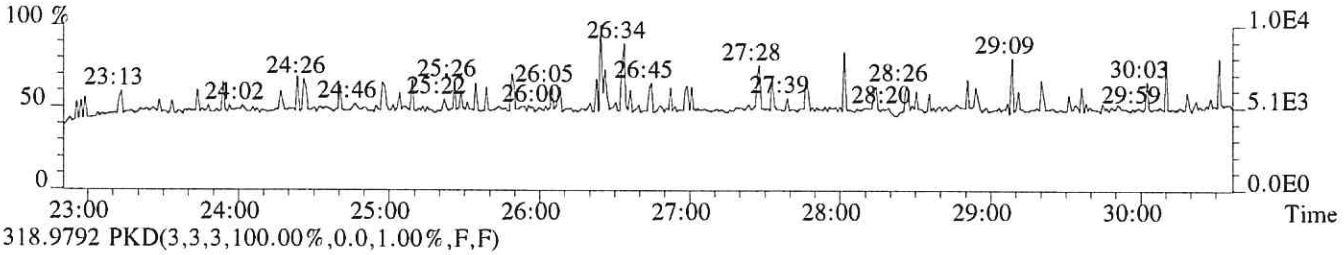
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2392.0,1.00%,F,T)



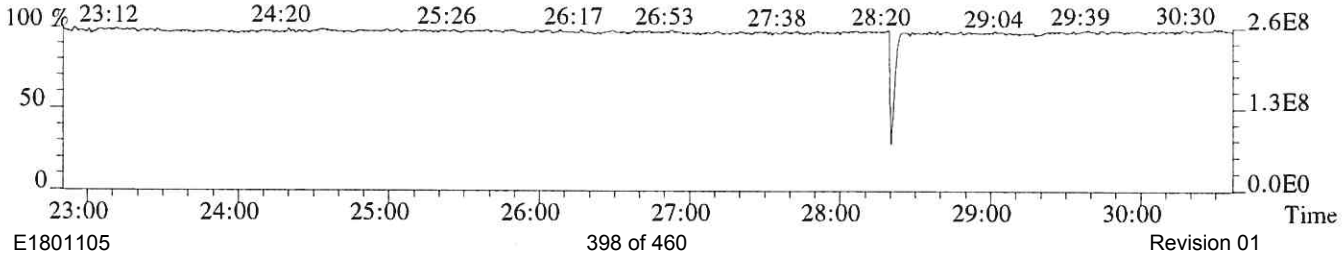
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1708.0,1.00%,F,T)



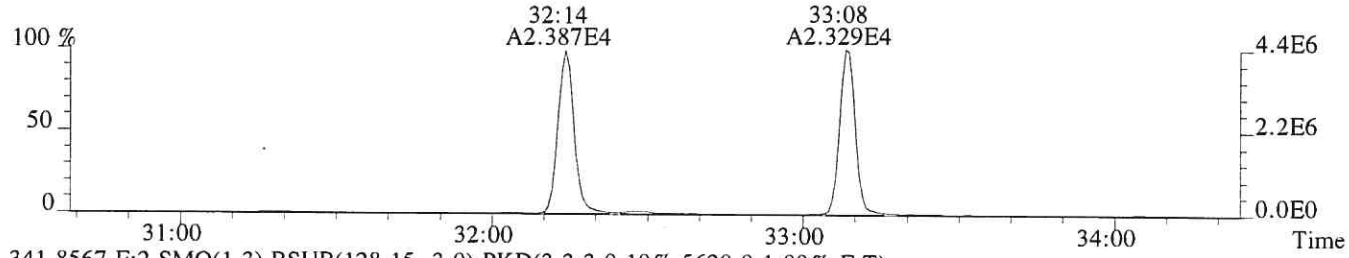
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



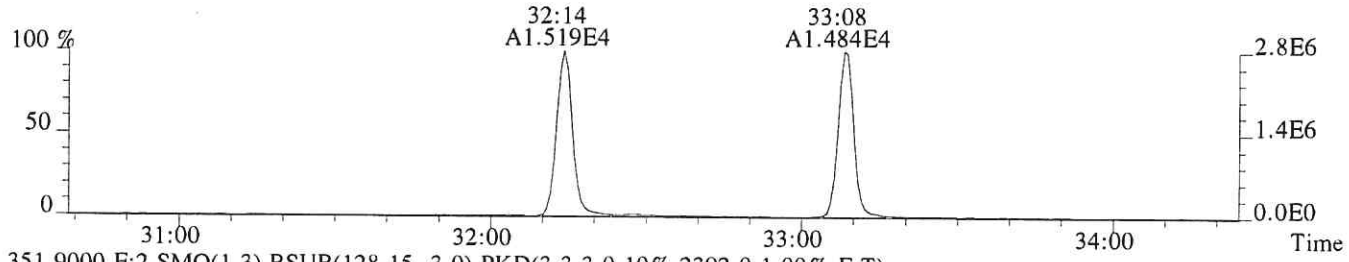
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



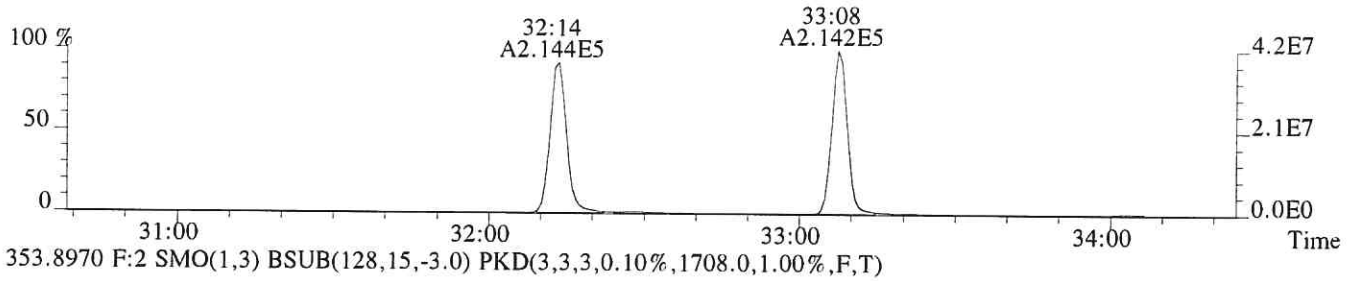
File:P614684 #1-339 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1188.0,1.00%,F,T)



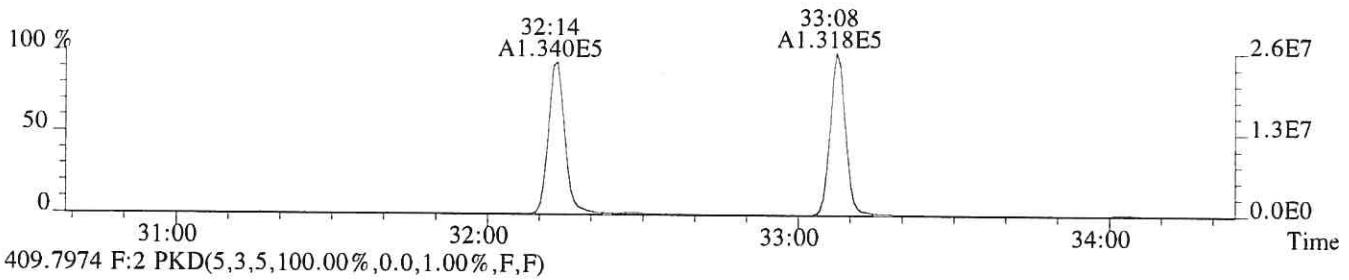
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5620.0,1.00%,F,T)



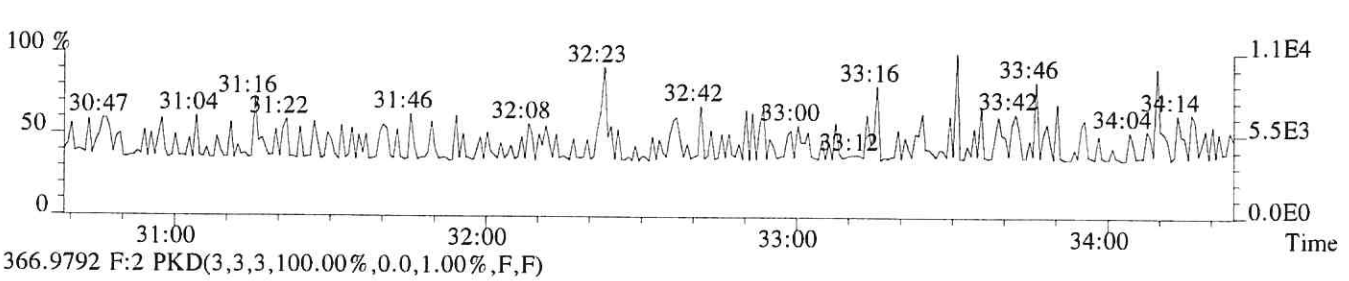
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2392.0,1.00%,F,T)



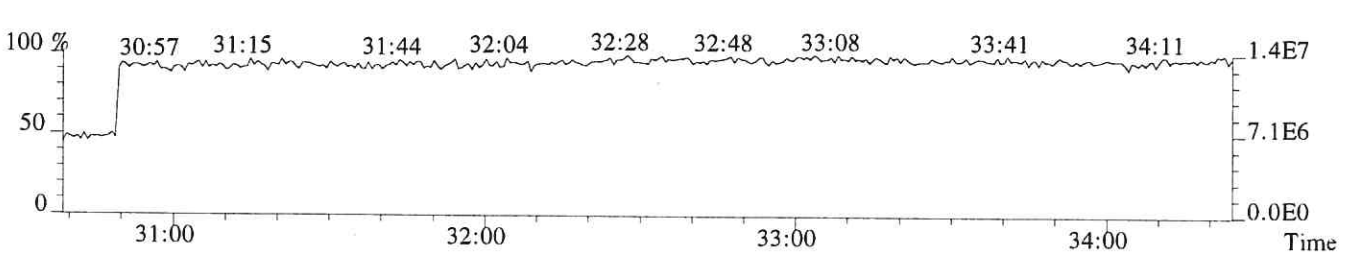
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1708.0,1.00%,F,T)



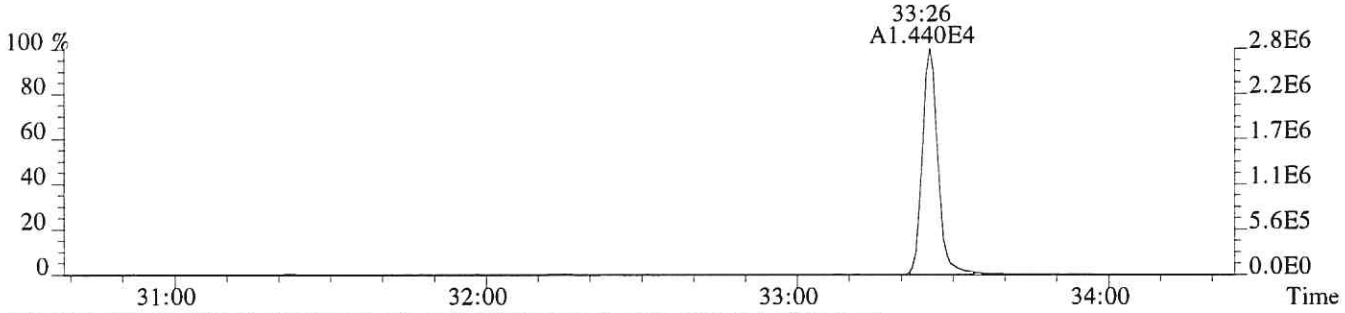
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



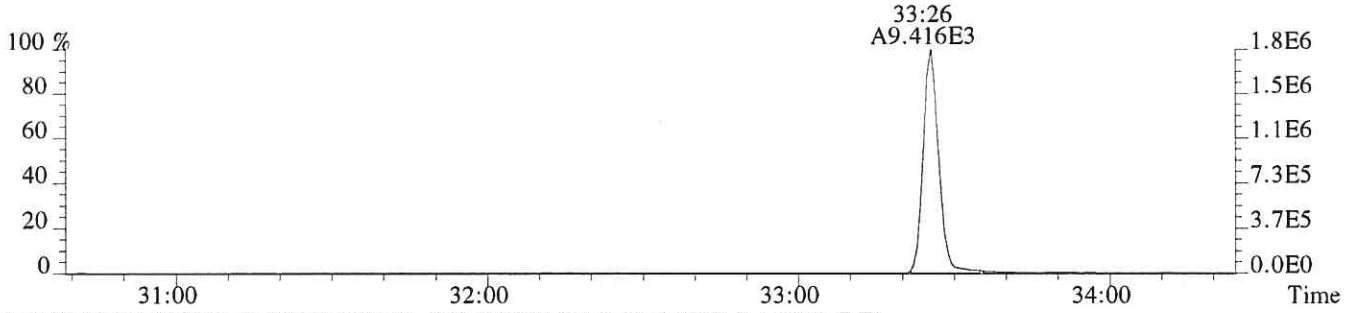
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



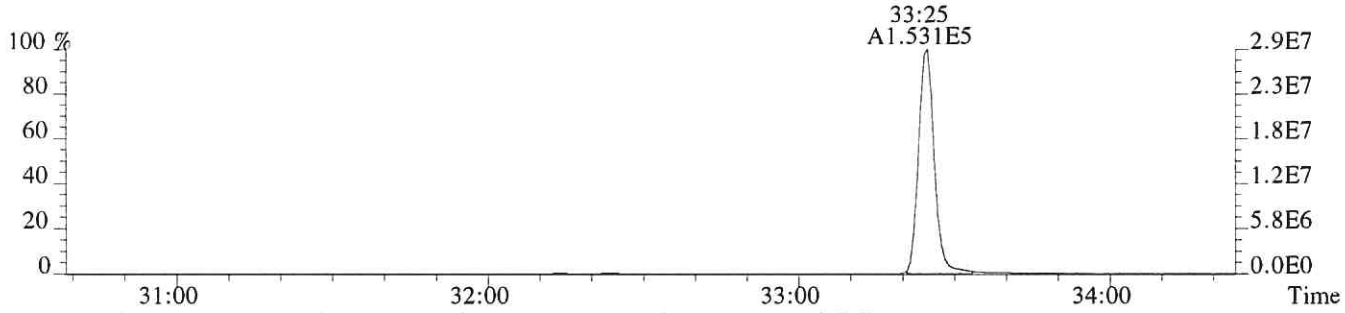
File:P614684 #1-339 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2228.0,1.00%,F,T)



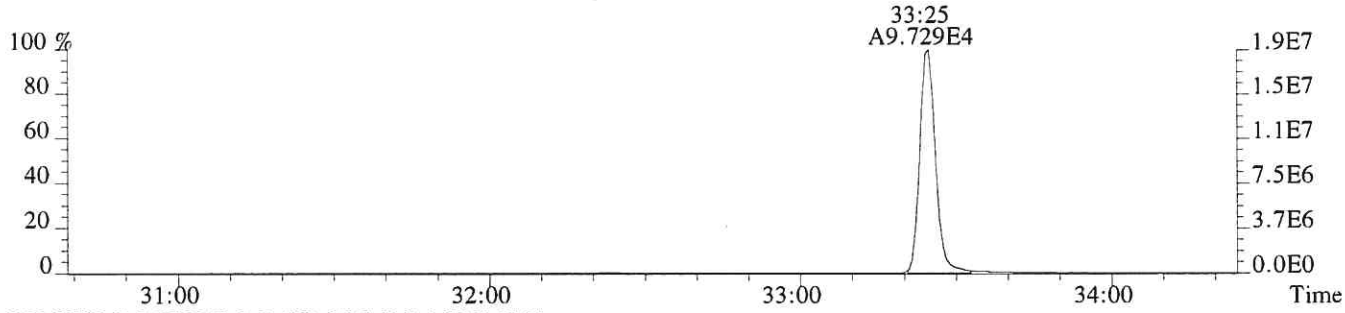
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1032.0,1.00%,F,T)



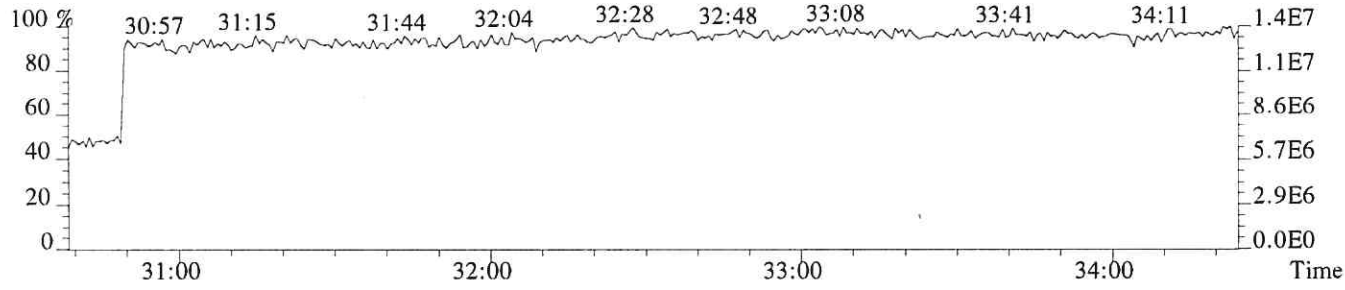
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3936.0,1.00%,F,T)



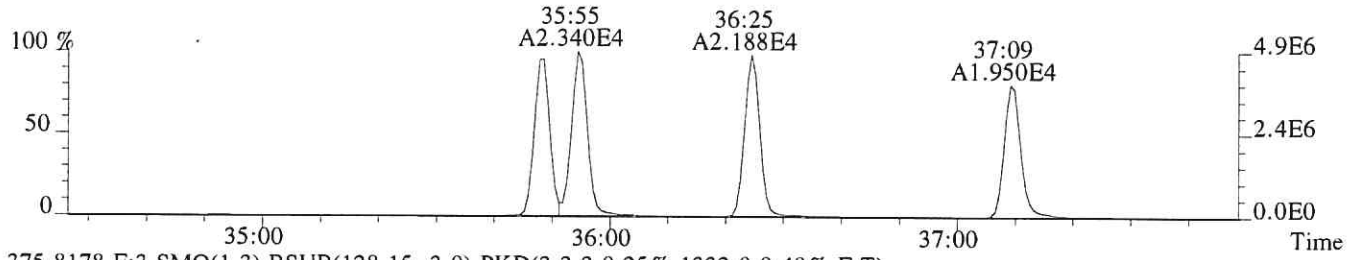
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3448.0,1.00%,F,T)



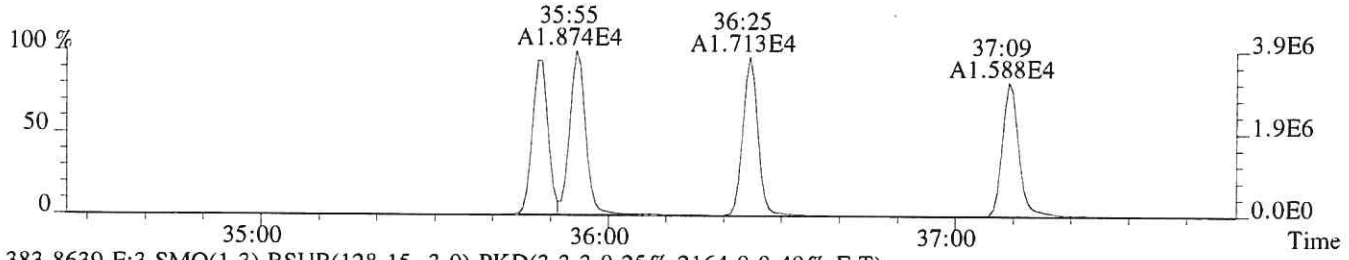
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



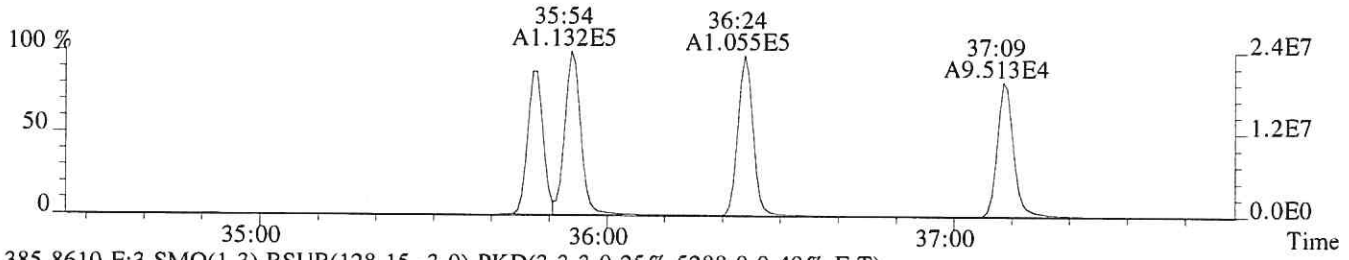
File:P614684 #1-304 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2656.0,0.40%,F,T)



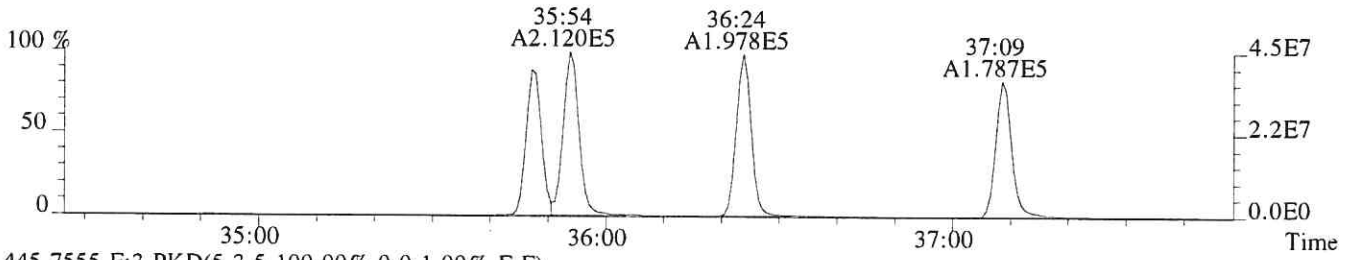
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1332.0,0.40%,F,T)



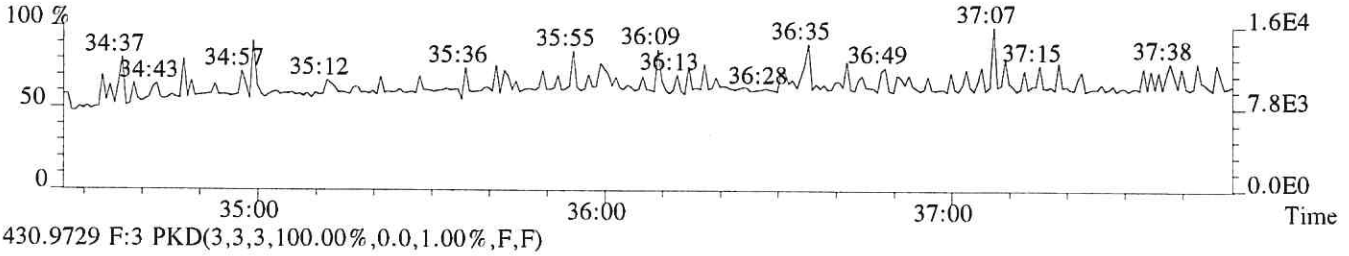
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2164.0,0.40%,F,T)



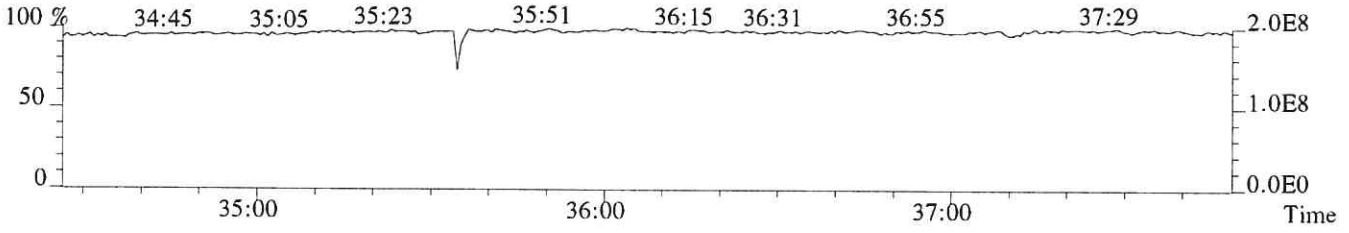
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5288.0,0.40%,F,T)



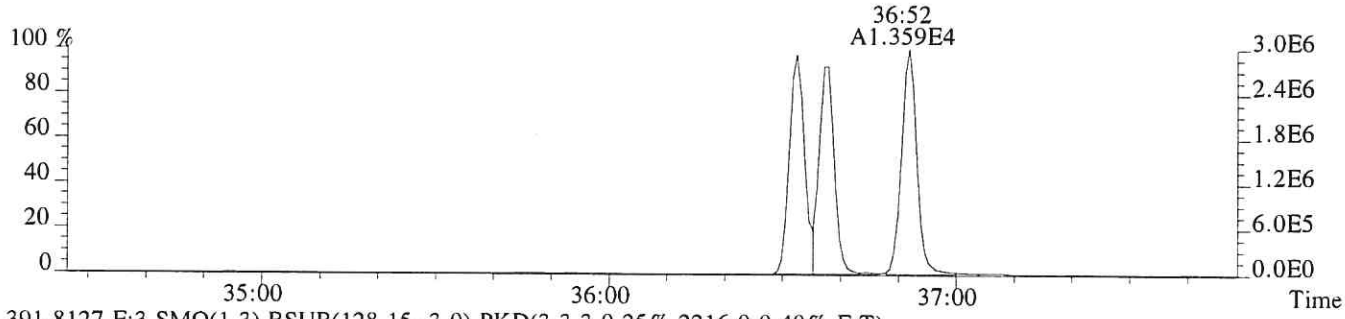
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



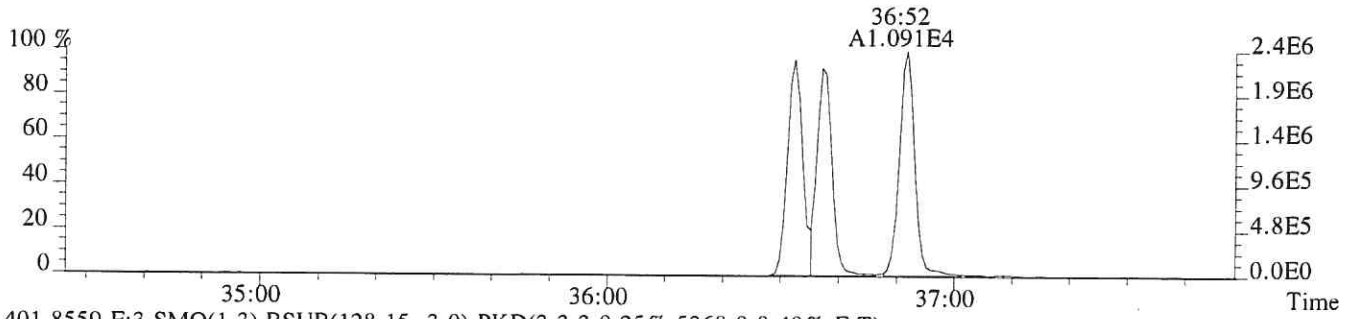
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



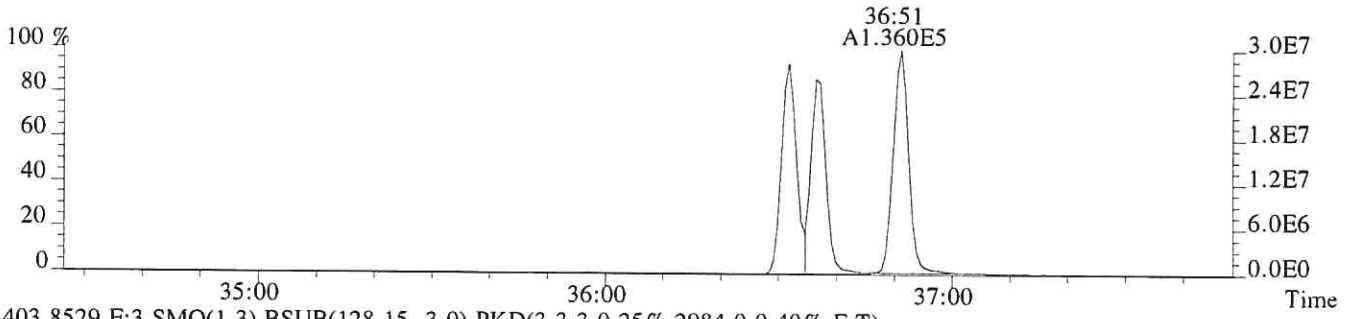
File:P614684 #1-304 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1156.0,0.40%,F,T)



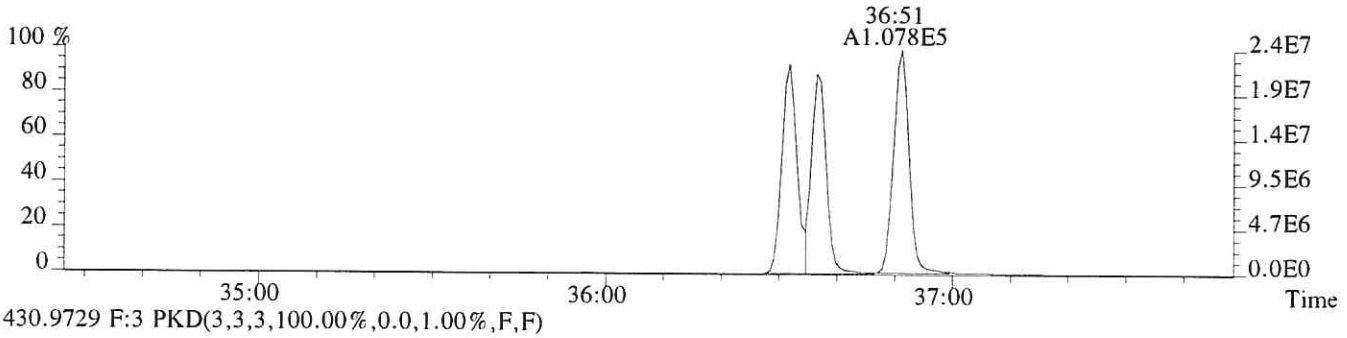
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2216.0,0.40%,F,T)



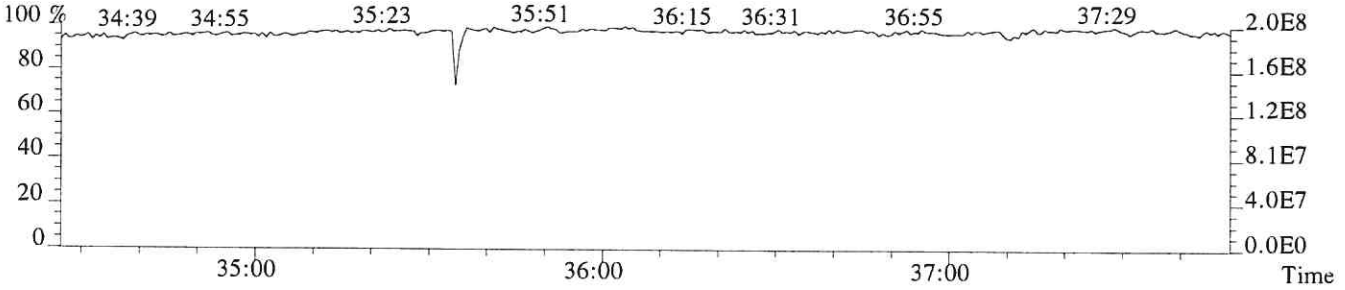
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5368.0,0.40%,F,T)



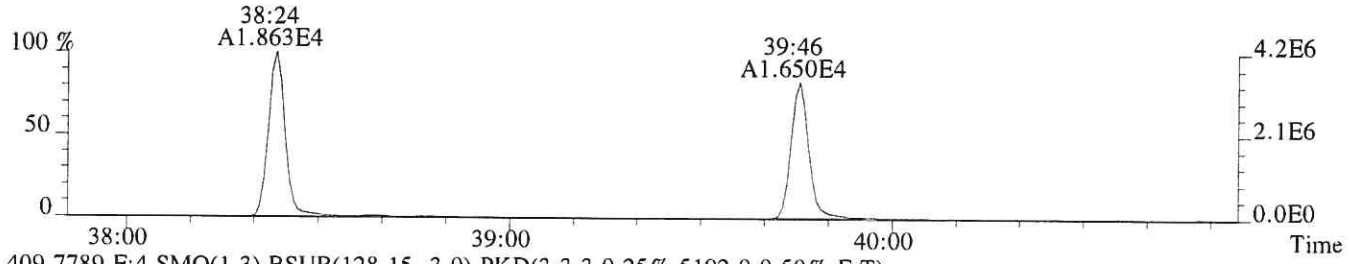
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2984.0,0.40%,F,T)



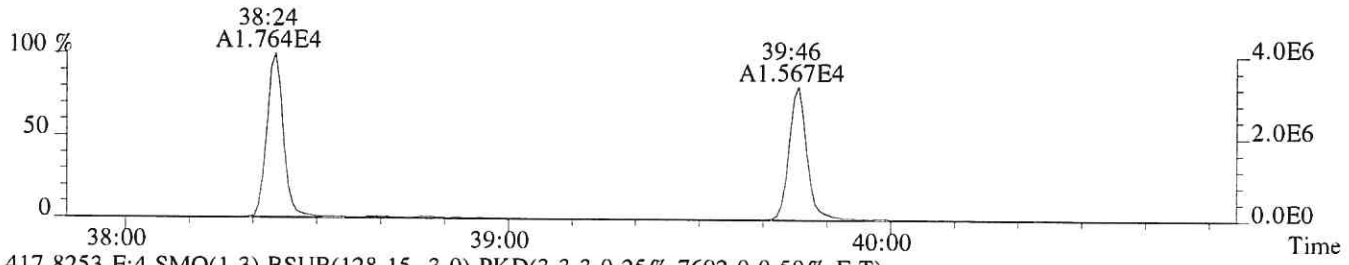
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



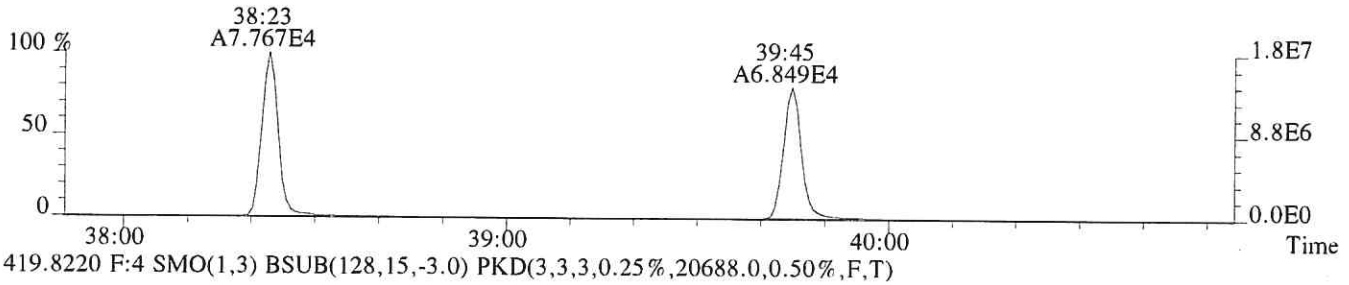
File:P614684 #1-276 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4060.0,0.50%,F,T)



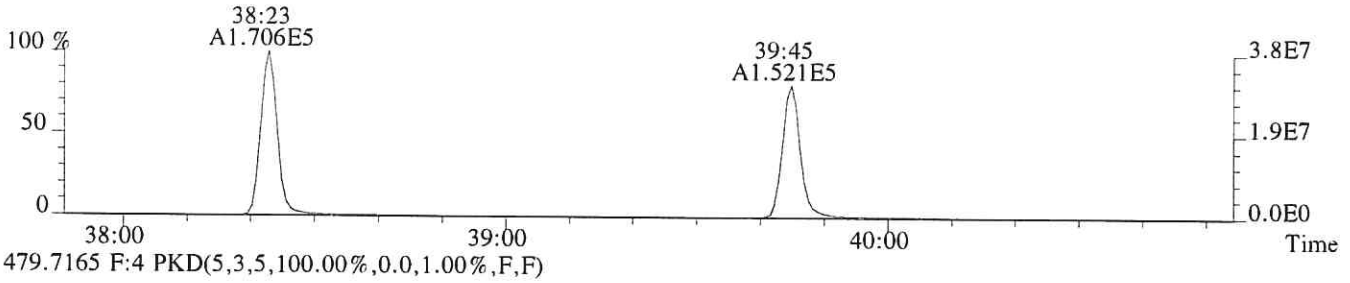
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5192.0,0.50%,F,T)



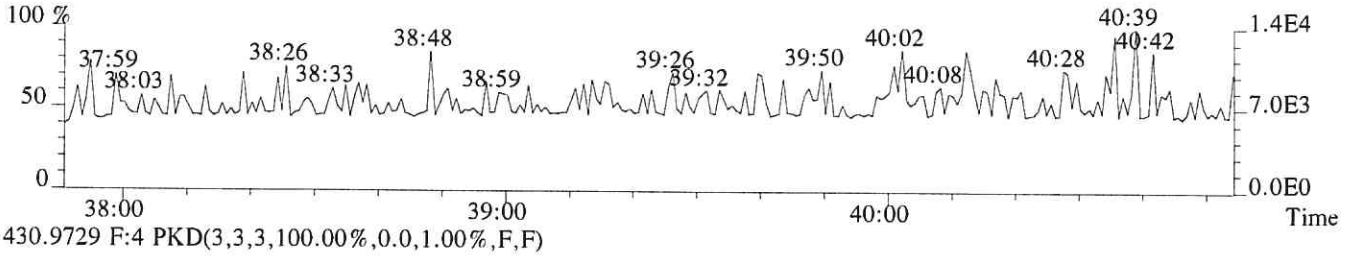
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7692.0,0.50%,F,T)



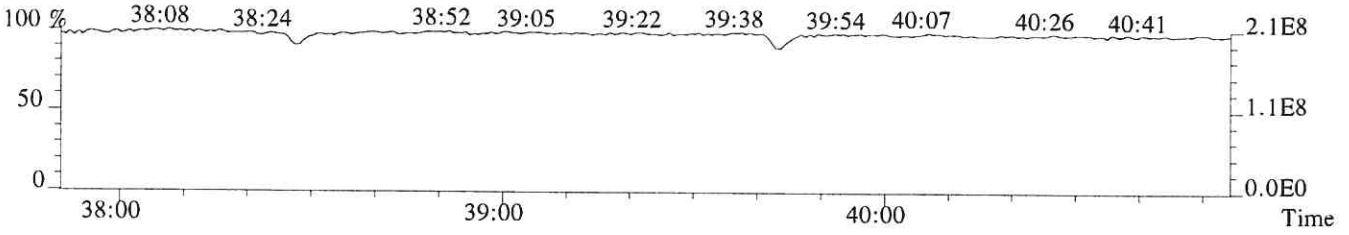
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,20688.0,0.50%,F,T)



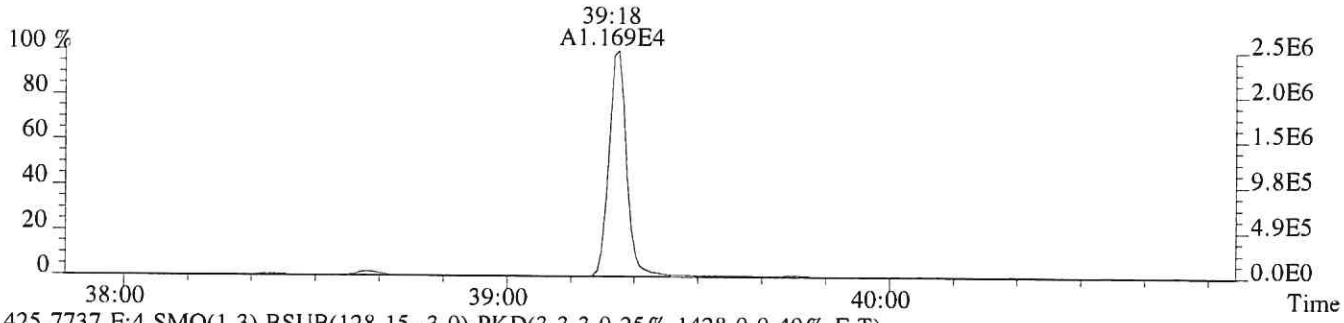
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



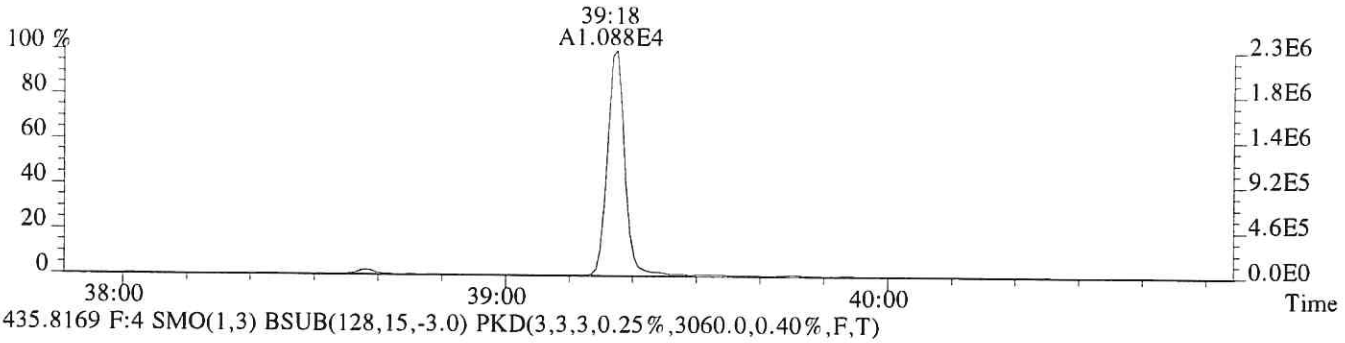
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



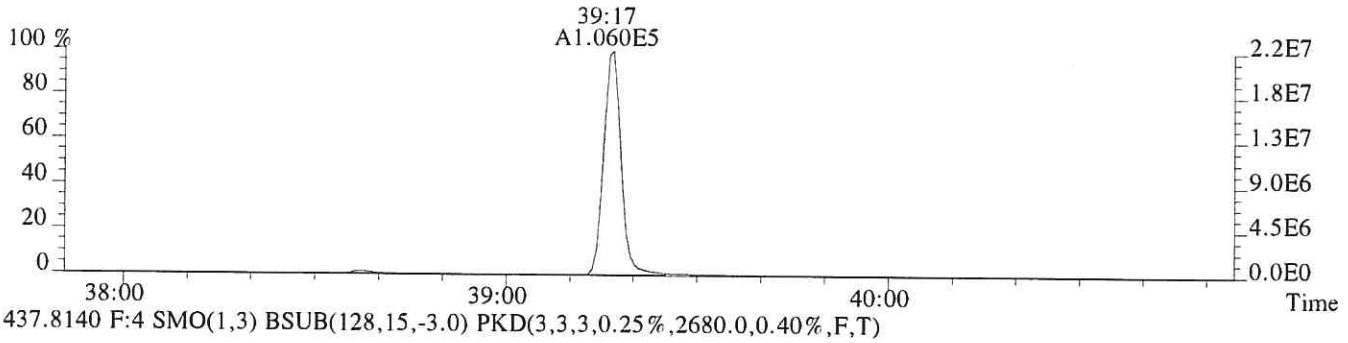
File:P614684 #1-276 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1224.0,0.40%,F,T)



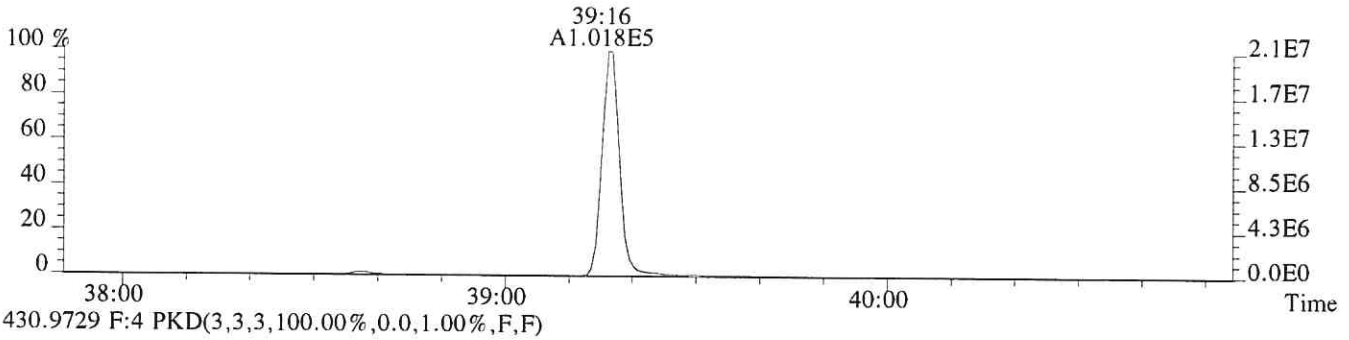
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1428.0,0.40%,F,T)



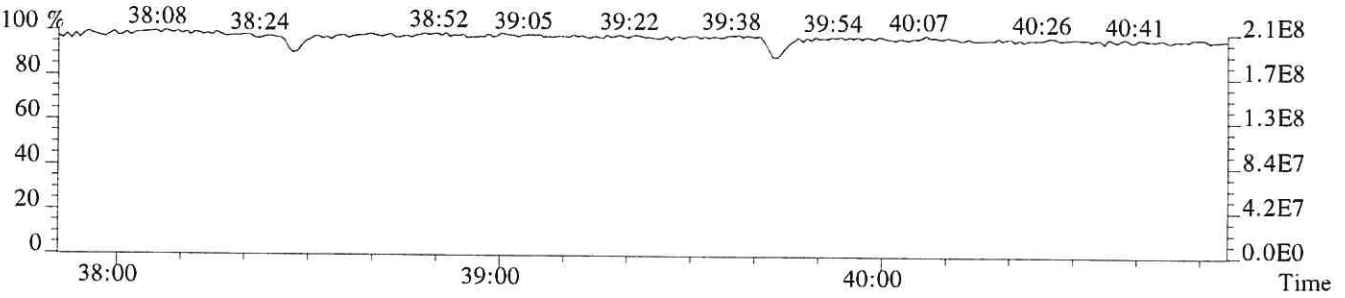
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3060.0,0.40%,F,T)



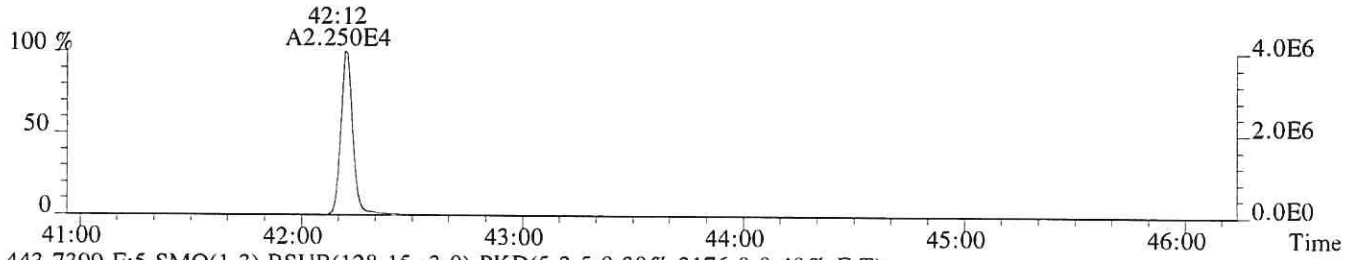
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2680.0,0.40%,F,T)



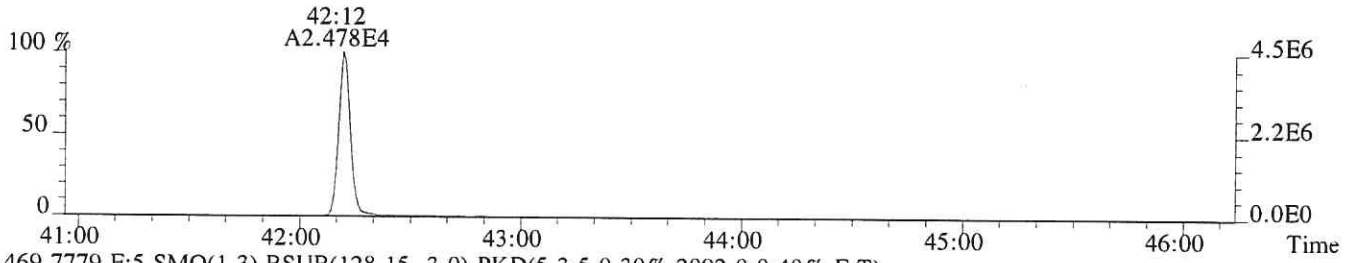
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



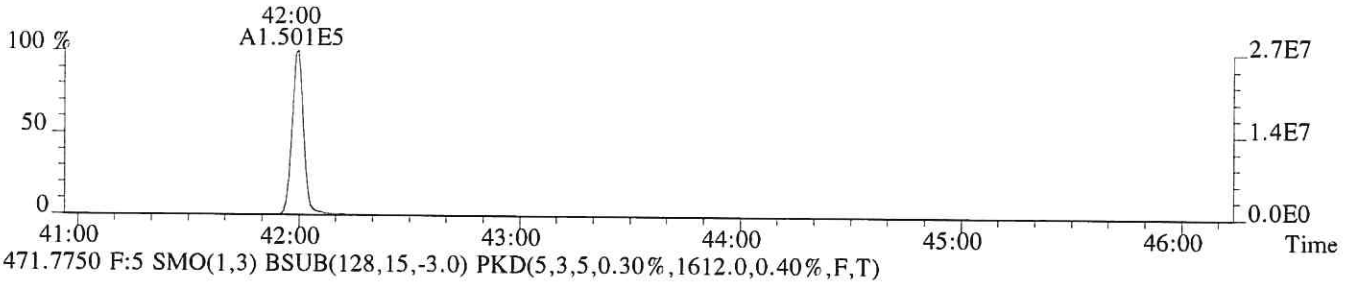
File:P614684 #1-477 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1020.0,0.40%,F,T)



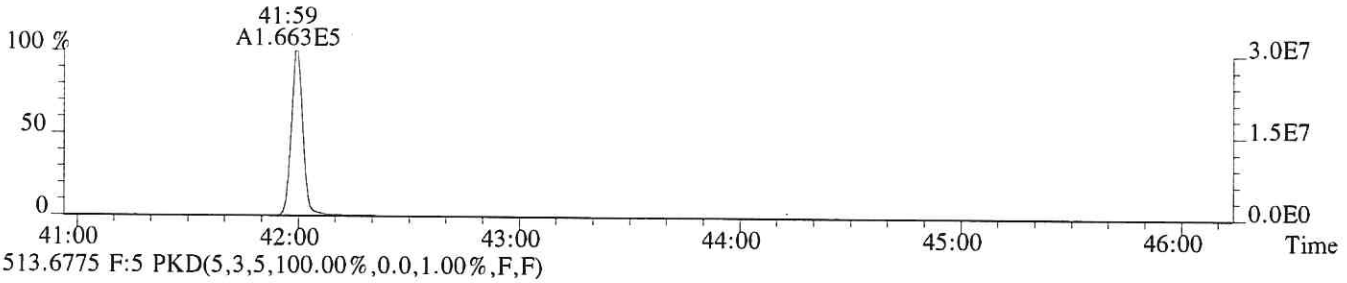
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3176.0,0.40%,F,T)



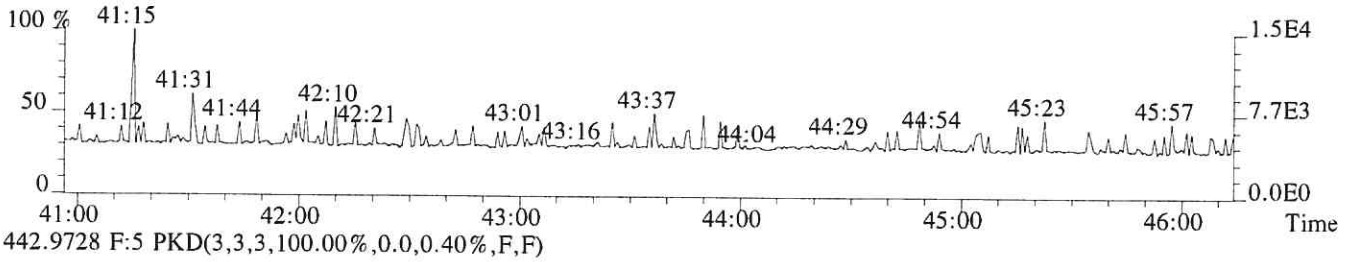
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2092.0,0.40%,F,T)



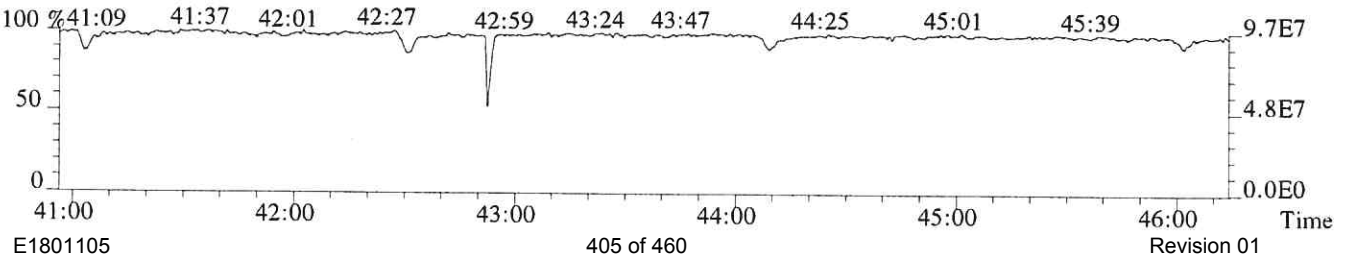
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1612.0,0.40%,F,T)



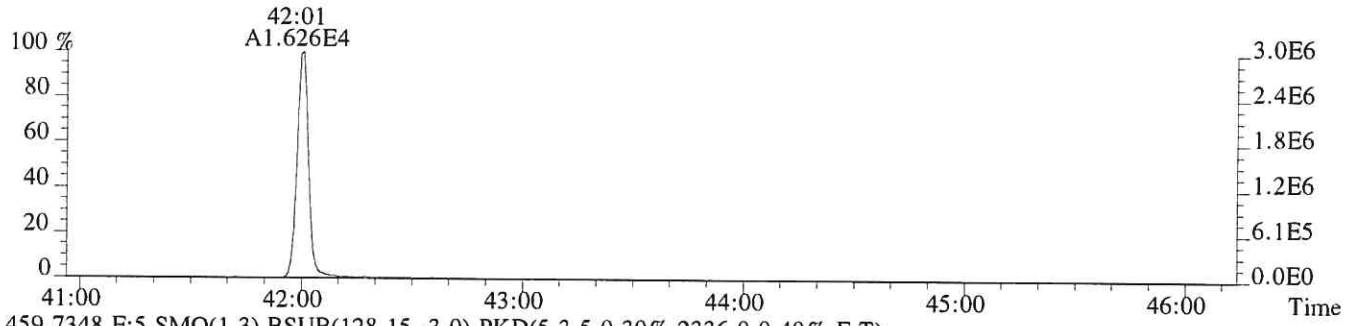
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



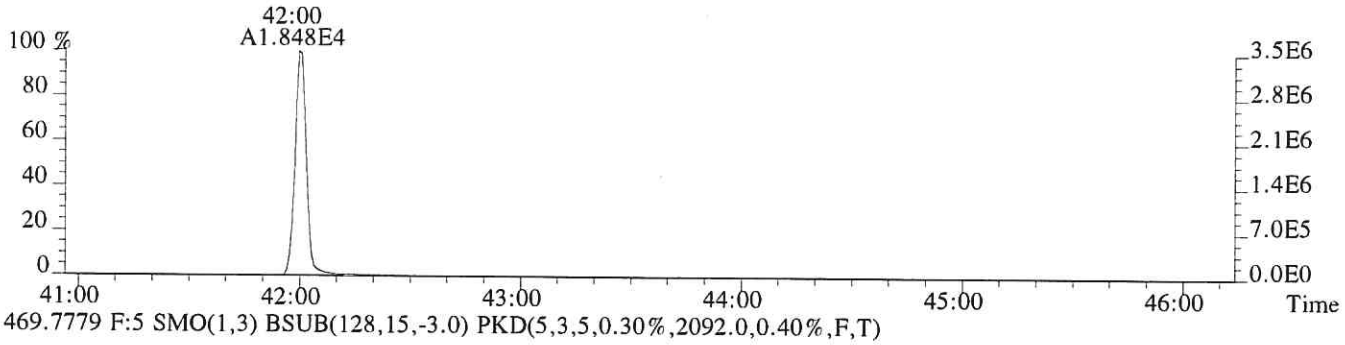
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



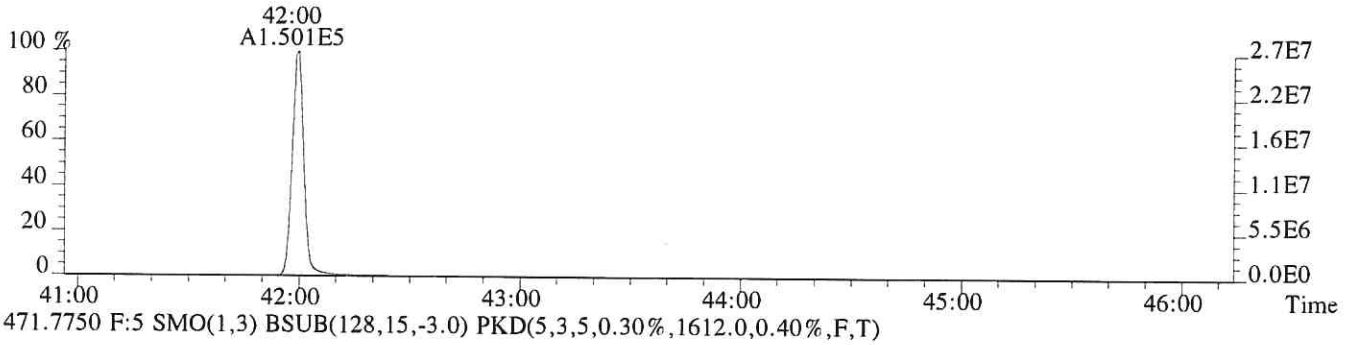
File:P614684 #1-477 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,824.0,0.40%,F,T)



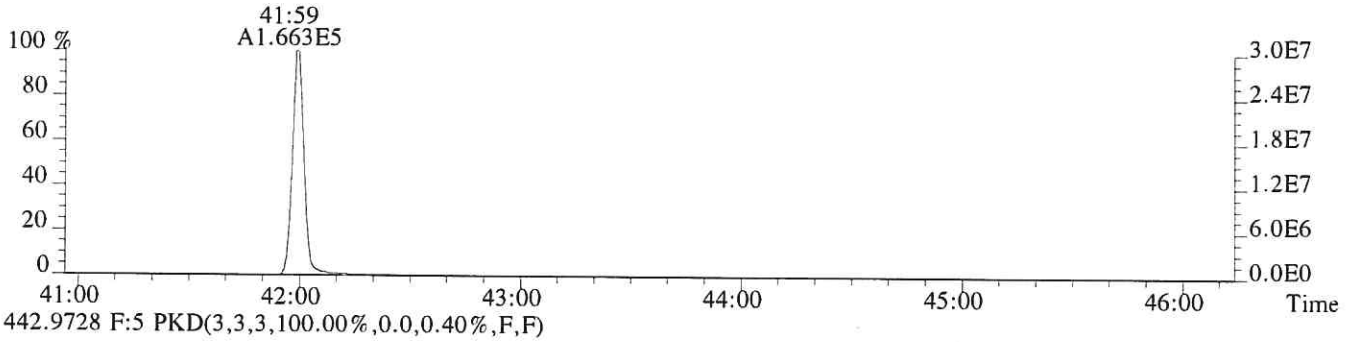
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2336.0,0.40%,F,T)



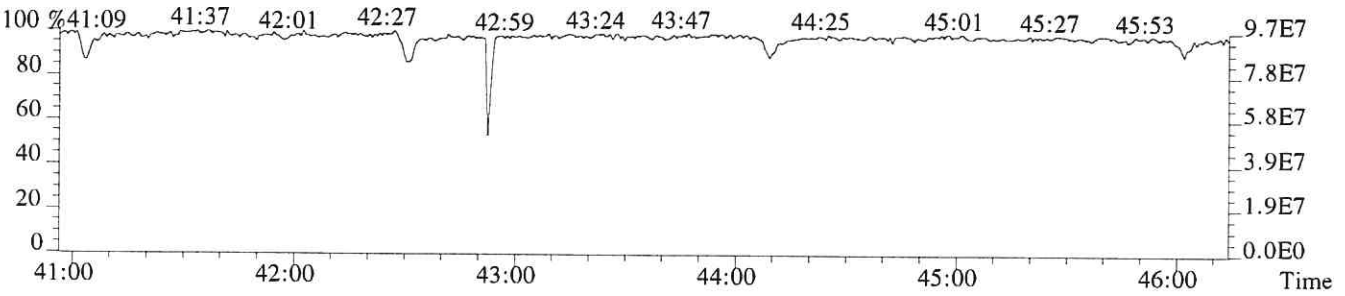
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2092.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1612.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76557

Run #4 Filename P614685 Samp: 1 Inj: 1 Acquired: 25-SEP-18 16:52:47
Processed: 26-SEP-18 07:39:09 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:01	3.637e+04	4.546e+04	0.80	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	32:15	3.073e+05	1.939e+05	1.58	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	33:09	2.818e+05	1.782e+05	1.58	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	35:49	2.774e+05	2.200e+05	1.26	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	35:55	2.905e+05	2.295e+05	1.27	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	36:25	2.685e+05	2.105e+05	1.28	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	37:10	2.537e+05	1.982e+05	1.28	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	38:24	2.407e+05	2.292e+05	1.05	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	39:46	1.925e+05	1.847e+05	1.04	yes	no	1.463
10	Unk	OCDF	42:13	3.041e+05	3.309e+05	0.92	yes	no	1.571
11	Unk	2,3,7,8-TCDD	28:48	2.365e+04	3.051e+04	0.78	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	33:26	1.706e+05	1.098e+05	1.55	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	36:33	1.645e+05	1.238e+05	1.33	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	36:38	1.567e+05	1.272e+05	1.23	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	36:53	1.702e+05	1.368e+05	1.24	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	39:18	1.477e+05	1.392e+05	1.06	yes	no	1.112
17	Unk	OCDD	42:01	2.180e+05	2.422e+05	0.90	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	27:59	3.444e+05	4.352e+05	0.79	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	32:14	5.358e+05	3.352e+05	1.60	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	33:08	5.234e+05	3.254e+05	1.61	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	35:48	2.524e+05	4.773e+05	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	35:55	2.834e+05	5.294e+05	0.54	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	36:25	2.621e+05	4.867e+05	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	37:09	2.431e+05	4.520e+05	0.54	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:24	1.967e+05	4.289e+05	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:46	1.638e+05	3.571e+05	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	28:47	2.330e+05	2.909e+05	0.80	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	33:25	3.758e+05	2.372e+05	1.58	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	36:33	3.106e+05	2.345e+05	1.32	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	36:37	2.932e+05	2.439e+05	1.20	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:17	2.673e+05	2.524e+05	1.06	yes	no	0.857
32	IS	13C-OCDD	42:00	3.863e+05	4.247e+05	0.91	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	28:13	2.395e+05	3.006e+05	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:52	3.335e+05	2.694e+05	1.24	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	28:48	5.645e+04				no	1.086

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
76557

Run #4 Filename P614685 Samp: 1 Inj: 1 Acquired: 25-SEP-18 16:52:47
Processed: 26-SEP-18 07:39:09 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.55e+06	2.18e+03	3.0e+03	8.17e+06	4.39e+03	1.9e+03
2	1,2,3,7,8-PeCDF	5.78e+07	2.87e+03	2.0e+04	3.64e+07	4.35e+03	8.4e+03
3	2,3,4,7,8-PeCDF	5.79e+07	2.87e+03	2.0e+04	3.65e+07	4.35e+03	8.4e+03
4	1,2,3,4,7,8-HxCDF	6.15e+07	2.89e+03	2.1e+04	4.93e+07	2.08e+03	2.4e+04
5	1,2,3,6,7,8-HxCDF	6.26e+07	2.89e+03	2.2e+04	4.97e+07	2.08e+03	2.4e+04
6	2,3,4,6,7,8-HxCDF	6.14e+07	2.89e+03	2.1e+04	4.79e+07	2.08e+03	2.3e+04
7	1,2,3,7,8,9-HxCDF	5.42e+07	2.89e+03	1.9e+04	4.26e+07	2.08e+03	2.0e+04
8	1,2,3,4,6,7,8-HpCDF	5.56e+07	1.47e+04	3.8e+03	5.23e+07	1.66e+04	3.1e+03
9	1,2,3,4,7,8,9-HpCDF	3.99e+07	1.47e+04	2.7e+03	3.80e+07	1.66e+04	2.3e+03
10	OCDF	5.72e+07	1.23e+03	4.7e+04	6.22e+07	3.01e+03	2.1e+04
11	2,3,7,8-TCDD	4.49e+06	5.36e+03	8.4e+02	5.78e+06	2.64e+03	2.2e+03
12	1,2,3,7,8-PeCDD	3.45e+07	2.46e+03	1.4e+04	2.21e+07	1.02e+03	2.2e+04
13	1,2,3,4,7,8-HxCDD	3.72e+07	9.04e+02	4.1e+04	2.90e+07	1.56e+03	1.9e+04
14	1,2,3,6,7,8-HxCDD	3.60e+07	9.04e+02	4.0e+04	2.81e+07	1.56e+03	1.8e+04
15	1,2,3,7,8,9-HxCDD	3.80e+07	9.04e+02	4.2e+04	3.00e+07	1.56e+03	1.9e+04
16	1,2,3,4,6,7,8-HpCDD	3.19e+07	1.58e+03	2.0e+04	3.06e+07	1.63e+03	1.9e+04
17	OCDD	4.21e+07	1.71e+03	2.5e+04	4.66e+07	1.53e+03	3.0e+04
18	13C-2,3,7,8-TCDF	6.23e+07	1.55e+04	4.0e+03	7.90e+07	1.02e+04	7.8e+03
19	13C-1,2,3,7,8-PeCDF	1.00e+08	2.14e+03	4.7e+04	6.28e+07	2.18e+03	2.9e+04
20	13C-2,3,4,7,8-PeCDF	1.07e+08	2.14e+03	5.0e+04	6.66e+07	2.18e+03	3.1e+04
21	13C-1,2,3,4,7,8-HxCDF	5.63e+07	2.92e+03	1.9e+04	1.07e+08	4.60e+03	2.3e+04
22	13C-1,2,3,6,7,8-HxCDF	6.12e+07	2.92e+03	2.1e+04	1.15e+08	4.60e+03	2.5e+04
23	13C-2,3,4,6,7,8-HxCDF	5.95e+07	2.92e+03	2.0e+04	1.10e+08	4.60e+03	2.4e+04
24	13C-1,2,3,7,8,9-HxCDF	5.22e+07	2.92e+03	1.8e+04	9.74e+07	4.60e+03	2.1e+04
25	13C-1,2,3,4,6,7,8-HpCDF	4.59e+07	1.18e+04	3.9e+03	9.95e+07	3.82e+04	2.6e+03
26	13C-1,2,3,4,7,8,9-HpCDF	3.37e+07	1.18e+04	2.9e+03	7.29e+07	3.82e+04	1.9e+03
27	13C-2,3,7,8-TCDD	4.45e+07	1.91e+04	2.3e+03	5.53e+07	7.70e+03	7.2e+03
28	13C-1,2,3,7,8-PeCDD	7.50e+07	3.59e+03	2.1e+04	4.74e+07	2.50e+03	1.9e+04
29	13C-1,2,3,4,7,8-HxCDD	6.95e+07	5.55e+03	1.3e+04	5.43e+07	3.18e+03	1.7e+04
30	13C-1,2,3,6,7,8-HxCDD	6.70e+07	5.55e+03	1.2e+04	5.36e+07	3.18e+03	1.7e+04
31	13C-1,2,3,4,6,7,8-HpCDD	5.80e+07	4.72e+03	1.2e+04	5.53e+07	2.63e+03	2.1e+04
32	13C-OCDD	7.33e+07	1.86e+03	4.0e+04	8.10e+07	5.92e+02	1.4e+05
33	13C-1,2,3,4-TCDD	4.48e+07	1.91e+04	2.3e+03	5.67e+07	7.70e+03	7.4e+03
34	13C-1,2,3,7,8,9-HxCDD	7.38e+07	5.55e+03	1.3e+04	5.89e+07	3.18e+03	1.9e+04
35	37Cl-2,3,7,8-TCDD	1.08e+07	3.52e+03	3.1e+03			

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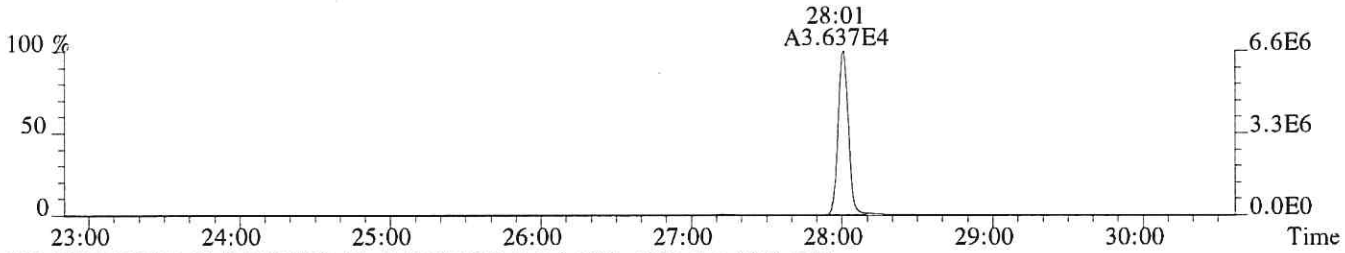
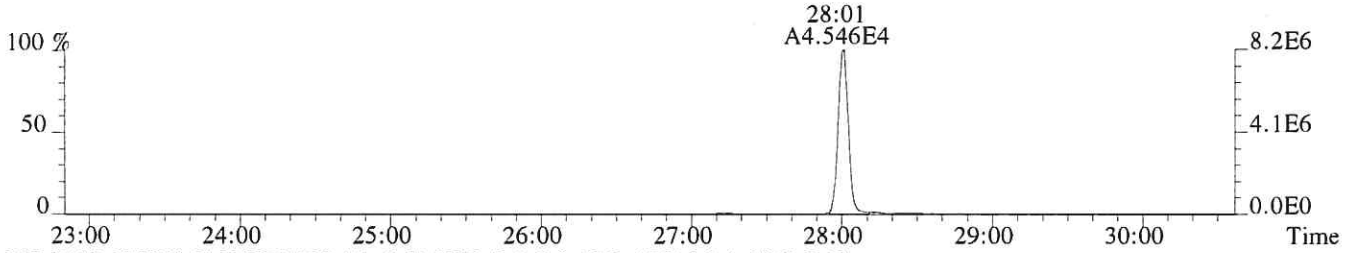
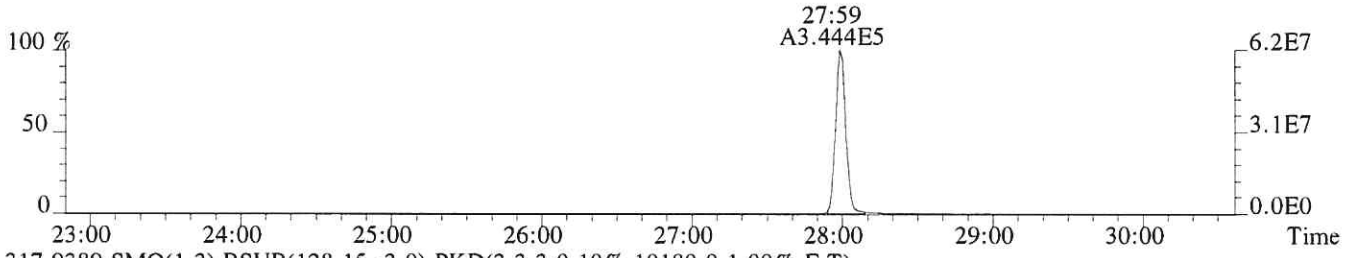
File:P614685 #1-552 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2176.0,1.00%,F,T)



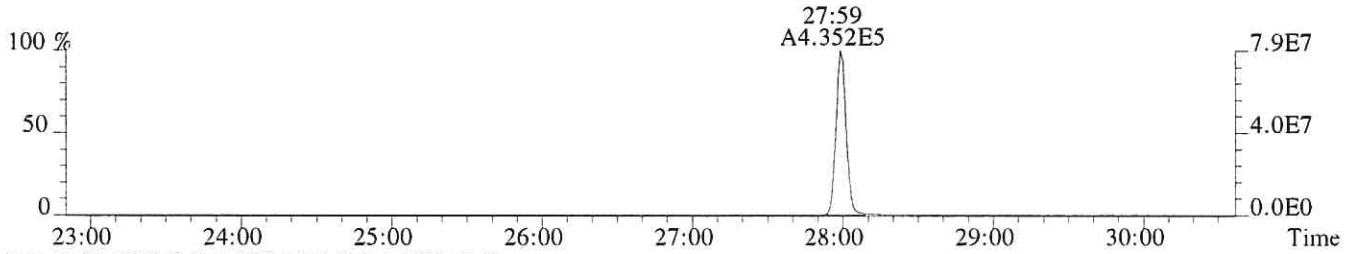
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4392.0,1.00%,F,T)



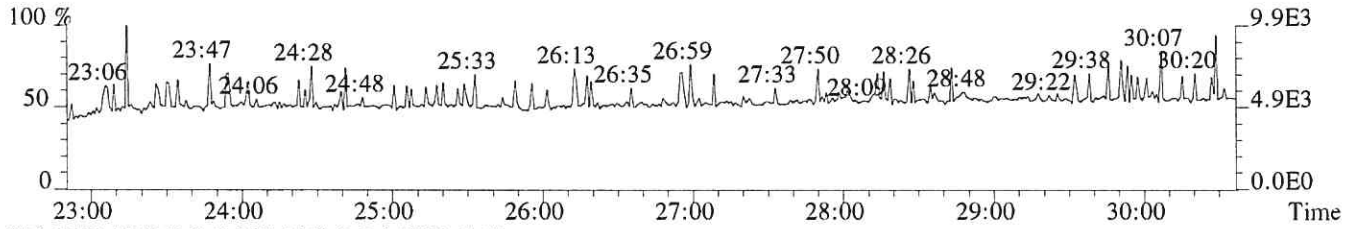
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,15516.0,1.00%,F,T)



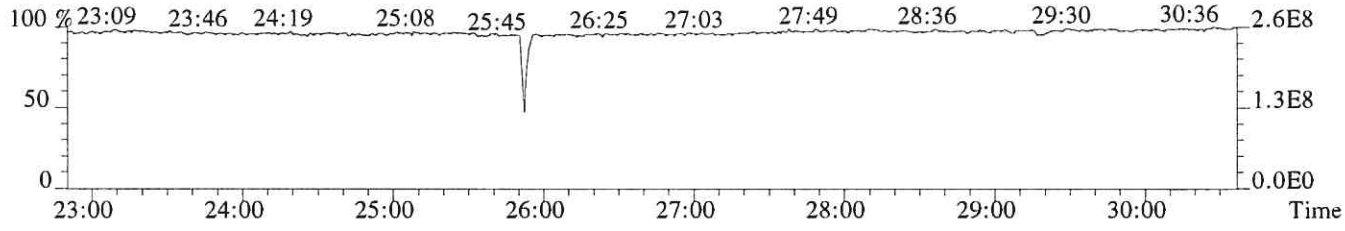
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10180.0,1.00%,F,T)



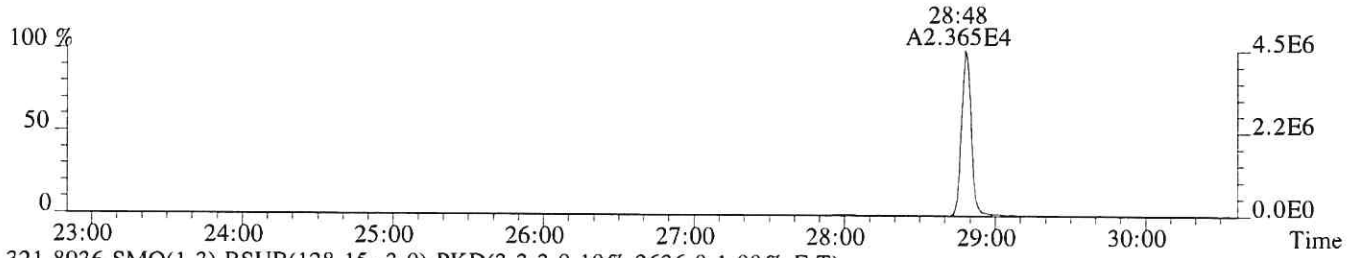
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



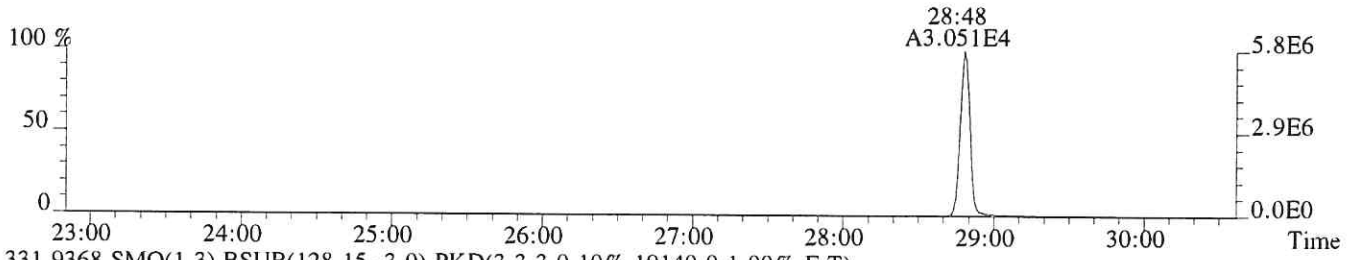
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



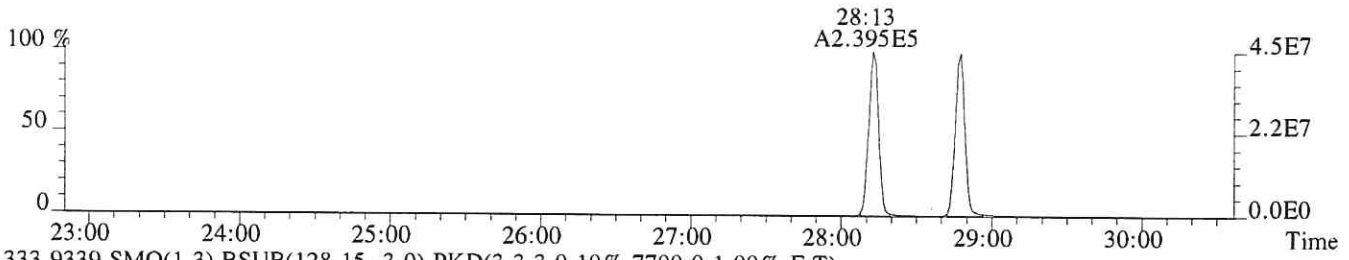
File:P614685 #1-552 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5364.0,1.00%,F,T)



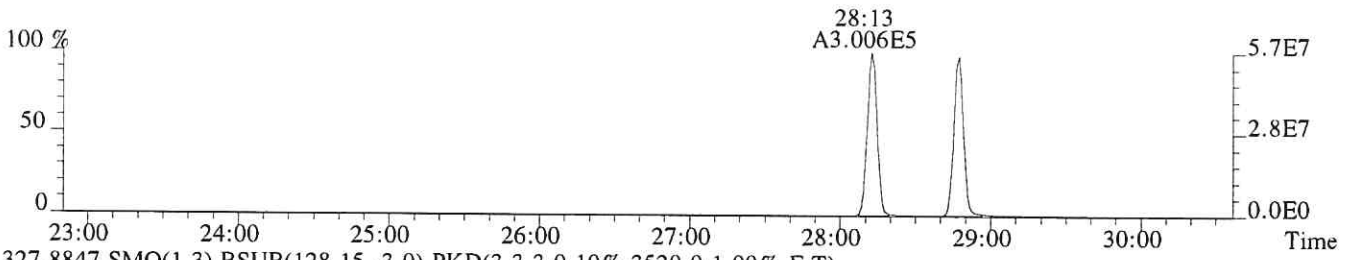
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2636.0,1.00%,F,T)



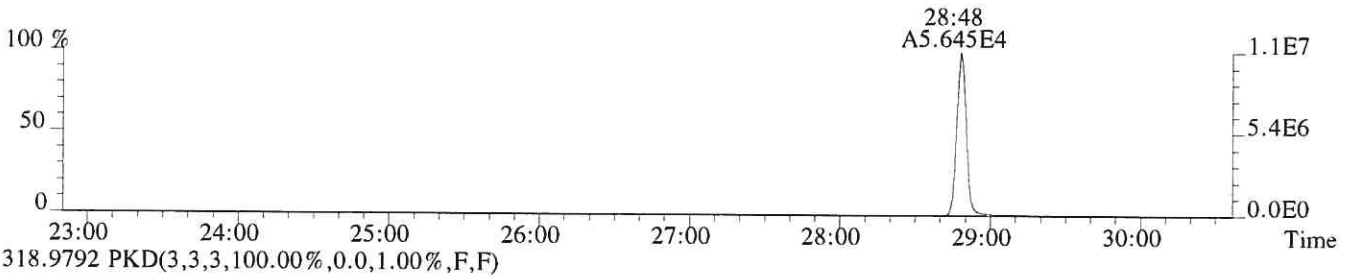
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,19140.0,1.00%,F,T)



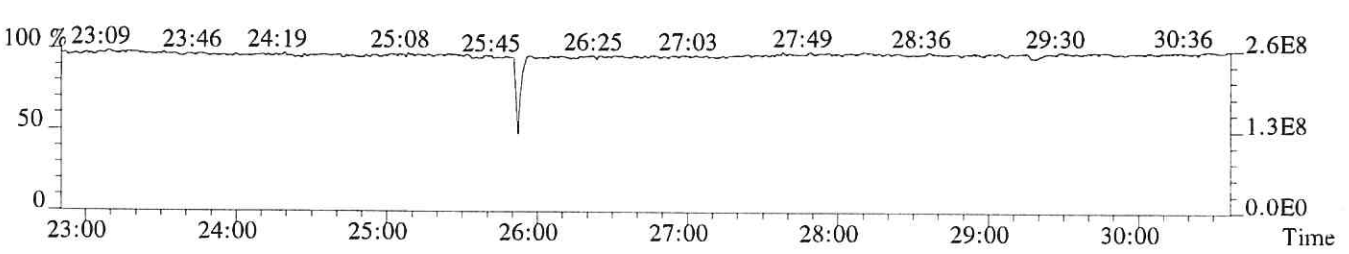
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7700.0,1.00%,F,T)



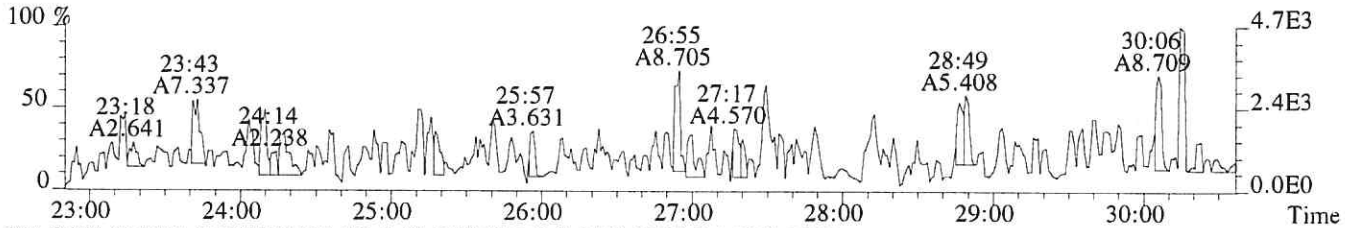
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3520.0,1.00%,F,T)



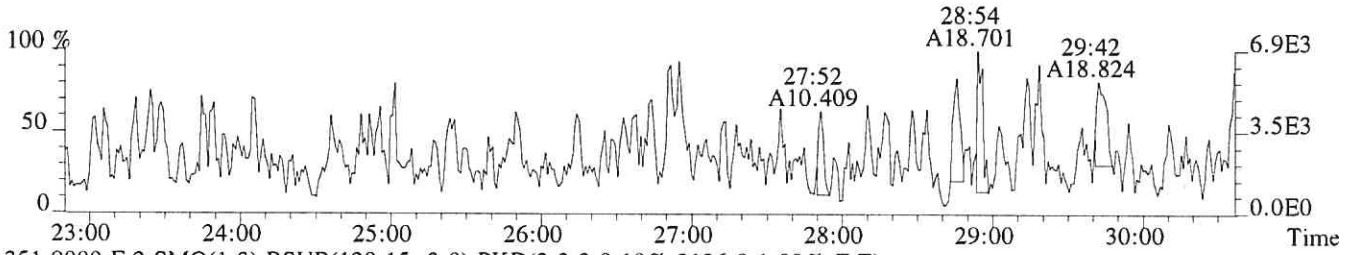
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



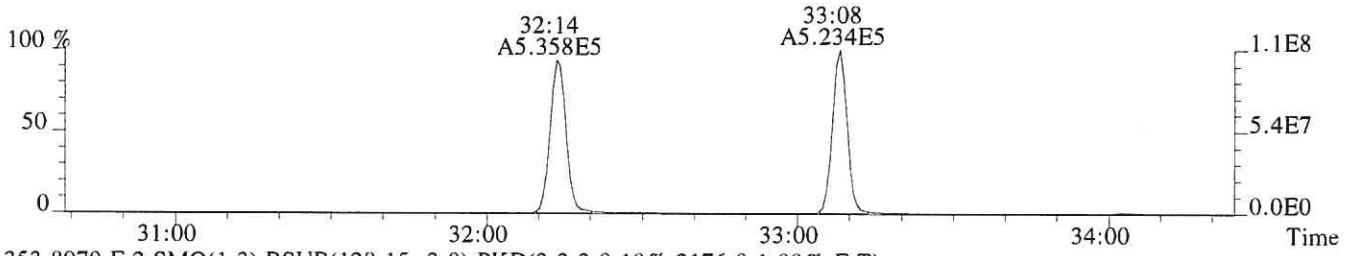
File:P614685 #1-552 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1116.0,1.00%,F,T)



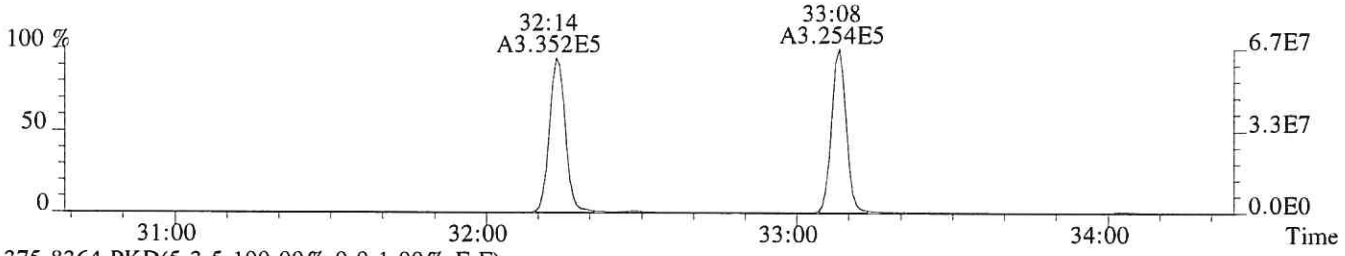
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2788.0,1.00%,F,T)



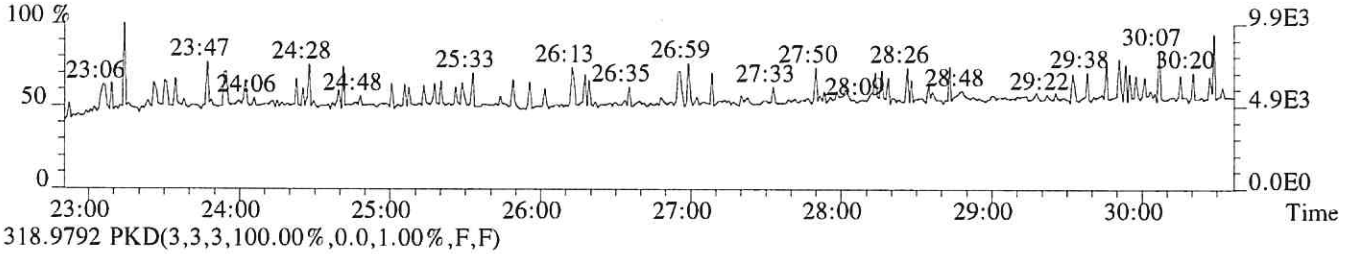
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2136.0,1.00%,F,T)



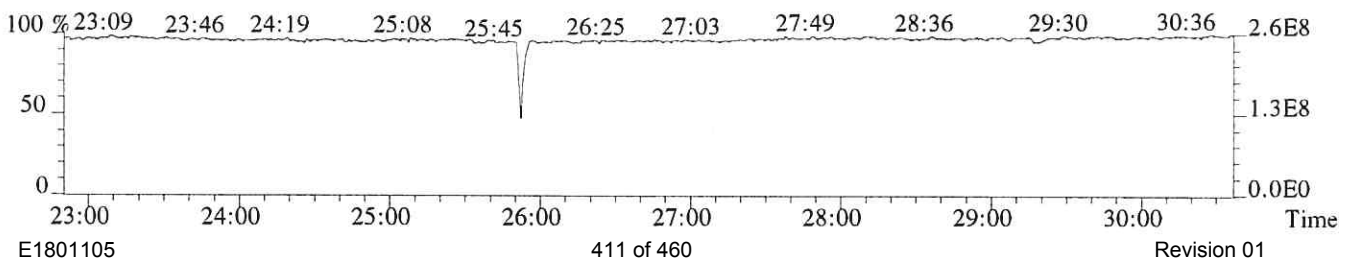
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2176.0,1.00%,F,T)



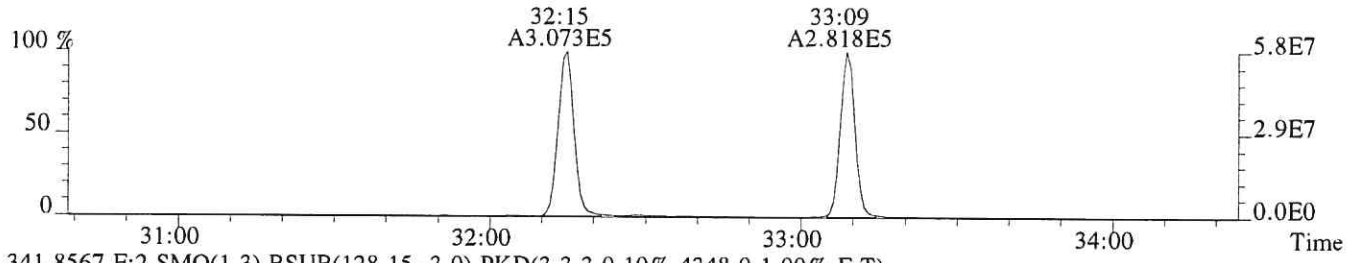
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



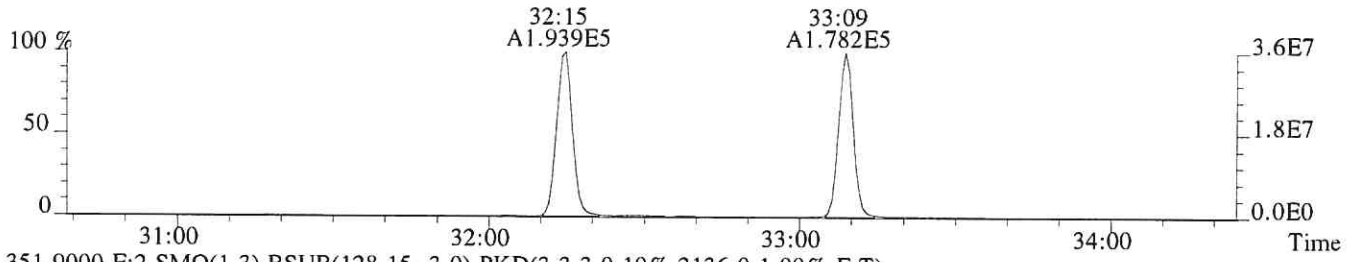
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



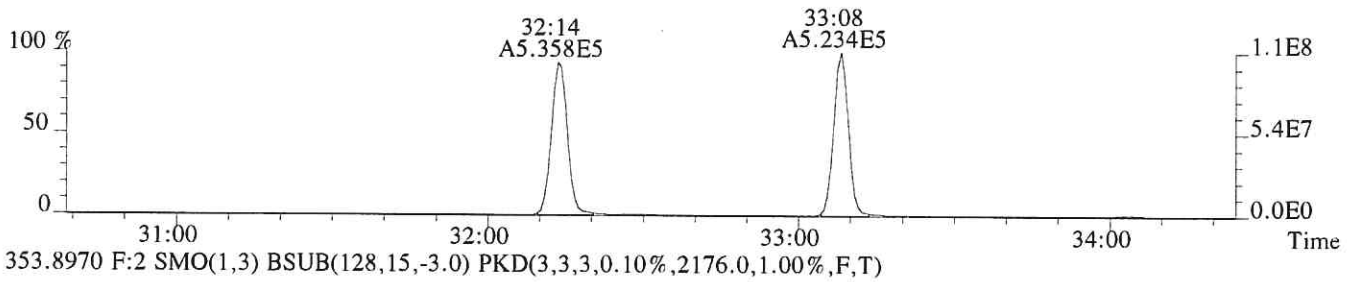
File:P614685 #1-339 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2872.0,1.00%,F,T)



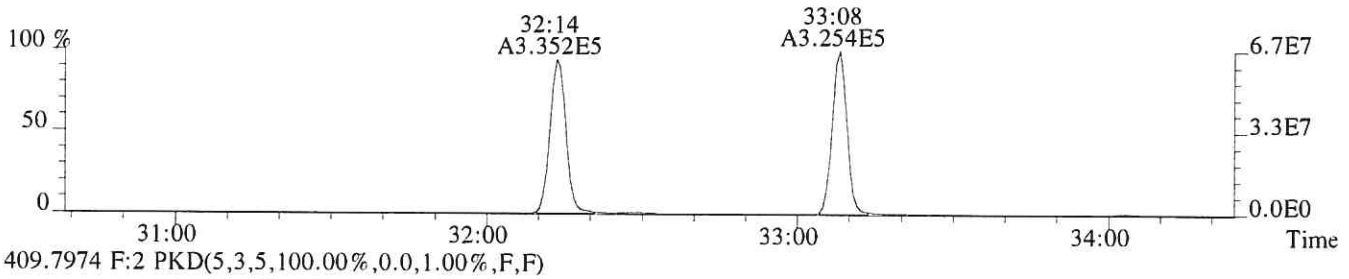
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4348.0,1.00%,F,T)



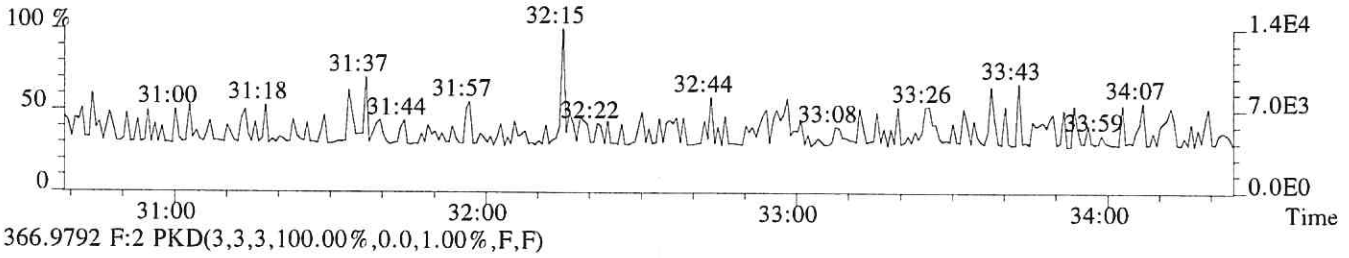
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2136.0,1.00%,F,T)



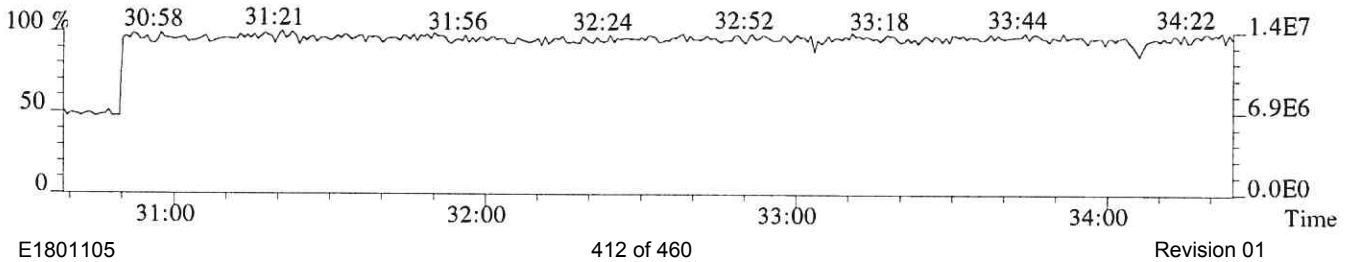
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2176.0,1.00%,F,T)



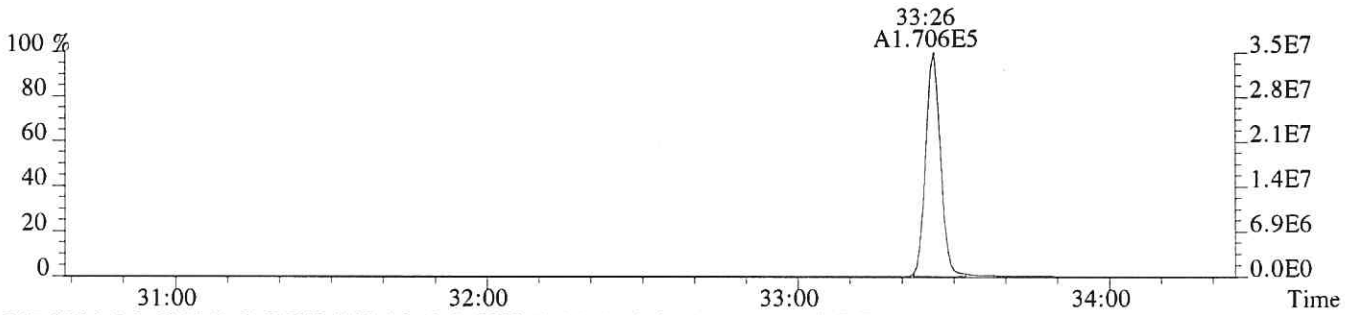
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



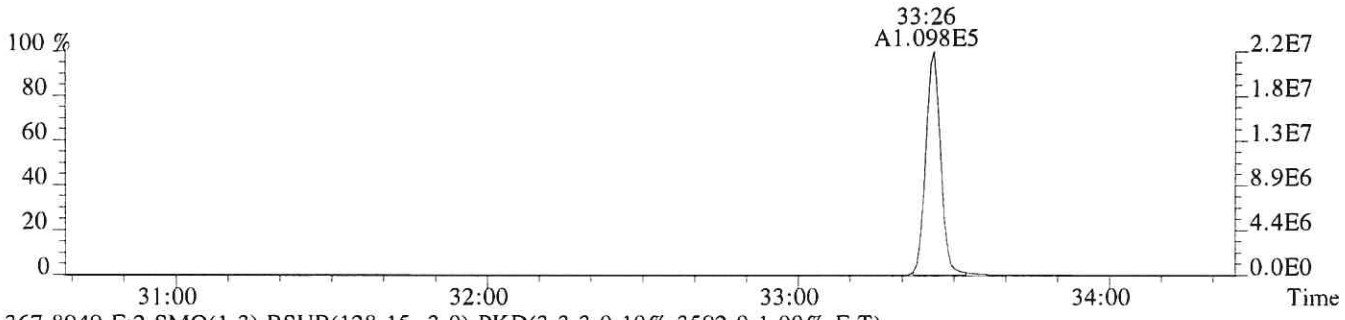
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



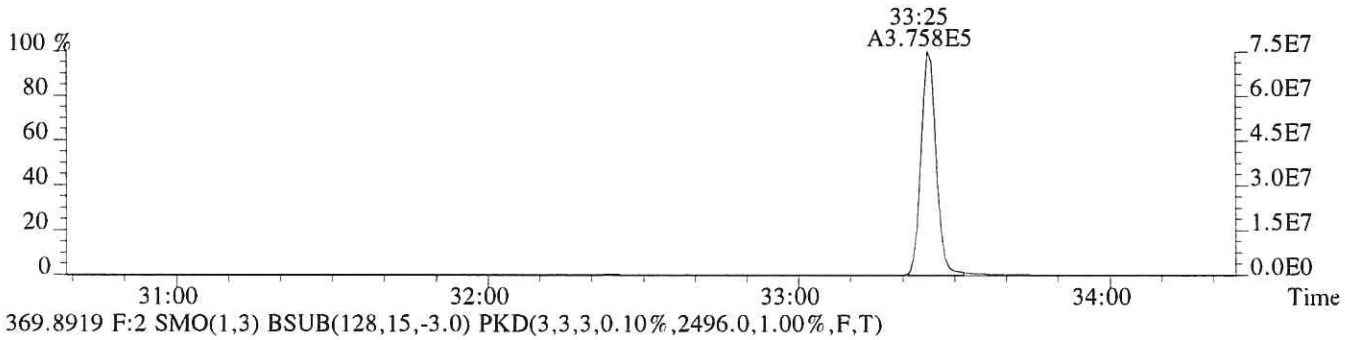
File:P614685 #1-339 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spectŁ
Sample#1 Exp:CS3
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2460.0,1.00%,F,T)



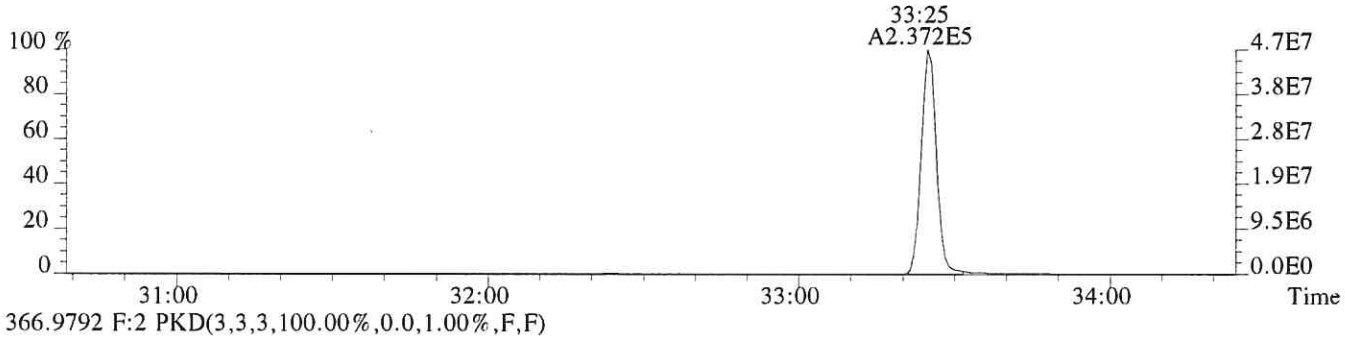
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1020.0,1.00%,F,T)



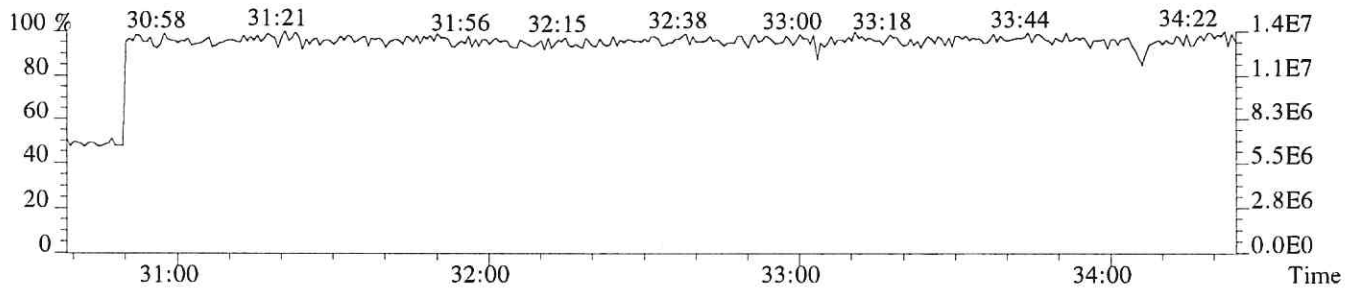
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3592.0,1.00%,F,T)



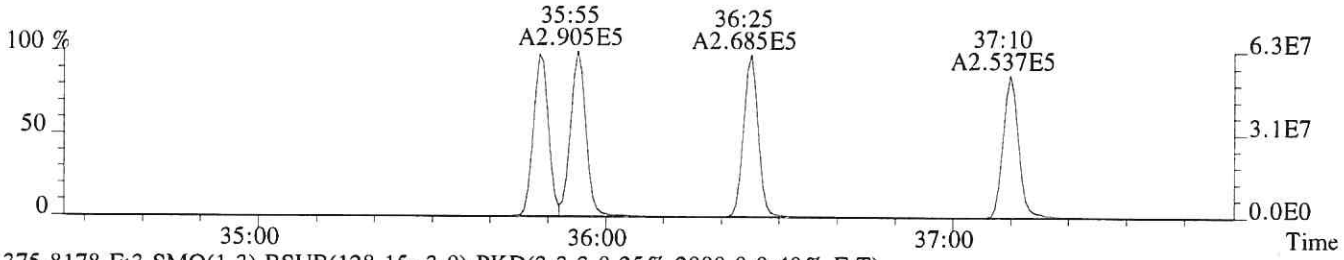
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2496.0,1.00%,F,T)



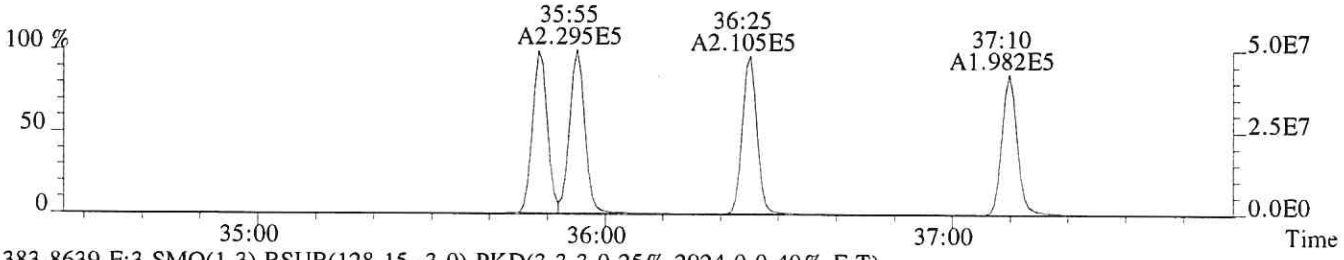
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



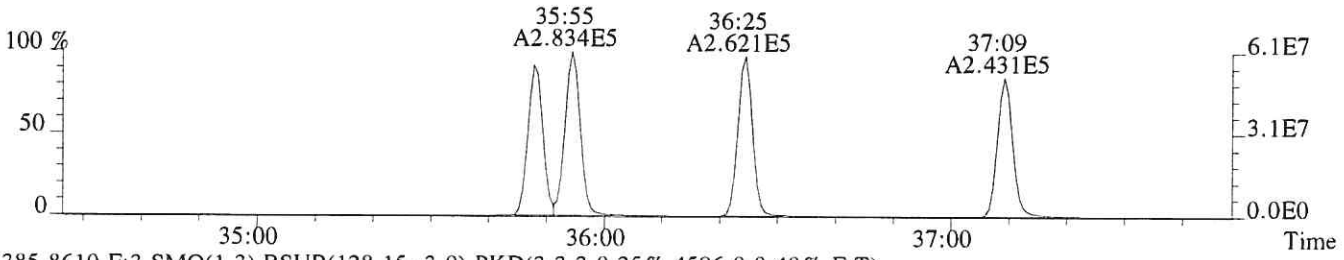
File:P614685 #1-304 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2888.0,0.40%,F,T)



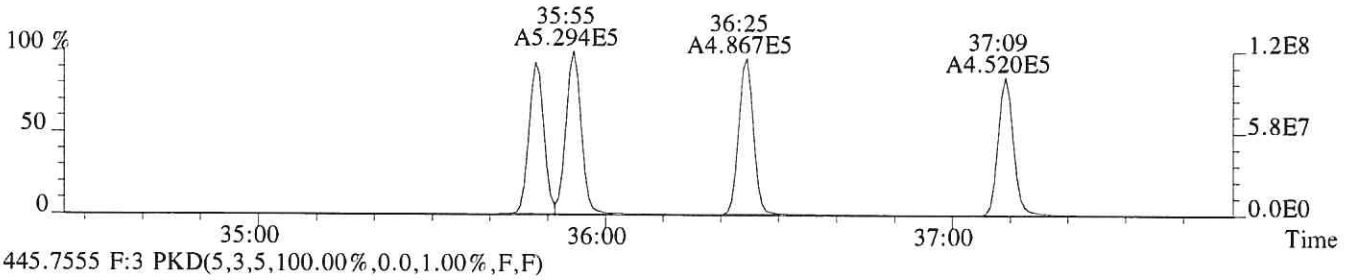
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2080.0,0.40%,F,T)



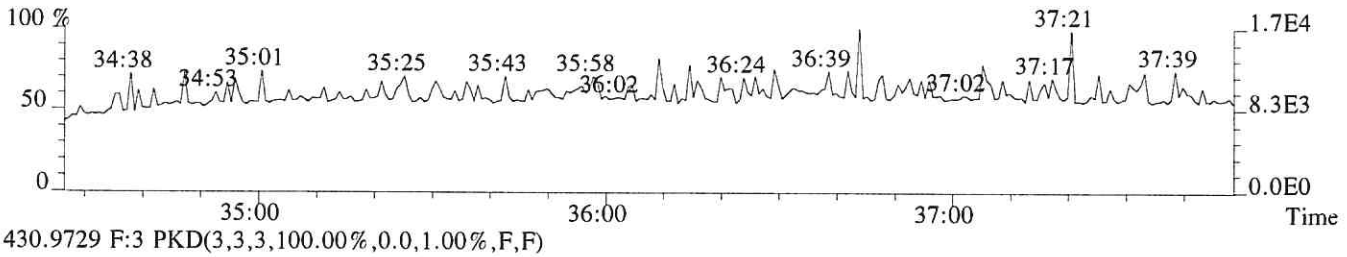
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2924.0,0.40%,F,T)



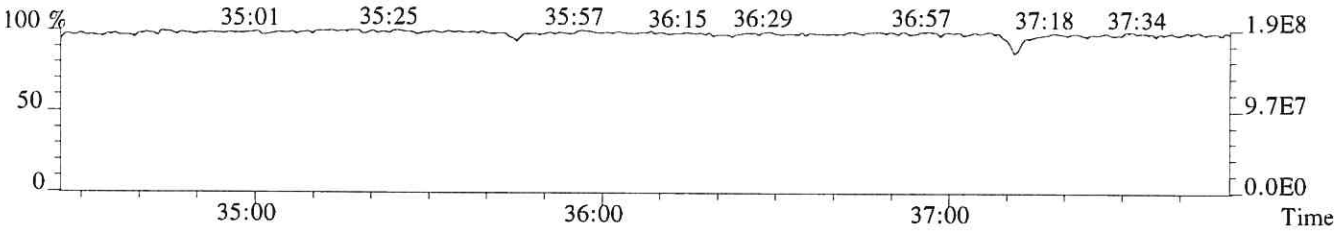
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4596.0,0.40%,F,T)



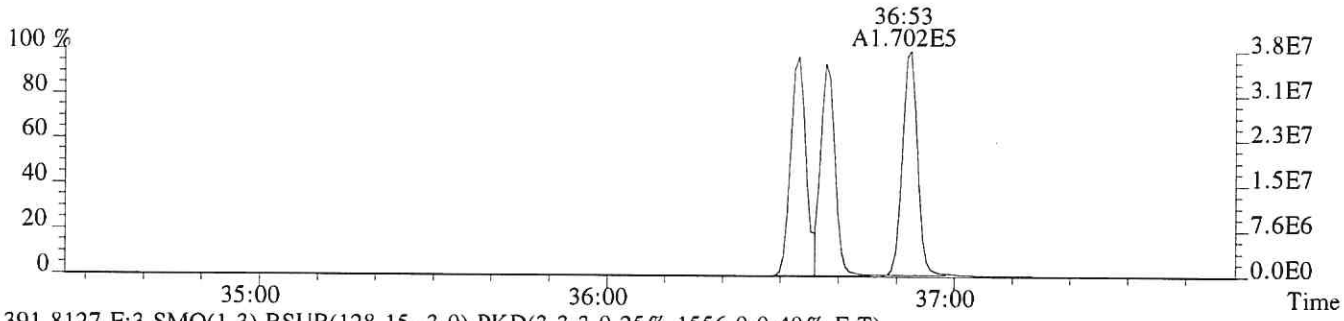
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



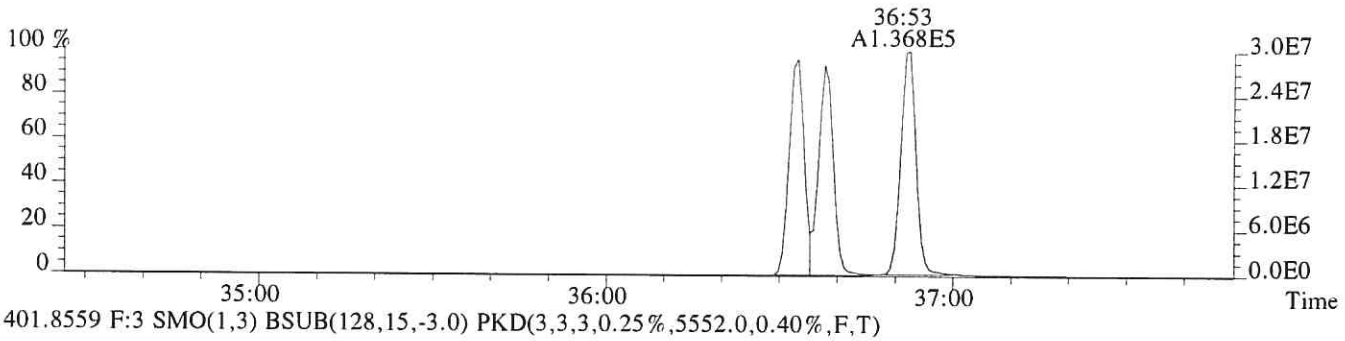
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



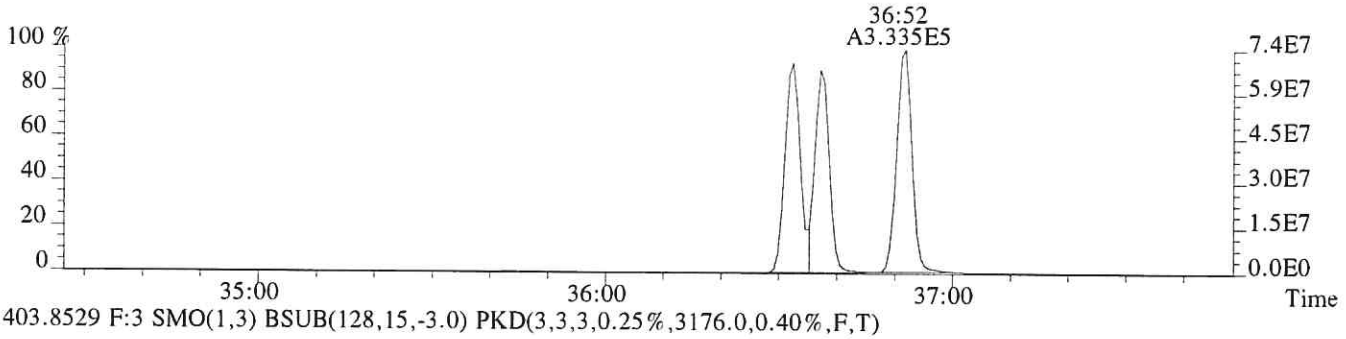
File:P614685 #1-304 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,904.0,0.40%,F,T)



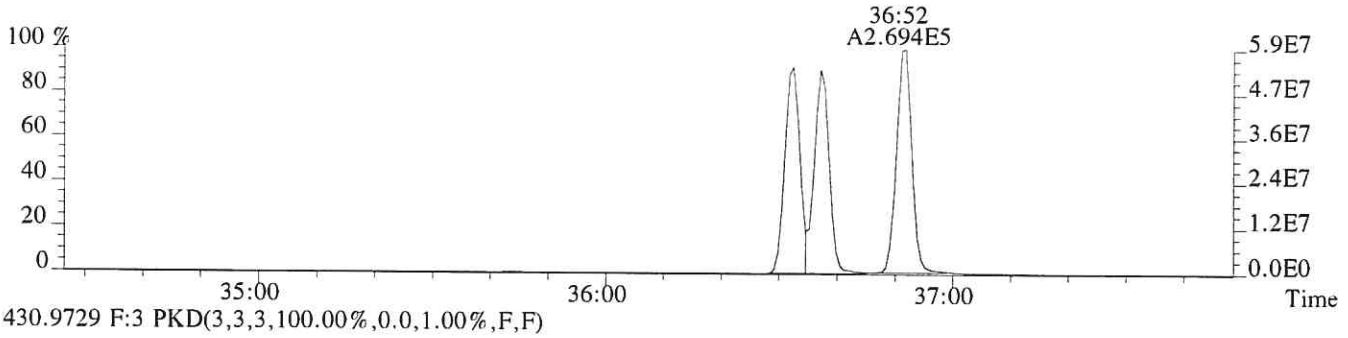
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1556.0,0.40%,F,T)



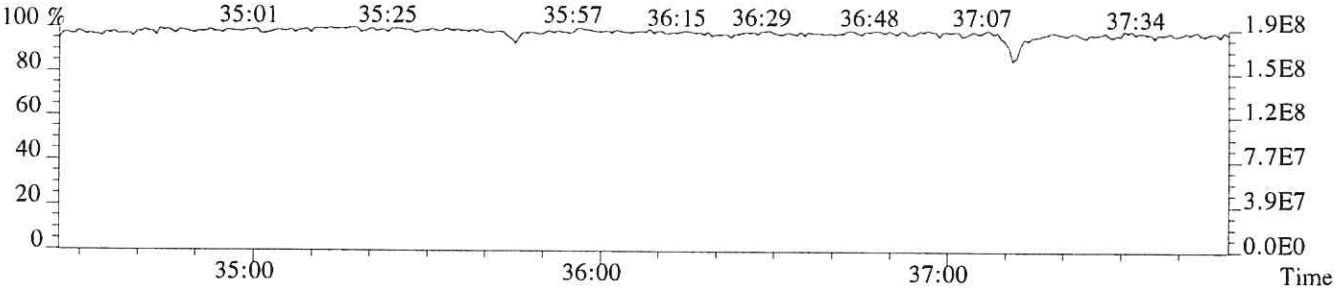
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5552.0,0.40%,F,T)



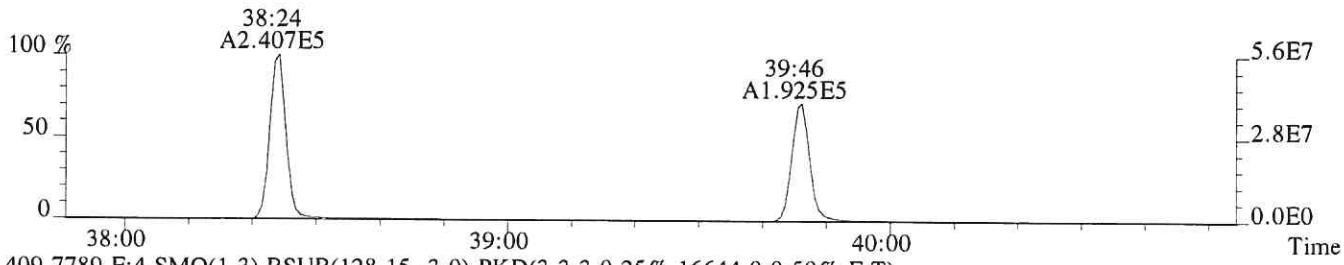
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3176.0,0.40%,F,T)



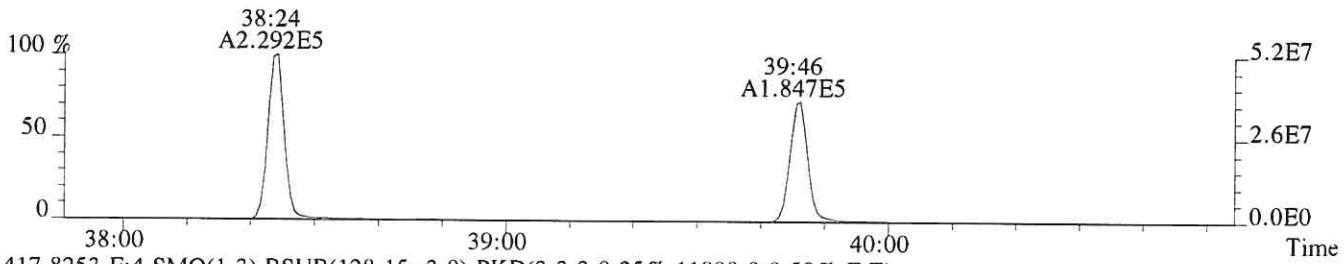
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



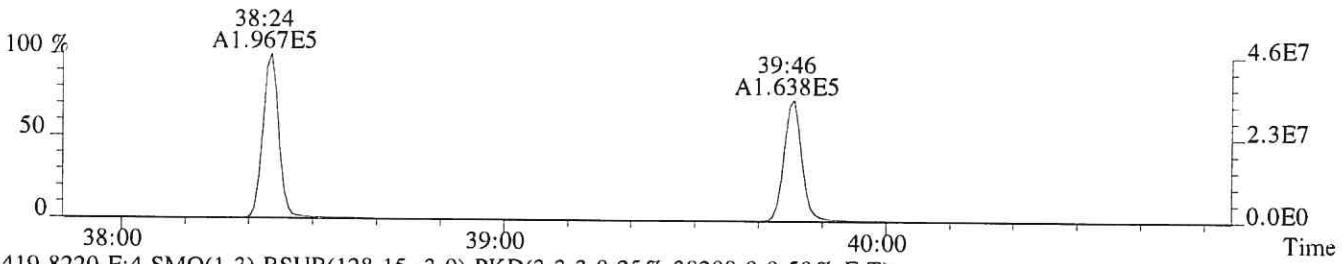
File:P614685 #1-276 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,14728.0,0.50%,F,T)



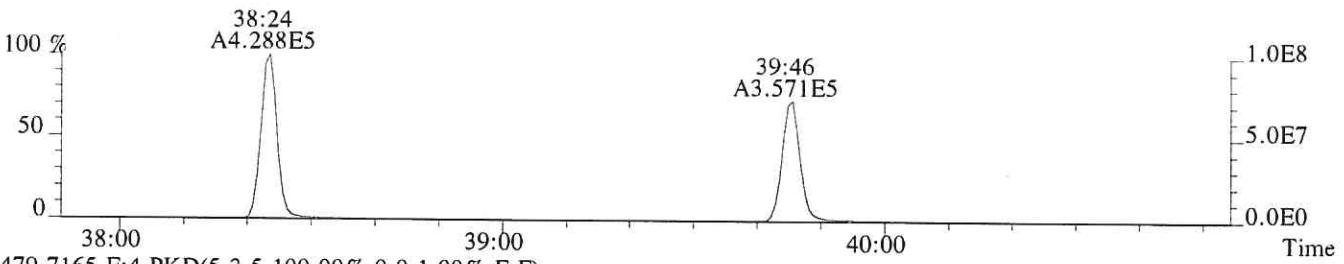
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,16644.0,0.50%,F,T)



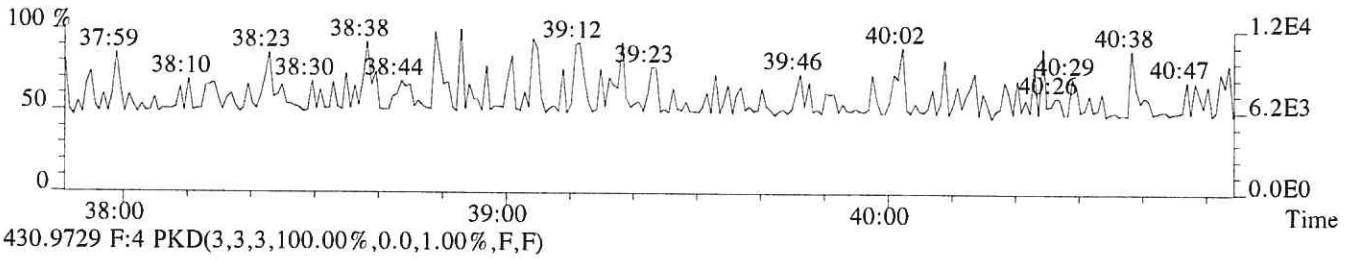
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,11800.0,0.50%,F,T)



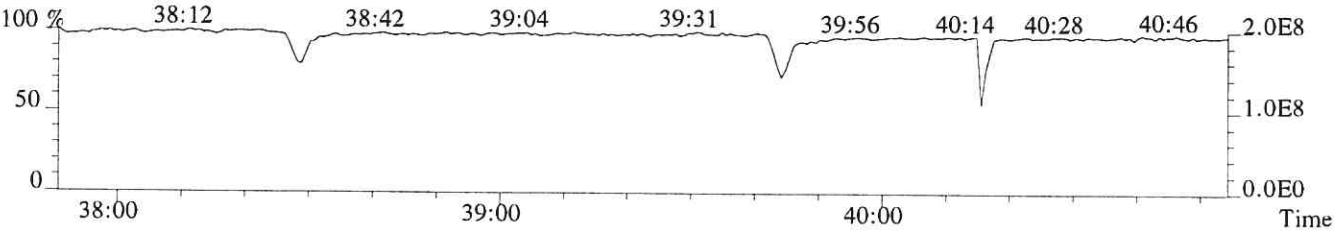
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,38208.0,0.50%,F,T)



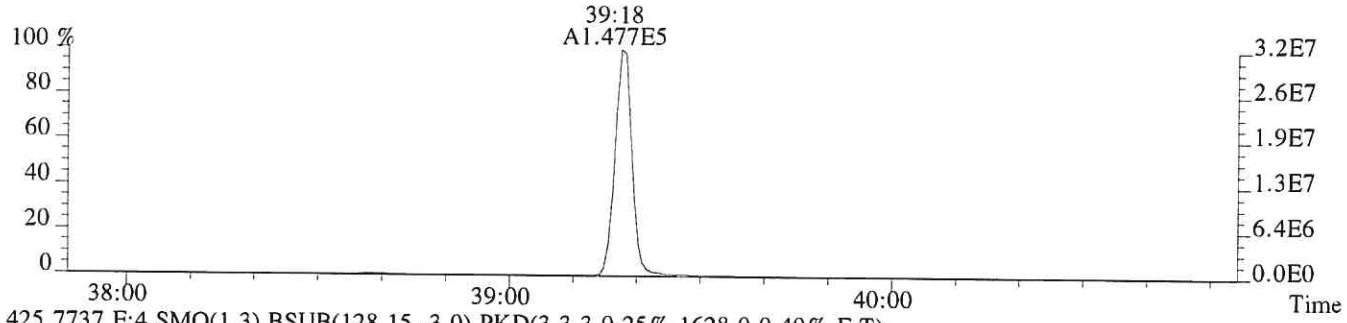
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



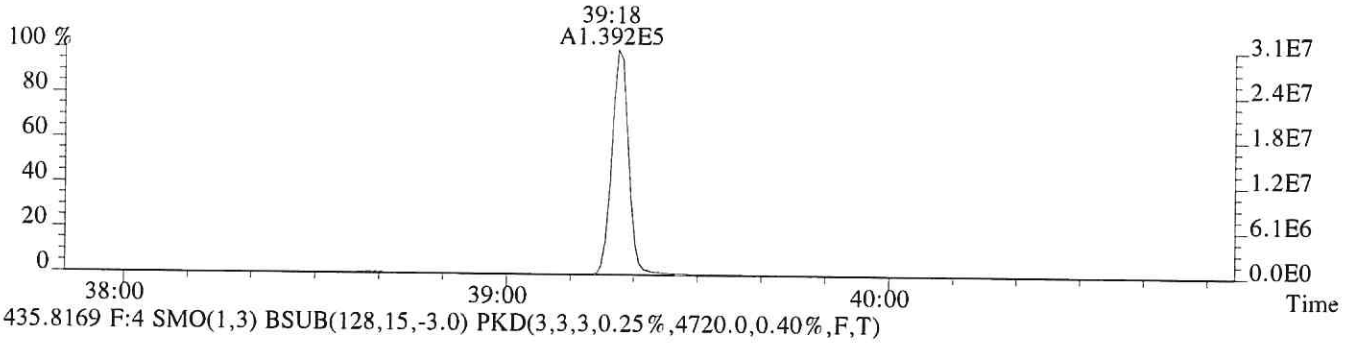
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



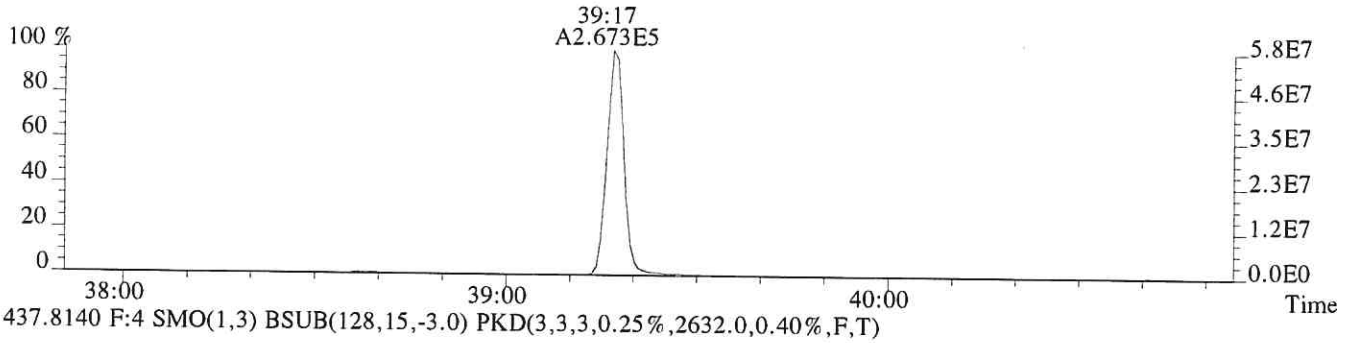
File:P614685 #1-276 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1576.0,0.40%,F,T)



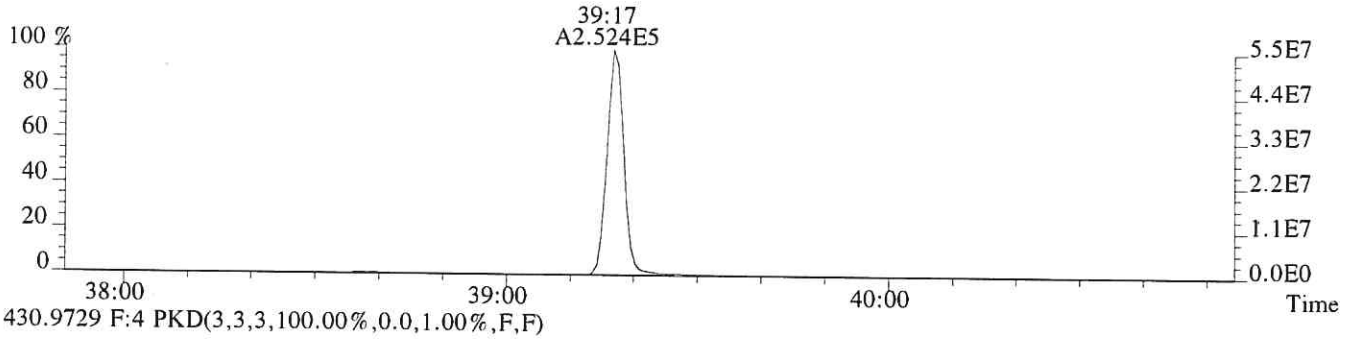
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1628.0,0.40%,F,T)



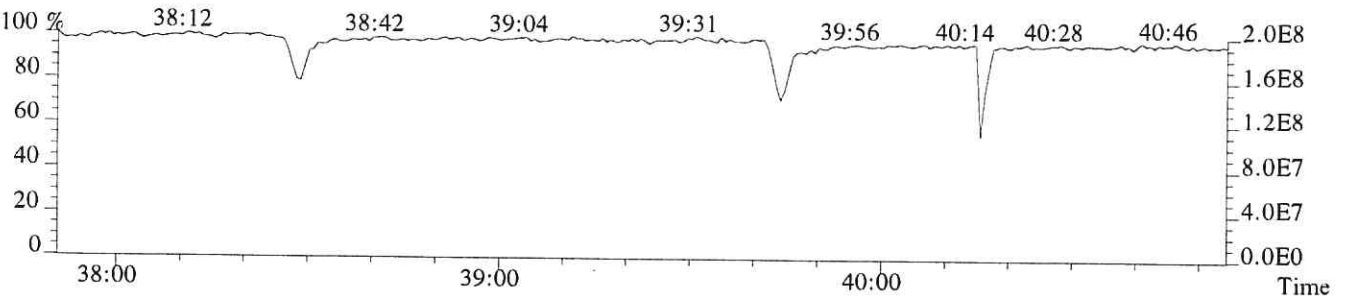
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4720.0,0.40%,F,T)



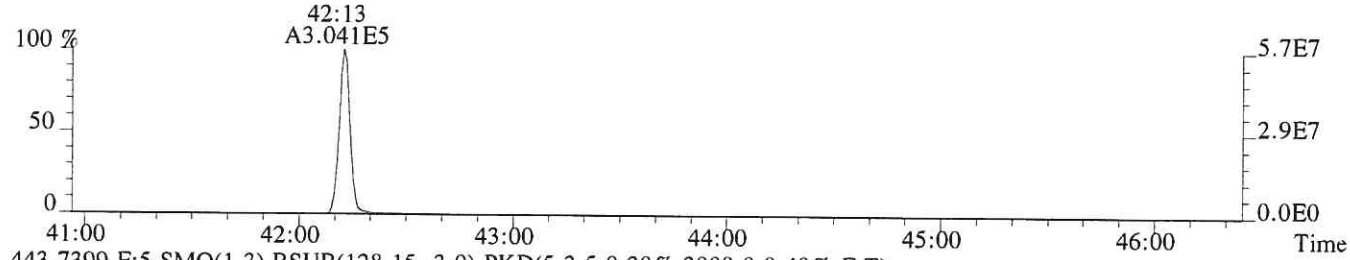
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2632.0,0.40%,F,T)



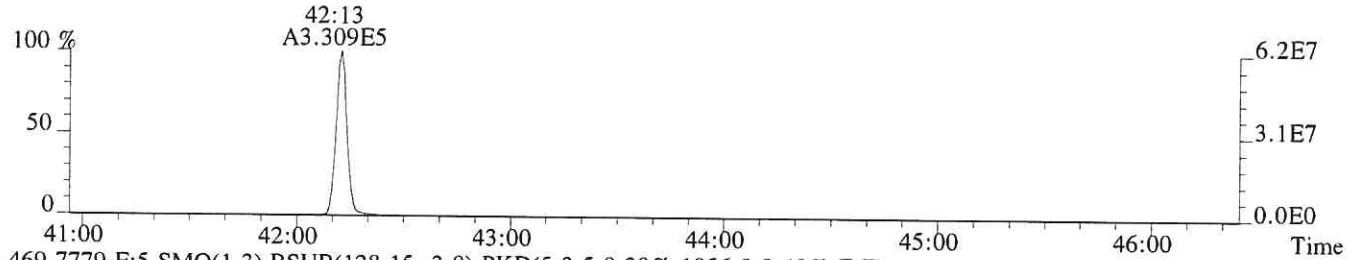
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



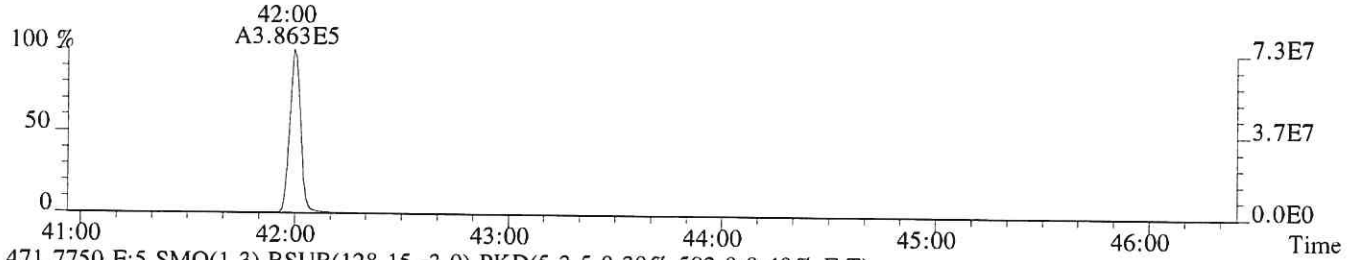
File:P614685 #1-493 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1228.0,0.40%,F,T)



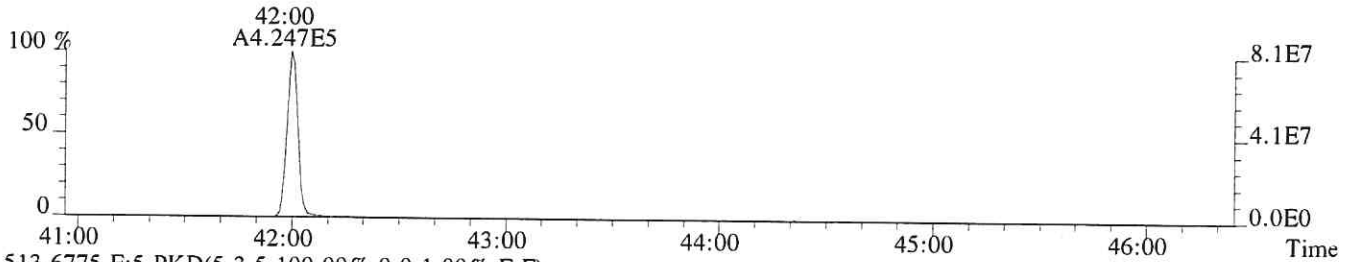
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3008.0,0.40%,F,T)



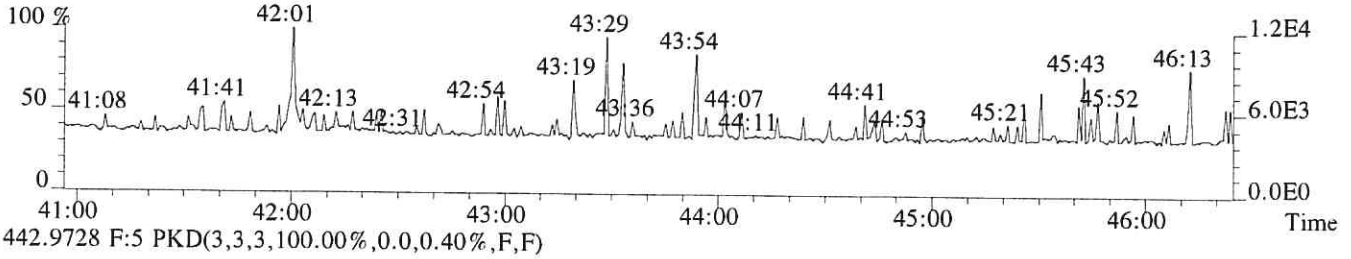
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1856.0,0.40%,F,T)



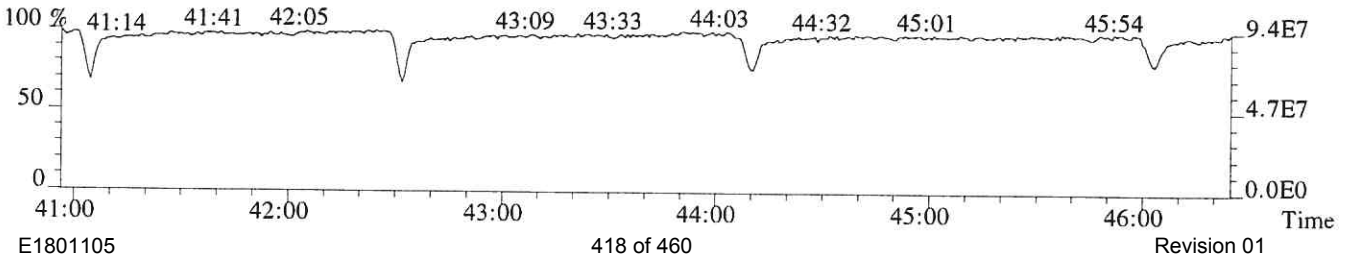
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,592.0,0.40%,F,T)



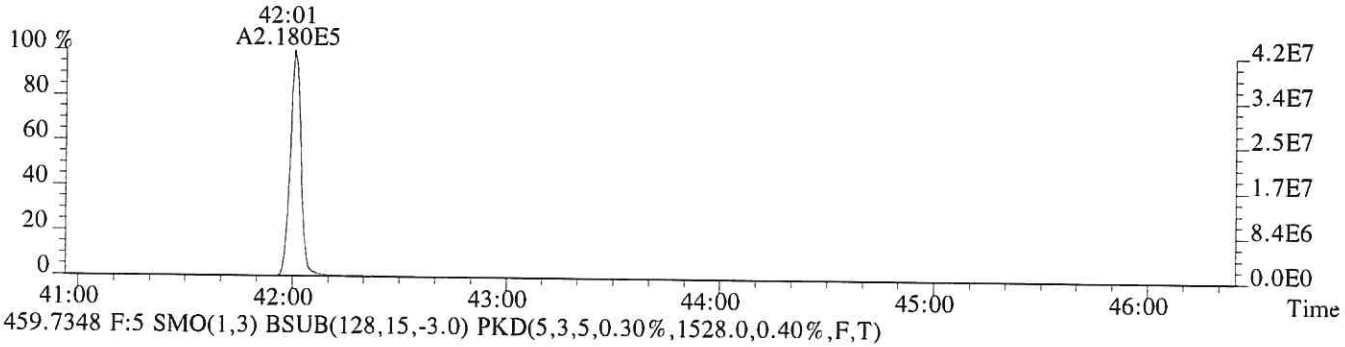
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



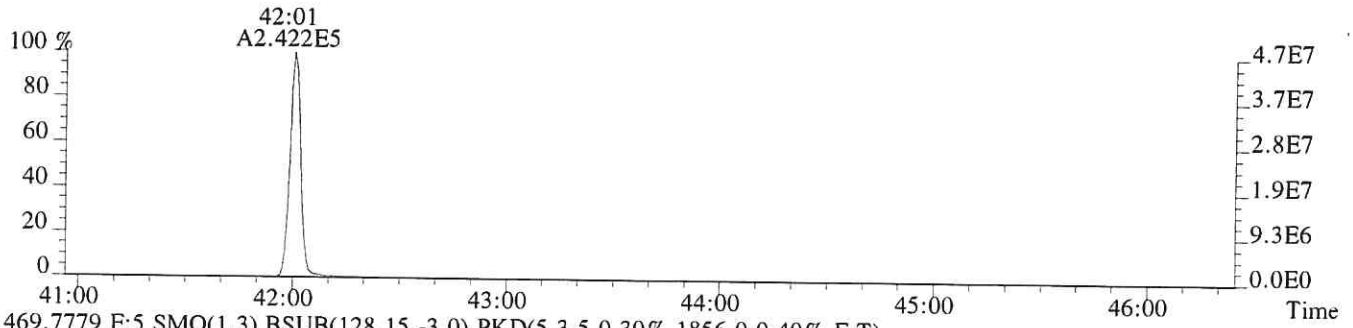
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



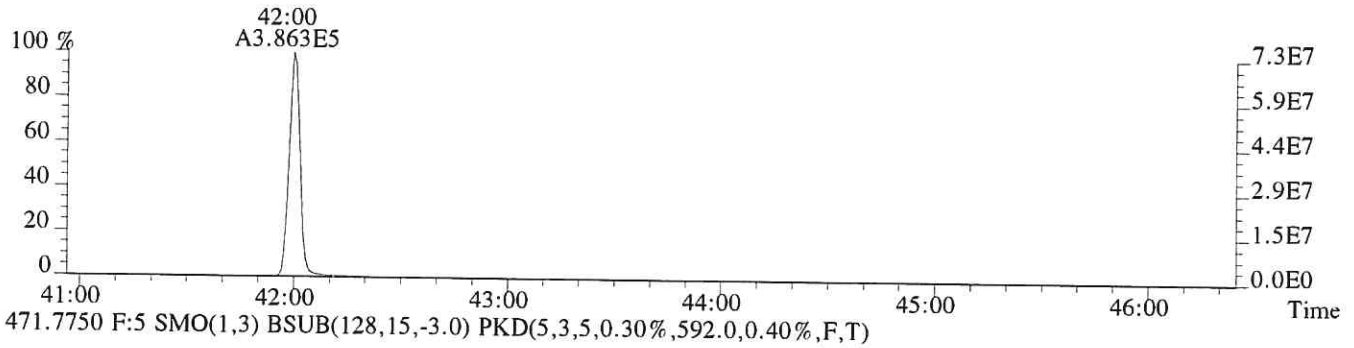
File:P614685 #1-493 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1708.0,0.40%,F,T)



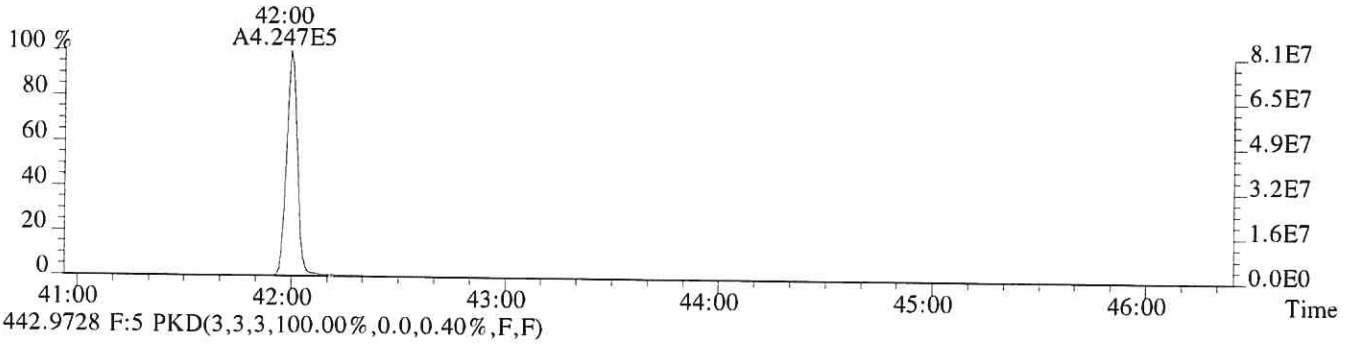
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1528.0,0.40%,F,T)



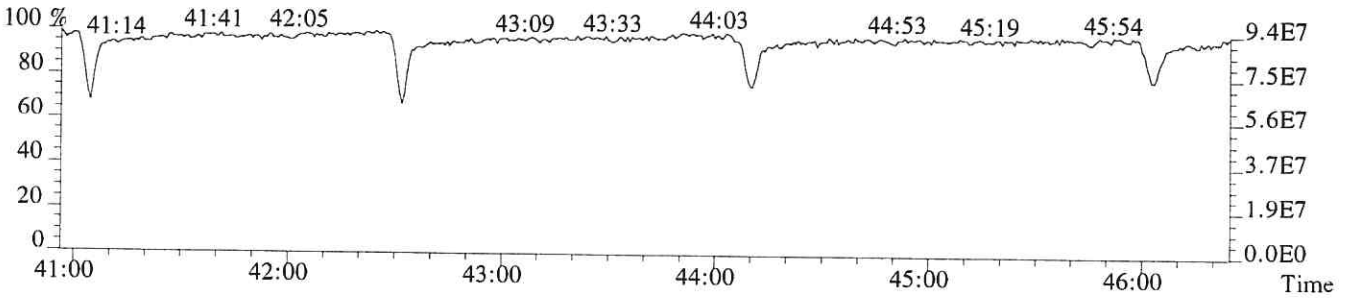
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1856.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,592.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
82167

Run #5 Filename P614686 Samp: 1 Inj: 1 Acquired: 25-SEP-18 17:41:03
Processed: 26-SEP-18 07:39:11 Sample ID: CS4

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:00	1.186e+05	1.498e+05	0.79	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	32:14	1.070e+06	6.680e+05	1.60	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	33:09	9.931e+05	6.255e+05	1.59	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	35:49	9.336e+05	7.318e+05	1.28	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	35:55	9.546e+05	7.530e+05	1.27	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	36:25	9.004e+05	7.134e+05	1.26	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	37:10	8.574e+05	6.711e+05	1.28	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	38:24	7.924e+05	7.640e+05	1.04	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	39:46	6.712e+05	6.389e+05	1.05	yes	no	1.463
10	Unk	OCDF	42:13	9.999e+05	1.075e+06	0.93	yes	no	1.571
11	Unk	2,3,7,8-TCDD	28:48	8.371e+04	1.065e+05	0.79	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	33:26	5.908e+05	3.807e+05	1.55	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	36:33	5.387e+05	4.268e+05	1.26	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	36:38	5.444e+05	4.299e+05	1.27	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	36:52	5.850e+05	4.610e+05	1.27	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	39:18	4.859e+05	4.568e+05	1.06	yes	no	1.112
17	Unk	OCDD	42:01	7.127e+05	7.901e+05	0.90	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	27:59	2.799e+05	3.543e+05	0.79	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	32:14	4.595e+05	2.875e+05	1.60	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	33:08	4.523e+05	2.842e+05	1.59	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	35:48	2.092e+05	3.928e+05	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	35:55	2.332e+05	4.327e+05	0.54	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	36:25	2.224e+05	4.139e+05	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	37:09	2.041e+05	3.825e+05	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:24	1.626e+05	3.528e+05	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:46	1.431e+05	3.159e+05	0.45	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	28:47	2.012e+05	2.528e+05	0.80	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	33:25	3.193e+05	2.044e+05	1.56	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	36:33	2.552e+05	2.035e+05	1.25	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	36:37	2.565e+05	2.045e+05	1.25	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:17	2.187e+05	2.081e+05	1.05	yes	no	0.857
32	IS	13C-OCDD	42:00	3.133e+05	3.464e+05	0.90	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	28:13	2.000e+05	2.518e+05	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:51	2.828e+05	2.264e+05	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	28:48	2.003e+05				no	1.086

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
82167

Run #5 Filename P614686 Samp: 1 Inj: 1 Acquired: 25-SEP-18 17:41:03
Processed: 26-SEP-18 07:39:11 LAB. ID: CS4

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	2.13e+07	2.15e+03	9.9e+03	2.70e+07	4.22e+03	6.4e+03
2	1,2,3,7,8-PeCDF	2.03e+08	3.06e+03	6.6e+04	1.29e+08	4.95e+03	2.6e+04
3	2,3,4,7,8-PeCDF	2.04e+08	3.06e+03	6.7e+04	1.28e+08	4.95e+03	2.6e+04
4	1,2,3,4,7,8-HxCDF	2.14e+08	1.85e+03	1.2e+05	1.68e+08	4.92e+03	3.4e+04
5	1,2,3,6,7,8-HxCDF	2.12e+08	1.85e+03	1.1e+05	1.67e+08	4.92e+03	3.4e+04
6	2,3,4,6,7,8-HxCDF	2.02e+08	1.85e+03	1.1e+05	1.59e+08	4.92e+03	3.2e+04
7	1,2,3,7,8,9-HxCDF	1.88e+08	1.85e+03	1.0e+05	1.47e+08	4.92e+03	3.0e+04
8	1,2,3,4,6,7,8-HpCDF	1.78e+08	2.61e+04	6.8e+03	1.72e+08	1.83e+04	9.4e+03
9	1,2,3,4,7,8,9-HpCDF	1.41e+08	2.61e+04	5.4e+03	1.35e+08	1.83e+04	7.4e+03
10	OCDF	1.94e+08	1.46e+03	1.3e+05	2.08e+08	3.00e+03	6.9e+04
11	2,3,7,8-TCDD	1.62e+07	6.38e+03	2.5e+03	2.06e+07	2.42e+03	8.5e+03
12	1,2,3,7,8-PeCDD	1.19e+08	3.22e+03	3.7e+04	7.64e+07	1.02e+03	7.5e+04
13	1,2,3,4,7,8-HxCDD	1.25e+08	9.48e+02	1.3e+05	9.78e+07	1.64e+03	5.9e+04
14	1,2,3,6,7,8-HxCDD	1.22e+08	9.48e+02	1.3e+05	9.73e+07	1.64e+03	5.9e+04
15	1,2,3,7,8,9-HxCDD	1.31e+08	9.48e+02	1.4e+05	1.04e+08	1.64e+03	6.3e+04
16	1,2,3,4,6,7,8-HpCDD	1.10e+08	2.46e+03	4.5e+04	1.04e+08	2.38e+03	4.4e+04
17	OCDD	1.42e+08	1.24e+03	1.1e+05	1.57e+08	1.46e+03	1.1e+05
18	13C-2,3,7,8-TCDF	5.06e+07	1.14e+04	4.4e+03	6.41e+07	7.28e+03	8.8e+03
19	13C-1,2,3,7,8-PeCDF	8.88e+07	3.08e+03	2.9e+04	5.58e+07	3.54e+03	1.6e+04
20	13C-2,3,4,7,8-PeCDF	9.15e+07	3.08e+03	3.0e+04	5.70e+07	3.54e+03	1.6e+04
21	13C-1,2,3,4,7,8-HxCDF	4.76e+07	3.01e+03	1.6e+04	8.96e+07	4.64e+03	1.9e+04
22	13C-1,2,3,6,7,8-HxCDF	5.17e+07	3.01e+03	1.7e+04	9.54e+07	4.64e+03	2.1e+04
23	13C-2,3,4,6,7,8-HxCDF	4.99e+07	3.01e+03	1.7e+04	9.21e+07	4.64e+03	2.0e+04
24	13C-1,2,3,7,8,9-HxCDF	4.48e+07	3.01e+03	1.5e+04	8.44e+07	4.64e+03	1.8e+04
25	13C-1,2,3,4,6,7,8-HpCDF	3.73e+07	8.80e+03	4.2e+03	8.02e+07	1.92e+04	4.2e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.97e+07	8.80e+03	3.4e+03	6.54e+07	1.92e+04	3.4e+03
27	13C-2,3,7,8-TCDD	3.77e+07	1.85e+04	2.0e+03	4.78e+07	7.81e+03	6.1e+03
28	13C-1,2,3,7,8-PeCDD	6.47e+07	3.56e+03	1.8e+04	4.18e+07	3.26e+03	1.3e+04
29	13C-1,2,3,4,7,8-HxCDD	5.86e+07	4.66e+03	1.3e+04	4.67e+07	3.04e+03	1.5e+04
30	13C-1,2,3,6,7,8-HxCDD	5.76e+07	4.66e+03	1.2e+04	4.61e+07	3.04e+03	1.5e+04
31	13C-1,2,3,4,6,7,8-HpCDD	4.94e+07	3.14e+03	1.6e+04	4.74e+07	1.71e+03	2.8e+04
32	13C-OCDD	6.18e+07	1.83e+03	3.4e+04	6.87e+07	9.56e+02	7.2e+04
33	13C-1,2,3,4-TCDD	3.76e+07	1.85e+04	2.0e+03	4.73e+07	7.81e+03	6.1e+03
34	13C-1,2,3,7,8,9-HxCDD	6.25e+07	4.66e+03	1.3e+04	5.04e+07	3.04e+03	1.7e+04
35	37Cl-2,3,7,8-TCDD	3.86e+07	4.32e+03	9.0e+03			

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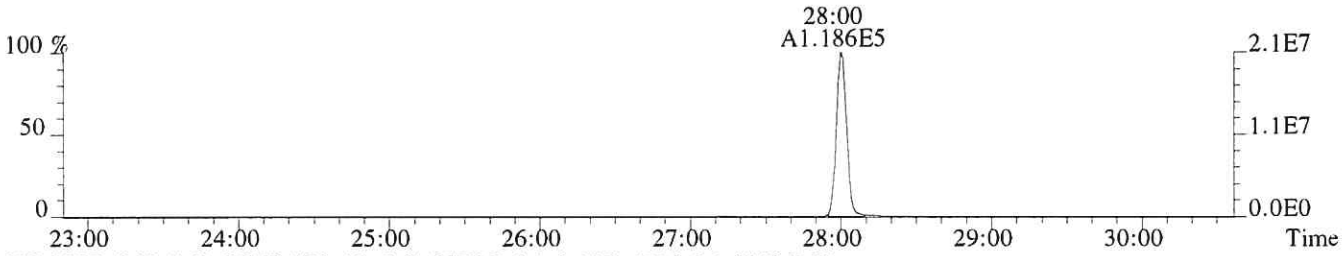
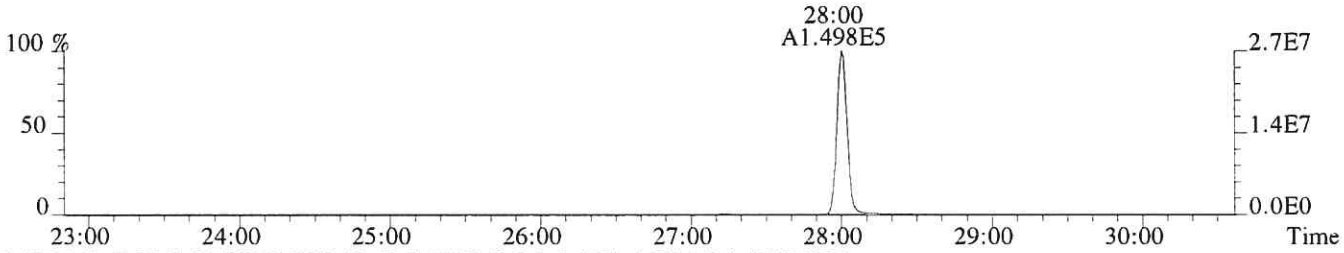
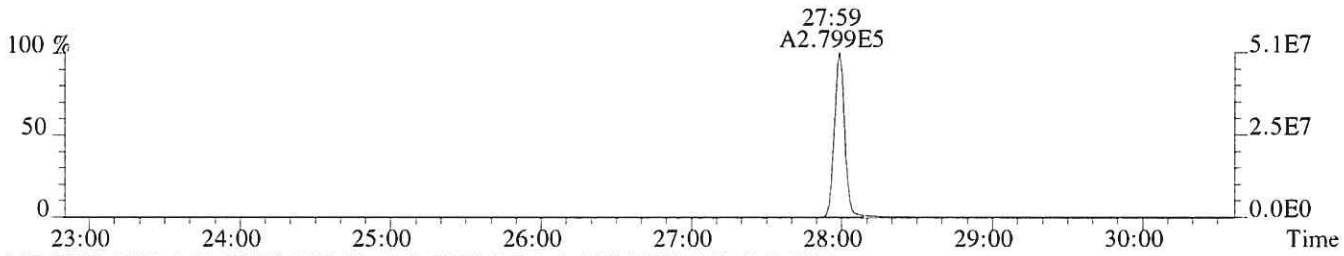
File:P614686 #1-552 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2148.0,1.00%,F,T)



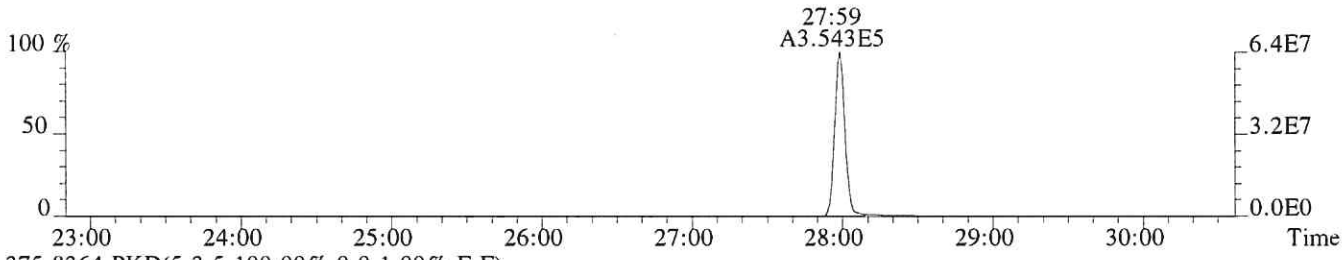
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4220.0,1.00%,F,T)



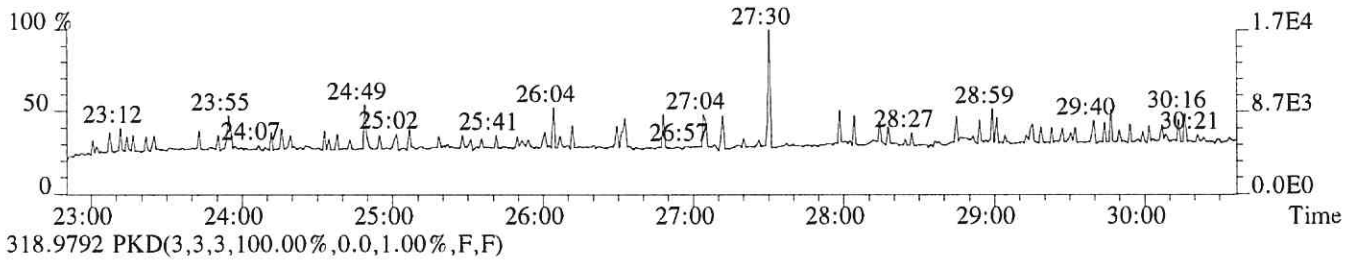
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11396.0,1.00%,F,T)



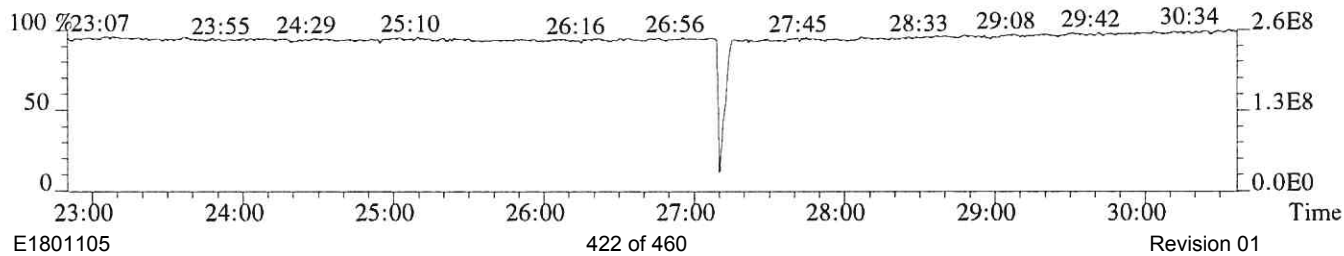
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7276.0,1.00%,F,T)



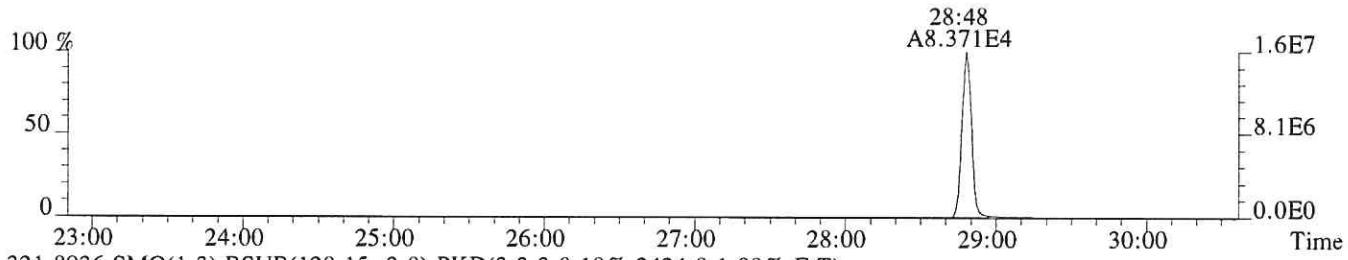
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



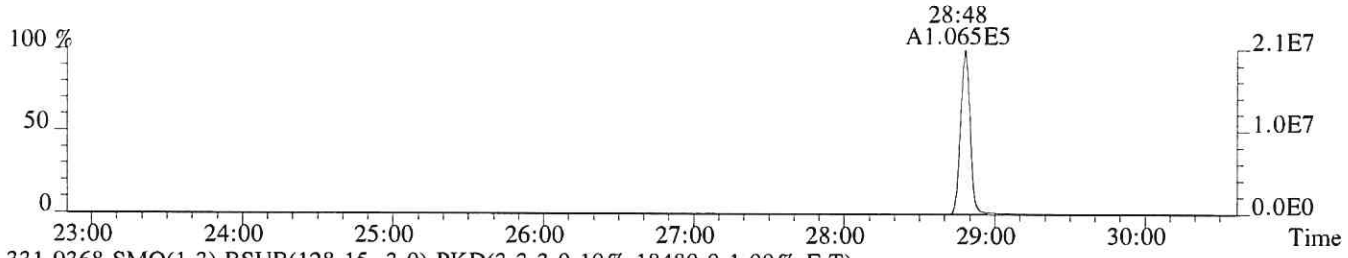
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



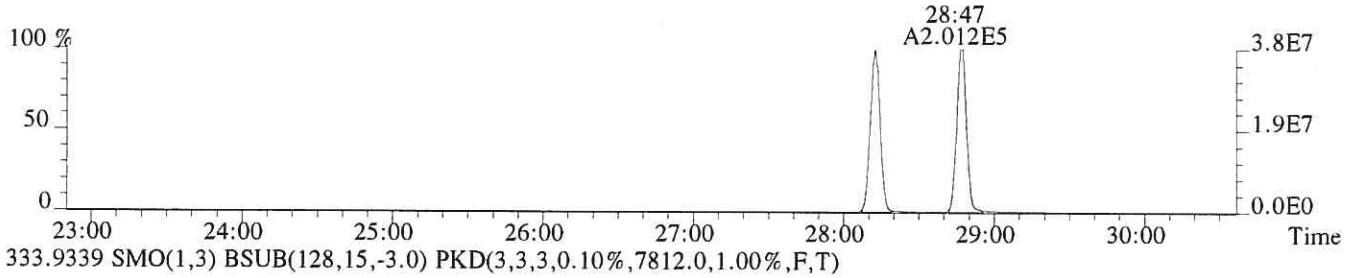
File:P614686 #1-552 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6384.0,1.00%,F,T)



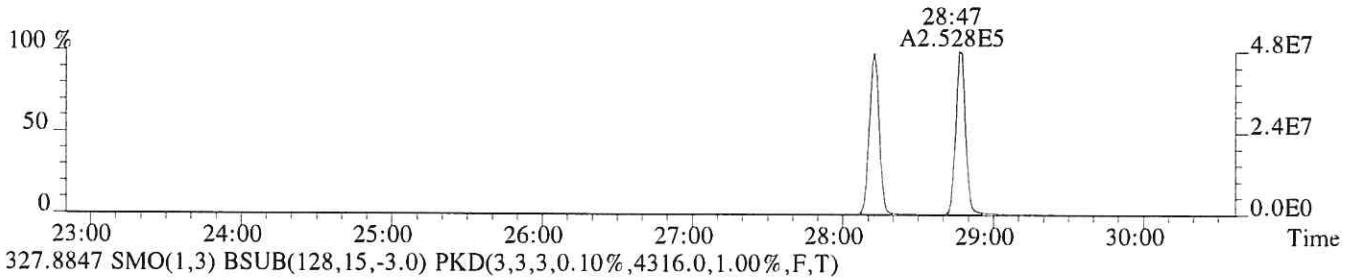
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2424.0,1.00%,F,T)



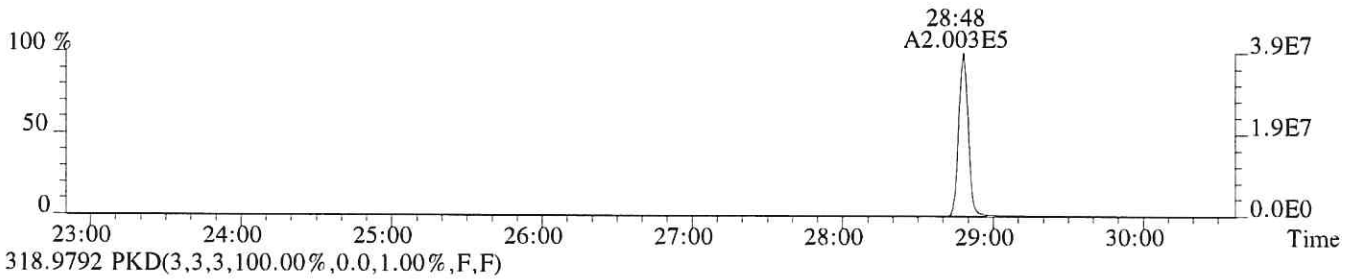
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,18480.0,1.00%,F,T)



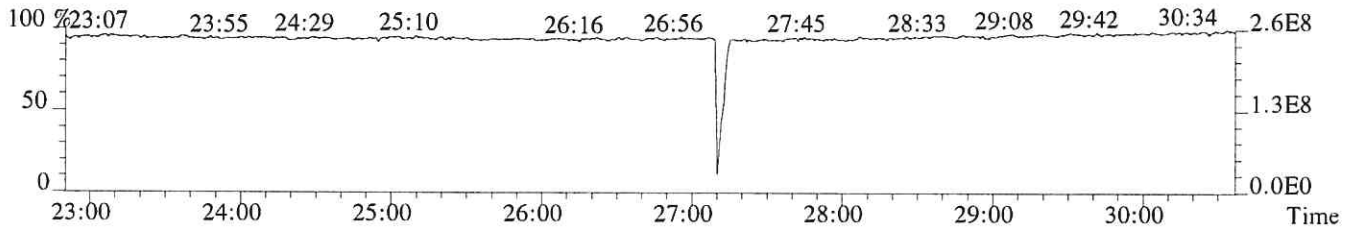
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7812.0,1.00%,F,T)



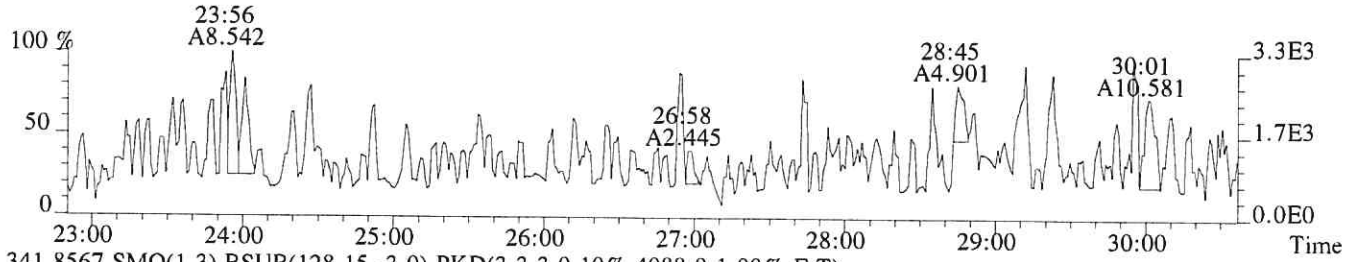
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4316.0,1.00%,F,T)



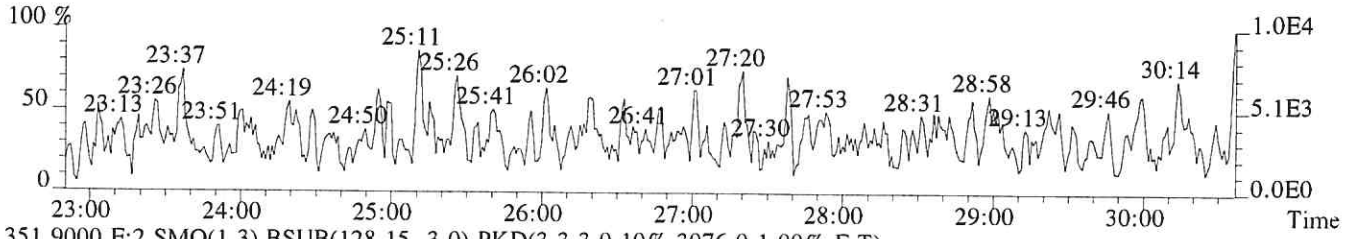
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



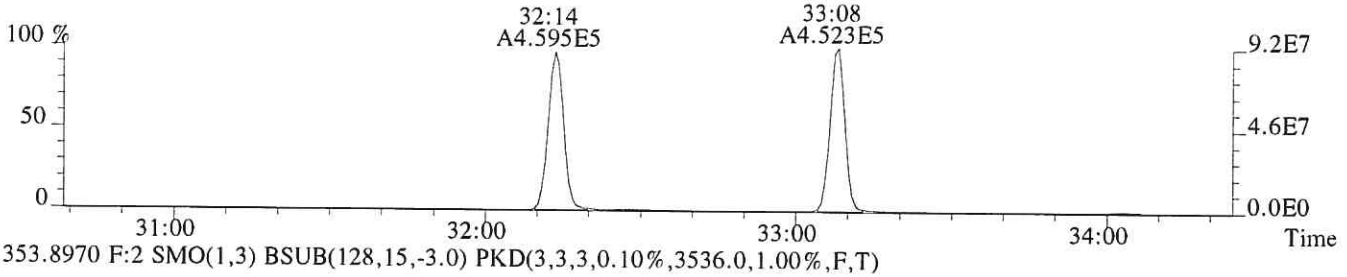
File:P614686 #1-552 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1356.0,1.00%,F,T)



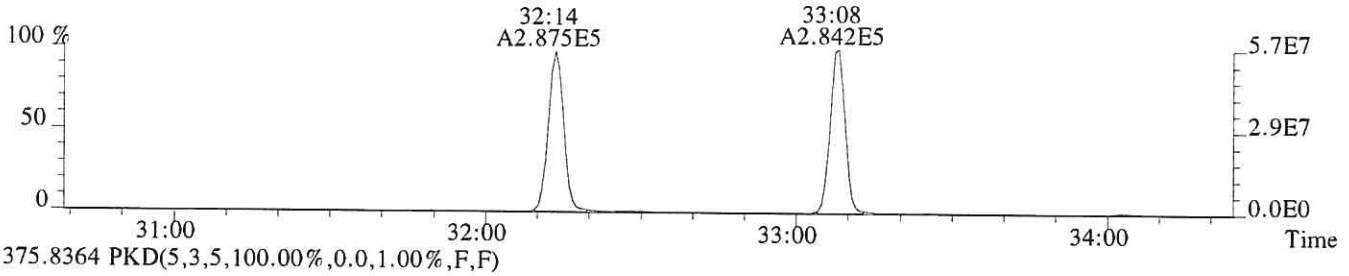
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4088.0,1.00%,F,T)



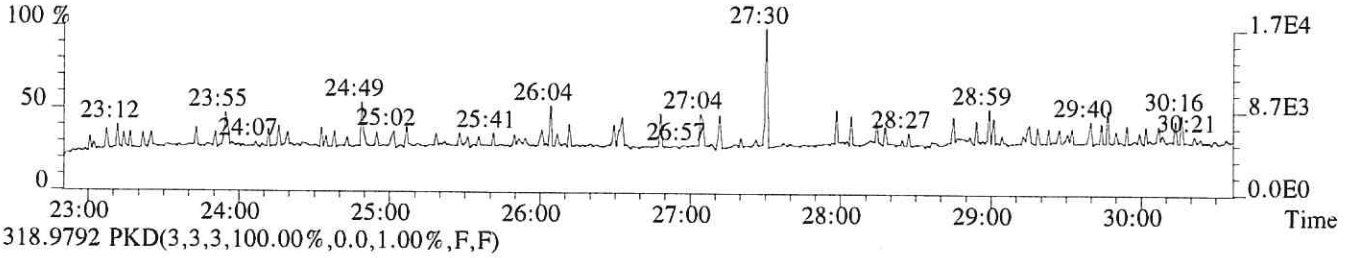
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3076.0,1.00%,F,T)



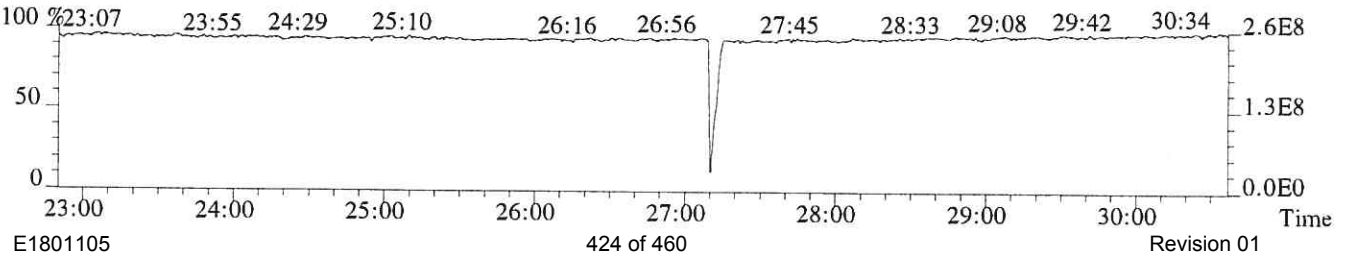
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3536.0,1.00%,F,T)



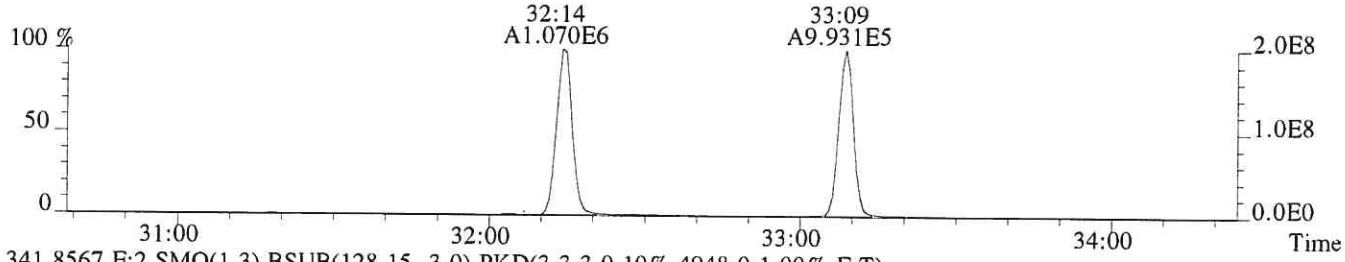
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



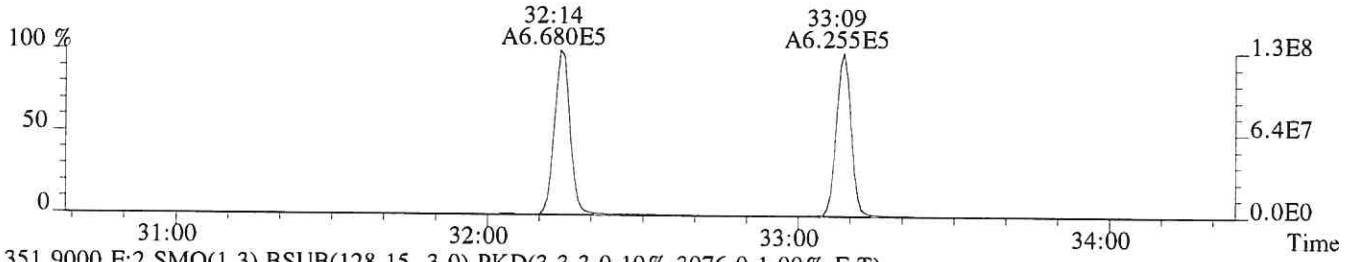
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



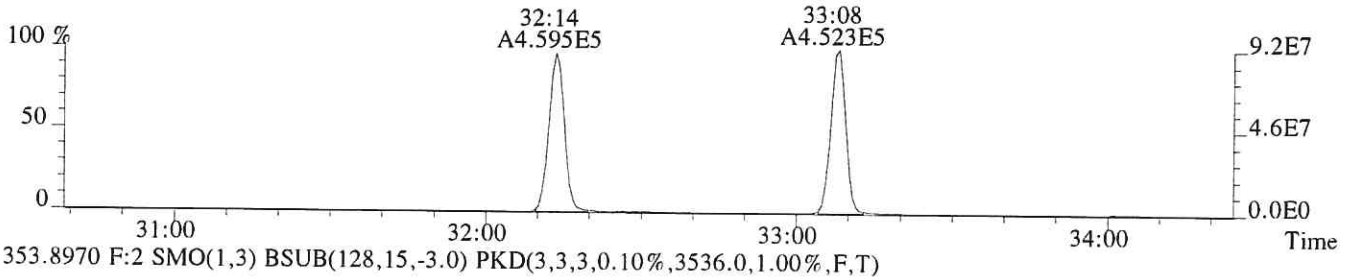
File:P614686 #1-339 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3064.0,1.00%,F,T)



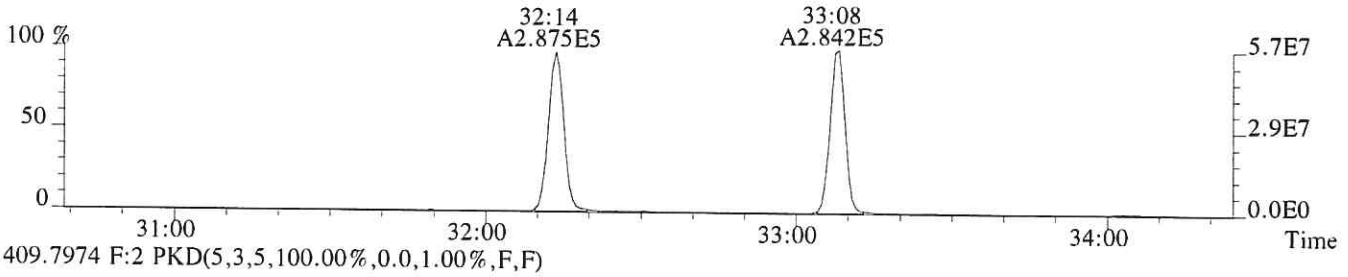
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4948.0,1.00%,F,T)



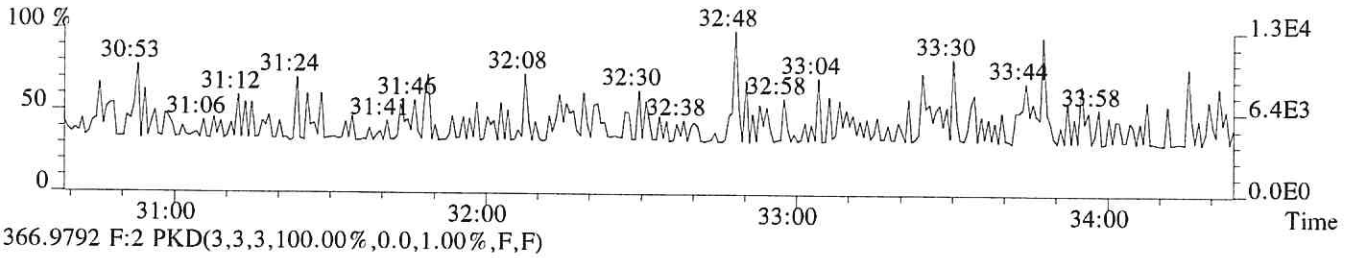
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3076.0,1.00%,F,T)



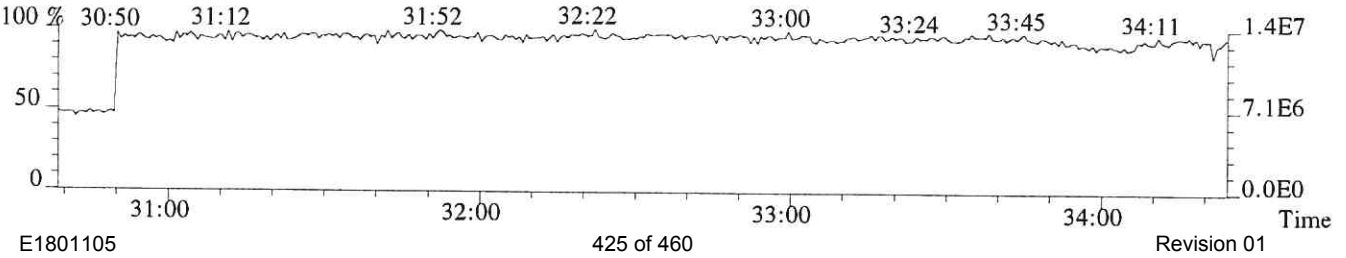
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3536.0,1.00%,F,T)



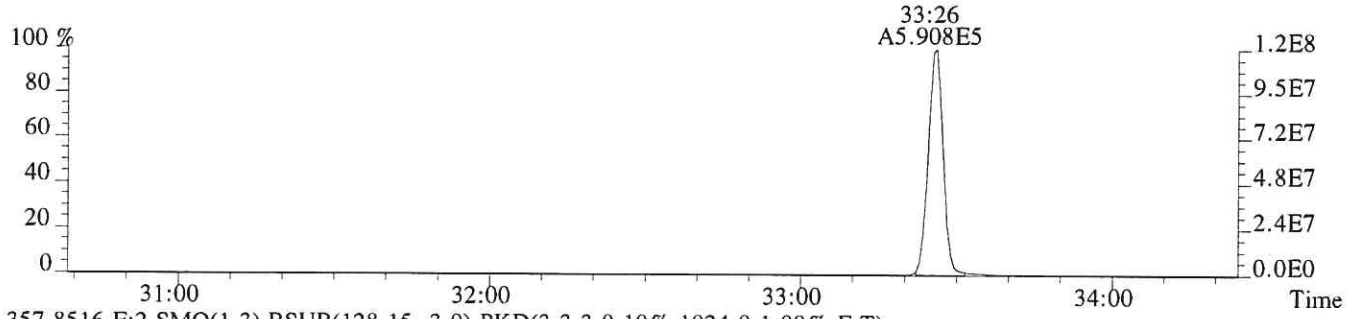
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



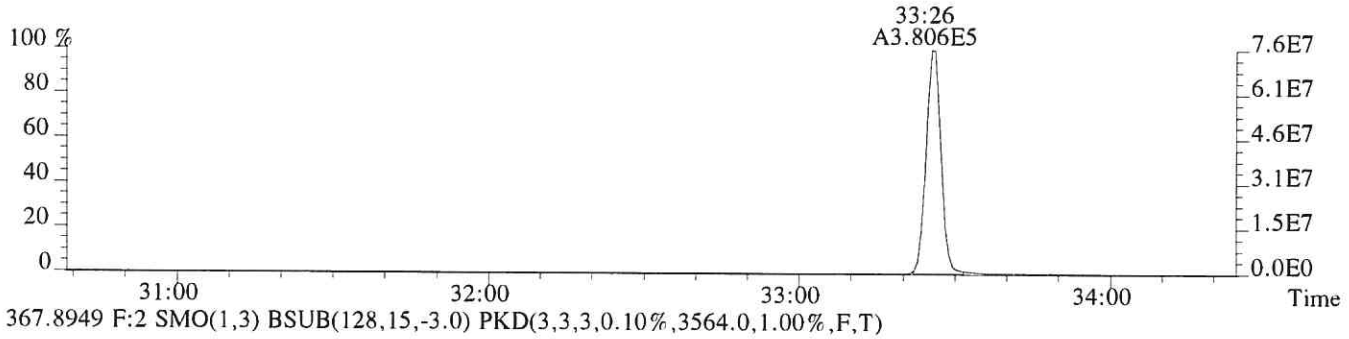
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



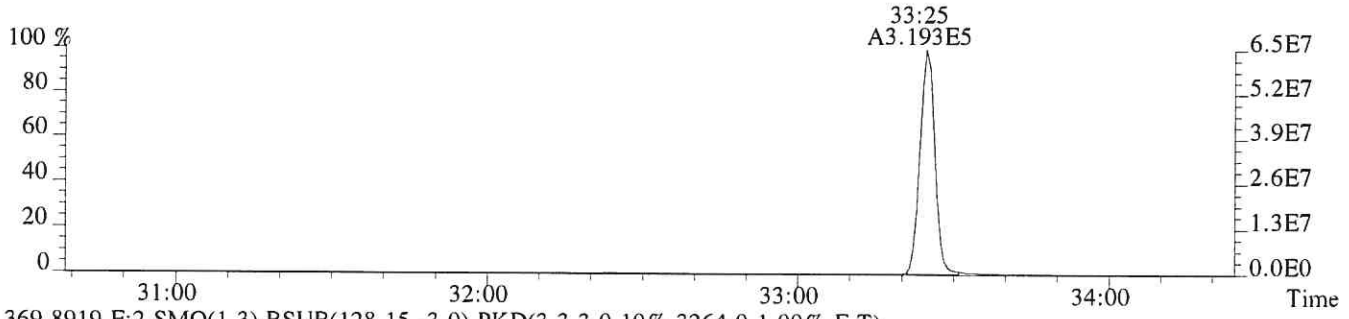
File:P614686 #1-339 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3220.0,1.00%,F,T)



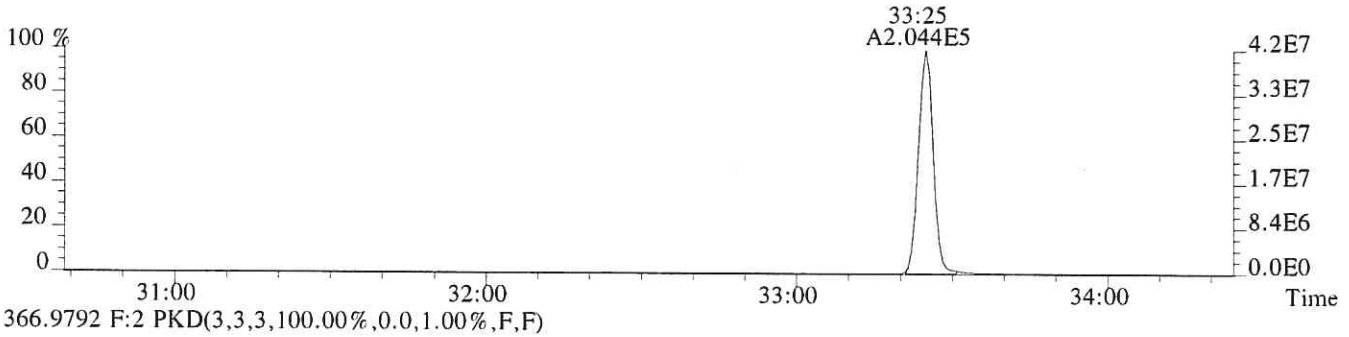
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1024.0,1.00%,F,T)



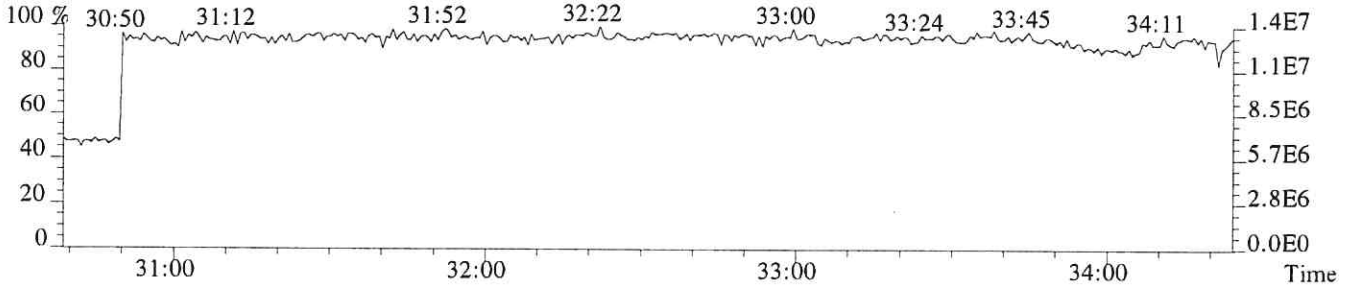
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3564.0,1.00%,F,T)



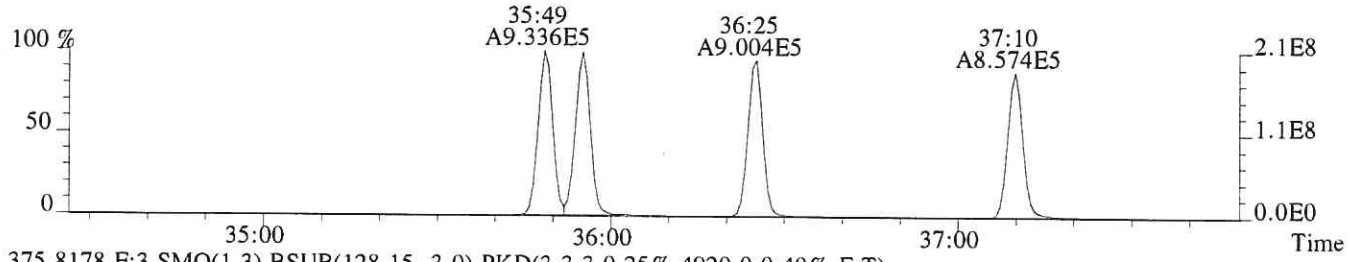
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3264.0,1.00%,F,T)



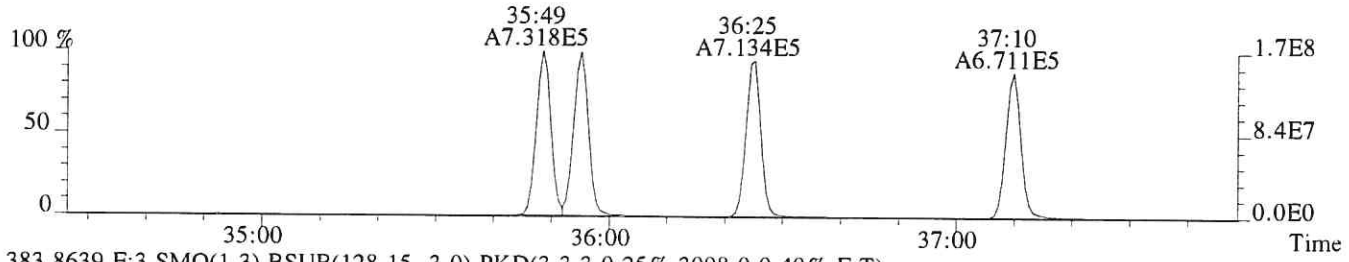
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



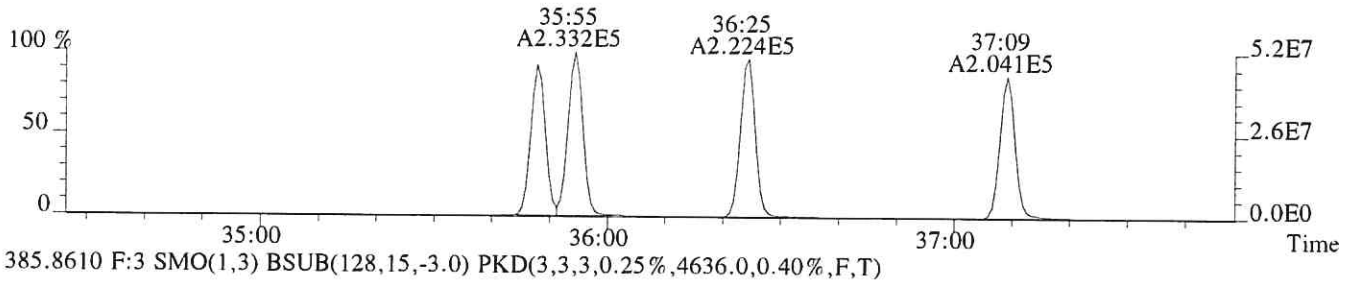
File:P614686 #1-304 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1848.0,0.40%,F,T)



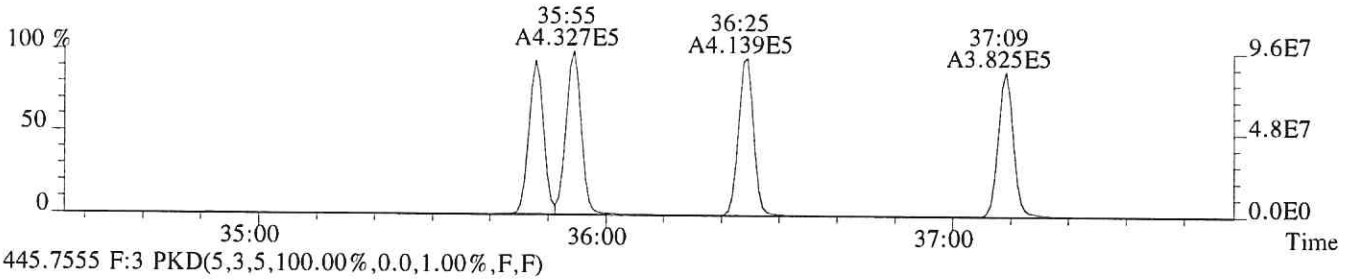
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4920.0,0.40%,F,T)



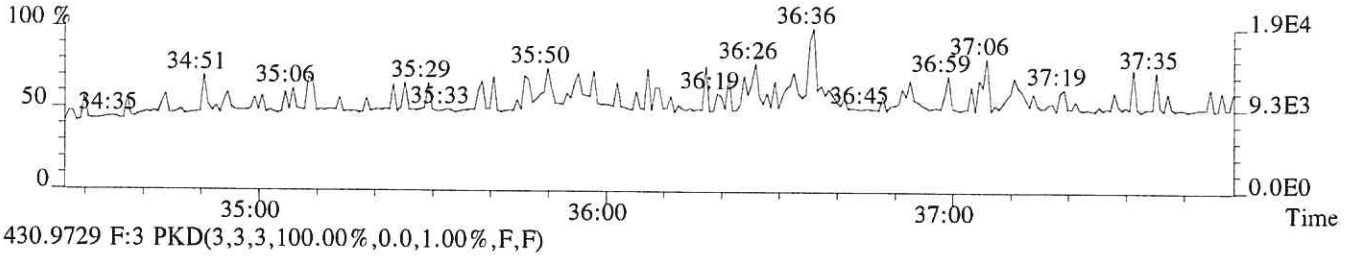
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3008.0,0.40%,F,T)



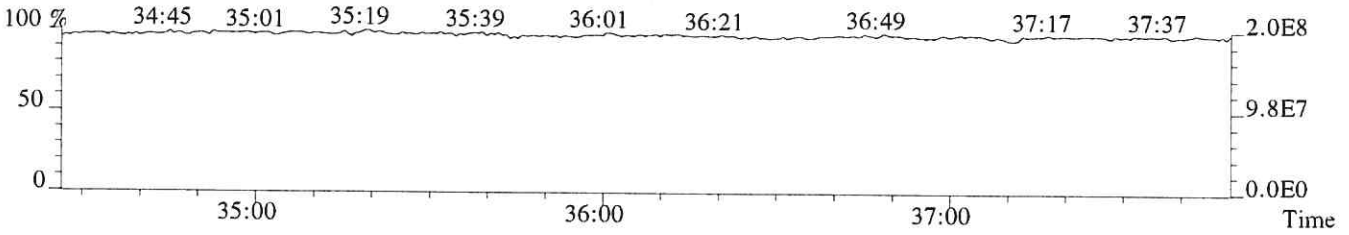
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4636.0,0.40%,F,T)



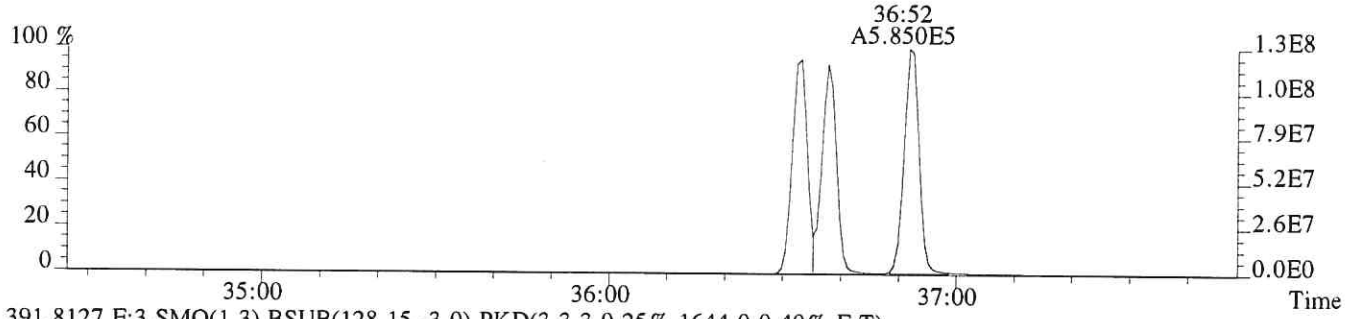
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



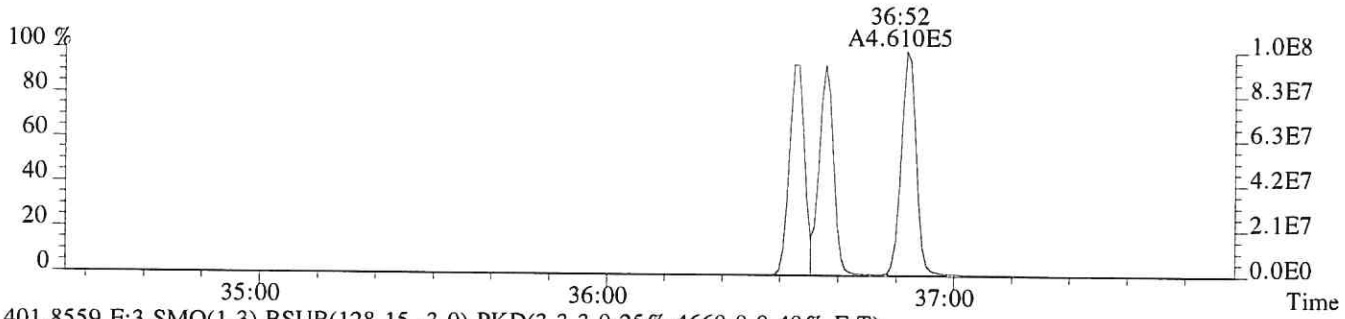
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



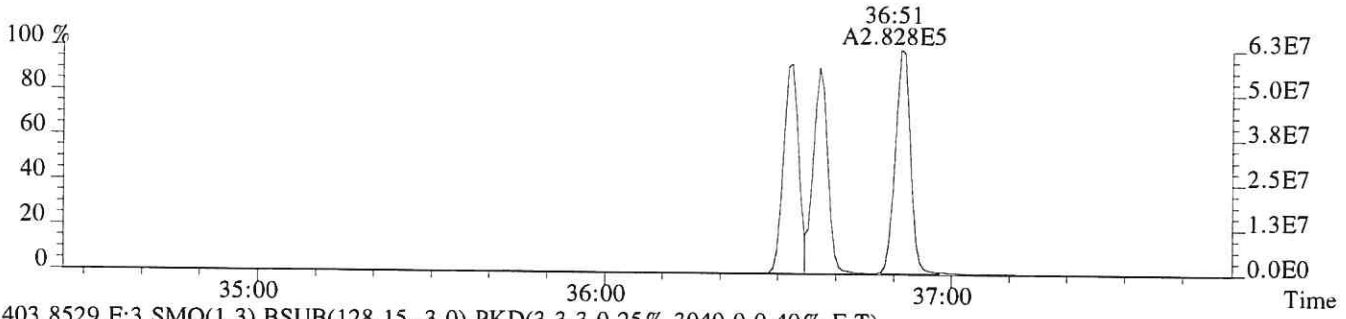
File:P614686 #1-304 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,948.0,0.40%,F,T)



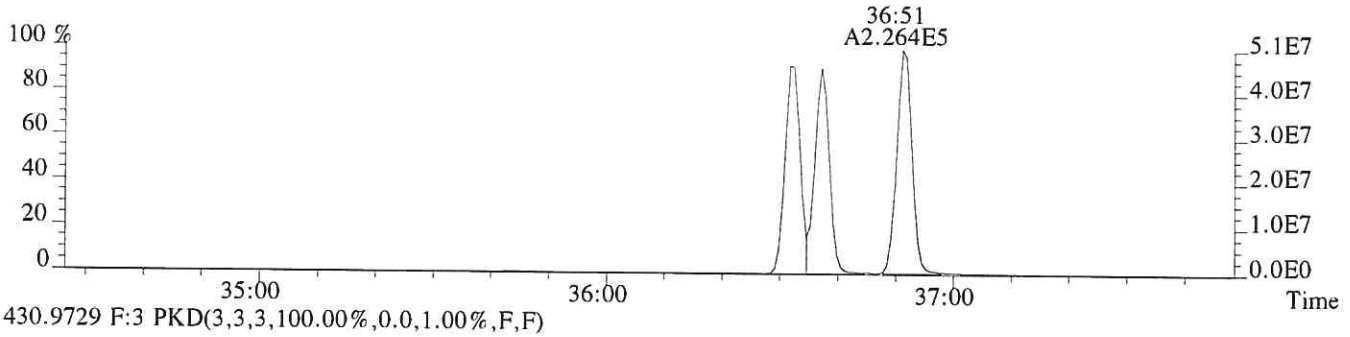
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1644.0,0.40%,F,T)



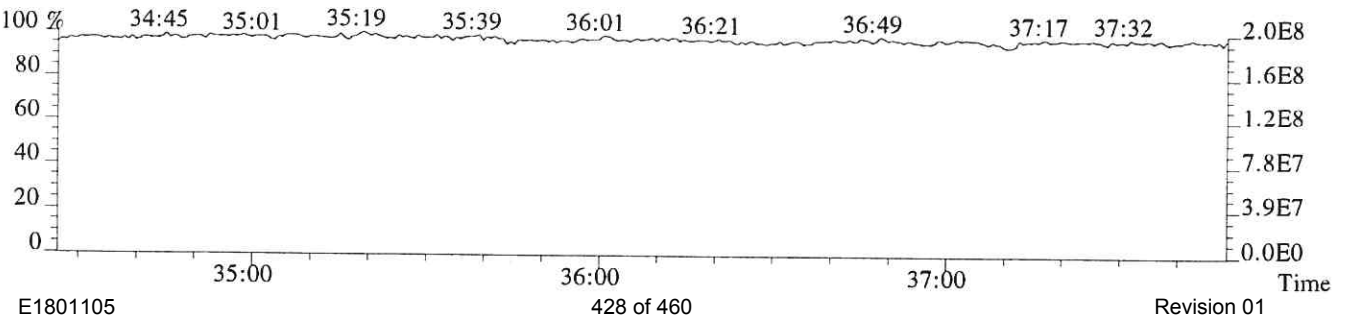
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4660.0,0.40%,F,T)



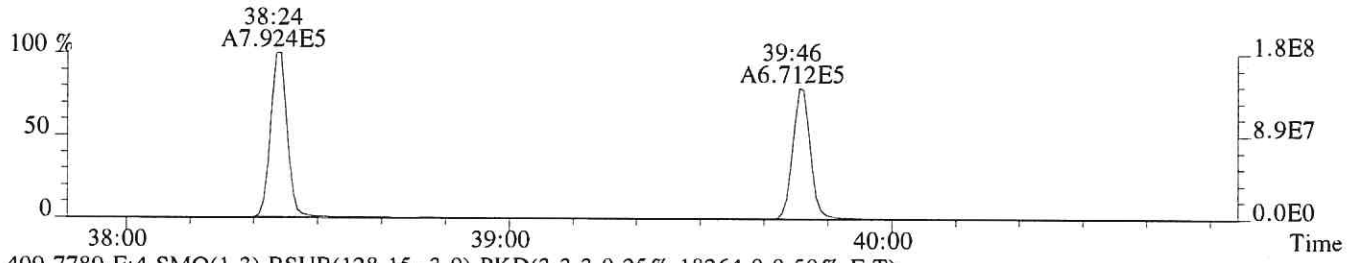
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3040.0,0.40%,F,T)



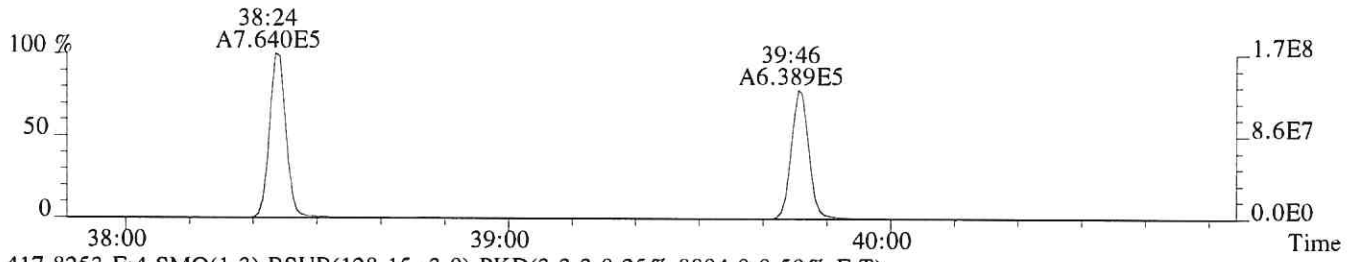
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



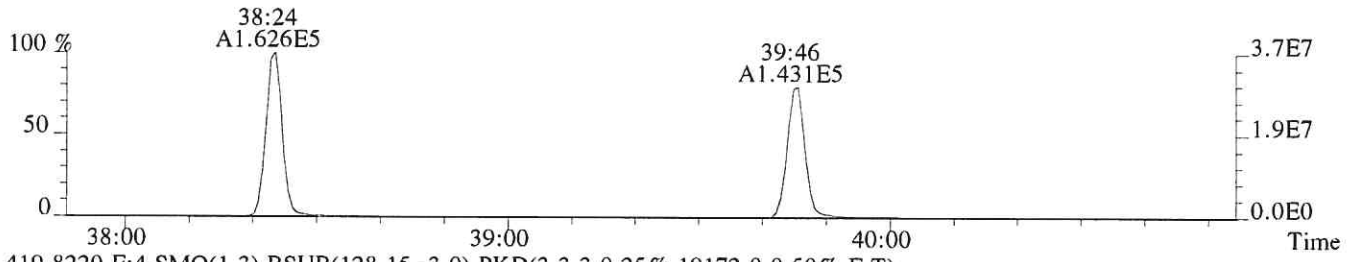
File:P614686 #1-276 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,26056.0,0.50%,F,T)



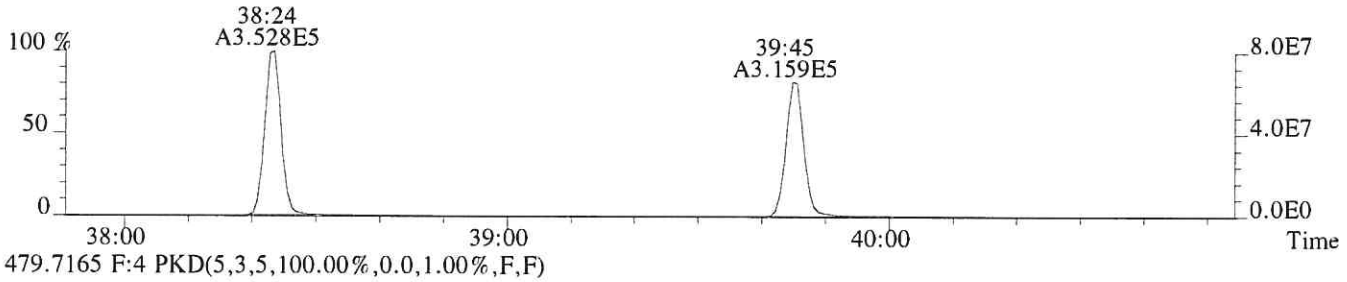
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,18264.0,0.50%,F,T)



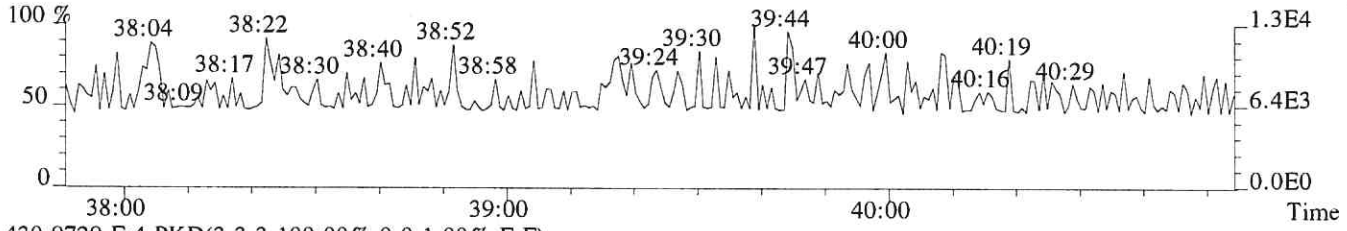
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,8804.0,0.50%,F,T)



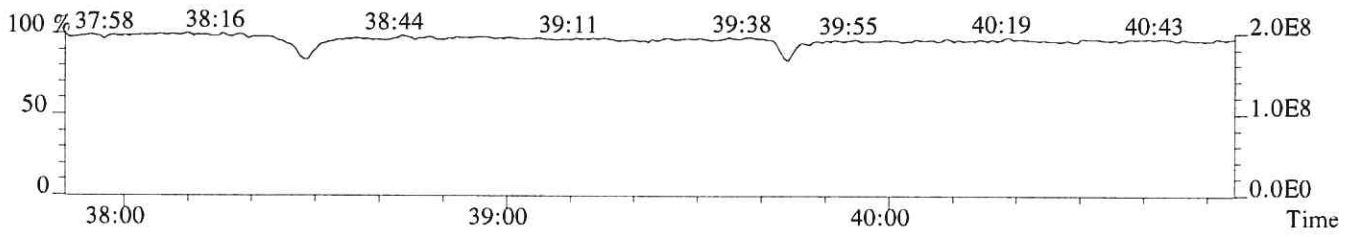
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,19172.0,0.50%,F,T)



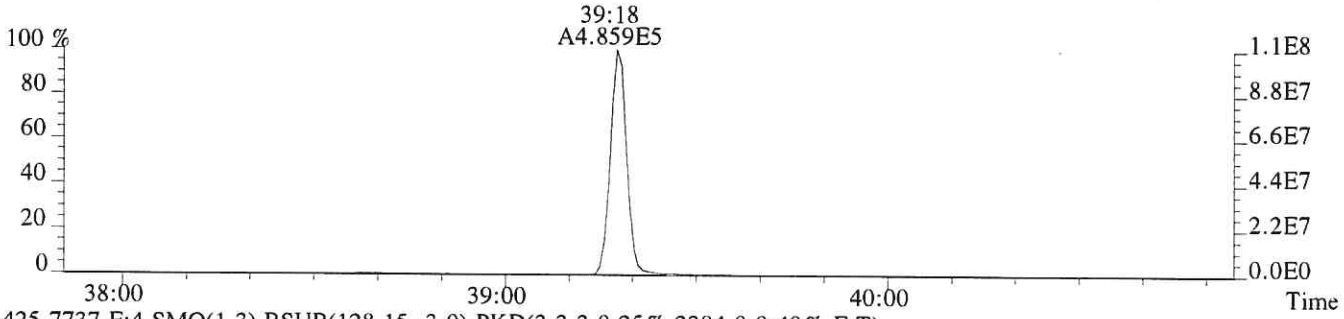
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



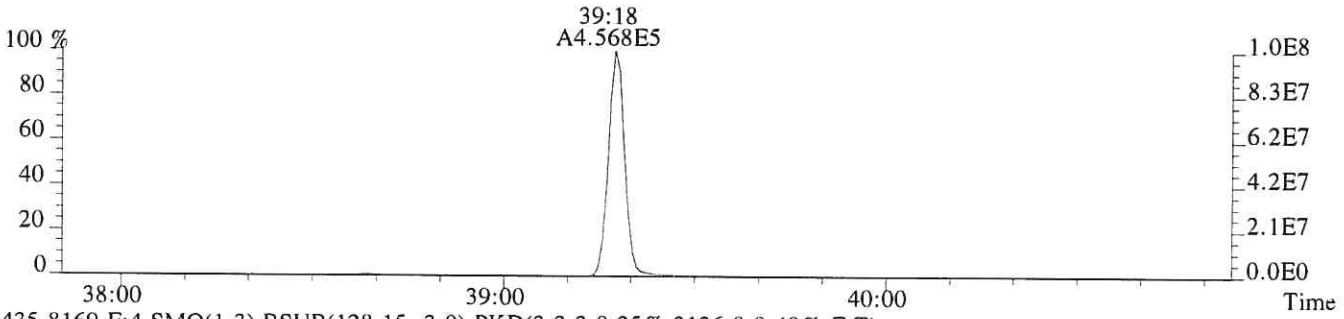
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



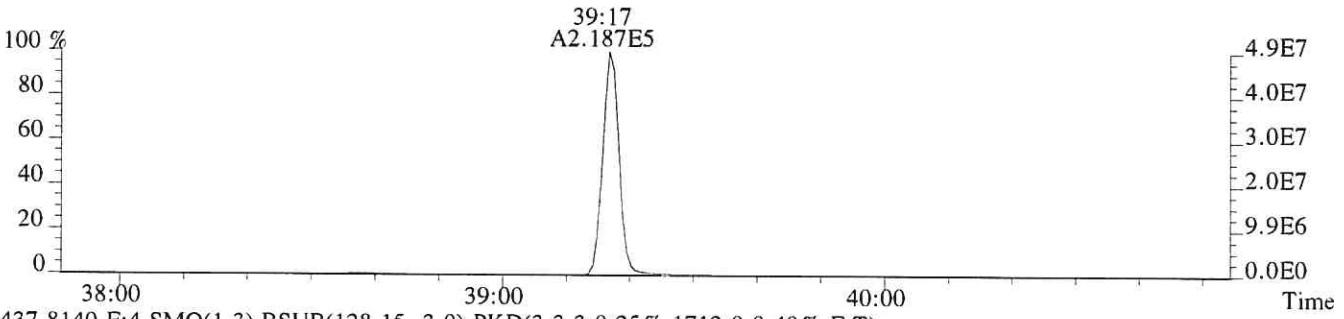
File:P614686 #1-276 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2456.0,0.40%,F,T)



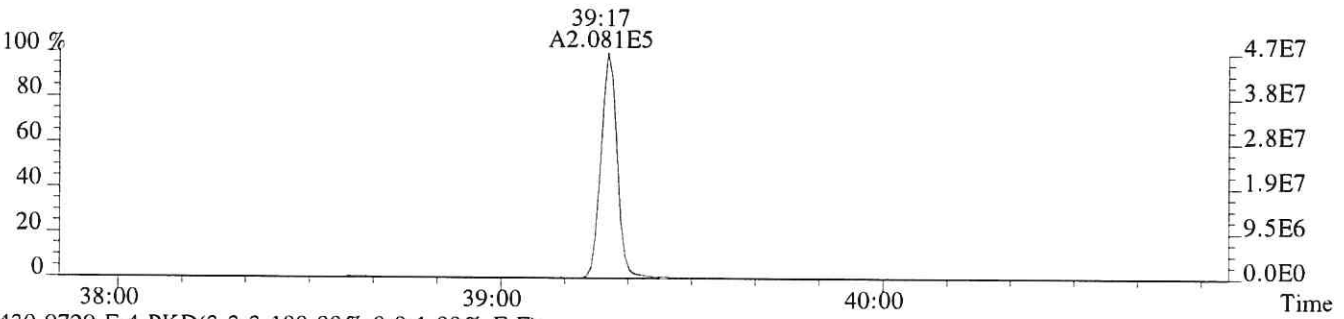
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2384.0,0.40%,F,T)



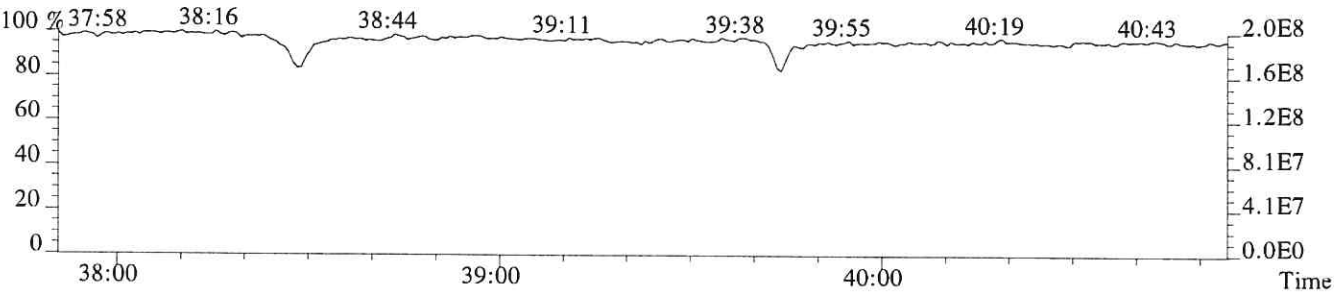
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3136.0,0.40%,F,T)



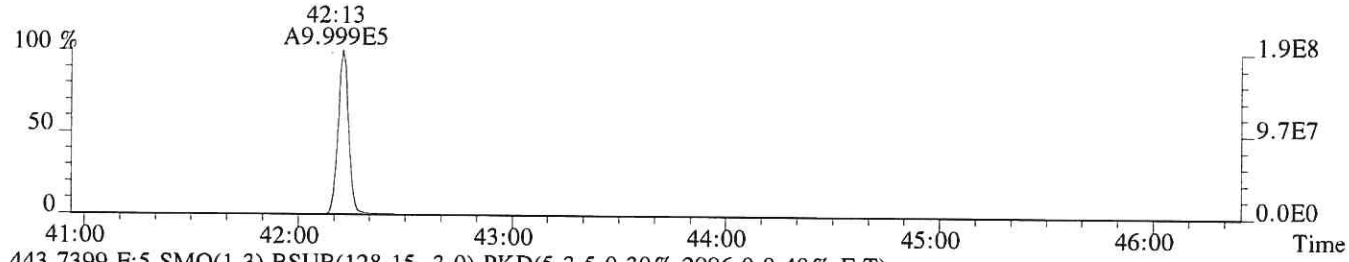
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1712.0,0.40%,F,T)



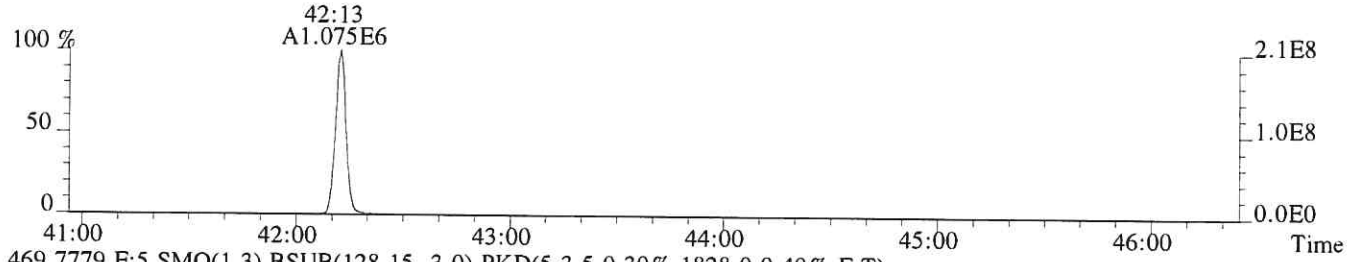
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



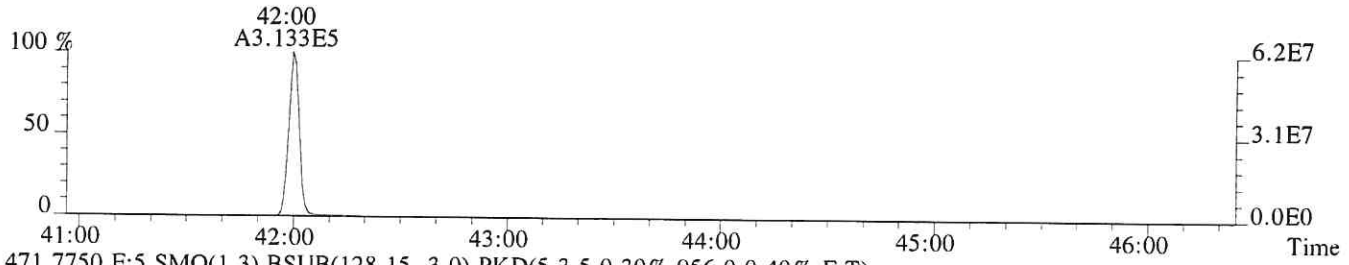
File:P614686 #1-493 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1464.0,0.40%,F,T)



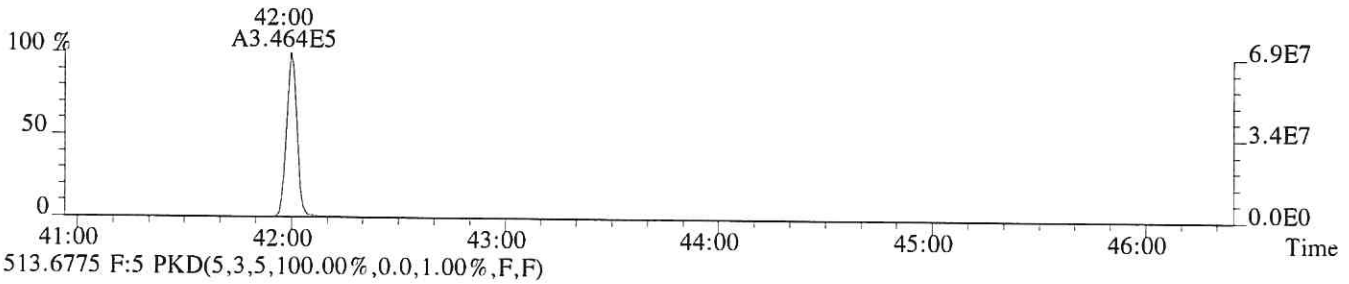
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2996.0,0.40%,F,T)



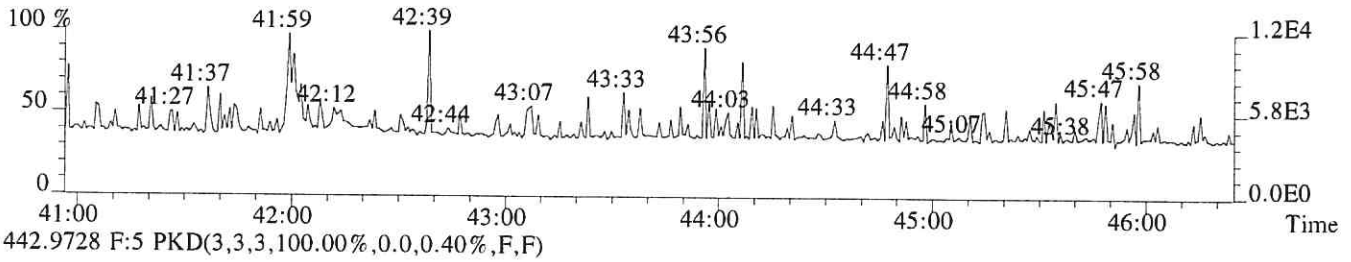
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1828.0,0.40%,F,T)



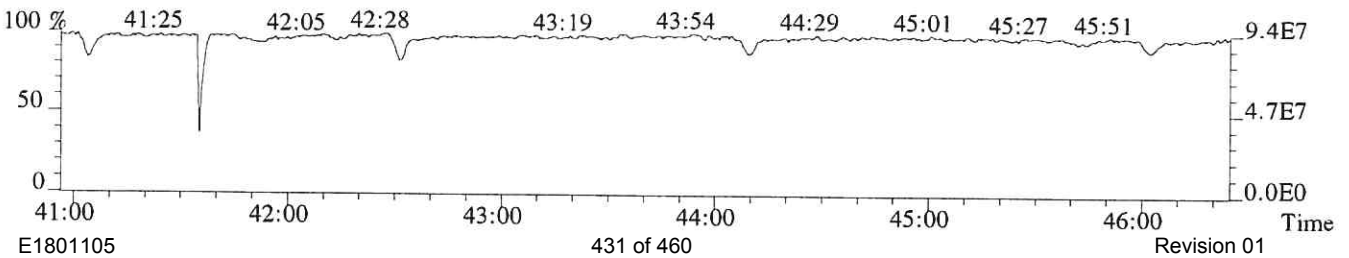
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,956.0,0.40%,F,T)



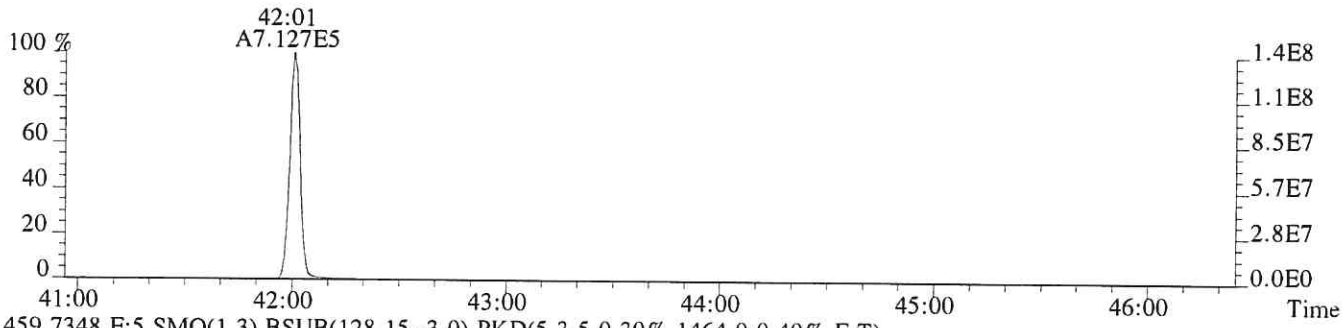
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



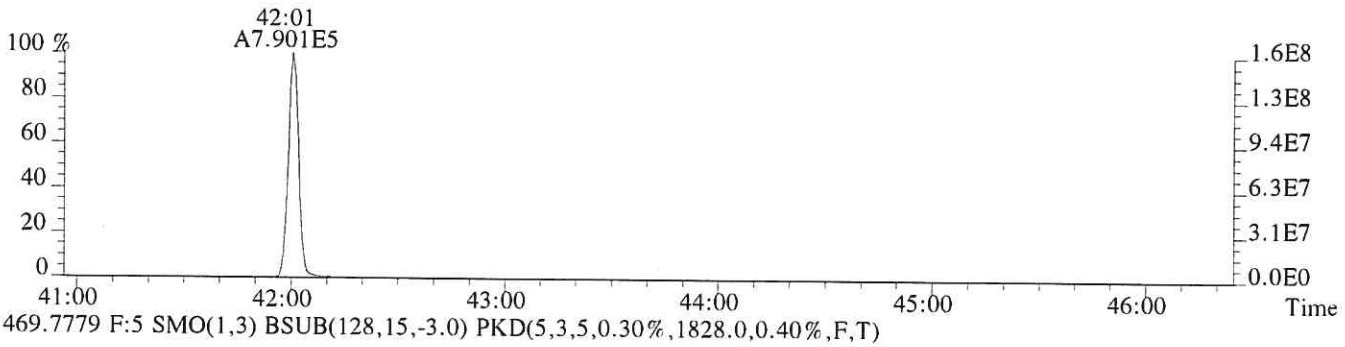
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



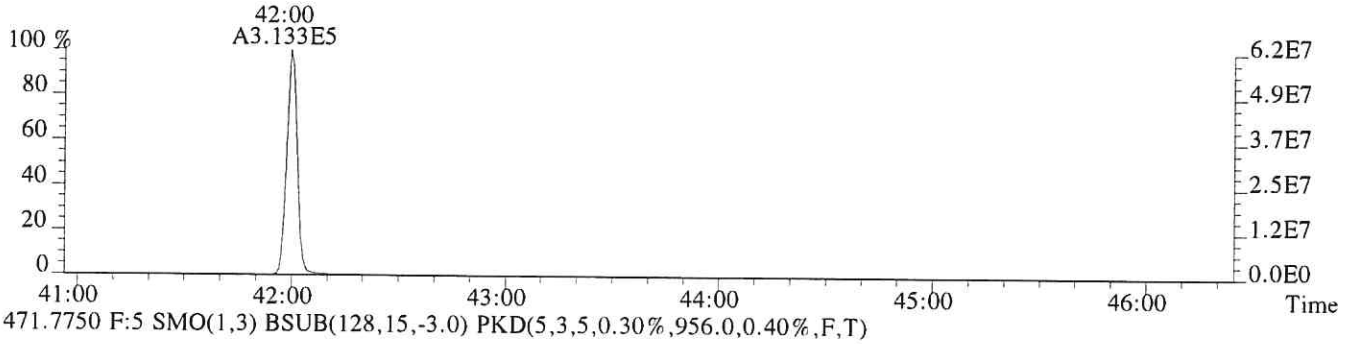
File:P614686 #1-493 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1244.0,0.40%,F,T)



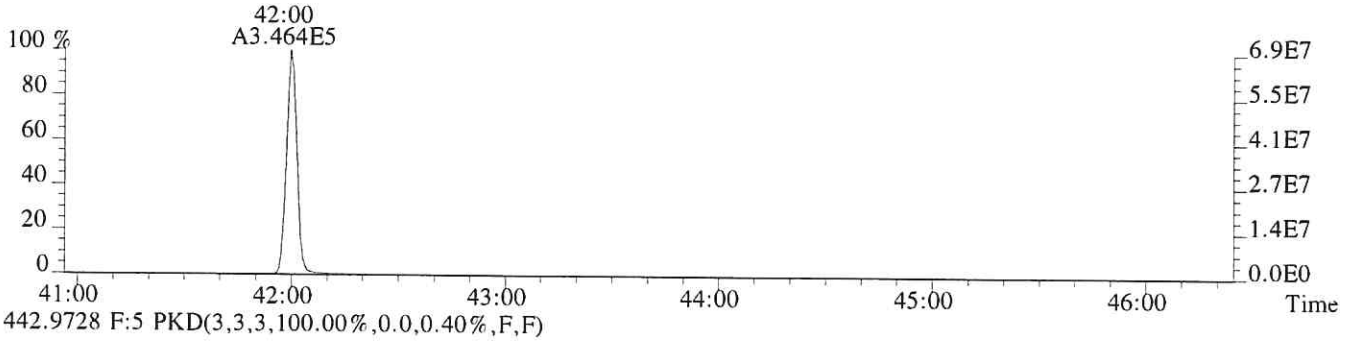
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1464.0,0.40%,F,T)



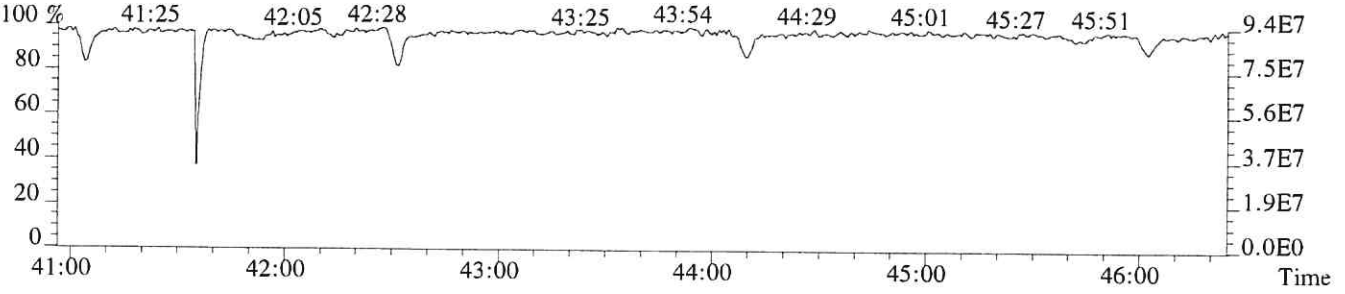
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1828.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,956.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
185657

Run #6 Filename P614687 Samp: 1 Inj: 1 Acquired: 25-SEP-18 18:30:08
Processed: 26-SEP-18 07:39:13 Sample ID: CS5

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:00	4.651e+05	5.844e+05	0.80	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	32:14	4.117e+06	2.575e+06	1.60	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	33:09	3.795e+06	2.391e+06	1.59	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	35:49	3.313e+06	2.571e+06	1.29	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	35:55	3.588e+06	2.836e+06	1.27	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	36:25	3.399e+06	2.690e+06	1.26	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	37:10	3.119e+06	2.463e+06	1.27	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	38:24	3.035e+06	2.883e+06	1.05	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	39:46	2.518e+06	2.388e+06	1.05	yes	no	1.463
10	Unk	OCDF	42:13	3.855e+06	4.175e+06	0.92	yes	no	1.571
11	Unk	2,3,7,8-TCDD	28:48	3.257e+05	4.207e+05	0.77	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	33:26	2.277e+06	1.455e+06	1.57	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	36:33	2.053e+06	1.616e+06	1.27	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	36:38	2.042e+06	1.617e+06	1.26	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	36:52	2.180e+06	1.732e+06	1.26	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	39:18	1.868e+06	1.765e+06	1.06	yes	no	1.112
17	Unk	OCDD	42:01	2.725e+06	3.028e+06	0.90	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	27:59	2.197e+05	2.785e+05	0.79	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	32:14	3.496e+05	2.178e+05	1.60	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	33:08	3.453e+05	2.138e+05	1.61	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	35:48	1.447e+05	2.684e+05	0.54	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	35:55	1.758e+05	3.274e+05	0.54	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	36:25	1.668e+05	3.132e+05	0.53	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	37:09	1.489e+05	2.799e+05	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:23	1.241e+05	2.682e+05	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:45	1.078e+05	2.346e+05	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	28:47	1.558e+05	1.966e+05	0.79	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	33:25	2.439e+05	1.553e+05	1.57	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	36:32	1.940e+05	1.538e+05	1.26	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	36:37	1.938e+05	1.542e+05	1.26	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:17	1.682e+05	1.601e+05	1.05	yes	no	0.857
32	IS	13C-OCDD	42:00	2.375e+05	2.681e+05	0.89	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	28:13	1.555e+05	1.925e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:51	2.160e+05	1.725e+05	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	28:48	7.877e+05				no	1.086

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www.alsglobal.com

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
185657

Run #6 Filename P614687 Samp: 1 Inj: 1 Acquired: 25-SEP-18 18:30:08
Processed: 26-SEP-18 07:39:13 LAB. ID: CS5

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	8.41e+07	1.94e+03	4.3e+04	1.06e+08	4.26e+03	2.5e+04
2	1,2,3,7,8-PeCDF	8.11e+08	8.46e+03	9.6e+04	5.11e+08	9.13e+03	5.6e+04
3	2,3,4,7,8-PeCDF	7.87e+08	8.46e+03	9.3e+04	4.93e+08	9.13e+03	5.4e+04
4	1,2,3,4,7,8-HxCDF	7.76e+08	1.23e+04	6.3e+04	6.07e+08	9.42e+03	6.4e+04
5	1,2,3,6,7,8-HxCDF	8.10e+08	1.23e+04	6.6e+04	6.40e+08	9.42e+03	6.8e+04
6	2,3,4,6,7,8-HxCDF	7.65e+08	1.23e+04	6.2e+04	6.05e+08	9.42e+03	6.4e+04
7	1,2,3,7,8,9-HxCDF	6.96e+08	1.23e+04	5.6e+04	5.46e+08	9.42e+03	5.8e+04
8	1,2,3,4,6,7,8-HpCDF	7.09e+08	9.68e+04	7.3e+03	6.78e+08	6.15e+04	1.1e+04
9	1,2,3,4,7,8,9-HpCDF	5.55e+08	9.68e+04	5.7e+03	5.29e+08	6.15e+04	8.6e+03
10	OCDF	7.55e+08	1.43e+03	5.3e+05	8.22e+08	2.80e+03	2.9e+05
11	2,3,7,8-TCDD	6.32e+07	4.52e+03	1.4e+04	8.21e+07	2.67e+03	3.1e+04
12	1,2,3,7,8-PeCDD	4.67e+08	3.26e+03	1.4e+05	2.98e+08	1.54e+03	1.9e+05
13	1,2,3,4,7,8-HxCDD	4.65e+08	2.34e+03	2.0e+05	3.68e+08	1.99e+03	1.8e+05
14	1,2,3,6,7,8-HxCDD	4.59e+08	2.34e+03	2.0e+05	3.67e+08	1.99e+03	1.8e+05
15	1,2,3,7,8,9-HxCDD	4.96e+08	2.34e+03	2.1e+05	3.98e+08	1.99e+03	2.0e+05
16	1,2,3,4,6,7,8-HpCDD	4.28e+08	1.10e+04	3.9e+04	4.06e+08	8.82e+03	4.6e+04
17	OCDD	5.24e+08	9.60e+02	5.5e+05	5.87e+08	1.87e+03	3.1e+05
18	13C-2,3,7,8-TCDF	3.91e+07	1.53e+04	2.6e+03	4.94e+07	1.22e+04	4.0e+03
19	13C-1,2,3,7,8-PeCDF	6.89e+07	2.06e+03	3.3e+04	4.27e+07	4.55e+03	9.4e+03
20	13C-2,3,4,7,8-PeCDF	6.95e+07	2.06e+03	3.4e+04	4.34e+07	4.55e+03	9.5e+03
21	13C-1,2,3,4,7,8-HxCDF	3.33e+07	2.62e+03	1.3e+04	6.22e+07	4.07e+03	1.5e+04
22	13C-1,2,3,6,7,8-HxCDF	3.91e+07	2.62e+03	1.5e+04	7.31e+07	4.07e+03	1.8e+04
23	13C-2,3,4,6,7,8-HxCDF	3.74e+07	2.62e+03	1.4e+04	6.98e+07	4.07e+03	1.7e+04
24	13C-1,2,3,7,8,9-HxCDF	3.36e+07	2.62e+03	1.3e+04	6.29e+07	4.07e+03	1.5e+04
25	13C-1,2,3,4,6,7,8-HpCDF	2.82e+07	6.76e+03	4.2e+03	6.20e+07	1.14e+04	5.5e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.34e+07	6.76e+03	3.5e+03	5.11e+07	1.14e+04	4.5e+03
27	13C-2,3,7,8-TCDD	3.04e+07	1.91e+04	1.6e+03	3.86e+07	8.85e+03	4.4e+03
28	13C-1,2,3,7,8-PeCDD	5.04e+07	1.98e+03	2.5e+04	3.21e+07	2.85e+03	1.1e+04
29	13C-1,2,3,4,7,8-HxCDD	4.39e+07	4.70e+03	9.3e+03	3.50e+07	2.24e+03	1.6e+04
30	13C-1,2,3,6,7,8-HxCDD	4.37e+07	4.70e+03	9.3e+03	3.49e+07	2.24e+03	1.6e+04
31	13C-1,2,3,4,6,7,8-HpCDD	3.82e+07	2.97e+03	1.3e+04	3.65e+07	2.54e+03	1.4e+04
32	13C-OCDD	4.50e+07	3.46e+03	1.3e+04	5.10e+07	1.82e+03	2.8e+04
33	13C-1,2,3,4-TCDD	2.93e+07	1.91e+04	1.5e+03	3.60e+07	8.85e+03	4.1e+03
34	13C-1,2,3,7,8,9-HxCDD	4.90e+07	4.70e+03	1.0e+04	3.94e+07	2.24e+03	1.8e+04
35	37Cl-2,3,7,8-TCDD	1.54e+08	4.95e+03	3.1e+04			

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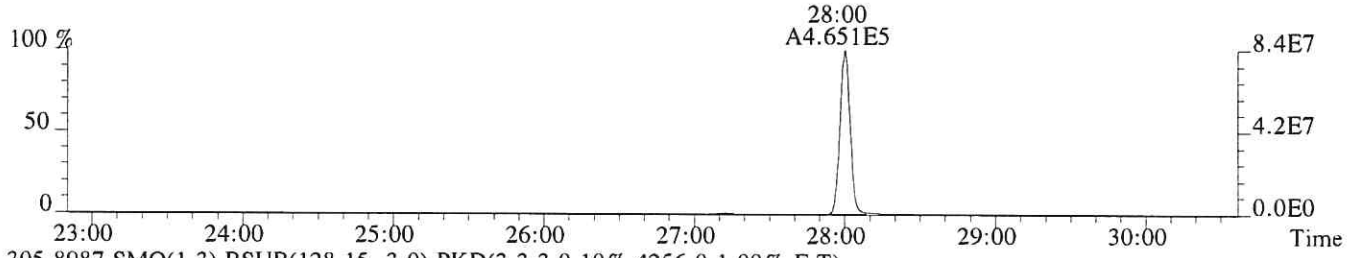
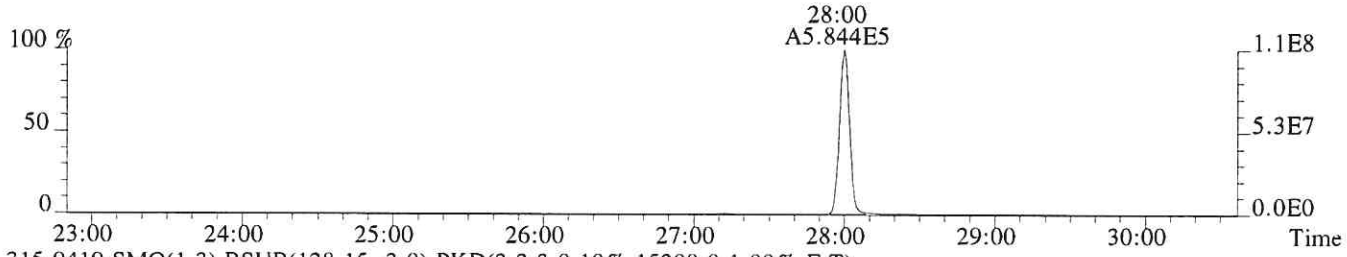
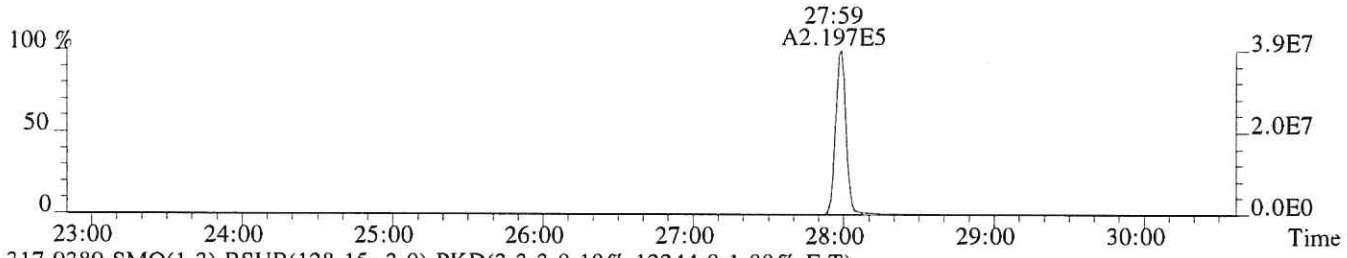
File:P614687 #1-552 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1940.0,1.00%,F,T)



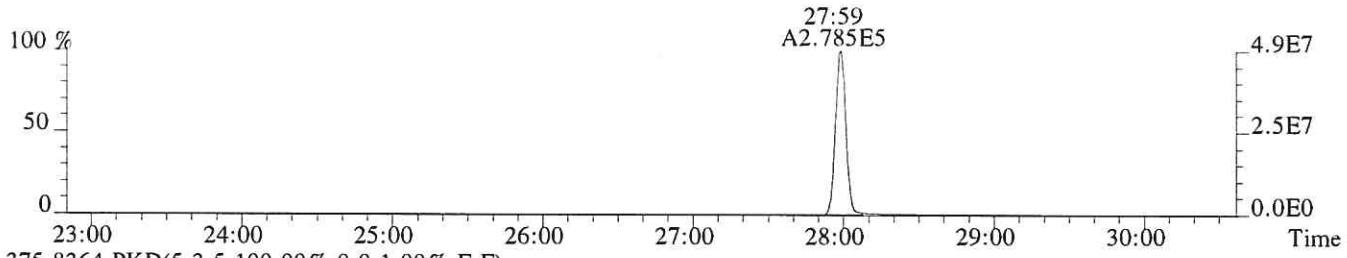
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4256.0,1.00%,F,T)



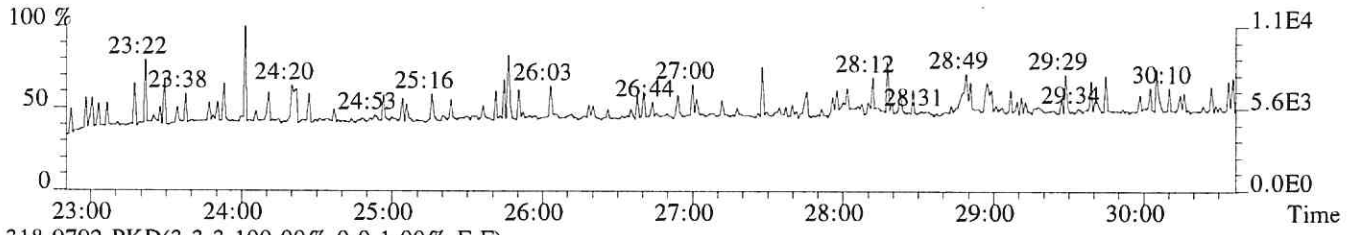
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,15308.0,1.00%,F,T)



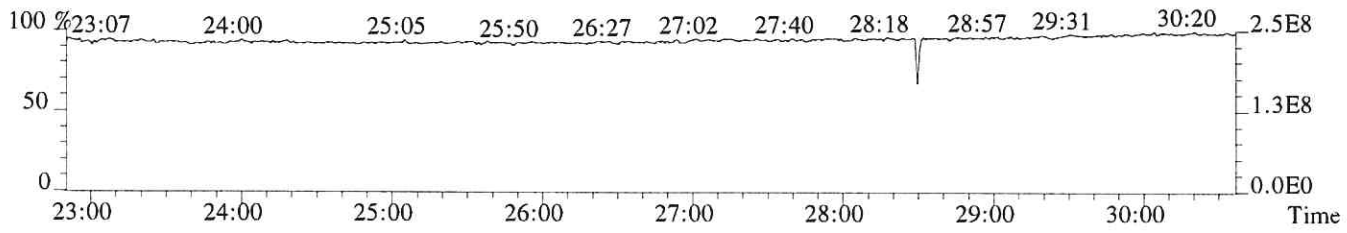
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12244.0,1.00%,F,T)



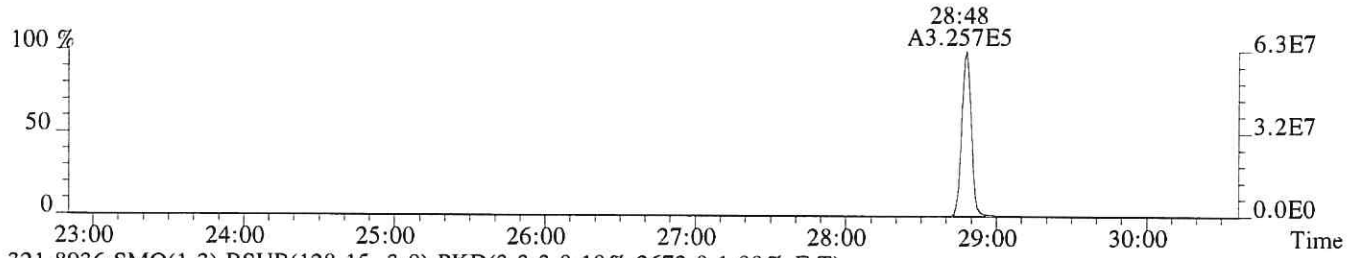
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



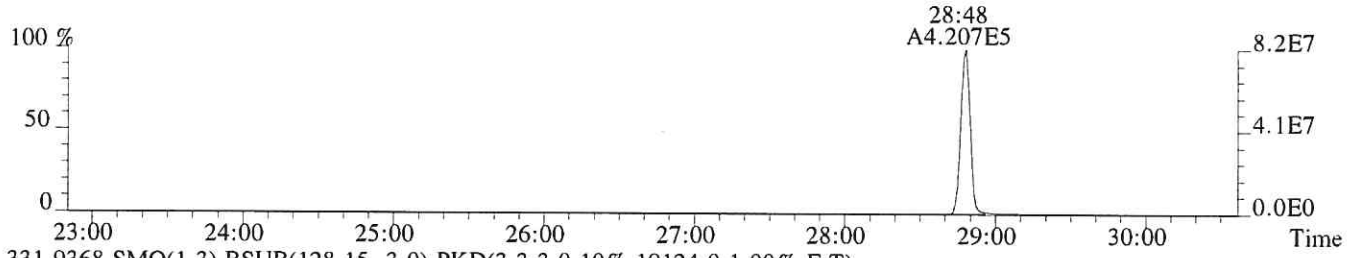
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



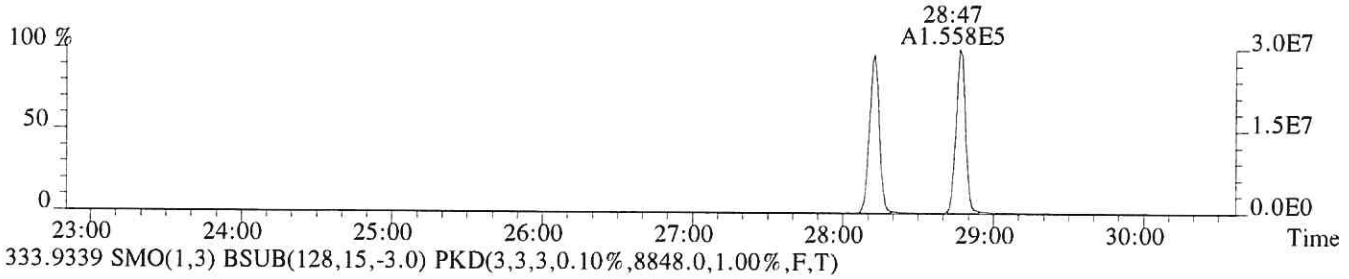
File:P614687 #1-552 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4516.0,1.00%,F,T)



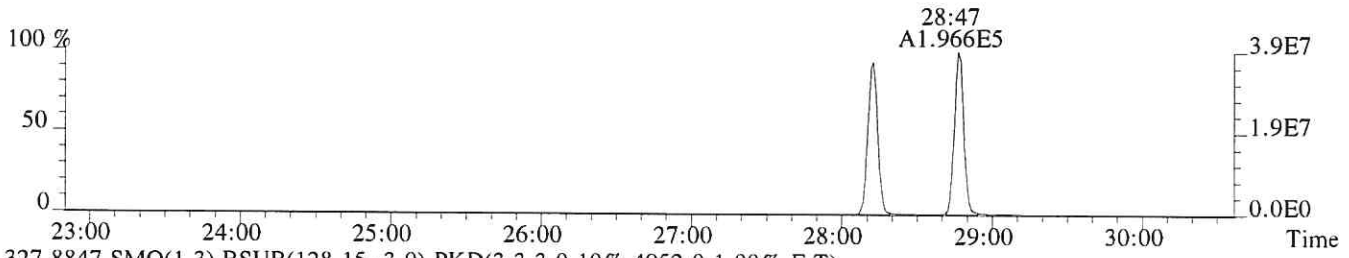
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2672.0,1.00%,F,T)



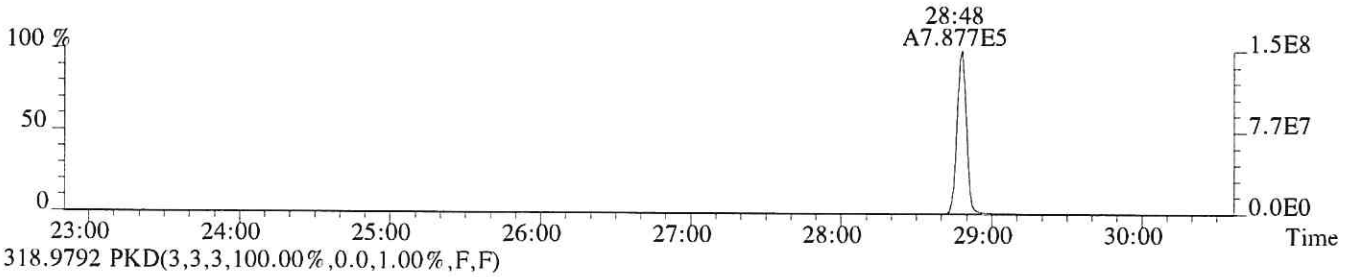
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,19124.0,1.00%,F,T)



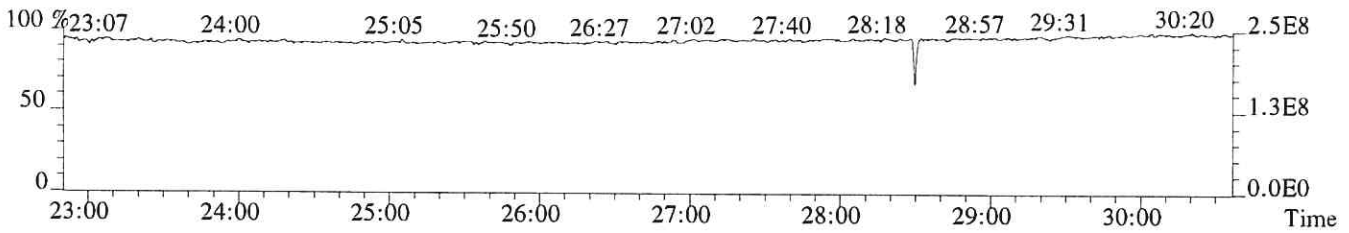
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8848.0,1.00%,F,T)



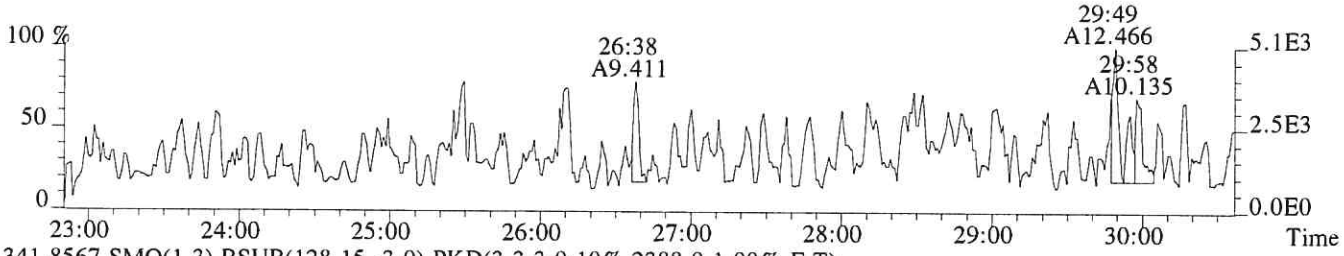
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4952.0,1.00%,F,T)



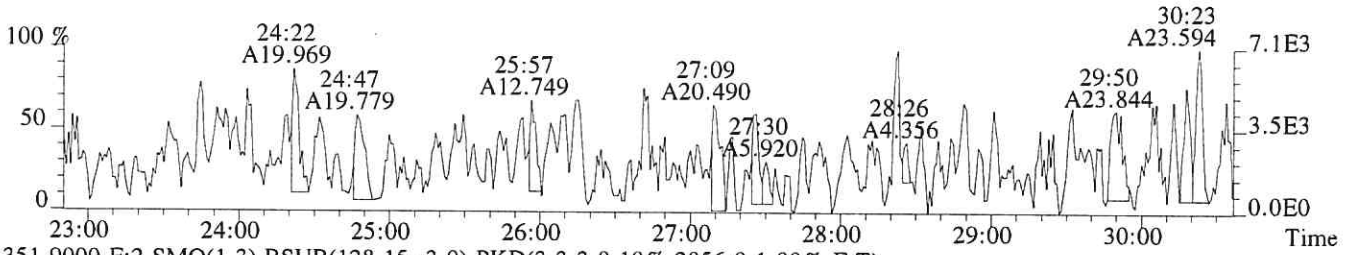
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



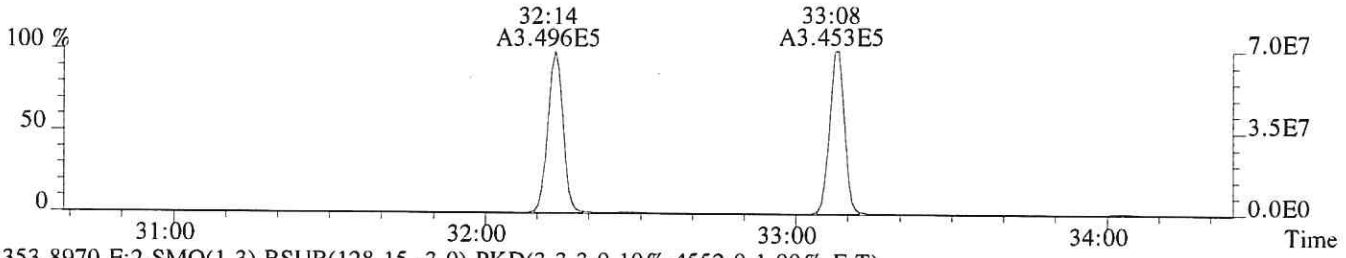
File:P614687 #1-552 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1884.0,1.00%,F,T)



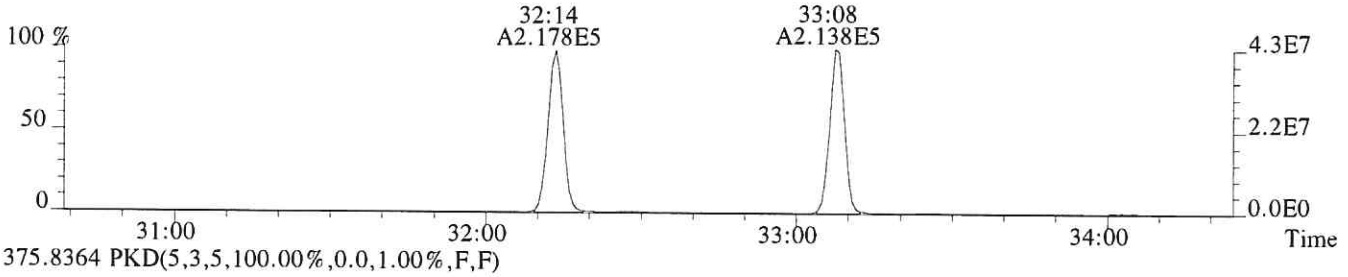
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2388.0,1.00%,F,T)



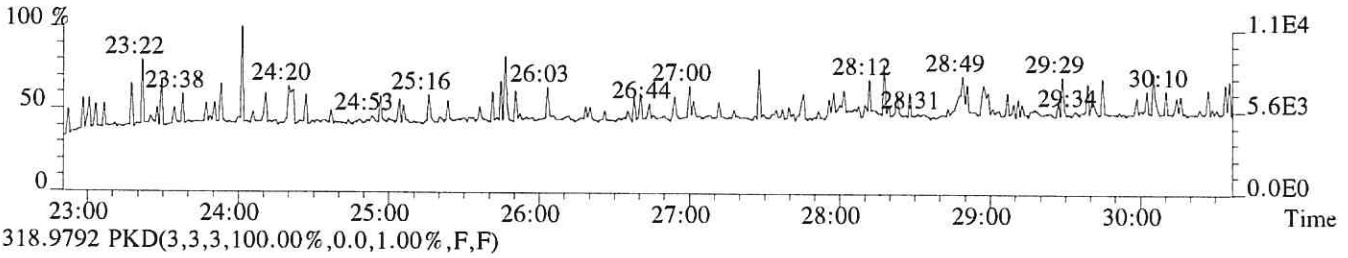
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2056.0,1.00%,F,T)



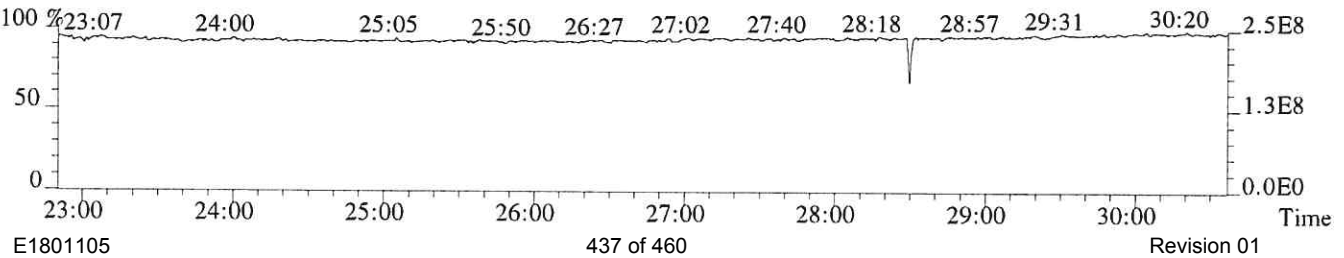
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4552.0,1.00%,F,T)



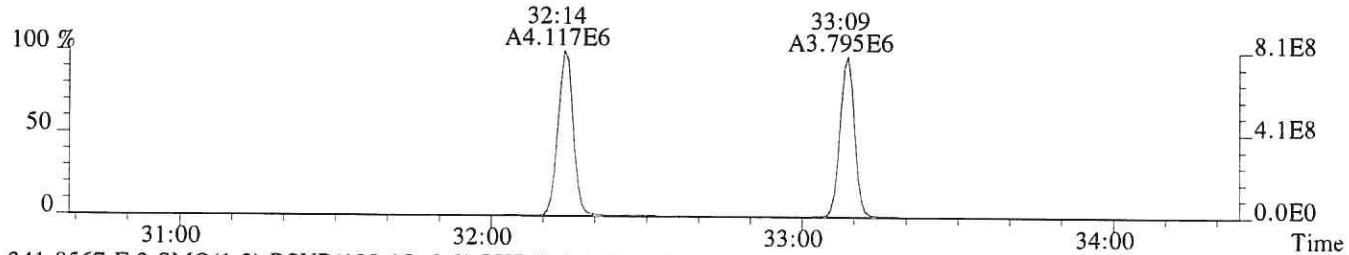
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



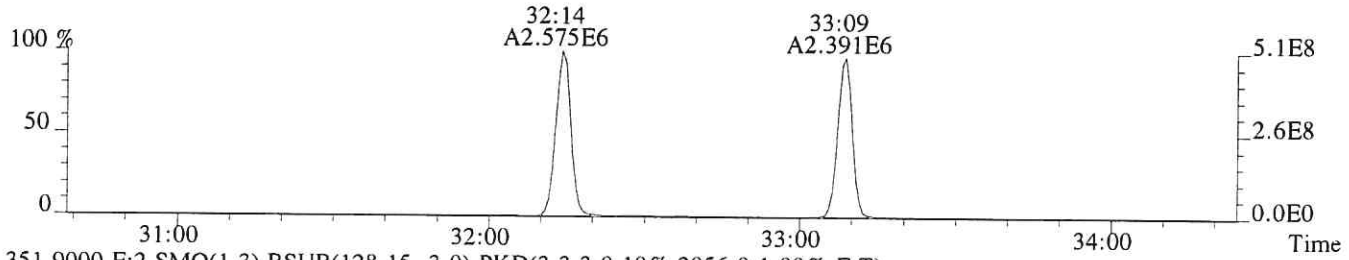
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



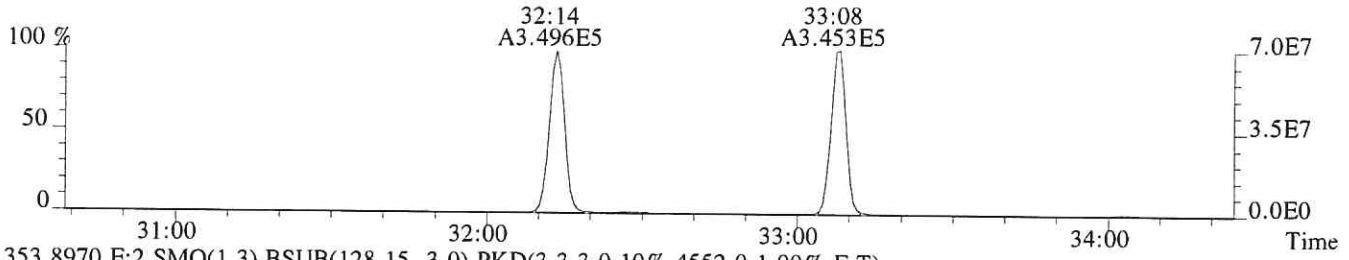
File:P614687 #1-339 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8456.0,1.00%,F,T)



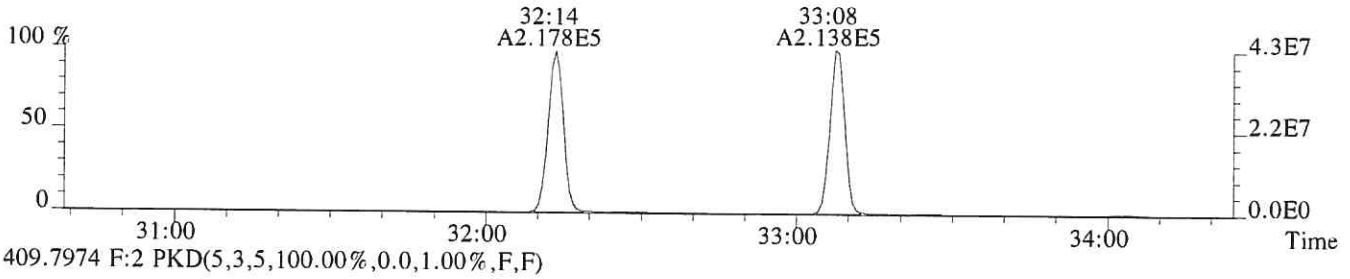
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9132.0,1.00%,F,T)



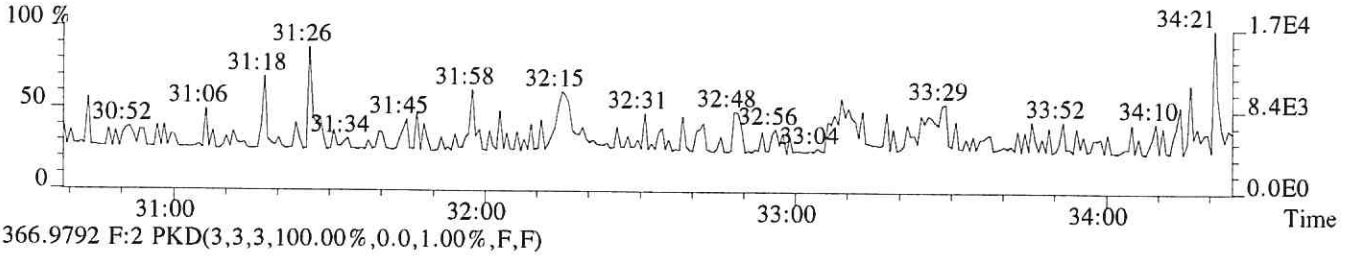
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2056.0,1.00%,F,T)



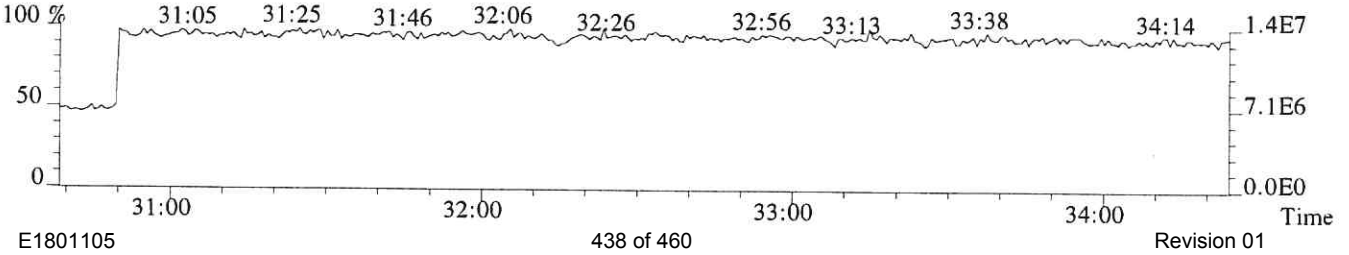
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4552.0,1.00%,F,T)



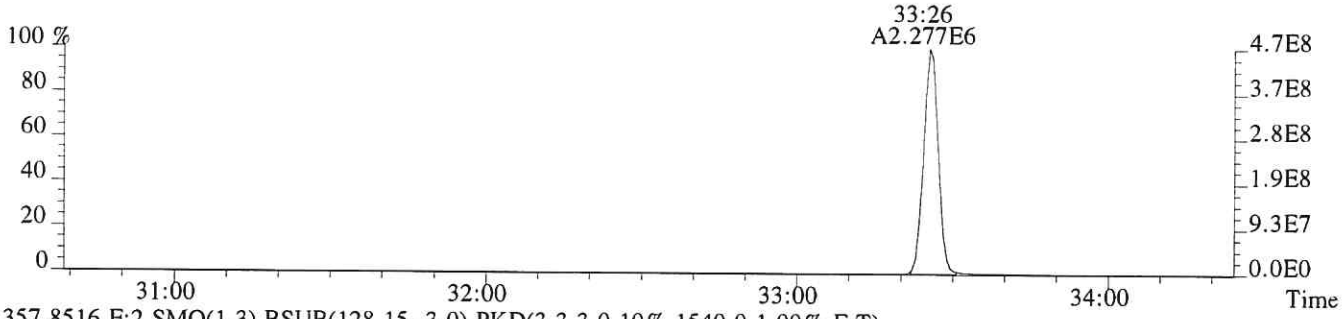
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



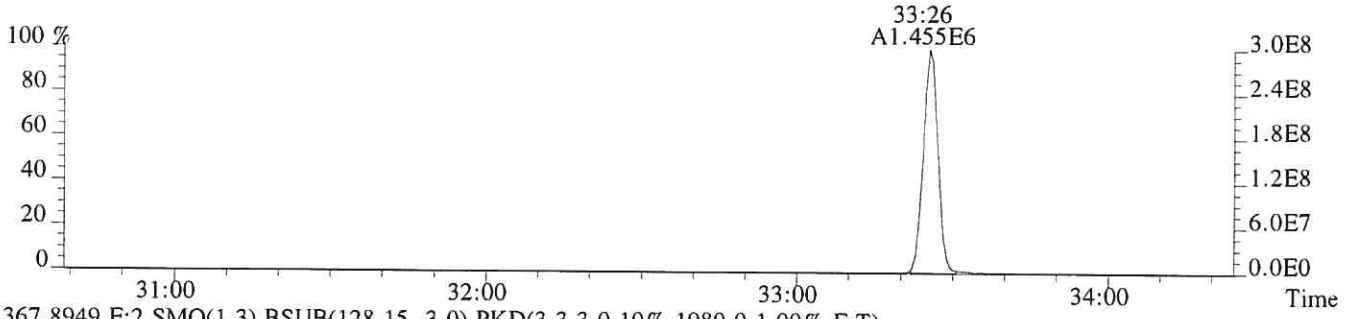
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



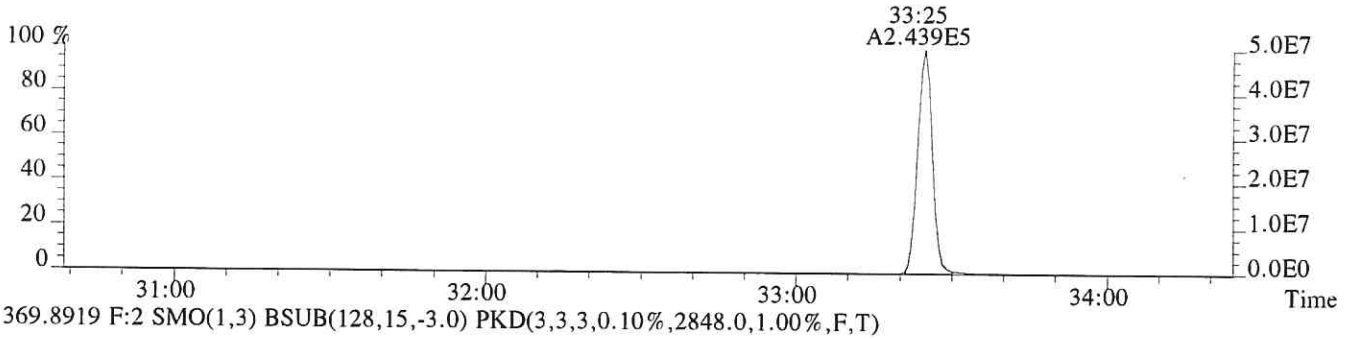
File:P614687 #1-339 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3264.0,1.00%,F,T)



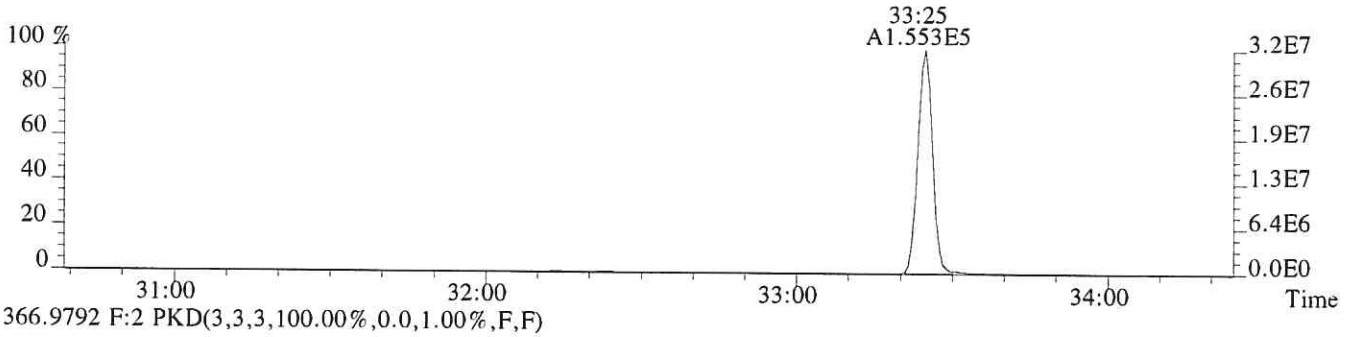
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1540.0,1.00%,F,T)



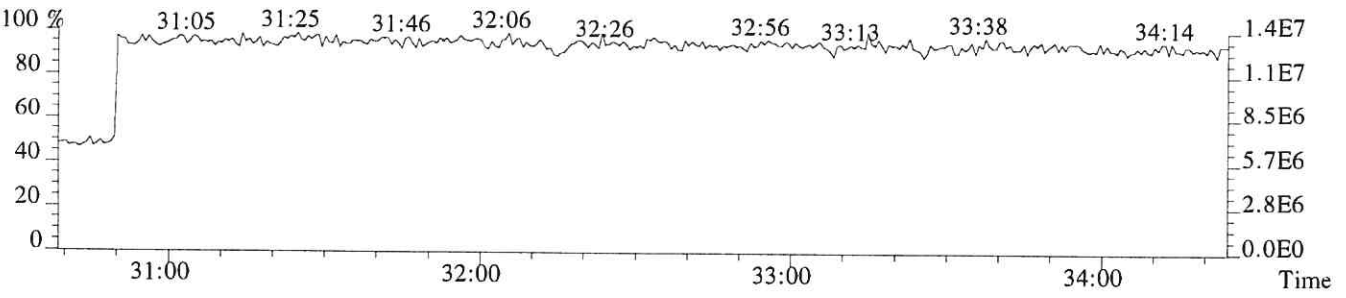
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1980.0,1.00%,F,T)



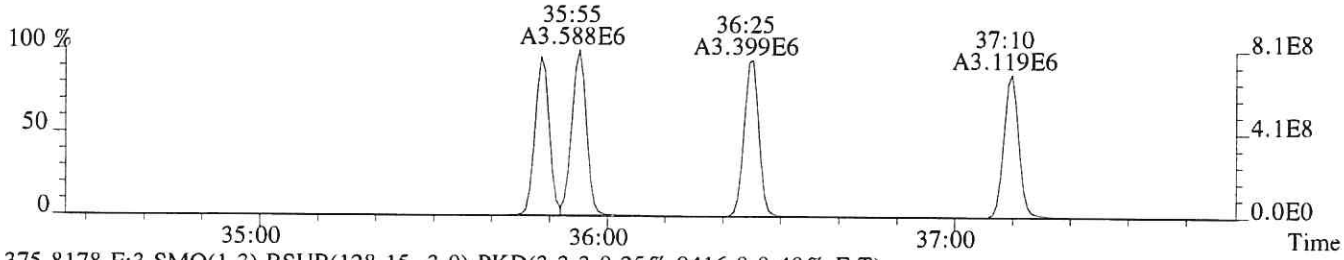
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2848.0,1.00%,F,T)



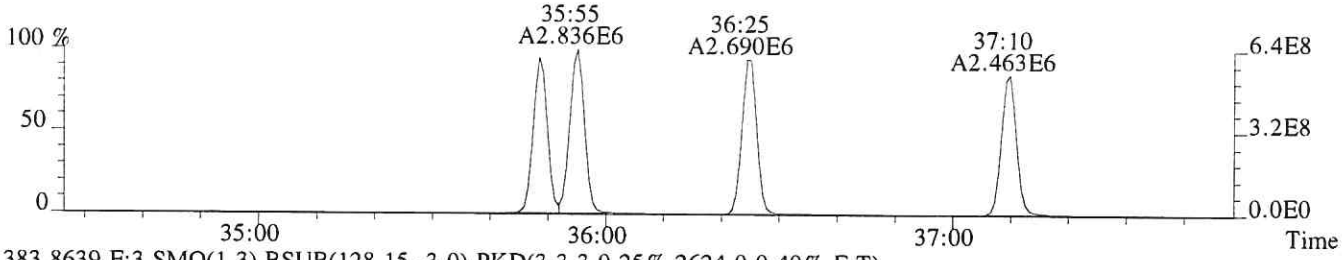
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



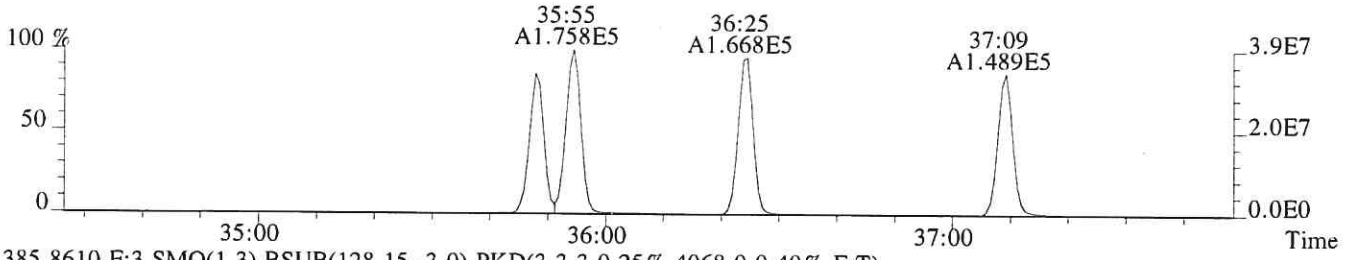
File:P614687 #1-304 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,12332.0,0.40%,F,T)



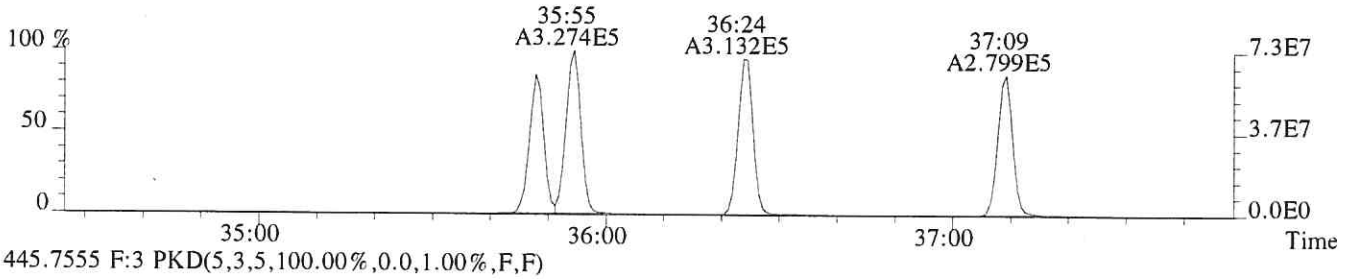
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,9416.0,0.40%,F,T)



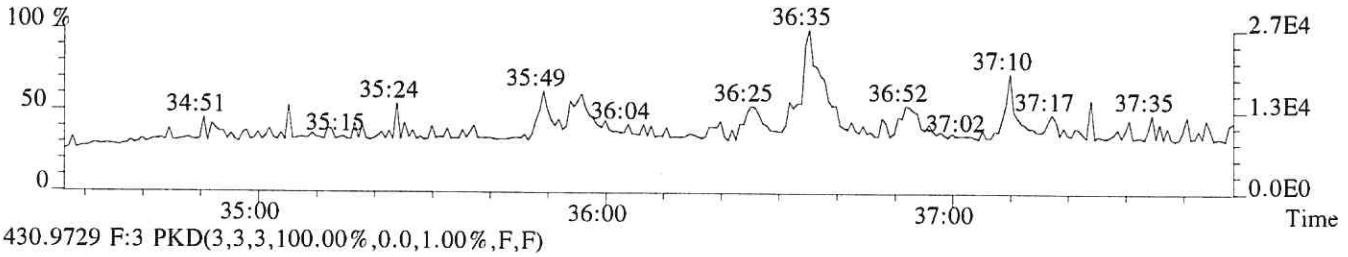
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2624.0,0.40%,F,T)



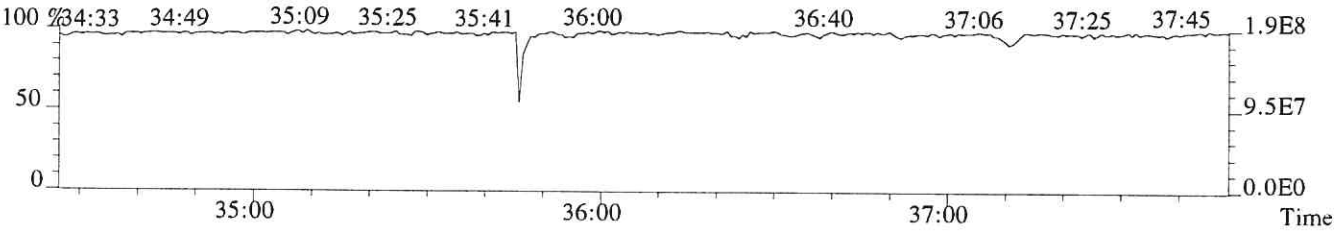
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4068.0,0.40%,F,T)



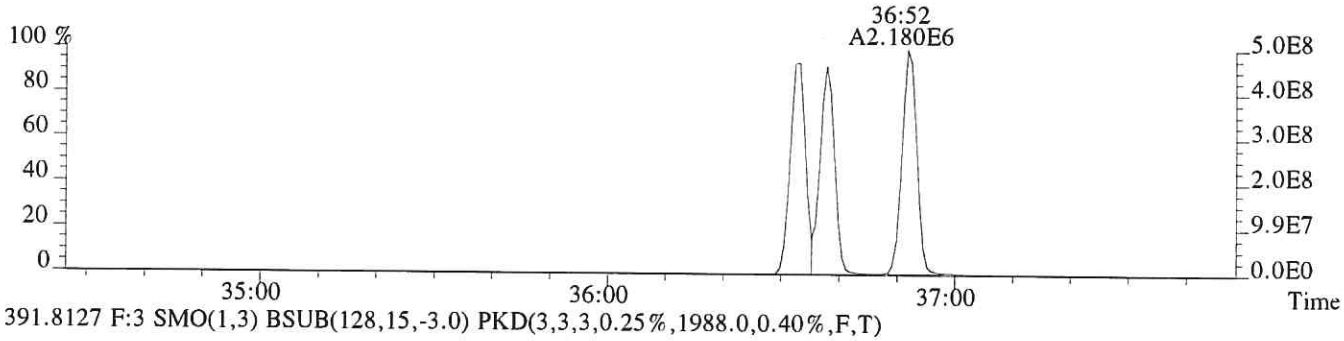
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



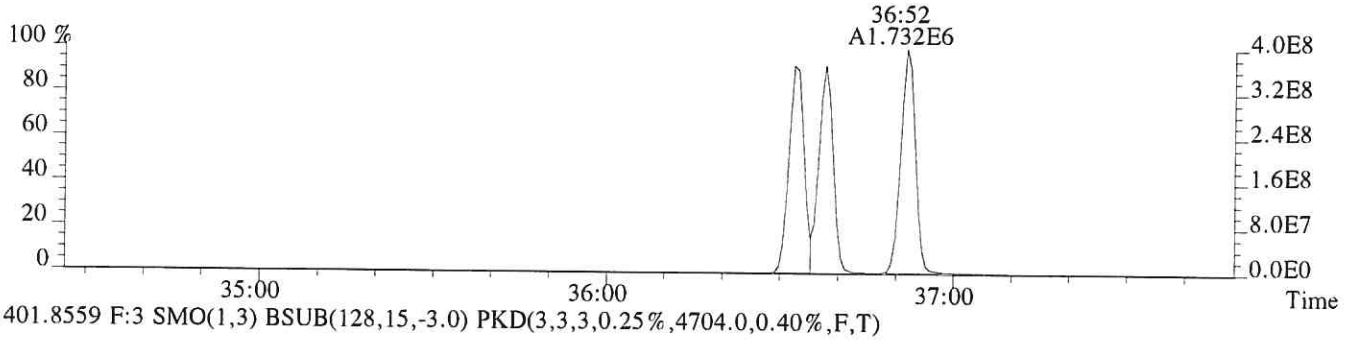
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



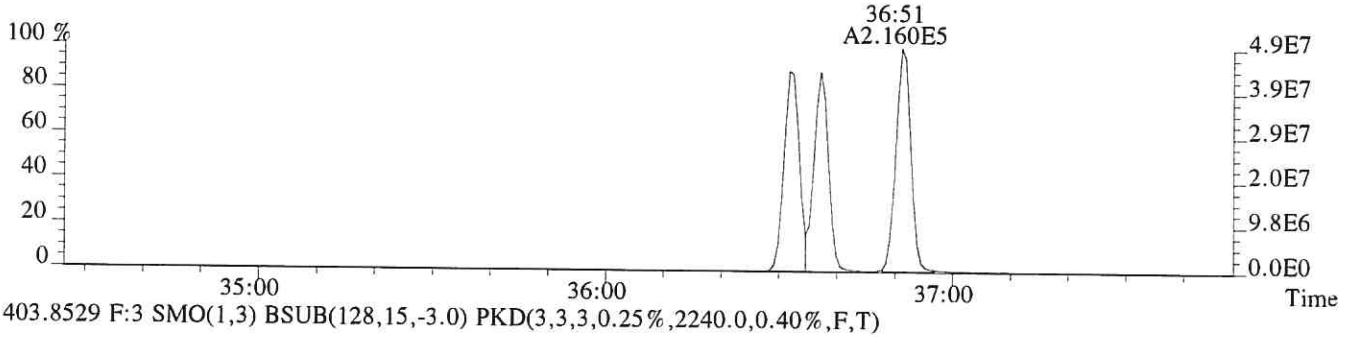
File:P614687 #1-304 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2336.0,0.40%,F,T)



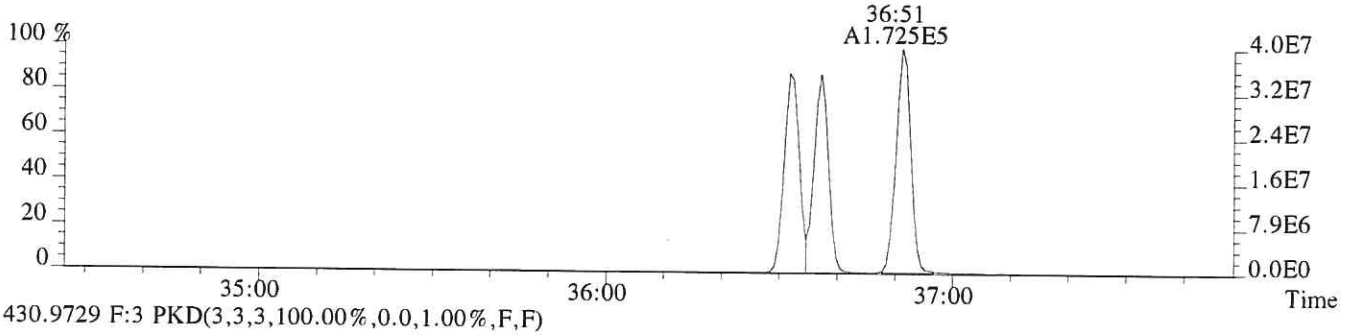
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1988.0,0.40%,F,T)



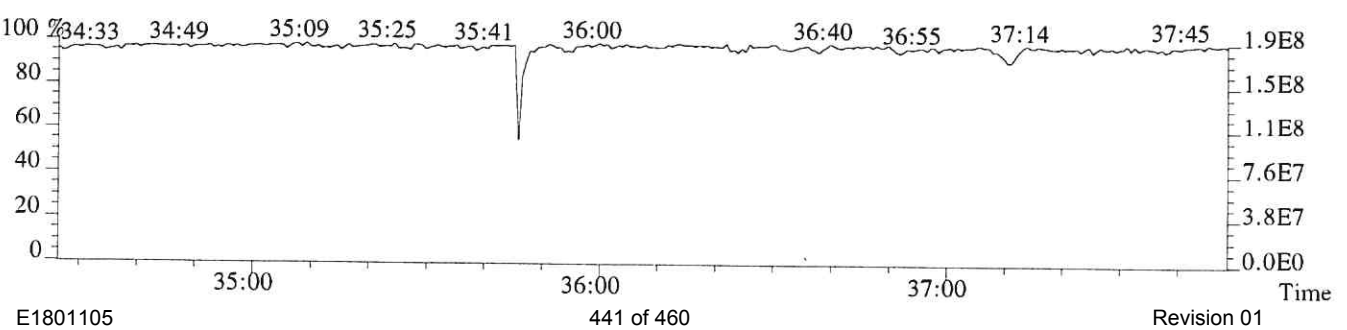
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4704.0,0.40%,F,T)



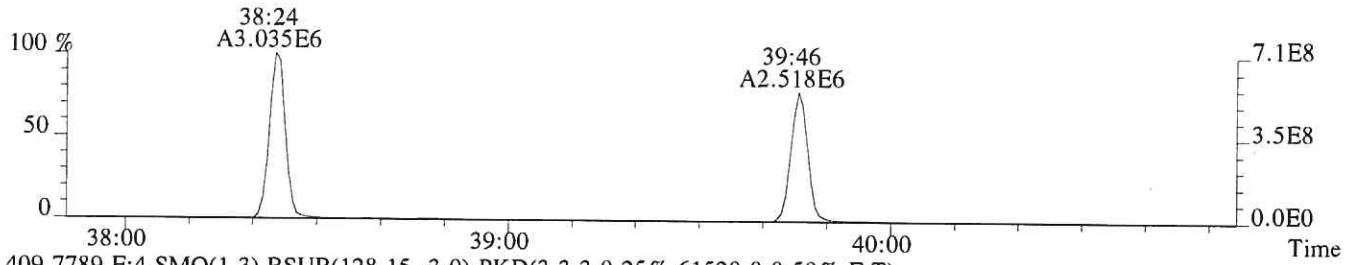
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2240.0,0.40%,F,T)



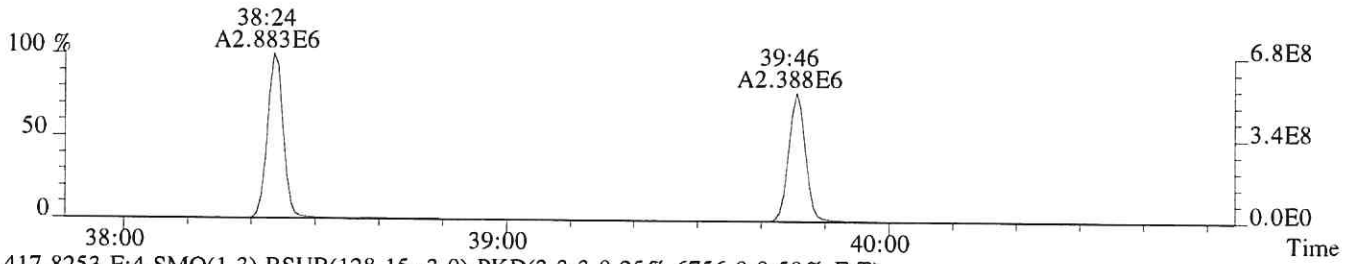
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



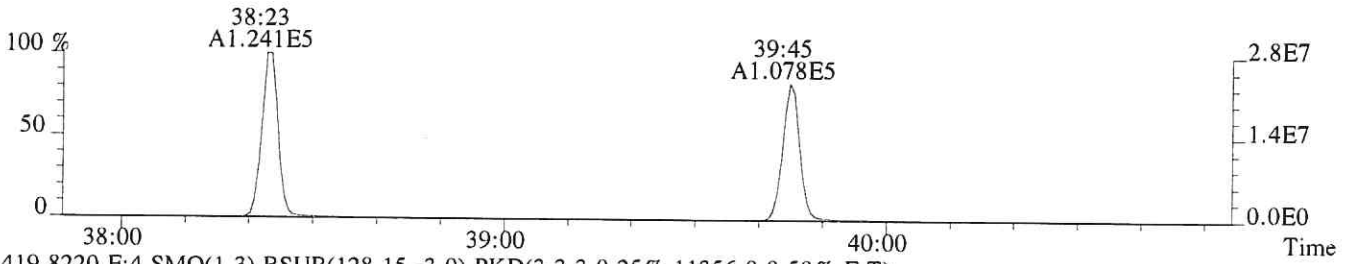
File:P614687 #1-276 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,96804.0,0.50%,F,T)



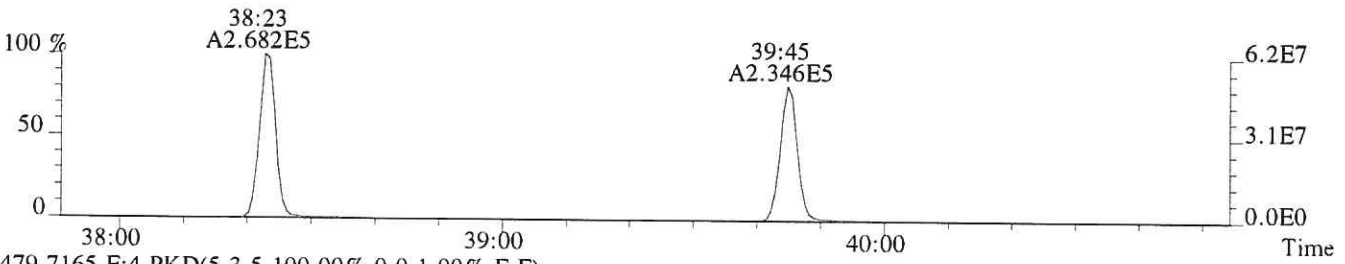
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,61520.0,0.50%,F,T)



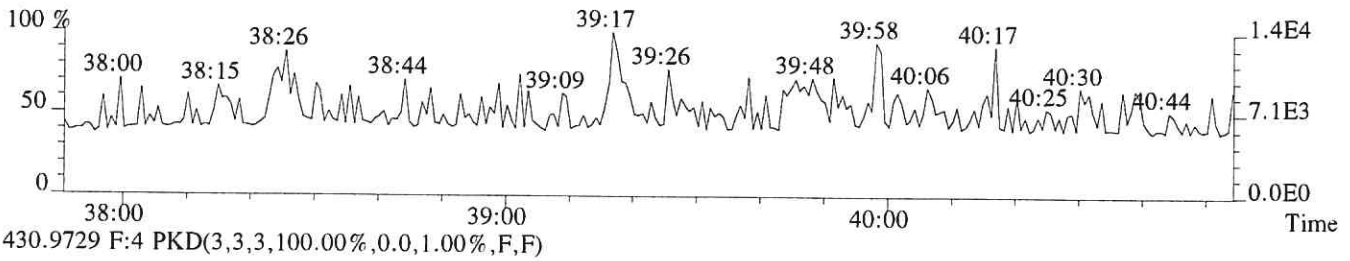
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6756.0,0.50%,F,T)



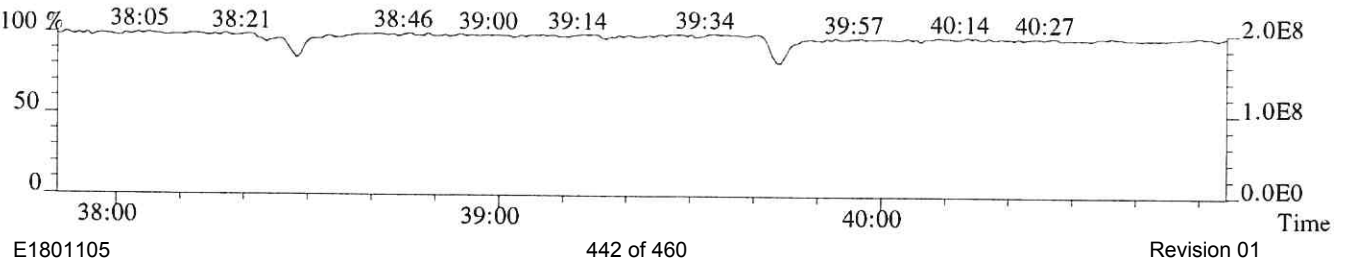
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,11356.0,0.50%,F,T)



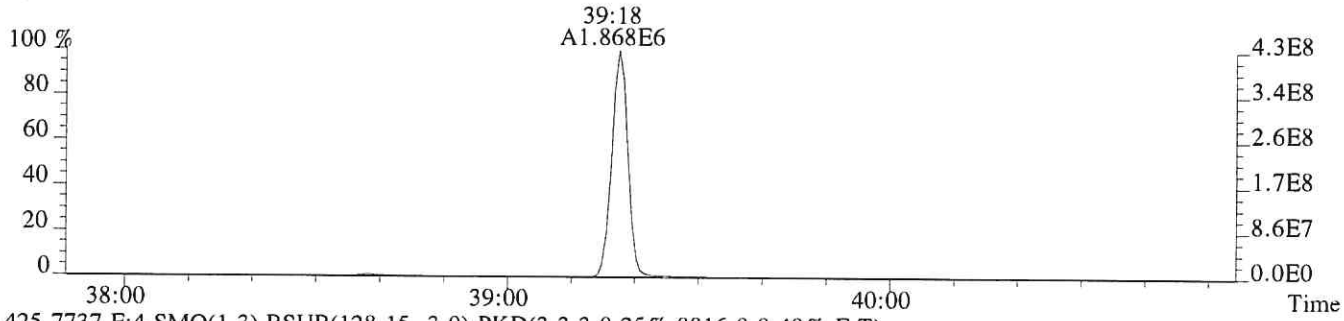
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



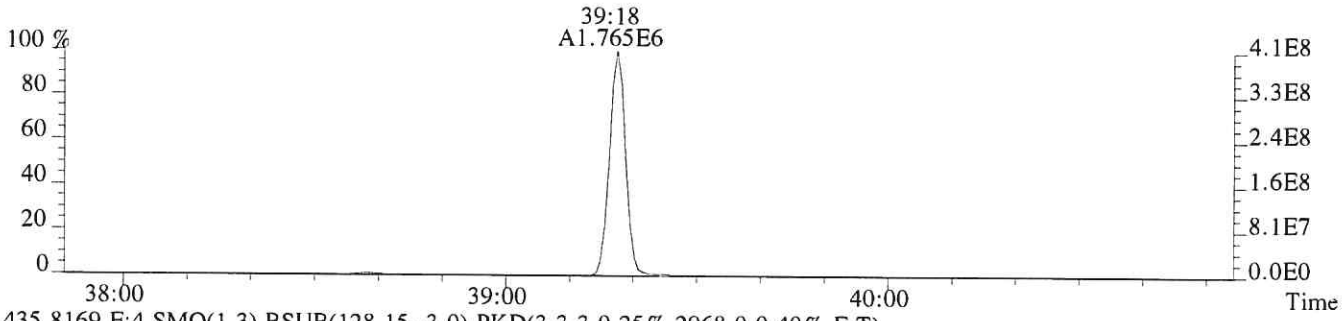
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



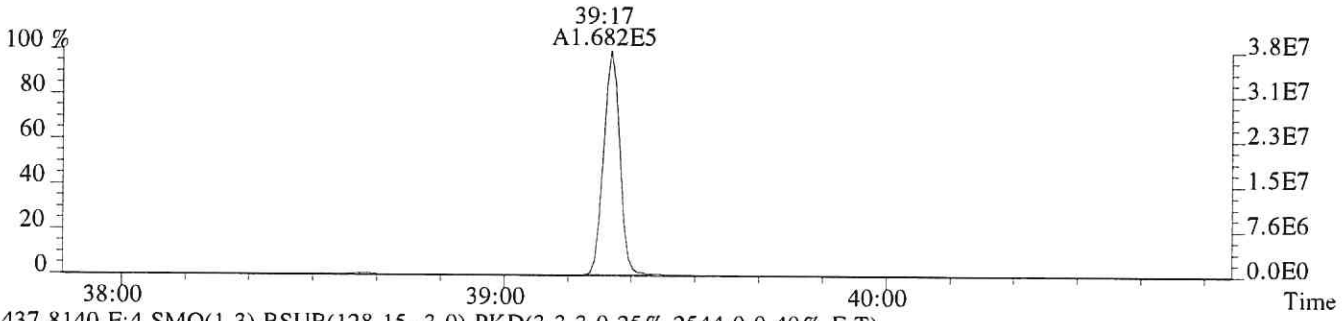
File:P614687 #1-276 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,11044.0,0.40%,F,T)



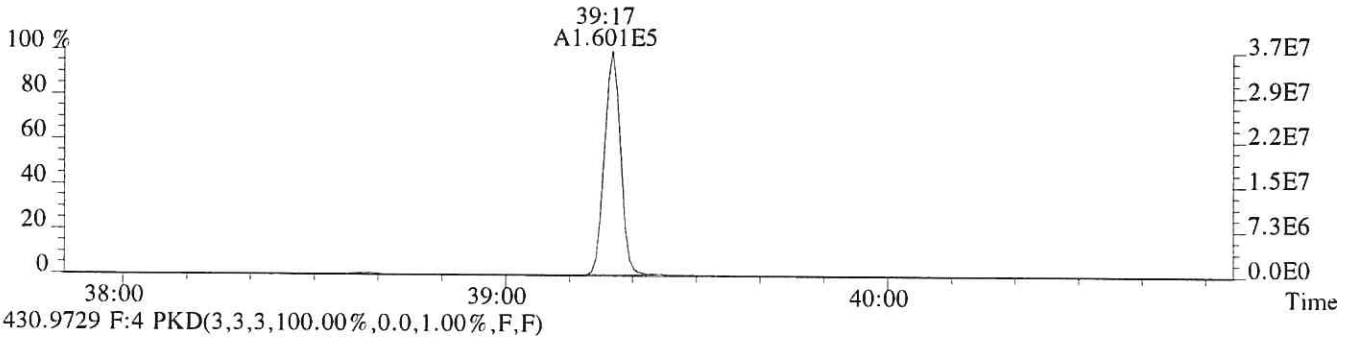
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,8816.0,0.40%,F,T)



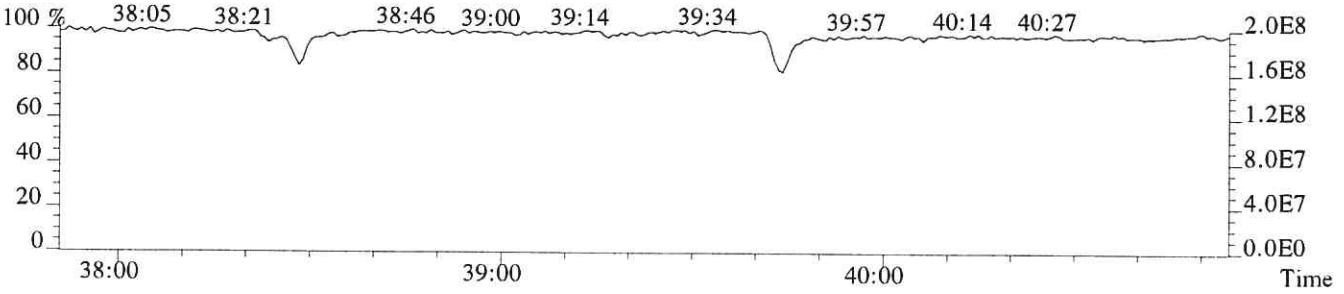
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2968.0,0.40%,F,T)



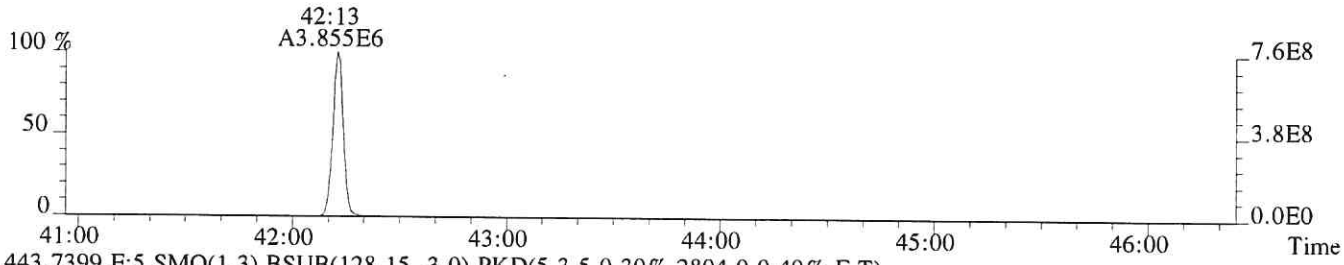
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2544.0,0.40%,F,T)



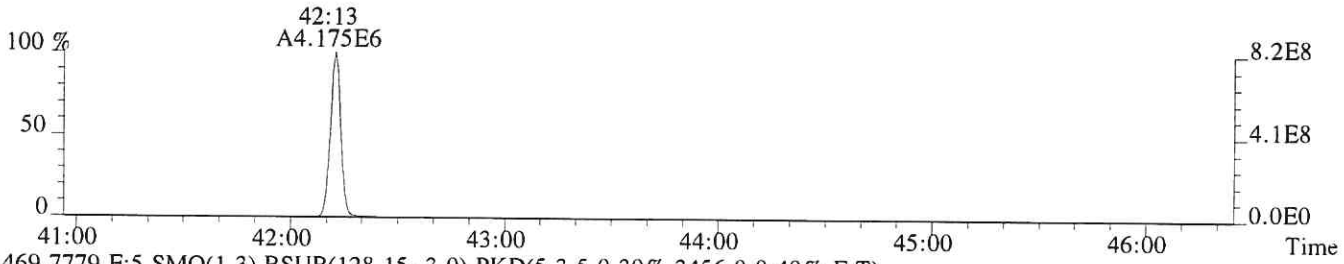
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



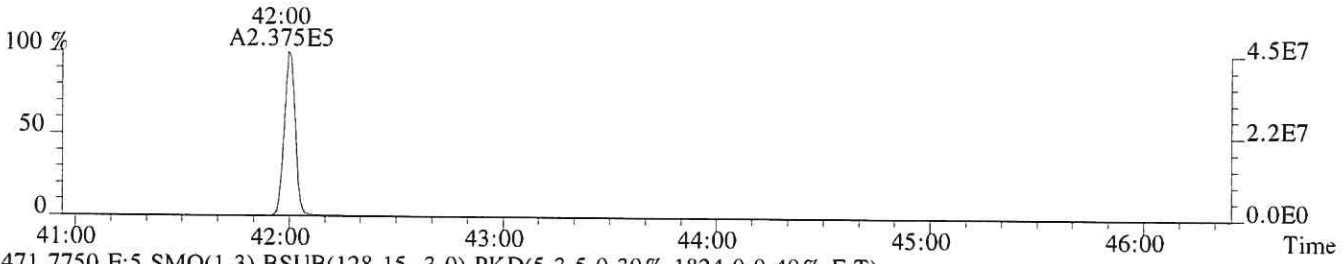
File:P614687 #1-493 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1428.0,0.40%,F,T)



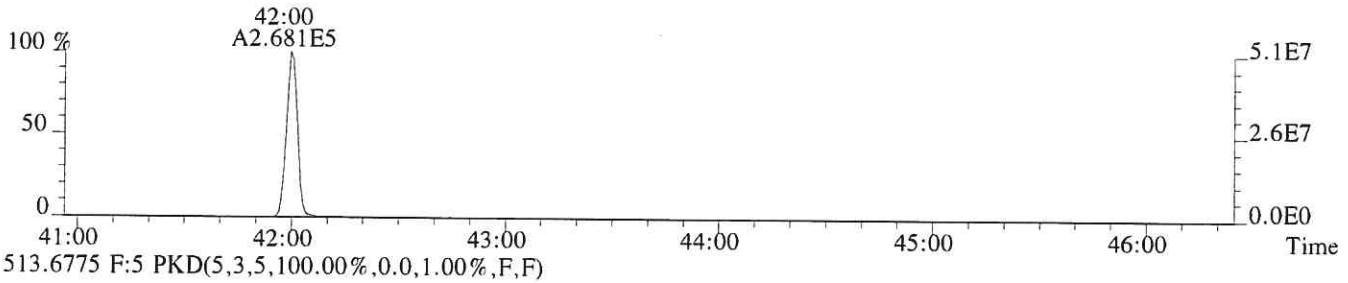
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2804.0,0.40%,F,T)



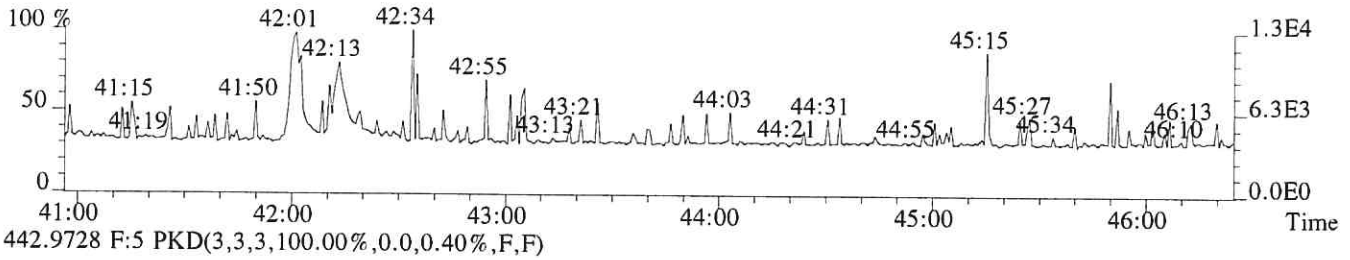
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3456.0,0.40%,F,T)



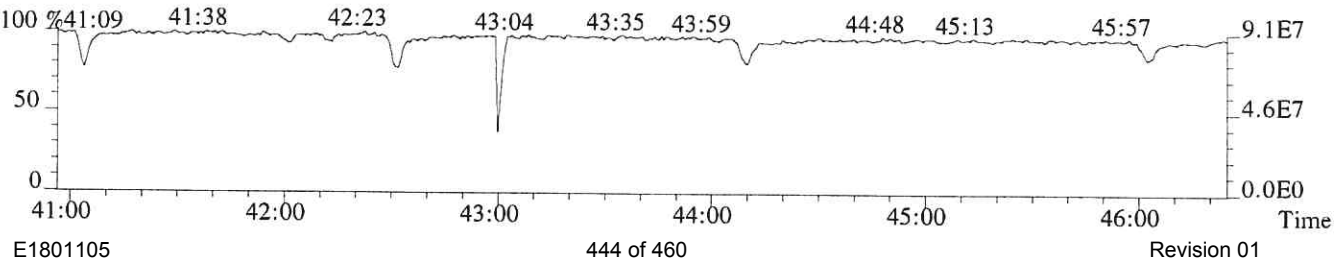
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1824.0,0.40%,F,T)



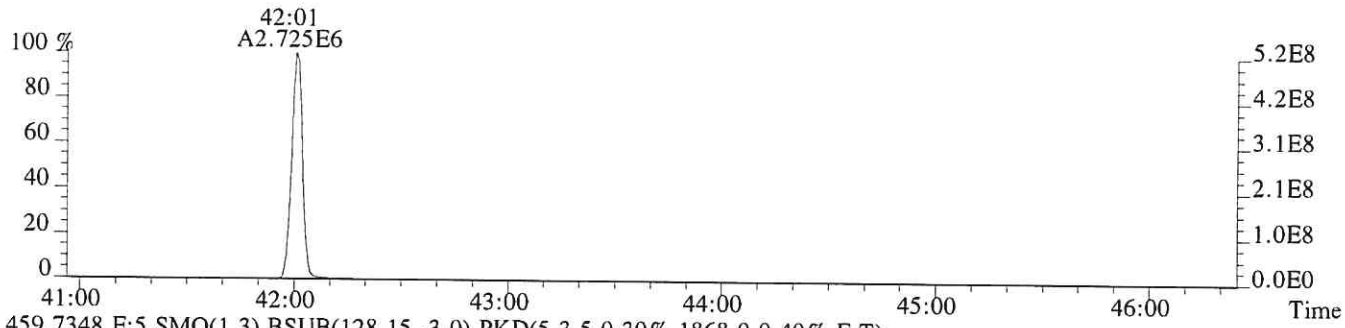
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



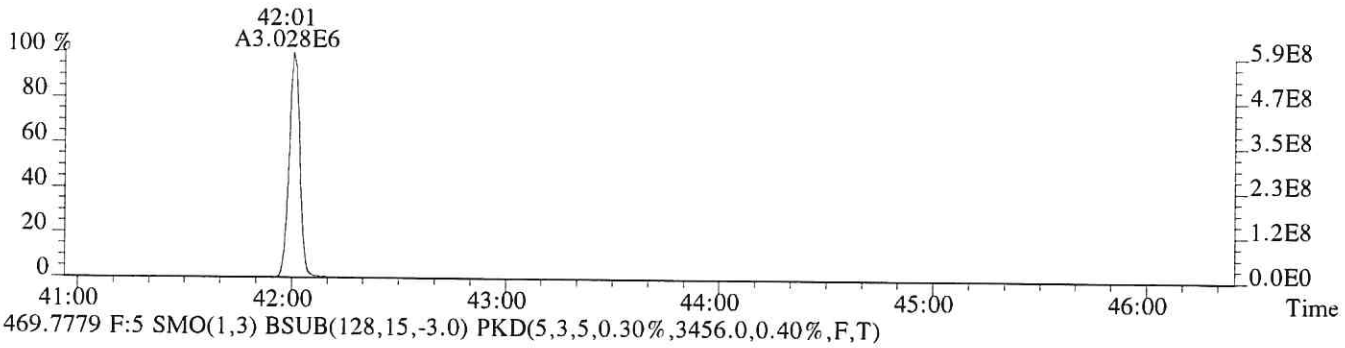
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



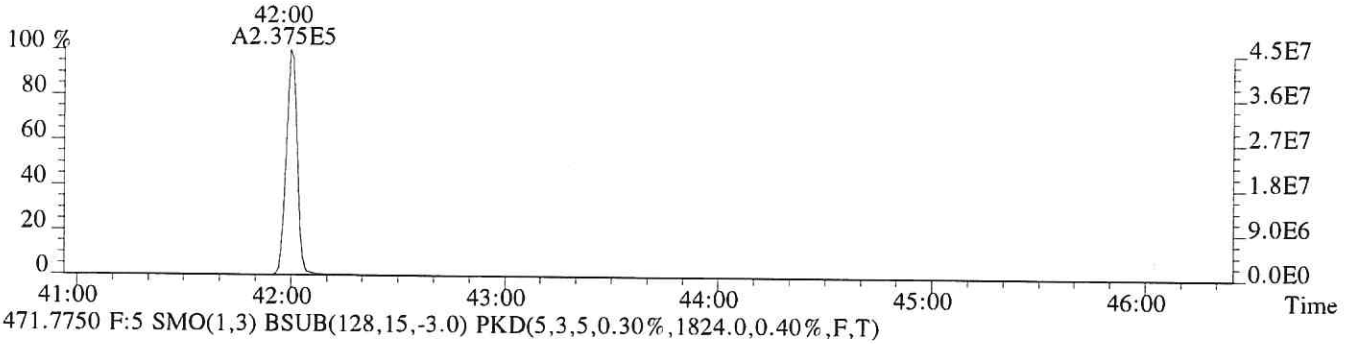
File:P614687 #1-493 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,960.0,0.40%,F,T)



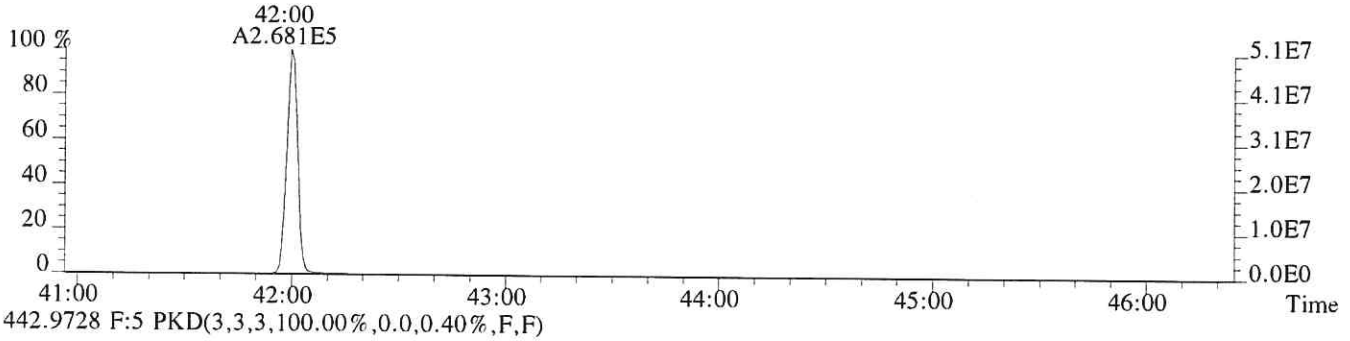
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1868.0,0.40%,F,T)



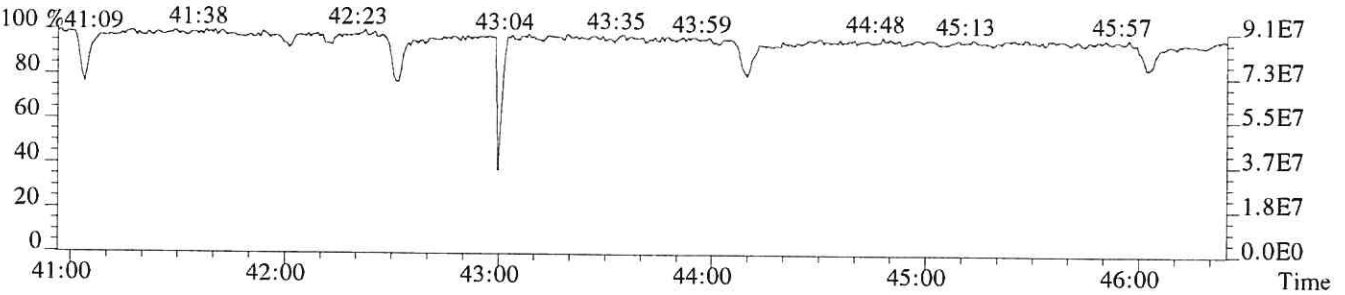
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3456.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1824.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

Instrument ID: E-HRMS-08 GC Column ID: DB-5MSUI

VER Data Filename: P614690 Analysis Date: 25-SEP-18 Time: 20:57:19

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	9.7	7.8 - 12.9	-2.5
1,2,3,7,8-PeCDD	M+2/M+4	1.57	1.32-1.78	49	39 - 65	-2.2
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	49	39 - 64	-2.2
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	50	39 - 64	-0.1
1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	49	41 - 61	-1.9
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	50	43 - 58	-0.9
OCDD	M+2/M+4	0.91	0.76-1.02	98	79 - 126	-2.1
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	9.7	8.4 - 12.0	-2.7
1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	49	41 - 60	-1.1
2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	49	41 - 61	-1.4
1,2,3,4,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	49	45 - 56	-2.6
1,2,3,6,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	49	44 - 57	-2.3
1,2,3,7,8,9-HxCDF	M+2/M+4	1.28	1.05-1.43	50	45 - 56	0.3
2,3,4,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	50	44 - 57	-0.4
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	50	45 - 55	-0.6
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.02	0.88-1.20	48	43 - 58	-3.5
OCDF	M+2/M+4	0.93	0.76-1.02	100	63 - 159	-0.4

(1) See Table 8, Method 1613B, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.

(3) Contract-required concentration range as specified in Table 6, Method 1613B, under VER.

(4) The beginning CCAL %RSD for the 17 unlabeled standard must not exceed +/- 20%, Section 7.7.4.1. The ending CCAL must not exceed +/-25%, Section 8.3.2.4, Method 8290

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

Instrument ID: E-HRMS-08 GC Column ID: DB-5MSUI

VER Data Filename: P614690 Analysis Date: 25-SEP-18 Time: 20:57:19

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
13C-2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	99	82 - 121	-0.7
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.56	1.32-1.78	97	62 - 160	-2.6
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	102	85 - 117	1.5
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	100	85 - 118	-0.2
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	105	72 - 138	5.2
13C-OCDD	M+2/M+4	0.89	0.76-1.02	224	96 - 415	11.9
13C-2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	99	71 - 140	-0.7
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	98	76 - 130	-2.1
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	96	77 - 130	-3.8
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	102	76 - 131	2.1
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	101	70 - 143	0.6
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	100	74 - 135	0.4
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	100	73 - 137	0.2
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	103	78 - 129	2.7
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.46	0.37-0.51	109	77 - 129	9.0
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD				9.9	7.8 - 12.7	-1.0

(1) See Table 8, Method 1613B, for m/z specifications.
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.
(3) Contract-required concentration range, as specified in Table 6, Method 1613B, under VER.
(4) No ion abundance ratio; report concentration found.
(5) The beginnning CCAL %RSD for the labeled standard must not exceed +/- 30% Section 7.7.4.2. The ending CCAL must not exceed +/- 35%, Sec 8.3.2.4 (8290)

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
188969

Run #7 Filename P614690 Samp: 1 Inj: 1 Acquired: 25-SEP-18 20:57:19
Processed: 26-SEP-18 08:08:37 Sample ID: 2ND SOURCE

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:00	1.742e+04	2.239e+04	0.78	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	32:14	1.470e+05	9.342e+04	1.57	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	33:09	1.362e+05	8.490e+04	1.60	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	35:49	1.308e+05	1.044e+05	1.25	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	35:55	1.371e+05	1.074e+05	1.28	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	36:25	1.285e+05	1.018e+05	1.26	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	37:09	1.211e+05	9.459e+04	1.28	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	38:24	1.180e+05	1.126e+05	1.05	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	39:46	1.018e+05	9.931e+04	1.02	yes	no	1.463
10	Unk	OCDF	42:12	1.605e+05	1.721e+05	0.93	yes	no	1.571
11	Unk	2,3,7,8-TCDD	28:48	1.193e+04	1.490e+04	0.80	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	33:26	8.164e+04	5.215e+04	1.57	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	36:33	7.752e+04	6.082e+04	1.27	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	36:38	7.678e+04	6.066e+04	1.27	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	36:52	8.213e+04	6.494e+04	1.26	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	39:18	7.382e+04	6.944e+04	1.06	yes	no	1.112
17	Unk	OCDD	42:01	1.146e+05	1.261e+05	0.91	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	27:59	1.682e+05	2.104e+05	0.80	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	32:14	2.590e+05	1.613e+05	1.61	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	33:08	2.497e+05	1.565e+05	1.60	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	35:48	1.202e+05	2.212e+05	0.54	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	35:54	1.342e+05	2.529e+05	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	36:24	1.258e+05	2.350e+05	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	37:09	1.132e+05	2.142e+05	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:23	9.579e+04	2.089e+05	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:45	8.964e+04	1.952e+05	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	28:47	1.166e+05	1.457e+05	0.80	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	33:25	1.797e+05	1.149e+05	1.56	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	36:32	1.476e+05	1.165e+05	1.27	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	36:37	1.453e+05	1.145e+05	1.27	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:17	1.336e+05	1.263e+05	1.06	yes	no	0.857
32	IS	13C-OCDD	42:00	2.007e+05	2.242e+05	0.89	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	28:13	1.202e+05	1.487e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:51	1.598e+05	1.284e+05	1.24	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	28:48	2.893e+04				no	1.086

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
188969

Run #7 Filename P614690 Samp: 1 Inj: 1 Acquired: 25-SEP-18 20:57:19
Processed: 26-SEP-18 08:08:37 LAB. ID: 2ND SOURCE

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	3.08e+06	2.16e+03	1.4e+03	3.95e+06	5.67e+03	7.0e+02
2	1,2,3,7,8-PeCDF	2.75e+07	1.50e+03	1.8e+04	1.74e+07	8.24e+03	2.1e+03
3	2,3,4,7,8-PeCDF	2.67e+07	1.50e+03	1.8e+04	1.67e+07	8.24e+03	2.0e+03
4	1,2,3,4,7,8-HxCDF	2.88e+07	2.35e+03	1.2e+04	2.29e+07	2.48e+03	9.3e+03
5	1,2,3,6,7,8-HxCDF	2.88e+07	2.35e+03	1.2e+04	2.30e+07	2.48e+03	9.3e+03
6	2,3,4,6,7,8-HxCDF	2.86e+07	2.35e+03	1.2e+04	2.28e+07	2.48e+03	9.2e+03
7	1,2,3,7,8,9-HxCDF	2.47e+07	2.35e+03	1.1e+04	1.95e+07	2.48e+03	7.9e+03
8	1,2,3,4,6,7,8-HpCDF	2.70e+07	4.46e+03	6.0e+03	2.58e+07	1.29e+04	2.0e+03
9	1,2,3,4,7,8,9-HpCDF	2.12e+07	4.46e+03	4.8e+03	2.03e+07	1.29e+04	1.6e+03
10	OCDF	3.01e+07	1.50e+03	2.0e+04	3.28e+07	3.09e+03	1.1e+04
11	2,3,7,8-TCDD	2.20e+06	4.04e+03	5.4e+02	2.73e+06	2.27e+03	1.2e+03
12	1,2,3,7,8-PeCDD	1.64e+07	3.14e+03	5.2e+03	1.06e+07	2.92e+02	3.6e+04
13	1,2,3,4,7,8-HxCDD	1.79e+07	1.59e+03	1.1e+04	1.41e+07	2.43e+03	5.8e+03
14	1,2,3,6,7,8-HxCDD	1.70e+07	1.59e+03	1.1e+04	1.34e+07	2.43e+03	5.5e+03
15	1,2,3,7,8,9-HxCDD	1.85e+07	1.59e+03	1.2e+04	1.48e+07	2.43e+03	6.1e+03
16	1,2,3,4,6,7,8-HpCDD	1.59e+07	2.28e+03	7.0e+03	1.49e+07	8.84e+02	1.7e+04
17	OCDD	2.16e+07	1.17e+03	1.8e+04	2.38e+07	1.31e+03	1.8e+04
18	13C-2,3,7,8-TCDF	2.88e+07	1.57e+04	1.8e+03	3.60e+07	9.18e+03	3.9e+03
19	13C-1,2,3,7,8-PeCDF	4.79e+07	4.01e+03	1.2e+04	3.00e+07	3.41e+03	8.8e+03
20	13C-2,3,4,7,8-PeCDF	4.95e+07	4.01e+03	1.2e+04	3.12e+07	3.41e+03	9.1e+03
21	13C-1,2,3,4,7,8-HxCDF	2.65e+07	2.99e+03	8.9e+03	4.93e+07	3.83e+03	1.3e+04
22	13C-1,2,3,6,7,8-HxCDF	2.83e+07	2.99e+03	9.5e+03	5.32e+07	3.83e+03	1.4e+04
23	13C-2,3,4,6,7,8-HxCDF	2.80e+07	2.99e+03	9.4e+03	5.25e+07	3.83e+03	1.4e+04
24	13C-1,2,3,7,8,9-HxCDF	2.35e+07	2.99e+03	7.9e+03	4.43e+07	3.83e+03	1.2e+04
25	13C-1,2,3,4,6,7,8-HpCDF	2.19e+07	7.32e+03	3.0e+03	4.77e+07	1.38e+04	3.5e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.88e+07	7.32e+03	2.6e+03	4.06e+07	1.38e+04	2.9e+03
27	13C-2,3,7,8-TCDD	2.17e+07	2.56e+04	8.4e+02	2.71e+07	6.97e+03	3.9e+03
28	13C-1,2,3,7,8-PeCDD	3.57e+07	3.26e+03	1.1e+04	2.28e+07	2.28e+03	1.0e+04
29	13C-1,2,3,4,7,8-HxCDD	3.37e+07	5.66e+03	6.0e+03	2.64e+07	3.42e+03	7.7e+03
30	13C-1,2,3,6,7,8-HxCDD	3.18e+07	5.66e+03	5.6e+03	2.51e+07	3.42e+03	7.3e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.85e+07	3.13e+03	9.1e+03	2.68e+07	1.88e+03	1.4e+04
32	13C-OCDD	3.77e+07	2.72e+03	1.4e+04	4.17e+07	9.60e+02	4.3e+04
33	13C-1,2,3,4-TCDD	2.21e+07	2.56e+04	8.6e+02	2.72e+07	6.97e+03	3.9e+03
34	13C-1,2,3,7,8,9-HxCDD	3.62e+07	5.66e+03	6.4e+03	2.92e+07	3.42e+03	8.5e+03
35	37Cl-2,3,7,8-TCDD	5.28e+06	4.24e+03	1.2e+03			

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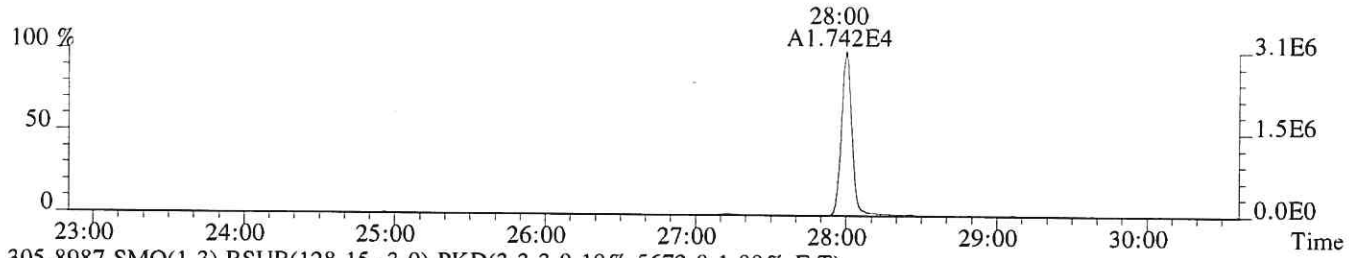
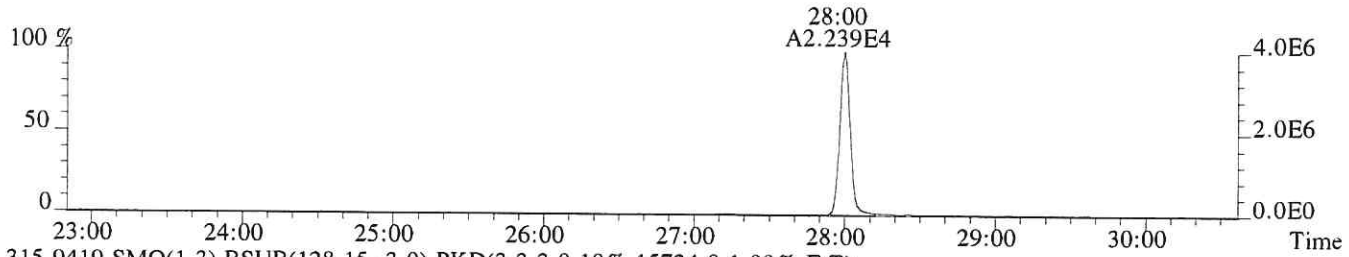
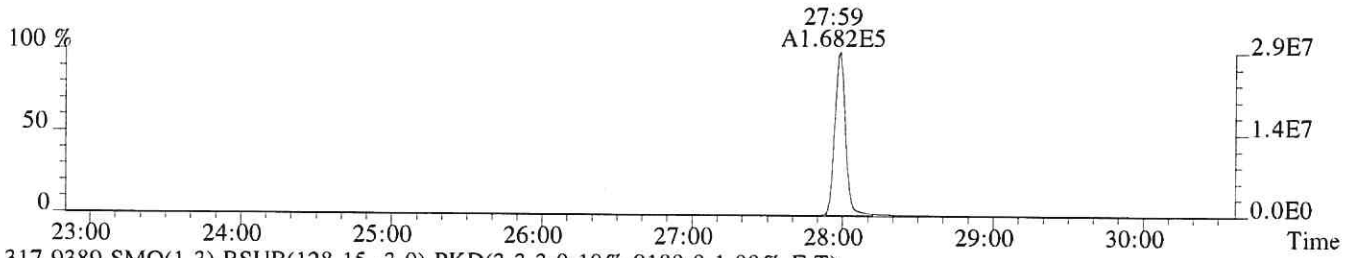
File:P614690 #1-552 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2160.0,1.00%,F,T)



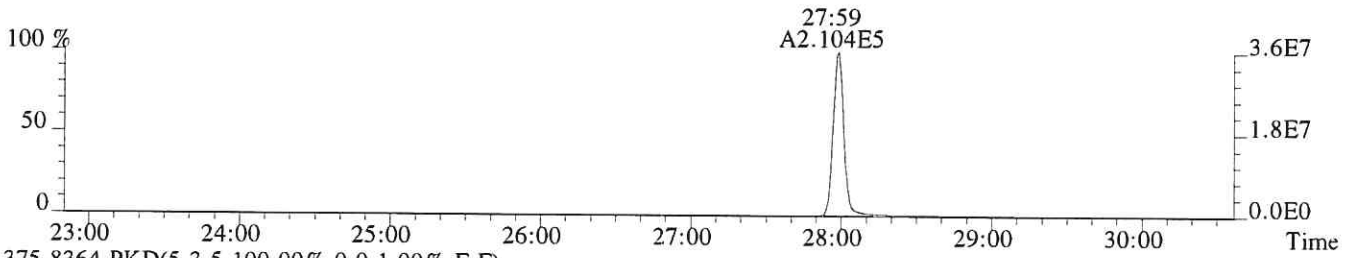
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5672.0,1.00%,F,T)



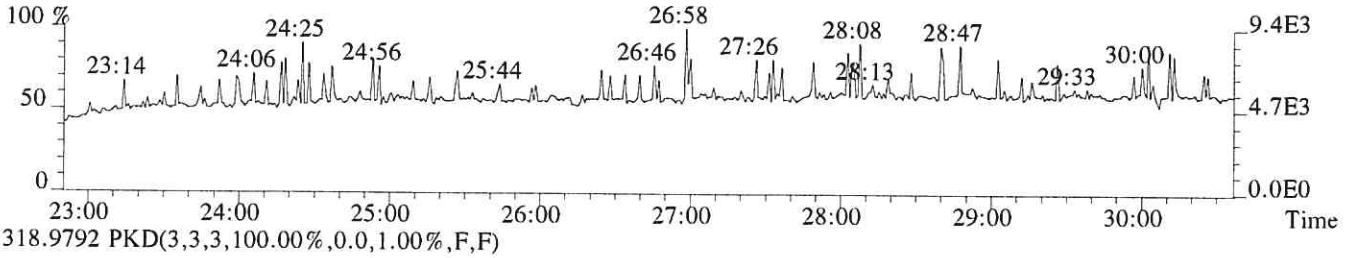
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,15724.0,1.00%,F,T)



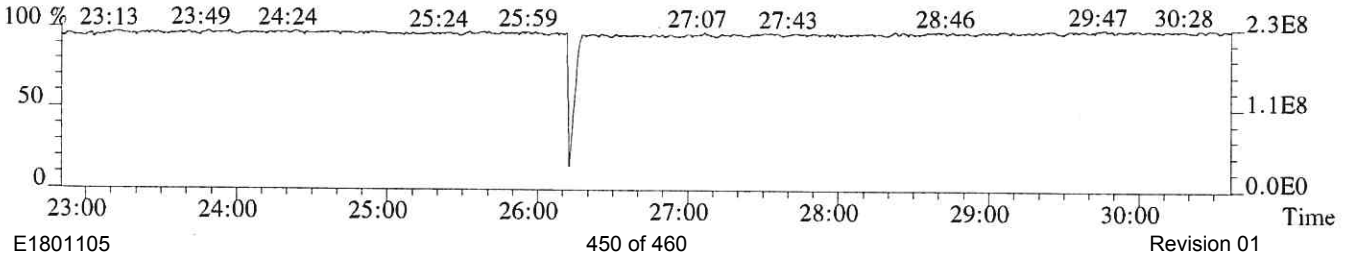
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9180.0,1.00%,F,T)



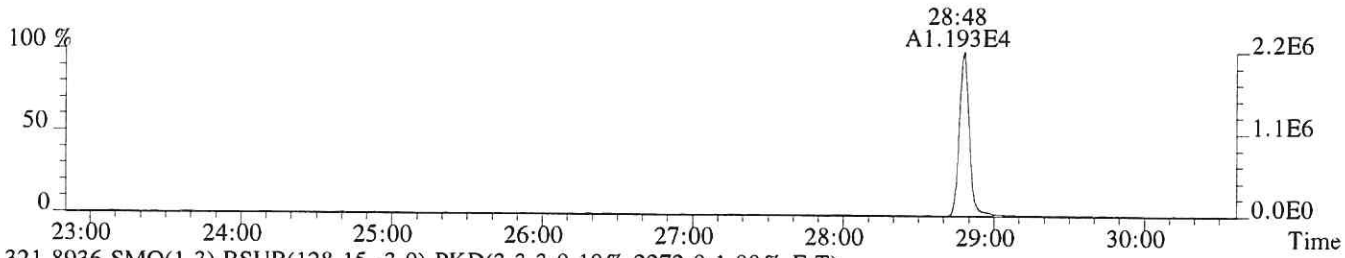
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



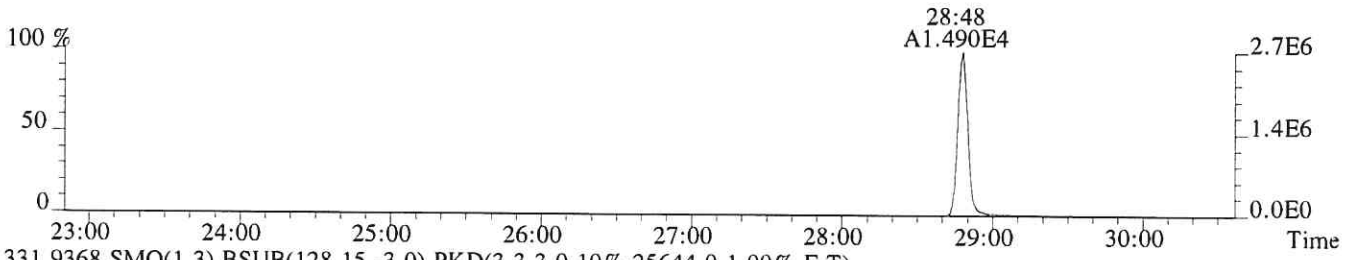
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



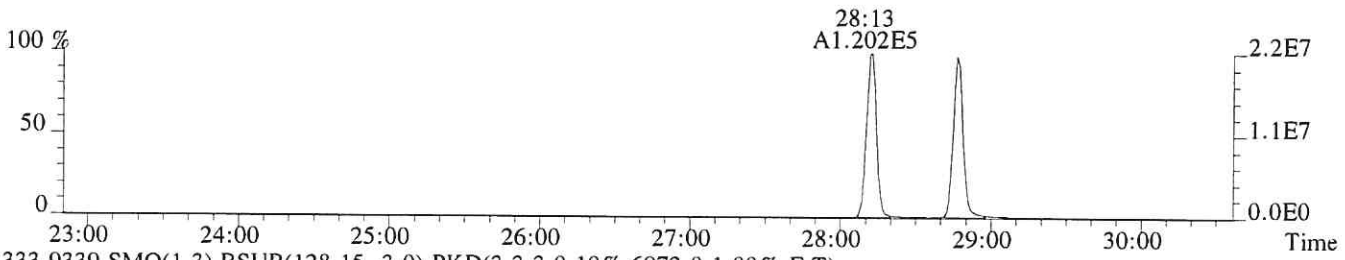
File:P614690 #1-552 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4040.0,1.00%,F,T)



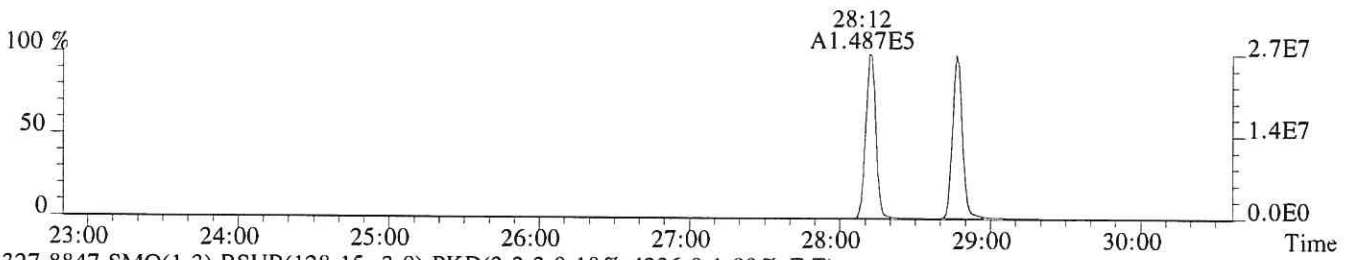
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2272.0,1.00%,F,T)



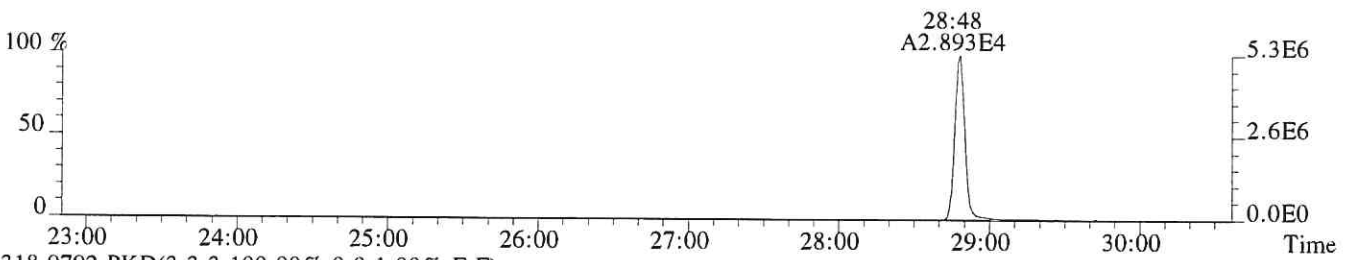
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,25644.0,1.00%,F,T)



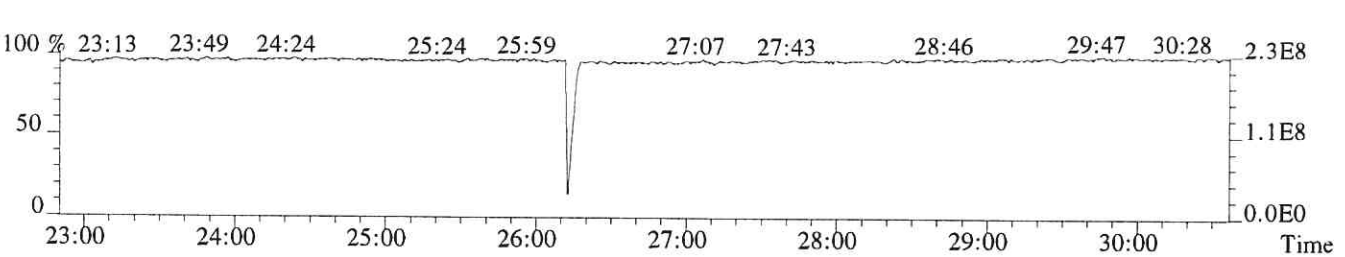
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6972.0,1.00%,F,T)



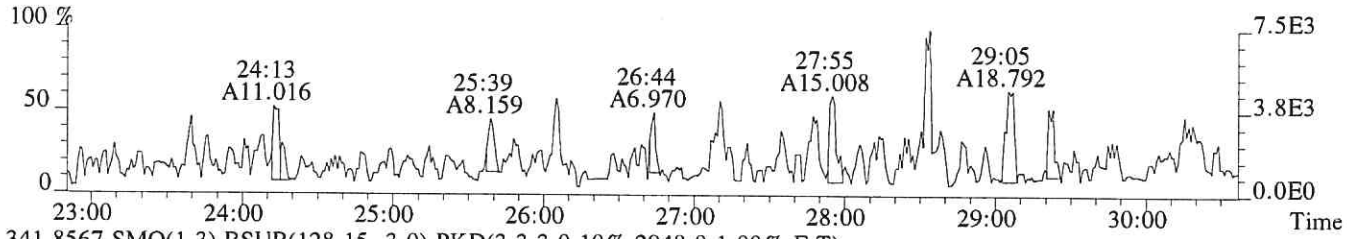
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4236.0,1.00%,F,T)



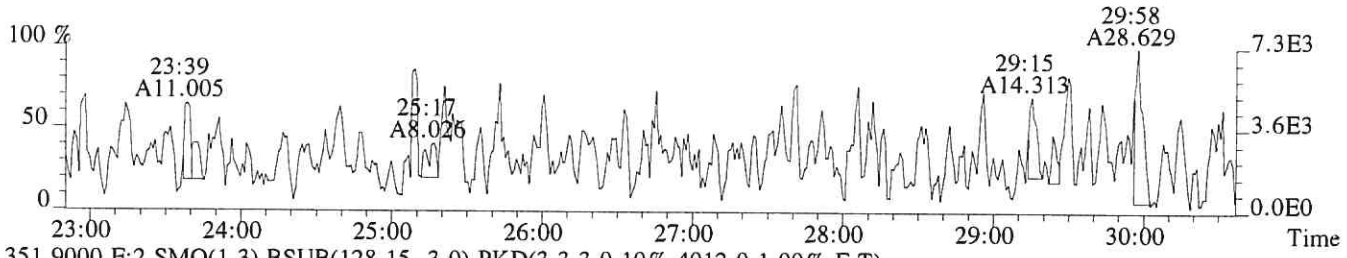
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



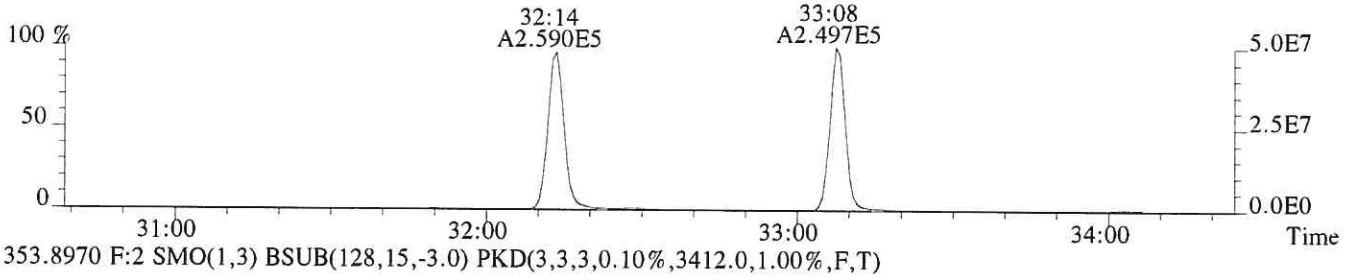
File:P614690 #1-552 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1588.0,1.00%,F,T)



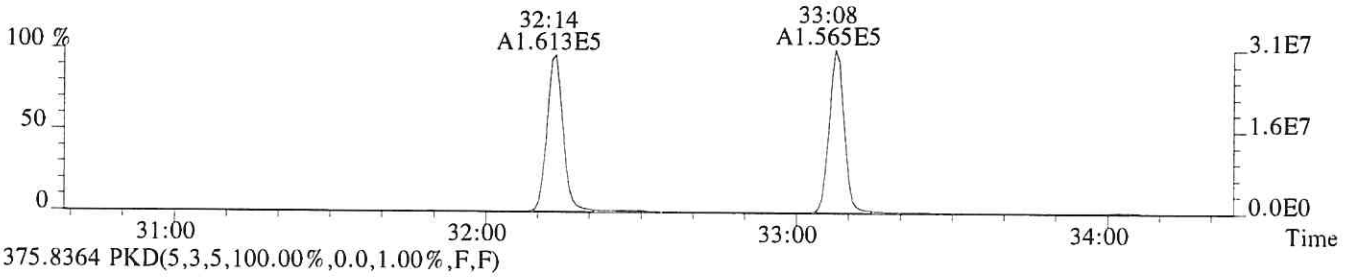
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2948.0,1.00%,F,T)



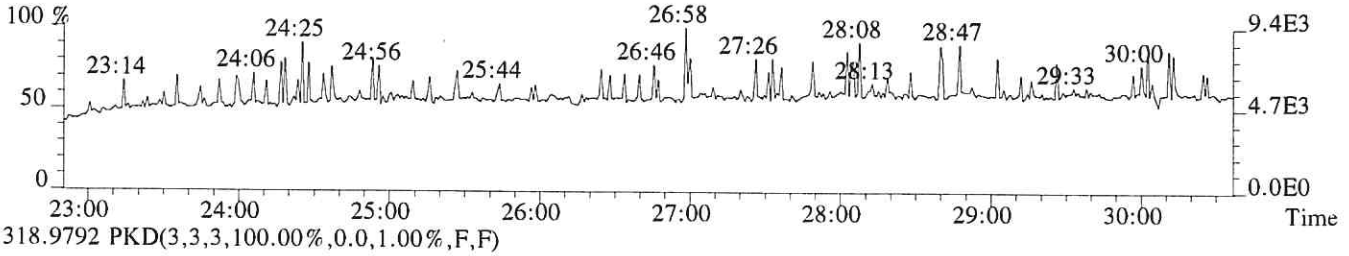
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4012.0,1.00%,F,T)



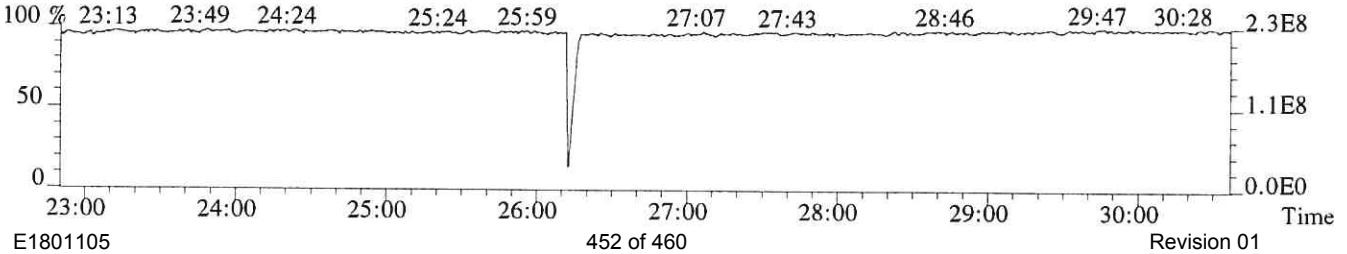
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3412.0,1.00%,F,T)



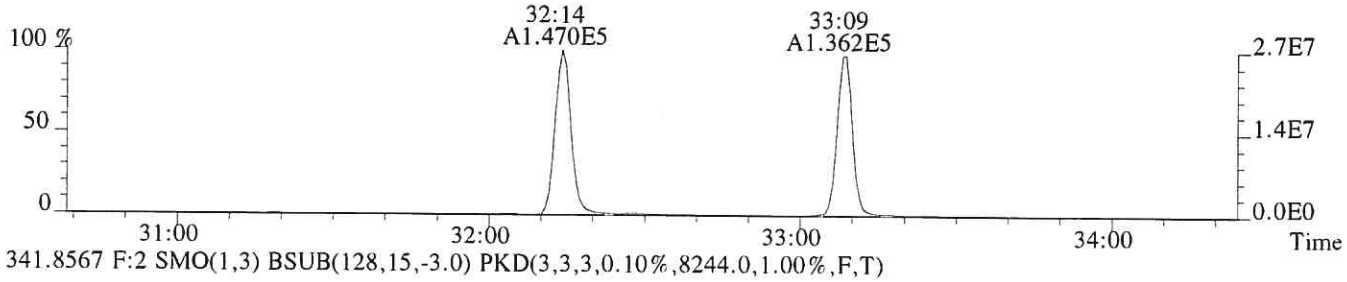
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



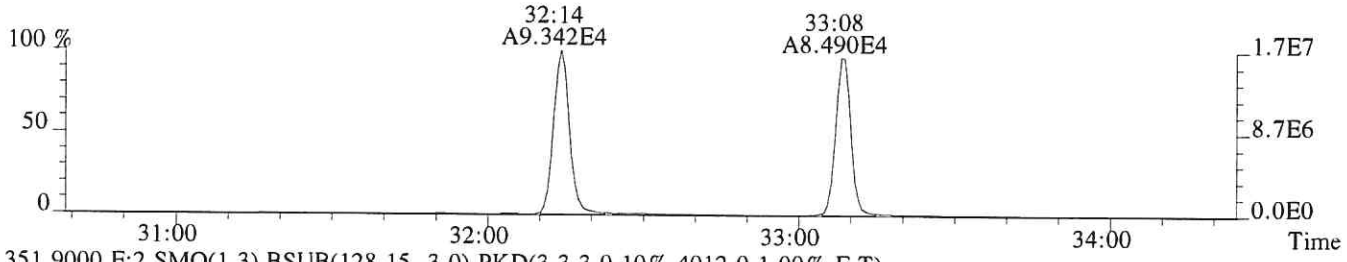
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



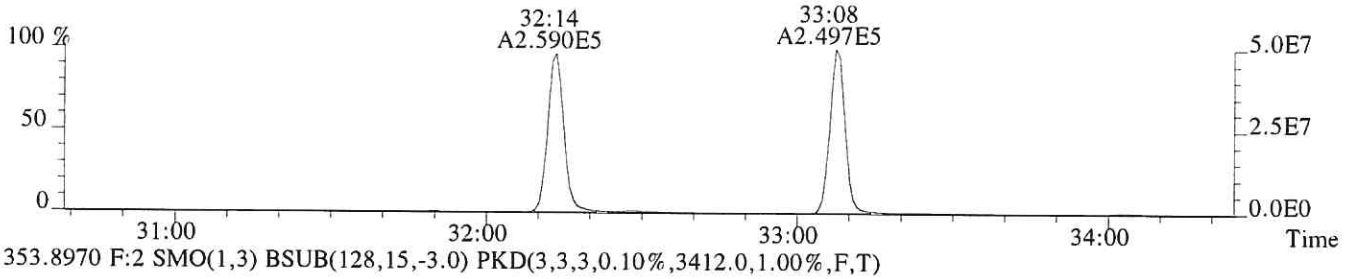
File:P614690 #1-339 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1504.0,1.00%,F,T)



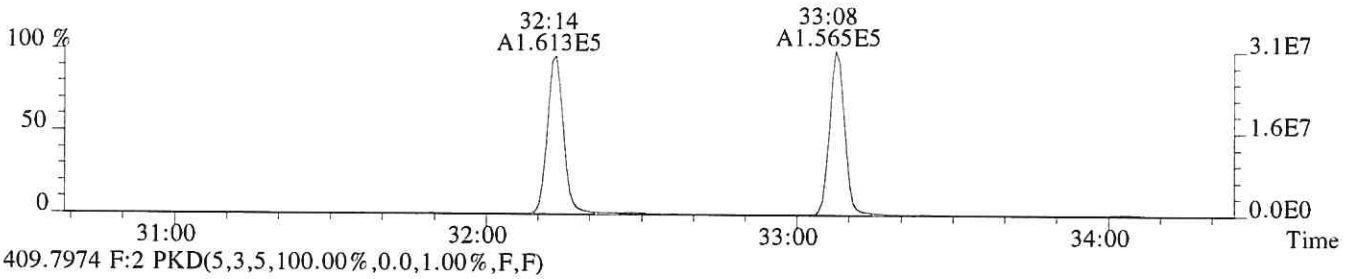
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8244.0,1.00%,F,T)



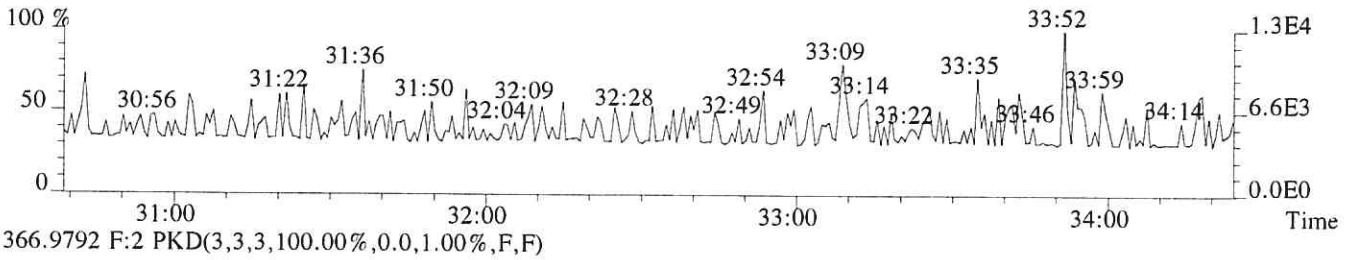
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4012.0,1.00%,F,T)



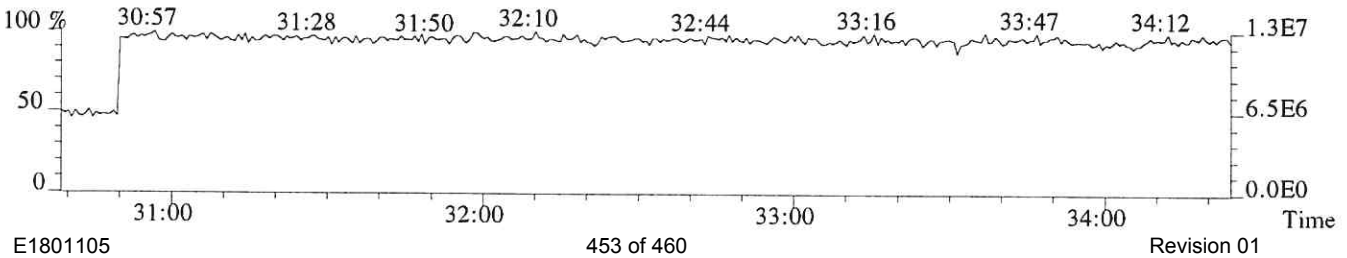
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3412.0,1.00%,F,T)



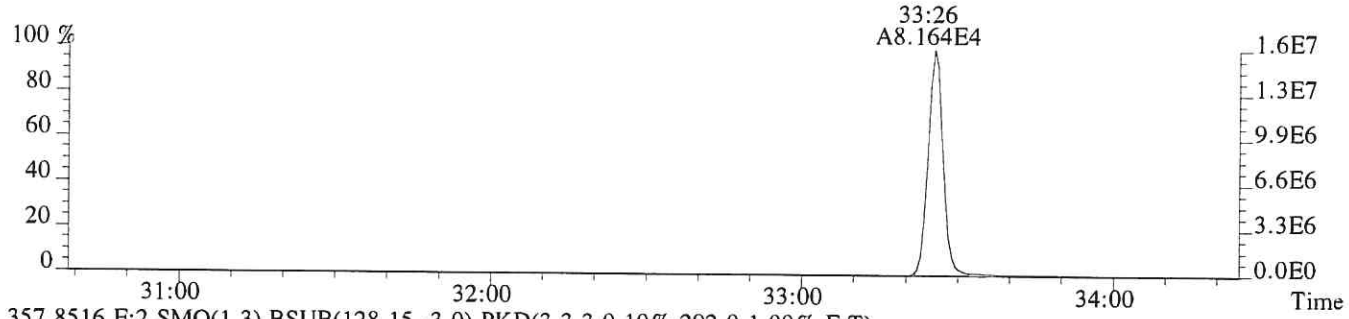
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



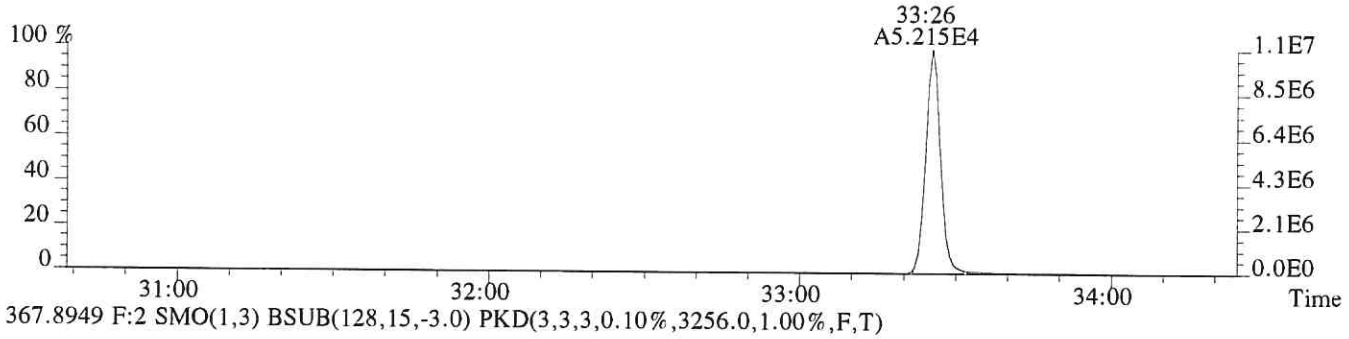
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



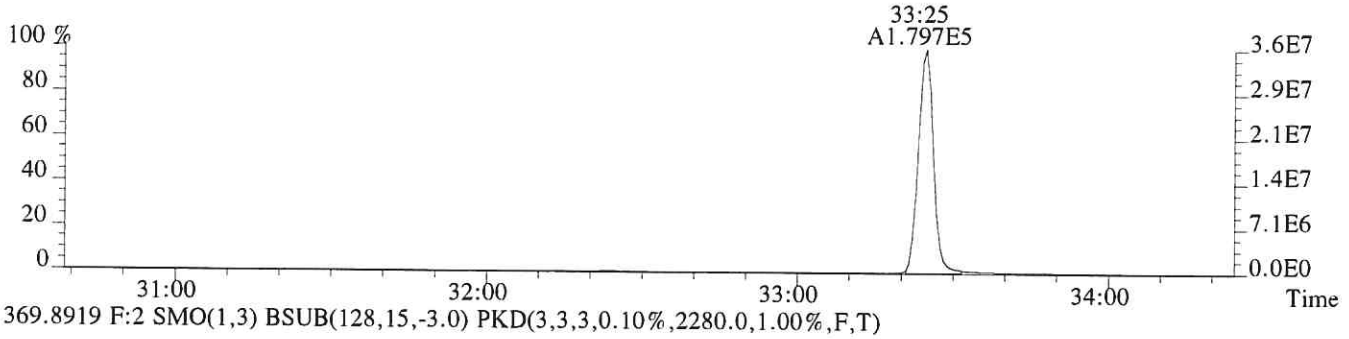
File:P614690 #1-339 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3144.0,1.00%,F,T)



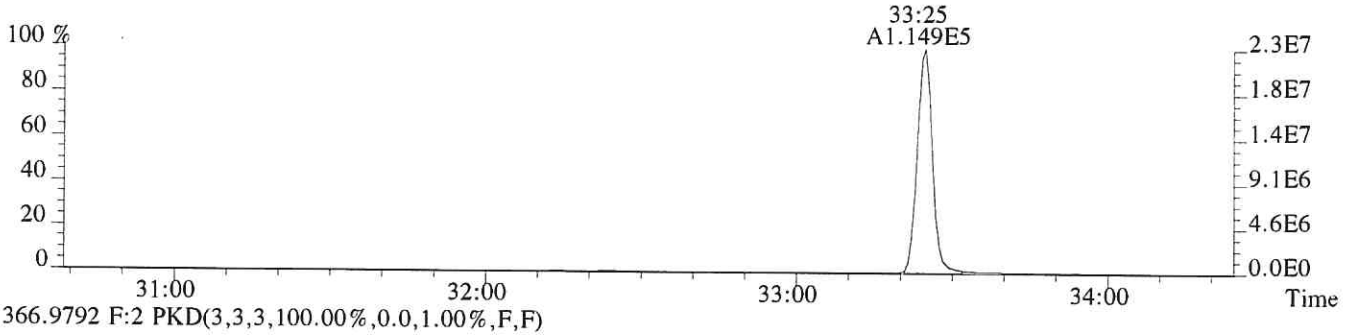
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,292.0,1.00%,F,T)



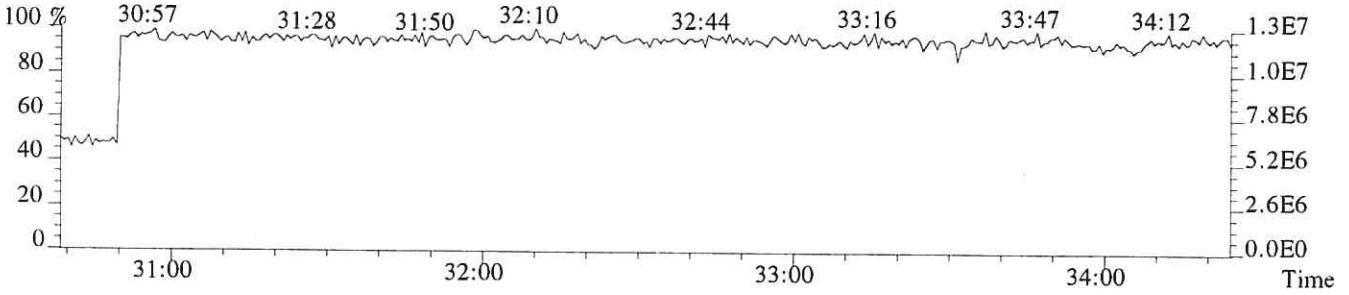
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3256.0,1.00%,F,T)



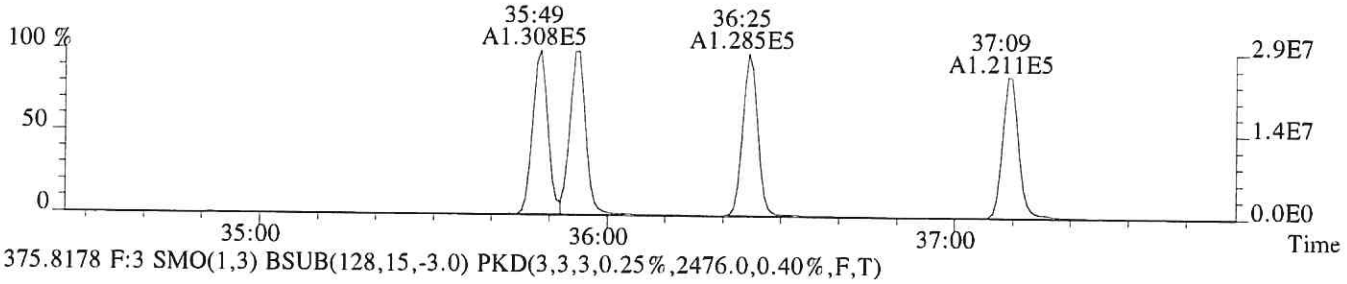
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2280.0,1.00%,F,T)



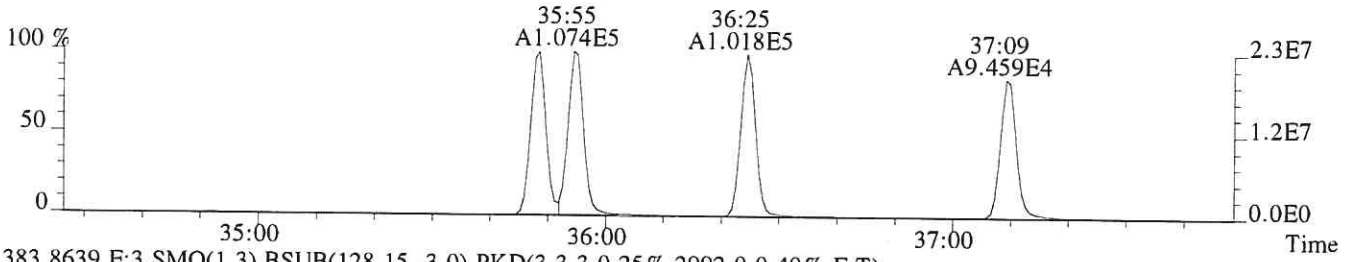
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



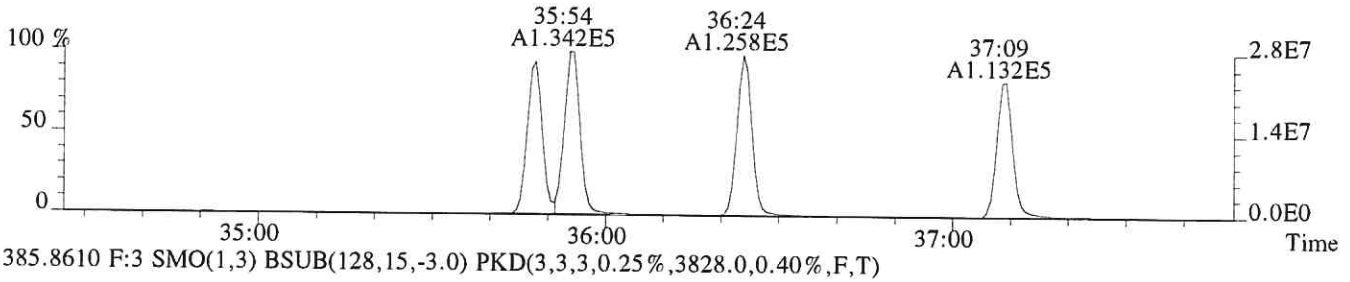
File:P614690 #1-304 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2352.0,0.40%,F,T)



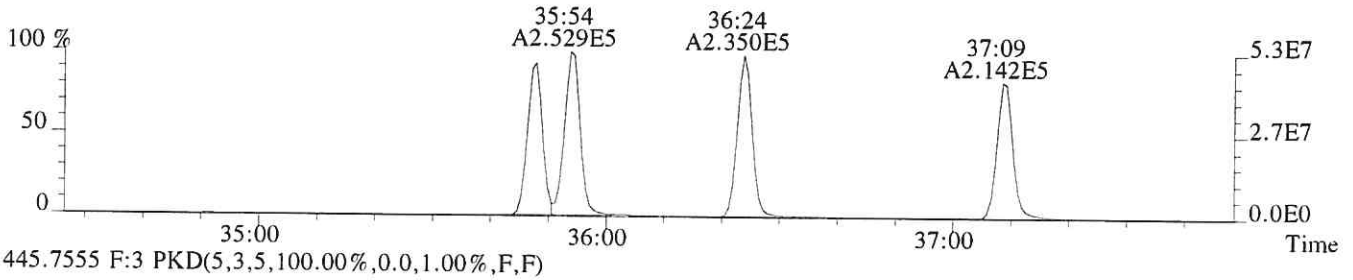
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2476.0,0.40%,F,T)



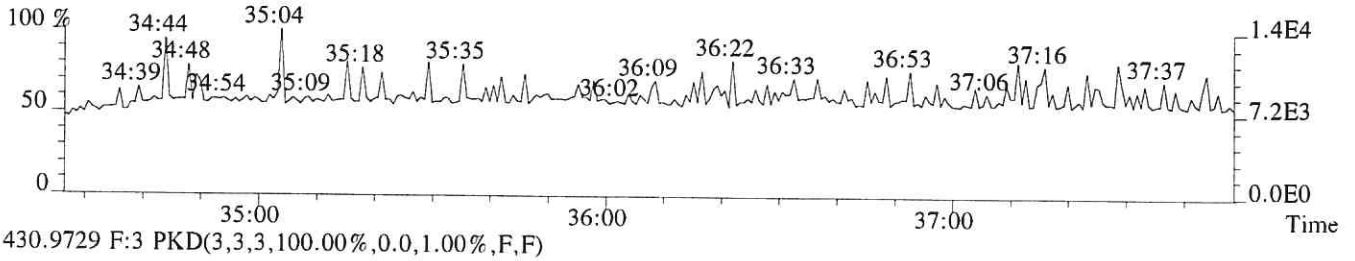
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2992.0,0.40%,F,T)



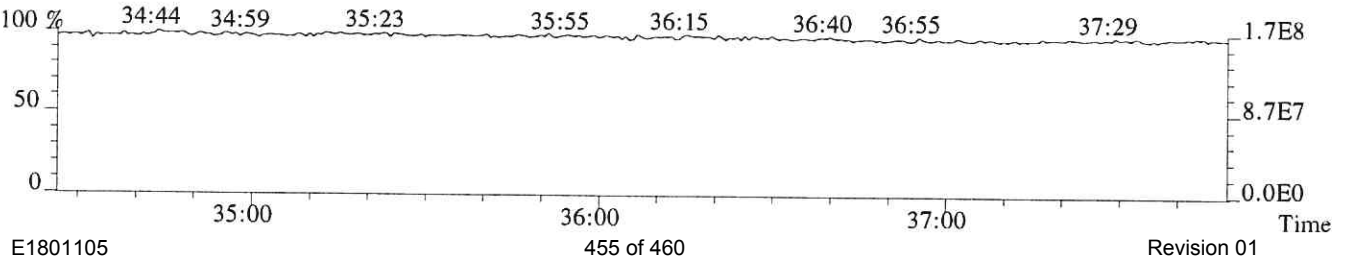
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3828.0,0.40%,F,T)



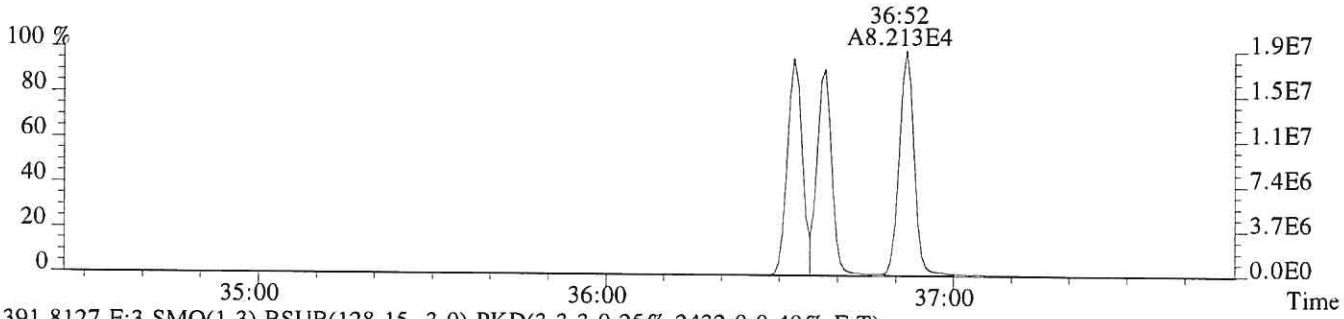
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



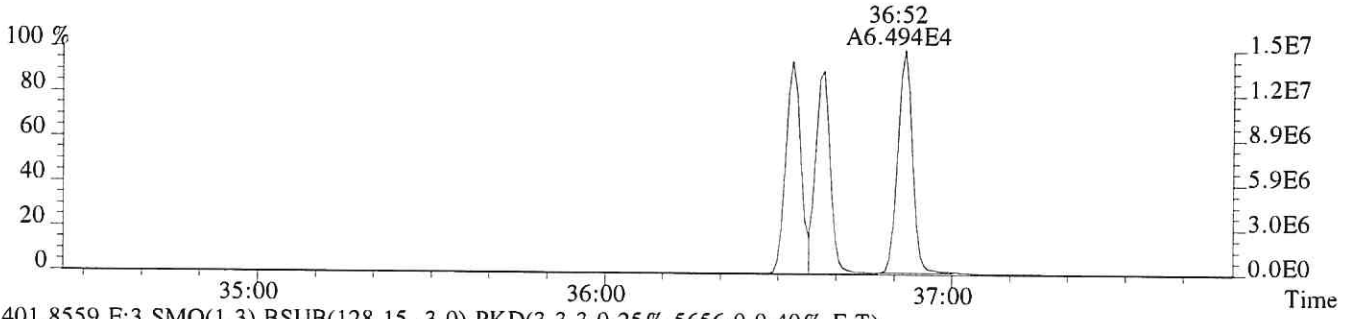
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



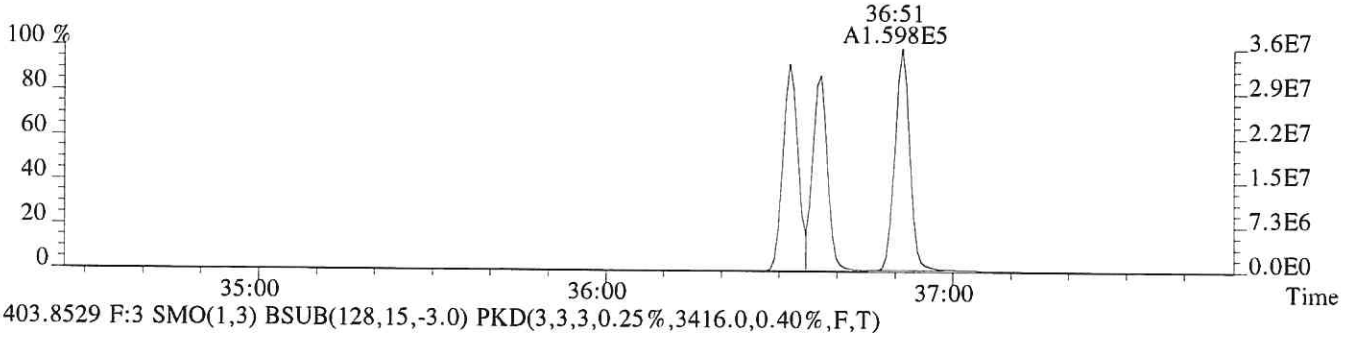
File:P614690 #1-304 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1588.0,0.40%,F,T)



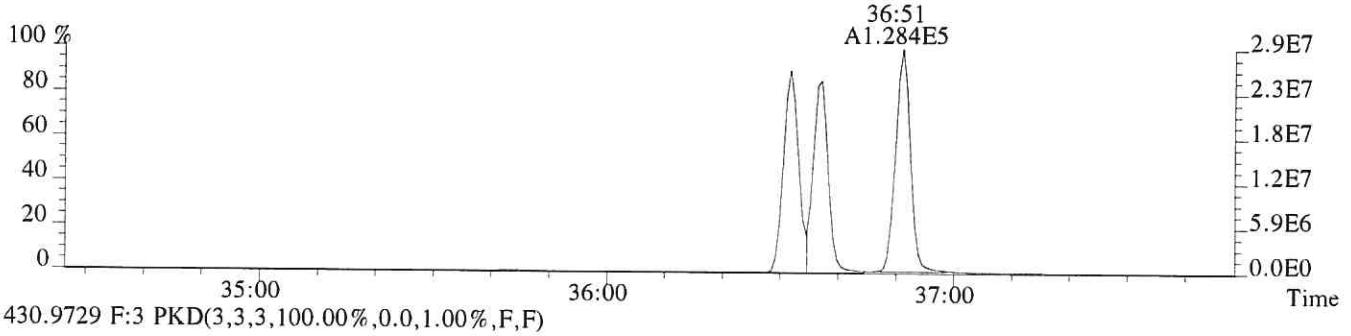
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2432.0,0.40%,F,T)



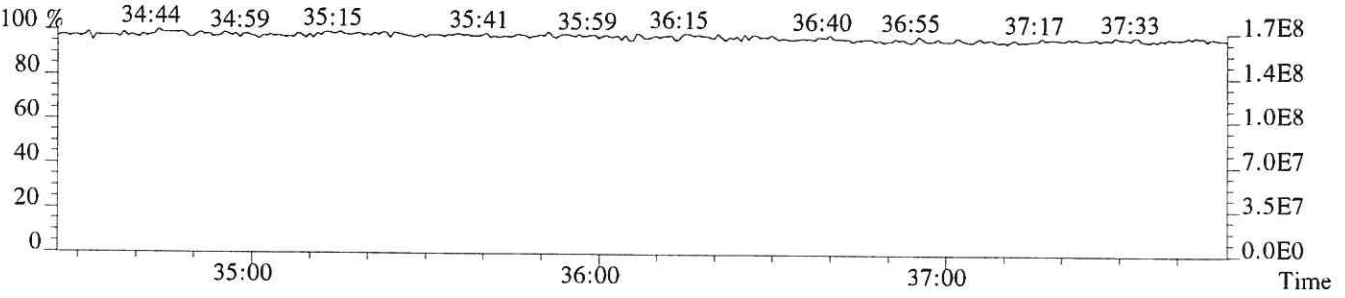
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5656.0,0.40%,F,T)



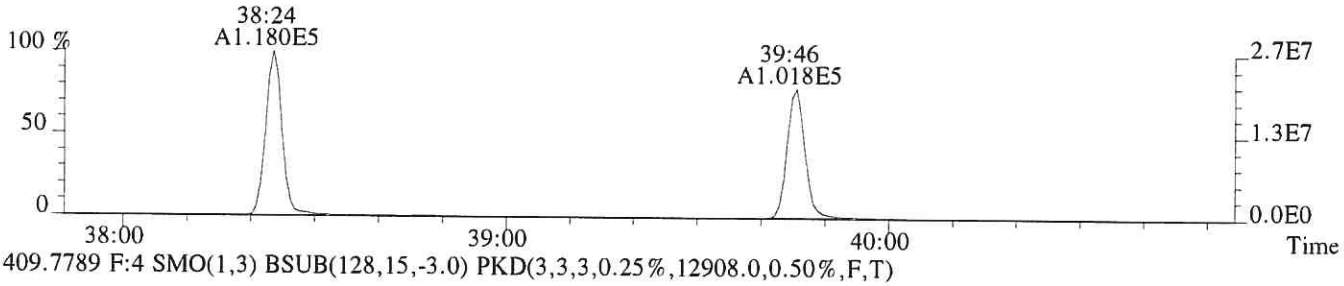
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3416.0,0.40%,F,T)



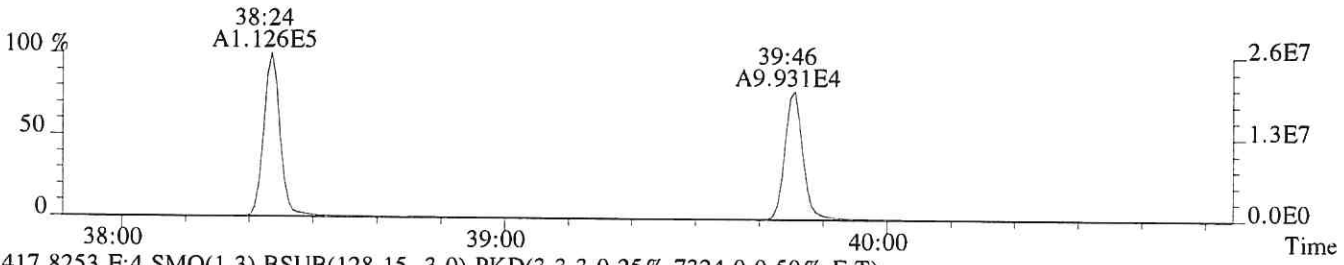
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



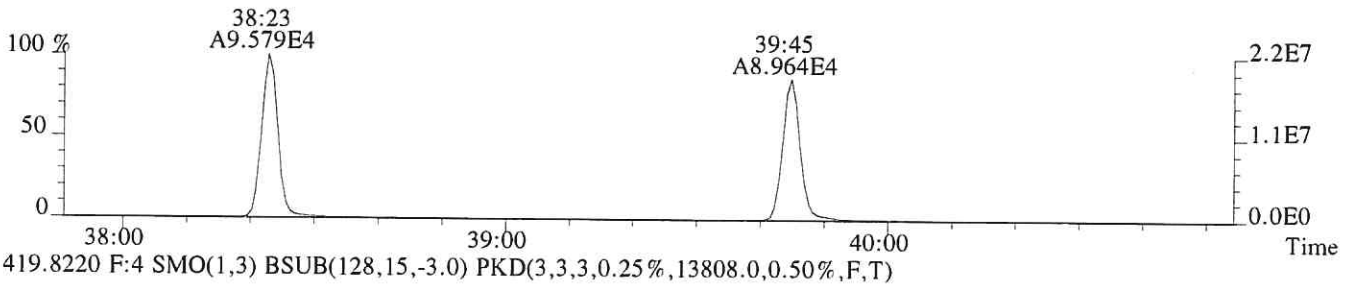
File:P614690 #1-276 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4460.0,0.50%,F,T)



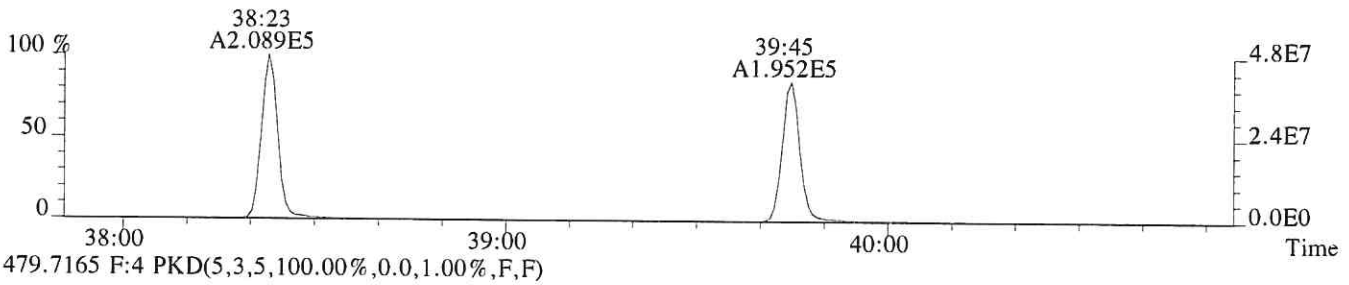
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,12908.0,0.50%,F,T)



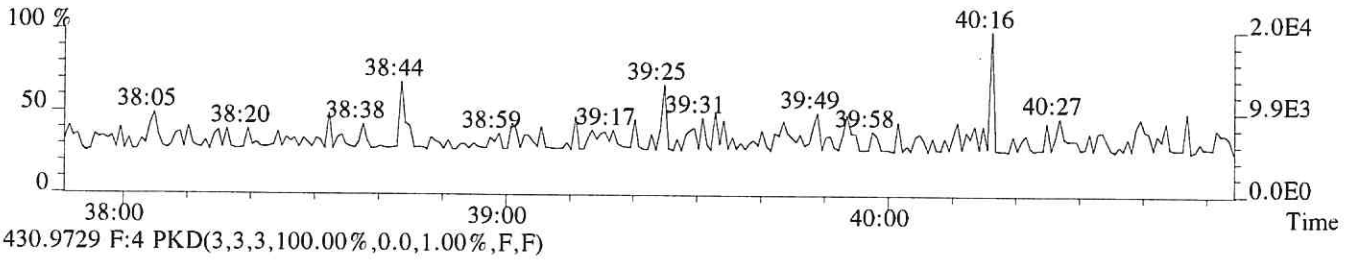
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7324.0,0.50%,F,T)



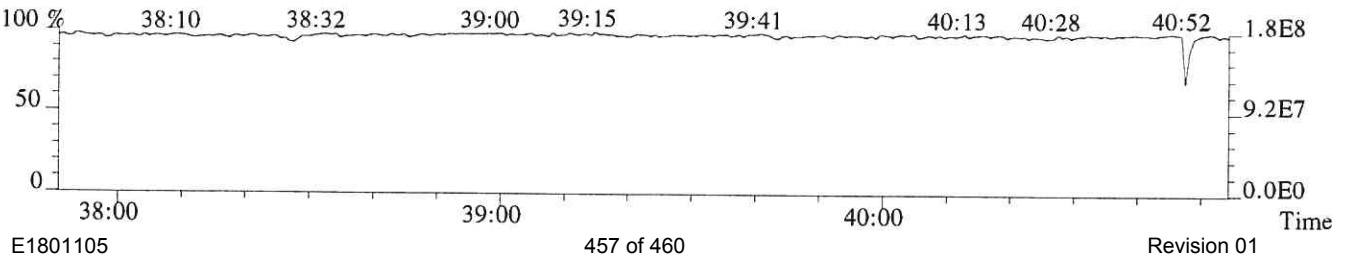
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,13808.0,0.50%,F,T)



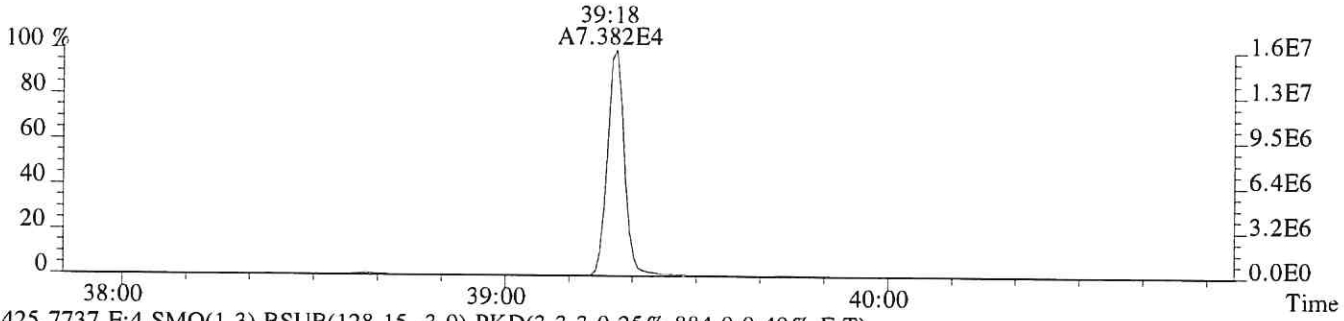
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



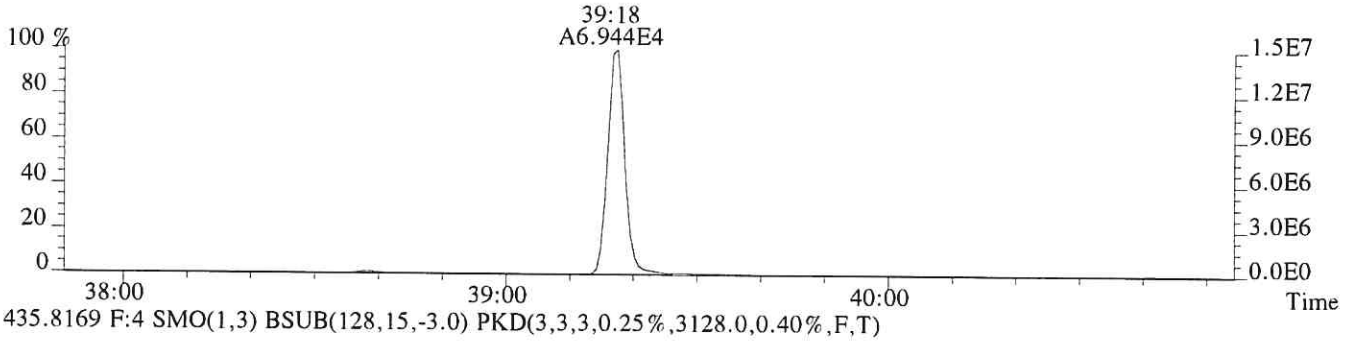
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



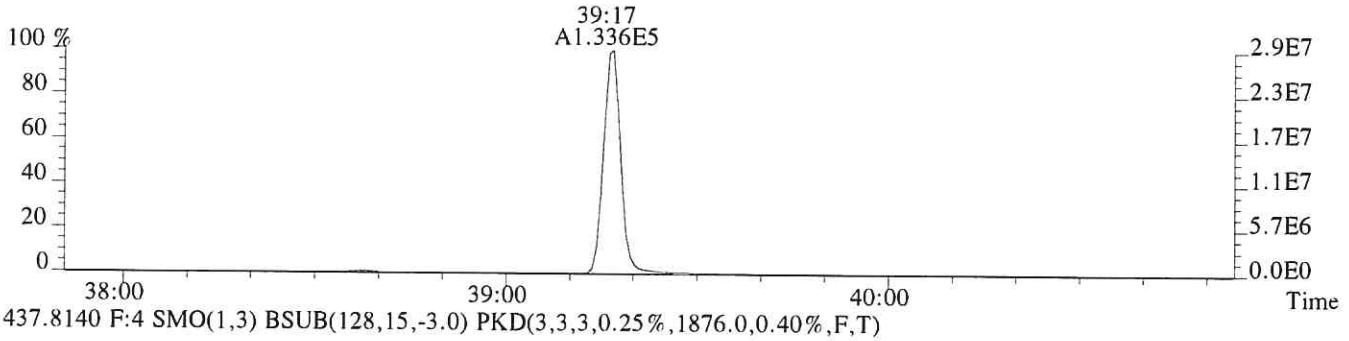
File:P614690 #1-276 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2280.0,0.40%,F,T)



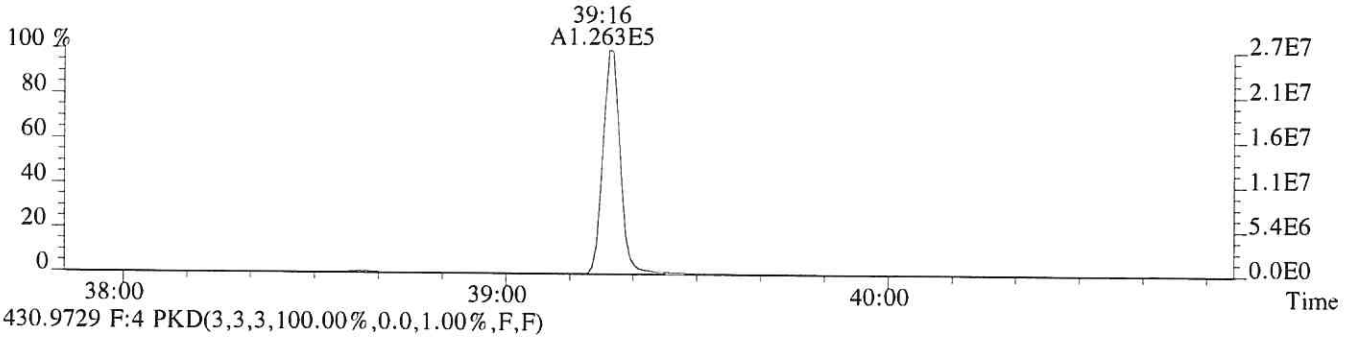
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,884.0,0.40%,F,T)



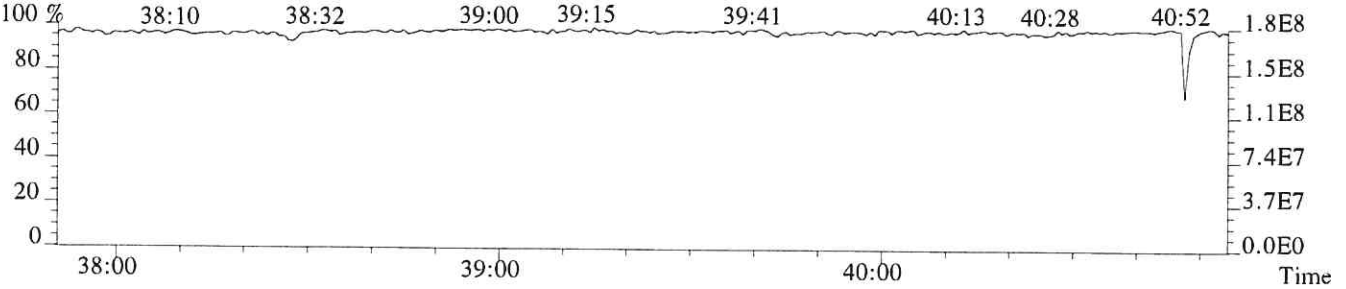
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3128.0,0.40%,F,T)



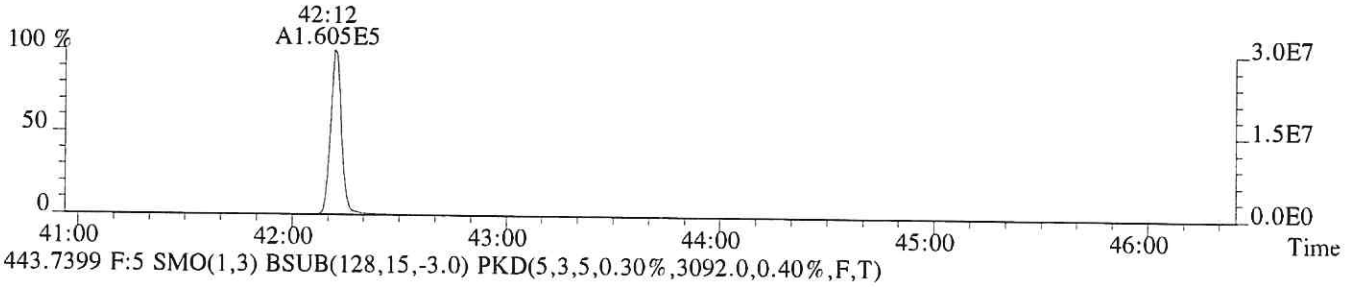
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1876.0,0.40%,F,T)



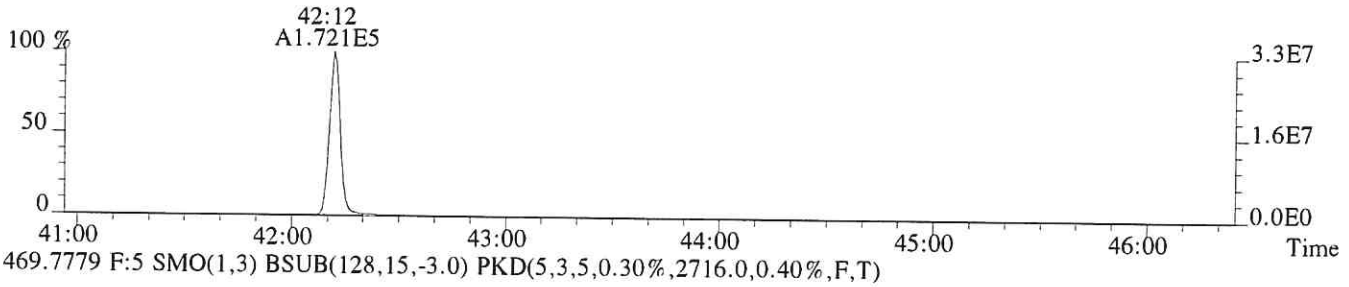
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



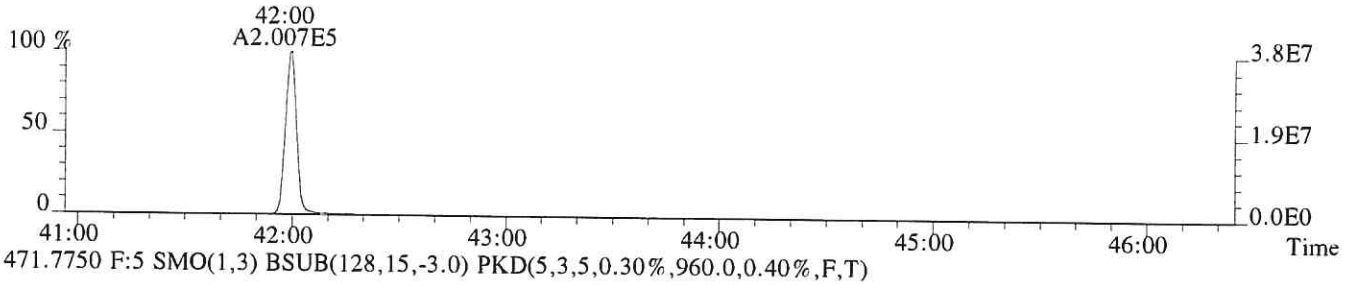
File:P614690 #1-493 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spectf
Sample#1 Exp:2ND SOURCE
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1500.0,0.40%,F,T)



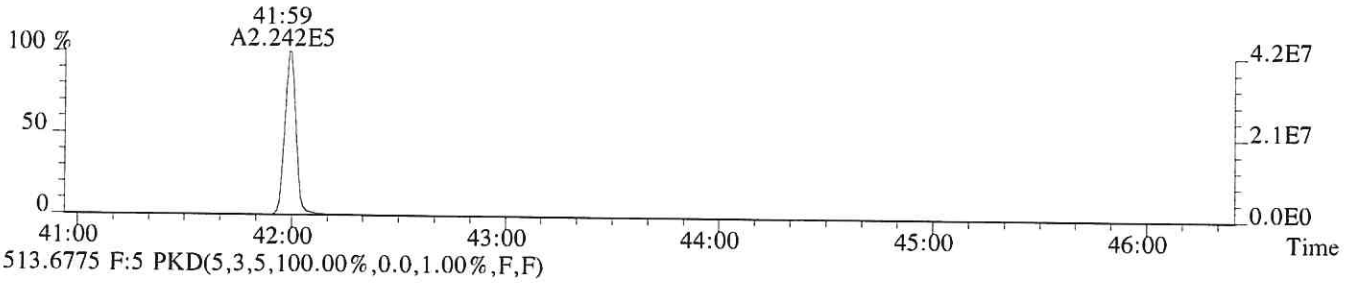
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3092.0,0.40%,F,T)



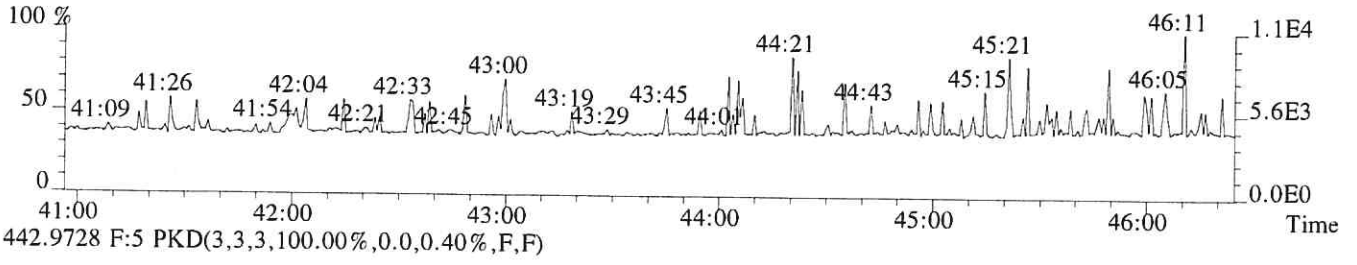
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2716.0,0.40%,F,T)



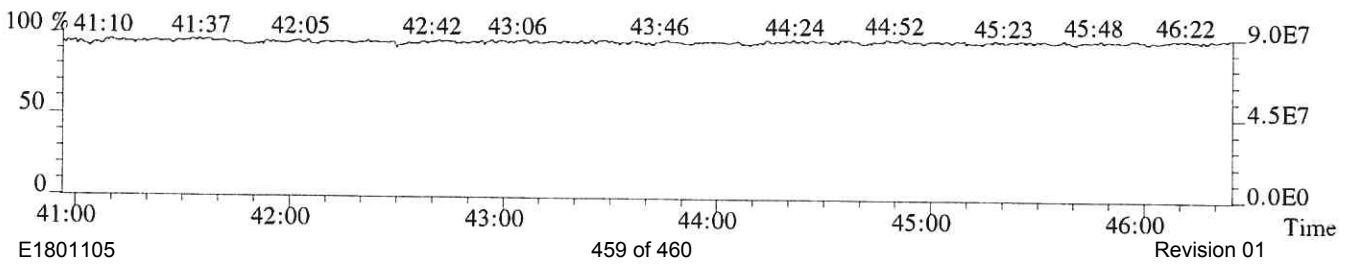
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,960.0,0.40%,F,T)



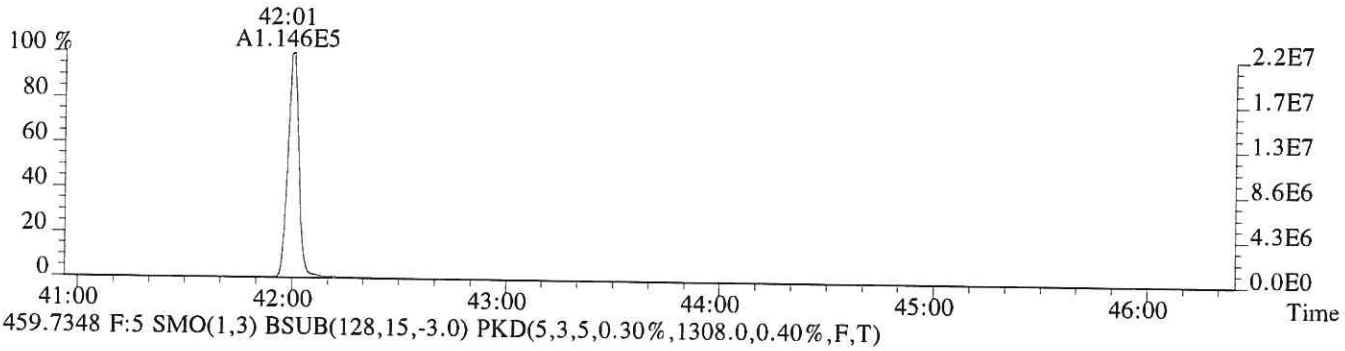
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



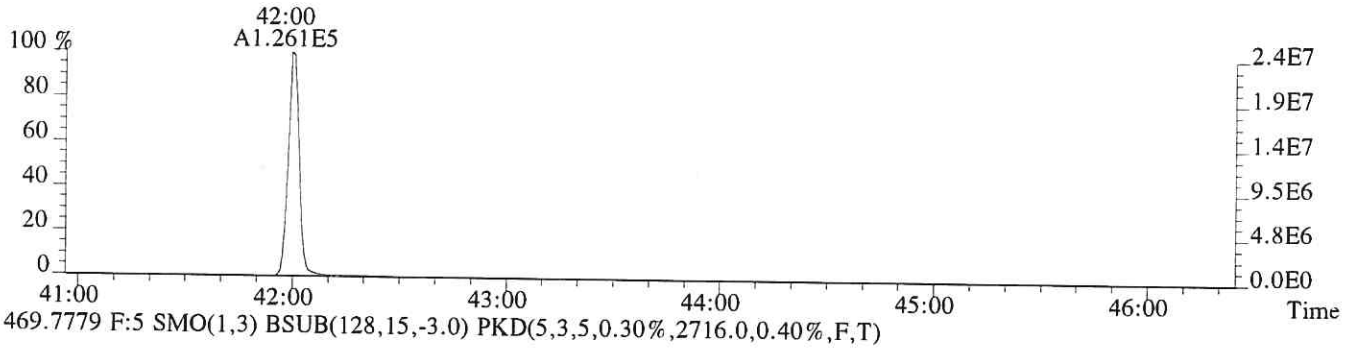
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



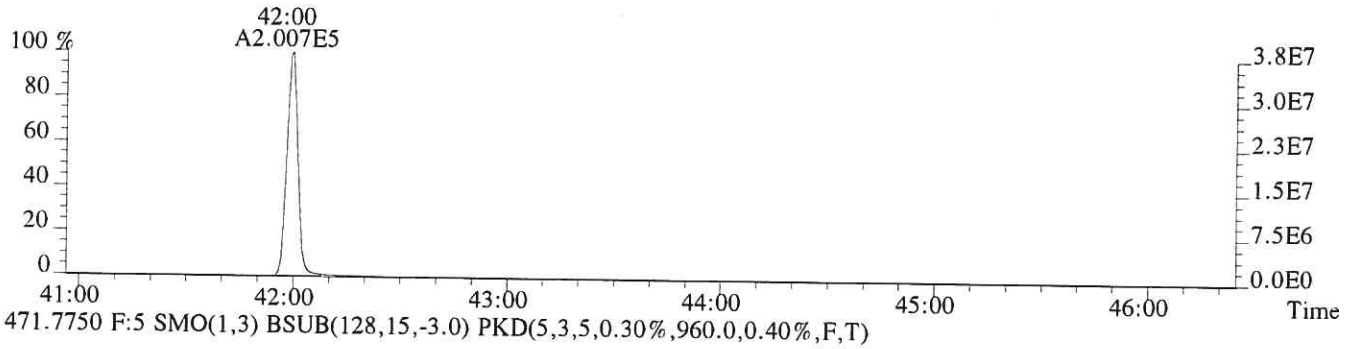
File:P614690 #1-493 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1172.0,0.40%,F,T)



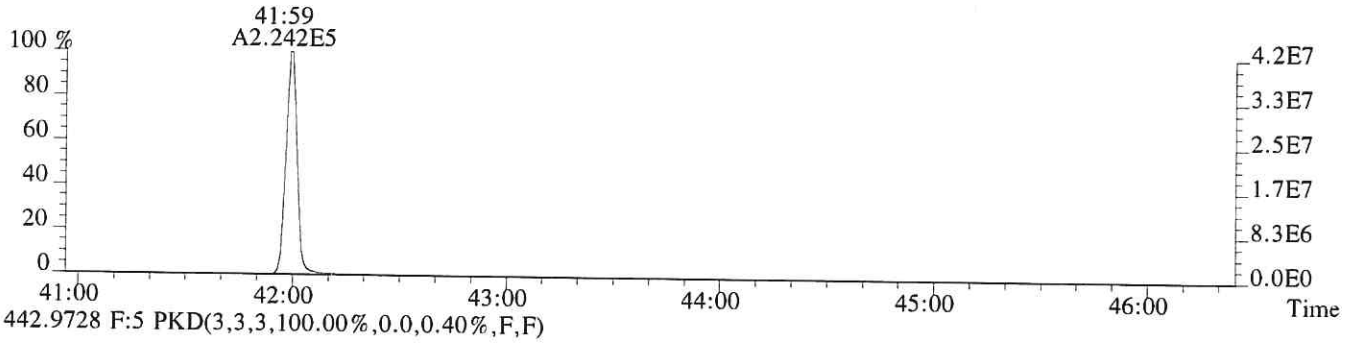
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1308.0,0.40%,F,T)



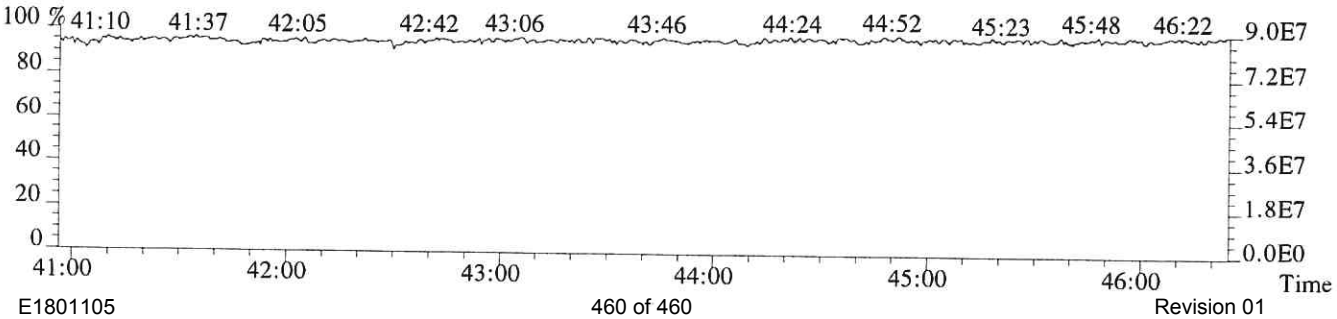
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2716.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,960.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



January 24, 2019 Service Request No:E1900031

Craig Hutchings
Integral Consulting, Inc.
1205 West Bay Drive NW
Olympia, WA 98502-4670

Laboratory Results for: C1844-0501

Dear Craig,

Enclosed are the results of the sample(s) submitted to our laboratory November 17, 2018
For your reference, these analyses have been assigned our service request number **E1900031.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the final complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the TNI 2009 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Kristin Brown

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ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	Integral	**Service Request No.:**	E1900031
Project:	C1887-0501		
Sample Matrix:	Sediment		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Sample on hold originally reported on a separate ALS service request number; samples were activated and reported under E1900031.

Data Validation Notes and Discussion

B flags – Method Blanks

The Method Blank EQ1900021-01 contained low levels of various dioxins furans compounds below the Method Reporting Limit (MRL). The associated compounds in the samples are flagged with 'B' flags where the sample result is less than ten times the level detected in the method blank.

Precision and Accuracy:

EQ1900021: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within control limits.

K flags

EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a 'K' flag. A 'K' flag indicates an estimated maximum possible concentration for the associated compound.

2378-TCDF

Samples analyzed on the DB-5MSUI column were analyzed under conditions where sufficient separation between 2,3,7,8-TCDF and its closest eluter was achieved. Confirmation of this result was not required.

Detection Limits

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

Manual Integrations

For this type of instrumentation and software, manual integration may be required frequently to correct inaccurate integrations performed by the processing software. These manual integrations are indicated in the raw data with a before and after chromatogram and are stamped with the reason for integration.

The TEQ Summary results for each sample have been calculated by ALS/Houston to include:

- WHO-2005 TEFs, The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds (M. Van den Berg et al., Toxicological Sciences 93(2):223-241, 2006)
- 2378-TCDF from the DB-225 column, when confirmation required
- Non-detected compounds are not included in the 'Total'
- The 1:1 and associated dilution have been combined into one TEQ Summary report

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: Integral Consulting, Incorporated **Service Request:**E1900031
Project: C1844-0501

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E1900031-001	SL0556	11/16/2018	1655
E1900031-002	SL0557	11/16/2018	1700
E1900031-003	SL0558	11/16/2018	1705

Service Request Summary

Folder #: **E1900031**
Client Name: Integral Consulting, Incorporated
Project Name: C1844-0501
Project Number:

Report To: Craig Hutchings
Integral Consulting, Inc.
1205 West Bay Drive NW
Olympia, WA 98502-4670
USA
Phone Number: 360-705-3534
Cell Number:
Fax Number:
E-mail: chutchings@integral-corp.com

Project Chemist: Kristin Brown
Originating Lab: HOUSTON
Logged By: KBROWN
Date Received: 11/17/18
Internal Due Date: 1/25/2019
QAP: LAB QAP
Qualifier Set: HRMS Qualifier Set
Formset: Lab Standard
Merged?: N
Report to MDL?: N, Y
P.O. Number:
EDD: Integral-UCR

3 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
3 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
Location: SMO
Pressure Gas:

				HOUSTON	
				Dioxins Furans/1613B	Total Solids/ALS SOP
Lab Samp No.	**Client Samp No**	**Matrix**	**Collected**		
E1900031-001	SL0556	Sediment	11/16/18 1655	**IV**	**IV**
E1900031-002	SL0557	Sediment	11/16/18 1700	**IV**	**IV**
E1900031-003	SL0558	Sediment	11/16/18 1705	**IV**	**IV**

Service Request Summary

Folder #: **E1900031**
Client Name: Integral Consulting, Incorporated
Project Name: C1844-0501
Project Number:

Report To: Craig Hutchings
Integral Consulting, Inc.
1205 West Bay Drive NW
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Phone Number: 360-705-3534
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Project Chemist: Kristin Brown
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Date Received: 11/17/18
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QAP: LAB QAP
Qualifier Set: HRMS Qualifier Set
Formset: Lab Standard
Merged?: N
Report to MDL?: N, Y
P.O. Number:
EDD: Integral-UCR

3 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
3 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
Location: SMO
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	Dioxins Furans/1613B	1	old SR E1801057-005
Semivoa GCMS	Dioxins Furans/1613B	1	old SR E1801057-004
Semivoa GCMS	Dioxins Furans/1613B	1	old SR E1801057-006

Superset Summary

Service Request: E1900031 **SuperSet Reference:** 19-0000495637 rev 00

Analytical Method: **1613B**

Calibrations: 01/24/18

Data Files:

Raw Data	Begin CCAL	Method Blank	Lab ID
P520053	P520049	P520052	E1900031-001
P520054	P520049	P520052	E1900031-002
P520055	P520049	P520052	E1900031-003
P520052	P520049	P520052	EQ1900021-01
P520061	P520049	P520052	EQ1900021-02
P520062	P520049	P520052	EQ1900021-03

Data Qualifiers

HRMS Qualifier Set

B Indicates the associated analyte was found in the method blank at >1/10th the reported value.

E Estimated value. The reported concentration is above the calibration range of the instrument.

H Sample extracted and/or analyzed out of suggested holding time.

J Estimated value. The reported concentration is below the MRL.

K The ion abundance ratio between the primary and secondary ions were outside of theoretical acceptance limits.The concentration of this analyte should be considered as an estimate.

P Chlorodiphenyl ether interference was present at the retention time of the target analyte. Reported result should be considered an estimate.

Q Monitored lock-mass indicates matrix-interference. Reported result is estimated.

S Signal saturated detector. Result reported from dilution.

U Compound was analyzed for, but was not detected (ND).

X See Case Narrative.

Y Isotopically Labeled Standard recovery outside of acceptance limits. In all cases, the signal-to-nois ratios are greater than 10:1, making the recoveries acceptable.

i The MDL/MRL have been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID: E1900031 | DB-5MSUI | SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
01/21/19	JC	001-003

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
1/21/19	LG	001-003

HS-HRMSREVIEW R1.0

PEER REVIEW PAGE2015

Chain of Custody

ALS Environmental - Houston HRMS
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SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 329897 **Prep WorkFlow:** OrgExtS(365) **Status:** Prepped
Team: Semivoa GCMS/TWOODS **Prep Method:** Method Soxhlet **Prep Date/Time:** 1/16/19 04:08 PM

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E1900031-001	SL0556	.01	1613B/Dioxins Furans			Sediment	10.053g	dark mud
2	E1900031-002	SL0557	.01	1613B/Dioxins Furans			Sediment	10.247g	dark mud
3	E1900031-003	SL0558	.01	1613B/Dioxins Furans			Sediment	10.215g	dark mud
4	EQ1900021-01	MB		1613B/Dioxins Furans			Solid	10.004g	
5	EQ1900021-02	LCS		1613B/Dioxins Furans			Solid	10.031g	
6	EQ1900021-03	DLCS		1613B/Dioxins Furans			Solid	10.024g	

Spiking Solutions

Name: 8290/1613B Cleanup Working Standard Inventory ID 196034 Logbook Ref: tw 010319 196034 8ng/ml Expires On: 04/27/2019

E1900031-001 100.00µL E1900031-002 100.00µL E1900031-003 100.00µL EQ1900021-01 100.00µL EQ1900021-02 100.00µL EQ1900021-03 100.00µL

Name: 1613B Matrix Working Standard Inventory ID 196331 Logbook Ref: 196331 JG 1/16/19 2-20ng/ml Expires On: 07/15/2019

E1900031-001 100.00µL E1900031-002 100.00µL E1900031-003 100.00µL EQ1900021-01 100.00µL EQ1900021-02 100.00µL EQ1900021-03 100.00µL

Name: 1613B Labeled Working Standard Inventory ID 196351 Logbook Ref: 196351 JG 1/16/2019 2-4ng/ml Expires On: 01/31/2019

E1900031-001 1,000.00µL E1900031-002 1,000.00µL E1900031-003 1,000.00µL EQ1900021-01 1,000.00µL EQ1900021-02 1,000.00µL EQ1900021-03 1,000.00µL

Preparation Materials

Carbon, High Purity	JG 12/17/18 (195653)	Ethyl Acetate 99.9% Minimum EtOAc	AL 12/31/18 (195971)	Glass Wool	tw 011119 glass wool (196223)
Hexanes 95%	tw 011119 hexane (196221)	Dichloromethane (Methylene Chloride) 99.9% MeCl2	AL (195005)	Sodium Hydroxide 1N NaOH	TW 6/14/18 (191093)
Sodium Sulfate Anhydrous Reagent Grade Na2SO4	JG 01/07/19 (196116)	Tridecane (n-Tridecane)	AL 12/12/18 (195585)	Silica Gel	tw 12/31/18 (195984)
sulfuric acid	AL 10/11/18 (194007)	Toluene 99.9% Minimum	tw 011119 toluene (196224)		

Preparation Steps

Step:	Extraction	Step:	Acid Clean	Step:	Silica Gel Clean	Step:	Final Volume
Started:	1/16/19 16:08	Started:	1/17/19 10:00	Started:	1/17/19 12:00	Started:	1/18/19 09:00
Finished:	1/17/19 09:00	Finished:	1/17/19 11:00	Finished:	1/17/19 15:00	Finished:	1/18/19 12:00
By:	TWOODS	By:	TWOODS	By:	TWOODS	By:	TWOODS
Comments		Comments		Comments		Comments	

Comments: _____

Reviewed By: _____ Date: _____

Preparation Information Benchsheet

Prep Run#: 329897
Team: Semivoa GCMS/TWOODS

Prep WorkFlow: OrgExtS(365)
Prep Method: Method Soxhlet

Status: Prepped
Prep Date/Time: 1/16/19 04:08 PM

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

E1900031

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Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	11/16/18 16:55
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0556	**Units:**	ng/Kg
Lab Code:	E1900031-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/18/19 11:39
Prep Method:	Method Soxhlet	**Date Extracted:**	1/16/19
Sample Amount:	10.053g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520053	**Blank File Name:**	P520052
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P520049

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	88.0		0.219	0.628	0.78	1.001	1
1,2,3,7,8-PeCDD	0.876	**J**	0.0897	3.14	1.61	1.000	1
1,2,3,4,7,8-HxCDD	0.0911	**BJK**	0.0645	3.14	0.76	1.000	1
1,2,3,6,7,8-HxCDD	0.174	**BJ**	0.0710	3.14	1.38	1.000	1
1,2,3,7,8,9-HxCDD	0.197	**BJK**	0.0661	3.14	0.95	1.006	1
1,2,3,4,6,7,8-HpCDD	2.78	**BJ**	0.116	3.14	1.08	1.000	1
OCDD	106		0.189	6.28	0.87	1.000	1
2,3,7,8-TCDF	217		0.117	0.628	0.77	1.000	1
1,2,3,7,8-PeCDF	8.58		0.134	3.14	1.38	1.001	1
2,3,4,7,8-PeCDF	6.91		0.144	3.14	1.59	1.001	1
1,2,3,4,7,8-HxCDF	160		0.0682	3.14	1.20	1.000	1
1,2,3,6,7,8-HxCDF	28.1		0.0618	3.14	1.22	1.000	1
1,2,3,7,8,9-HxCDF	3.93		0.0778	3.14	1.14	1.001	1
2,3,4,6,7,8-HxCDF	1.92	**J**	0.0644	3.14	1.30	1.001	1
1,2,3,4,6,7,8-HpCDF	68.8		0.165	3.14	0.98	1.000	1
1,2,3,4,7,8,9-HpCDF	33.1		0.207	3.14	1.02	1.000	1
OCDF	38.6		0.181	6.28	0.86	1.005	1

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	11/16/18 16:55
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0556	**Units:**	ng/Kg
Lab Code:	E1900031-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/18/19 11:39
Prep Method:	Method Soxhlet	**Date Extracted:**	1/16/19
Sample Amount:	10.053g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520053	**Blank File Name:**	P520052
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P520049

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	99.4		0.219	0.628	0.87		1
Total Penta-Dioxins	1.03**J**		0.0897	3.14	1.48		1
Total Hexa-Dioxins	1.50**J**		0.0671	3.14	1.29		1
Total Hepta-Dioxins	9.41		0.116	3.14	1.07		1
Total Tetra-Furans	404		0.117	0.628	0.83		1
Total Penta-Furans	23.6		0.139	3.14	1.53		1
Total Hexa-Furans	194		0.0676	3.14	1.20		1
Total Hepta-Furans	118		0.184	3.14	0.98		1

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	11/16/18 16:55
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0556	**Units:**	Percent
Lab Code:	E1900031-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/18/19 11:39
Prep Method:	Method Soxhlet	**Date Extracted:**	1/16/19
Sample Amount:	10.053g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520053	**Blank File Name:**	P520052
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P520049

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	648.790	32		25-164	0.79	1.019
13C-1,2,3,7,8-PeCDD	2000	1115.510	56		25-181	1.58	1.181
13C-1,2,3,4,7,8-HxCDD	2000	978.425	49		32-141	1.27	0.991
13C-1,2,3,6,7,8-HxCDD	2000	919.151	46		28-130	1.28	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	986.557	49		23-140	1.05	1.067
13C-OCDD	4000	1006.295	25		17-157	0.90	1.143
13C-2,3,7,8-TCDF	2000	892.647	45		24-169	0.79	0.992
13C-1,2,3,7,8-PeCDF	2000	1074.858	54		24-185	1.59	1.139
13C-2,3,4,7,8-PeCDF	2000	1026.937	51		21-178	1.57	1.170
13C-1,2,3,4,7,8-HxCDF	2000	815.584	41		26-152	0.52	0.971
13C-1,2,3,6,7,8-HxCDF	2000	822.513	41		26-123	0.52	0.974
13C-1,2,3,7,8,9-HxCDF	2000	846.050	42		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	880.077	44		28-136	0.51	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	695.121	35		28-143	0.44	1.042
13C-1,2,3,4,7,8,9-HpCDF	2000	801.792	40		26-138	0.45	1.080
37Cl-2,3,7,8-TCDD	800	452.515	57		35-197	NA	1.020

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	11/16/18 16:55
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0556	**Units:**	ng/Kg
Lab Code:	E1900031-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**88.0**	0.219	0.628	1	1	88.0
1,2,3,7,8-PeCDD	**0.876**	0.0897	3.14	1	1	0.876
1,2,3,4,7,8-HxCDD	**0.0911**	0.0645	3.14	1	0.1	0.00911
1,2,3,6,7,8-HxCDD	**0.174**	0.0710	3.14	1	0.1	0.0174
1,2,3,7,8,9-HxCDD	**0.197**	0.0661	3.14	1	0.1	0.0197
1,2,3,4,6,7,8-HpCDD	**2.78**	0.116	3.14	1	0.01	0.0278
OCDD	**106**	0.189	6.28	1	0.0003	0.0318
2,3,7,8-TCDF	**217**	0.117	0.628	1	0.1	21.7
1,2,3,7,8-PeCDF	**8.58**	0.134	3.14	1	0.03	0.257
2,3,4,7,8-PeCDF	**6.91**	0.144	3.14	1	0.3	2.07
1,2,3,4,7,8-HxCDF	**160**	0.0682	3.14	1	0.1	16.0
1,2,3,6,7,8-HxCDF	**28.1**	0.0618	3.14	1	0.1	2.81
1,2,3,7,8,9-HxCDF	**3.93**	0.0778	3.14	1	0.1	0.393
2,3,4,6,7,8-HxCDF	**1.92**	0.0644	3.14	1	0.1	0.192
1,2,3,4,6,7,8-HpCDF	**68.8**	0.165	3.14	1	0.01	0.688
1,2,3,4,7,8,9-HpCDF	**33.1**	0.207	3.14	1	0.01	0.331
OCDF	**38.6**	0.181	6.28	1	0.0003	0.0116
		Total TEQ				133

2005 WHO TEFs, ND = 0

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	11/16/18 16:55
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0556	**Units:**	Percent
Lab Code:	E1900031-001	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/22/19 10:11
	5.635g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	79.2		-	1

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	11/16/18 17:00
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0557	**Units:**	ng/Kg
Lab Code:	E1900031-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/18/19 12:27
Prep Method:	Method Soxhlet	**Date Extracted:**	1/16/19
Sample Amount:	10.247g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520054	**Blank File Name:**	P520052
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P520049

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	2.43		0.232	0.591	0.66	1.001	1
1,2,3,7,8-PeCDD	0.110**JK**		0.0937	2.96	0.69	1.000	1
1,2,3,4,7,8-HxCDD	ND	U	0.0689	2.96			1
1,2,3,6,7,8-HxCDD	ND	U	0.0765	2.96			1
1,2,3,7,8,9-HxCDD	ND	U	0.0709	2.96			1
1,2,3,4,6,7,8-HpCDD	0.600**BJ**		0.0465	2.96	1.17	1.000	1
OCDD	21.1**B**		0.185	5.91	0.87	1.000	1
2,3,7,8-TCDF	5.51		0.0859	0.591	0.75	1.001	1
1,2,3,7,8-PeCDF	0.212**JK**		0.110	2.96	2.38	1.001	1
2,3,4,7,8-PeCDF	0.370**BJ**		0.122	2.96	1.49	1.000	1
1,2,3,4,7,8-HxCDF	0.543**BJ**		0.0483	2.96	1.12	1.000	1
1,2,3,6,7,8-HxCDF	0.141**BJK**		0.0470	2.96	0.78	1.001	1
1,2,3,7,8,9-HxCDF	ND	U	0.0568	2.96			1
2,3,4,6,7,8-HxCDF	0.176**BJ**		0.0496	2.96	1.23	1.001	1
1,2,3,4,6,7,8-HpCDF	0.350**BJK**		0.0792	2.96	0.85	1.000	1
1,2,3,4,7,8,9-HpCDF	0.140**J**		0.0923	2.96	1.08	1.000	1
OCDF	0.523**BJK**		0.152	5.91	0.67	1.005	1

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	11/16/18 17:00
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0557	**Units:**	ng/Kg
Lab Code:	E1900031-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/18/19 12:27
Prep Method:	Method Soxhlet	**Date Extracted:**	1/16/19
Sample Amount:	10.247g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520054	**Blank File Name:**	P520052
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P520049

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	2.43		0.232	0.591	0.66		1
Total Penta-Dioxins	ND	U	0.0937	2.96			1
Total Hexa-Dioxins	0.879**J**		0.0720	2.96	1.28		1
Total Hepta-Dioxins	2.86**J**		0.0465	2.96	1.13		1
Total Tetra-Furans	9.42		0.0859	0.591	0.67		1
Total Penta-Furans	0.370**J**		0.116	2.96	1.49		1
Total Hexa-Furans	0.838**J**		0.0502	2.96	1.38		1
Total Hepta-Furans	0.140**J**		0.0852	2.96	1.08		1

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	11/16/18 17:00
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0557	**Units:**	Percent
Lab Code:	E1900031-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/18/19 12:27
Prep Method:	Method Soxhlet	**Date Extracted:**	1/16/19
Sample Amount:	10.247g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520054	**Blank File Name:**	P520052
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P520049

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	784.834	39		25-164	0.79	1.019
13C-1,2,3,7,8-PeCDD	2000	1346.259	67		25-181	1.57	1.181
13C-1,2,3,4,7,8-HxCDD	2000	1249.349	62		32-141	1.27	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1165.068	58		28-130	1.29	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1416.937	71		23-140	1.05	1.067
13C-OCDD	4000	1623.868	41		17-157	0.89	1.143
13C-2,3,7,8-TCDF	2000	1000.309	50		24-169	0.78	0.992
13C-1,2,3,7,8-PeCDF	2000	1272.767	64		24-185	1.58	1.139
13C-2,3,4,7,8-PeCDF	2000	1173.658	59		21-178	1.60	1.171
13C-1,2,3,4,7,8-HxCDF	2000	1059.566	53		26-152	0.52	0.971
13C-1,2,3,6,7,8-HxCDF	2000	1034.132	52		26-123	0.52	0.974
13C-1,2,3,7,8,9-HxCDF	2000	1120.257	56		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1078.304	54		28-136	0.53	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	946.695	47		28-143	0.44	1.042
13C-1,2,3,4,7,8,9-HpCDF	2000	1140.576	57		26-138	0.44	1.080
37Cl-2,3,7,8-TCDD	800	480.841	60		35-197	NA	1.020

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	11/16/18 17:00
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0557	**Units:**	ng/Kg
Lab Code:	E1900031-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**2.43**	0.232	0.591	1	1	2.43
1,2,3,7,8-PeCDD	**0.110**	0.0937	2.96	1	1	0.110
1,2,3,4,7,8-HxCDD	ND	0.0689	2.96	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.0765	2.96	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.0709	2.96	1	0.1	
1,2,3,4,6,7,8-HpCDD	**0.600**	0.0465	2.96	1	0.01	0.00600
OCDD	**21.1**	0.185	5.91	1	0.0003	0.00633
2,3,7,8-TCDF	**5.51**	0.0859	0.591	1	0.1	0.551
1,2,3,7,8-PeCDF	**0.212**	0.110	2.96	1	0.03	0.00636
2,3,4,7,8-PeCDF	**0.370**	0.122	2.96	1	0.3	0.111
1,2,3,4,7,8-HxCDF	**0.543**	0.0483	2.96	1	0.1	0.0543
1,2,3,6,7,8-HxCDF	**0.141**	0.0470	2.96	1	0.1	0.0141
1,2,3,7,8,9-HxCDF	ND	0.0568	2.96	1	0.1	
2,3,4,6,7,8-HxCDF	**0.176**	0.0496	2.96	1	0.1	0.0176
1,2,3,4,6,7,8-HpCDF	**0.350**	0.0792	2.96	1	0.01	0.00350
1,2,3,4,7,8,9-HpCDF	**0.140**	0.0923	2.96	1	0.01	0.00140
OCDF	**0.523**	0.152	5.91	1	0.0003	0.000157
		Total TEQ				3.31

2005 WHO TEFs, ND = 0

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	11/16/18 17:00
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0557	**Units:**	Percent
Lab Code:	E1900031-002	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/22/19 10:11
	5.447g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	82.5		-	1

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	11/16/18 17:05
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0558	**Units:**	ng/Kg
Lab Code:	E1900031-003	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/18/19 13:16
Prep Method:	Method Soxhlet	**Date Extracted:**	1/16/19
Sample Amount:	10.215g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520055	**Blank File Name:**	P520052
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P520049

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	20.9		0.156	0.609	0.72	1.001	1
1,2,3,7,8-PeCDD	0.221**J**		0.0643	3.04	1.33	1.001	1
1,2,3,4,7,8-HxCDD	ND	U	0.0435	3.04			1
1,2,3,6,7,8-HxCDD	0.0911**BJK**		0.0483	3.04	0.91	1.000	1
1,2,3,7,8,9-HxCDD	0.137**BJK**		0.0447	3.04	0.94	1.007	1
1,2,3,4,6,7,8-HpCDD	1.43**BJ**		0.0780	3.04	1.06	1.000	1
OCDD	46.2		0.147	6.09	0.90	1.000	1
2,3,7,8-TCDF	51.7		0.0942	0.609	0.73	1.001	1
1,2,3,7,8-PeCDF	1.62**J**		0.108	3.04	1.46	1.001	1
2,3,4,7,8-PeCDF	1.65**J**		0.116	3.04	1.41	1.000	1
1,2,3,4,7,8-HxCDF	3.56		0.0402	3.04	1.19	1.000	1
1,2,3,6,7,8-HxCDF	0.801**BJ**		0.0411	3.04	1.09	1.000	1
1,2,3,7,8,9-HxCDF	0.307**BJK**		0.0467	3.04	1.52	1.001	1
2,3,4,6,7,8-HxCDF	0.134**BJK**		0.0404	3.04	0.73	1.000	1
1,2,3,4,6,7,8-HpCDF	1.10**BJ**		0.0597	3.04	1.03	1.000	1
1,2,3,4,7,8,9-HpCDF	0.389**J**		0.0782	3.04	1.05	1.000	1
OCDF	0.881**BJK**		0.108	6.09	0.70	1.005	1

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	11/16/18 17:05
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0558	**Units:**	ng/Kg
Lab Code:	E1900031-003	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/18/19 13:16
Prep Method:	Method Soxhlet	**Date Extracted:**	1/16/19
Sample Amount:	10.215g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520055	**Blank File Name:**	P520052
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P520049

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	23.5		0.156	0.609	0.72		1
Total Penta-Dioxins	0.221**J**		0.0643	3.04	1.33		1
Total Hexa-Dioxins	1.11**J**		0.0455	3.04	1.21		1
Total Hepta-Dioxins	4.76		0.0780	3.04	1.07		1
Total Tetra-Furans	96.7		0.0942	0.609	0.66		1
Total Penta-Furans	4.03		0.112	3.04	1.54		1
Total Hexa-Furans	4.53		0.0419	3.04	1.06		1
Total Hepta-Furans	1.98**J**		0.0682	3.04	1.03		1

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	11/16/18 17:05
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0558	**Units:**	Percent
Lab Code:	E1900031-003	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/18/19 13:16
Prep Method:	Method Soxhlet	**Date Extracted:**	1/16/19
Sample Amount:	10.215g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520055	**Blank File Name:**	P520052
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P520049

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	870.087	44		25-164	0.81	1.019
13C-1,2,3,7,8-PeCDD	2000	1483.507	74		25-181	1.58	1.181
13C-1,2,3,4,7,8-HxCDD	2000	1282.481	64		32-141	1.28	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1221.735	61		28-130	1.24	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1476.007	74		23-140	1.07	1.067
13C-OCDD	4000	1785.182	45		17-157	0.91	1.142
13C-2,3,7,8-TCDF	2000	1141.192	57		24-169	0.78	0.992
13C-1,2,3,7,8-PeCDF	2000	1411.109	71		24-185	1.57	1.139
13C-2,3,4,7,8-PeCDF	2000	1330.229	67		21-178	1.57	1.171
13C-1,2,3,4,7,8-HxCDF	2000	1139.730	57		26-152	0.52	0.971
13C-1,2,3,6,7,8-HxCDF	2000	1061.141	53		26-123	0.51	0.974
13C-1,2,3,7,8,9-HxCDF	2000	1176.322	59		29-147	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1158.865	58		28-136	0.52	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	1035.969	52		28-143	0.45	1.042
13C-1,2,3,4,7,8,9-HpCDF	2000	1138.698	57		26-138	0.44	1.080
37Cl-2,3,7,8-TCDD	800	557.943	70		35-197	NA	1.020

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	11/16/18 17:05
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0558	**Units:**	ng/Kg
Lab Code:	E1900031-003	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**20.9**	0.156	0.609	1	1	20.9
1,2,3,7,8-PeCDD	**0.221**	0.0643	3.04	1	1	0.221
1,2,3,4,7,8-HxCDD	ND	0.0435	3.04	1	0.1	
1,2,3,6,7,8-HxCDD	**0.0911**	0.0483	3.04	1	0.1	0.00911
1,2,3,7,8,9-HxCDD	**0.137**	0.0447	3.04	1	0.1	0.0137
1,2,3,4,6,7,8-HpCDD	**1.43**	0.0780	3.04	1	0.01	0.0143
OCDD	**46.2**	0.147	6.09	1	0.0003	0.0139
2,3,7,8-TCDF	**51.7**	0.0942	0.609	1	0.1	5.17
1,2,3,7,8-PeCDF	**1.62**	0.108	3.04	1	0.03	0.0486
2,3,4,7,8-PeCDF	**1.65**	0.116	3.04	1	0.3	0.495
1,2,3,4,7,8-HxCDF	**3.56**	0.0402	3.04	1	0.1	0.356
1,2,3,6,7,8-HxCDF	**0.801**	0.0411	3.04	1	0.1	0.0801
1,2,3,7,8,9-HxCDF	**0.307**	0.0467	3.04	1	0.1	0.0307
2,3,4,6,7,8-HxCDF	**0.134**	0.0404	3.04	1	0.1	0.0134
1,2,3,4,6,7,8-HpCDF	**1.10**	0.0597	3.04	1	0.01	0.0110
1,2,3,4,7,8,9-HpCDF	**0.389**	0.0782	3.04	1	0.01	0.00389
OCDF	**0.881**	0.108	6.09	1	0.0003	0.000264
		Total TEQ				27.4

2005 WHO TEFs, ND = 0

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	11/16/18 17:05
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0558	**Units:**	Percent
Lab Code:	E1900031-003	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/22/19 10:11
	7.432g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	80.4		-	1

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/Kg
Lab Code:	EQ1900021-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/18/19 10:50
Prep Method:	Method Soxhlet	**Date Extracted:**	1/16/19
Sample Amount:	10.004g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520052	**Blank File Name:**	P520052
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P520049

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.160	0.500			1
1,2,3,7,8-PeCDD	ND	U	0.0662	2.50			1
1,2,3,4,7,8-HxCDD	0.0806**JK**		0.0378	2.50	0.95	1.000	1
1,2,3,6,7,8-HxCDD	0.0926**JK**		0.0426	2.50	0.78	1.000	1
1,2,3,7,8,9-HxCDD	0.123**J**		0.0392	2.50	1.14	1.006	1
1,2,3,4,6,7,8-HpCDD	0.469**JK**		0.0403	2.50	0.79	1.000	1
OCDD	2.45**J**		0.149	5.00	0.83	1.000	1
2,3,7,8-TCDF	ND	U	0.0632	0.500			1
1,2,3,7,8-PeCDF	ND	U	0.0682	2.50			1
2,3,4,7,8-PeCDF	0.119**J**		0.0767	2.50	1.50	1.001	1
1,2,3,4,7,8-HxCDF	0.104**J**		0.0387	2.50	1.20	1.000	1
1,2,3,6,7,8-HxCDF	0.125**J**		0.0368	2.50	1.41	1.000	1
1,2,3,7,8,9-HxCDF	0.0975**JK**		0.0436	2.50	0.81	1.000	1
2,3,4,6,7,8-HxCDF	0.0725**JK**		0.0386	2.50	1.59	1.000	1
1,2,3,4,6,7,8-HpCDF	0.154**JK**		0.0539	2.50	1.40	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0644	2.50			1
OCDF	0.637**JK**		0.109	5.00	1.05	1.005	1

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/Kg
Lab Code:	EQ1900021-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/18/19 10:50
Prep Method:	Method Soxhlet	**Date Extracted:**	1/16/19
Sample Amount:	10.004g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520052	**Blank File Name:**	P520052
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P520049

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.160	0.500			1
Total Penta-Dioxins	ND	U	0.0662	2.50			1
Total Hexa-Dioxins	0.221**J**		0.0398	2.50	1.16		1
Total Hepta-Dioxins	0.346**J**		0.0403	2.50	0.91		1
Total Tetra-Furans	ND	U	0.0632	0.500			1
Total Penta-Furans	0.119**J**		0.0722	2.50	1.50		1
Total Hexa-Furans	0.270**J**		0.0393	2.50	1.19		1
Total Hepta-Furans	ND	U	0.0588	2.50			1

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	Percent
Lab Code:	EQ1900021-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/18/19 10:50
Prep Method:	Method Soxhlet	**Date Extracted:**	1/16/19
Sample Amount:	10.004g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520052	**Blank File Name:**	P520052
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P520049

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	827.308	41		25-164	0.79	1.019
13C-1,2,3,7,8-PeCDD	2000	1354.533	68		25-181	1.59	1.181
13C-1,2,3,4,7,8-HxCDD	2000	1244.474	62		32-141	1.28	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1147.976	57		28-130	1.28	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1349.097	67		23-140	1.07	1.067
13C-OCDD	4000	1526.296	38		17-157	0.90	1.142
13C-2,3,7,8-TCDF	2000	1046.817	52		24-169	0.79	0.992
13C-1,2,3,7,8-PeCDF	2000	1303.465	65		24-185	1.58	1.139
13C-2,3,4,7,8-PeCDF	2000	1182.198	59		21-178	1.59	1.170
13C-1,2,3,4,7,8-HxCDF	2000	1037.400	52		26-152	0.52	0.971
13C-1,2,3,6,7,8-HxCDF	2000	1027.807	51		26-123	0.52	0.974
13C-1,2,3,7,8,9-HxCDF	2000	1120.311	56		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1059.583	53		28-136	0.52	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	939.920	47		28-143	0.45	1.042
13C-1,2,3,4,7,8,9-HpCDF	2000	1069.941	53		26-138	0.44	1.080
37Cl-2,3,7,8-TCDD	800	467.817	58		35-197	NA	1.020

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Analyzed:**	01/18/19
Sample Matrix:	Sediment	**Date Extracted:**	01/16/19

Duplicate Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Units:**	ng/Kg
Prep Method:	Method Soxhlet	**Basis:**	Dry
		Analysis Lot:	622727

	Lab Control Sample EQ1900021-02			Duplicate Lab Control Sample EQ1900021-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,2,3,4,6,7,8-HpCDD	73.6	99.7	74	75.9	99.8	76	70-140	3	50
1,2,3,4,7,8-HxCDD	88.8	99.7	89	92.2	99.8	92	70-164	4	50
1,2,3,6,7,8-HxCDD	96.6	99.7	97	98.5	99.8	99	76-134	2	50
1,2,3,7,8,9-HxCDD	95.6	99.7	96	98.3	99.8	99	64-162	3	50
1,2,3,7,8-PeCDD	94.5	99.7	95	99.0	99.8	99	70-142	5	50
2,3,7,8-TCDD	27.1	19.9	136	28.1	20.0	141	67-158	4	50
OCDD	197	199	99	235	200	118	78-144	17	50
1,2,3,4,6,7,8-HpCDF	93.6	99.7	94	95.1	99.8	95	82-122	2	50
1,2,3,4,7,8,9-HpCDF	98.8	99.7	99	102	99.8	102	78-138	3	50
1,2,3,4,7,8-HxCDF	96.0	99.7	96	99.2	99.8	99	72-134	3	50
1,2,3,6,7,8-HxCDF	96.8	99.7	97	97.5	99.8	98	84-130	<1	50
1,2,3,7,8,9-HxCDF	91.8	99.7	92	97.7	99.8	98	78-130	6	50
1,2,3,7,8-PeCDF	88.1	99.7	88	91.3	99.8	92	80-134	4	50
2,3,4,6,7,8-HxCDF	97.7	99.7	98	100	99.8	100	70-156	3	50
2,3,4,7,8-PeCDF	99.0	99.7	99	101	99.8	102	68-160	2	50
2,3,7,8-TCDF	19.6	19.9	98	21.1	20.0	106	75-158	7	50
OCDF	196	199	98	218	200	109	63-170	11	50

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Analyzed:**	01/18/19
Sample Matrix:	Sediment	**Date Extracted:**	01/16/19

Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Units:**	ng/Kg
Prep Method:	Method Soxhlet	**Basis:**	Dry
		Analysis Lot:	622727

EQ1900021-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,2,3,4,6,7,8-HpCDD	73.6	99.7	74	70-140
1,2,3,4,7,8-HxCDD	88.8	99.7	89	70-164
1,2,3,6,7,8-HxCDD	96.6	99.7	97	76-134
1,2,3,7,8,9-HxCDD	95.6	99.7	96	64-162
1,2,3,7,8-PeCDD	94.5	99.7	95	70-142
2,3,7,8-TCDD	27.1	19.9	136	67-158
OCDD	197	199	99	78-144
1,2,3,4,6,7,8-HpCDF	93.6	99.7	94	82-122
1,2,3,4,7,8,9-HpCDF	98.8	99.7	99	78-138
1,2,3,4,7,8-HxCDF	96.0	99.7	96	72-134
1,2,3,6,7,8-HxCDF	96.8	99.7	97	84-130
1,2,3,7,8,9-HxCDF	91.8	99.7	92	78-130
1,2,3,7,8-PeCDF	88.1	99.7	88	80-134
2,3,4,6,7,8-HxCDF	97.7	99.7	98	70-156
2,3,4,7,8-PeCDF	99.0	99.7	99	68-160
2,3,7,8-TCDF	19.6	19.9	98	75-158
OCDF	196	199	98	63-170

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1900021-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/18/19 18:40
Prep Method:	Method Soxhlet	**Date Extracted:**	1/16/19
Sample Amount:	10.031g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520061	**Blank File Name:**	P520052
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P520049

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	27.1		0.205	0.498	0.78	1.001	1
1,2,3,7,8-PeCDD	94.5		0.0762	2.49	1.59	1.000	1
1,2,3,4,7,8-HxCDD	88.8		0.0466	2.49	1.25	1.000	1
1,2,3,6,7,8-HxCDD	96.6		0.0528	2.49	1.26	1.000	1
1,2,3,7,8,9-HxCDD	95.6		0.0484	2.49	1.23	1.006	1
1,2,3,4,6,7,8-HpCDD	73.6		0.0504	2.49	1.08	1.000	1
OCDD	197		0.108	4.98	0.87	1.000	1
2,3,7,8-TCDF	19.6		0.0837	0.498	0.75	1.001	1
1,2,3,7,8-PeCDF	88.1		0.0856	2.49	1.51	1.001	1
2,3,4,7,8-PeCDF	99.0		0.0947	2.49	1.50	1.000	1
1,2,3,4,7,8-HxCDF	96.0		0.0493	2.49	1.19	1.000	1
1,2,3,6,7,8-HxCDF	96.8		0.0478	2.49	1.23	1.000	1
1,2,3,7,8,9-HxCDF	91.8		0.0583	2.49	1.20	1.000	1
2,3,4,6,7,8-HxCDF	97.7		0.0488	2.49	1.19	1.000	1
1,2,3,4,6,7,8-HpCDF	93.6		0.134	2.49	0.98	1.000	1
1,2,3,4,7,8,9-HpCDF	98.8		0.180	2.49	1.01	1.000	1
OCDF	196		0.108	4.98	0.88	1.005	1

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1900021-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/18/19 18:40
Prep Method:	Method Soxhlet	**Date Extracted:**	1/16/19
Sample Amount:	10.031g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520061	**Blank File Name:**	P520052
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P520049

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	27.1		0.205	0.498	0.78		1
Total Penta-Dioxins	94.5		0.0762	2.49	1.59		1
Total Hexa-Dioxins	281		0.0492	2.49	1.25		1
Total Hepta-Dioxins	74.0		0.0504	2.49	0.94		1
Total Tetra-Furans	21.0		0.0837	0.498	0.80		1
Total Penta-Furans	189		0.0899	2.49	1.51		1
Total Hexa-Furans	383		0.0508	2.49	1.18		1
Total Hepta-Furans	192		0.155	2.49	0.98		1

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	Percent
Lab Code:	EQ1900021-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/18/19 18:40
Prep Method:	Method Soxhlet	**Date Extracted:**	1/16/19
Sample Amount:	10.031g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520061	**Blank File Name:**	P520052
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P520049

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	847.602	42		25-164	0.79	1.019
13C-1,2,3,7,8-PeCDD	2000	1523.936	76		25-181	1.57	1.181
13C-1,2,3,4,7,8-HxCDD	2000	1385.384	69		32-141	1.28	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1277.231	64		28-130	1.27	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1614.594	81		23-140	1.06	1.067
13C-OCDD	4000	2024.250	51		17-157	0.91	1.142
13C-2,3,7,8-TCDF	2000	1046.076	52		24-169	0.79	0.992
13C-1,2,3,7,8-PeCDF	2000	1416.782	71		24-185	1.58	1.139
13C-2,3,4,7,8-PeCDF	2000	1311.374	66		21-178	1.57	1.171
13C-1,2,3,4,7,8-HxCDF	2000	1149.053	57		26-152	0.52	0.971
13C-1,2,3,6,7,8-HxCDF	2000	1135.834	57		26-123	0.52	0.974
13C-1,2,3,7,8,9-HxCDF	2000	1216.371	61		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1227.363	61		28-136	0.51	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	1139.566	57		28-143	0.45	1.042
13C-1,2,3,4,7,8,9-HpCDF	2000	1182.999	59		26-138	0.45	1.080
37Cl-2,3,7,8-TCDD	800	465.547	58		35-197	NA	1.020

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1900021-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/18/19 19:29
Prep Method:	Method Soxhlet	**Date Extracted:**	1/16/19
Sample Amount:	10.024g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520062	**Blank File Name:**	P520052
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P520049

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	28.1		0.187	0.499	0.78	1.001	1
1,2,3,7,8-PeCDD	99.0		0.0681	2.49	1.59	1.000	1
1,2,3,4,7,8-HxCDD	92.2		0.0304	2.49	1.25	1.000	1
1,2,3,6,7,8-HxCDD	98.5		0.0333	2.49	1.27	1.000	1
1,2,3,7,8,9-HxCDD	98.3		0.0311	2.49	1.28	1.006	1
1,2,3,4,6,7,8-HpCDD	75.9		0.0617	2.49	1.05	1.000	1
OCDD	235		0.128	4.99	0.88	1.000	1
2,3,7,8-TCDF	21.1		0.0803	0.499	0.72	1.000	1
1,2,3,7,8-PeCDF	91.3		0.0814	2.49	1.52	1.001	1
2,3,4,7,8-PeCDF	101		0.0879	2.49	1.49	1.000	1
1,2,3,4,7,8-HxCDF	99.2		0.0571	2.49	1.20	1.000	1
1,2,3,6,7,8-HxCDF	97.5		0.0547	2.49	1.20	1.000	1
1,2,3,7,8,9-HxCDF	97.7		0.0609	2.49	1.19	1.000	1
2,3,4,6,7,8-HxCDF	100		0.0554	2.49	1.19	1.000	1
1,2,3,4,6,7,8-HpCDF	95.1		0.164	2.49	1.00	1.000	1
1,2,3,4,7,8,9-HpCDF	102		0.193	2.49	0.99	1.000	1
OCDF	218		0.0950	4.99	0.87	1.005	1

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1900021-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/18/19 19:29
Prep Method:	Method Soxhlet	**Date Extracted:**	1/16/19
Sample Amount:	10.024g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520062	**Blank File Name:**	P520052
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P520049

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	28.1		0.187	0.499	0.78		1
Total Penta-Dioxins	99.2		0.0681	2.49	1.59		1
Total Hexa-Dioxins	289		0.0316	2.49	1.25		1
Total Hepta-Dioxins	80.6		0.0617	2.49	1.08		1
Total Tetra-Furans	22.2		0.0803	0.499	0.85		1
Total Penta-Furans	194		0.0845	2.49	1.37		1
Total Hexa-Furans	395		0.0569	2.49	1.20		1
Total Hepta-Furans	198		0.178	2.49	1.00		1

Client:	Integral Consulting, Incorporated	**Service Request:**	E1900031
Project:	C1844-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	Percent
Lab Code:	EQ1900021-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/18/19 19:29
Prep Method:	Method Soxhlet	**Date Extracted:**	1/16/19
Sample Amount:	10.024g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520062	**Blank File Name:**	P520052
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P520049

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	880.221	44		25-164	0.79	1.019
13C-1,2,3,7,8-PeCDD	2000	1444.081	72		25-181	1.59	1.181
13C-1,2,3,4,7,8-HxCDD	2000	1376.321	69		32-141	1.28	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1308.974	65		28-130	1.26	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1475.597	74		23-140	1.04	1.067
13C-OCDD	4000	1772.086	44		17-157	0.89	1.142
13C-2,3,7,8-TCDF	2000	1102.737	55		24-169	0.79	0.992
13C-1,2,3,7,8-PeCDF	2000	1331.664	67		24-185	1.57	1.139
13C-2,3,4,7,8-PeCDF	2000	1248.879	62		21-178	1.58	1.171
13C-1,2,3,4,7,8-HxCDF	2000	1091.219	55		26-152	0.53	0.971
13C-1,2,3,6,7,8-HxCDF	2000	1110.079	56		26-123	0.53	0.974
13C-1,2,3,7,8,9-HxCDF	2000	1216.935	61		29-147	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1145.078	57		28-136	0.51	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	997.434	50		28-143	0.44	1.042
13C-1,2,3,4,7,8,9-HpCDF	2000	1157.776	58		26-138	0.45	1.080
37Cl-2,3,7,8-TCDD	800	331.214	41		35-197	NA	1.020

Chromatograms and Selected Ion Monitoring

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Sample Response Summary

CLIENT ID.
SL0556

Run #11 Filename P520053 Samp: 1 Inj: 1 Acquired: 18-JAN-19 11:39:42
Processed: 21-JAN-19 09:19:57 Sample ID: E1900031-001

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:16	4.085e+04	5.332e+04	0.77	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:28	2.723e+03	1.973e+03	1.38	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:22	2.080e+03	1.308e+03	1.59	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:02	3.824e+04	3.185e+04	1.20	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:08	7.280e+03	5.974e+03	1.22	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:39	4.863e+02	3.733e+02	1.30	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:25	8.030e+02	7.062e+02	1.14	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:39	1.129e+04	1.154e+04	0.98	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:03	5.070e+03	4.950e+03	1.02	yes	no	1.258
10	Unk	OCDF	42:35	2.607e+03	3.013e+03	0.86	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:04	8.577e+03	1.097e+04	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:38	1.920e+02	1.194e+02	1.61	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:46	1.732e+01	2.275e+01	0.76	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	36:51	3.339e+01	2.418e+01	1.38	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:05	3.768e+01	3.972e+01	0.95	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:34	4.583e+02	4.239e+02	1.08	yes	no	1.025
17	Unk	OCDD	42:23	5.906e+03	6.815e+03	0.87	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:16	5.110e+04	6.484e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:26	8.323e+04	5.251e+04	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:20	7.847e+04	4.992e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:01	3.172e+04	6.073e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:07	3.609e+04	6.957e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:37	3.450e+04	6.708e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:23	2.880e+04	5.558e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:38	1.890e+04	4.280e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:02	1.876e+04	4.164e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:02	2.266e+04	2.878e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:38	5.723e+04	3.613e+04	1.58	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:45	4.654e+04	3.655e+04	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	36:51	4.501e+04	3.511e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:34	3.988e+04	3.783e+04	1.05	yes	no	0.858
32	IS	13C-OCDD	42:23	2.549e+04	2.834e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:29	7.634e+04	9.533e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:05	1.025e+05	8.117e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:04	3.938e+04				no	1.014

$$\text{OCDD} = \frac{(5.906e+03 + 6.815e+03) \times 4000\ \text{pg} \times 1}{(2.549e+04 + 2.834e+04) \times 10.053\ \text{g} \times 79.2 / 100 \times 1.118} = 106.1926\ \text{ng/Kg}$$

LCS 1/22/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0556

Run #11 Filename P520053 Samp: 1 Inj: 1 Acquired: 18-JAN-19 11:39:42
Processed: 21-JAN-19 09:19:57 LAB. ID: E1900031-001

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	7.07e+06	1.70e+03	4.1e+03	9.27e+06	2.14e+03	4.3e+03
2	1,2,3,7,8-PeCDF	5.42e+05	2.66e+03	2.0e+02	3.78e+05	3.04e+03	1.2e+02
3	2,3,4,7,8-PeCDF	3.52e+05	2.66e+03	1.3e+02	2.23e+05	3.04e+03	7.3e+01
4	1,2,3,4,7,8-HxCDF	8.11e+06	1.35e+03	6.0e+03	6.65e+06	1.20e+03	5.5e+03
5	1,2,3,6,7,8-HxCDF	1.50e+06	1.35e+03	1.1e+03	1.19e+06	1.20e+03	9.9e+02
6	2,3,4,6,7,8-HxCDF	1.10e+05	1.35e+03	8.2e+01	8.21e+04	1.20e+03	6.8e+01
7	1,2,3,7,8,9-HxCDF	1.71e+05	1.35e+03	1.3e+02	1.47e+05	1.20e+03	1.2e+02
8	1,2,3,4,6,7,8-HpCDF	2.45e+06	1.70e+03	1.4e+03	2.49e+06	3.09e+03	8.1e+02
9	1,2,3,4,7,8,9-HpCDF	1.00e+06	1.70e+03	5.9e+02	9.66e+05	3.09e+03	3.1e+02
10	OCDF	4.38e+05	4.92e+02	8.9e+02	4.99e+05	1.26e+03	4.0e+02
11	2,3,7,8-TCDD	1.70e+06	2.14e+03	8.0e+02	2.20e+06	1.84e+03	1.2e+03
12	1,2,3,7,8-PeCDD	3.42e+04	1.94e+03	1.8e+01	2.01e+04	7.12e+02	2.8e+01
13	1,2,3,4,7,8-HxCDD	3.17e+03	7.52e+02	4.2e+00	7.27e+03	1.28e+03	5.7e+00
14	1,2,3,6,7,8-HxCDD	6.58e+03	7.52e+02	8.7e+00	4.08e+03	1.28e+03	3.2e+00
15	1,2,3,7,8,9-HxCDD	6.85e+03	7.52e+02	9.1e+00	8.42e+03	1.28e+03	6.6e+00
16	1,2,3,4,6,7,8-HpCDD	8.35e+04	1.70e+03	4.9e+01	9.10e+04	1.26e+03	7.2e+01
17	OCDD	9.52e+05	4.12e+02	2.3e+03	1.09e+06	1.09e+03	1.0e+03
18	13C-2,3,7,8-TCDF	9.72e+06	4.82e+03	2.0e+03	1.22e+07	3.45e+03	3.5e+03
19	13C-1,2,3,7,8-PeCDF	1.60e+07	1.31e+03	1.2e+04	1.03e+07	1.82e+03	5.6e+03
20	13C-2,3,4,7,8-PeCDF	1.57e+07	1.31e+03	1.2e+04	1.02e+07	1.82e+03	5.6e+03
21	13C-1,2,3,4,7,8-HxCDF	6.71e+06	1.36e+03	4.9e+03	1.30e+07	2.16e+03	6.0e+03
22	13C-1,2,3,6,7,8-HxCDF	7.91e+06	1.36e+03	5.8e+03	1.51e+07	2.16e+03	7.0e+03
23	13C-2,3,4,6,7,8-HxCDF	7.62e+06	1.36e+03	5.6e+03	1.48e+07	2.16e+03	6.8e+03
24	13C-1,2,3,7,8,9-HxCDF	6.12e+06	1.36e+03	4.5e+03	1.19e+07	2.16e+03	5.5e+03
25	13C-1,2,3,4,6,7,8-HpCDF	4.15e+06	3.82e+03	1.1e+03	9.26e+06	5.74e+03	1.6e+03
26	13C-1,2,3,4,7,8,9-HpCDF	3.55e+06	3.82e+03	9.3e+02	8.05e+06	5.74e+03	1.4e+03
27	13C-2,3,7,8-TCDD	4.60e+06	7.02e+03	6.6e+02	5.89e+06	3.79e+03	1.6e+03
28	13C-1,2,3,7,8-PeCDD	1.19e+07	1.10e+03	1.1e+04	7.47e+06	1.54e+03	4.8e+03
29	13C-1,2,3,4,7,8-HxCDD	1.07e+07	2.73e+03	3.9e+03	8.38e+06	1.60e+03	5.2e+03
30	13C-1,2,3,6,7,8-HxCDD	9.62e+06	2.73e+03	3.5e+03	7.65e+06	1.60e+03	4.8e+03
31	13C-1,2,3,4,6,7,8-HpCDD	8.08e+06	1.91e+03	4.2e+03	7.60e+06	2.46e+03	3.1e+03
32	13C-OCDD	4.22e+06	7.72e+02	5.5e+03	4.69e+06	6.76e+02	6.9e+03
33	13C-1,2,3,4-TCDD	1.50e+07	7.02e+03	2.1e+03	1.87e+07	3.79e+03	4.9e+03
34	13C-1,2,3,7,8,9-HxCDD	2.18e+07	2.73e+03	8.0e+03	1.69e+07	1.60e+03	1.1e+04
35	37Cl-2,3,7,8-TCDD	7.86e+06	1.76e+03	4.5e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0556

Entry: 36 Totals Name: Total Tetra-Furans

Run: 11 File: P520053 Sample:1 Injection:1 Function:1

Acquired: 18-JAN-19 11:39:42 Processed: 21-JAN-19 09:19:57

Mass: 303.9020 305.8990 Tot Response: 1.76e+05 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	25:21	4.16e+02	5.03e+02	0.83	yes	9.20e+02		n	n
2	25:40	2.25e+03	3.01e+03	0.75	yes	5.27e+03		n	n
3	26:21	1.86e+03	2.53e+03	0.74	yes	4.39e+03		n	n
4	26:44	3.59e+02	5.04e+02	0.71	yes	8.63e+02		n	n
5	26:56	1.24e+03	1.61e+03	0.77	yes	2.85e+03		n	n
6	27:04	2.08e+03	2.87e+03	0.72	yes	4.95e+03		n	n
7	27:29	1.88e+04	2.51e+04	0.75	yes	4.38e+04		n	n
8	27:44	9.16e+02	1.27e+03	0.72	yes	2.18e+03		n	n
9	28:16	4.08e+04	5.33e+04	0.77	yes	9.42e+04	2,3,7,8-TCDF	n	n
10	28:36	3.11e+03	4.19e+03	0.74	yes	7.30e+03		n	n
11	28:50	6.06e+02	9.26e+02	0.65	yes	1.53e+03		n	n
12	30:05	3.30e+03	4.20e+03	0.79	yes	7.51e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0556

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 11 File: P520053 Sample:1 Injection:1 Function:1

Acquired: 18-JAN-19 11:39:42 Processed: 21-JAN-19 09:19:57

Mass: 319.8970 321.8940 Tot Response: 2.21e+04 RRF: 1.085

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	27:24	2.52e+01	2.89e+01	0.87	yes	5.42e+01		n	n
2	27:57	3.60e+01	4.63e+01	0.78	yes	8.22e+01		n	n
3	28:47	1.50e+02	1.96e+02	0.76	yes	3.46e+02		n	n
4	29:04	8.58e+03	1.10e+04	0.78	yes	1.95e+04	2,3,7,8-TCDD	n	n
5	29:21	9.10e+02	1.16e+03	0.79	yes	2.07e+03		n	n

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Peak List Summary

CLIENT ID.

SL0556

Entry: 38 Totals Name: Total Penta-Furans1

Run: 11 File: P520053 Sample:1 Injection:1 Function:1

Acquired: 18-JAN-19 11:39:42 Processed: 21-JAN-19 09:19:57

Mass: 339.8600 341.8570 Tot Response: 1.15e+02 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:03	7.32e+01	4.19e+01 1.75	yes	1.15e+02		y	y

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0556

Entry: 39 Totals Name: Total Penta-Furans2

Run: 11 File: P520053 Sample:1 Injection:1 Function:2

Acquired: 18-JAN-19 11:39:42 Processed: 21-JAN-19 09:19:57

Mass: 339.8600 341.8570 Tot Response: 1.22e+04 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	31:32	1.33e+03	8.74e+02	1.53	yes	2.21e+03		n	n
2	32:18	2.77e+02	1.86e+02	1.49	yes	4.63e+02		n	n
3	32:28	2.72e+03	1.97e+03	1.38	yes	4.70e+03	1,2,3,7,8-PeCDF	n	n
4	32:42	8.29e+02	5.87e+02	1.41	yes	1.42e+03		n	n
5	33:22	2.08e+03	1.31e+03	1.59	yes	3.39e+03	2,3,4,7,8-PeCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0556

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 11 File: P520053 Sample:1 Injection:1 Function:2

Acquired: 18-JAN-19 11:39:42 Processed: 21-JAN-19 09:19:57

Mass: 355.8550 357.8520 Tot Response: 3.67e+02 RRF: 0.9565

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	32:27	3.34e+01	2.25e+01 1.48	yes	5.58e+01		n	n
2	33:38	1.92e+02	1.19e+02 1.61	yes	3.11e+02	1,2,3,7,8-PeCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0556

Entry: 41 Totals Name: Total Hexa-Furans

Run: 11 File: P520053 Sample:1 Injection:1 Function:3

Acquired: 18-JAN-19 11:39:42 Processed: 21-JAN-19 09:19:57

Mass: 373.8210 375.8180 Tot Response: 8.57e+04 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	36:02	3.82e+04	3.18e+04	1.20	yes	7.01e+04	1,2,3,4,7,8-HxCDF	n	n
2	36:08	7.28e+03	5.97e+03	1.22	yes	1.33e+04	1,2,3,6,7,8-HxCDF	n	n
3	36:39	4.86e+02	3.73e+02	1.30	yes	8.60e+02	2,3,4,6,7,8-HxCDF	n	n
4	37:25	8.03e+02	7.06e+02	1.14	yes	1.51e+03	1,2,3,7,8,9-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0556

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 11 File: P520053 Sample:1 Injection:1 Function:3

Acquired: 18-JAN-19 11:39:42 Processed: 21-JAN-19 09:19:57

Mass: 389.8160 391.8130 Tot Response: 5.07e+02 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	35:26	2.39e+02	1.86e+02 1.29	yes	4.25e+02		n	n
2	35:57	1.41e+01	1.06e+01 1.32	yes	2.47e+01		n	n
3	36:51	3.34e+01	2.42e+01 1.38	yes	5.76e+01	1,2,3,6,7,8-HxCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0556

Entry: 43 Totals Name: Total Hepta-Furans

Run: 11 File: P520053 Sample:1 Injection:1 Function:4

Acquired: 18-JAN-19 11:39:42 Processed: 21-JAN-19 09:19:57

Mass: 407.7820 409.7790 Tot Response: 3.80e+04 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:39	1.13e+04	1.15e+04	0.98	yes	2.28e+04	1,2,3,4,6,7,8-HpCDF	n	n
2	39:03	2.51e+03	2.62e+03	0.96	yes	5.13e+03		n	n
3	40:03	5.07e+03	4.95e+03	1.02	yes	1.00e+04	1,2,3,4,7,8,9-HpCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0556

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 11 File: P520053 Sample:1 Injection:1 Function:4

Acquired: 18-JAN-19 11:39:42 Processed: 21-JAN-19 09:19:57

Mass: 423.7770 425.7740 Tot Response: 2.98e+03 RRF: 1.025

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:54	1.09e+03	1.02e+03 1.07	yes	2.10e+03		n	n
2	39:34	4.58e+02	4.24e+02 1.08	yes	8.82e+02	1,2,3,4,6,7,8-HpCDD	n	n

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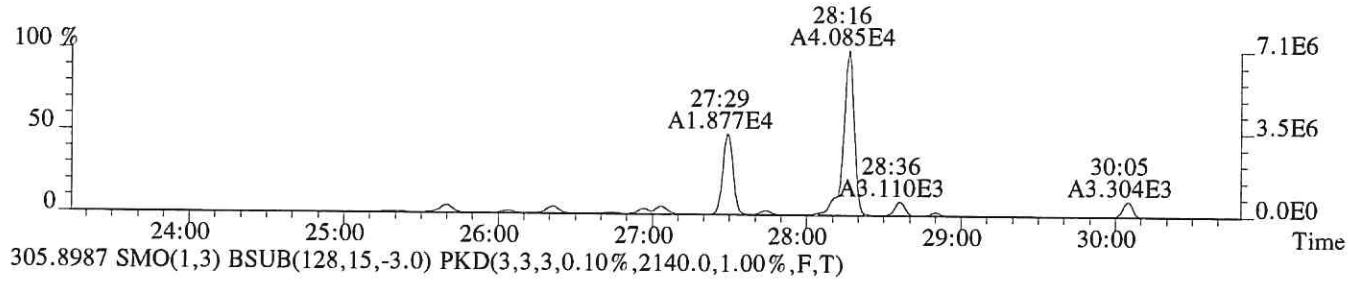
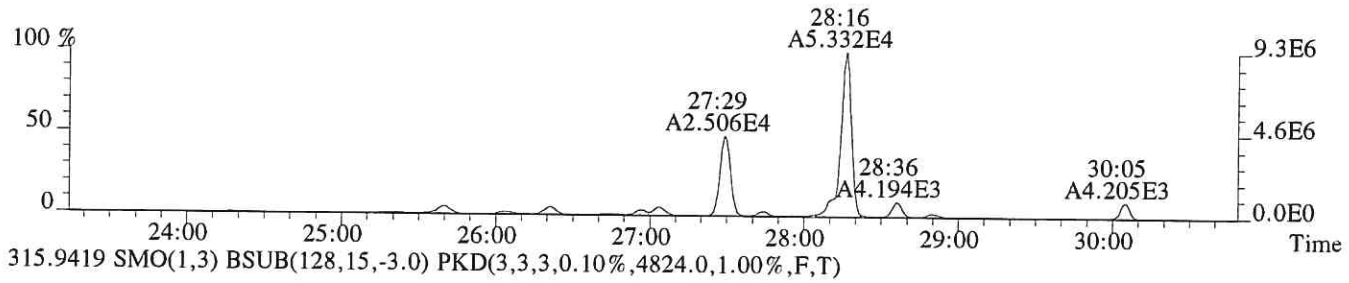
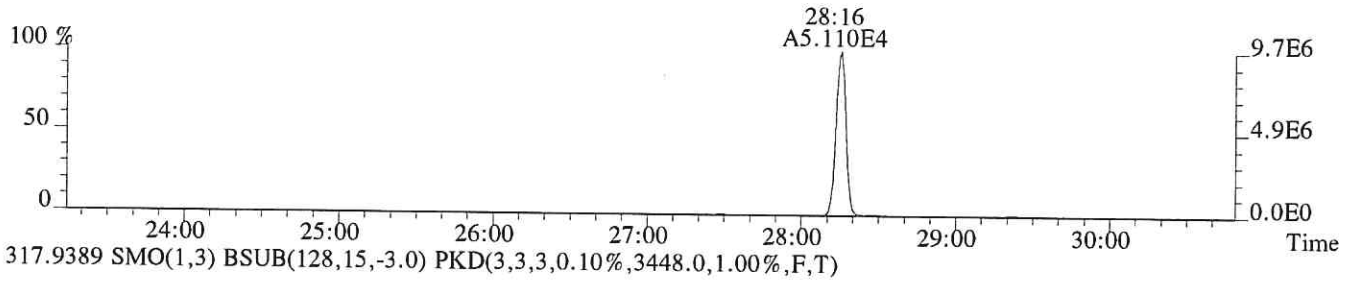
File:P520053 #1-538 Acq:18-JAN-2019 11:39:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-001
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1704.0,1.00%,F,T)



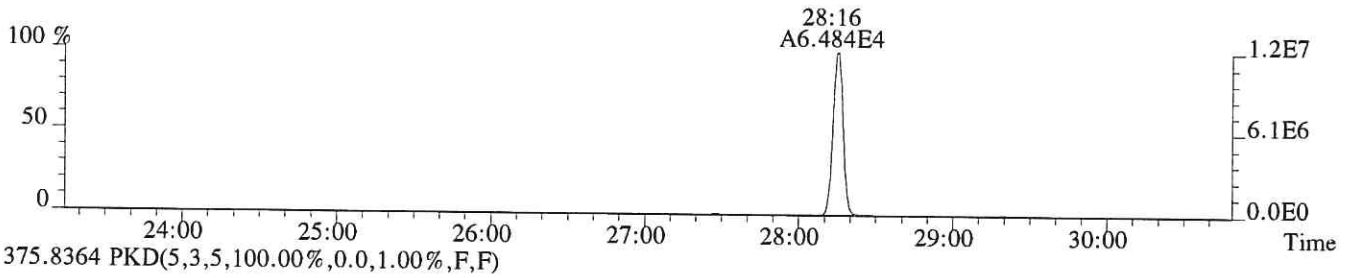
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2140.0,1.00%,F,T)



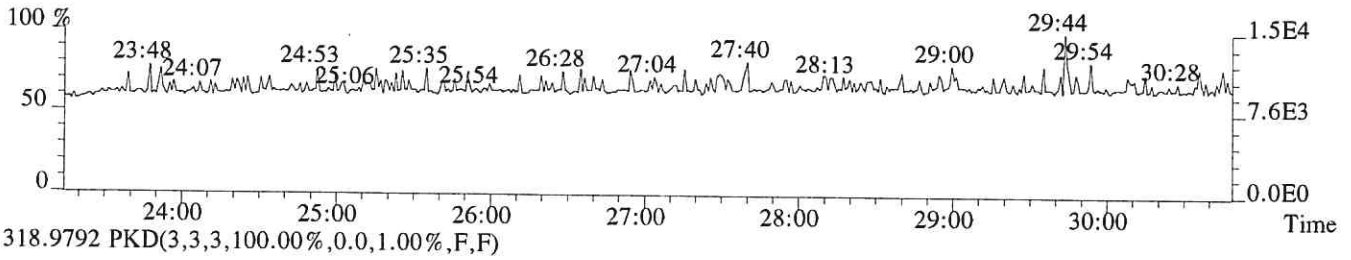
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4824.0,1.00%,F,T)



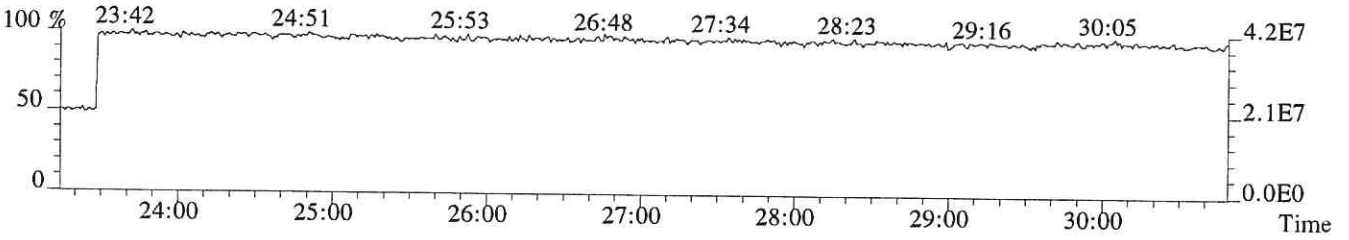
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3448.0,1.00%,F,T)



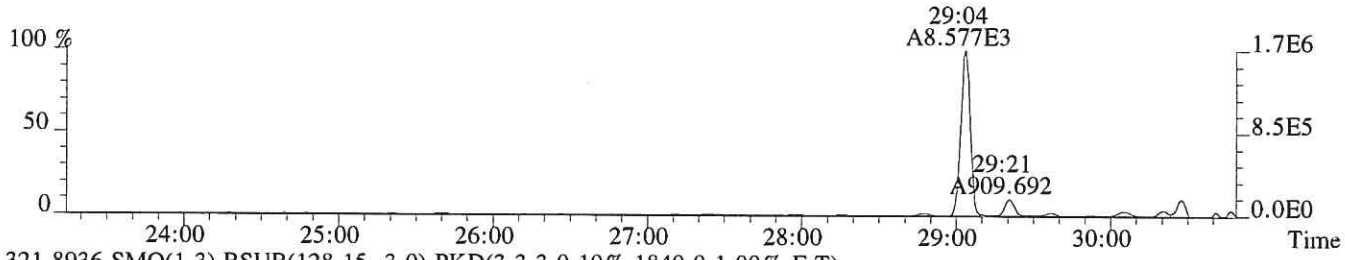
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



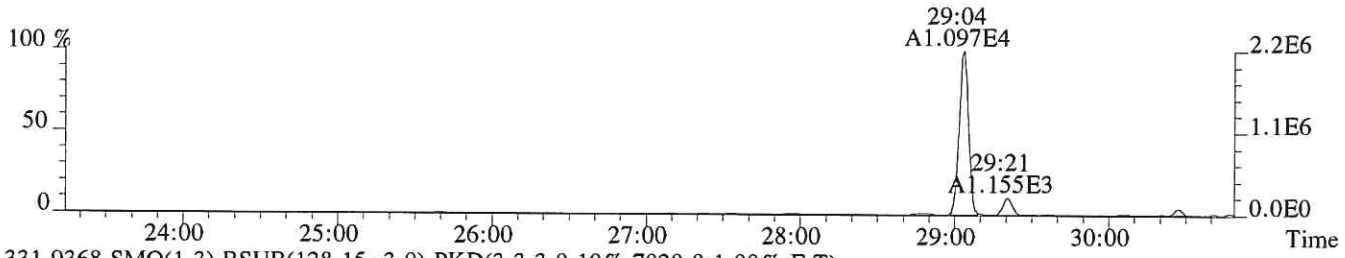
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



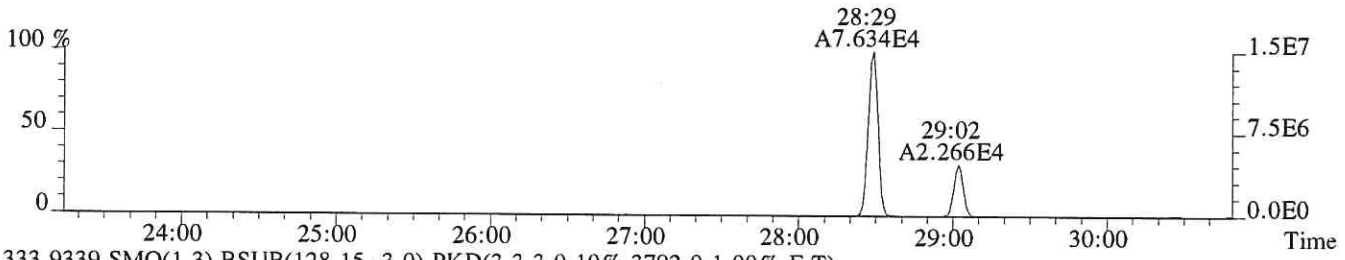
File:P520053 #1-538 Acq:18-JAN-2019 11:39:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-001
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2140.0,1.00%,F,T)



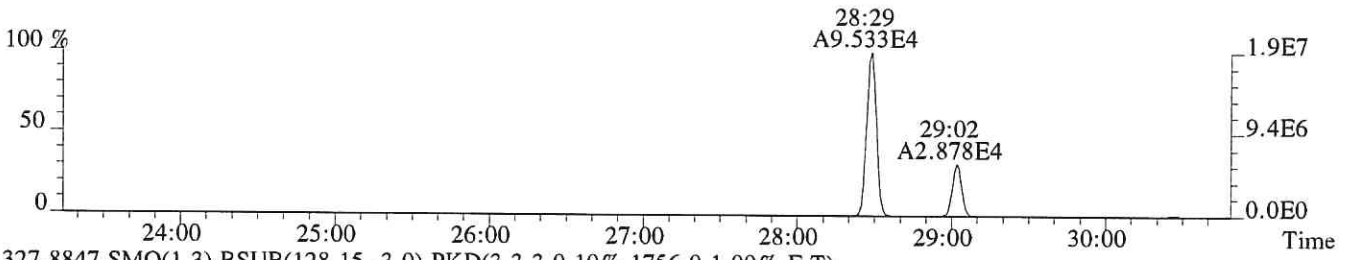
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1840.0,1.00%,F,T)



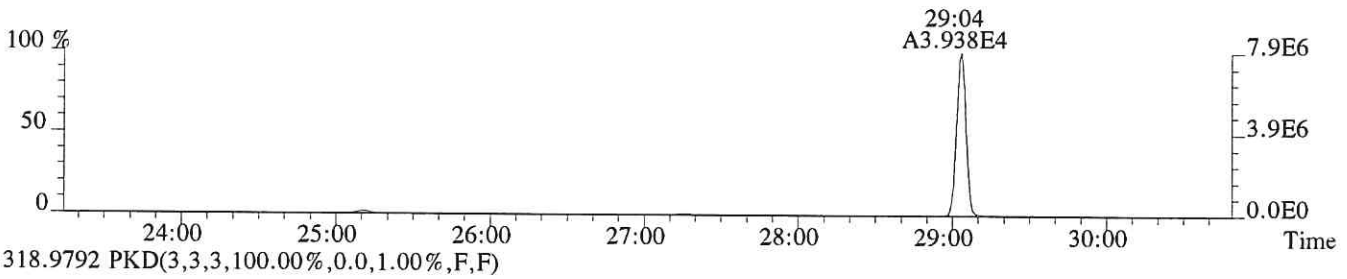
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7020.0,1.00%,F,T)



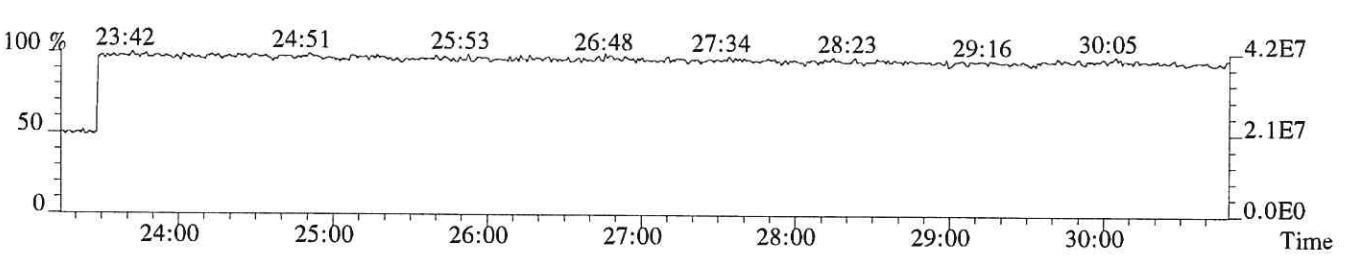
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3792.0,1.00%,F,T)



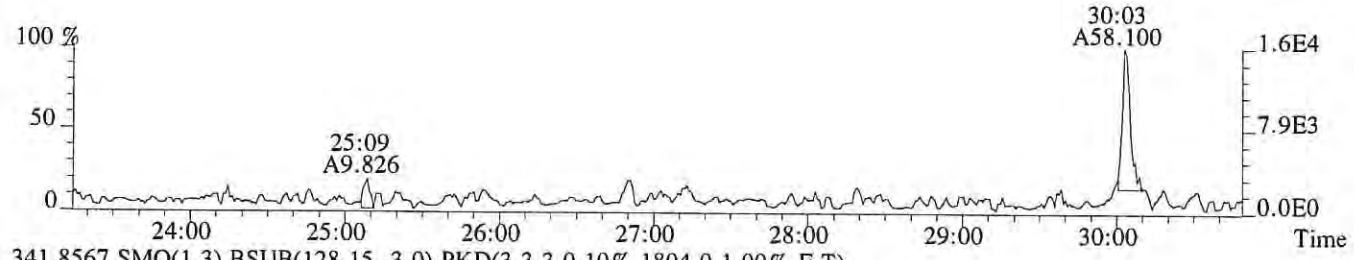
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1756.0,1.00%,F,T)



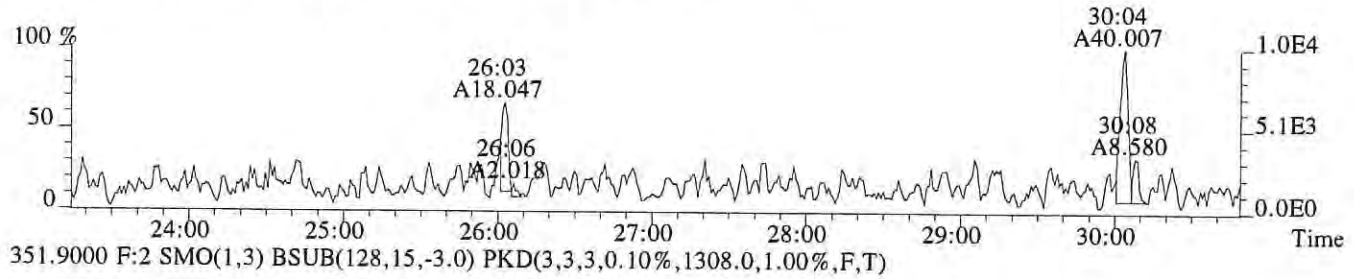
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



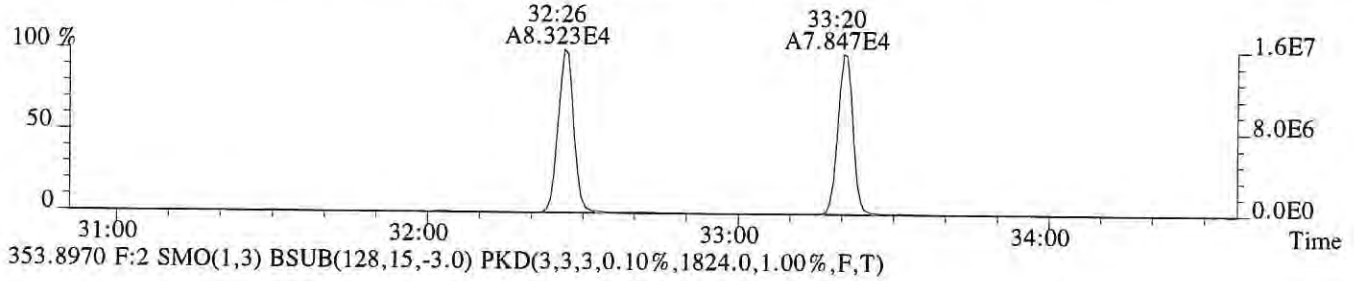
File:P520053 #1-538 Acq:18-JAN-2019 11:39:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-001
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1312.0,1.00%,F,T)



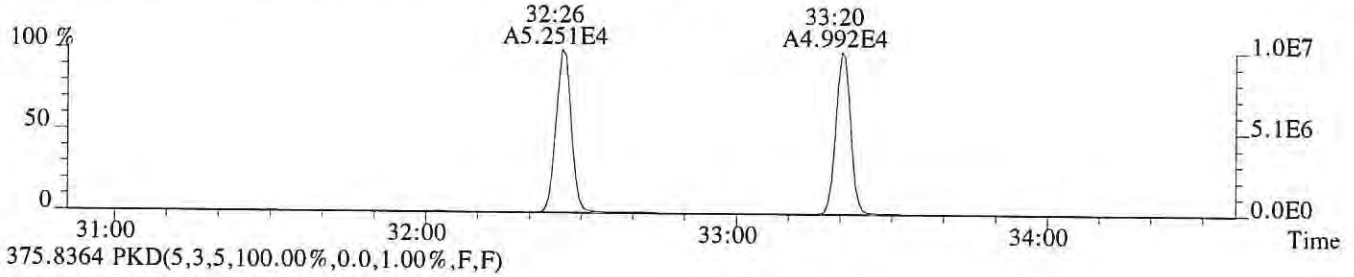
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1804.0,1.00%,F,T)



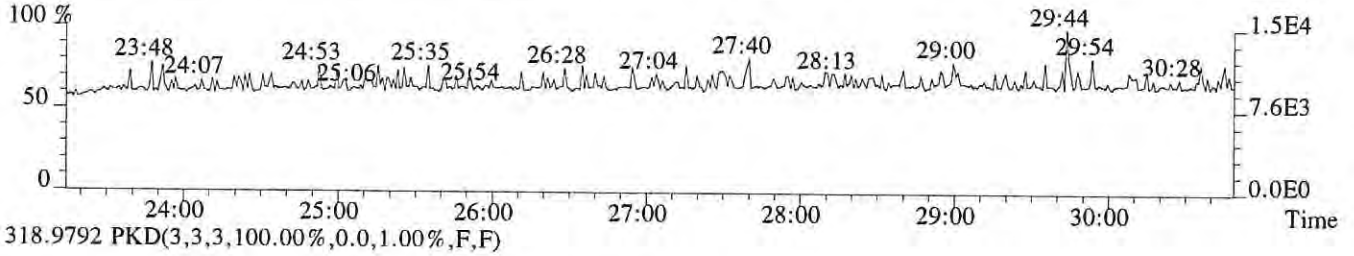
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1308.0,1.00%,F,T)



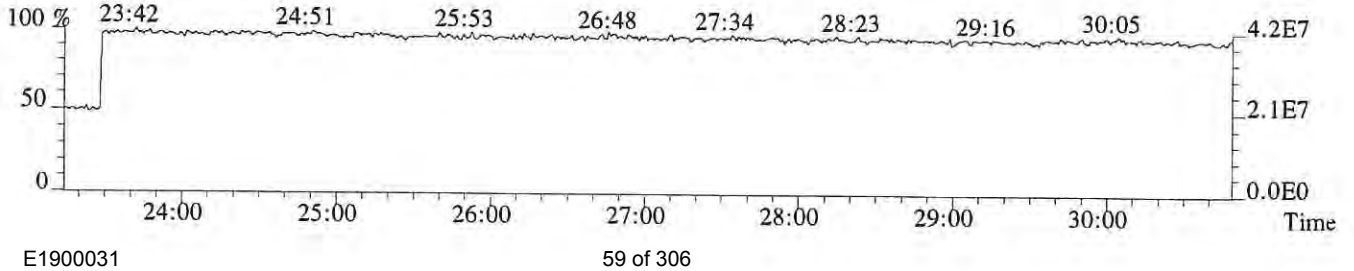
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1824.0,1.00%,F,T)



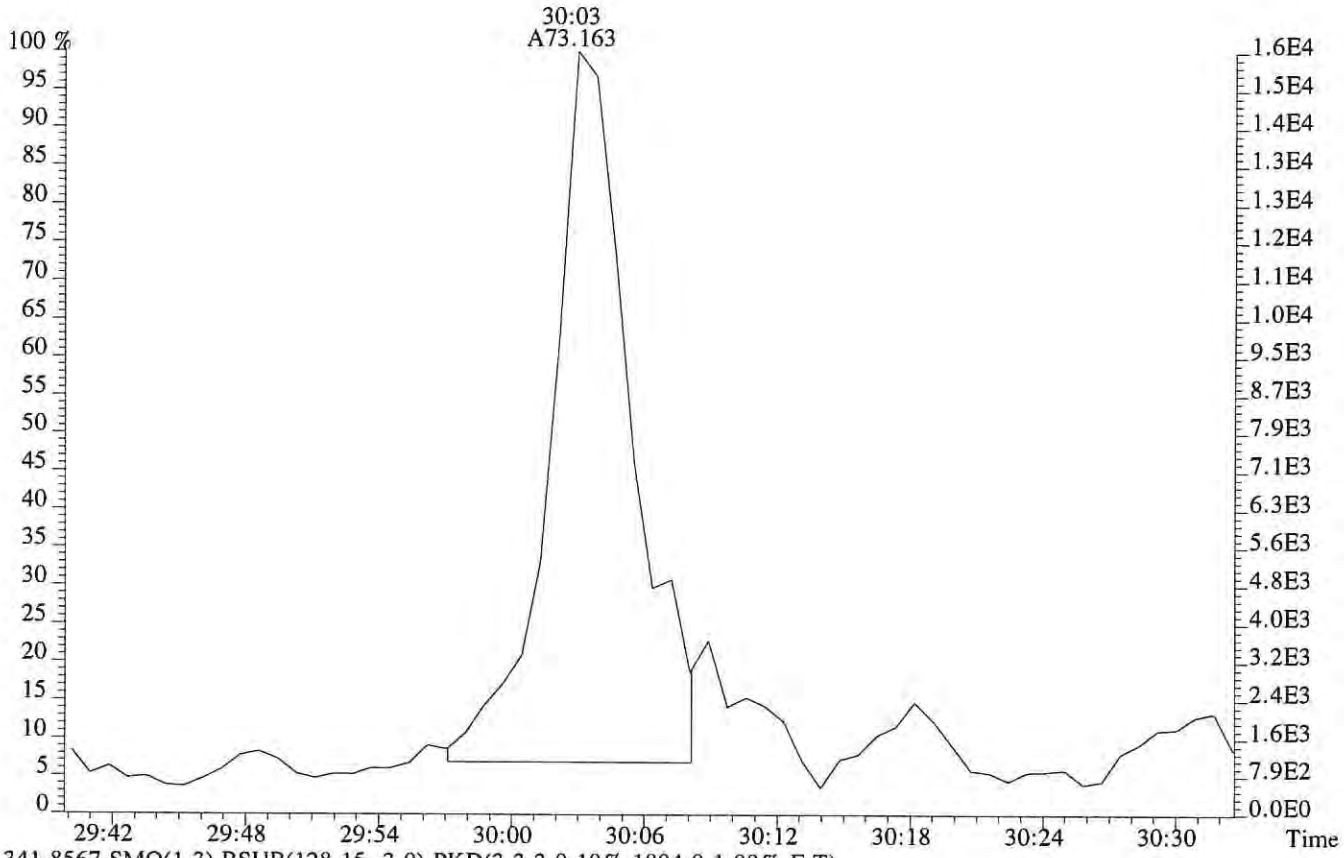
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



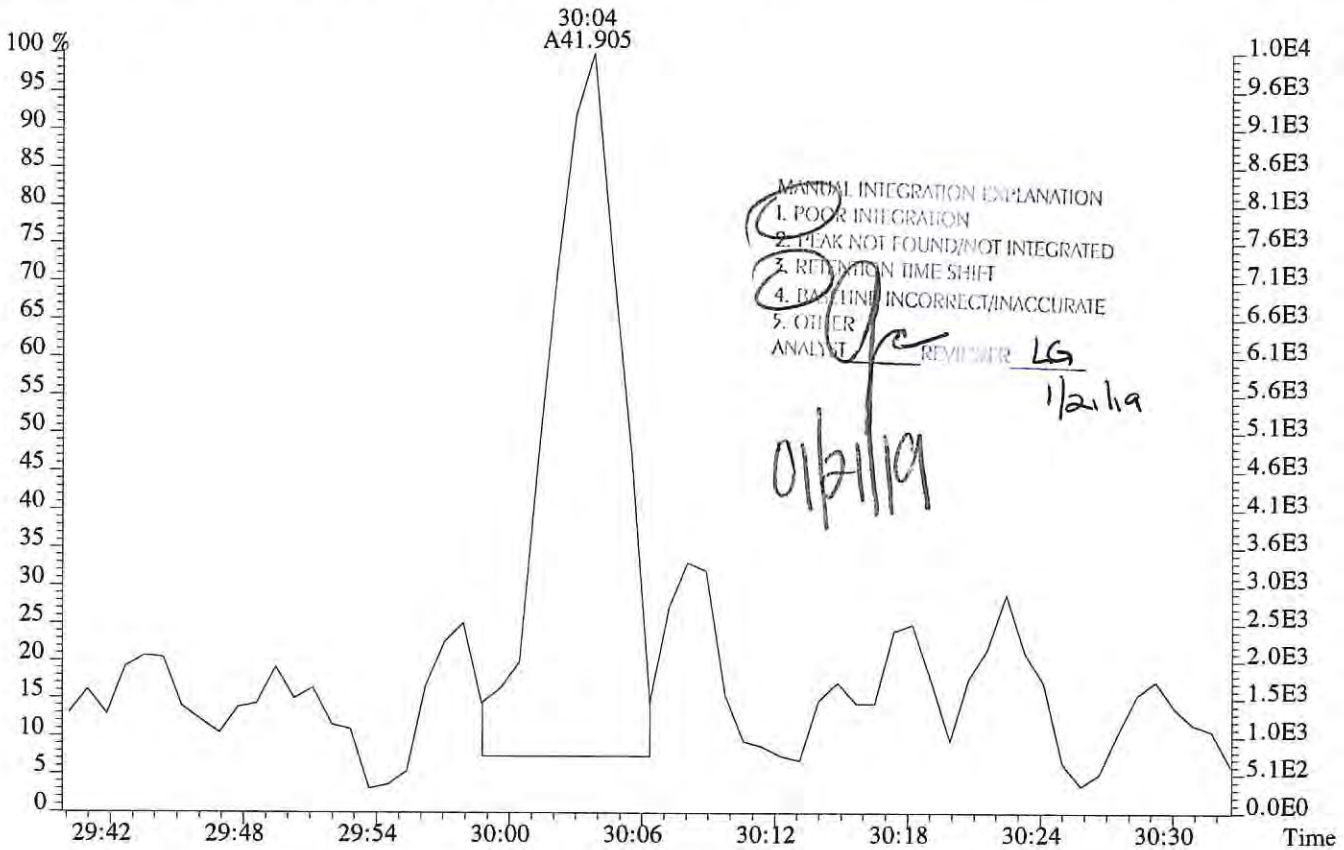
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P520053 #1-538 Acq:18-JAN-2019 11:39:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-001
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1312.0,1.00%,F,T)

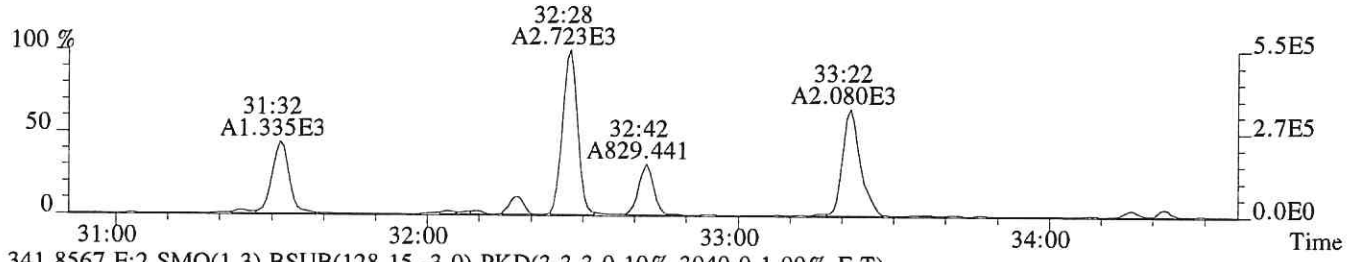


341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1804.0,1.00%,F,T)

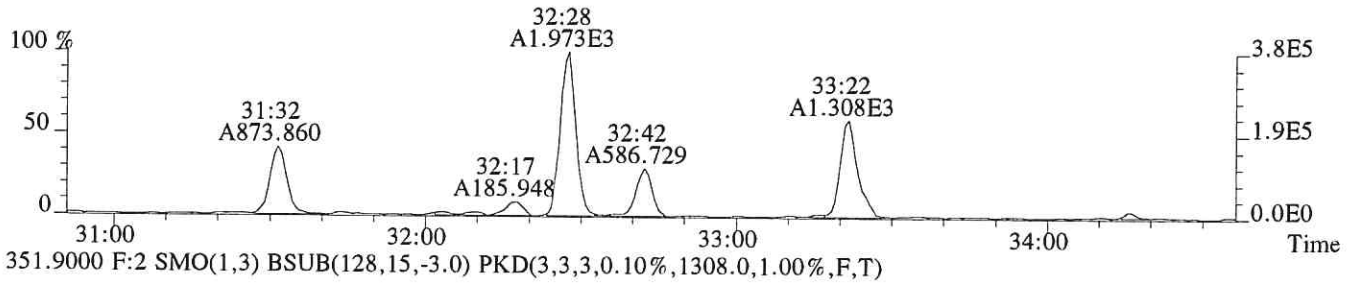


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER LG
1/21/19
01/21/19

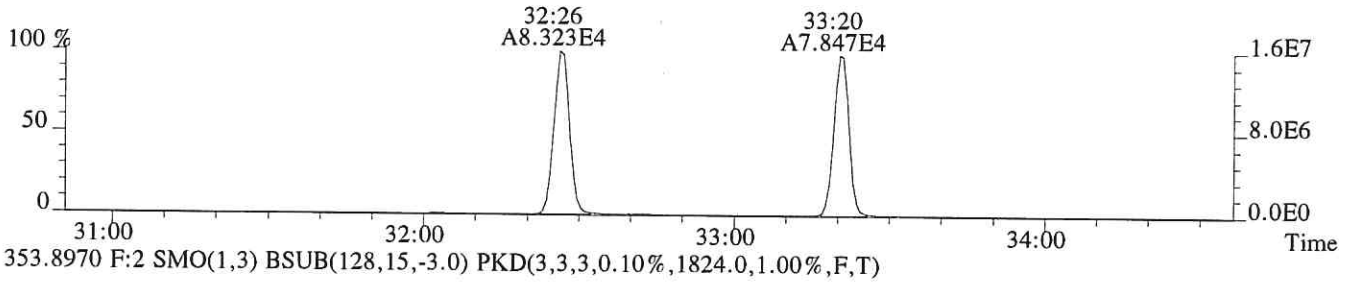
File:P520053 #1-339 Acq:18-JAN-2019 11:39:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-001
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2660.0,1.00%,F,T)



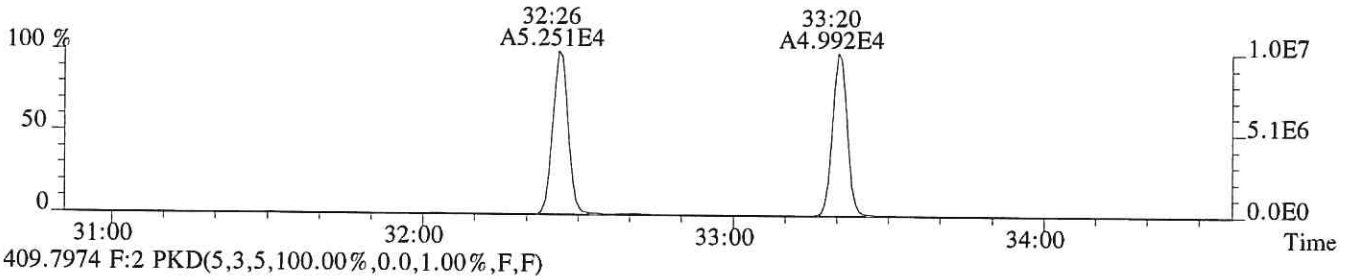
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3040.0,1.00%,F,T)



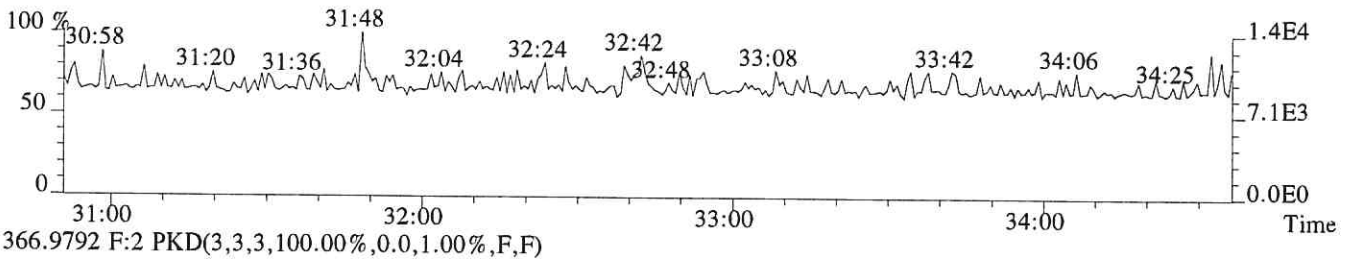
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1308.0,1.00%,F,T)



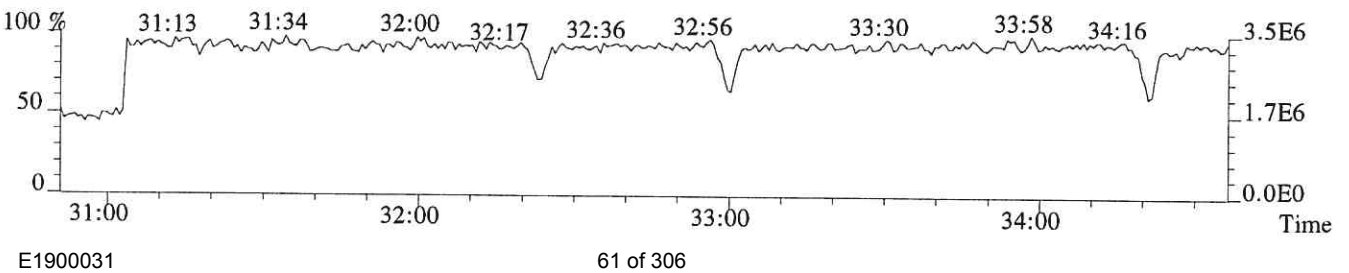
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1824.0,1.00%,F,T)



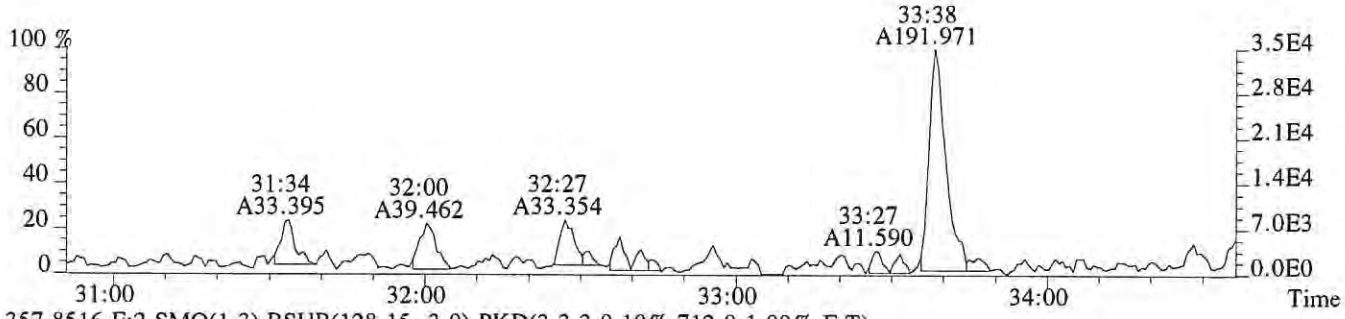
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



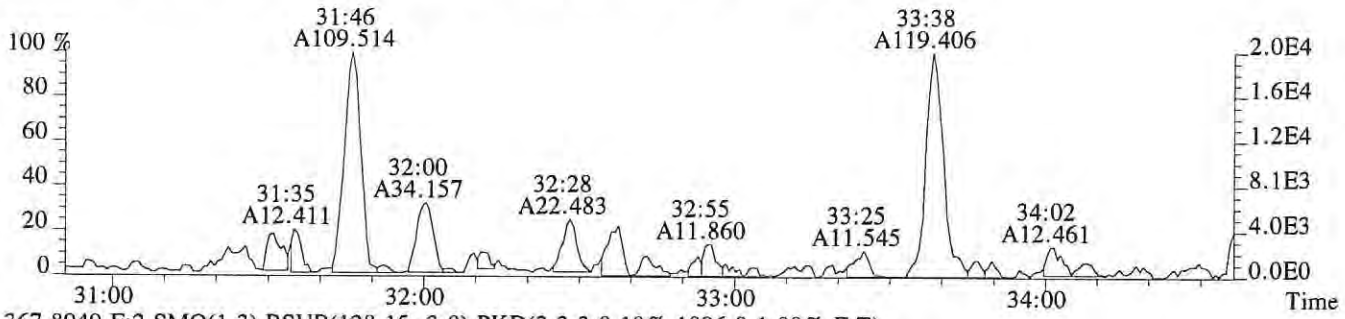
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



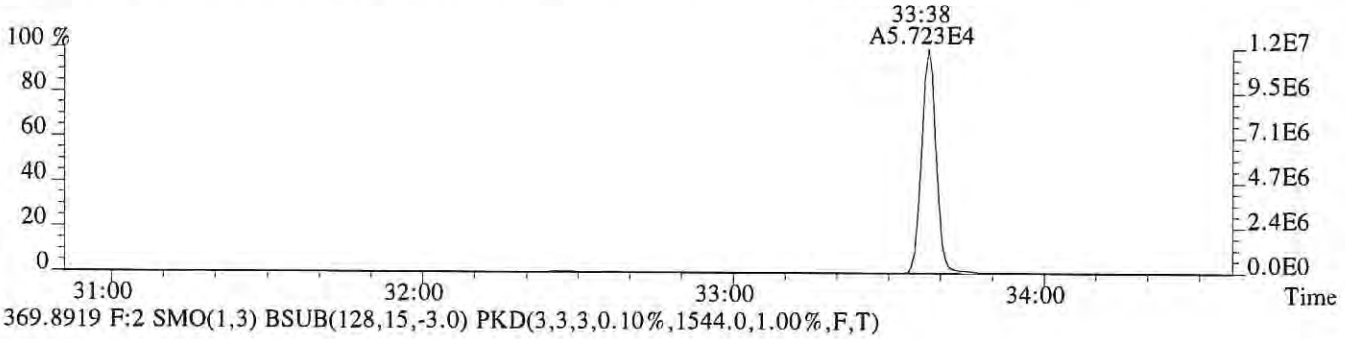
File:P520053 #1-339 Acq:18-JAN-2019 11:39:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-001
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1940.0,1.00%,F,T)



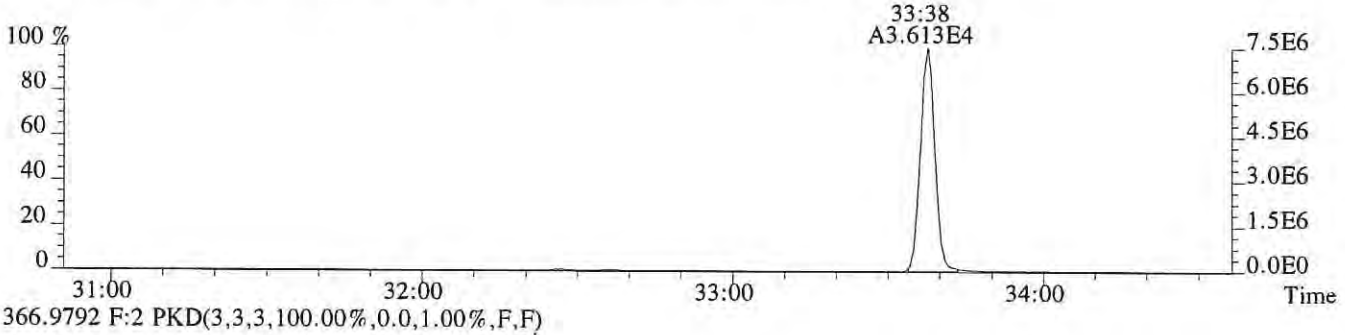
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,712.0,1.00%,F,T)



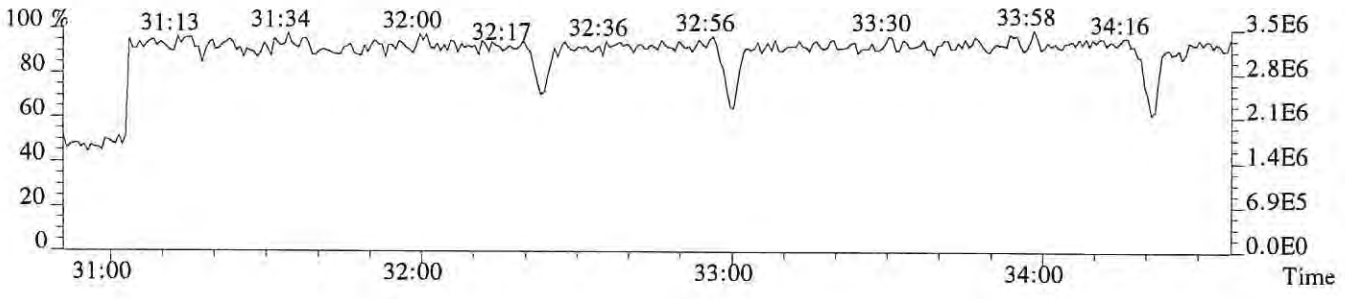
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1096.0,1.00%,F,T)



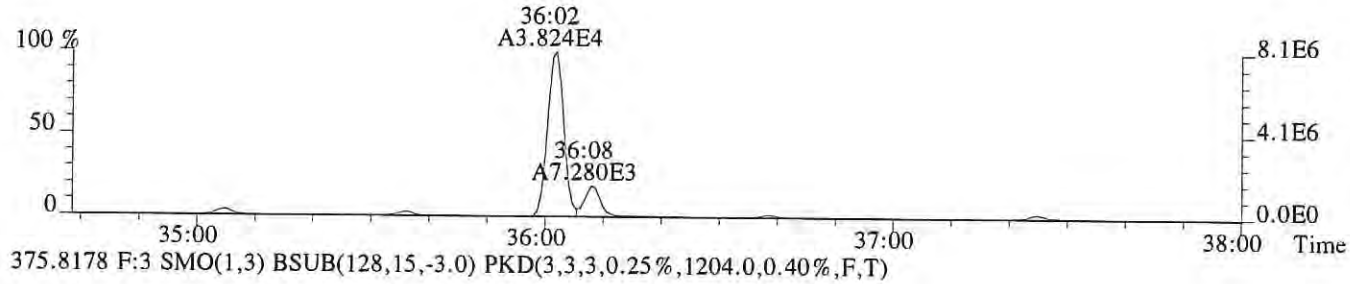
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1544.0,1.00%,F,T)



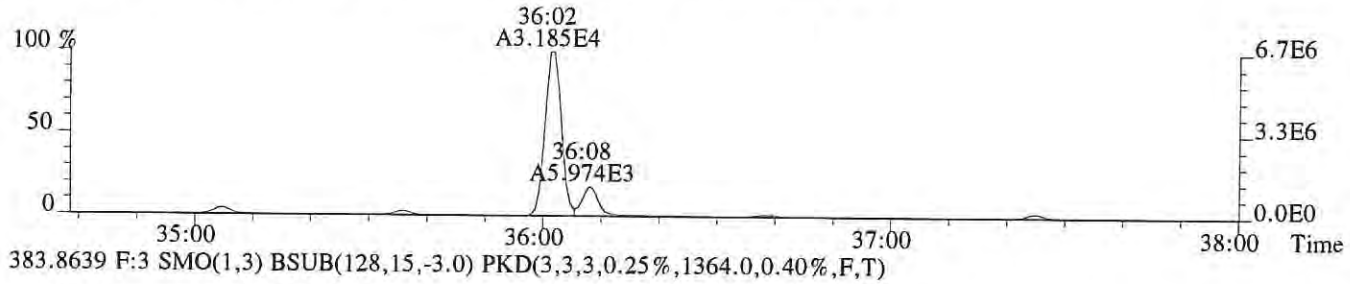
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



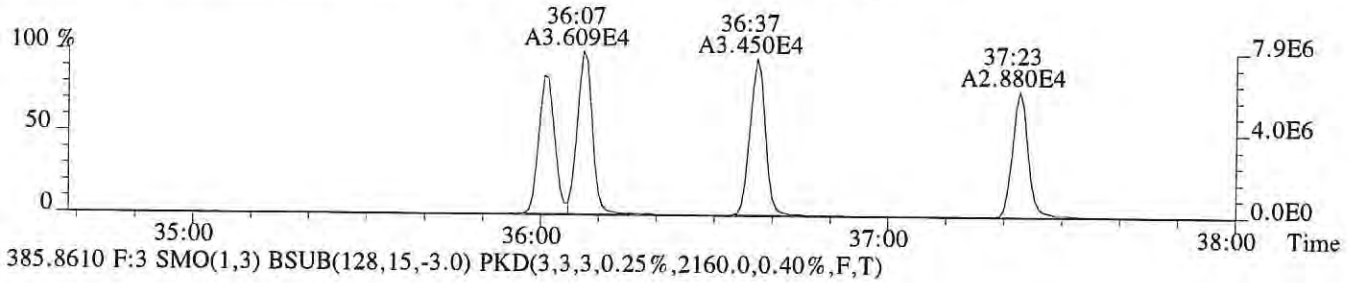
File:P520053 #1-303 Acq:18-JAN-2019 11:39:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-001
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1352.0,0.40%,F,T)



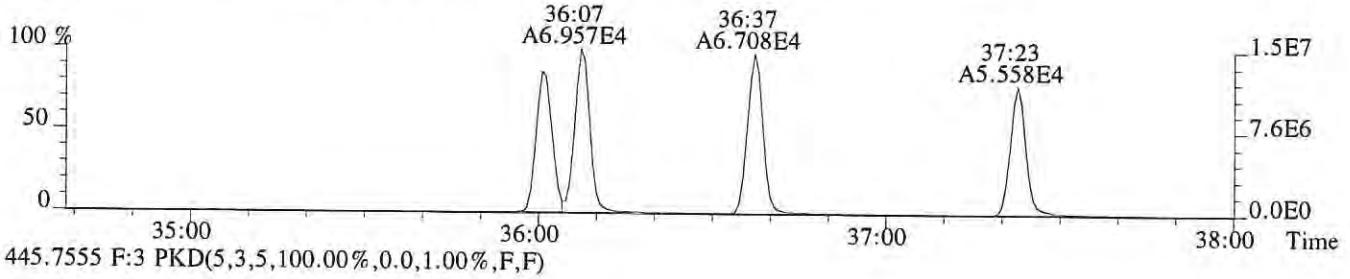
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1204.0,0.40%,F,T)



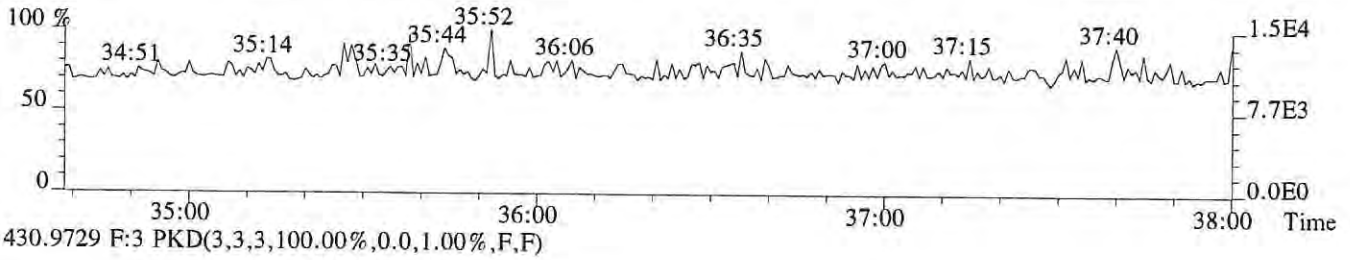
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1364.0,0.40%,F,T)



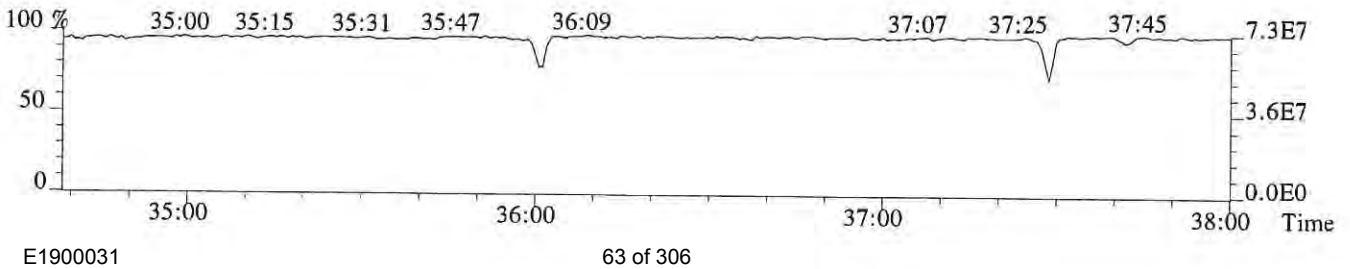
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2160.0,0.40%,F,T)



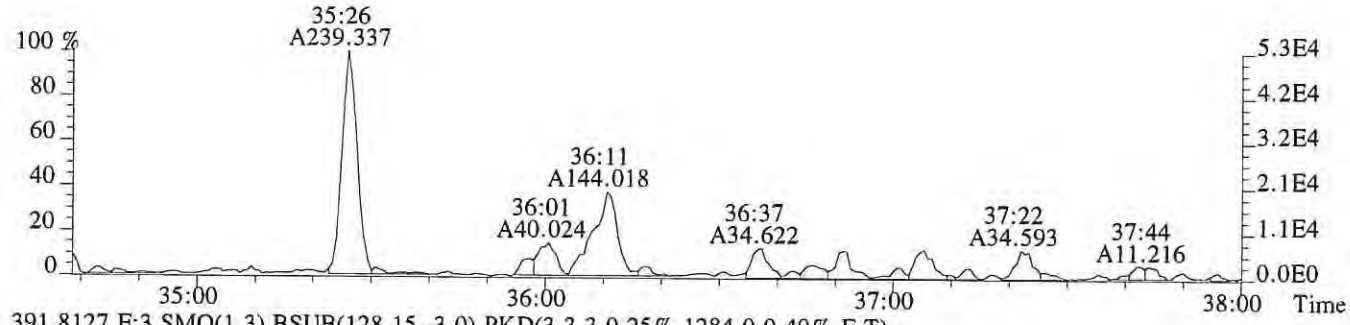
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



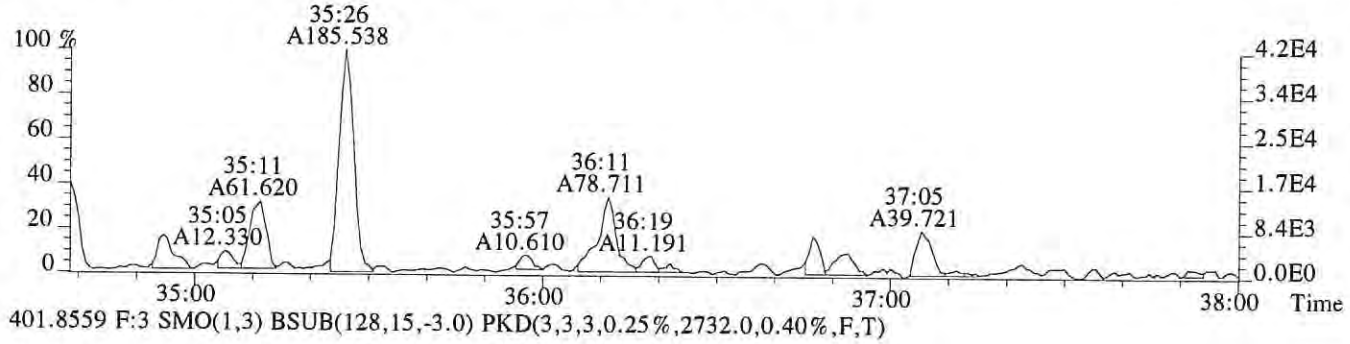
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



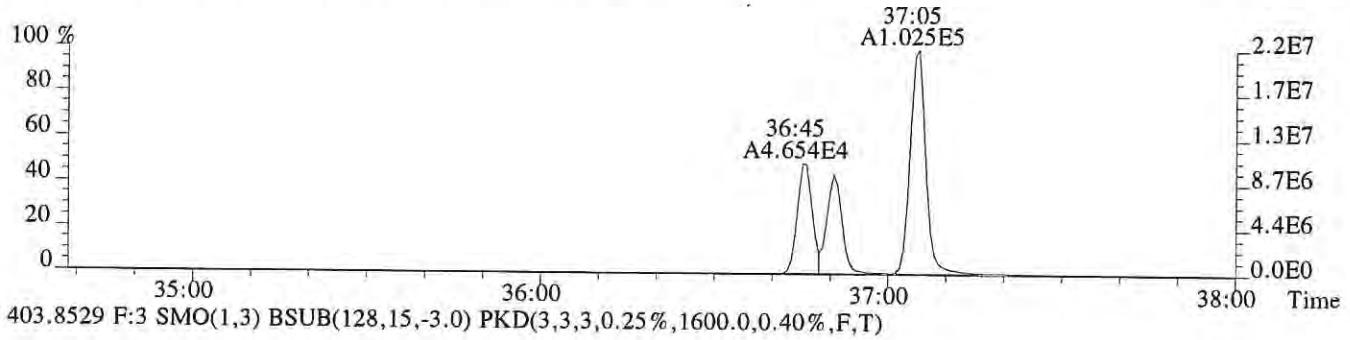
File:P520053 #1-303 Acq:18-JAN-2019 11:39:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-001
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,752.0,0.40%,F,T)



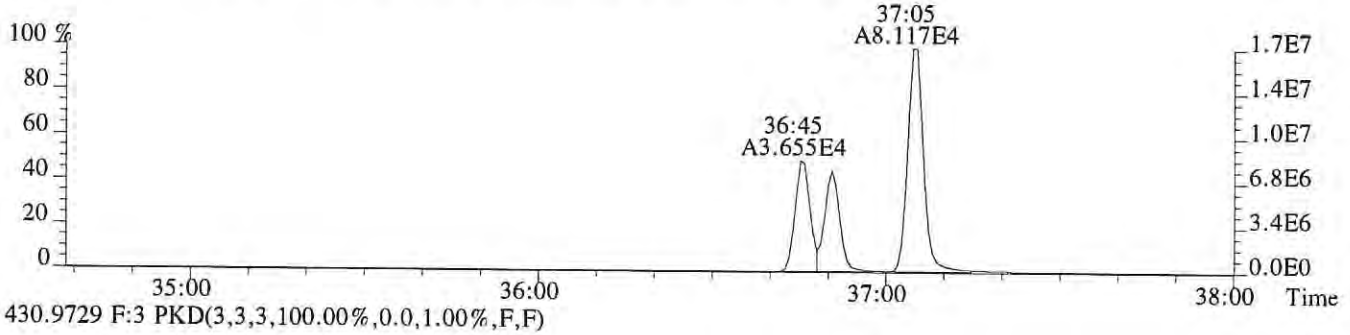
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1284.0,0.40%,F,T)



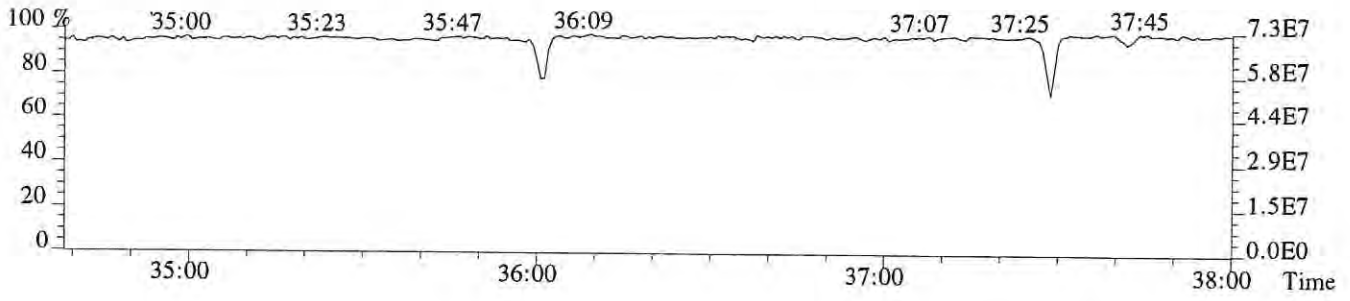
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2732.0,0.40%,F,T)



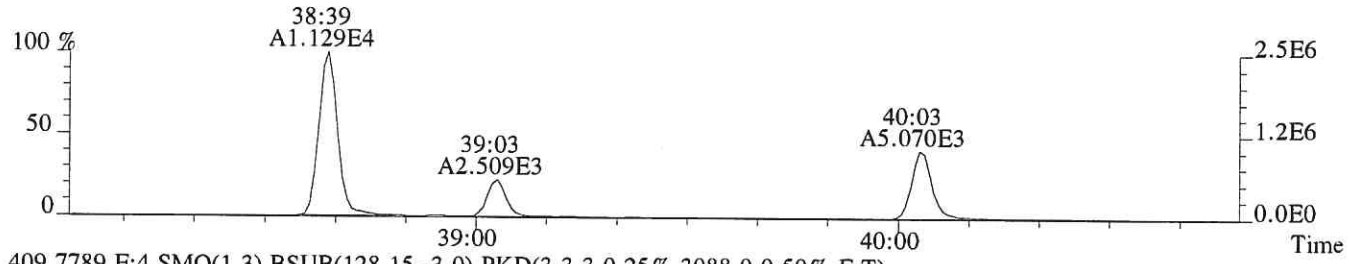
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1600.0,0.40%,F,T)



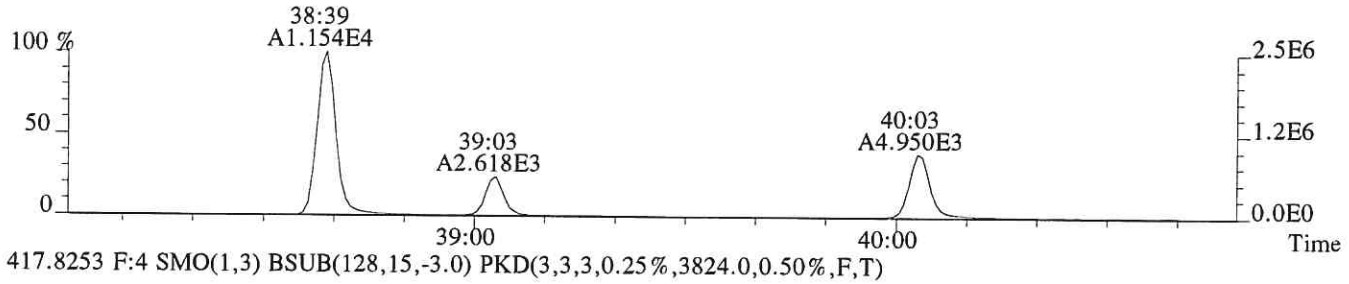
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



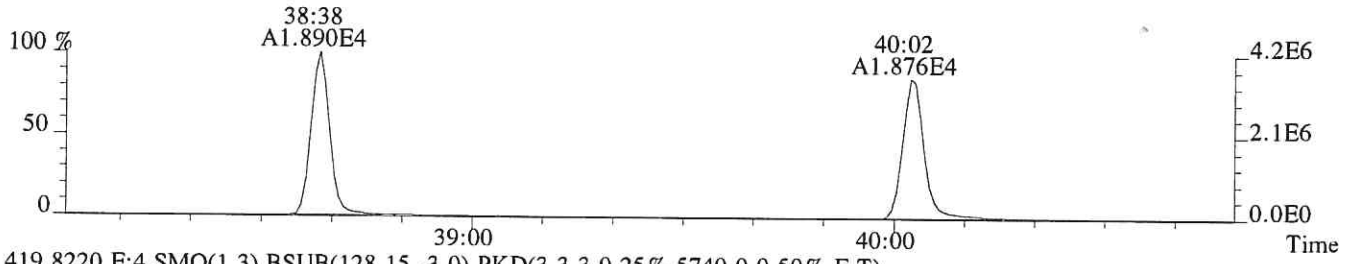
File:P520053 #1-250 Acq:18-JAN-2019 11:39:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-001
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1700.0,0.50%,F,T)



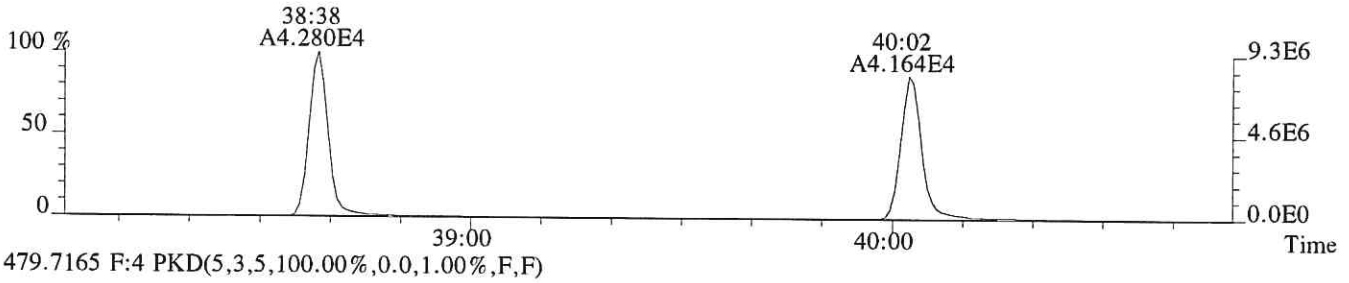
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3088.0,0.50%,F,T)



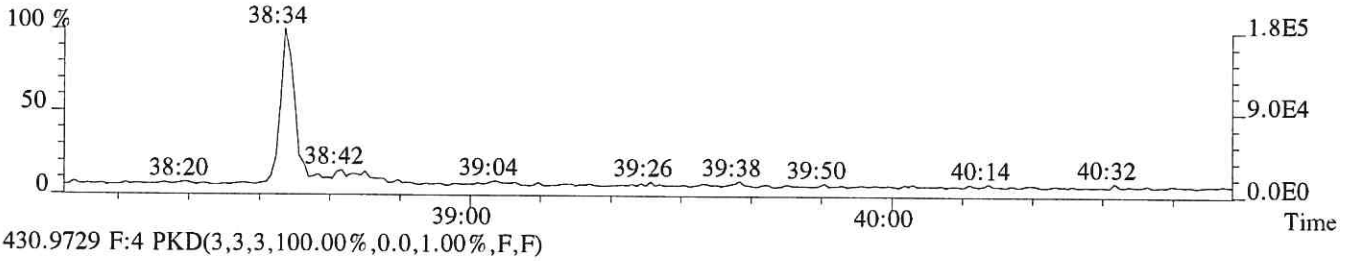
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3824.0,0.50%,F,T)



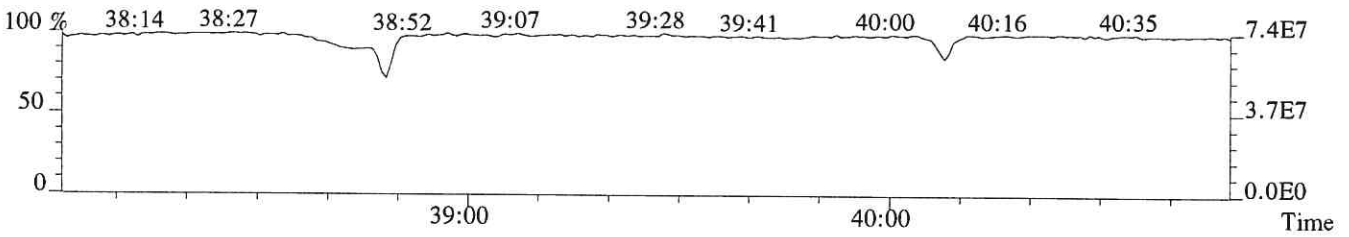
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5740.0,0.50%,F,T)



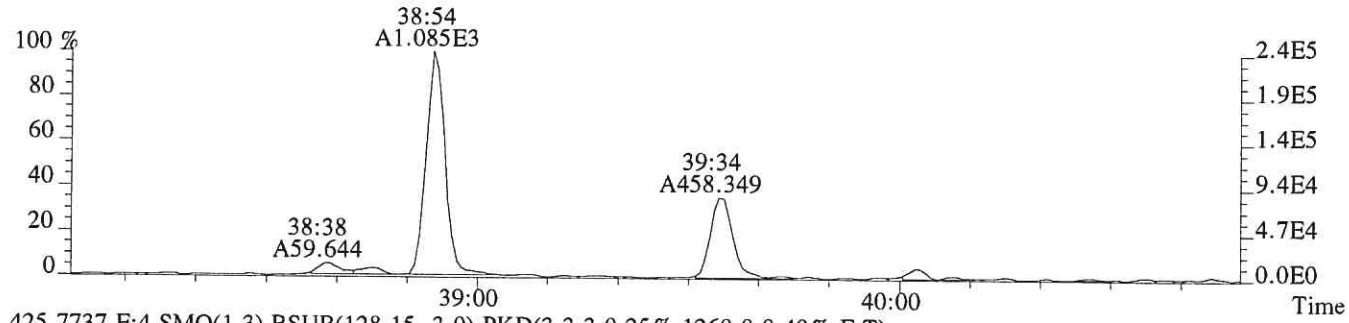
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



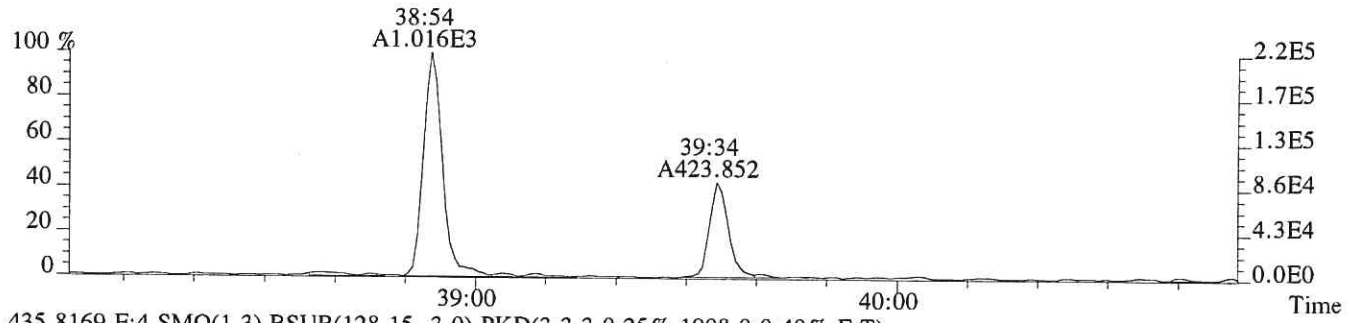
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



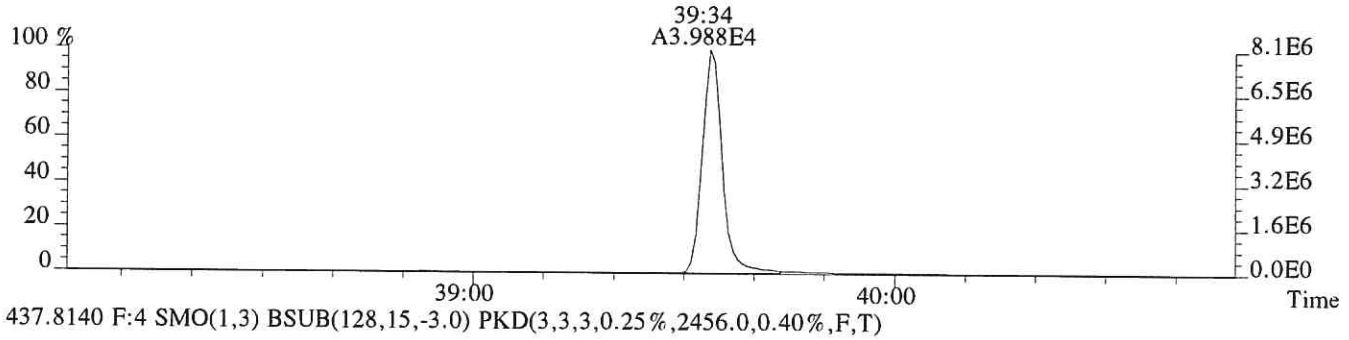
File:P520053 #1-250 Acq:18-JAN-2019 11:39:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-001
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1696.0,0.40%,F,T)



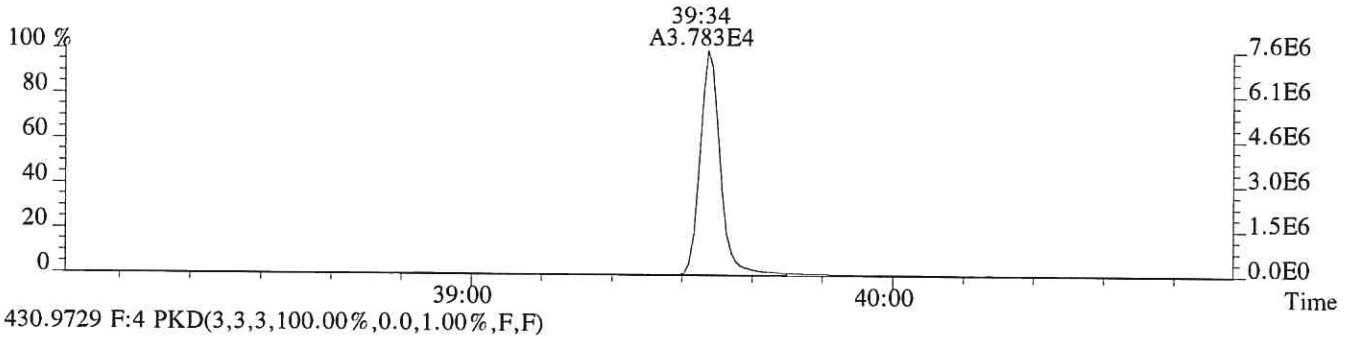
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1260.0,0.40%,F,T)



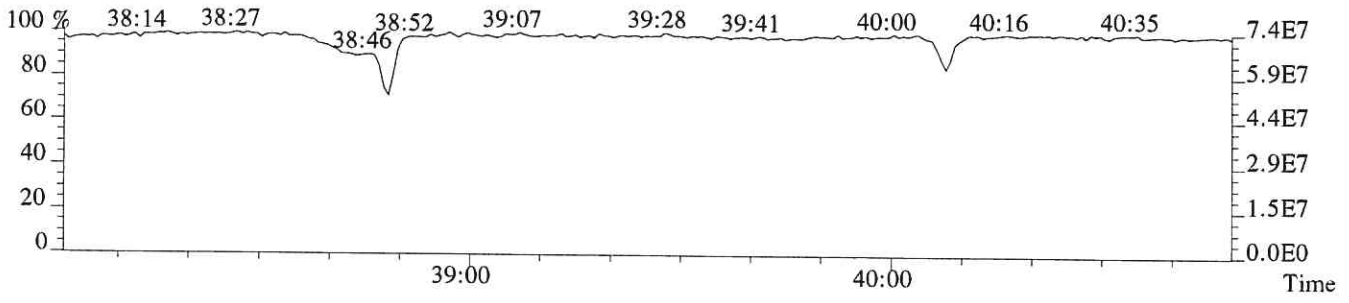
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1908.0,0.40%,F,T)



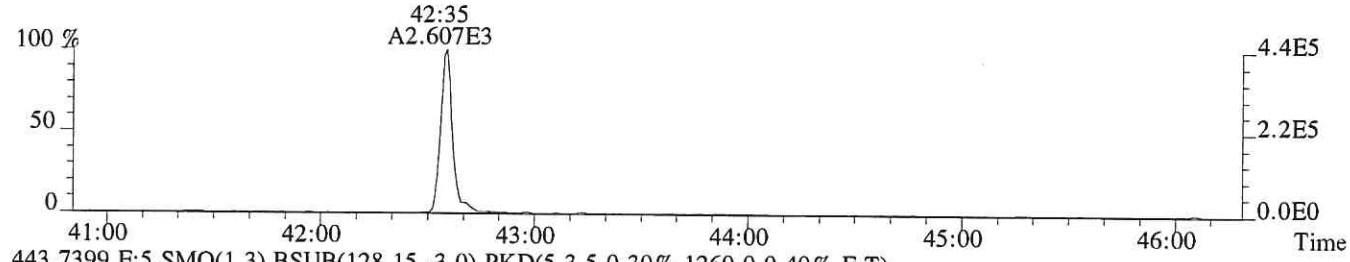
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2456.0,0.40%,F,T)



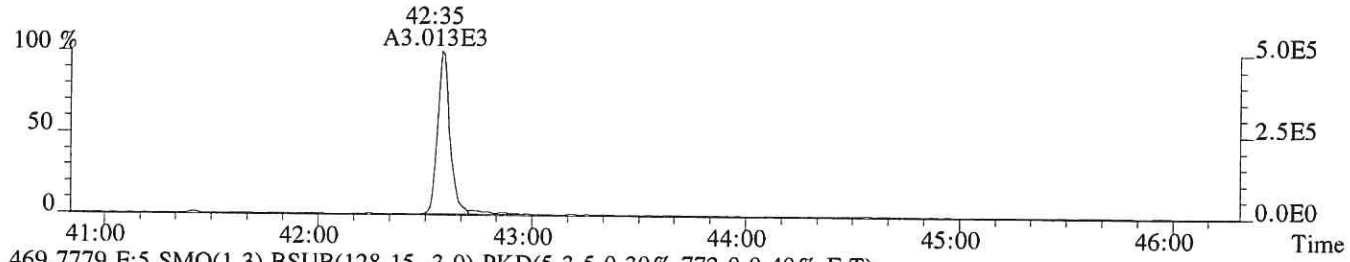
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



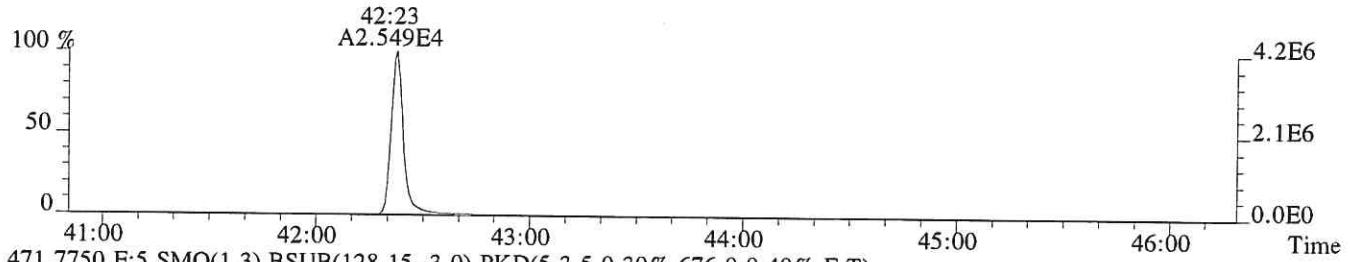
File:P520053 #1-493 Acq:18-JAN-2019 11:39:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-001
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,492.0,0.40%,F,T)



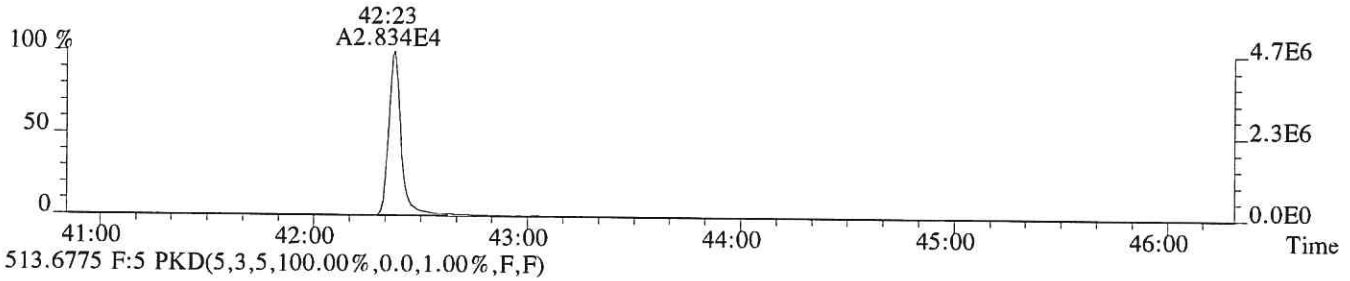
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1260.0,0.40%,F,T)



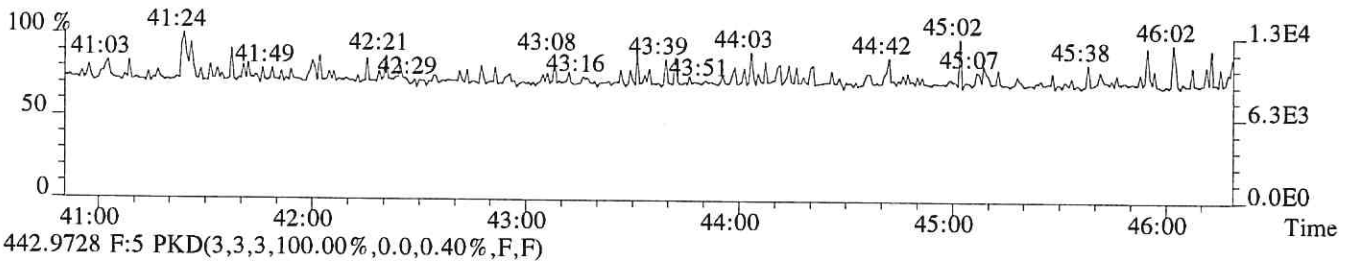
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,772.0,0.40%,F,T)



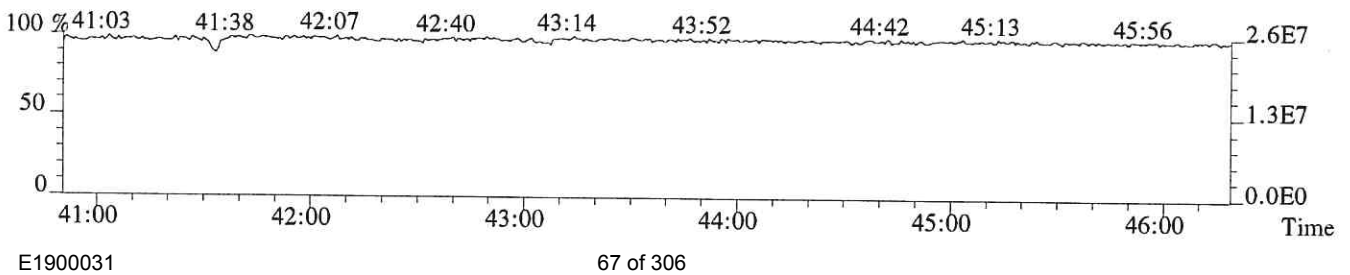
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,676.0,0.40%,F,T)



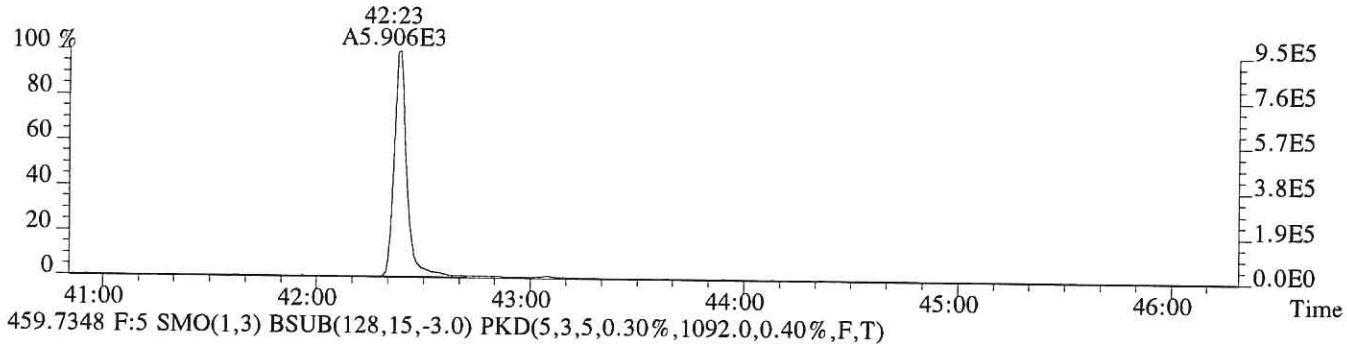
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



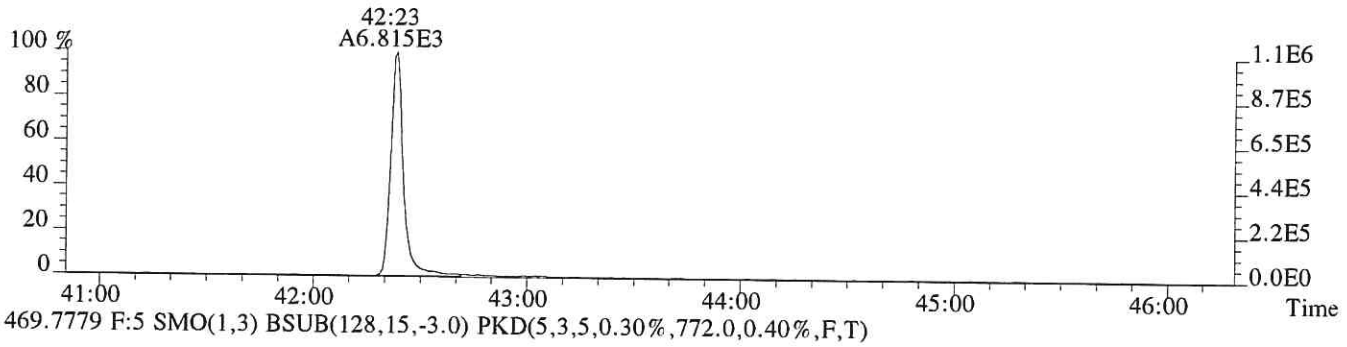
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



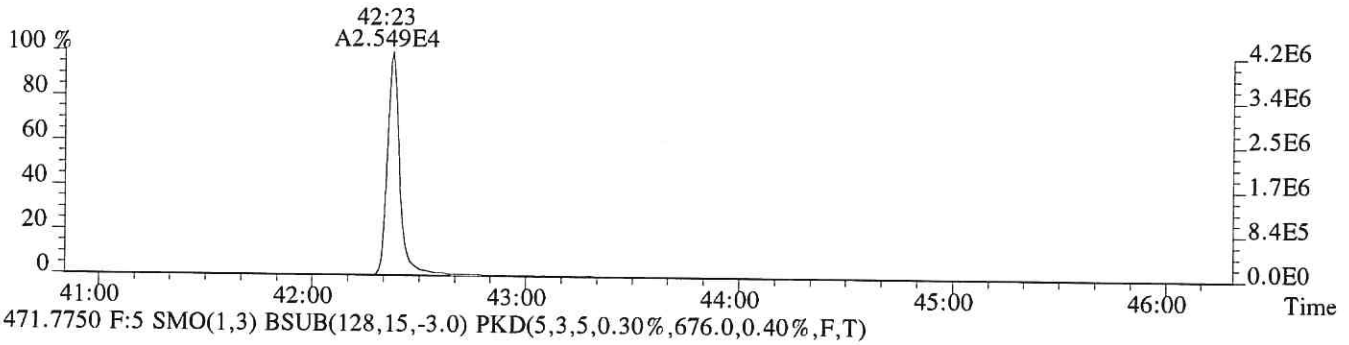
File:P520053 #1-493 Acq:18-JAN-2019 11:39:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-001
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,412.0,0.40%,F,T)



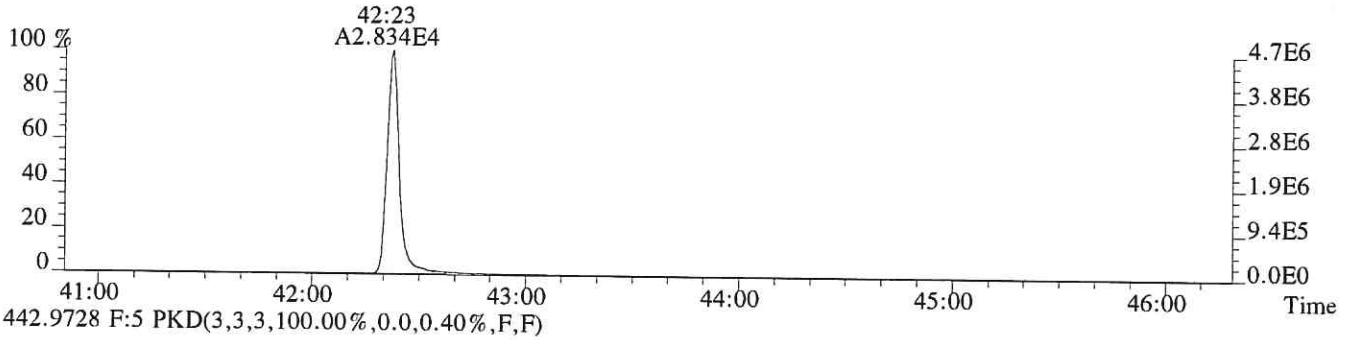
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1092.0,0.40%,F,T)



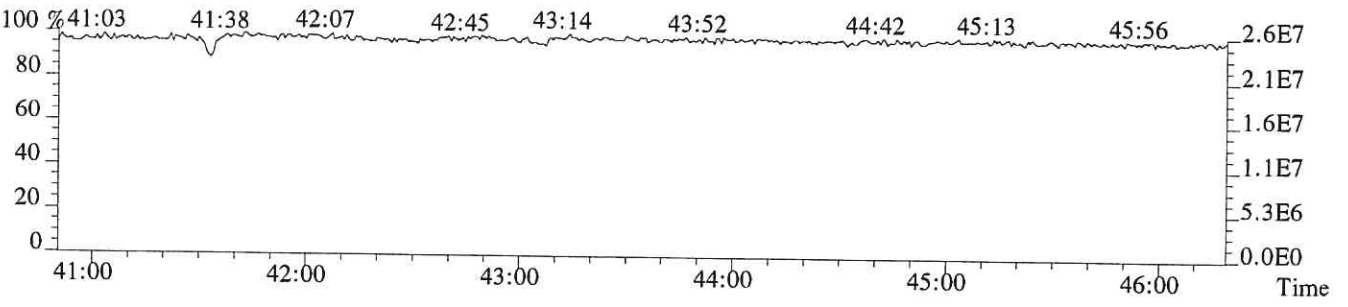
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,772.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,676.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0557

Run #12 Filename P520054 Samp: 1 Inj: 1 Acquired: 18-JAN-19 12:27:28
Processed: 21-JAN-19 09:19:58 Sample ID: E1900031-002

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:16	1.052e+03	1.398e+03	0.75	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:28	1.173e+02	4.929e+01	2.38	no	yes	1.012
3	Unk	2,3,4,7,8-PeCDF	33:21	1.134e+02	7.603e+01	1.49	yes	yes	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:02	1.450e+02	1.293e+02	1.12	yes	yes	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:09	4.097e+01	5.248e+01	0.78	no	yes	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:39	4.753e+01	3.853e+01	1.23	yes	yes	1.110
7	Unk	1,2,3,7,8,9-HxCDF	NotFnd	*	*	*	no	yes	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:38	7.143e+01	8.440e+01	0.85	no	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:02	2.773e+01	2.572e+01	1.08	yes	no	1.258
10	Unk	OCDF	42:35	5.135e+01	7.641e+01	0.67	no	yes	1.359
11	Unk	2,3,7,8-TCDD	29:03	2.373e+02	3.606e+02	0.66	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:38	2.618e+01	3.809e+01	0.69	no	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	NotFnd	*	*	*	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	NotFnd	*	*	*	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:35	1.308e+02	1.115e+02	1.17	yes	no	1.025
17	Unk	OCDD	42:23	1.681e+03	1.940e+03	0.87	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:15	4.914e+04	6.262e+04	0.78	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:26	8.475e+04	5.351e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:20	7.763e+04	4.860e+04	1.60	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:01	3.429e+04	6.604e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:07	3.817e+04	7.280e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:37	3.606e+04	6.790e+04	0.53	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:23	3.212e+04	6.120e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:38	2.150e+04	4.869e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:02	2.198e+04	4.979e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:01	2.369e+04	2.984e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:38	5.924e+04	3.768e+04	1.57	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:45	4.953e+04	3.909e+04	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	36:51	4.781e+04	3.701e+04	1.29	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:34	4.782e+04	4.541e+04	1.05	yes	no	0.858
32	IS	13C-OCDD	42:23	3.409e+04	3.847e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:28	6.547e+04	8.221e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:05	8.535e+04	6.809e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:03	3.599e+04				no	1.014

$$\text{OCDD} = \frac{(1.681e+03 + 1.940e+03) \times 4000\ \text{pg} \times 1}{(3.409e+04 + 3.847e+04) \times 10.247\ \text{g} \times 82.5 / 100 \times 1.118} = 21.1202\ \text{ng/kg}$$

LCA 1/22/19

ALS ENVIRONMENTAL -- HOUSTON HRMS
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0557

Run #12 Filename P520054 Samp: 1 Inj: 1 Acquired: 18-JAN-19 12:27:28
Processed: 21-JAN-19 09:19:58 LAB. ID: E1900031-002

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.75e+05	1.05e+03	1.7e+02	2.30e+05	1.92e+03	1.2e+02
2	1,2,3,7,8-PeCDF	1.94e+04	2.43e+03	8.0e+00	8.62e+03	2.70e+03	3.2e+00
3	2,3,4,7,8-PeCDF	1.91e+04	2.43e+03	7.9e+00	1.24e+04	2.70e+03	4.6e+00
4	1,2,3,4,7,8-HxCDF	3.04e+04	1.41e+03	2.2e+01	2.72e+04	7.20e+02	3.8e+01
5	1,2,3,6,7,8-HxCDF	8.90e+03	1.41e+03	6.3e+00	1.07e+04	7.20e+02	1.5e+01
6	2,3,4,6,7,8-HxCDF	8.83e+03	1.41e+03	6.3e+00	6.93e+03	7.20e+02	9.6e+00
7	1,2,3,7,8,9-HxCDF	*	1.41e+03	*	*	7.20e+02	*
8	1,2,3,4,6,7,8-HpCDF	1.37e+04	1.87e+03	7.3e+00	1.88e+04	8.24e+02	2.3e+01
9	1,2,3,4,7,8,9-HpCDF	5.56e+03	1.87e+03	3.0e+00	5.81e+03	8.24e+02	7.1e+00
10	OCDF	8.87e+03	6.00e+02	1.5e+01	1.09e+04	1.46e+03	7.5e+00
11	2,3,7,8-TCDD	4.72e+04	2.82e+03	1.7e+01	6.80e+04	1.70e+03	4.0e+01
12	1,2,3,7,8-PeCDD	6.77e+03	1.71e+03	4.0e+00	8.06e+03	1.25e+03	6.5e+00
13	1,2,3,4,7,8-HxCDD	*	1.23e+03	*	*	1.22e+03	*
14	1,2,3,6,7,8-HxCDD	*	1.23e+03	*	*	1.22e+03	*
15	1,2,3,7,8,9-HxCDD	*	1.23e+03	*	*	1.22e+03	*
16	1,2,3,4,6,7,8-HpCDD	2.56e+04	8.48e+02	3.0e+01	2.46e+04	6.68e+02	3.7e+01
17	OCDD	2.68e+05	8.60e+02	3.1e+02	3.25e+05	1.21e+03	2.7e+02
18	13C-2,3,7,8-TCDF	9.50e+06	4.96e+03	1.9e+03	1.21e+07	3.71e+03	3.3e+03
19	13C-1,2,3,7,8-PeCDF	1.66e+07	2.17e+03	7.7e+03	1.05e+07	1.84e+03	5.7e+03
20	13C-2,3,4,7,8-PeCDF	1.59e+07	2.17e+03	7.3e+03	9.95e+06	1.84e+03	5.4e+03
21	13C-1,2,3,4,7,8-HxCDF	7.44e+06	1.18e+03	6.3e+03	1.45e+07	2.07e+03	7.0e+03
22	13C-1,2,3,6,7,8-HxCDF	8.21e+06	1.18e+03	6.9e+03	1.56e+07	2.07e+03	7.6e+03
23	13C-2,3,4,6,7,8-HxCDF	7.91e+06	1.18e+03	6.7e+03	1.49e+07	2.07e+03	7.2e+03
24	13C-1,2,3,7,8,9-HxCDF	6.62e+06	1.18e+03	5.6e+03	1.27e+07	2.07e+03	6.1e+03
25	13C-1,2,3,4,6,7,8-HpCDF	4.57e+06	5.25e+03	8.7e+02	1.02e+07	4.30e+03	2.4e+03
26	13C-1,2,3,4,7,8,9-HpCDF	4.22e+06	5.25e+03	8.0e+02	9.41e+06	4.30e+03	2.2e+03
27	13C-2,3,7,8-TCDD	4.64e+06	6.27e+03	7.4e+02	5.97e+06	2.69e+03	2.2e+03
28	13C-1,2,3,7,8-PeCDD	1.18e+07	1.12e+03	1.1e+04	7.58e+06	1.41e+03	5.4e+03
29	13C-1,2,3,4,7,8-HxCDD	1.13e+07	3.08e+03	3.7e+03	8.90e+06	1.86e+03	4.8e+03
30	13C-1,2,3,6,7,8-HxCDD	1.02e+07	3.08e+03	3.3e+03	7.95e+06	1.86e+03	4.3e+03
31	13C-1,2,3,4,6,7,8-HpCDD	9.62e+06	1.93e+03	5.0e+03	9.15e+06	1.25e+03	7.3e+03
32	13C-OCDD	5.55e+06	3.92e+02	1.4e+04	6.29e+06	6.92e+02	9.1e+03
33	13C-1,2,3,4-TCDD	1.29e+07	6.27e+03	2.1e+03	1.63e+07	2.69e+03	6.1e+03
34	13C-1,2,3,7,8,9-HxCDD	1.80e+07	3.08e+03	5.8e+03	1.44e+07	1.86e+03	7.7e+03
35	37Cl-2,3,7,8-TCDD	7.23e+06	1.12e+03	6.4e+03			

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Peak List Summary

CLIENT ID.
SL0557

Entry: 36 Totals Name: Total Tetra-Furans

Run: 12 File: P520054 Sample:1 Injection:1 Function:1

Acquired: 18-JAN-19 12:27:28 Processed: 21-JAN-19 09:19:58

Mass: 303.9020 305.8990 Tot Response: 4.19e+03 RRF: 0.9417

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	26:20	6.74e+01	1.00e+02	0.67	yes	1.68e+02	n	n
2	26:56	4.19e+01	5.52e+01	0.76	yes	9.71e+01	n	n
3	27:02	9.14e+01	1.20e+02	0.76	yes	2.12e+02	n	n
4	27:28	5.64e+02	7.00e+02	0.81	yes	1.26e+03	n	n
5	28:16	1.05e+03	1.40e+03	0.75	yes	2.45e+03	2,3,7,8-TCDF	n	n

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Peak List Summary

CLIENT ID.
SL0557

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 12 File: P520054 Sample:1 Injection:1 Function:1

Acquired: 18-JAN-19 12:27:28 Processed: 21-JAN-19 09:19:58

Mass: 319.8970 321.8940 Tot Response: 5.98e+02 RRF: 1.085

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:03	2.37e+02	3.61e+02 0.66	yes	5.98e+02	2,3,7,8-TCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0557

Entry: 39 Totals Name: Total Penta-Furans2

Run: 12 File: P520054 Sample:1 Injection:1 Function:2

Acquired: 18-JAN-19 12:27:28 Processed: 21-JAN-19 09:19:58

Mass: 339.8600 341.8570 Tot Response: 1.89e+02 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:21	1.13e+02	7.60e+01 1.49	yes	1.89e+02	2,3,4,7,8-PeCDF	n	y

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0557

Entry: 41 Totals Name: Total Hexa-Furans

Run: 12 File: P520054 Sample:1 Injection:1 Function:3

Acquired: 18-JAN-19 12:27:28 Processed: 21-JAN-19 09:19:58

Mass: 373.8210 375.8180 Tot Response: 4.18e+02 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:55	1.60e+01	1.16e+01	1.38	yes	2.76e+01		y	y
2	35:57	1.74e+01	1.32e+01	1.32	yes	3.05e+01		y	y
3	36:02	1.45e+02	1.29e+02	1.12	yes	2.74e+02	1,2,3,4,7,8-HxCDF	y	y
4	36:39	4.75e+01	3.85e+01	1.23	yes	8.61e+01	2,3,4,6,7,8-HxCDF	y	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0557

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 12 File: P520054 Sample:1 Injection:1 Function:3

Acquired: 18-JAN-19 12:27:28 Processed: 21-JAN-19 09:19:58

Mass: 389.8160 391.8130 Tot Response: 3.37e+02 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	35:26	1.90e+02	1.48e+02 1.28	yes	3.37e+02		n	n

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Peak List Summary

CLIENT ID.
SL0557

Entry: 43 Totals Name: Total Hepta-Furans

Run: 12 File: P520054 Sample:1 Injection:1 Function:4

Acquired: 18-JAN-19 12:27:28 Processed: 21-JAN-19 09:19:58

Mass: 407.7820 409.7790 Tot Response: 5.34e+01 RRF: 1.308

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	40:02	2.77e+01	1.08	yes	5.34e+01	1,2,3,4,7,8,9-HpCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0557

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 12 File: P520054 Sample:1 Injection:1 Function:4

Acquired: 18-JAN-19 12:27:28 Processed: 21-JAN-19 09:19:58

Mass: 423.7770 425.7740 Tot Response: 1.15e+03 RRF: 1.025

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:54	4.84e+02	4.28e+02	1.13	yes	9.12e+02		n	n
2	39:35	1.31e+02	1.11e+02	1.17	yes	2.42e+02	1,2,3,4,6,7,8-HpCDD	n	n

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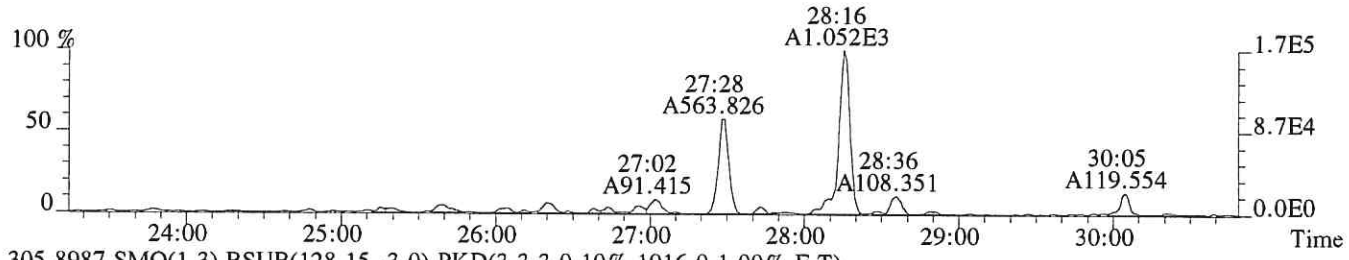
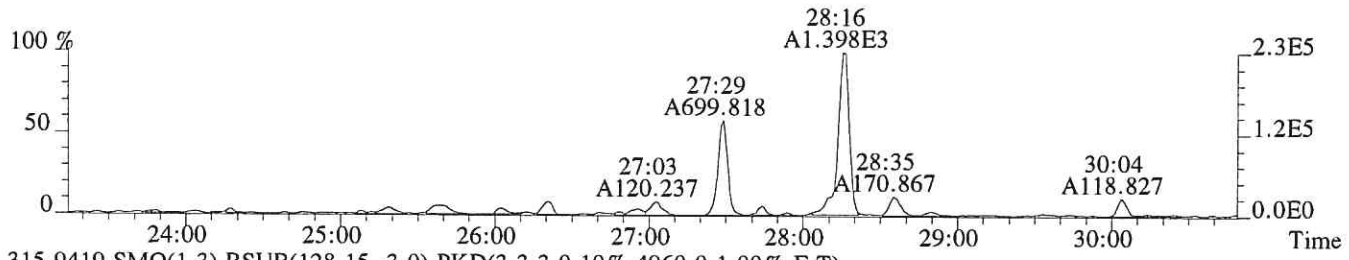
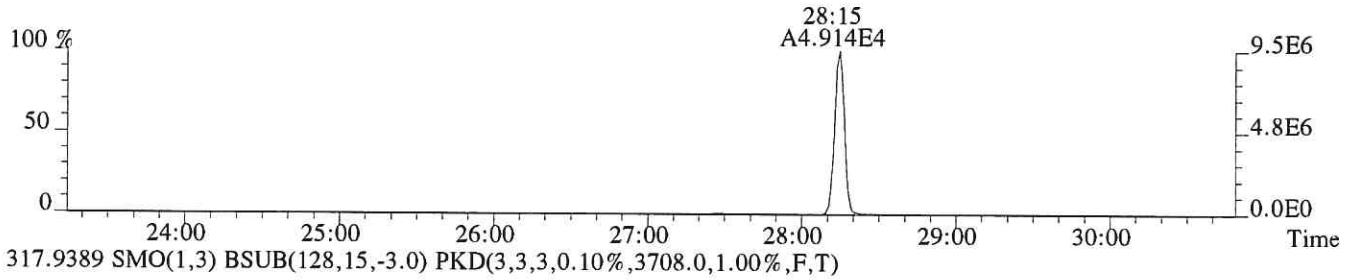
File:P520054 #1-538 Acq:18-JAN-2019 12:27:28 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-002
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1048.0,1.00%,F,T)



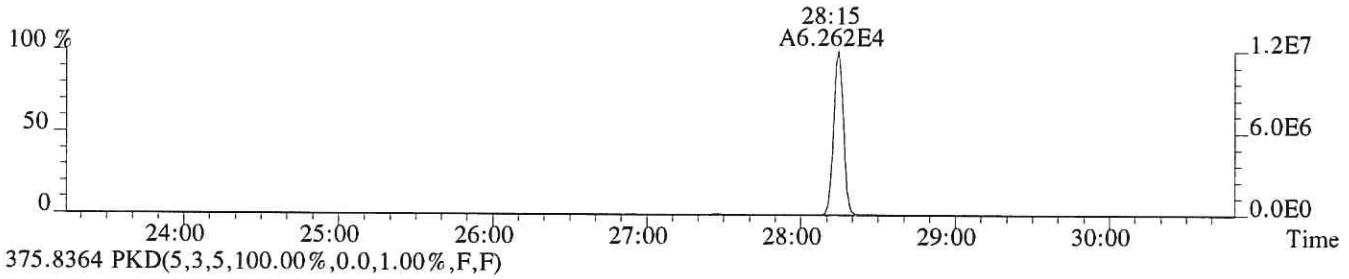
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1916.0,1.00%,F,T)



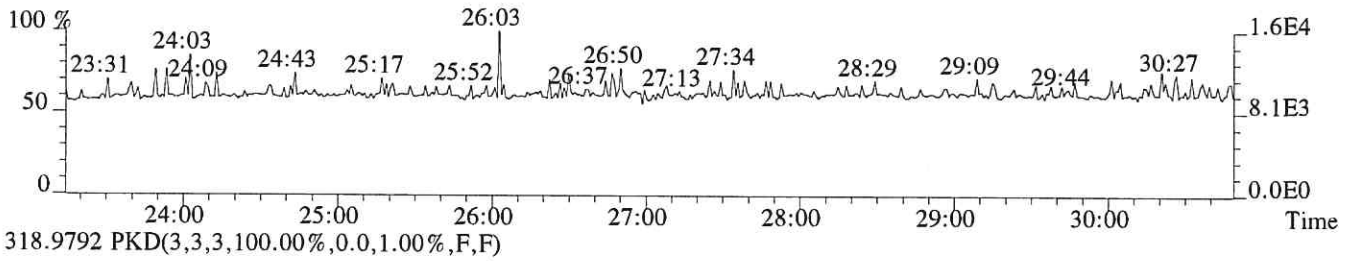
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4960.0,1.00%,F,T)



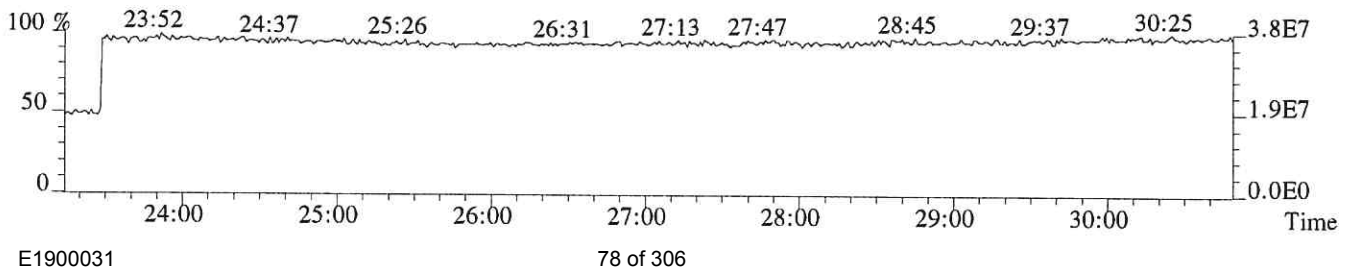
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3708.0,1.00%,F,T)



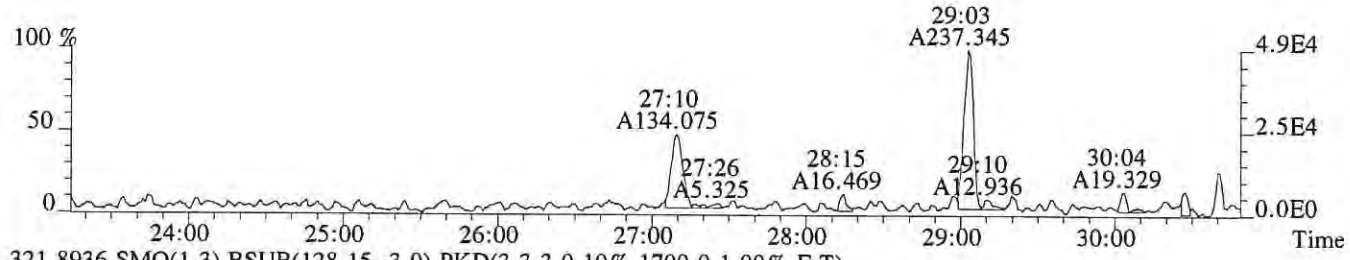
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



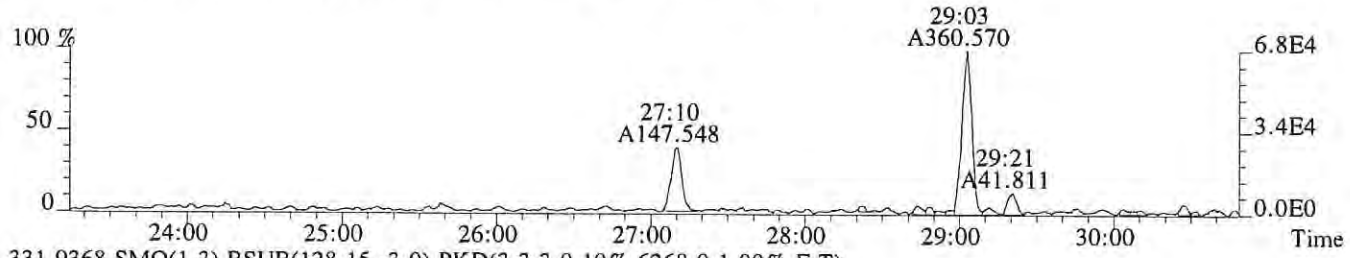
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



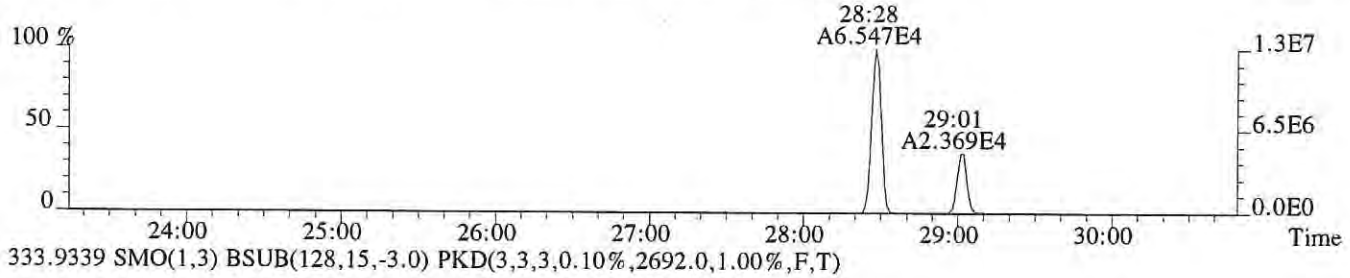
File:P520054 #1-538 Acq:18-JAN-2019 12:27:28 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-002
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2824.0,1.00%,F,T)



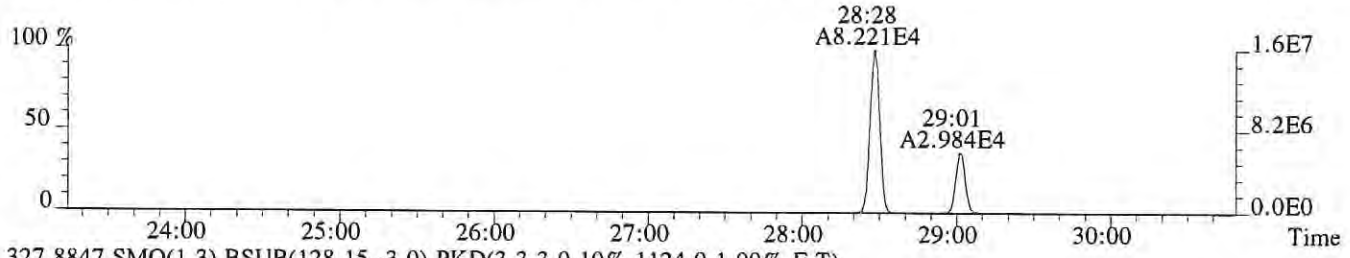
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1700.0,1.00%,F,T)



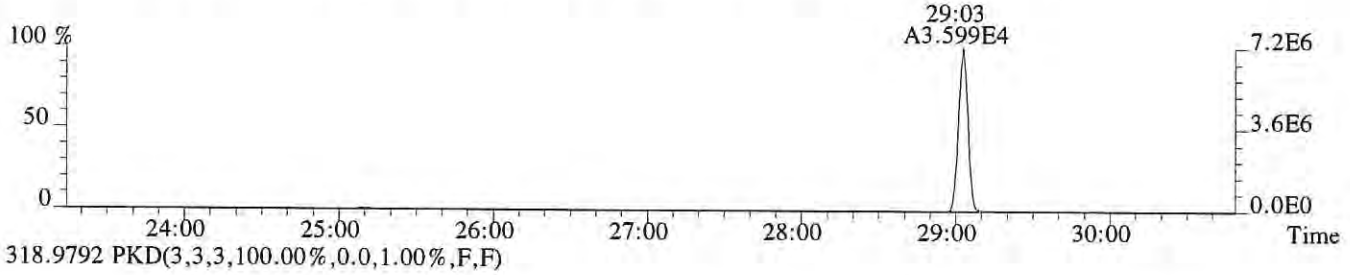
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6268.0,1.00%,F,T)



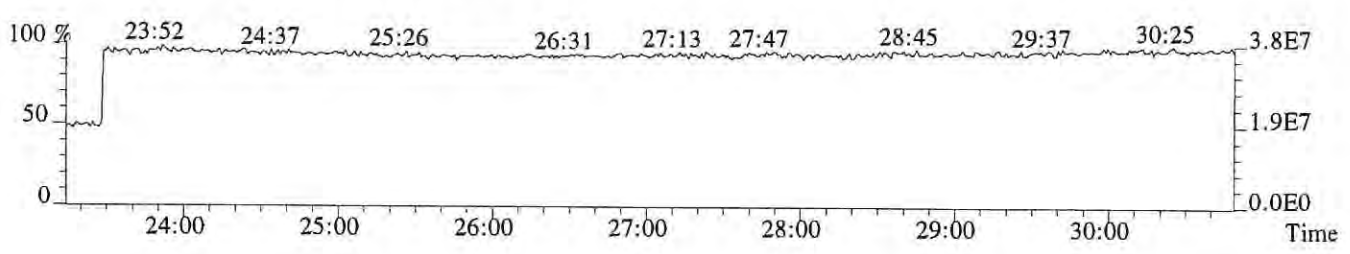
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2692.0,1.00%,F,T)



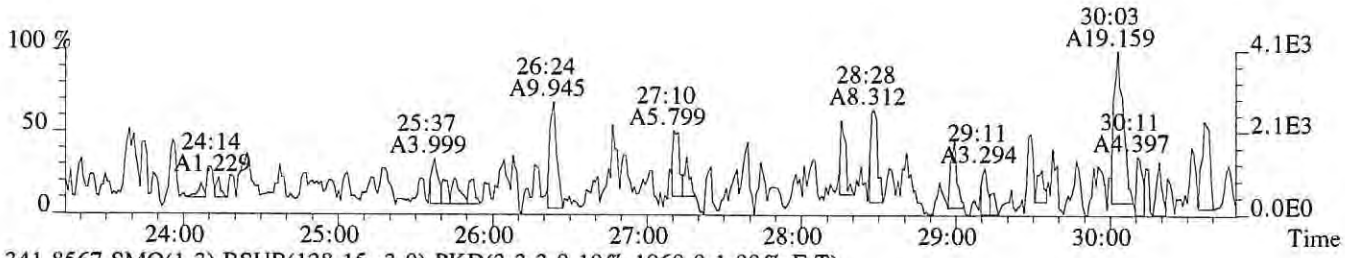
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1124.0,1.00%,F,T)



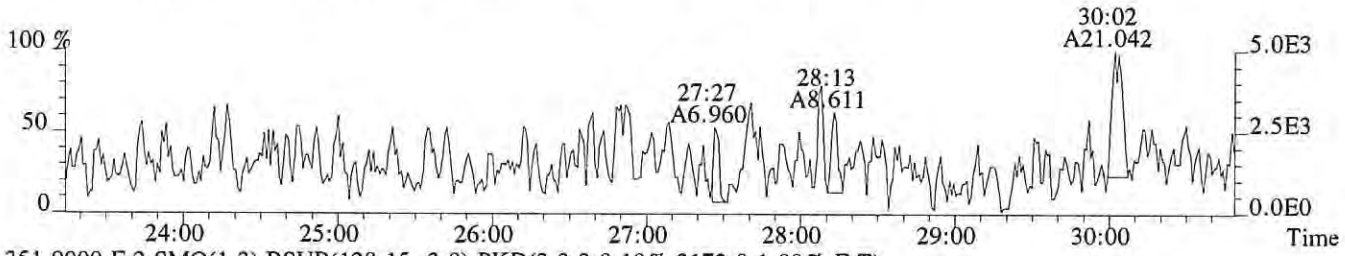
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



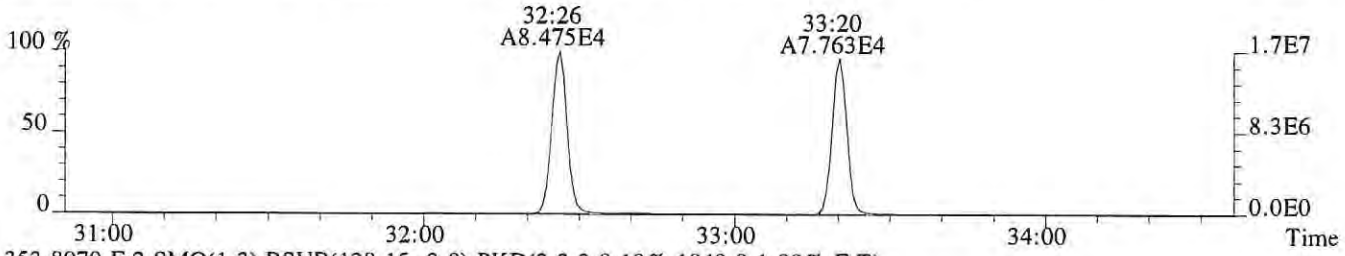
File:P520054 #1-538 Acq:18-JAN-2019 12:27:28 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-002
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,832.0,1.00%,F,T)



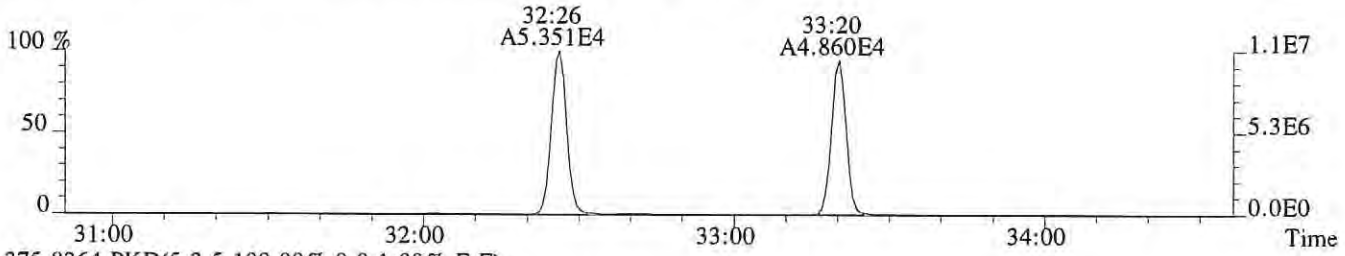
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1960.0,1.00%,F,T)



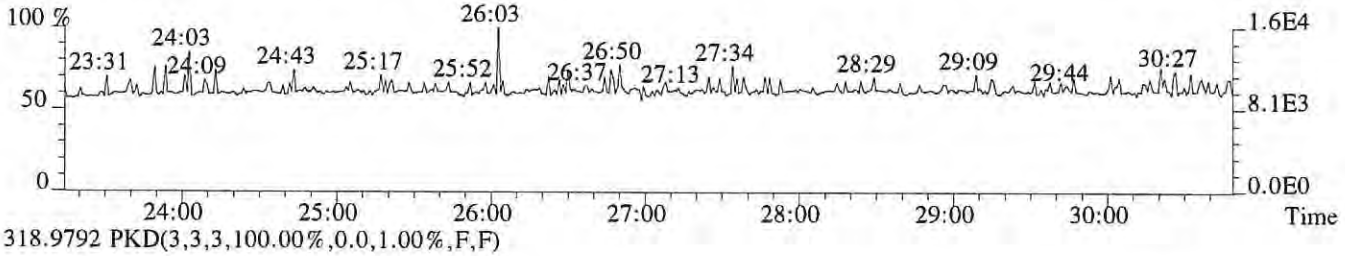
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2172.0,1.00%,F,T)



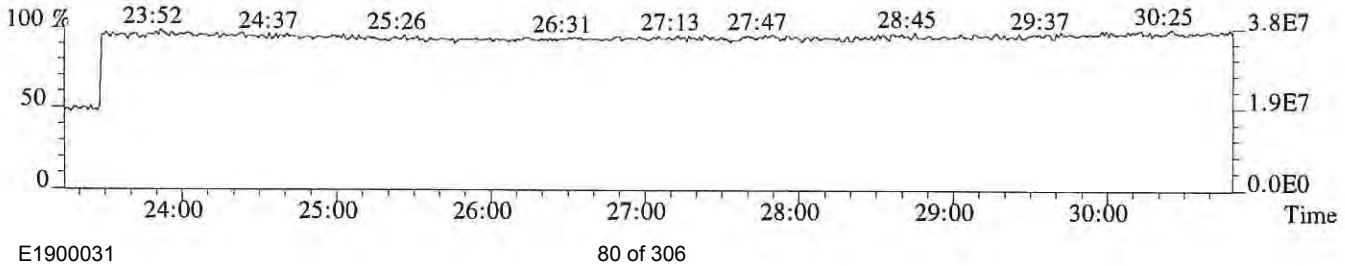
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1840.0,1.00%,F,T)



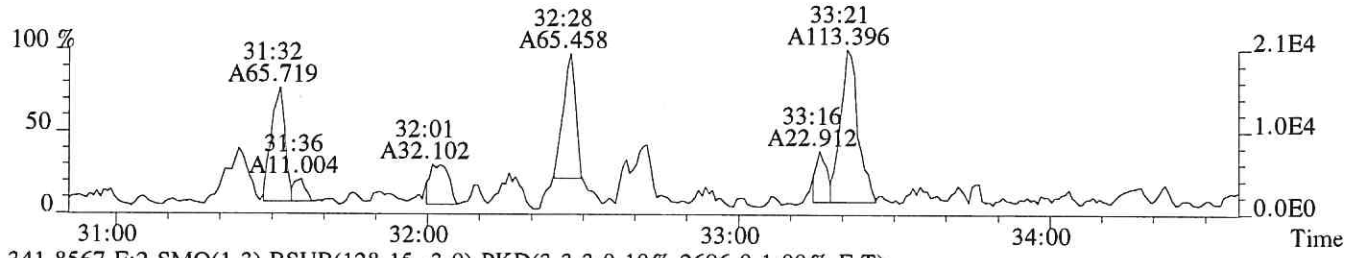
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



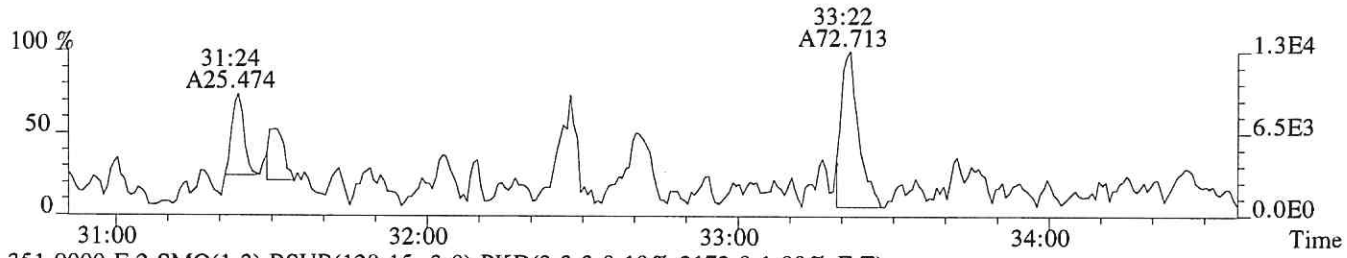
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



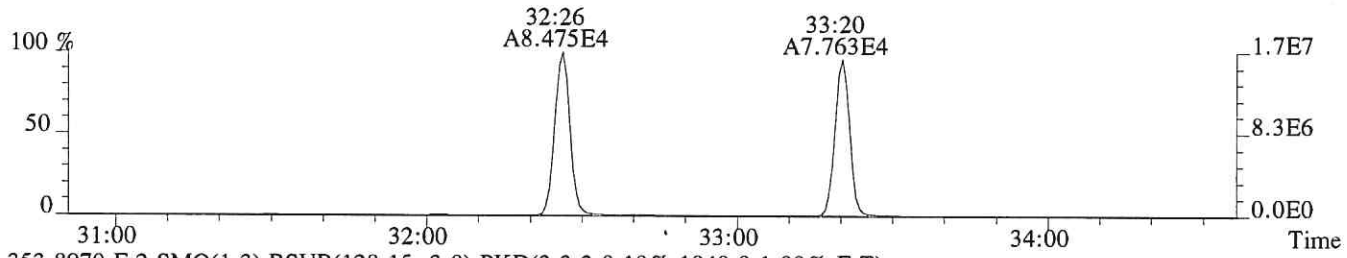
File:P520054 #1-339 Acq:18-JAN-2019 12:27:28 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-002
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2432.0,1.00%,F,T)



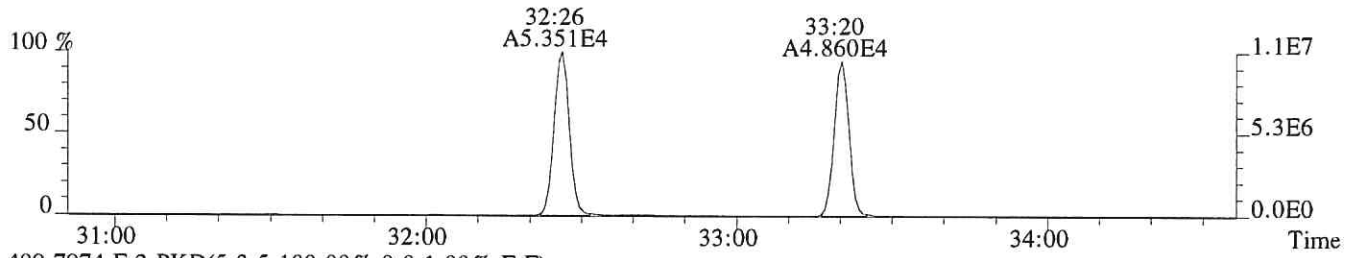
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2696.0,1.00%,F,T)



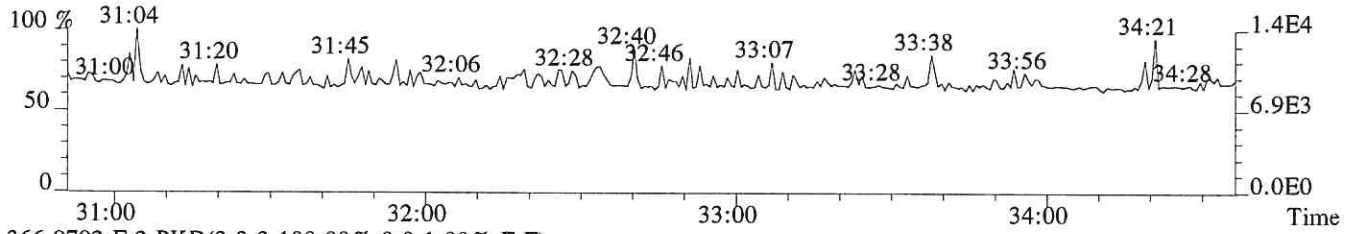
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2172.0,1.00%,F,T)



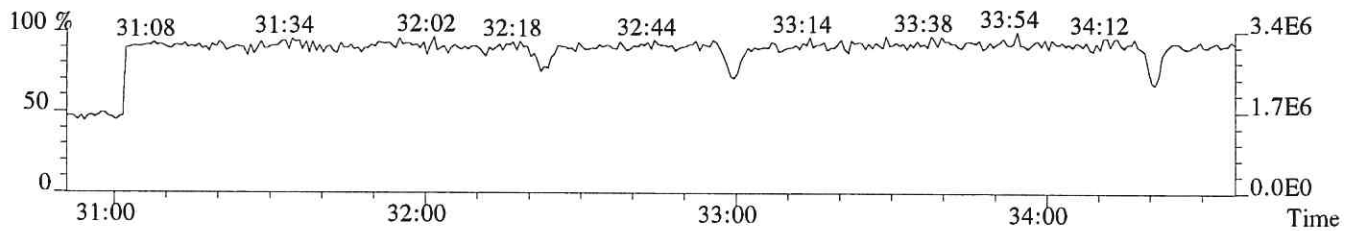
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1840.0,1.00%,F,T)



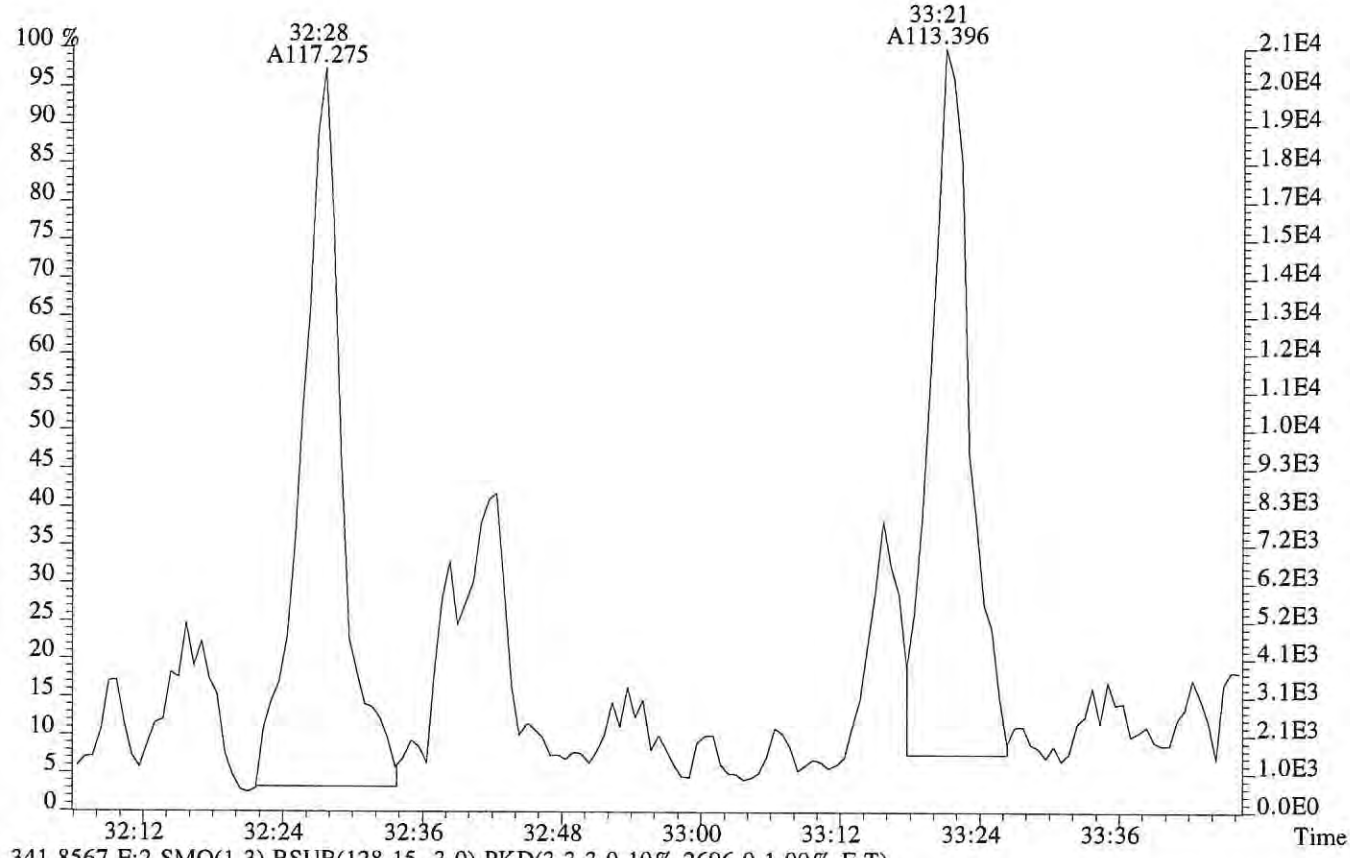
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



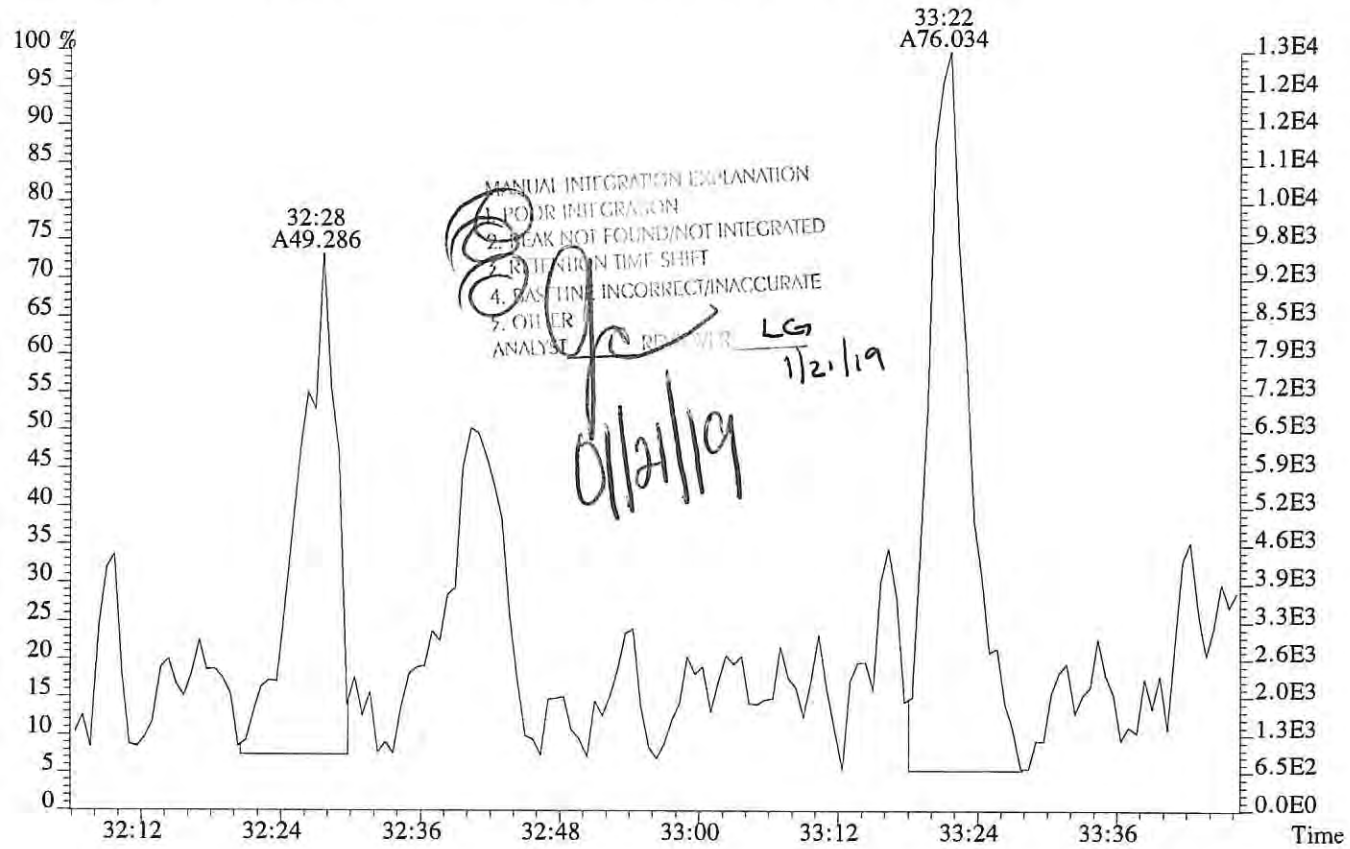
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P520054 #1-339 Acq:18-JAN-2019 12:27:28 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-002
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2432.0,1.00%,F,T)



341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2696.0,1.00%,F,T)

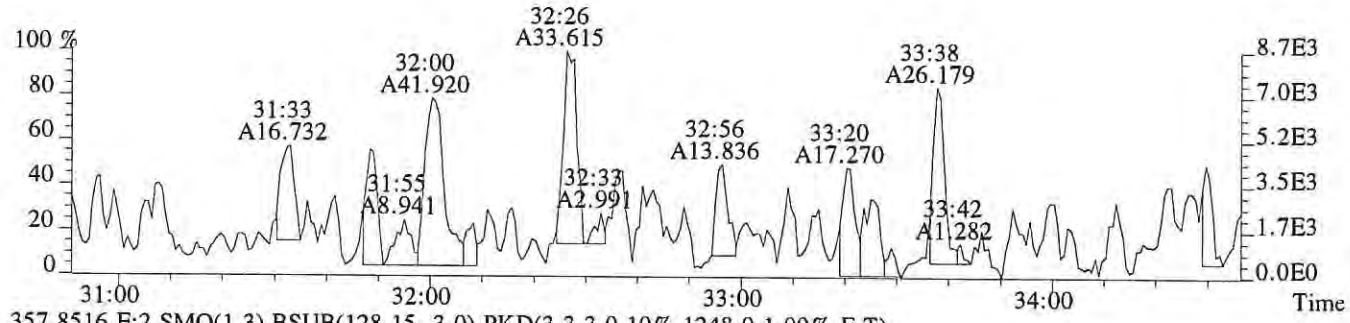


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER

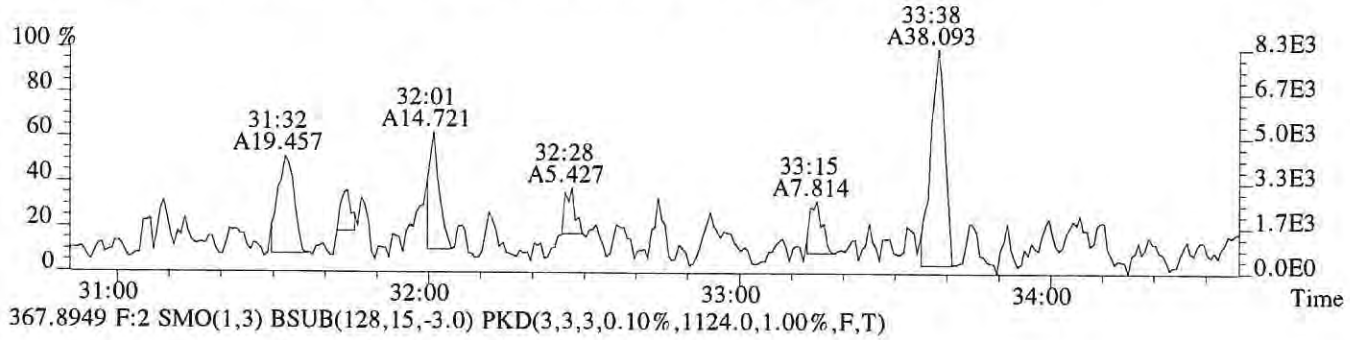
LG
1/21/19

01/21/19

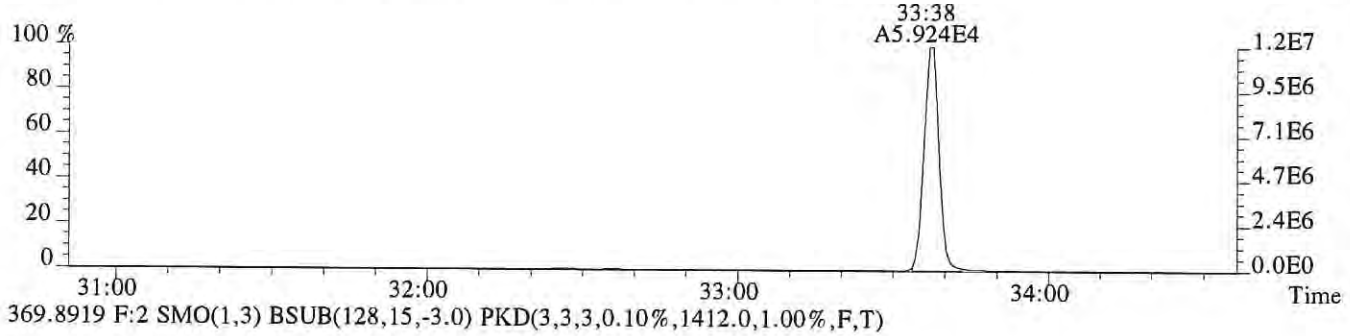
File:P520054 #1-339 Acq:18-JAN-2019 12:27:28 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-002
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1708.0,1.00%,F,T)



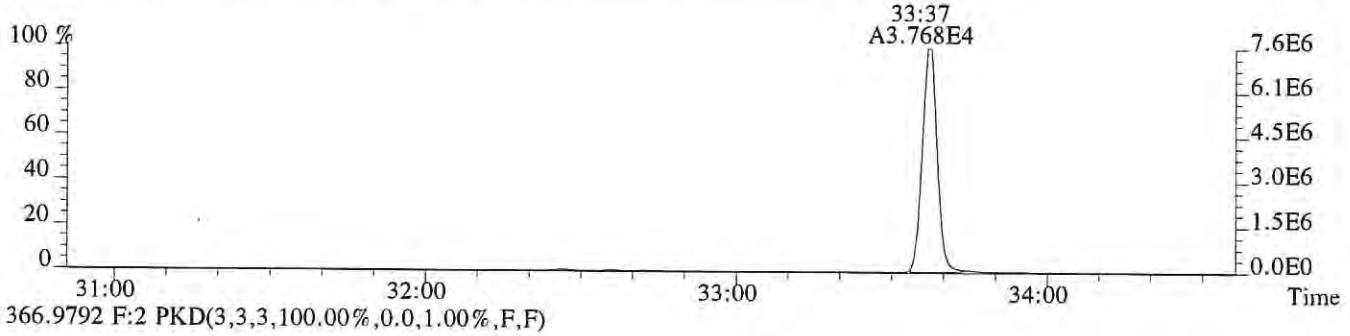
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1248.0,1.00%,F,T)



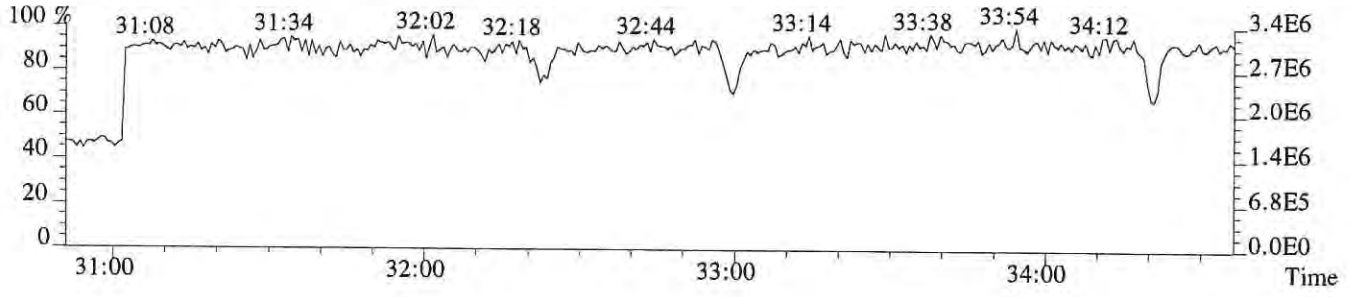
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1124.0,1.00%,F,T)



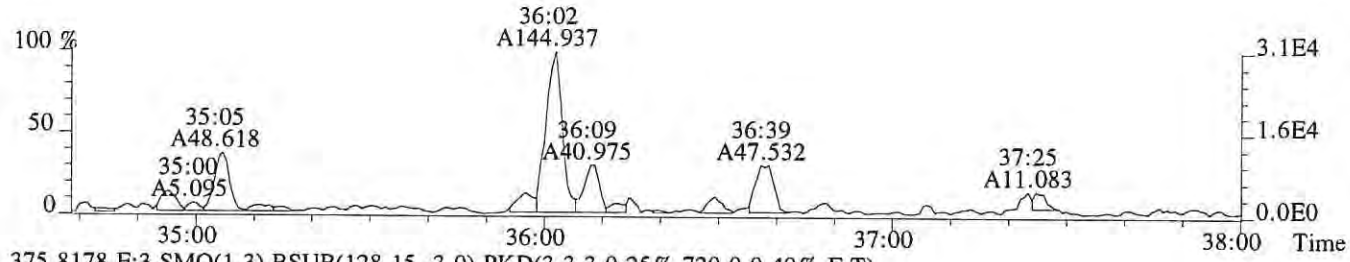
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1412.0,1.00%,F,T)



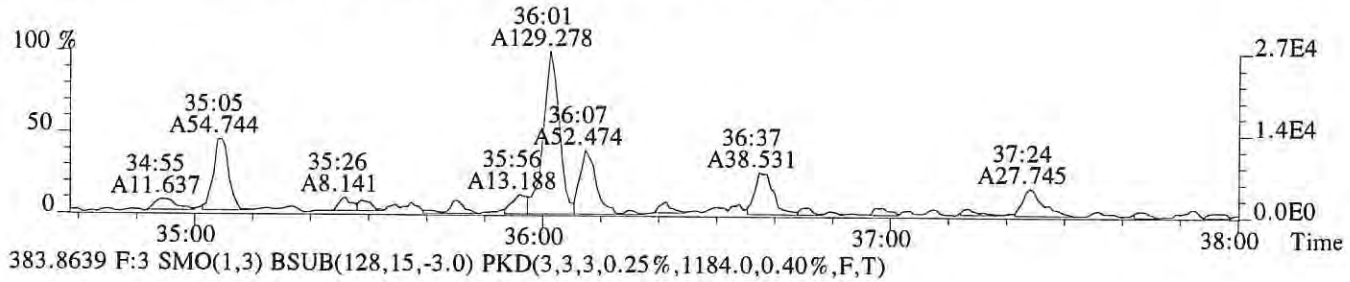
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



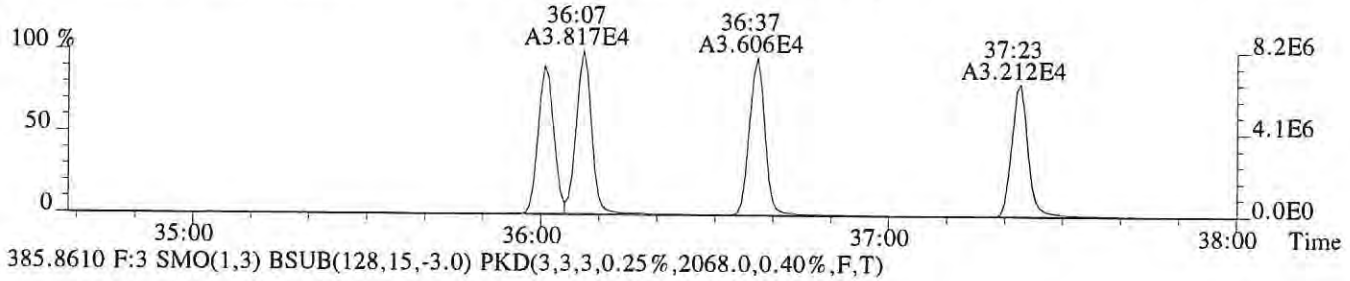
File:P520054 #1-303 Acq:18-JAN-2019 12:27:28 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-002
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1412.0,0.40%,F,T)



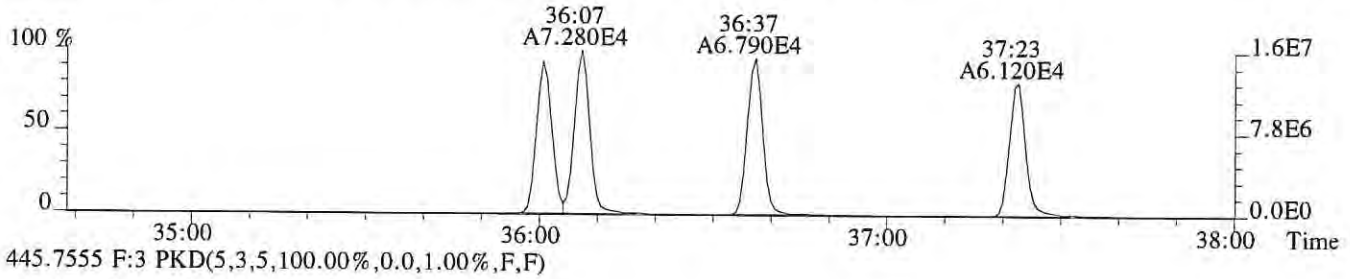
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,720.0,0.40%,F,T)



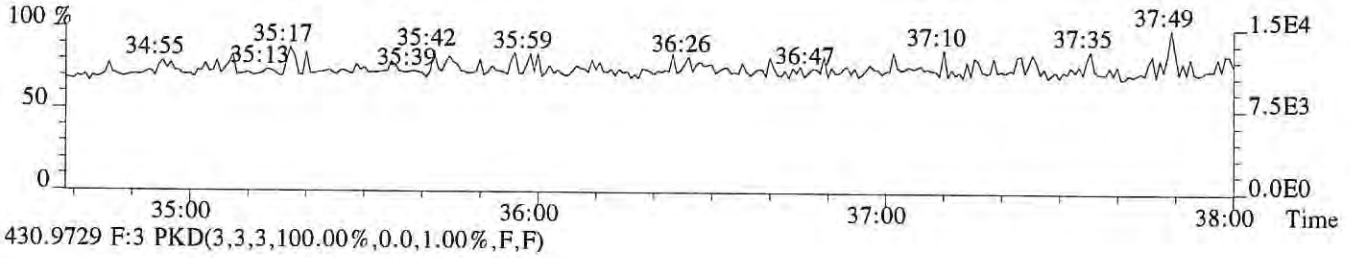
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1184.0,0.40%,F,T)



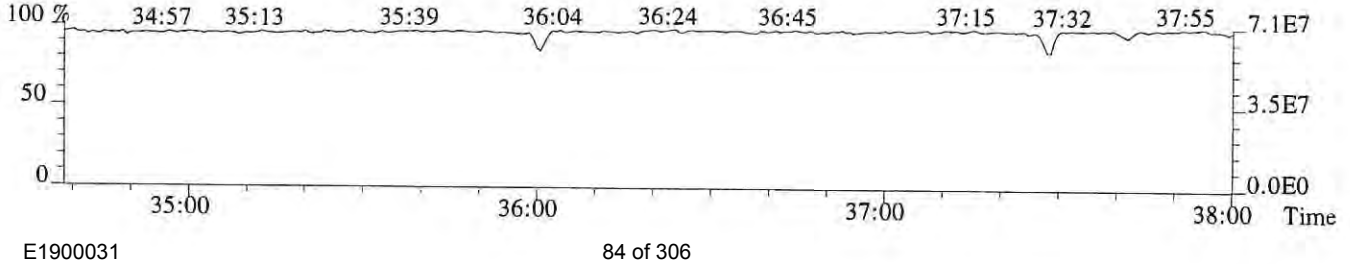
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2068.0,0.40%,F,T)



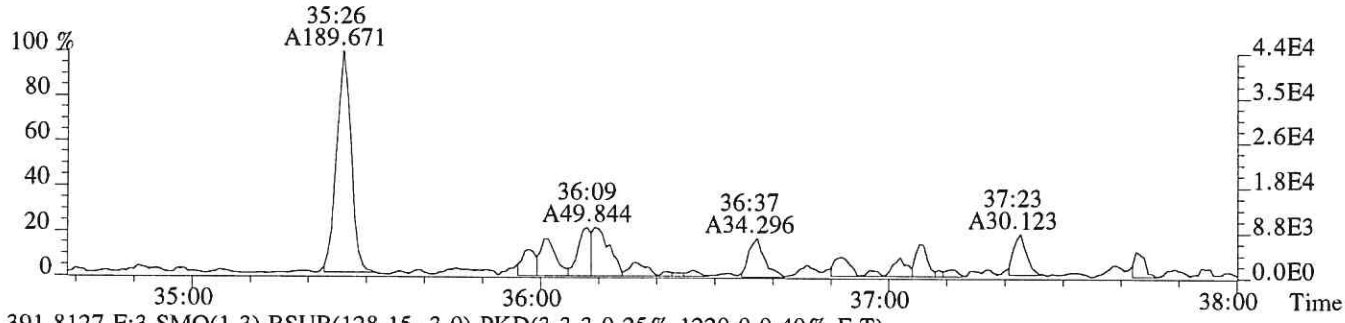
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



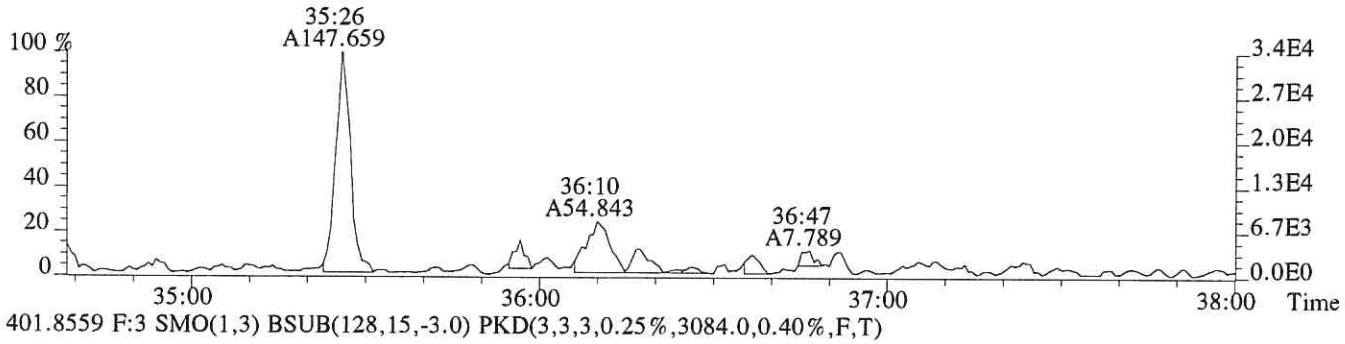
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



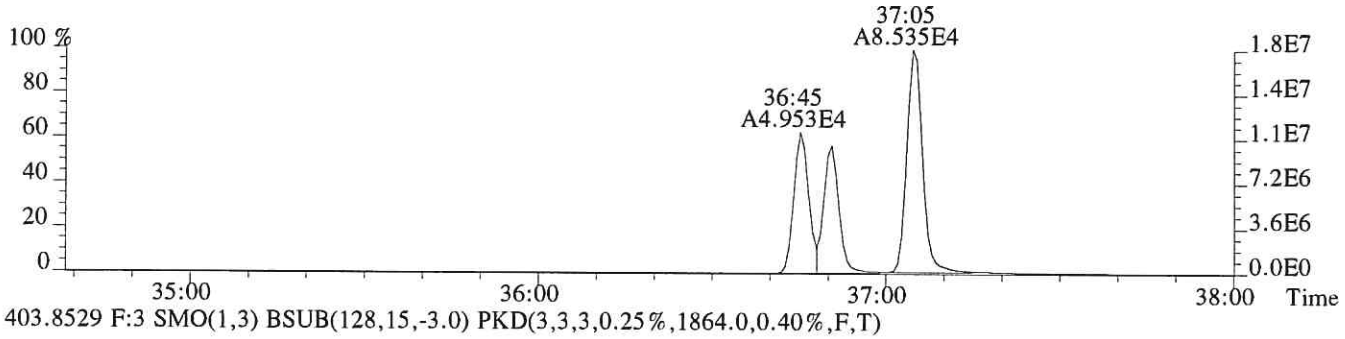
File:P520054 #1-303 Acq:18-JAN-2019 12:27:28 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-002
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1232.0,0.40%,F,T)



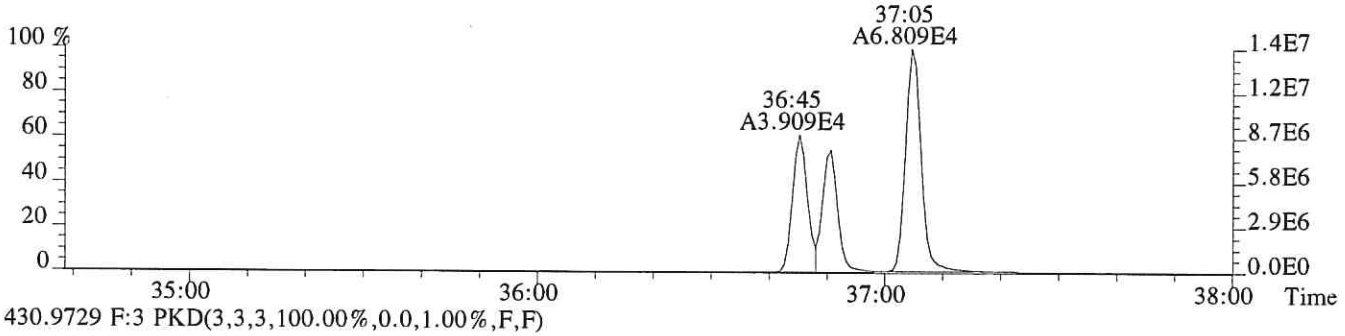
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1220.0,0.40%,F,T)



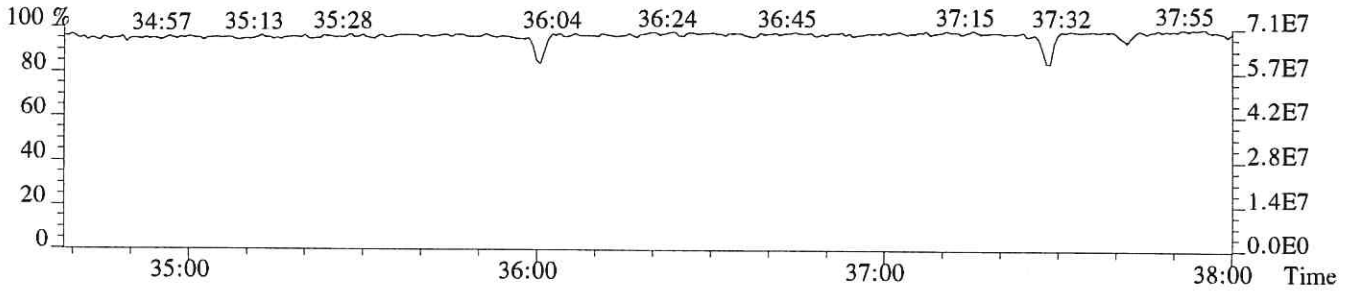
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3084.0,0.40%,F,T)



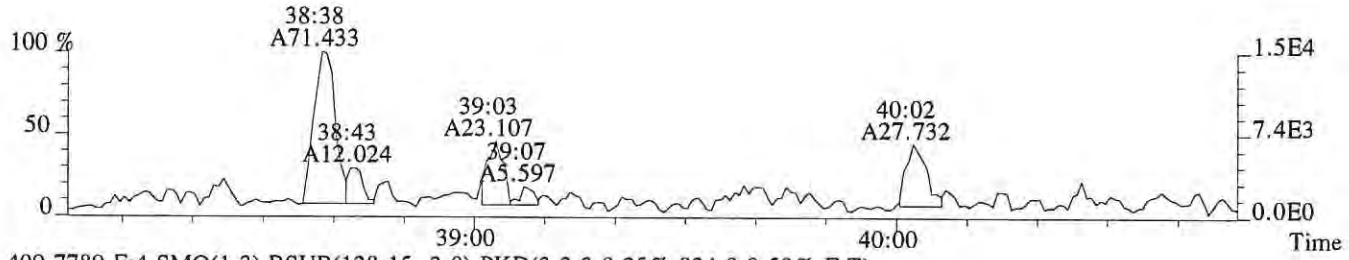
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1864.0,0.40%,F,T)



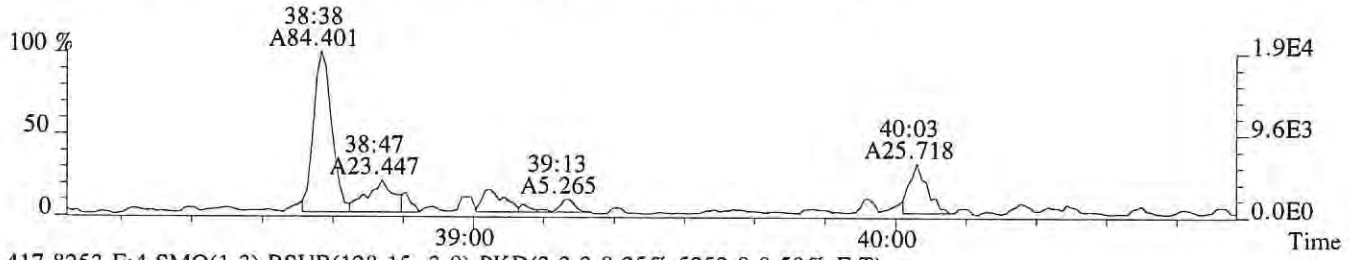
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



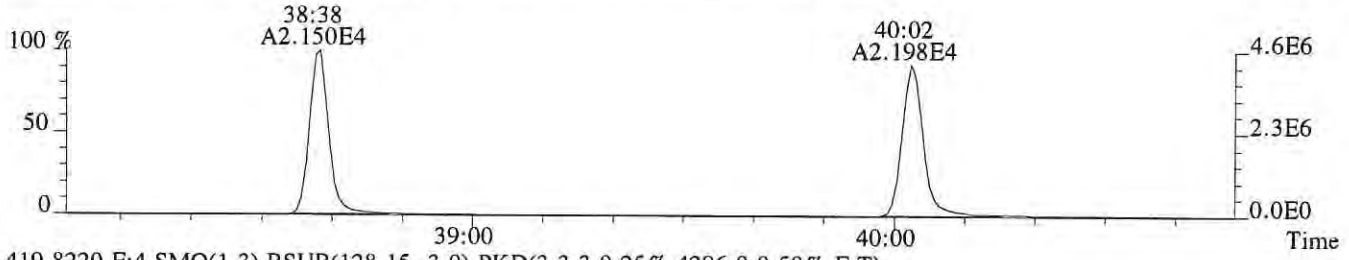
File:P520054 #1-250 Acq:18-JAN-2019 12:27:28 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-002
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1868.0,0.50%,F,T)



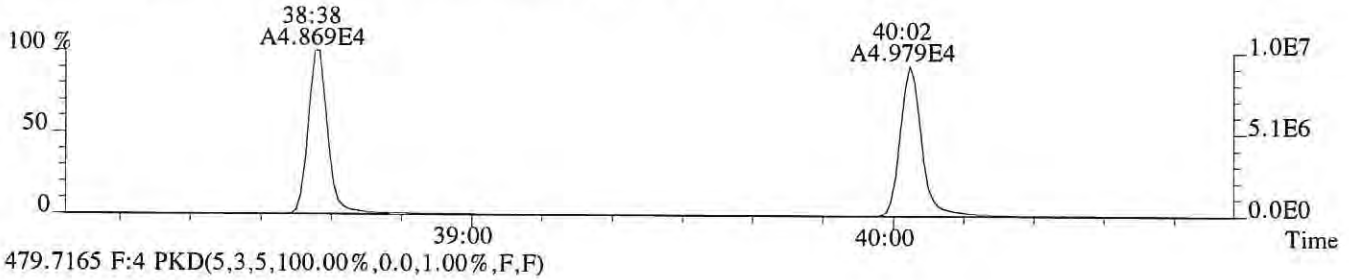
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,824.0,0.50%,F,T)



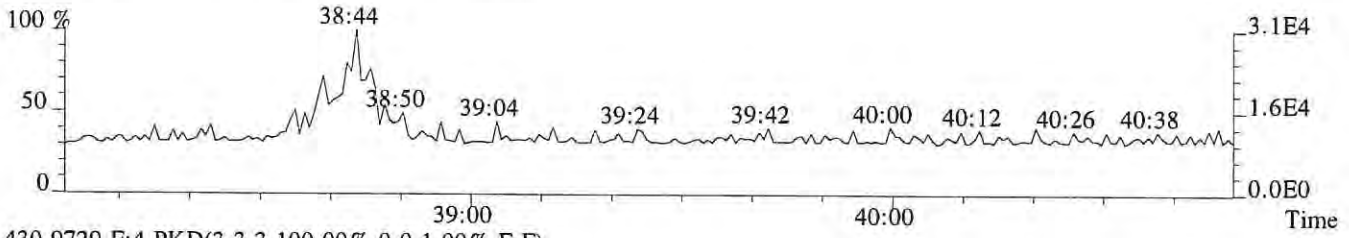
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5252.0,0.50%,F,T)



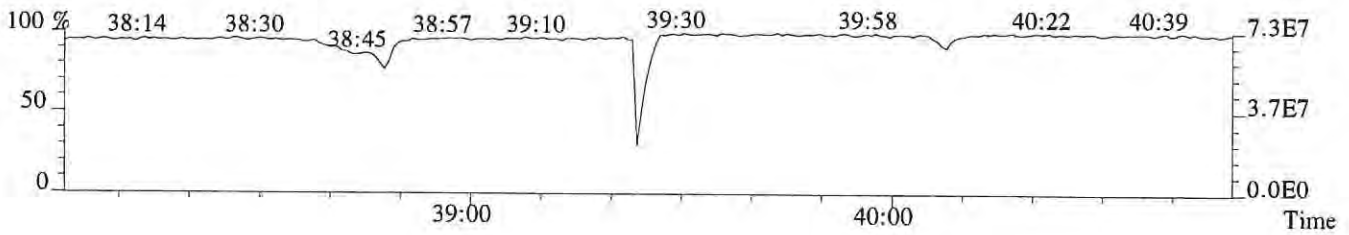
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4296.0,0.50%,F,T)



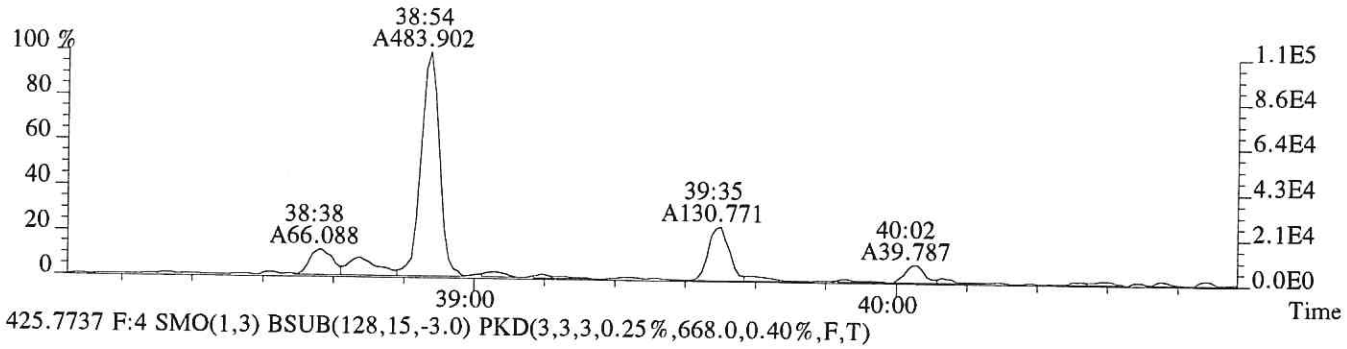
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



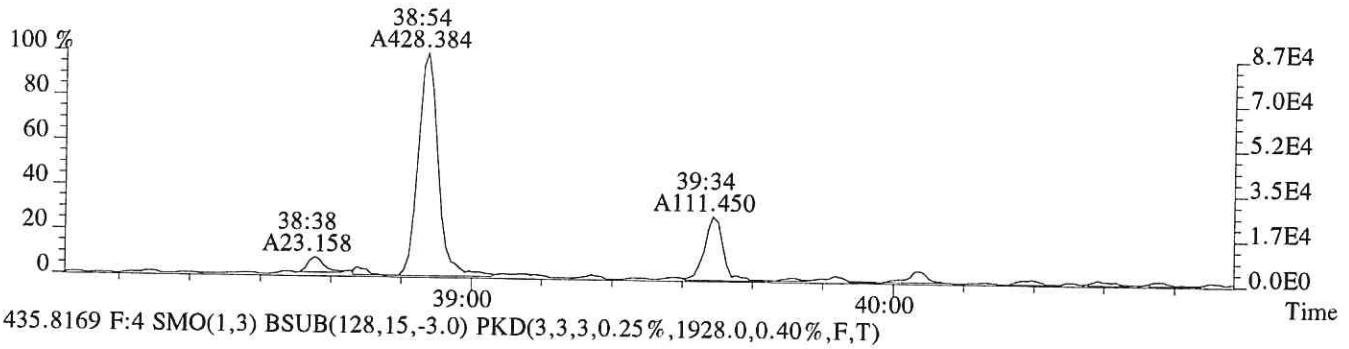
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



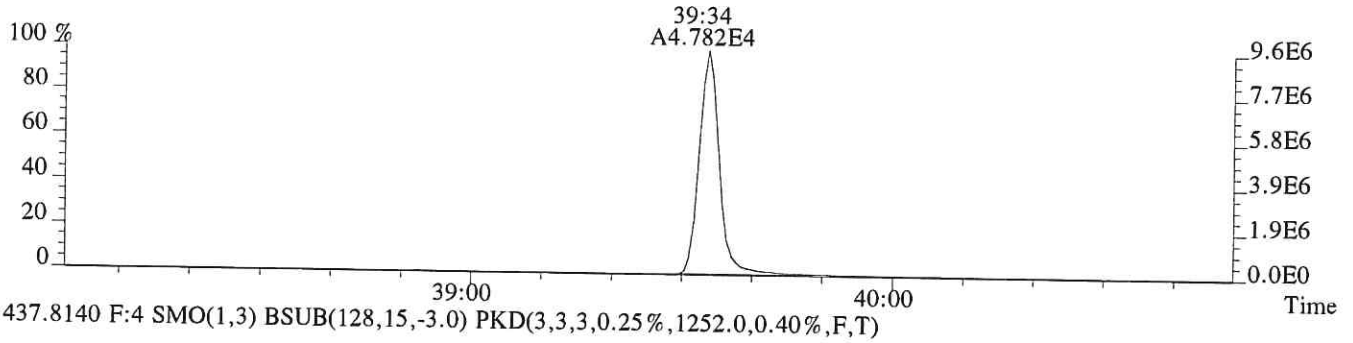
File:P520054 #1-250 Acq:18-JAN-2019 12:27:28 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-002
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,848.0,0.40%,F,T)



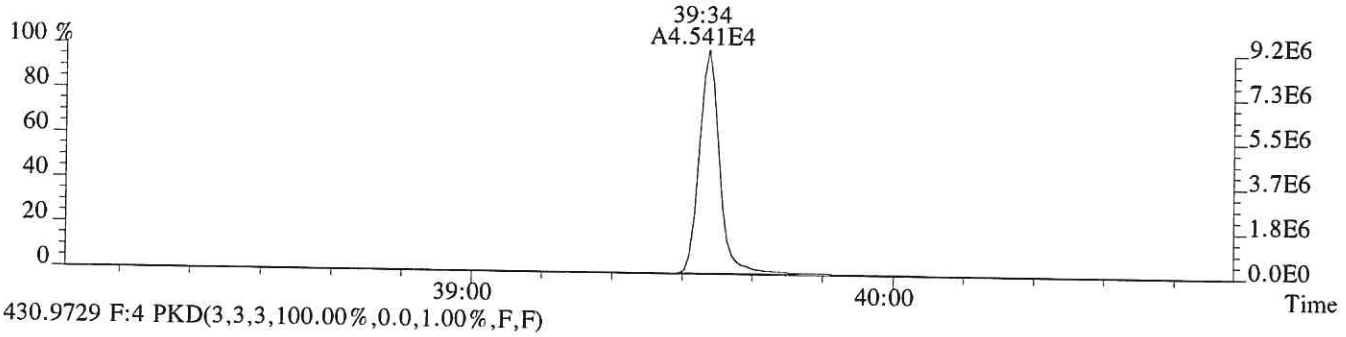
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,668.0,0.40%,F,T)



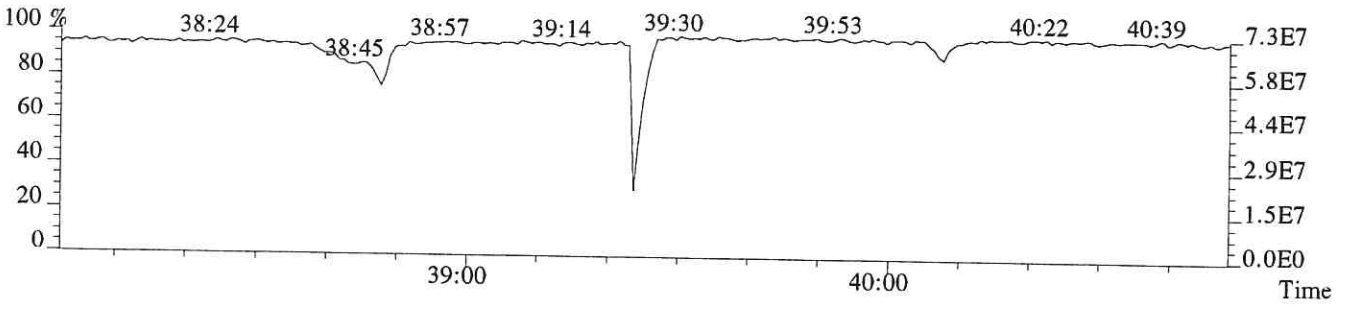
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1928.0,0.40%,F,T)



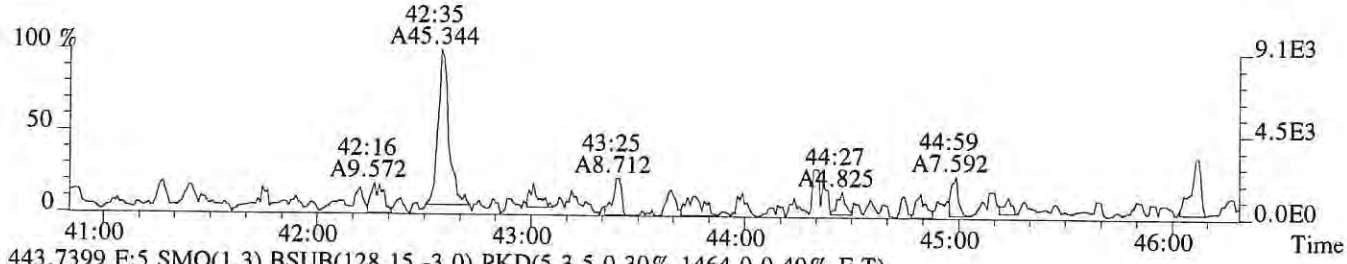
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1252.0,0.40%,F,T)



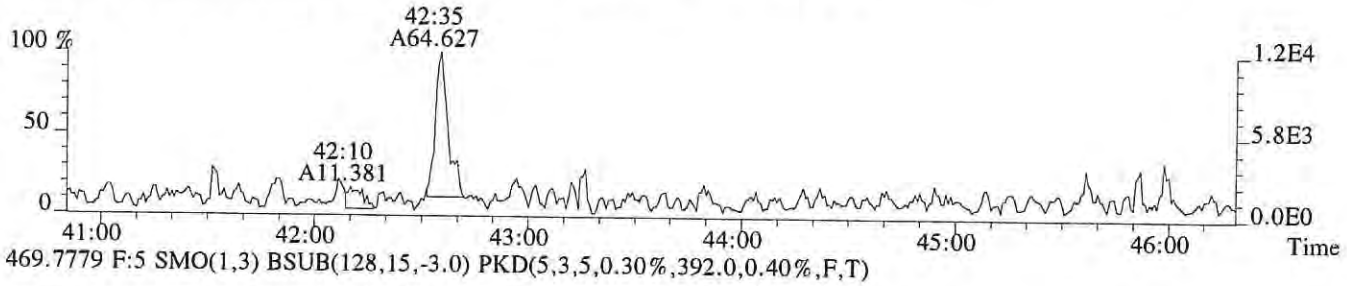
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



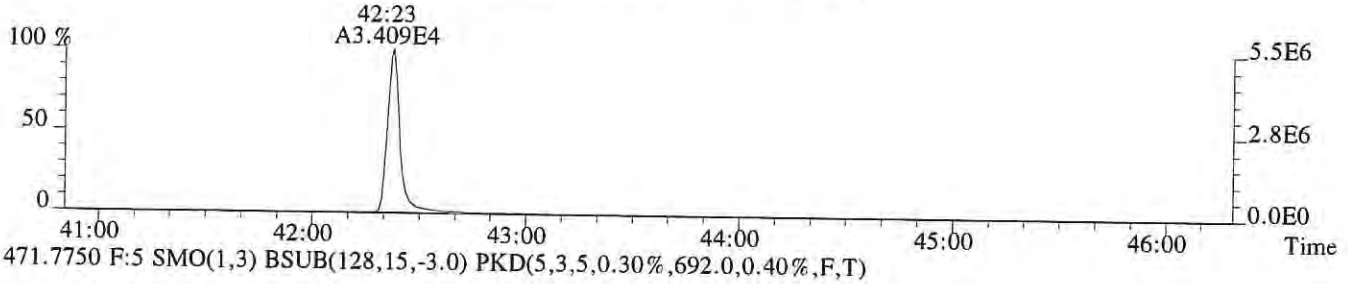
File:P520054 #1-493 Acq:18-JAN-2019 12:27:28 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-002
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,600.0,0.40%,F,T)



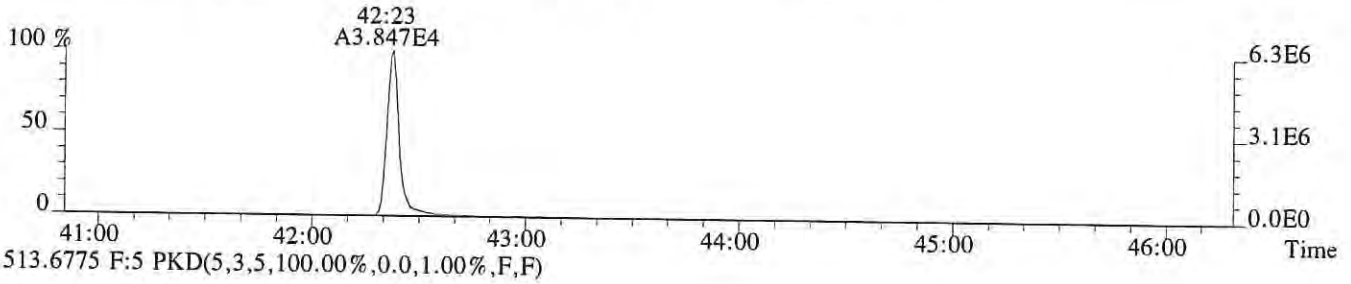
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1464.0,0.40%,F,T)



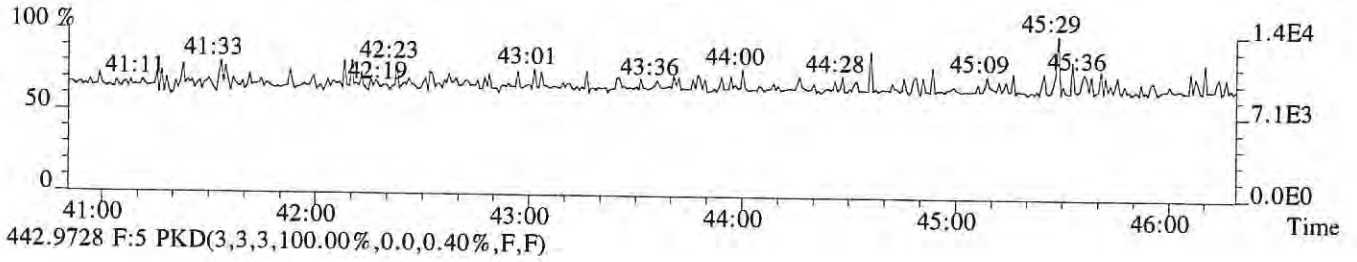
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,392.0,0.40%,F,T)



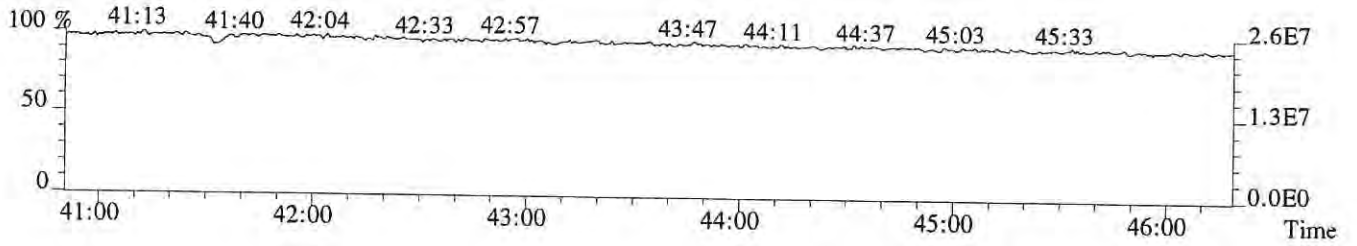
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,692.0,0.40%,F,T)



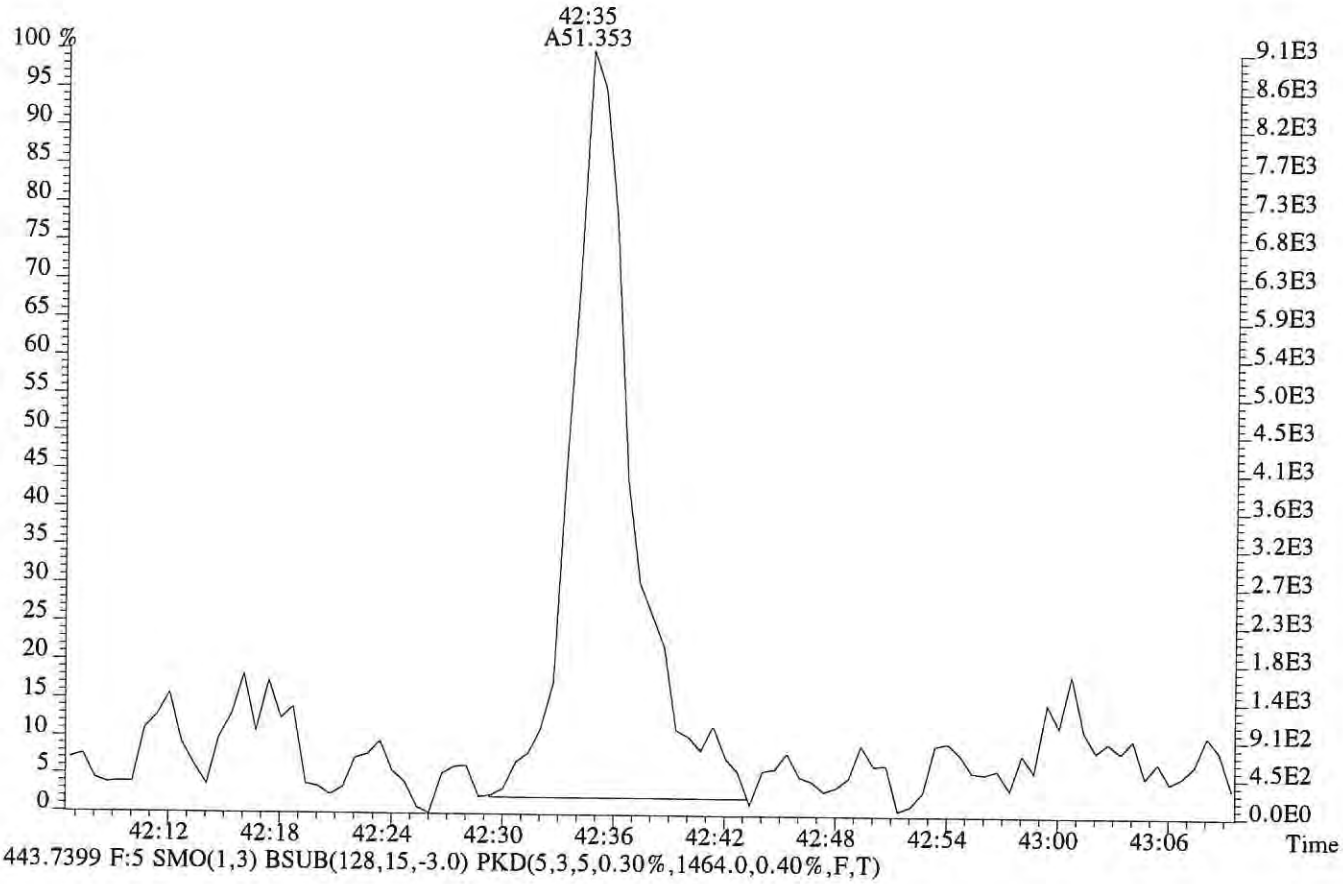
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



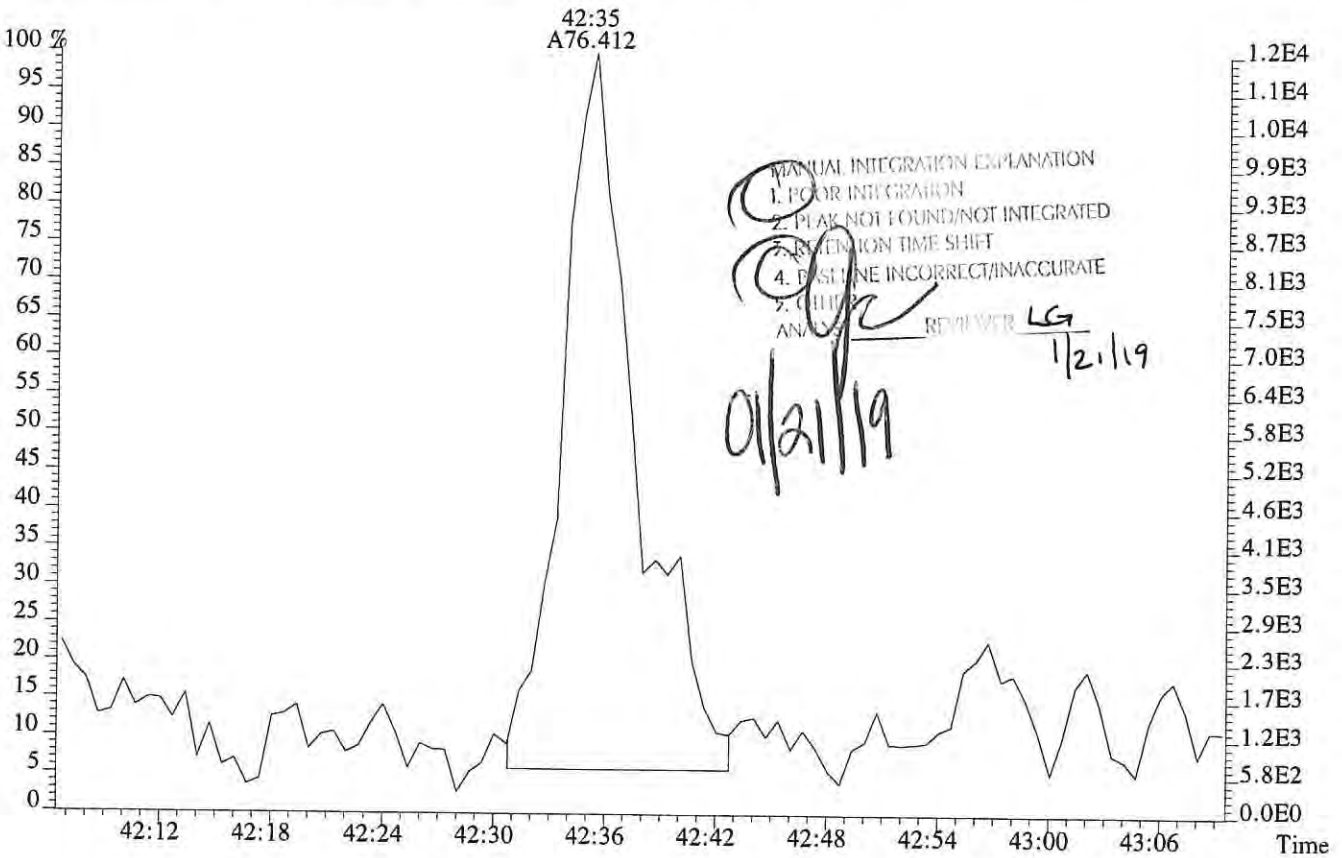
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



File:P520054 #1-493 Acq:18-JAN-2019 12:27:28 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-002
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,600.0,0.40%,F,T)

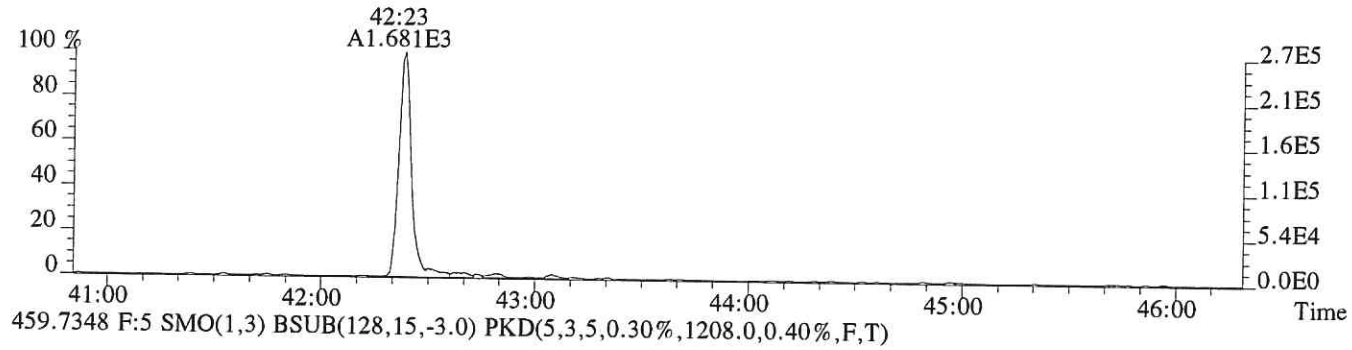


443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1464.0,0.40%,F,T)

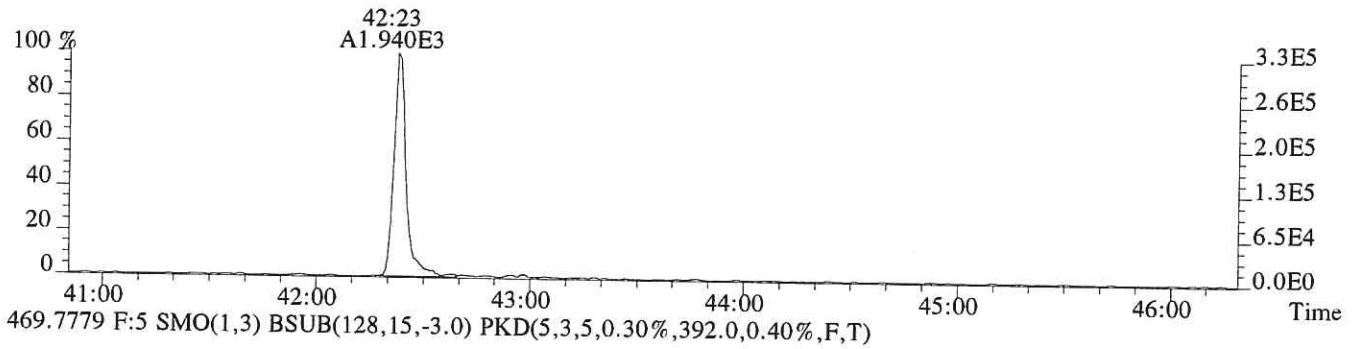


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST
REVIEWER LG 1/21/19
01/21/19

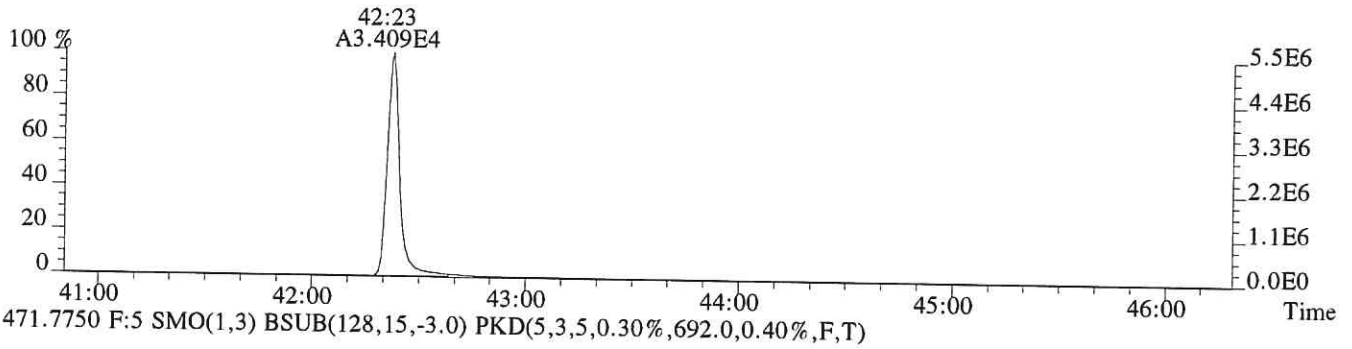
File:P520054 #1-493 Acq:18-JAN-2019 12:27:28 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-002
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,860.0,0.40%,F,T)



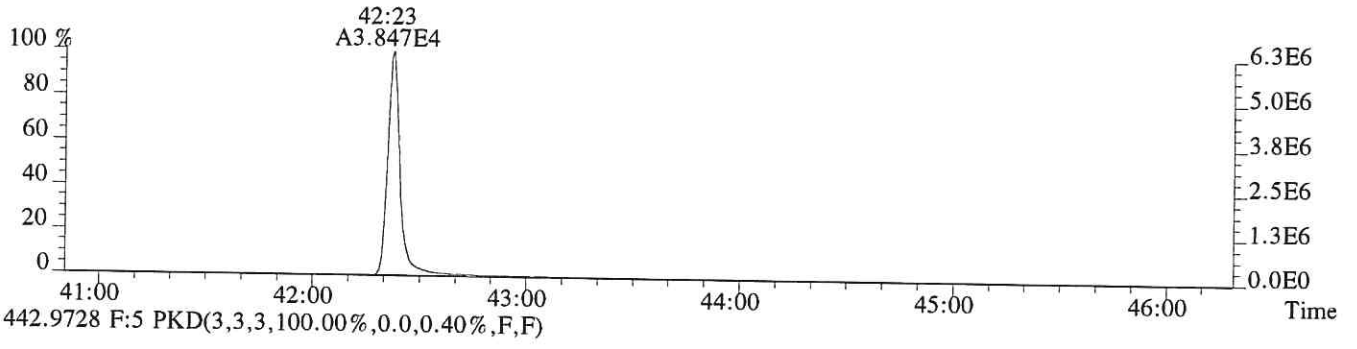
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1208.0,0.40%,F,T)



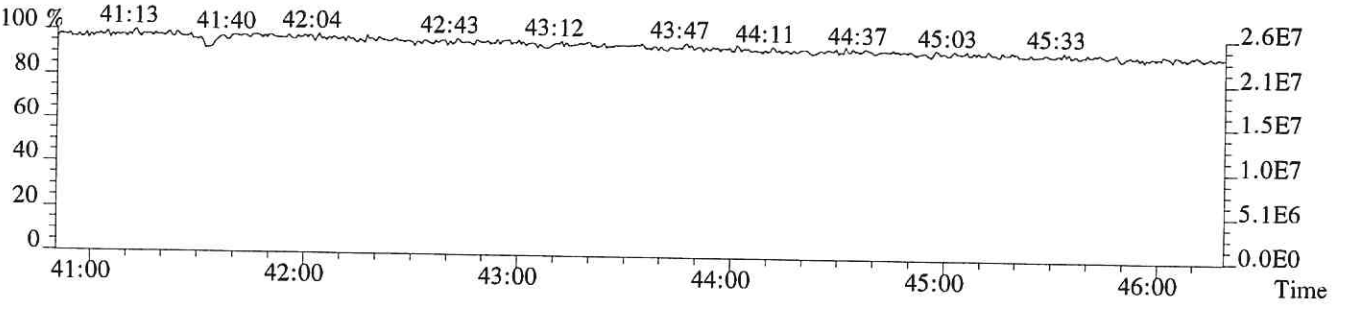
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,392.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,692.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0558

Run #13 Filename P520055 Samp: 1 Inj: 1 Acquired: 18-JAN-19 13:16:06
Processed: 21-JAN-19 09:19:59 Sample ID: E1900031-003

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:16	1.135e+04	1.553e+04	0.73	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:27	6.454e+02	4.431e+02	1.46	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:21	5.738e+02	4.078e+02	1.41	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:01	1.168e+03	9.798e+02	1.19	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:08	2.511e+02	2.299e+02	1.09	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:38	4.323e+01	5.914e+01	0.73	no	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:24	1.098e+02	7.206e+01	1.52	no	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:38	2.734e+02	2.648e+02	1.03	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:02	8.424e+01	8.036e+01	1.05	yes	no	1.258
10	Unk	OCDF	42:35	1.056e+02	1.512e+02	0.70	no	no	1.359
11	Unk	2,3,7,8-TCDD	29:03	2.437e+03	3.382e+03	0.72	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:39	5.584e+01	4.208e+01	1.33	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	yes	1.038
14	Unk	1,2,3,6,7,8-HxCDD	36:51	2.185e+01	2.412e+01	0.91	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:06	3.412e+01	3.626e+01	0.94	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:34	3.450e+02	3.250e+02	1.06	yes	no	1.025
17	Unk	OCDD	42:23	4.567e+03	5.102e+03	0.90	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:15	5.881e+04	7.564e+04	0.78	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:26	9.880e+04	6.284e+04	1.57	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:20	9.217e+04	5.868e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:01	4.200e+04	8.139e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:07	4.415e+04	8.605e+04	0.51	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:37	4.383e+04	8.392e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:22	3.779e+04	7.426e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:38	2.723e+04	6.059e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:02	2.514e+04	5.679e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:01	2.804e+04	3.454e+04	0.81	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:37	6.905e+04	4.358e+04	1.58	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:45	5.839e+04	4.563e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	36:50	5.627e+04	4.544e+04	1.24	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:33	5.738e+04	5.367e+04	1.07	yes	no	0.858
32	IS	13C-OCDD	42:22	4.334e+04	4.787e+04	0.91	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:28	6.947e+04	8.624e+04	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:05	9.637e+04	7.907e+04	1.22	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:03	4.404e+04				no	1.014

$$\text{OCDD} = \frac{(4.567e+03 + 5.102e+03) \times 4000\ \text{pg} \times 1}{(4.334e+04 + 4.787e+04) \times 10.215\ \text{g} \times 80.4/100 \times 1.118} = 46.1810\ \text{ng/kg}$$

LCS 1/22/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0558

Run #13 Filename P520055 Samp: 1 Inj: 1 Acquired: 18-JAN-19 13:16:06
Processed: 21-JAN-19 09:19:59 LAB. ID: E1900031-003

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.97e+06	2.28e+03	8.7e+02	2.69e+06	1.45e+03	1.9e+03
2	1,2,3,7,8-PeCDF	1.26e+05	2.37e+03	5.3e+01	8.64e+04	3.28e+03	2.6e+01
3	2,3,4,7,8-PeCDF	9.38e+04	2.37e+03	4.0e+01	6.67e+04	3.28e+03	2.0e+01
4	1,2,3,4,7,8-HxCDF	2.53e+05	1.32e+03	1.9e+02	2.14e+05	7.80e+02	2.7e+02
5	1,2,3,6,7,8-HxCDF	5.67e+04	1.32e+03	4.3e+01	4.99e+04	7.80e+02	6.4e+01
6	2,3,4,6,7,8-HxCDF	8.79e+03	1.32e+03	6.7e+00	1.16e+04	7.80e+02	1.5e+01
7	1,2,3,7,8,9-HxCDF	2.00e+04	1.32e+03	1.5e+01	1.16e+04	7.80e+02	1.5e+01
8	1,2,3,4,6,7,8-HpCDF	5.76e+04	1.89e+03	3.0e+01	5.90e+04	6.72e+02	8.8e+01
9	1,2,3,4,7,8,9-HpCDF	1.55e+04	1.89e+03	8.2e+00	1.79e+04	6.72e+02	2.7e+01
10	OCDF	1.71e+04	3.16e+02	5.4e+01	3.08e+04	1.48e+03	2.1e+01
11	2,3,7,8-TCDD	4.79e+05	2.14e+03	2.2e+02	6.75e+05	1.36e+03	4.9e+02
12	1,2,3,7,8-PeCDD	1.04e+04	1.64e+03	6.3e+00	7.52e+03	7.28e+02	1.0e+01
13	1,2,3,4,7,8-HxCDD	*	1.03e+03	*	*	7.24e+02	*
14	1,2,3,6,7,8-HxCDD	5.05e+03	1.03e+03	4.9e+00	5.29e+03	7.24e+02	7.3e+00
15	1,2,3,7,8,9-HxCDD	6.05e+03	1.03e+03	5.9e+00	7.78e+03	7.24e+02	1.1e+01
16	1,2,3,4,6,7,8-HpCDD	6.77e+04	1.56e+03	4.4e+01	6.21e+04	1.40e+03	4.4e+01
17	OCDD	7.67e+05	6.32e+02	1.2e+03	8.42e+05	1.39e+03	6.1e+02
18	13C-2,3,7,8-TCDF	1.12e+07	3.66e+03	3.0e+03	1.43e+07	2.79e+03	5.1e+03
19	13C-1,2,3,7,8-PeCDF	1.92e+07	1.76e+03	1.1e+04	1.23e+07	1.31e+03	9.4e+03
20	13C-2,3,4,7,8-PeCDF	1.86e+07	1.76e+03	1.1e+04	1.21e+07	1.31e+03	9.2e+03
21	13C-1,2,3,4,7,8-HxCDF	9.16e+06	1.66e+03	5.5e+03	1.74e+07	1.54e+03	1.1e+04
22	13C-1,2,3,6,7,8-HxCDF	9.37e+06	1.66e+03	5.6e+03	1.82e+07	1.54e+03	1.2e+04
23	13C-2,3,4,6,7,8-HxCDF	9.77e+06	1.66e+03	5.9e+03	1.87e+07	1.54e+03	1.2e+04
24	13C-1,2,3,7,8,9-HxCDF	8.06e+06	1.66e+03	4.8e+03	1.58e+07	1.54e+03	1.0e+04
25	13C-1,2,3,4,6,7,8-HpCDF	5.98e+06	1.88e+03	3.2e+03	1.33e+07	5.92e+03	2.2e+03
26	13C-1,2,3,4,7,8,9-HpCDF	4.83e+06	1.88e+03	2.6e+03	1.10e+07	5.92e+03	1.9e+03
27	13C-2,3,7,8-TCDD	5.59e+06	7.12e+03	7.8e+02	7.02e+06	2.90e+03	2.4e+03
28	13C-1,2,3,7,8-PeCDD	1.44e+07	1.53e+03	9.4e+03	9.04e+06	1.13e+03	8.0e+03
29	13C-1,2,3,4,7,8-HxCDD	1.33e+07	2.72e+03	4.9e+03	1.03e+07	1.84e+03	5.6e+03
30	13C-1,2,3,6,7,8-HxCDD	1.18e+07	2.72e+03	4.3e+03	9.50e+06	1.84e+03	5.2e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.15e+07	1.73e+03	6.6e+03	1.09e+07	1.63e+03	6.7e+03
32	13C-OCDD	7.06e+06	3.00e+02	2.4e+04	7.85e+06	4.28e+02	1.8e+04
33	13C-1,2,3,4-TCDD	1.36e+07	7.12e+03	1.9e+03	1.67e+07	2.90e+03	5.8e+03
34	13C-1,2,3,7,8,9-HxCDD	2.09e+07	2.72e+03	7.7e+03	1.66e+07	1.84e+03	9.0e+03
35	37Cl-2,3,7,8-TCDD	8.83e+06	1.12e+03	7.9e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0558

Entry: 36 Totals Name: Total Tetra-Furans

Run: 13 File: P520055 Sample:1 Injection:1 Function:1

Acquired: 18-JAN-19 13:16:06 Processed: 21-JAN-19 09:19:59

Mass: 303.9020 305.8990 Tot Response: 5.03e+04 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:17	2.19e+01	3.31e+01	0.66	yes	5.50e+01		n	n
2	25:20	1.41e+02	2.02e+02	0.70	yes	3.42e+02		n	n
3	26:03	1.95e+02	2.90e+02	0.67	yes	4.85e+02		n	n
4	26:21	5.44e+02	6.83e+02	0.80	yes	1.23e+03		n	n
5	26:43	1.00e+02	1.46e+02	0.69	yes	2.46e+02		n	n
6	26:55	3.85e+02	5.18e+02	0.74	yes	9.03e+02		n	n
7	27:04	6.52e+02	7.90e+02	0.82	yes	1.44e+03		n	n
8	27:28	5.58e+03	7.60e+03	0.73	yes	1.32e+04		n	n
9	27:43	3.21e+02	3.97e+02	0.81	yes	7.18e+02		n	n
10	28:16	1.13e+04	1.55e+04	0.73	yes	2.69e+04	2,3,7,8-TCDF	n	n
11	28:35	9.11e+02	1.17e+03	0.78	yes	2.08e+03		n	n
12	28:49	1.78e+02	2.42e+02	0.73	yes	4.20e+02		n	n
13	30:04	1.03e+03	1.24e+03	0.83	yes	2.28e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0558

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 13 File: P520055 Sample:1 Injection:1 Function:1

Acquired: 18-JAN-19 13:16:06 Processed: 21-JAN-19 09:19:59

Mass: 319.8970 321.8940 Tot Response: 6.56e+03 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	28:26	9.86e+00	1.38e+01	0.72	yes	2.36e+01		n	n
2	29:03	2.44e+03	3.38e+03	0.72	yes	5.82e+03	2,3,7,8-TCDD	n	n
3	29:20	3.04e+02	3.82e+02	0.79	yes	6.86e+02		n	n
4	29:28	1.17e+01	1.64e+01	0.72	yes	2.81e+01		n	n

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Peak List Summary

CLIENT ID.
SL0558

Entry: 39 Totals Name: Total Penta-Furans2

Run: 13 File: P520055 Sample:1 Injection:1 Function:2

Acquired: 18-JAN-19 13:16:06 Processed: 21-JAN-19 09:19:59

Mass: 339.8600 341.8570 Tot Response: 2.55e+03 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	31:31	2.89e+02	1.88e+02 1.54	yes	4.77e+02		n	n
2	32:27	6.45e+02	4.43e+02 1.46	yes	1.09e+03	1,2,3,7,8-PeCDF	n	n
3	33:21	5.74e+02	4.08e+02 1.41	yes	9.82e+02	2,3,4,7,8-PeCDF	n	n

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Peak List Summary

CLIENT ID.
SL0558

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 13 File: P520055 Sample:1 Injection:1 Function:2

Acquired: 18-JAN-19 13:16:06 Processed: 21-JAN-19 09:19:59

Mass: 355.8550 357.8520 Tot Response: 9.79e+01 RRF: 0.9565

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:39	5.58e+01	4.21e+01 1.33	yes	9.79e+01	1,2,3,7,8-PeCDD	n	n

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Peak List Summary

CLIENT ID.
SL0558

Entry: 41 Totals Name: Total Hexa-Furans

Run: 13 File: P520055 Sample:1 Injection:1 Function:3

Acquired: 18-JAN-19 13:16:06 Processed: 21-JAN-19 09:19:59

Mass: 373.8210 375.8180 Tot Response: 2.73e+03 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	35:35	5.02e+01	4.72e+01	1.06	yes	9.74e+01		n	n
2	36:01	1.17e+03	9.80e+02	1.19	yes	2.15e+03	1,2,3,4,7,8-HxCDF	n	n
3	36:08	2.51e+02	2.30e+02	1.09	yes	4.81e+02	1,2,3,6,7,8-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0558

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 13 File: P520055 Sample:1 Injection:1 Function:3

Acquired: 18-JAN-19 13:16:06 Processed: 21-JAN-19 09:19:59

Mass: 389.8160 391.8130 Tot Response: 4.89e+02 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	35:25	2.00e+02	1.65e+02 1.21	yes	3.65e+02		n	n
2	36:11	6.76e+01	5.60e+01 1.21	yes	1.24e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0558

Entry: 43 Totals Name: Total Hepta-Furans

Run: 13 File: P520055 Sample:1 Injection:1 Function:4

Acquired: 18-JAN-19 13:16:06 Processed: 21-JAN-19 09:19:59

Mass: 407.7820 409.7790 Tot Response: 9.25e+02 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:38	2.73e+02	2.65e+02	1.03	yes	5.38e+02	1,2,3,4,6,7,8-HpCDF	n	n
2	39:02	1.11e+02	1.12e+02	0.99	yes	2.23e+02		n	n
3	40:02	8.42e+01	8.04e+01	1.05	yes	1.65e+02	1,2,3,4,7,8,9-HpCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0558

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 13 File: P520055 Sample:1 Injection:1 Function:4

Acquired: 18-JAN-19 13:16:06 Processed: 21-JAN-19 09:19:59

Mass: 423.7770 425.7740 Tot Response: 2.22e+03 RRF: 1.025

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:53	8.05e+02	7.50e+02	1.07	yes	1.55e+03		n	n
2	39:34	3.45e+02	3.25e+02	1.06	yes	6.70e+02	1,2,3,4,6,7,8-HpCDD	n	n

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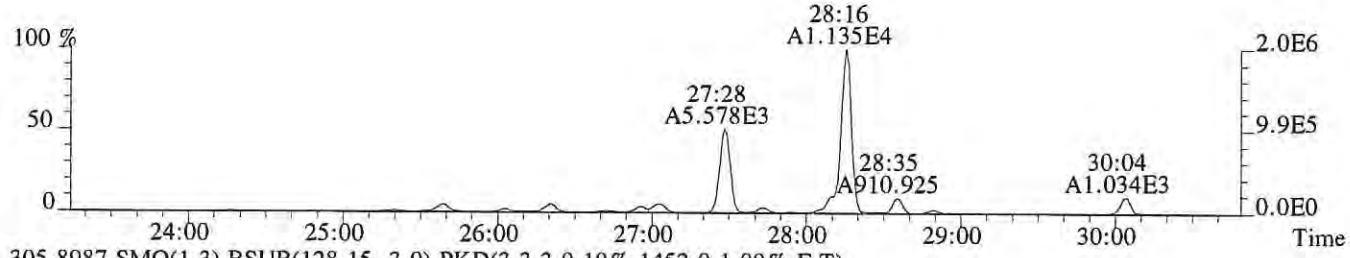
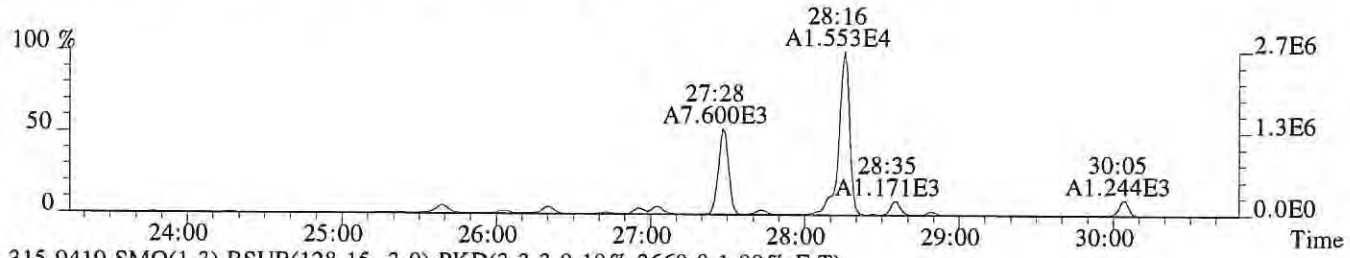
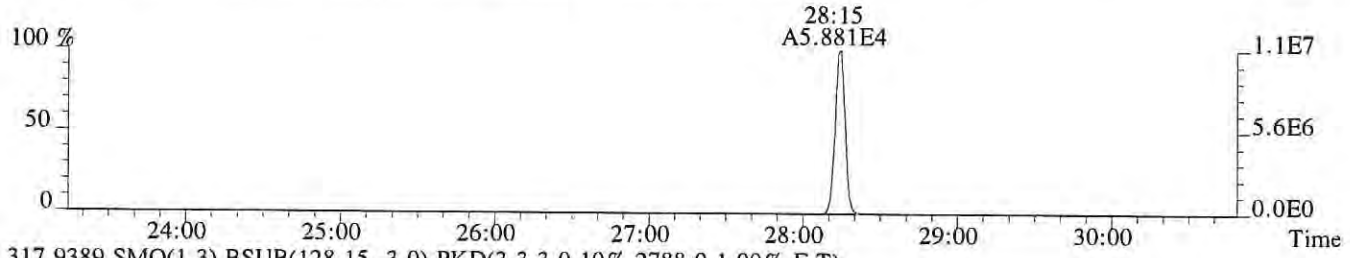
File:P520055 #1-538 Acq:18-JAN-2019 13:16:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-003
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2276.0,1.00%,F,T)



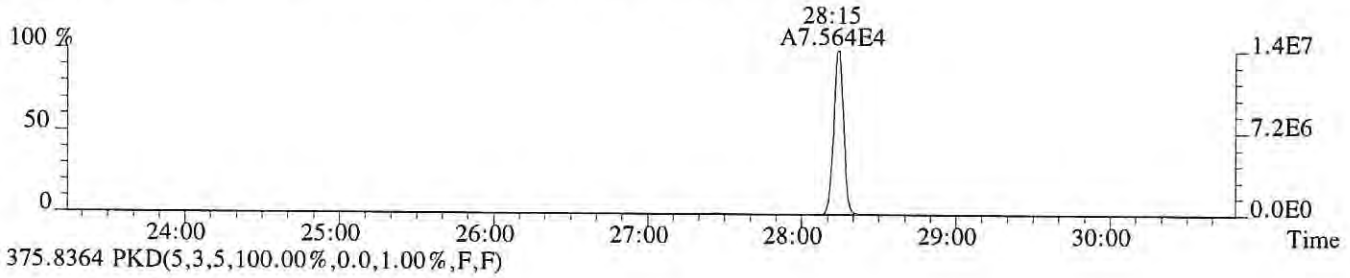
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1452.0,1.00%,F,T)



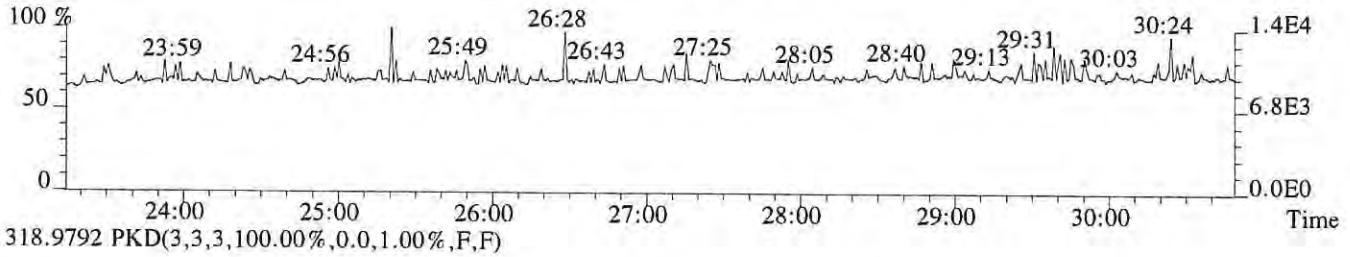
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3660.0,1.00%,F,T)



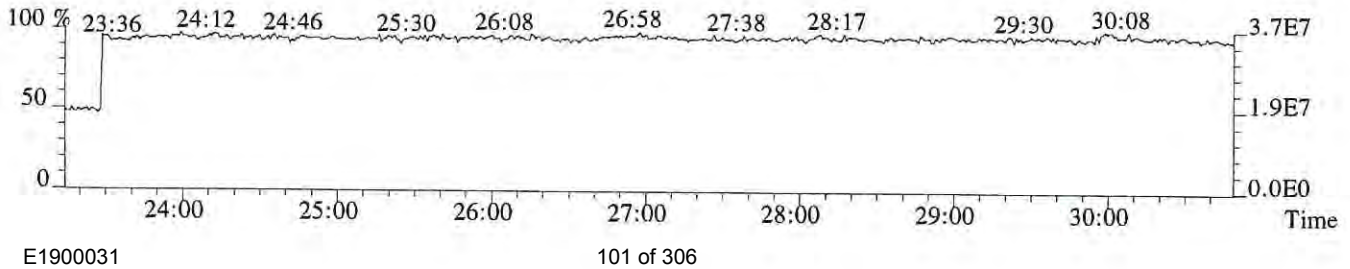
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2788.0,1.00%,F,T)



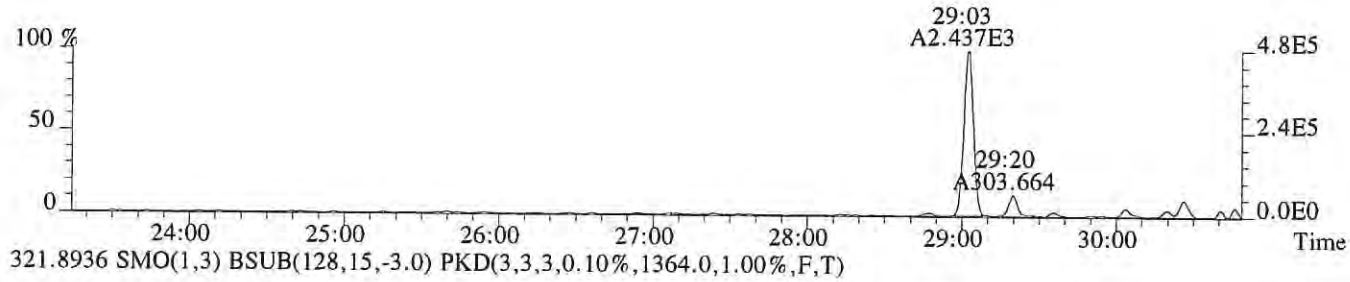
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



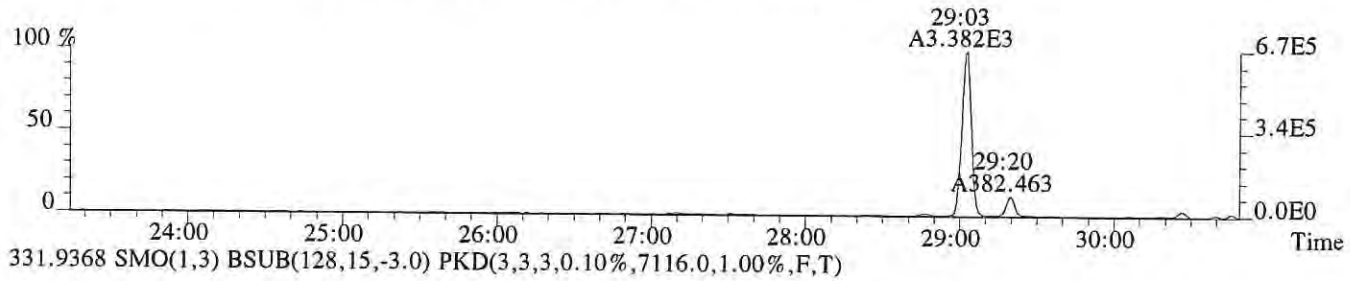
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



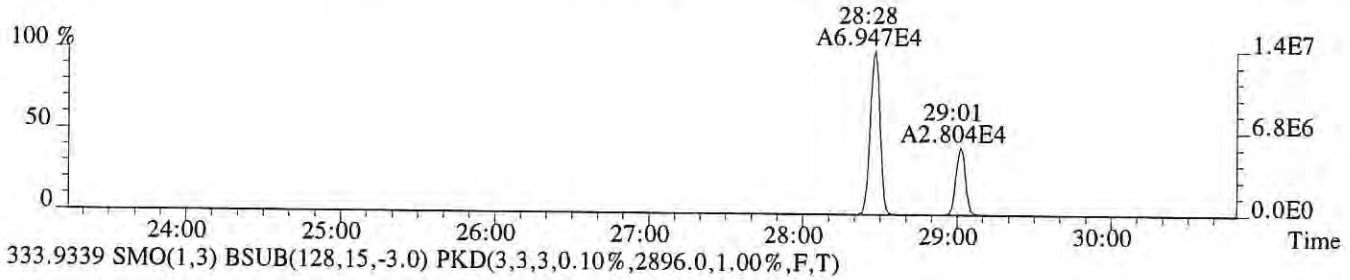
File:P520055 #1-538 Acq:18-JAN-2019 13:16:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-003
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2140.0,1.00%,F,T)



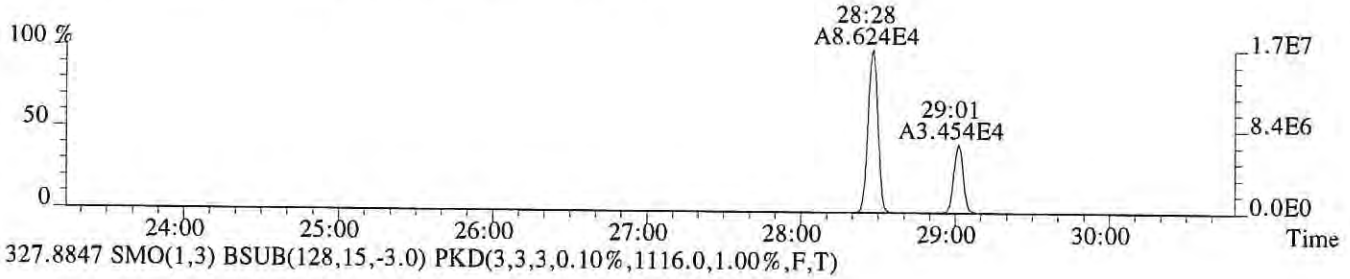
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1364.0,1.00%,F,T)



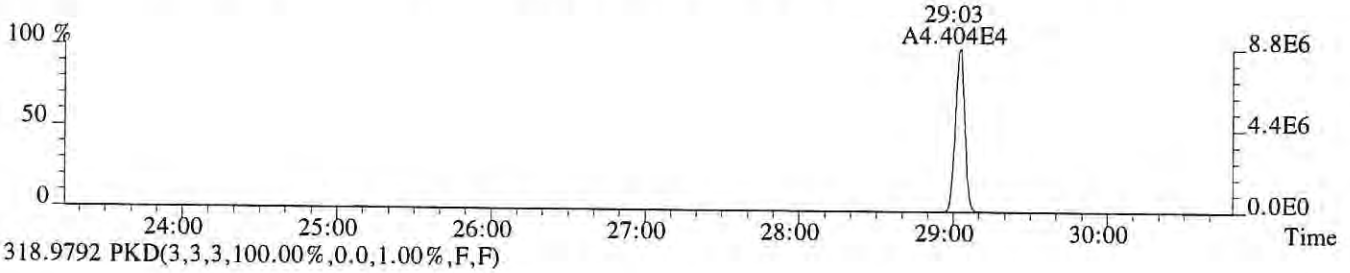
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7116.0,1.00%,F,T)



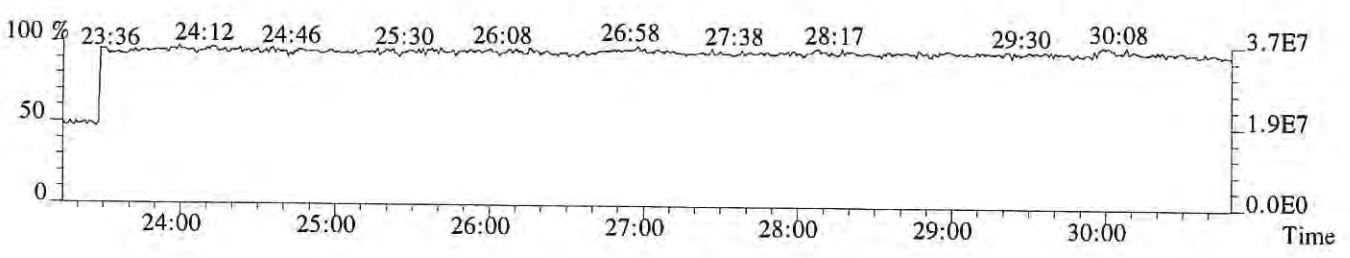
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2896.0,1.00%,F,T)



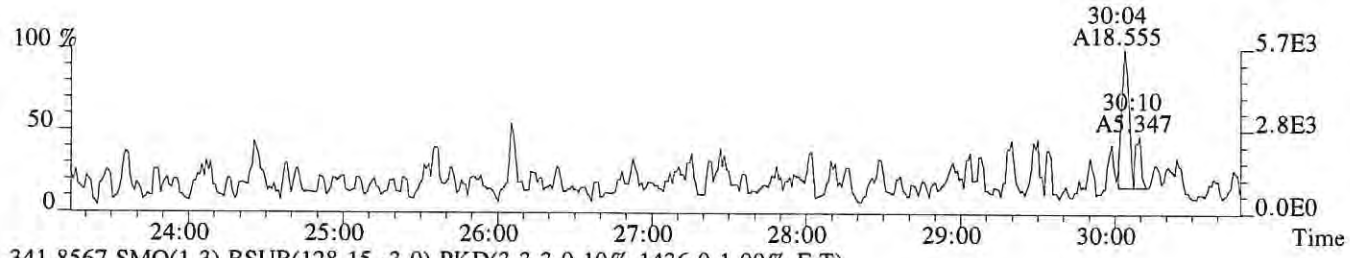
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1116.0,1.00%,F,T)



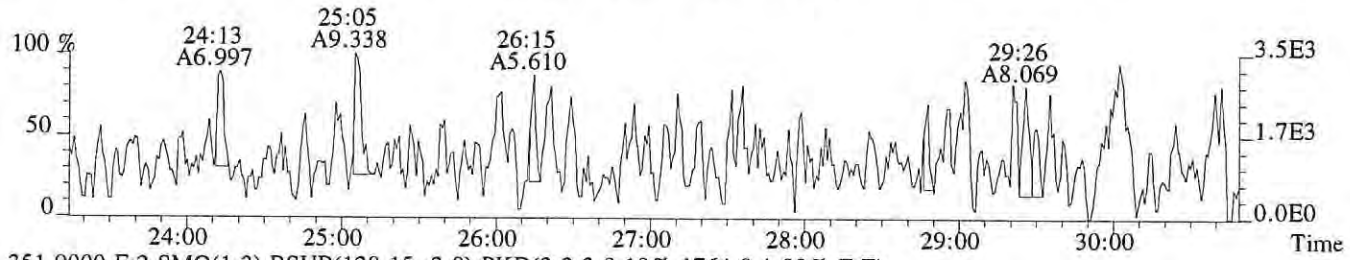
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



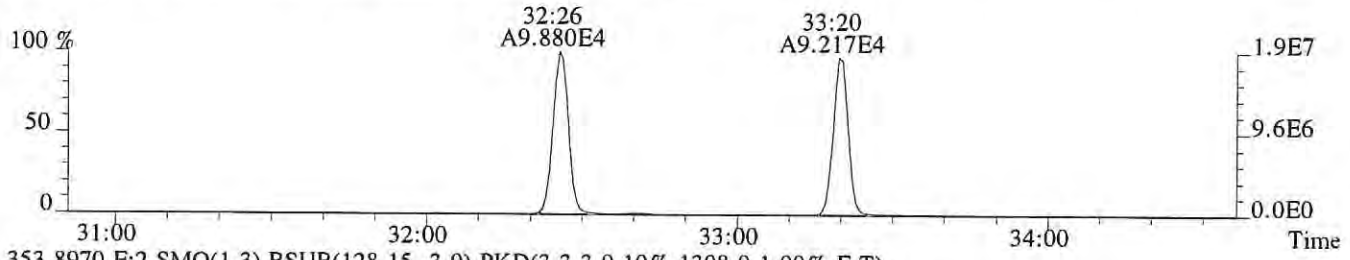
File:P520055 #1-538 Acq:18-JAN-2019 13:16:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-003
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1212.0,1.00%,F,T)



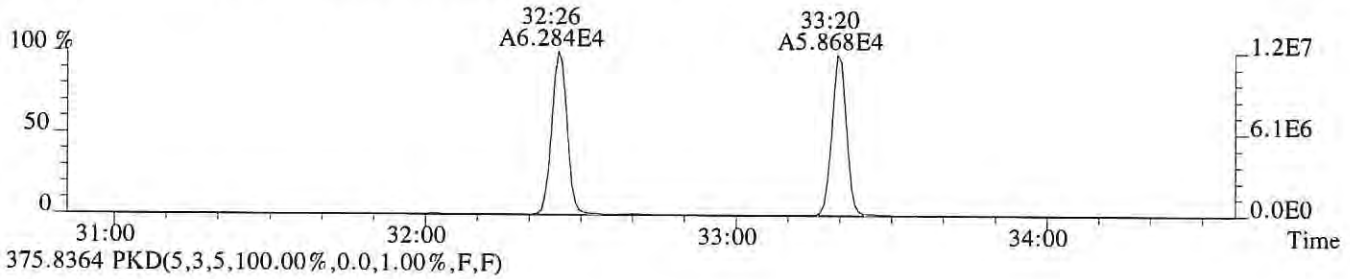
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1436.0,1.00%,F,T)



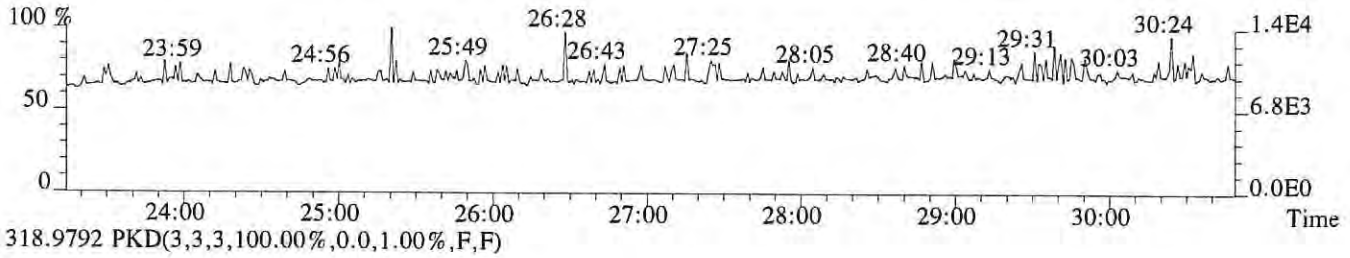
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1764.0,1.00%,F,T)



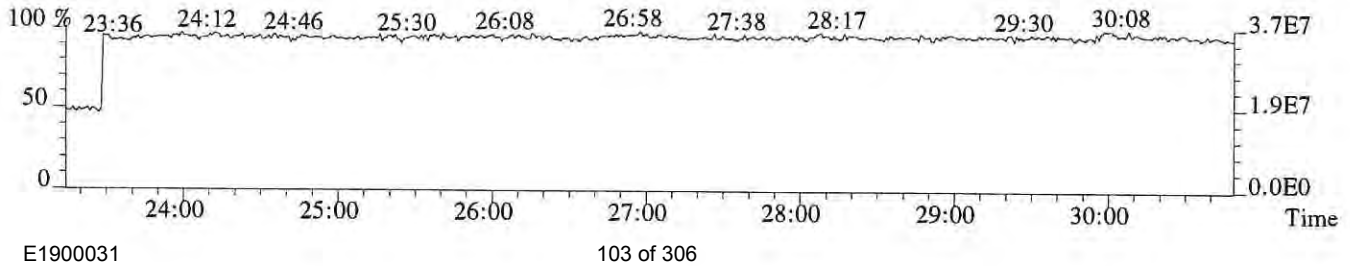
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1308.0,1.00%,F,T)



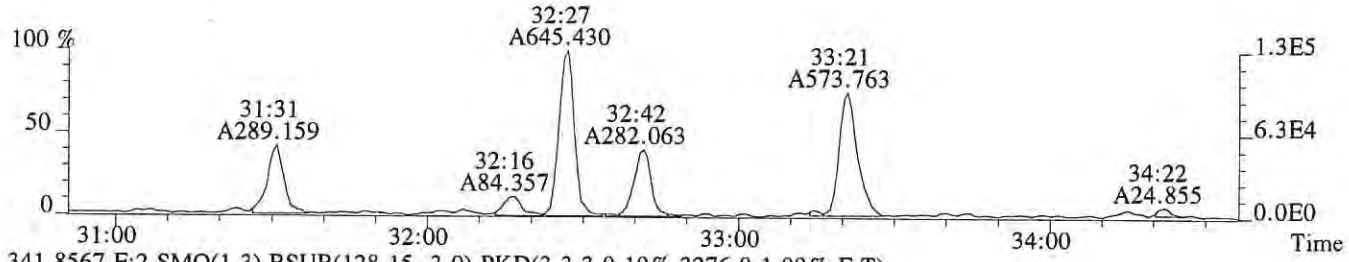
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



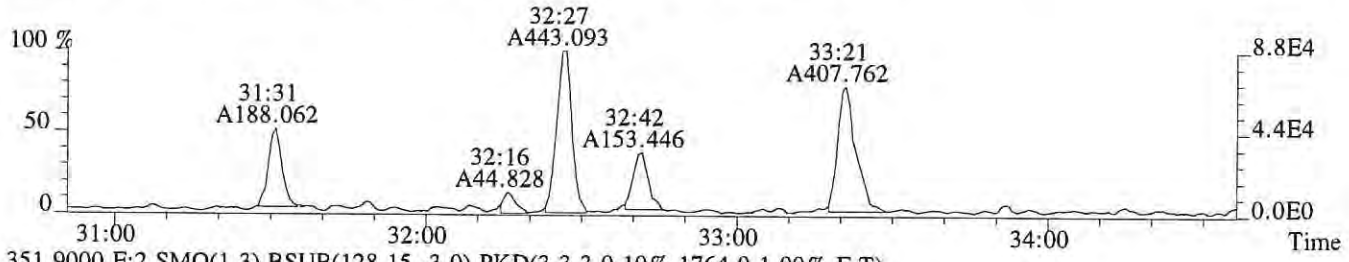
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



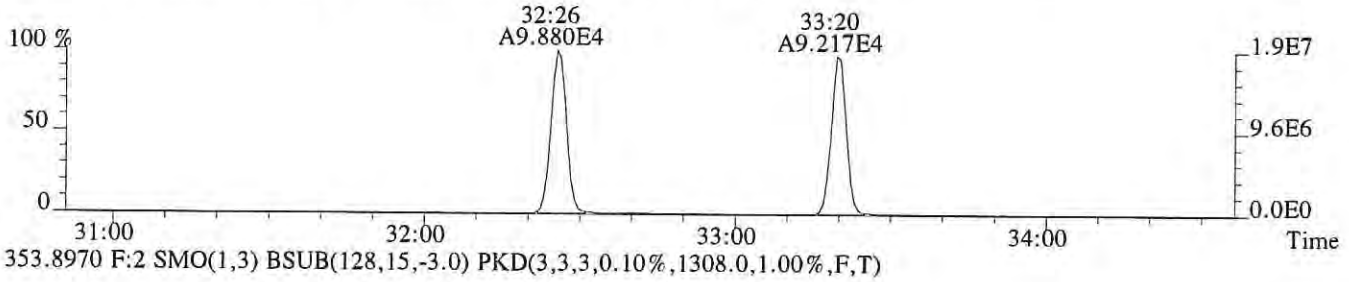
File:P520055 #1-339 Acq:18-JAN-2019 13:16:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-003
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2372.0,1.00%,F,T)



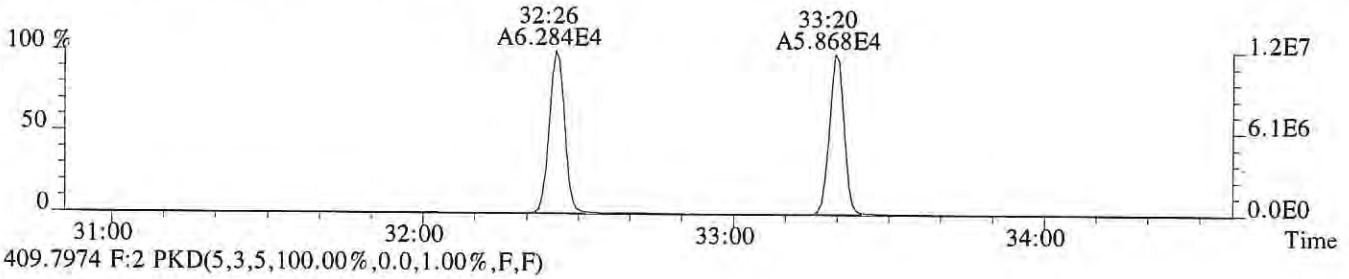
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3276.0,1.00%,F,T)



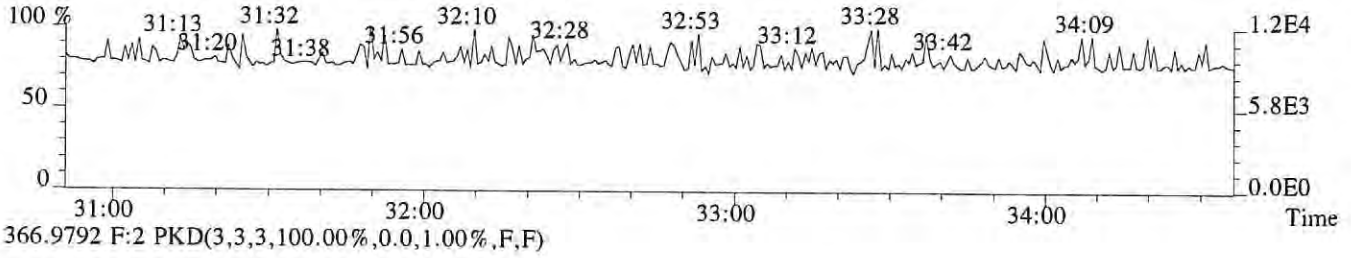
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1764.0,1.00%,F,T)



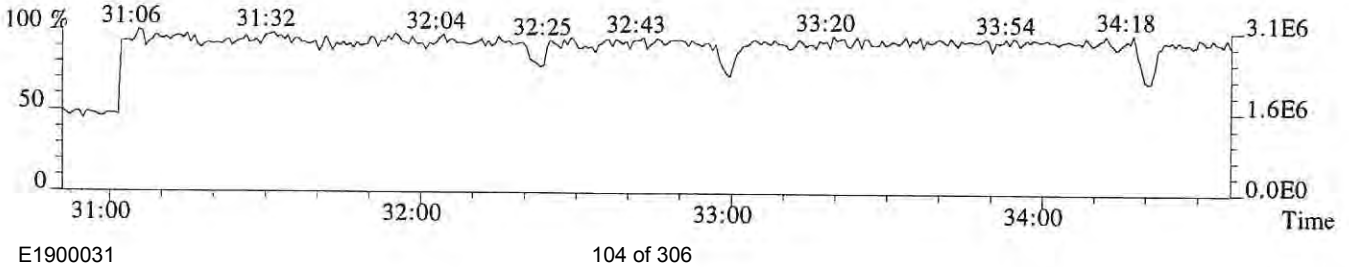
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1308.0,1.00%,F,T)



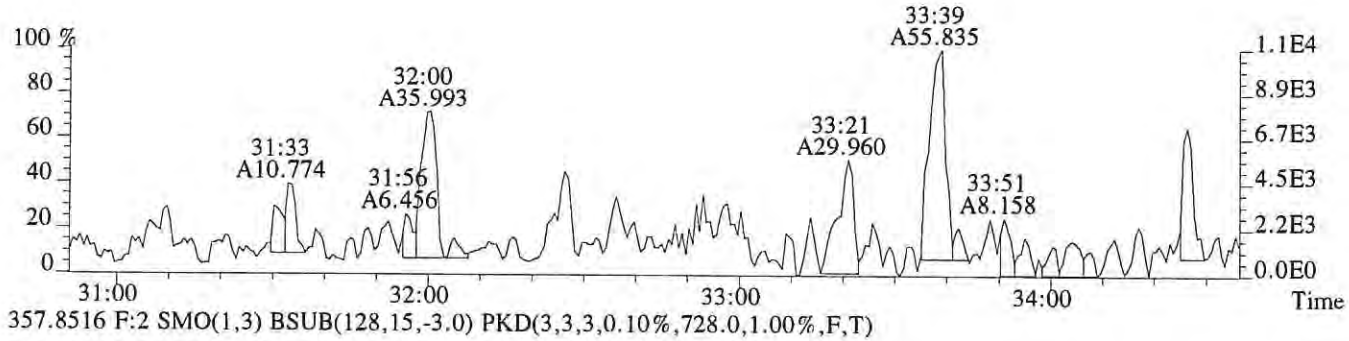
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



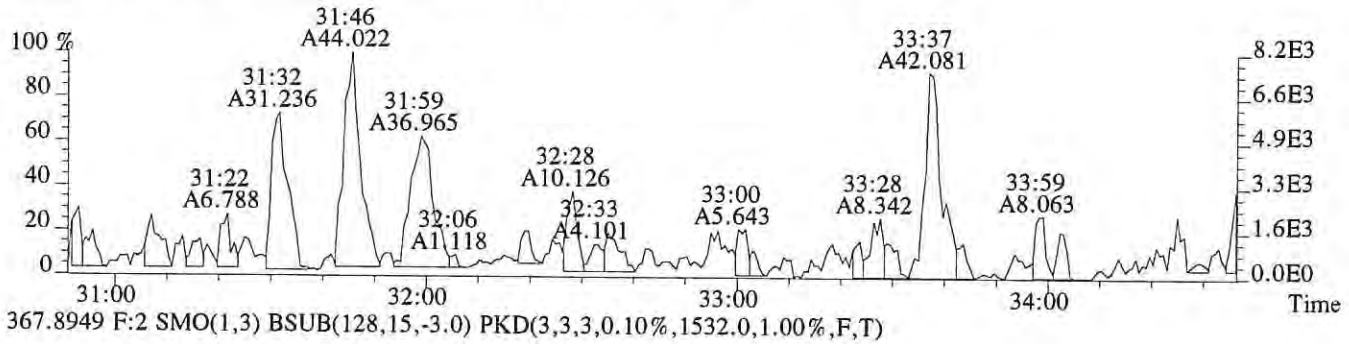
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



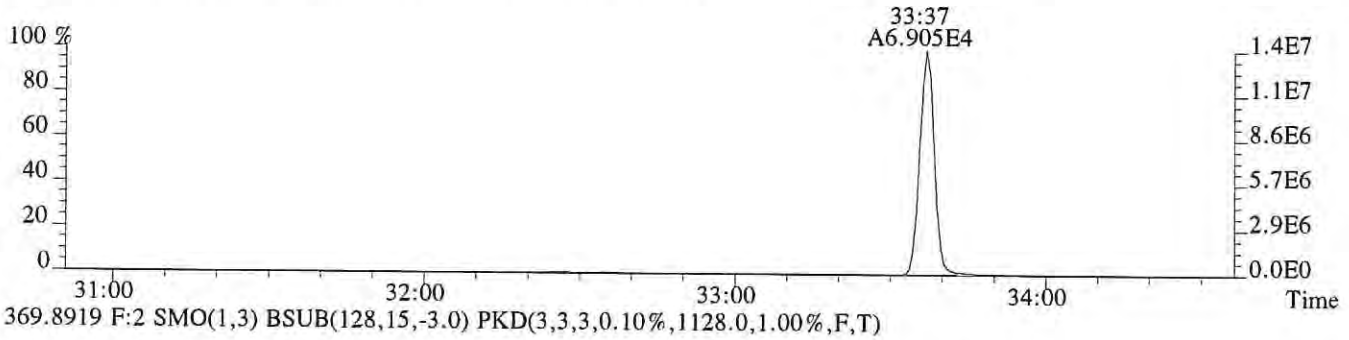
File:P520055 #1-339 Acq:18-JAN-2019 13:16:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-003
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1644.0,1.00%,F,T)



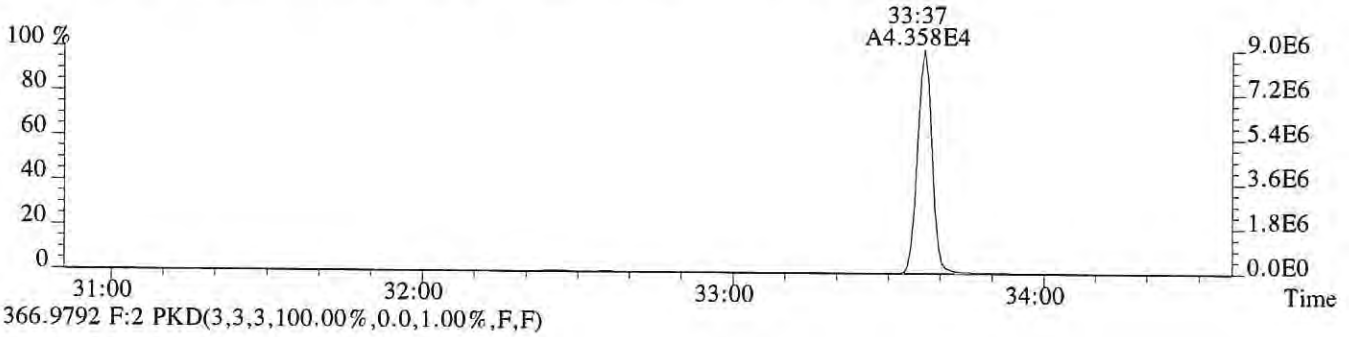
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,728.0,1.00%,F,T)



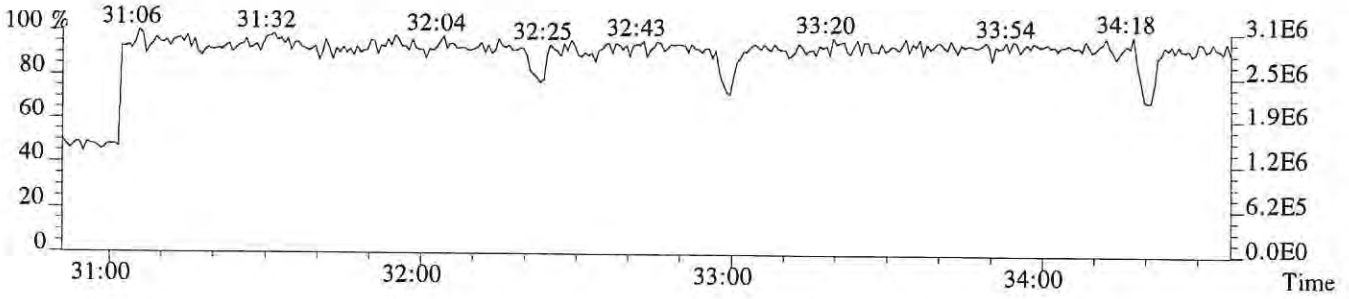
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1532.0,1.00%,F,T)



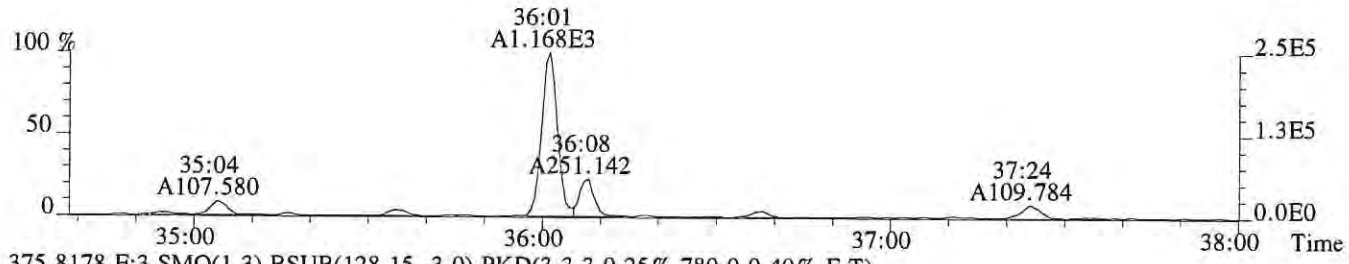
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1128.0,1.00%,F,T)



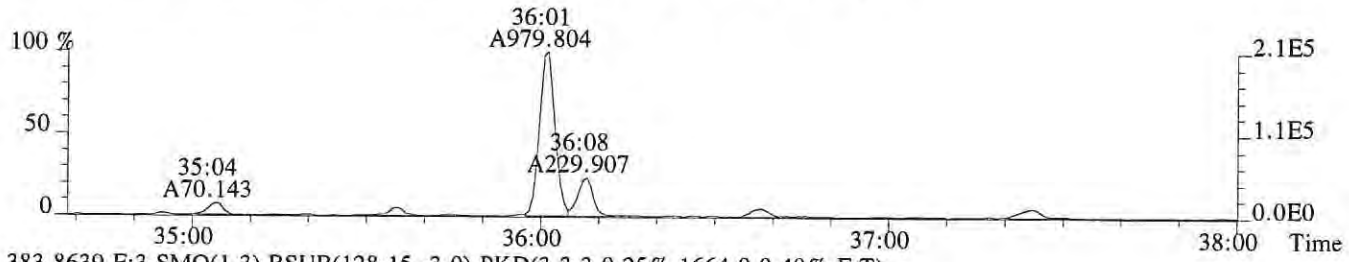
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



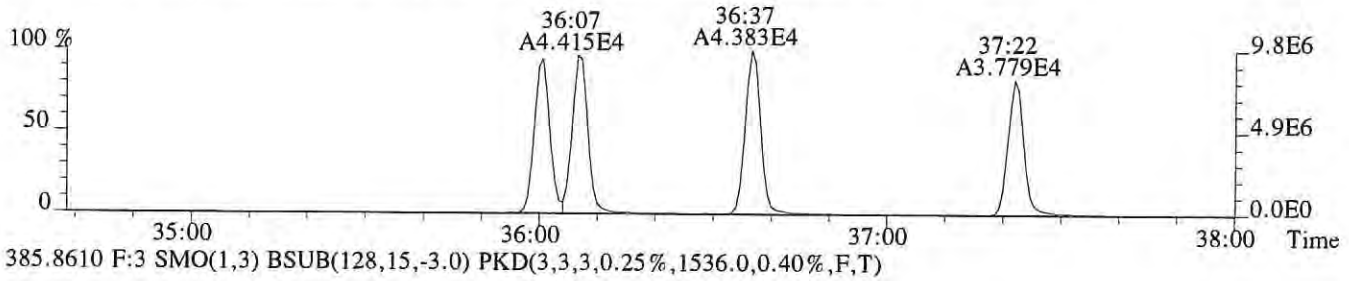
File:P520055 #1-303 Acq:18-JAN-2019 13:16:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-003
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1320.0,0.40%,F,T)



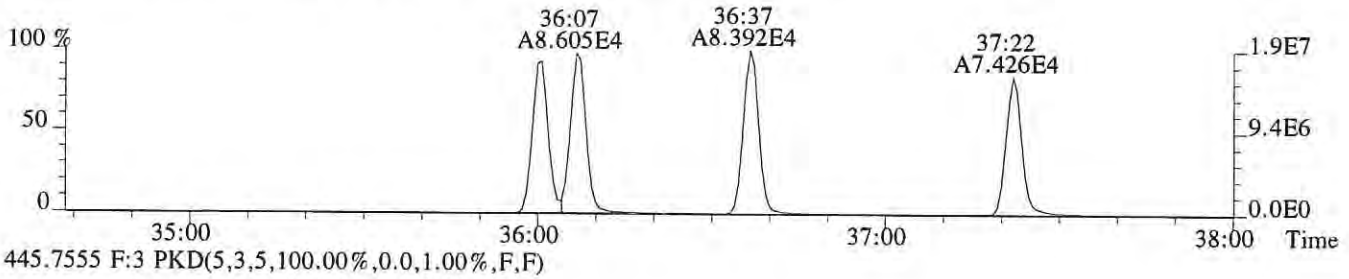
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,780.0,0.40%,F,T)



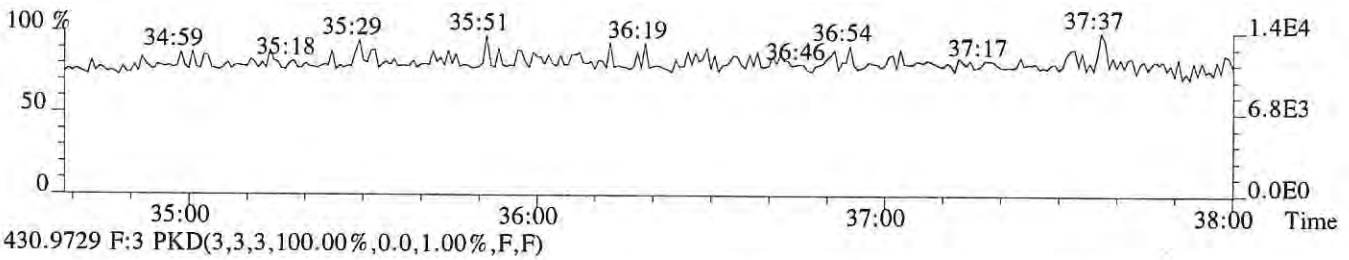
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1664.0,0.40%,F,T)



385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1536.0,0.40%,F,T)



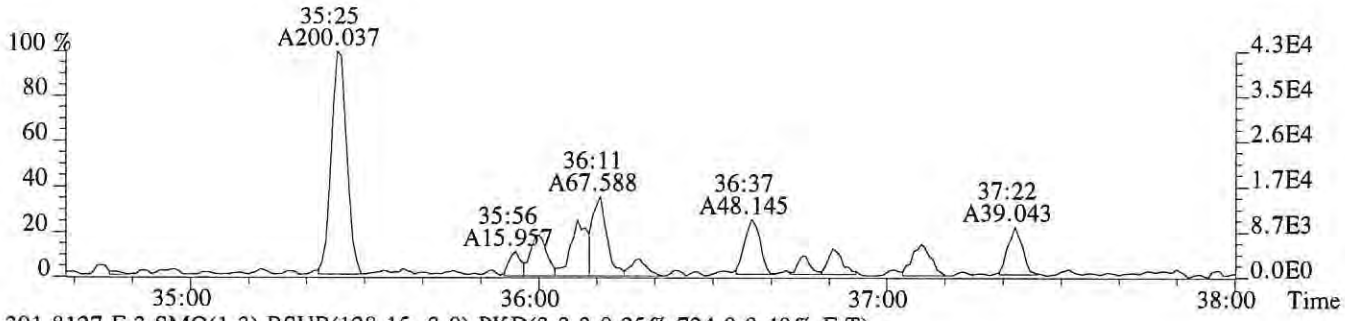
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



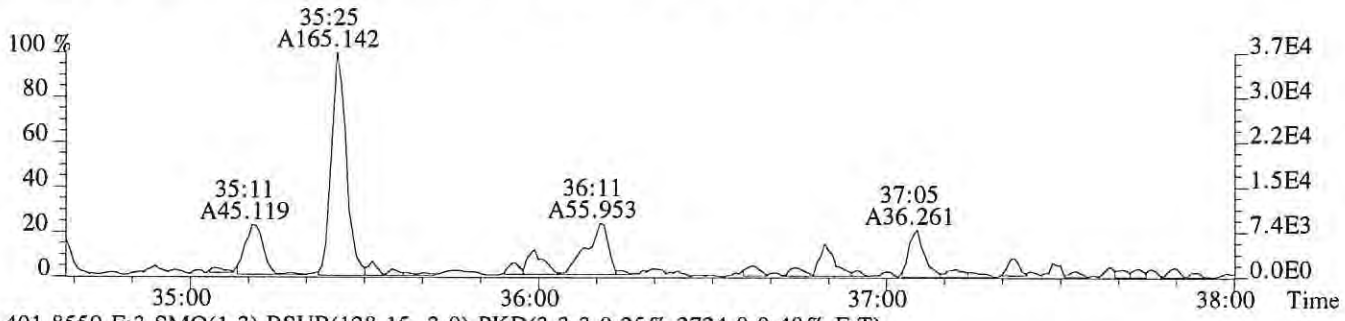
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



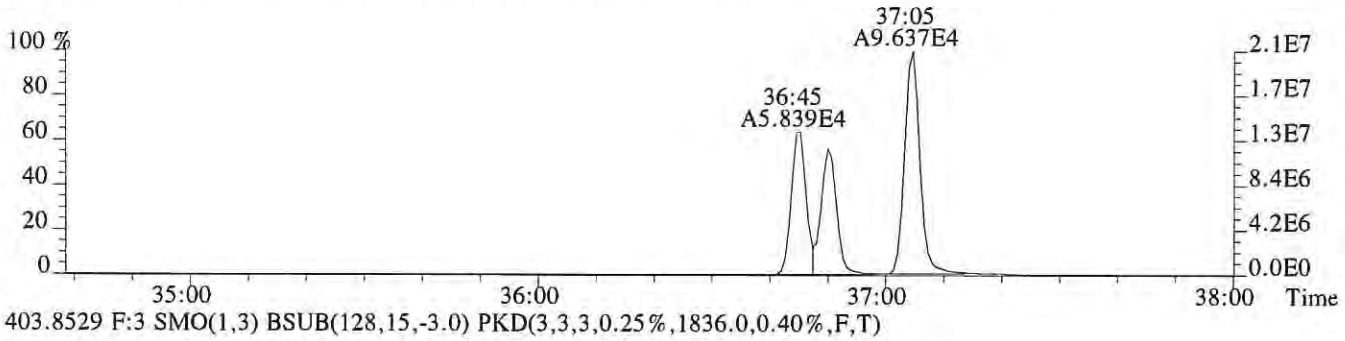
File:P520055 #1-303 Acq:18-JAN-2019 13:16:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-003
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1032.0,0.40%,F,T)



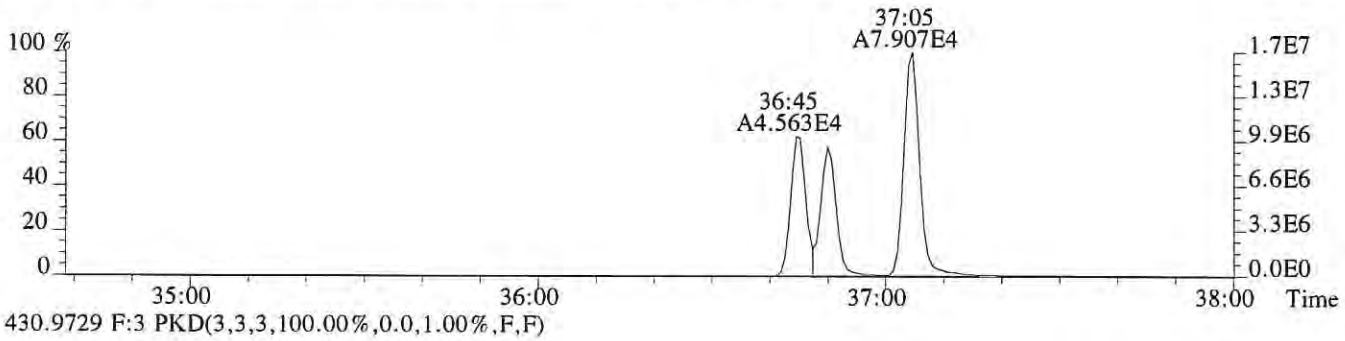
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,724.0,0.40%,F,T)



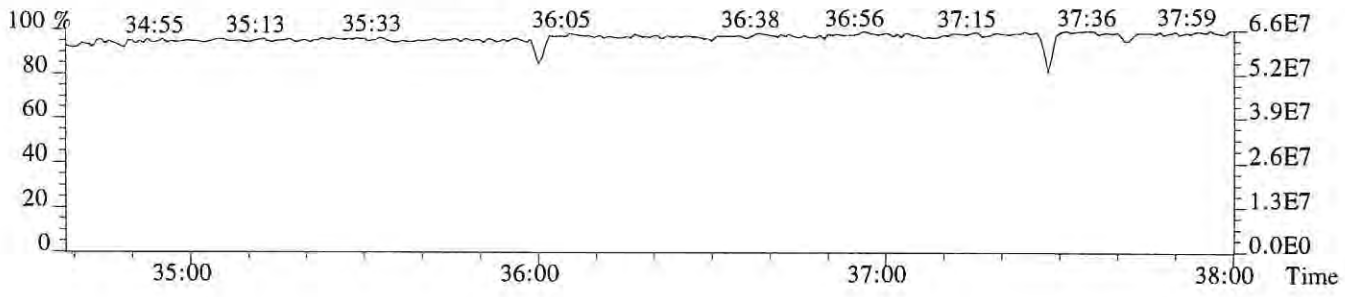
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2724.0,0.40%,F,T)



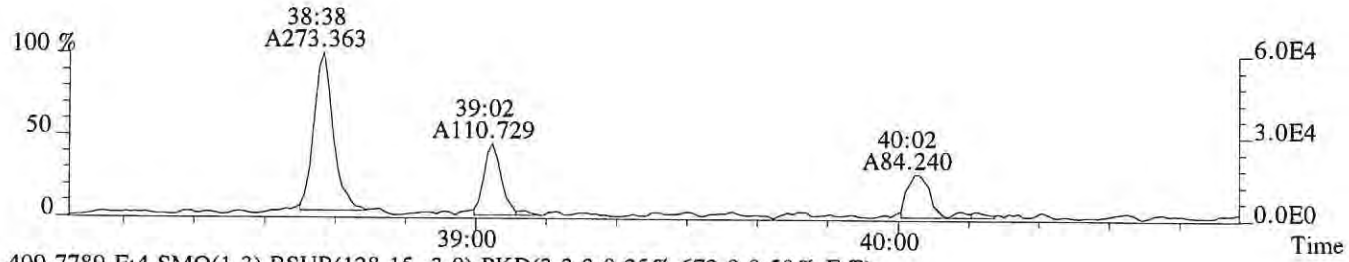
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1836.0,0.40%,F,T)



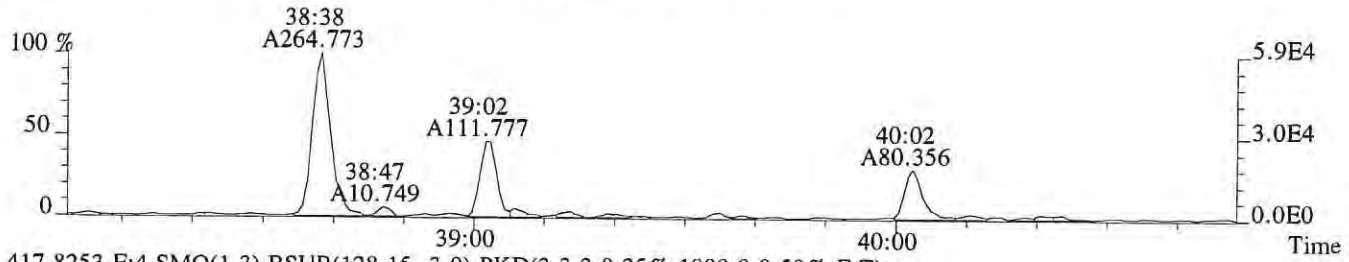
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



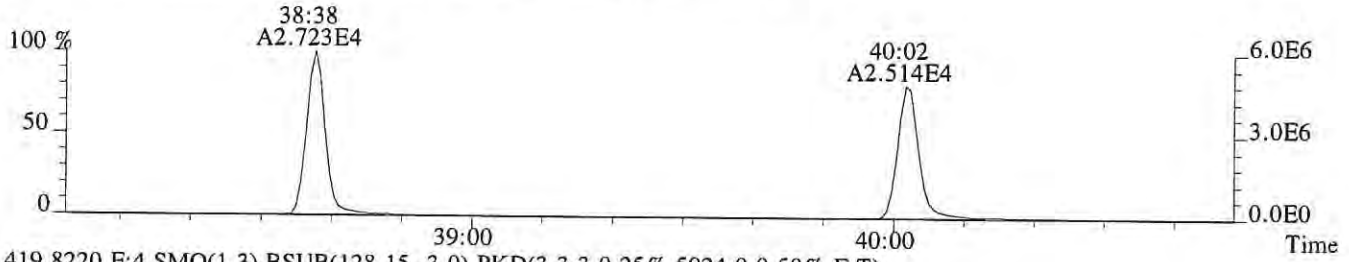
File:P520055 #1-250 Acq:18-JAN-2019 13:16:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-003
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1892.0,0.50%,F,T)



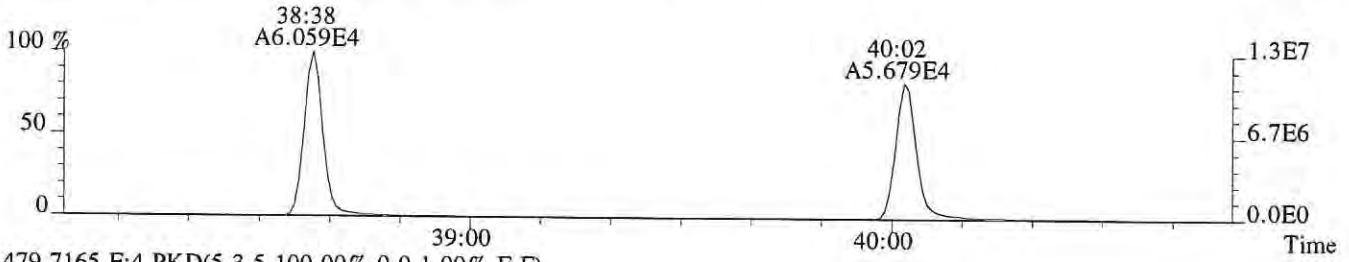
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,672.0,0.50%,F,T)



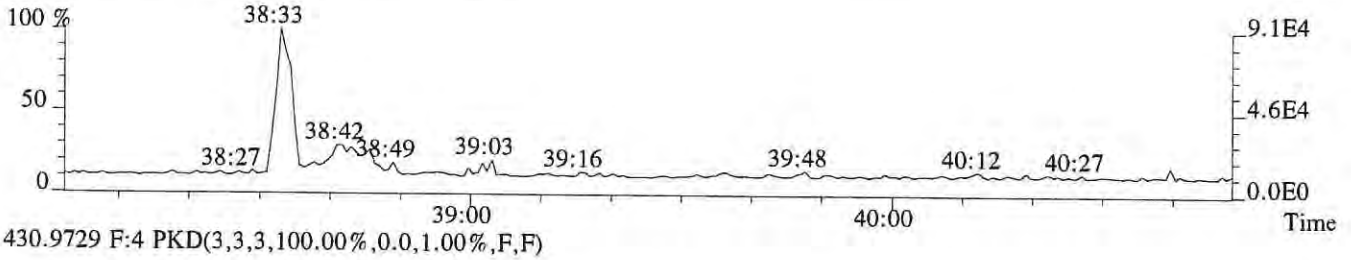
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1880.0,0.50%,F,T)



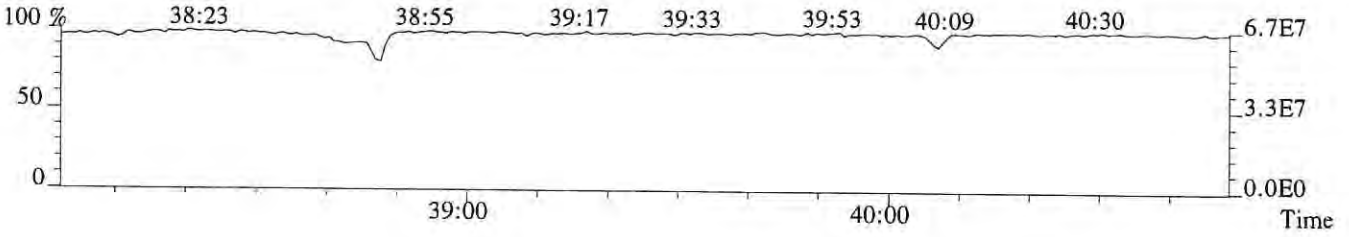
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5924.0,0.50%,F,T)



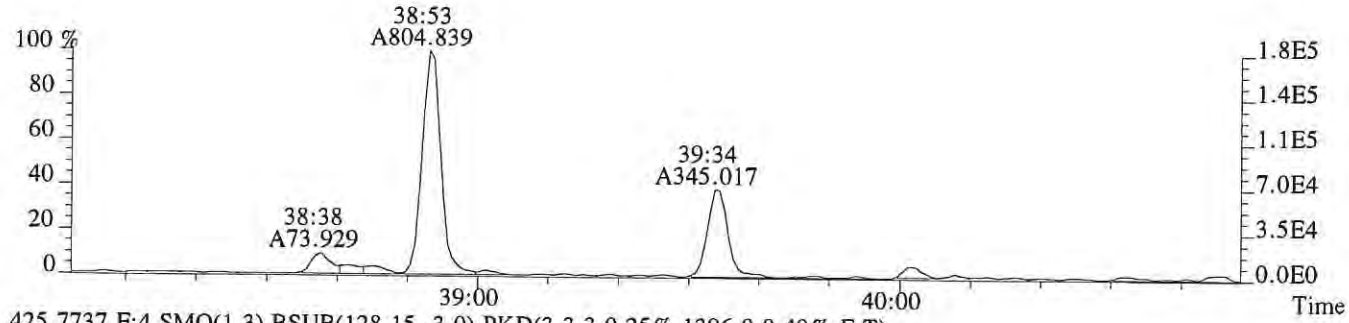
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



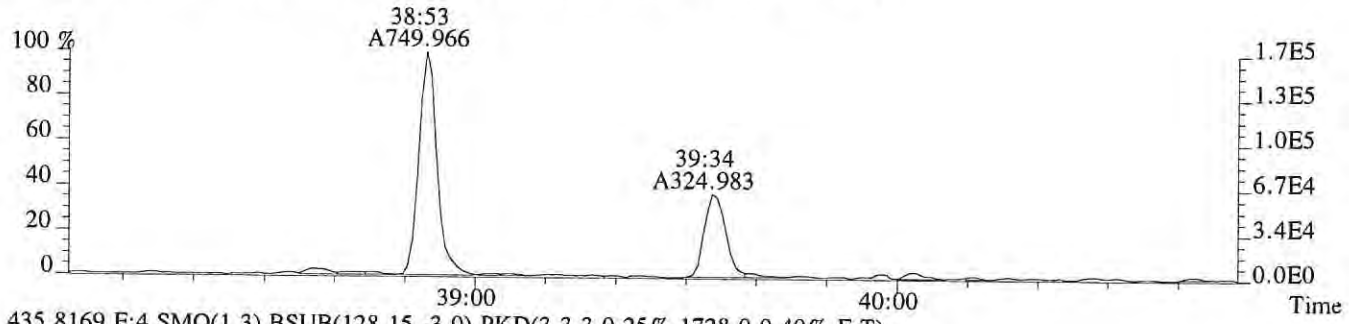
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



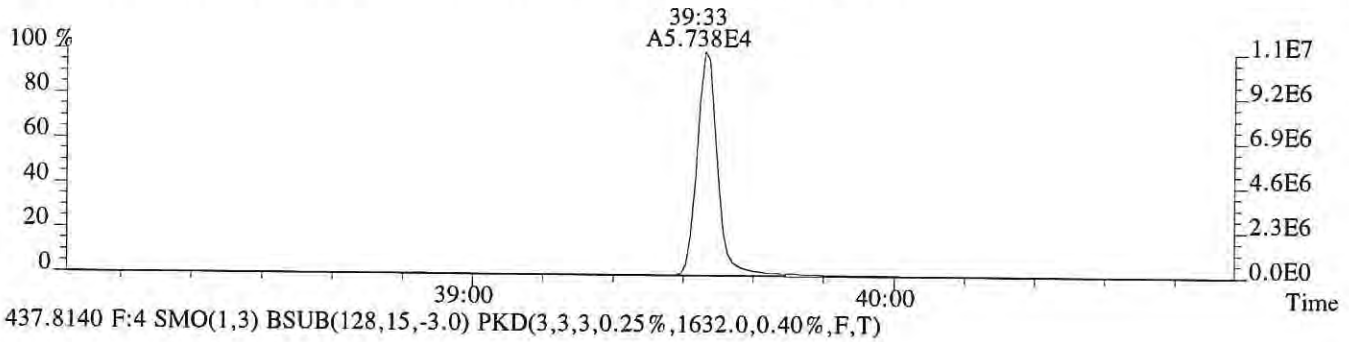
File:P520055 #1-250 Acq:18-JAN-2019 13:16:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-003
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1556.0,0.40%,F,T)



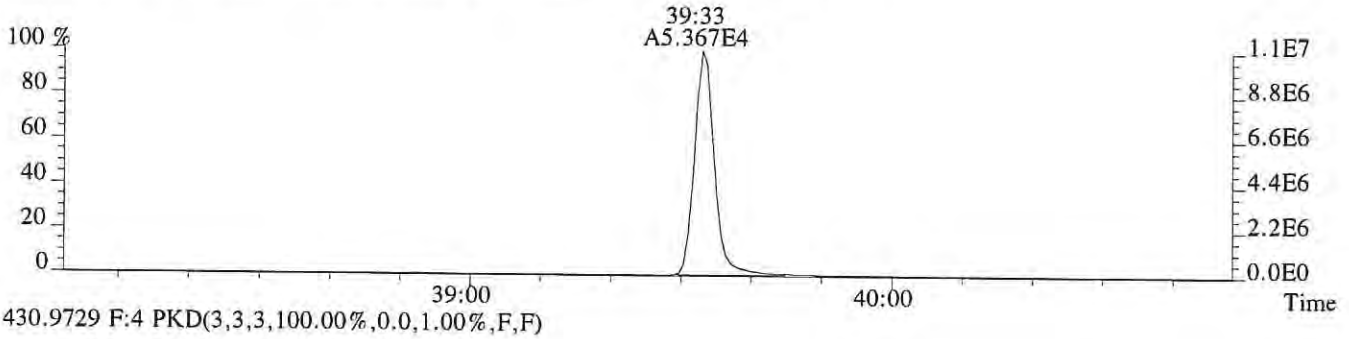
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1396.0,0.40%,F,T)



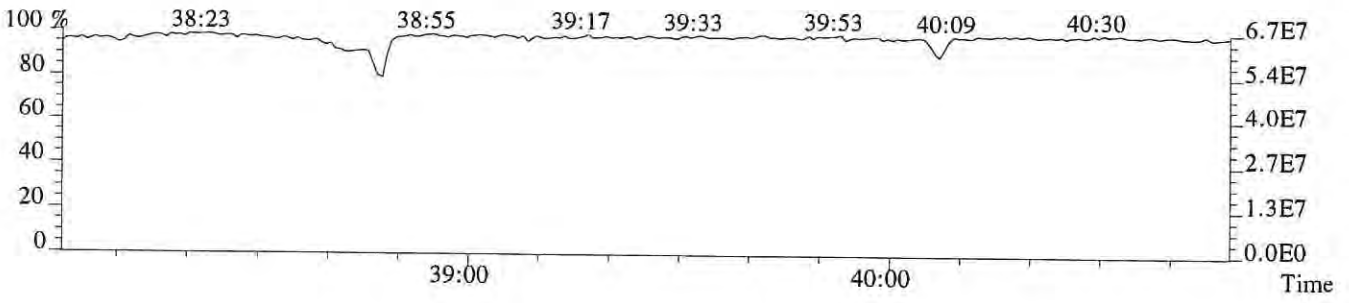
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1728.0,0.40%,F,T)



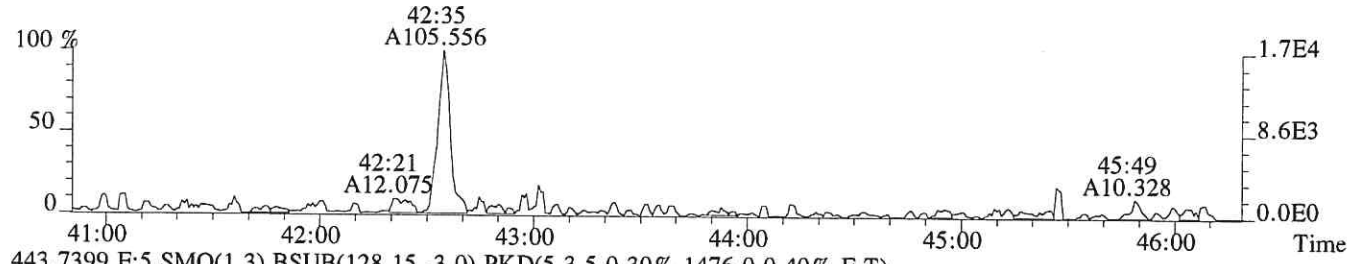
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1632.0,0.40%,F,T)



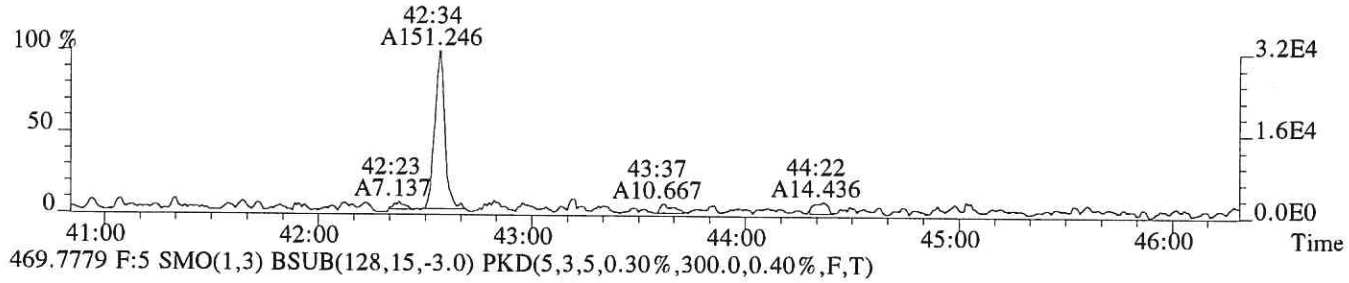
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



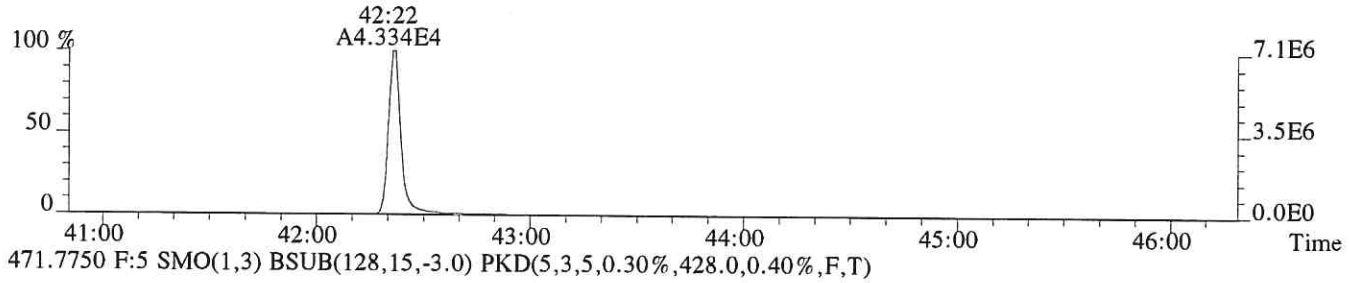
File:P520055 #1-493 Acq:18-JAN-2019 13:16:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-003
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,316.0,0.40%,F,T)



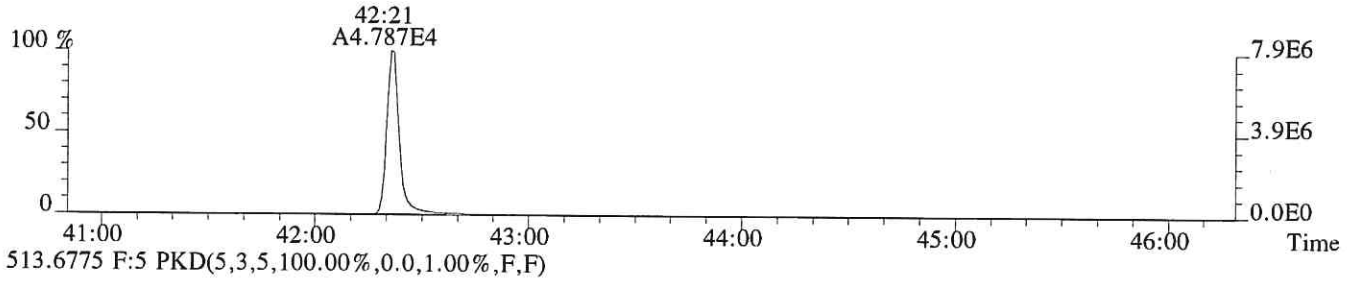
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1476.0,0.40%,F,T)



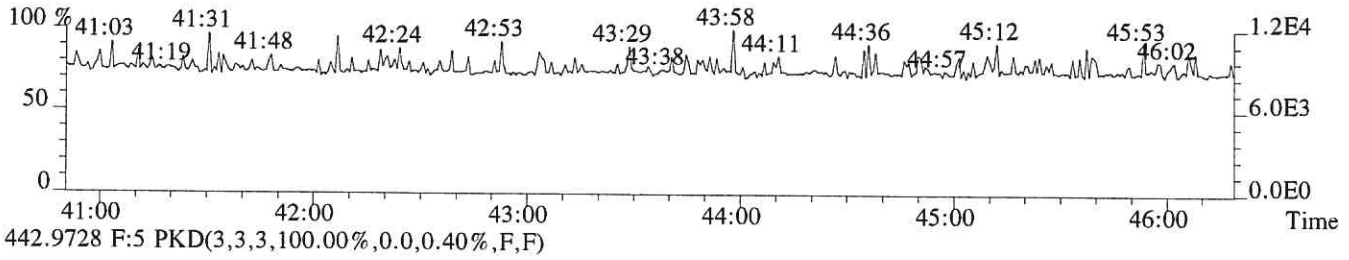
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,300.0,0.40%,F,T)



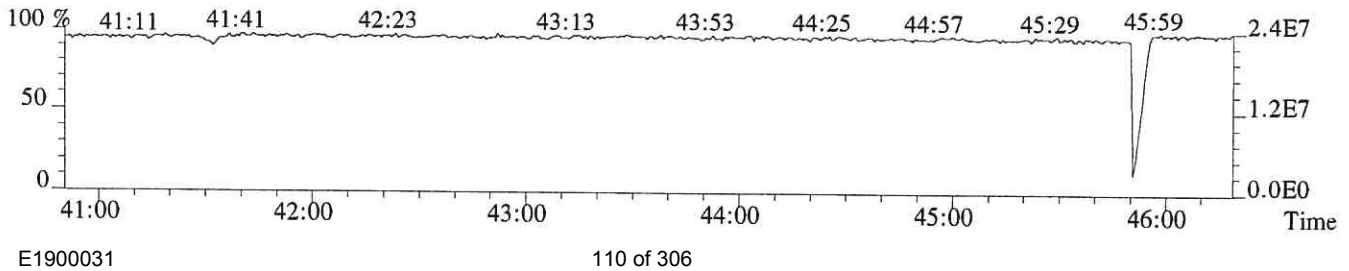
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,428.0,0.40%,F,T)



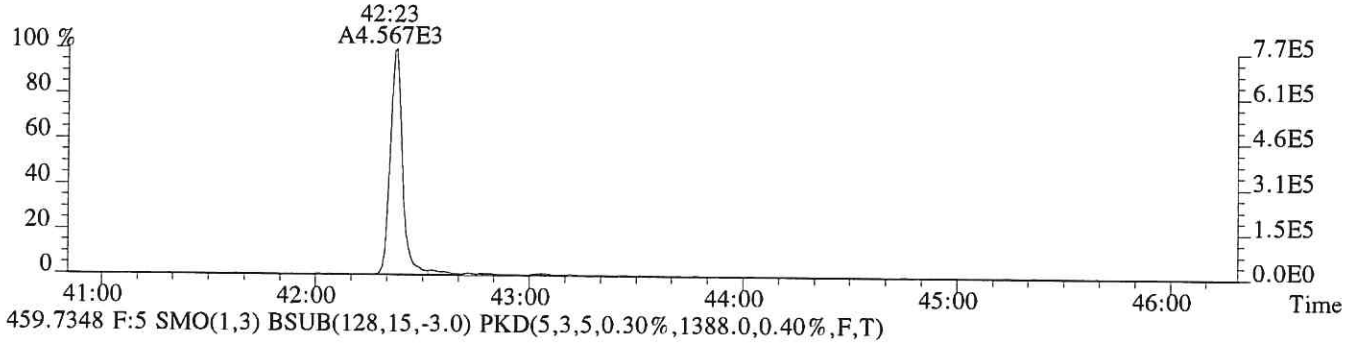
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



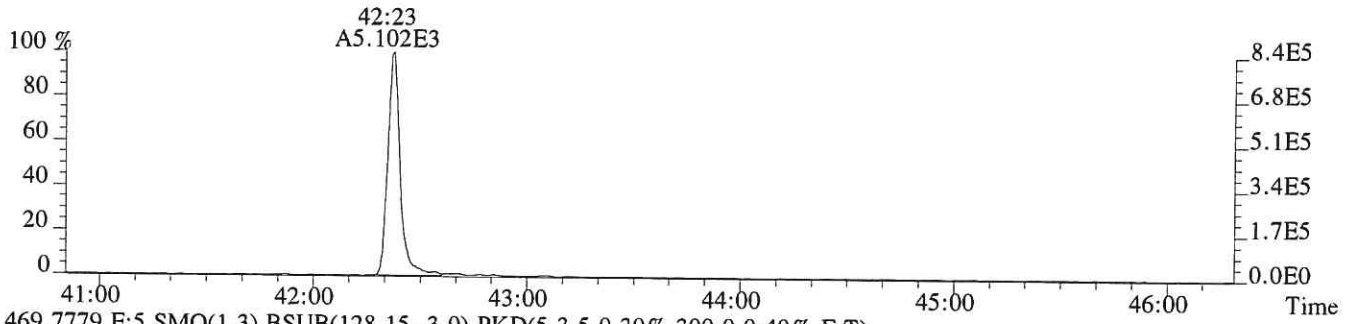
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



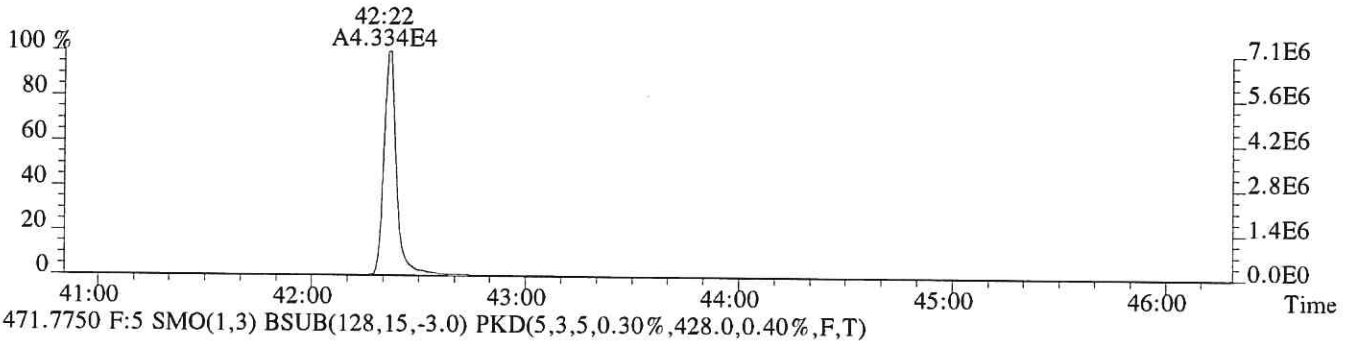
File:P520055 #1-493 Acq:18-JAN-2019 13:16:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1900031-003
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,632.0,0.40%,F,T)



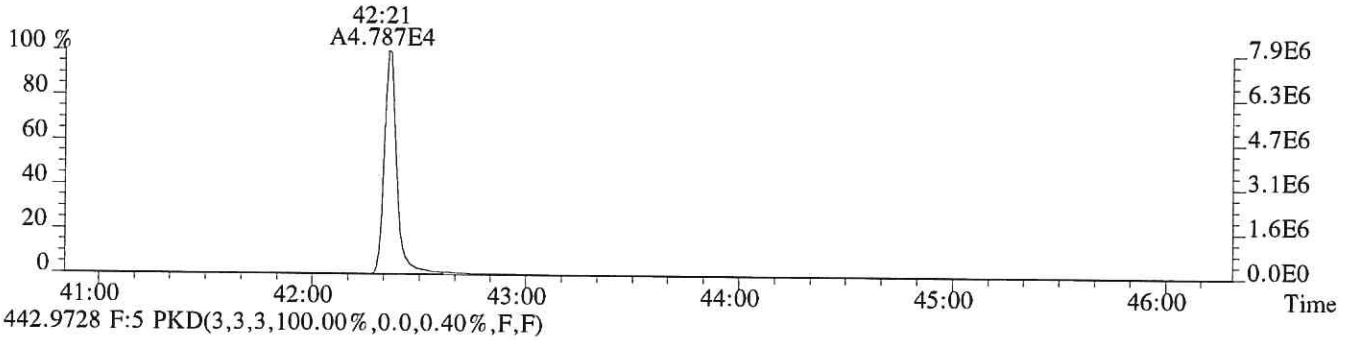
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1388.0,0.40%,F,T)



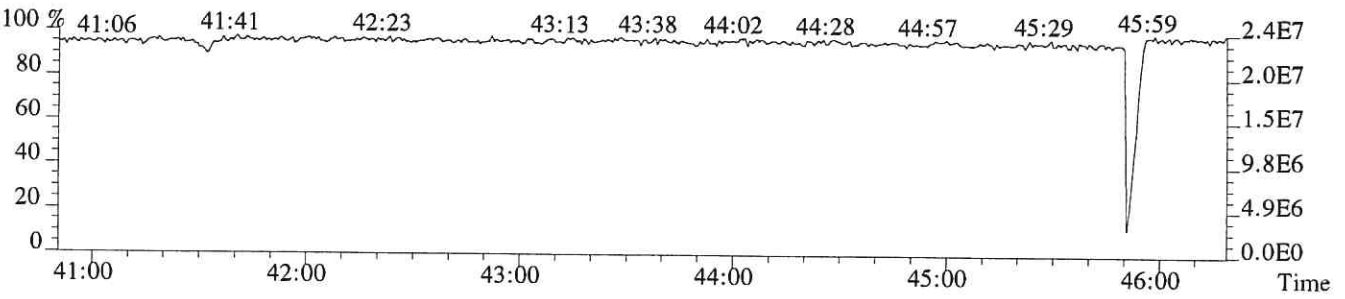
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,300.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,428.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
METHOD BLANK

Run #10 Filename P520052 Samp: 1 Inj: 1 Acquired: 18-JAN-19 10:50:59
Processed: 21-JAN-19 09:19:56 Sample ID: EQ1900021-01

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	NotFnd	*	*	*	no	yes	0.942
2	Unk	1,2,3,7,8-PeCDF	NotFnd	*	*	*	no	yes	1.012
3	Unk	2,3,4,7,8-PeCDF	33:22	5.064e+01	3.385e+01	1.50	yes	yes	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:02	3.927e+01	3.260e+01	1.20	yes	yes	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:07	5.371e+01	3.797e+01	1.41	yes	yes	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:38	3.445e+01	2.165e+01	1.59	no	yes	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:23	3.400e+01	4.191e+01	0.81	no	yes	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:38	5.896e+01	4.204e+01	1.40	no	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	NotFnd	*	*	*	no	no	1.258
10	Unk	OCDF	42:35	9.674e+01	9.220e+01	1.05	no	no	1.359
11	Unk	2,3,7,8-TCDD	NotFnd	*	*	*	no	no	1.085
12	Unk	1,2,3,7,8-PeCDD	NotFnd	*	*	*	no	yes	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:46	2.414e+01	2.550e+01	0.95	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	36:51	2.624e+01	3.384e+01	0.78	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:05	3.520e+01	3.095e+01	1.14	yes	yes	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:34	1.284e+02	1.633e+02	0.79	no	no	1.025
17	Unk	OCDD	42:23	2.491e+02	3.017e+02	0.83	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:16	5.990e+04	7.573e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:26	1.006e+05	6.357e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:20	9.061e+04	5.683e+04	1.59	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:01	3.945e+04	7.651e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:07	4.482e+04	8.538e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:37	4.125e+04	7.934e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:23	3.769e+04	7.249e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:38	2.541e+04	5.685e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:02	2.429e+04	5.519e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:02	2.881e+04	3.663e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:38	6.946e+04	4.363e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:45	5.854e+04	4.567e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	36:51	5.536e+04	4.330e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:34	5.412e+04	5.067e+04	1.07	yes	no	0.858
32	IS	13C-OCDD	42:22	3.823e+04	4.228e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:29	7.591e+04	9.533e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:05	1.007e+05	8.047e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:04	4.061e+04				no	1.014

$$\text{OCDD} = \frac{(2.491e+02 + 3.017e+02) \times 4000\ \text{pg} \times 1}{(3.823e+04 + 4.228e+04) \times \quad \text{g} \times \quad / 100 \times 1.118} =$$

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
METHOD BLANK

Run #10 Filename P520052 Samp: 1 Inj: 1 Acquired: 18-JAN-19 10:50:59
Processed: 21-JAN-19 09:19:56 LAB. ID: EQ1900021-01

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	*	1.22e+03	*	*	1.85e+03	*
2	1,2,3,7,8-PeCDF	*	2.13e+03	*	*	2.34e+03	*
3	2,3,4,7,8-PeCDF	8.66e+03	2.13e+03	4.1e+00	8.36e+03	2.34e+03	3.6e+00
4	1,2,3,4,7,8-HxCDF	8.11e+03	9.48e+02	8.6e+00	7.56e+03	1.37e+03	5.5e+00
5	1,2,3,6,7,8-HxCDF	8.18e+03	9.48e+02	8.6e+00	7.53e+03	1.37e+03	5.5e+00
6	2,3,4,6,7,8-HxCDF	7.96e+03	9.48e+02	8.4e+00	5.01e+03	1.37e+03	3.7e+00
7	1,2,3,7,8,9-HxCDF	7.00e+03	9.48e+02	7.4e+00	7.91e+03	1.37e+03	5.8e+00
8	1,2,3,4,6,7,8-HpCDF	1.29e+04	1.71e+03	7.6e+00	1.10e+04	8.00e+02	1.4e+01
9	1,2,3,4,7,8,9-HpCDF	*	1.71e+03	*	*	8.00e+02	*
10	OCDF	1.73e+04	8.80e+02	2.0e+01	1.72e+04	1.10e+03	1.6e+01
11	2,3,7,8-TCDD	*	2.92e+03	*	*	1.72e+03	*
12	1,2,3,7,8-PeCDD	*	1.45e+03	*	*	1.48e+03	*
13	1,2,3,4,7,8-HxCDD	5.65e+03	8.04e+02	7.0e+00	6.55e+03	1.07e+03	6.1e+00
14	1,2,3,6,7,8-HxCDD	6.01e+03	8.04e+02	7.5e+00	8.69e+03	1.07e+03	8.1e+00
15	1,2,3,7,8,9-HxCDD	7.79e+03	8.04e+02	9.7e+00	7.07e+03	1.07e+03	6.6e+00
16	1,2,3,4,6,7,8-HpCDD	2.70e+04	9.68e+02	2.8e+01	3.40e+04	7.72e+02	4.4e+01
17	OCDD	3.85e+04	9.24e+02	4.2e+01	5.24e+04	1.32e+03	4.0e+01
18	13C-2,3,7,8-TCDF	1.13e+07	7.78e+03	1.5e+03	1.44e+07	3.54e+03	4.1e+03
19	13C-1,2,3,7,8-PeCDF	1.97e+07	2.65e+03	7.5e+03	1.25e+07	1.68e+03	7.4e+03
20	13C-2,3,4,7,8-PeCDF	1.86e+07	2.65e+03	7.0e+03	1.17e+07	1.68e+03	7.0e+03
21	13C-1,2,3,4,7,8-HxCDF	8.47e+06	1.79e+03	4.7e+03	1.66e+07	2.00e+03	8.3e+03
22	13C-1,2,3,6,7,8-HxCDF	9.64e+06	1.79e+03	5.4e+03	1.83e+07	2.00e+03	9.2e+03
23	13C-2,3,4,6,7,8-HxCDF	9.25e+06	1.79e+03	5.2e+03	1.77e+07	2.00e+03	8.9e+03
24	13C-1,2,3,7,8,9-HxCDF	7.91e+06	1.79e+03	4.4e+03	1.52e+07	2.00e+03	7.6e+03
25	13C-1,2,3,4,6,7,8-HpCDF	5.30e+06	3.29e+03	1.6e+03	1.18e+07	8.66e+03	1.4e+03
26	13C-1,2,3,4,7,8,9-HpCDF	4.73e+06	3.29e+03	1.4e+03	1.07e+07	8.66e+03	1.2e+03
27	13C-2,3,7,8-TCDD	5.89e+06	8.18e+03	7.2e+02	7.48e+06	3.01e+03	2.5e+03
28	13C-1,2,3,7,8-PeCDD	1.42e+07	1.20e+03	1.2e+04	8.87e+06	1.30e+03	6.8e+03
29	13C-1,2,3,4,7,8-HxCDD	1.34e+07	2.75e+03	4.9e+03	1.04e+07	1.93e+03	5.4e+03
30	13C-1,2,3,6,7,8-HxCDD	1.19e+07	2.75e+03	4.3e+03	9.28e+06	1.93e+03	4.8e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.08e+07	1.63e+03	6.6e+03	1.02e+07	1.03e+03	9.9e+03
32	13C-OCDD	6.35e+06	7.96e+02	8.0e+03	7.05e+06	4.12e+02	1.7e+04
33	13C-1,2,3,4-TCDD	1.48e+07	8.18e+03	1.8e+03	1.84e+07	3.01e+03	6.1e+03
34	13C-1,2,3,7,8,9-HxCDD	2.12e+07	2.75e+03	7.7e+03	1.71e+07	1.93e+03	8.8e+03
35	37Cl-2,3,7,8-TCDD	8.04e+06	1.93e+03	4.2e+03			

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Peak List Summary

CLIENT ID.
METHOD BLANK

Entry: 39 Totals Name: Total Penta-Furans2

Run: 10 File: P520052 Sample:1 Injection:1 Function:2

Acquired: 18-JAN-19 10:50:59 Processed: 21-JAN-19 09:19:56

Mass: 339.8600 341.8570 Tot Response: 8.45e+01 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:22	5.06e+01	3.38e+01 1.50	yes	8.45e+01	2,3,4,7,8-PeCDF	y	y

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.

METHOD BLANK

Entry: 41 Totals Name: Total Hexa-Furans

Run: 10 File: P520052 Sample:1 Injection:1 Function:3

Acquired: 18-JAN-19 10:50:59 Processed: 21-JAN-19 09:19:56

Mass: 373.8210 375.8180 Tot Response: 1.91e+02 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	35:56	1.51e+01	1.28e+01	1.19	yes	2.79e+01		y	y
2	36:02	3.93e+01	3.26e+01	1.20	yes	7.19e+01	1,2,3,4,7,8-HxCDF	y	n
3	36:07	5.37e+01	3.80e+01	1.41	yes	9.17e+01	1,2,3,6,7,8-HxCDF	y	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
METHOD BLANK

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 10 File: P520052 Sample:1 Injection:1 Function:3

Acquired: 18-JAN-19 10:50:59 Processed: 21-JAN-19 09:19:56

Mass: 389.8160 391.8130 Tot Response: 1.18e+02 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	36:11	2.81e+01	2.42e+01	1.16	yes	5.23e+01		n	n
2	37:05	3.52e+01	3.10e+01	1.14	yes	6.62e+01	1,2,3,7,8,9-HxCDD	y	y

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
METHOD BLANK

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 10 File: P520052 Sample:1 Injection:1 Function:4

Acquired: 18-JAN-19 10:50:59 Processed: 21-JAN-19 09:19:56

Mass: 423.7770 425.7740 Tot Response: 1.86e+02 RRF: 1.025

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:53	8.84e+01	9.72e+01 0.91	yes	1.86e+02		n	n

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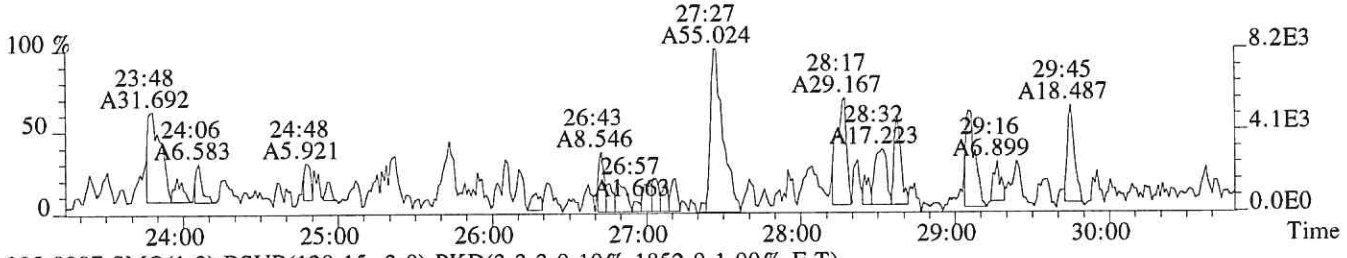
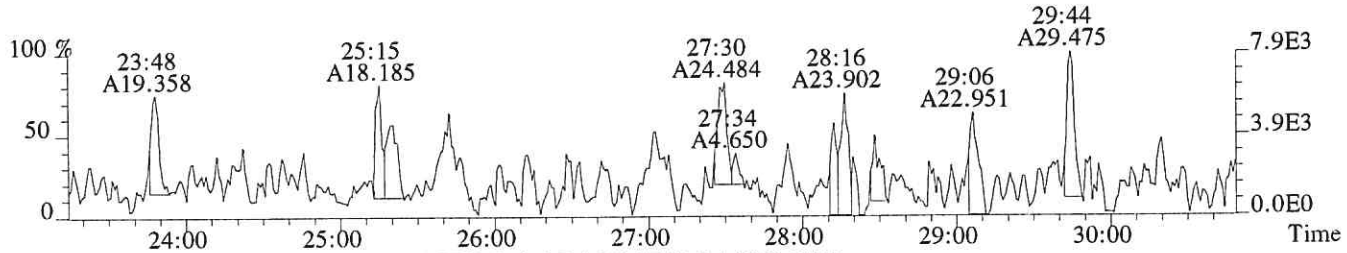
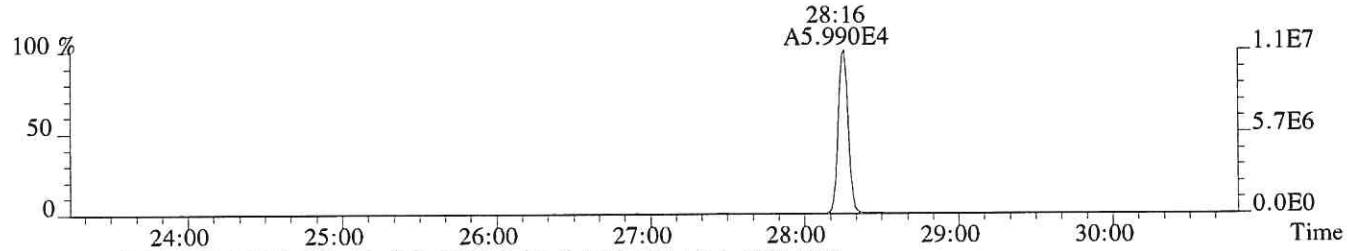
File:P520052 #1-538 Acq:18-JAN-2019 10:50:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-01
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1216.0,1.00%,F,T)



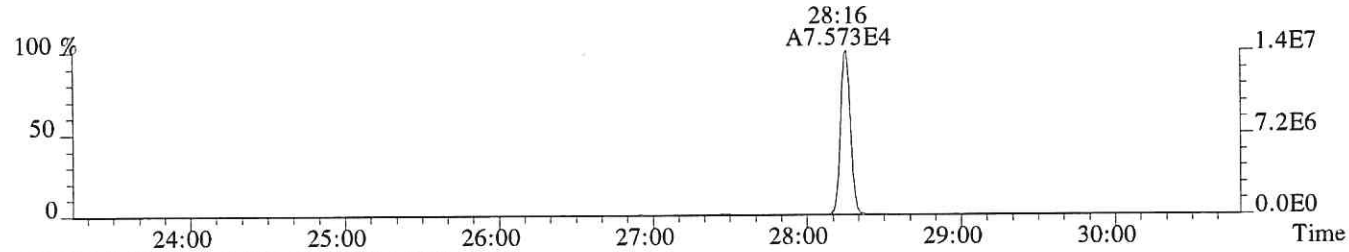
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1852.0,1.00%,F,T)



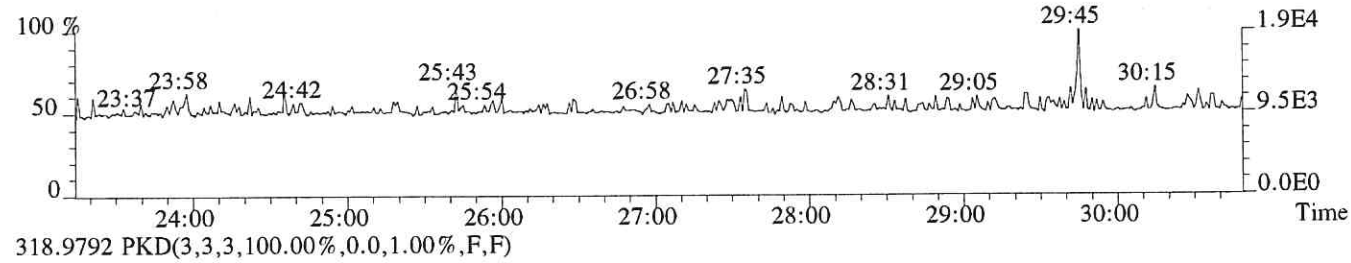
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7780.0,1.00%,F,T)



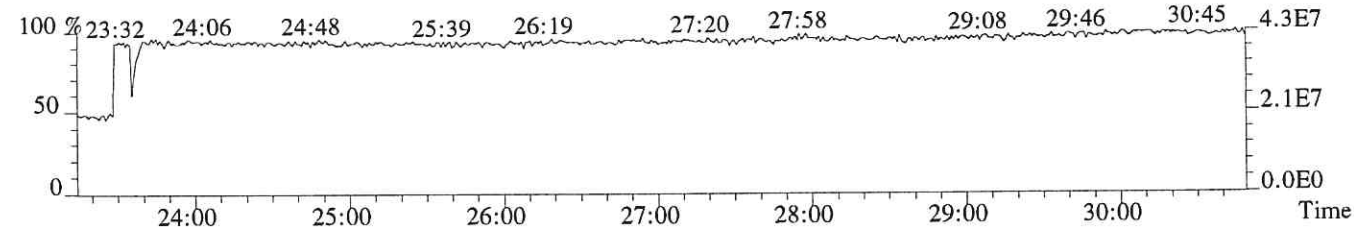
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3544.0,1.00%,F,T)



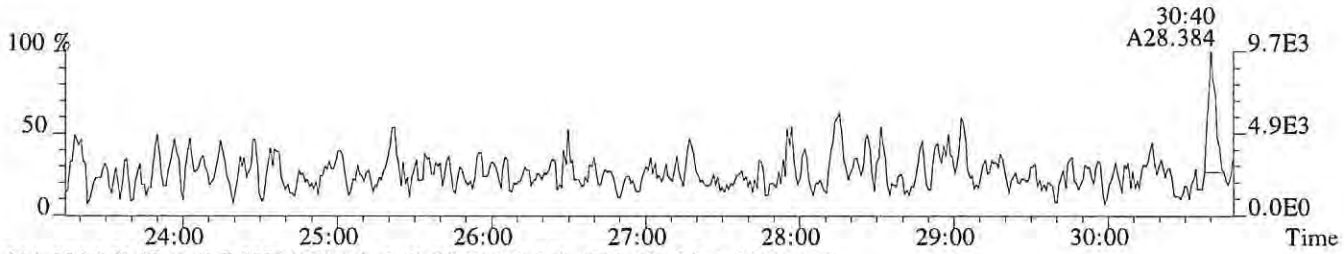
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



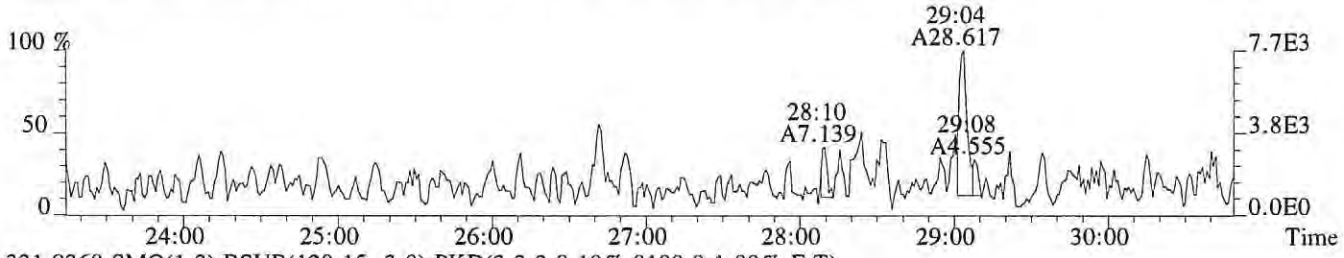
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



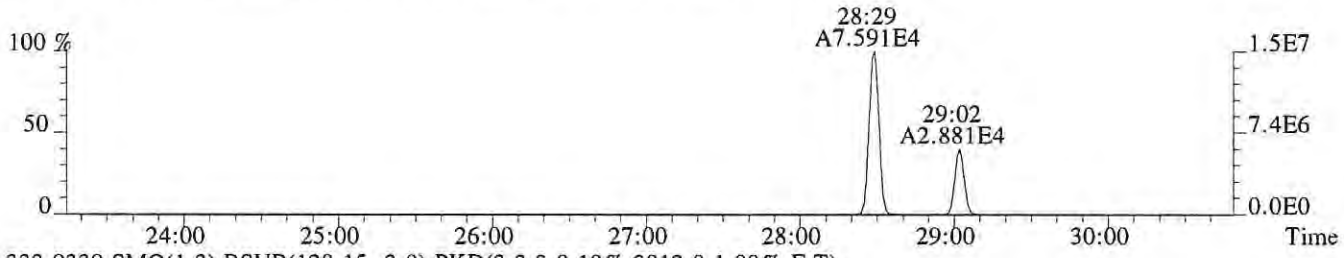
File:P520052 #1-538 Acq:18-JAN-2019 10:50:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-01
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2924.0,1.00%,F,T)



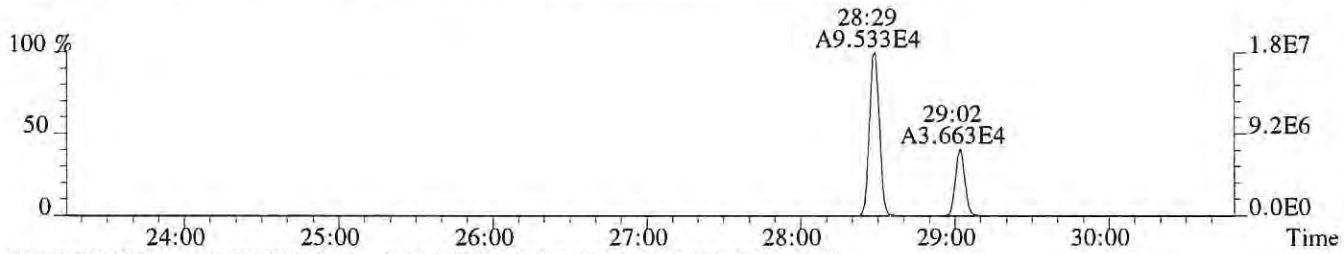
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1716.0,1.00%,F,T)



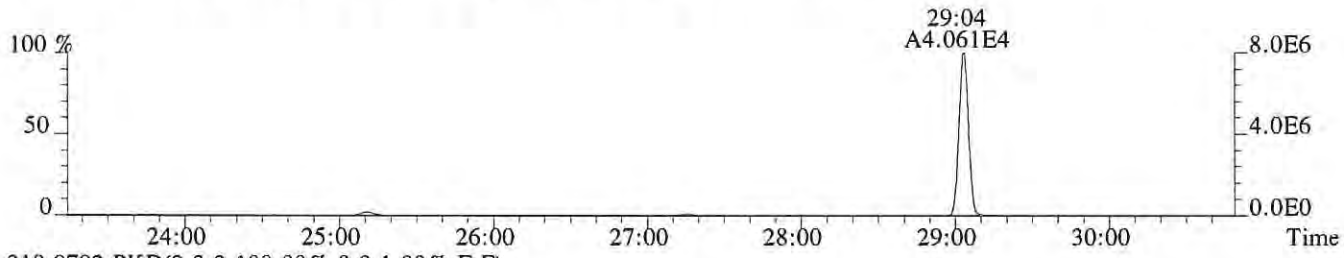
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8180.0,1.00%,F,T)



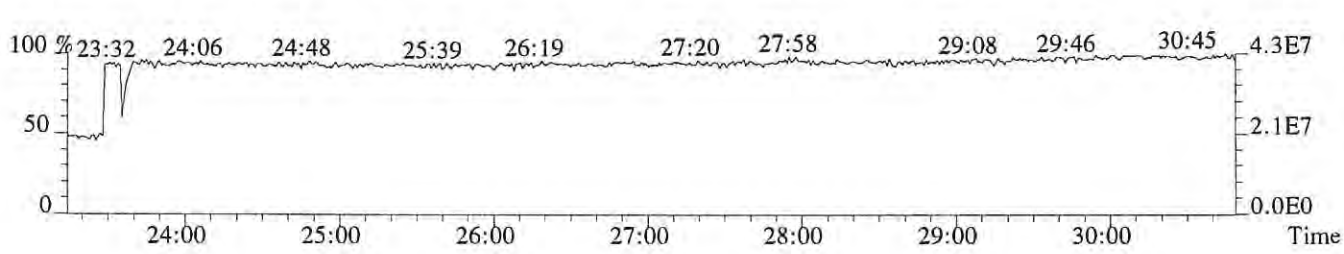
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3012.0,1.00%,F,T)



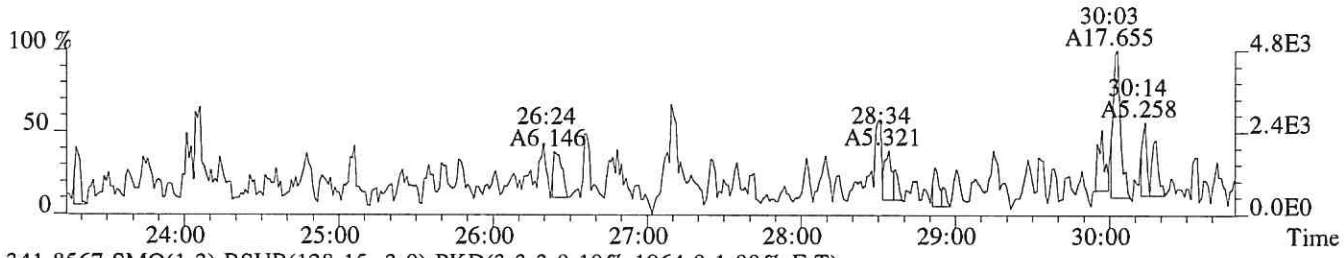
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1932.0,1.00%,F,T)



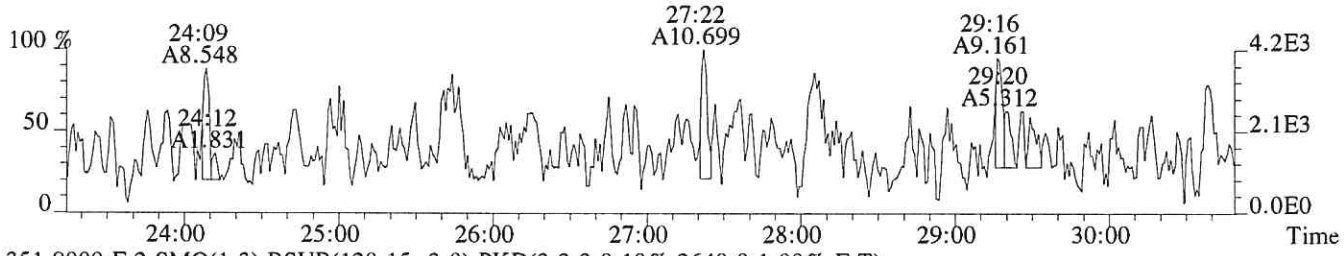
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



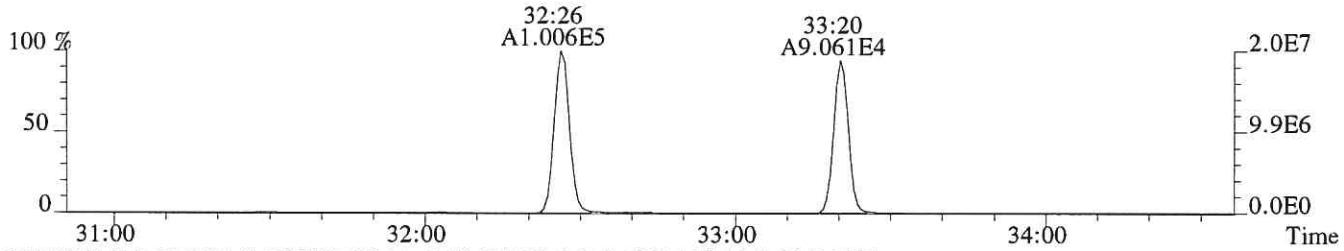
File:P520052 #1-538 Acq:18-JAN-2019 10:50:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-01
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1032.0,1.00%,F,T)



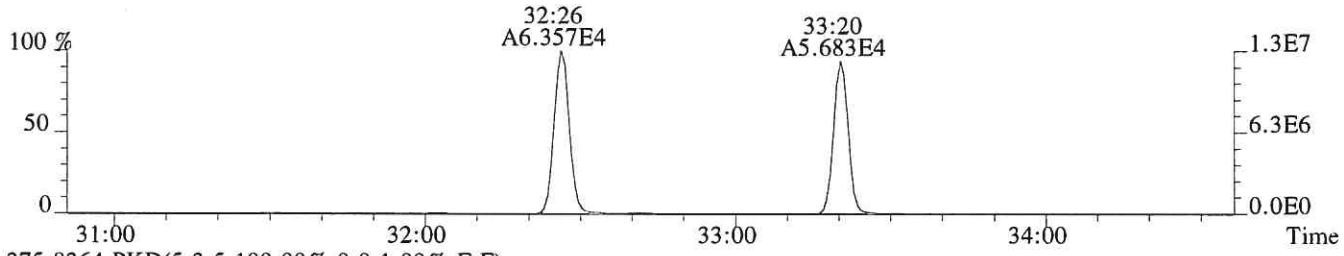
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1964.0,1.00%,F,T)



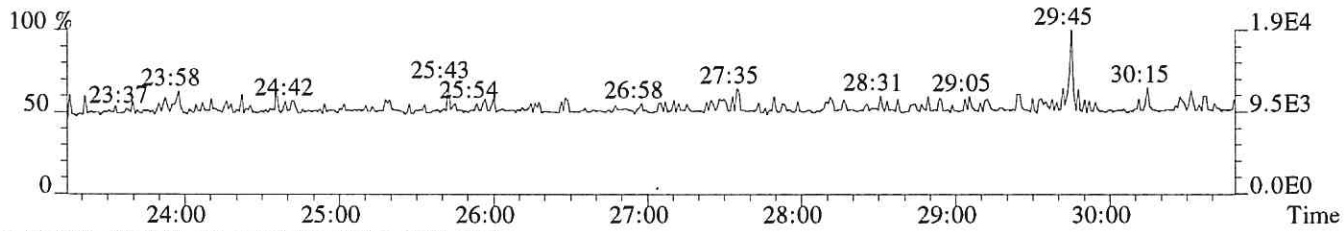
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2648.0,1.00%,F,T)



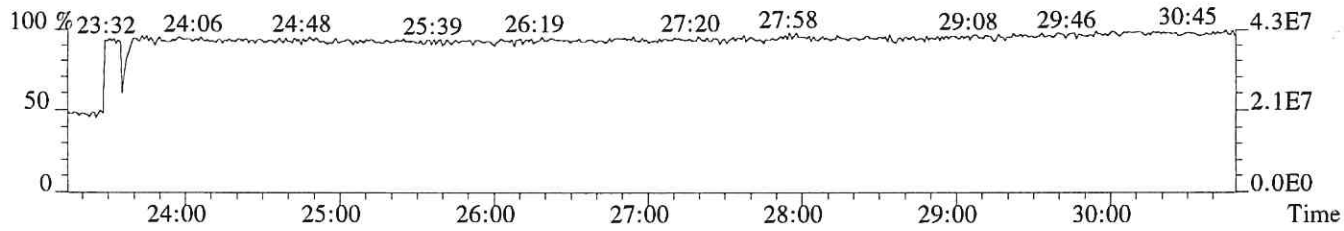
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1684.0,1.00%,F,T)



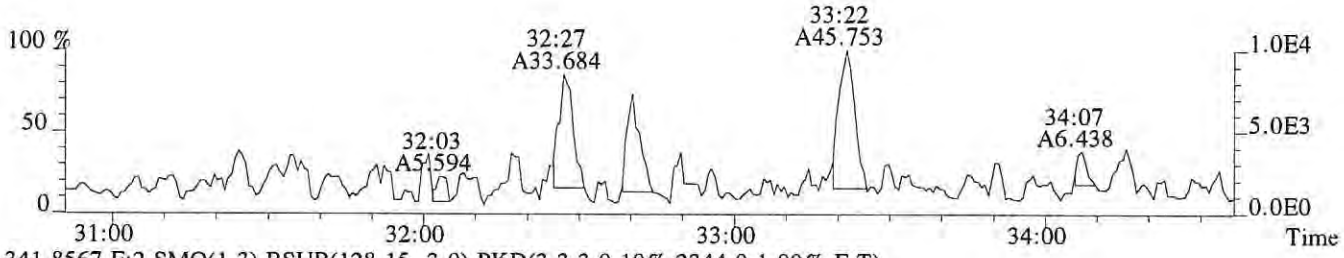
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



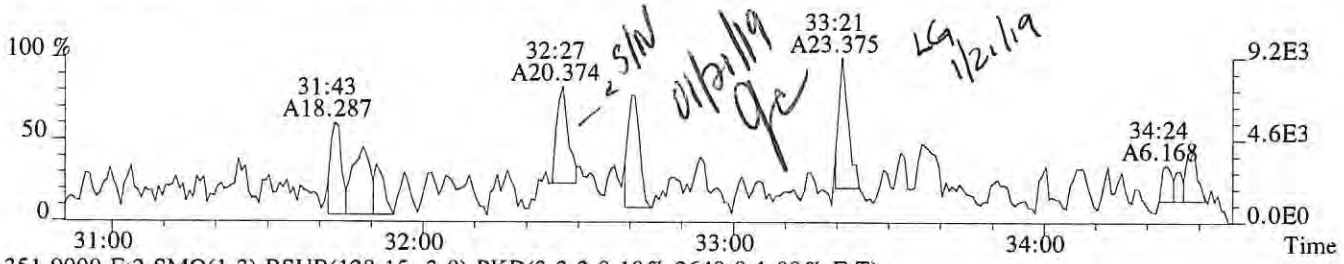
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



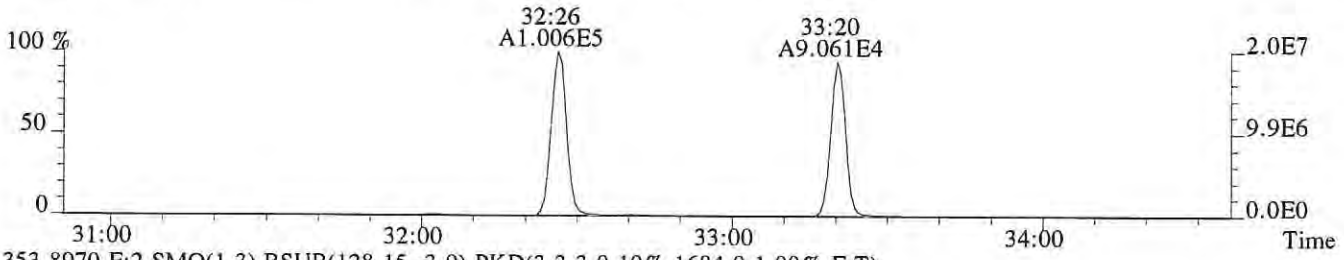
File:P520052 #1-339 Acq:18-JAN-2019 10:50:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-01
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2128.0,1.00%,F,T)



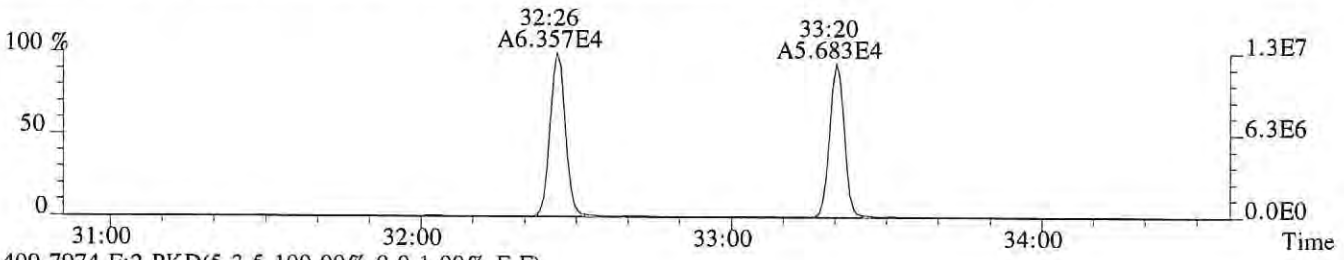
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2344.0,1.00%,F,T)



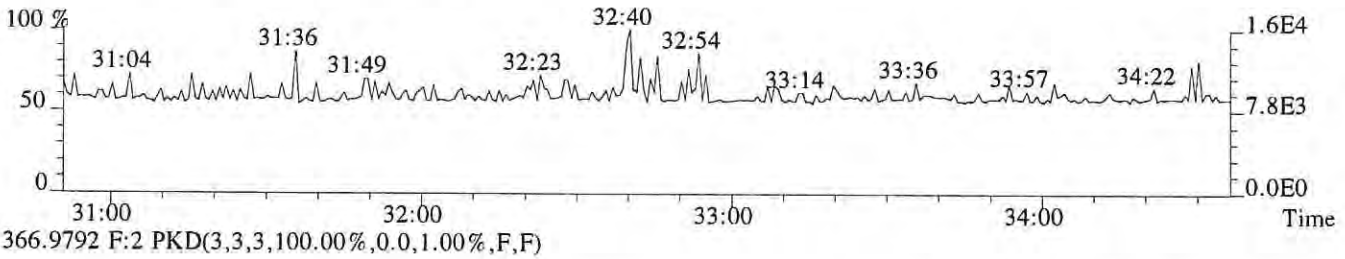
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2648.0,1.00%,F,T)



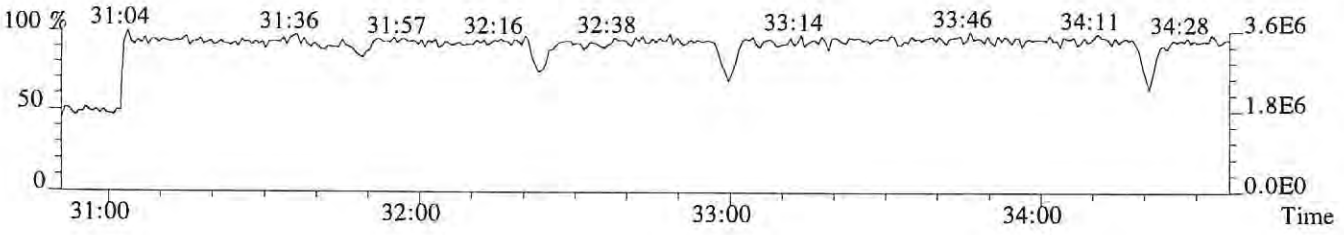
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1684.0,1.00%,F,T)



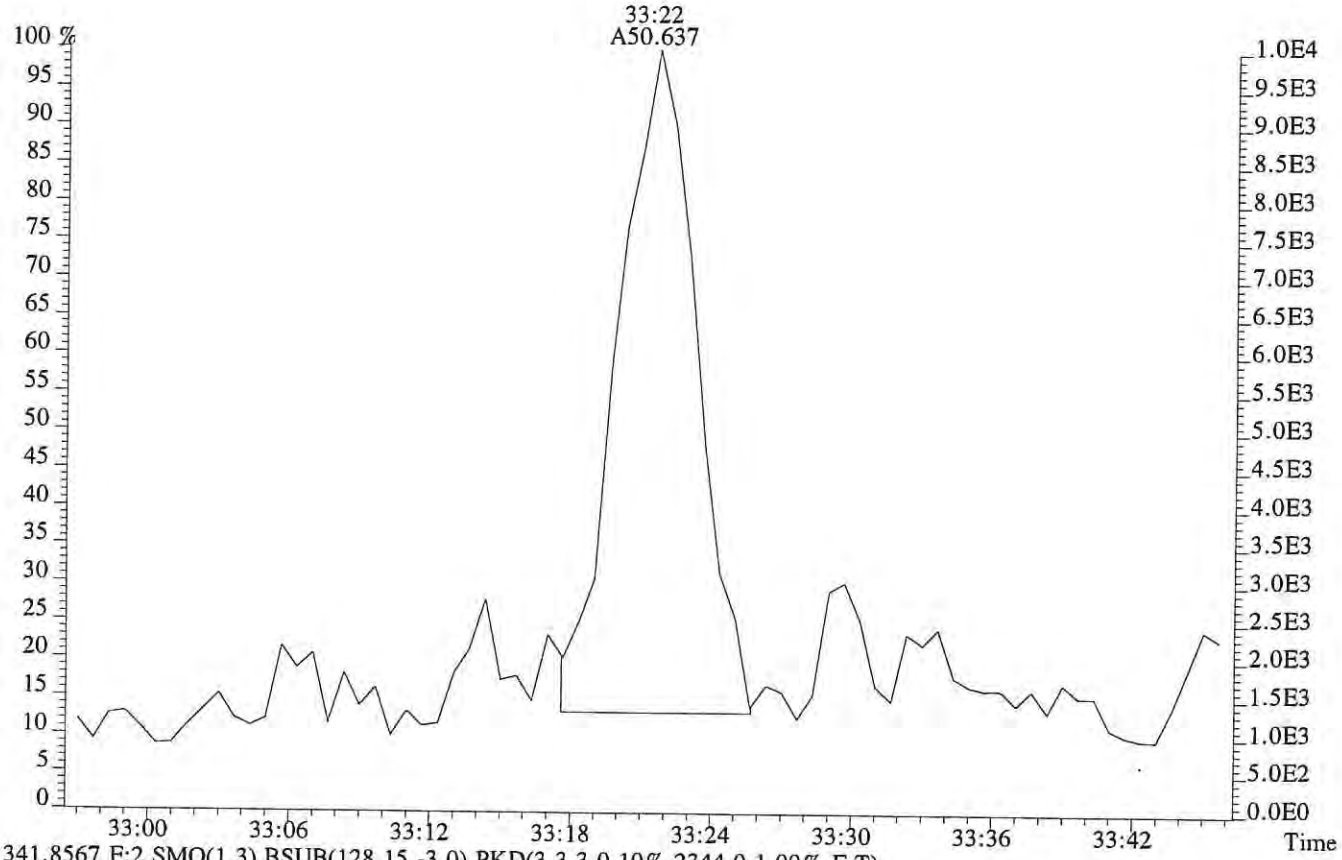
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



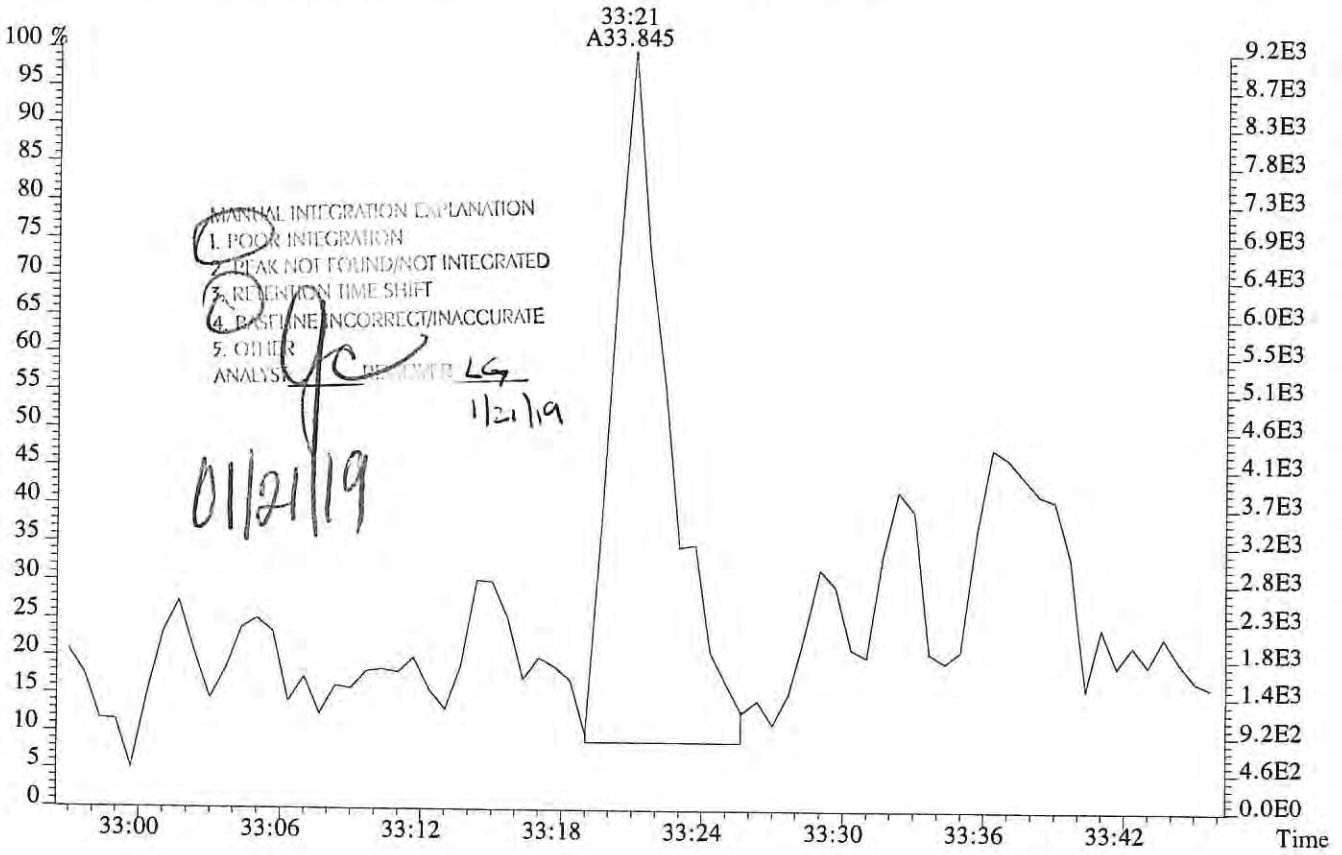
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P520052 #1-339 Acq:18-JAN-2019 10:50:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-01
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2128.0,1.00%,F,T)

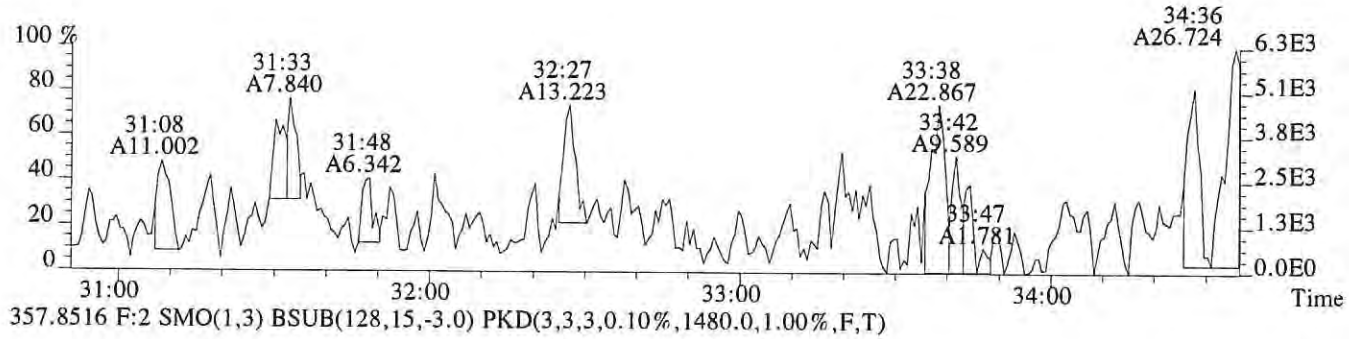


341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2344.0,1.00%,F,T)

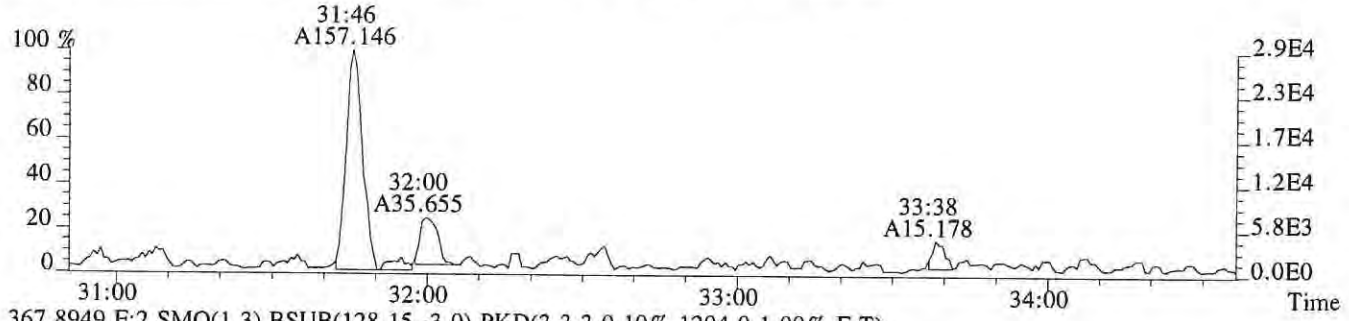


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST LG 1/21/19
01/21/19

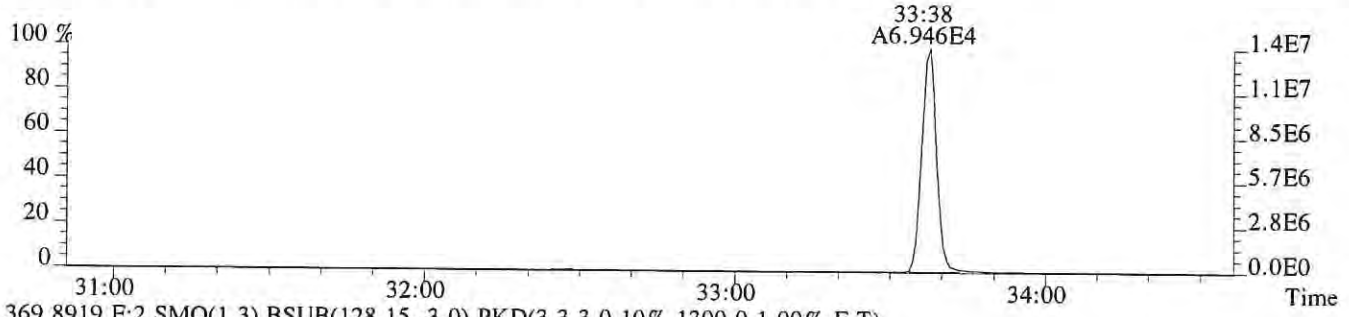
File:P520052 #1-339 Acq:18-JAN-2019 10:50:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-01
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1448.0,1.00%,F,T)



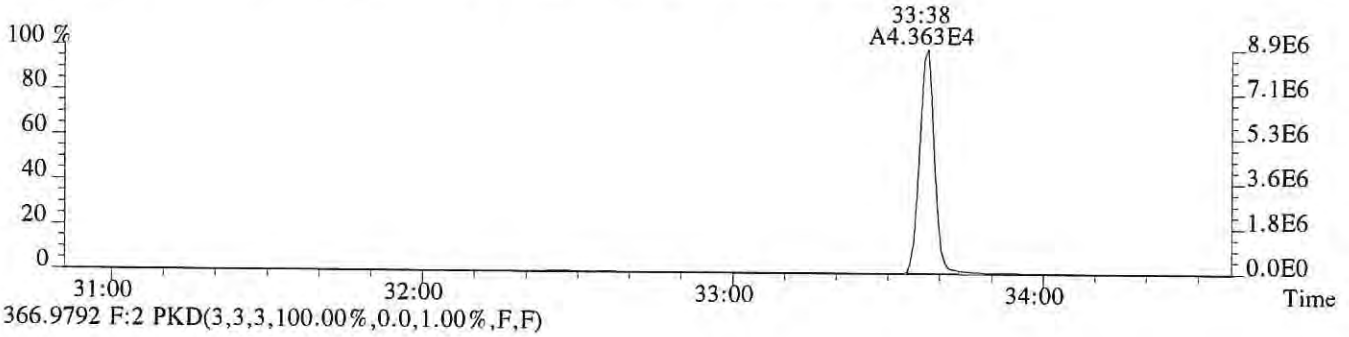
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1480.0,1.00%,F,T)



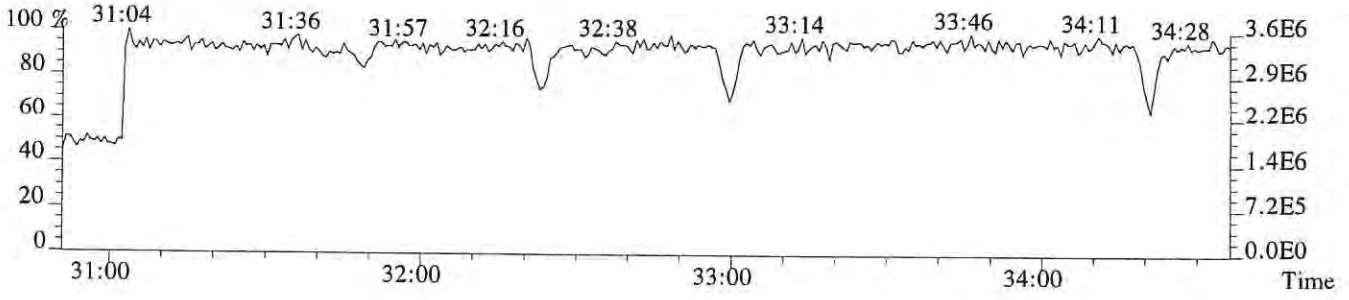
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1204.0,1.00%,F,T)



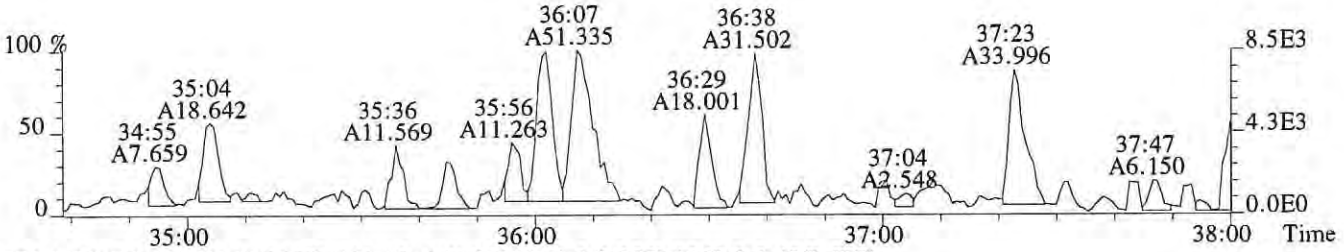
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1300.0,1.00%,F,T)



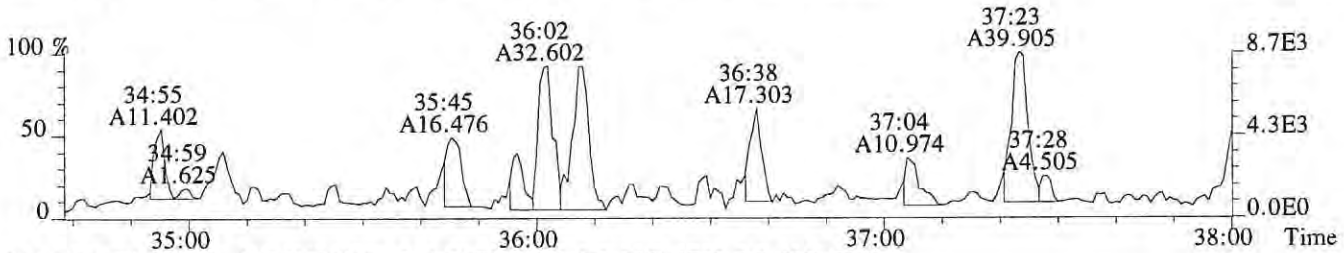
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



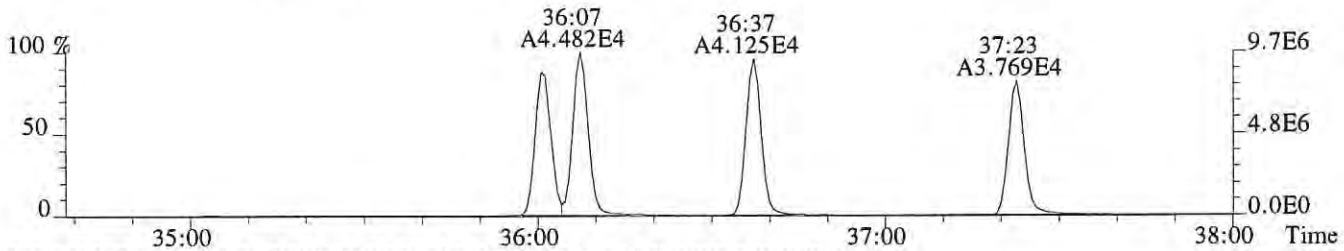
File:P520052 #1-303 Acq:18-JAN-2019 10:50:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-01
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,948.0,0.40%,F,T)



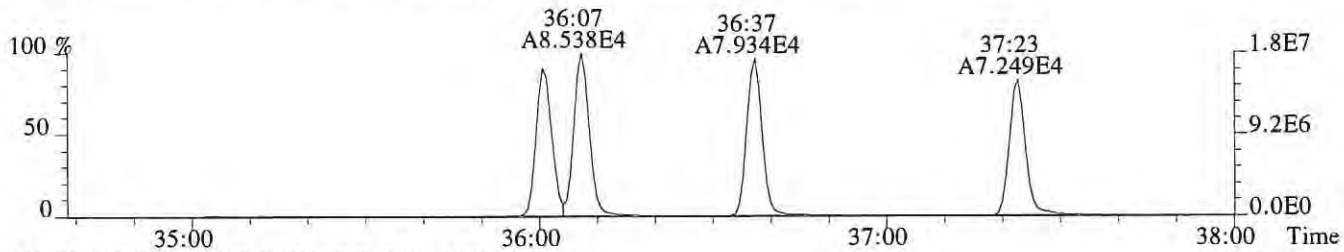
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1368.0,0.40%,F,T)



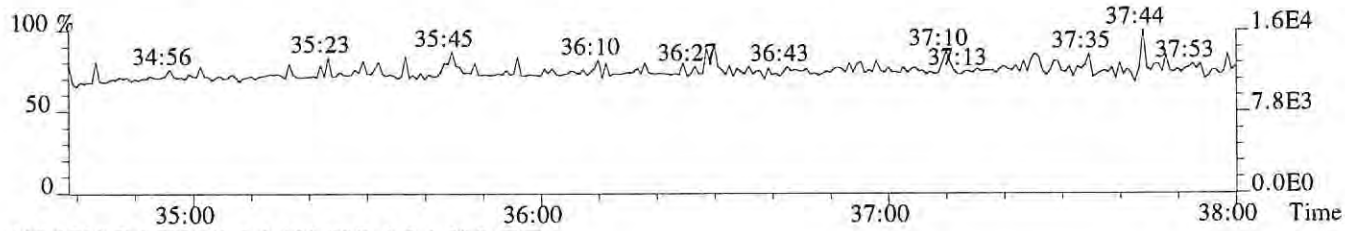
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1792.0,0.40%,F,T)



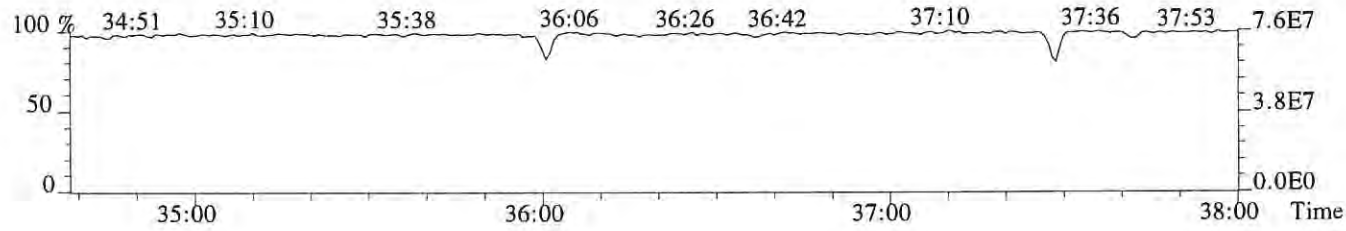
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1996.0,0.40%,F,T)



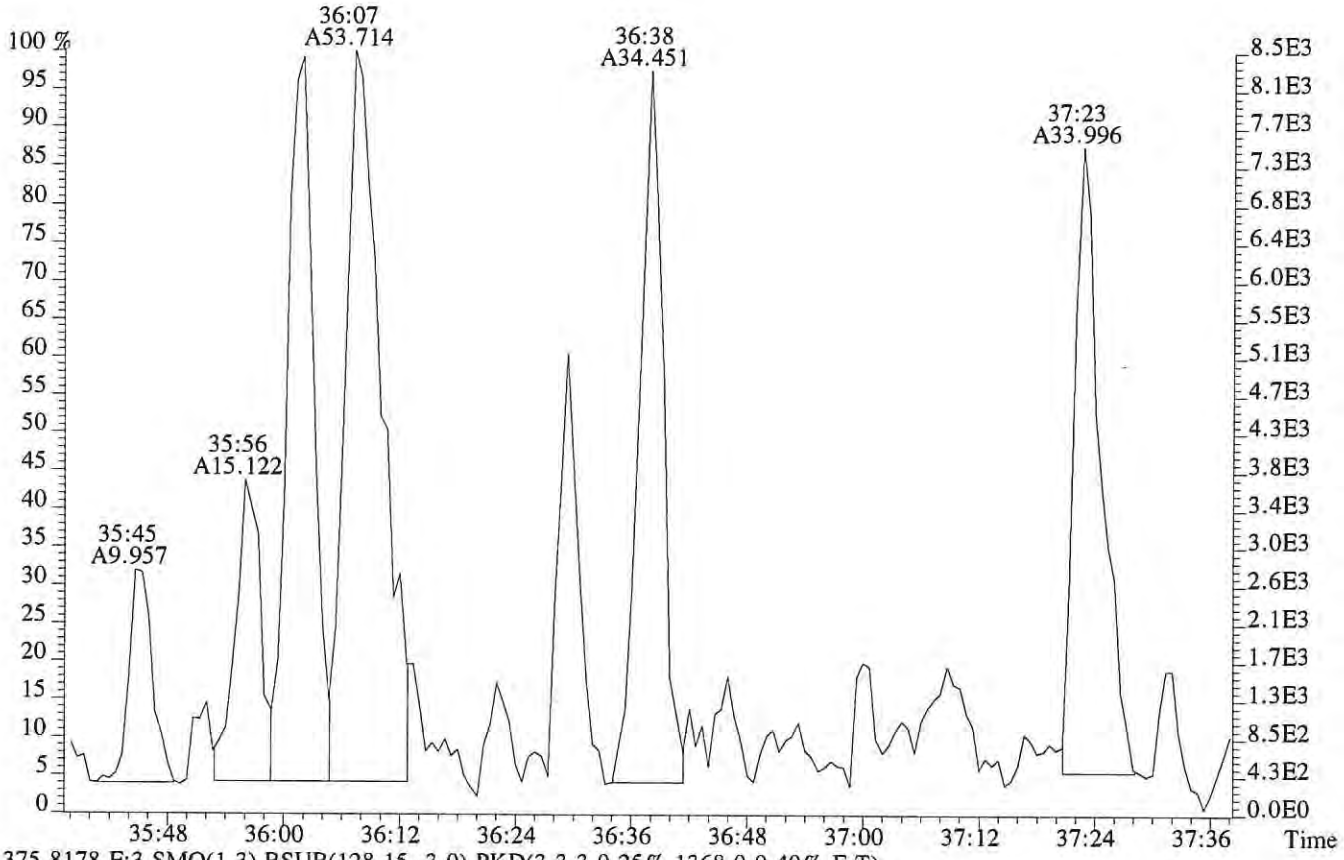
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



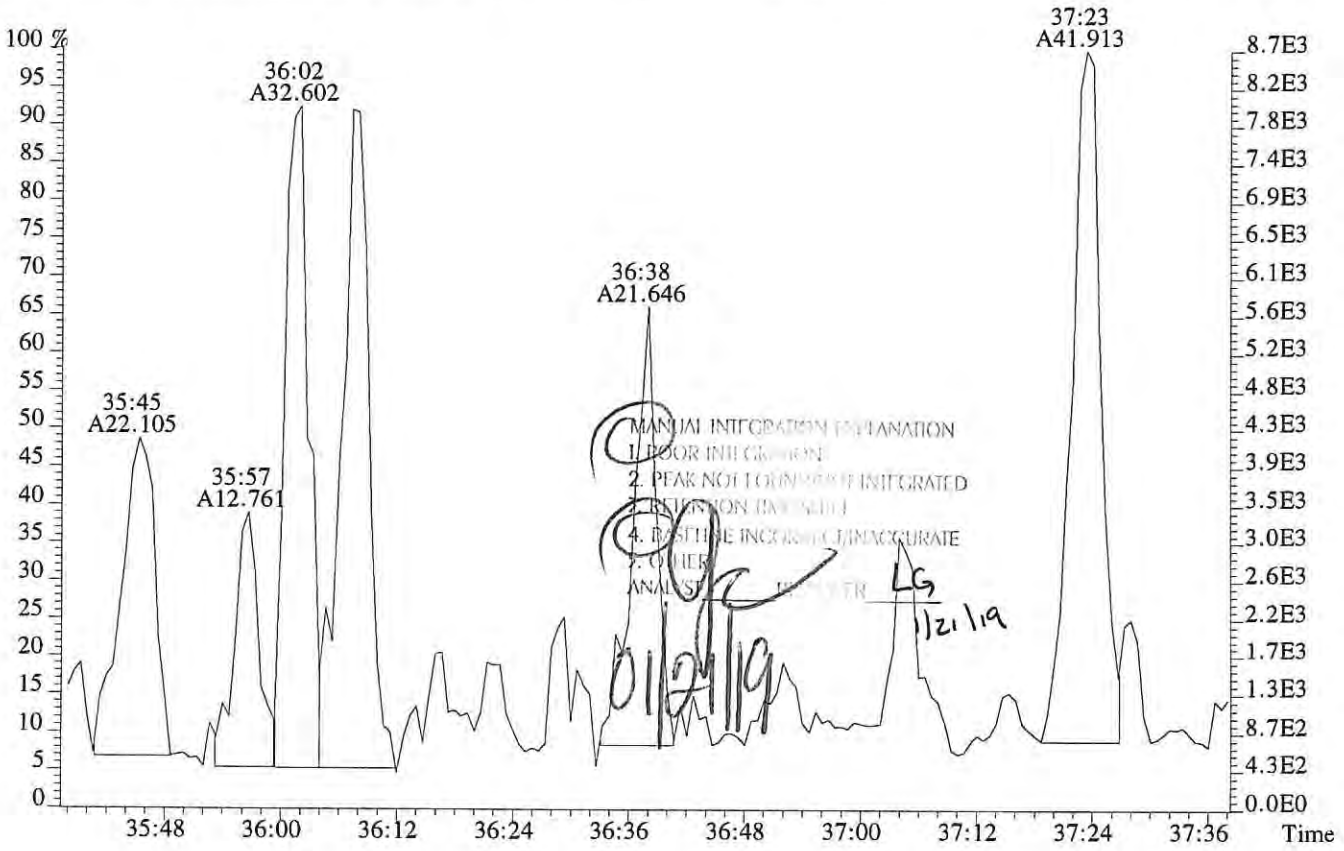
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P520052 #1-303 Acq:18-JAN-2019 10:50:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-01
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,948.0,0.40%,F,T)

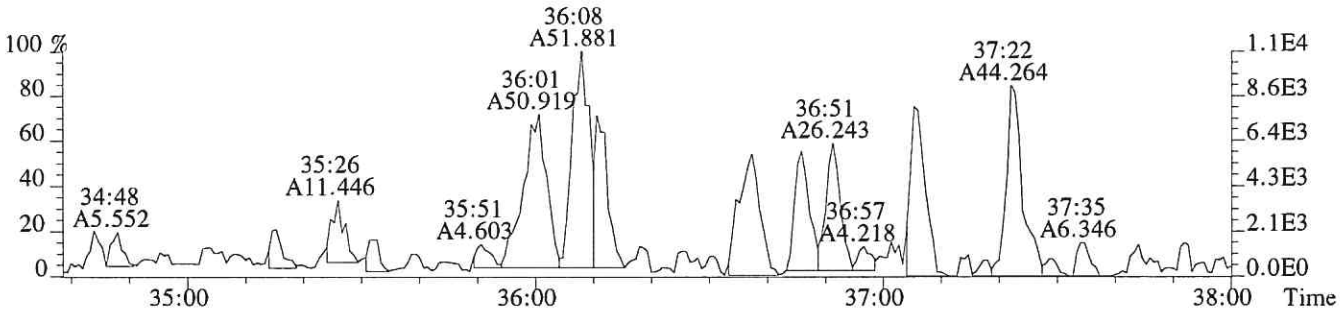


375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1368.0,0.40%,F,T)

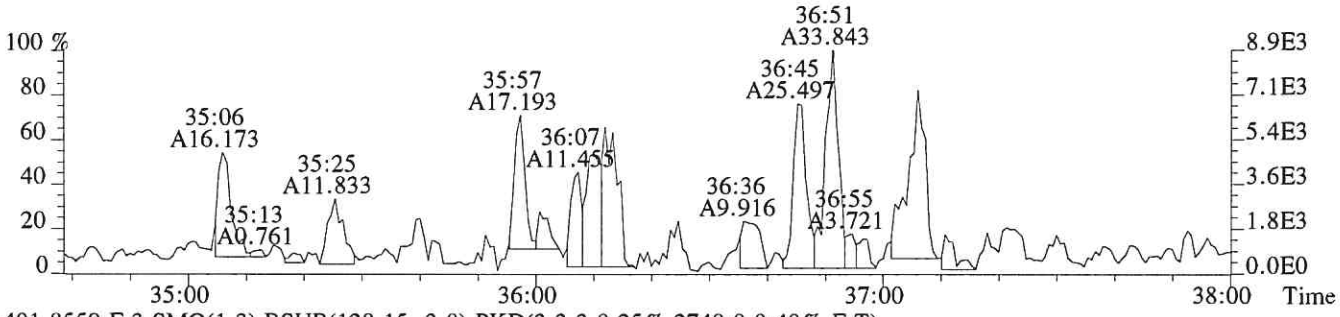


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST
LG
1/21/19
01/21/19

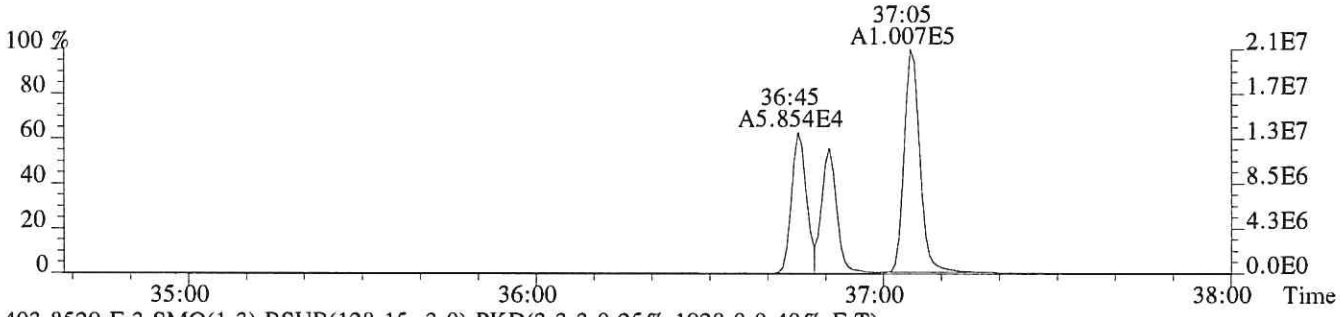
File:P520052 #1-303 Acq:18-JAN-2019 10:50:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-01
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,804.0,0.40%,F,T)



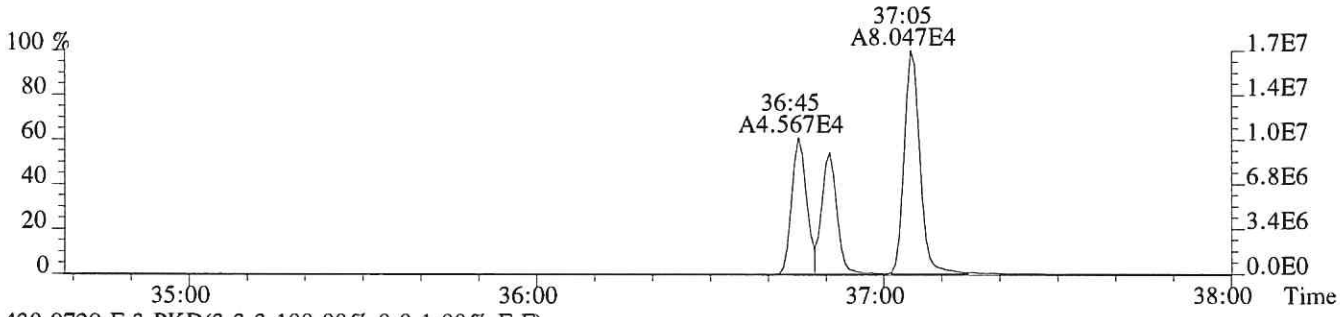
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1072.0,0.40%,F,T)



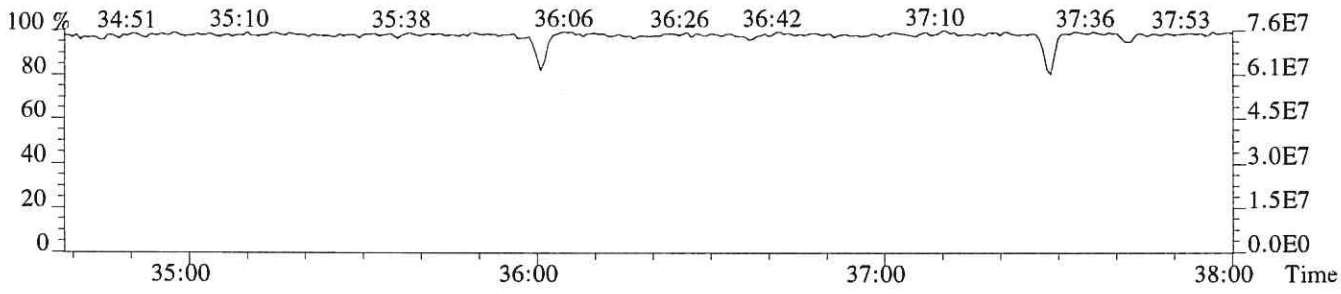
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2748.0,0.40%,F,T)



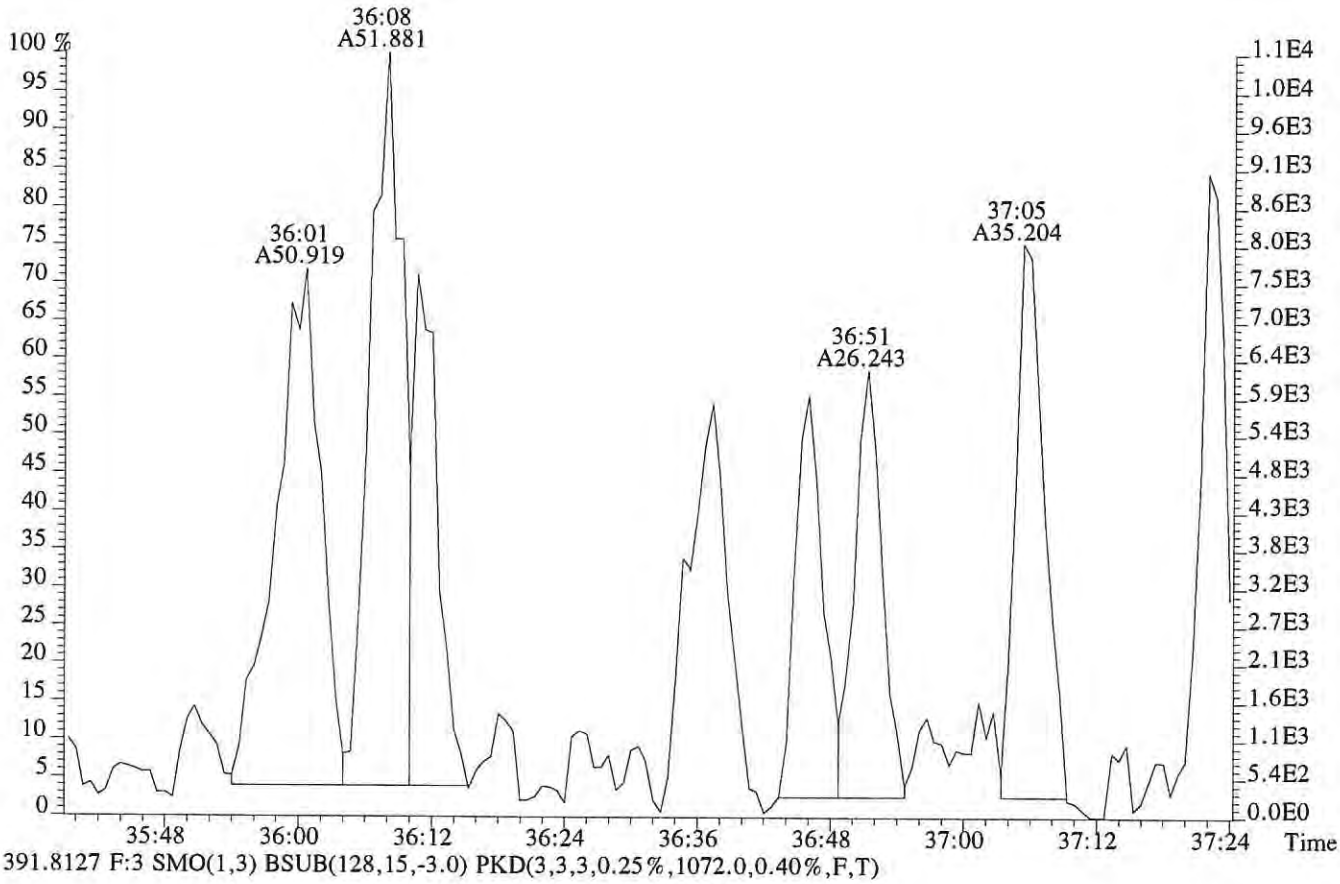
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1928.0,0.40%,F,T)



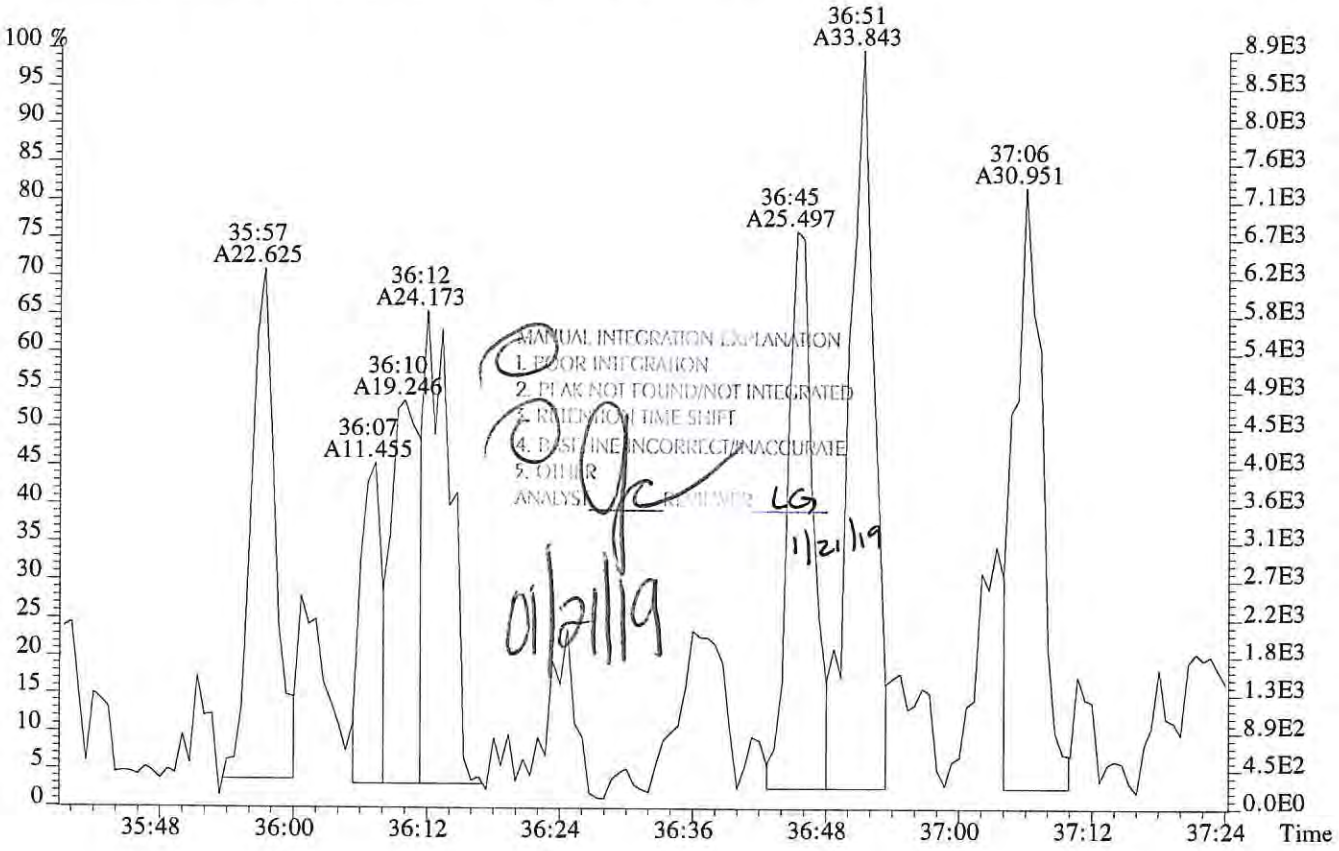
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



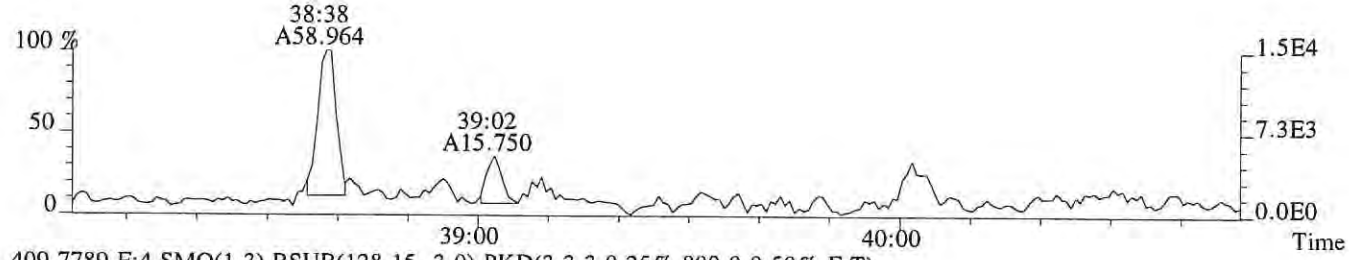
File:P520052 #1-303 Acq:18-JAN-2019 10:50:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-01
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,804.0,0.40%,F,T)



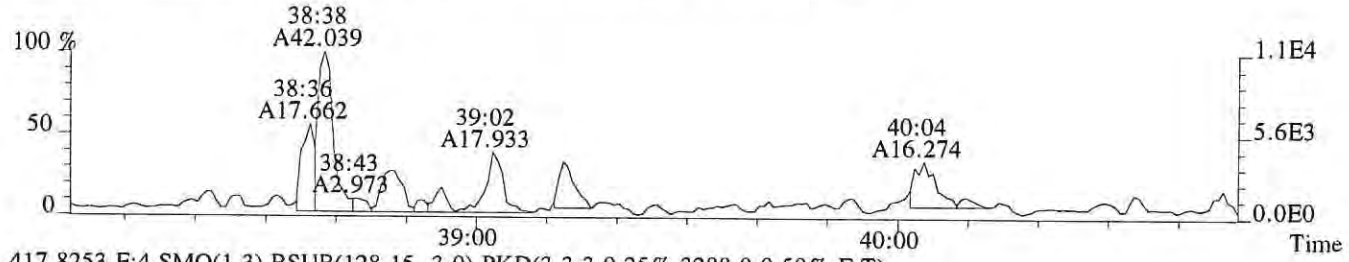
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1072.0,0.40%,F,T)



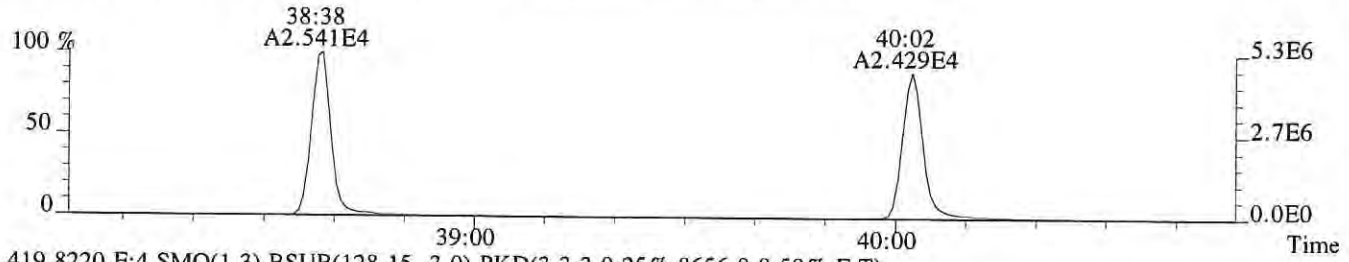
File:P520052 #1-250 Acq:18-JAN-2019 10:50:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-01
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1708.0,0.50%,F,T)



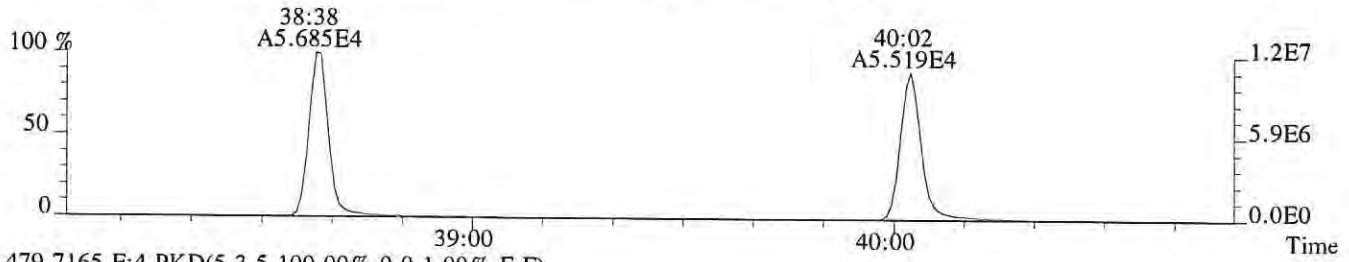
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,800.0,0.50%,F,T)



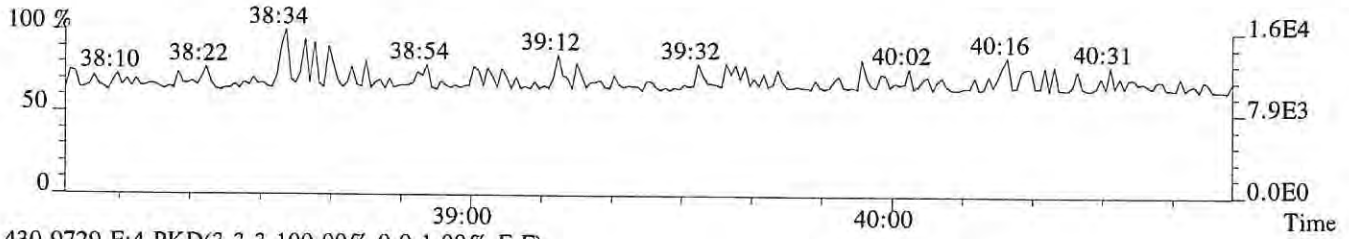
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3288.0,0.50%,F,T)



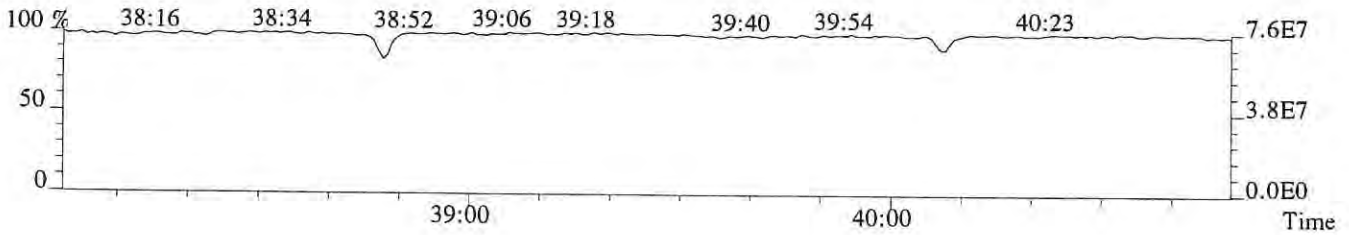
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,8656.0,0.50%,F,T)



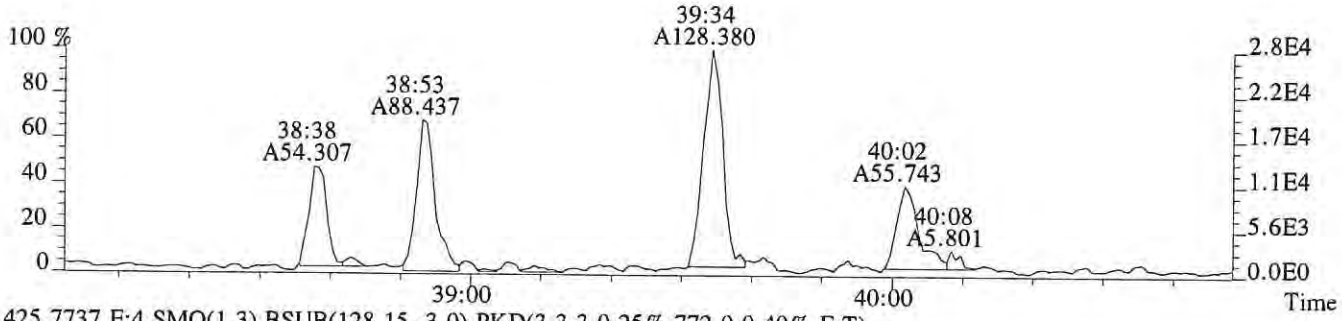
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



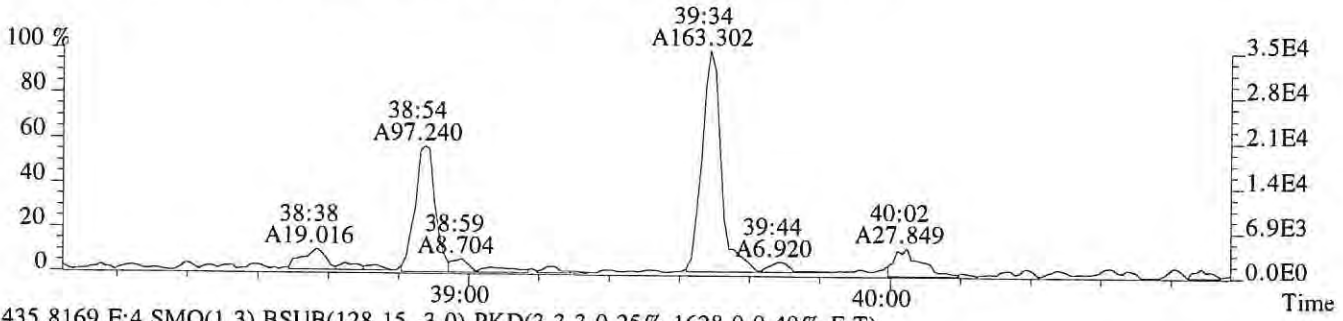
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



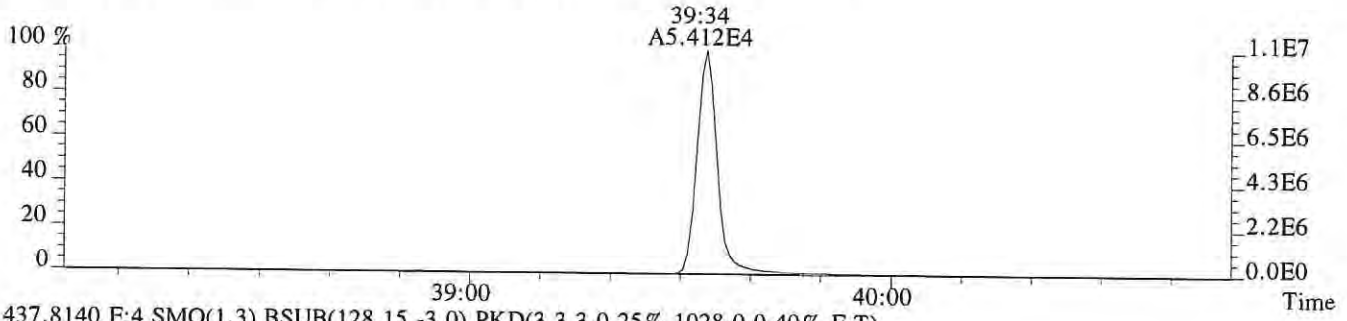
File:P520052 #1-250 Acq:18-JAN-2019 10:50:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-01
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,968.0,0.40%,F,T)



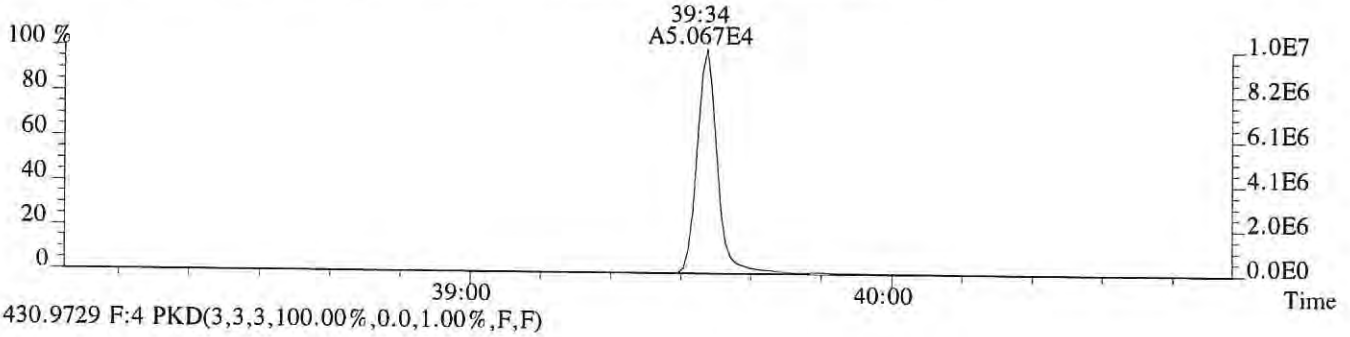
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,772.0,0.40%,F,T)



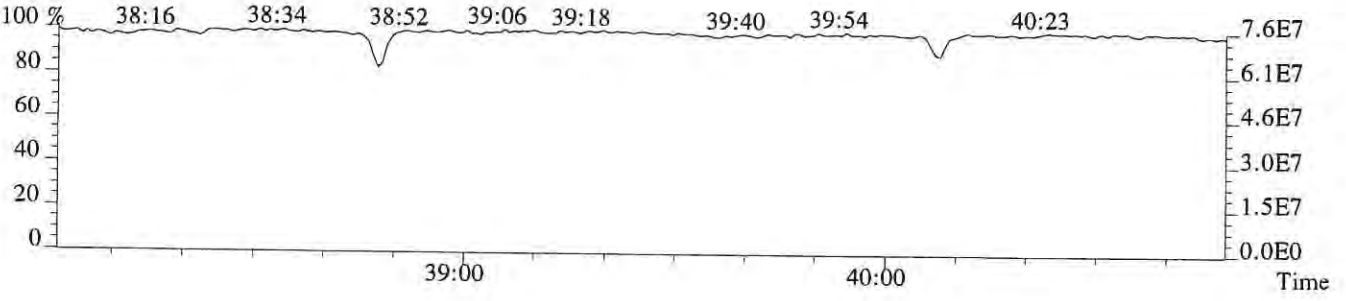
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1628.0,0.40%,F,T)



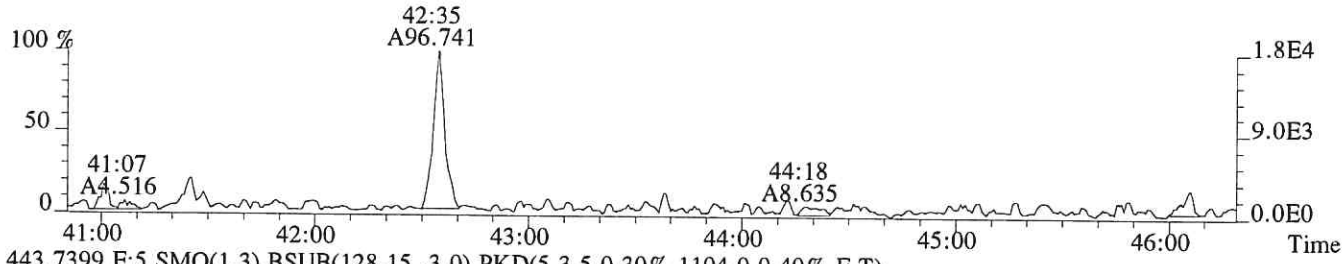
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1028.0,0.40%,F,T)



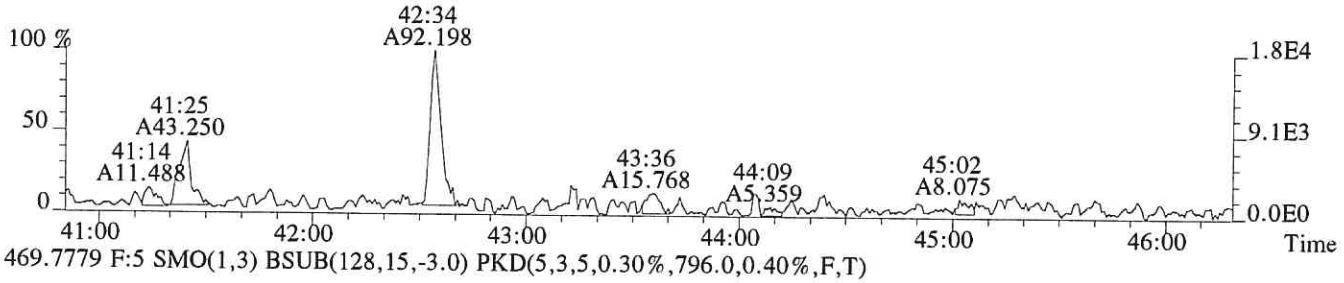
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



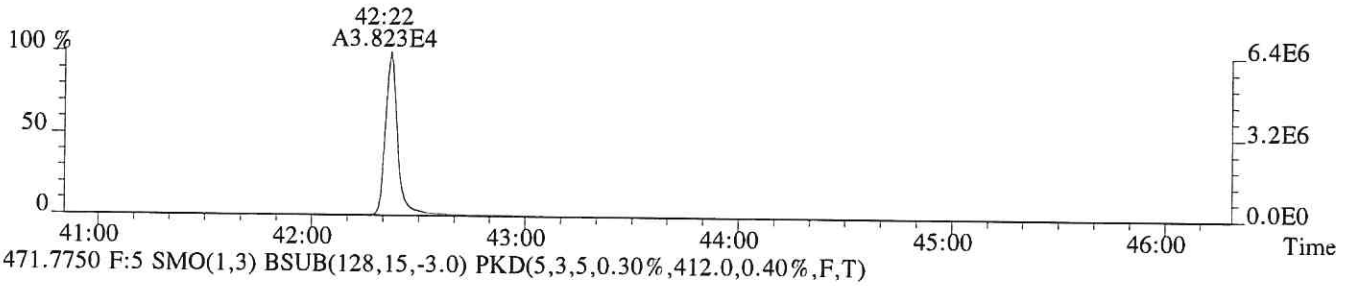
File:P520052 #1-493 Acq:18-JAN-2019 10:50:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-01
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,880.0,0.40%,F,T)



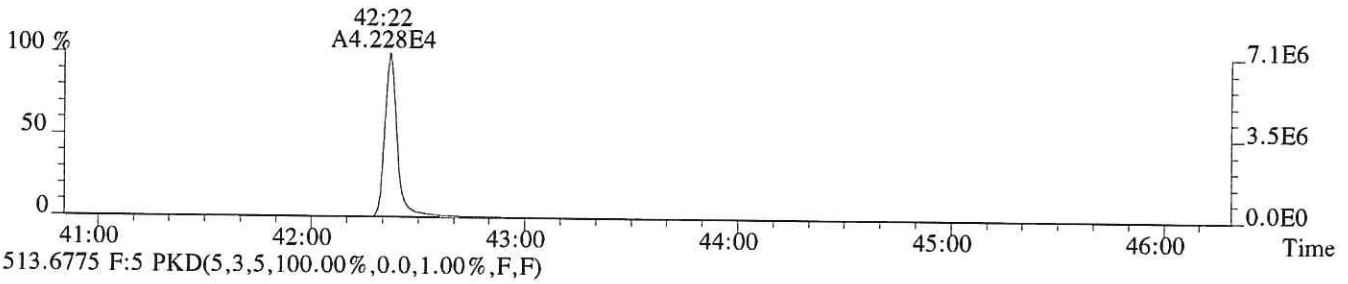
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1104.0,0.40%,F,T)



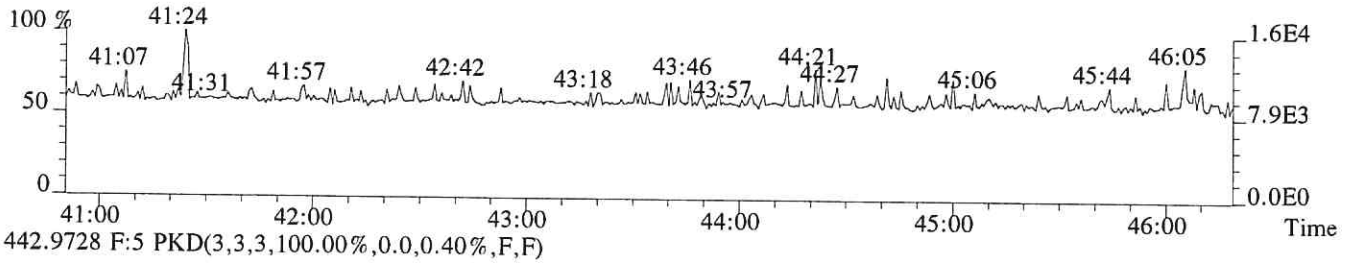
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,796.0,0.40%,F,T)



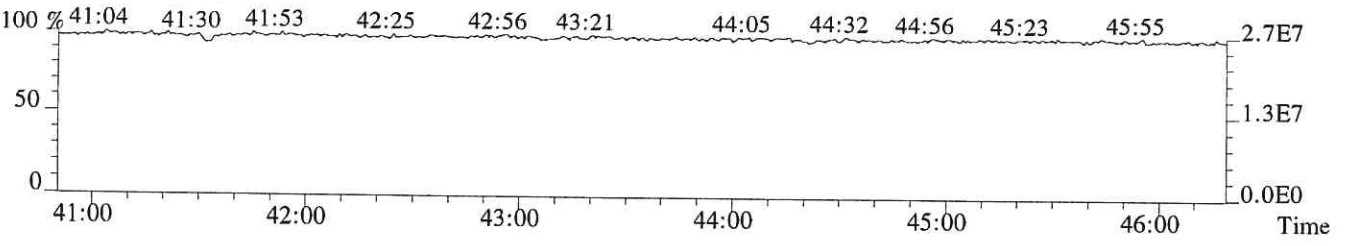
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,412.0,0.40%,F,T)



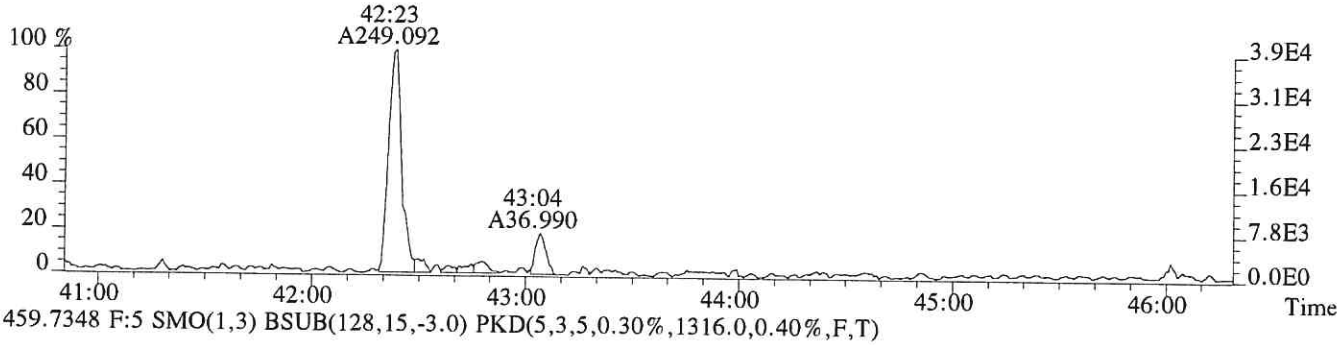
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



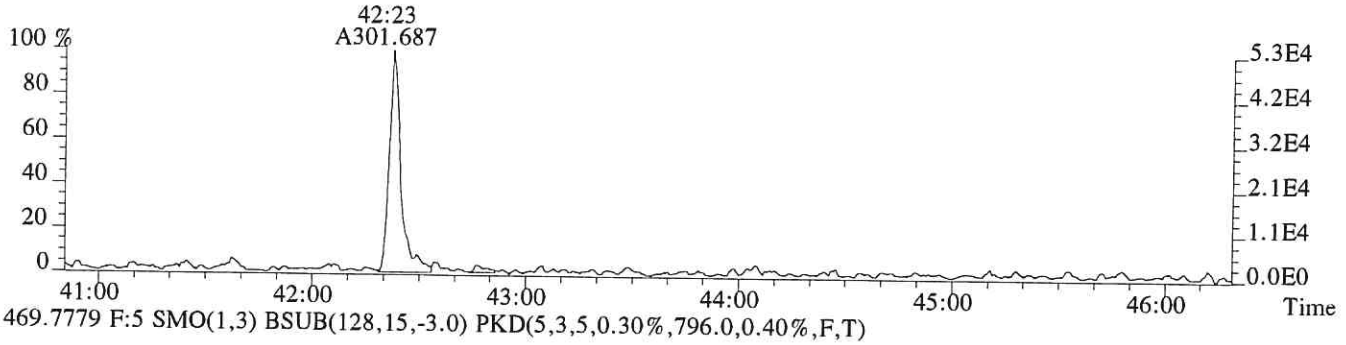
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



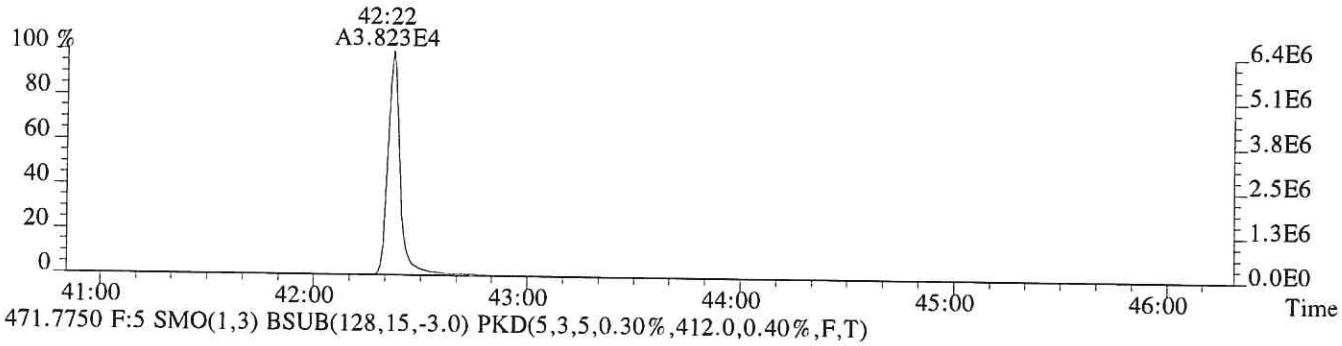
File:P520052 #1-493 Acq:18-JAN-2019 10:50:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-01
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,924.0,0.40%,F,T)



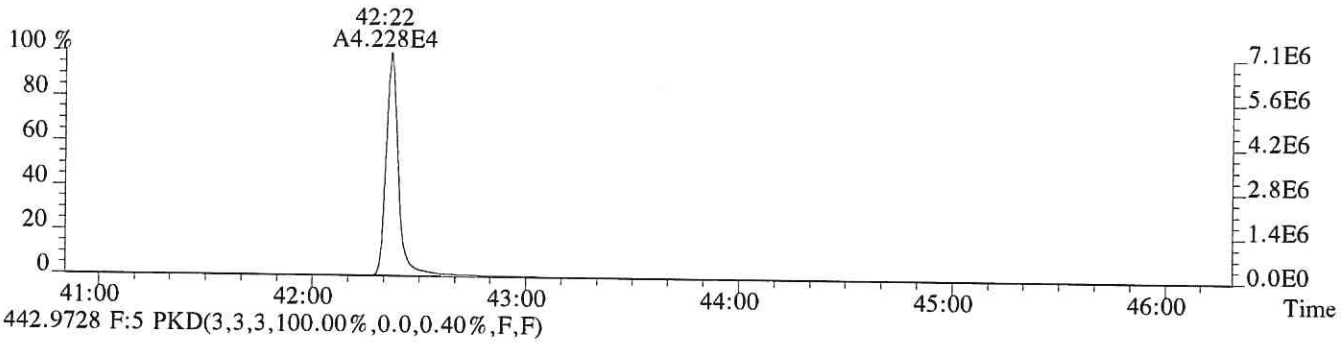
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1316.0,0.40%,F,T)



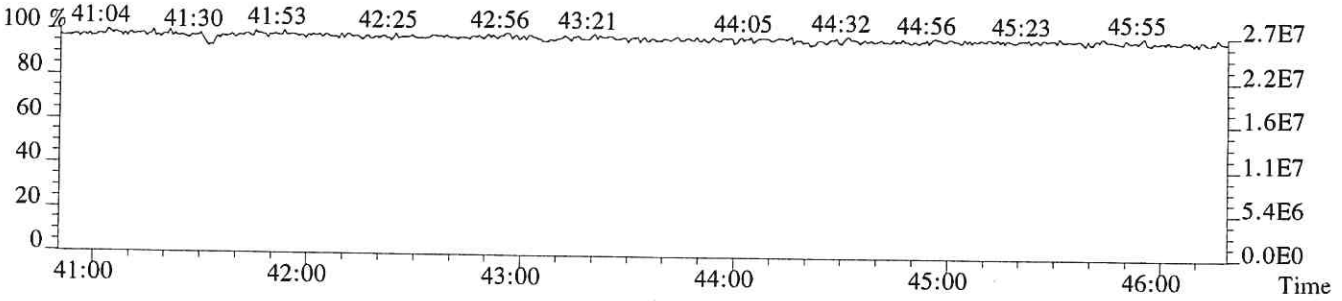
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,796.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,412.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



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Sample Response Summary

CLIENT ID.
LCS

Run #19 Filename P520061 Samp: 1 Inj: 1 Acquired: 18-JAN-19 18:40:22
Processed: 21-JAN-19 09:20:03 Sample ID: EQ1900021-02

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:16	3.687e+03	4.917e+03	0.75	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:27	3.296e+04	2.178e+04	1.51	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:21	3.205e+04	2.132e+04	1.50	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:01	2.793e+04	2.348e+04	1.19	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:08	3.023e+04	2.455e+04	1.23	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:38	2.879e+04	2.424e+04	1.19	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:23	2.399e+04	2.001e+04	1.20	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:38	2.191e+04	2.229e+04	0.98	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:03	1.925e+04	1.900e+04	1.01	yes	no	1.258
10	Unk	OCDF	42:35	2.331e+04	2.639e+04	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:03	2.977e+03	3.795e+03	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:38	2.425e+04	1.529e+04	1.59	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:46	2.083e+04	1.664e+04	1.25	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	36:51	2.150e+04	1.704e+04	1.26	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:05	2.217e+04	1.803e+04	1.23	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:34	1.718e+04	1.594e+04	1.08	yes	no	1.025
17	Unk	OCDD	42:23	1.918e+04	2.210e+04	0.87	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:15	4.105e+04	5.186e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:26	7.499e+04	4.736e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:20	6.855e+04	4.356e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:01	3.073e+04	5.897e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:07	3.427e+04	6.622e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:37	3.315e+04	6.441e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:23	2.870e+04	5.484e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:38	2.152e+04	4.813e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:02	1.902e+04	4.235e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:01	2.030e+04	2.566e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:37	5.326e+04	3.396e+04	1.57	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:45	4.545e+04	3.557e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	36:51	4.290e+04	3.377e+04	1.27	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:34	4.504e+04	4.255e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	42:22	3.548e+04	3.910e+04	0.91	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:28	5.159e+04	6.580e+04	0.78	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:05	7.030e+04	5.621e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:03	2.770e+04				no	1.014

$$\text{OCDD} = \frac{(1.918e+04 + 2.210e+04) \times 4000\ \text{pg} \times 1}{(3.548e+04 + 3.910e+04) \times \quad \text{g} \times \quad / 100 \times 1.118} =$$

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
LCS

Run #19 Filename P520061 Samp: 1 Inj: 1 Acquired: 18-JAN-19 18:40:22
Processed: 21-JAN-19 09:20:03 LAB. ID: EQ1900021-02

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.96e+05	1.10e+03	6.4e+02	9.29e+05	1.71e+03	5.4e+02
2	1,2,3,7,8-PeCDF	6.63e+06	1.25e+03	5.3e+03	4.38e+06	2.89e+03	1.5e+03
3	2,3,4,7,8-PeCDF	6.54e+06	1.25e+03	5.2e+03	4.36e+06	2.89e+03	1.5e+03
4	1,2,3,4,7,8-HxCDF	6.10e+06	1.61e+03	3.8e+03	5.24e+06	7.08e+02	7.4e+03
5	1,2,3,6,7,8-HxCDF	6.50e+06	1.61e+03	4.0e+03	5.20e+06	7.08e+02	7.3e+03
6	2,3,4,6,7,8-HxCDF	6.30e+06	1.61e+03	3.9e+03	5.22e+06	7.08e+02	7.4e+03
7	1,2,3,7,8,9-HxCDF	4.95e+06	1.61e+03	3.1e+03	4.07e+06	7.08e+02	5.8e+03
8	1,2,3,4,6,7,8-HpCDF	4.68e+06	1.61e+03	2.9e+03	4.86e+06	3.78e+03	1.3e+03
9	1,2,3,4,7,8,9-HpCDF	3.69e+06	1.61e+03	2.3e+03	3.62e+06	3.78e+03	9.6e+02
10	OCDF	3.89e+06	7.48e+02	5.2e+03	4.26e+06	1.05e+03	4.1e+03
11	2,3,7,8-TCDD	6.05e+05	2.73e+03	2.2e+02	7.52e+05	1.37e+03	5.5e+02
12	1,2,3,7,8-PeCDD	4.99e+06	1.63e+03	3.1e+03	3.14e+06	9.84e+02	3.2e+03
13	1,2,3,4,7,8-HxCDD	4.81e+06	1.05e+03	4.6e+03	3.79e+06	7.52e+02	5.0e+03
14	1,2,3,6,7,8-HxCDD	4.61e+06	1.05e+03	4.4e+03	3.59e+06	7.52e+02	4.8e+03
15	1,2,3,7,8,9-HxCDD	4.71e+06	1.05e+03	4.5e+03	3.79e+06	7.52e+02	5.0e+03
16	1,2,3,4,6,7,8-HpCDD	3.40e+06	1.09e+03	3.1e+03	3.15e+06	7.08e+02	4.4e+03
17	OCDD	3.09e+06	5.40e+02	5.7e+03	3.63e+06	9.36e+02	3.9e+03
18	13C-2,3,7,8-TCDF	7.86e+06	6.51e+03	1.2e+03	9.84e+06	3.52e+03	2.8e+03
19	13C-1,2,3,7,8-PeCDF	1.46e+07	2.34e+03	6.2e+03	9.14e+06	1.04e+03	8.8e+03
20	13C-2,3,4,7,8-PeCDF	1.39e+07	2.34e+03	6.0e+03	8.77e+06	1.04e+03	8.4e+03
21	13C-1,2,3,4,7,8-HxCDF	6.73e+06	1.56e+03	4.3e+03	1.29e+07	1.48e+03	8.7e+03
22	13C-1,2,3,6,7,8-HxCDF	7.33e+06	1.56e+03	4.7e+03	1.41e+07	1.48e+03	9.5e+03
23	13C-2,3,4,6,7,8-HxCDF	7.24e+06	1.56e+03	4.6e+03	1.40e+07	1.48e+03	9.5e+03
24	13C-1,2,3,7,8,9-HxCDF	5.88e+06	1.56e+03	3.8e+03	1.14e+07	1.48e+03	7.7e+03
25	13C-1,2,3,4,6,7,8-HpCDF	4.52e+06	3.41e+03	1.3e+03	1.03e+07	3.38e+03	3.1e+03
26	13C-1,2,3,4,7,8,9-HpCDF	3.69e+06	3.41e+03	1.1e+03	8.13e+06	3.38e+03	2.4e+03
27	13C-2,3,7,8-TCDD	4.03e+06	5.96e+03	6.8e+02	5.16e+06	4.16e+03	1.2e+03
28	13C-1,2,3,7,8-PeCDD	1.08e+07	1.22e+03	8.8e+03	7.00e+06	1.23e+03	5.7e+03
29	13C-1,2,3,4,7,8-HxCDD	1.04e+07	3.72e+03	2.8e+03	8.10e+06	1.24e+03	6.5e+03
30	13C-1,2,3,6,7,8-HxCDD	9.16e+06	3.72e+03	2.5e+03	7.17e+06	1.24e+03	5.8e+03
31	13C-1,2,3,4,6,7,8-HpCDD	8.91e+06	1.15e+03	7.8e+03	8.40e+06	6.20e+02	1.4e+04
32	13C-OCDD	5.81e+06	6.72e+02	8.6e+03	6.41e+06	6.56e+02	9.8e+03
33	13C-1,2,3,4-TCDD	1.03e+07	5.96e+03	1.7e+03	1.30e+07	4.16e+03	3.1e+03
34	13C-1,2,3,7,8,9-HxCDD	1.50e+07	3.72e+03	4.0e+03	1.20e+07	1.24e+03	9.7e+03
35	37Cl-2,3,7,8-TCDD	5.56e+06	2.36e+03	2.4e+03			

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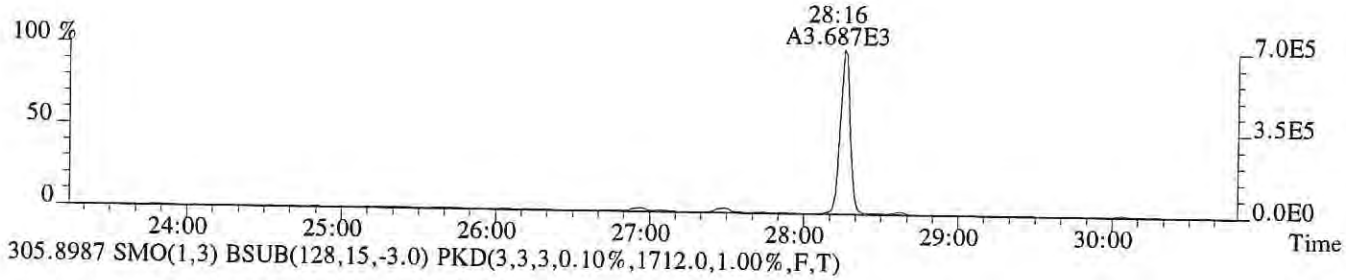
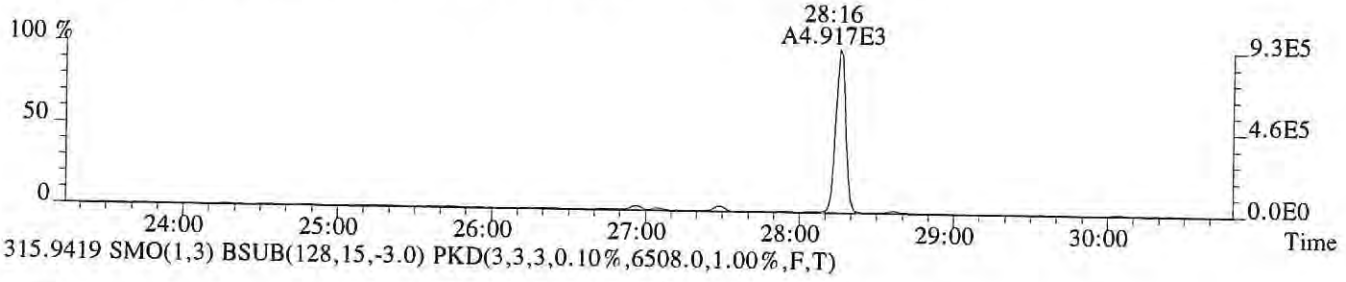
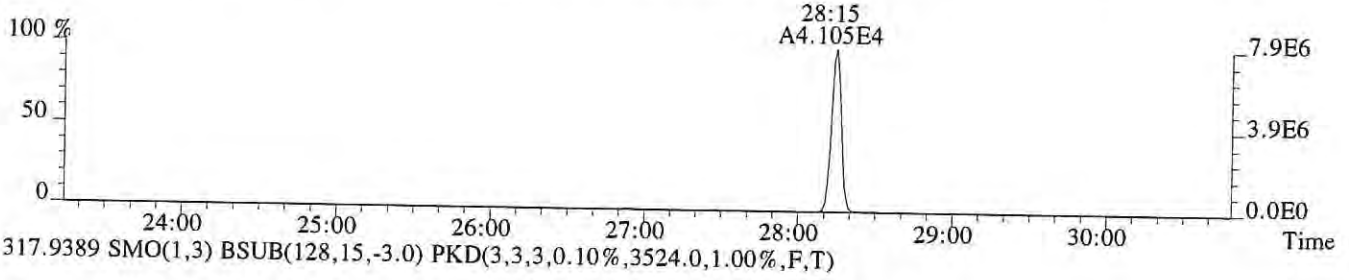
File:P520061 #1-538 Acq:18-JAN-2019 18:40:22 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-02
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1096.0,1.00%,F,T)



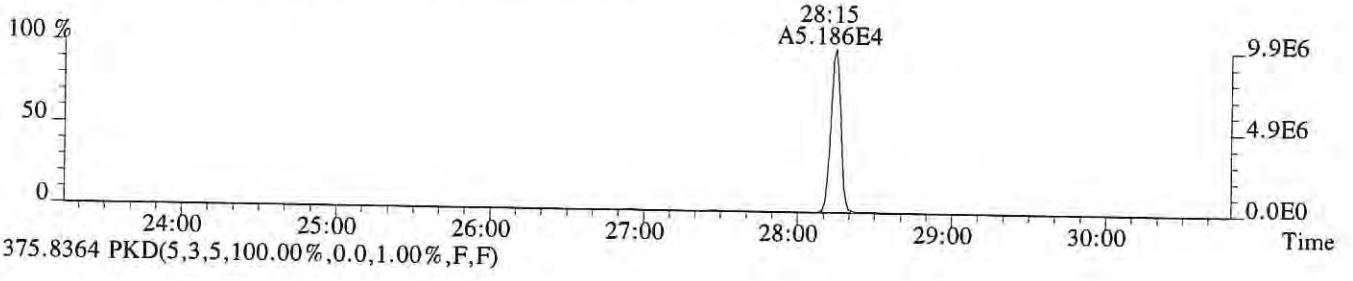
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1712.0,1.00%,F,T)



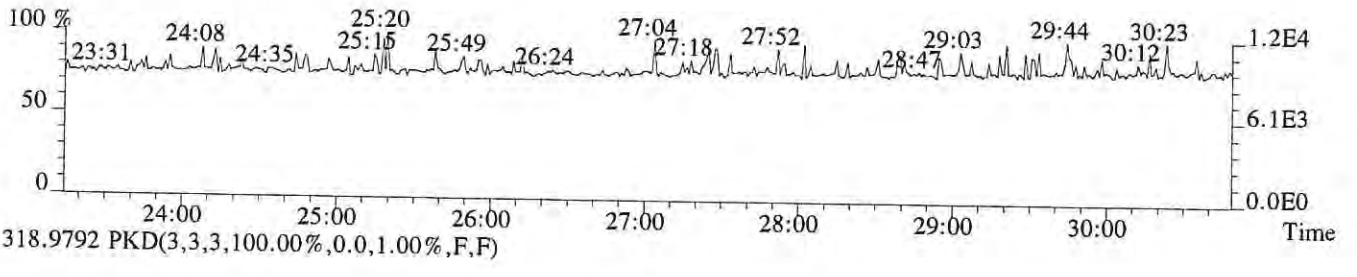
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6508.0,1.00%,F,T)



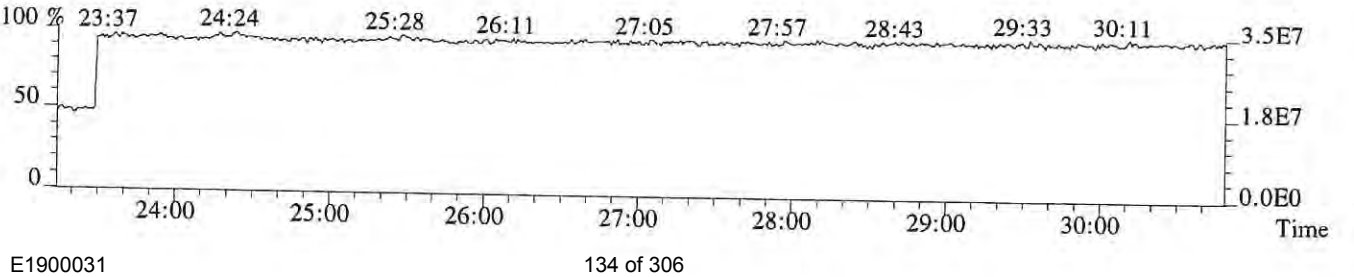
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3524.0,1.00%,F,T)



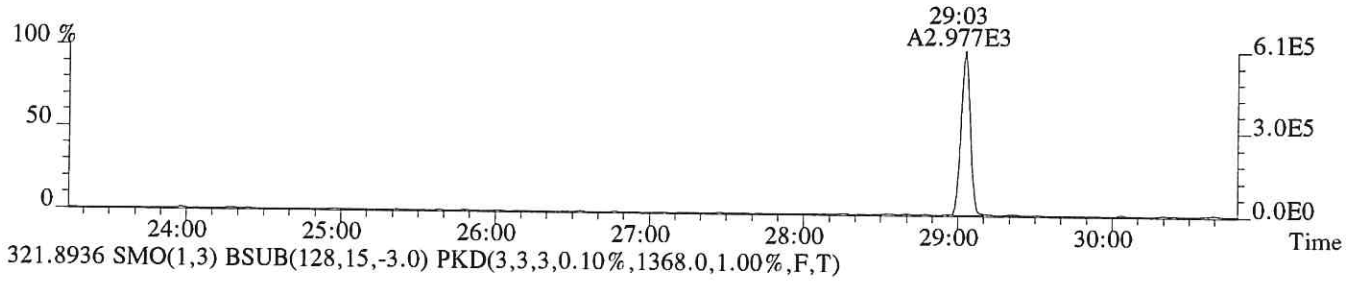
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



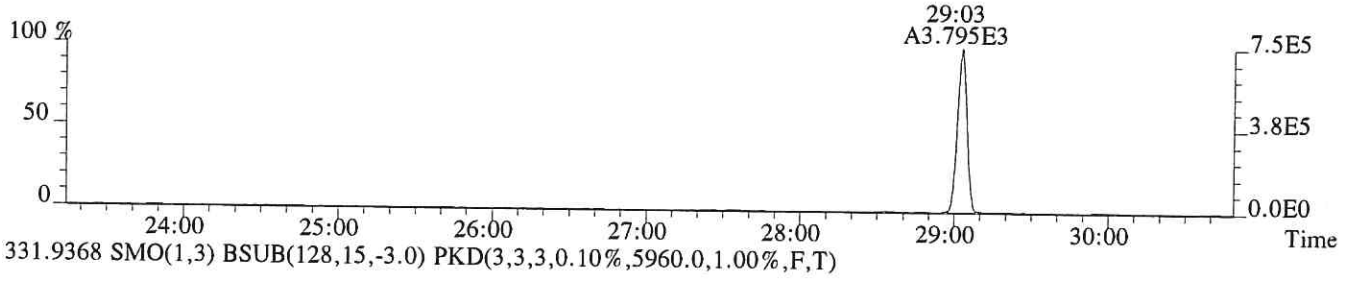
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



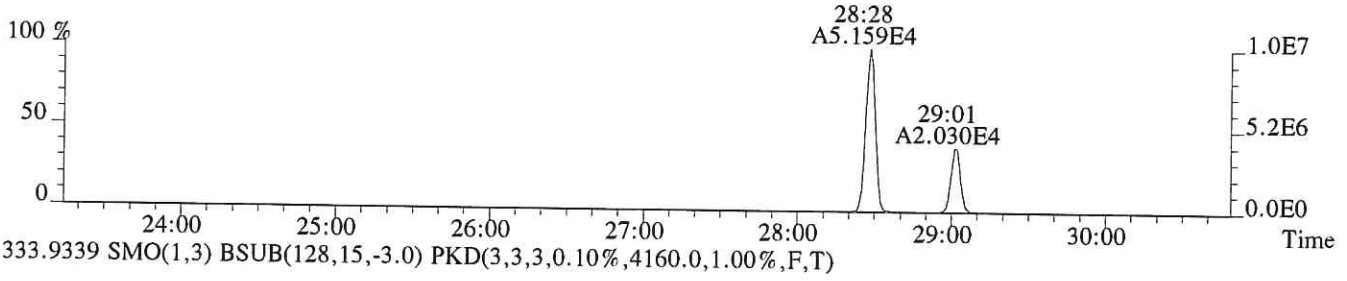
File:P520061 #1-538 Acq:18-JAN-2019 18:40:22 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-02
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2732.0,1.00%,F,T)



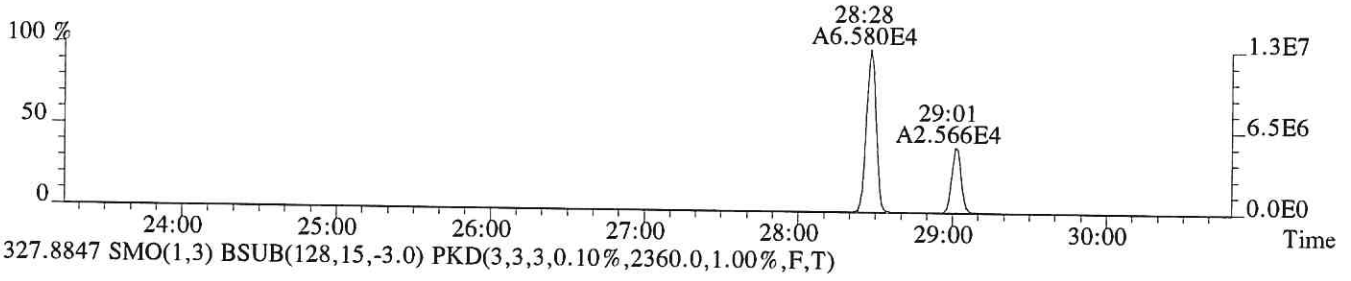
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1368.0,1.00%,F,T)



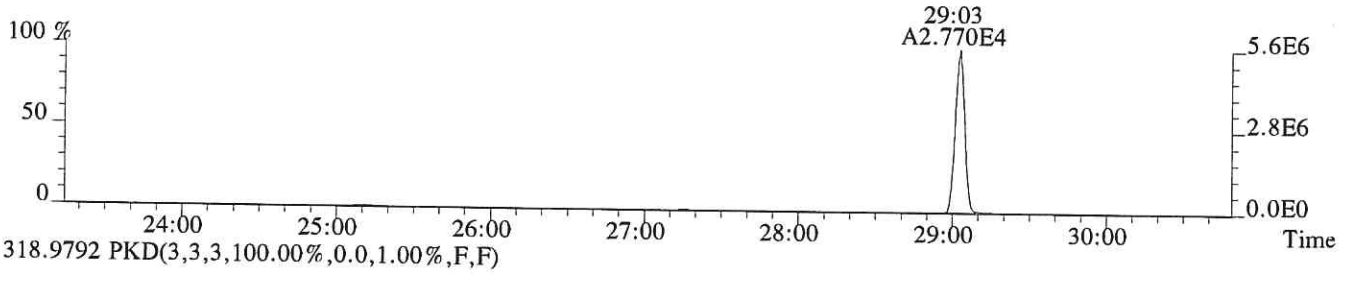
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5960.0,1.00%,F,T)



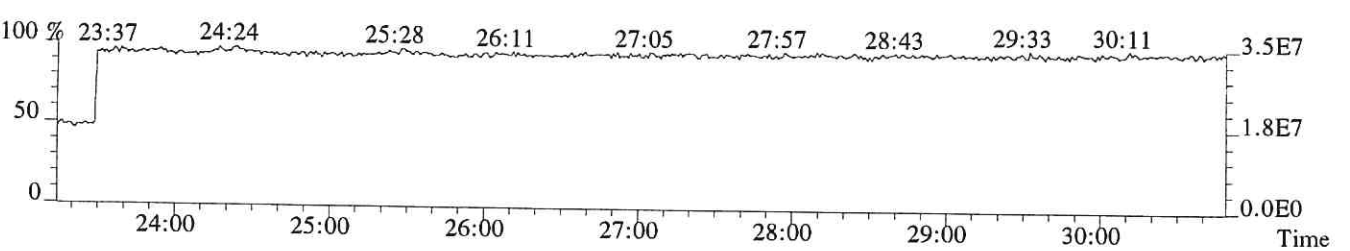
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4160.0,1.00%,F,T)



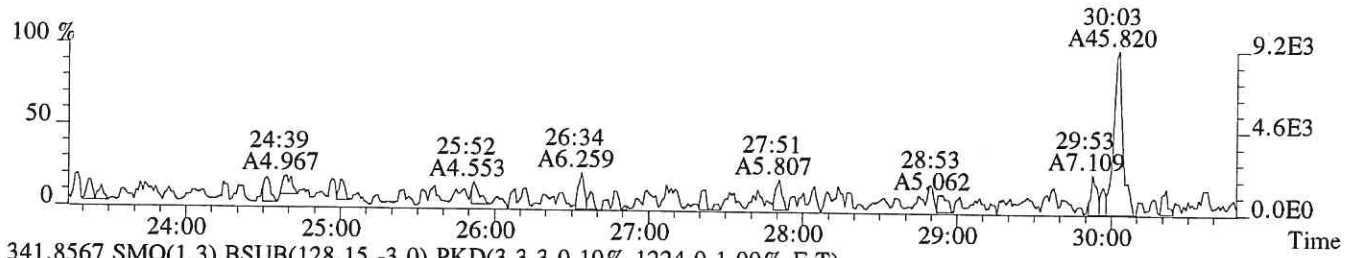
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2360.0,1.00%,F,T)



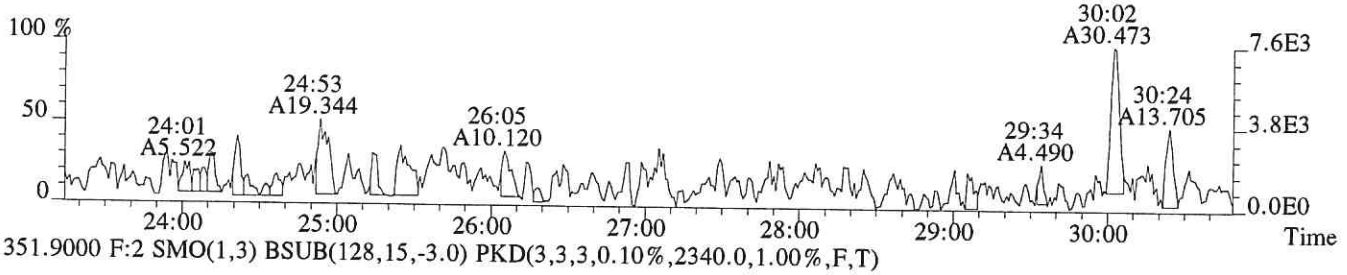
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



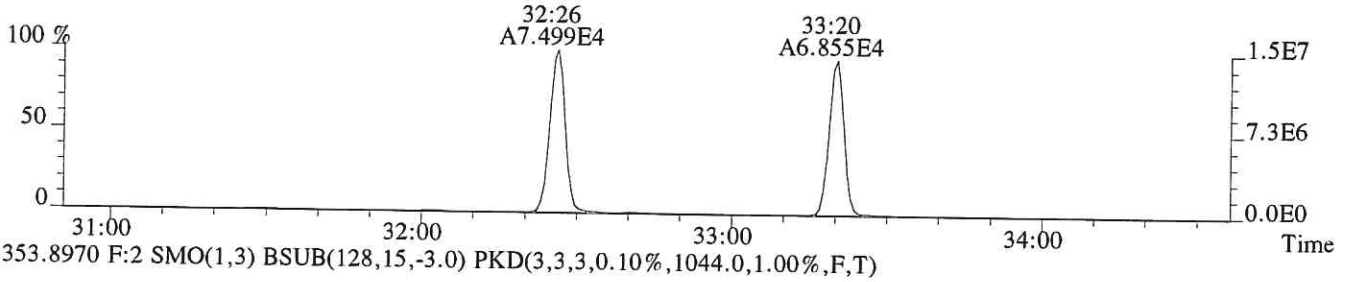
File:P520061 #1-538 Acq:18-JAN-2019 18:40:22 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-02
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,720.0,1.00%,F,T)



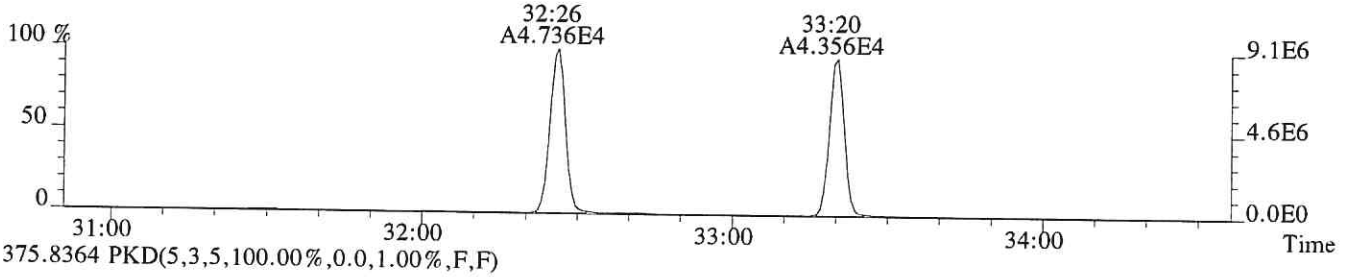
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1224.0,1.00%,F,T)



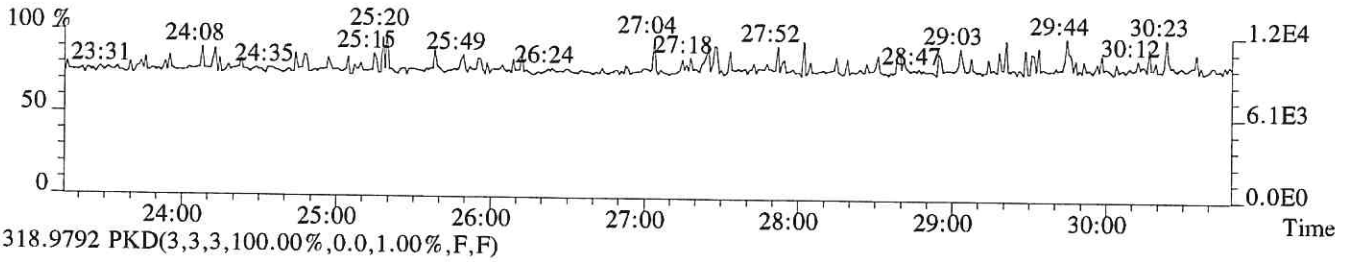
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2340.0,1.00%,F,T)



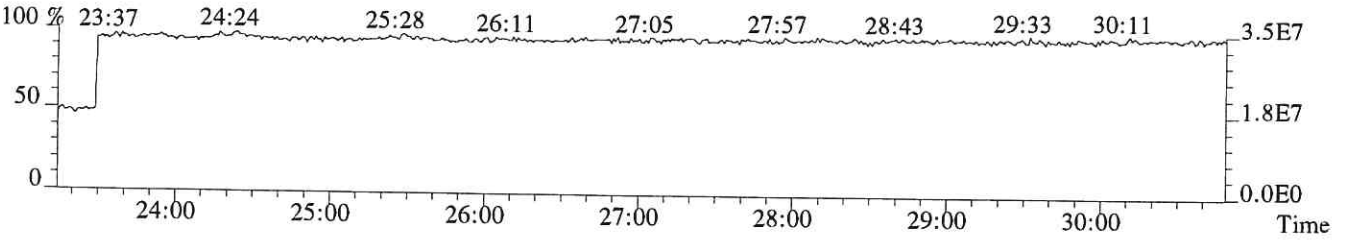
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1044.0,1.00%,F,T)



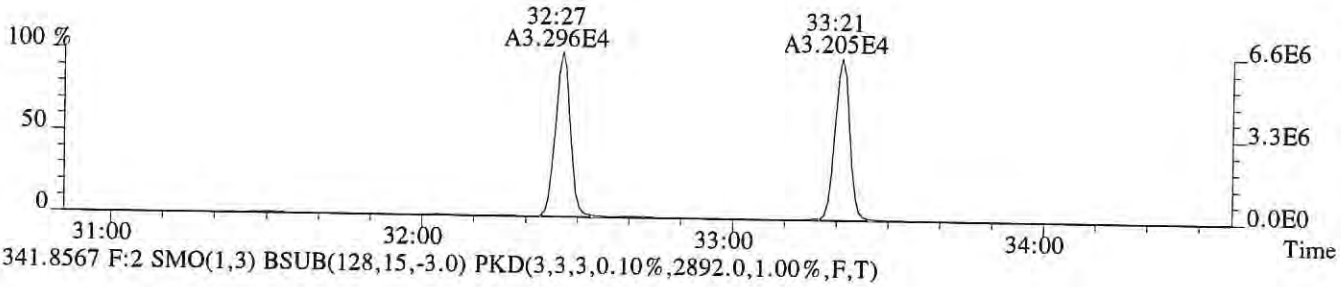
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



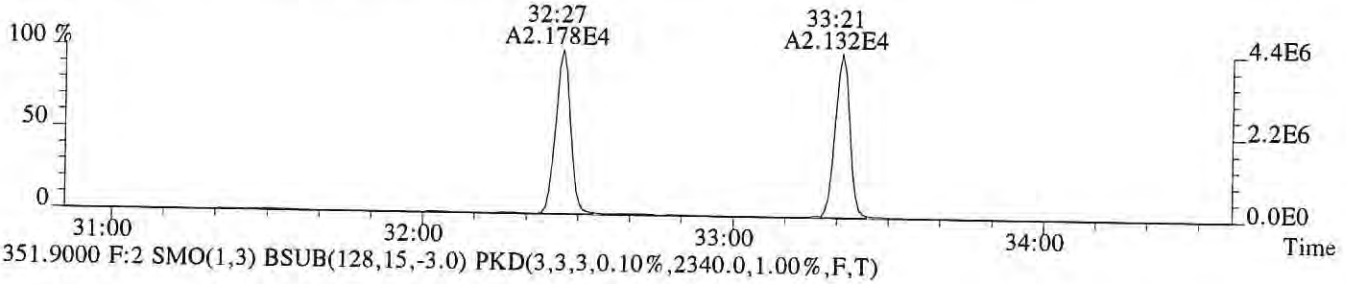
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



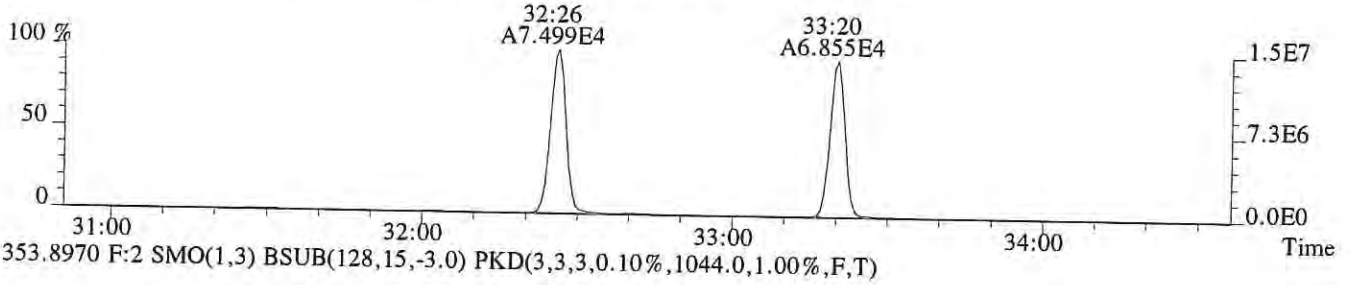
File:P520061 #1-339 Acq:18-JAN-2019 18:40:22 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-02
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1248.0,1.00%,F,T)



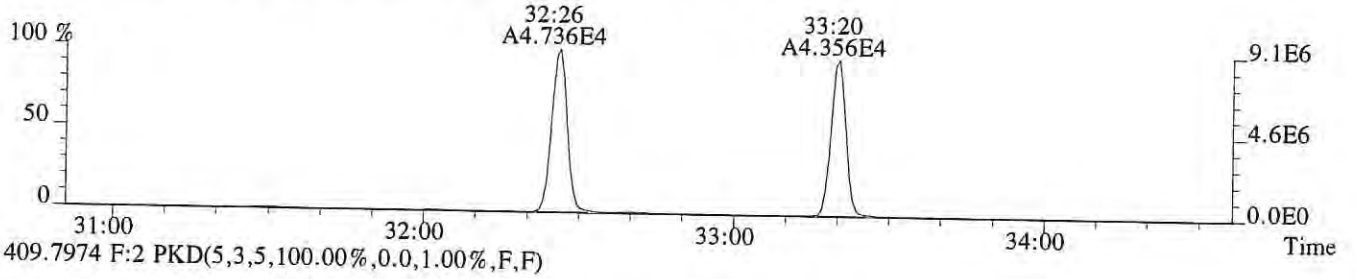
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2892.0,1.00%,F,T)



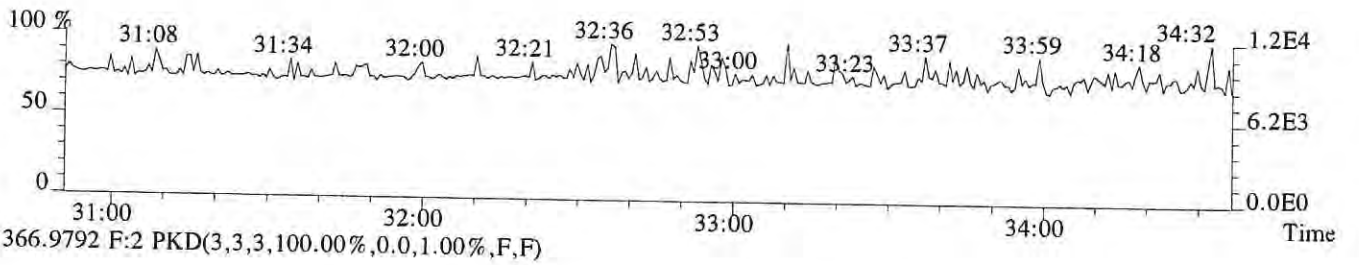
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2340.0,1.00%,F,T)



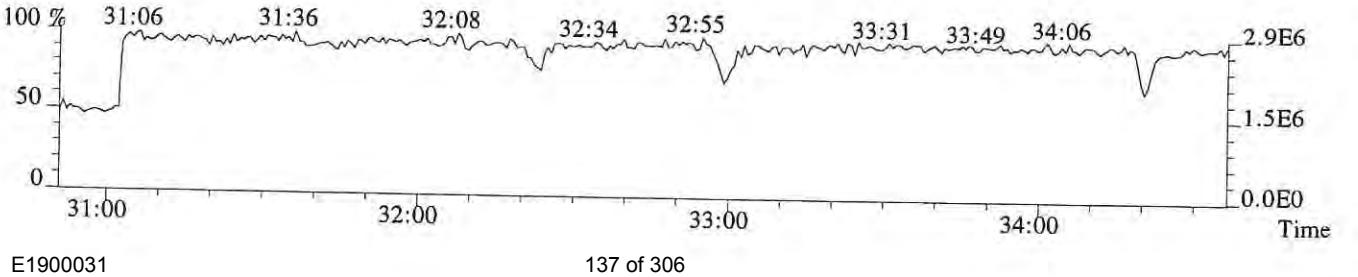
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1044.0,1.00%,F,T)



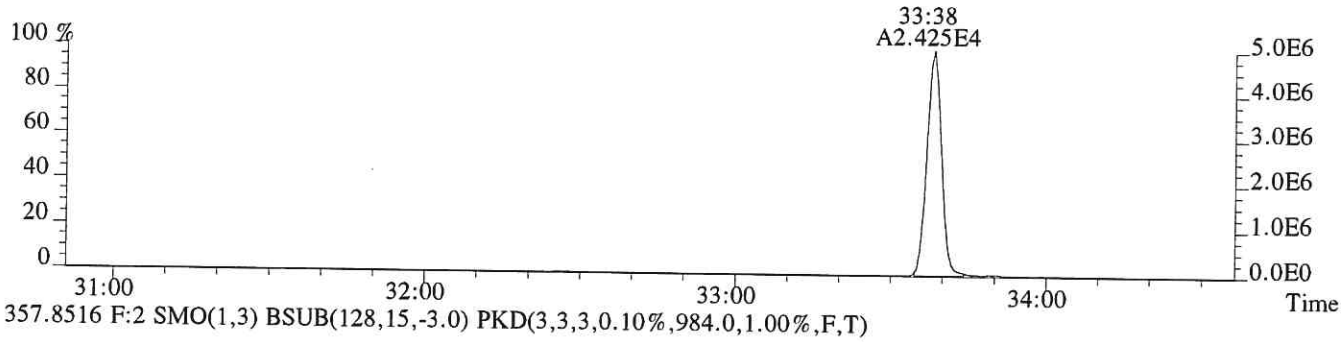
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



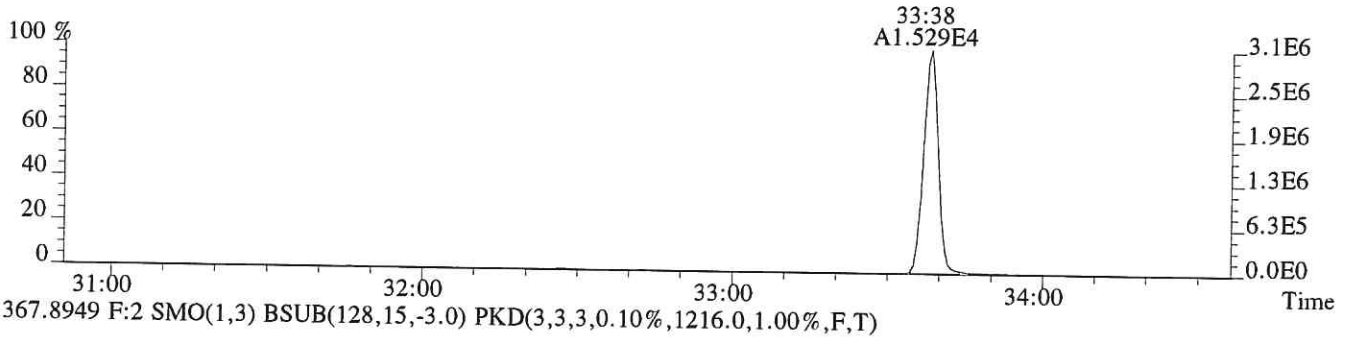
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



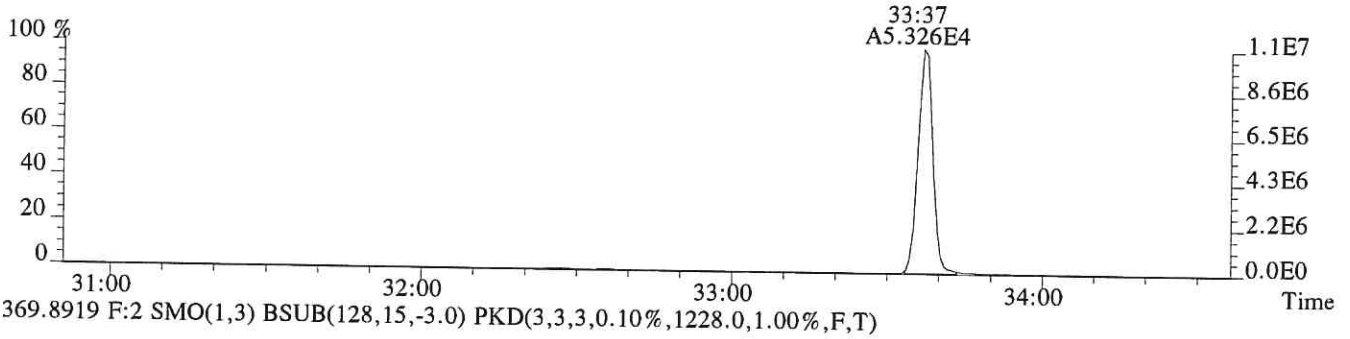
File:P520061 #1-339 Acq:18-JAN-2019 18:40:22 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-02
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1628.0,1.00%,F,T)



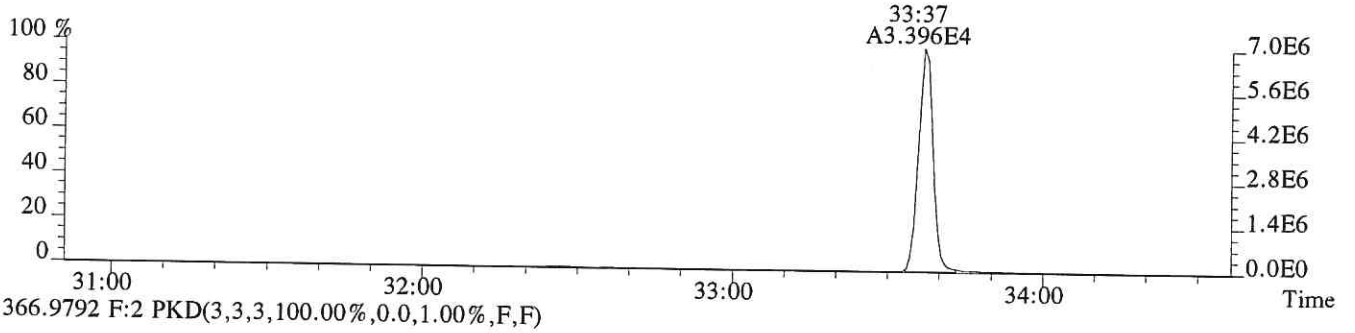
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,984.0,1.00%,F,T)



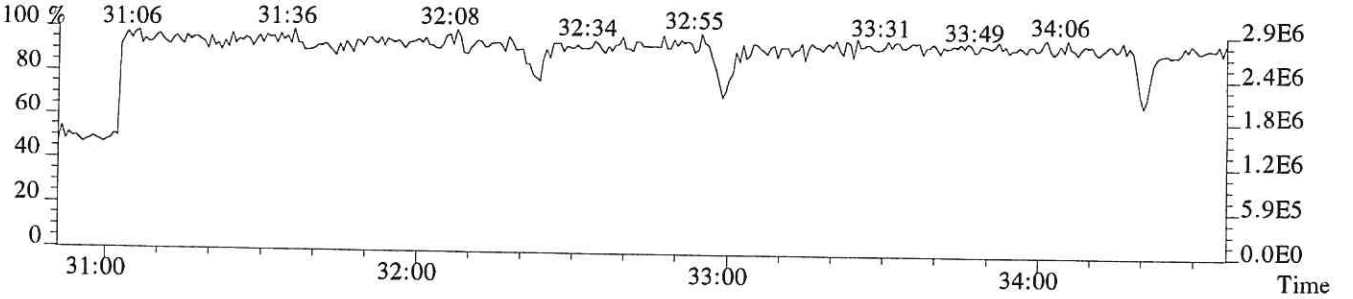
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1216.0,1.00%,F,T)



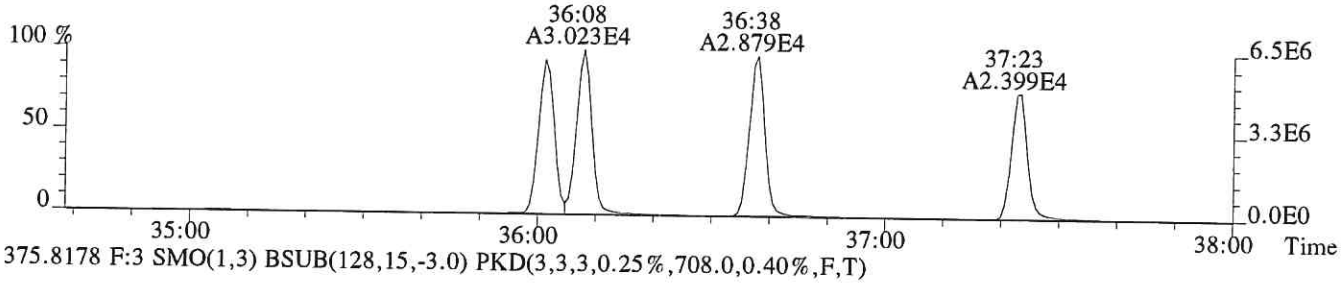
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1228.0,1.00%,F,T)



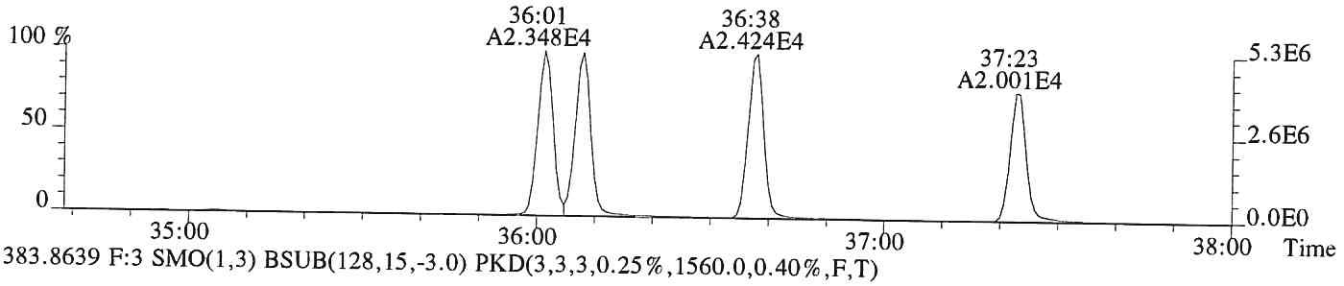
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



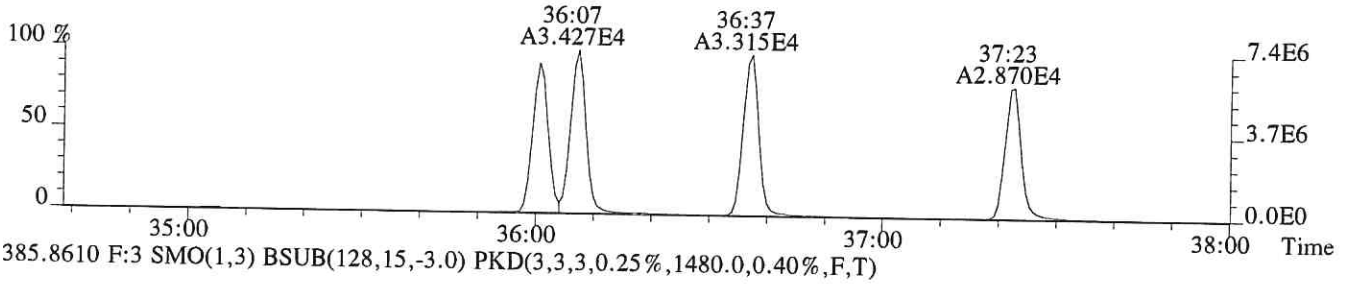
File:P520061 #1-303 Acq:18-JAN-2019 18:40:22 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-02
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1608.0,0.40%,F,T)



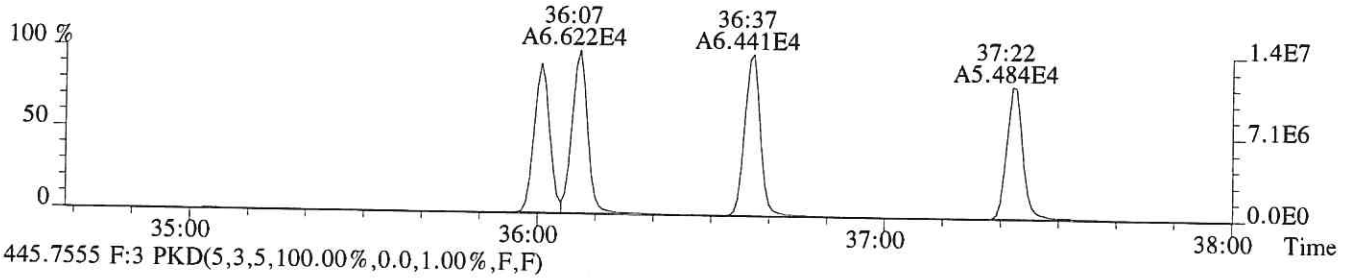
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,708.0,0.40%,F,T)



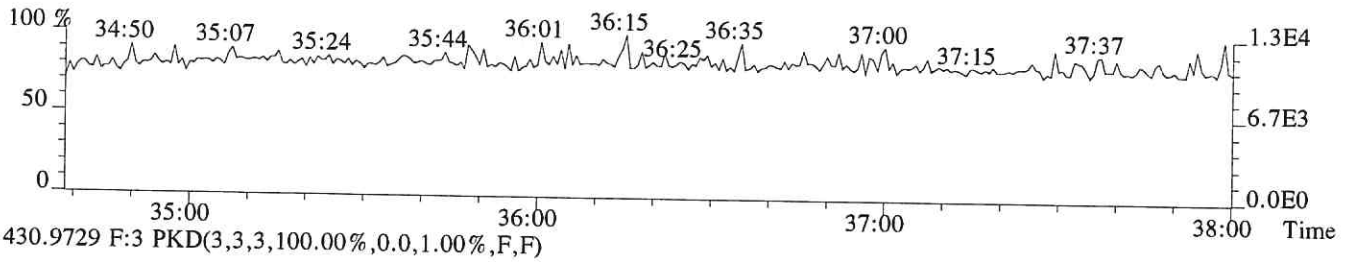
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1560.0,0.40%,F,T)



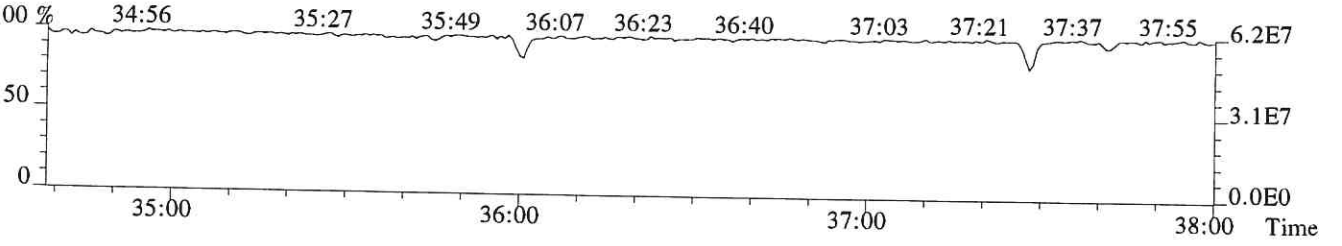
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1480.0,0.40%,F,T)



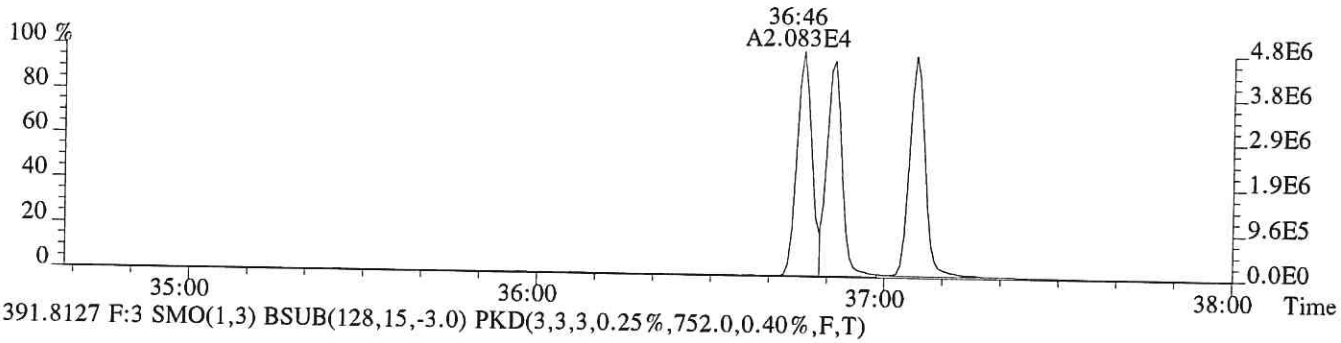
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



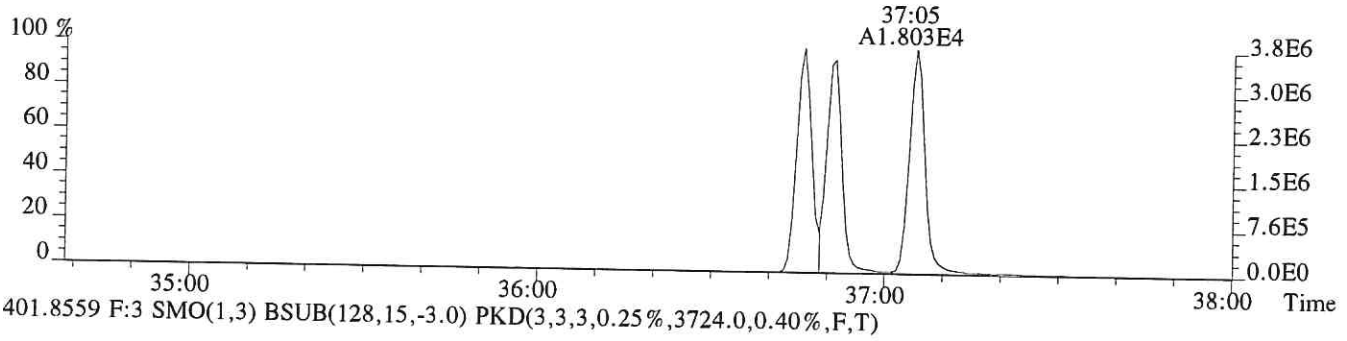
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



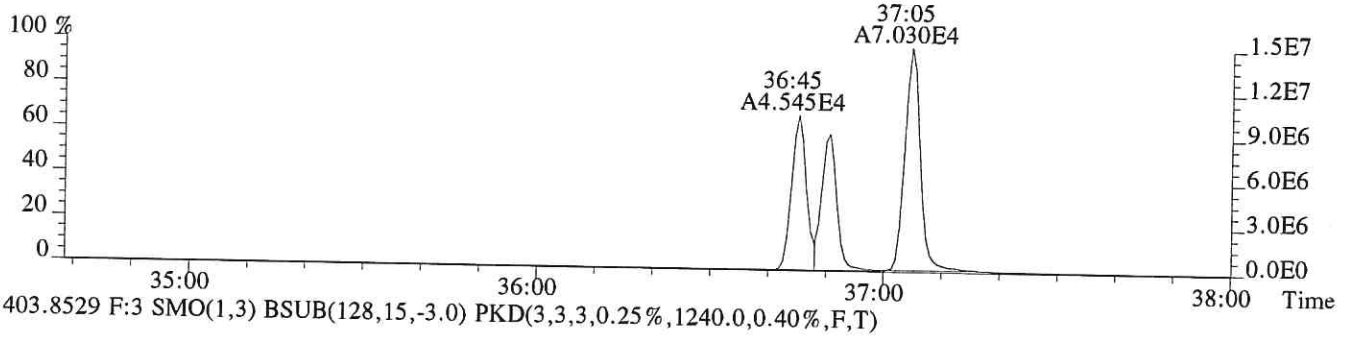
File:P520061 #1-303 Acq:18-JAN-2019 18:40:22 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-02
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1048.0,0.40%,F,T)



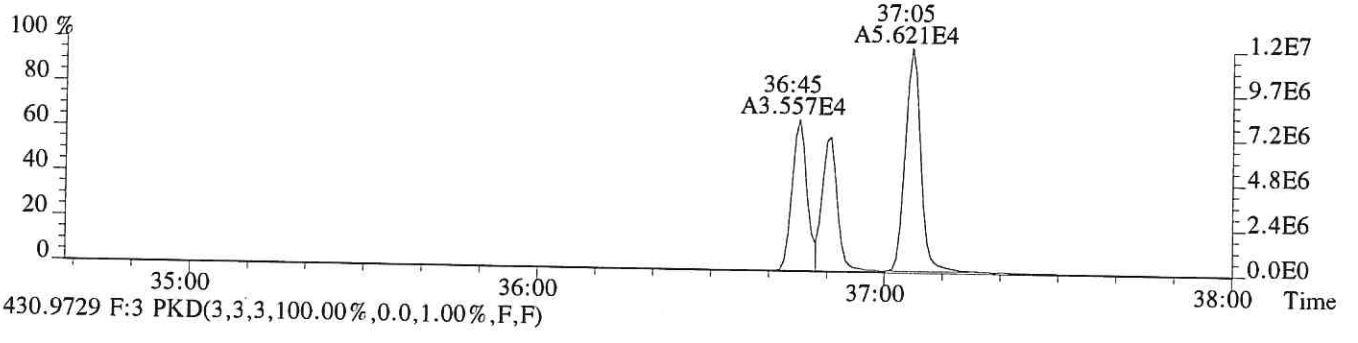
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,752.0,0.40%,F,T)



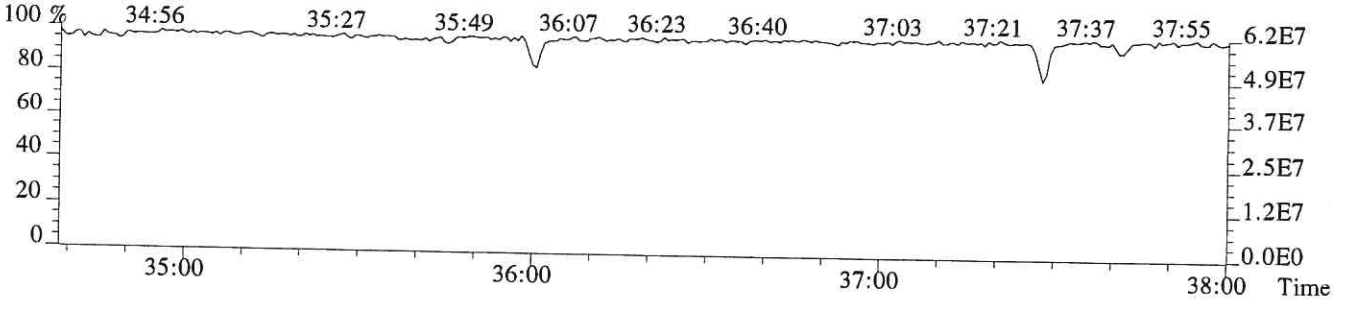
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3724.0,0.40%,F,T)



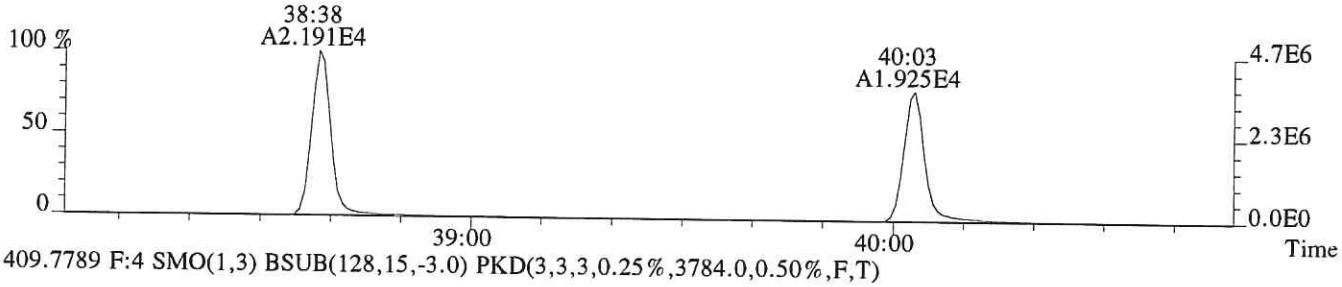
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1240.0,0.40%,F,T)



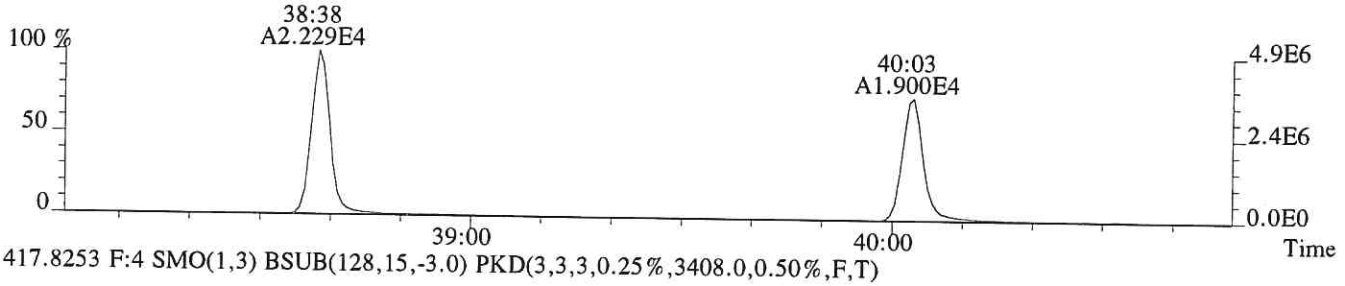
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



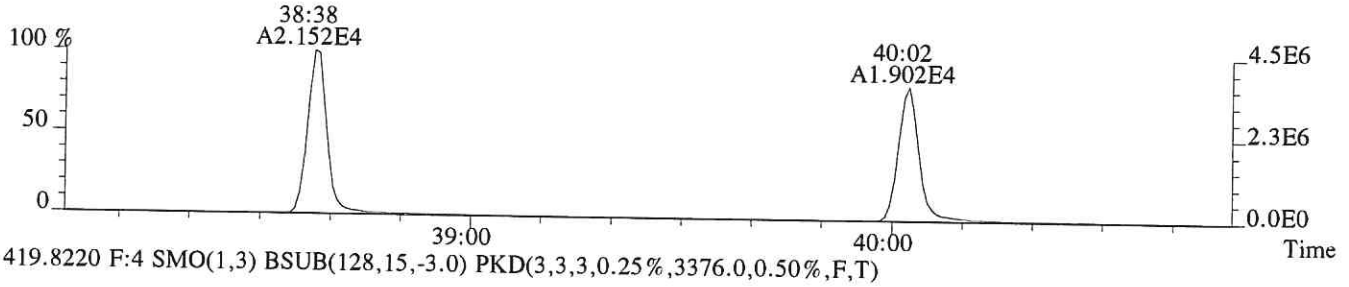
File:P520061 #1-250 Acq:18-JAN-2019 18:40:22 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-02
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1608.0,0.50%,F,T)



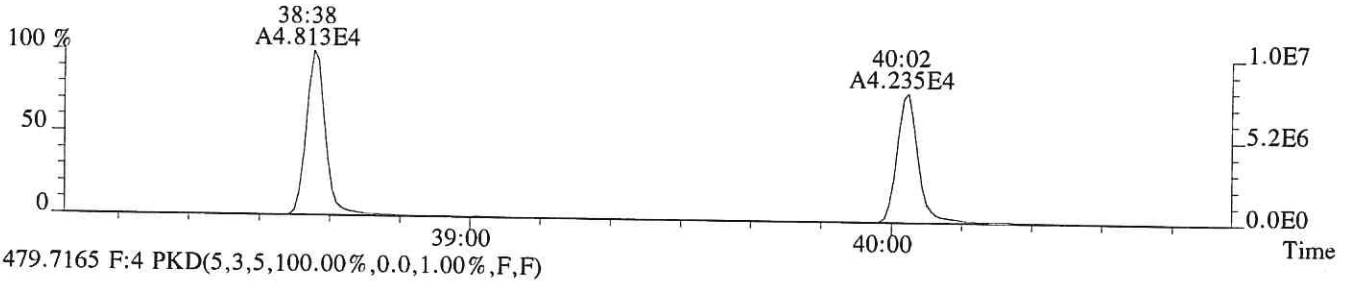
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3784.0,0.50%,F,T)



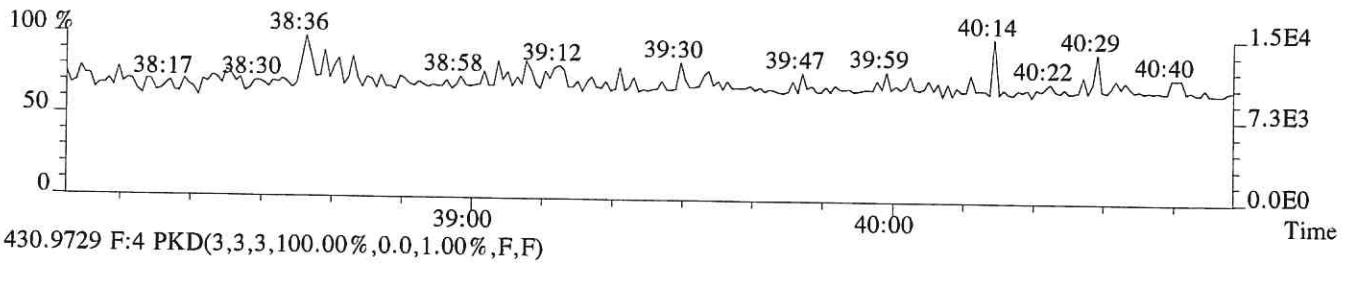
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3408.0,0.50%,F,T)



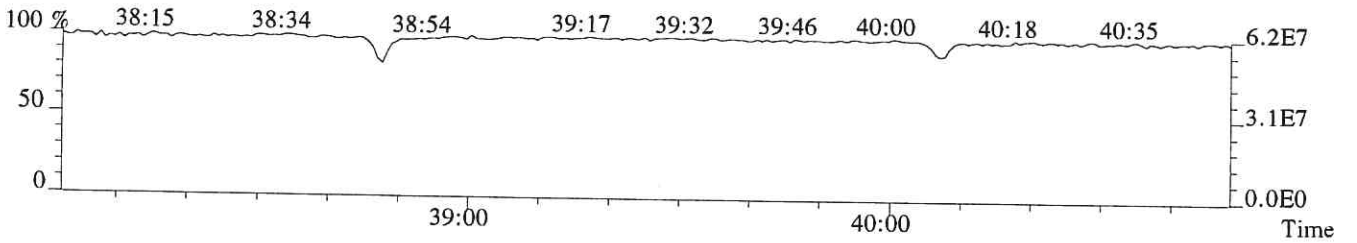
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3376.0,0.50%,F,T)



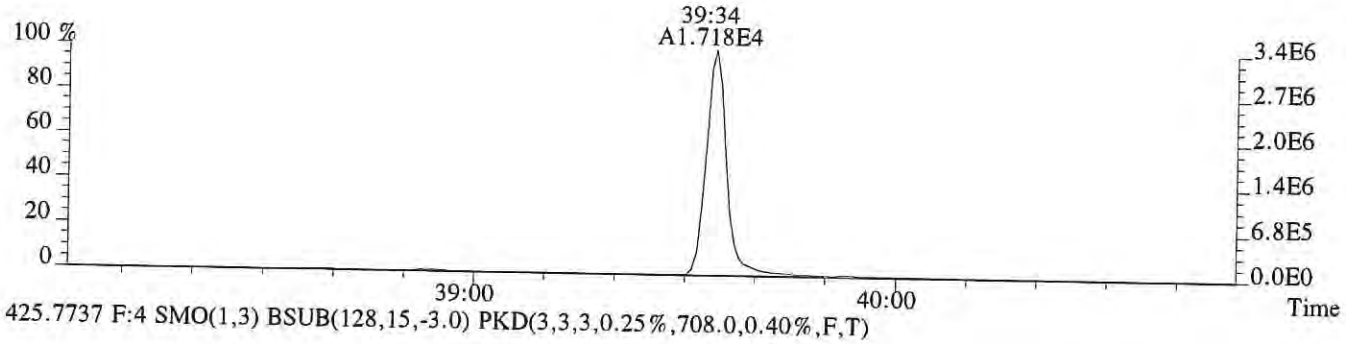
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



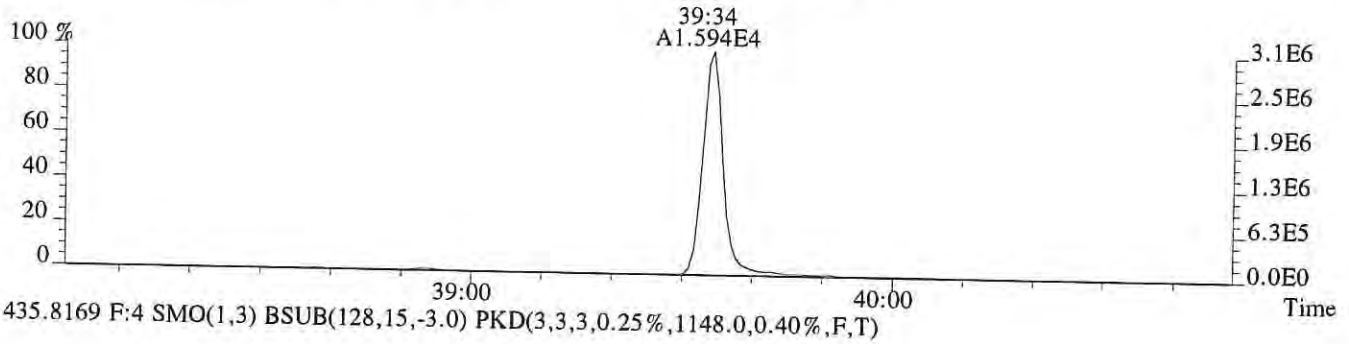
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



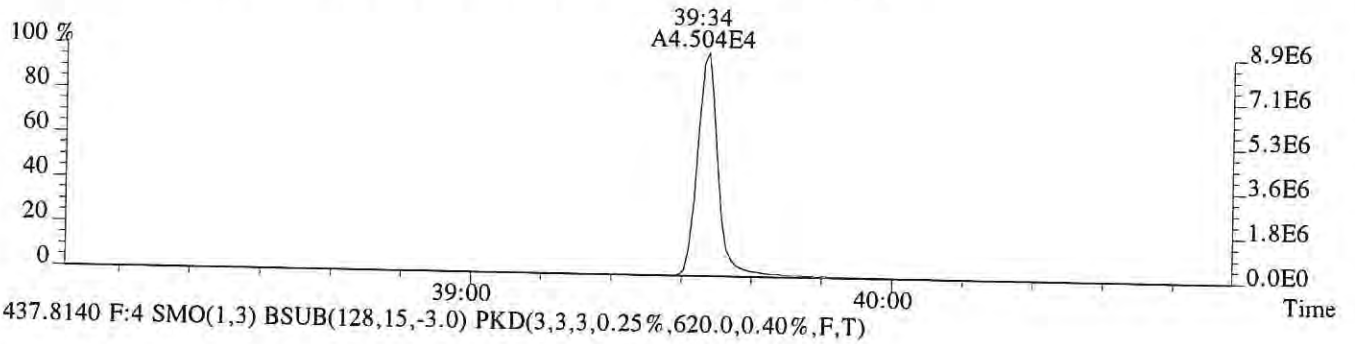
File:P520061 #1-250 Acq:18-JAN-2019 18:40:22 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-02
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1092.0,0.40%,F,T)



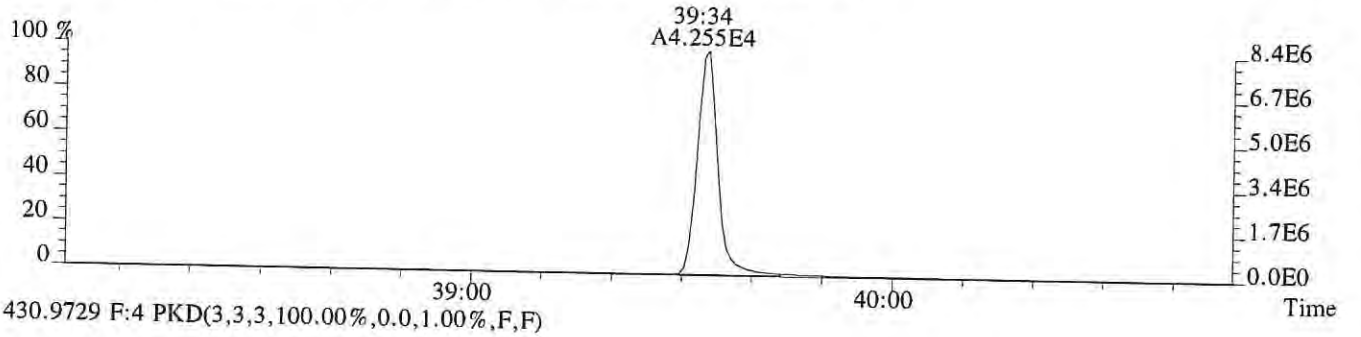
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,708.0,0.40%,F,T)



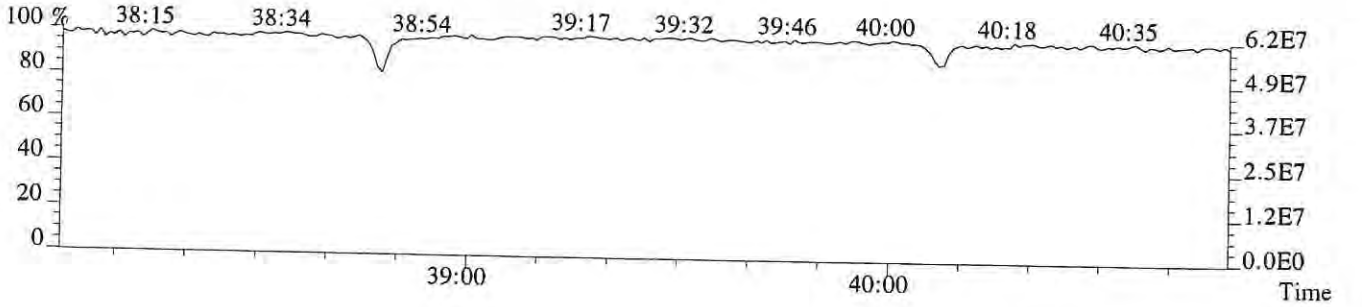
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1148.0,0.40%,F,T)



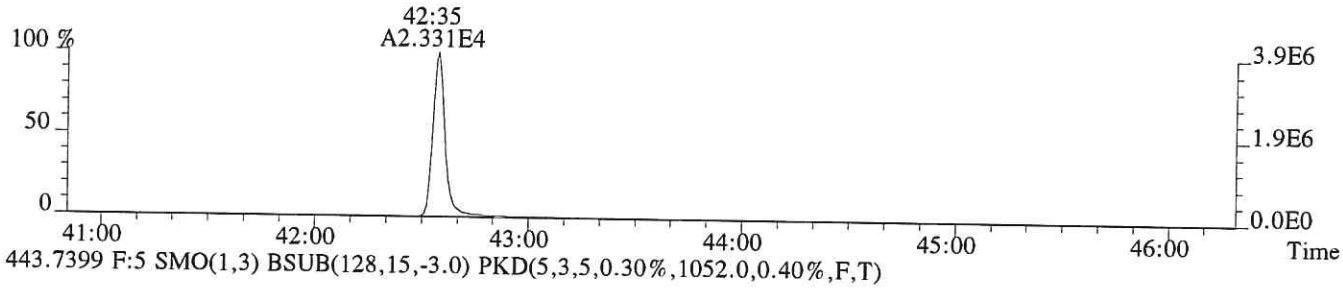
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,620.0,0.40%,F,T)



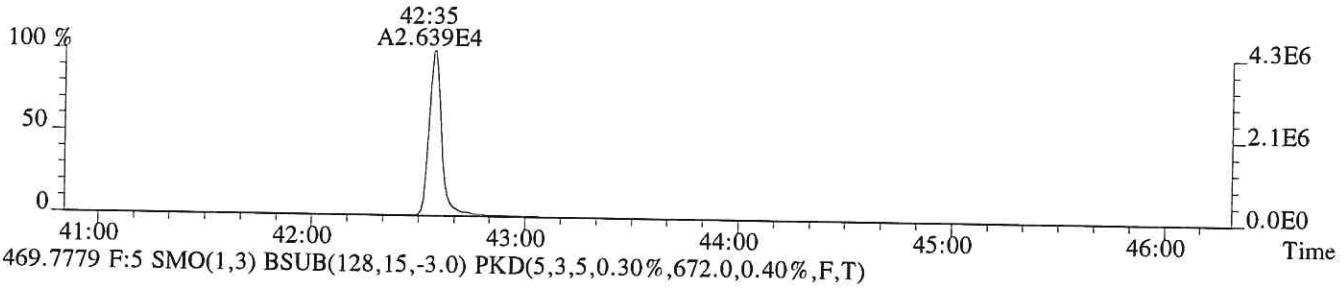
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



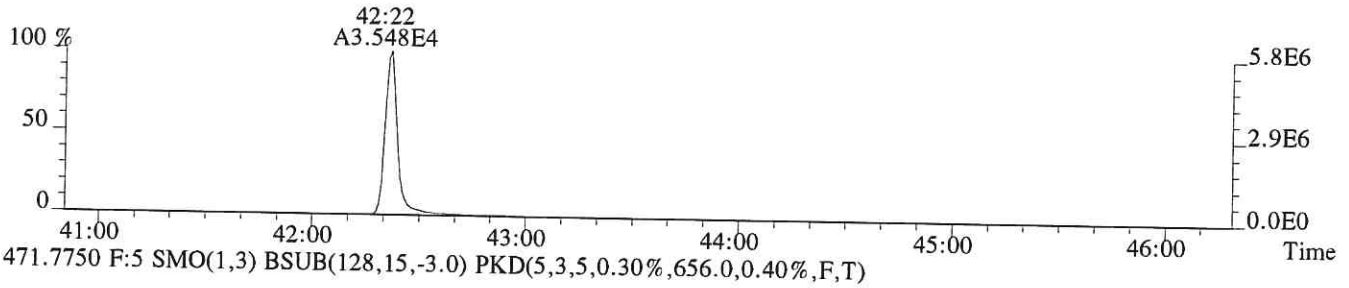
File:P520061 #1-493 Acq:18-JAN-2019 18:40:22 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-02
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,748.0,0.40%,F,T)



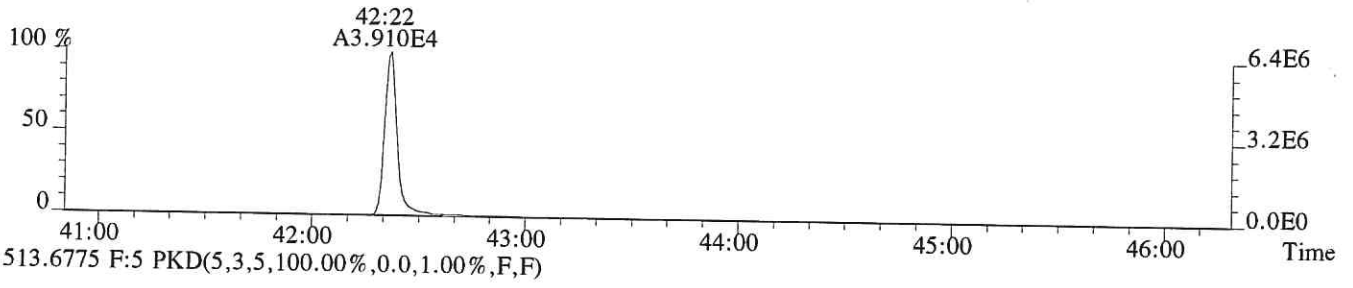
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1052.0,0.40%,F,T)



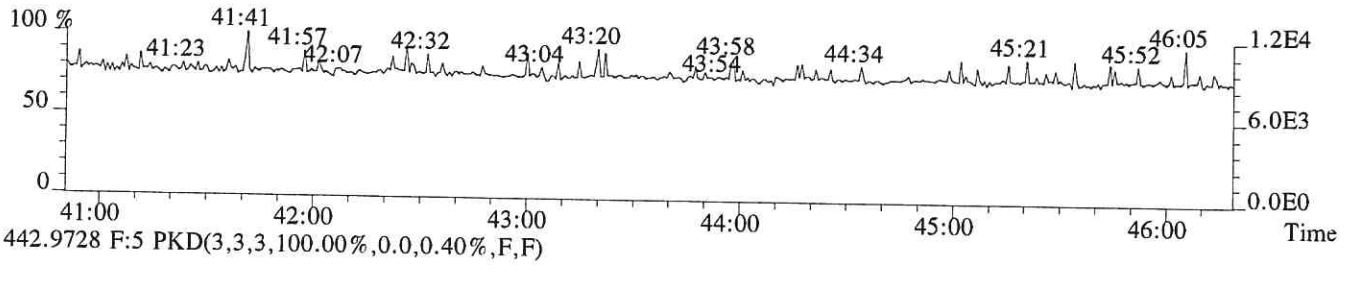
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,672.0,0.40%,F,T)



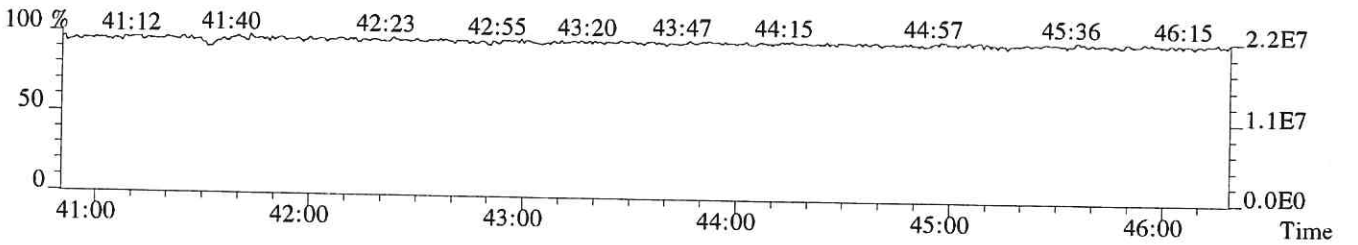
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,656.0,0.40%,F,T)



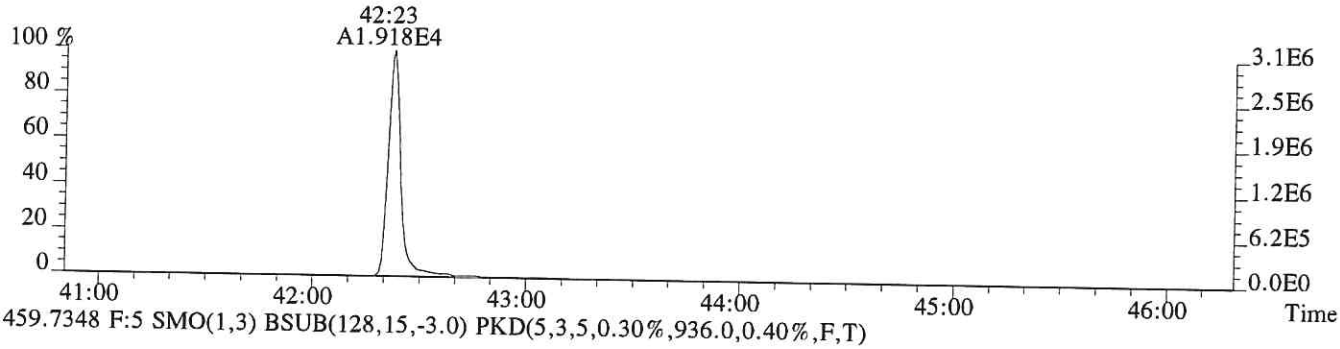
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



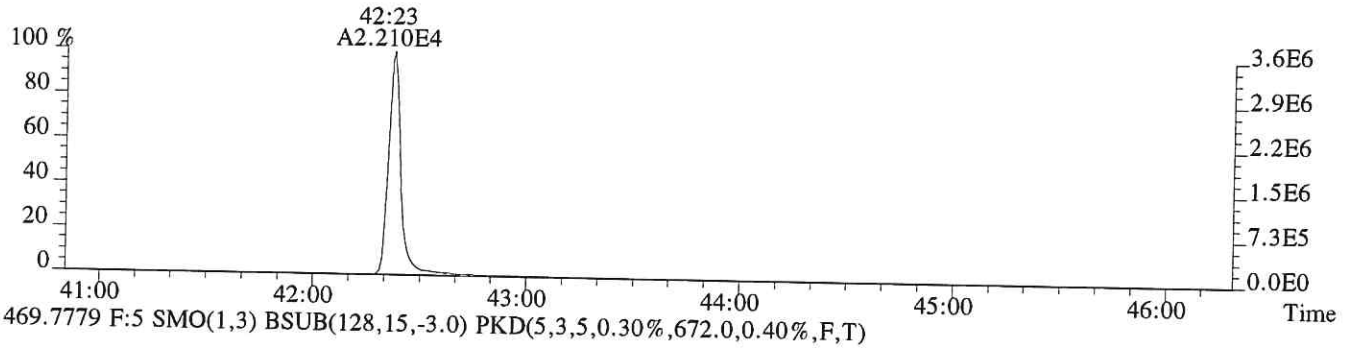
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



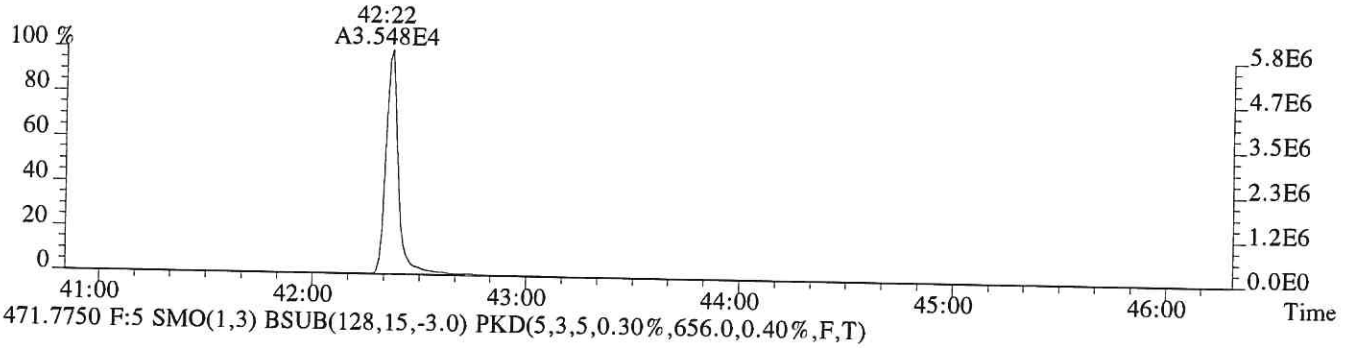
File:P520061 #1-493 Acq:18-JAN-2019 18:40:22 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-02
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,540.0,0.40%,F,T)



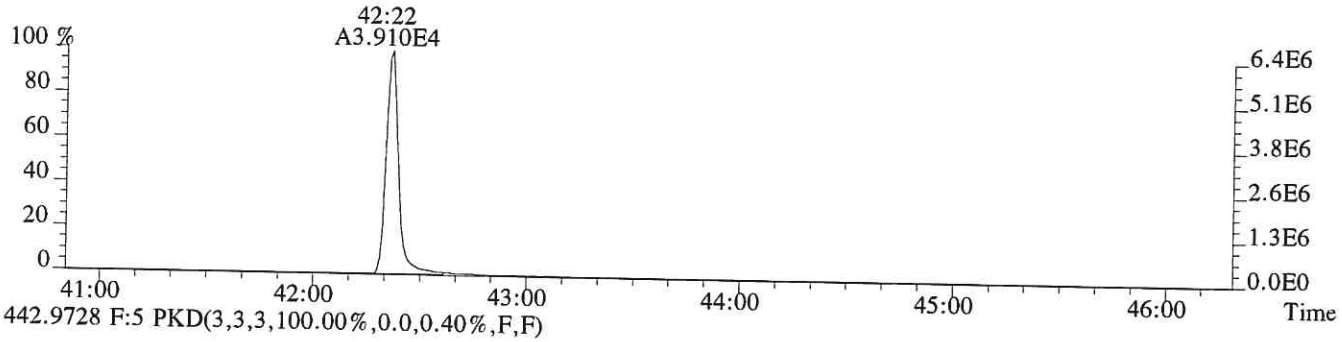
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,936.0,0.40%,F,T)



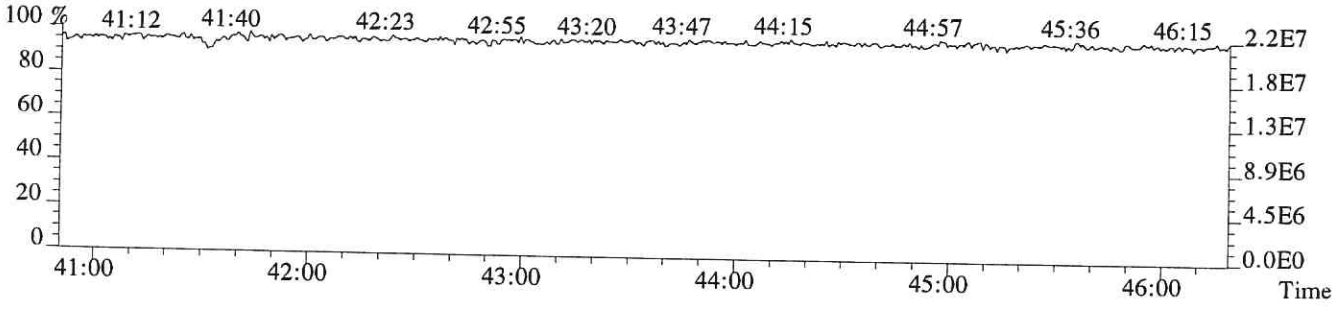
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,672.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,656.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
DLCS

Run #20 Filename P520062 Samp: 1 Inj: 1 Acquired: 18-JAN-19 19:29:01
Processed: 21-JAN-19 09:20:04 Sample ID: EQ1900021-03

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:16	5.612e+03	7.799e+03	0.72	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:28	4.411e+04	2.904e+04	1.52	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:22	4.277e+04	2.864e+04	1.49	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:02	3.418e+04	2.846e+04	1.20	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:09	3.649e+04	3.051e+04	1.20	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:38	3.432e+04	2.874e+04	1.19	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:23	3.167e+04	2.653e+04	1.19	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:38	2.444e+04	2.436e+04	1.00	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:03	2.372e+04	2.408e+04	0.99	yes	no	1.258
10	Unk	OCDF	42:35	2.806e+04	3.213e+04	0.87	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:04	4.375e+03	5.630e+03	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:39	3.311e+04	2.079e+04	1.59	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:46	2.664e+04	2.136e+04	1.25	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	36:51	2.800e+04	2.209e+04	1.27	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:05	2.904e+04	2.276e+04	1.28	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:35	1.983e+04	1.896e+04	1.05	yes	no	1.025
17	Unk	OCDD	42:23	2.500e+04	2.838e+04	0.88	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:16	5.925e+04	7.527e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:27	9.651e+04	6.142e+04	1.57	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:21	8.985e+04	5.680e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:01	3.658e+04	6.933e+04	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:08	4.214e+04	7.996e+04	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:37	3.838e+04	7.477e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:23	3.591e+04	6.800e+04	0.53	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:38	2.333e+04	5.247e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:02	2.321e+04	5.146e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:02	2.903e+04	3.652e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:38	6.965e+04	4.387e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:45	5.612e+04	4.396e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	36:51	5.448e+04	4.321e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:34	5.084e+04	4.867e+04	1.04	yes	no	0.858
32	IS	13C-OCDD	42:22	3.831e+04	4.286e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:29	7.129e+04	8.994e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:05	8.770e+04	6.958e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:04	2.707e+04				no	1.014

$$\text{OCDD} = \frac{(2.500e+04 + 2.838e+04) \times 4000\ \text{pg} \times 1}{(3.831e+04 + 4.286e+04) \times \quad \text{g} \times \quad / 100 \times 1.118}$$

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Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
DLCS

Run #20 Filename P520062 Samp: 1 Inj: 1 Acquired: 18-JAN-19 19:29:01
Processed: 21-JAN-19 09:20:04 LAB. ID: EQ1900021-03

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.05e+06	1.90e+03	5.5e+02	1.44e+06	1.94e+03	7.4e+02
2	1,2,3,7,8-PeCDF	8.52e+06	1.80e+03	4.7e+03	5.65e+06	3.17e+03	1.8e+03
3	2,3,4,7,8-PeCDF	8.81e+06	1.80e+03	4.9e+03	5.92e+06	3.17e+03	1.9e+03
4	1,2,3,4,7,8-HxCDF	7.59e+06	1.71e+03	4.4e+03	6.32e+06	1.39e+03	4.6e+03
5	1,2,3,6,7,8-HxCDF	7.65e+06	1.71e+03	4.5e+03	6.38e+06	1.39e+03	4.6e+03
6	2,3,4,6,7,8-HxCDF	7.51e+06	1.71e+03	4.4e+03	6.34e+06	1.39e+03	4.6e+03
7	1,2,3,7,8,9-HxCDF	6.81e+06	1.71e+03	4.0e+03	5.63e+06	1.39e+03	4.1e+03
8	1,2,3,4,6,7,8-HpCDF	5.19e+06	3.88e+03	1.3e+03	5.15e+06	3.23e+03	1.6e+03
9	1,2,3,4,7,8,9-HpCDF	4.64e+06	3.88e+03	1.2e+03	4.75e+06	3.23e+03	1.5e+03
10	OCDF	4.63e+06	6.52e+02	7.1e+03	5.26e+06	1.08e+03	4.9e+03
11	2,3,7,8-TCDD	9.10e+05	3.18e+03	2.9e+02	1.13e+06	2.04e+03	5.5e+02
12	1,2,3,7,8-PeCDD	6.69e+06	1.98e+03	3.4e+03	4.13e+06	1.04e+03	4.0e+03
13	1,2,3,4,7,8-HxCDD	6.09e+06	6.16e+02	9.9e+03	4.84e+06	8.16e+02	5.9e+03
14	1,2,3,6,7,8-HxCDD	5.90e+06	6.16e+02	9.6e+03	4.70e+06	8.16e+02	5.8e+03
15	1,2,3,7,8,9-HxCDD	5.96e+06	6.16e+02	9.7e+03	4.81e+06	8.16e+02	5.9e+03
16	1,2,3,4,6,7,8-HpCDD	3.85e+06	1.85e+03	2.1e+03	3.71e+06	5.36e+02	6.9e+03
17	OCDD	4.07e+06	8.72e+02	4.7e+03	4.61e+06	1.04e+03	4.4e+03
18	13C-2,3,7,8-TCDF	1.11e+07	4.94e+03	2.3e+03	1.42e+07	2.47e+03	5.7e+03
19	13C-1,2,3,7,8-PeCDF	1.84e+07	2.57e+03	7.1e+03	1.16e+07	1.97e+03	5.9e+03
20	13C-2,3,4,7,8-PeCDF	1.80e+07	2.57e+03	7.0e+03	1.13e+07	1.97e+03	5.7e+03
21	13C-1,2,3,4,7,8-HxCDF	7.84e+06	1.44e+03	5.4e+03	1.48e+07	1.80e+03	8.2e+03
22	13C-1,2,3,6,7,8-HxCDF	8.63e+06	1.44e+03	6.0e+03	1.65e+07	1.80e+03	9.1e+03
23	13C-2,3,4,6,7,8-HxCDF	8.48e+06	1.44e+03	5.9e+03	1.66e+07	1.80e+03	9.2e+03
24	13C-1,2,3,7,8,9-HxCDF	7.63e+06	1.44e+03	5.3e+03	1.45e+07	1.80e+03	8.0e+03
25	13C-1,2,3,4,6,7,8-HpCDF	4.93e+06	4.41e+03	1.1e+03	1.10e+07	7.03e+03	1.6e+03
26	13C-1,2,3,4,7,8,9-HpCDF	4.54e+06	4.41e+03	1.0e+03	1.00e+07	7.03e+03	1.4e+03
27	13C-2,3,7,8-TCDD	5.69e+06	8.11e+03	7.0e+02	7.16e+06	2.87e+03	2.5e+03
28	13C-1,2,3,7,8-PeCDD	1.41e+07	1.27e+03	1.1e+04	8.91e+06	1.20e+03	7.5e+03
29	13C-1,2,3,4,7,8-HxCDD	1.27e+07	3.16e+03	4.0e+03	9.92e+06	1.73e+03	5.7e+03
30	13C-1,2,3,6,7,8-HxCDD	1.15e+07	3.16e+03	3.6e+03	9.16e+06	1.73e+03	5.3e+03
31	13C-1,2,3,4,6,7,8-HpCDD	9.67e+06	1.36e+03	7.1e+03	9.12e+06	1.43e+03	6.4e+03
32	13C-OCDD	6.32e+06	7.48e+02	8.5e+03	7.02e+06	5.36e+02	1.3e+04
33	13C-1,2,3,4-TCDD	1.38e+07	8.11e+03	1.7e+03	1.73e+07	2.87e+03	6.0e+03
34	13C-1,2,3,7,8,9-HxCDD	1.82e+07	3.16e+03	5.8e+03	1.45e+07	1.73e+03	8.4e+03
35	37Cl-2,3,7,8-TCDD	5.44e+06	1.73e+03	3.1e+03			

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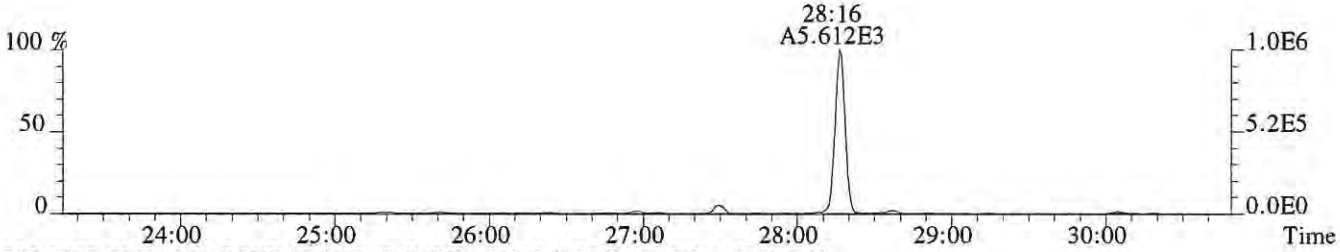
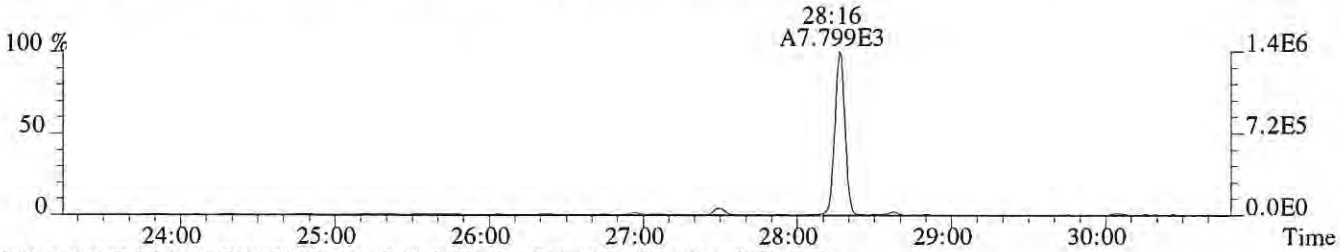
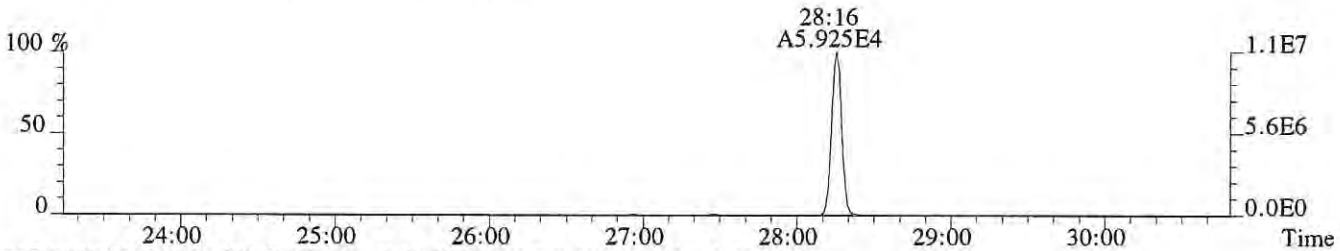
File:P520062 #1-538 Acq:18-JAN-2019 19:29:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-03
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1904.0,1.00%,F,T)



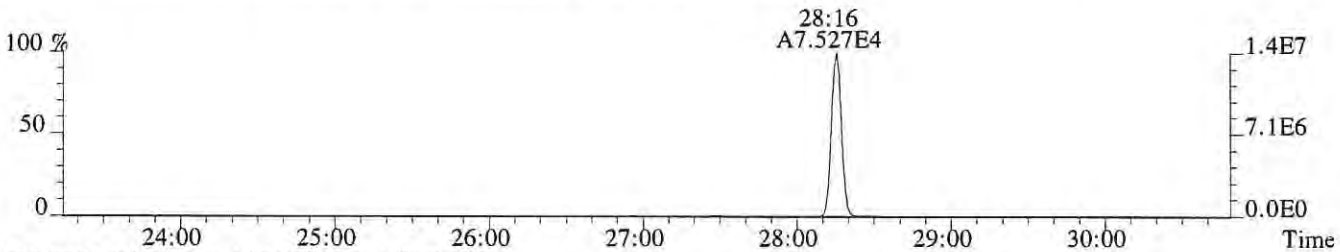
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1936.0,1.00%,F,T)



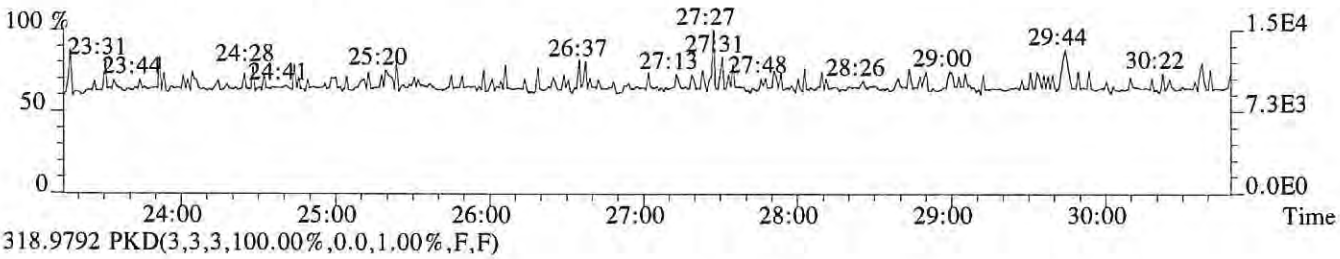
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4936.0,1.00%,F,T)



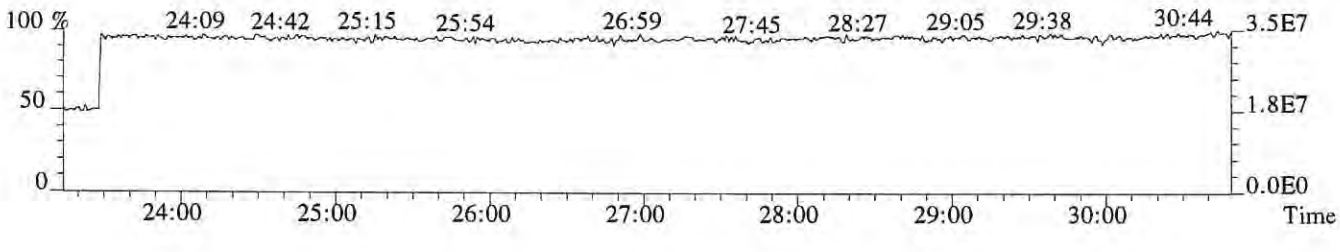
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2468.0,1.00%,F,T)



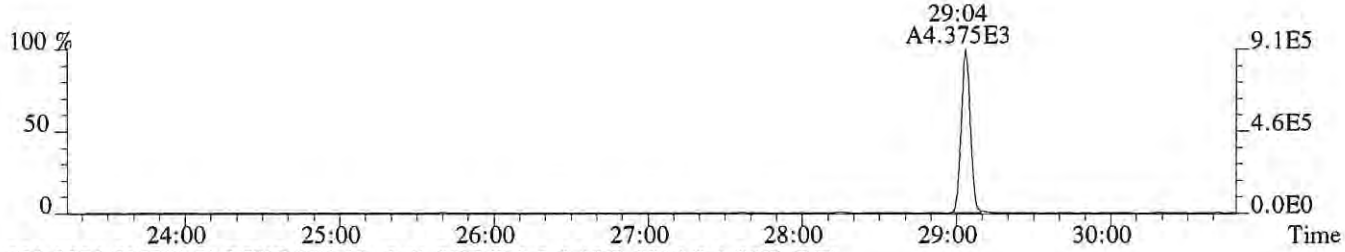
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



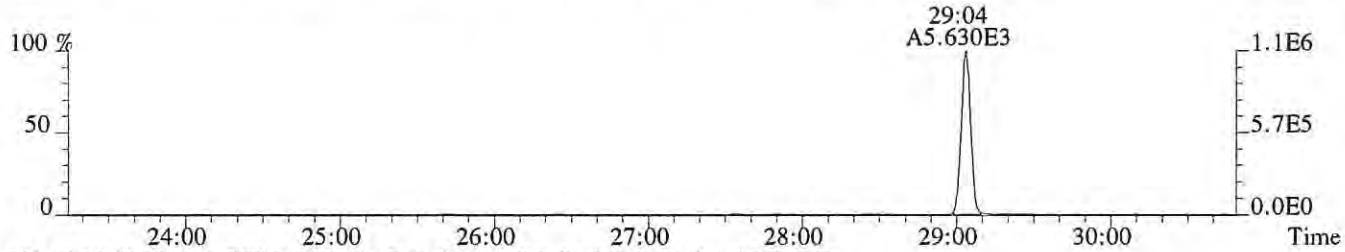
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



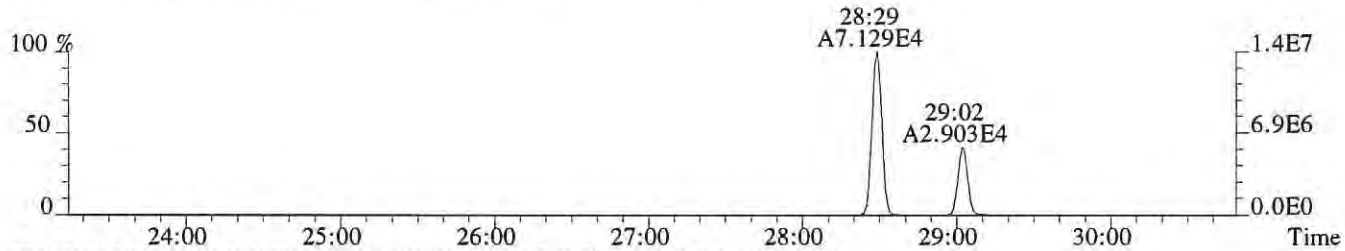
File:P520062 #1-538 Acq:18-JAN-2019 19:29:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-03
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3180.0,1.00%,F,T)



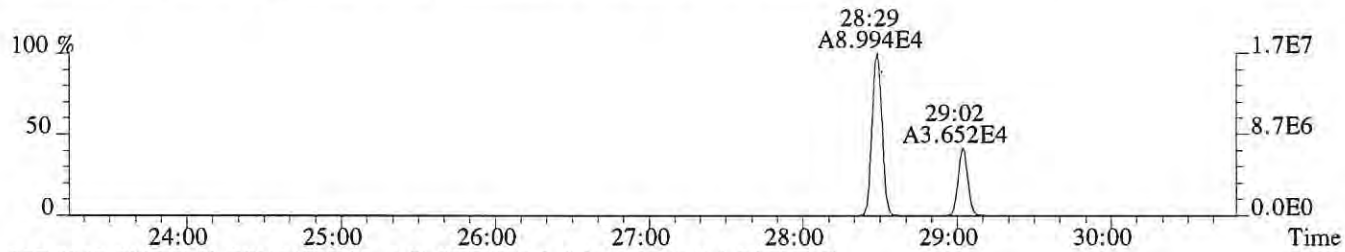
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2040.0,1.00%,F,T)



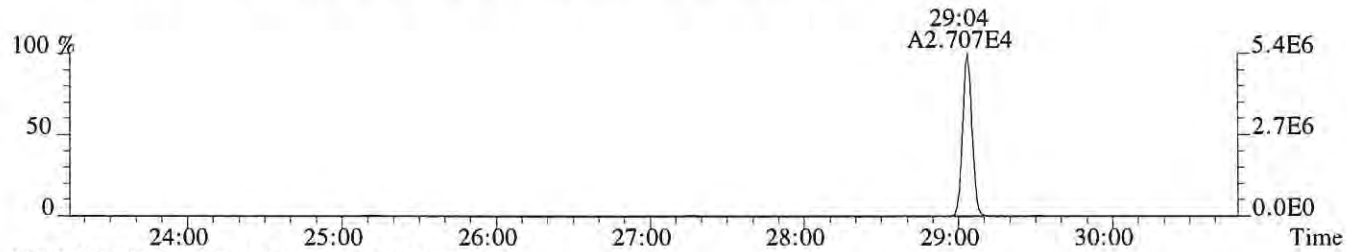
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8108.0,1.00%,F,T)



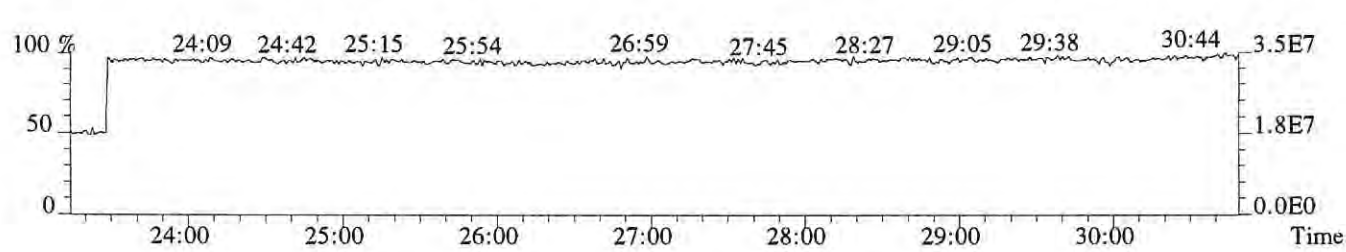
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2872.0,1.00%,F,T)



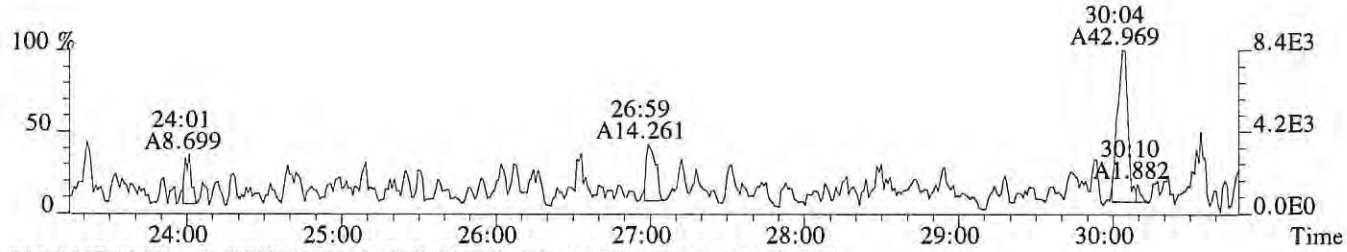
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1732.0,1.00%,F,T)



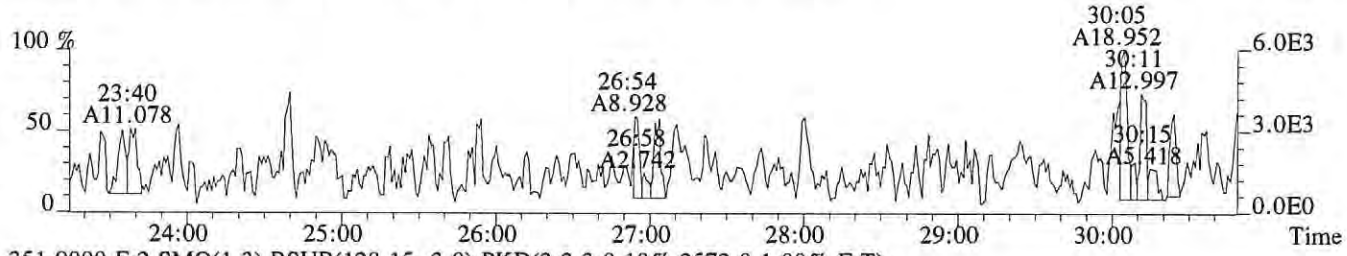
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



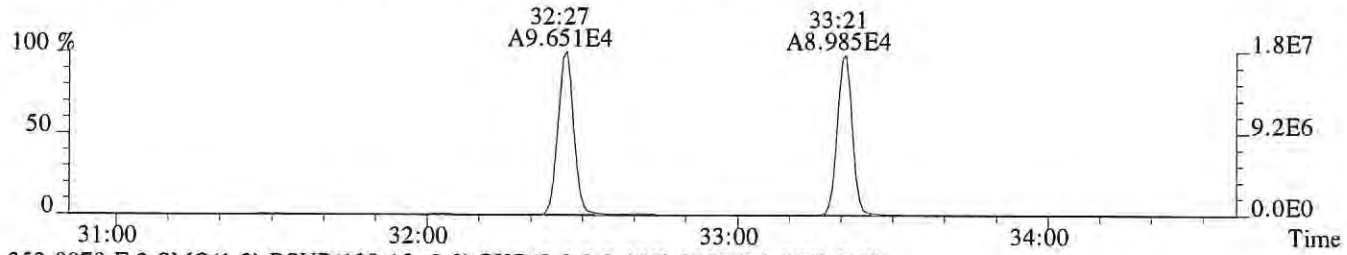
File:P520062 #1-538 Acq:18-JAN-2019 19:29:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-03
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1484.0,1.00%,F,T)



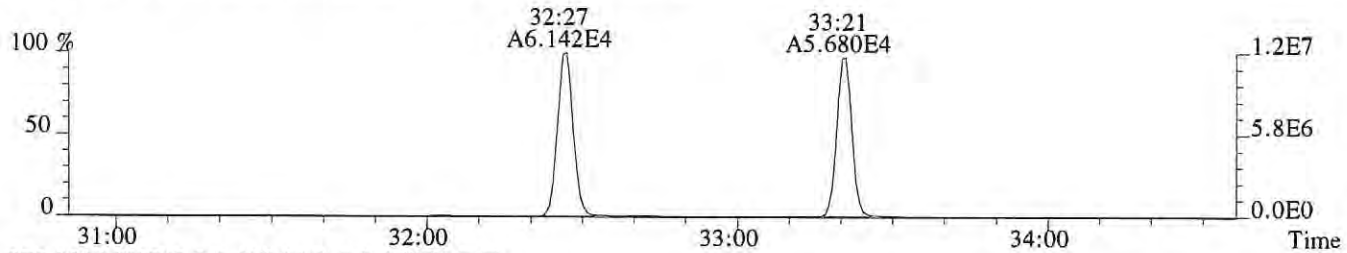
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1792.0,1.00%,F,T)



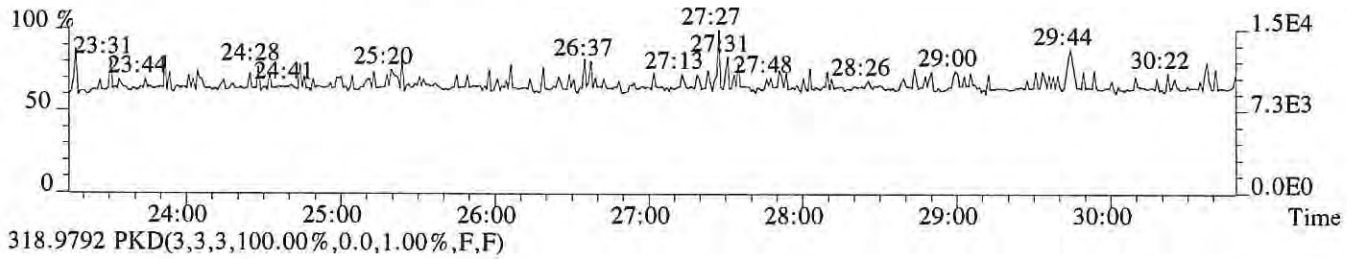
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2572.0,1.00%,F,T)



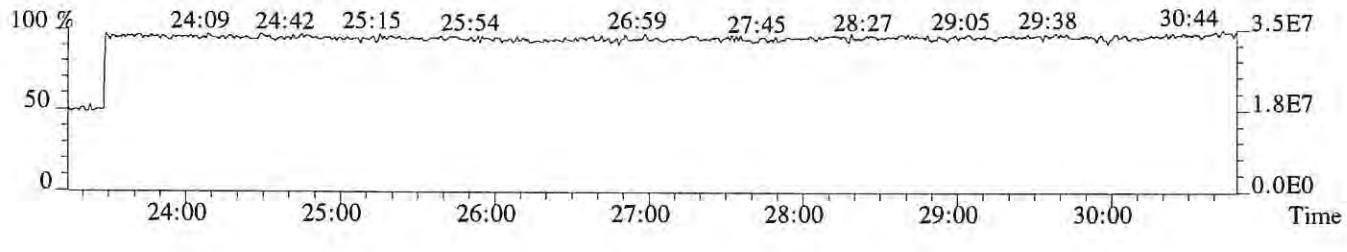
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1968.0,1.00%,F,T)



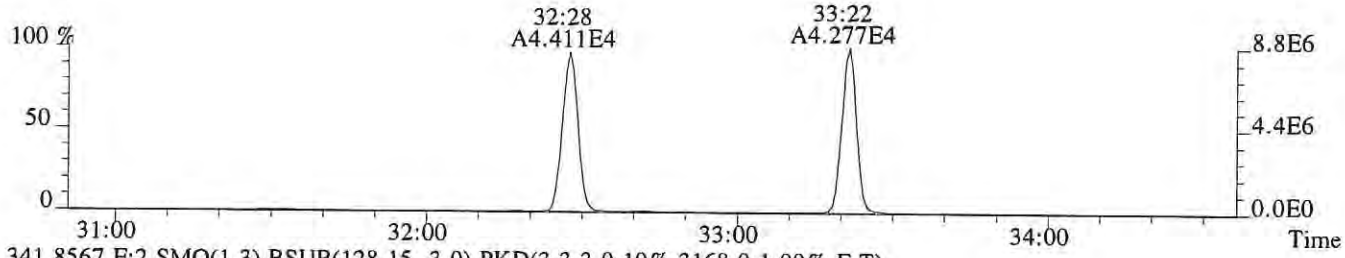
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



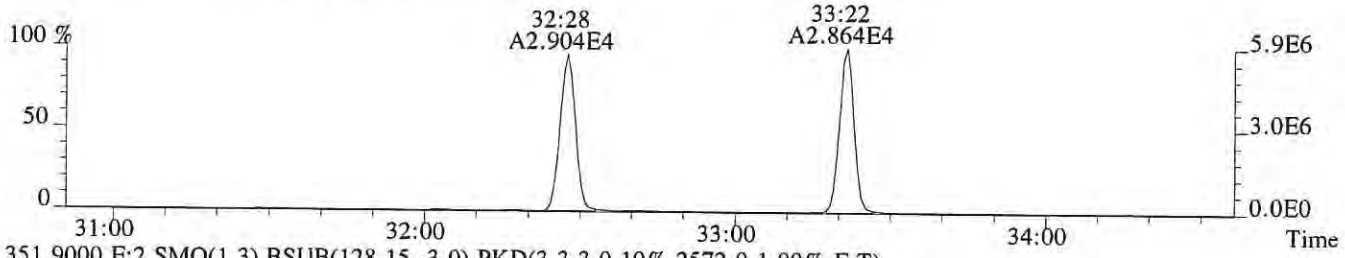
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



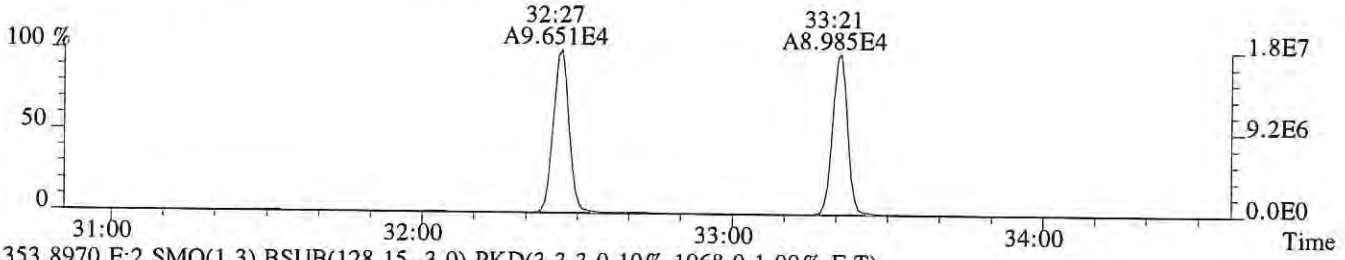
File:P520062 #1-339 Acq:18-JAN-2019 19:29:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-03
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1800.0,1.00%,F,T)



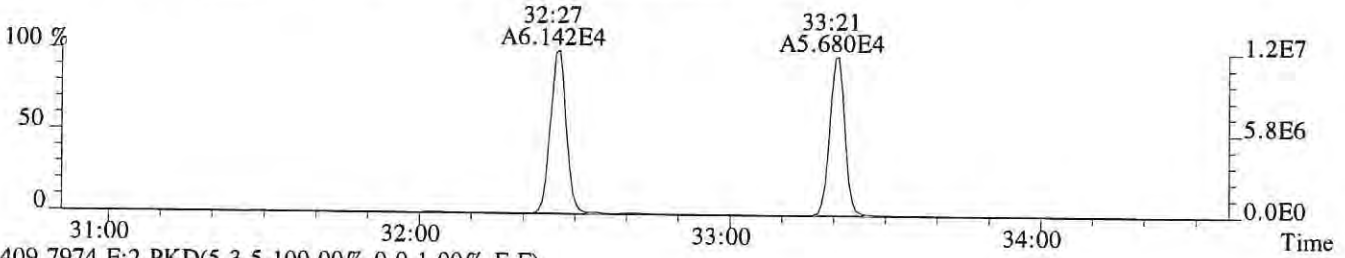
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3168.0,1.00%,F,T)



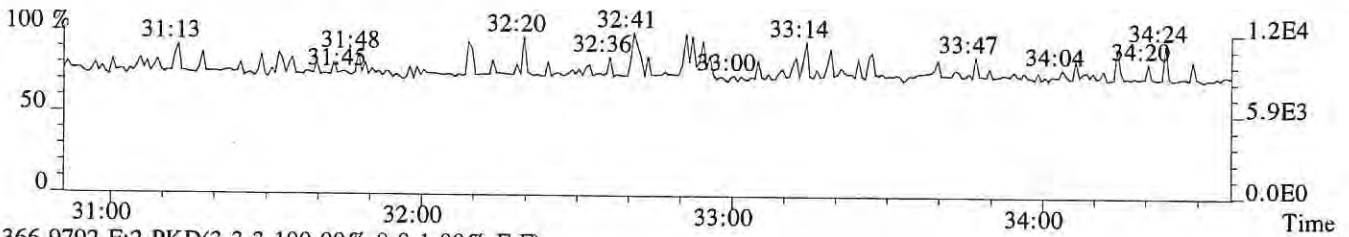
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2572.0,1.00%,F,T)



353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1968.0,1.00%,F,T)



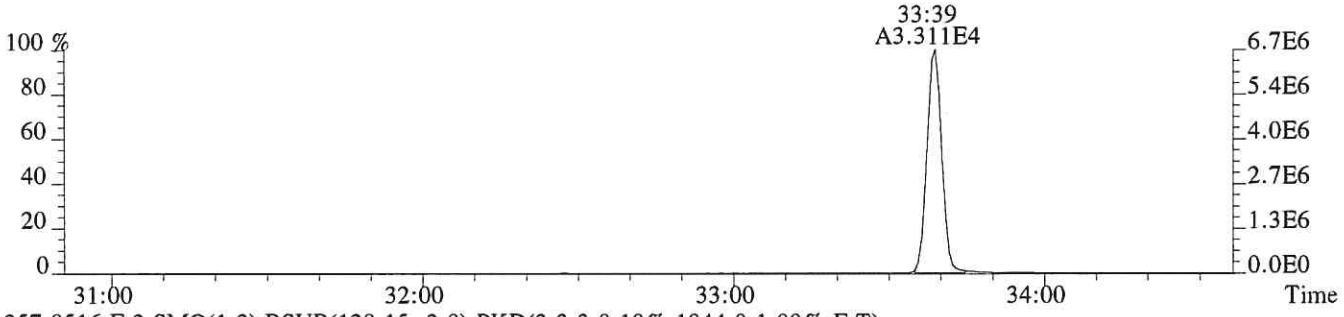
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



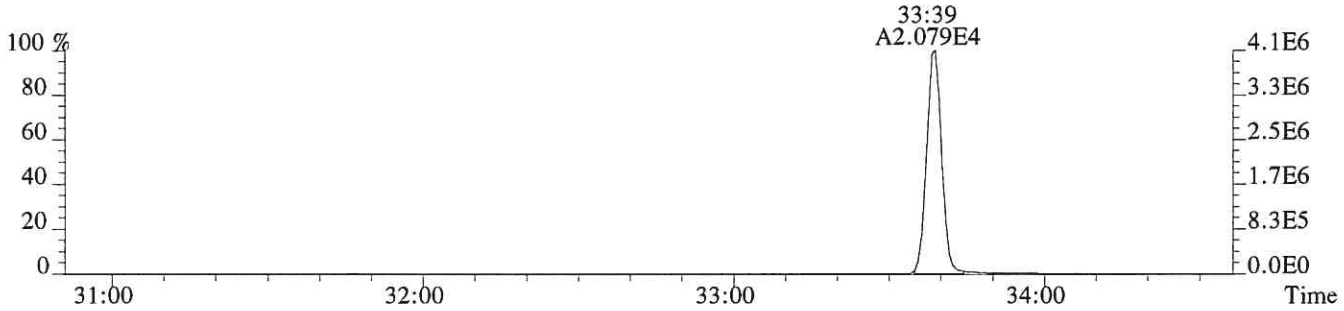
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



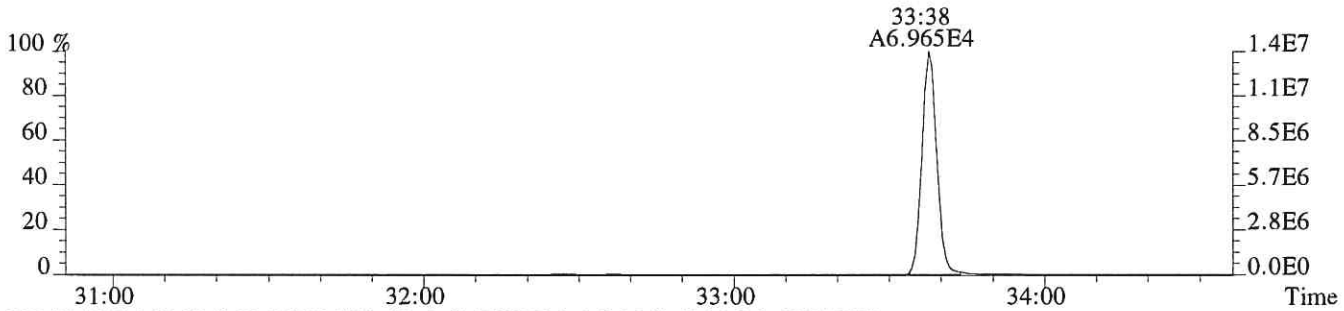
File:P520062 #1-339 Acq:18-JAN-2019 19:29:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-03
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1976.0,1.00%,F,T)



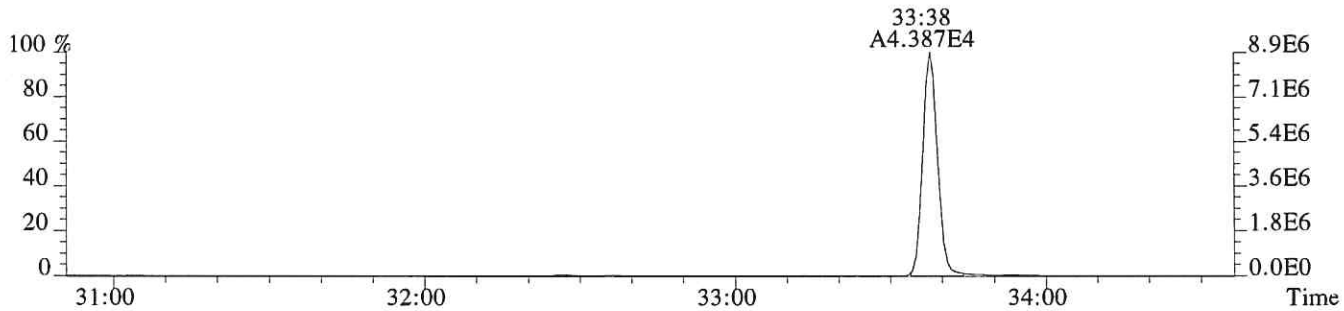
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1044.0,1.00%,F,T)



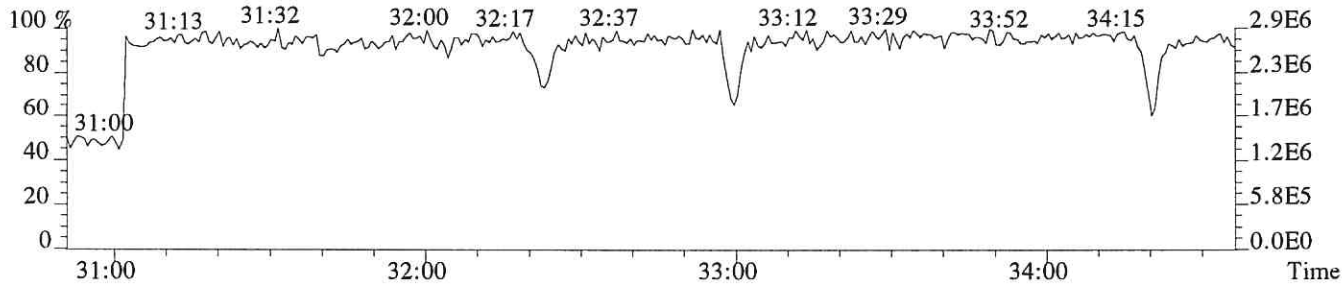
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1272.0,1.00%,F,T)



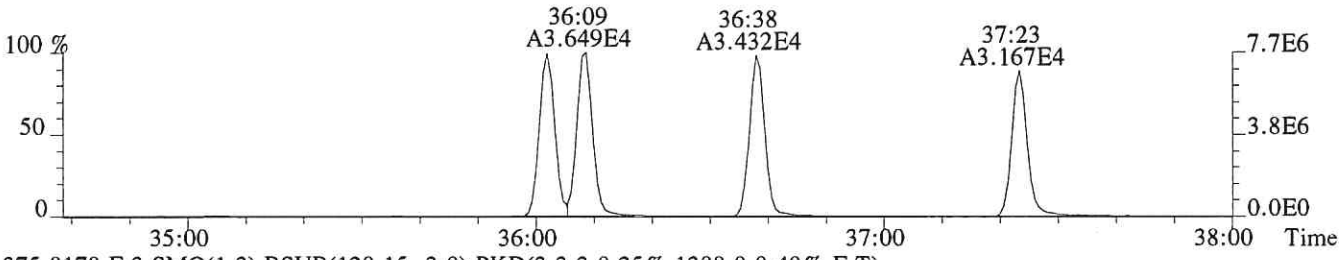
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1196.0,1.00%,F,T)



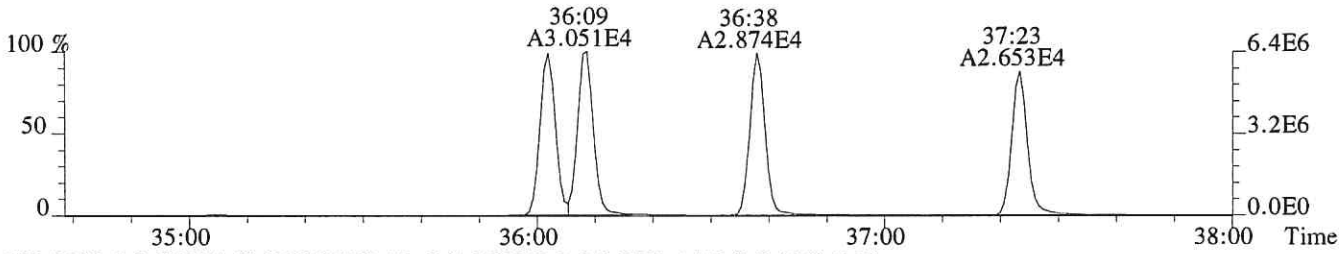
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



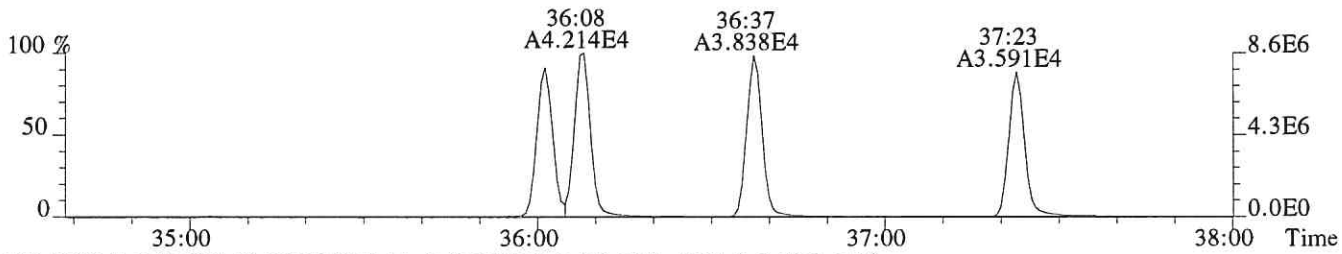
File:P520062 #1-303 Acq:18-JAN-2019 19:29:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-03
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1708.0,0.40%,F,T)



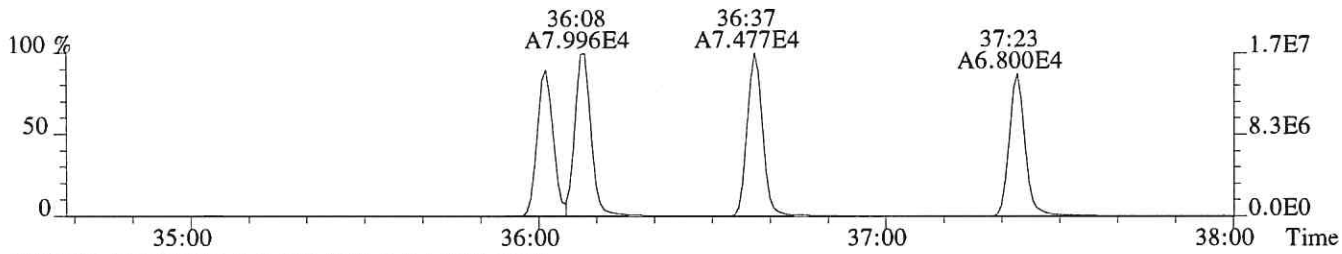
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1388.0,0.40%,F,T)



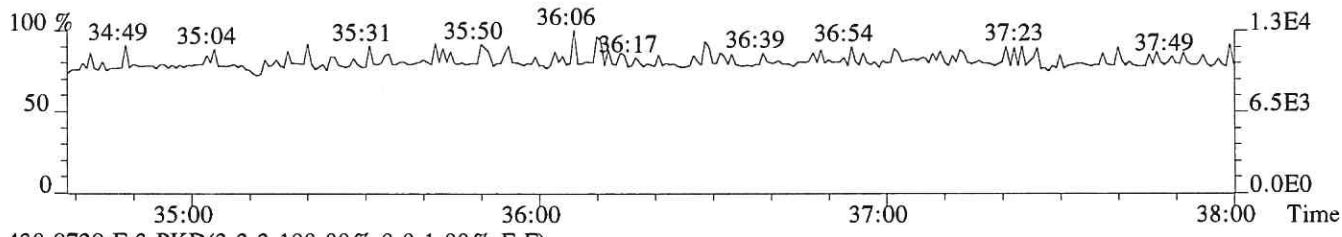
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1440.0,0.40%,F,T)



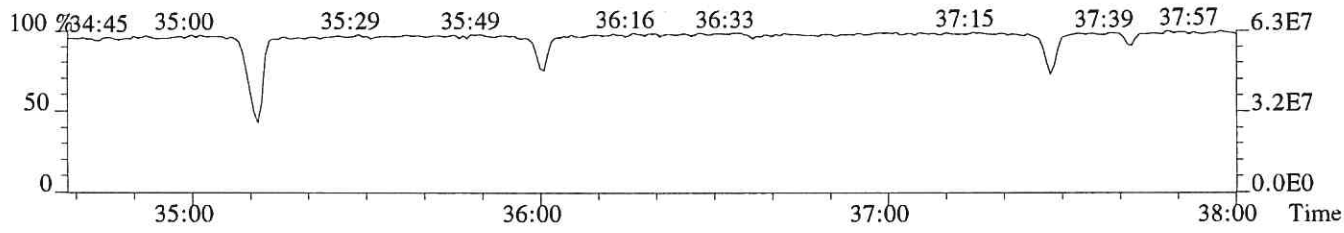
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1804.0,0.40%,F,T)



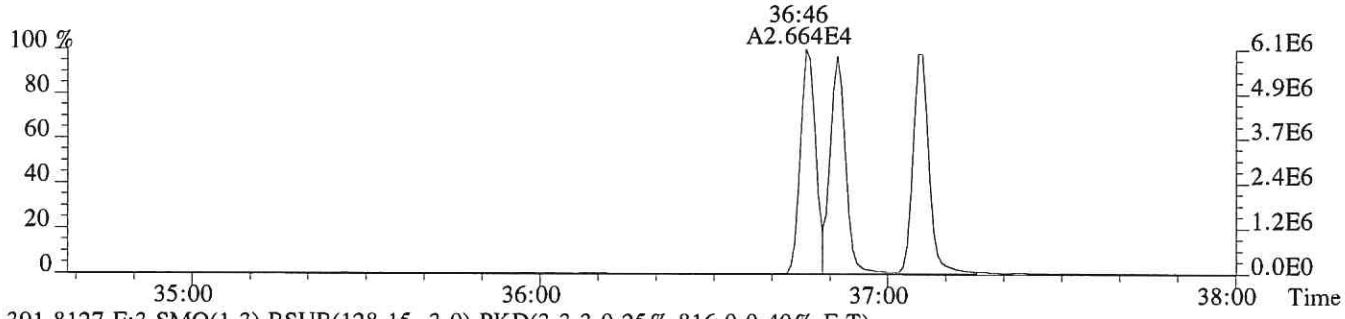
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



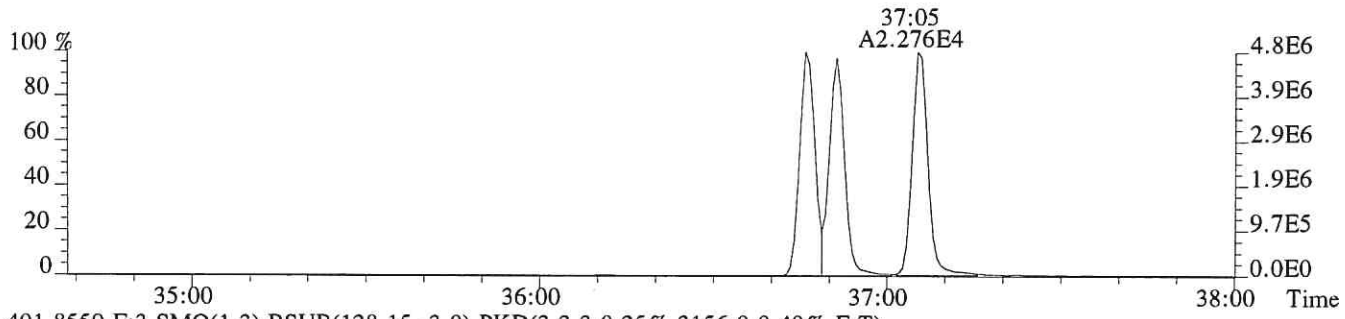
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



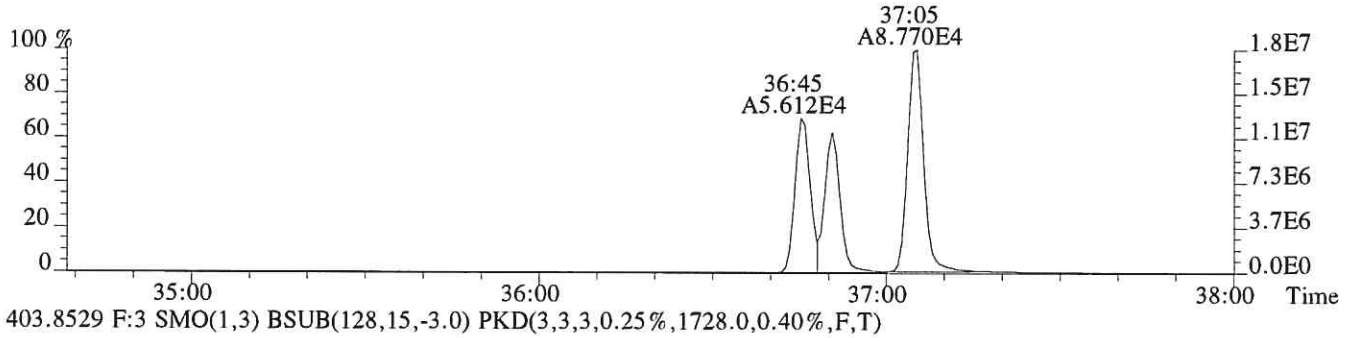
File:P520062 #1-303 Acq:18-JAN-2019 19:29:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-03
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,616.0,0.40%,F,T)



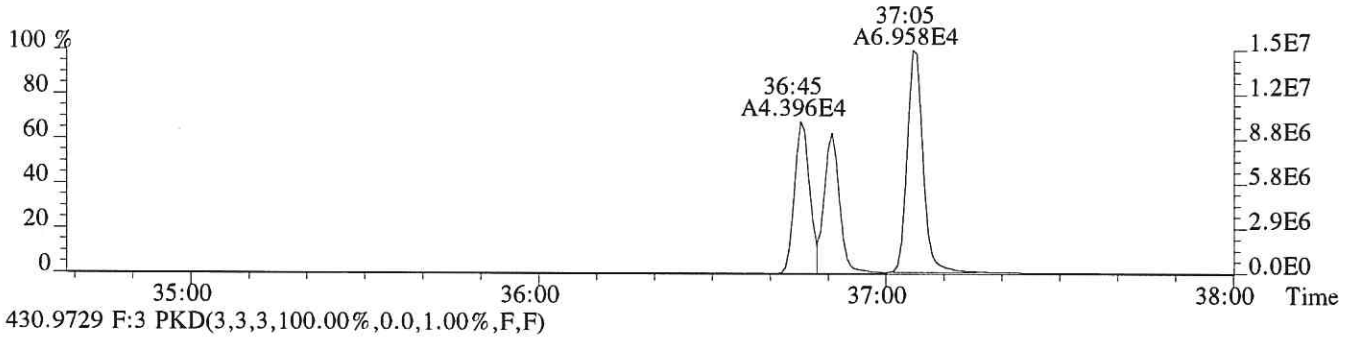
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,816.0,0.40%,F,T)



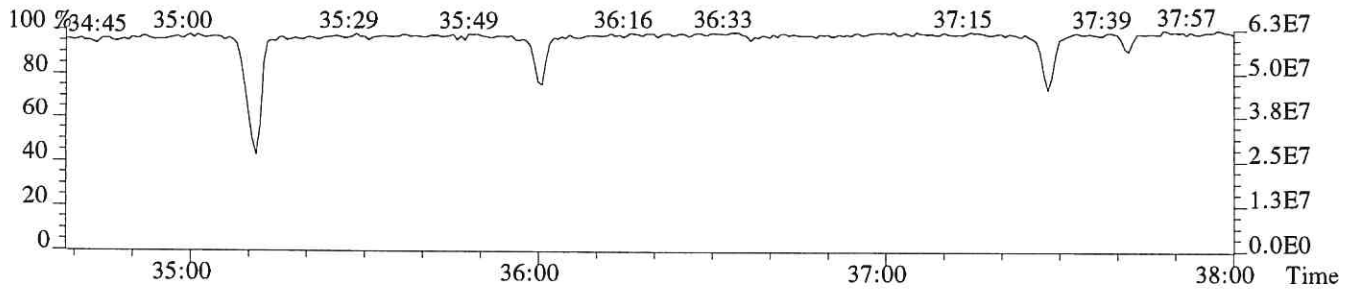
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3156.0,0.40%,F,T)



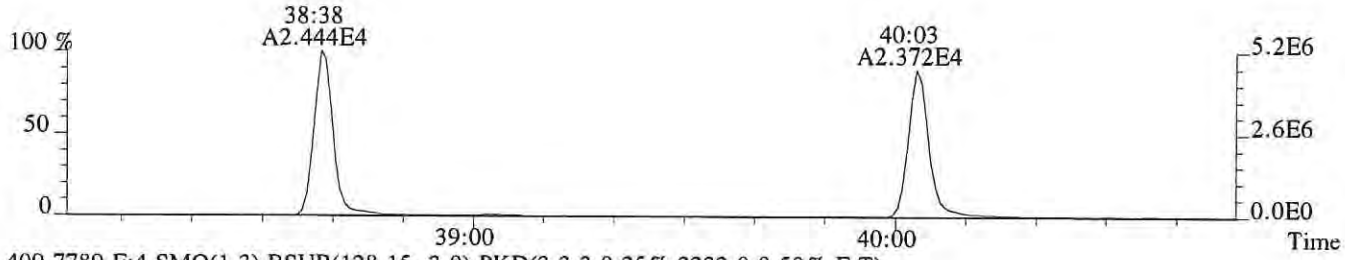
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1728.0,0.40%,F,T)



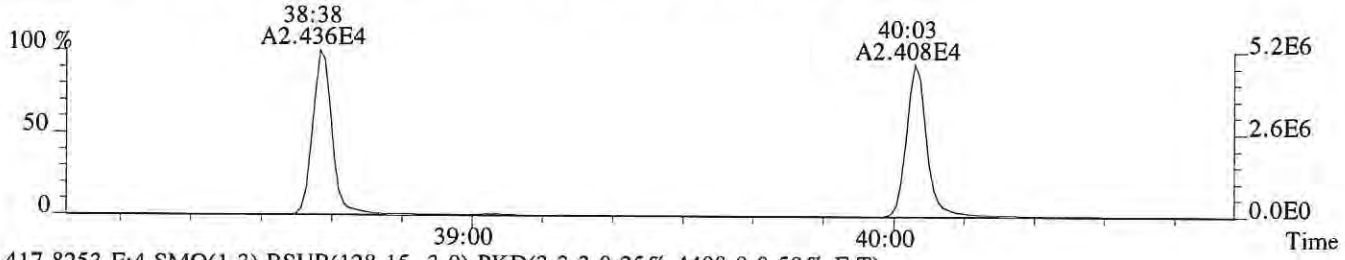
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



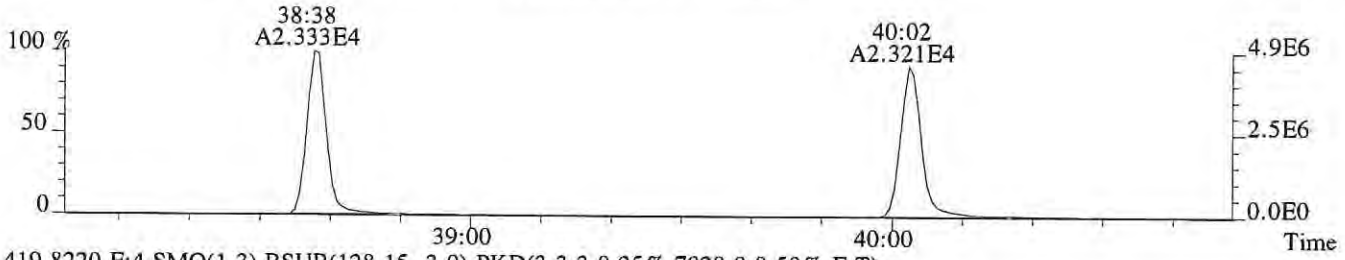
File:P520062 #1-250 Acq:18-JAN-2019 19:29:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-03
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3880.0,0.50%,F,T)



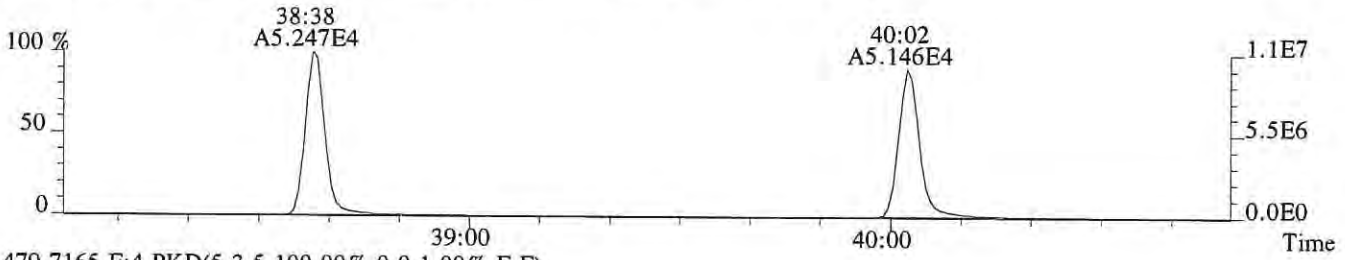
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3232.0,0.50%,F,T)



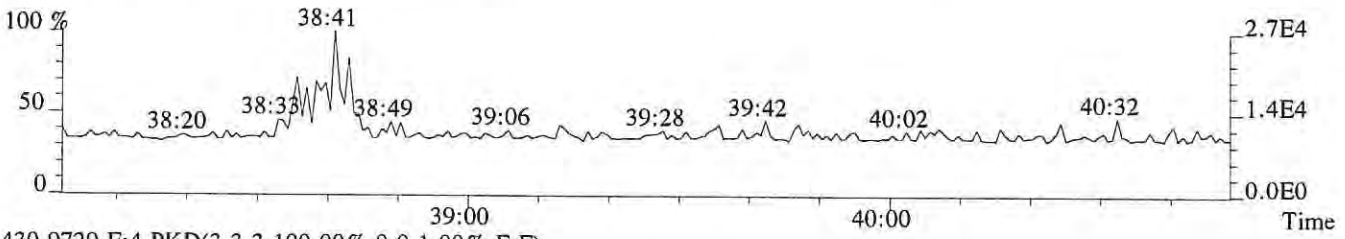
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4408.0,0.50%,F,T)



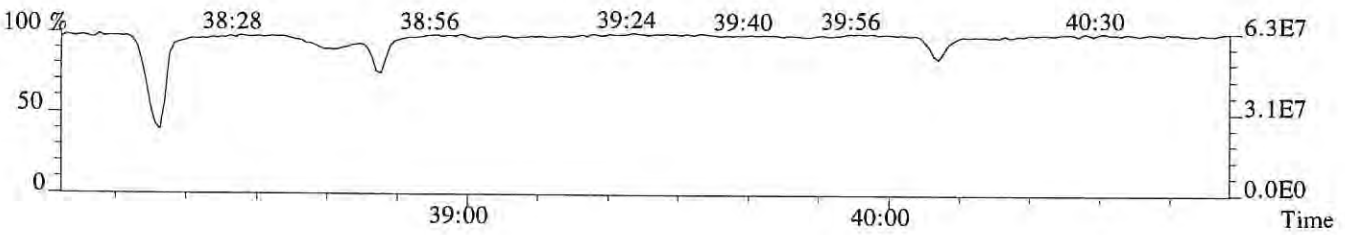
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7028.0,0.50%,F,T)



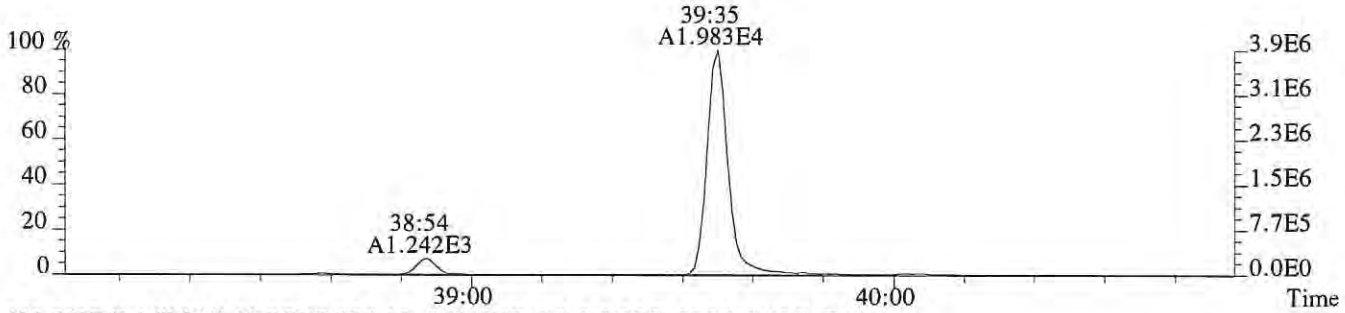
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



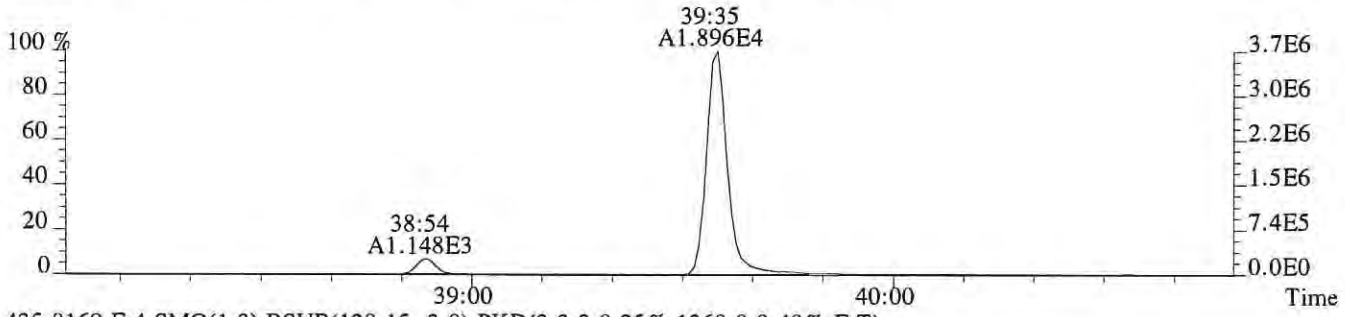
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



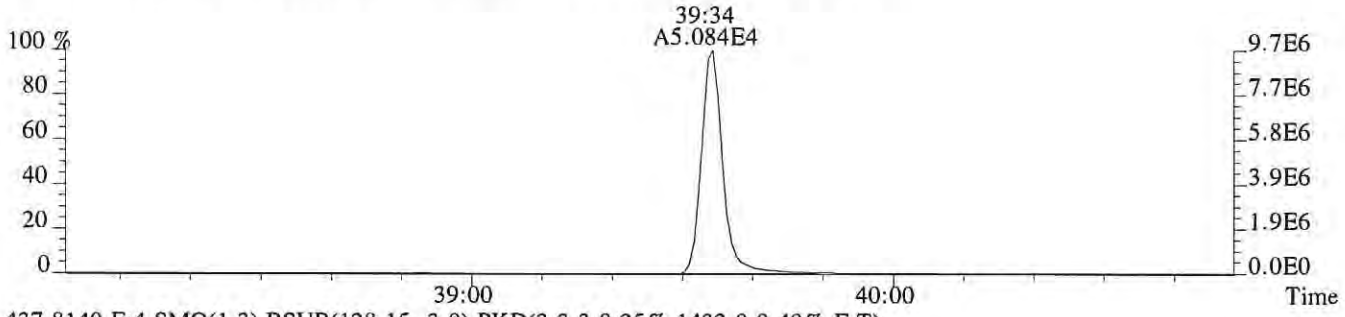
File:P520062 #1-250 Acq:18-JAN-2019 19:29:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-03
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1852.0,0.40%,F,T)



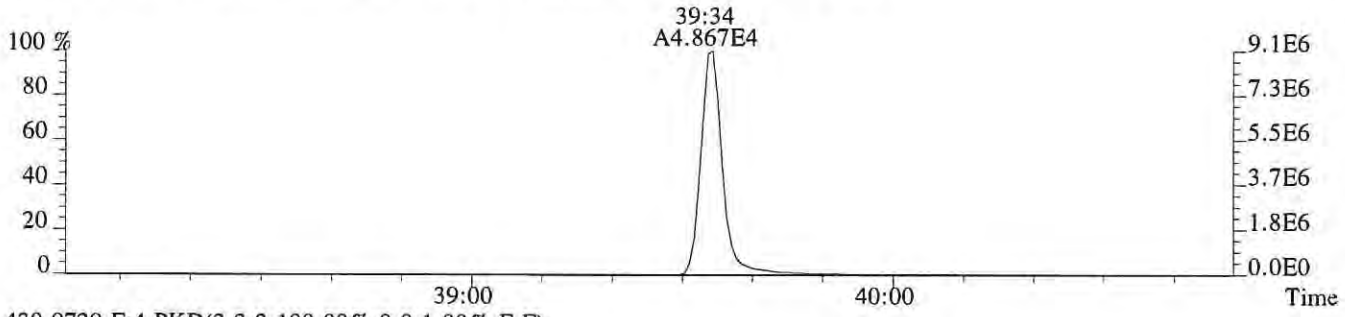
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,536.0,0.40%,F,T)



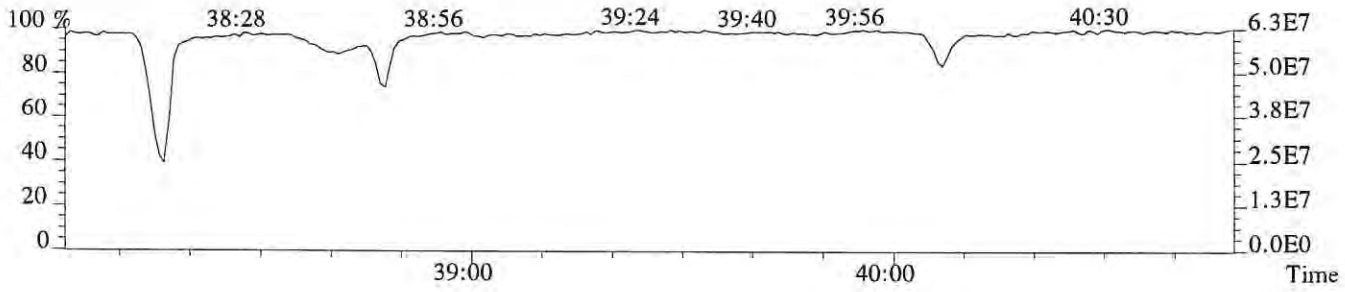
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1360.0,0.40%,F,T)



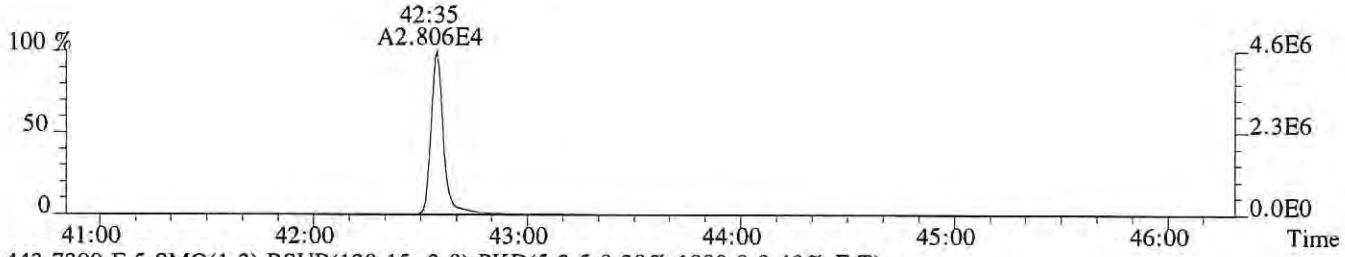
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1432.0,0.40%,F,T)



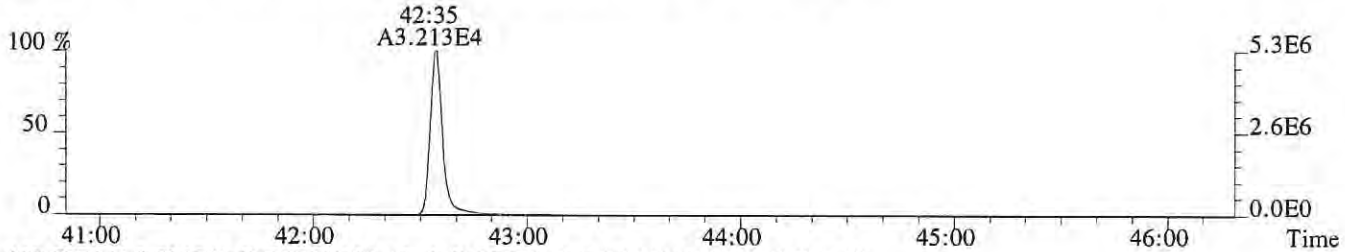
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



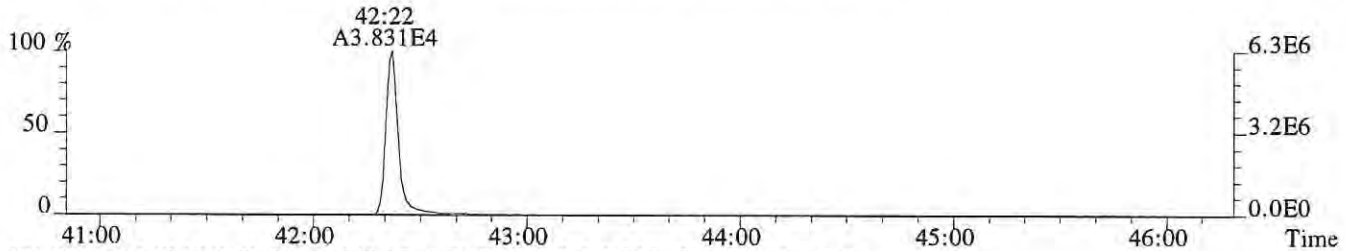
File:P520062 #1-493 Acq:18-JAN-2019 19:29:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-03
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,652.0,0.40%,F,T)



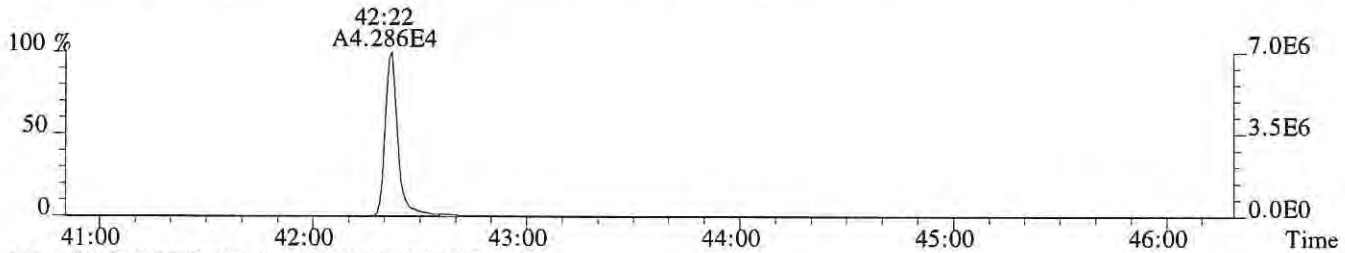
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1080.0,0.40%,F,T)



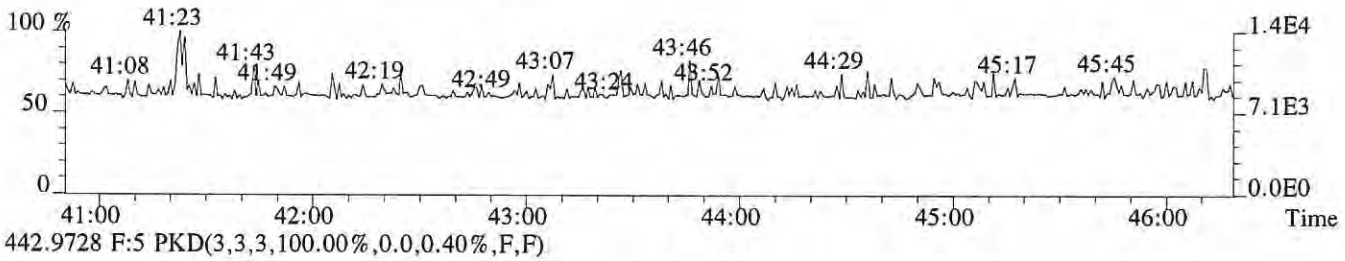
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,748.0,0.40%,F,T)



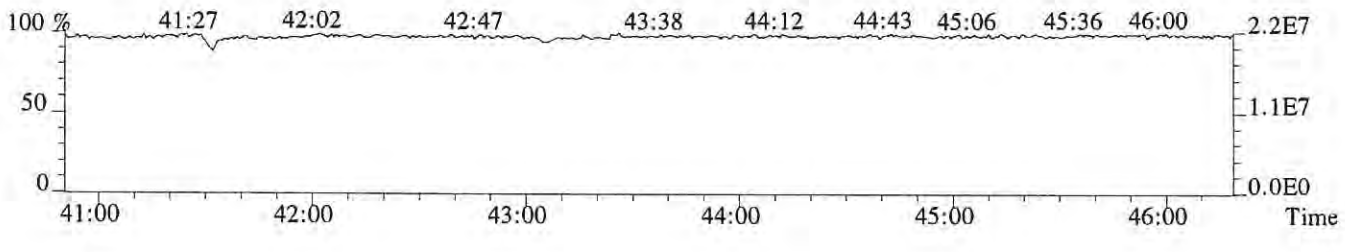
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,536.0,0.40%,F,T)



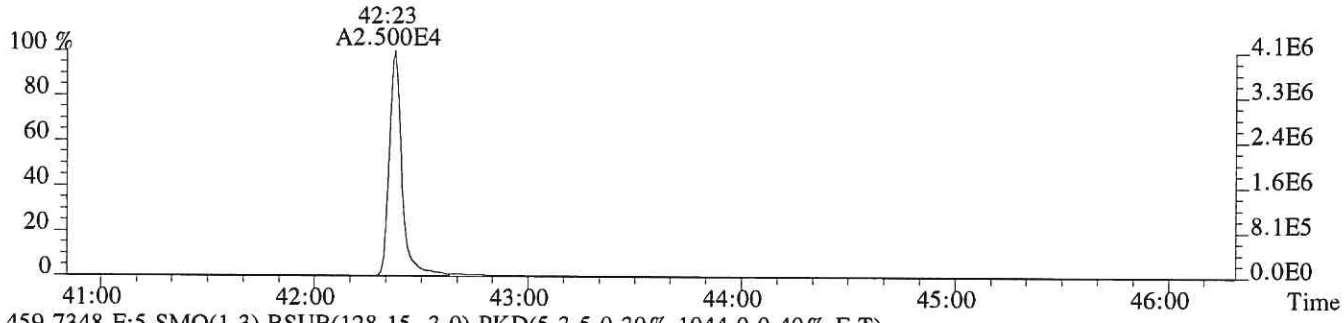
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



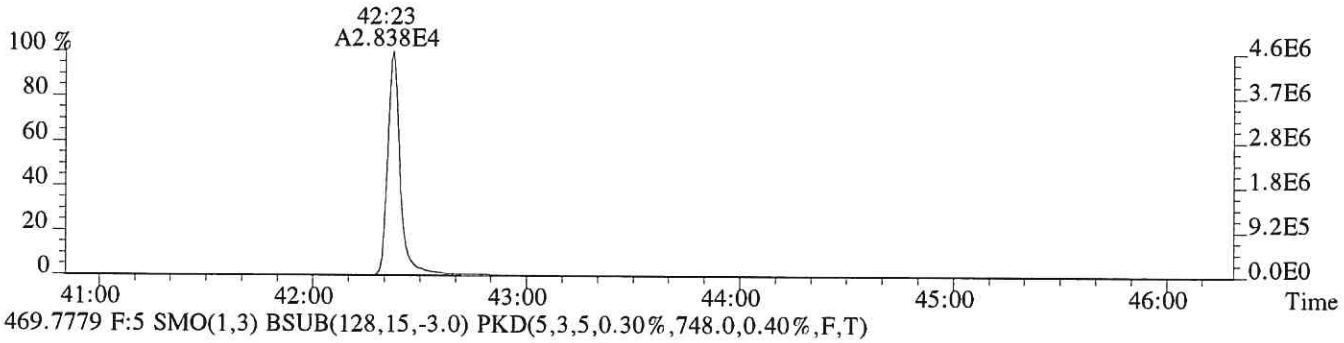
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



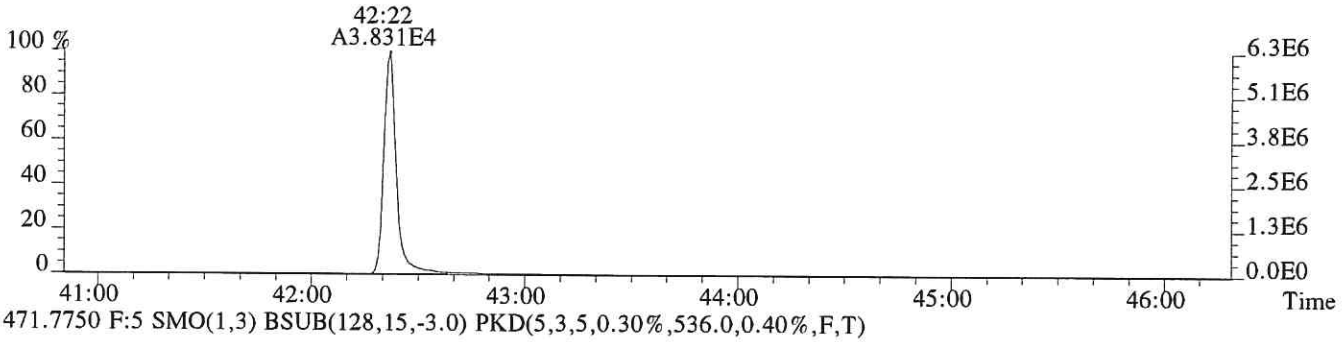
File:P520062 #1-493 Acq:18-JAN-2019 19:29:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900021-03
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,872.0,0.40%,F,T)



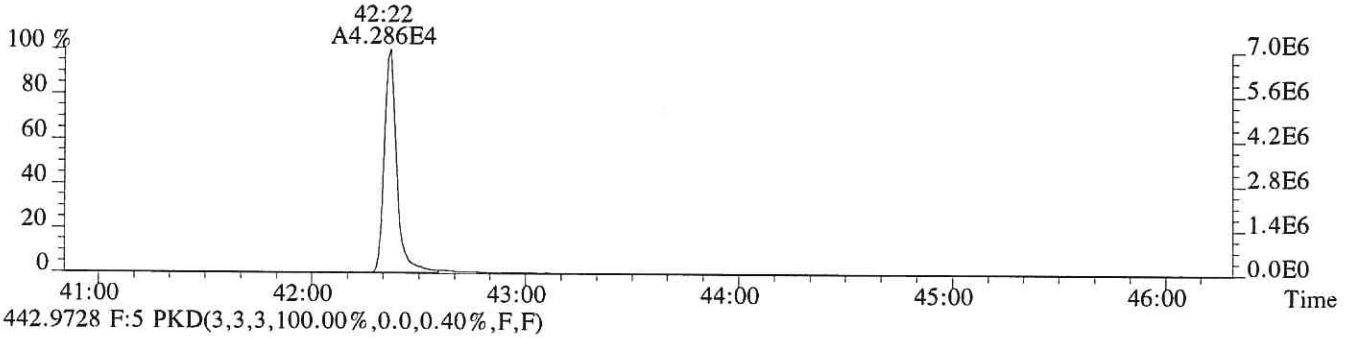
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1044.0,0.40%,F,T)



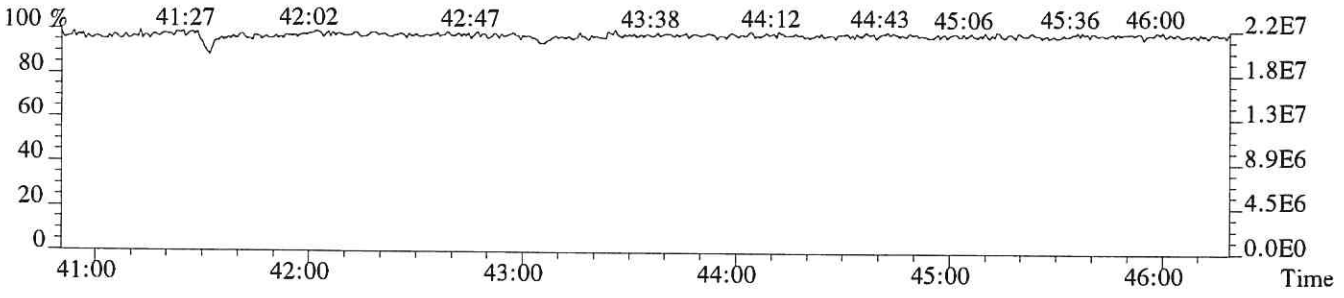
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,748.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,536.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



Continuing Calibration

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

CCAL HRCC3/CS3 Daily Calibration QC Checklist

Calibration File Name: P520049

Date: 01/18/19

Circle one: (Beginning) / Ending

Method: (1613) / 1613E / 8290/ VCP / Tetra / TCDD Only / TCDF Conf / VCP Conf / 8280 / M23 / TO-9A

Retention Window/Column Performance Check:	Analyst	Second Check
Windows in and first and last eluters labeled	✓	✓
Column Performance shows less than or equal to 25% valley between column specific 2378 isomer and its closest eluters	✓	✓
No QC ion deflections affect column specific 2378 isomer or its closest eluters (HRMS Only)	✓	✓

CS3 Continuing Calibration	Analyst	Second Check
Percent RSD within method criteria	✓	✓
All relative abundance ratios meet method criteria	✓	✓
No QC ion deflections of greater than 20% (HRMS Only)	✓	✓
Mass spectrometer resolution greater than or equal to 10,000 and documented (HRMS Only)	✓	✓
2378-TCDD elutes at 25 minutes or later on the DB-5 column / DB-5MSUI column	✓	✓
Signal-to-noise of all target analytes and their labeled standards at least 10:1	✓	✓
Valley between labeled 123478 and 123678 HxCDD peaks less than or equal to 50% (LRMS Only)	N/A	N/A
Ending Calibration injected prior to end of 12 hour clock	N/A	N/A

Analyst: QC

Second QC: LG

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

Lab Code: Case No.: Client No.: SDG No.:

GC Column: DB-5MSUI ID: 0.25 (mm)

Init. Calib. Date: 01/24/18

Init. Calib.Times: 11:44

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, AND LABORATORY CONTROL SAMPLES (LCSs) IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
195556	CS3	P520049	18-JAN-19	08:07:23
192977	WINDOW DEFINE	P520050	18-JAN-19	09:06:02
METHOD BLANK	EQ1900017-01	P520051	18-JAN-19	09:54:08
METHOD BLANK	EQ1900021-01	P520052	18-JAN-19	10:50:59
SL0556	E1900031-001	P520053	18-JAN-19	11:39:42
SL0557	E1900031-002	P520054	18-JAN-19	12:27:28
SL0558	E1900031-003	P520055	18-JAN-19	13:16:06
LOW BRIGHT MARKETE╗	K1812190-001RE	P520056	18-JAN-19	14:04:44
001/002 SECONDARY ╗	K1900117-001	P520057	18-JAN-19	14:53:24
3009136-001	E1900011-001	P520058	18-JAN-19	16:15:07
EDC PROCESS	E1900020-006	P520059	18-JAN-19	17:03:53
TZT-07	E1900020-007	P520060	18-JAN-19	17:51:43
LCS	EQ1900021-02	P520061	18-JAN-19	18:40:22
DLCS	EQ1900021-03	P520062	18-JAN-19	19:29:01

E1900031

Sample List Report — **MassLynx 4.1 SCN815 SCN795**

Sample List: C:\MassLynx\EHRMS07.PRO\SampleDB\20190118A.SPL
Last Modified: Monday, January 21, 2019 07:10:32 Central Standard Time
Printed: Monday, January 21, 2019 07:10:34 Central Standard Time

Page Position (1, 1)

OPUS4: P520049res

	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst	Comments
1	1/18/19	08:07	P520049	CS3	195556	EPA1613_ALS	Dioxin_ALS	Tray1:2	LG	HRMS check 09:01
2		09:06	P520050	WINDOWDEFINE	192977	EPA1613_ALS	Dioxin_ALS	Tray1:1		
3		09:54	P520051	MB	EQ1900017-01	EPA1613_ALS	Dioxin_ALS	Tray1:3		
4		10:50	P520052	MB	EQ1900021-01	EPA1613_ALS	Dioxin_ALS	Tray1:4		
5		11:39	P520053	E1900031-001	E1900031-001	EPA1613_ALS	Dioxin_ALS	Tray1:5		
6		12:27	P520054	E1900031-002	E1900031-002	EPA1613_ALS	Dioxin_ALS	Tray1:6		
7		13:16	P520055	E1900031-003	E1900031-003	EPA1613_ALS	Dioxin_ALS	Tray1:7		
8		14:04	P520056	K1812190-001 RE	K1812190-001RE	EPA1613_ALS	Dioxin_ALS	Tray1:8		K1812190--001RE
9		14:53	P520057	K1900117-001	K1900117-001	EPA1613_ALS	Dioxin_ALS	Tray1:9		
10		16:15	P520058	E1900011-001	E1900011-001	EPA1613_ALS	Dioxin_ALS	Tray1:10		
11		17:03	P520059	E1900020-006	E1900020-006	EPA1613_ALS	Dioxin_ALS	Tray1:11		
12		17:51	P520060	E1900020-007	E1900020-007	EPA1613_ALS	Dioxin_ALS	Tray1:12		
13		18:40	P520061	LCS	EQ1900021-02	EPA1613_ALS	Dioxin_ALS	Tray1:13		
14		19:29	P520062	DLCS	EQ1900021-03	EPA1613_ALS	Dioxin_ALS	Tray1:14		
15		20:25	P520063	CS3	195556	EPA1613_ALS	Dioxin_ALS	Tray1:2		HRMS check 20:25
16	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:2	---	---
17	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:1	---	---
18	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:18	---	---
19	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:19	---	---
20	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:20	---	---
21	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:66	---	---

gc 01/21/19

5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

WDM

Lab Name: ALS Environmental
Lab Code: ALSTX
GC Column: DB-5MSUI

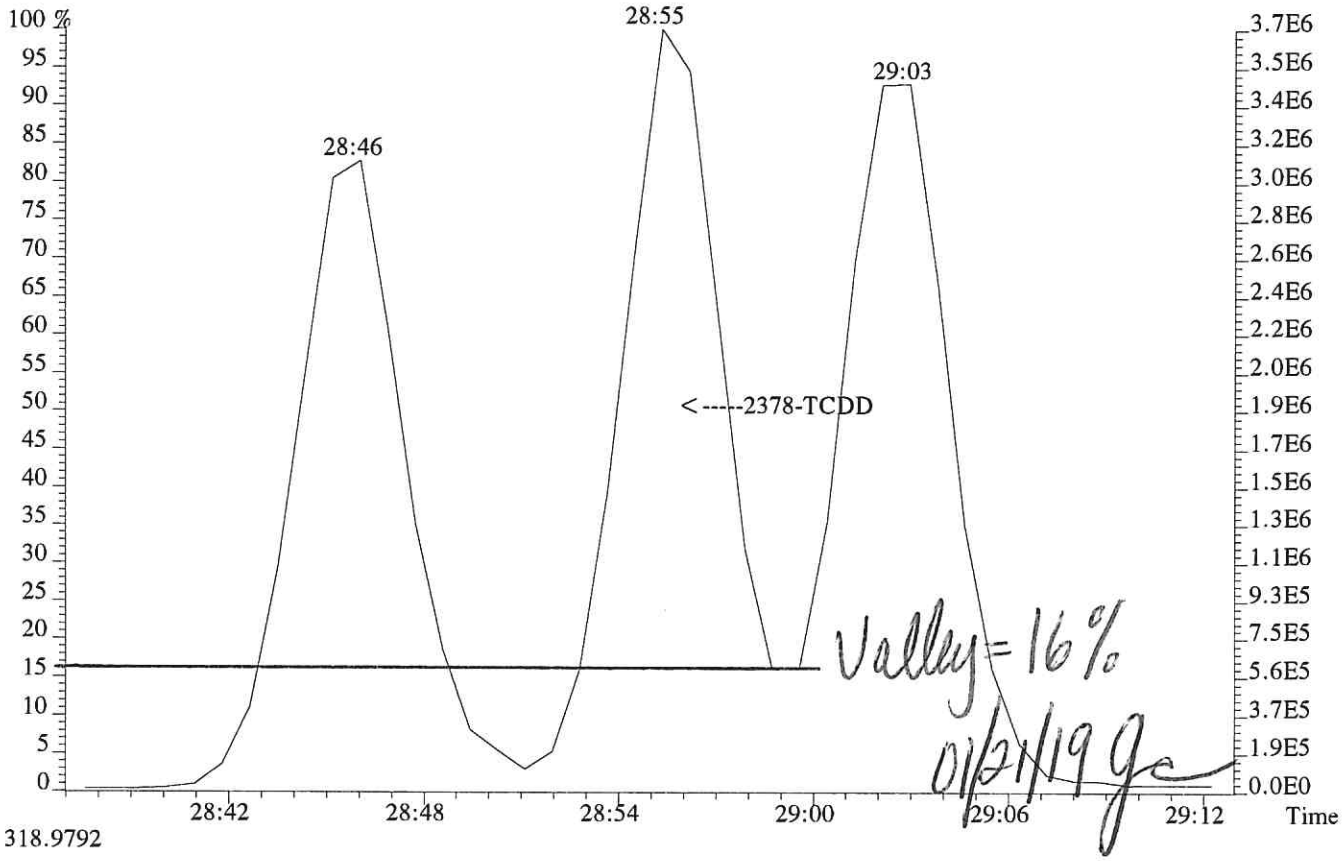
Case No.: _____ SDG No.:
ID: 0.25 (mm)

Lab File ID: P520050
Date Analyzed: 18-JAN-2019
Time Analyzed: 09:06:02

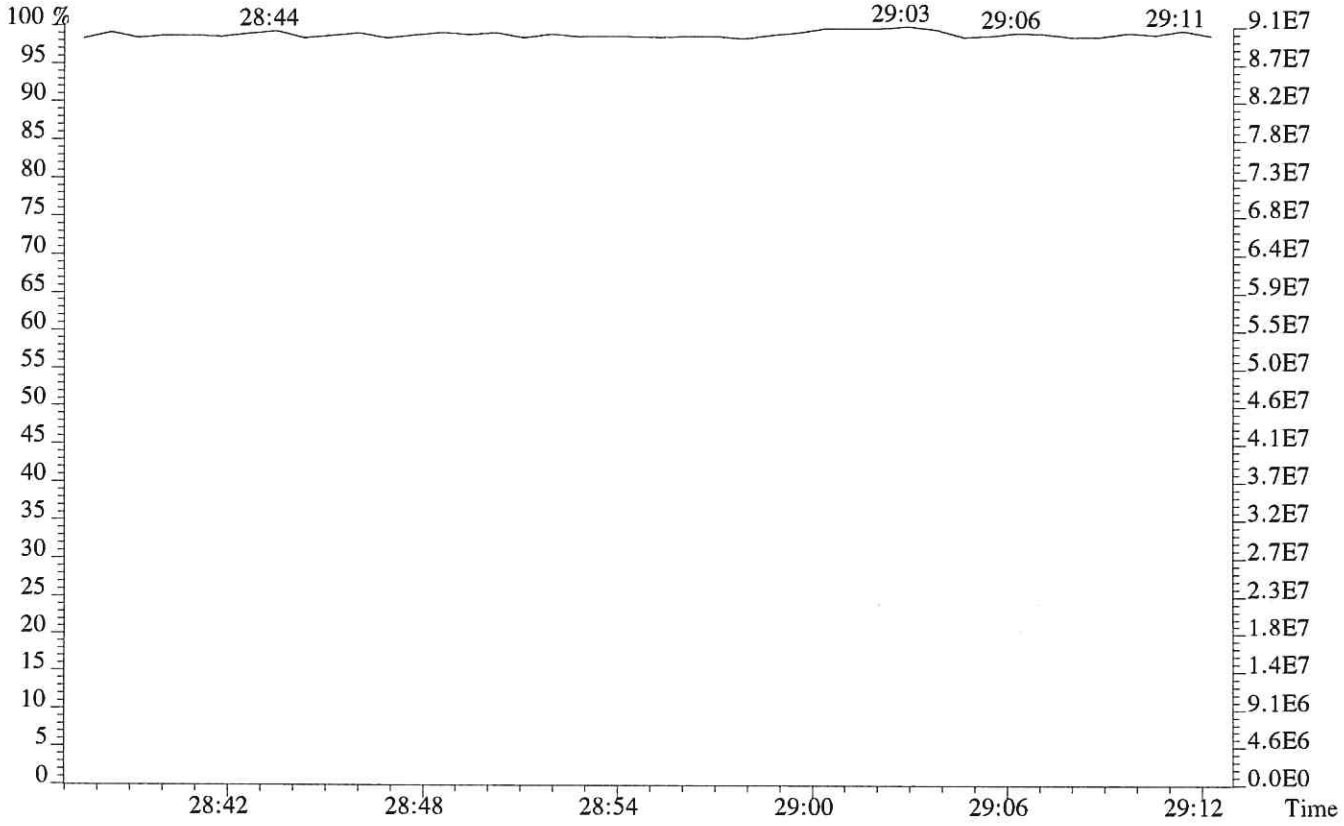
Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	23:48	30:04
TCDD	25:39	29:55
PeCDF	30:01	34:14
PeCDD	31:33	34:00
HxCDF	34:55	37:24
HxCDD	35:25	37:00
HpCDF	38:38	40:02
HpCDD	38:52	39:33

% Valley 2378-TCDD: 16 %

File:P520050 #1-538 Acq:18-JAN-2019 09:06:02 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:192977
319.8965



318.9792



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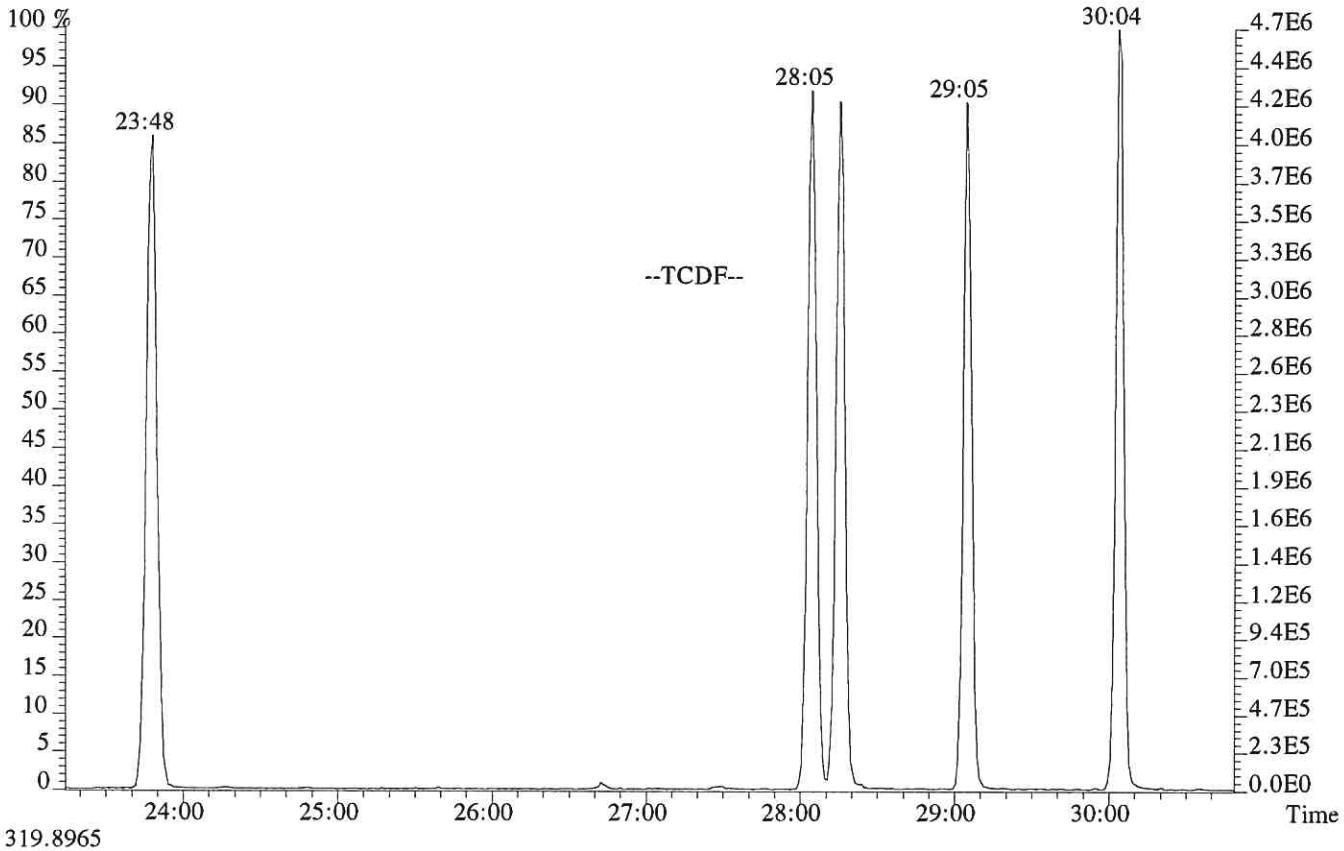
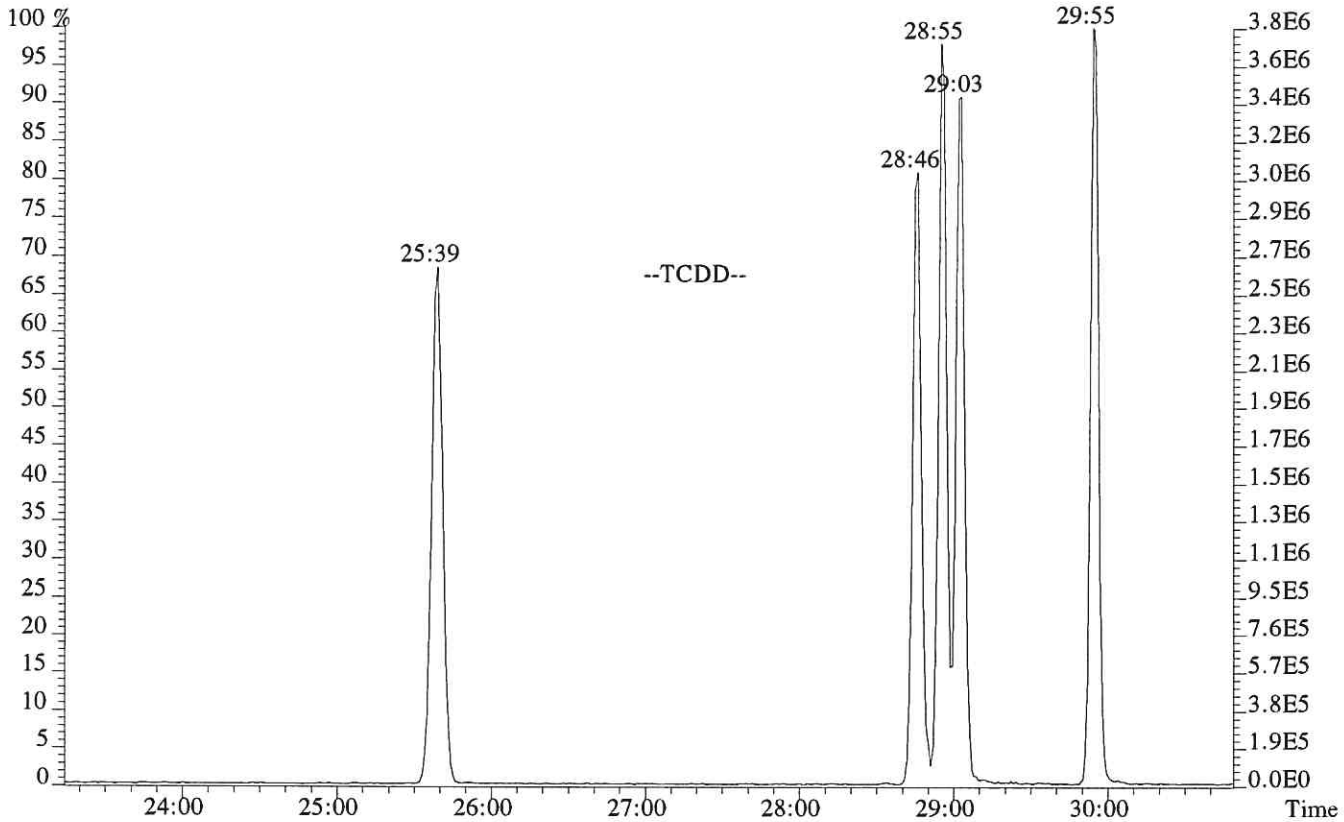
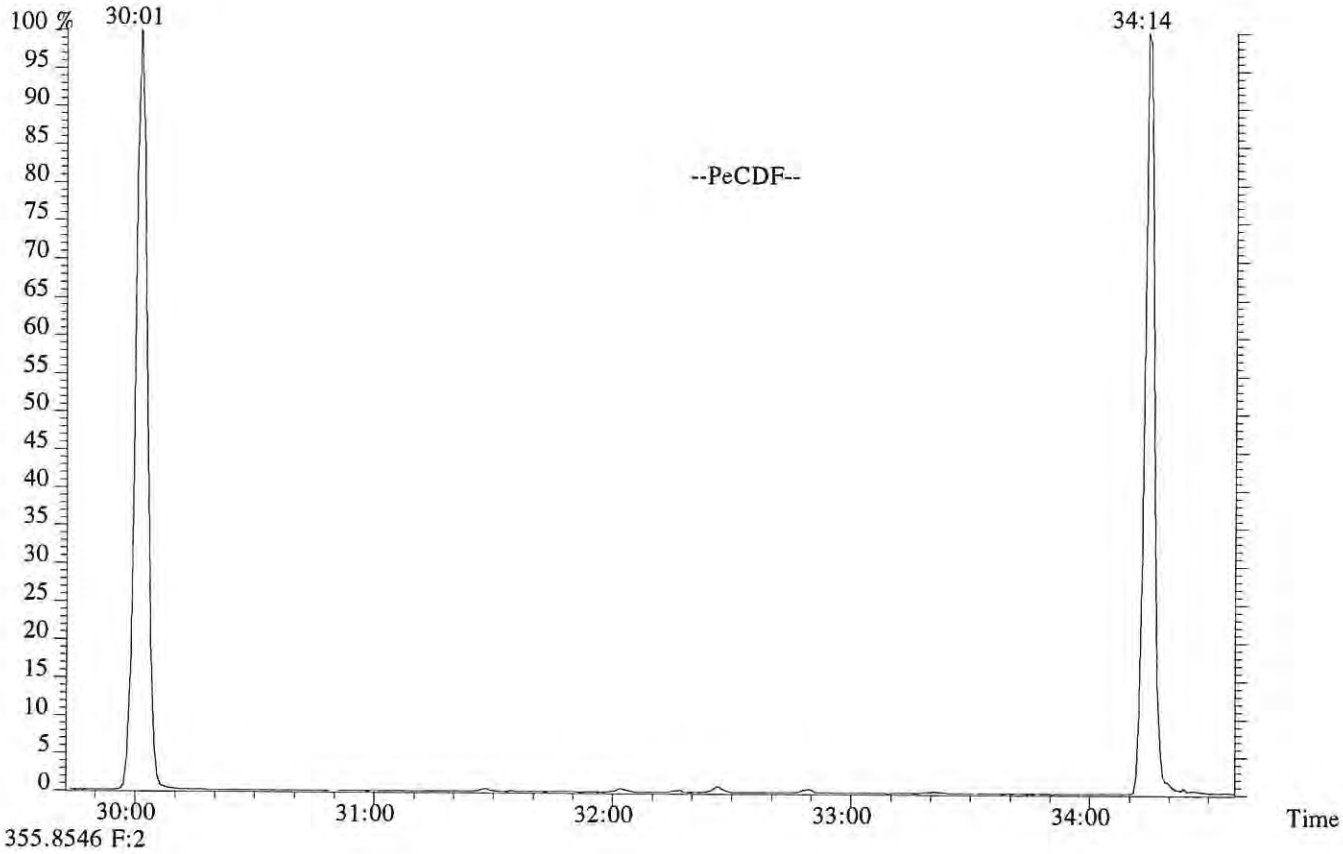
Sample#1 Exp:192977
303.9016



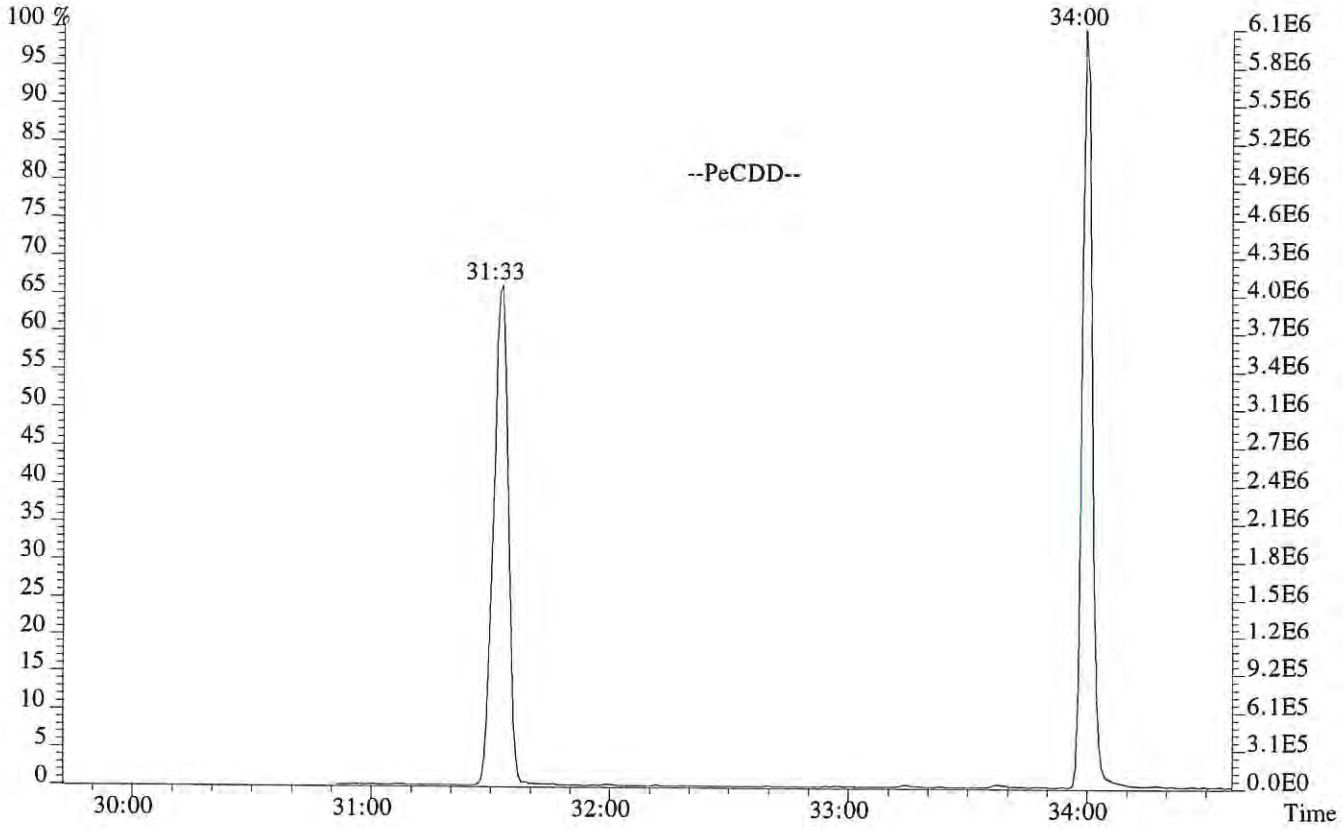
319.8965



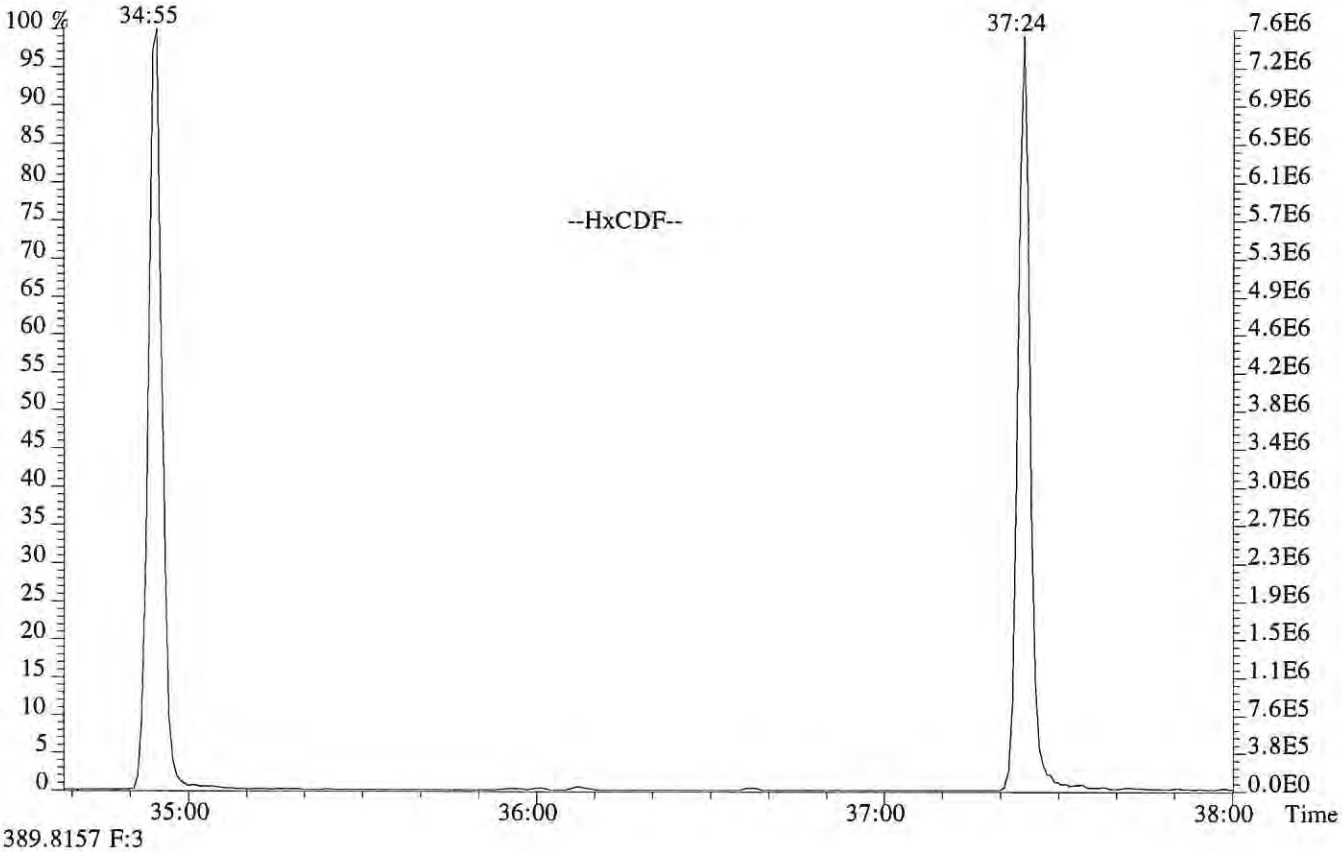
File:P520050 #1-538 Acq:18-JAN-2019 09:06:02 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:192977
339.8597,339.8597 F:2



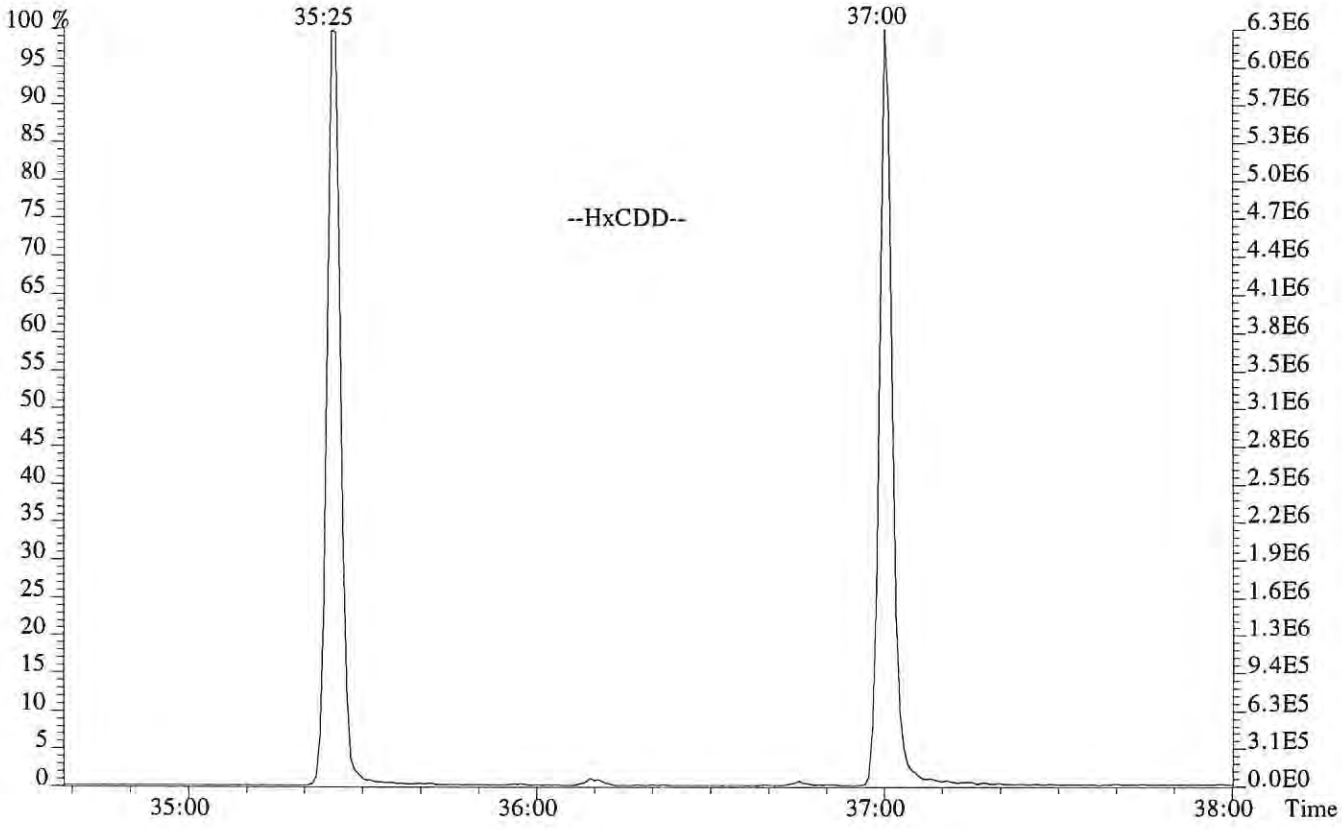
355.8546 F:2



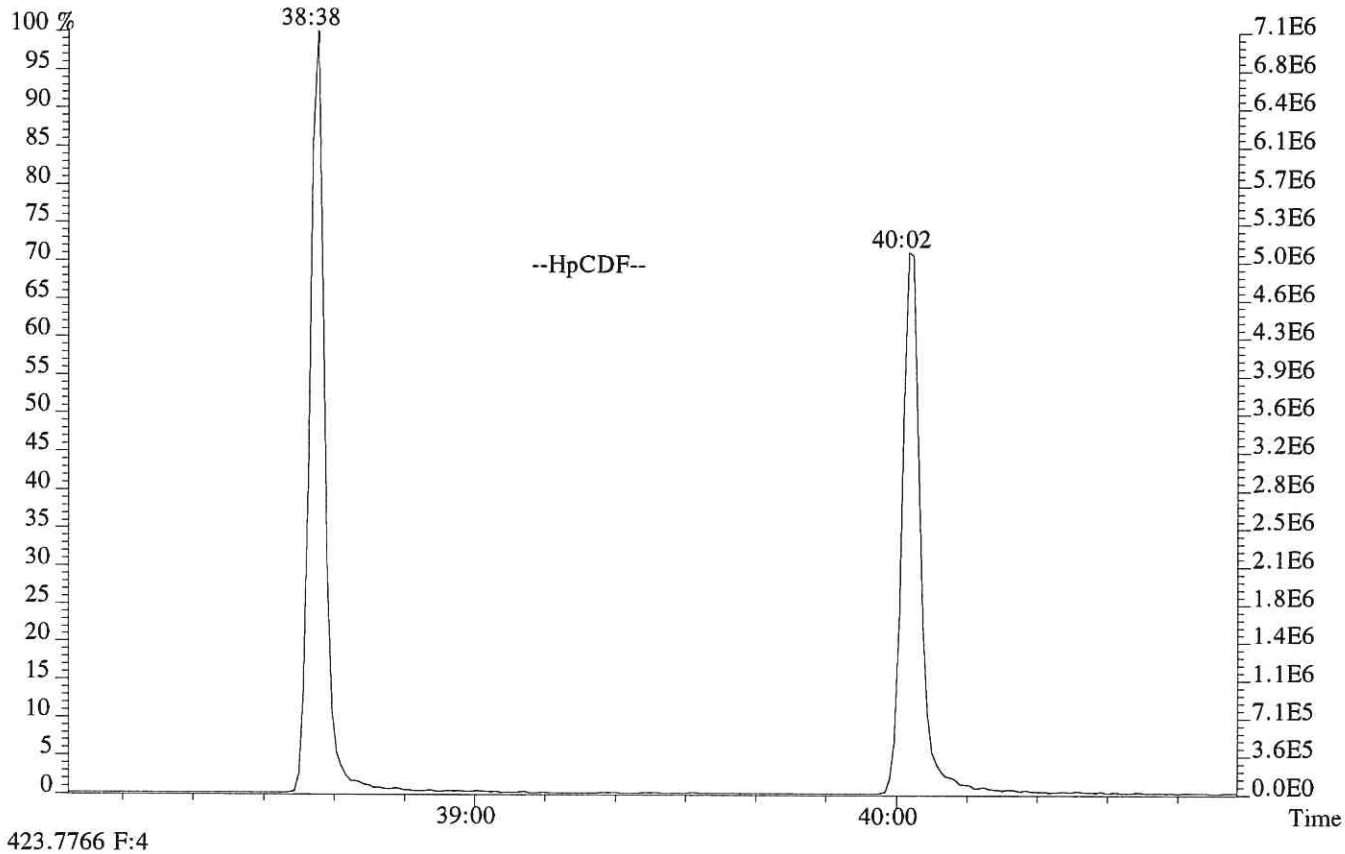
File:P520050 #1-303 Acq:18-JAN-2019 09:06:02 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:192977
373.8208 F:3



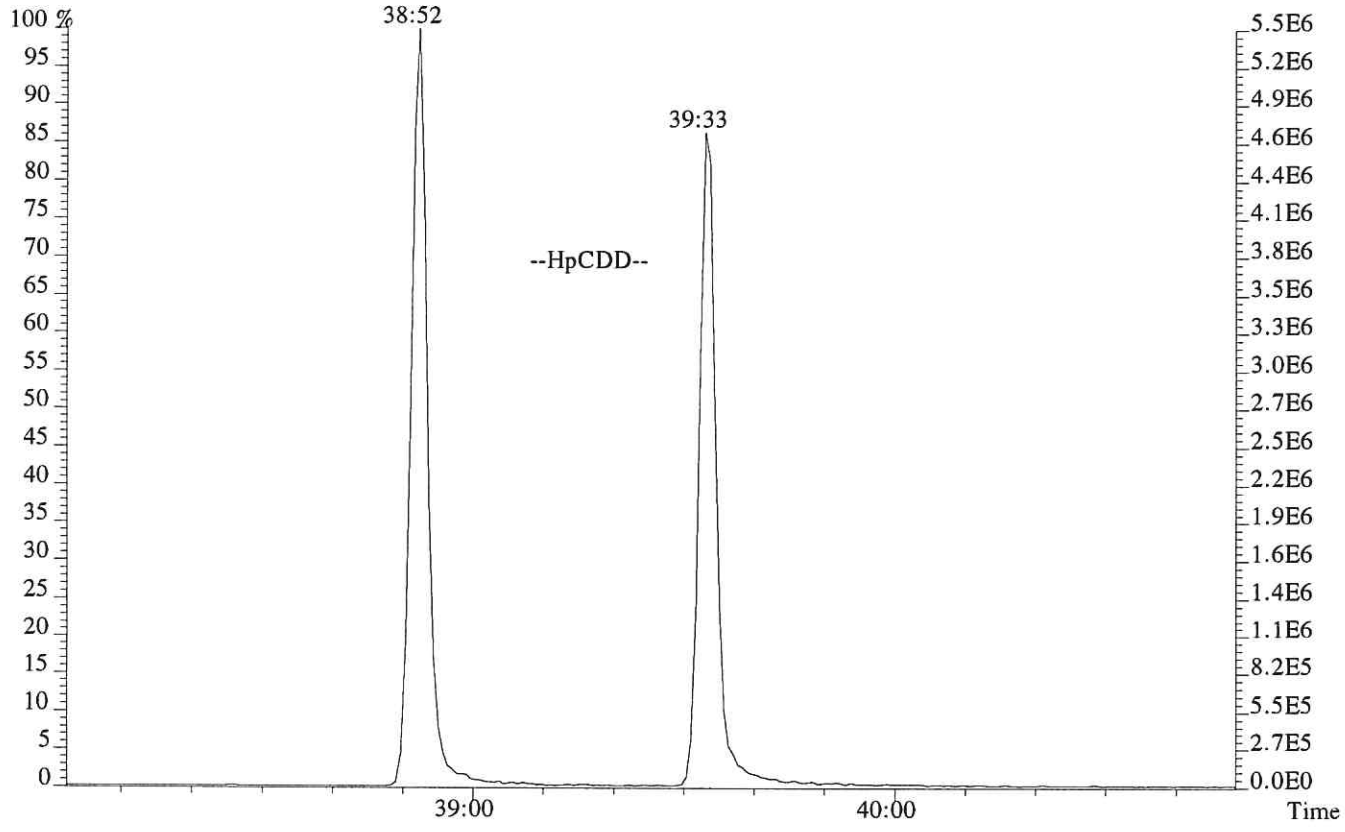
389.8157 F:3



File:P520050 #1-250 Acq:18-JAN-2019 09:06:02 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:192977
407.7818 F:4



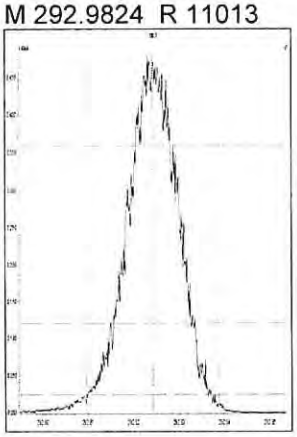
423.7766 F:4



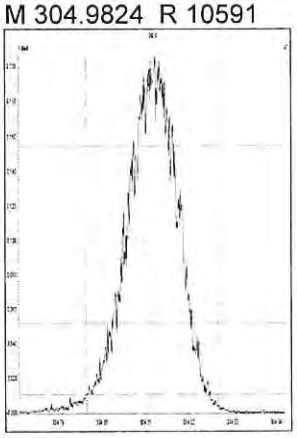
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Friday, January 18, 2019 09:01:56 Central Standard Time

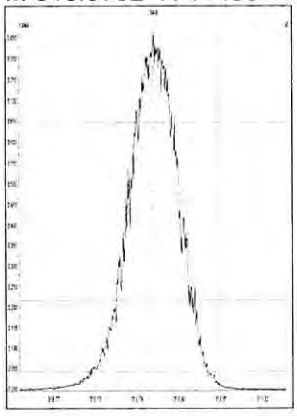
M 292.9824 R 11013



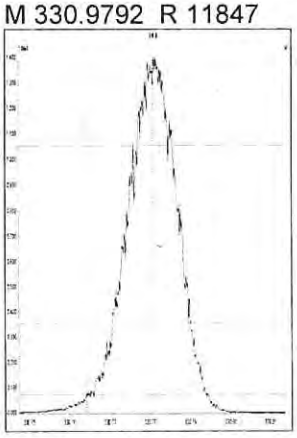
M 304.9824 R 10591



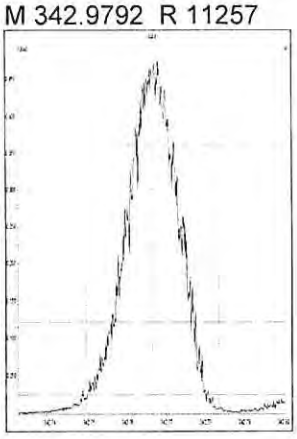
M 318.9792 R 11469



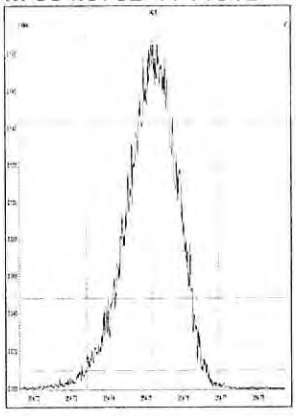
M 330.9792 R 11847



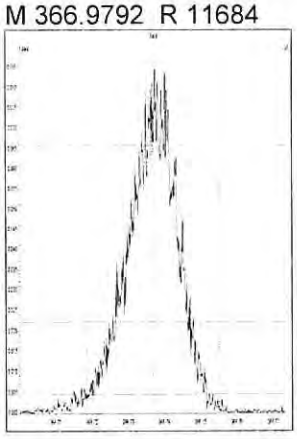
M 342.9792 R 11257



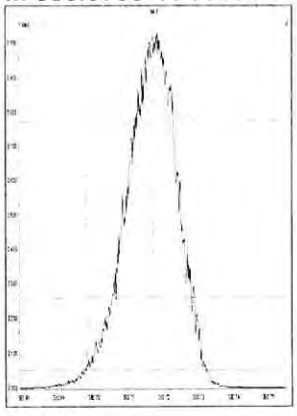
M 354.9792 R 11012



M 366.9792 R 11684



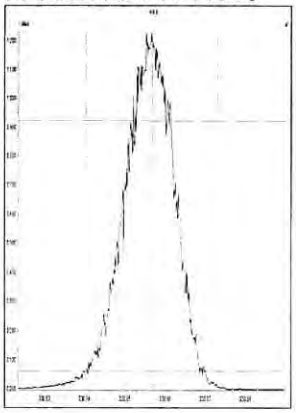
M 380.9760 R 11013



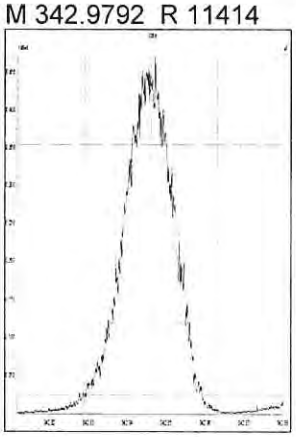
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Friday, January 18, 2019 09:02:53 Central Standard Time

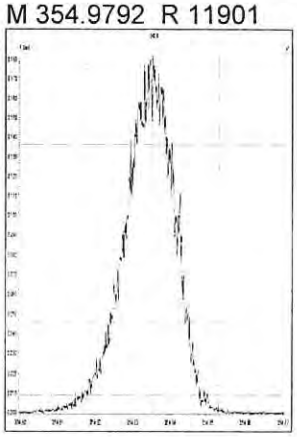
M 330.9792 R 11963



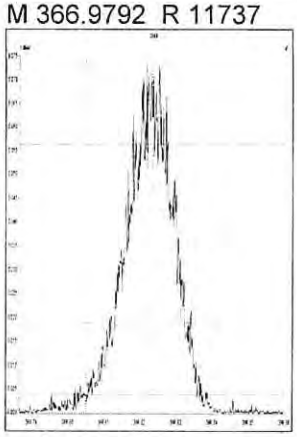
M 342.9792 R 11414



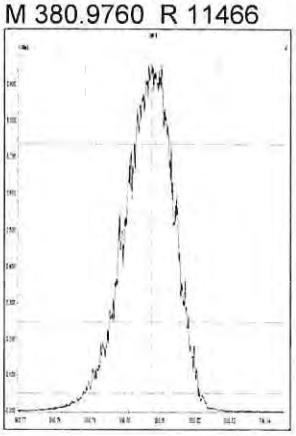
M 354.9792 R 11901



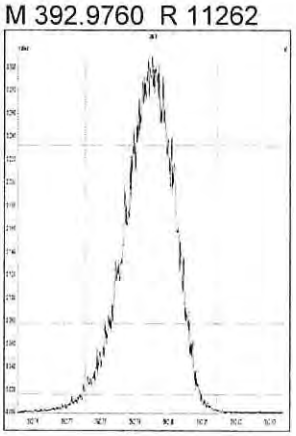
M 366.9792 R 11737



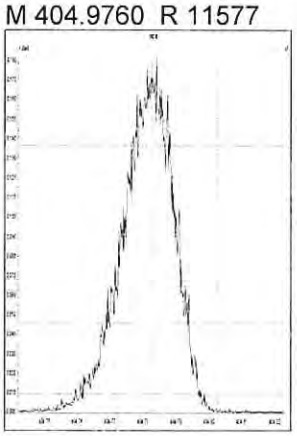
M 380.9760 R 11466



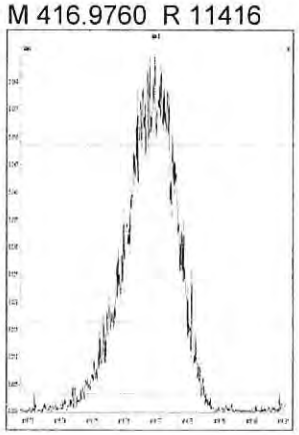
M 392.9760 R 11262



M 404.9760 R 11577



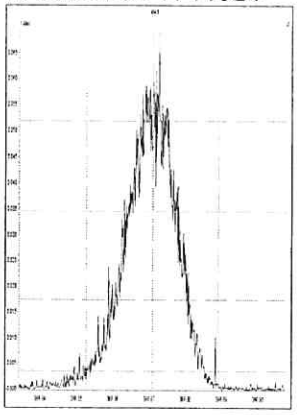
M 416.9760 R 11416



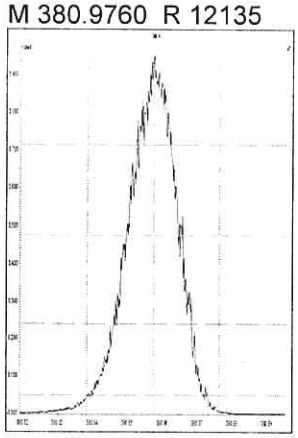
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Friday, January 18, 2019 09:03:45 Central Standard Time

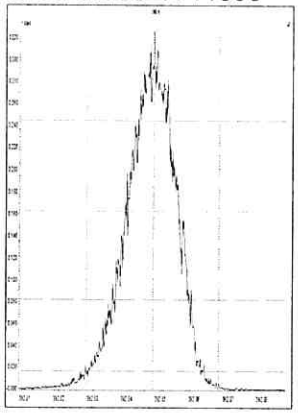
M 366.9792 R 11624



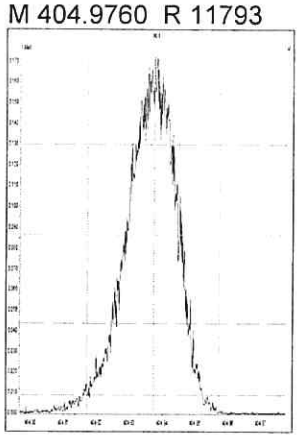
M 380.9760 R 12135



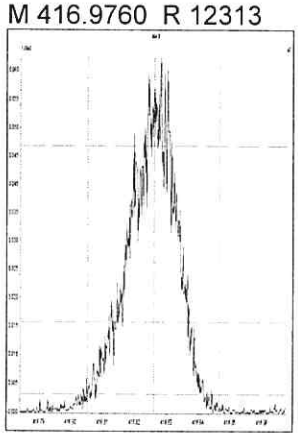
M 392.9760 R 11850



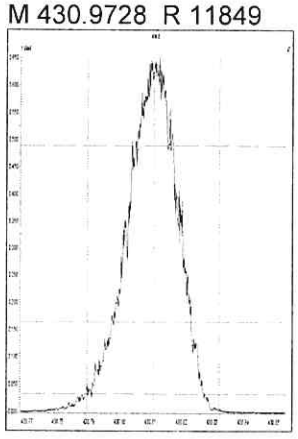
M 404.9760 R 11793



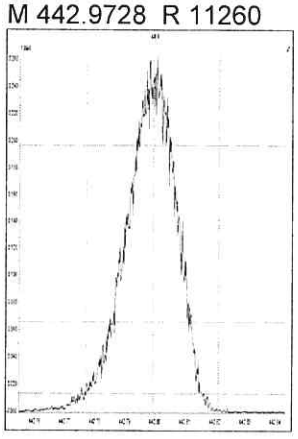
M 416.9760 R 12313



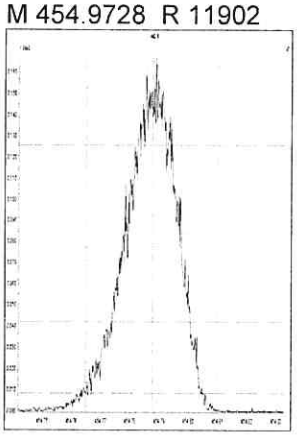
M 430.9728 R 11849



M 442.9728 R 11260



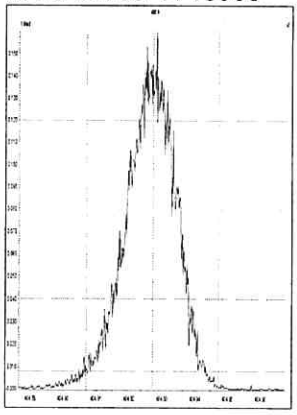
M 454.9728 R 11902



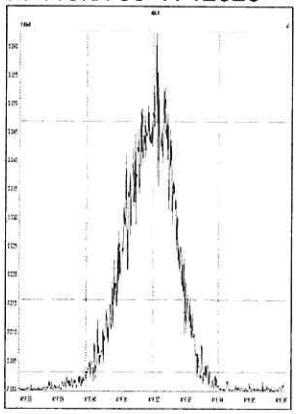
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Friday, January 18, 2019 09:04:28 Central Standard Time

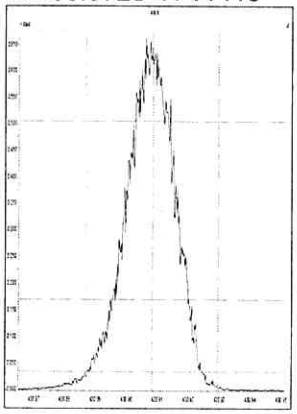
M 404.9760 R 10963



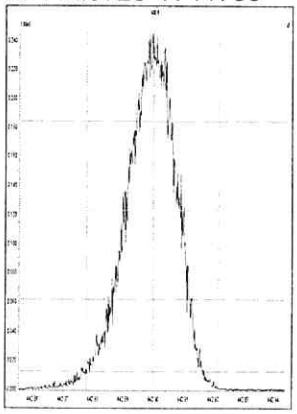
M 416.9760 R 12623



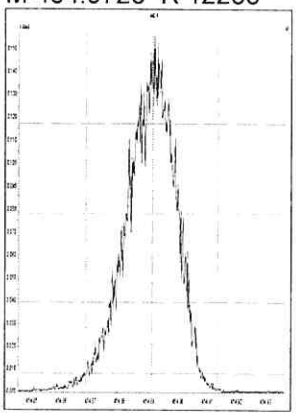
M 430.9728 R 11415



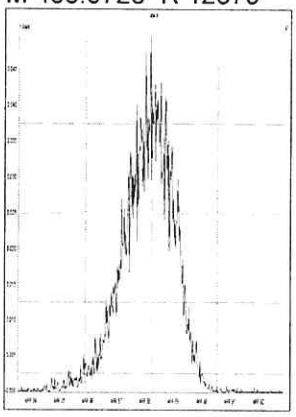
M 442.9728 R 11735



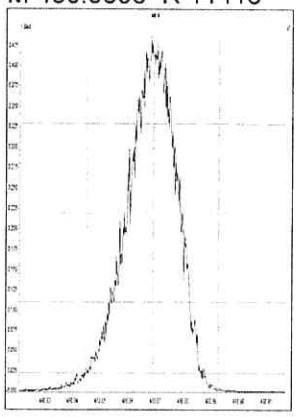
M 454.9728 R 12255



M 466.9728 R 12379



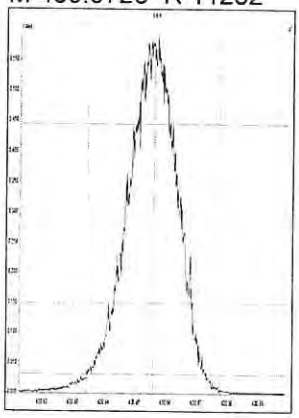
M 480.9696 R 11416



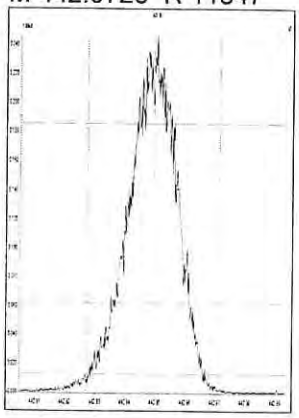
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Friday, January 18, 2019 09:04:58 Central Standard Time

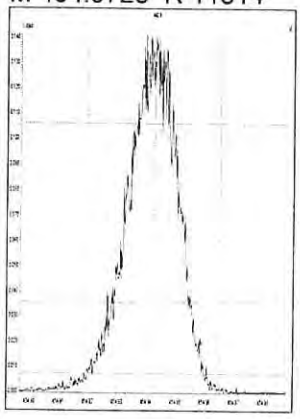
M 430.9728 R 11262



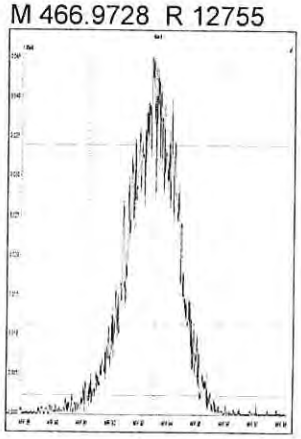
M 442.9728 R 11847



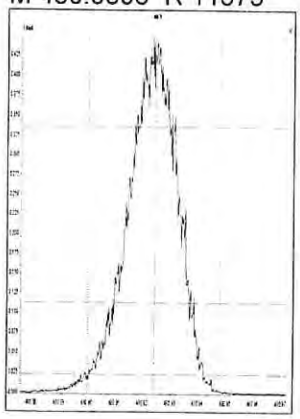
M 454.9728 R 11314



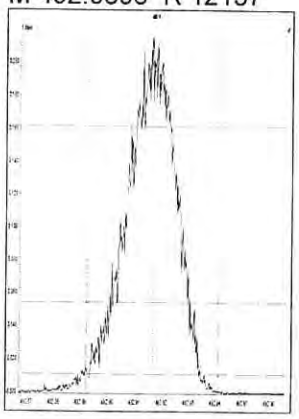
M 466.9728 R 12755



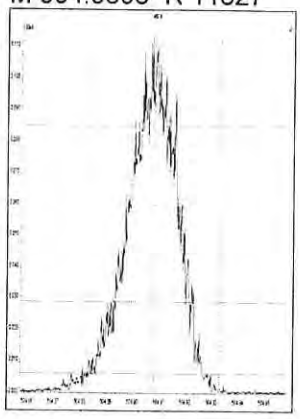
M 480.9696 R 11573



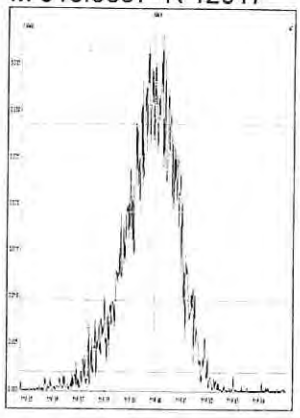
M 492.9696 R 12137



M 504.9696 R 11627



M 516.9697 R 12017



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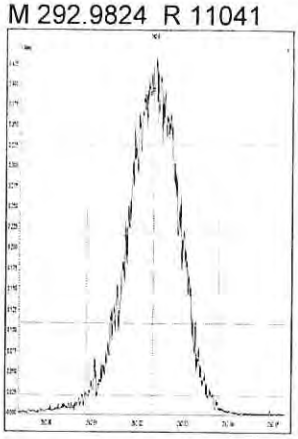

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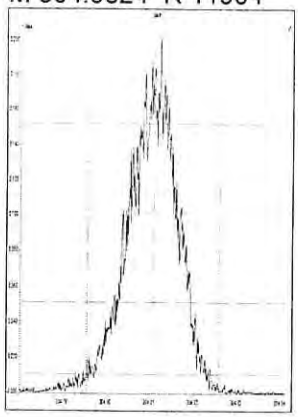

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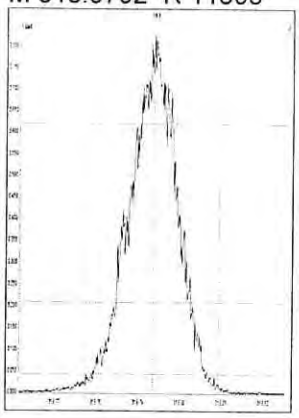
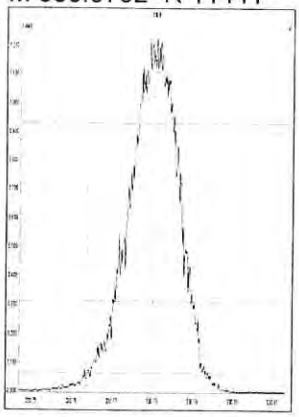


M 330.9792 R 11441



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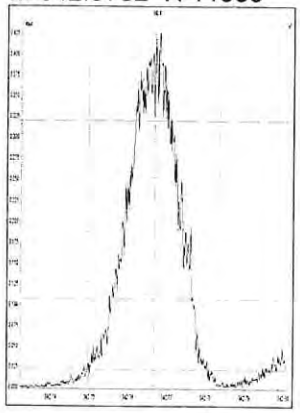

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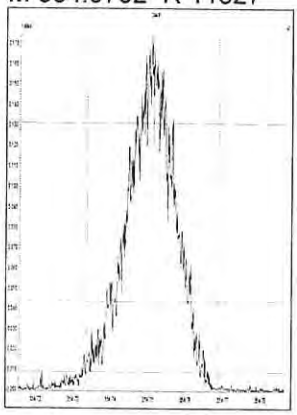
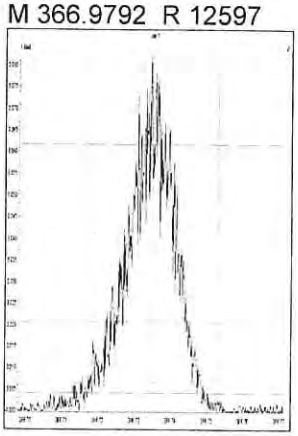
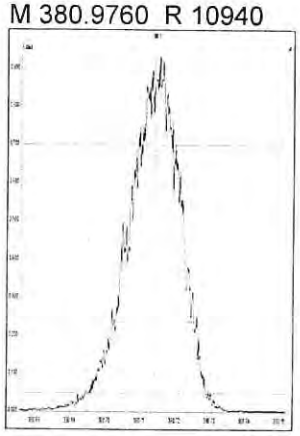


M 366.9792 R 12597



M 380.9760 R 10940



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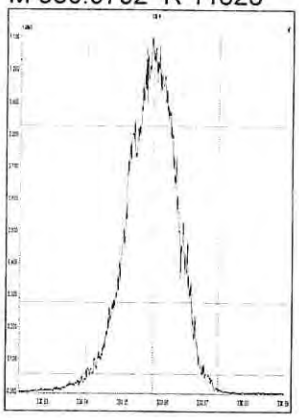

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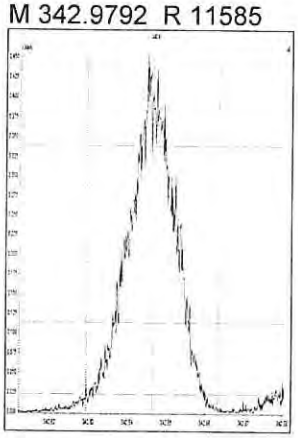
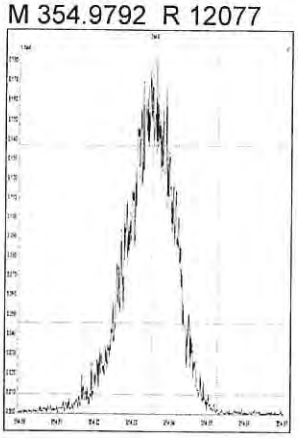


M 354.9792 R 12077



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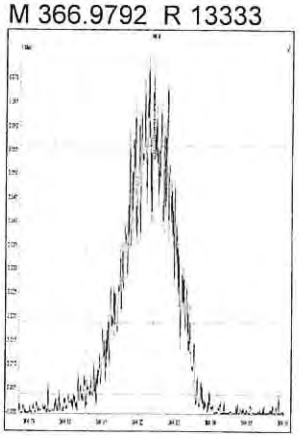

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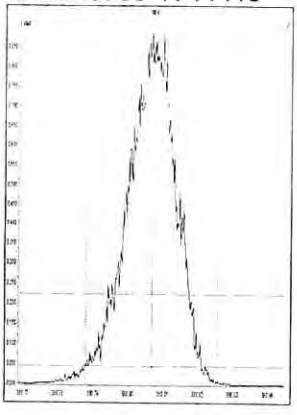
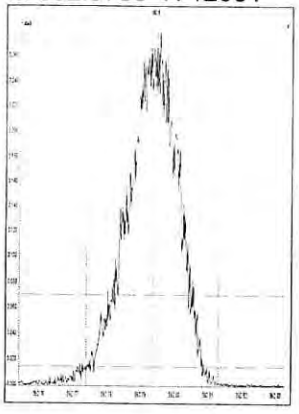
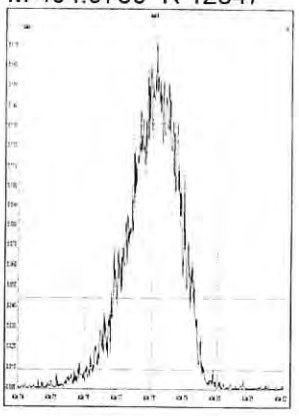


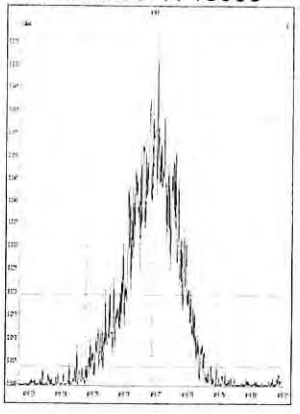
M 392.9760 R 12081



M 404.9760 R 12347



M 416.9760 R 13065



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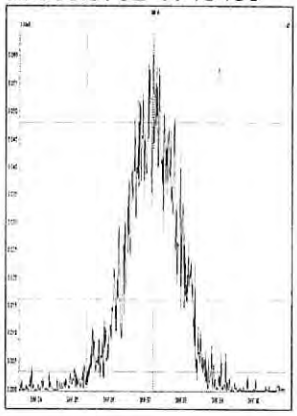

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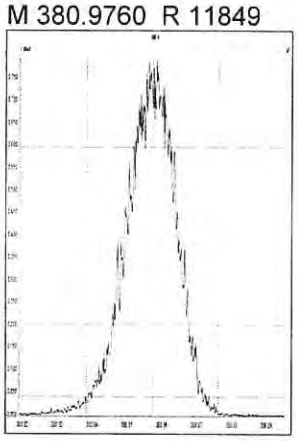
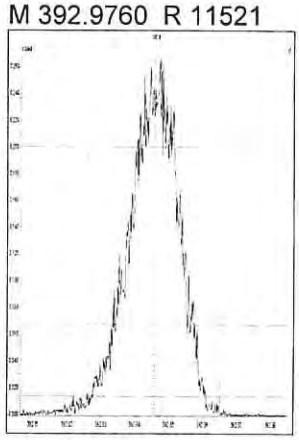


M 392.9760 R 11521



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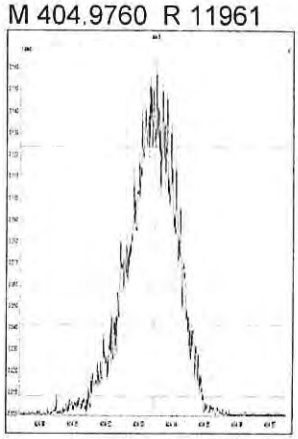

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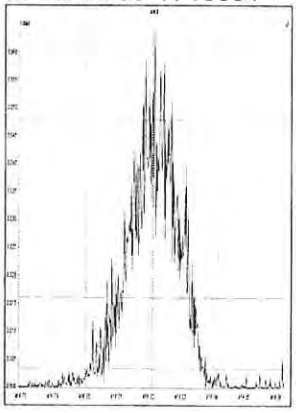
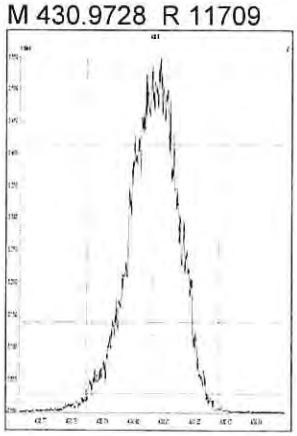


M 430.9728 R 11709



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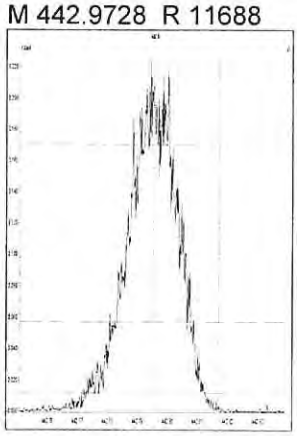

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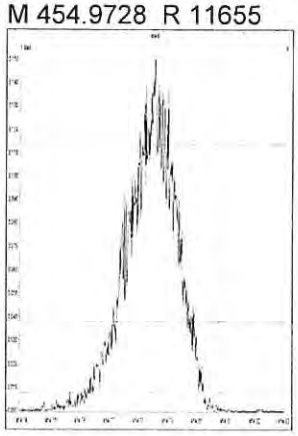

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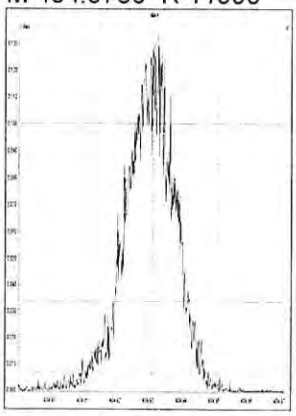

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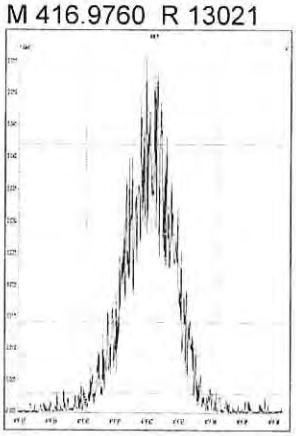

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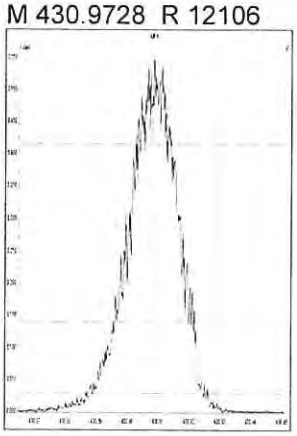

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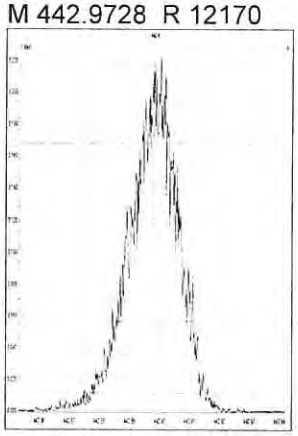

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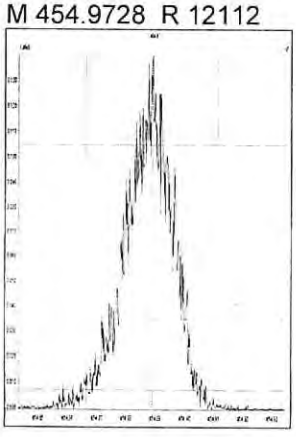

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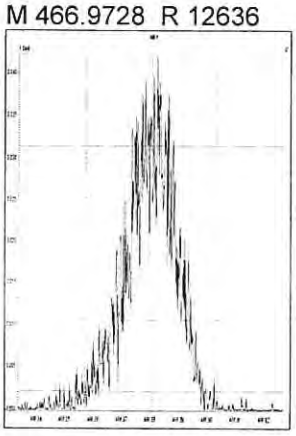
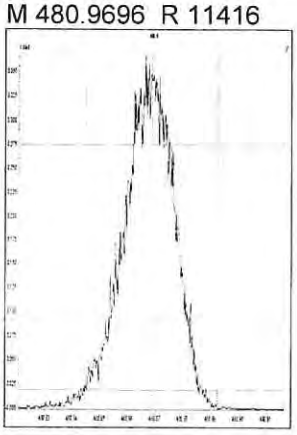


M 480.9696 R 11416



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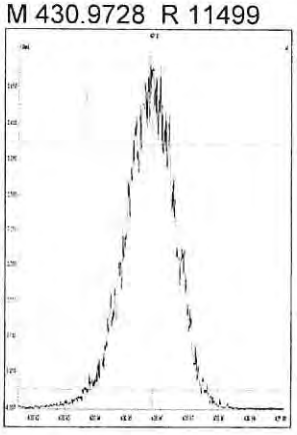

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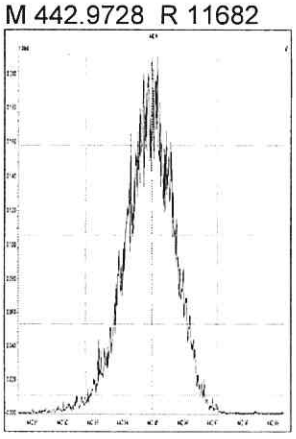

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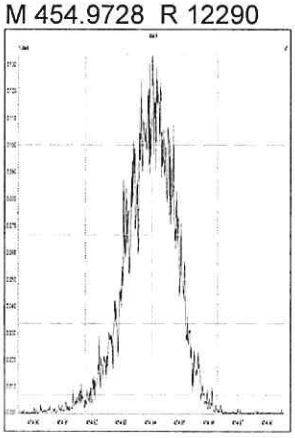

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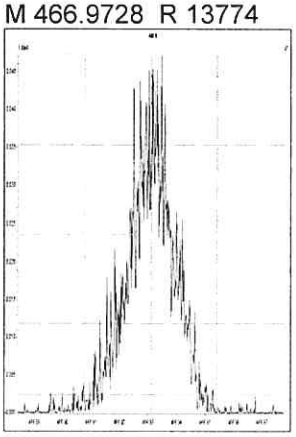
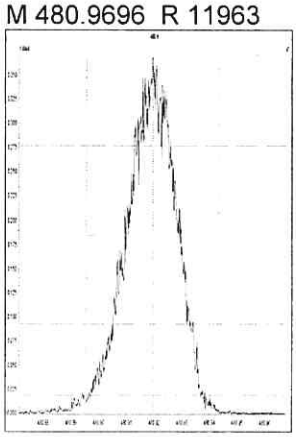
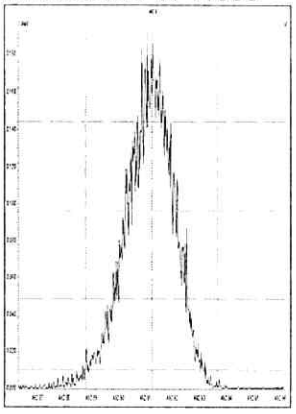


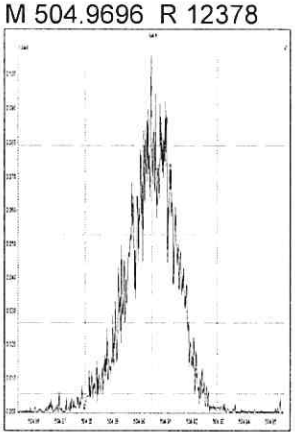
M 480.9696 R 11963



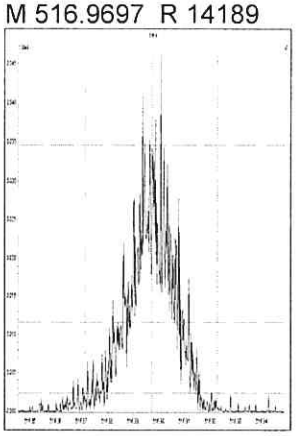
M 492.9696 R 11688



M 504.9696 R 12378



M 516.9697 R 14189



USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P520049 Analysis Date: 18-JAN-19 Time: 08:07:23

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	9.2	7.8 - 12.9	-8.2
1,2,3,7,8-PeCDD	M+2/M+4	1.55	1.32-1.78	49	39 - 65	-1.4
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	49	39 - 64	-1.8
1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	50	39 - 64	-0.9
1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	53	41 - 61	5.6
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	50	43 - 58	-0.3
OCDD	M+2/M+4	0.88	0.76-1.02	99	79 - 126	-0.6
2,3,7,8-TCDF	M/M+2	0.73	0.65-0.89	9.6	8.4 - 12.0	-4.5
1,2,3,7,8-PeCDF	M+2/M+4	1.52	1.32-1.78	50	41 - 60	-0.6
2,3,4,7,8-PeCDF	M+2/M+4	1.51	1.32-1.78	49	41 - 61	-1.5
1,2,3,4,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	50	45 - 56	0.4
1,2,3,6,7,8-HxCDF	M+2/M+4	1.19	1.05-1.43	50	44 - 57	0.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.20	1.05-1.43	50	45 - 56	0.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.17	1.05-1.43	49	44 - 57	-1.8
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.02	0.88-1.20	50	45 - 55	-0.9
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.00	0.88-1.20	50	43 - 58	-0.8
OCDF	M+2/M+4	0.88	0.76-1.02	95	63 - 159	-4.5

(1) See Table 8, Method 1613B, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.

(3) Contract-required concentration range as specified in Table 6, Method 1613B, under VER.

(4) The beginning CCAL %RSD for the 17 unlabeled standard must not exceed +/- 20%, Section 7.7.4.1. The ending CCAL must not exceed +/-25%, Section 8.3.2.4, Method 8290

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USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P520049 Analysis Date: 18-JAN-19 Time: 08:07:23

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	109	82 - 121	9.2
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.59	1.32-1.78	118	62 - 160	18.3
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	97	85 - 117	-3.2
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	93	85 - 118	-6.8
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	96	72 - 138	-3.7
13C-OCDD	M+2/M+4	0.89	0.76-1.02	195	96 - 415	-2.4
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	95	71 - 140	-5.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	110	76 - 130	9.8
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	111	77 - 130	11.1
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	81	76 - 131	-18.9
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	86	70 - 143	-14.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	93	74 - 135	-6.6
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	90	73 - 137	-10.1
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	89	78 - 129	-10.7
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	93	77 - 129	-7.1
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD				10.5	7.8 - 12.7	4.5

(1) See Table 8, Method 1613B, for m/z specifications.
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.
(3) Contract-required concentration range, as specified in Table 6, Method 1613B, under VER.
(4) No ion abundance ratio; report concentration found.
(5) The beginnning CCAL %RSD for the labeled standard must not exceed +/- 30% Section 7.7.4.2. The ending CCAL must not exceed +/- 35%, Sec 8.3.2.4 (8290)

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
195556

Run #7 Filename P520049 Samp: 1 Inj: 1 Acquired: 18-JAN-19 08:07:23
Processed: 21-JAN-19 09:19:54 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:15	9.816e+03	1.339e+04	0.73	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:26	8.789e+04	5.796e+04	1.52	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:20	8.255e+04	5.456e+04	1.51	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:01	6.959e+04	5.718e+04	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:07	7.782e+04	6.534e+04	1.19	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:37	7.035e+04	6.019e+04	1.17	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:22	6.707e+04	5.586e+04	1.20	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:38	6.171e+04	6.071e+04	1.02	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:02	5.042e+04	5.030e+04	1.00	yes	no	1.258
10	Unk	OCDF	42:34	7.333e+04	8.297e+04	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:02	7.921e+03	1.012e+04	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:38	5.936e+04	3.828e+04	1.55	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:45	5.387e+04	4.284e+04	1.26	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	36:51	5.350e+04	4.286e+04	1.25	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:05	5.830e+04	4.754e+04	1.23	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:34	4.554e+04	4.394e+04	1.04	yes	no	1.025
17	Unk	OCDD	42:22	6.271e+04	7.122e+04	0.88	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:14	1.138e+05	1.441e+05	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:26	1.777e+05	1.121e+05	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:20	1.781e+05	1.123e+05	1.59	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:00	7.269e+04	1.394e+05	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:07	8.760e+04	1.674e+05	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:37	8.230e+04	1.572e+05	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:21	7.301e+04	1.419e+05	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:37	5.681e+04	1.261e+05	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:02	4.981e+04	1.116e+05	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:01	8.014e+04	1.009e+05	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:36	1.270e+05	7.996e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:45	1.061e+05	8.368e+04	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	36:50	1.049e+05	8.256e+04	1.27	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:33	9.035e+04	8.475e+04	1.07	yes	no	0.858
32	IS	13C-OCDD	42:21	1.137e+05	1.274e+05	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:27	7.970e+04	9.967e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:04	1.182e+05	9.379e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:02	1.901e+04				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
195556

Run #7 Filename P520049 Samp: 1 Inj: 1 Acquired: 18-JAN-19 08:07:23
Processed: 21-JAN-19 09:19:54 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.89e+06	6.08e+02	3.1e+03	2.55e+06	1.36e+03	1.9e+03
2	1,2,3,7,8-PeCDF	1.73e+07	1.61e+03	1.1e+04	1.13e+07	1.66e+03	6.9e+03
3	2,3,4,7,8-PeCDF	1.73e+07	1.61e+03	1.1e+04	1.14e+07	1.66e+03	6.9e+03
4	1,2,3,4,7,8-HxCDF	1.58e+07	1.30e+03	1.2e+04	1.30e+07	7.64e+02	1.7e+04
5	1,2,3,6,7,8-HxCDF	1.70e+07	1.30e+03	1.3e+04	1.42e+07	7.64e+02	1.9e+04
6	2,3,4,6,7,8-HxCDF	1.56e+07	1.30e+03	1.2e+04	1.32e+07	7.64e+02	1.7e+04
7	1,2,3,7,8,9-HxCDF	1.39e+07	1.30e+03	1.1e+04	1.19e+07	7.64e+02	1.6e+04
8	1,2,3,4,6,7,8-HpCDF	1.38e+07	5.67e+03	2.4e+03	1.36e+07	6.76e+03	2.0e+03
9	1,2,3,4,7,8,9-HpCDF	9.91e+06	5.67e+03	1.7e+03	9.80e+06	6.76e+03	1.5e+03
10	OCDF	1.26e+07	1.11e+03	1.1e+04	1.40e+07	1.92e+03	7.3e+03
11	2,3,7,8-TCDD	1.62e+06	3.31e+03	4.9e+02	2.07e+06	1.55e+03	1.3e+03
12	1,2,3,7,8-PeCDD	1.22e+07	1.01e+03	1.2e+04	7.75e+06	7.04e+02	1.1e+04
13	1,2,3,4,7,8-HxCDD	1.24e+07	1.30e+03	9.5e+03	9.81e+06	1.27e+03	7.7e+03
14	1,2,3,6,7,8-HxCDD	1.15e+07	1.30e+03	8.8e+03	9.19e+06	1.27e+03	7.3e+03
15	1,2,3,7,8,9-HxCDD	1.28e+07	1.30e+03	9.8e+03	1.02e+07	1.27e+03	8.1e+03
16	1,2,3,4,6,7,8-HpCDD	9.41e+06	1.22e+03	7.7e+03	8.89e+06	1.43e+03	6.2e+03
17	OCDD	1.07e+07	1.00e+03	1.1e+04	1.21e+07	1.56e+03	7.8e+03
18	13C-2,3,7,8-TCDF	2.21e+07	4.86e+03	4.6e+03	2.79e+07	2.42e+03	1.2e+04
19	13C-1,2,3,7,8-PeCDF	3.42e+07	1.39e+03	2.5e+04	2.14e+07	1.42e+03	1.5e+04
20	13C-2,3,4,7,8-PeCDF	3.60e+07	1.39e+03	2.6e+04	2.26e+07	1.42e+03	1.6e+04
21	13C-1,2,3,4,7,8-HxCDF	1.63e+07	1.24e+03	1.3e+04	3.13e+07	1.48e+03	2.1e+04
22	13C-1,2,3,6,7,8-HxCDF	1.92e+07	1.24e+03	1.6e+04	3.65e+07	1.48e+03	2.5e+04
23	13C-2,3,4,6,7,8-HxCDF	1.83e+07	1.24e+03	1.5e+04	3.42e+07	1.48e+03	2.3e+04
24	13C-1,2,3,7,8,9-HxCDF	1.52e+07	1.24e+03	1.2e+04	2.95e+07	1.48e+03	2.0e+04
25	13C-1,2,3,4,6,7,8-HpCDF	1.24e+07	3.34e+03	3.7e+03	2.76e+07	6.71e+03	4.1e+03
26	13C-1,2,3,4,7,8,9-HpCDF	9.78e+06	3.34e+03	2.9e+03	2.19e+07	6.71e+03	3.3e+03
27	13C-2,3,7,8-TCDD	1.60e+07	6.93e+03	2.3e+03	1.99e+07	3.46e+03	5.7e+03
28	13C-1,2,3,7,8-PeCDD	2.58e+07	1.04e+03	2.5e+04	1.63e+07	1.46e+03	1.1e+04
29	13C-1,2,3,4,7,8-HxCDD	2.41e+07	3.07e+03	7.9e+03	1.91e+07	1.55e+03	1.2e+04
30	13C-1,2,3,6,7,8-HxCDD	2.27e+07	3.07e+03	7.4e+03	1.77e+07	1.55e+03	1.1e+04
31	13C-1,2,3,4,6,7,8-HpCDD	1.81e+07	2.24e+03	8.1e+03	1.69e+07	1.32e+03	1.3e+04
32	13C-OCDD	1.91e+07	1.23e+03	1.6e+04	2.16e+07	1.09e+03	2.0e+04
33	13C-1,2,3,4-TCDD	1.57e+07	6.93e+03	2.3e+03	1.96e+07	3.46e+03	5.7e+03
34	13C-1,2,3,7,8,9-HxCDD	2.58e+07	3.07e+03	8.4e+03	2.04e+07	1.55e+03	1.3e+04
35	37Cl-2,3,7,8-TCDD	3.86e+06	1.64e+03	2.4e+03			

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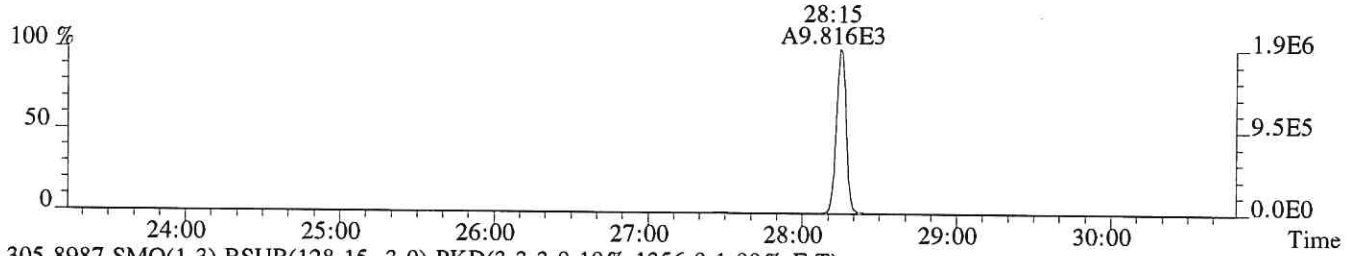
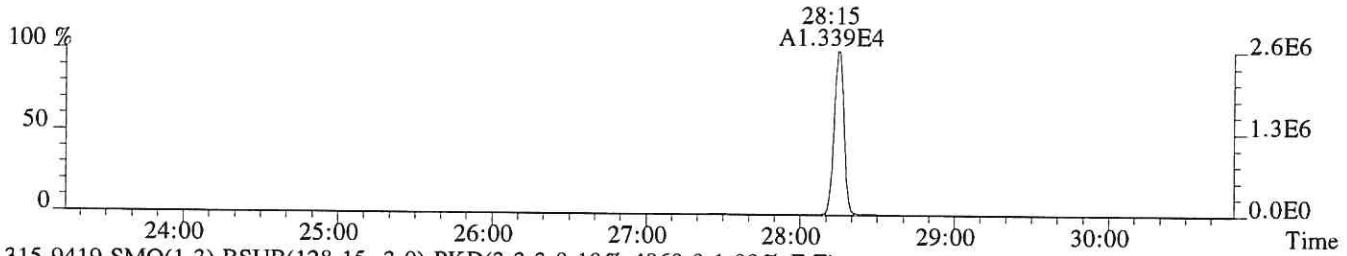
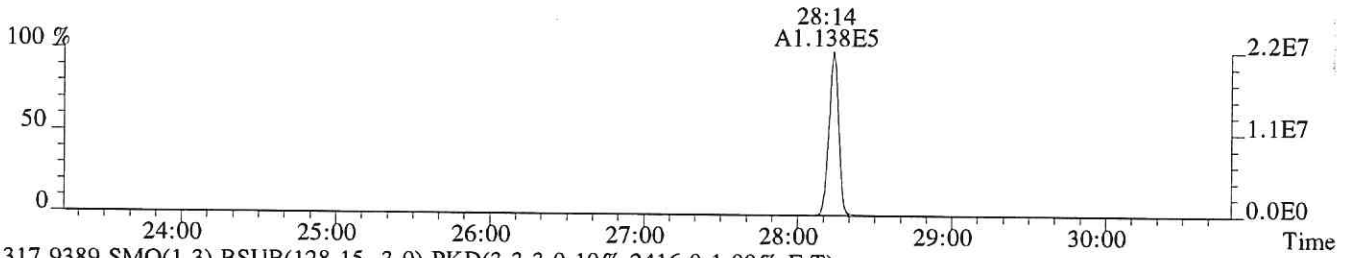
File:P520049 #1-538 Acq:18-JAN-2019 08:07:23 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,608.0,1.00%,F,T)



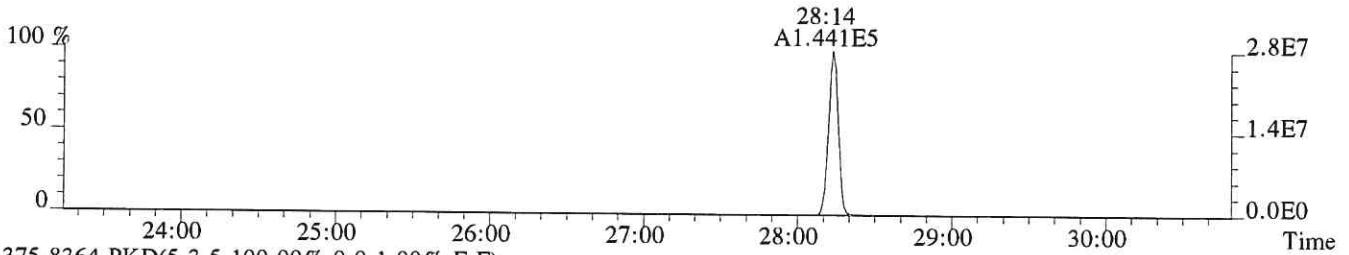
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1356.0,1.00%,F,T)



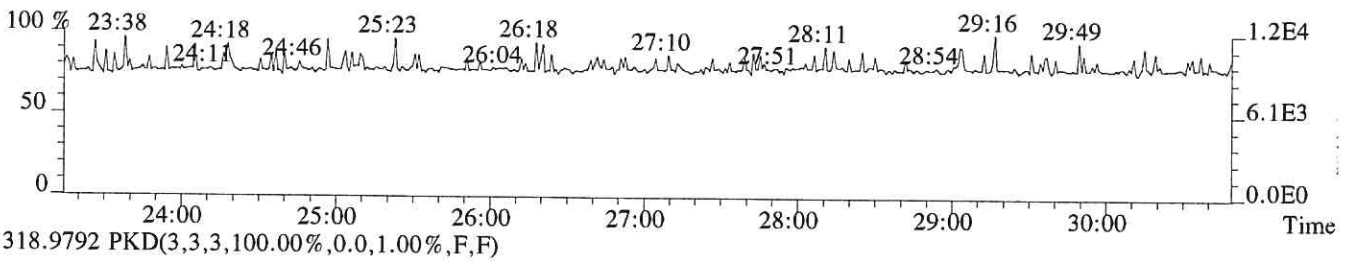
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4860.0,1.00%,F,T)



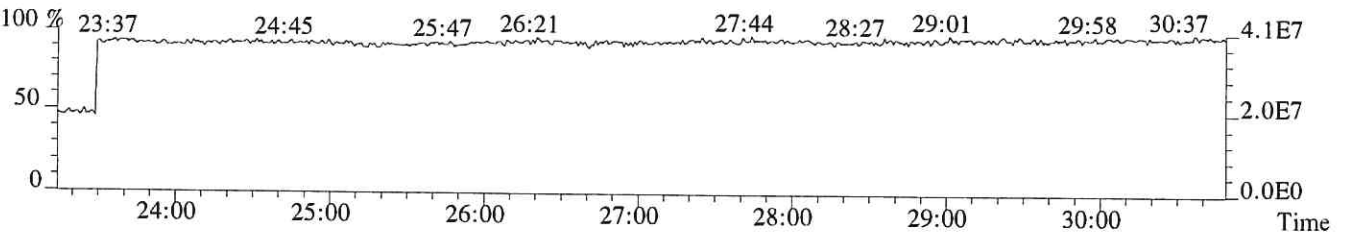
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2416.0,1.00%,F,T)



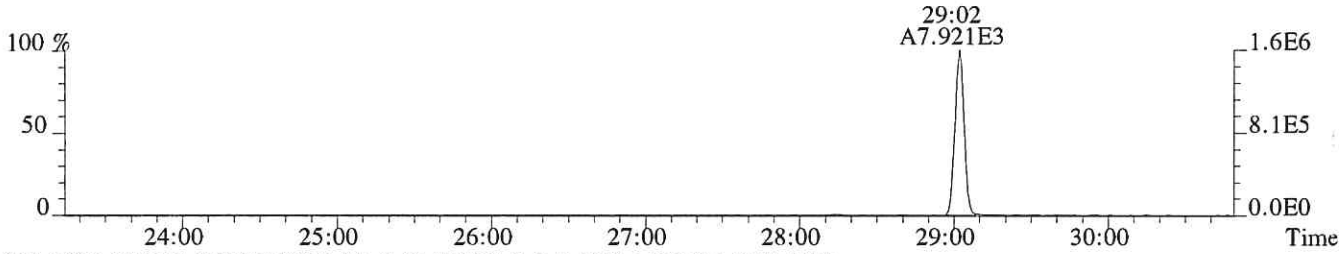
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



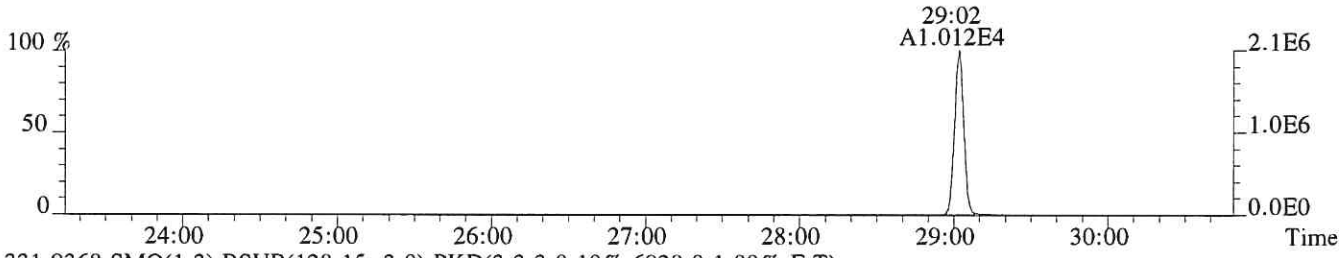
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



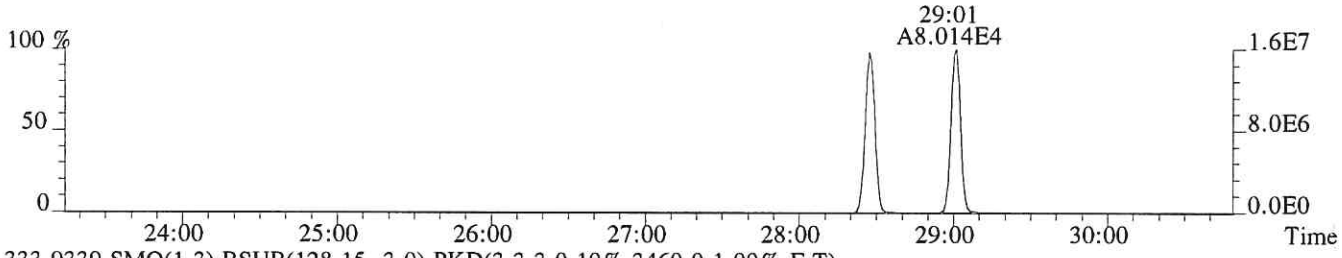
File:P520049 #1-538 Acq:18-JAN-2019 08:07:23 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3312.0,1.00%,F,T)



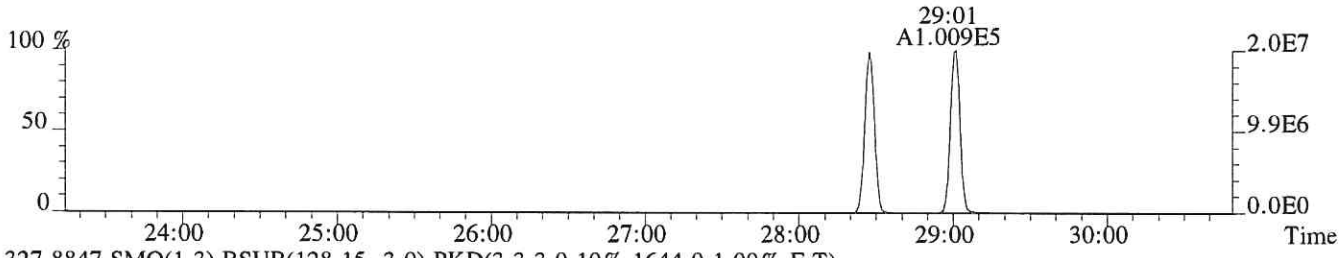
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1552.0,1.00%,F,T)



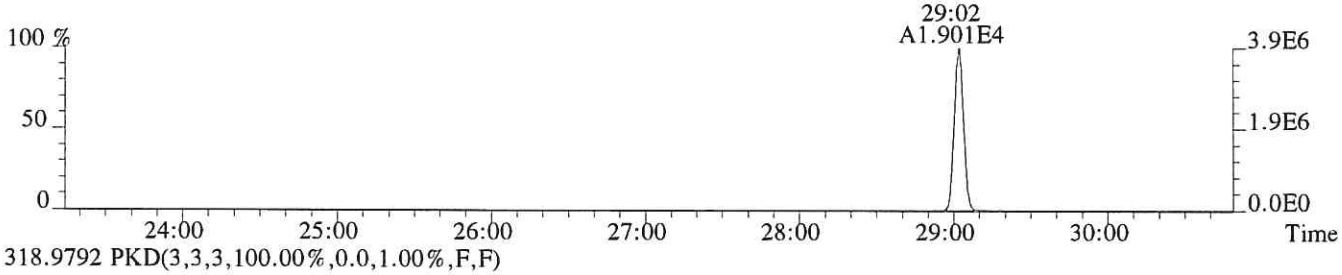
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6928.0,1.00%,F,T)



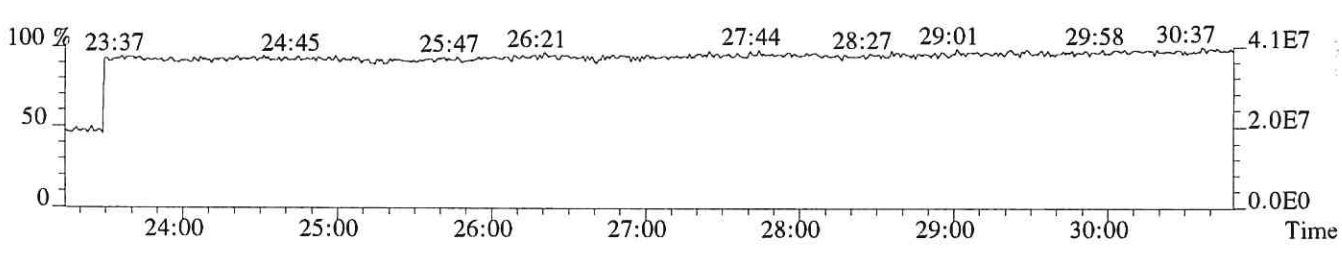
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3460.0,1.00%,F,T)



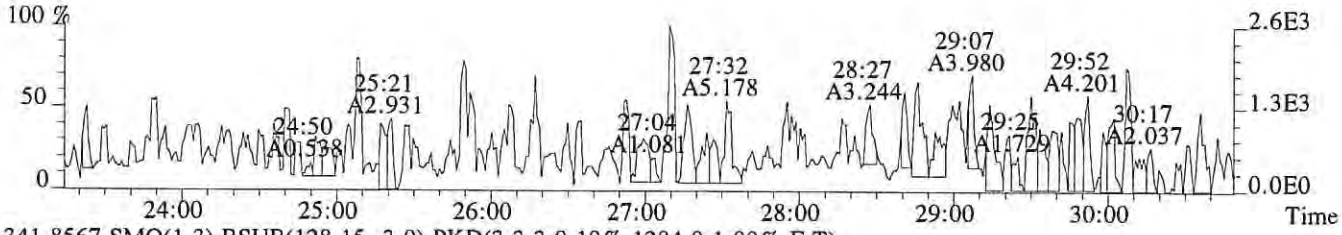
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1644.0,1.00%,F,T)



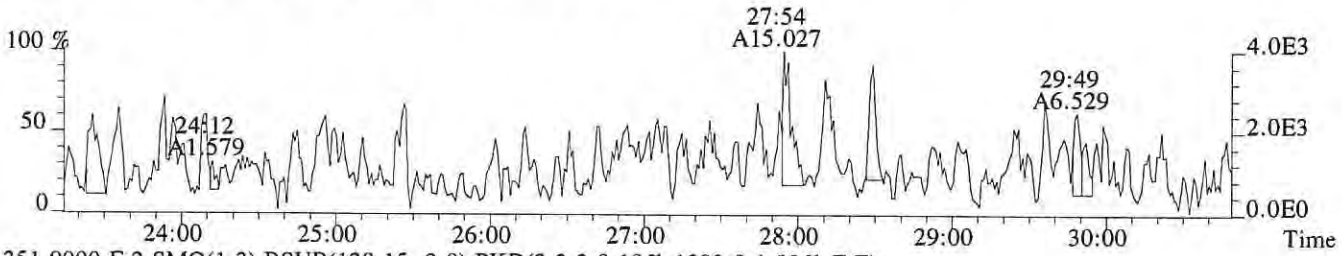
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



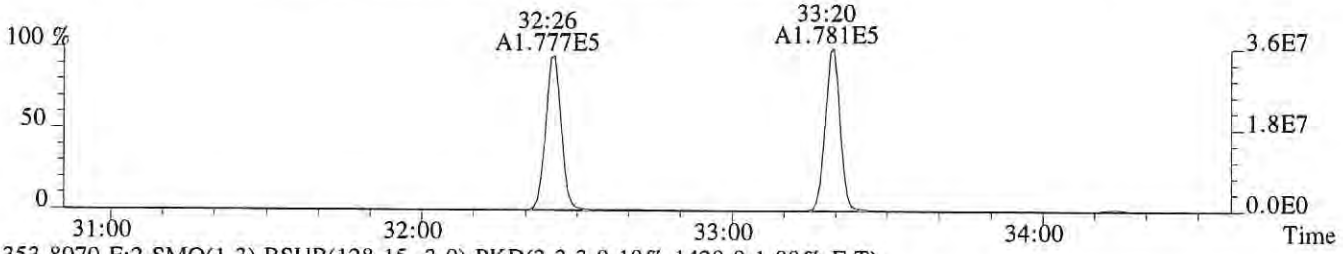
File:P520049 #1-538 Acq:18-JAN-2019 08:07:23 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,624.0,1.00%,F,T)



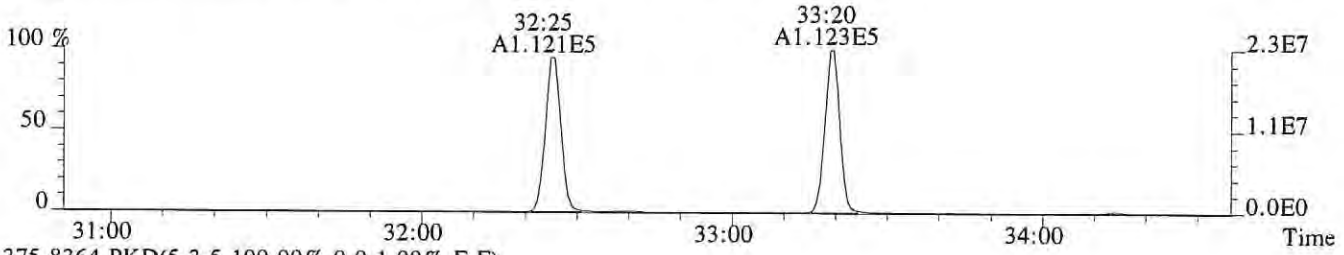
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1284.0,1.00%,F,T)



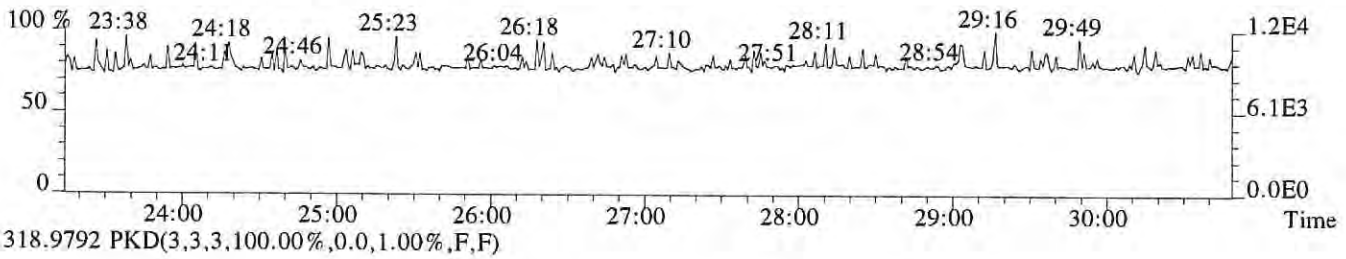
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1392.0,1.00%,F,T)



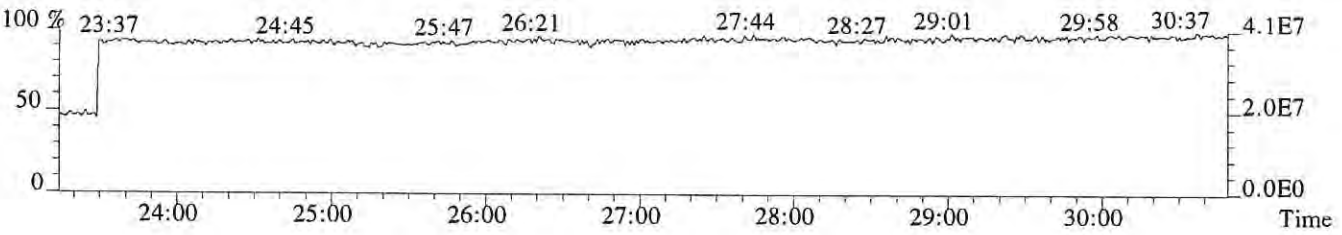
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1420.0,1.00%,F,T)



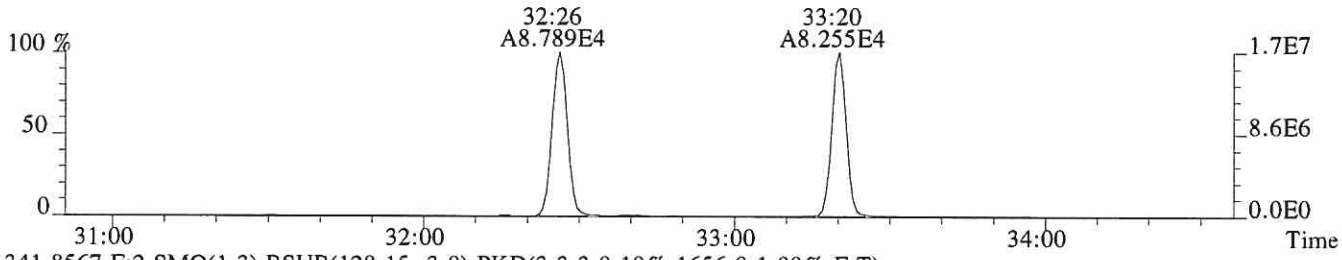
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



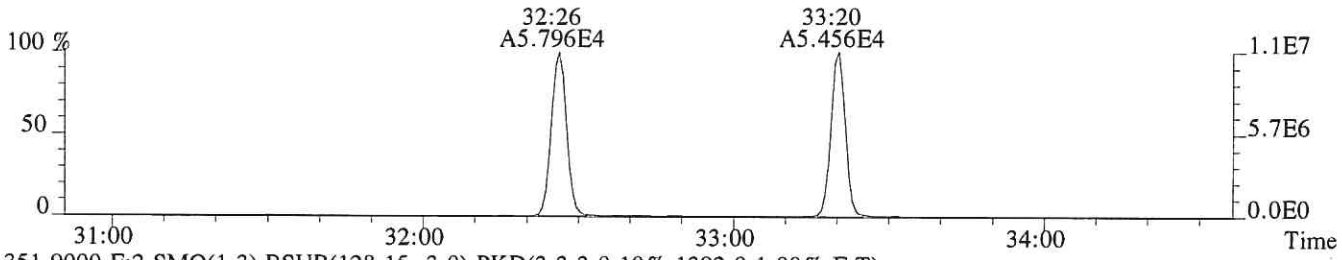
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



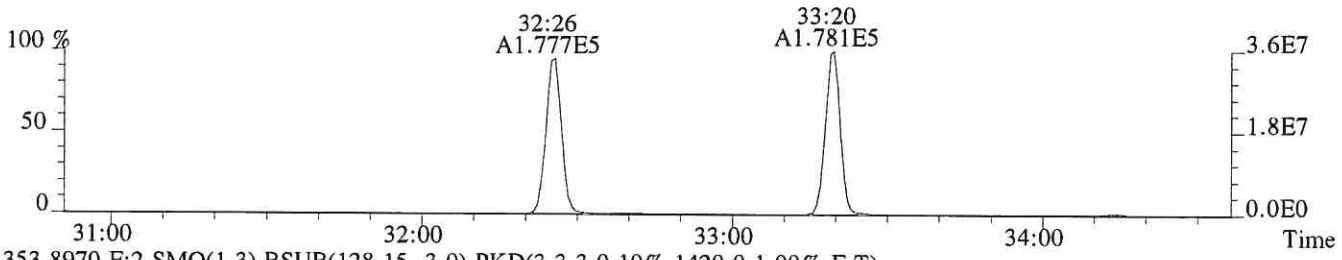
File:P520049 #1-339 Acq:18-JAN-2019 08:07:23 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1612.0,1.00%,F,T)



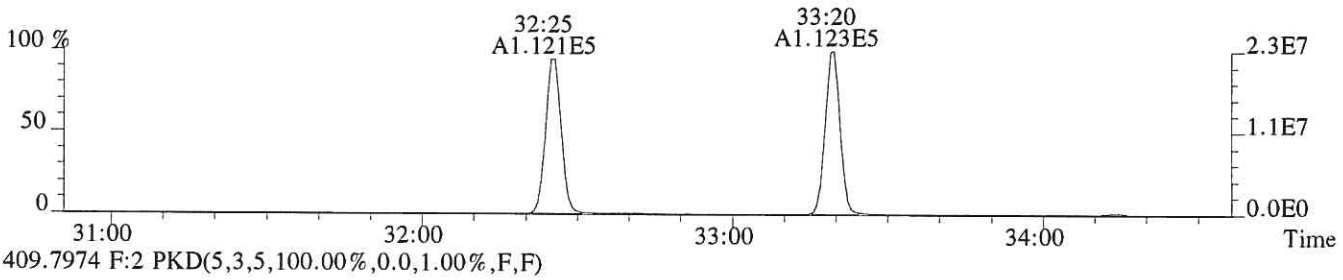
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1656.0,1.00%,F,T)



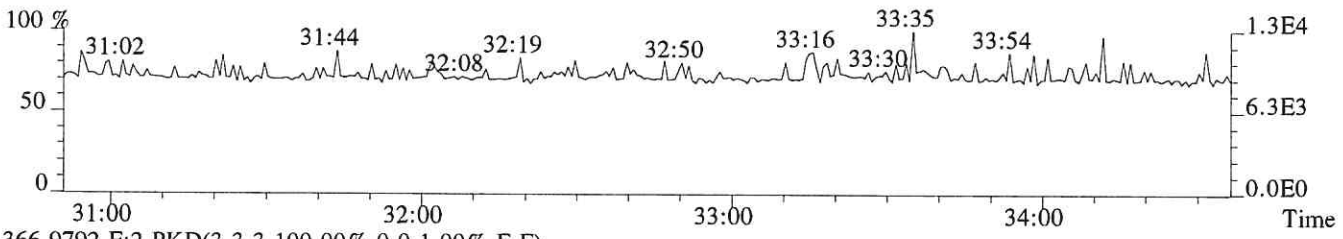
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1392.0,1.00%,F,T)



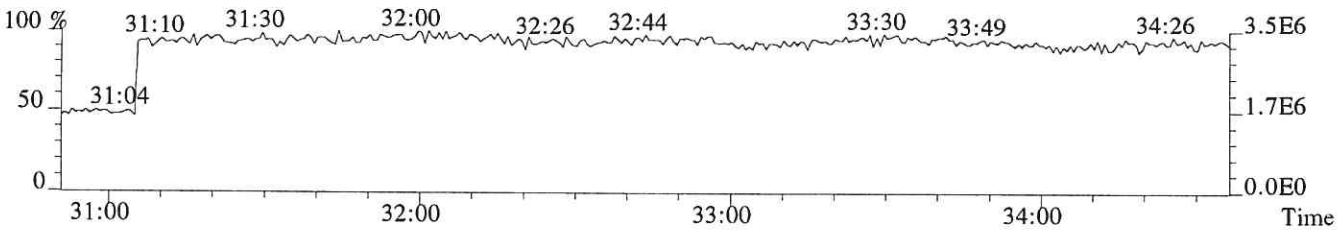
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1420.0,1.00%,F,T)



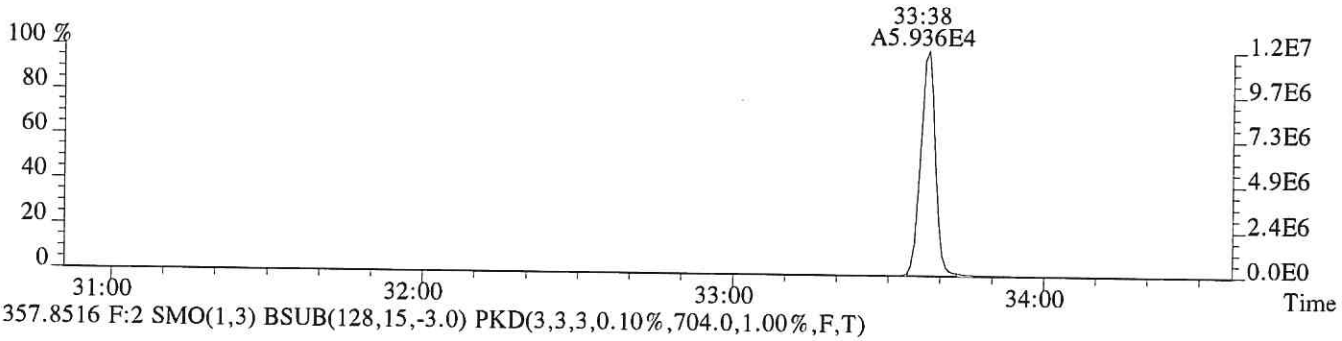
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



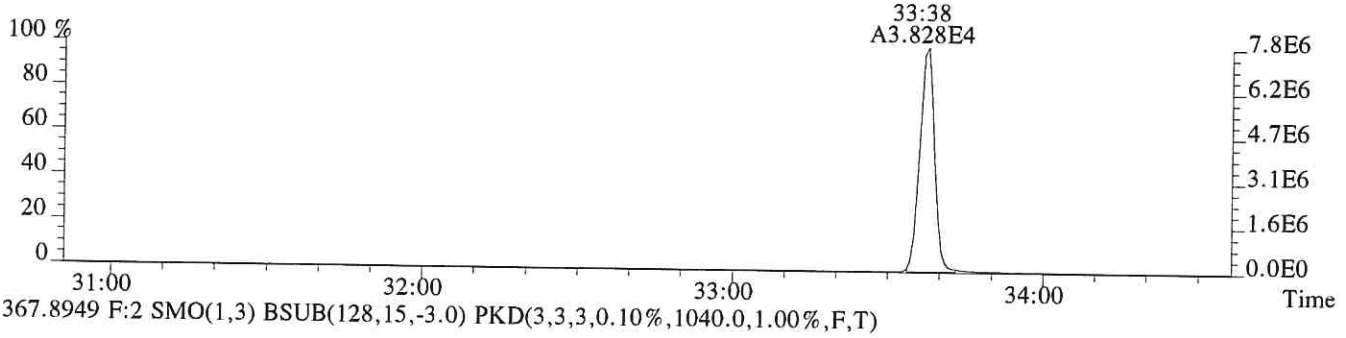
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



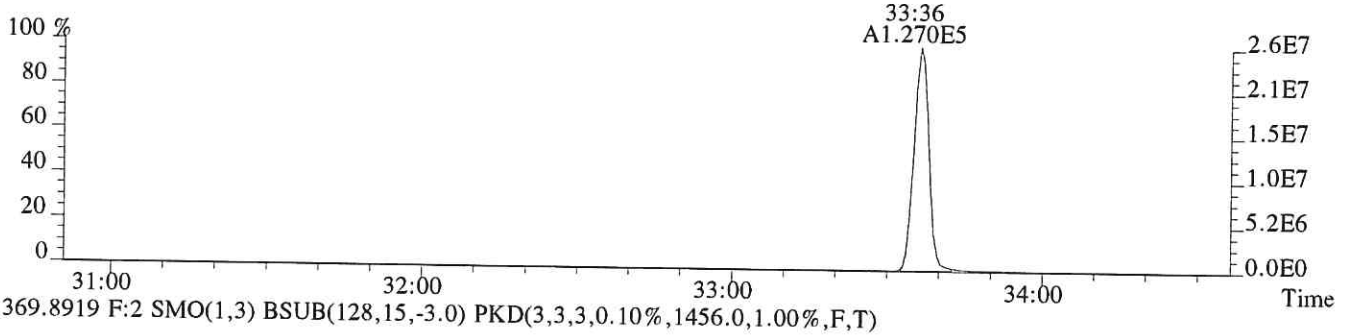
File:P520049 #1-339 Acq:18-JAN-2019 08:07:23 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1012.0,1.00%,F,T)



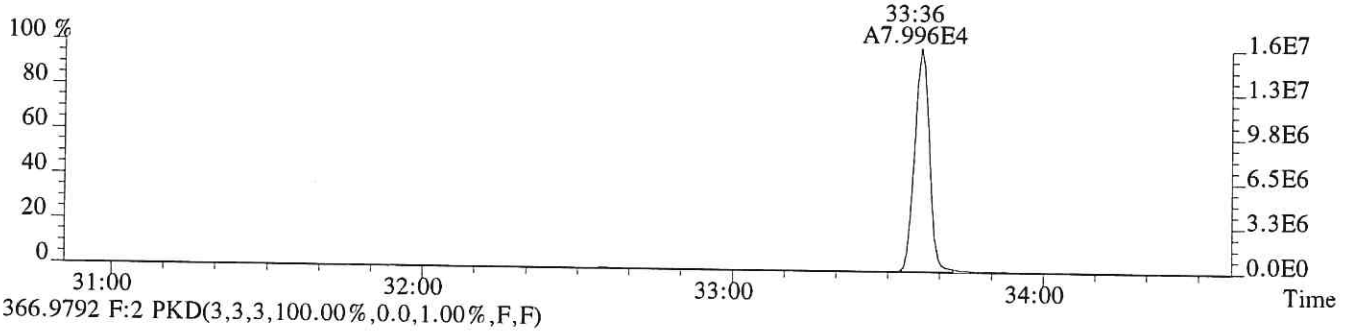
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,704.0,1.00%,F,T)



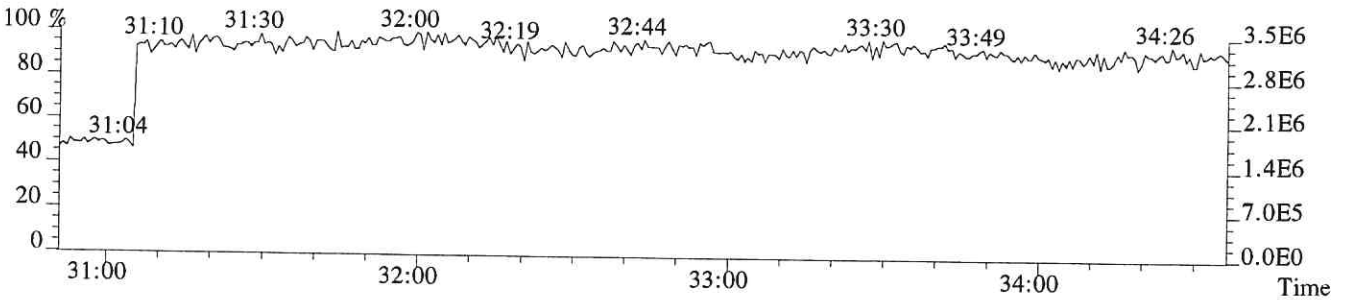
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1040.0,1.00%,F,T)



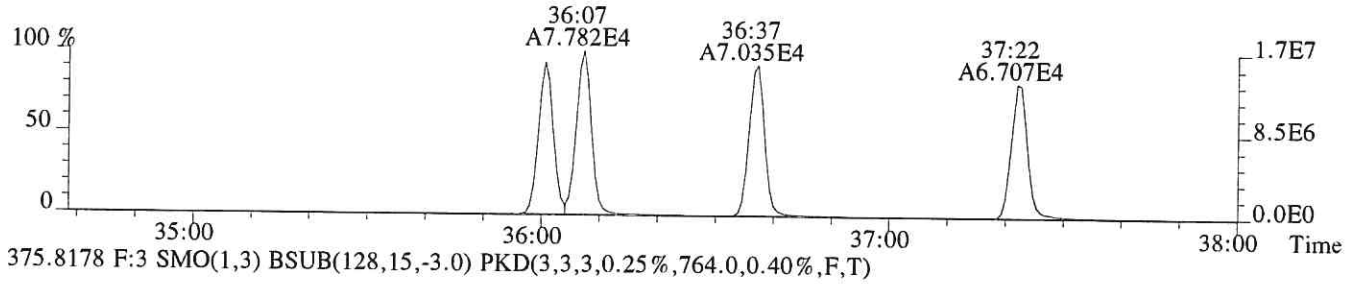
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1456.0,1.00%,F,T)



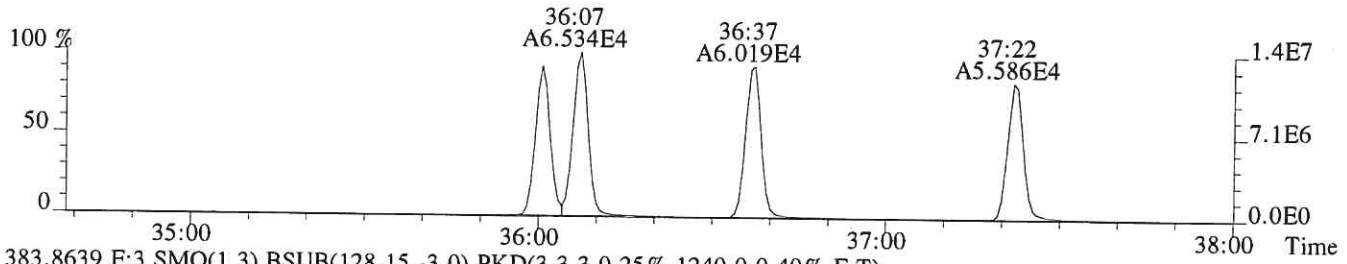
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



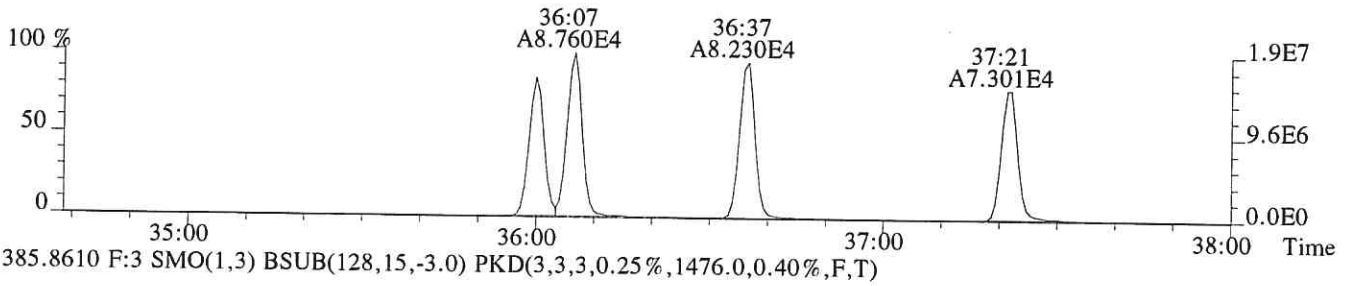
File:P520049 #1-303 Acq:18-JAN-2019 08:07:23 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1300.0,0.40%,F,T)



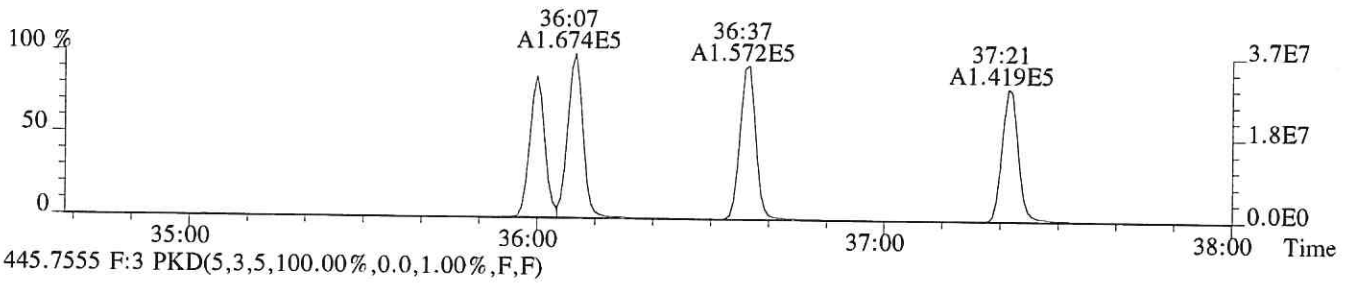
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,764.0,0.40%,F,T)



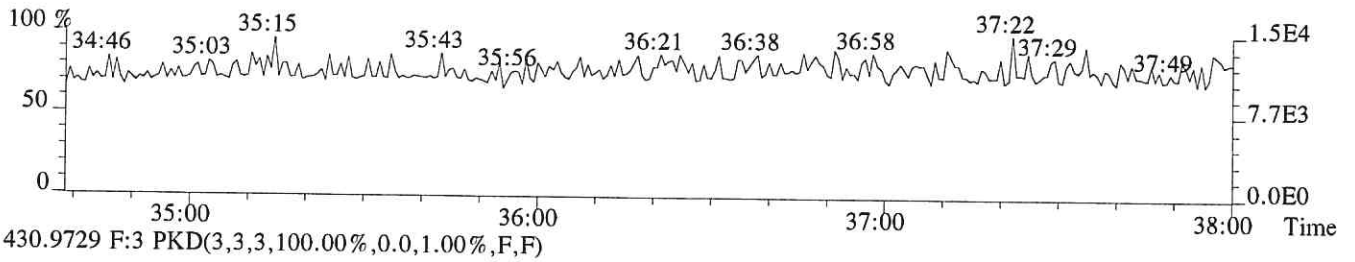
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1240.0,0.40%,F,T)



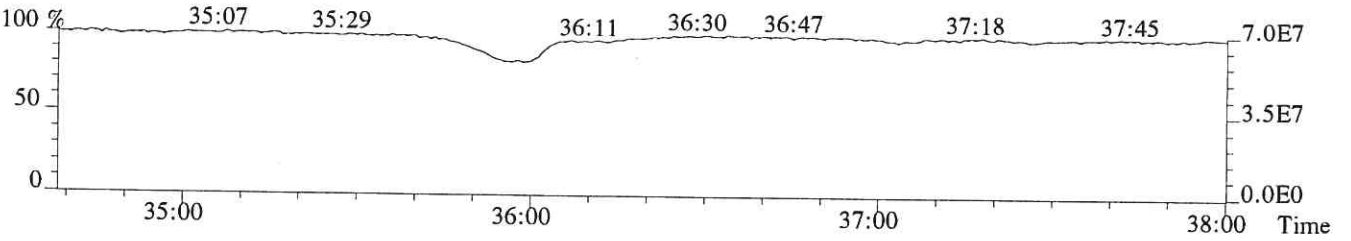
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1476.0,0.40%,F,T)



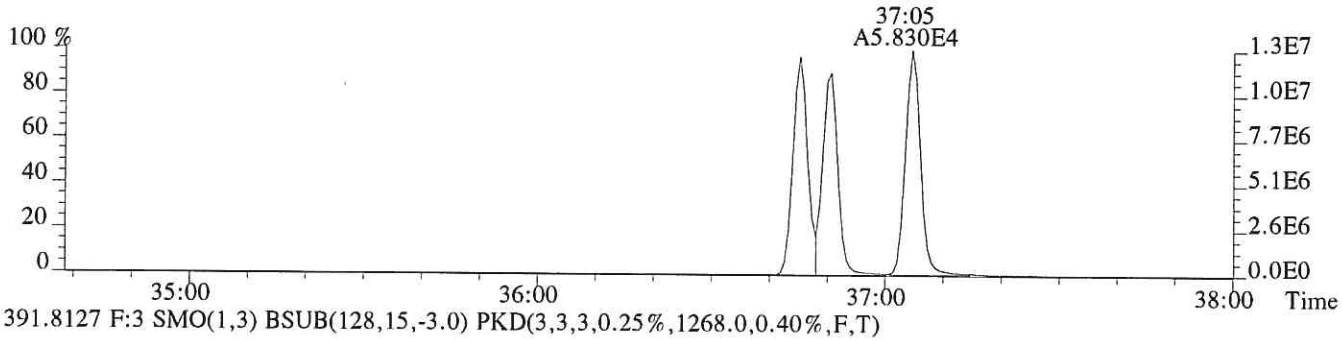
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



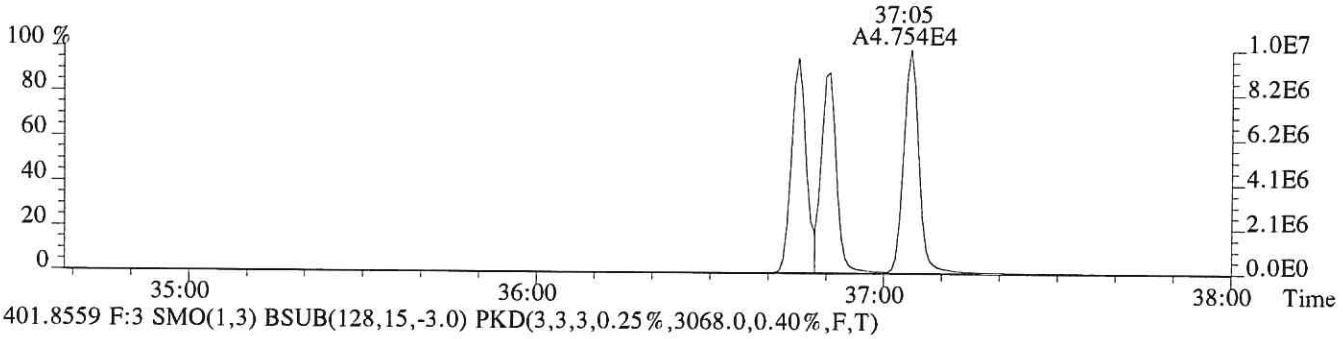
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



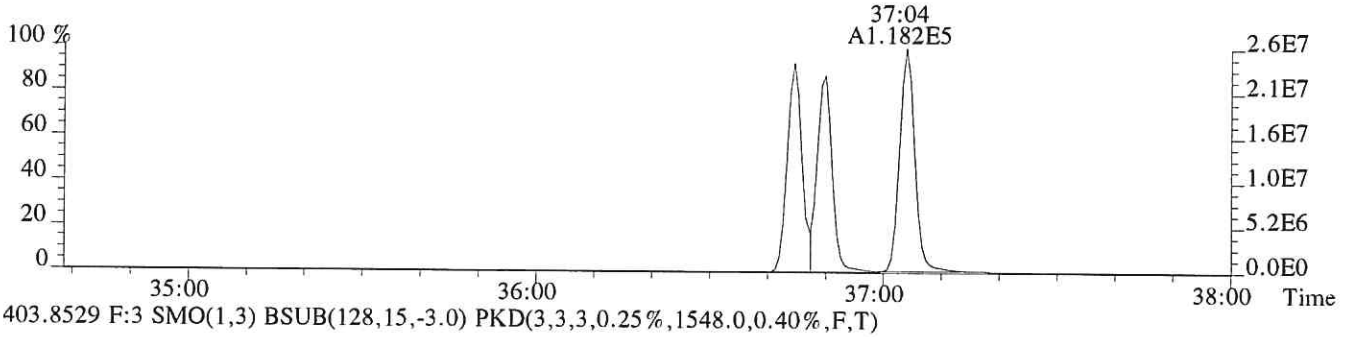
File:P520049 #1-303 Acq:18-JAN-2019 08:07:23 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1304.0,0.40%,F,T)



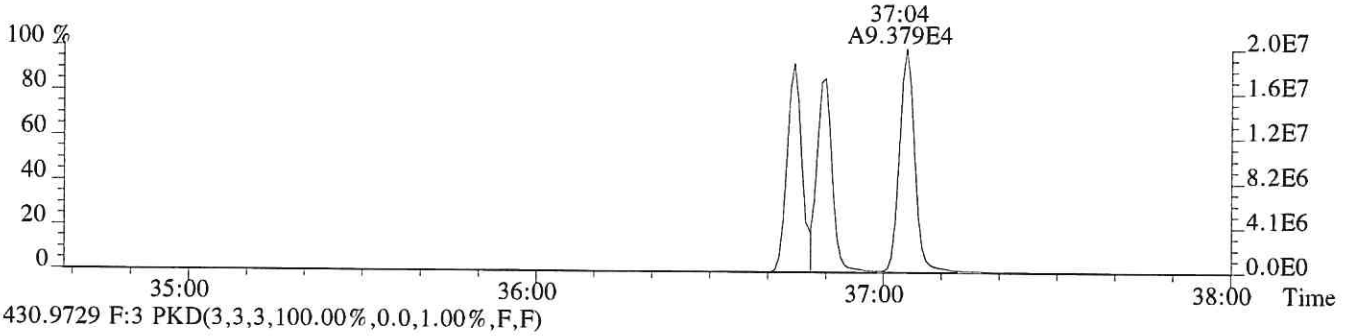
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1268.0,0.40%,F,T)



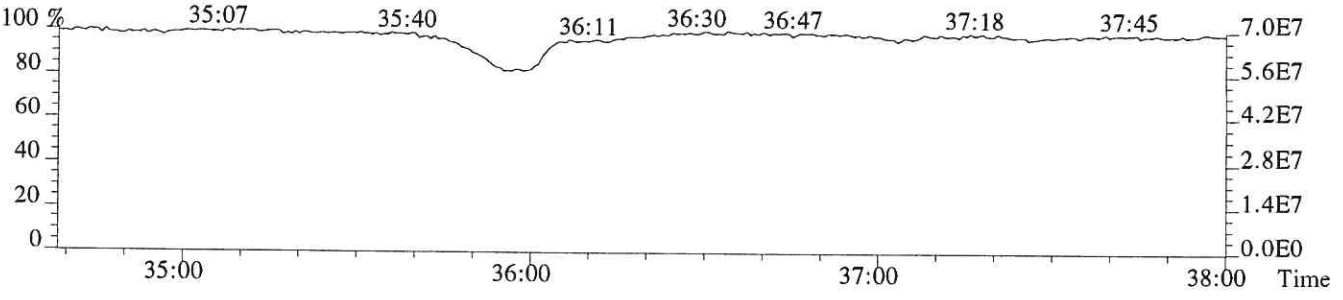
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3068.0,0.40%,F,T)



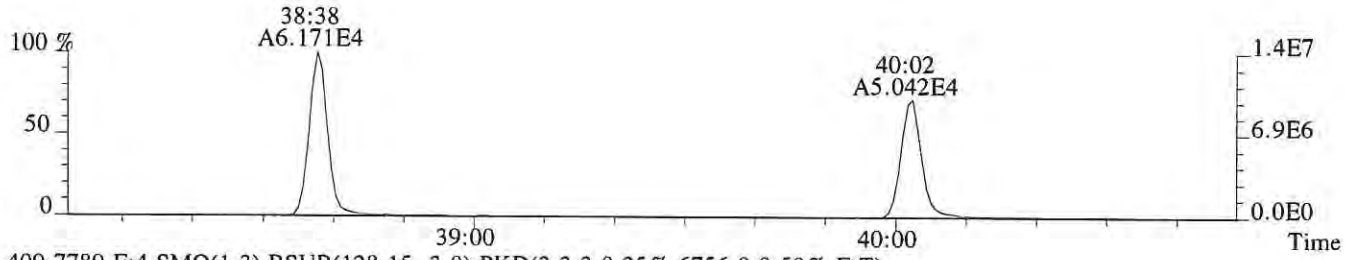
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1548.0,0.40%,F,T)



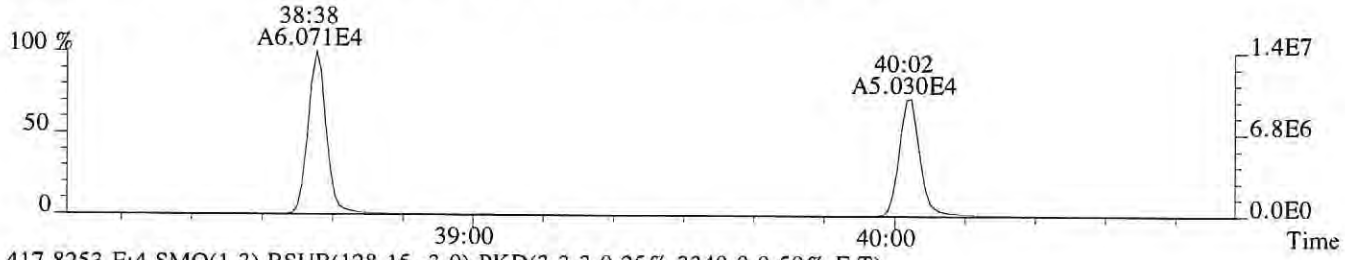
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



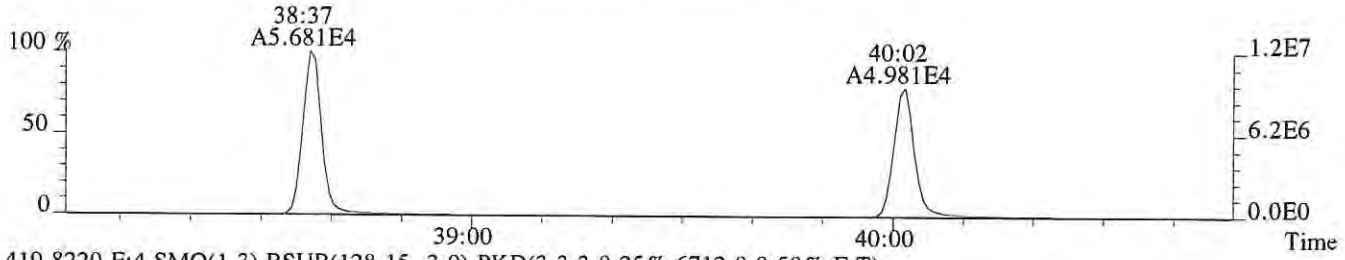
File:P520049 #1-250 Acq:18-JAN-2019 08:07:23 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5672.0,0.50%,F,T)



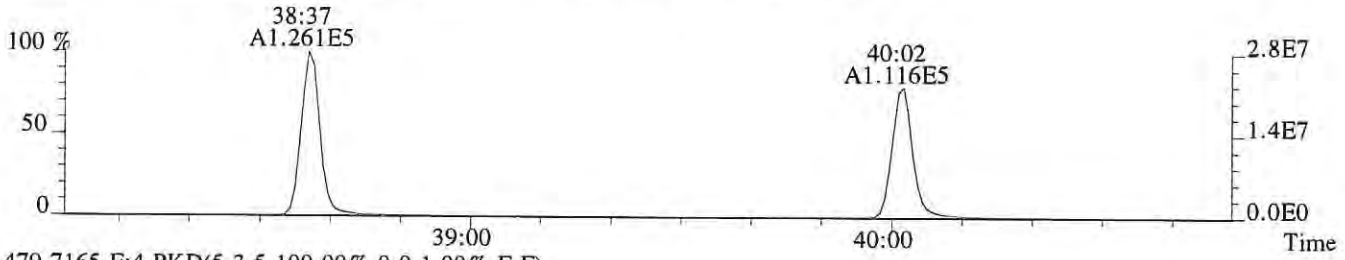
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6756.0,0.50%,F,T)



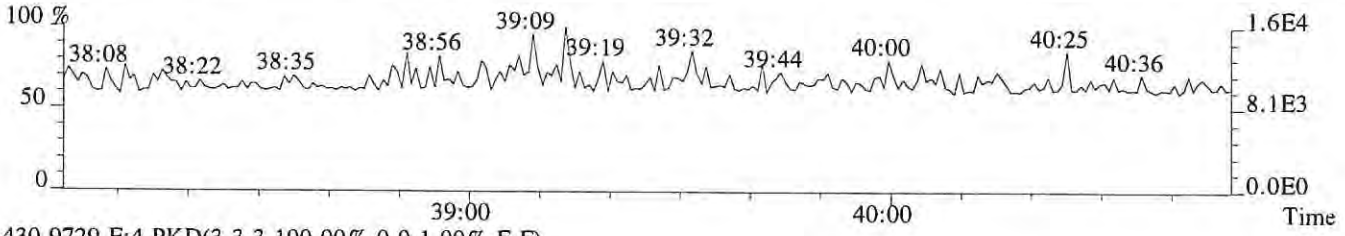
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3340.0,0.50%,F,T)



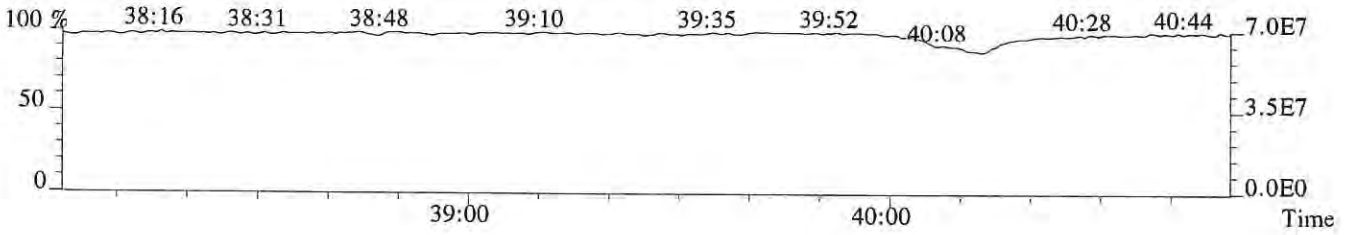
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6712.0,0.50%,F,T)



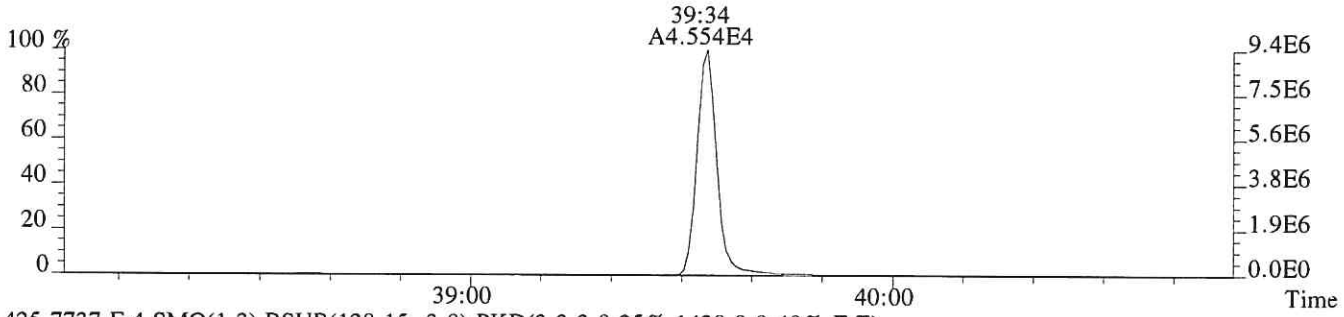
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



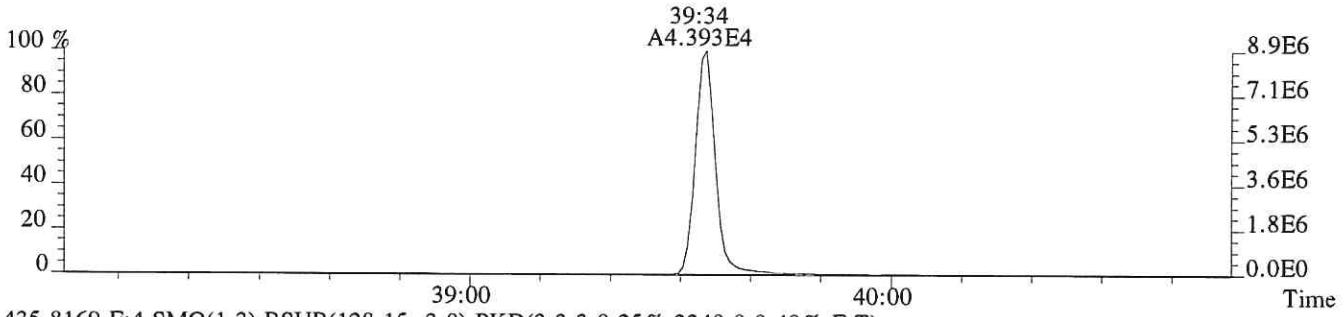
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



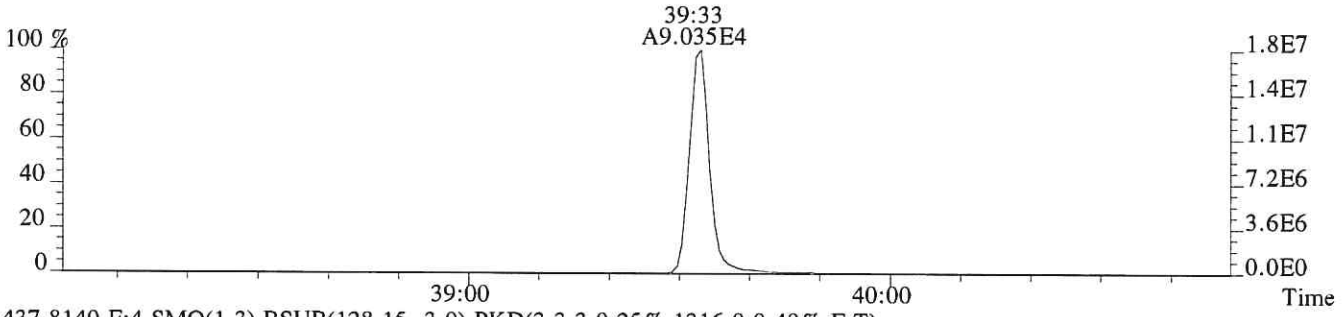
File:P520049 #1-250 Acq:18-JAN-2019 08:07:23 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1220.0,0.40%,F,T)



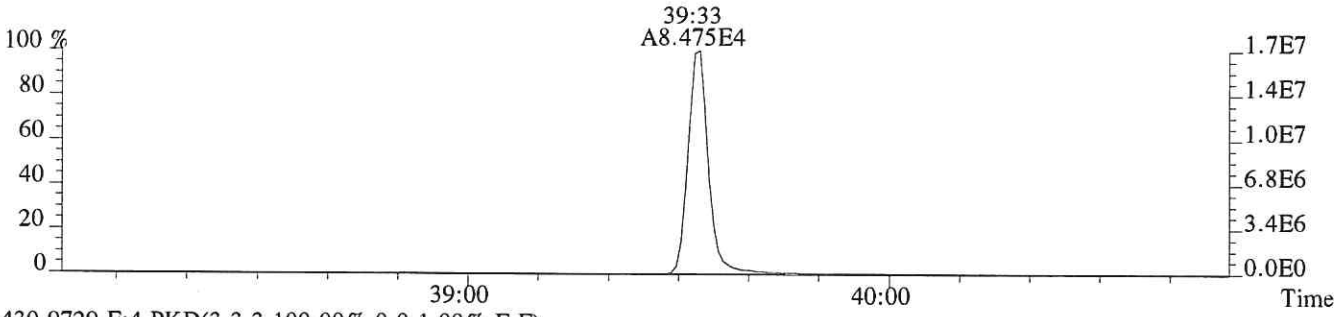
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1428.0,0.40%,F,T)



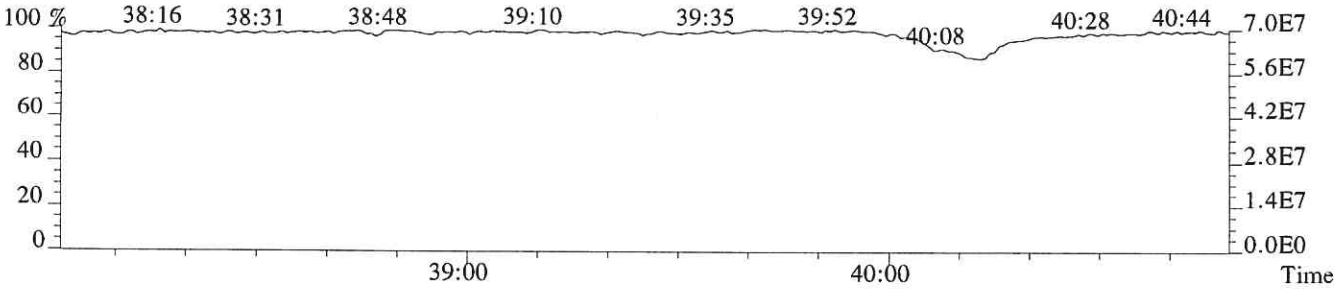
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2240.0,0.40%,F,T)



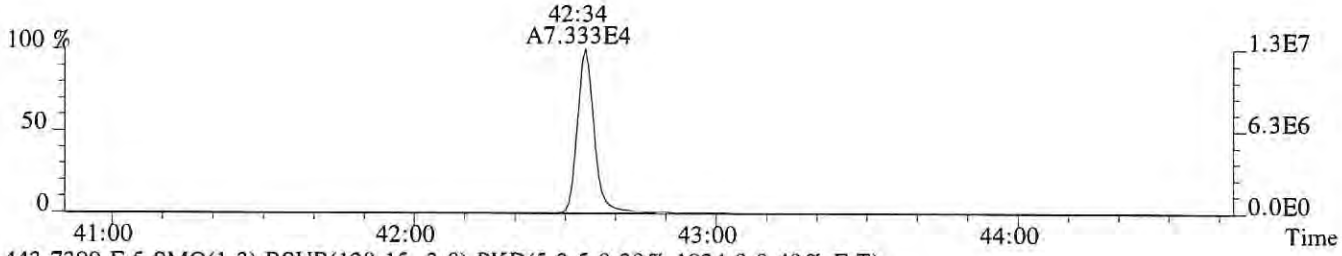
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1316.0,0.40%,F,T)



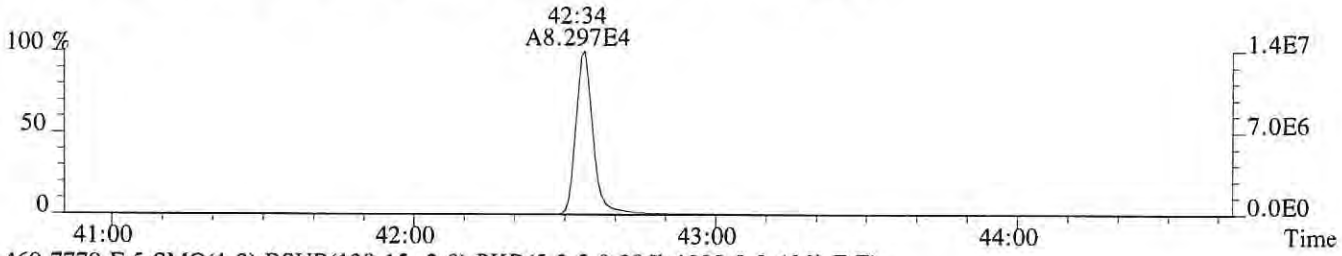
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



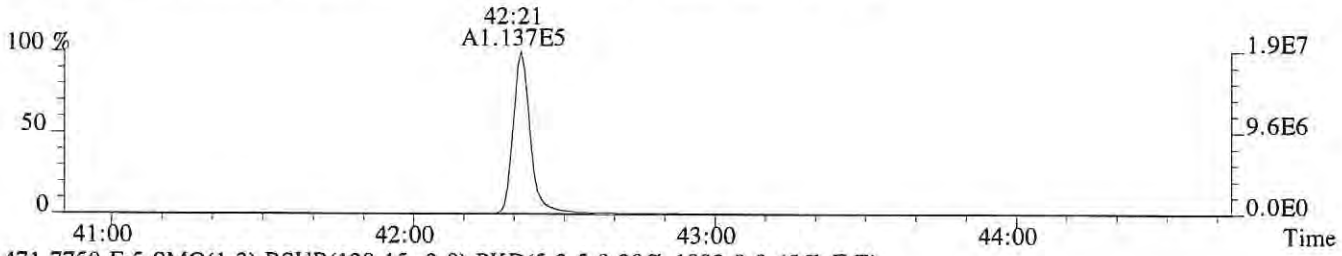
File:P520049 #1-349 Acq:18-JAN-2019 08:07:23 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1108.0,0.40%,F,T)



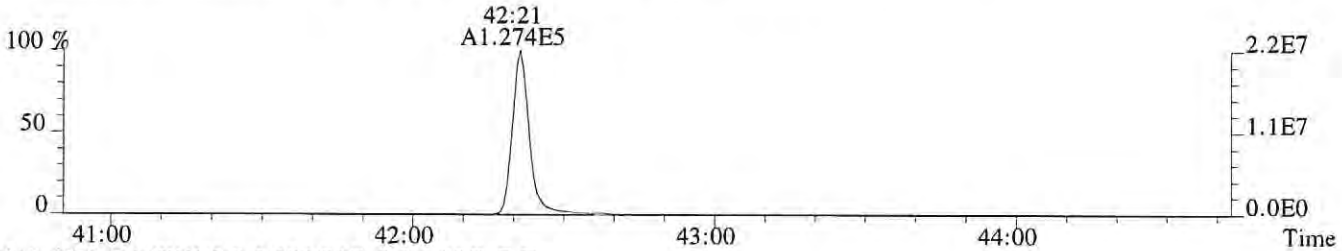
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1924.0,0.40%,F,T)



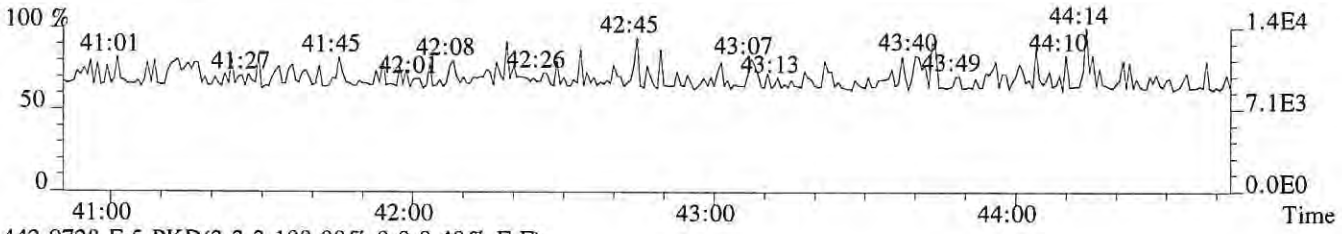
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1228.0,0.40%,F,T)



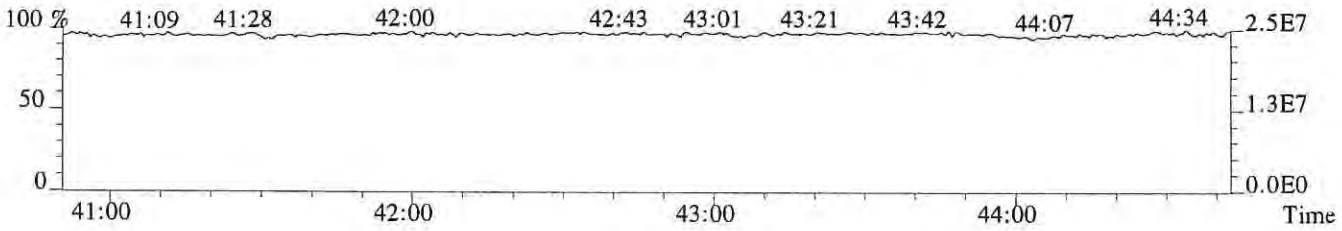
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1092.0,0.40%,F,T)



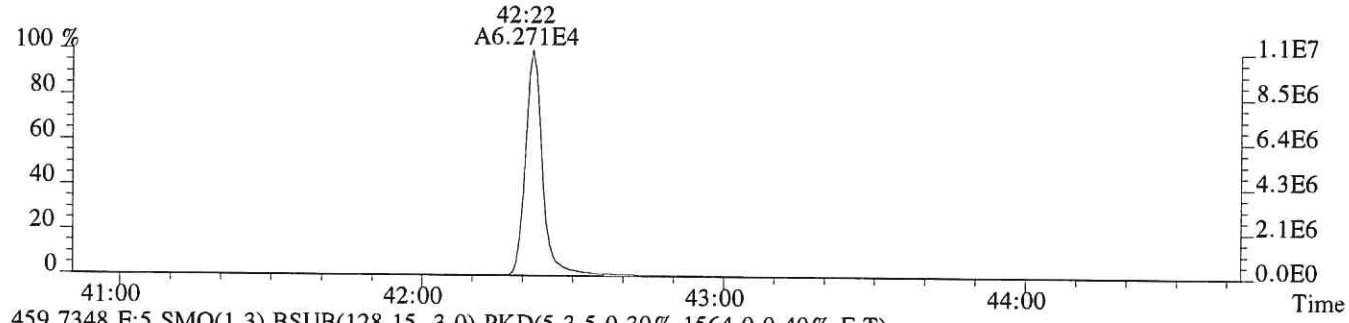
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



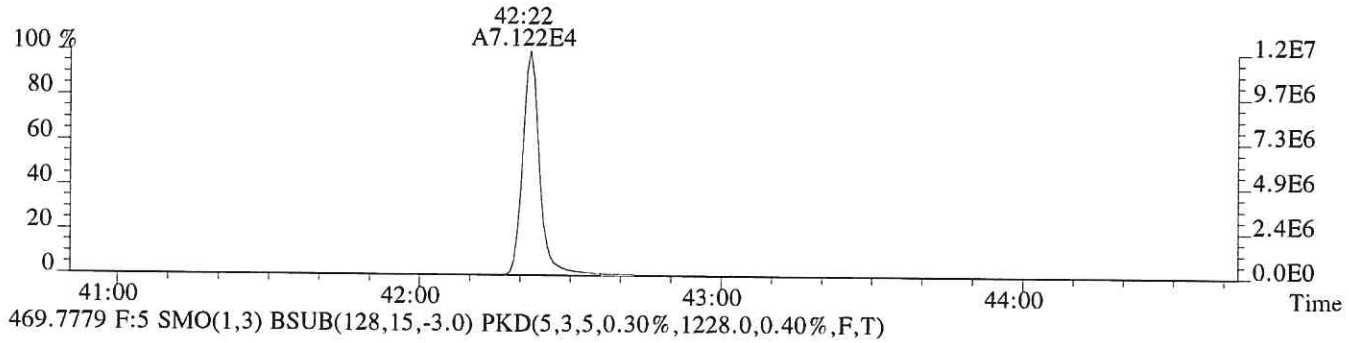
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



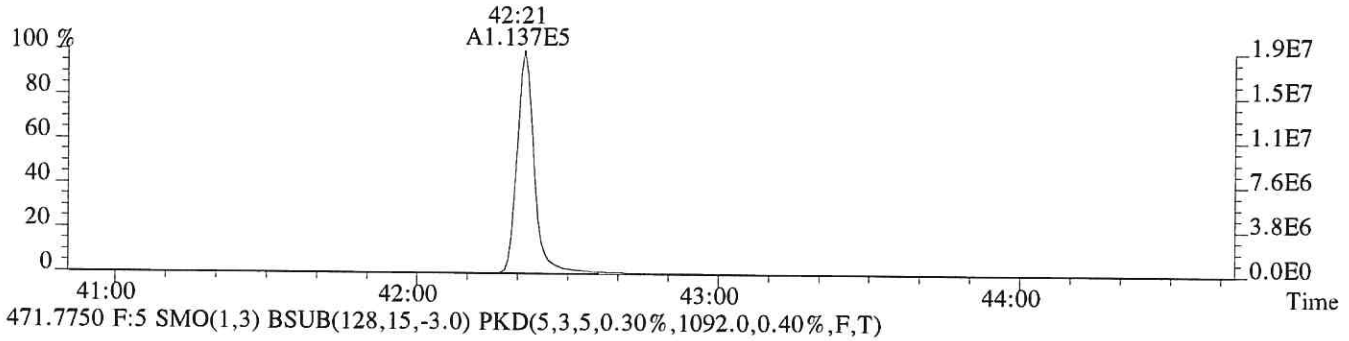
File:P520049 #1-349 Acq:18-JAN-2019 08:07:23 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1004.0,0.40%,F,T)



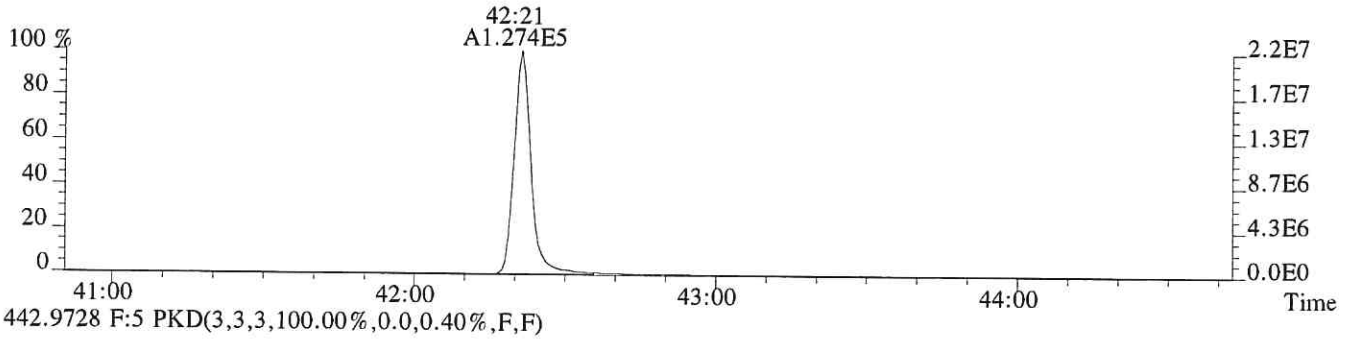
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1564.0,0.40%,F,T)



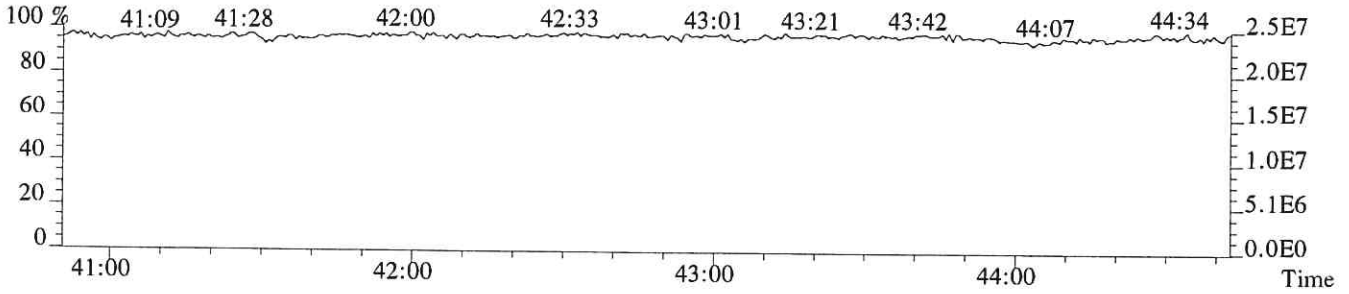
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1228.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1092.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



Initial Calibration

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Laboratory Review Checklist: HRMS Initial Calibration

Method: 1613/8290	Process Date: 01/25/18
Instrument Name: E-HRMS-07	Calibration File Name: P5-1801241613I
Processor Name: Gisela Cruz	Reviewer Name: Loan Luong
Supervisor: Kristin Neir	

Description	Yes	No	NA	NR	ER#
Analytical Sequence					
Does the analytical sequence summary accurately reflect the instrument run log, including ICV?	√				
Was a Mass Resolution Check performed at the beginning and end of the 12-hour sequence?	√				
Were all calibration standards and the ICV analyzed within the same 12-hour sequence?	√				
Were all calibration standards analyzed only once?	√				
Was the ICV analyzed after the ICAL, before analyzing samples?	√				
	√				
Mass Resolution Check					
Are beginning and ending resolution checks provided and legible?	√				
Were all target masses >10,000 resolving power at the beginning of the sequence?	√				
Were all target masses >10,000 resolving power at the end of the sequence?	√				
For PCB analysis, were masses at the low and high end of each function mass range >8,000?			√		
Where automatic printout of the mass resolution were not >10,000, was the resolution inspected by a trained analyst, including manual calculation of the resolution, if warranted?			√		
Window Define/209					
Is the window defining mix summary present, and accompanied by SICPs/Chromatograms for the WDM?	√				
Was the WDM/Column Performance/209 solution analyzed prior to the analysis of the calibration standards?	√				
Was 2,3,7,8-TCDD peak valley <25% to any other TCDD?	√				
Were all first and last eluters adequately resolved in each function?	√				
If first and last eluters were not resolved, was corrective action performed and documented, followed by a reanalysis of the WDM?			√		
Was the retention time of PCB 209 >55 min?			√		
Were the following congeners uniquely resolved (valley height <40% of the shortest peak)? PCB-34 and PCB-23 PCB-187 and PCB-182			√		
Did PCB 156/157 co-elute within 2 seconds at peak maximum?			√		
Calibration Standards					
Were there at least 5 calibration standards analyzed?	√				
If not all calibration standards were used, were the omitted standards either the lowest or highest calibration standard?			√		

Laboratory Review Checklist: HRMS Initial Calibration

Method: 1613/8290	Process Date: 01/25/18
Instrument Name: E-HRMS-07	Calibration File Name: P5-1801241613I
Processor Name: Gisela Cruz	Reviewer Name: Loan Luong
Supervisor: Kristin Neir	

Description	Yes	No	NA	NR	ER#
Are all sample response summaries, S/N height summaries, and SICPs included (and legible) for the entire sequence?	√				
Did each calibration point meet method criteria for Ion Abundance Ratio for all analytes and labeled standards?	√				
Did each calibration point meet method criteria for signal-to-noise ratios (S/N)?	√				
Were area counts for the highest calibration standard below levels of saturation?	√				
Were manual integrations technically justified to correct for poor software integration?		√			
Response Factors					
Is the ICAL Response Factor Summary present, including RR/RF values for each native/labeled analyte at each level of calibration?	√				
Were all calibration standards used in determining response factors?	√				
Were relative response factors (RR) for each native analyte calculated at each calibration point?	√				
Did the RSD for RRFs for each native analyte meet method criteria?	√				
Were response factors (RF) for each native analyte not having a corresponding labeled compound calculated at each calibration point?	√				
Were RFs for each labeled compound calculated for each calibration point?	√				
Did the RSD for RF for each labeled compound meet method criteria?	√				
Initial Calibration Verification					
Is the calibration verification present, including form 4A/B reflecting results for the ICV (Conc. or %D)	√				
Did all analytes meet method criteria for the ICV.	√				

Laboratory Review Checklist: Initial Calibration

Method: 1613/8290	Process Date: 01/25/18
Instrument Name: E-HRMS-07	Calibration File Name: P5-1801241613I
Processor Name: Gisela Cruz	Reviewer Name: Loan Luong

ER#[5]	Description

NA = Not Applicable;
NR = Not Reviewed;
R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

Lab Code: TX01411 Episode No.: SDG No.:

GC Column: DB-5MSUI ID: 0.25 (mm) Instrument ID: E-HRMS-07

Init. Calib. Date: 01/24/18

Init. Calib.Times: 11:44

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, SPIKES AND DUPLICATES IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
183360	WINDOW DEFINE	P513848	24-JAN-18	11:44:47
76554	CS0.5	P513850	24-JAN-18	13:32:06
76555	CS1	P513851	24-JAN-18	14:23:56
76556	CS2	P513852	24-JAN-18	15:18:44
76557	CS3	P513853	24-JAN-18	16:06:29
76558	CS4	P513854	24-JAN-18	16:55:09
185657	CS5	P513855	24-JAN-18	17:43:48
75080	2ND SOURCE	P513857	24-JAN-18	19:21:06

Sample List Report — **MassLynx 4.1 SCN815 SCN795**

Sample List: C:\MassLynx\EHRMS07.PRO\SampleDB\20180124A.SPL
Last Modified: Thursday, January 25, 2018 07:09:10 Eastern Standard Time
Printed: Thursday, January 25, 2018 07:24:00 Eastern Standard Time

Page Position (1, 1)

Opus 4: P5-180124I613I P513857res

*Opus 4: P5-180124m23I P513857resm23

	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst	Comments
1	1/24/18	10:38	P513847	CS3	186061	EPA1613_ALS	Dioxin_ALS	Tray1:1	LS	not used
2		11:44	P513848	WINDOWDEFINE	183360	EPA1613_ALS	Dioxin_ALS	Tray1:2		HRMS check 11:10
3		12:35	P513849	CS0.5	76554	EPA1613_ALS	Dioxin_ALS	Tray1:3		not used
4		13:32	P513850	CS0.5	76554	EPA1613_ALS	Dioxin_ALS	Tray1:4		~~not used~~ LD 1/24/18
5		14:23	P513851	CS1	76555	EPA1613_ALS	Dioxin_ALS	Tray1:5		
6		15:18	P513852	CS2	76556	EPA1613_ALS	Dioxin_ALS	Tray1:6		
7		16:06	P513853	CS3	76557	EPA1613_ALS	Dioxin_ALS	Tray1:7		
8		16:55	P513854	CS4	76558	EPA1613_ALS	Dioxin_ALS	Tray1:8		
9		17:43	P513855	CS5	185657	EPA1613_ALS	Dioxin_ALS	Tray1:9		
10		18:32	P513856	NONANE	NONANE	EPA1613_ALS	Dioxin_ALS	Tray1:10		
11		19:21	P513857	2ND SOURCE	75080	EPA1613_ALS	Dioxin_ALS	Tray1:11		
12			---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:1		
13			---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:1		
14			---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:2		
15			---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:15		HRMS check 1/25/18 00:51
16		19:21	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:16	---	---
17	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:17	---	---
18	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:18	---	---
19	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:19	---	---
20	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:20	---	---
21	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:21	---	---
22	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:22	---	---
23	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:23	---	---
24	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:24	---	---
25	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:25	---	---

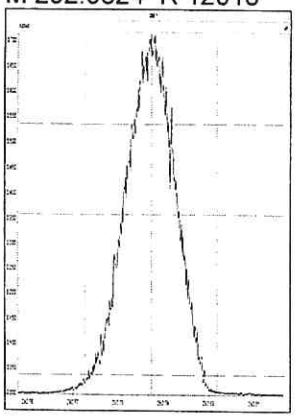
gc 01/25/18

* gc 01/25/18

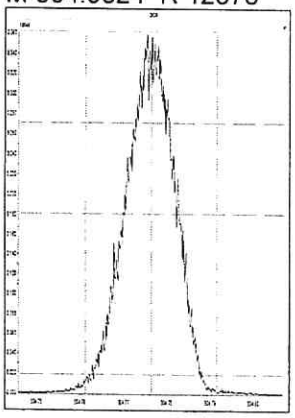
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Wednesday, January 24, 2018 11:40:23 Eastern Standard Time

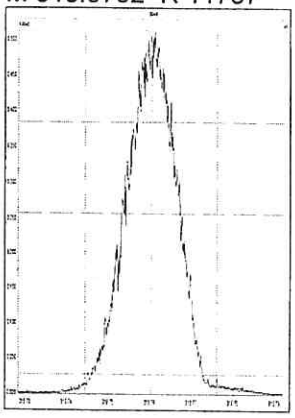
M 292.9824 R 12018



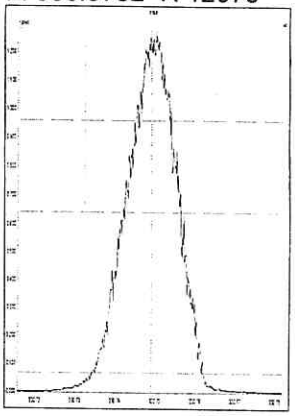
M 304.9824 R 12378



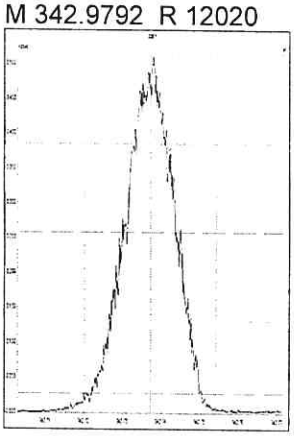
M 318.9792 R 11737



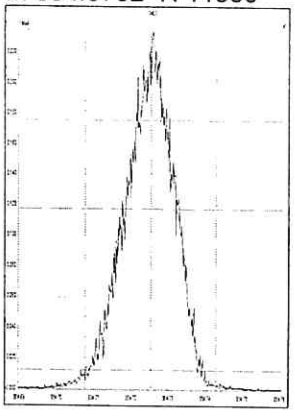
M 330.9792 R 12075



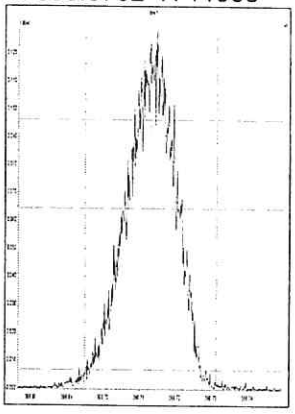
M 342.9792 R 12020



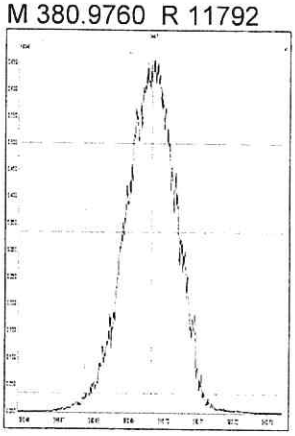
M 354.9792 R 11680



M 366.9792 R 11963



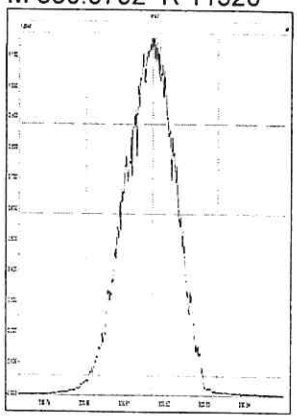
M 380.9760 R 11792



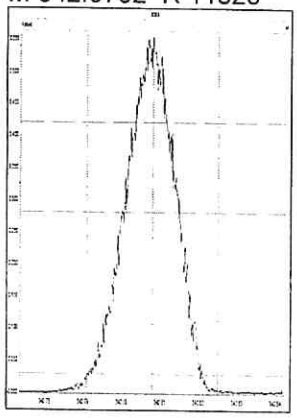
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Wednesday, January 24, 2018 11:41:23 Eastern Standard Time

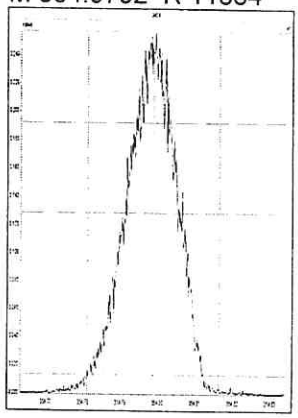
M 330.9792 R 11520



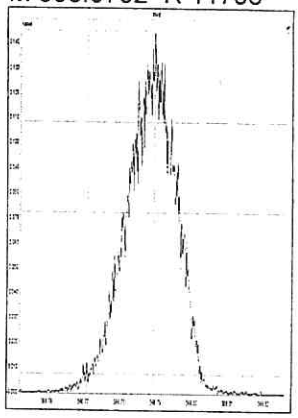
M 342.9792 R 11625



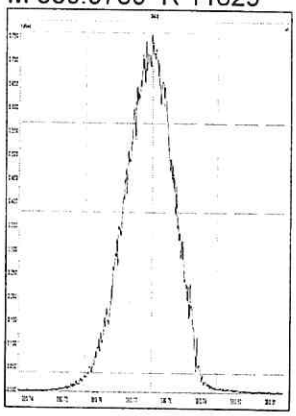
M 354.9792 R 11364



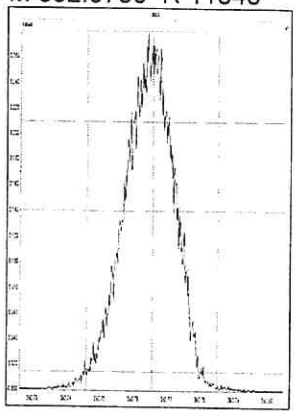
M 366.9792 R 11796



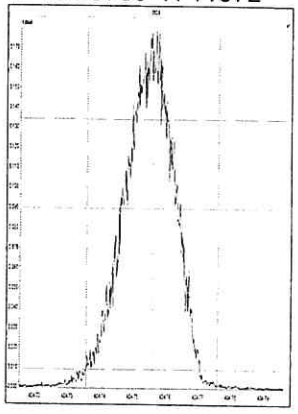
M 380.9760 R 11629



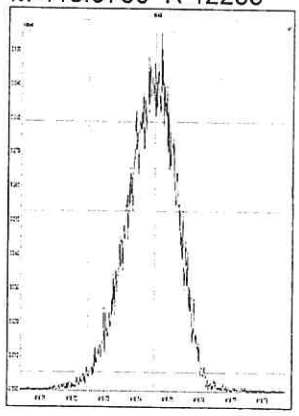
M 392.9760 R 11848



M 404.9760 R 11572



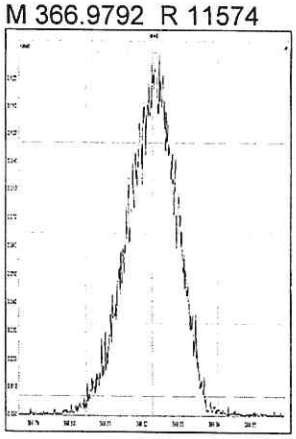
M 416.9760 R 12255



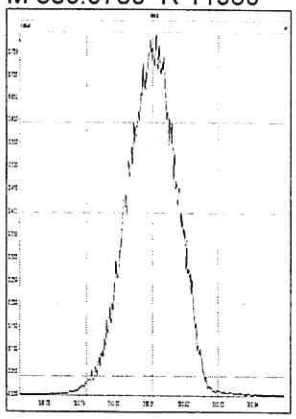
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Wednesday, January 24, 2018 11:42:15 Eastern Standard Time

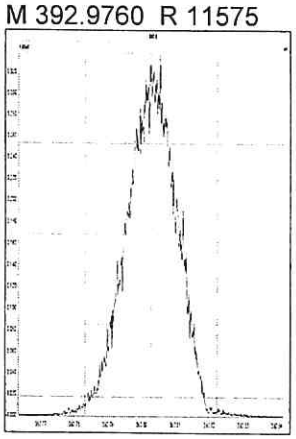
M 366.9792 R 11574



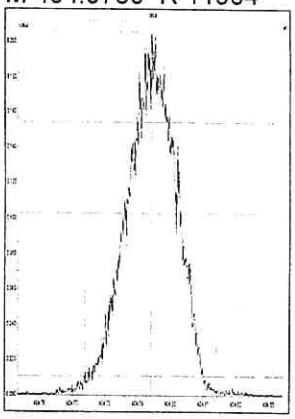
M 380.9760 R 11960



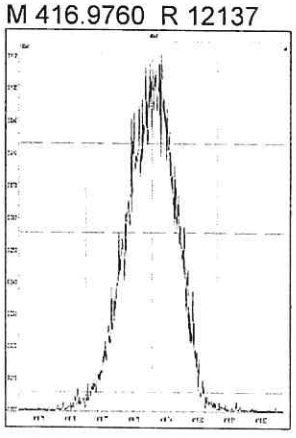
M 392.9760 R 11575



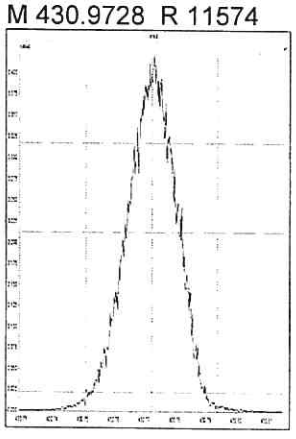
M 404.9760 R 11904



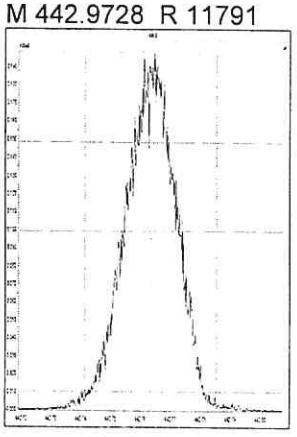
M 416.9760 R 12137



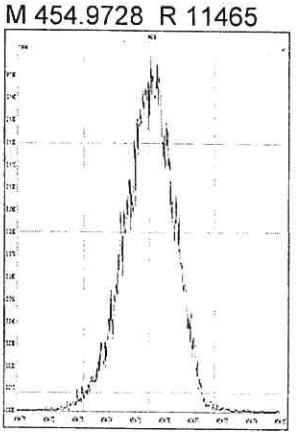
M 430.9728 R 11574



M 442.9728 R 11791



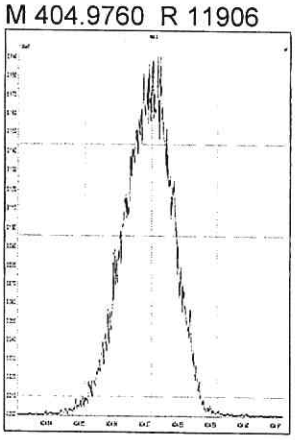
M 454.9728 R 11465



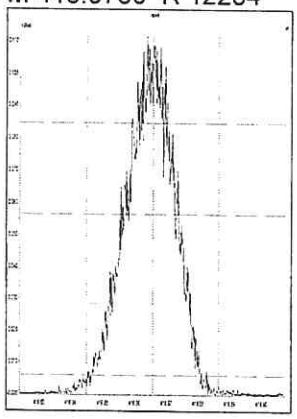
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Wednesday, January 24, 2018 11:43:11 Eastern Standard Time

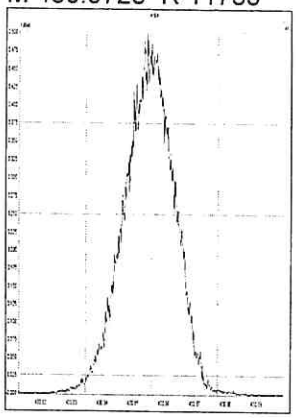
M 404.9760 R 11906



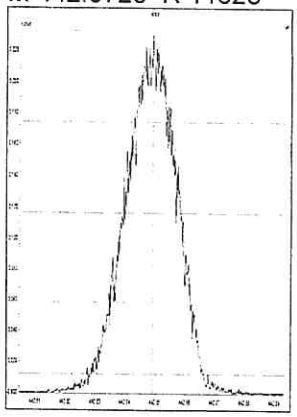
M 416.9760 R 12254



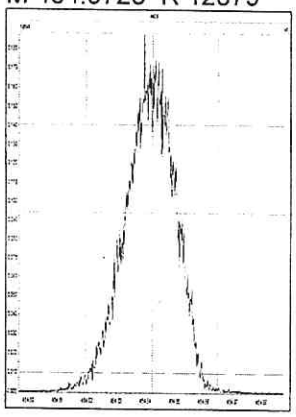
M 430.9728 R 11735



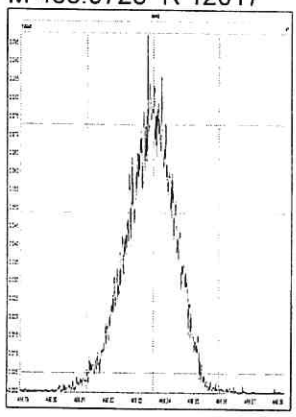
M 442.9728 R 11628



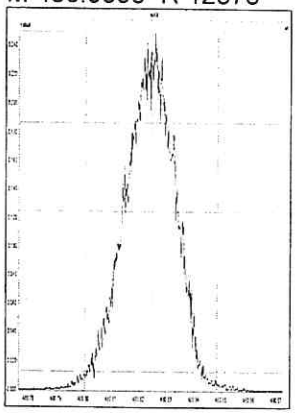
M 454.9728 R 12379



M 466.9728 R 12017



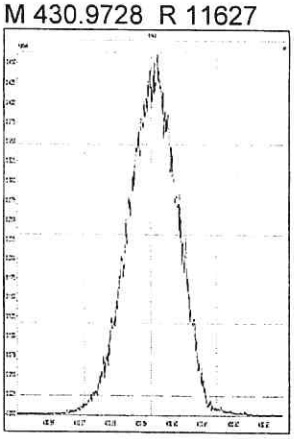
M 480.9696 R 12376



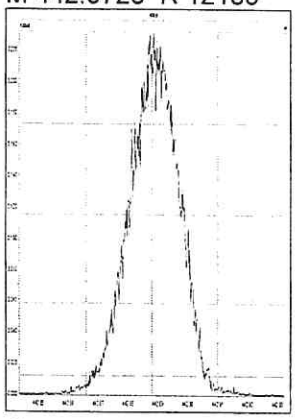
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Wednesday, January 24, 2018 11:43:57 Eastern Standard Time

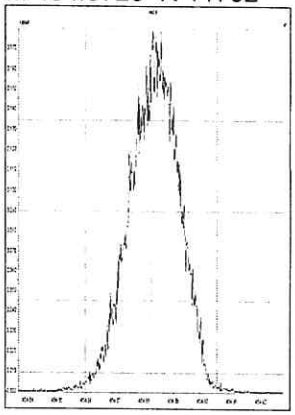
M 430.9728 R 11627



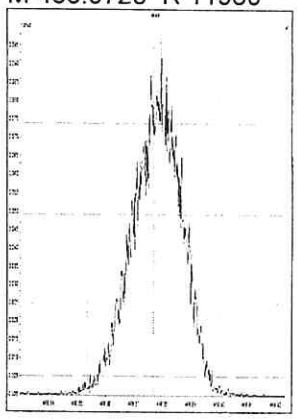
M 442.9728 R 12133



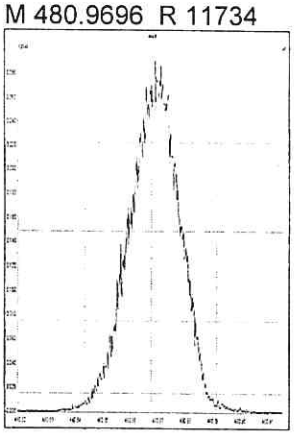
M 454.9728 R 11792



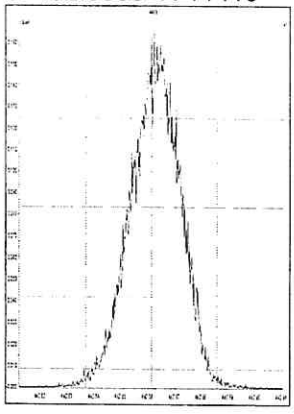
M 466.9728 R 11960



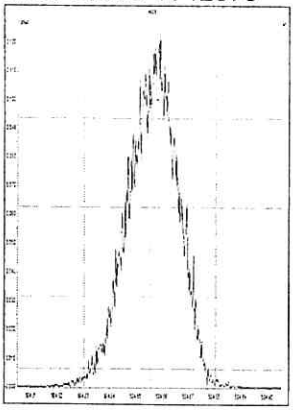
M 480.9696 R 11734



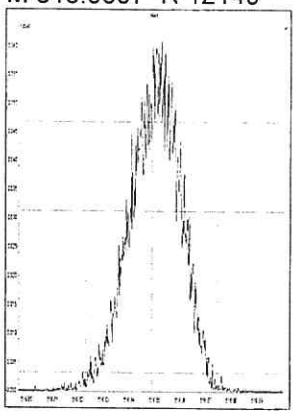
M 492.9696 R 11415



M 504.9696 R 12075



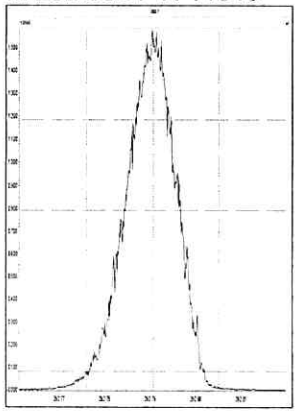
M 516.9697 R 12140



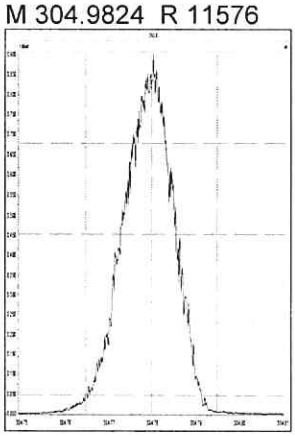
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Thursday, January 25, 2018 06:51:19 Eastern Standard Time

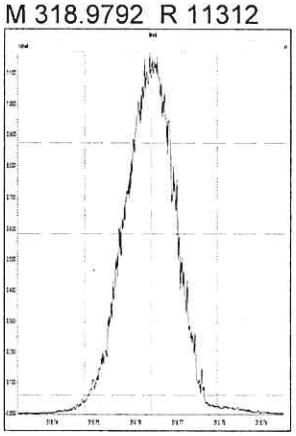
M 292.9824 R 11519



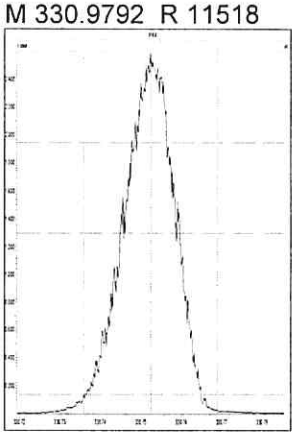
M 304.9824 R 11576



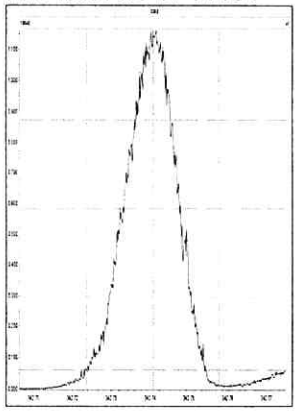
M 318.9792 R 11312



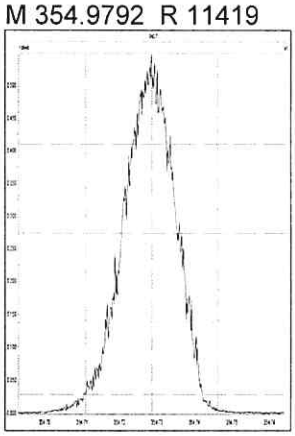
M 330.9792 R 11518



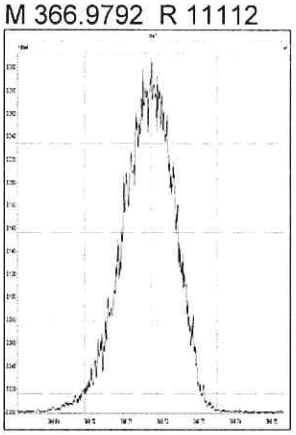
M 342.9792 R 11161



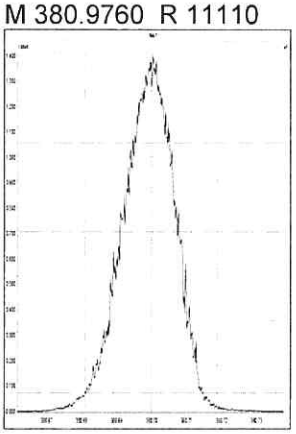
M 354.9792 R 11419



M 366.9792 R 11112



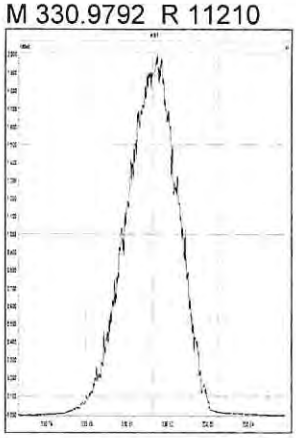
M 380.9760 R 11110



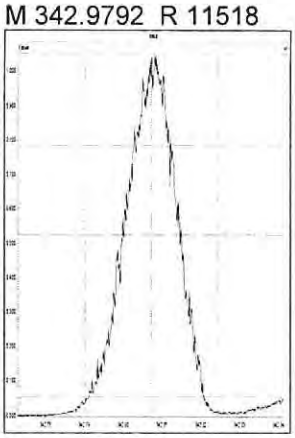
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Thursday, January 25, 2018 06:52:11 Eastern Standard Time

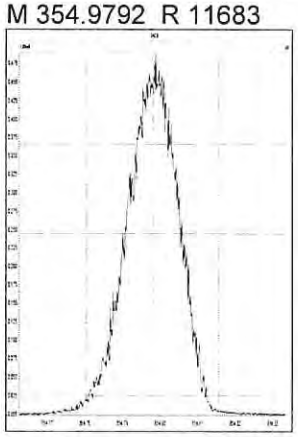
M 330.9792 R 11210



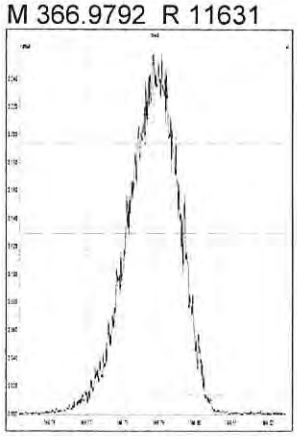
M 342.9792 R 11518



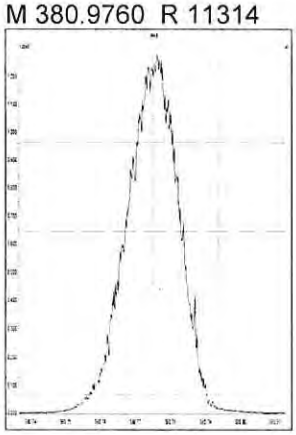
M 354.9792 R 11683



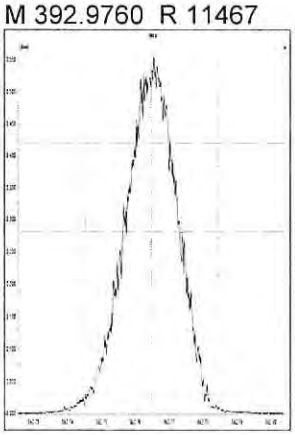
M 366.9792 R 11631



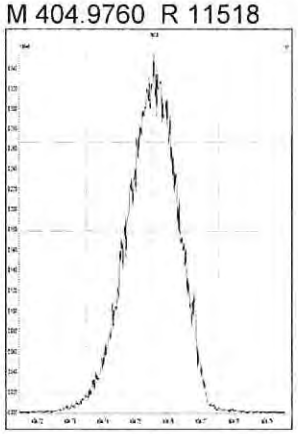
M 380.9760 R 11314



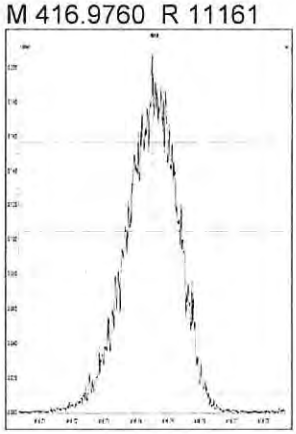
M 392.9760 R 11467



M 404.9760 R 11518



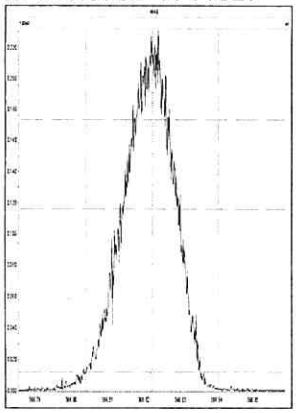
M 416.9760 R 11161



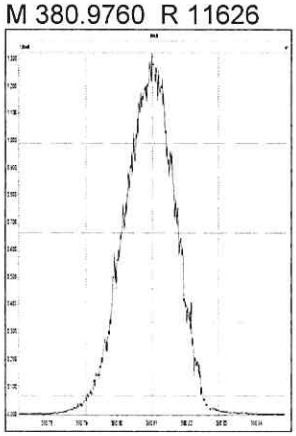
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Thursday, January 25, 2018 06:52:51 Eastern Standard Time

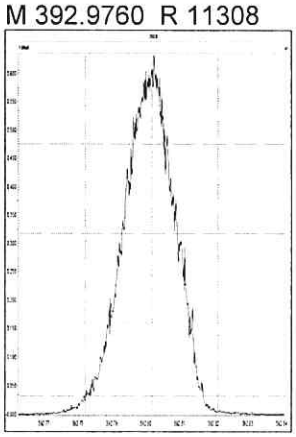
M 366.9792 R 11627



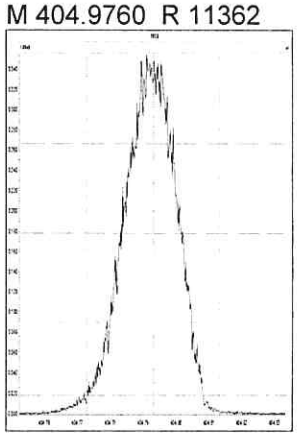
M 380.9760 R 11626



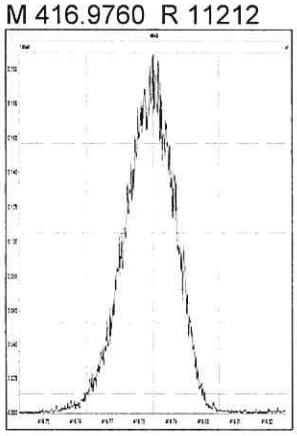
M 392.9760 R 11308



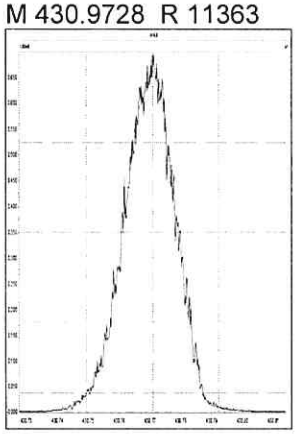
M 404.9760 R 11362



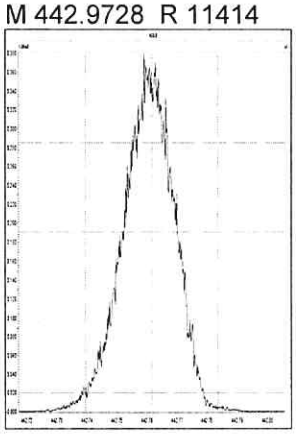
M 416.9760 R 11212



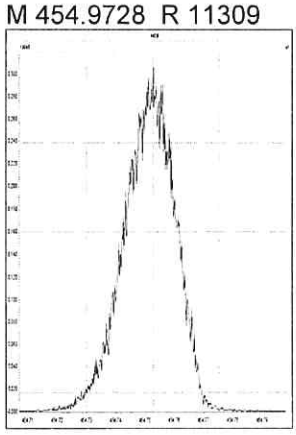
M 430.9728 R 11363



M 442.9728 R 11414



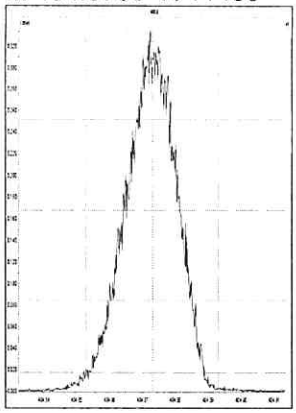
M 454.9728 R 11309



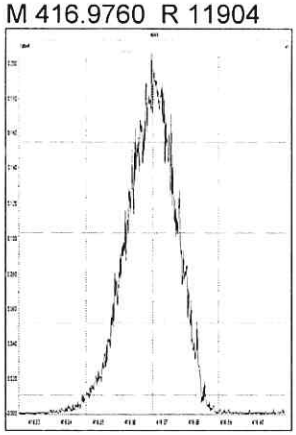
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Thursday, January 25, 2018 06:53:26 Eastern Standard Time

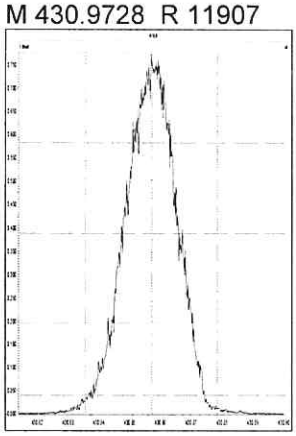
M 404.9760 R 11465



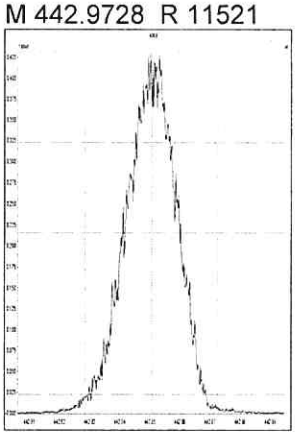
M 416.9760 R 11904



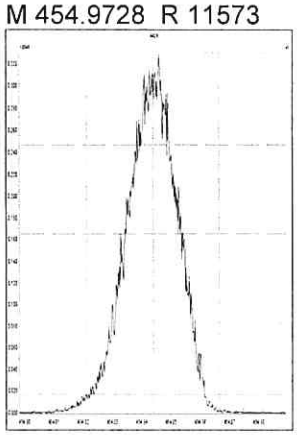
M 430.9728 R 11907



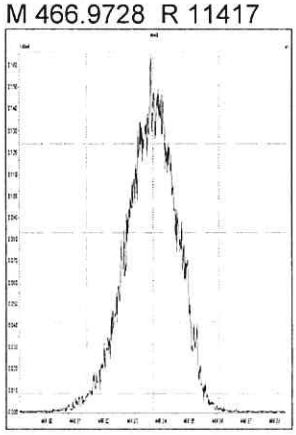
M 442.9728 R 11521



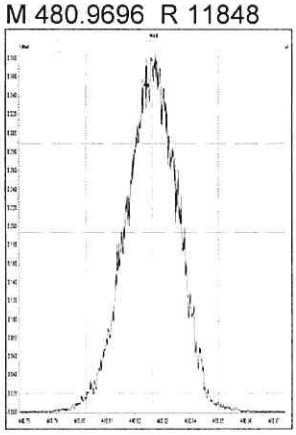
M 454.9728 R 11573



M 466.9728 R 11417



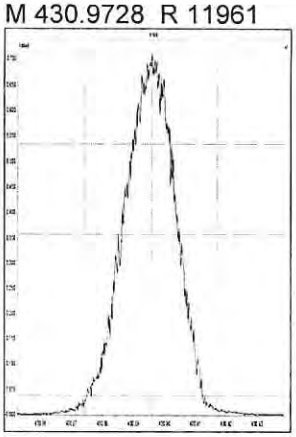
M 480.9696 R 11848



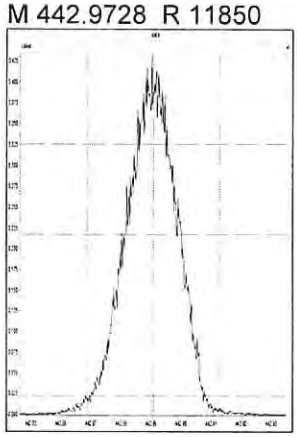
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Thursday, January 25, 2018 06:53:57 Eastern Standard Time

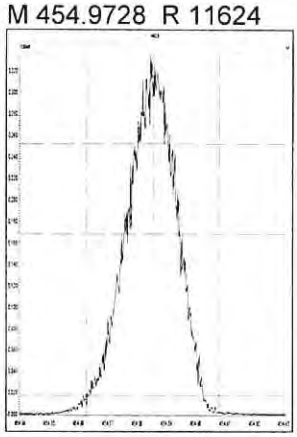
M 430.9728 R 11961



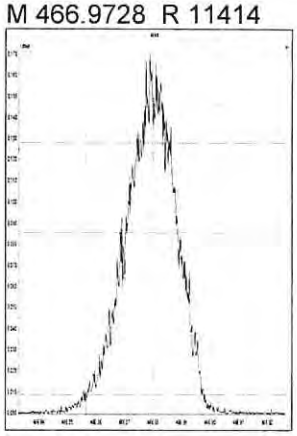
M 442.9728 R 11850



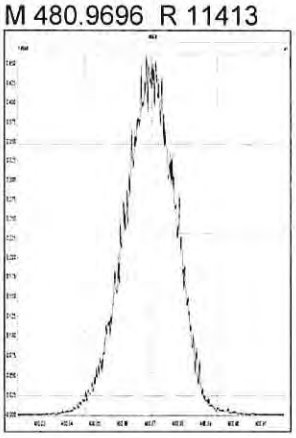
M 454.9728 R 11624



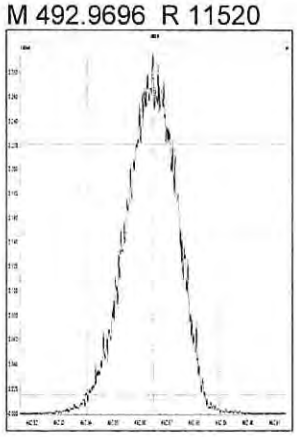
M 466.9728 R 11414



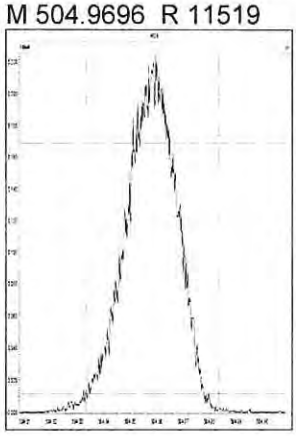
M 480.9696 R 11413



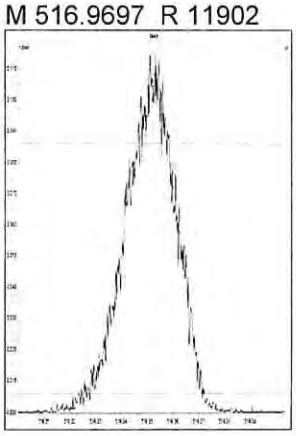
M 492.9696 R 11520



M 504.9696 R 11519



M 516.9697 R 11902



5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

WDM

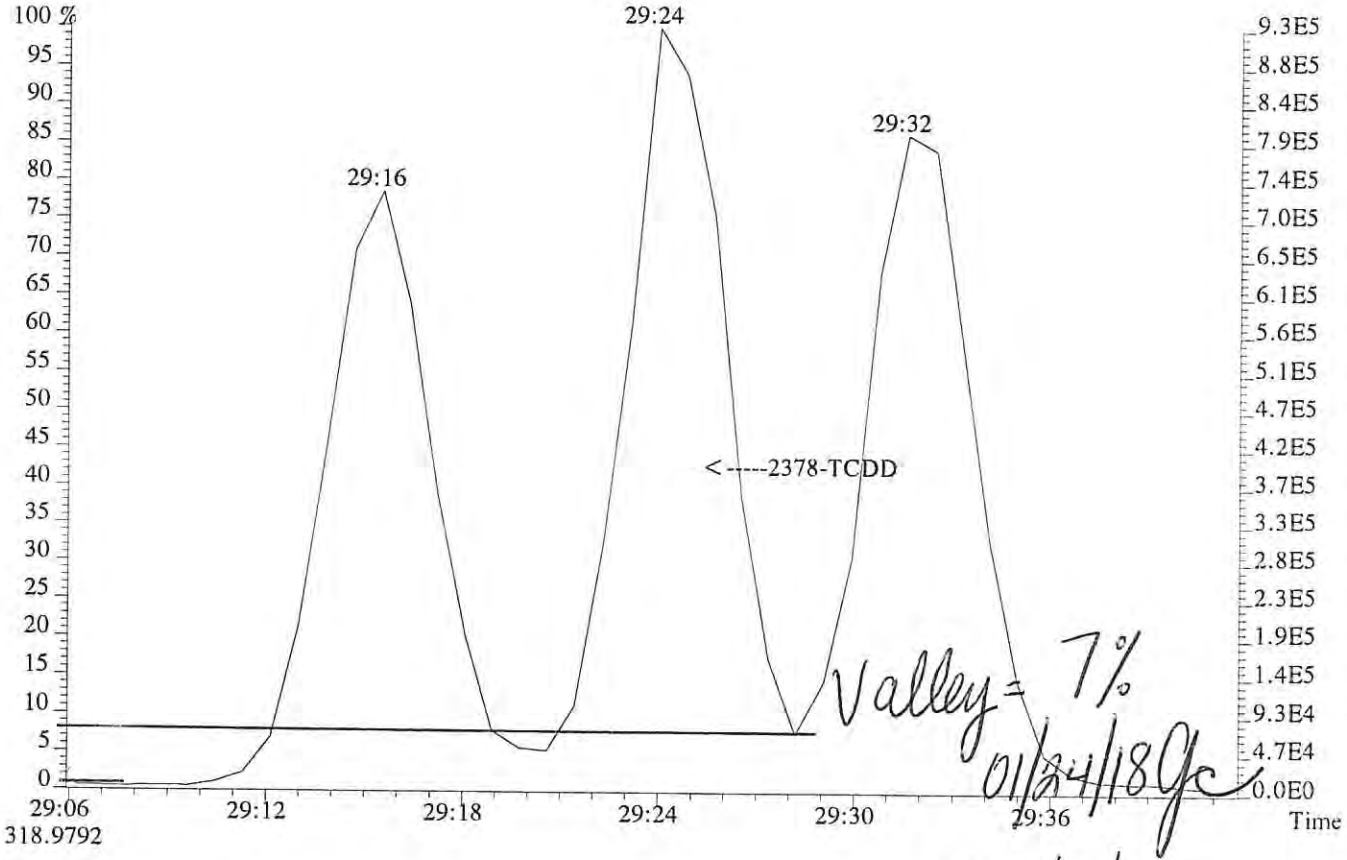
Lab Name: ALS Environmental
Lab Code: ALSTX
GC Column: DB-5MSUI

Case No.: _____ SDG No.:
ID: 0.25 (mm) Lab File ID: P513848
Date Analyzed: 24-JAN-2018
Time Analyzed: 11:44:47

Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	24:25	30:32
TCDD	26:17	30:22
PeCDF	30:27	34:34
PeCDD	31:55	34:19
HxCDF	35:11	37:38
HxCDD	35:41	37:14
HpCDF	38:49	40:14
HpCDD	39:04	39:44

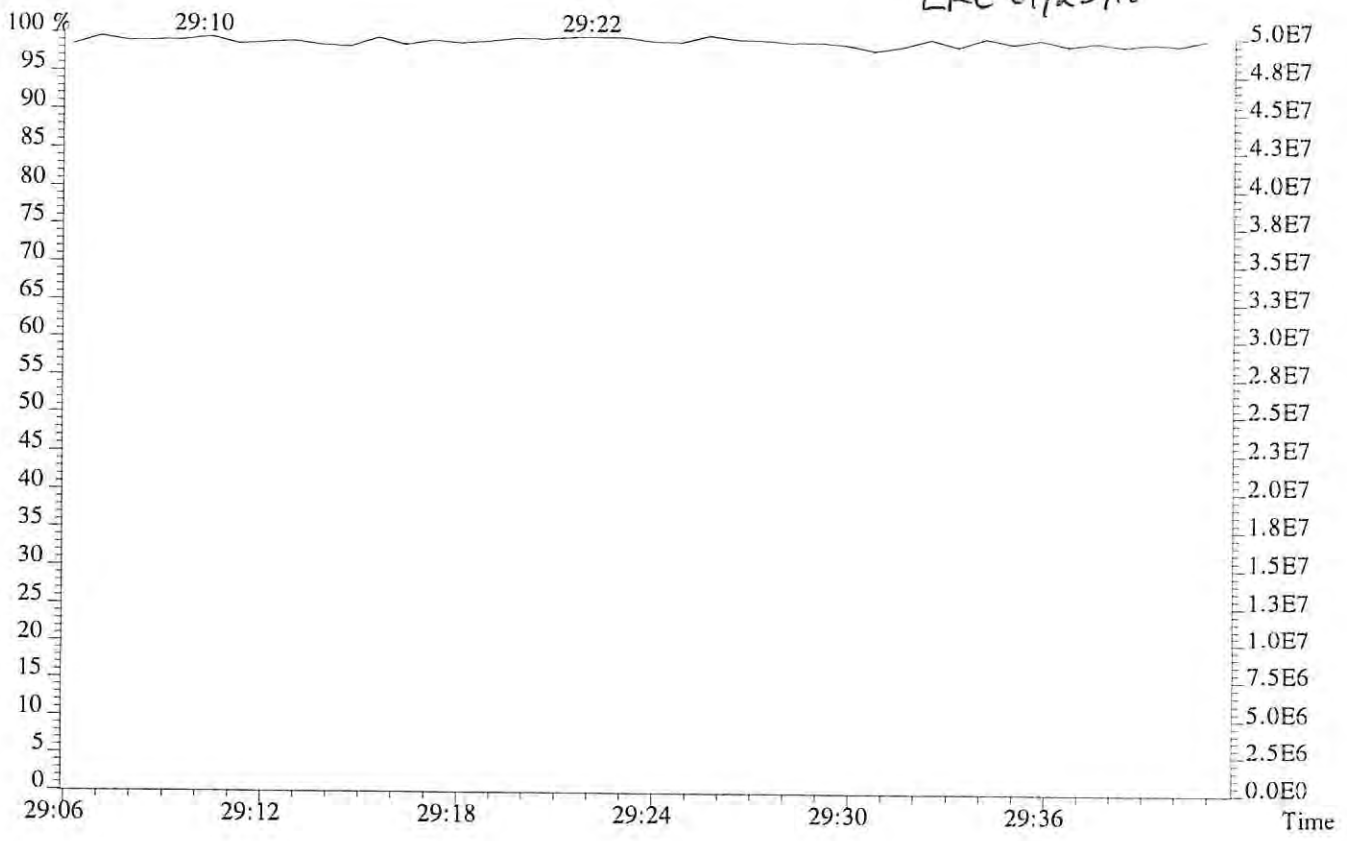
% Valley 2378-TCDD: 7 %

File:P513848 #1-665 Acq:24-JAN-2018 11:44:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:183360
319.8965

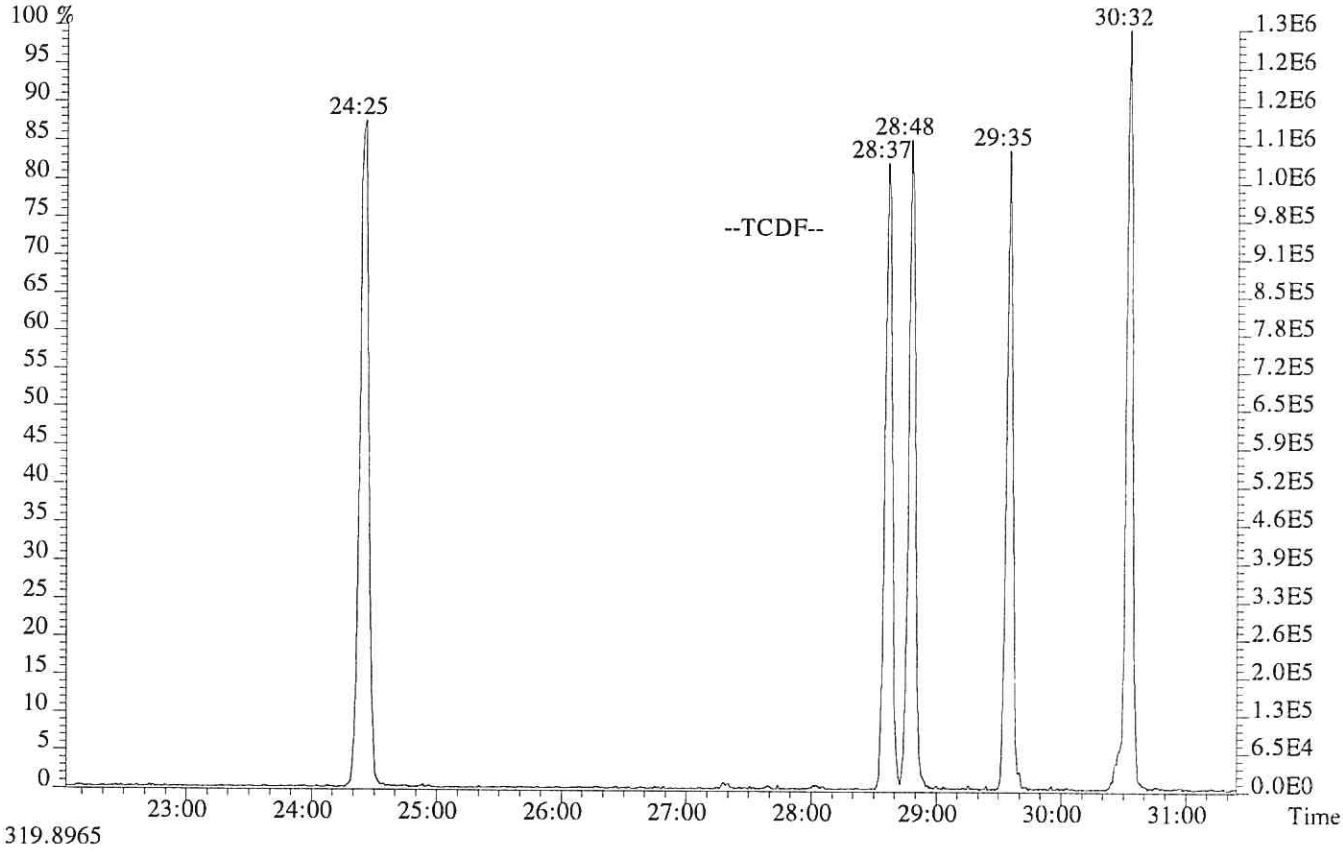


318.9792

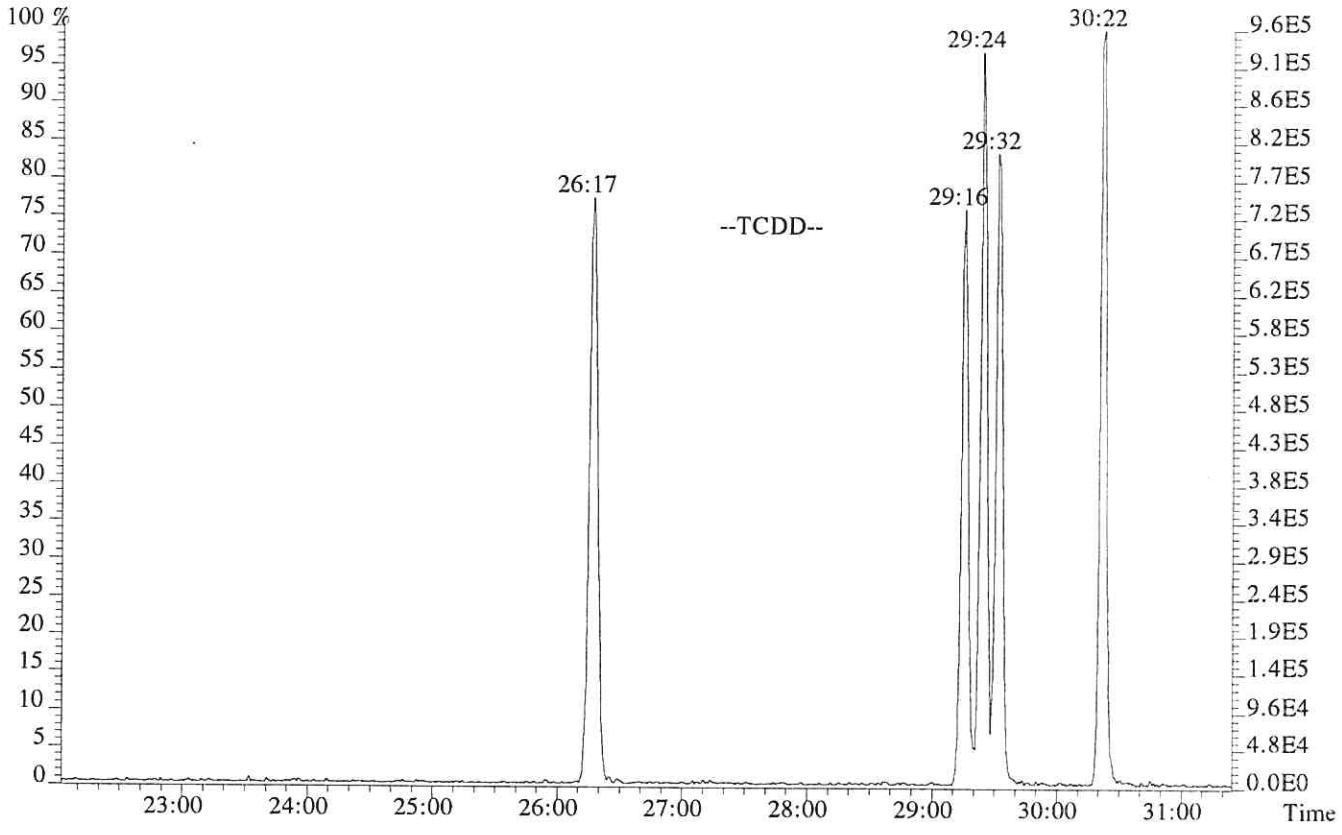
LKL 01/25/18



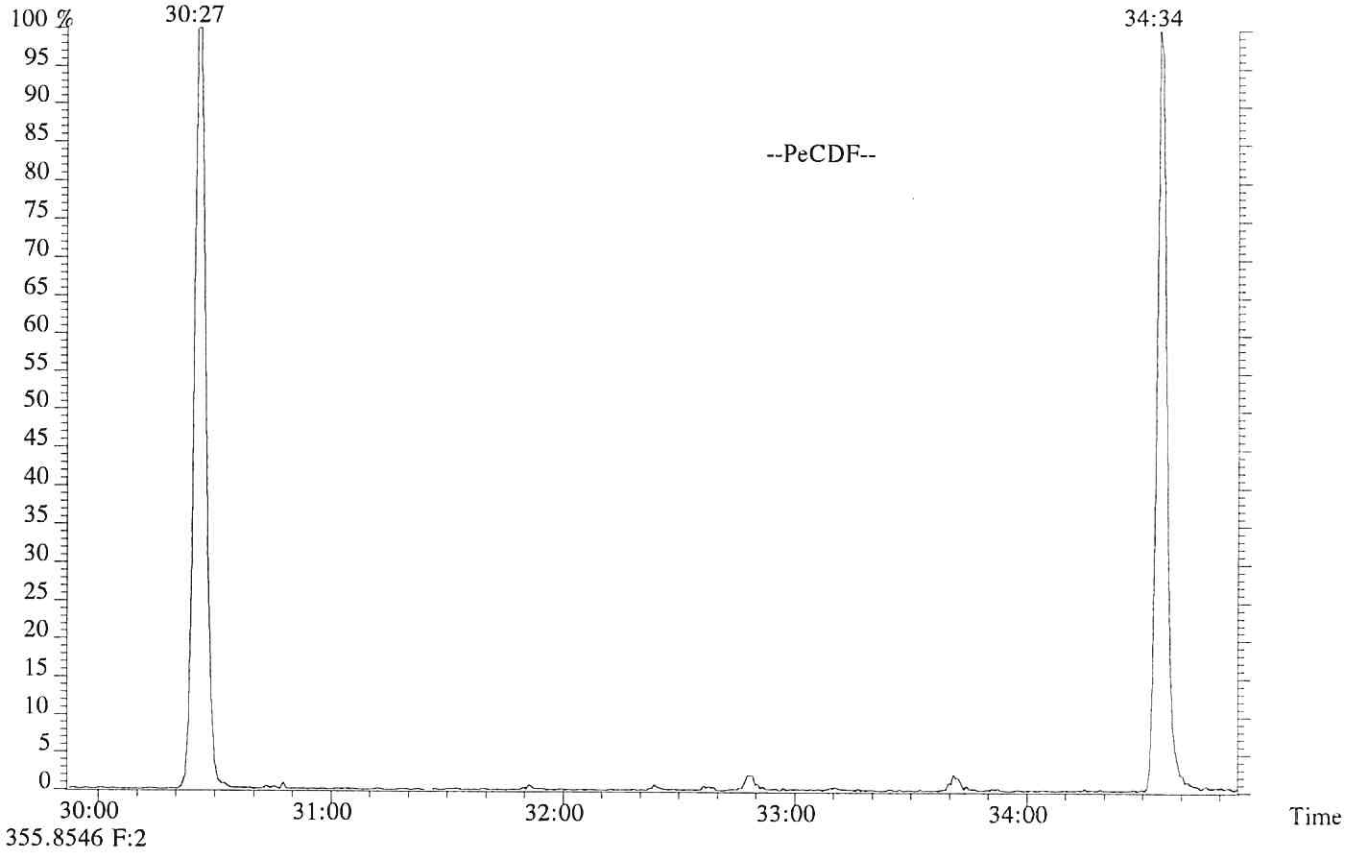
File:P513848 #1-665 Acq:24-JAN-2018 11:44:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:183360
303.9016



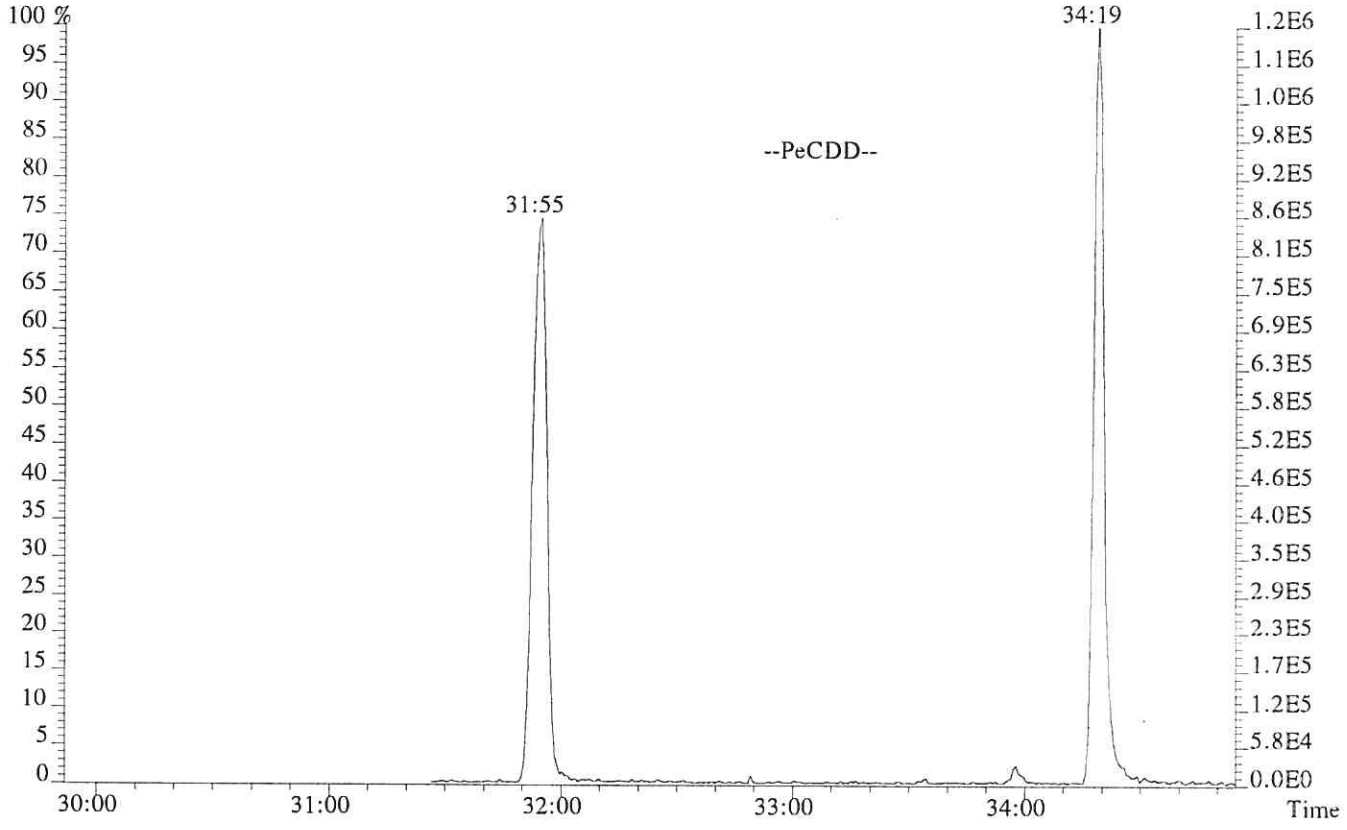
319.8965



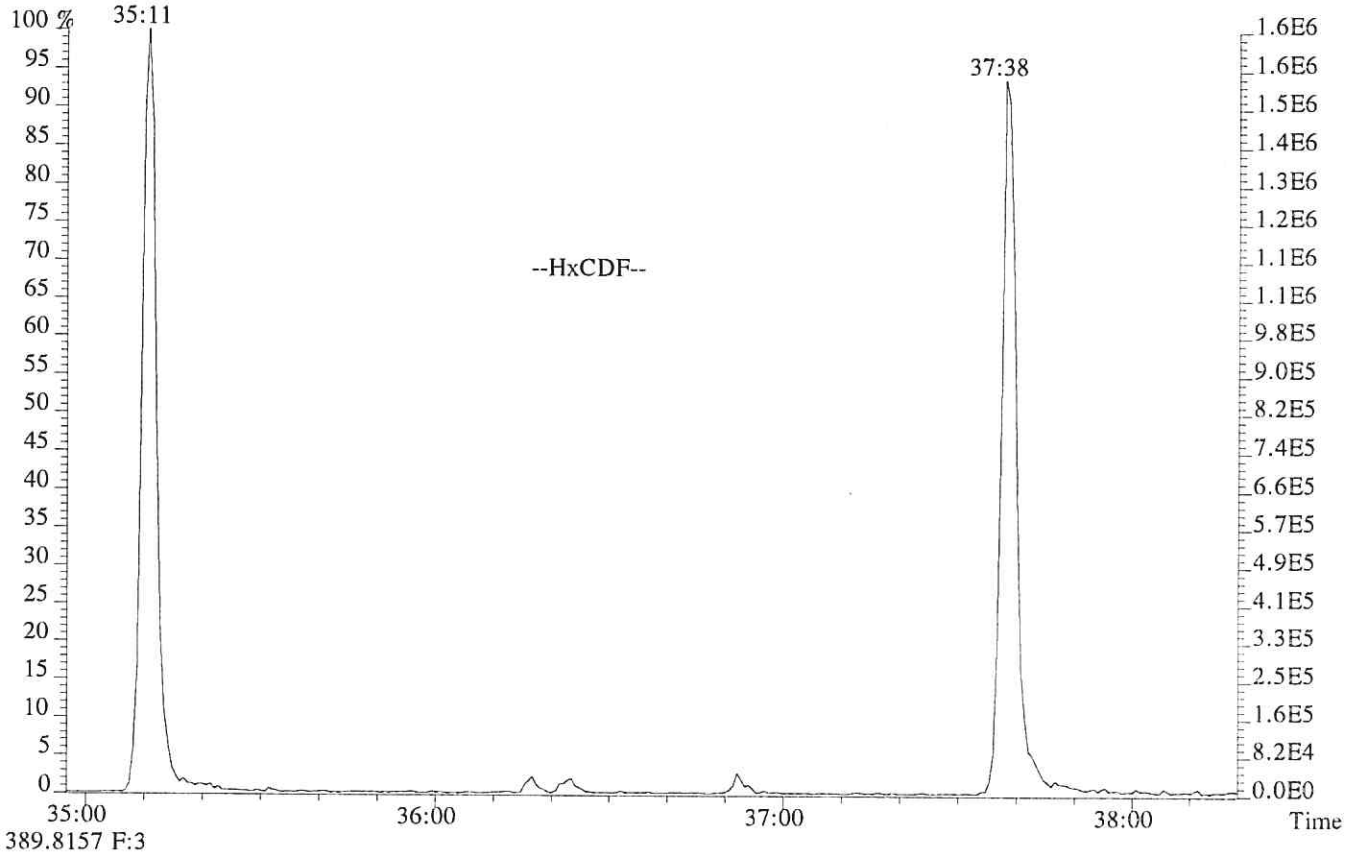
File:P513848 #1-665 Acq:24-JAN-2018 11:44:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:183360
339.8597,339.8597 F:2



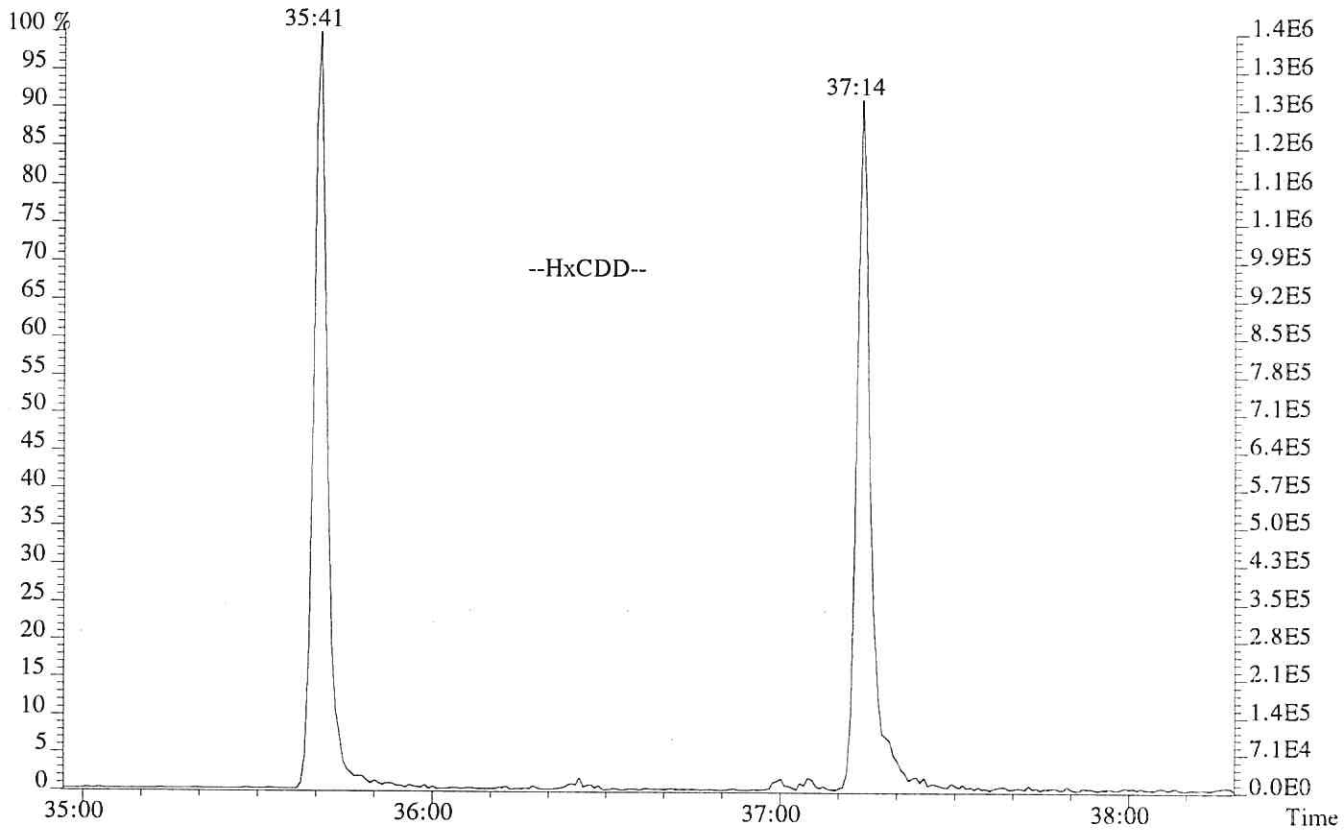
355.8546 F:2



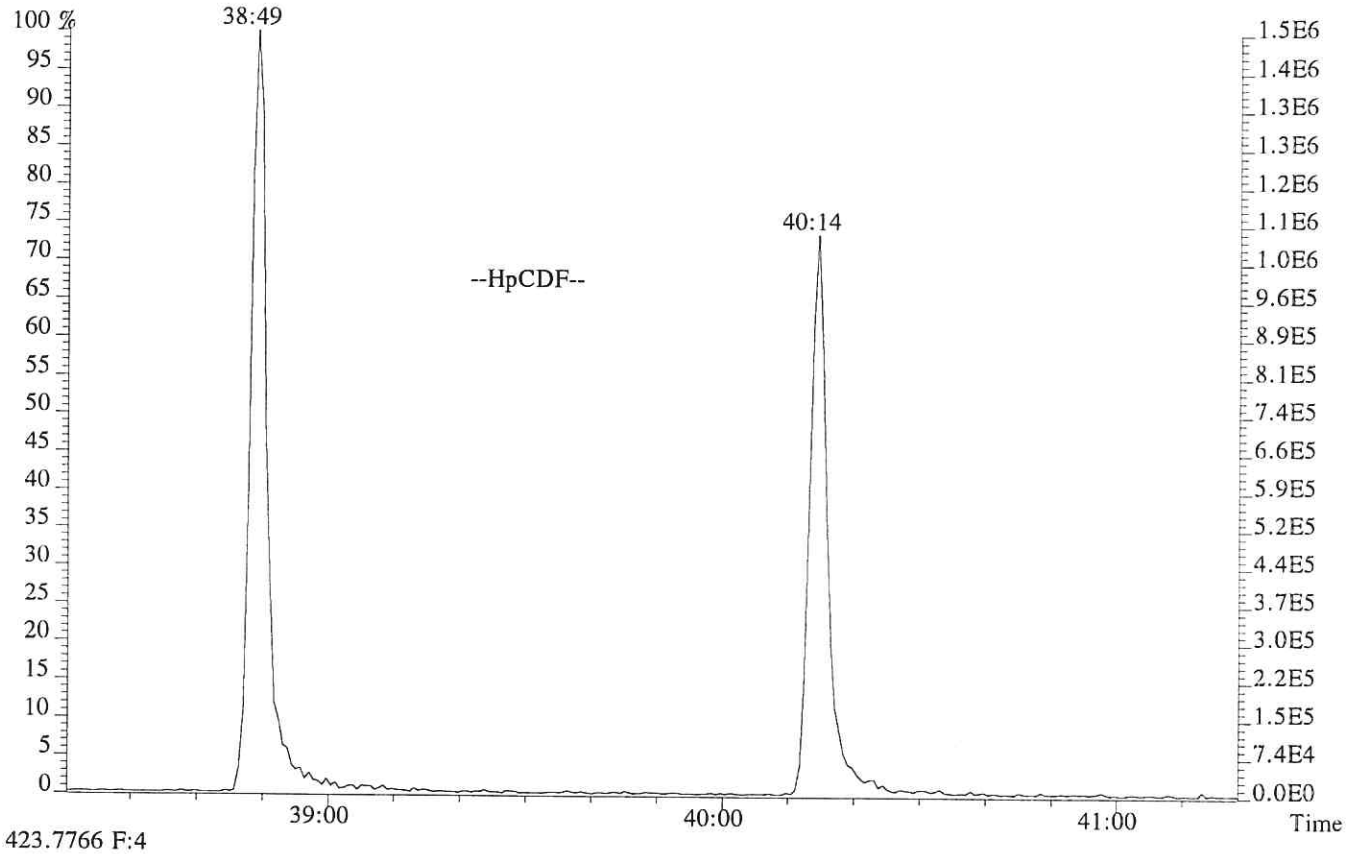
File:P513848 #1-303 Acq:24-JAN-2018 11:44:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:183360
373.8208 F:3



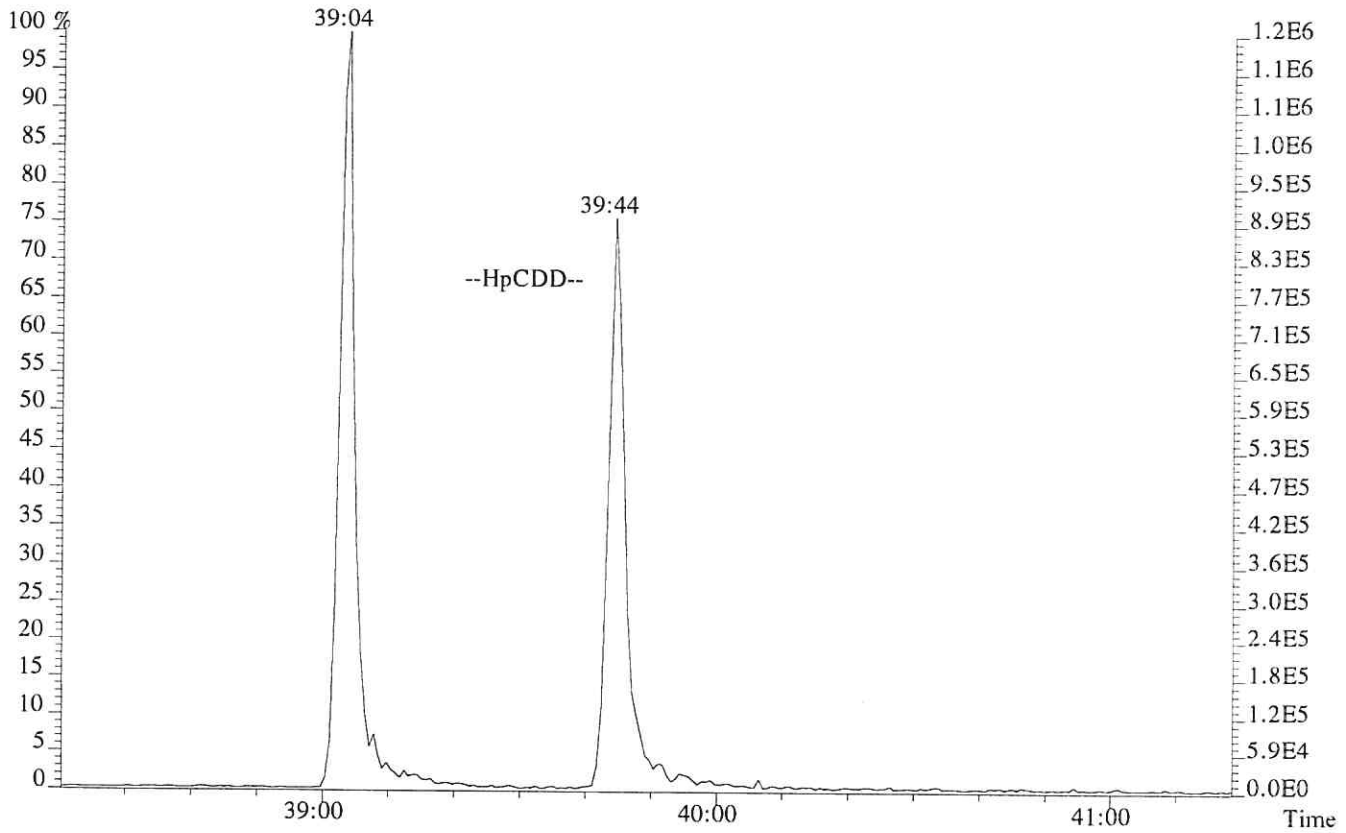
389.8157 F:3



File:P513848 #1-268 Acq:24-JAN-2018 11:44:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:183360
407.7818 F:4



423.7766 F:4



USEPA - CLP
6DFA6
CDD/CDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
HIGH RESOLUTION

Lab Name: ALS Environmental
Lab Code: ALSTX Case No.:
GC Column: DB-5MSUI ID: 0.25(mm)
Init. Calib. Date(s).: 01/24/18
Init. Calib. Time.: 11:44

Contract No.:
TO No.: SDG No.:
Instrument ID: E-HRMS-07
Method 1613/8290

RR/RRF

Target Analytes	CS0.5	CS1	CS2	CS3	CS4	CS5	MEAN RR/RRF	%RSD	QC LIMITS
2,3,7,8-TCDD	1.10	1.07	1.06	1.07	1.10	1.11	1.09	1.96	+/-20%
2,3,7,8-TCDF	0.89	0.96	0.91	0.94	0.96	0.99	0.94	4.09	+/-20%
1,2,3,7,8-PeCDF	0.93	0.98	1.02	1.03	1.06	1.06	1.01	5.02	+/-20%
1,2,3,7,8-PeCDD	0.92	0.97	0.96	0.95	0.97	0.97	0.96	2.08	+/-20%
2,3,4,7,8-PeCDF	0.87	0.94	0.98	0.97	0.99	1.00	0.96	4.97	+/-20%
1,2,3,4,7,8-HxCDF	1.07	1.13	1.22	1.21	1.25	1.26	1.19	6.34	+/-20%
1,2,3,6,7,8-HxCDF	1.06	1.07	1.13	1.13	1.17	1.17	1.12	4.28	+/-20%
1,2,3,4,7,8-HxCDD	0.96	1.04	1.03	1.06	1.06	1.07	1.04	3.78	+/-20%
1,2,3,6,7,8-HxCDD	1.00	1.06	1.03	1.03	1.05	1.06	1.04	2.33	+/-20%
1,2,3,7,8,9-HxCDD	0.98	1.06	1.10	1.06	1.07	1.10	1.06	4.09	+/-20%
2,3,4,6,7,8-HxCDF	1.01	1.09	1.12	1.13	1.15	1.17	1.11	5.18	+/-20%
1,2,3,7,8,9-HxCDF	1.08	1.10	1.15	1.17	1.18	1.18	1.14	3.94	+/-20%
1,2,3,4,6,7,8-HpCDF	1.31	1.32	1.36	1.37	1.37	1.38	1.35	2.22	+/-20%
1,2,3,4,6,7,8-HpCDD	1.00	0.98	1.05	1.03	1.05	1.04	1.02	2.88	+/-20%
1,2,3,4,7,8,9-HpCDF	1.18	1.23	1.29	1.30	1.28	1.27	1.26	3.68	+/-20%
OCDD	1.05	1.14	1.14	1.13	1.12	1.12	1.12	2.97	+/-20%
OCDF	1.26	1.39	1.35	1.33	1.39	1.43	1.36	4.36	+/-20%
Labeled Compounds									
13C-2,3,7,8-TCDD	0.91	0.87	0.93	0.90	0.94	0.98	0.92	4.14	+/-35%
13C-1,2,3,7,8-PeCDD	0.91	0.83	1.03	0.99	1.01	1.08	0.98	9.21	+/-35%
13C-1,2,3,4,7,8-HxCDD	0.94	0.90	0.90	0.95	0.93	0.92	0.92	2.06	+/-35%
13C-1,2,3,6,7,8-HxCDD	0.96	0.96	0.94	0.97	0.97	0.91	0.95	2.50	+/-35%
13C-1,2,3,4,6,7,8-HpCDD	0.81	0.92	0.79	0.88	0.90	0.85	0.86	5.83	+/-35%
13C-OCDD	0.52	0.63	0.58	0.58	0.62	0.57	0.58	6.90	+/-35%
13C-2,3,7,8-TCDF	1.45	1.48	1.53	1.60	1.53	1.49	1.51	3.54	+/-35%
13C-1,2,3,7,8-PeCDF	1.37	1.32	1.50	1.50	1.52	1.62	1.47	7.34	+/-35%
13C-2,3,4,7,8-PeCDF	1.36	1.29	1.50	1.46	1.52	1.61	1.46	7.94	+/-35%
13C-1,2,3,4,7,8-HxCDF	1.22	1.27	1.18	1.29	1.25	1.19	1.23	3.63	+/-35%
13C-1,2,3,6,7,8-HxCDF	1.40	1.48	1.34	1.42	1.41	1.34	1.40	3.84	+/-35%
13C-2,3,4,6,7,8-HxCDF	1.26	1.26	1.23	1.27	1.28	1.23	1.26	1.87	+/-35%
13C-1,2,3,7,8,9-HxCDF	1.03	1.17	1.06	1.00	1.17	1.08	1.09	6.47	+/-35%
13C-1,2,3,4,6,7,8-HpCDF	0.96	1.02	0.92	0.99	0.98	0.93	0.97	3.83	+/-35%
13C-1,2,3,4,7,8,9-HpCDF	0.76	0.95	0.79	0.74	0.86	0.82	0.82	9.19	+/-35%
37Cl-2,3,7,8-TCDD	0.93	0.96	1.03	1.00	1.05	1.11	1.01	6.21	+/-35%

1.123789-HxCDD Relative Response (RR) is calculated based on the labeled analog of the other two HxCDDs.
2. OCDF RR is calculated based on the labeled analog of OCDD

FORM VI-HR CDD-1 DLM02.2

USEPA - CLP
6DFB6
CDD/CDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY
HIGH RESOLUTION

Lab Name: ALS Environmental Contract No.:
Lab Code: ALSTX Case No.: TO No.: SDG No.:
GC Column: DB-5MSUI ID: 0.25(mm) Instrument ID: E-HRMS-07
Init. Calib. Date(s).: 01/24/18 Method 1613/8290
Init. Calib. Time.: 11:44

Target Analytes	SELECTED IONS	ION ABUNDANCE RATIO CS0.5	CS1	CS2	CS3	CS4	CS5	FLAG	ION RATIO QC LIMITS
2,3,7,8-TCDF	304/306	0.76	0.72	0.74	0.75	0.77	0.77		0.65-0.89
2,3,7,8-TCDD	320/322	0.73	0.88	0.76	0.79	0.78	0.78		0.65-0.89
1,2,3,7,8-PeCDF	340/342	1.42	1.54	1.48	1.53	1.54	1.55		1.32-1.78
2,3,4,7,8-PeCDF	340/342	1.48	1.46	1.50	1.52	1.53	1.54		1.32-1.78
1,2,3,7,8-PeCDD	356/358	1.64	1.66	1.58	1.56	1.56	1.57		1.32-1.78
1,2,3,4,7,8-HxCDF	374/376	1.18	1.20	1.20	1.22	1.22	1.23		1.05-1.43
1,2,3,6,7,8-HxCDF	374/376	1.28	1.17	1.21	1.21	1.22	1.24		1.05-1.43
2,3,4,6,7,8-HxCDF	374/376	1.12	1.24	1.22	1.22	1.21	1.22		1.05-1.43
1,2,3,7,8,9-HxCDF	374/376	1.19	1.33	1.22	1.21	1.24	1.23		1.05-1.43
1,2,3,4,7,8-HxCDD	390/392	1.32	1.26	1.25	1.25	1.25	1.26		1.05-1.43
1,2,3,6,7,8-HxCDD	390/392	1.09	1.35	1.26	1.26	1.26	1.26		1.05-1.43
1,2,3,7,8,9-HxCDD	390/392	1.23	1.21	1.24	1.28	1.26	1.25		1.05-1.43
1,2,3,4,6,7,8-HpCDF	408/410	0.98	1.03	1.02	1.02	1.03	1.04		0.88-1.20
1,2,3,4,7,8,9-HpCDF	408/410	1.03	0.96	1.01	1.03	1.03	1.04		0.88-1.20
1,2,3,4,6,7,8-HpCDD	424/426	0.99	1.11	1.04	1.05	1.05	1.05		0.88-1.20
OCDF	442/444	0.88	0.95	0.89	0.90	0.91	0.91		0.76-1.02
OCDD	458/460	0.86	0.88	0.89	0.89	0.89	0.89		0.76-1.02
13C-2,3,7,8-TCDD	332/334	0.81	0.80	0.80	0.80	0.81	0.80		0.65-0.89
13C-1,2,3,7,8-PeCDD	368/370	1.60	1.59	1.59	1.58	1.59	1.59		1.32-1.78
13C-1,2,3,4,7,8-HxCDD	402/404	1.29	1.27	1.26	1.33	1.27	1.28		1.05-1.43
13C-1,2,3,6,7,8-HxCDD	402/404	1.26	1.28	1.27	1.20	1.26	1.26		1.05-1.43
13C-1,2,3,4,6,7,8-HpCDD	436/438	1.06	1.04	1.06	1.06	1.08	1.06		0.88-1.20
13C-OCDD	470/472	0.90	0.91	0.90	0.89	0.90	0.89		0.76-1.02
13C-2,3,7,8-TCDF	316/318	0.79	0.79	0.80	0.79	0.79	0.79		0.65-0.89
13C-1,2,3,7,8-PeCDF	352/354	1.58	1.60	1.59	1.58	1.58	1.59		1.32-1.78
13C-2,3,4,7,8-PeCDF	352/354	1.58	1.58	1.58	1.58	1.58	1.58		1.32-1.78
13C-1,2,3,4,7,8-HxCDF	384/386	0.53	0.52	0.52	0.53	0.53	0.53		0.43-0.59
13C-1,2,3,6,7,8-HxCDF	384/386	0.53	0.53	0.53	0.53	0.53	0.53		0.43-0.59
13C-2,3,4,6,7,8-HxCDF	384/386	0.52	0.52	0.52	0.52	0.53	0.52		0.43-0.59
13C-1,2,3,7,8,9-HxCDF	384/386	0.52	0.52	0.53	0.53	0.52	0.52		0.43-0.59
13C-1,2,3,4,6,7,8-HpCDF	418/420	0.45	0.45	0.45	0.45	0.45	0.45		0.37-0.51
13C-1,2,3,4,7,8,9-HpCDF	418/420	0.45	0.44	0.45	0.45	0.45	0.45		0.37-0.51
13C-1,2,3,4-TCDD	332/334	0.81	0.82	0.81	0.81	0.82	0.82		0.65-0.89
13C-1,2,3,7,8,9-HxCDD	402/404	1.26	1.25	1.27	1.23	1.25	1.25		1.05-1.43

Quality Control (QC) limits represent +/- 15% window around the theoretical ion abundance ratio. The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterisk in the flag column.

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76554

Run #1 Filename P513850 Samp: 1 Inj: 1 Acquired: 24-JAN-18 13:32:06
Processed: 24-JAN-18 15:49:37 Sample ID: CS0.5

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:48	3.276e+02	4.332e+02	0.76	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	2.212e+03	1.557e+03	1.42	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:42	2.093e+03	1.410e+03	1.48	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:17	1.728e+03	1.459e+03	1.18	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:23	2.025e+03	1.584e+03	1.28	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:53	1.636e+03	1.459e+03	1.12	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	1.473e+03	1.234e+03	1.19	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:49	1.513e+03	1.543e+03	0.98	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	1.104e+03	1.067e+03	1.03	yes	no	1.258
10	Unk	OCDF	42:45	1.481e+03	1.680e+03	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:32	2.508e+02	3.419e+02	0.73	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:58	1.543e+03	9.381e+02	1.64	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	37:00	1.247e+03	9.443e+02	1.32	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:05	1.208e+03	1.105e+03	1.09	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:19	1.245e+03	1.015e+03	1.23	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:44	9.700e+02	9.817e+02	0.99	yes	no	1.025
17	Unk	OCDD	42:31	1.223e+03	1.416e+03	0.86	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:47	1.518e+05	1.920e+05	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:48	1.987e+05	1.259e+05	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:41	1.969e+05	1.249e+05	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:16	8.196e+04	1.558e+05	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:23	9.429e+04	1.782e+05	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:52	8.377e+04	1.622e+05	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:37	6.829e+04	1.322e+05	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:48	5.778e+04	1.288e+05	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	4.552e+04	1.019e+05	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:31	9.630e+04	1.195e+05	0.81	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	1.330e+05	8.317e+04	1.60	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	1.026e+05	7.962e+04	1.29	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:04	1.036e+05	8.231e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:44	8.056e+04	7.625e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	42:31	9.520e+04	1.052e+05	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:58	1.055e+05	1.310e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:18	1.085e+05	8.606e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:32	5.518e+02				no	1.014

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
76554

Run #1 Filename P513850 Samp: 1 Inj: 1 Acquired: 24-JAN-18 13:32:06
Processed: 24-JAN-18 15:49:37 LAB. ID: CS0.5

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.43e+04	7.40e+02	8.7e+01	8.19e+04	1.58e+03	5.2e+01
2	1,2,3,7,8-PeCDF	4.30e+05	1.01e+03	4.3e+02	3.00e+05	2.96e+03	1.0e+02
3	2,3,4,7,8-PeCDF	4.25e+05	1.01e+03	4.2e+02	2.98e+05	2.96e+03	1.0e+02
4	1,2,3,4,7,8-HxCDF	3.96e+05	8.76e+02	4.5e+02	3.10e+05	2.44e+02	1.3e+03
5	1,2,3,6,7,8-HxCDF	4.08e+05	8.76e+02	4.7e+02	3.20e+05	2.44e+02	1.3e+03
6	2,3,4,6,7,8-HxCDF	3.56e+05	8.76e+02	4.1e+02	3.17e+05	2.44e+02	1.3e+03
7	1,2,3,7,8,9-HxCDF	3.08e+05	8.76e+02	3.5e+02	2.40e+05	2.44e+02	9.9e+02
8	1,2,3,4,6,7,8-HpCDF	3.07e+05	8.60e+02	3.6e+02	3.29e+05	5.36e+02	6.1e+02
9	1,2,3,4,7,8,9-HpCDF	2.09e+05	8.60e+02	2.4e+02	1.94e+05	5.36e+02	3.6e+02
10	OCDF	2.59e+05	6.40e+02	4.0e+02	2.85e+05	1.05e+03	2.7e+02
11	2,3,7,8-TCDD	4.96e+04	1.22e+03	4.1e+01	7.37e+04	7.32e+02	1.0e+02
12	1,2,3,7,8-PeCDD	3.05e+05	1.17e+03	2.6e+02	1.78e+05	1.88e+02	9.5e+02
13	1,2,3,4,7,8-HxCDD	2.70e+05	5.20e+02	5.2e+02	2.09e+05	4.64e+02	4.5e+02
14	1,2,3,6,7,8-HxCDD	2.52e+05	5.20e+02	4.8e+02	2.26e+05	4.64e+02	4.9e+02
15	1,2,3,7,8,9-HxCDD	2.55e+05	5.20e+02	4.9e+02	2.09e+05	4.64e+02	4.5e+02
16	1,2,3,4,6,7,8-HpCDD	1.84e+05	1.72e+02	1.1e+03	2.04e+05	1.92e+02	1.1e+03
17	OCDD	1.95e+05	1.24e+02	1.6e+03	2.29e+05	1.76e+03	1.3e+02
18	13C-2,3,7,8-TCDF	2.97e+07	7.00e+03	4.2e+03	3.74e+07	3.24e+03	1.2e+04
19	13C-1,2,3,7,8-PeCDF	3.75e+07	6.04e+02	6.2e+04	2.38e+07	1.03e+03	2.3e+04
20	13C-2,3,4,7,8-PeCDF	3.92e+07	6.04e+02	6.5e+04	2.45e+07	1.03e+03	2.4e+04
21	13C-1,2,3,4,7,8-HxCDF	1.77e+07	4.00e+02	4.4e+04	3.34e+07	1.14e+03	2.9e+04
22	13C-1,2,3,6,7,8-HxCDF	1.91e+07	4.00e+02	4.8e+04	3.65e+07	1.14e+03	3.2e+04
23	13C-2,3,4,6,7,8-HxCDF	1.78e+07	4.00e+02	4.5e+04	3.38e+07	1.14e+03	3.0e+04
24	13C-1,2,3,7,8,9-HxCDF	1.38e+07	4.00e+02	3.5e+04	2.65e+07	1.14e+03	2.3e+04
25	13C-1,2,3,4,6,7,8-HpCDF	1.16e+07	1.44e+03	8.1e+03	2.60e+07	5.60e+03	4.6e+03
26	13C-1,2,3,4,7,8,9-HpCDF	8.60e+06	1.44e+03	6.0e+03	1.92e+07	5.60e+03	3.4e+03
27	13C-2,3,7,8-TCDD	1.97e+07	6.10e+03	3.2e+03	2.45e+07	2.10e+03	1.2e+04
28	13C-1,2,3,7,8-PeCDD	2.62e+07	9.88e+02	2.7e+04	1.65e+07	6.72e+02	2.4e+04
29	13C-1,2,3,4,7,8-HxCDD	2.25e+07	4.24e+03	5.3e+03	1.74e+07	9.28e+02	1.9e+04
30	13C-1,2,3,6,7,8-HxCDD	2.12e+07	4.24e+03	5.0e+03	1.71e+07	9.28e+02	1.8e+04
31	13C-1,2,3,4,6,7,8-HpCDD	1.57e+07	9.20e+02	1.7e+04	1.49e+07	8.32e+02	1.8e+04
32	13C-OCDD	1.56e+07	1.68e+02	9.3e+04	1.71e+07	3.40e+02	5.0e+04
33	13C-1,2,3,4-TCDD	2.11e+07	6.10e+03	3.5e+03	2.60e+07	2.10e+03	1.2e+04
34	13C-1,2,3,7,8,9-HxCDD	2.13e+07	4.24e+03	5.0e+03	1.71e+07	9.28e+02	1.8e+04
35	37Cl-2,3,7,8-TCDD	1.10e+05	1.04e+03	1.1e+02			

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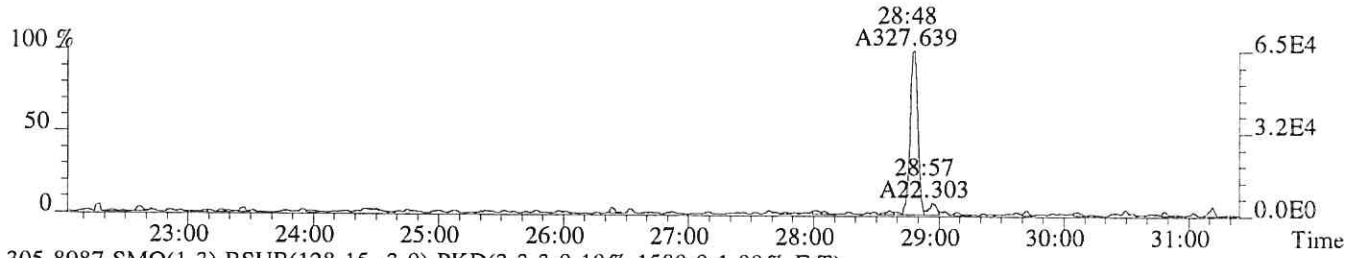
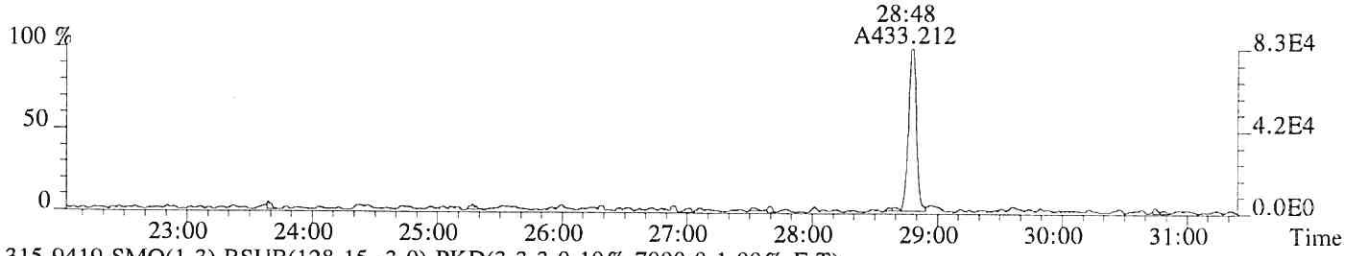
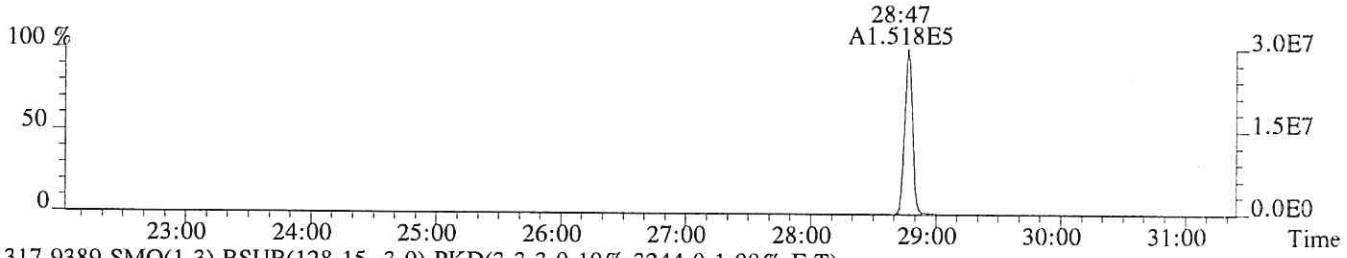
File:P513850 #1-665 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,740.0,1.00%,F,T)



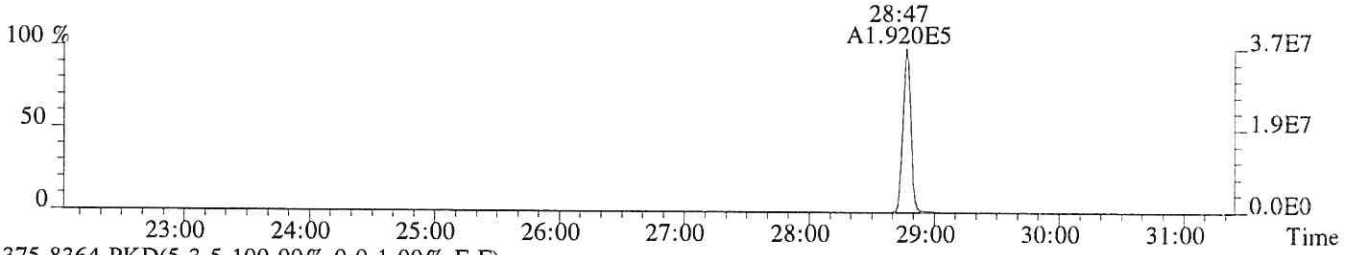
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1580.0,1.00%,F,T)



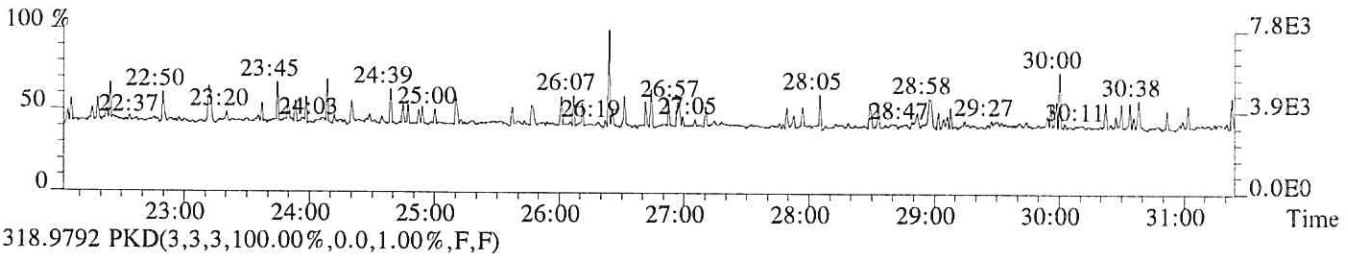
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7000.0,1.00%,F,T)



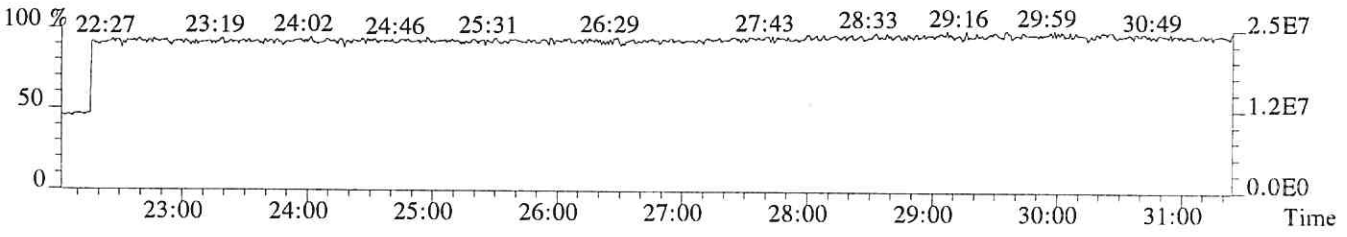
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3244.0,1.00%,F,T)



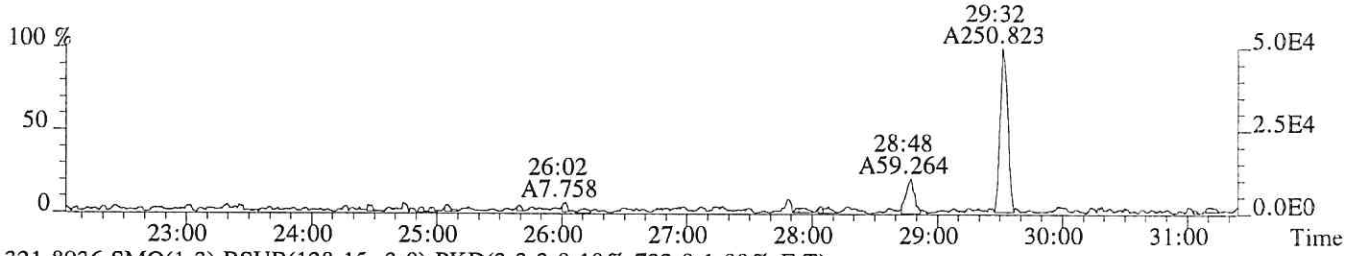
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



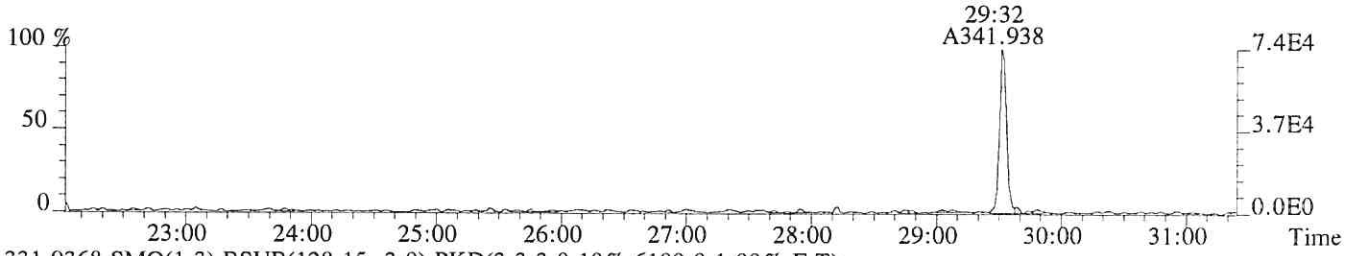
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



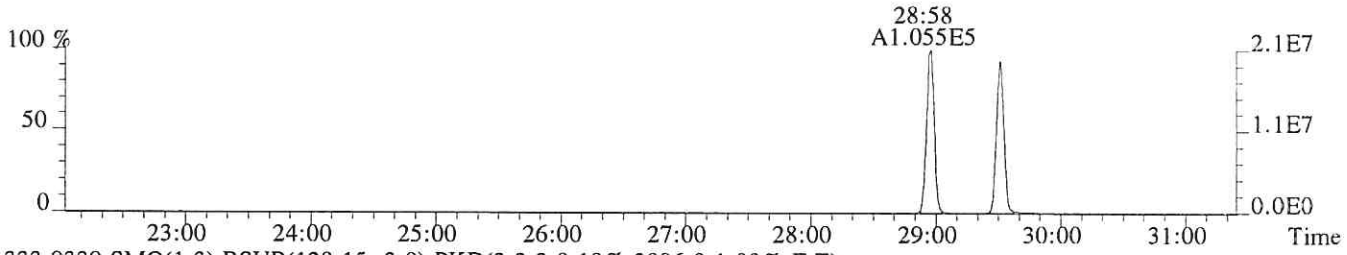
File:P513850 #1-665 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1220.0,1.00%,F,T)



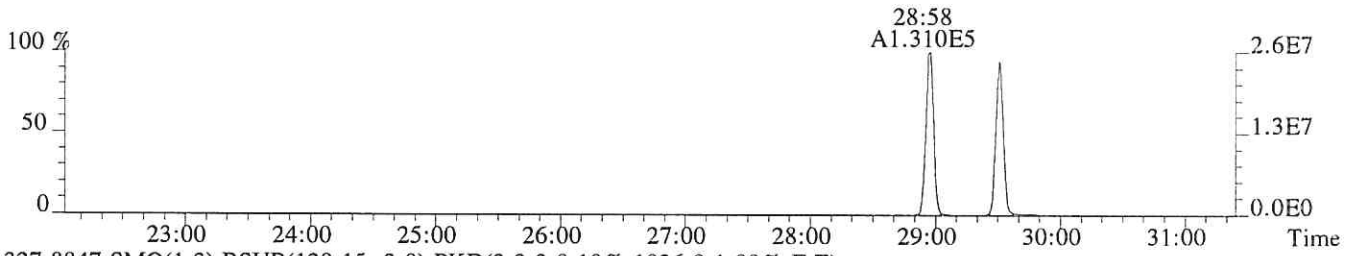
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,732.0,1.00%,F,T)



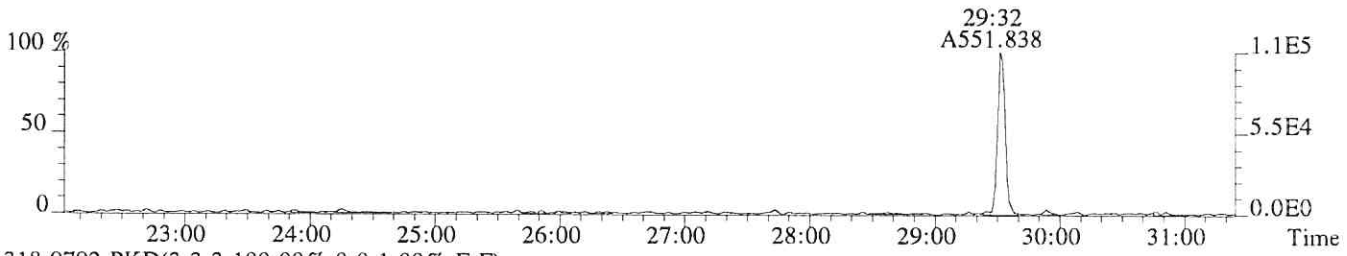
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6100.0,1.00%,F,T)



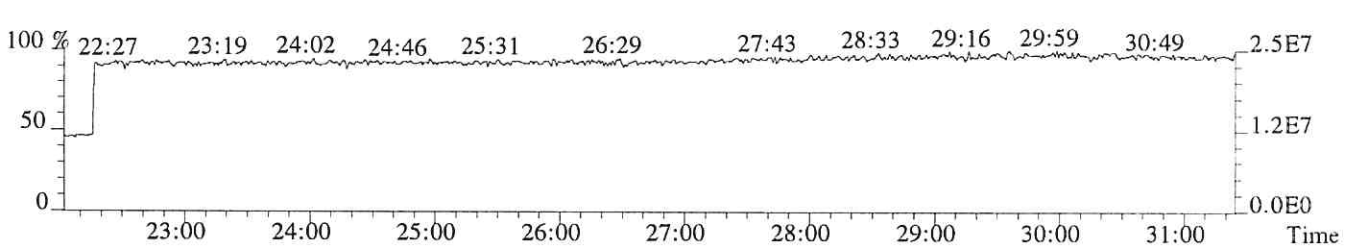
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2096.0,1.00%,F,T)



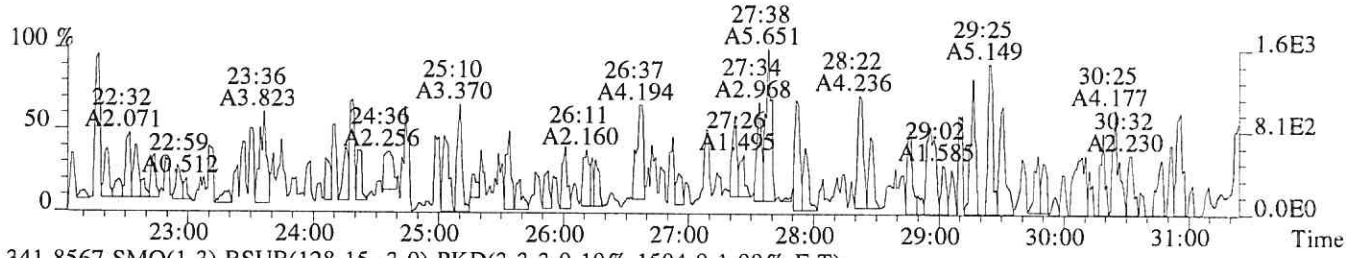
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1036.0,1.00%,F,T)



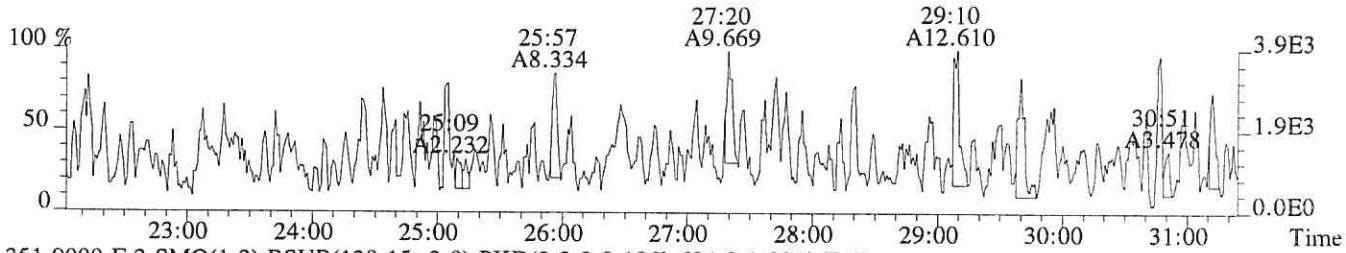
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



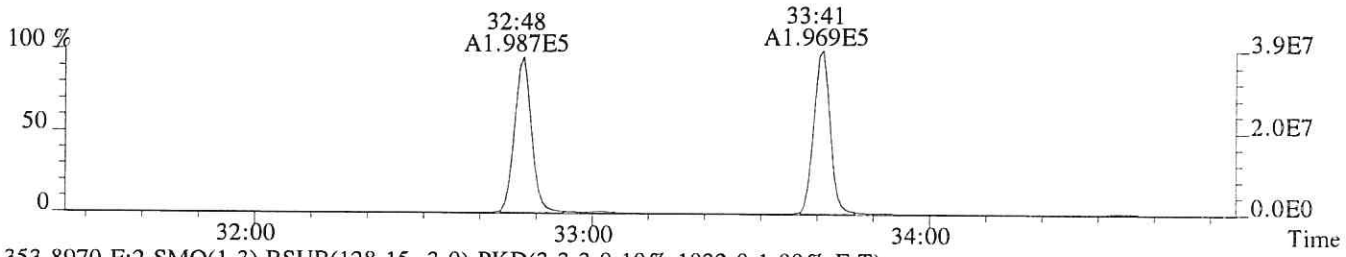
File:P513850 #1-665 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,244.0,1.00%,F,T)



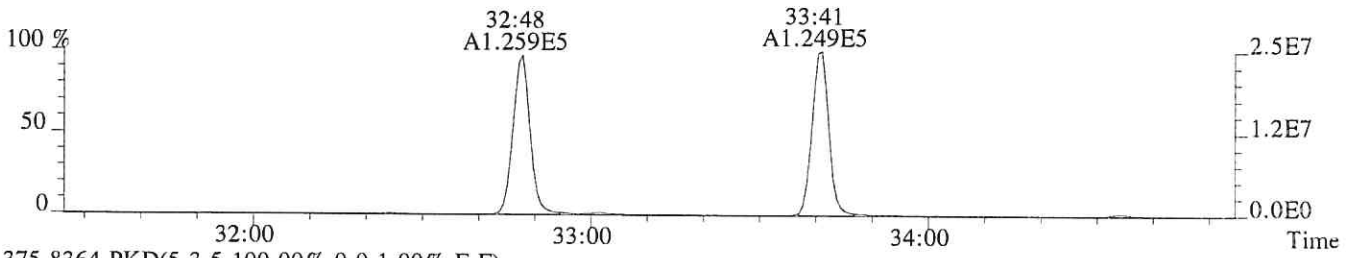
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1504.0,1.00%,F,T)



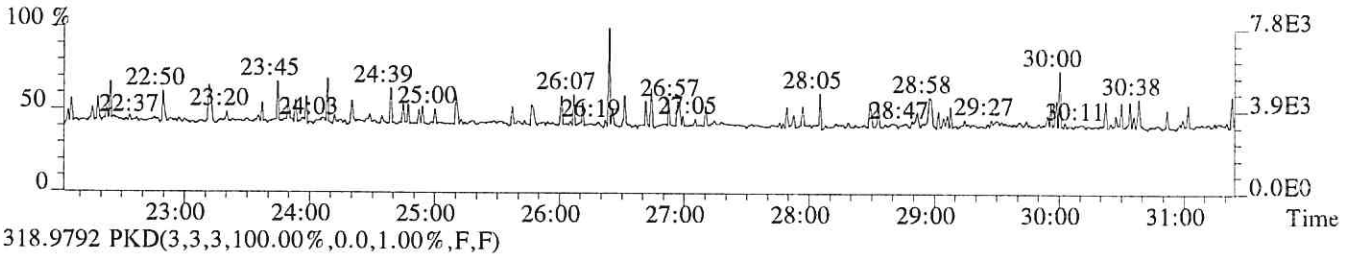
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,604.0,1.00%,F,T)



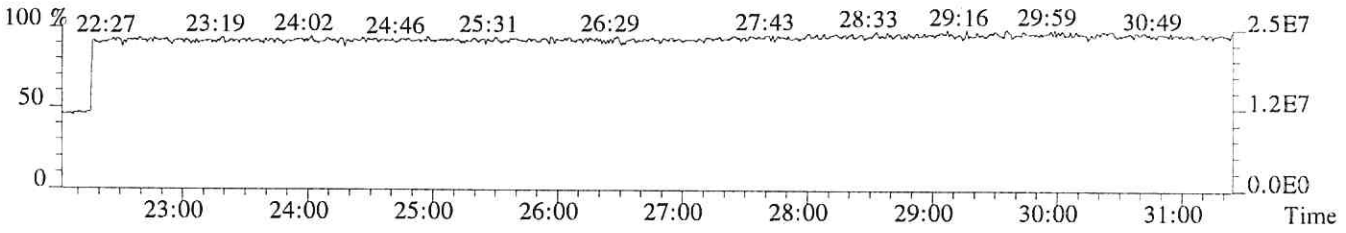
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1032.0,1.00%,F,T)



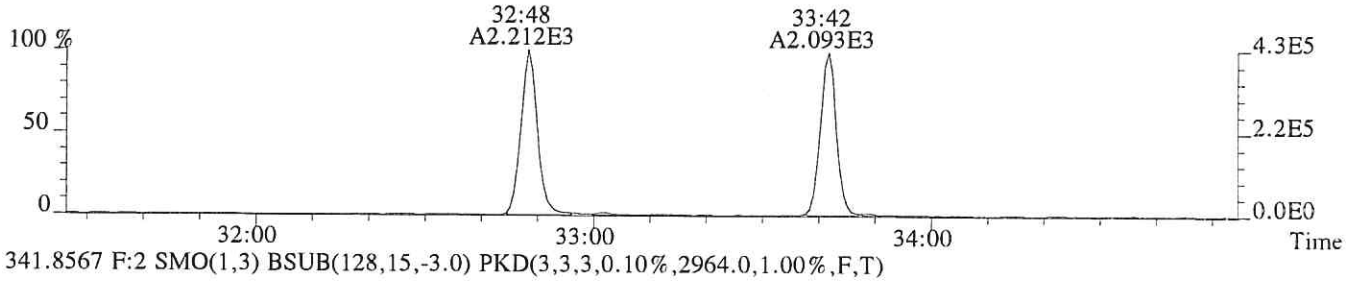
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



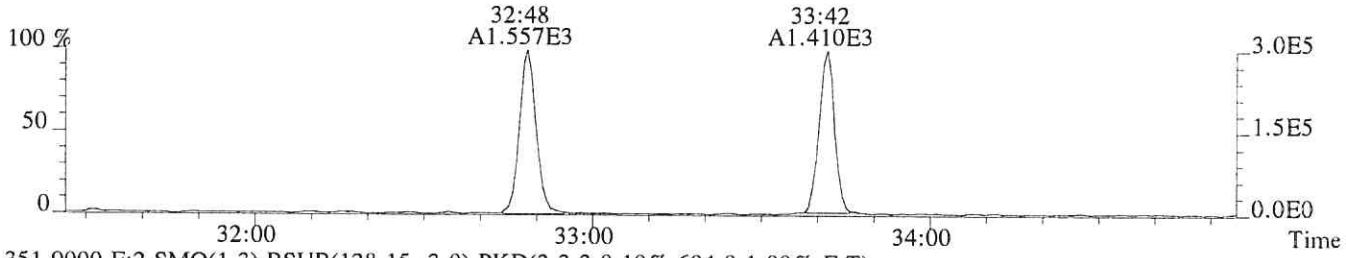
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



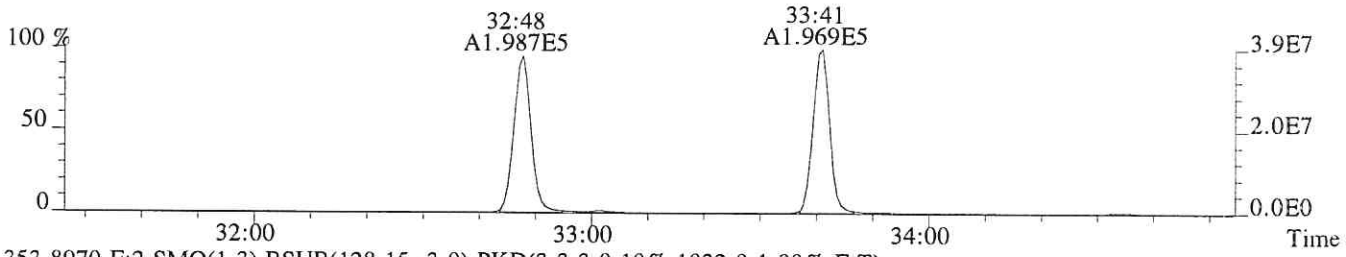
File:P513850 #1-313 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1008.0,1.00%,F,T)



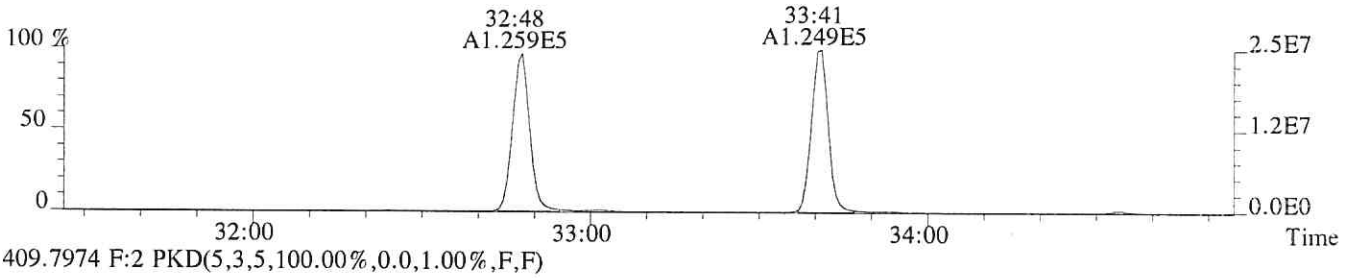
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2964.0,1.00%,F,T)



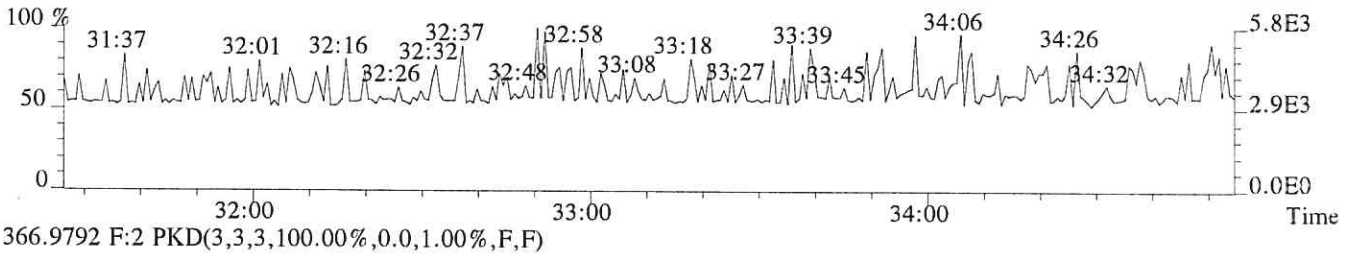
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,604.0,1.00%,F,T)



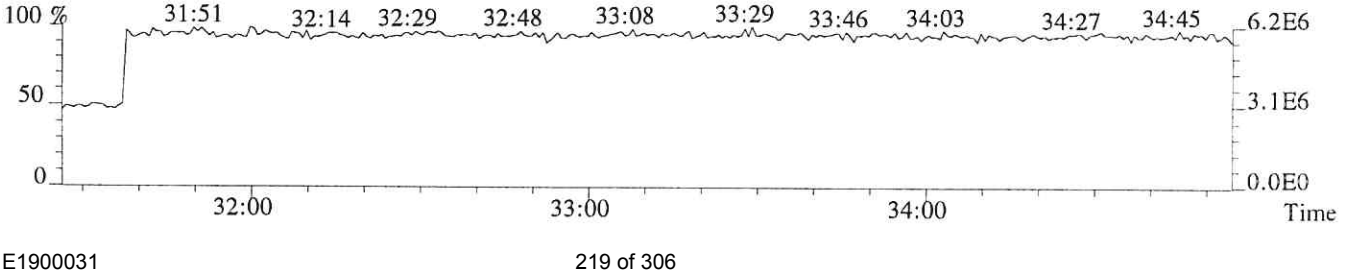
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1032.0,1.00%,F,T)



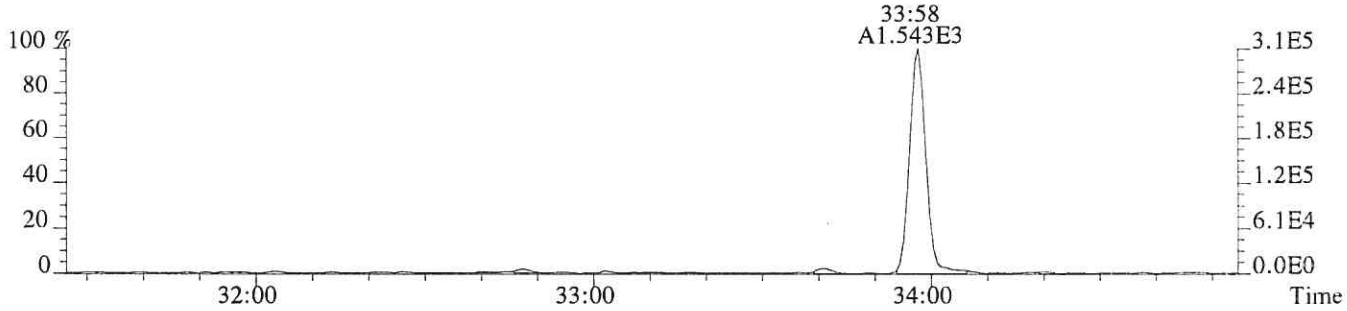
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



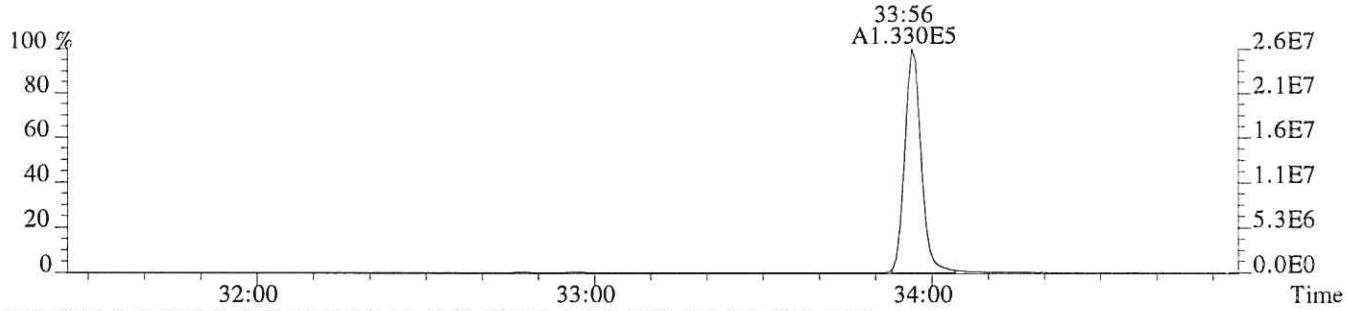
File:P513850 #1-313 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:76554
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1172.0,1.00%,F,T)



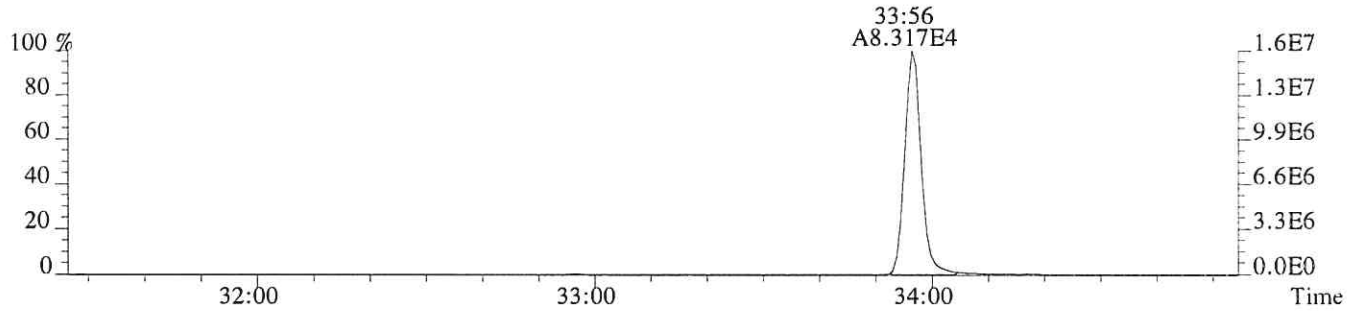
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,188.0,1.00%,F,T)



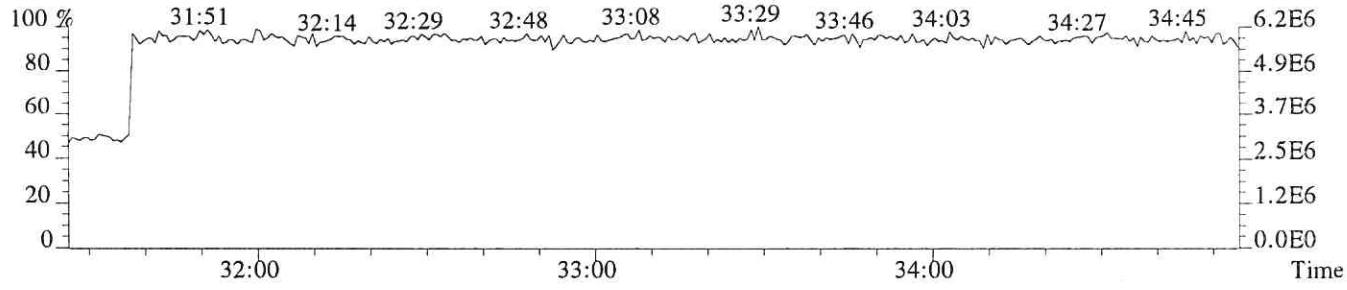
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,988.0,1.00%,F,T)



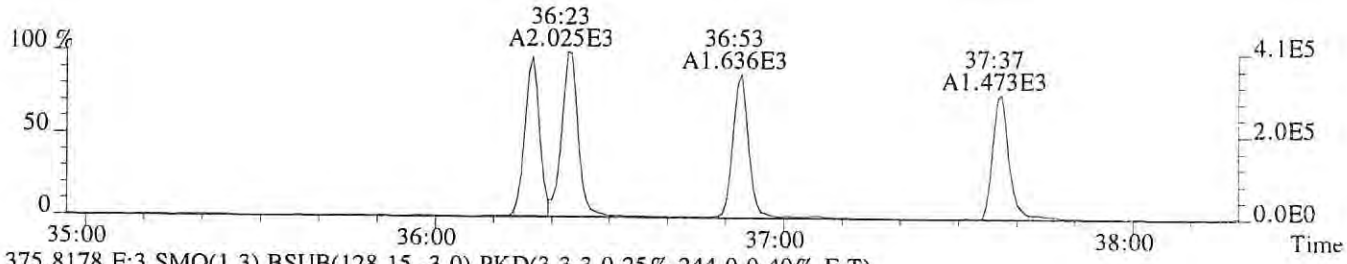
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,672.0,1.00%,F,T)



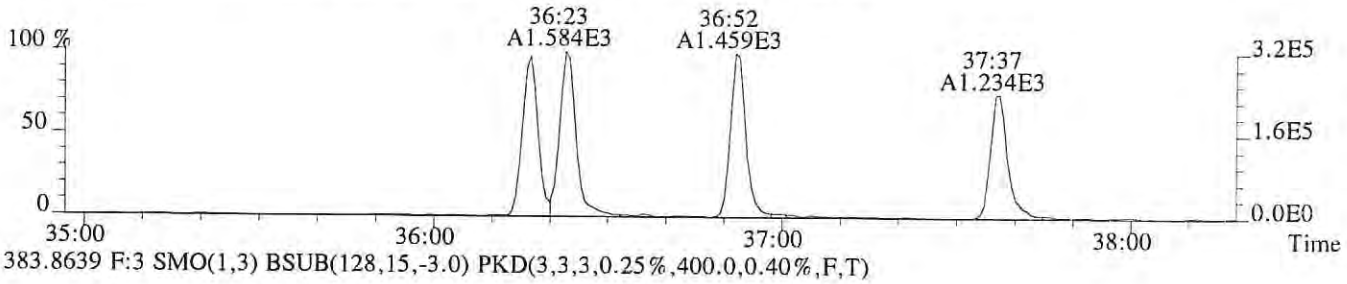
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



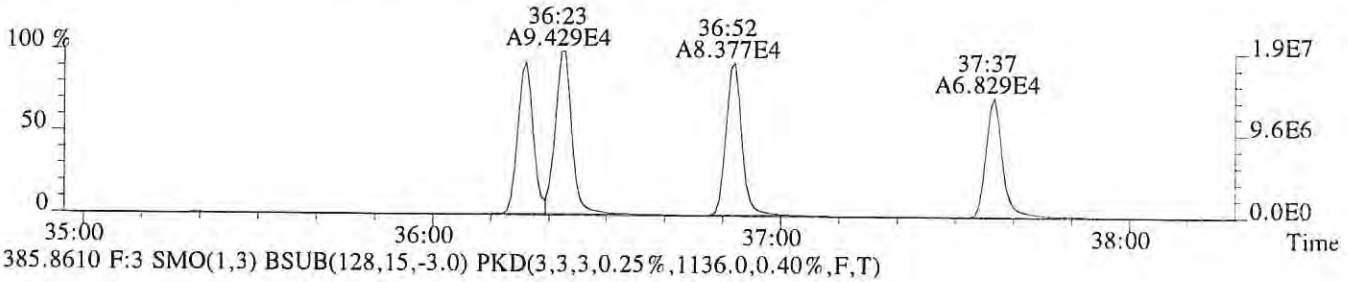
File:P513850 #1-303 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:76554
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,876.0,0.40%,F,T)



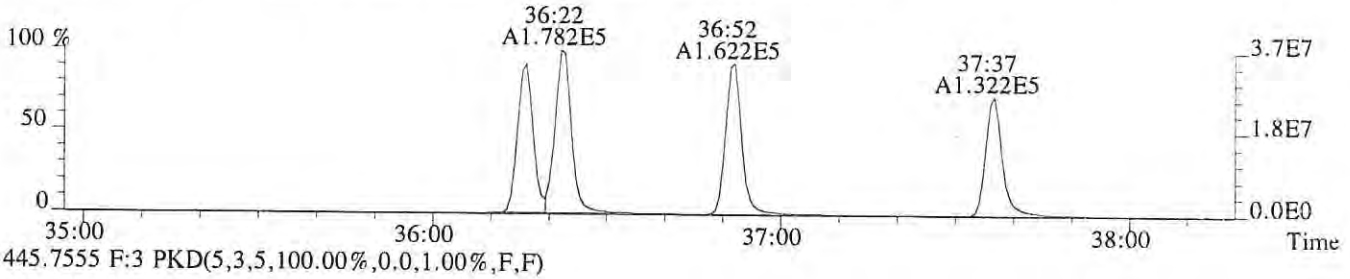
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,244.0,0.40%,F,T)



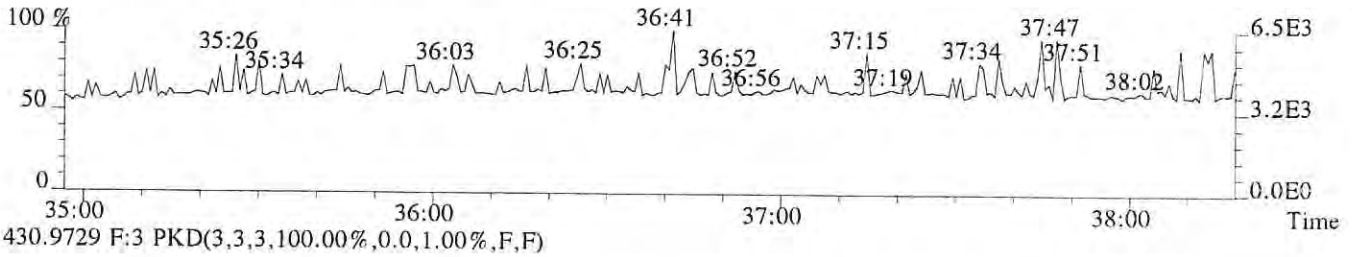
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,400.0,0.40%,F,T)



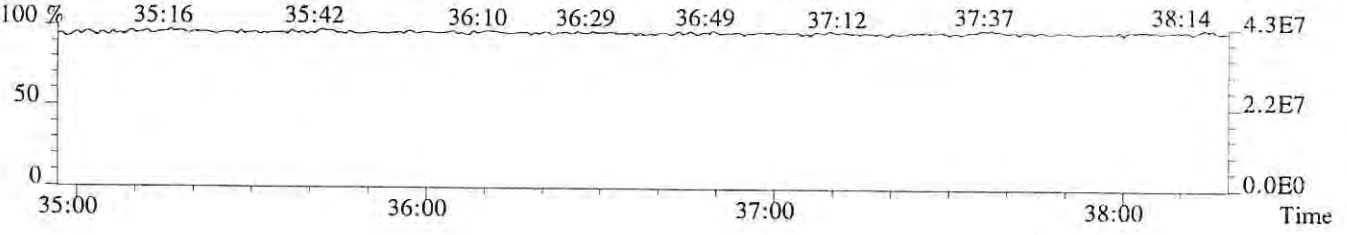
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1136.0,0.40%,F,T)



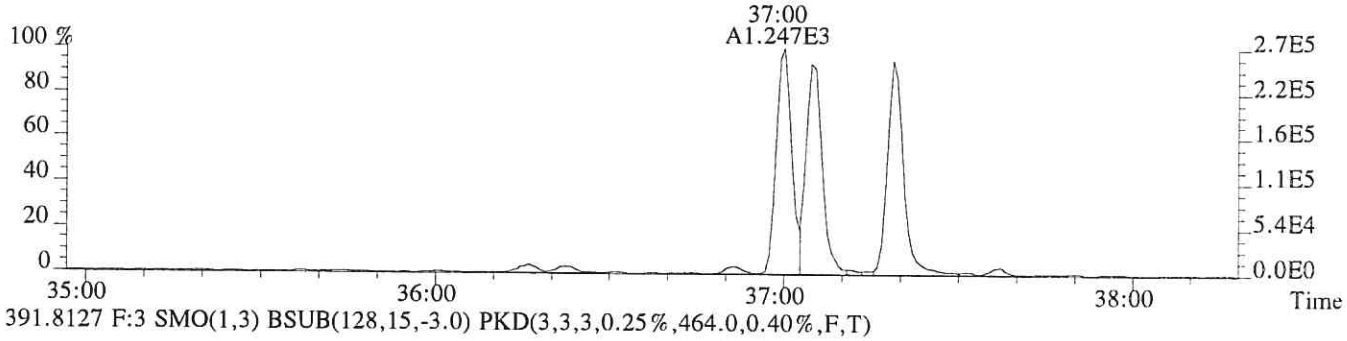
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



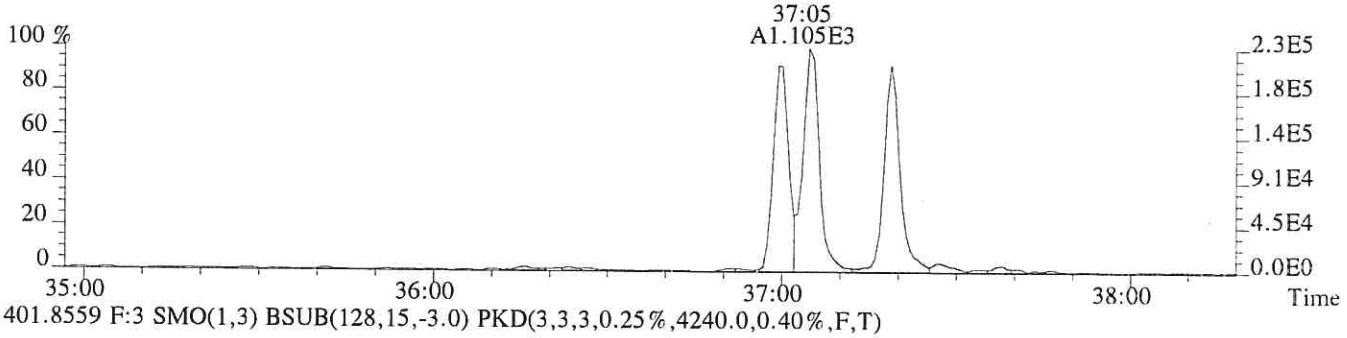
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



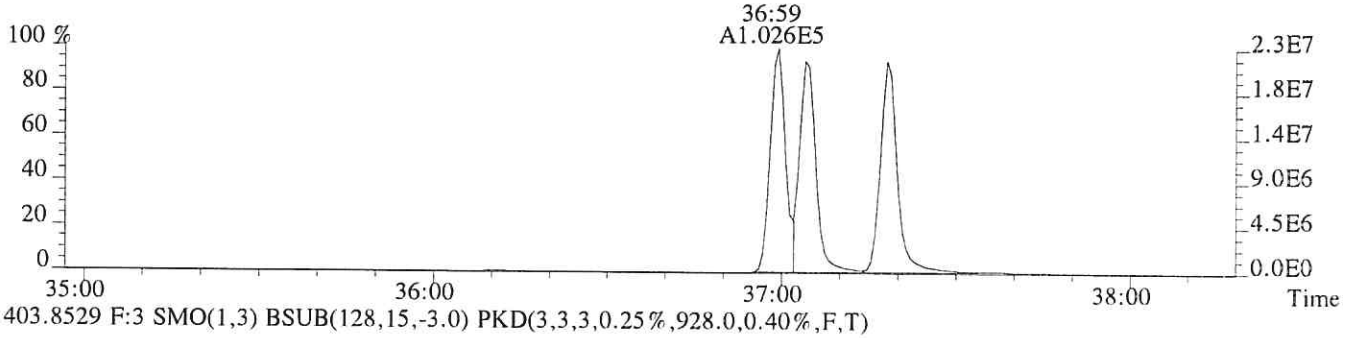
File:P513850 #1-303 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,520.0,0.40%,F,T)



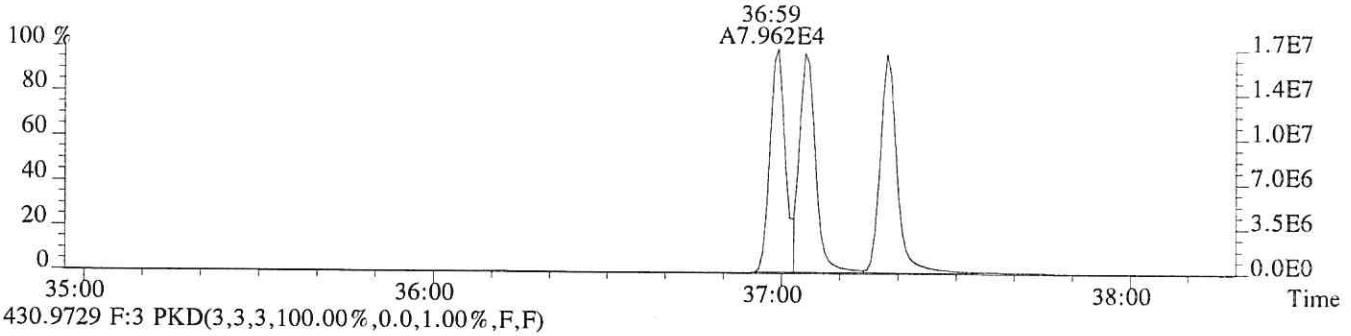
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,464.0,0.40%,F,T)



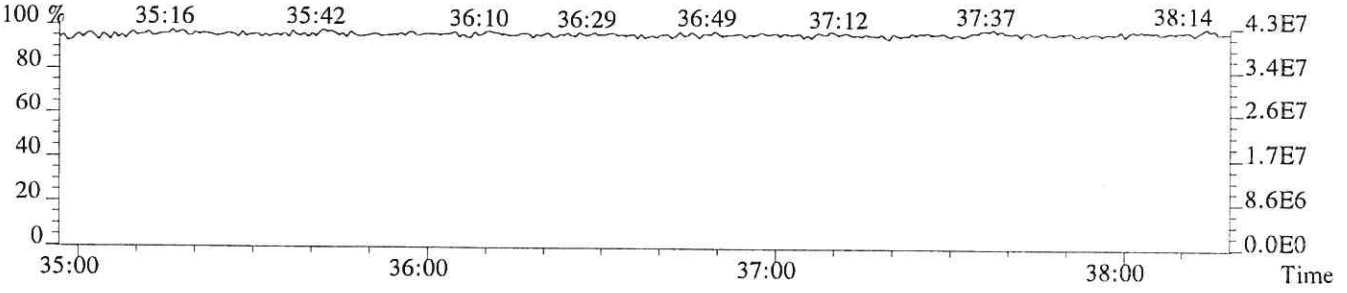
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4240.0,0.40%,F,T)



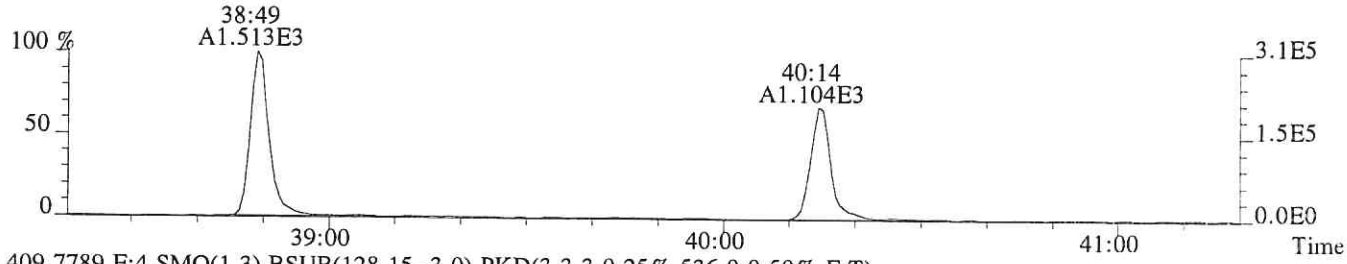
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,928.0,0.40%,F,T)



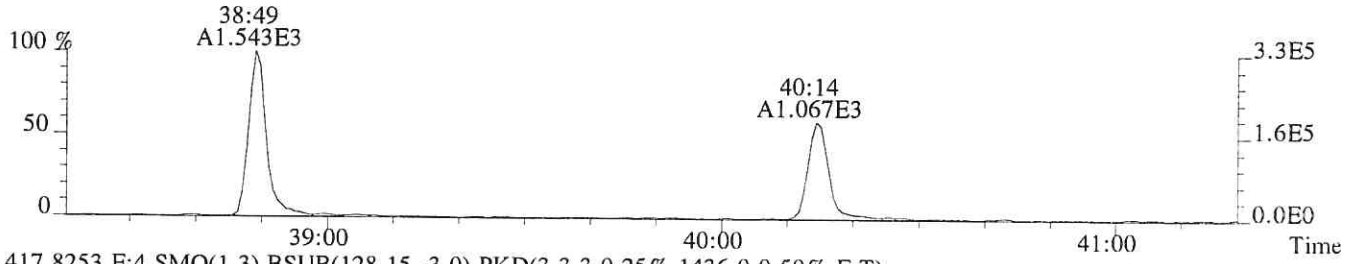
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



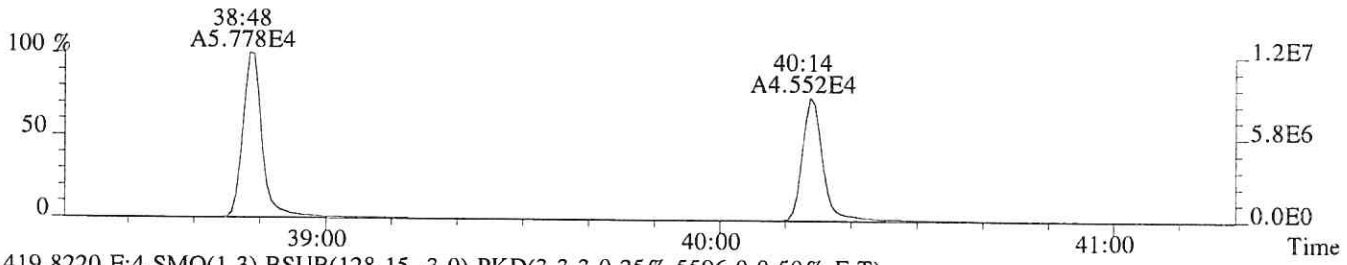
File:P513850 #1-268 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,860.0,0.50%,F,T)



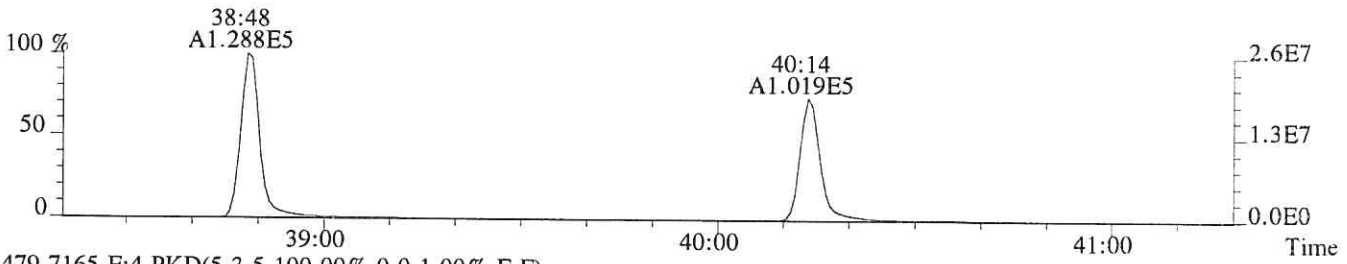
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,536.0,0.50%,F,T)



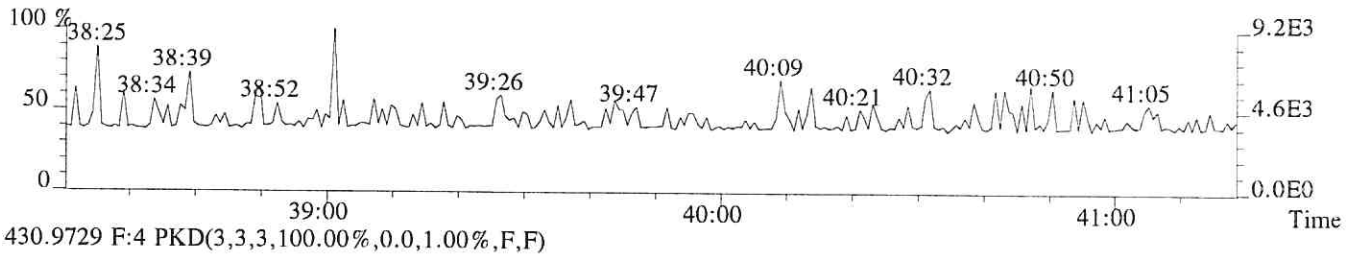
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1436.0,0.50%,F,T)



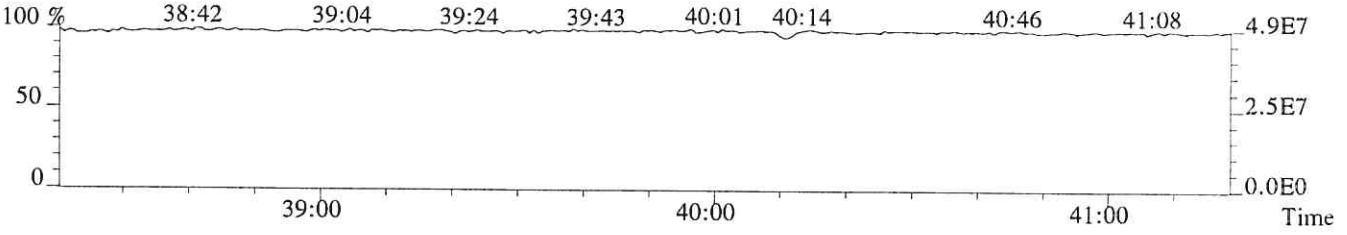
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5596.0,0.50%,F,T)



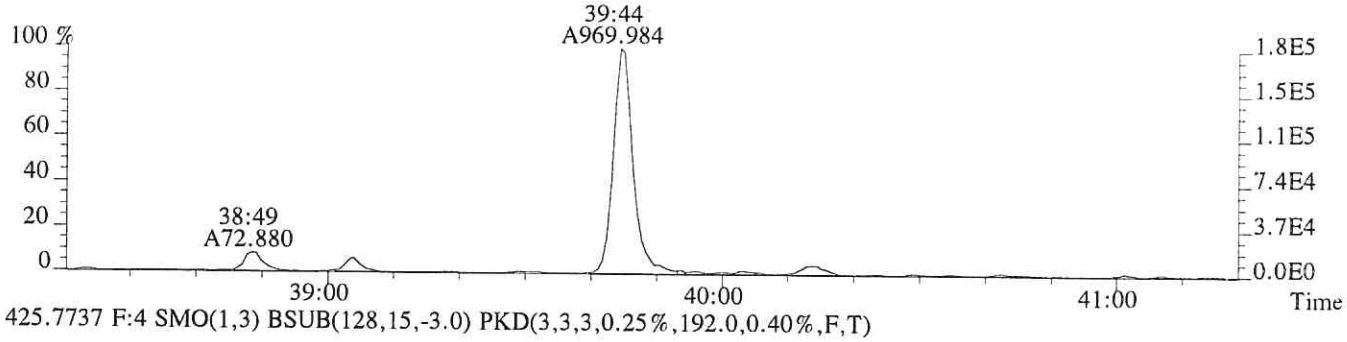
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



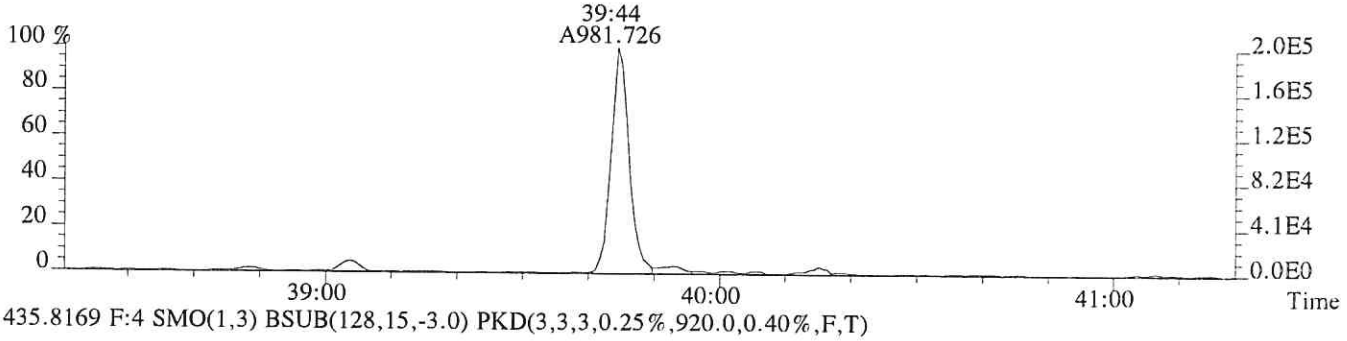
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



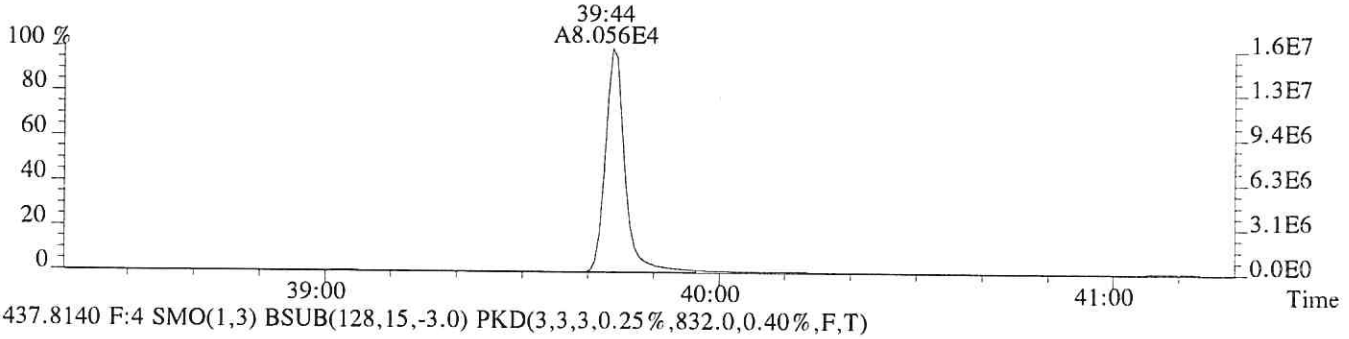
File:P513850 #1-268 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,172.0,0.40%,F,T)



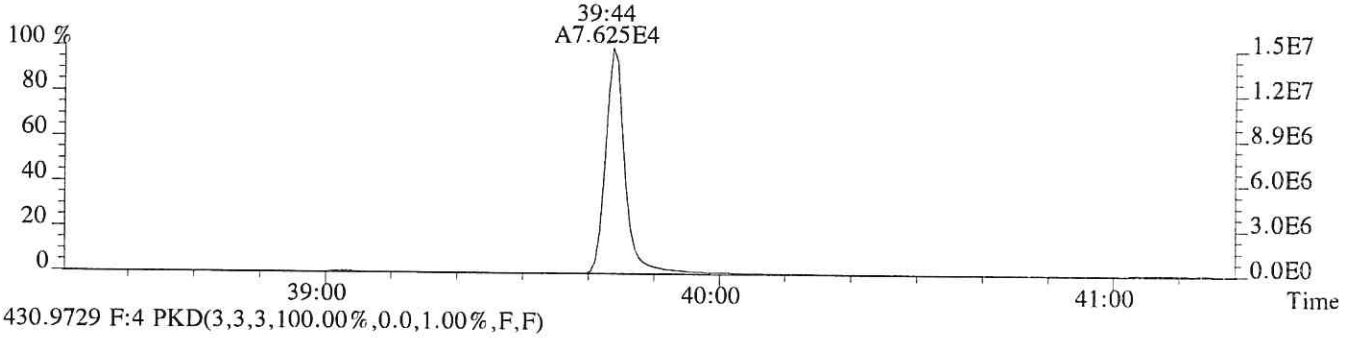
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,192.0,0.40%,F,T)



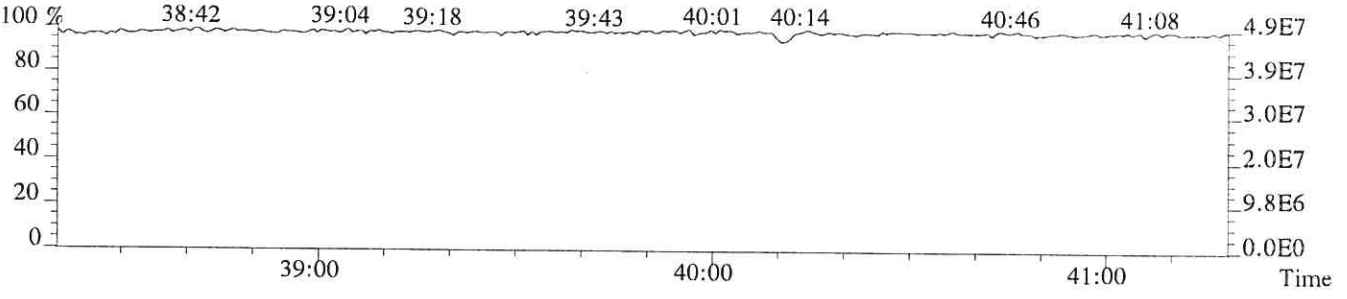
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,920.0,0.40%,F,T)



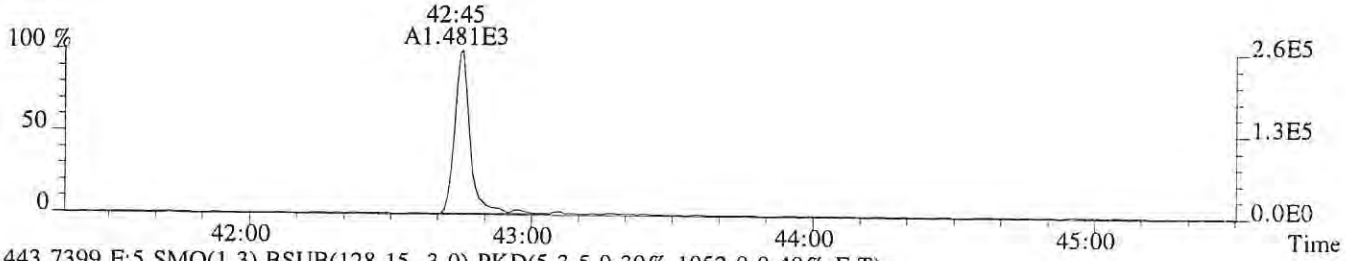
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,832.0,0.40%,F,T)



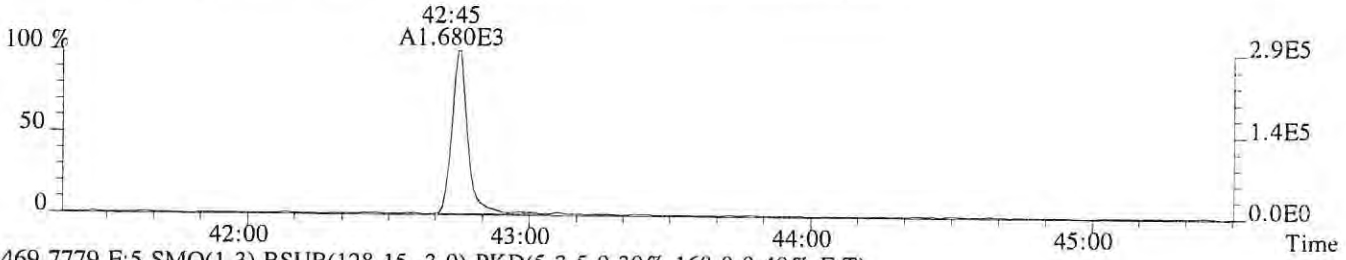
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



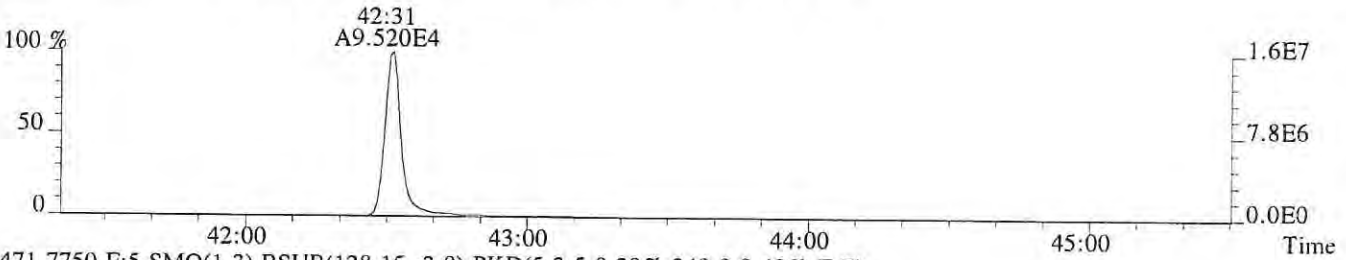
File:P513850 #1-375 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,640.0,0.40%,F,T)



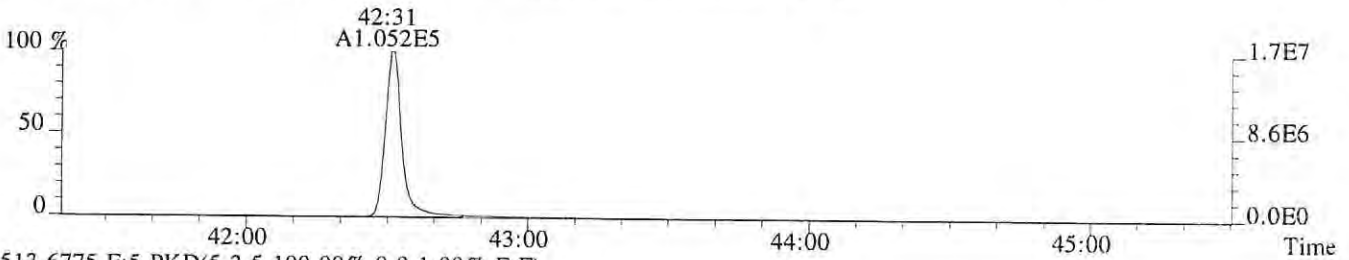
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1052.0,0.40%,F,T)



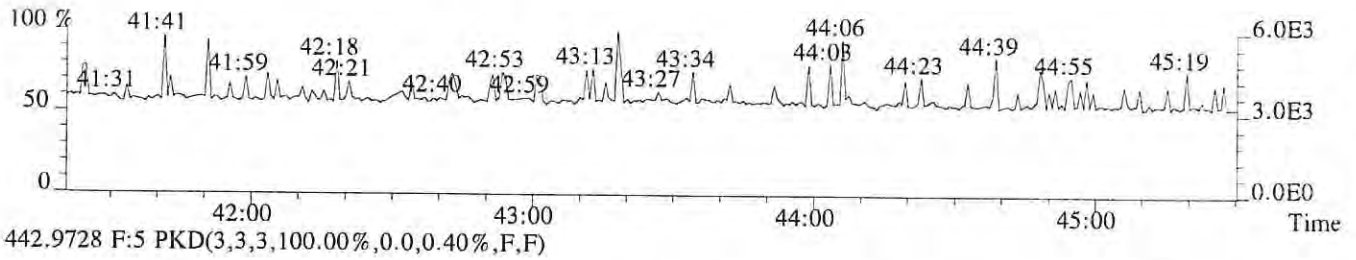
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,168.0,0.40%,F,T)



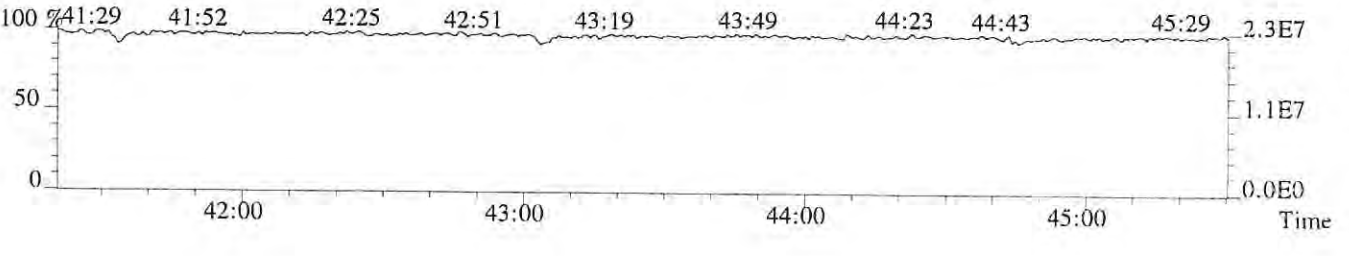
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,340.0,0.40%,F,T)



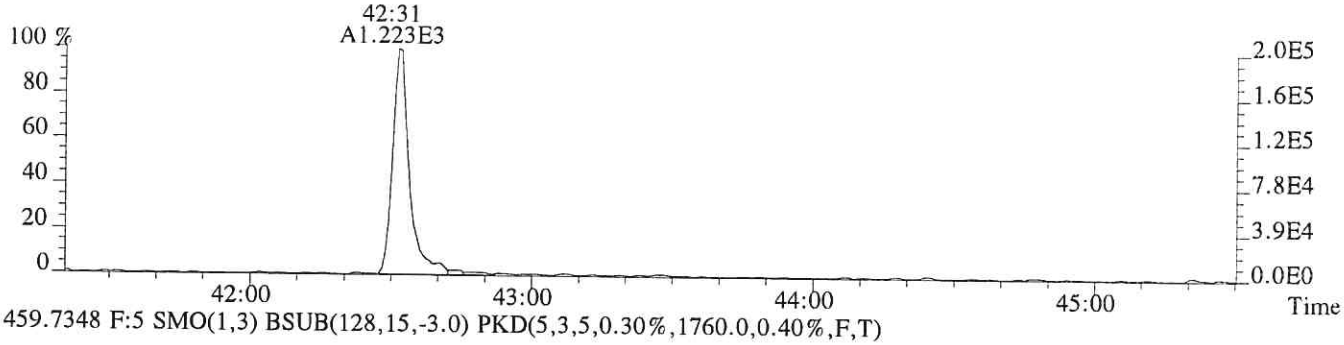
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



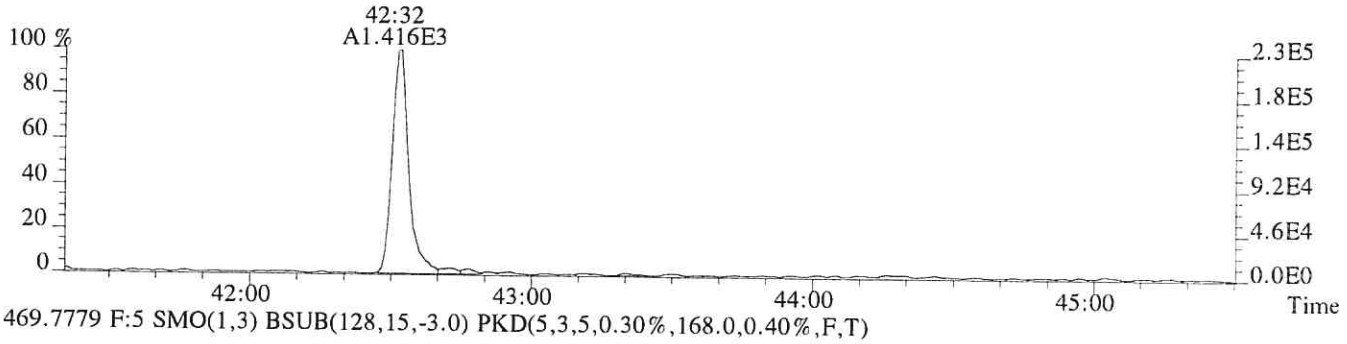
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



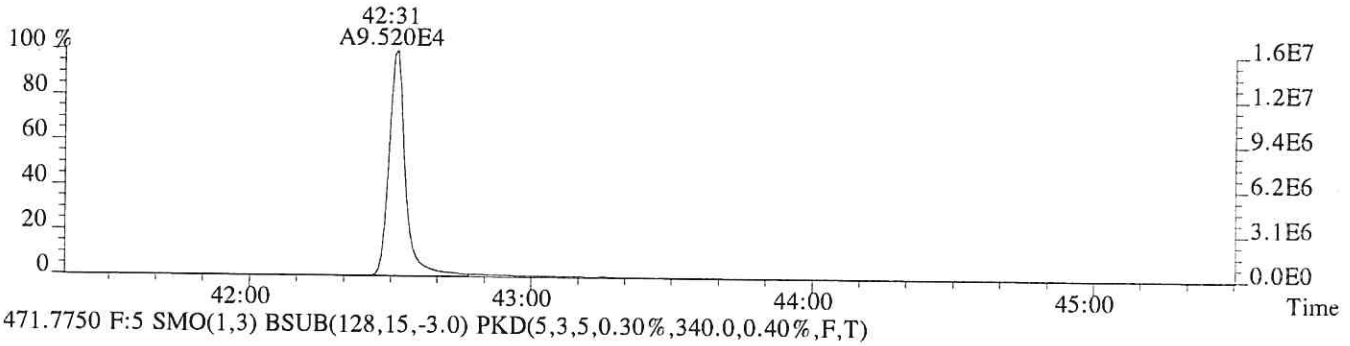
File:P513850 #1-375 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,124.0,0.40%,F,T)



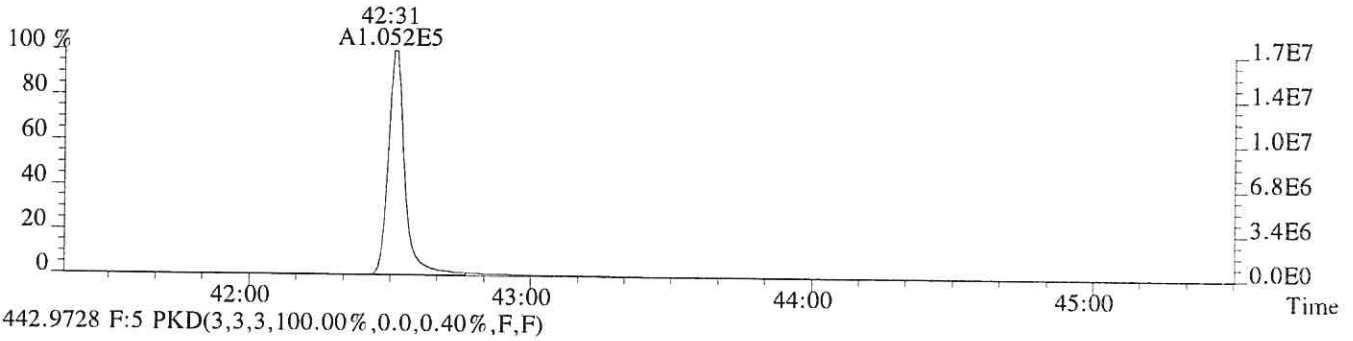
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1760.0,0.40%,F,T)



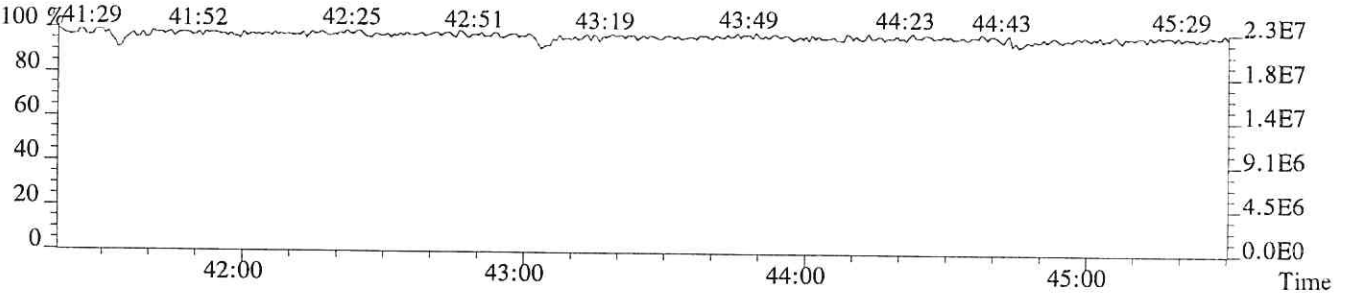
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,168.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,340.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76555

Run #2 Filename P513851 Samp: 1 Inj: 1 Acquired: 24-JAN-18 14:23:56
Processed: 24-JAN-18 15:49:38 Sample ID: CS1

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:48	3.265e+02	4.510e+02	0.72	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	2.143e+03	1.390e+03	1.54	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:41	1.966e+03	1.345e+03	1.46	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:16	1.692e+03	1.406e+03	1.20	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:23	1.851e+03	1.586e+03	1.17	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:52	1.642e+03	1.320e+03	1.24	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	1.587e+03	1.193e+03	1.33	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:49	1.464e+03	1.425e+03	1.03	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	1.230e+03	1.277e+03	0.96	yes	no	1.258
10	Unk	OCDF	42:45	1.832e+03	1.936e+03	0.95	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:32	2.385e+02	2.700e+02	0.88	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:57	1.365e+03	8.234e+02	1.66	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:59	1.134e+03	9.001e+02	1.26	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:05	1.250e+03	9.288e+02	1.35	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:19	1.168e+03	9.616e+02	1.21	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:44	1.020e+03	9.210e+02	1.11	yes	no	1.025
17	Unk	OCDD	42:31	1.446e+03	1.652e+03	0.88	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:47	7.137e+04	9.000e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:47	8.867e+04	5.547e+04	1.60	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	8.638e+04	5.480e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:15	3.777e+04	7.232e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:22	4.414e+04	8.392e+04	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:51	3.753e+04	7.150e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:36	3.488e+04	6.647e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:48	2.710e+04	6.070e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	2.509e+04	5.658e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:31	4.231e+04	5.302e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	5.560e+04	3.503e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	4.358e+04	3.432e+04	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:04	4.635e+04	3.621e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:44	4.039e+04	3.882e+04	1.04	yes	no	0.858
32	IS	13C-OCDD	42:31	5.166e+04	5.687e+04	0.91	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:57	4.919e+04	6.018e+04	0.82	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:18	4.800e+04	3.836e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:32	5.257e+02				no	1.014

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www.alsglobal.com

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
76555

Run #2 Filename P513851 Samp: 1 Inj: 1 Acquired: 24-JAN-18 14:23:56
Processed: 24-JAN-18 15:49:38 LAB. ID: CS1

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.11e+04	5.52e+02	1.1e+02	8.10e+04	1.82e+03	4.5e+01
2	1,2,3,7,8-PeCDF	4.20e+05	1.32e+03	3.2e+02	2.59e+05	1.41e+03	1.8e+02
3	2,3,4,7,8-PeCDF	4.04e+05	1.32e+03	3.1e+02	2.67e+05	1.41e+03	1.9e+02
4	1,2,3,4,7,8-HxCDF	3.58e+05	5.32e+02	6.7e+02	3.14e+05	1.28e+02	2.5e+03
5	1,2,3,6,7,8-HxCDF	3.97e+05	5.32e+02	7.5e+02	3.35e+05	1.28e+02	2.6e+03
6	2,3,4,6,7,8-HxCDF	3.52e+05	5.32e+02	6.6e+02	2.91e+05	1.28e+02	2.3e+03
7	1,2,3,7,8,9-HxCDF	3.28e+05	5.32e+02	6.2e+02	2.40e+05	1.28e+02	1.9e+03
8	1,2,3,4,6,7,8-HpCDF	3.00e+05	3.04e+02	9.9e+02	3.07e+05	7.12e+02	4.3e+02
9	1,2,3,4,7,8,9-HpCDF	2.35e+05	3.04e+02	7.7e+02	2.45e+05	7.12e+02	3.4e+02
10	OCDF	3.05e+05	4.12e+02	7.4e+02	3.13e+05	8.20e+02	3.8e+02
11	2,3,7,8-TCDD	5.05e+04	1.50e+03	3.4e+01	5.68e+04	1.02e+03	5.5e+01
12	1,2,3,7,8-PeCDD	2.75e+05	9.88e+02	2.8e+02	1.65e+05	1.80e+02	9.2e+02
13	1,2,3,4,7,8-HxCDD	2.60e+05	5.96e+02	4.4e+02	2.09e+05	7.60e+02	2.7e+02
14	1,2,3,6,7,8-HxCDD	2.55e+05	5.96e+02	4.3e+02	1.96e+05	7.60e+02	2.6e+02
15	1,2,3,7,8,9-HxCDD	2.36e+05	5.96e+02	4.0e+02	1.94e+05	7.60e+02	2.6e+02
16	1,2,3,4,6,7,8-HpCDD	1.99e+05	6.88e+02	2.9e+02	1.95e+05	5.68e+02	3.4e+02
17	OCDD	2.63e+05	1.92e+02	1.4e+03	2.88e+05	1.59e+03	1.8e+02
18	13C-2,3,7,8-TCDF	1.42e+07	6.97e+03	2.0e+03	1.79e+07	2.86e+03	6.3e+03
19	13C-1,2,3,7,8-PeCDF	1.70e+07	6.48e+02	2.6e+04	1.08e+07	1.59e+03	6.8e+03
20	13C-2,3,4,7,8-PeCDF	1.78e+07	6.48e+02	2.7e+04	1.13e+07	1.59e+03	7.1e+03
21	13C-1,2,3,4,7,8-HxCDF	8.20e+06	9.16e+02	9.0e+03	1.58e+07	1.42e+03	1.1e+04
22	13C-1,2,3,6,7,8-HxCDF	9.34e+06	9.16e+02	1.0e+04	1.79e+07	1.42e+03	1.3e+04
23	13C-2,3,4,6,7,8-HxCDF	8.09e+06	9.16e+02	8.8e+03	1.56e+07	1.42e+03	1.1e+04
24	13C-1,2,3,7,8,9-HxCDF	7.17e+06	9.16e+02	7.8e+03	1.36e+07	1.42e+03	9.6e+03
25	13C-1,2,3,4,6,7,8-HpCDF	5.66e+06	2.69e+03	2.1e+03	1.28e+07	9.09e+03	1.4e+03
26	13C-1,2,3,4,7,8,9-HpCDF	4.79e+06	2.69e+03	1.8e+03	1.07e+07	9.09e+03	1.2e+03
27	13C-2,3,7,8-TCDD	8.84e+06	4.39e+03	2.0e+03	1.11e+07	2.59e+03	4.3e+03
28	13C-1,2,3,7,8-PeCDD	1.13e+07	1.11e+03	1.0e+04	7.15e+06	7.88e+02	9.1e+03
29	13C-1,2,3,4,7,8-HxCDD	9.90e+06	2.00e+03	4.9e+03	7.79e+06	1.42e+03	5.5e+03
30	13C-1,2,3,6,7,8-HxCDD	9.60e+06	2.00e+03	4.8e+03	7.47e+06	1.42e+03	5.2e+03
31	13C-1,2,3,4,6,7,8-HpCDD	7.95e+06	1.15e+03	6.9e+03	7.67e+06	8.88e+02	8.6e+03
32	13C-OCDD	8.56e+06	6.00e+01	1.4e+05	9.50e+06	8.00e+02	1.2e+04
33	13C-1,2,3,4-TCDD	9.96e+06	4.39e+03	2.3e+03	1.22e+07	2.59e+03	4.7e+03
34	13C-1,2,3,7,8,9-HxCDD	9.63e+06	2.00e+03	4.8e+03	7.67e+06	1.42e+03	5.4e+03
35	37Cl-2,3,7,8-TCDD	1.07e+05	1.30e+03	8.2e+01			

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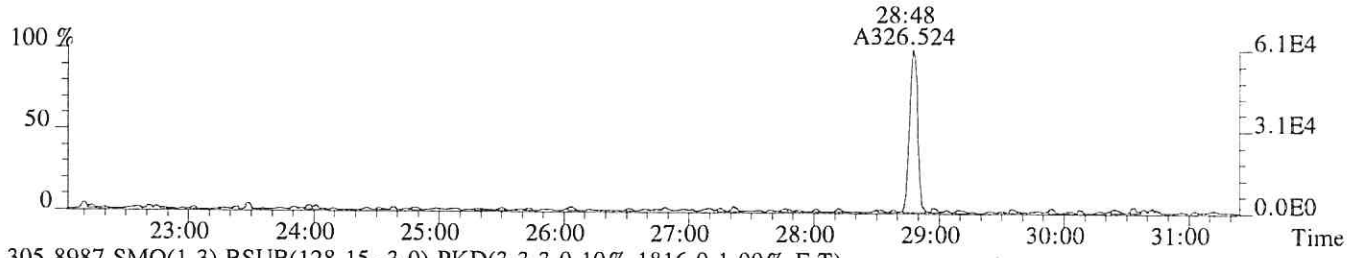
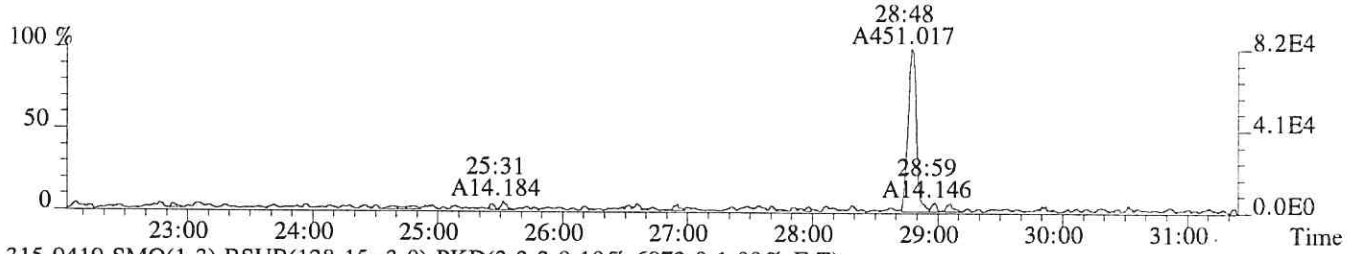
File:P513851 #1-665 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555

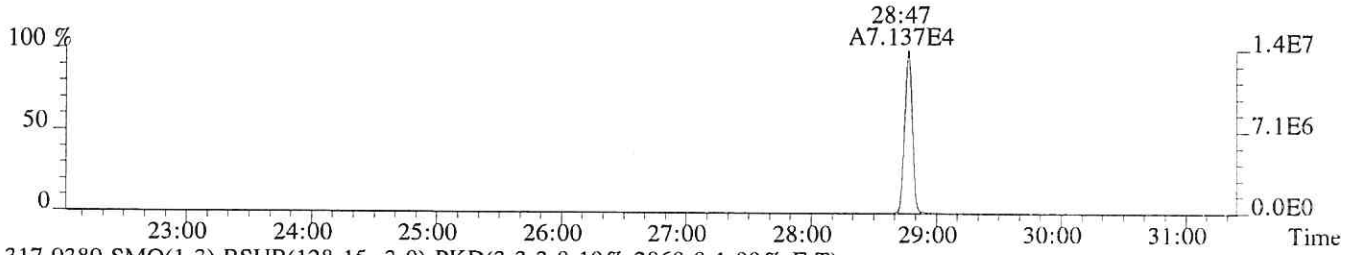
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,552.0,1.00%,F,T)



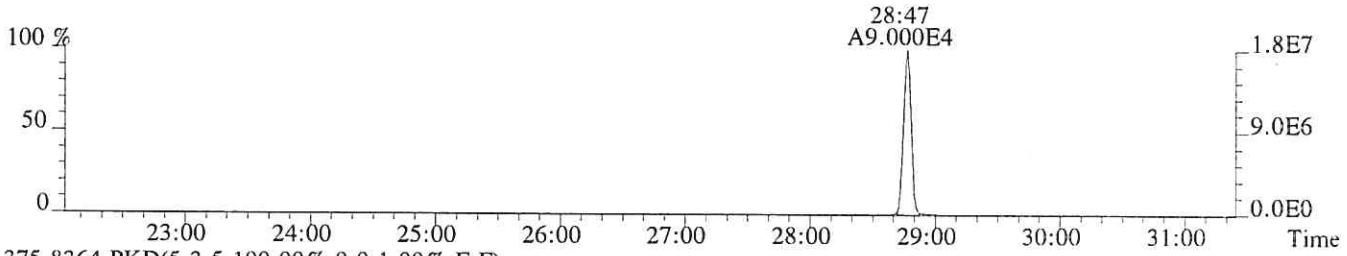
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1816.0,1.00%,F,T)



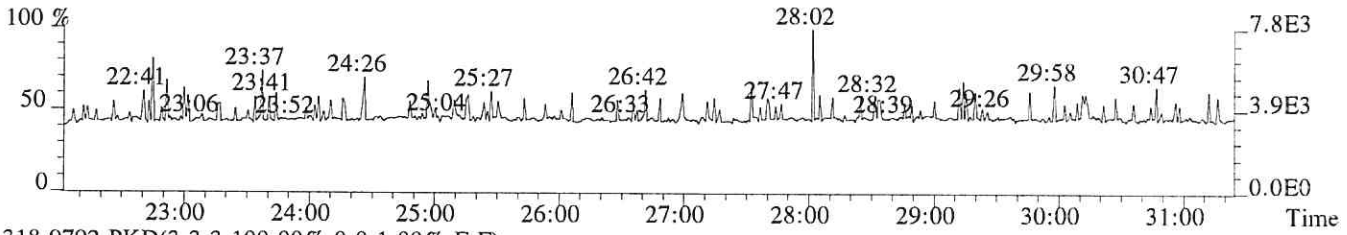
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6972.0,1.00%,F,T)



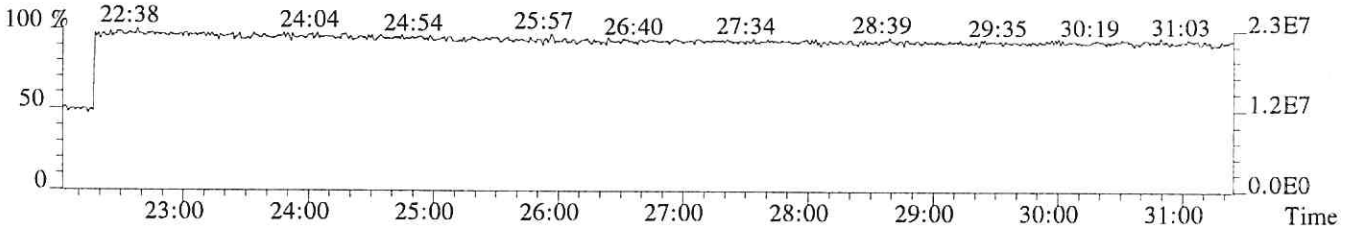
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2860.0,1.00%,F,T)



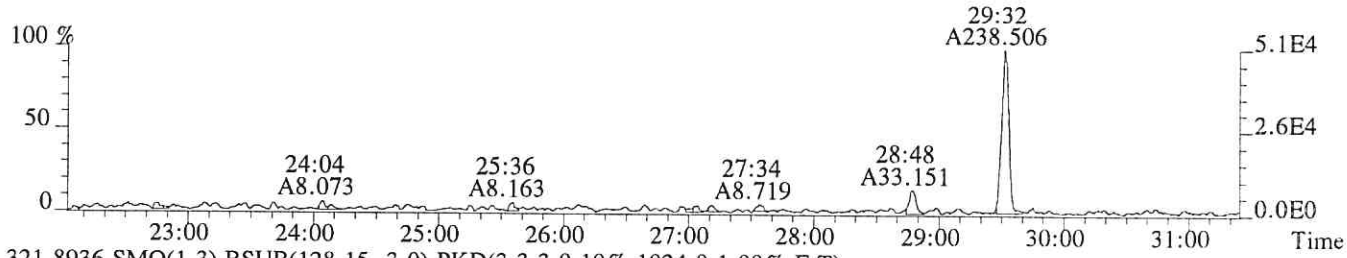
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



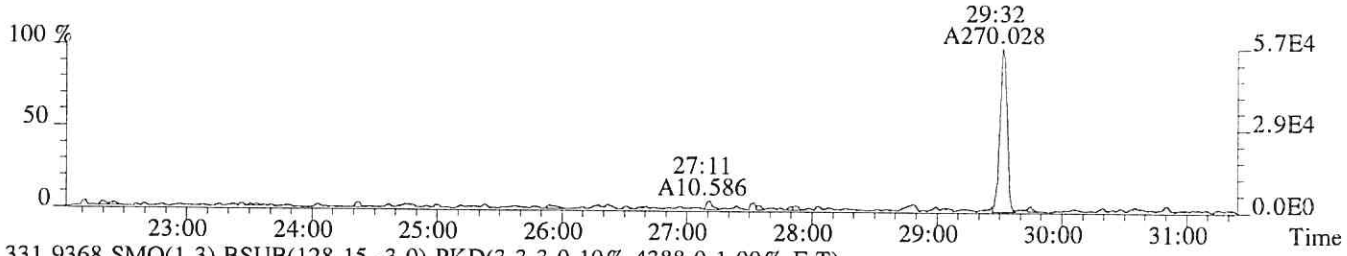
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



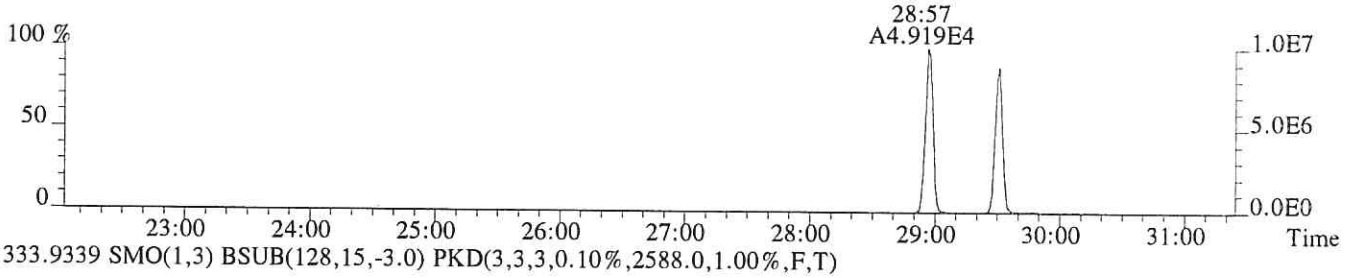
File:P513851 #1-665 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spectŁ
Sample#1 Exp:76555
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1496.0,1.00%,F,T)



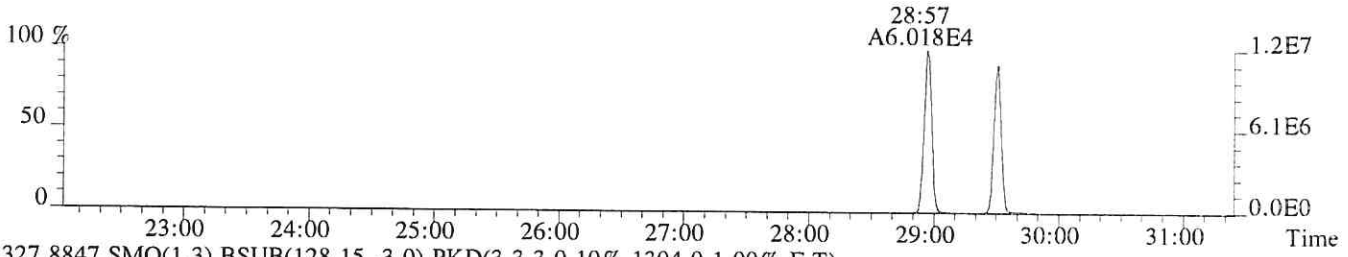
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1024.0,1.00%,F,T)



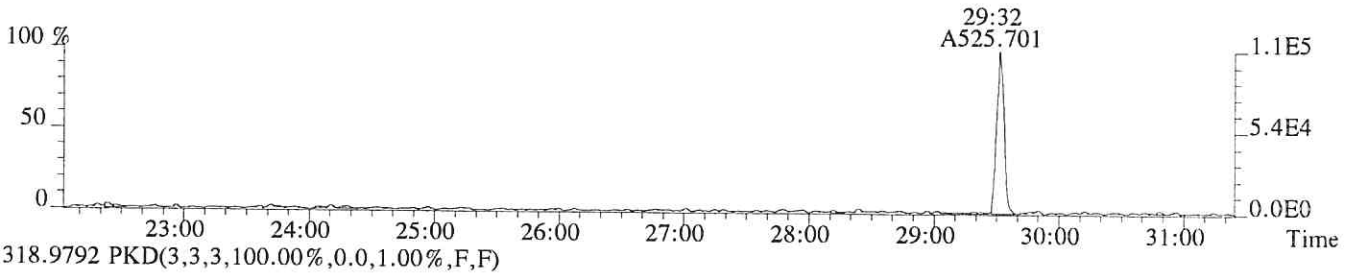
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4388.0,1.00%,F,T)



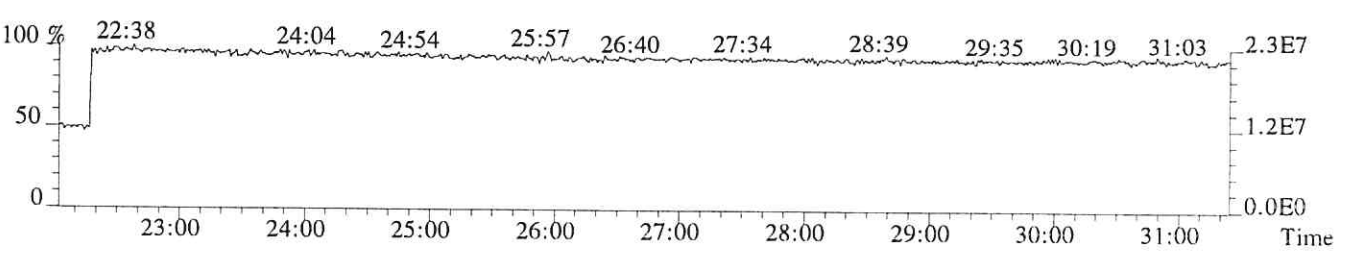
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2588.0,1.00%,F,T)



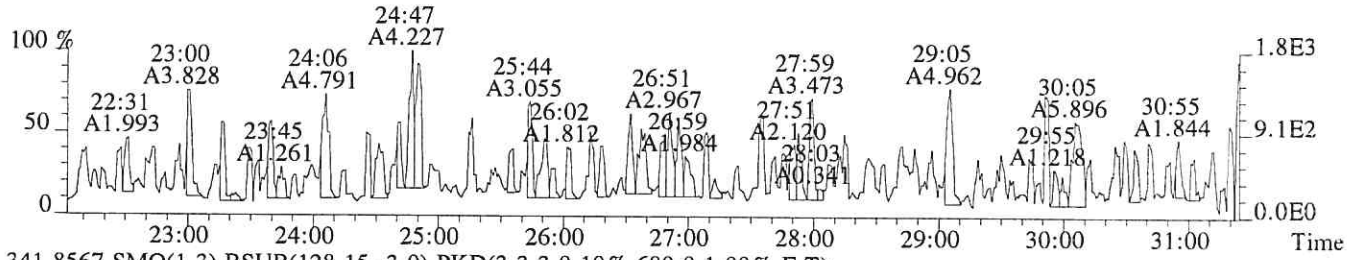
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1304.0,1.00%,F,T)



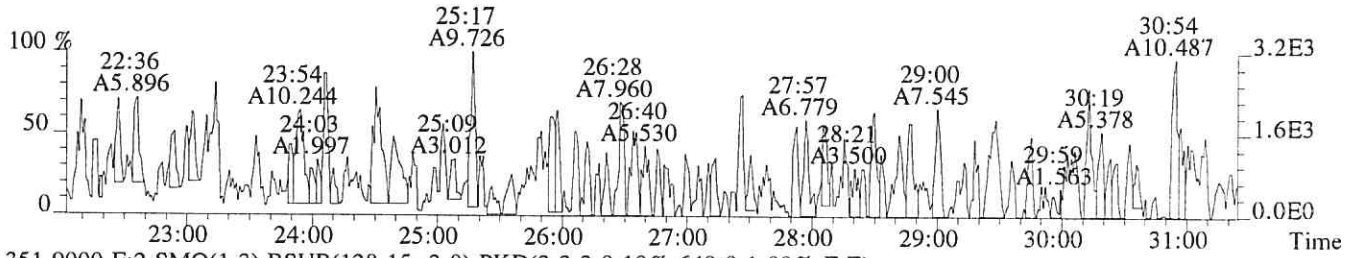
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



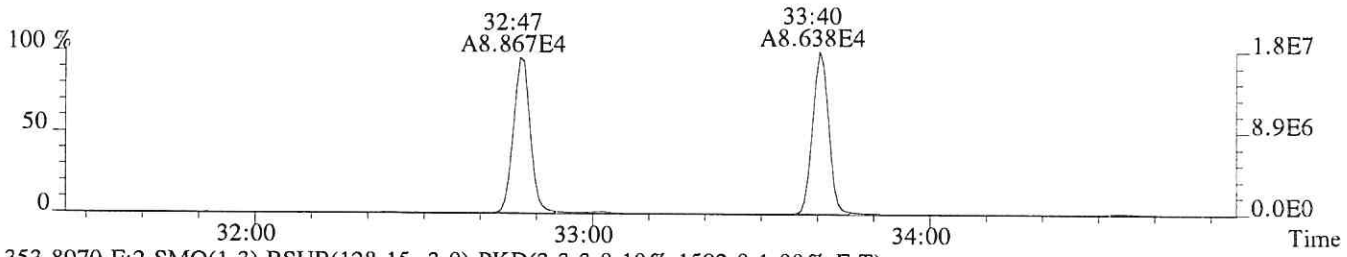
File:P513851 #1-665 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,388.0,1.00%,F,T)



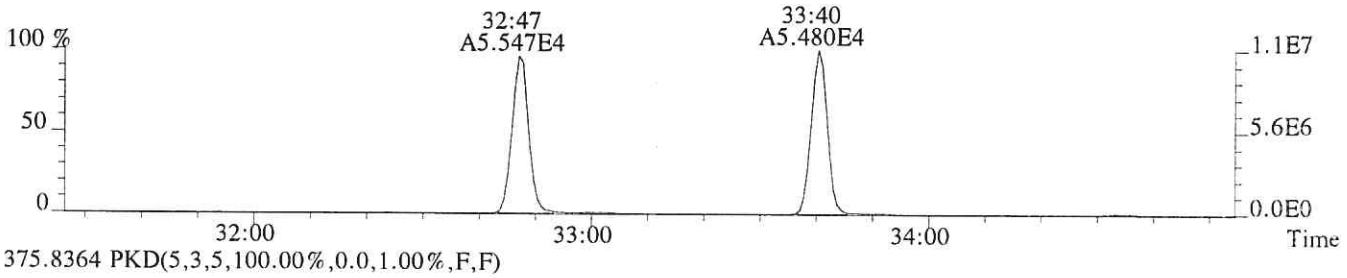
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,680.0,1.00%,F,T)



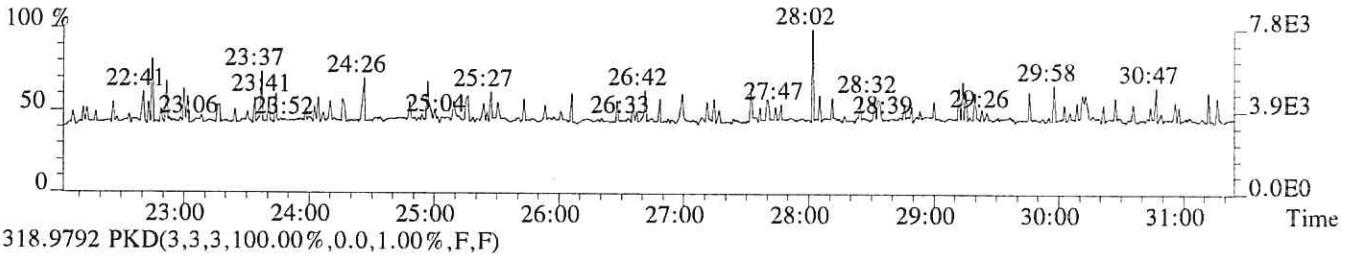
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,648.0,1.00%,F,T)



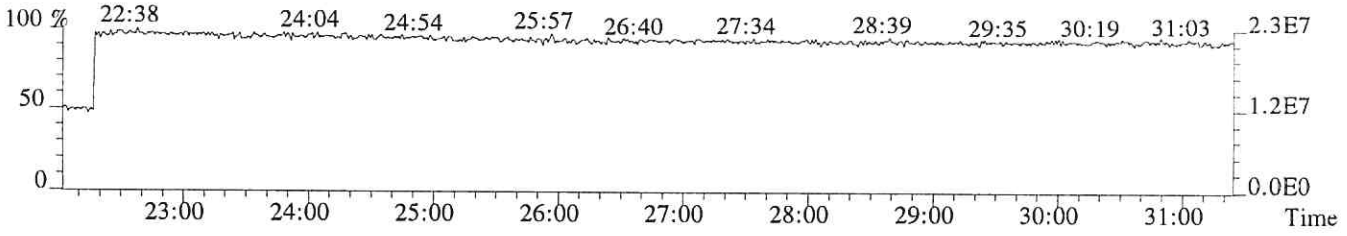
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1592.0,1.00%,F,T)



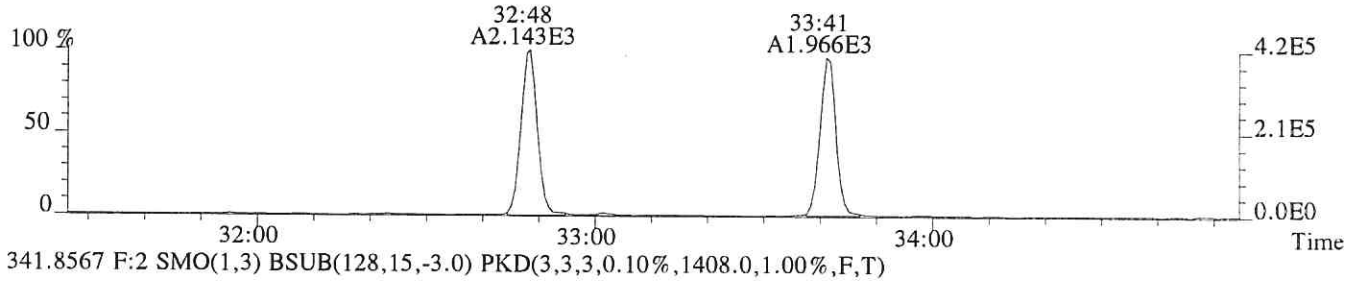
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



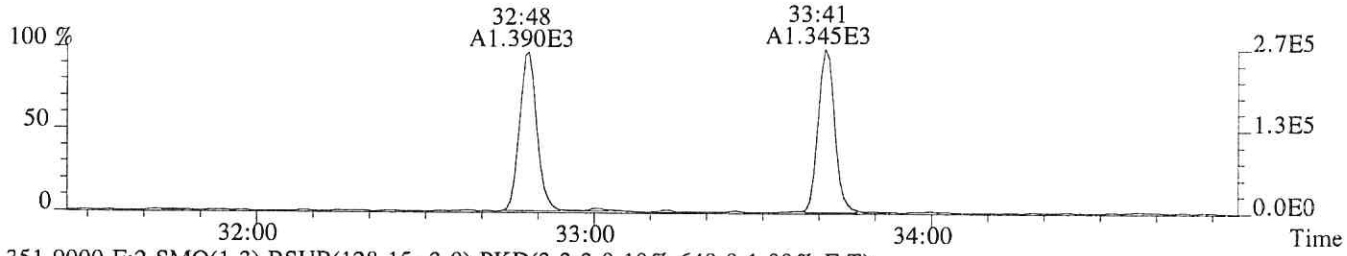
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



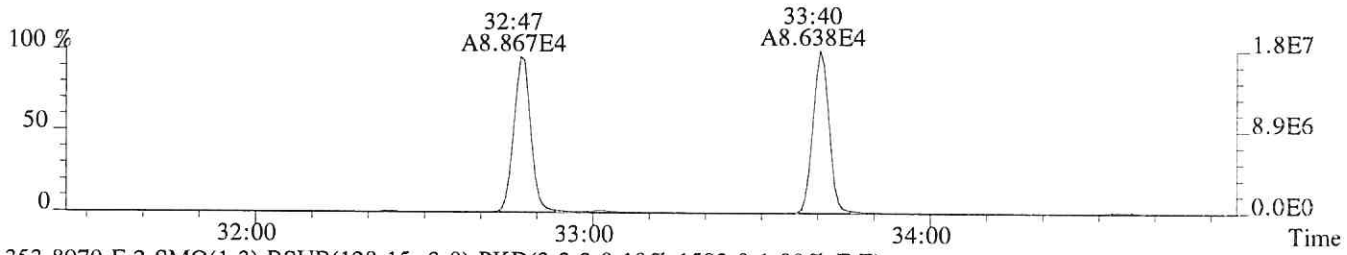
File:P513851 #1-313 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1316.0,1.00%,F,T)



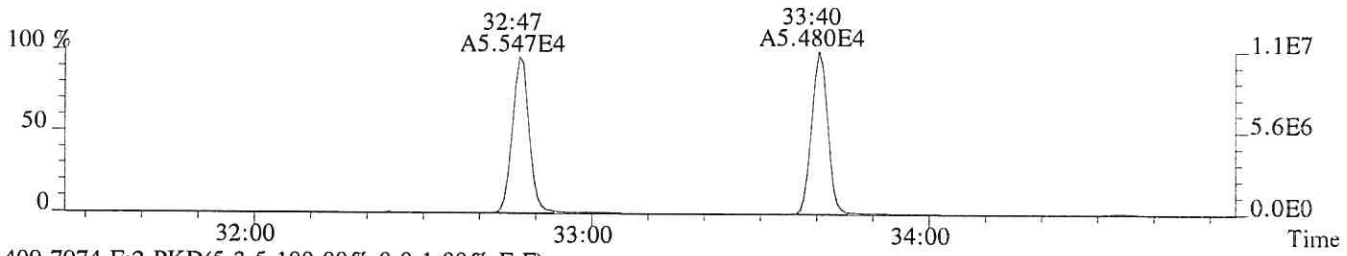
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1408.0,1.00%,F,T)



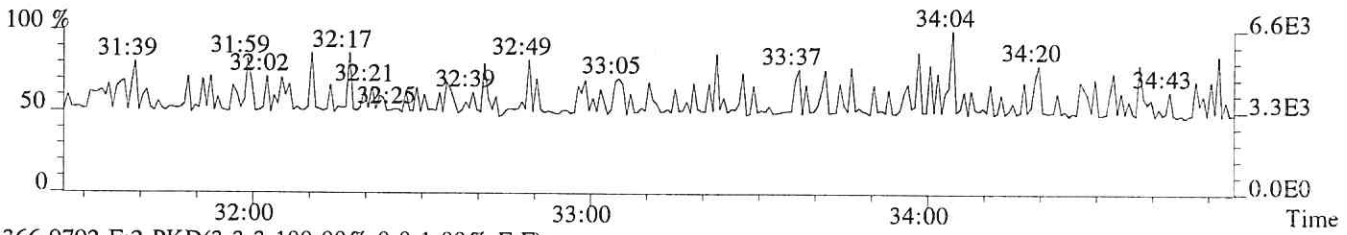
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,648.0,1.00%,F,T)



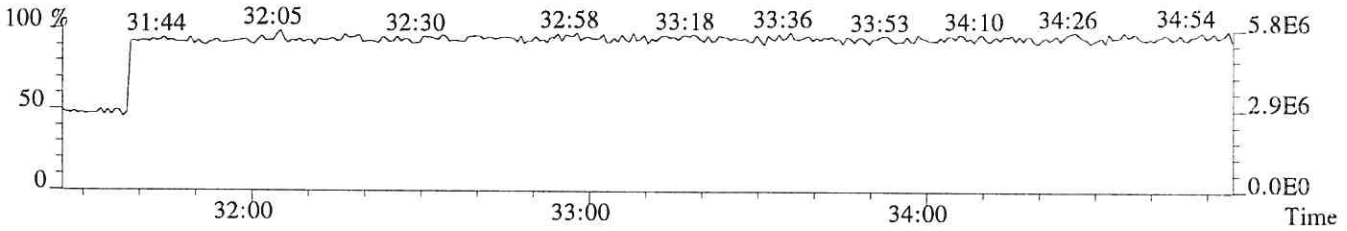
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1592.0,1.00%,F,T)



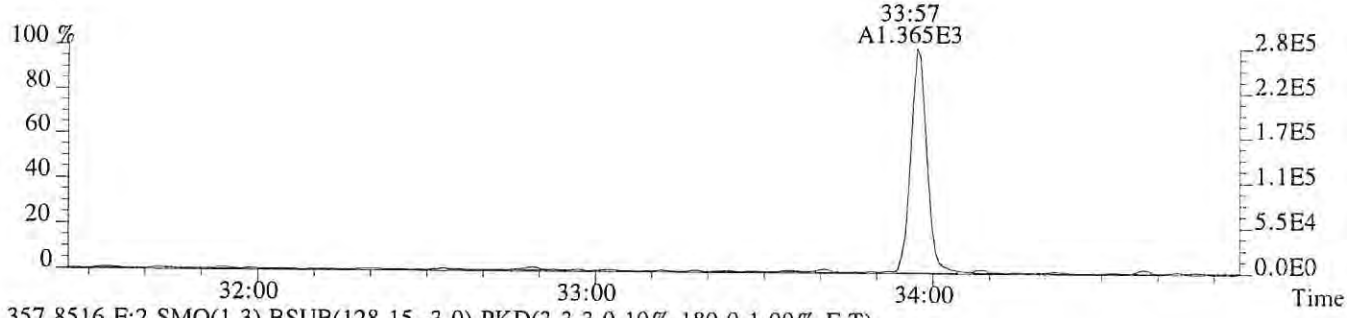
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



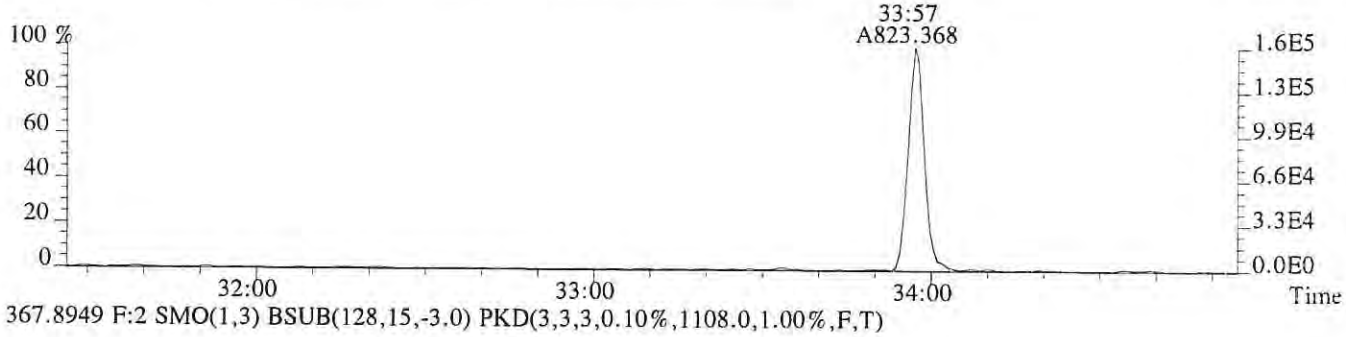
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



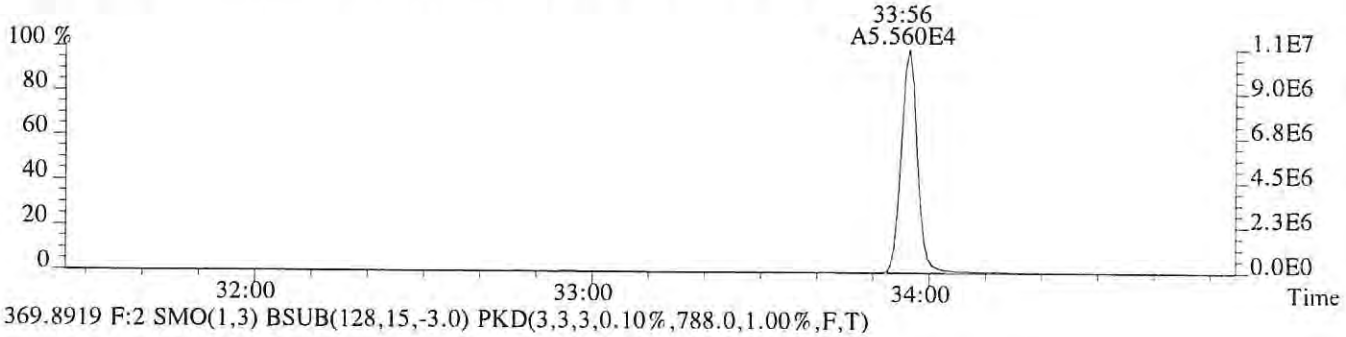
File:P513851 #1-313 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,988.0,1.00%,F,T)



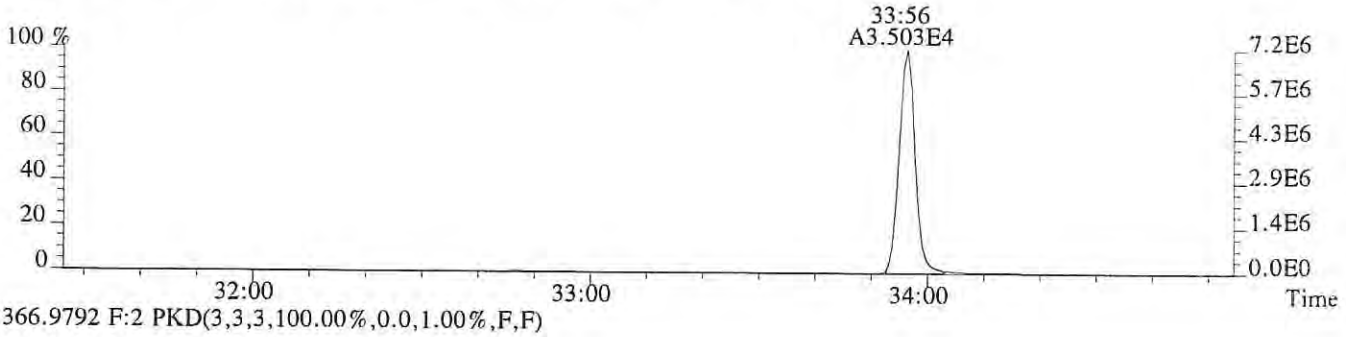
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,180.0,1.00%,F,T)



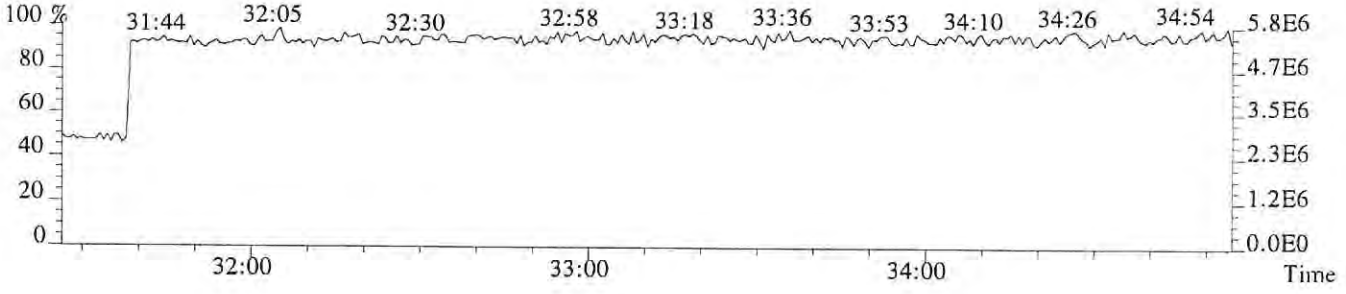
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1108.0,1.00%,F,T)



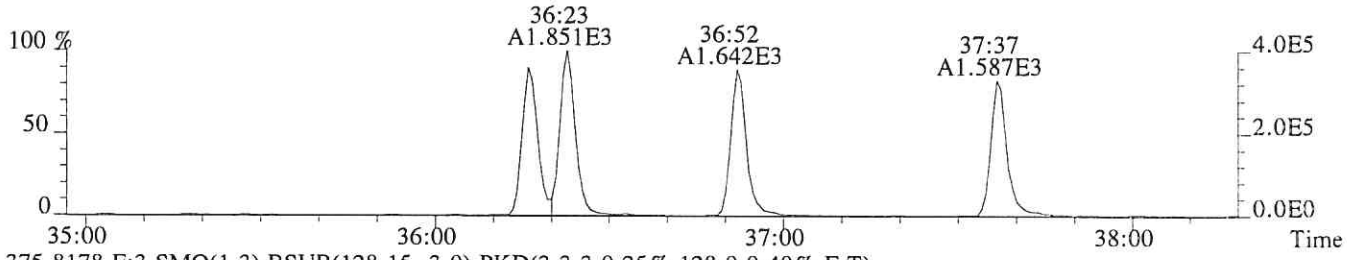
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,788.0,1.00%,F,T)



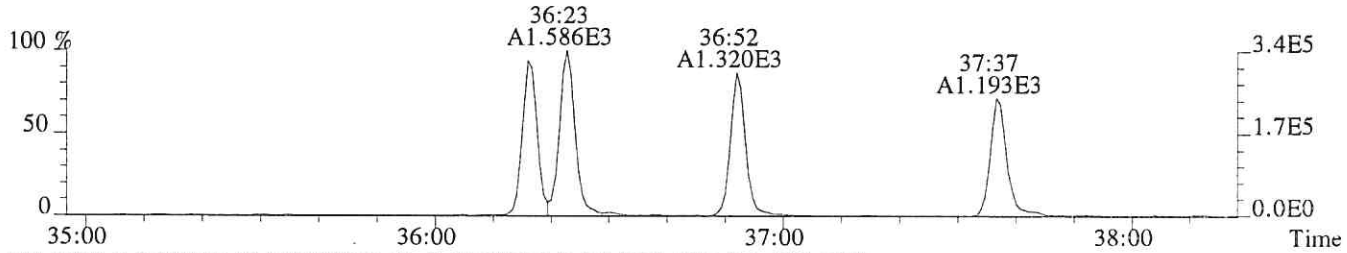
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



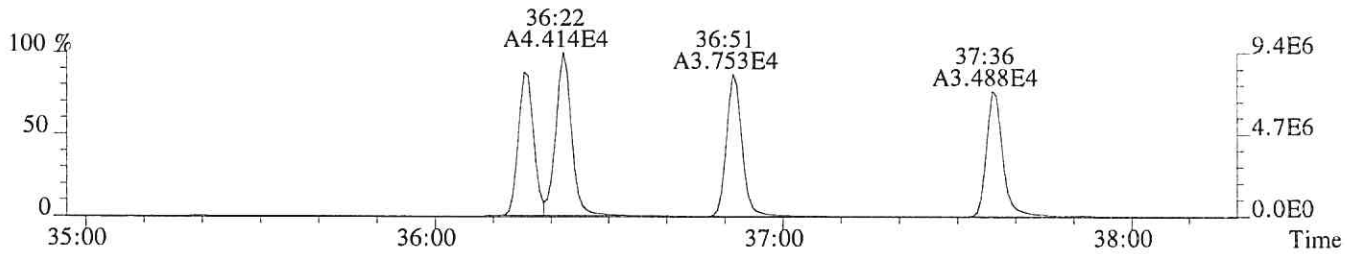
File:P513851 #1-303 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:76555
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,532.0,0.40%,F,T)



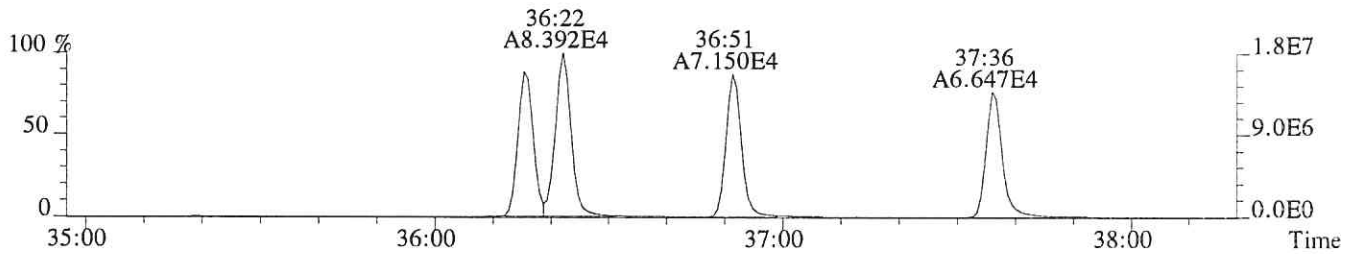
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,128.0,0.40%,F,T)



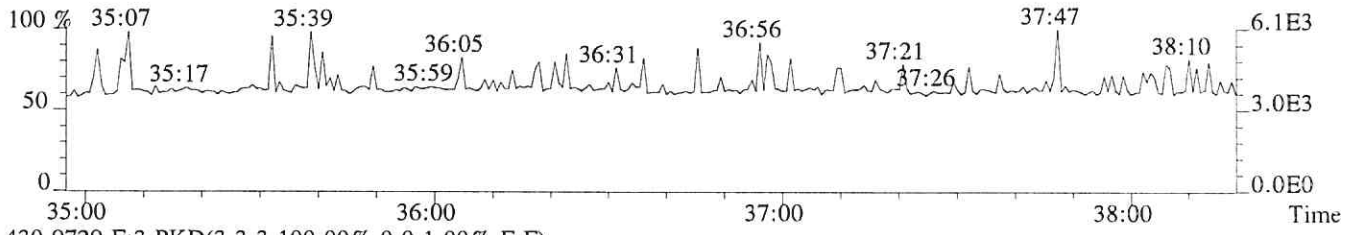
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,916.0,0.40%,F,T)



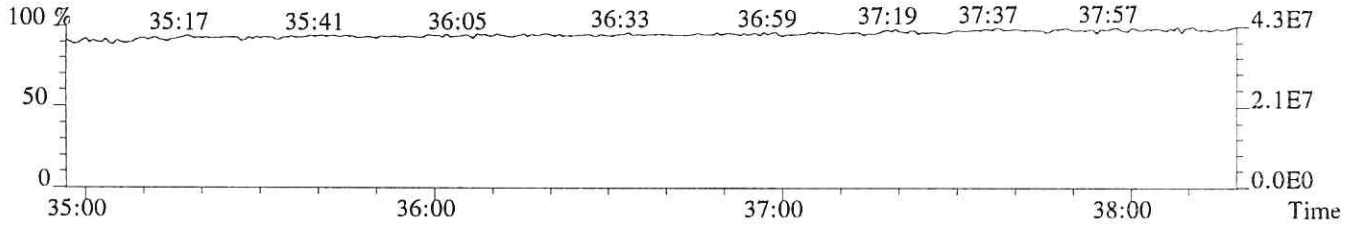
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1424.0,0.40%,F,T)



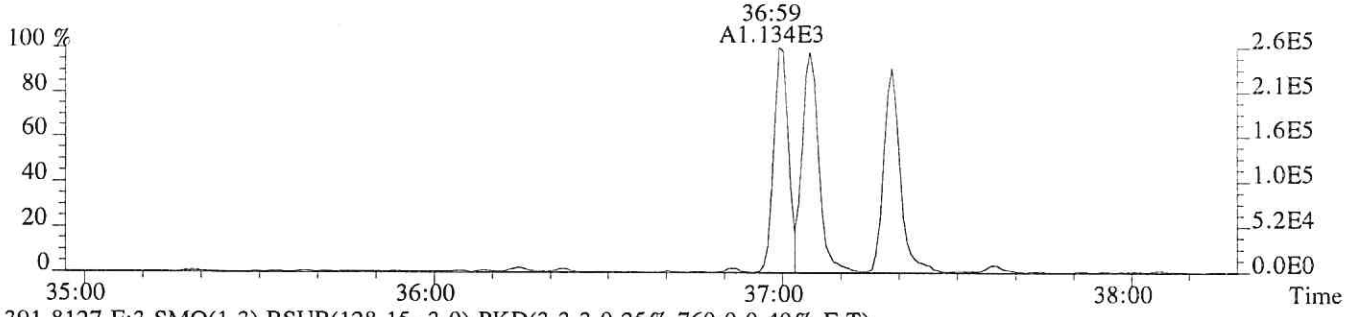
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



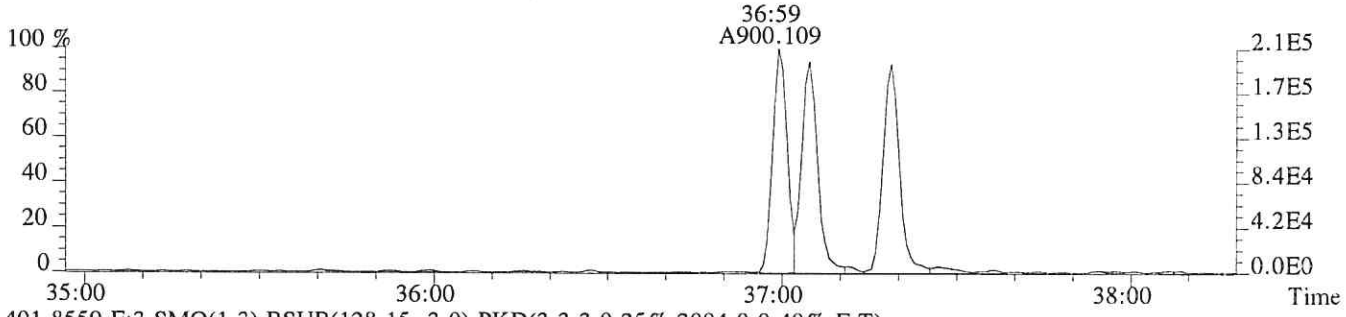
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



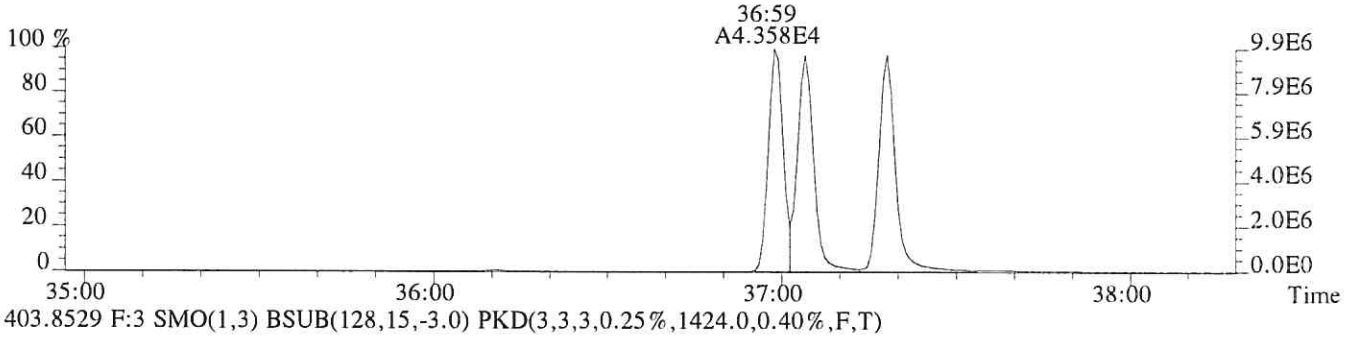
File:P513851 #1-303 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,596.0,0.40%,F,T)



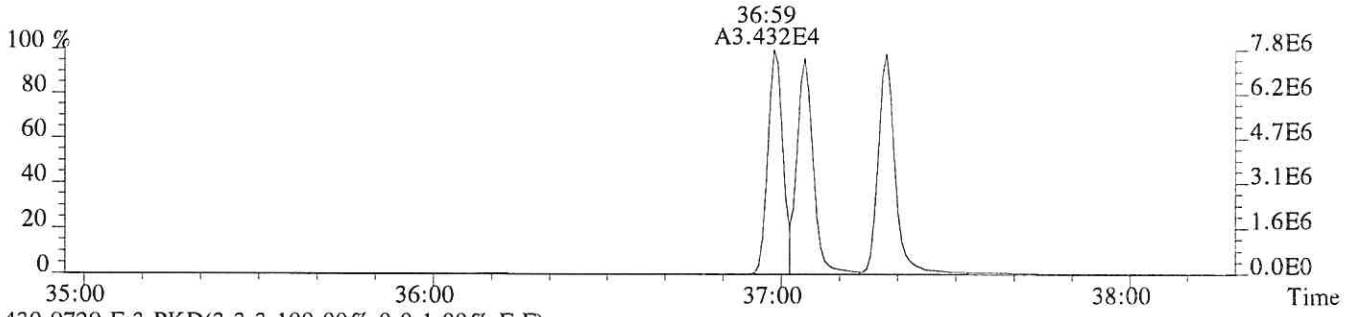
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,760.0,0.40%,F,T)



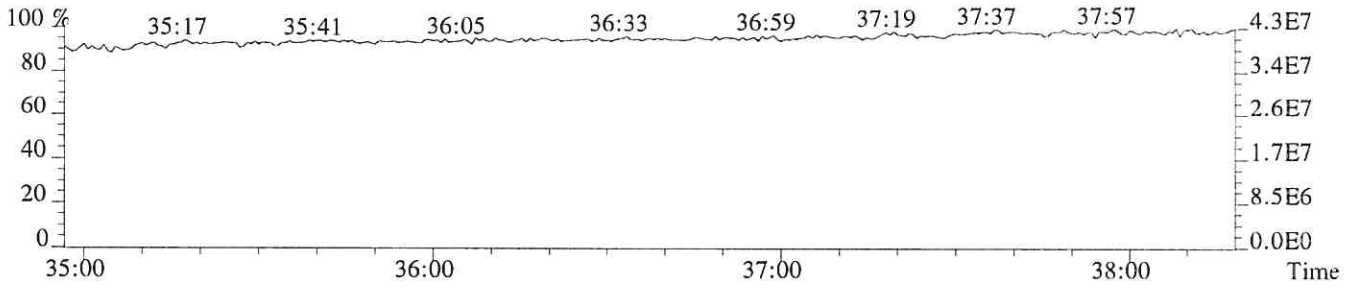
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2004.0,0.40%,F,T)



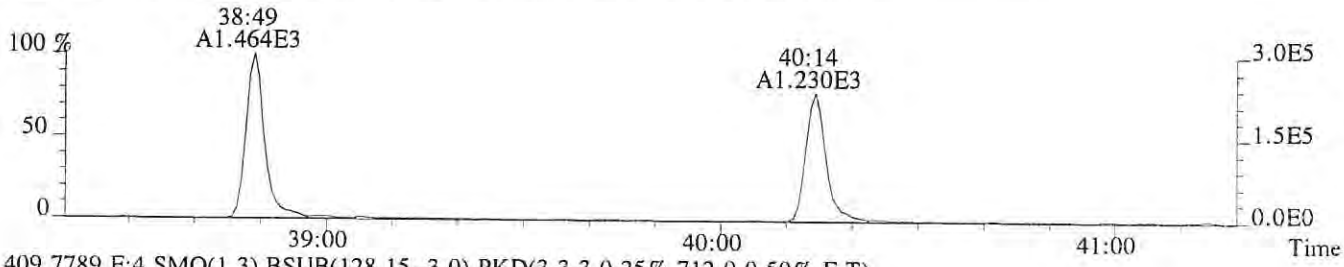
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1424.0,0.40%,F,T)



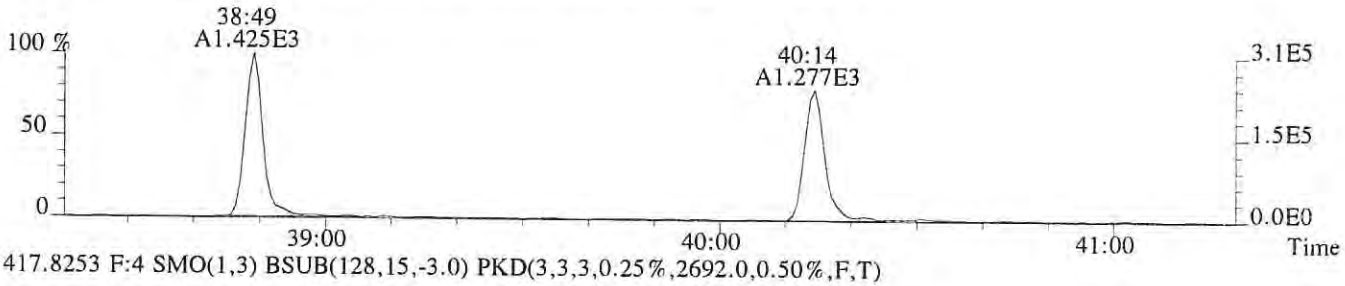
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



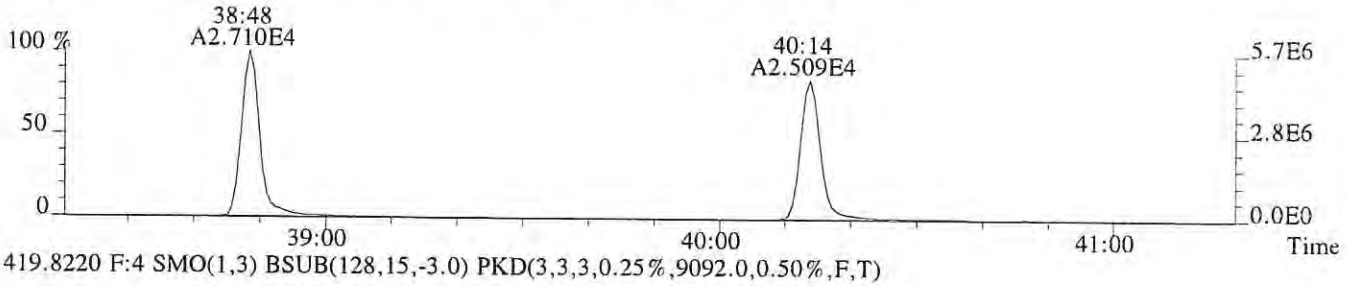
File:P513851 #1-268 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,304.0,0.50%,F,T)



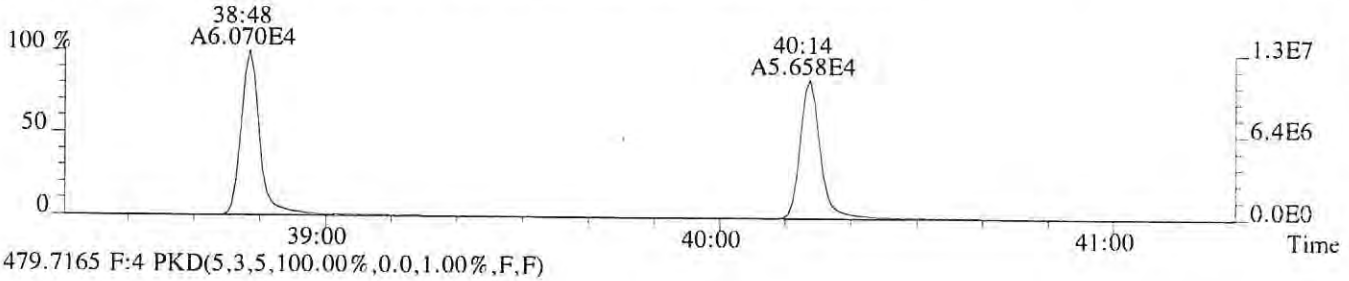
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,712.0,0.50%,F,T)



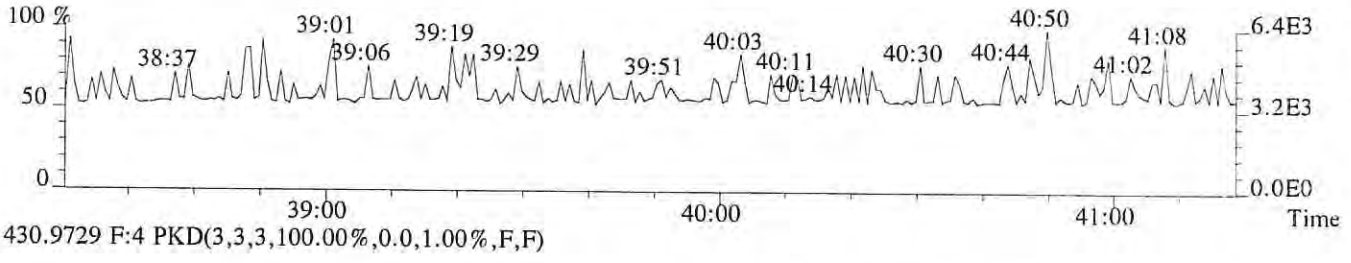
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2692.0,0.50%,F,T)



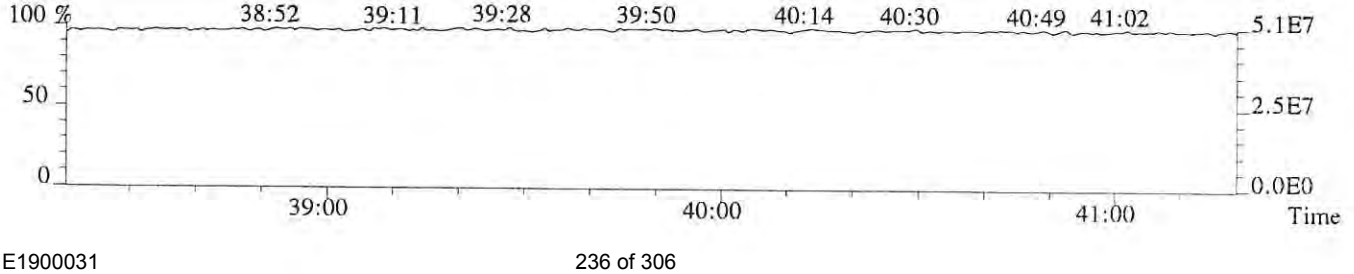
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,9092.0,0.50%,F,T)



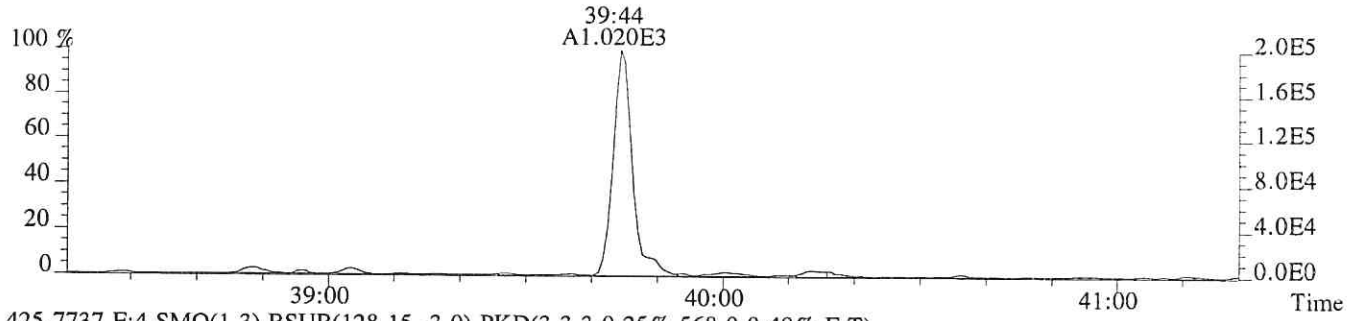
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



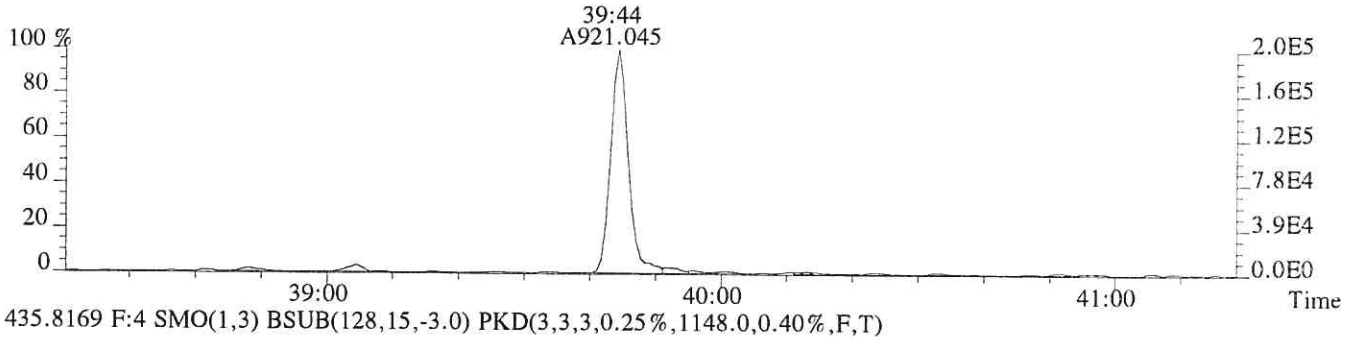
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



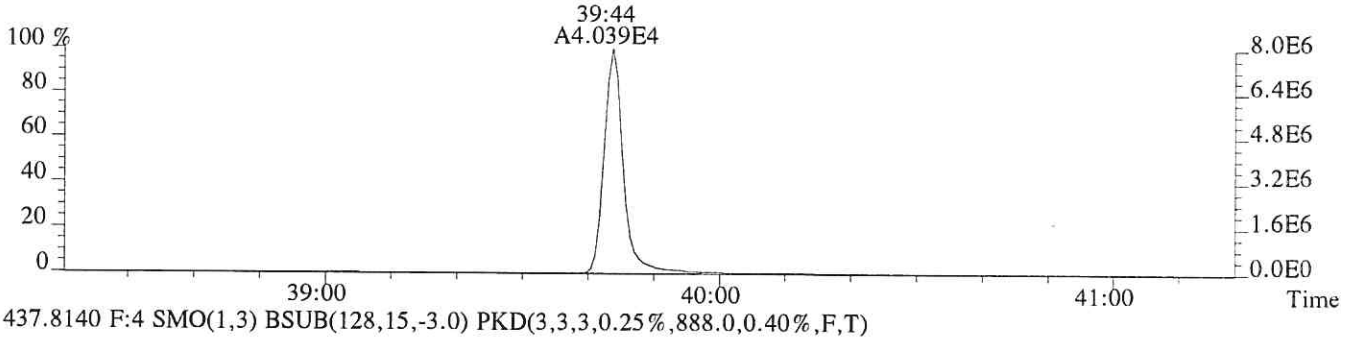
File:P513851 #1-268 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spectE
Sample#1 Exp:76555
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,688.0,0.40%,F,T)



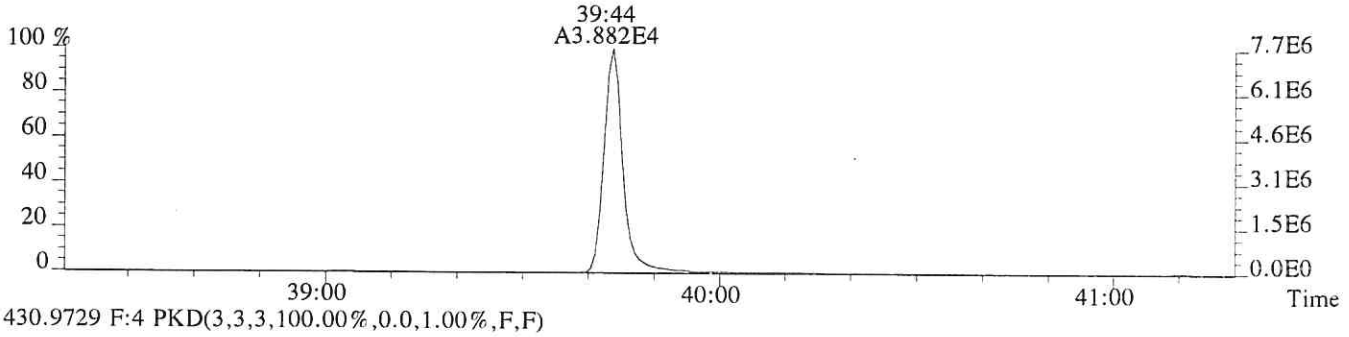
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,568.0,0.40%,F,T)



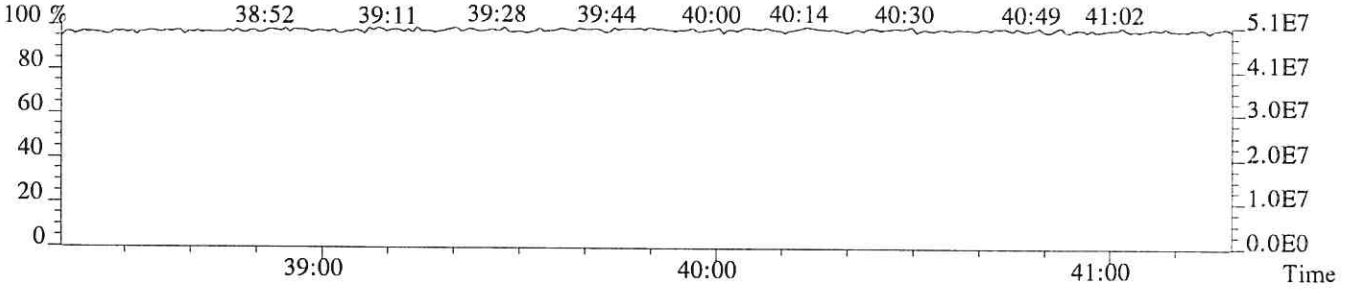
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1148.0,0.40%,F,T)



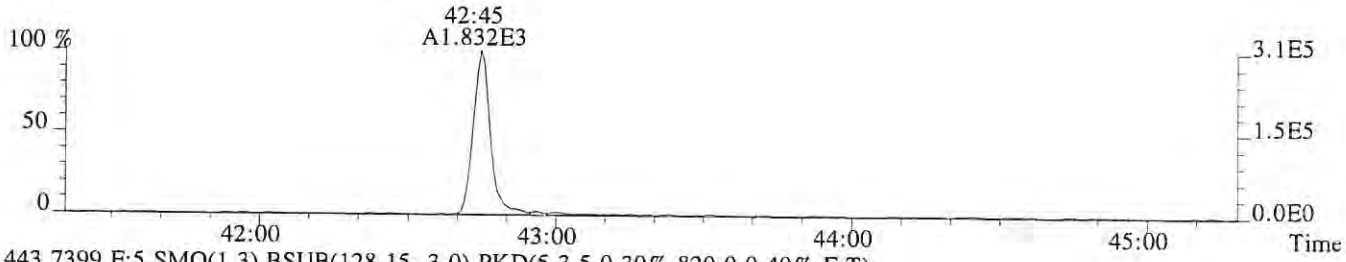
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,888.0,0.40%,F,T)



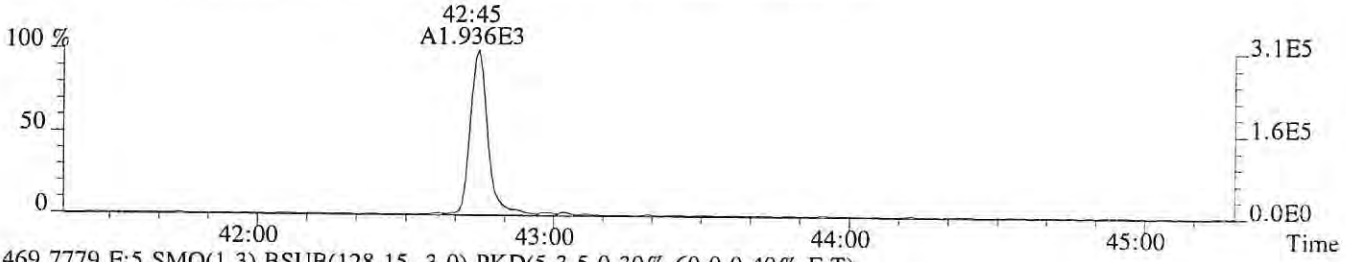
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



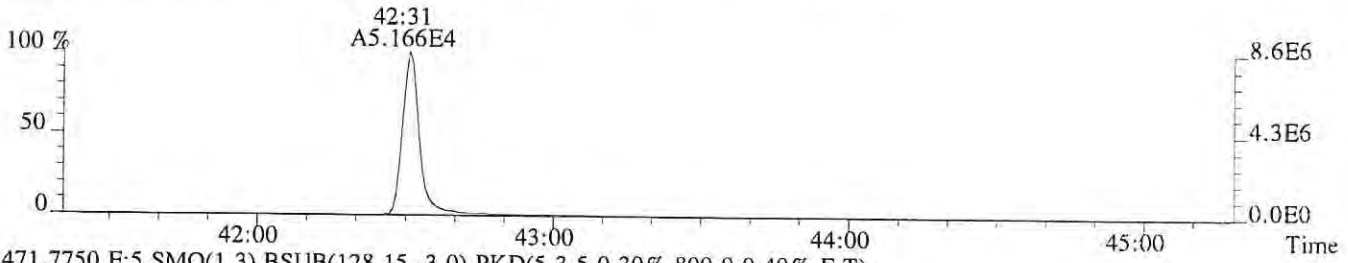
File:P513851 #1-357 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,412.0,0.40%,F,T)



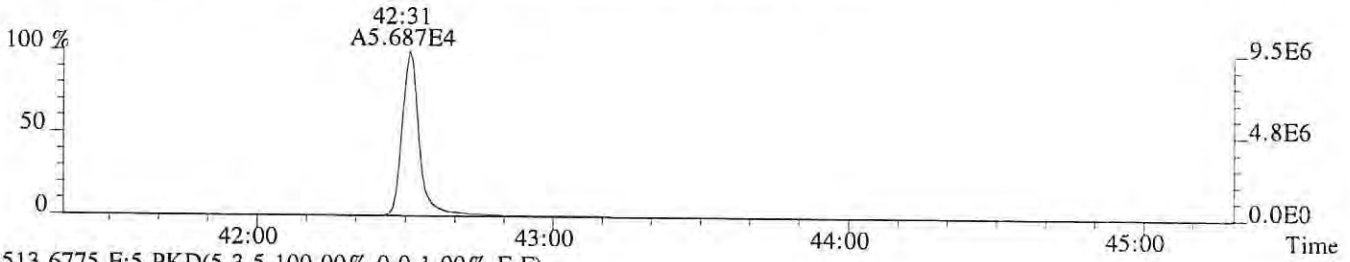
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,820.0,0.40%,F,T)



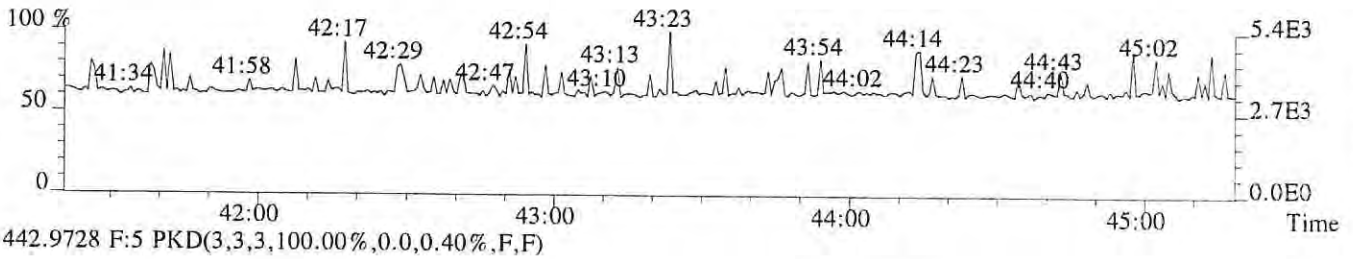
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,60.0,0.40%,F,T)



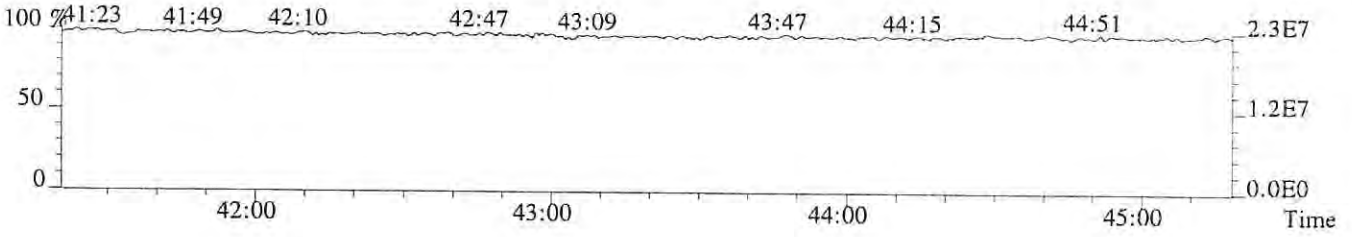
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,800.0,0.40%,F,T)



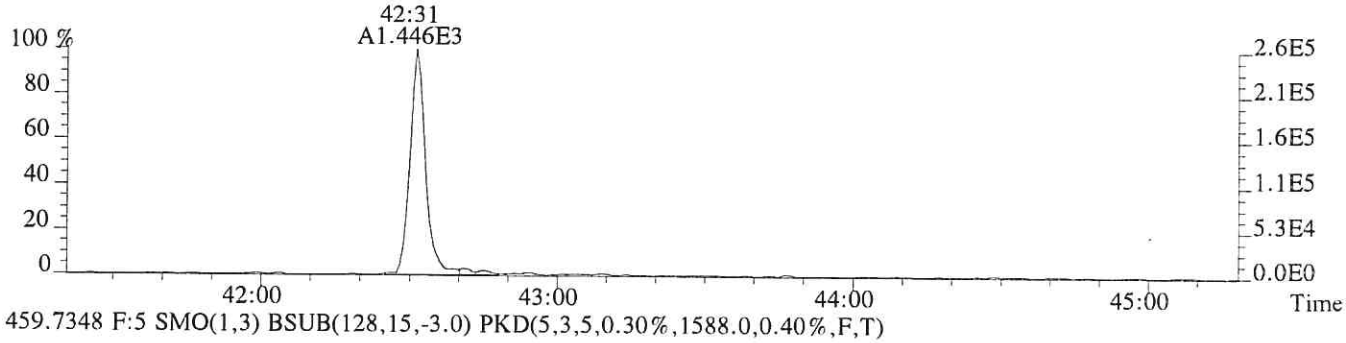
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



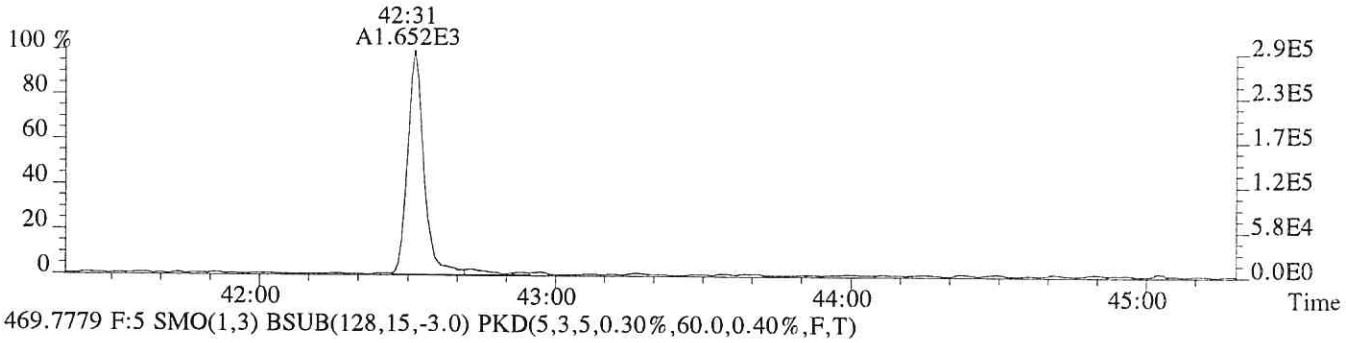
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



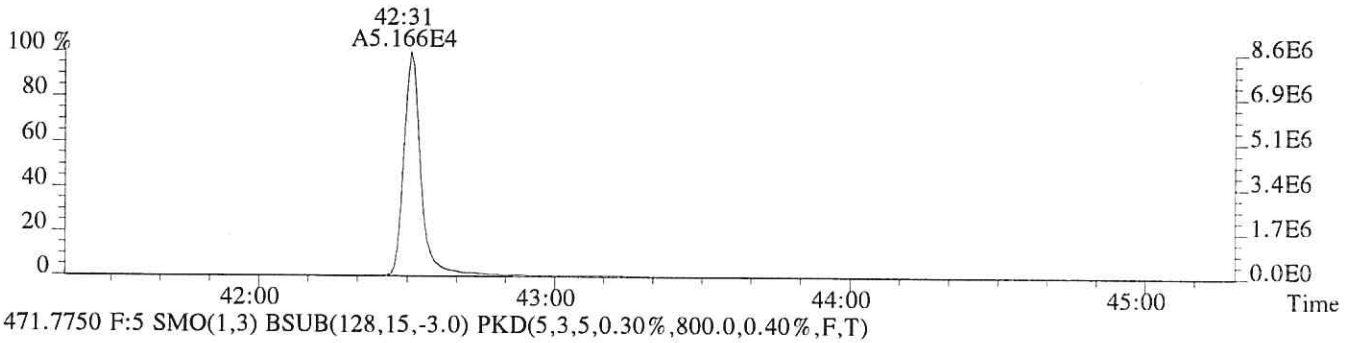
File:P513851 #1-357 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,192.0,0.40%,F,T)



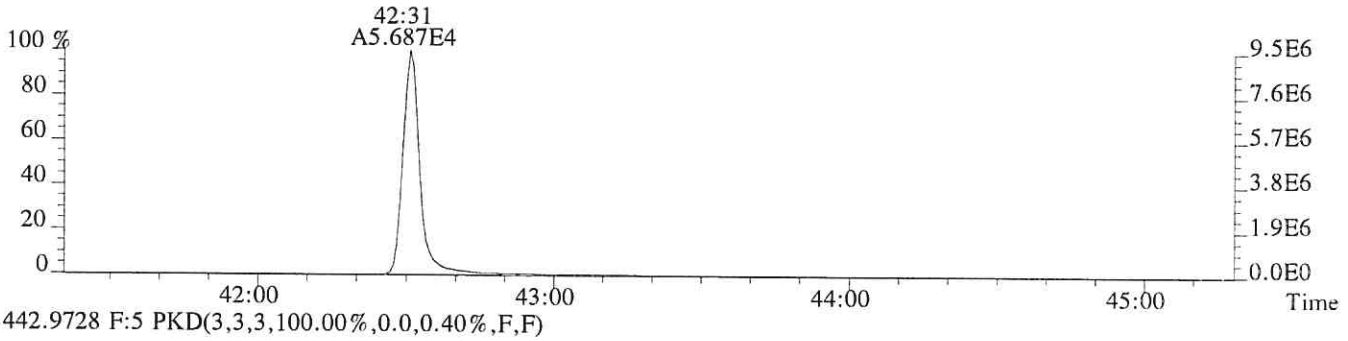
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1588.0,0.40%,F,T)



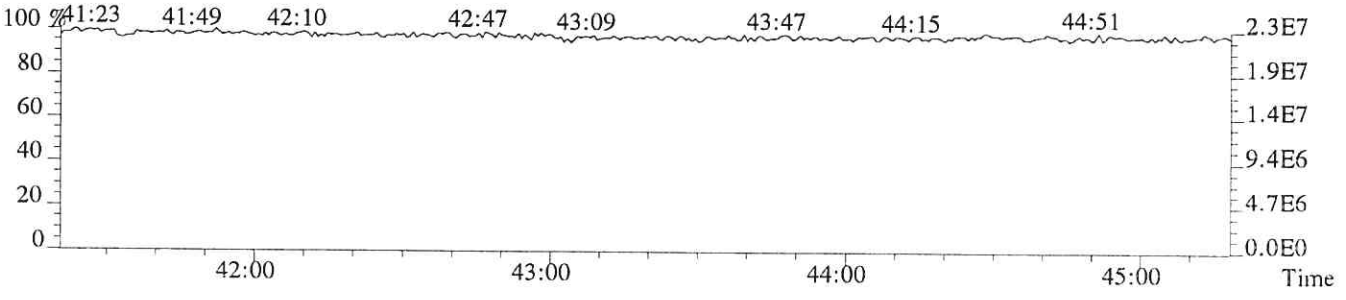
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,60.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,800.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76556

Run #3 Filename P513852 Samp: 1 Inj: 1 Acquired: 24-JAN-18 15:18:44
Processed: 24-JAN-18 16:27:06 Sample ID: CS2

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:48	5.859e+03	7.932e+03	0.74	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	4.499e+04	3.047e+04	1.48	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:42	4.356e+04	2.901e+04	1.50	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:17	4.061e+04	3.382e+04	1.20	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:23	4.295e+04	3.562e+04	1.21	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:53	3.905e+04	3.212e+04	1.22	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	3.479e+04	2.862e+04	1.22	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:49	3.262e+04	3.207e+04	1.02	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	2.654e+04	2.632e+04	1.01	yes	no	1.258
10	Unk	OCDF	42:45	3.789e+04	4.247e+04	0.89	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:32	4.192e+03	5.525e+03	0.76	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:58	2.973e+04	1.886e+04	1.58	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	37:00	2.687e+04	2.156e+04	1.25	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:05	2.801e+04	2.223e+04	1.26	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:19	2.898e+04	2.343e+04	1.24	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:45	2.194e+04	2.114e+04	1.04	yes	no	1.025
17	Unk	OCDD	42:32	3.213e+04	3.615e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:47	3.357e+05	4.220e+05	0.80	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:48	4.551e+05	2.871e+05	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	4.534e+05	2.868e+05	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:16	2.091e+05	4.014e+05	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:23	2.405e+05	4.554e+05	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:52	2.176e+05	4.192e+05	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:37	1.900e+05	3.615e+05	0.53	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:49	1.476e+05	3.275e+05	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	1.279e+05	2.823e+05	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:31	2.035e+05	2.546e+05	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	3.112e+05	1.963e+05	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	2.611e+05	2.071e+05	1.26	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:05	2.721e+05	2.137e+05	1.27	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:44	2.118e+05	1.999e+05	1.06	yes	no	0.858
32	IS	13C-OCDD	42:31	2.824e+05	3.150e+05	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:57	2.212e+05	2.732e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:19	2.902e+05	2.282e+05	1.27	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:32	1.018e+04				no	1.014

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www.alsglobal.com

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
76556

Run #3 Filename P513852 Samp: 1 Inj: 1 Acquired: 24-JAN-18 15:18:44
Processed: 24-JAN-18 16:27:06 LAB. ID: CS2

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.20e+06	7.00e+02	1.7e+03	1.59e+06	1.72e+03	9.3e+02
2	1,2,3,7,8-PeCDF	9.02e+06	1.92e+02	4.7e+04	6.06e+06	3.56e+03	1.7e+03
3	2,3,4,7,8-PeCDF	8.94e+06	1.92e+02	4.7e+04	5.88e+06	3.56e+03	1.7e+03
4	1,2,3,4,7,8-HxCDF	9.11e+06	1.02e+03	9.0e+03	7.52e+06	1.04e+03	7.2e+03
5	1,2,3,6,7,8-HxCDF	8.86e+06	1.02e+03	8.7e+03	7.32e+06	1.04e+03	7.0e+03
6	2,3,4,6,7,8-HxCDF	8.62e+06	1.02e+03	8.5e+03	6.97e+06	1.04e+03	6.7e+03
7	1,2,3,7,8,9-HxCDF	7.31e+06	1.02e+03	7.2e+03	6.00e+06	1.04e+03	5.7e+03
8	1,2,3,4,6,7,8-HpCDF	6.83e+06	3.67e+03	1.9e+03	6.77e+06	3.04e+03	2.2e+03
9	1,2,3,4,7,8,9-HpCDF	5.23e+06	3.67e+03	1.4e+03	5.30e+06	3.04e+03	1.7e+03
10	OCDF	6.47e+06	1.08e+03	6.0e+03	7.24e+06	1.74e+03	4.2e+03
11	2,3,7,8-TCDD	8.47e+05	1.35e+03	6.3e+02	1.14e+06	7.40e+02	1.5e+03
12	1,2,3,7,8-PeCDD	6.05e+06	5.16e+02	1.2e+04	3.80e+06	5.04e+02	7.5e+03
13	1,2,3,4,7,8-HxCDD	6.06e+06	7.48e+02	8.1e+03	4.85e+06	1.29e+03	3.8e+03
14	1,2,3,6,7,8-HxCDD	5.88e+06	7.48e+02	7.9e+03	4.64e+06	1.29e+03	3.6e+03
15	1,2,3,7,8,9-HxCDD	5.73e+06	7.48e+02	7.7e+03	4.69e+06	1.29e+03	3.6e+03
16	1,2,3,4,6,7,8-HpCDD	4.40e+06	1.68e+03	2.6e+03	4.18e+06	7.28e+02	5.7e+03
17	OCDD	5.55e+06	1.60e+02	3.5e+04	6.20e+06	1.07e+03	5.8e+03
18	13C-2,3,7,8-TCDF	6.63e+07	8.64e+03	7.7e+03	8.31e+07	4.36e+03	1.9e+04
19	13C-1,2,3,7,8-PeCDF	8.82e+07	9.44e+02	9.3e+04	5.54e+07	2.55e+03	2.2e+04
20	13C-2,3,4,7,8-PeCDF	9.11e+07	9.44e+02	9.6e+04	5.80e+07	2.55e+03	2.3e+04
21	13C-1,2,3,4,7,8-HxCDF	4.63e+07	1.33e+03	3.5e+04	8.84e+07	3.58e+03	2.5e+04
22	13C-1,2,3,6,7,8-HxCDF	4.97e+07	1.33e+03	3.7e+04	9.31e+07	3.58e+03	2.6e+04
23	13C-2,3,4,6,7,8-HxCDF	4.74e+07	1.33e+03	3.6e+04	9.03e+07	3.58e+03	2.5e+04
24	13C-1,2,3,7,8,9-HxCDF	3.91e+07	1.33e+03	2.9e+04	7.44e+07	3.58e+03	2.1e+04
25	13C-1,2,3,4,6,7,8-HpCDF	3.05e+07	5.18e+03	5.9e+03	6.68e+07	7.38e+03	9.0e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.48e+07	5.18e+03	4.8e+03	5.51e+07	7.38e+03	7.5e+03
27	13C-2,3,7,8-TCDD	4.21e+07	6.43e+03	6.5e+03	5.22e+07	3.34e+03	1.6e+04
28	13C-1,2,3,7,8-PeCDD	6.30e+07	1.05e+03	6.0e+04	3.99e+07	1.24e+03	3.2e+04
29	13C-1,2,3,4,7,8-HxCDD	5.84e+07	4.36e+03	1.3e+04	4.60e+07	2.04e+03	2.3e+04
30	13C-1,2,3,6,7,8-HxCDD	5.57e+07	4.36e+03	1.3e+04	4.34e+07	2.04e+03	2.1e+04
31	13C-1,2,3,4,6,7,8-HpCDD	4.12e+07	2.07e+03	2.0e+04	3.91e+07	2.18e+03	1.8e+04
32	13C-OCDD	4.87e+07	6.80e+01	7.2e+05	5.40e+07	9.12e+02	5.9e+04
33	13C-1,2,3,4-TCDD	4.48e+07	6.43e+03	7.0e+03	5.57e+07	3.34e+03	1.7e+04
34	13C-1,2,3,7,8,9-HxCDD	5.61e+07	4.36e+03	1.3e+04	4.47e+07	2.04e+03	2.2e+04
35	37Cl-2,3,7,8-TCDD	2.10e+06	1.00e+03	2.1e+03			

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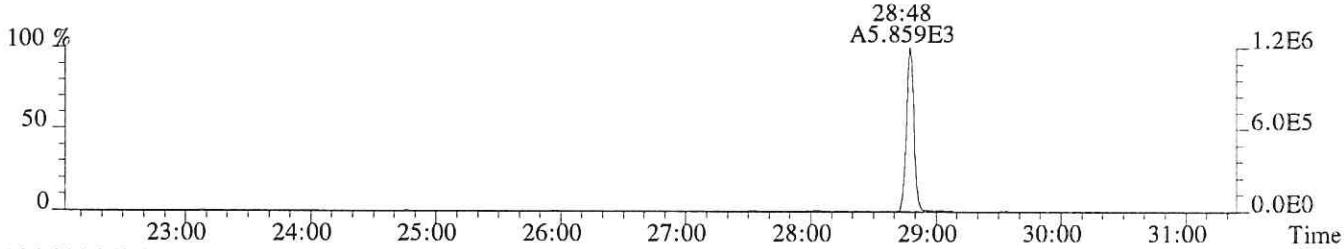
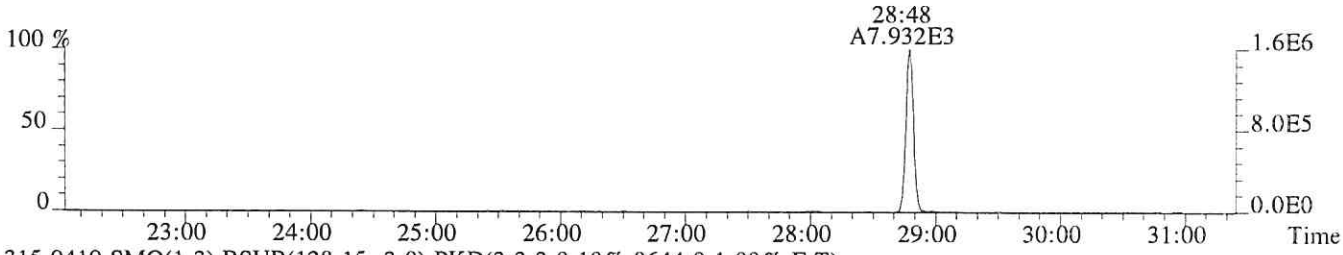
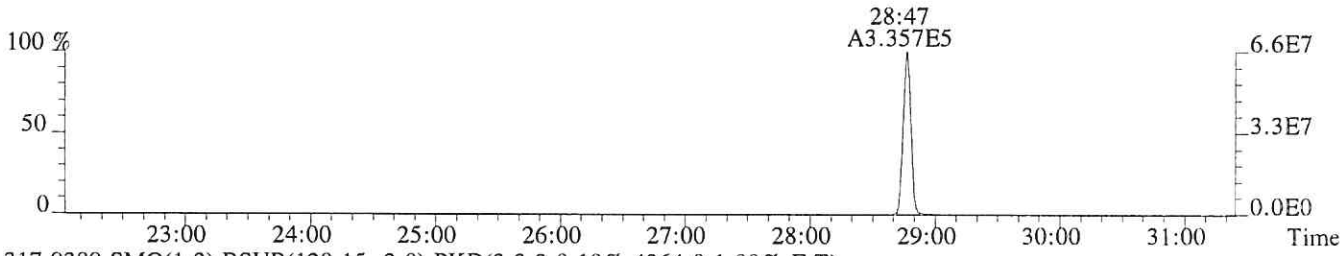
File:P513852 #1-665 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,700.0,1.00%,F,T)



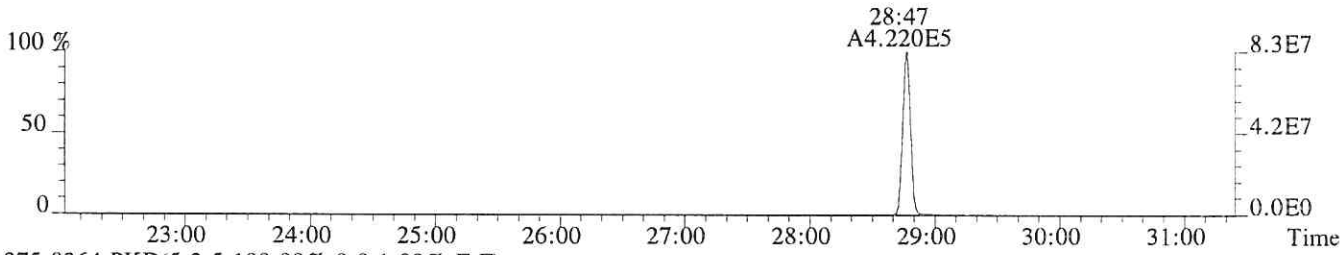
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1724.0,1.00%,F,T)



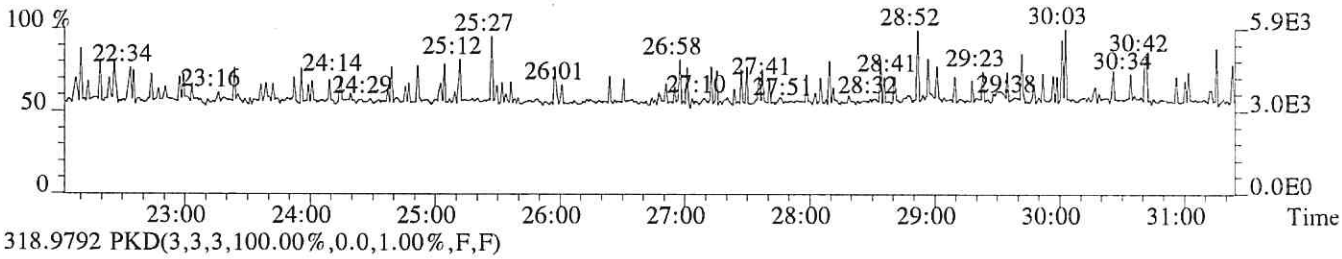
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8644.0,1.00%,F,T)



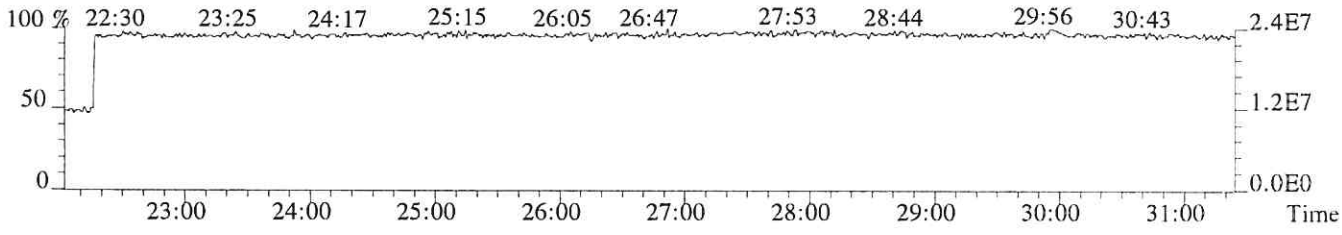
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4364.0,1.00%,F,T)



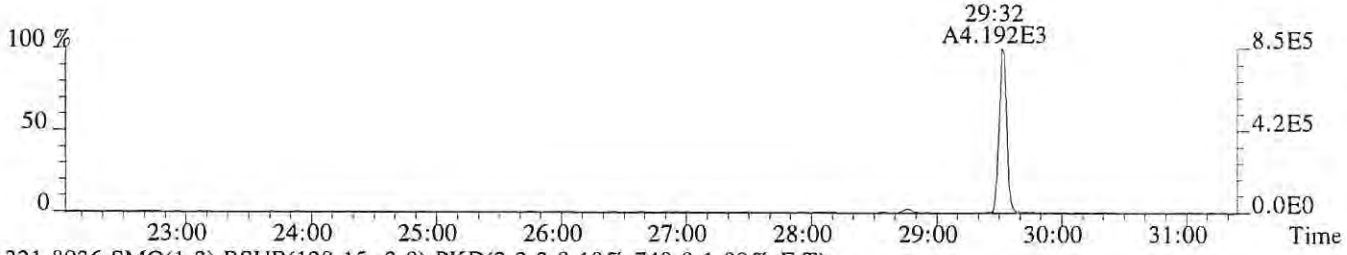
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



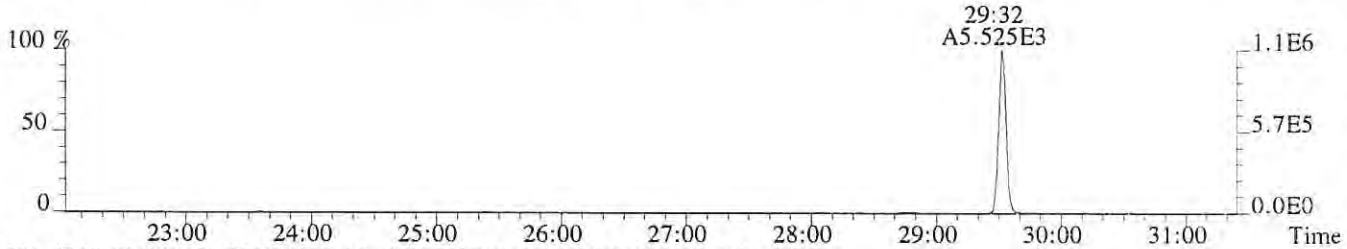
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



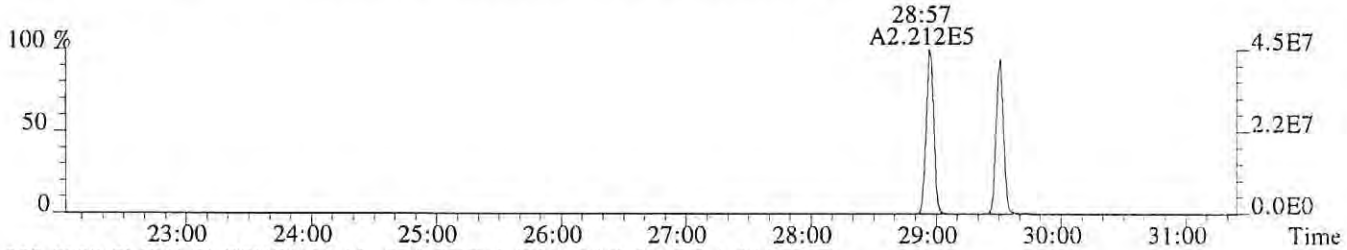
File:P513852 #1-665 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1348.0,1.00%,F,T)



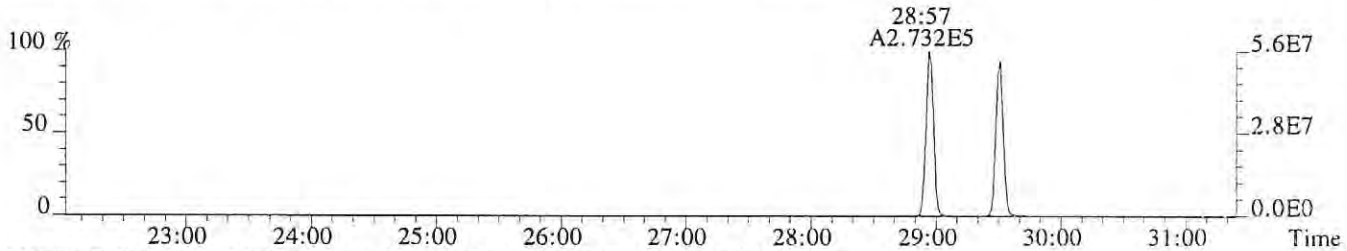
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,740.0,1.00%,F,T)



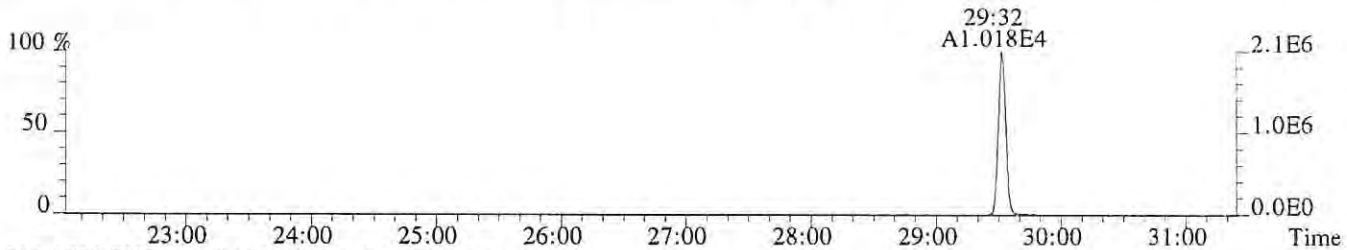
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6428.0,1.00%,F,T)



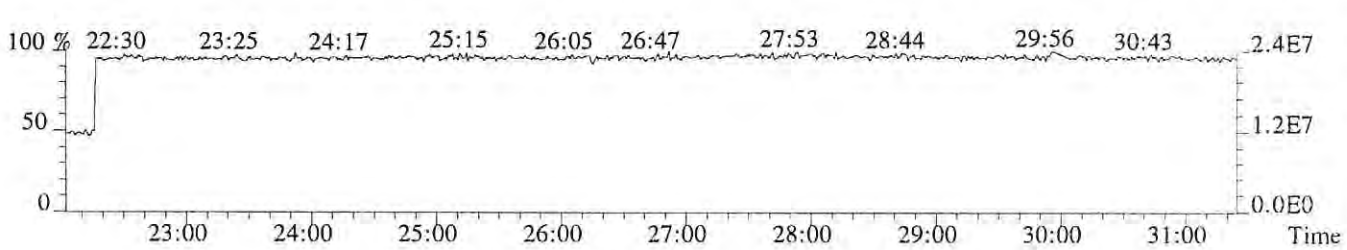
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3336.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1004.0,1.00%,F,T)

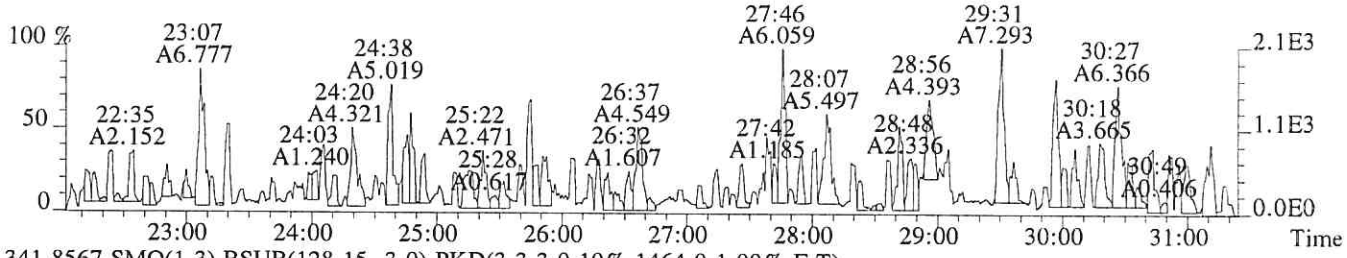


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

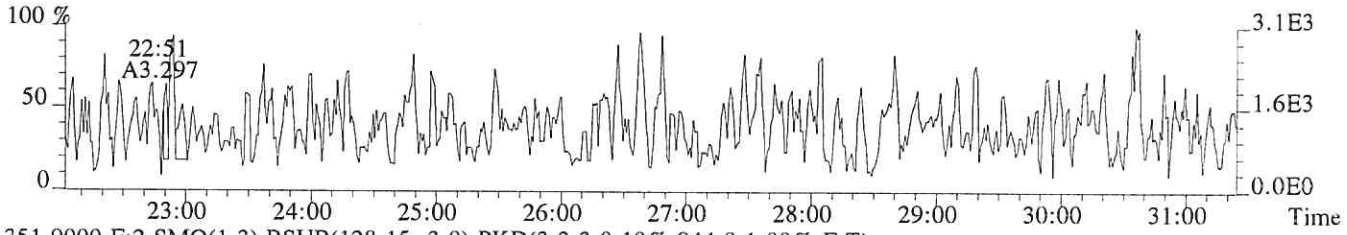


File:P513852 #1-665 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556

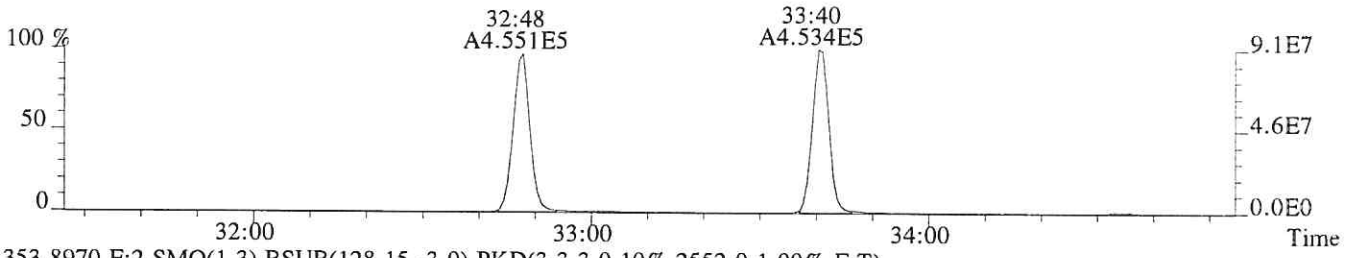
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,196.0,1.00%,F,T)



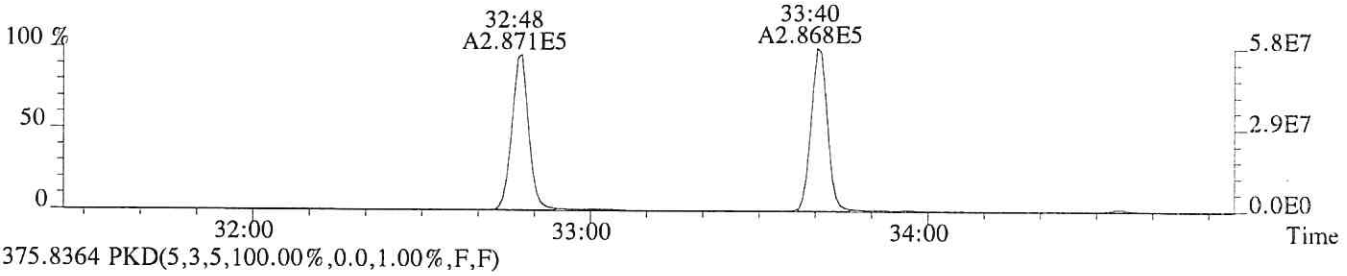
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1464.0,1.00%,F,T)



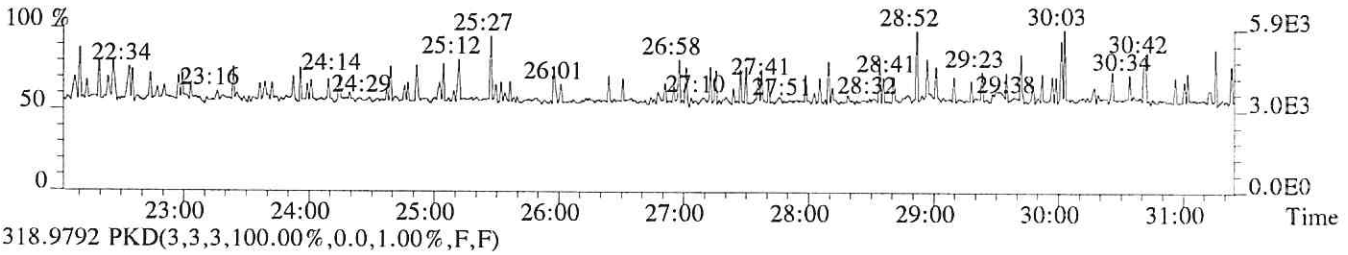
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,944.0,1.00%,F,T)



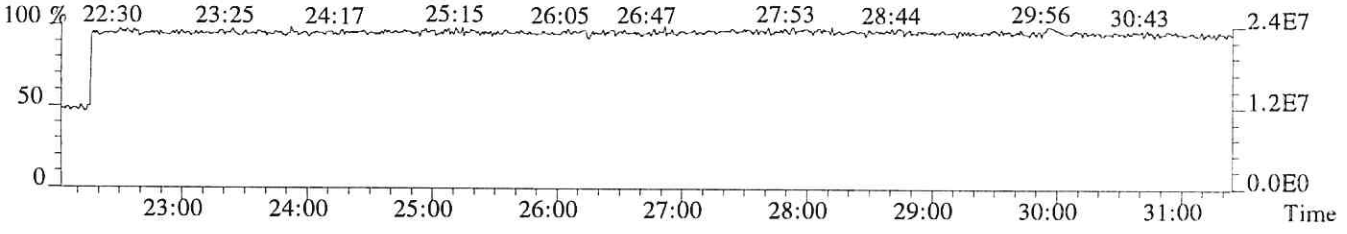
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2552.0,1.00%,F,T)



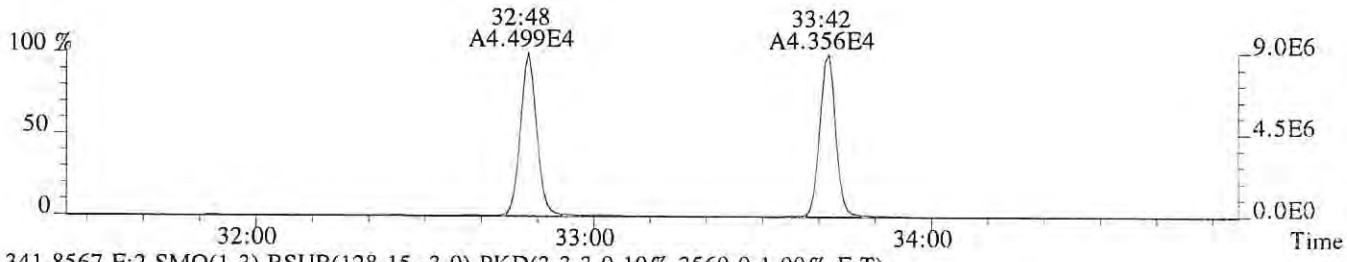
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



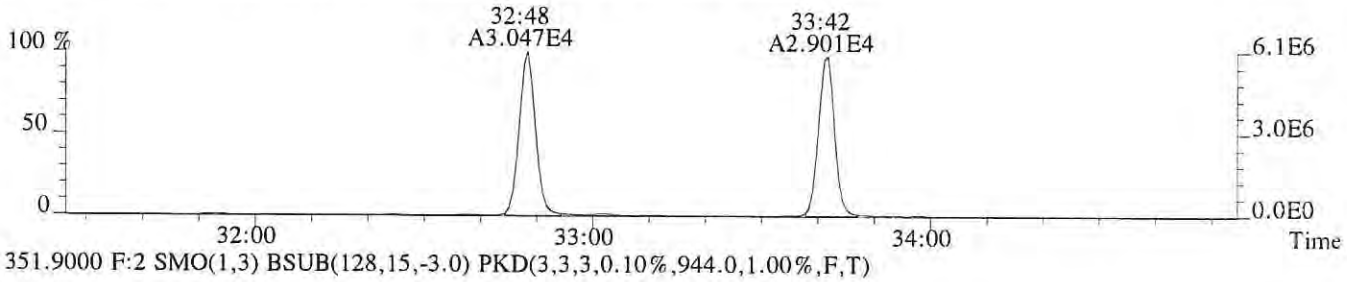
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



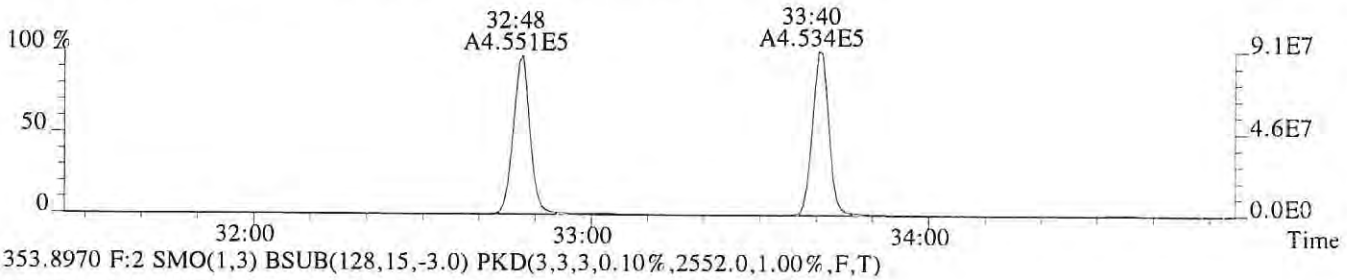
File:P513852 #1-313 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,192.0,1.00%,F,T)



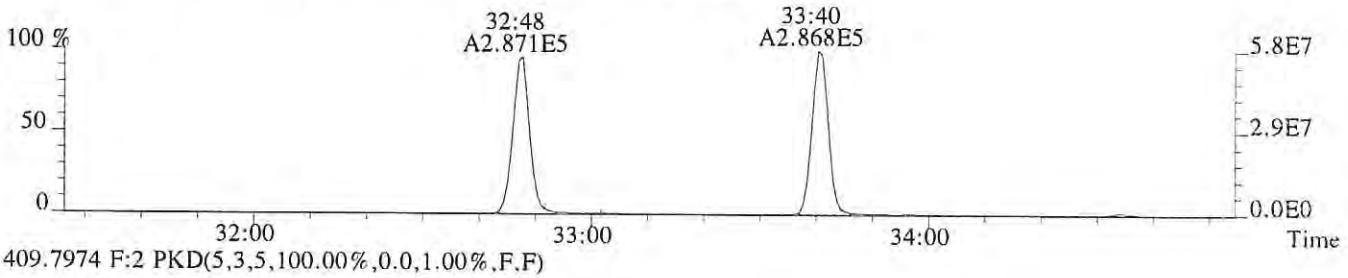
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3560.0,1.00%,F,T)



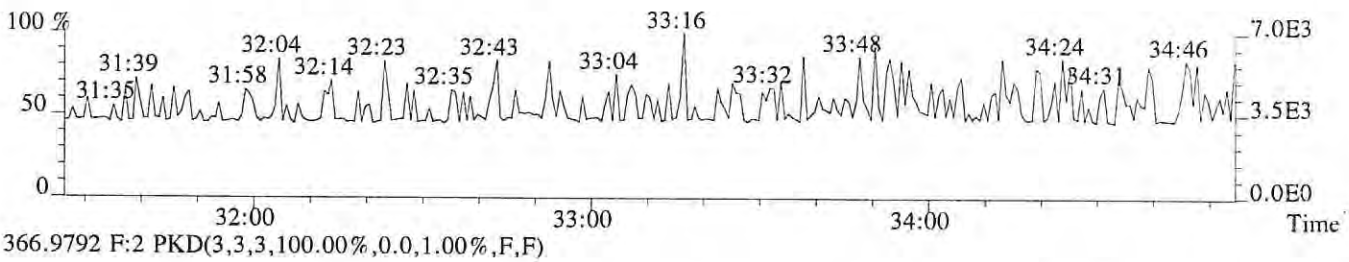
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,944.0,1.00%,F,T)



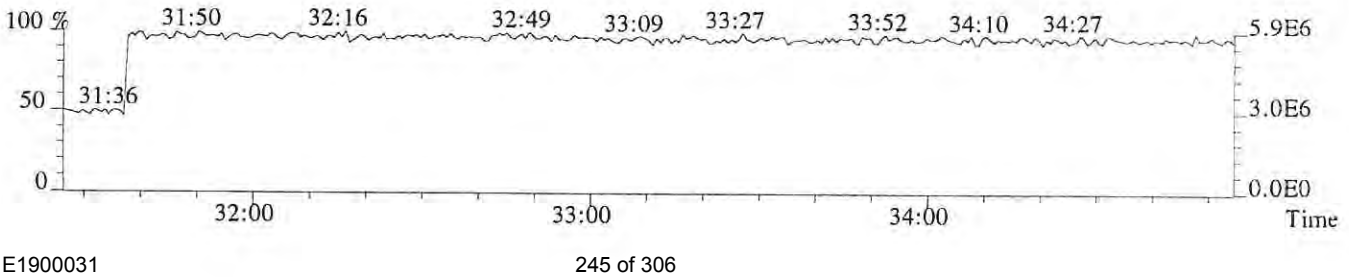
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2552.0,1.00%,F,T)



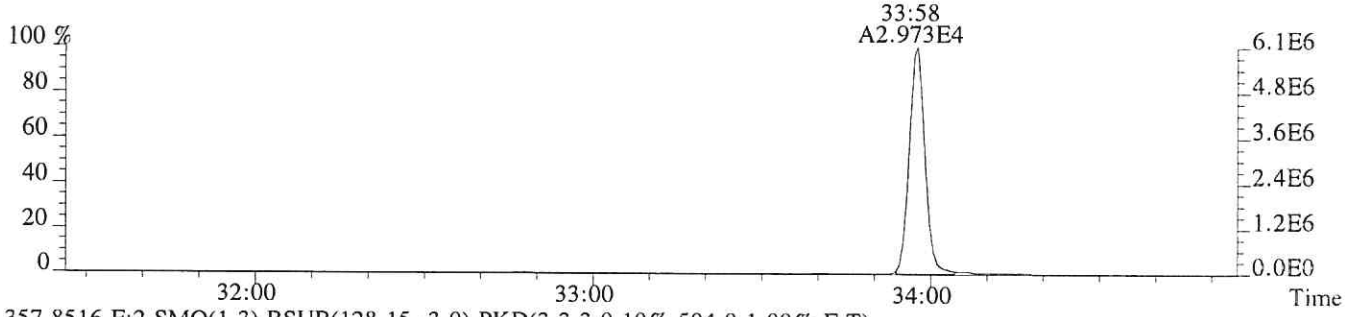
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



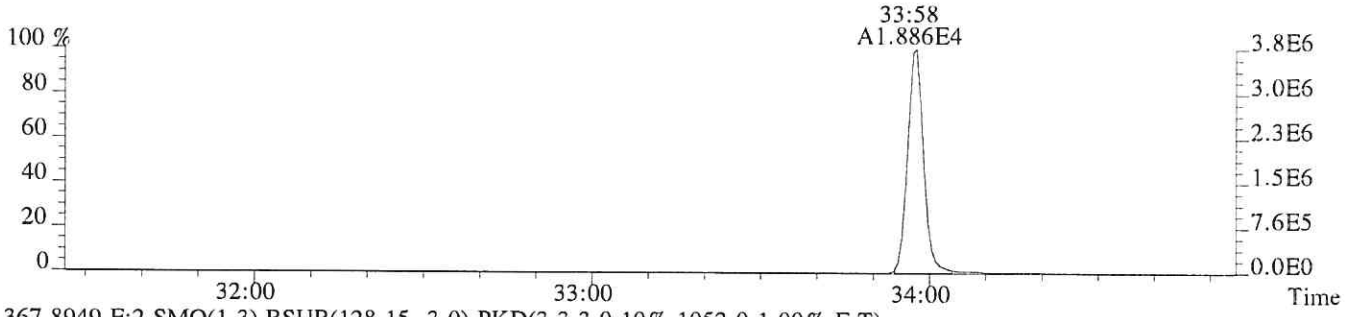
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



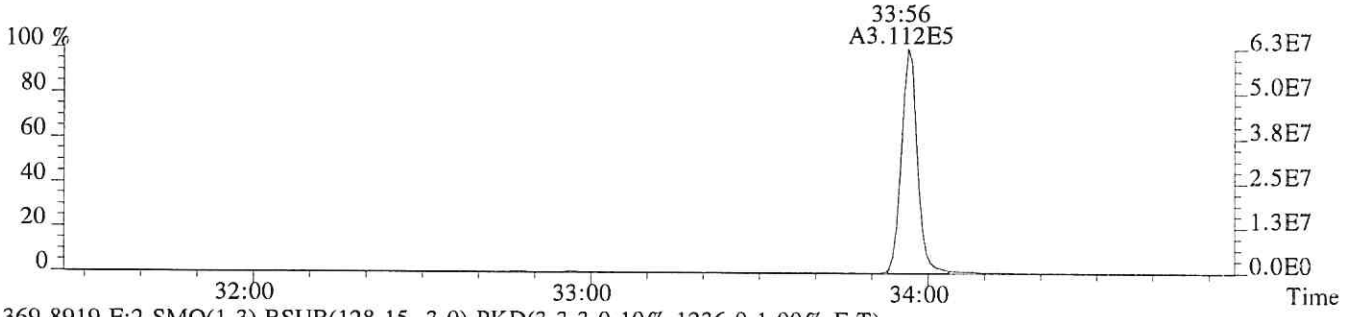
File:P513852 #1-313 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,516.0,1.00%,F,T)



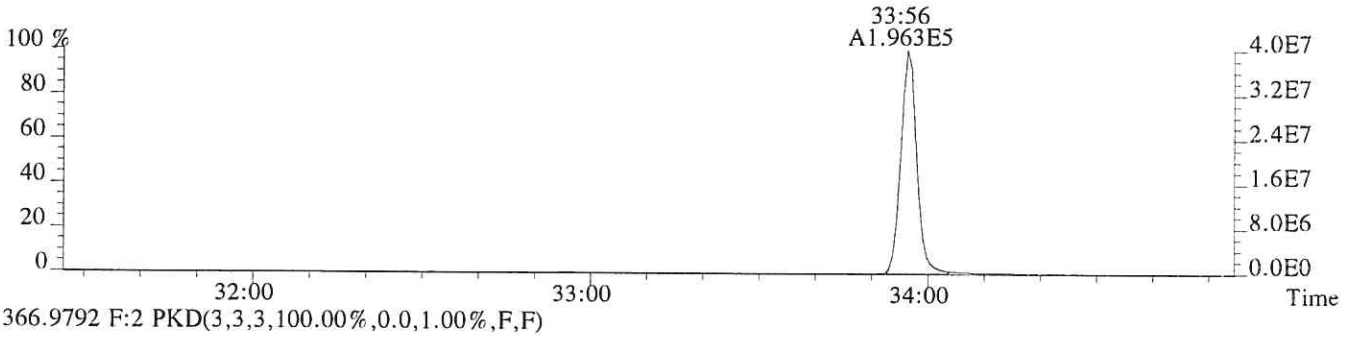
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,504.0,1.00%,F,T)



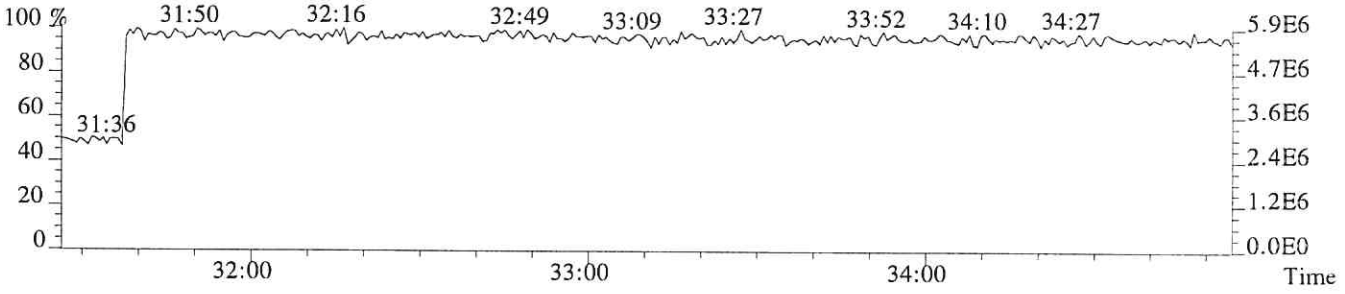
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1052.0,1.00%,F,T)



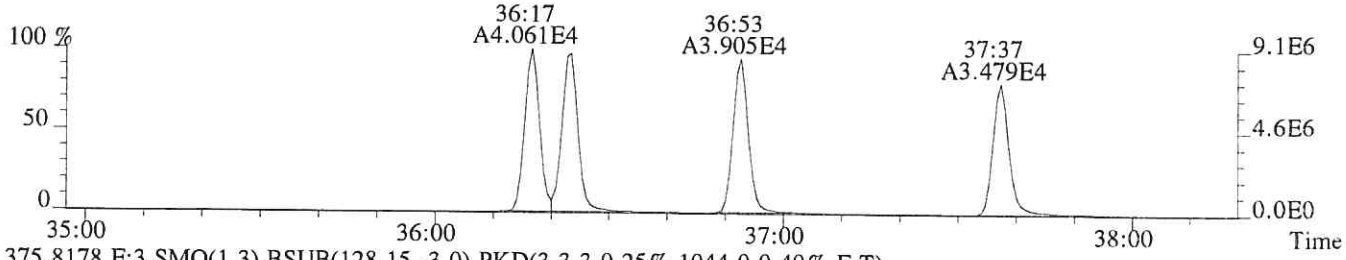
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1236.0,1.00%,F,T)



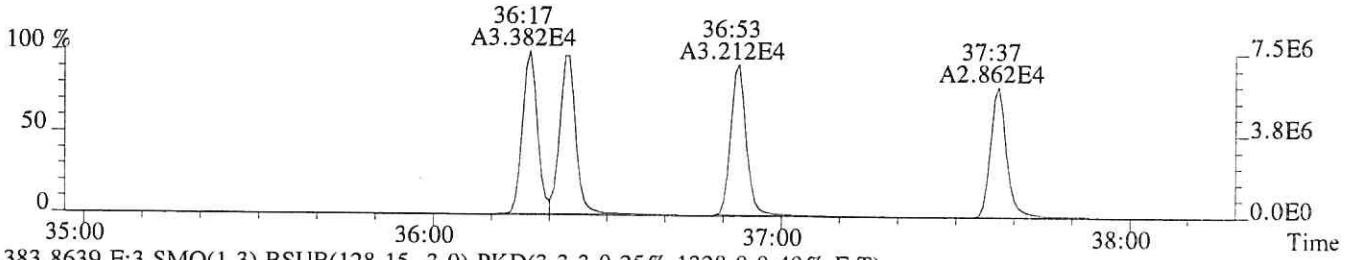
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



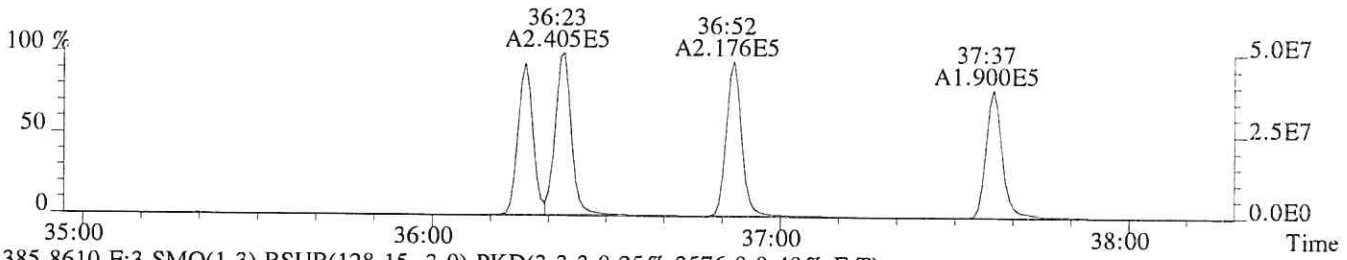
File:P513852 #1-303 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1016.0,0.40%,F,T)



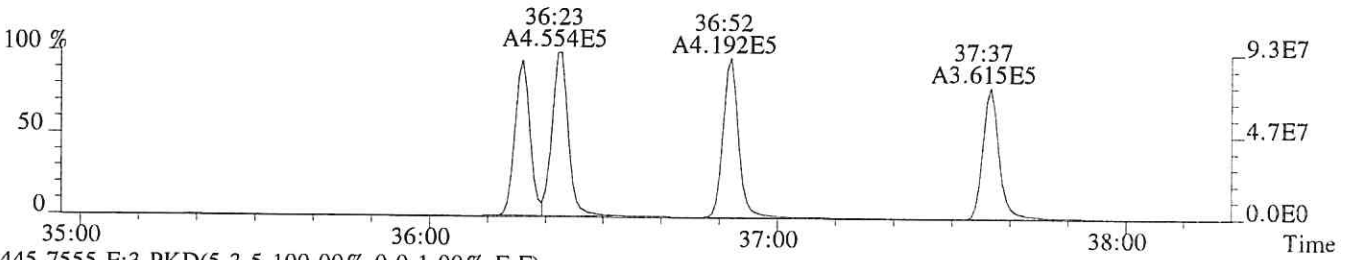
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1044.0,0.40%,F,T)



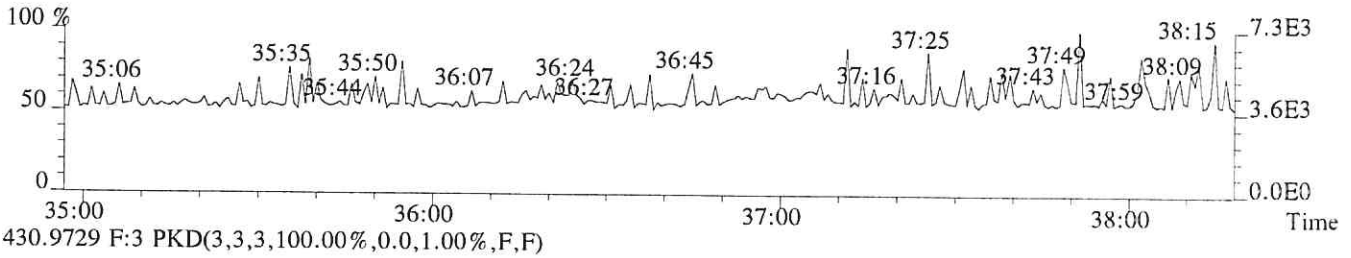
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1328.0,0.40%,F,T)



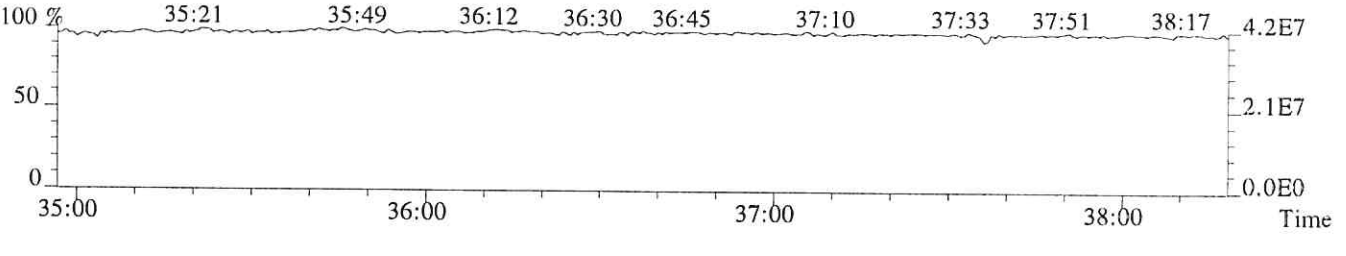
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3576.0,0.40%,F,T)



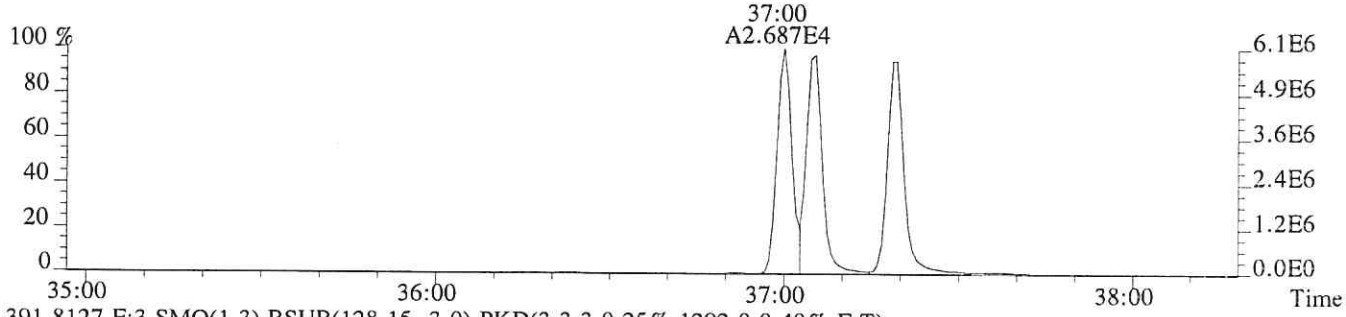
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



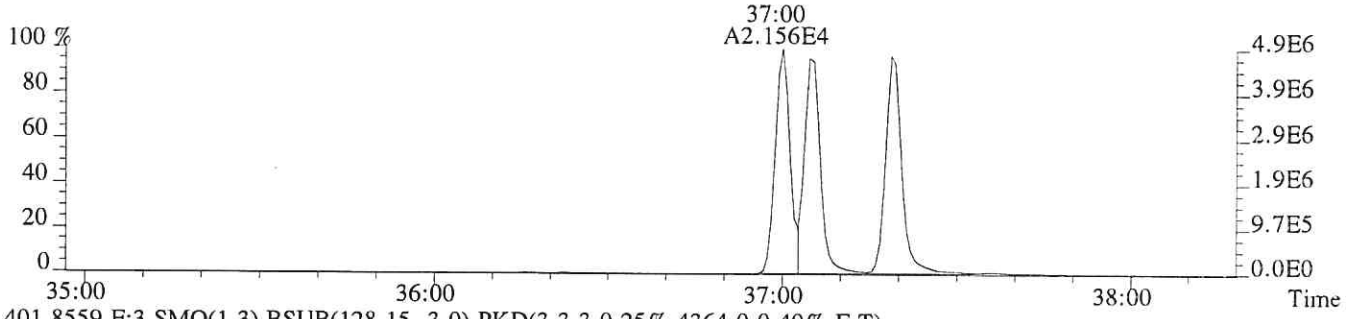
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



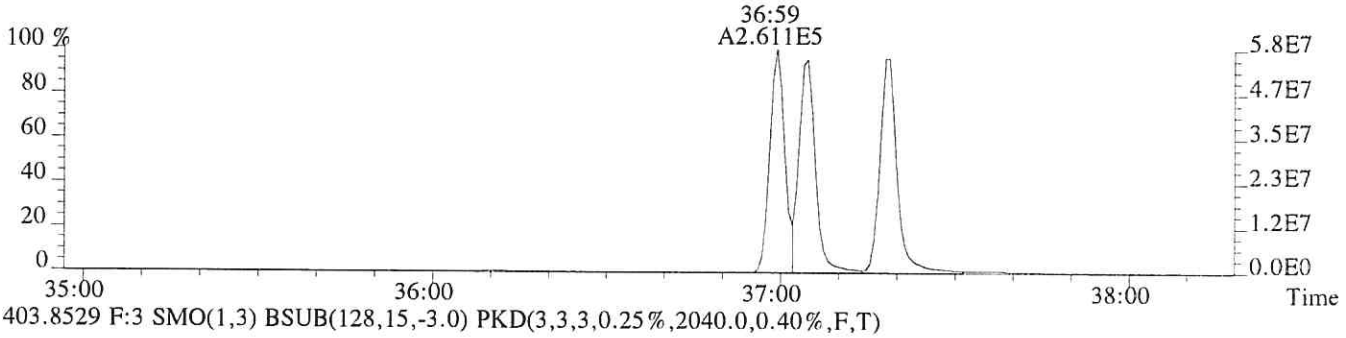
File:P513852 #1-303 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,748.0,0.40%,F,T)



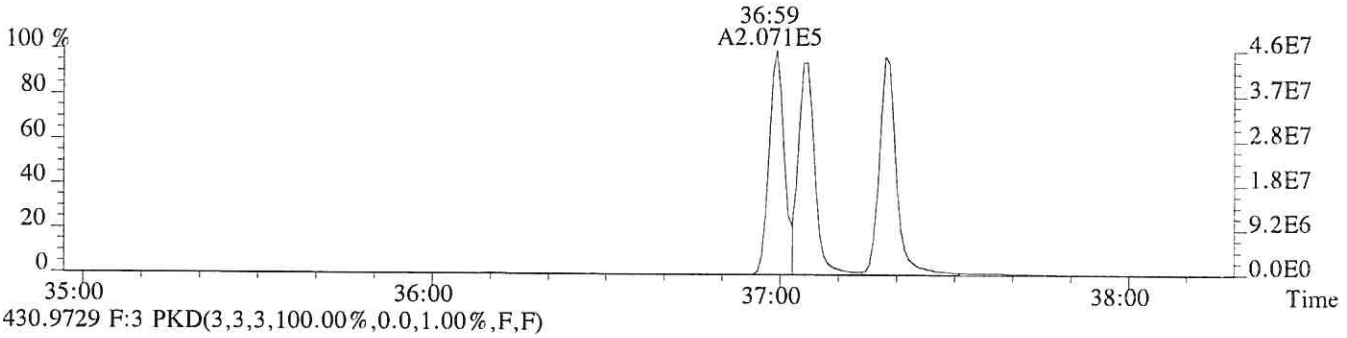
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1292.0,0.40%,F,T)



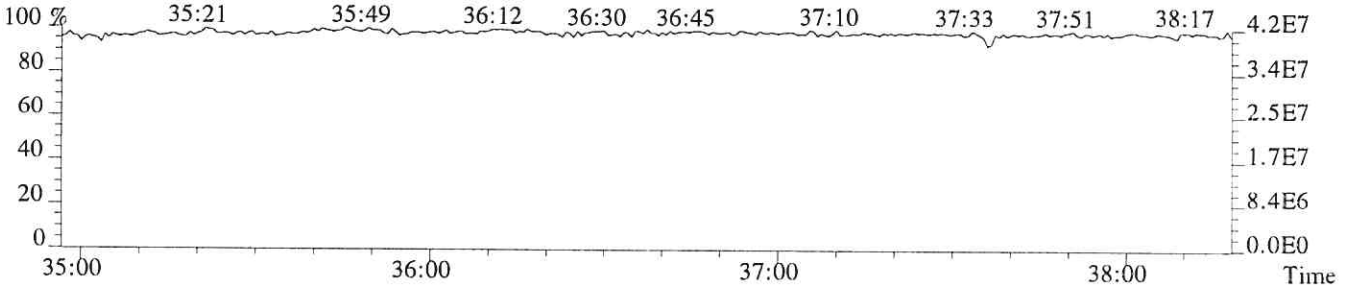
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4364.0,0.40%,F,T)



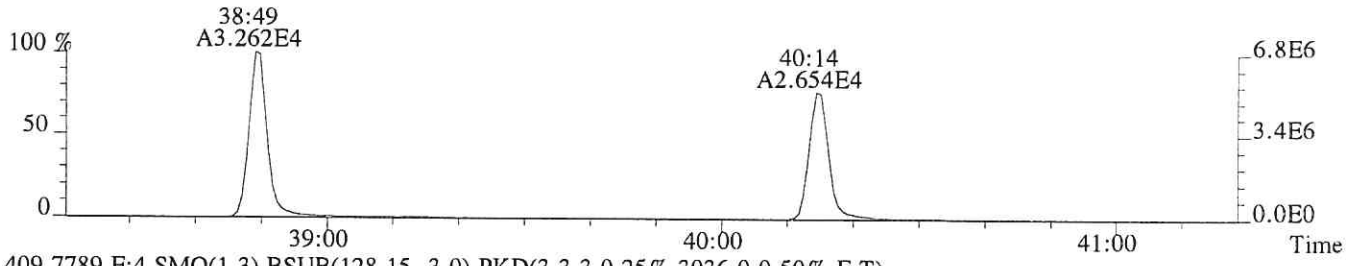
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2040.0,0.40%,F,T)



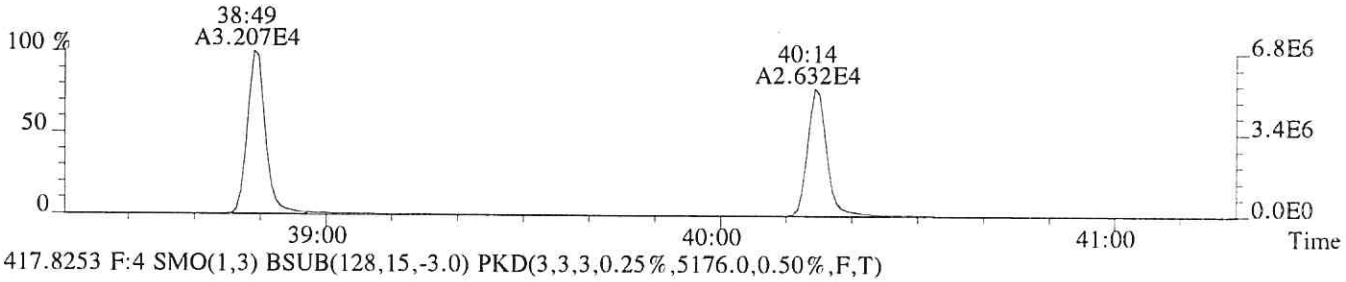
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



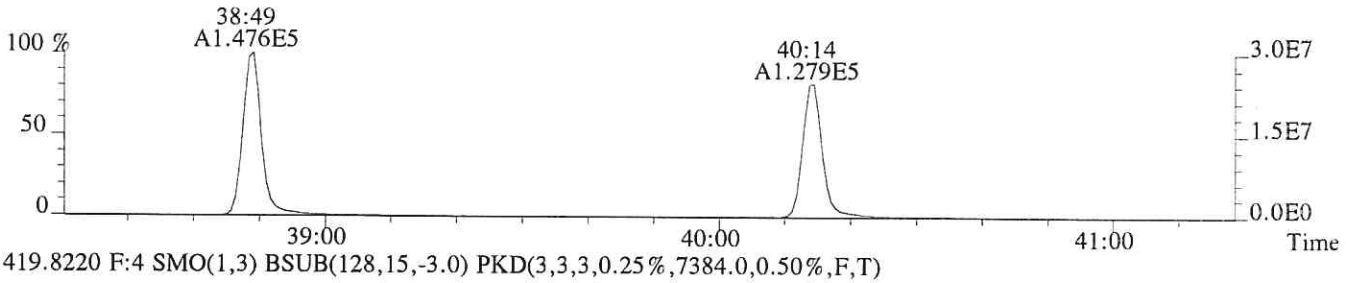
File:P513852 #1-268 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3668.0,0.50%,F,T)



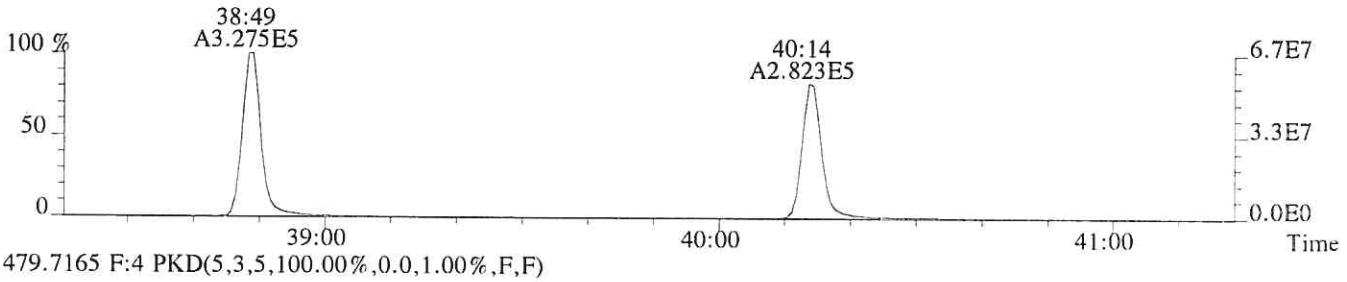
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3036.0,0.50%,F,T)



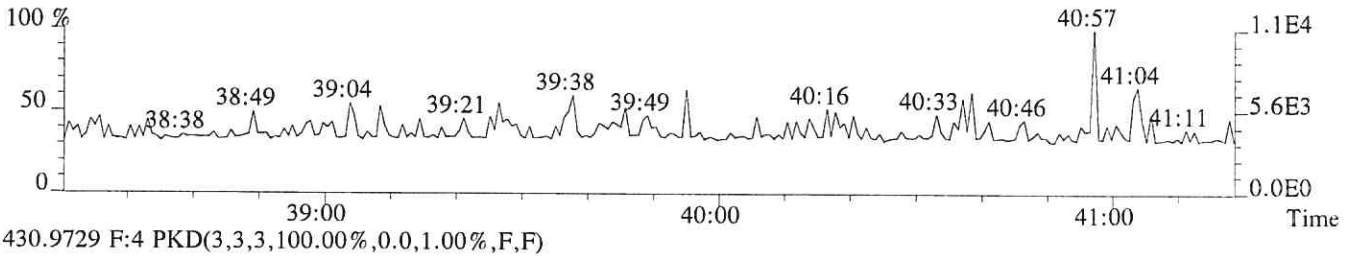
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5176.0,0.50%,F,T)



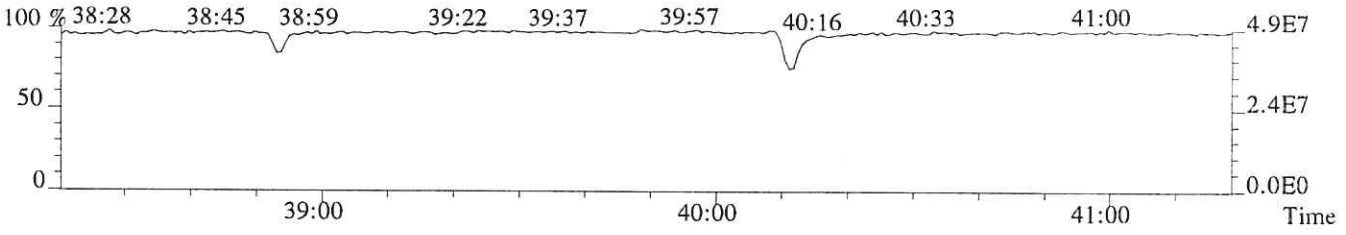
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7384.0,0.50%,F,T)



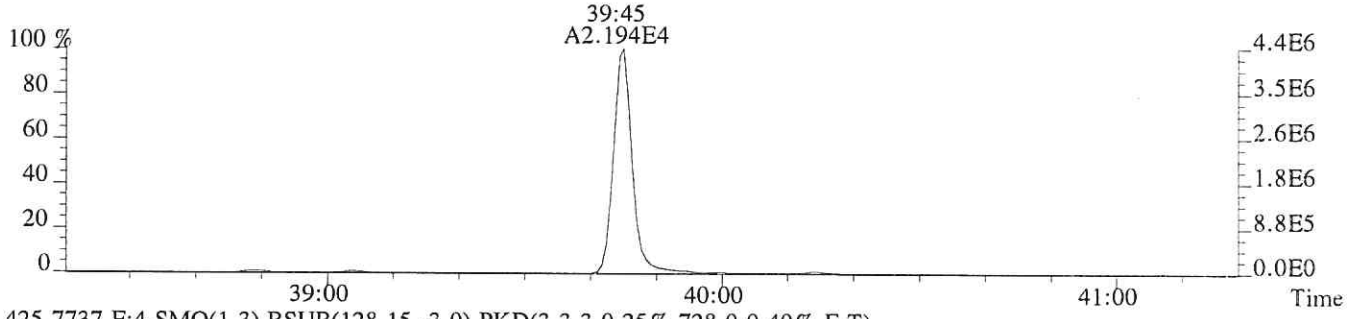
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



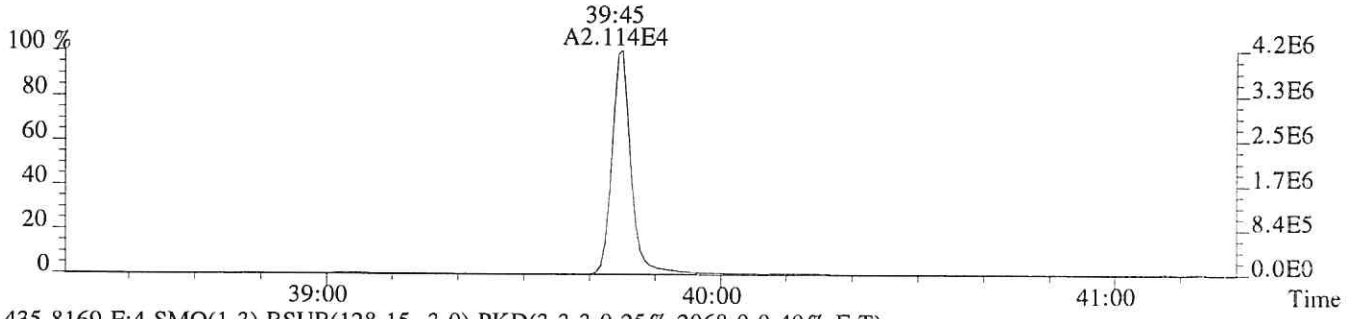
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



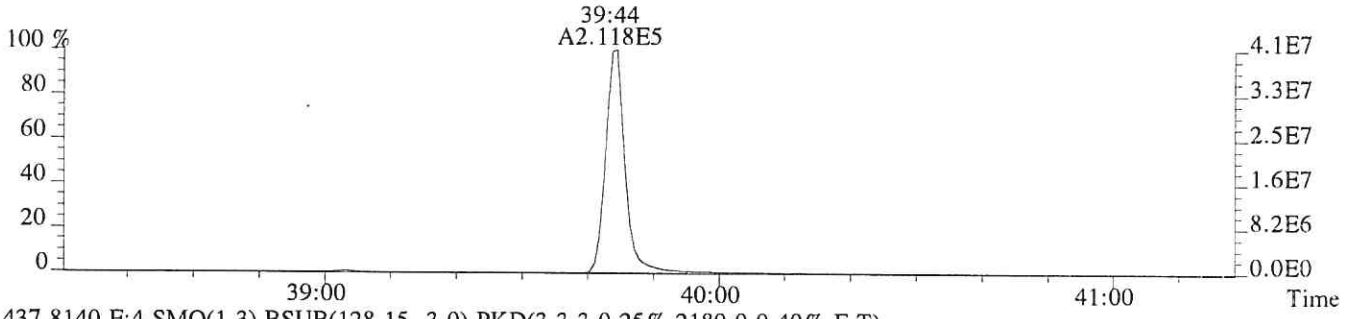
File:P513852 #1-268 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1676.0,0.40%,F,T)



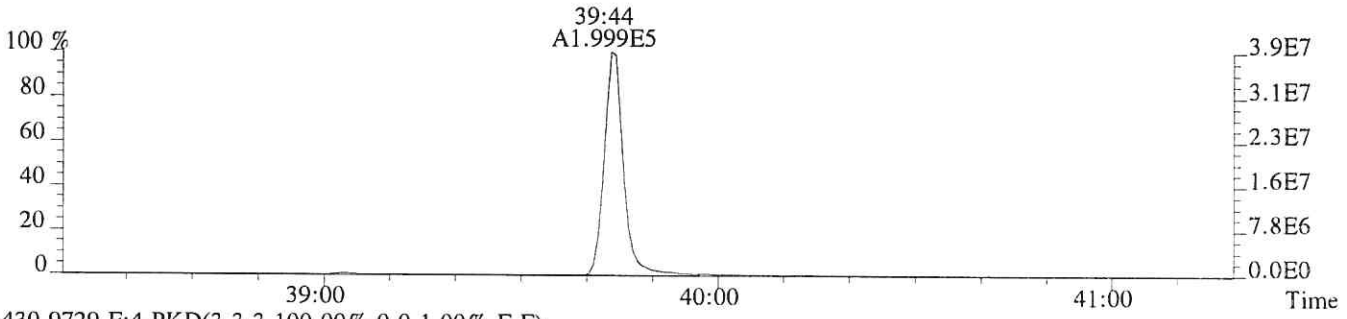
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,728.0,0.40%,F,T)



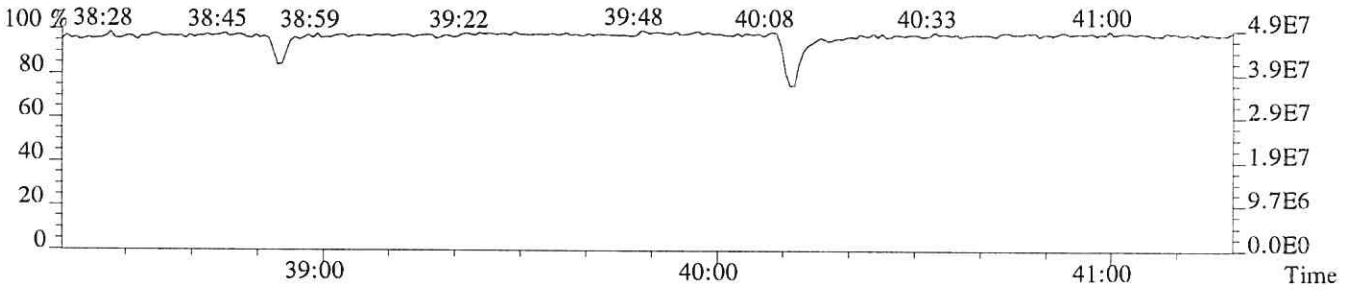
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2068.0,0.40%,F,T)



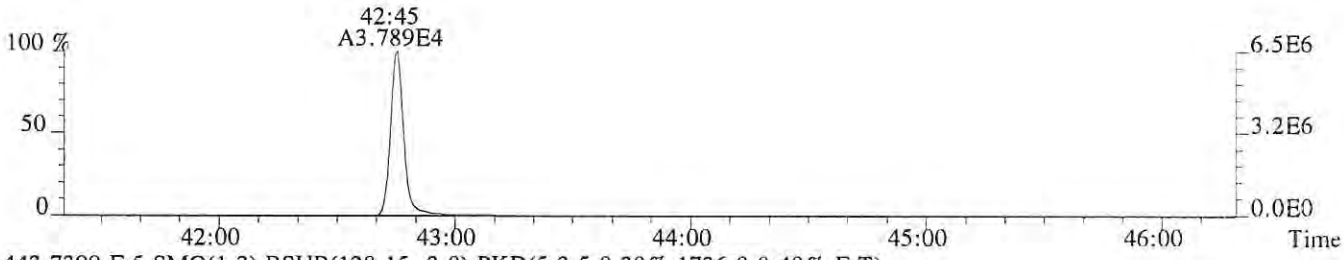
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2180.0,0.40%,F,T)



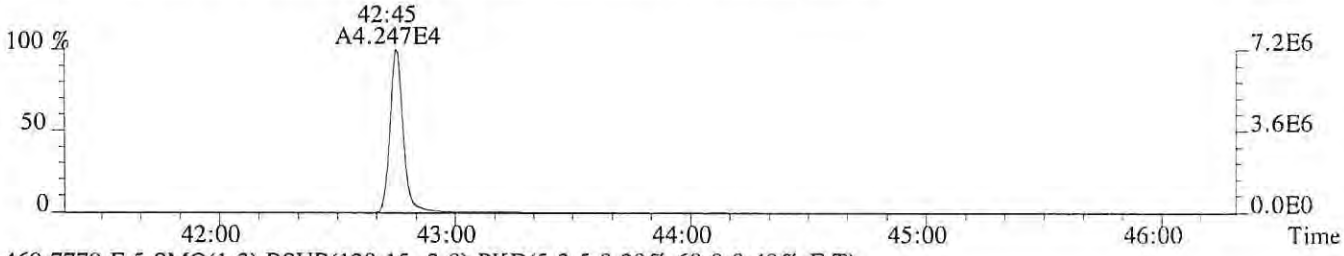
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



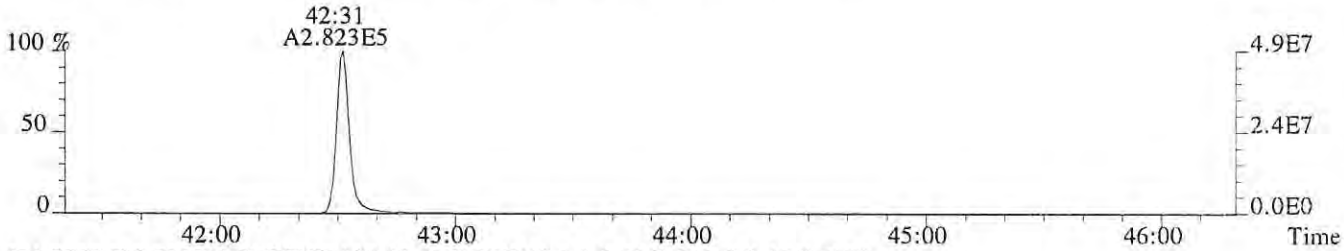
File:P513852 #1-448 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1076.0,0.40%,F,T)



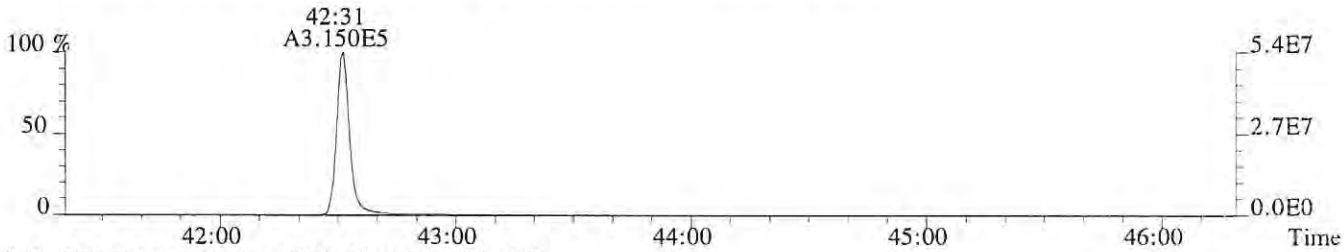
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1736.0,0.40%,F,T)



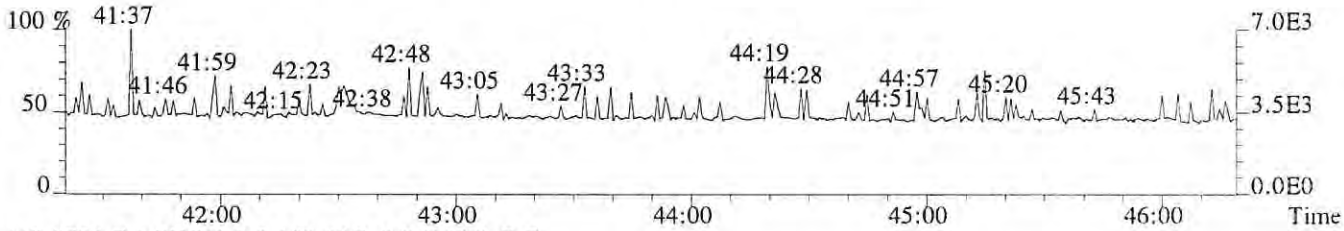
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,68.0,0.40%,F,T)



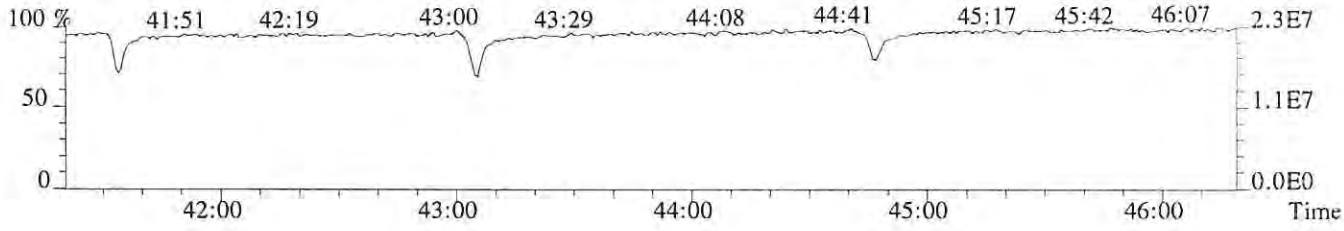
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,912.0,0.40%,F,T)



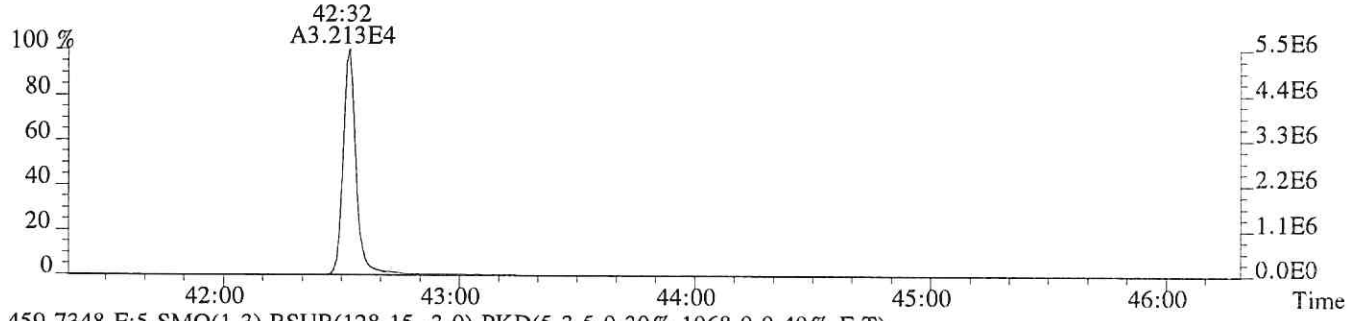
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



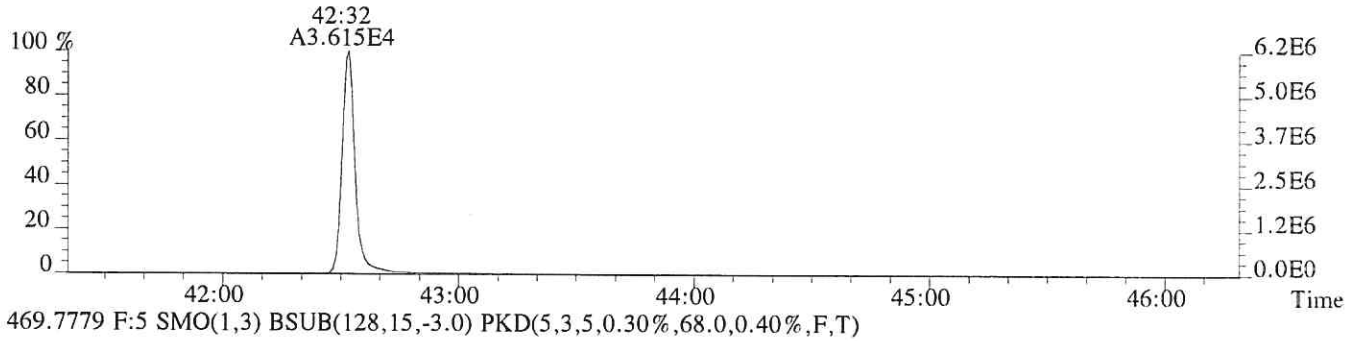
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



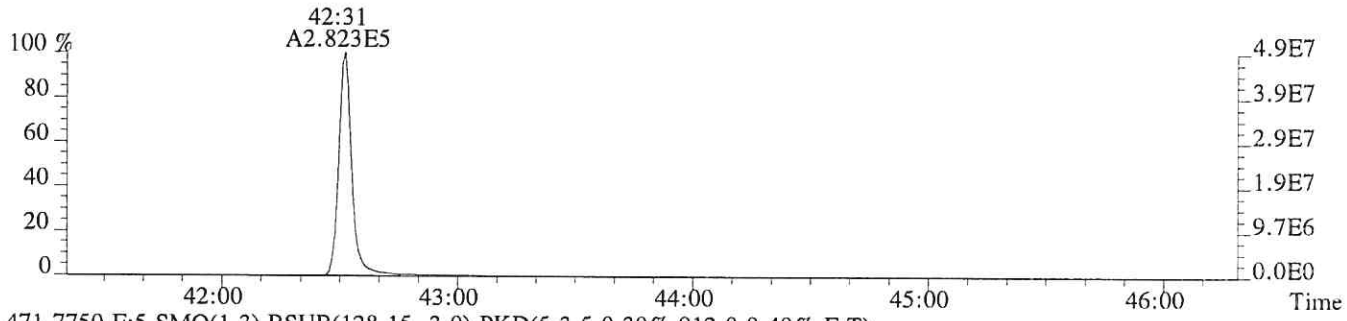
File:P513852 #1-448 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,160.0,0.40%,F,T)



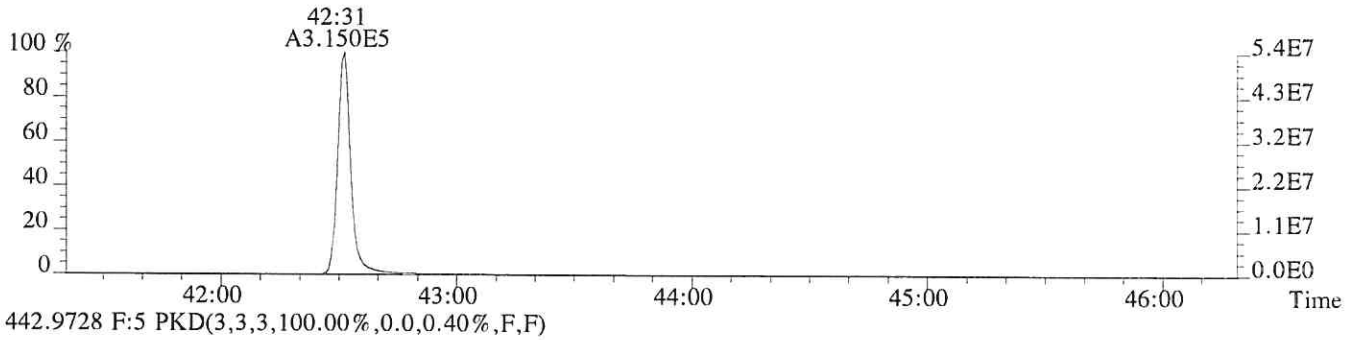
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1068.0,0.40%,F,T)



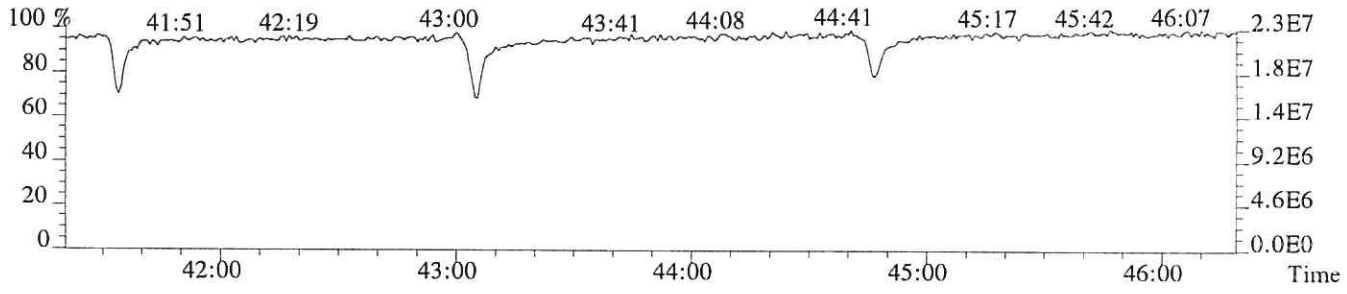
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,68.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,912.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76557

Run #4 Filename P513853 Samp: 1 Inj: 1 Acquired: 24-JAN-18 16:06:29
Processed: 24-JAN-18 17:13:42 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:47	4.270e+04	5.692e+04	0.75	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	3.077e+05	2.016e+05	1.53	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:41	2.833e+05	1.864e+05	1.52	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:16	2.625e+05	2.158e+05	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:22	2.702e+05	2.228e+05	1.21	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:52	2.439e+05	2.001e+05	1.22	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	1.977e+05	1.631e+05	1.21	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:48	2.099e+05	2.057e+05	1.02	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	1.509e+05	1.470e+05	1.03	yes	no	1.258
10	Unk	OCDF	42:45	2.260e+05	2.525e+05	0.90	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:31	2.824e+04	3.588e+04	0.79	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:57	1.903e+05	1.221e+05	1.56	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:59	1.727e+05	1.384e+05	1.25	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:04	1.705e+05	1.356e+05	1.26	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:18	1.758e+05	1.371e+05	1.28	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:44	1.431e+05	1.365e+05	1.05	yes	no	1.025
17	Unk	OCDD	42:31	1.906e+05	2.140e+05	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:46	4.689e+05	5.926e+05	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:47	6.073e+05	3.832e+05	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	5.900e+05	3.740e+05	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:15	2.738e+05	5.189e+05	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:21	3.023e+05	5.708e+05	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:51	2.671e+05	5.167e+05	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:36	2.133e+05	4.042e+05	0.53	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:48	1.882e+05	4.188e+05	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	1.419e+05	3.155e+05	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:30	2.668e+05	3.316e+05	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	4.009e+05	2.534e+05	1.58	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	3.335e+05	2.508e+05	1.33	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:03	3.244e+05	2.699e+05	1.20	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:43	2.779e+05	2.632e+05	1.06	yes	no	0.858
32	IS	13C-OCDD	42:31	3.375e+05	3.799e+05	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:56	2.956e+05	3.663e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:17	3.390e+05	2.761e+05	1.23	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:31	6.612e+04				no	1.014

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www.alsglobal.com

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
76557

Run #4 Filename P513853 Samp: 1 Inj: 1 Acquired: 24-JAN-18 16:06:29
Processed: 24-JAN-18 17:13:42 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	8.50e+06	6.40e+02	1.3e+04	1.14e+07	2.11e+03	5.4e+03
2	1,2,3,7,8-PeCDF	6.16e+07	1.61e+03	3.8e+04	4.01e+07	2.10e+03	1.9e+04
3	2,3,4,7,8-PeCDF	5.79e+07	1.61e+03	3.6e+04	3.78e+07	2.10e+03	1.8e+04
4	1,2,3,4,7,8-HxCDF	5.83e+07	1.86e+03	3.1e+04	4.74e+07	2.55e+03	1.9e+04
5	1,2,3,6,7,8-HxCDF	5.80e+07	1.86e+03	3.1e+04	4.80e+07	2.55e+03	1.9e+04
6	2,3,4,6,7,8-HxCDF	5.37e+07	1.86e+03	2.9e+04	4.34e+07	2.55e+03	1.7e+04
7	1,2,3,7,8,9-HxCDF	4.12e+07	1.86e+03	2.2e+04	3.39e+07	2.55e+03	1.3e+04
8	1,2,3,4,6,7,8-HpCDF	4.57e+07	4.44e+03	1.0e+04	4.52e+07	1.05e+04	4.3e+03
9	1,2,3,4,7,8,9-HpCDF	3.06e+07	4.44e+03	6.9e+03	2.99e+07	1.05e+04	2.8e+03
10	OCDF	3.93e+07	1.44e+02	2.7e+05	4.34e+07	1.38e+03	3.1e+04
11	2,3,7,8-TCDD	5.83e+06	1.92e+03	3.0e+03	7.39e+06	1.30e+03	5.7e+03
12	1,2,3,7,8-PeCDD	3.83e+07	1.45e+03	2.6e+04	2.46e+07	7.04e+02	3.5e+04
13	1,2,3,4,7,8-HxCDD	3.89e+07	5.12e+02	7.6e+04	3.08e+07	1.23e+03	2.5e+04
14	1,2,3,6,7,8-HxCDD	3.74e+07	5.12e+02	7.3e+04	3.02e+07	1.23e+03	2.5e+04
15	1,2,3,7,8,9-HxCDD	3.75e+07	5.12e+02	7.3e+04	3.01e+07	1.23e+03	2.5e+04
16	1,2,3,4,6,7,8-HpCDD	2.89e+07	1.84e+03	1.6e+04	2.78e+07	1.41e+03	2.0e+04
17	OCDD	3.41e+07	6.32e+02	5.4e+04	3.81e+07	1.31e+03	2.9e+04
18	13C-2,3,7,8-TCDF	9.47e+07	6.52e+03	1.5e+04	1.19e+08	4.12e+03	2.9e+04
19	13C-1,2,3,7,8-PeCDF	1.17e+08	1.28e+03	9.1e+04	7.33e+07	8.08e+02	9.1e+04
20	13C-2,3,4,7,8-PeCDF	1.21e+08	1.28e+03	9.4e+04	7.72e+07	8.08e+02	9.6e+04
21	13C-1,2,3,4,7,8-HxCDF	6.01e+07	1.97e+03	3.1e+04	1.13e+08	1.75e+03	6.5e+04
22	13C-1,2,3,6,7,8-HxCDF	6.52e+07	1.97e+03	3.3e+04	1.24e+08	1.75e+03	7.1e+04
23	13C-2,3,4,6,7,8-HxCDF	5.86e+07	1.97e+03	3.0e+04	1.11e+08	1.75e+03	6.4e+04
24	13C-1,2,3,7,8,9-HxCDF	4.44e+07	1.97e+03	2.3e+04	8.35e+07	1.75e+03	4.8e+04
25	13C-1,2,3,4,6,7,8-HpCDF	4.03e+07	8.48e+03	4.8e+03	9.01e+07	6.21e+03	1.5e+04
26	13C-1,2,3,4,7,8,9-HpCDF	2.83e+07	8.48e+03	3.3e+03	6.33e+07	6.21e+03	1.0e+04
27	13C-2,3,7,8-TCDD	5.56e+07	5.87e+03	9.5e+03	6.88e+07	2.90e+03	2.4e+04
28	13C-1,2,3,7,8-PeCDD	8.27e+07	1.46e+03	5.7e+04	5.24e+07	1.17e+03	4.5e+04
29	13C-1,2,3,4,7,8-HxCDD	7.51e+07	3.07e+03	2.4e+04	5.90e+07	2.67e+03	2.2e+04
30	13C-1,2,3,6,7,8-HxCDD	7.07e+07	3.07e+03	2.3e+04	5.69e+07	2.67e+03	2.1e+04
31	13C-1,2,3,4,6,7,8-HpCDD	5.63e+07	2.93e+03	1.9e+04	5.39e+07	1.32e+03	4.1e+04
32	13C-OCDD	5.98e+07	1.07e+03	5.6e+04	6.69e+07	9.36e+02	7.1e+04
33	13C-1,2,3,4-TCDD	5.97e+07	5.87e+03	1.0e+04	7.42e+07	2.90e+03	2.6e+04
34	13C-1,2,3,7,8,9-HxCDD	7.31e+07	3.07e+03	2.4e+04	5.89e+07	2.67e+03	2.2e+04
35	37Cl-2,3,7,8-TCDD	1.36e+07	1.25e+03	1.1e+04			

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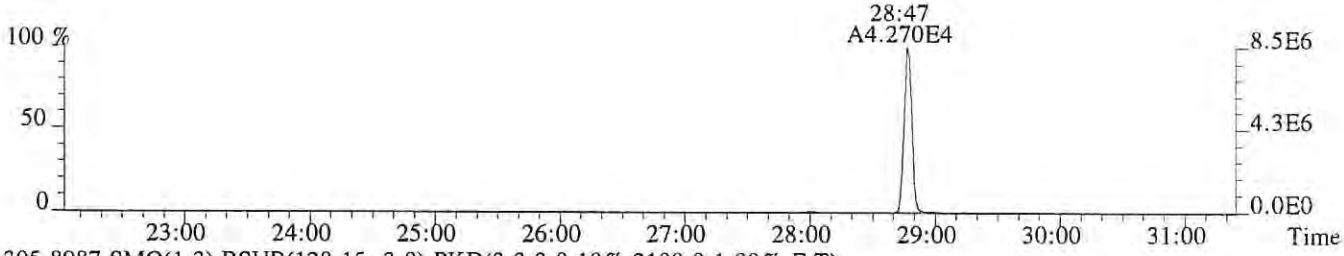
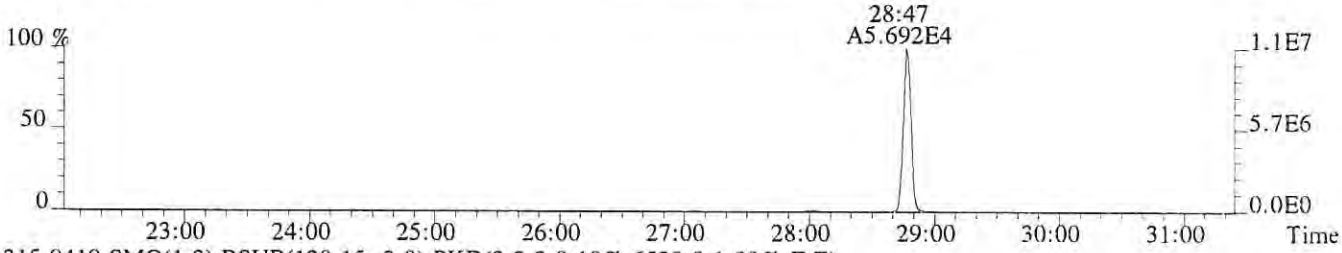
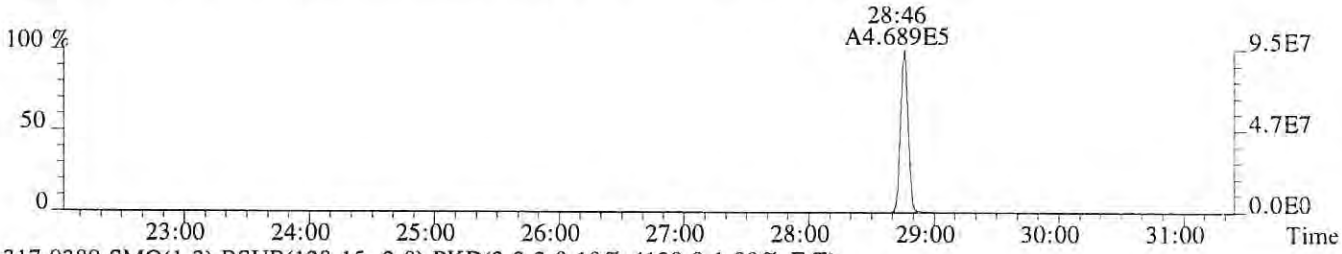
File:P513853 #1-665 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,640.0,1.00%,F,T)



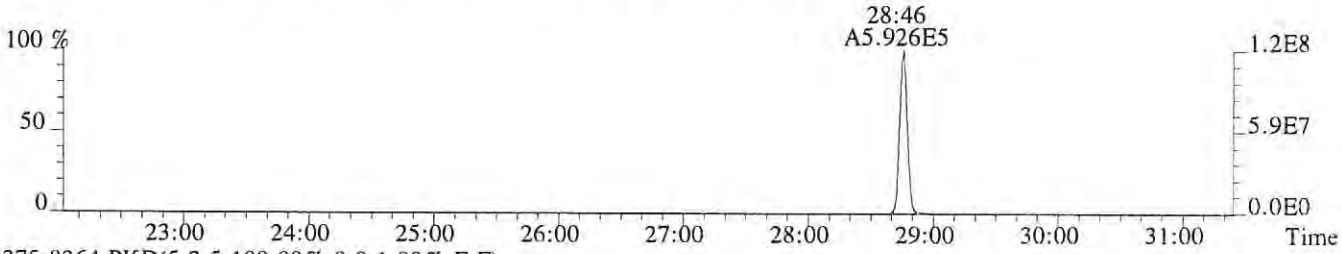
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2108.0,1.00%,F,T)



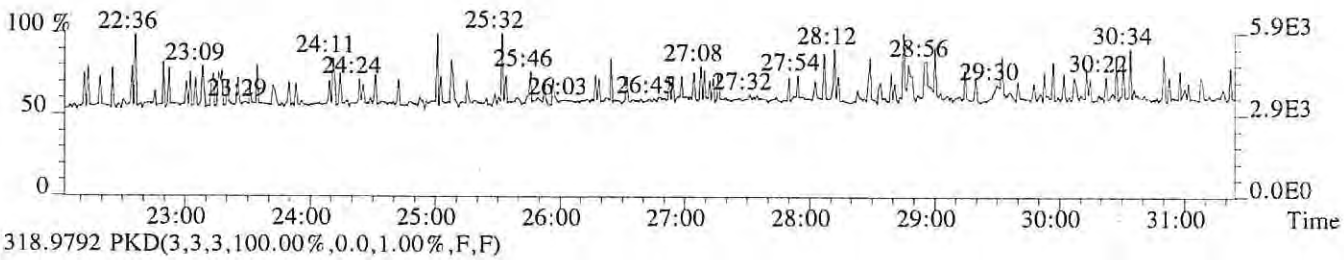
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6520.0,1.00%,F,T)



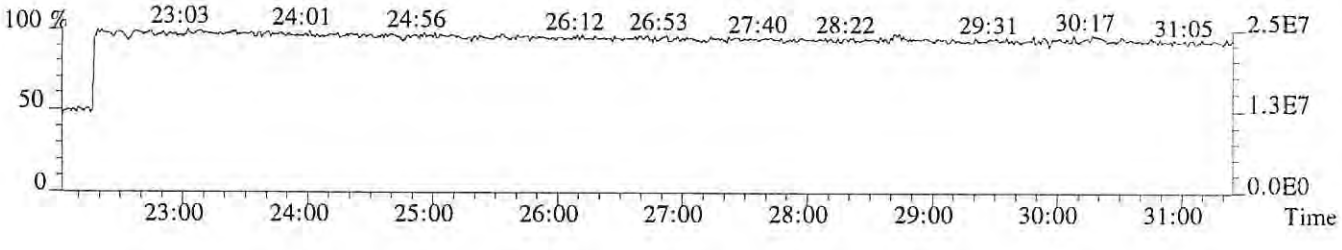
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4120.0,1.00%,F,T)



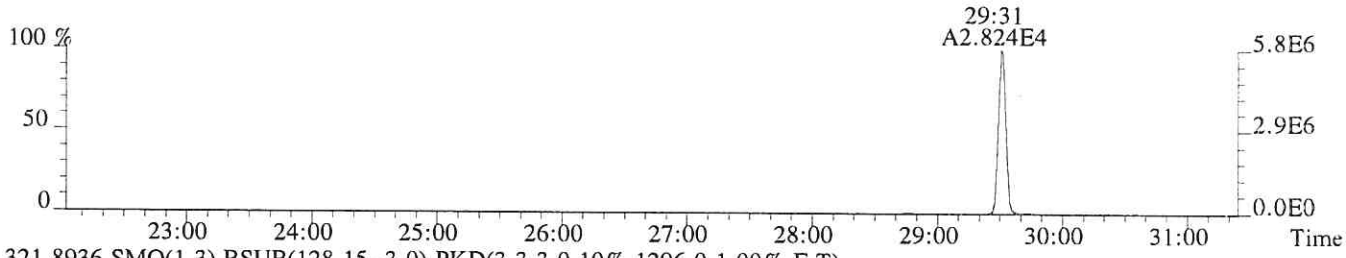
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



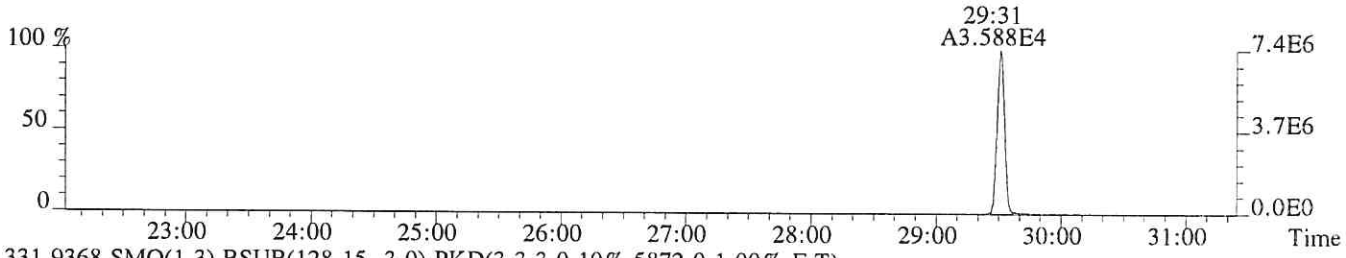
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



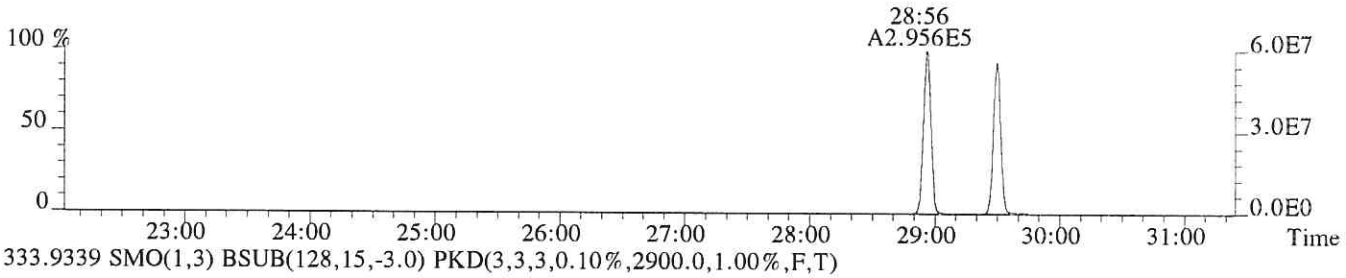
File:P513853 #1-665 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1924.0,1.00%,F,T)



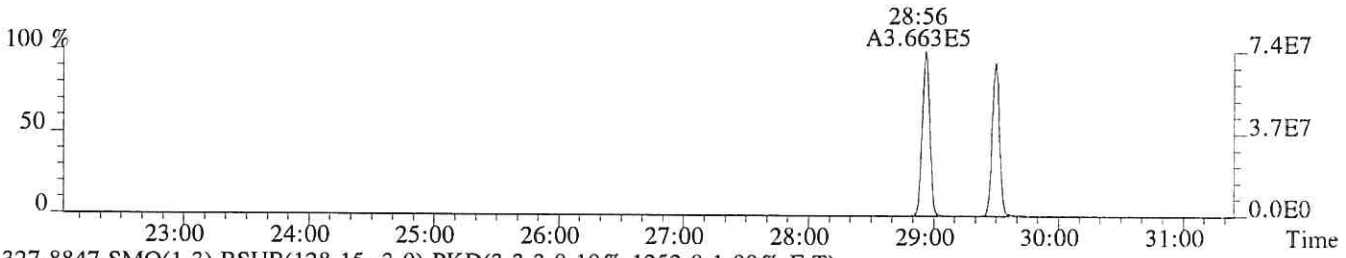
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1296.0,1.00%,F,T)



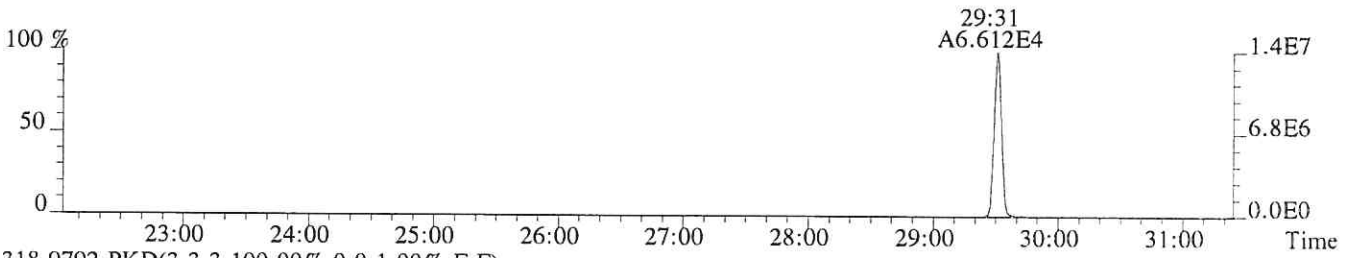
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5872.0,1.00%,F,T)



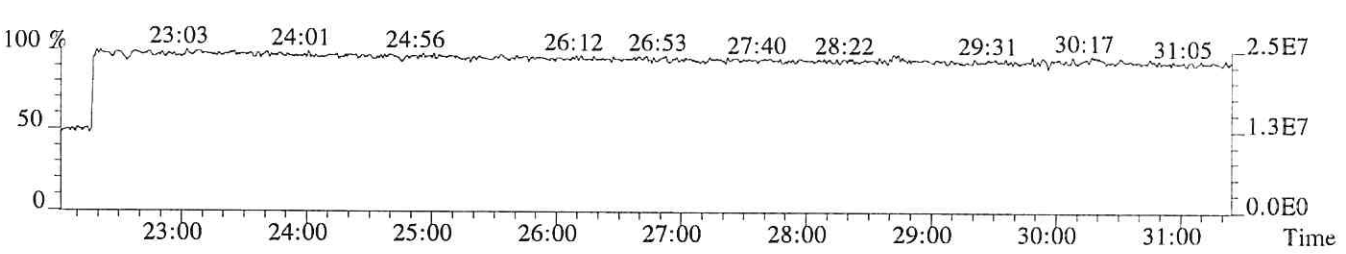
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2900.0,1.00%,F,T)



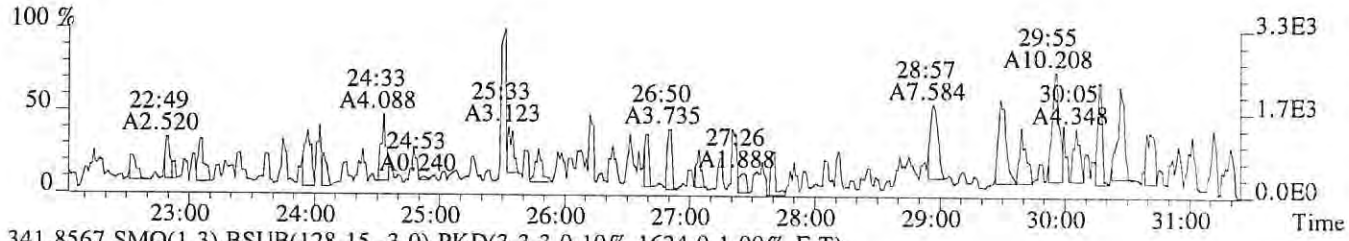
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1252.0,1.00%,F,T)



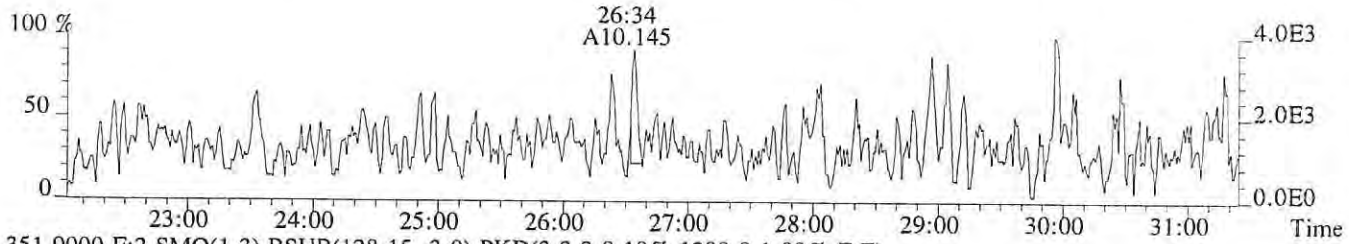
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



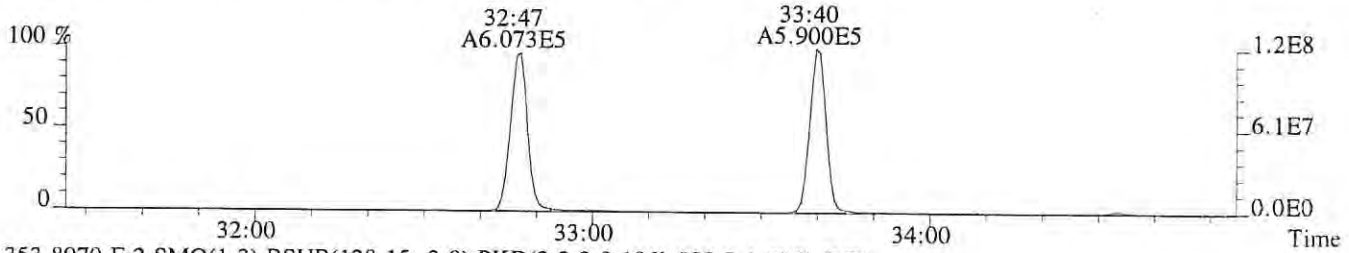
File:P513853 #1-665 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,452.0,1.00%,F,T)



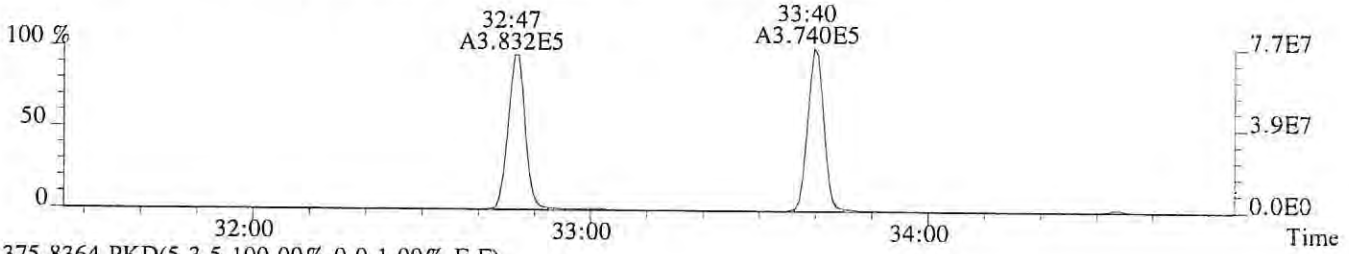
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1624.0,1.00%,F,T)



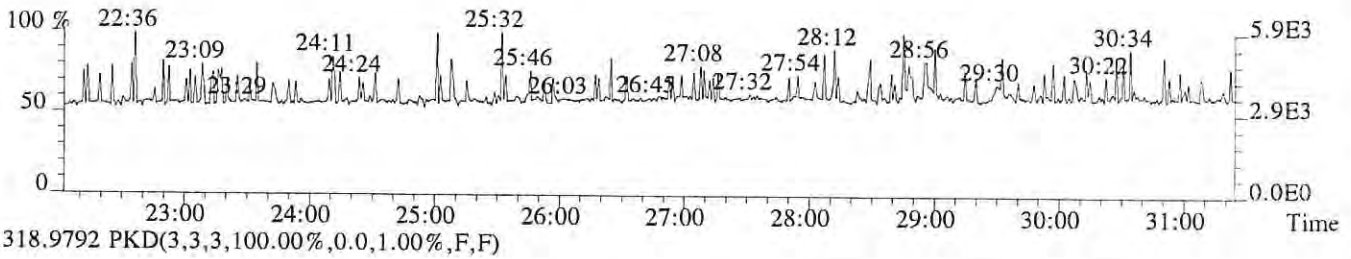
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1280.0,1.00%,F,T)



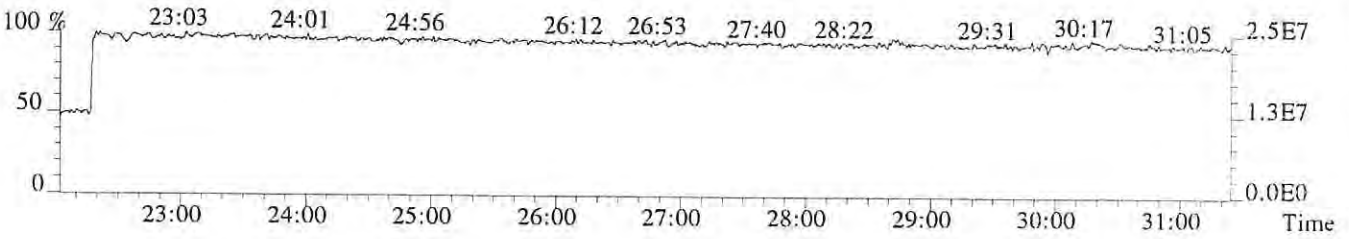
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,808.0,1.00%,F,T)



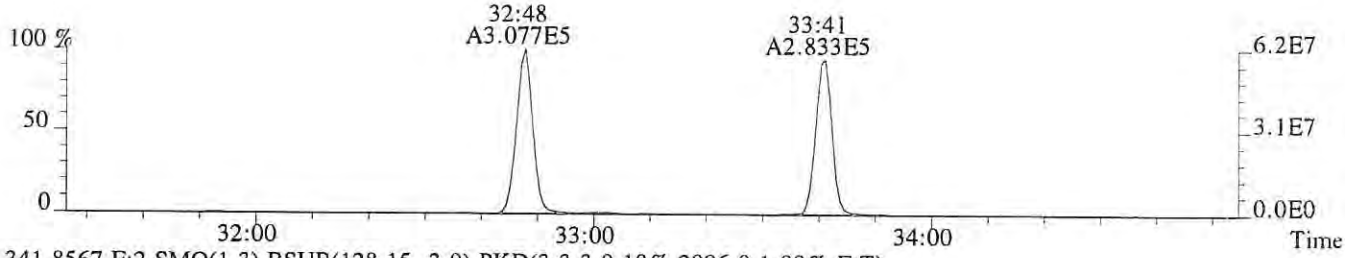
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



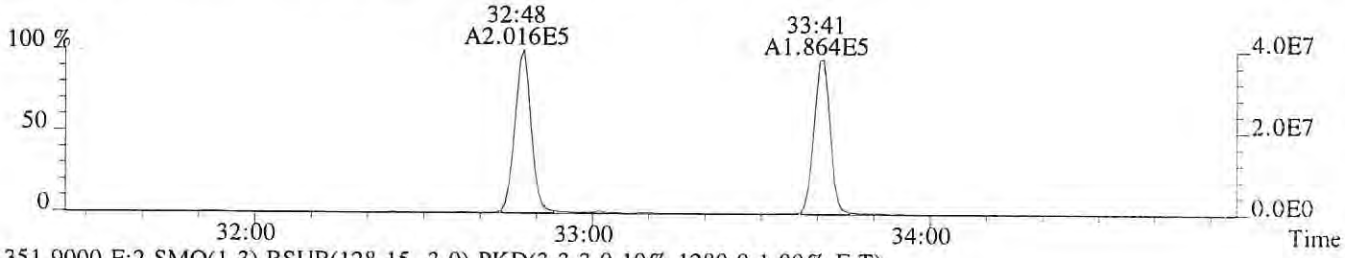
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



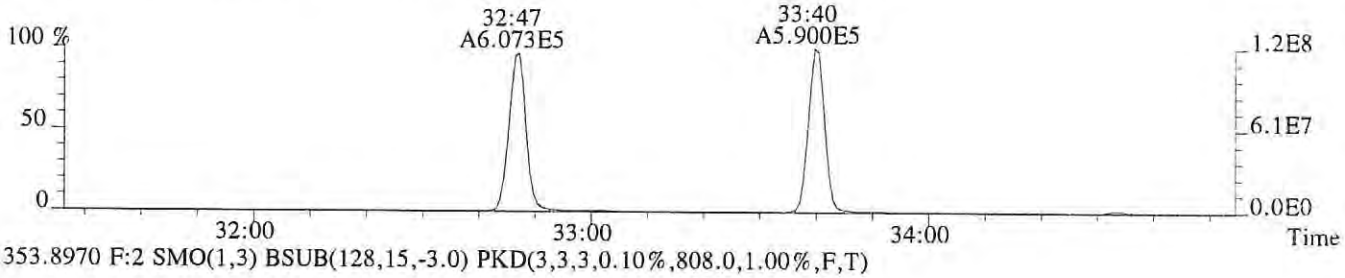
File:P513853 #1-313 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1612.0,1.00%,F,T)



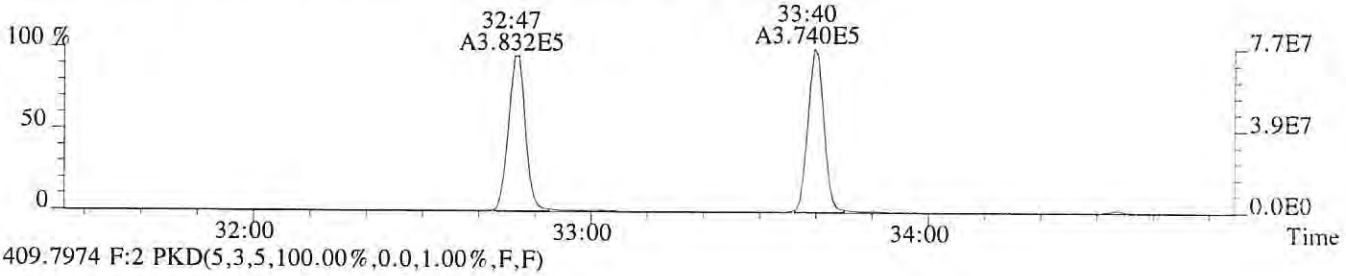
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2096.0,1.00%,F,T)



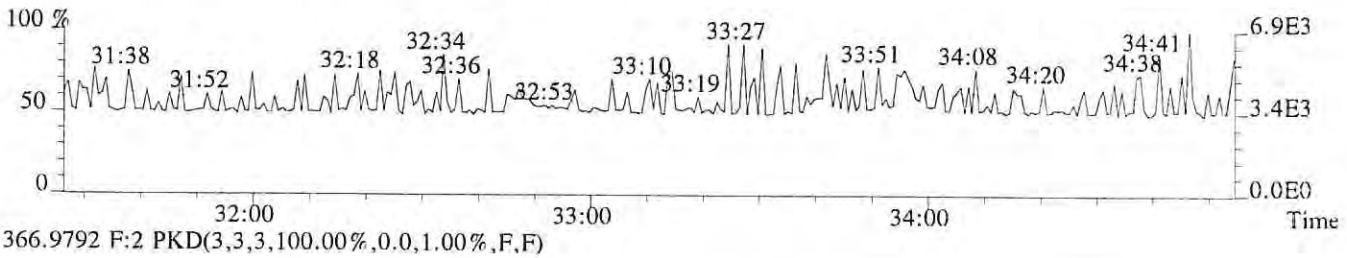
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1280.0,1.00%,F,T)



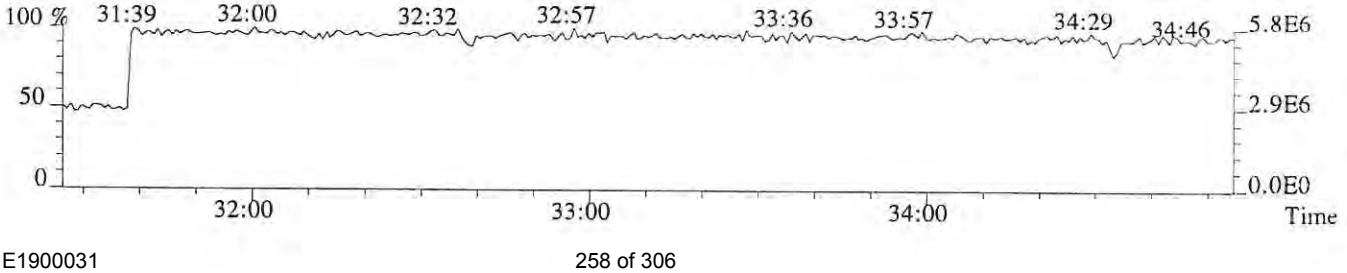
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,808.0,1.00%,F,T)



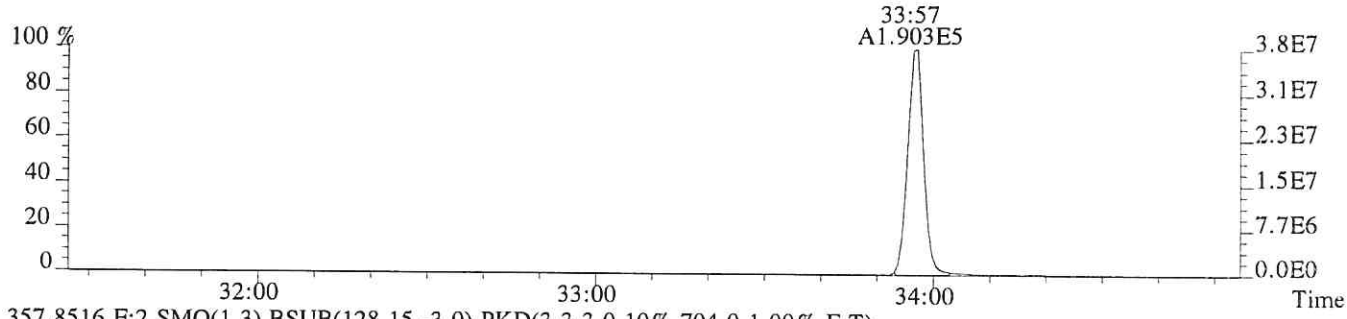
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



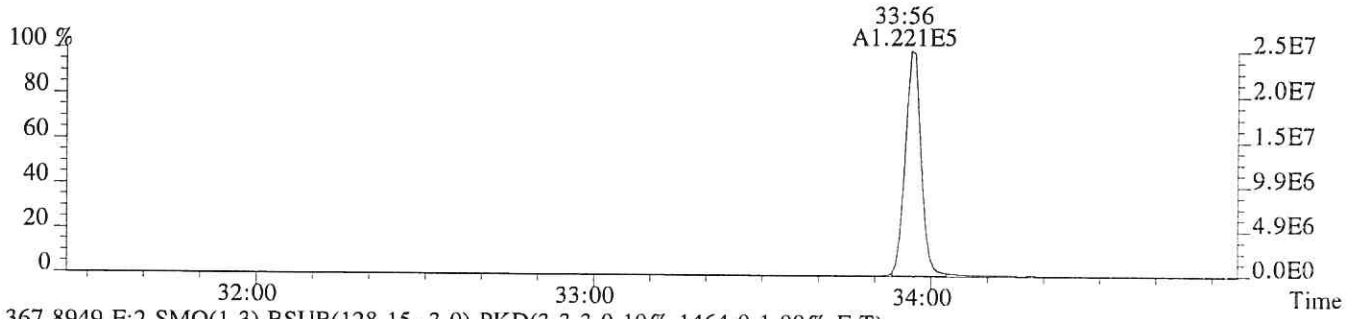
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



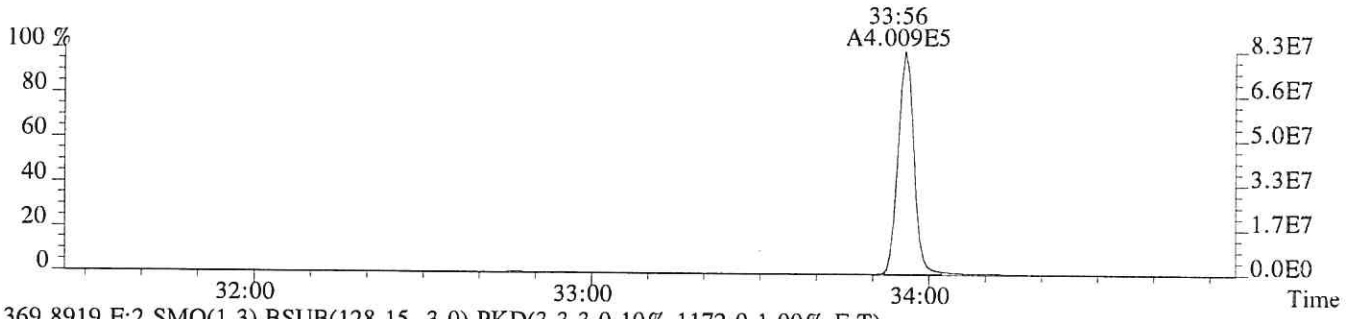
File:P513853 #1-313 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1452.0,1.00%,F,T)



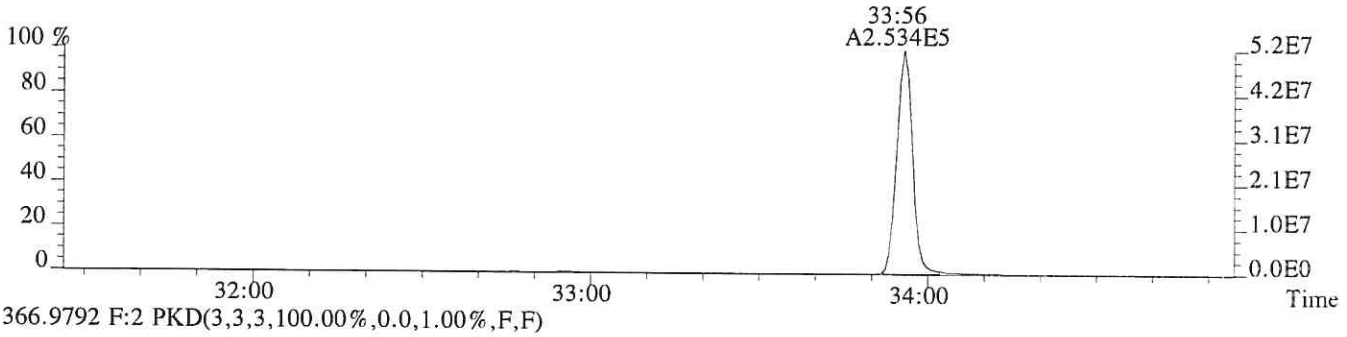
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,704.0,1.00%,F,T)



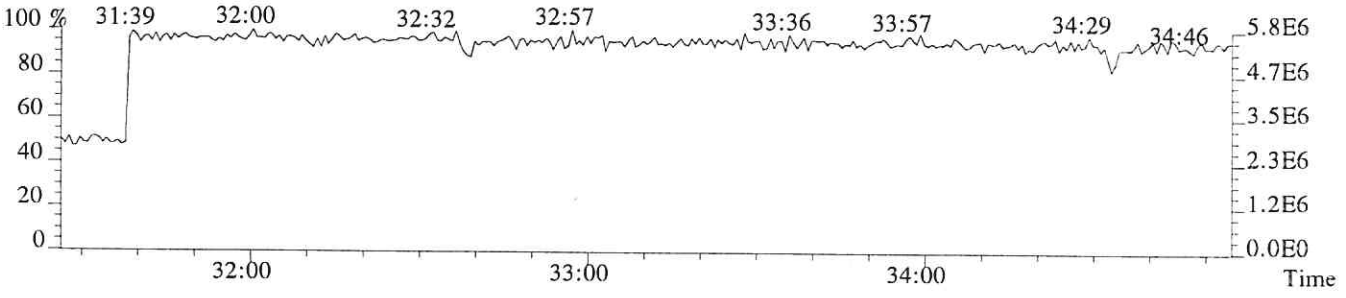
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1464.0,1.00%,F,T)



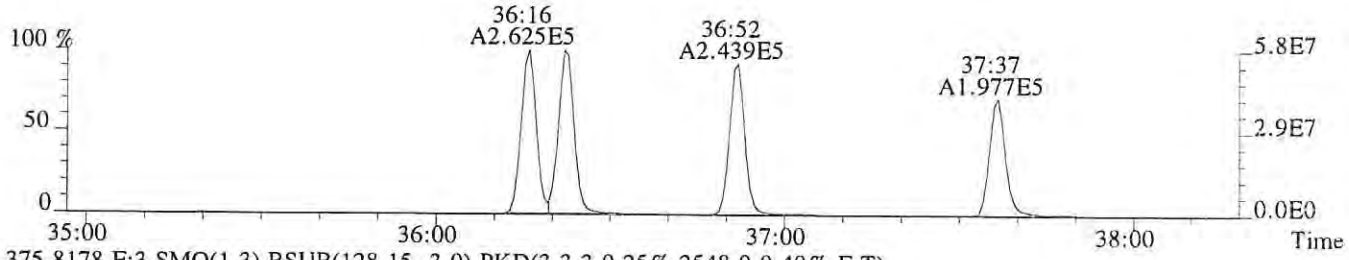
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1172.0,1.00%,F,T)



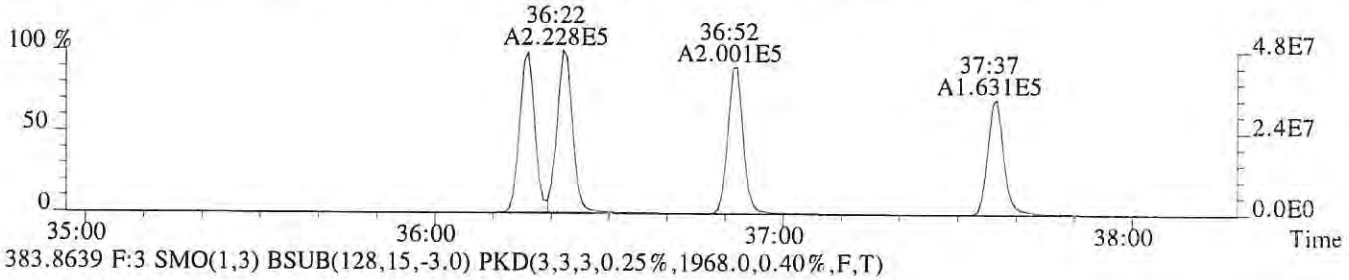
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



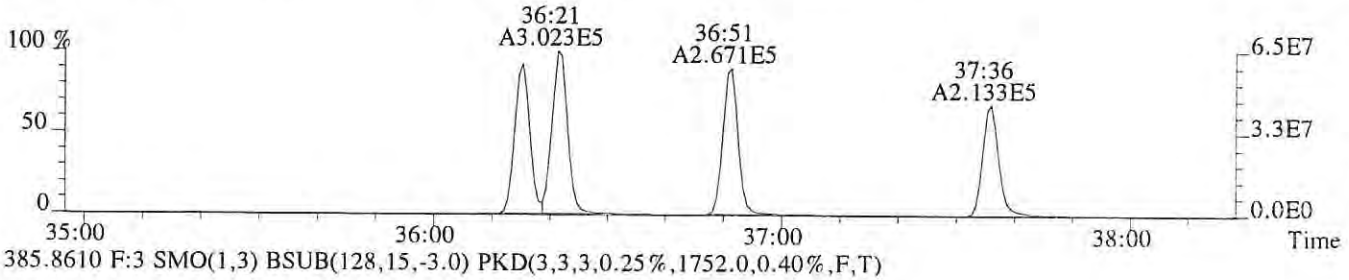
File:P513853 #1-303 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1856.0,0.40%,F,T)



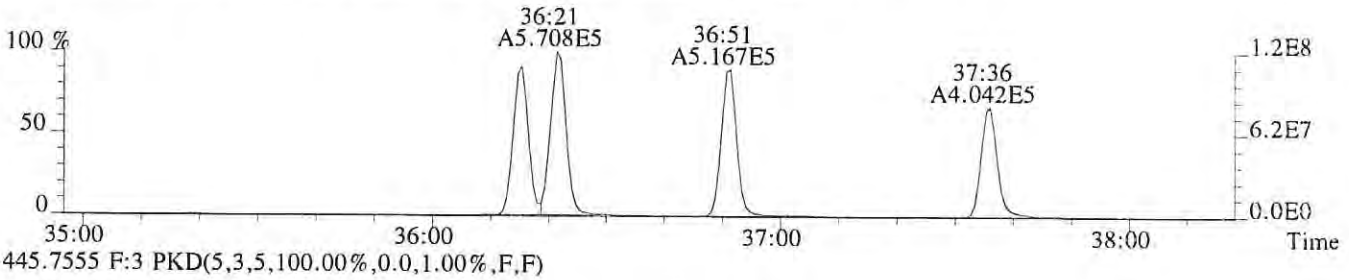
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2548.0,0.40%,F,T)



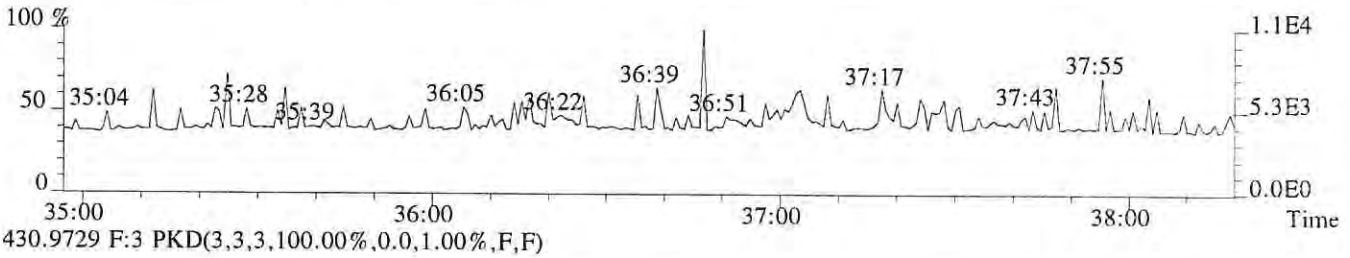
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1968.0,0.40%,F,T)



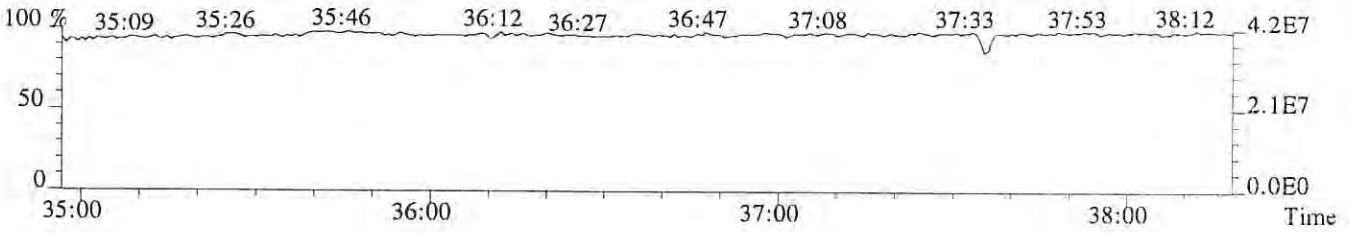
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1752.0,0.40%,F,T)



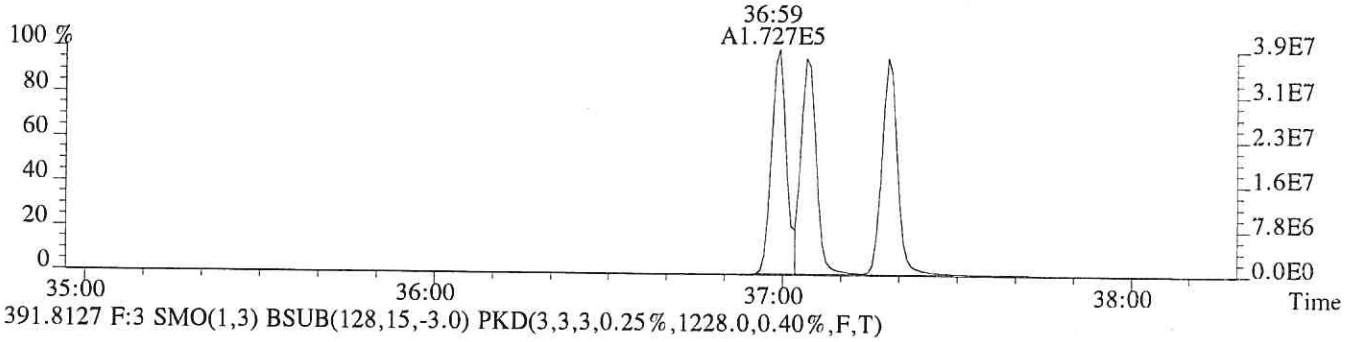
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



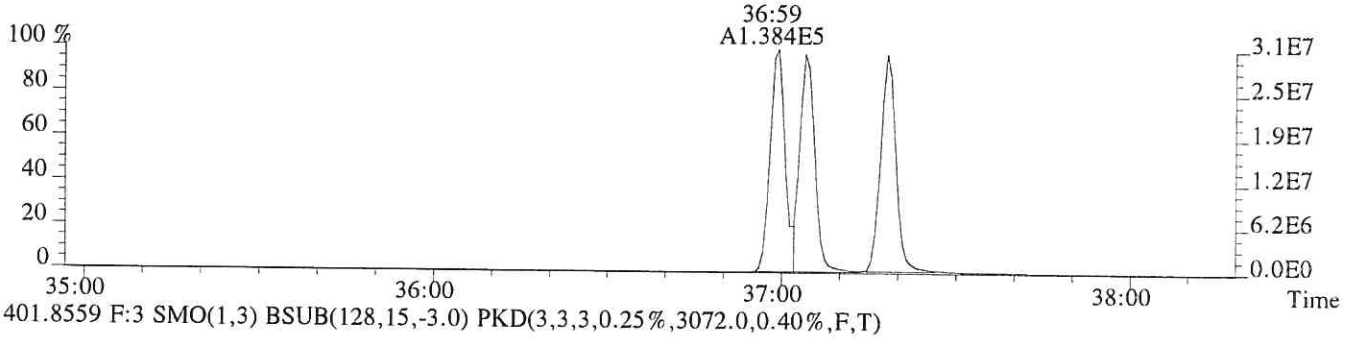
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



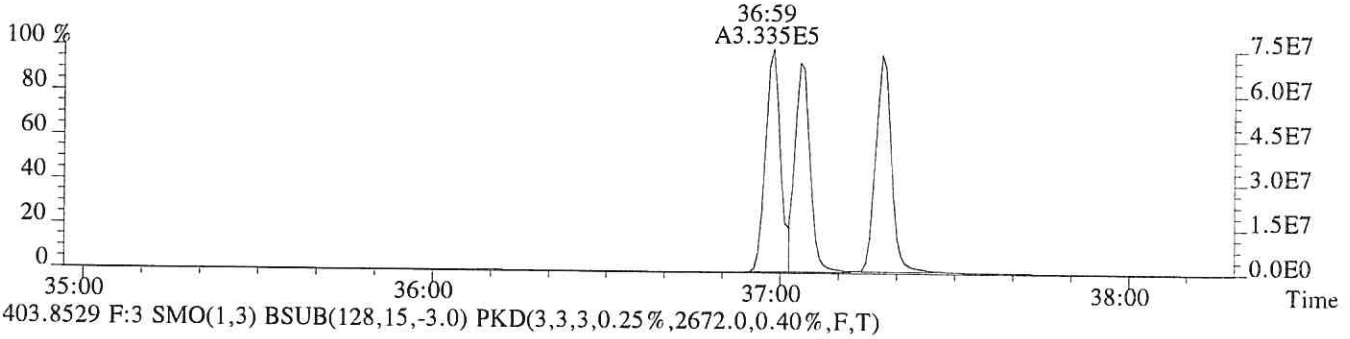
File:P513853 #1-303 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,512.0,0.40%,F,T)



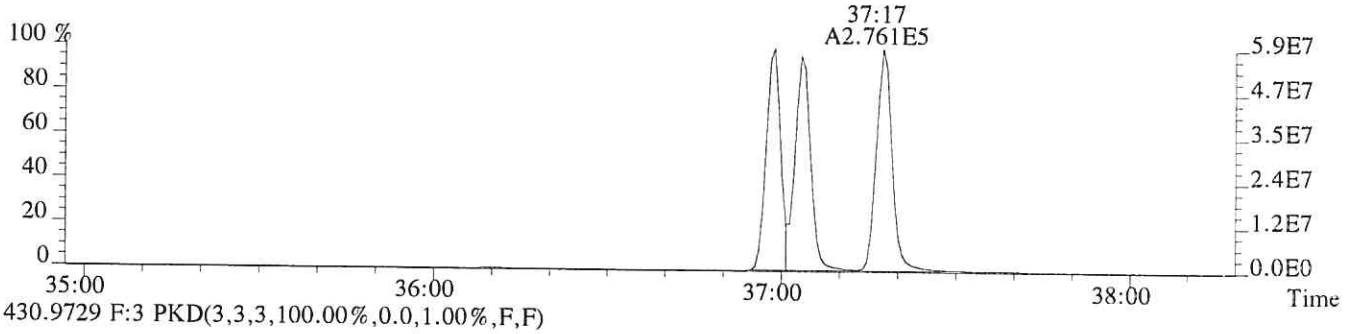
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1228.0,0.40%,F,T)



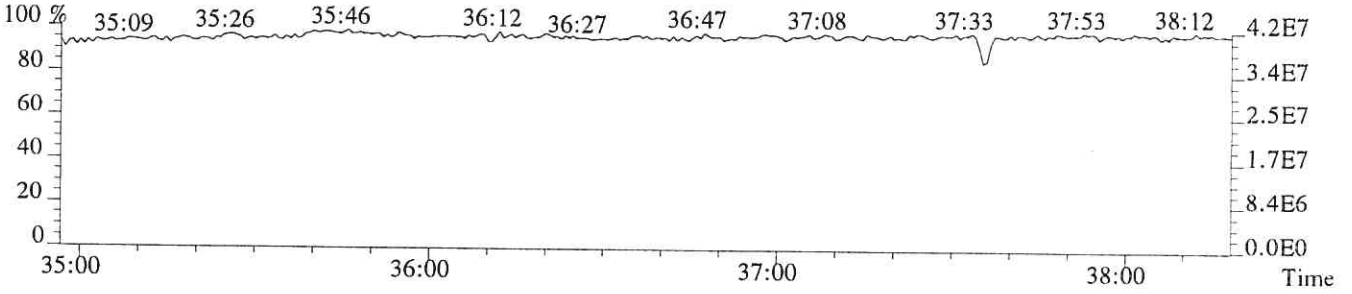
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3072.0,0.40%,F,T)



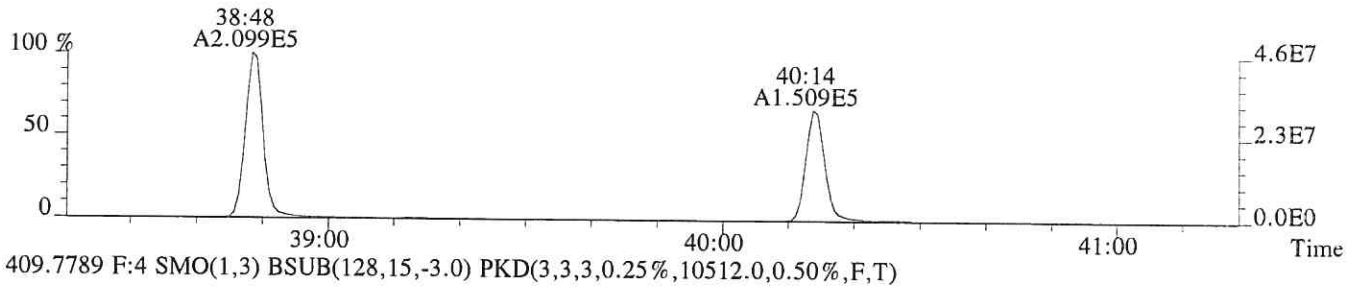
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2672.0,0.40%,F,T)



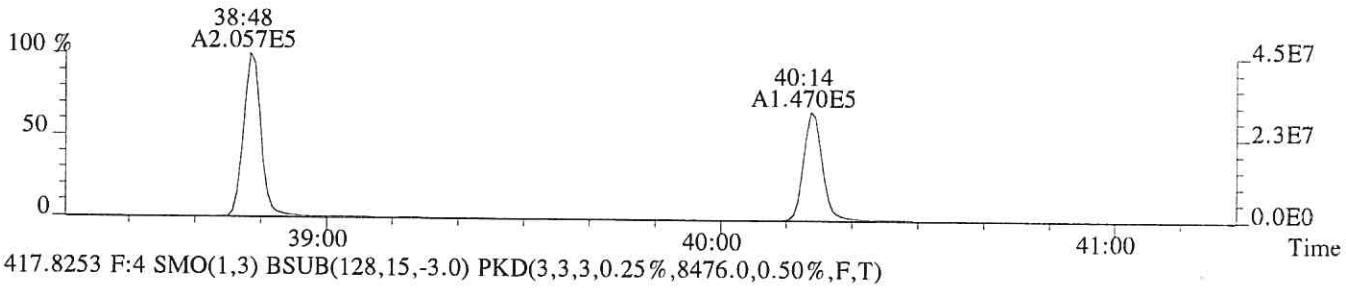
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



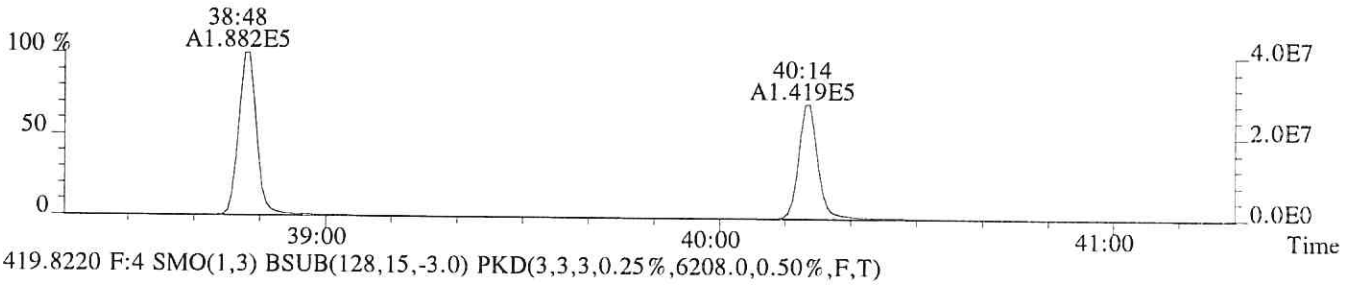
File:P513853 #1-268 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4436.0,0.50%,F,T)



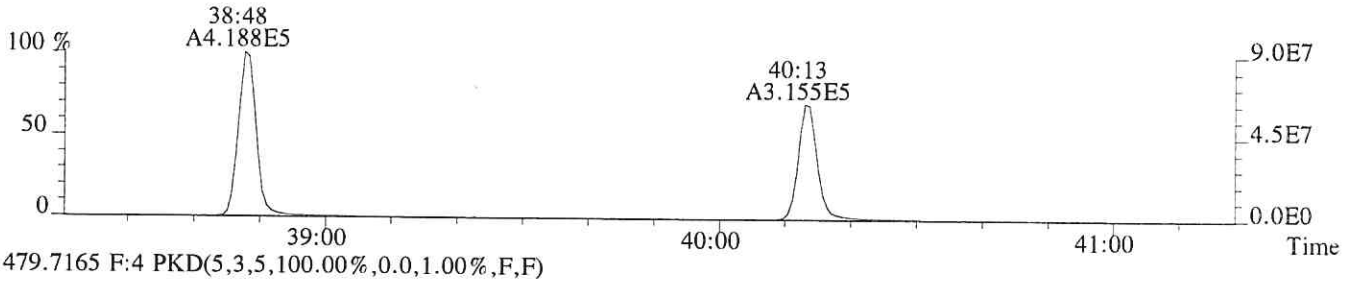
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,10512.0,0.50%,F,T)



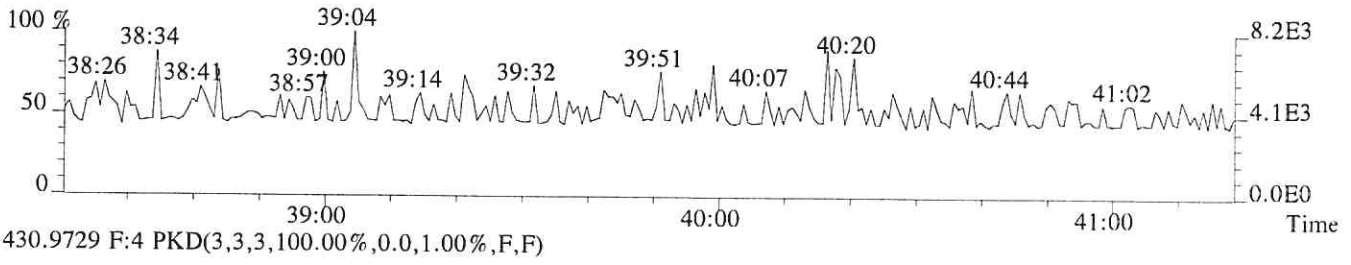
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,8476.0,0.50%,F,T)



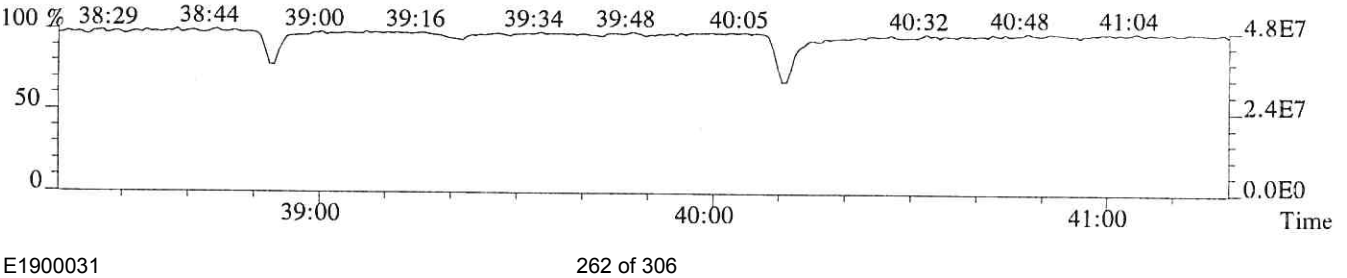
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6208.0,0.50%,F,T)



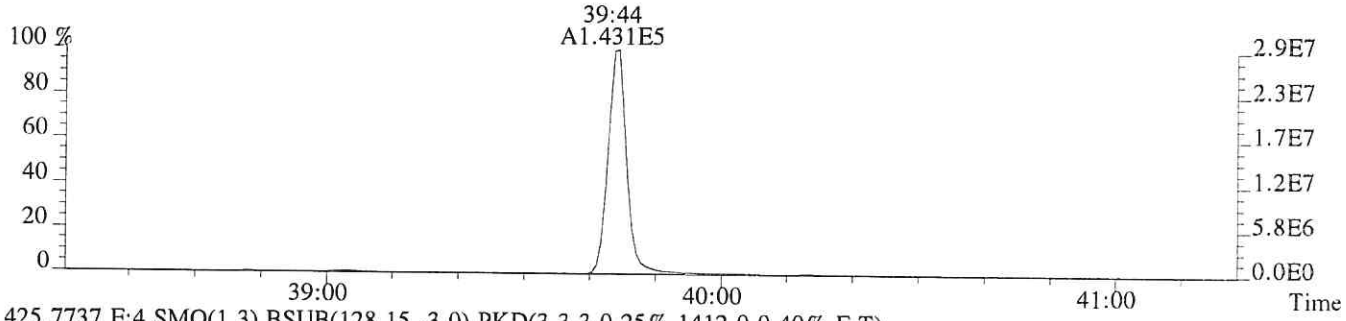
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



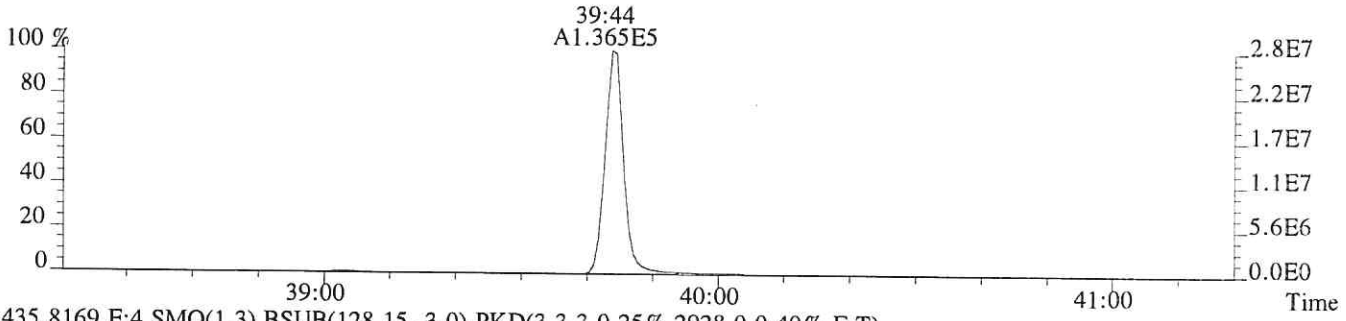
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



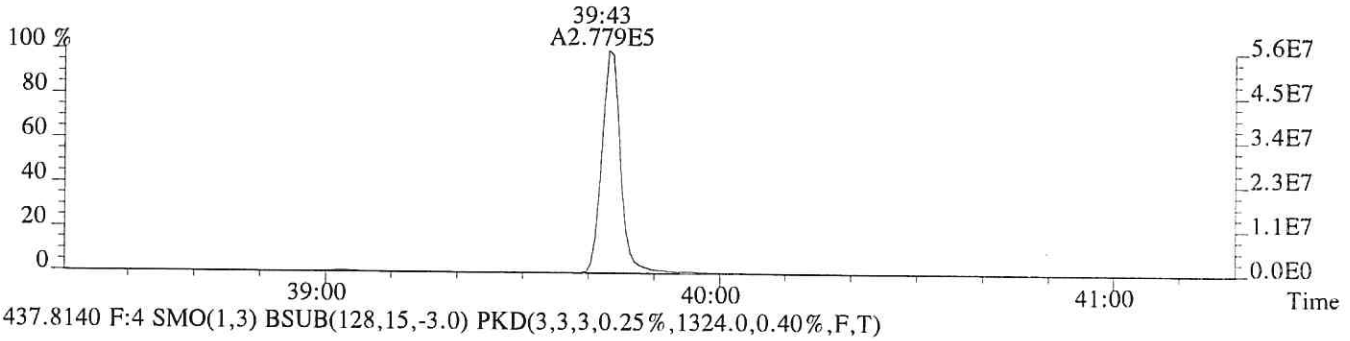
File:P513853 #1-268 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1840.0,0.40%,F,T)



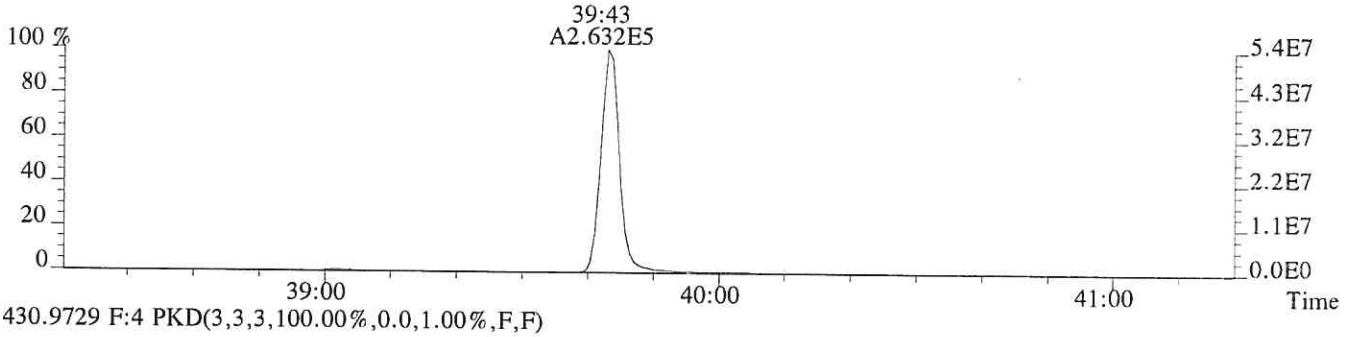
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1412.0,0.40%,F,T)



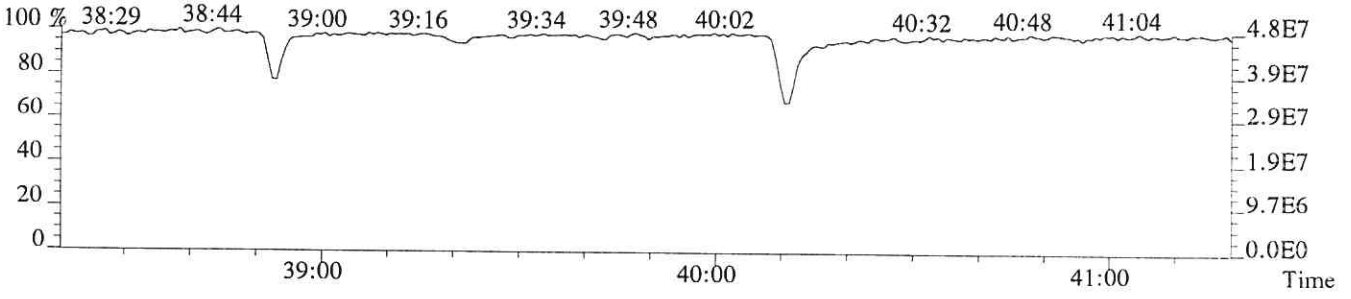
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2928.0,0.40%,F,T)



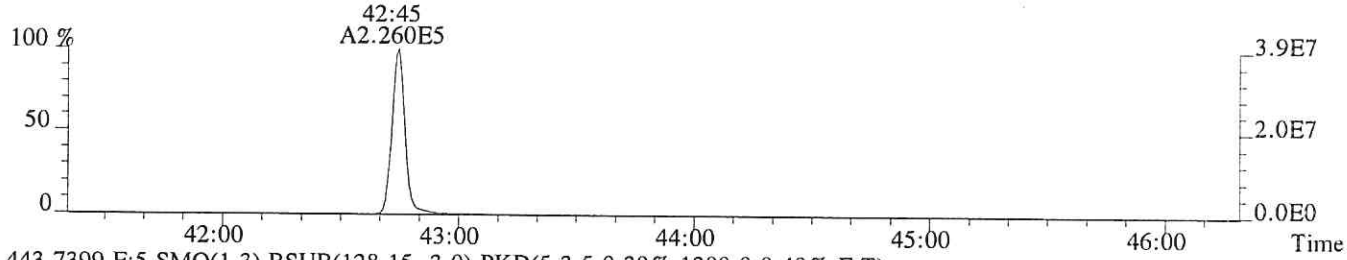
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1324.0,0.40%,F,T)



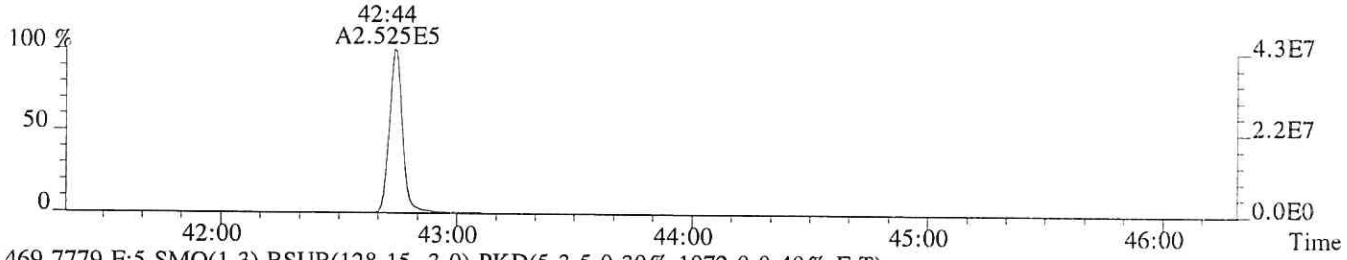
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



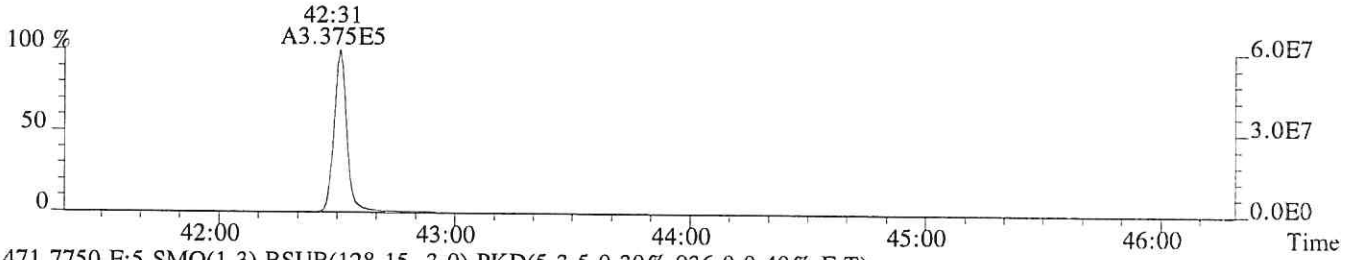
File:P513853 #1-448 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,144.0,0.40%,F,T)



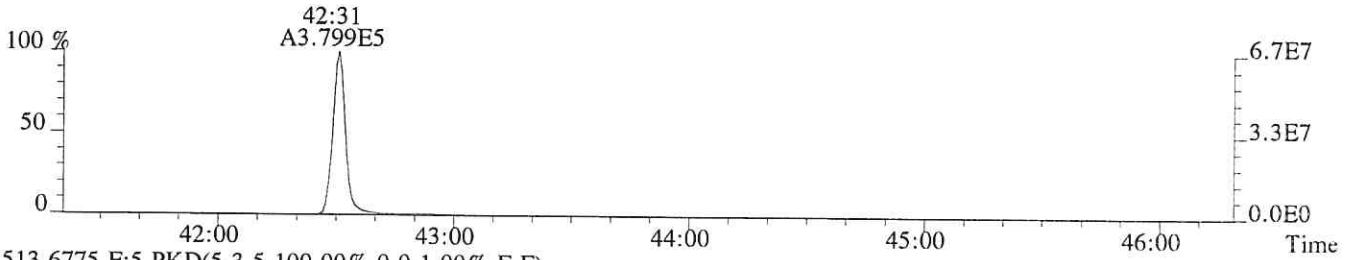
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1380.0,0.40%,F,T)



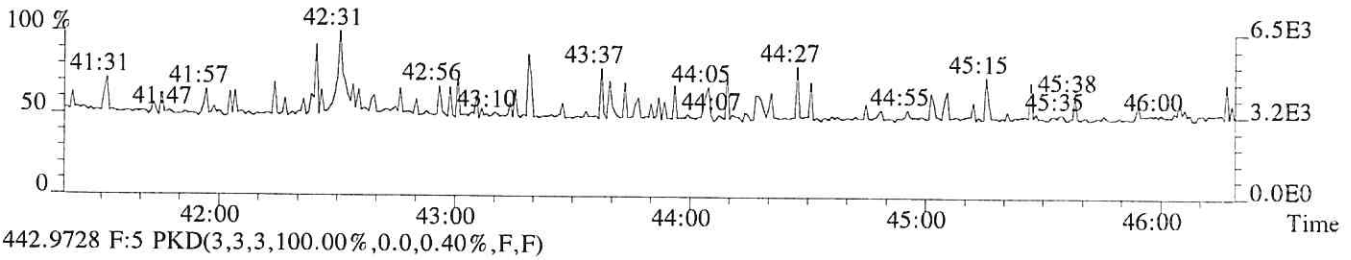
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1072.0,0.40%,F,T)



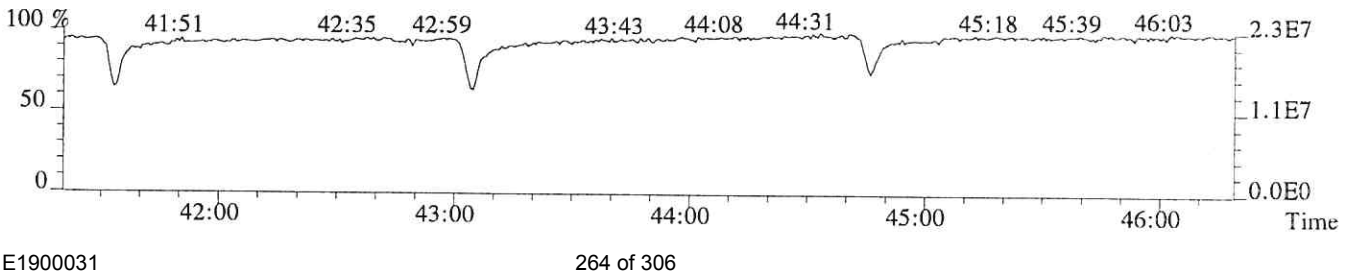
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,936.0,0.40%,F,T)



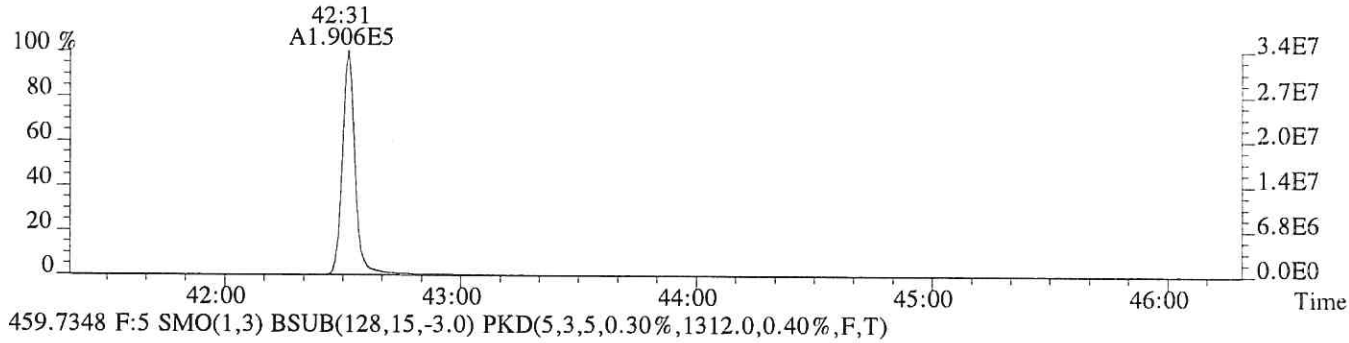
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



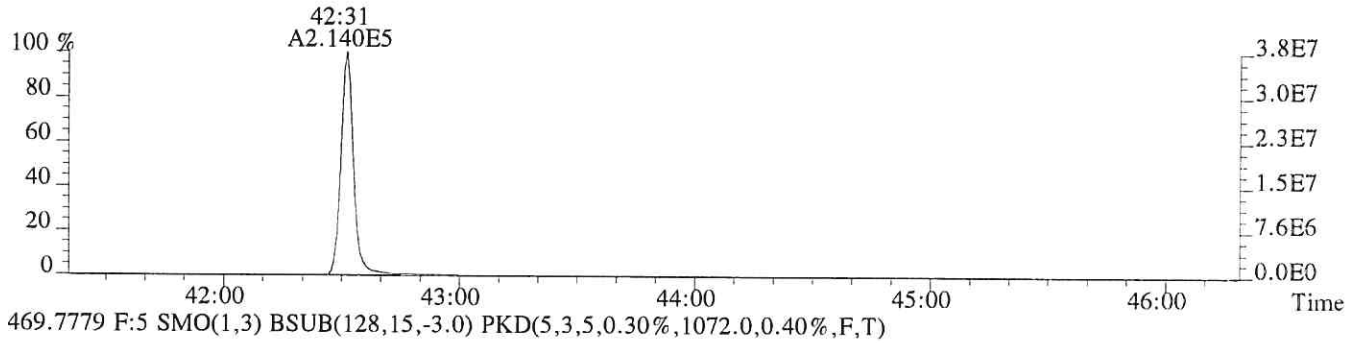
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



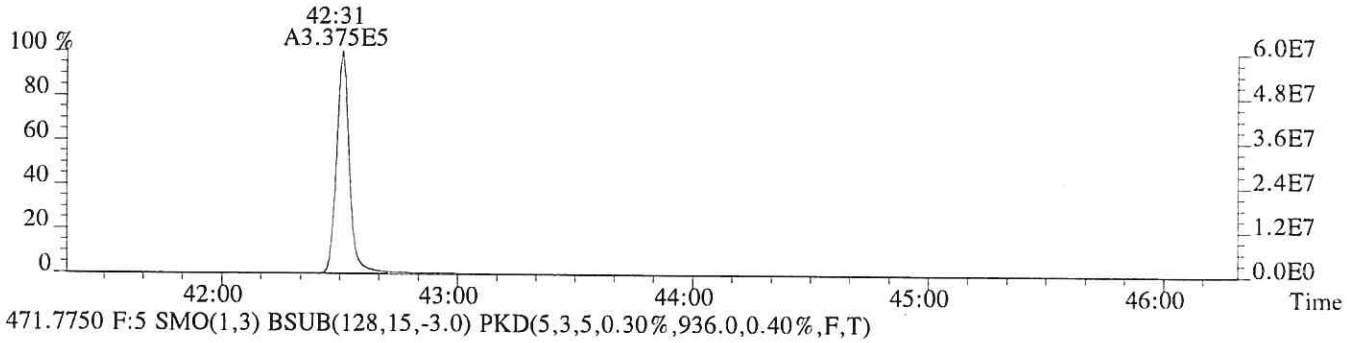
File:P513853 #1-448 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,632.0,0.40%,F,T)



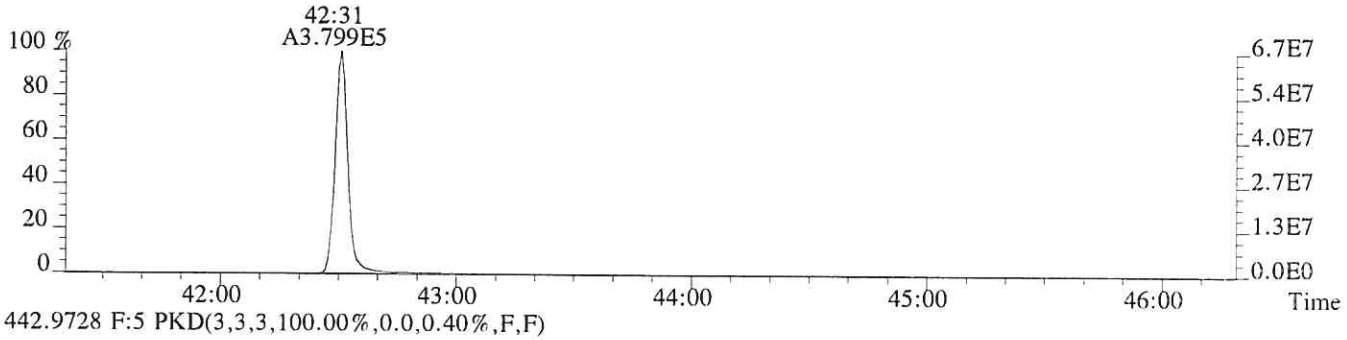
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1312.0,0.40%,F,T)



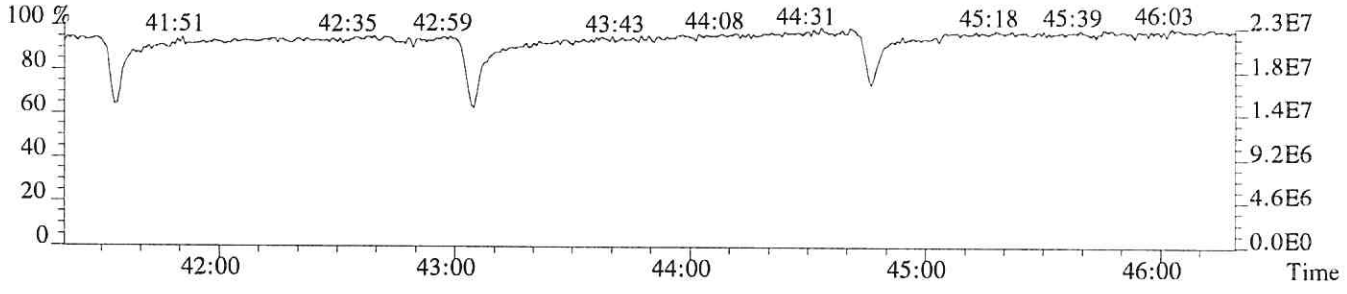
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1072.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,936.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76558

Run #5 Filename P513854 Samp: 1 Inj: 1 Acquired: 24-JAN-18 16:55:09
Processed: 24-JAN-18 17:50:33 Sample ID: CS4

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:47	9.367e+04	1.218e+05	0.77	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:47	7.158e+05	4.652e+05	1.54	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:40	6.668e+05	4.362e+05	1.53	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:15	6.097e+05	4.979e+05	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:22	6.415e+05	5.246e+05	1.22	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:51	5.685e+05	4.706e+05	1.21	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:36	5.397e+05	4.367e+05	1.24	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:48	4.833e+05	4.698e+05	1.03	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	3.955e+05	3.845e+05	1.03	yes	no	1.258
10	Unk	OCDF	42:44	5.770e+05	6.374e+05	0.91	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:31	6.699e+04	8.569e+04	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:56	4.394e+05	2.817e+05	1.56	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:59	3.869e+05	3.085e+05	1.25	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:04	4.031e+05	3.210e+05	1.26	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:18	4.024e+05	3.196e+05	1.26	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:44	3.425e+05	3.252e+05	1.05	yes	no	1.025
17	Unk	OCDD	42:31	4.623e+05	5.191e+05	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:46	2.467e+05	3.121e+05	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:46	3.414e+05	2.167e+05	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	3.412e+05	2.161e+05	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:15	1.522e+05	2.895e+05	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:21	1.720e+05	3.253e+05	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:51	1.562e+05	2.969e+05	0.53	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:36	1.406e+05	2.715e+05	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:48	1.081e+05	2.395e+05	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:13	9.438e+04	2.110e+05	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:30	1.544e+05	1.910e+05	0.81	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	2.282e+05	1.431e+05	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	1.841e+05	1.451e+05	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:03	1.915e+05	1.516e+05	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:43	1.646e+05	1.528e+05	1.08	yes	no	0.858
32	IS	13C-OCDD	42:31	2.072e+05	2.298e+05	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:56	1.645e+05	2.018e+05	0.82	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:17	1.964e+05	1.566e+05	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:31	1.545e+05				no	1.014

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
76558

Run #5 Filename P513854 Samp: 1 Inj: 1 Acquired: 24-JAN-18 16:55:09
Processed: 24-JAN-18 17:50:33 LAB. ID: CS4

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.89e+07	1.00e+03	1.9e+04	2.44e+07	1.90e+03	1.3e+04
2	1,2,3,7,8-PeCDF	1.40e+08	2.03e+03	6.9e+04	9.16e+07	1.47e+03	6.2e+04
3	2,3,4,7,8-PeCDF	1.39e+08	2.03e+03	6.9e+04	9.17e+07	1.47e+03	6.2e+04
4	1,2,3,4,7,8-HxCDF	1.35e+08	1.80e+03	7.5e+04	1.11e+08	2.10e+03	5.3e+04
5	1,2,3,6,7,8-HxCDF	1.41e+08	1.80e+03	7.8e+04	1.16e+08	2.10e+03	5.5e+04
6	2,3,4,6,7,8-HxCDF	1.27e+08	1.80e+03	7.0e+04	1.06e+08	2.10e+03	5.0e+04
7	1,2,3,7,8,9-HxCDF	1.14e+08	1.80e+03	6.3e+04	9.30e+07	2.10e+03	4.4e+04
8	1,2,3,4,6,7,8-HpCDF	1.07e+08	1.75e+04	6.1e+03	1.05e+08	2.93e+04	3.6e+03
9	1,2,3,4,7,8,9-HpCDF	8.10e+07	1.75e+04	4.6e+03	7.89e+07	2.93e+04	2.7e+03
10	OCDF	1.02e+08	5.04e+02	2.0e+05	1.14e+08	1.72e+03	6.6e+04
11	2,3,7,8-TCDD	1.41e+07	2.20e+03	6.4e+03	1.80e+07	1.38e+03	1.3e+04
12	1,2,3,7,8-PeCDD	9.08e+07	1.42e+03	6.4e+04	5.86e+07	1.44e+02	4.1e+05
13	1,2,3,4,7,8-HxCDD	8.77e+07	1.20e+03	7.3e+04	7.06e+07	1.58e+03	4.5e+04
14	1,2,3,6,7,8-HxCDD	8.80e+07	1.20e+03	7.3e+04	7.05e+07	1.58e+03	4.5e+04
15	1,2,3,7,8,9-HxCDD	8.97e+07	1.20e+03	7.5e+04	7.13e+07	1.58e+03	4.5e+04
16	1,2,3,4,6,7,8-HpCDD	7.19e+07	1.52e+03	4.7e+04	6.86e+07	1.50e+03	4.6e+04
17	OCDD	8.05e+07	7.36e+02	1.1e+05	9.09e+07	1.16e+03	7.8e+04
18	13C-2,3,7,8-TCDF	4.92e+07	8.28e+03	5.9e+03	6.18e+07	3.78e+03	1.6e+04
19	13C-1,2,3,7,8-PeCDF	6.78e+07	1.09e+03	6.2e+04	4.35e+07	7.12e+02	6.1e+04
20	13C-2,3,4,7,8-PeCDF	7.11e+07	1.09e+03	6.5e+04	4.54e+07	7.12e+02	6.4e+04
21	13C-1,2,3,4,7,8-HxCDF	3.32e+07	1.94e+03	1.7e+04	6.39e+07	1.54e+03	4.2e+04
22	13C-1,2,3,6,7,8-HxCDF	3.76e+07	1.94e+03	1.9e+04	7.17e+07	1.54e+03	4.7e+04
23	13C-2,3,4,6,7,8-HxCDF	3.46e+07	1.94e+03	1.8e+04	6.63e+07	1.54e+03	4.3e+04
24	13C-1,2,3,7,8,9-HxCDF	2.97e+07	1.94e+03	1.5e+04	5.66e+07	1.54e+03	3.7e+04
25	13C-1,2,3,4,6,7,8-HpCDF	2.37e+07	7.11e+03	3.3e+03	5.25e+07	1.03e+04	5.1e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.95e+07	7.11e+03	2.7e+03	4.34e+07	1.03e+04	4.2e+03
27	13C-2,3,7,8-TCDD	3.25e+07	6.40e+03	5.1e+03	3.99e+07	2.77e+03	1.4e+04
28	13C-1,2,3,7,8-PeCDD	4.73e+07	1.13e+03	4.2e+04	2.97e+07	8.40e+02	3.5e+04
29	13C-1,2,3,4,7,8-HxCDD	4.15e+07	3.03e+03	1.4e+04	3.28e+07	2.40e+03	1.4e+04
30	13C-1,2,3,6,7,8-HxCDD	4.14e+07	3.03e+03	1.4e+04	3.31e+07	2.40e+03	1.4e+04
31	13C-1,2,3,4,6,7,8-HpCDD	3.45e+07	1.55e+03	2.2e+04	3.21e+07	1.32e+03	2.4e+04
32	13C-OCDD	3.61e+07	1.25e+03	2.9e+04	4.00e+07	1.19e+03	3.4e+04
33	13C-1,2,3,4-TCDD	3.34e+07	6.40e+03	5.2e+03	4.12e+07	2.77e+03	1.5e+04
34	13C-1,2,3,7,8,9-HxCDD	4.34e+07	3.03e+03	1.4e+04	3.46e+07	2.40e+03	1.4e+04
35	37Cl-2,3,7,8-TCDD	3.25e+07	1.28e+03	2.5e+04			

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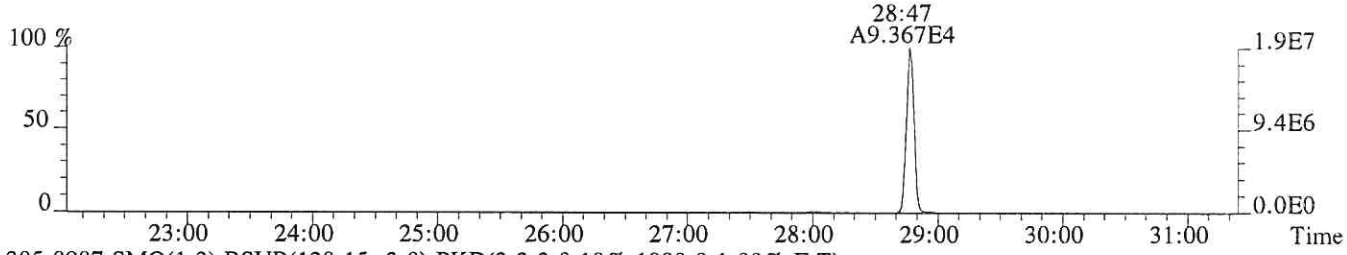
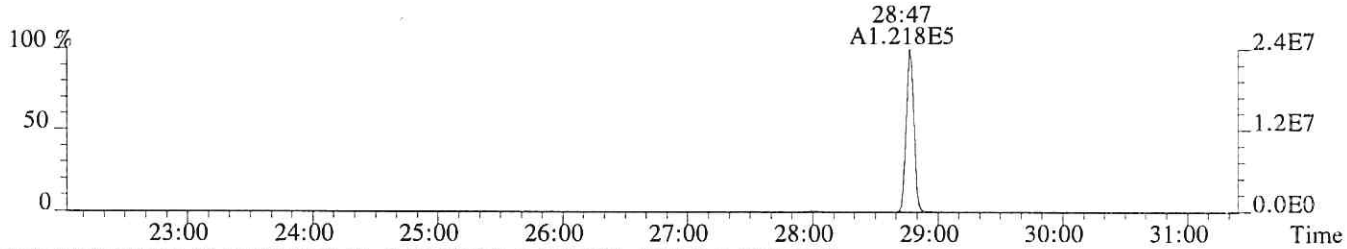
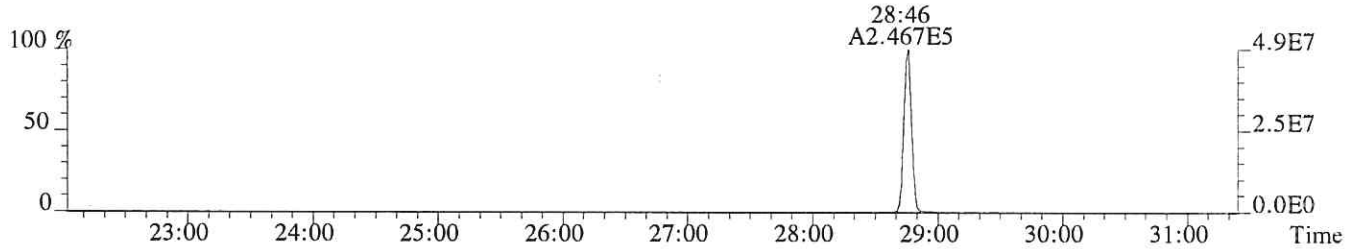
File:P513854 #1-665 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1004.0,1.00%,F,T)



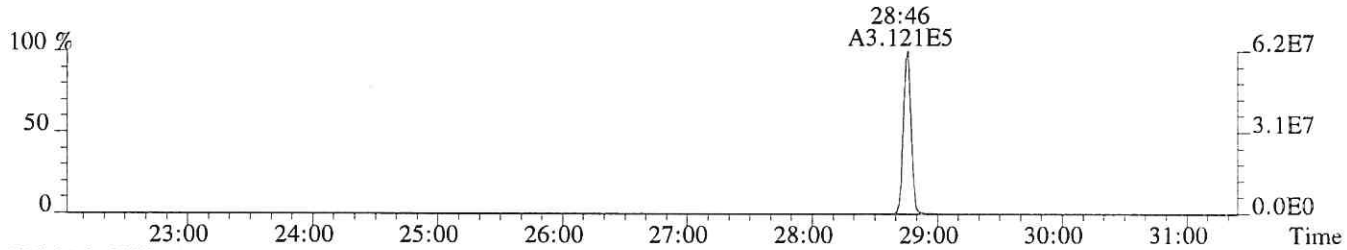
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1900.0,1.00%,F,T)



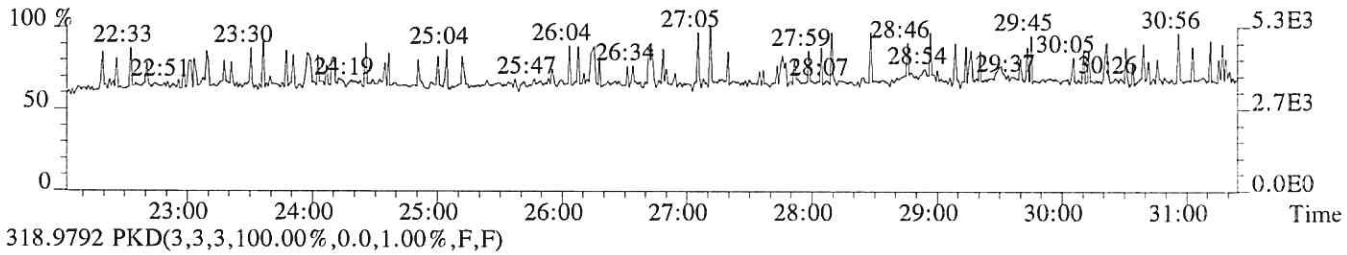
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8284.0,1.00%,F,T)



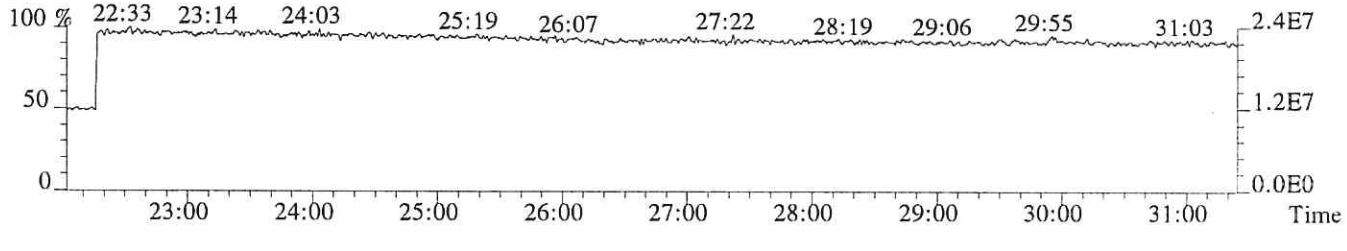
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3780.0,1.00%,F,T)



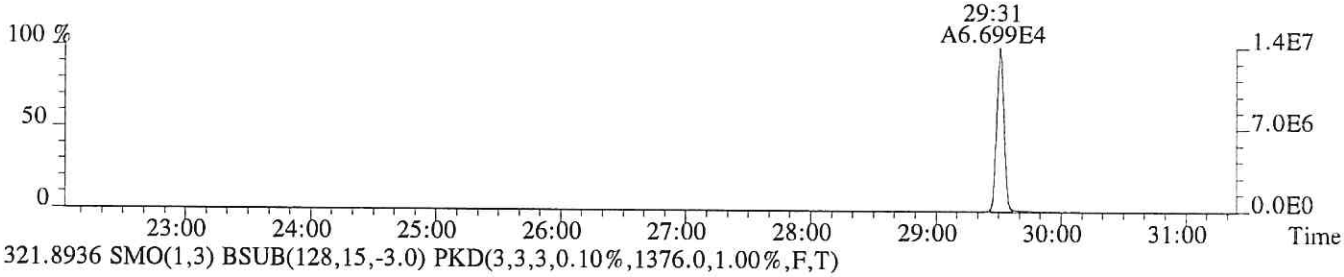
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



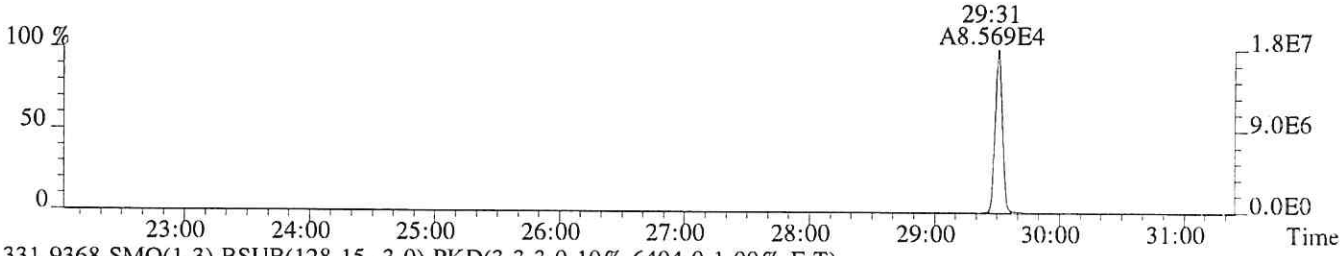
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



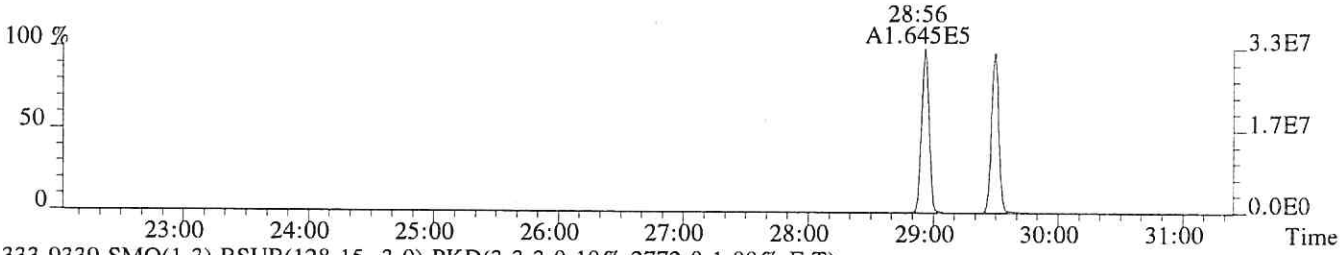
File:P513854 #1-665 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2200.0,1.00%,F,T)



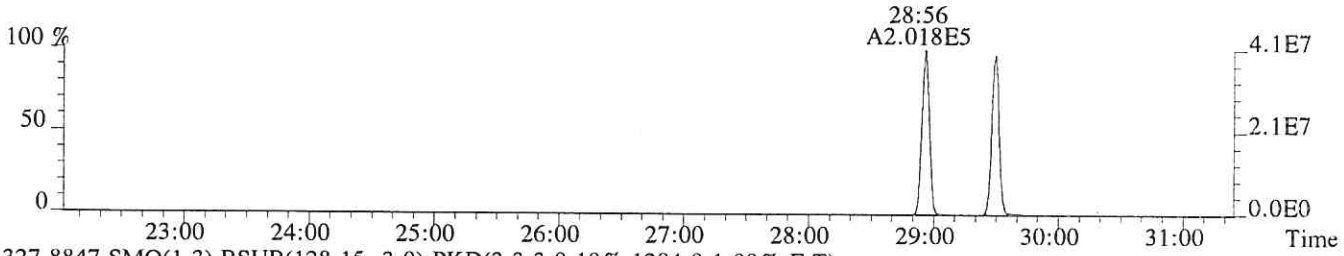
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1376.0,1.00%,F,T)



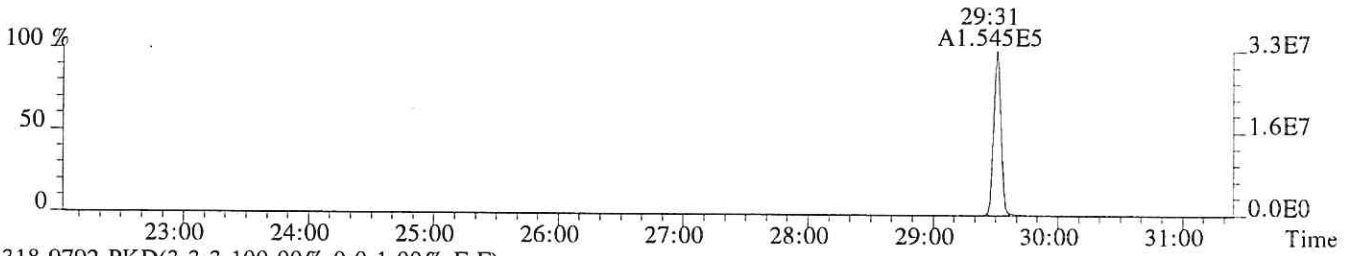
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6404.0,1.00%,F,T)



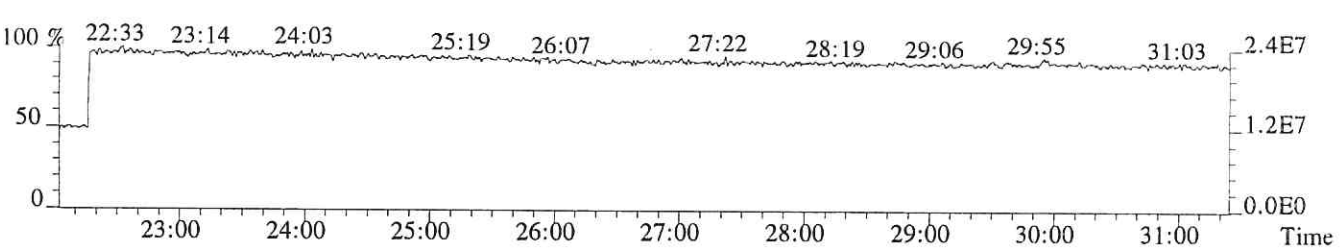
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2772.0,1.00%,F,T)



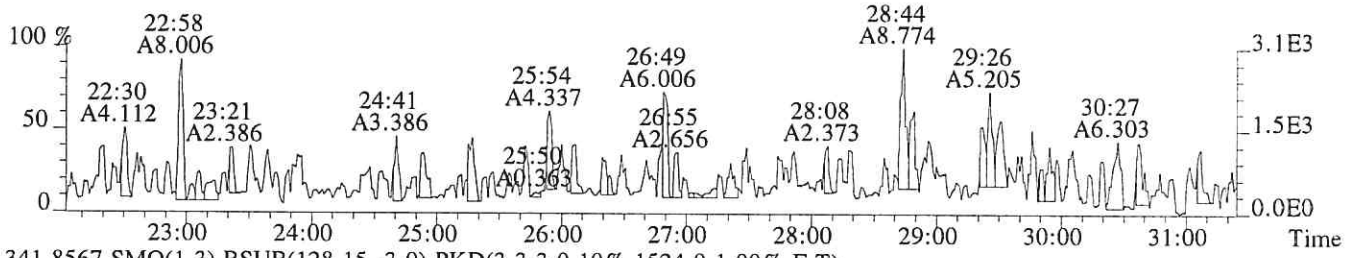
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1284.0,1.00%,F,T)



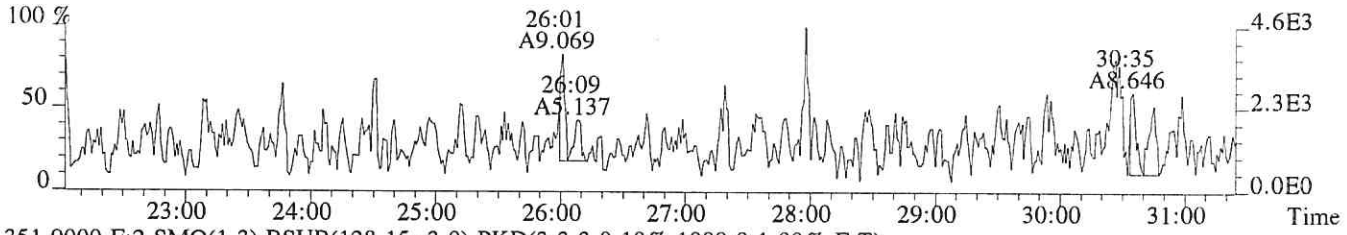
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



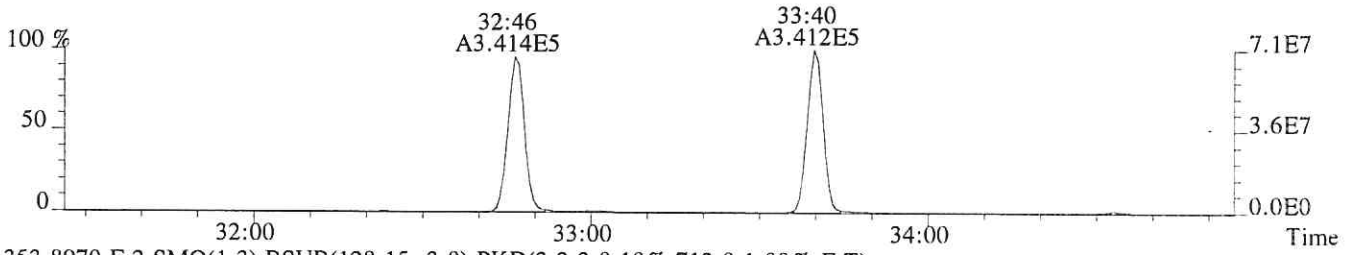
File:P513854 #1-665 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,600.0,1.00%,F,T)



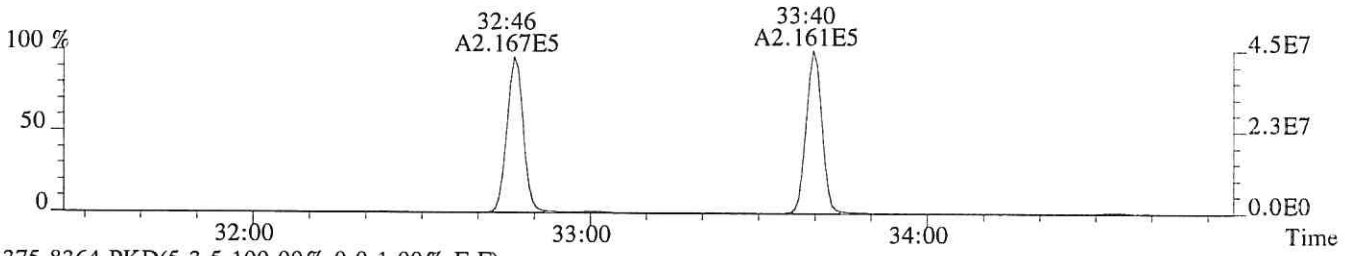
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1524.0,1.00%,F,T)



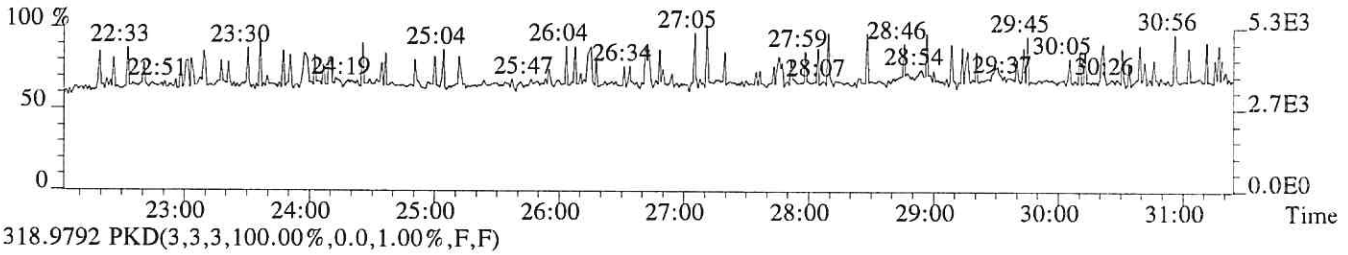
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1088.0,1.00%,F,T)



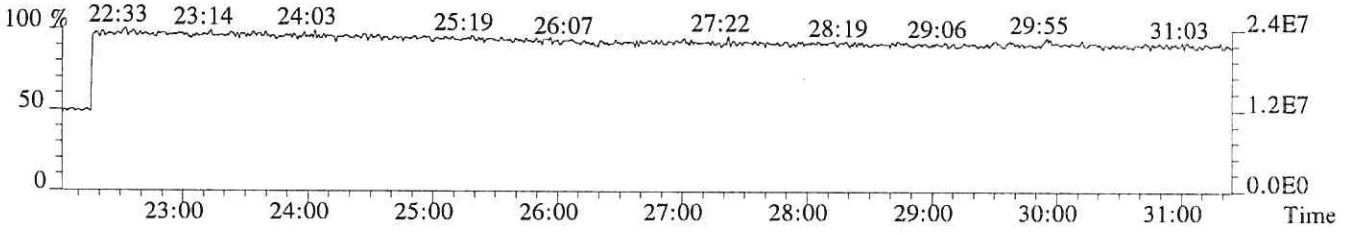
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,712.0,1.00%,F,T)



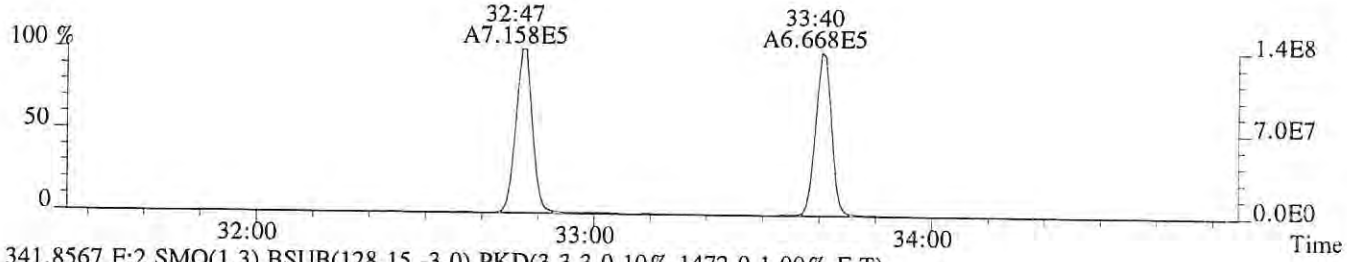
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



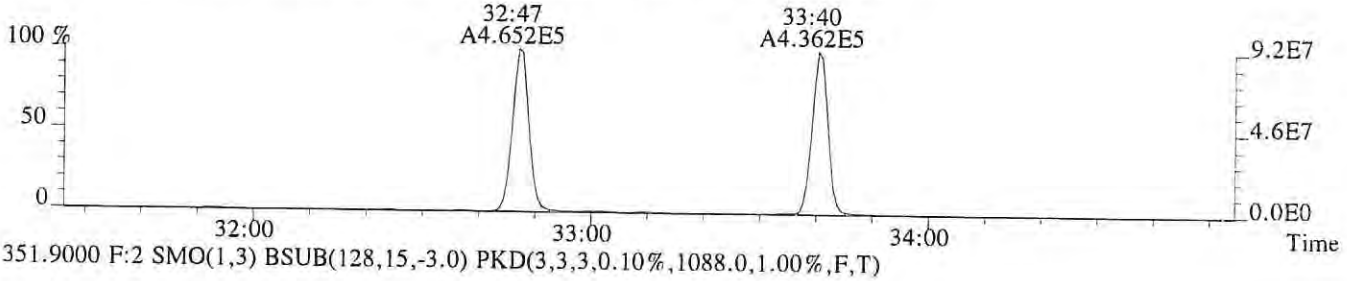
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



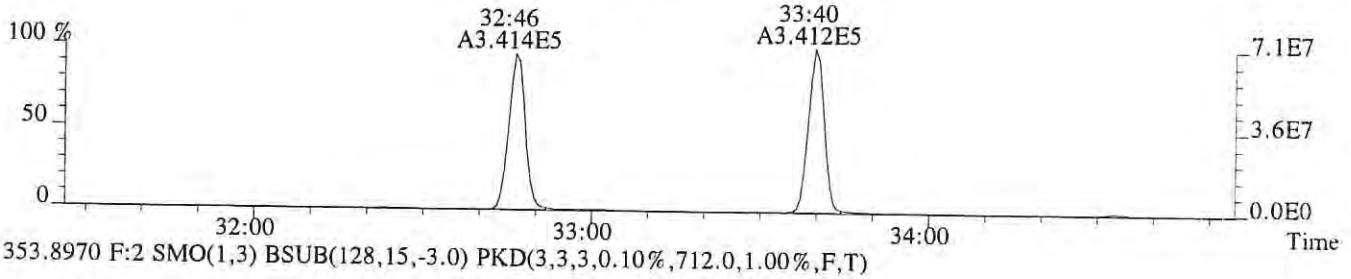
File:P513854 #1-313 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2028.0,1.00%,F,T)



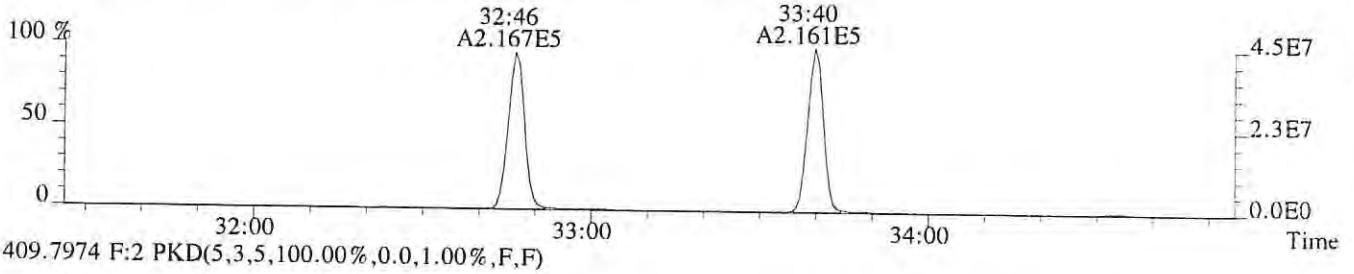
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1472.0,1.00%,F,T)



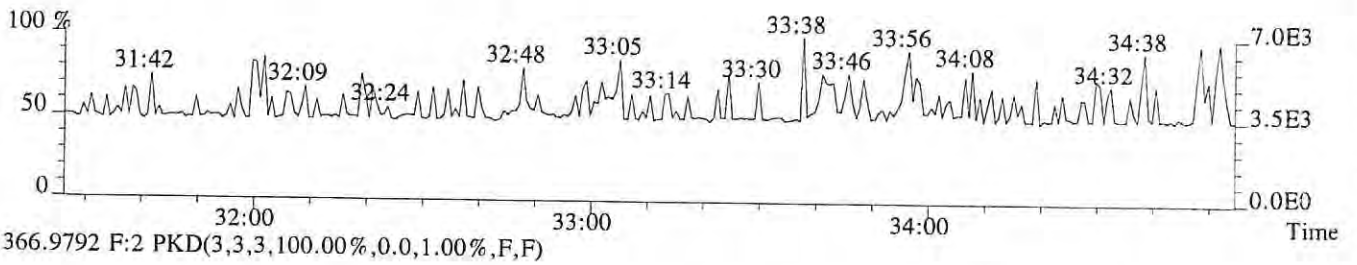
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1088.0,1.00%,F,T)



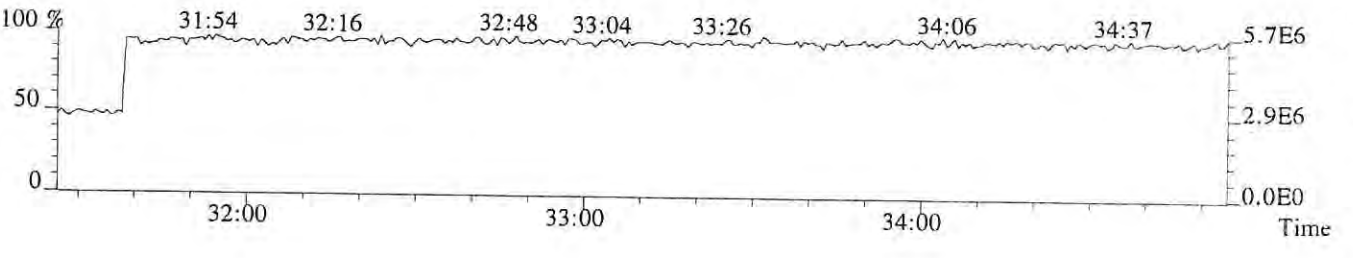
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,712.0,1.00%,F,T)



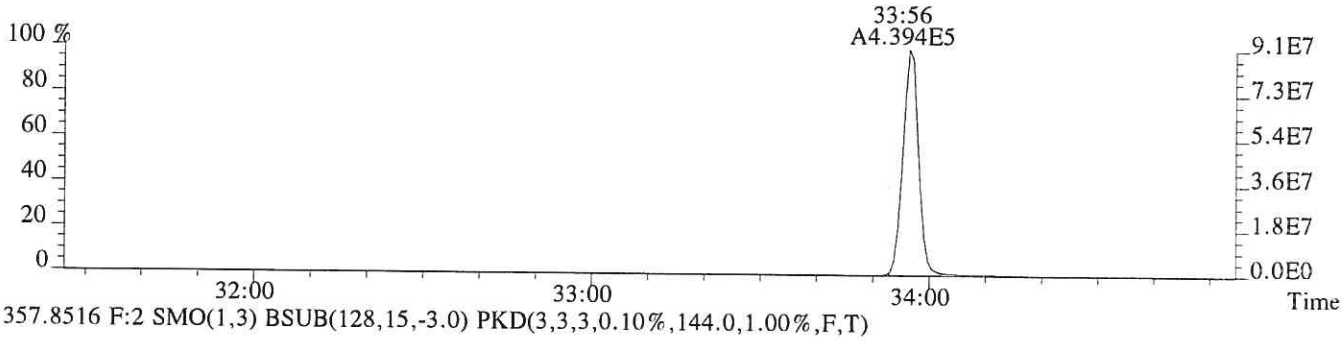
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



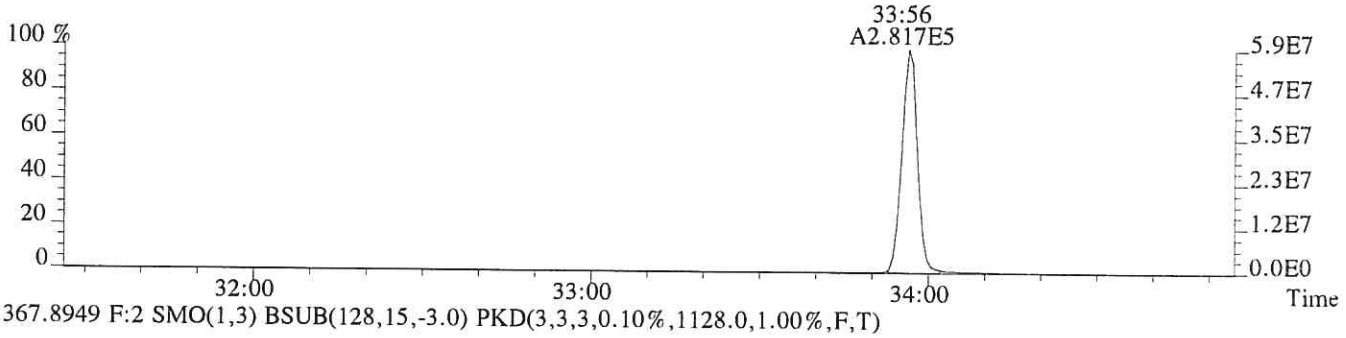
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



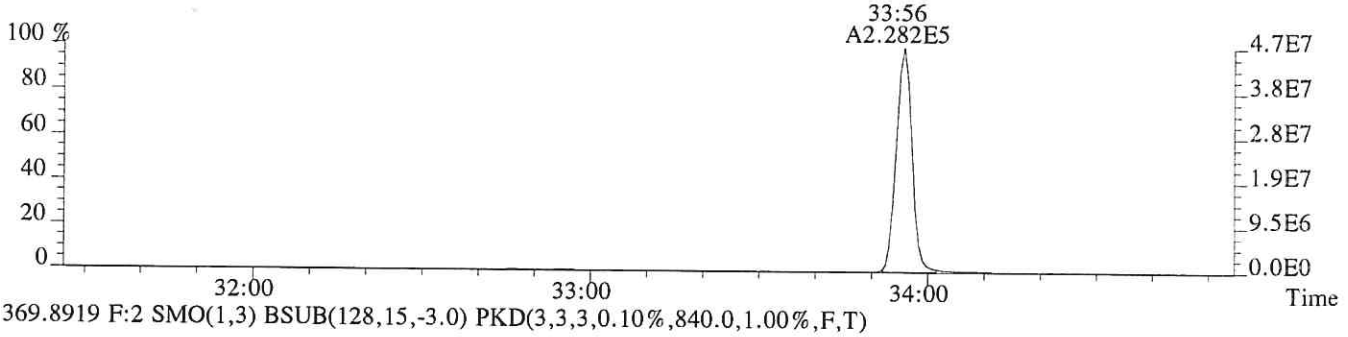
File:P513854 #1-313 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1420.0,1.00%,F,T)



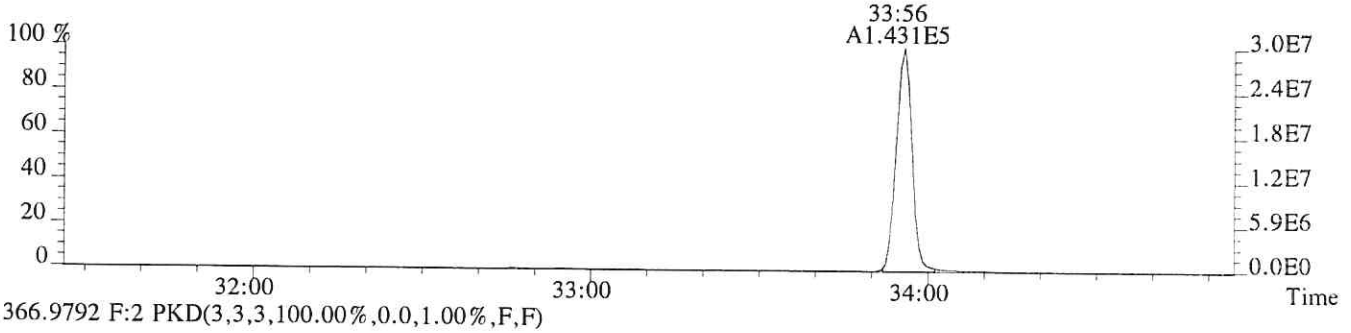
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,144.0,1.00%,F,T)



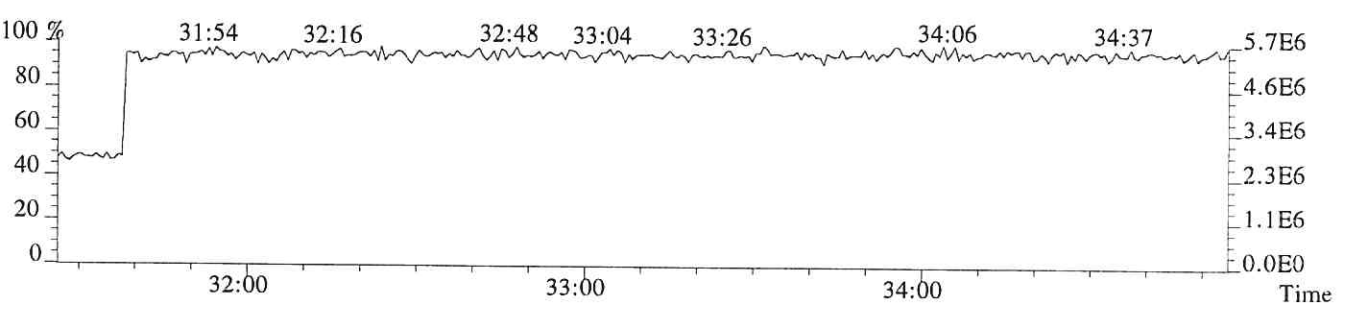
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1128.0,1.00%,F,T)



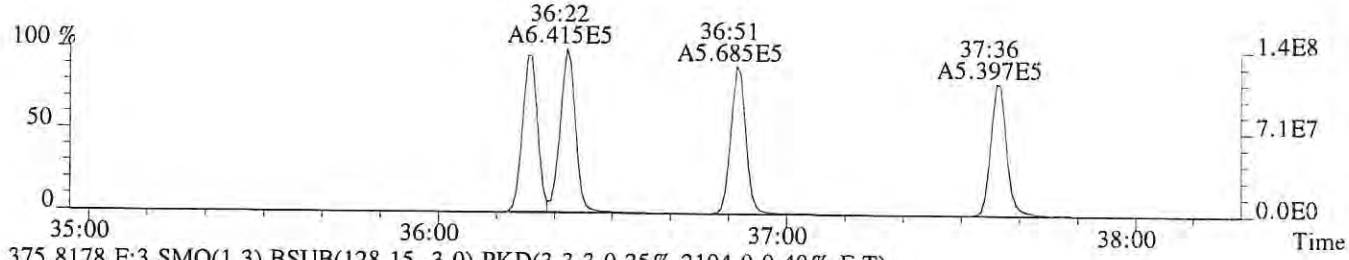
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,840.0,1.00%,F,T)



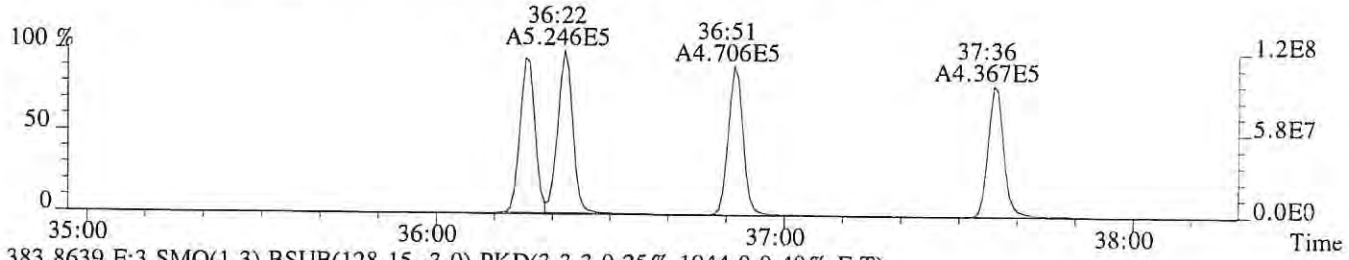
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



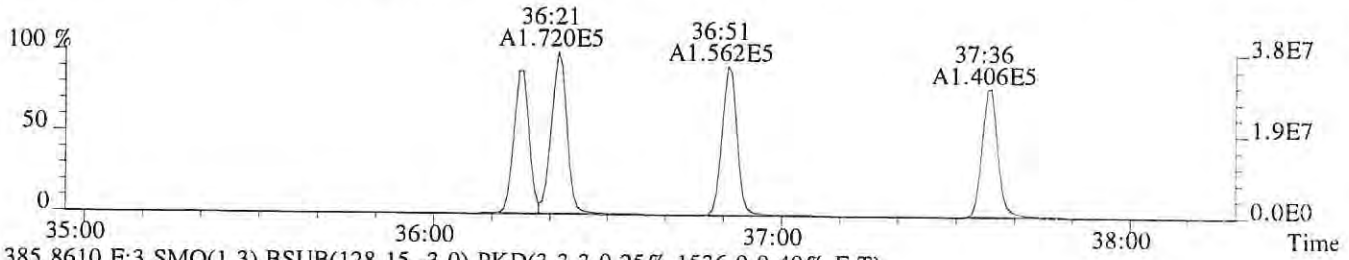
File:P513854 #1-303 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1804.0,0.40%,F,T)



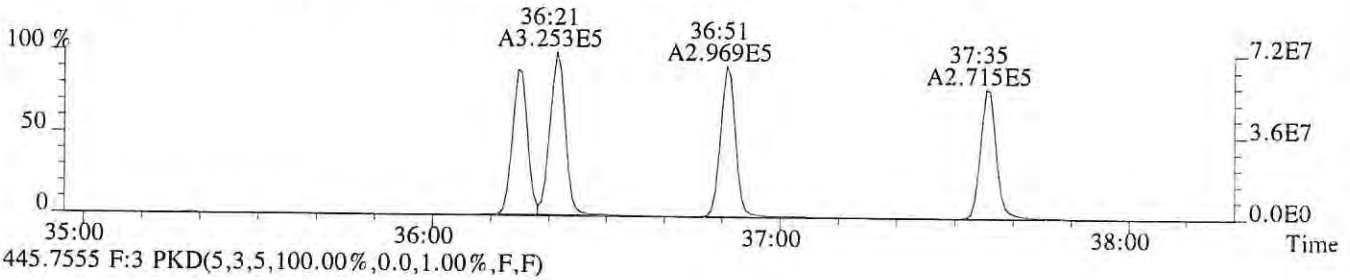
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2104.0,0.40%,F,T)



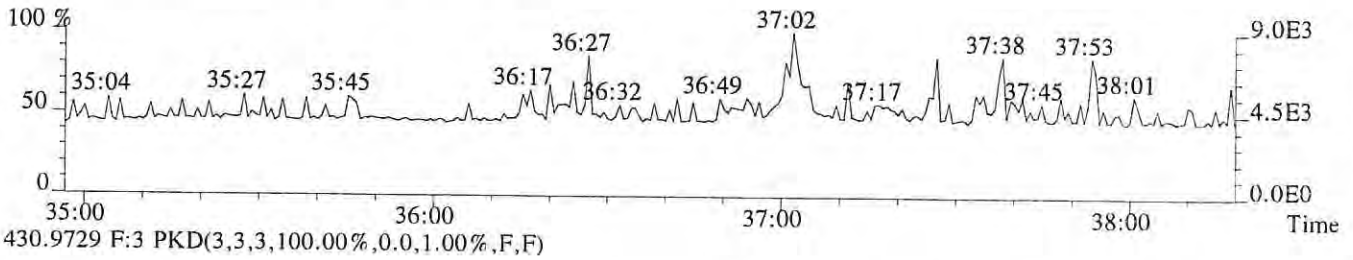
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1944.0,0.40%,F,T)



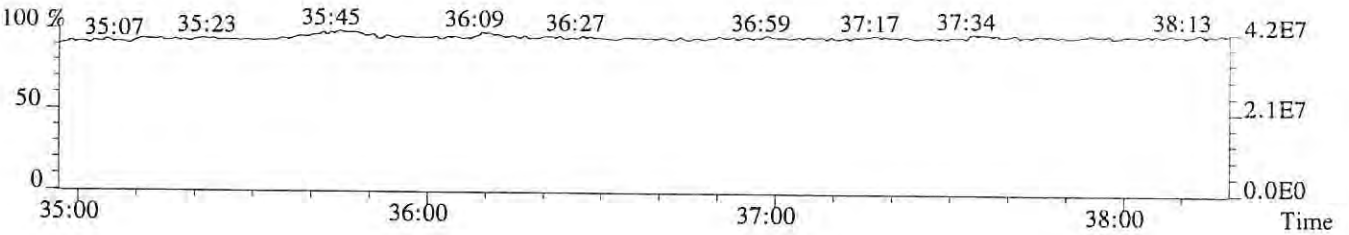
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1536.0,0.40%,F,T)



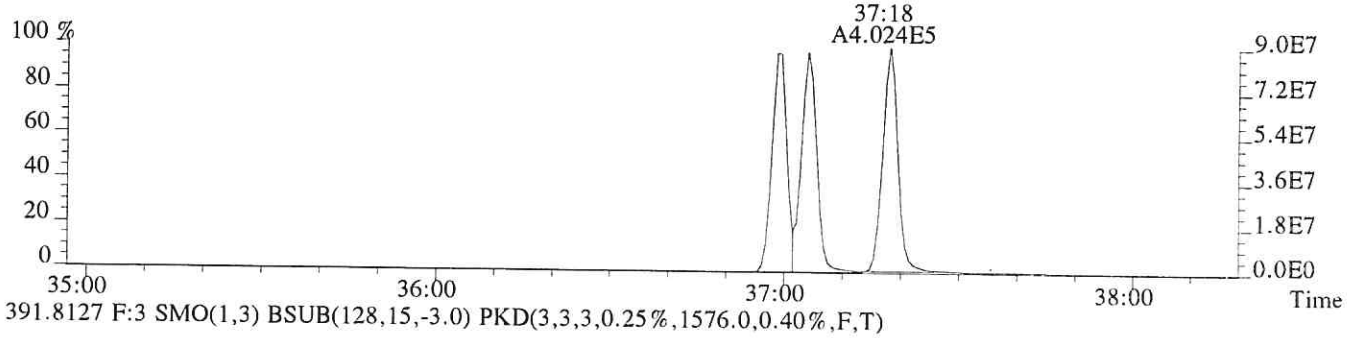
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



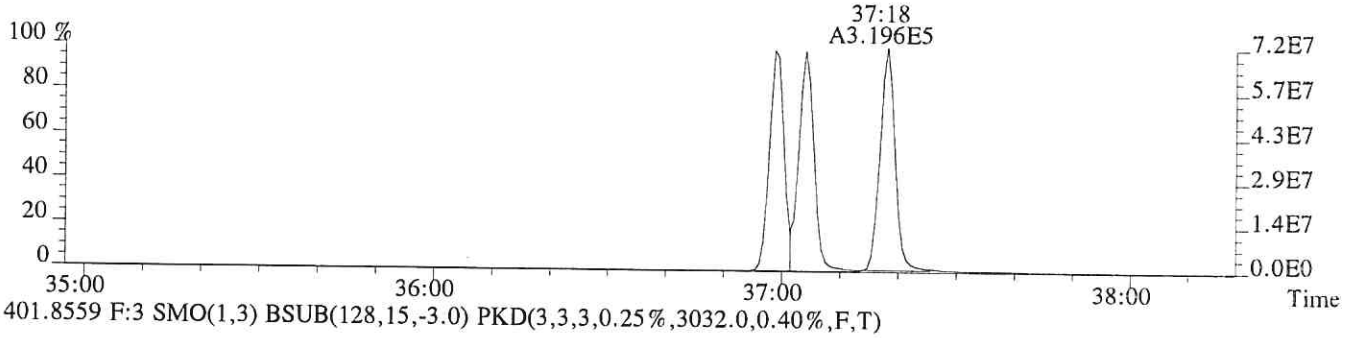
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



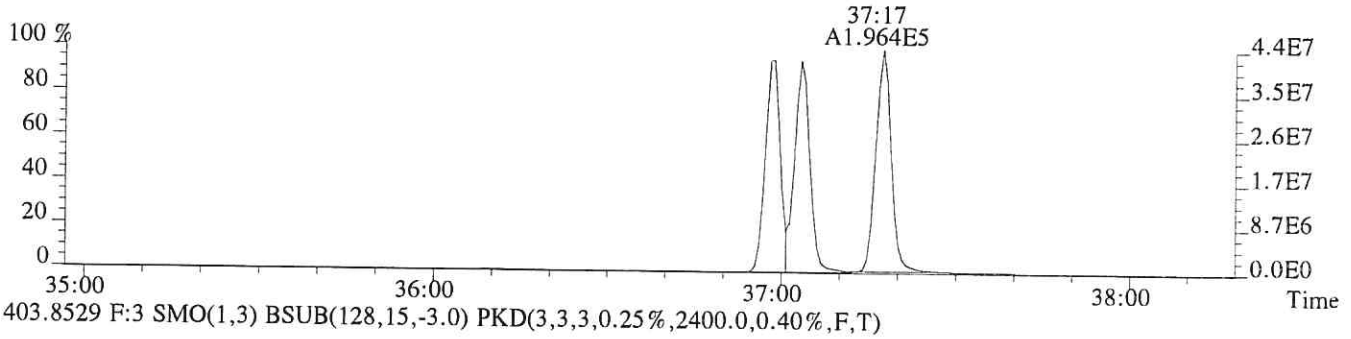
File:P513854 #1-303 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1200.0,0.40%,F,T)



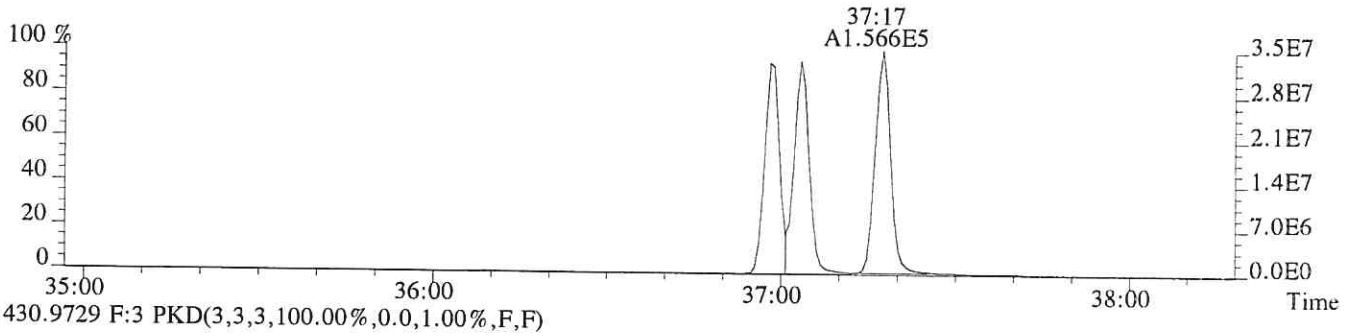
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1576.0,0.40%,F,T)



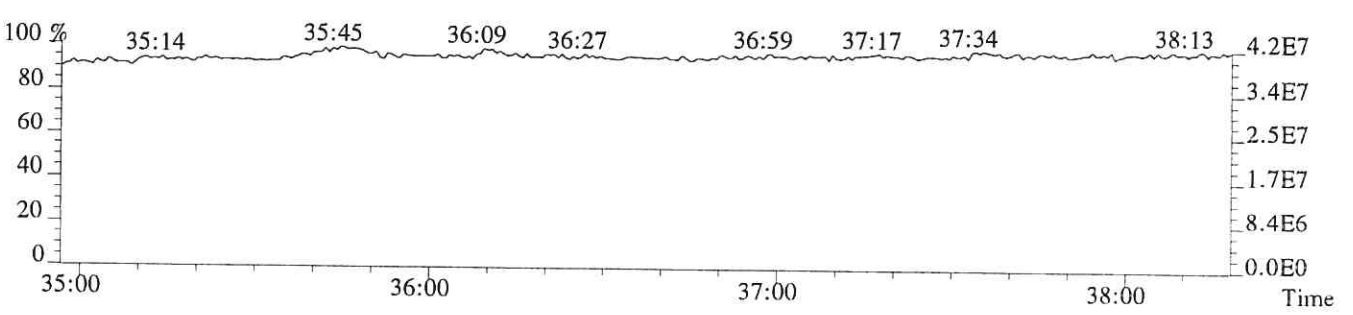
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3032.0,0.40%,F,T)



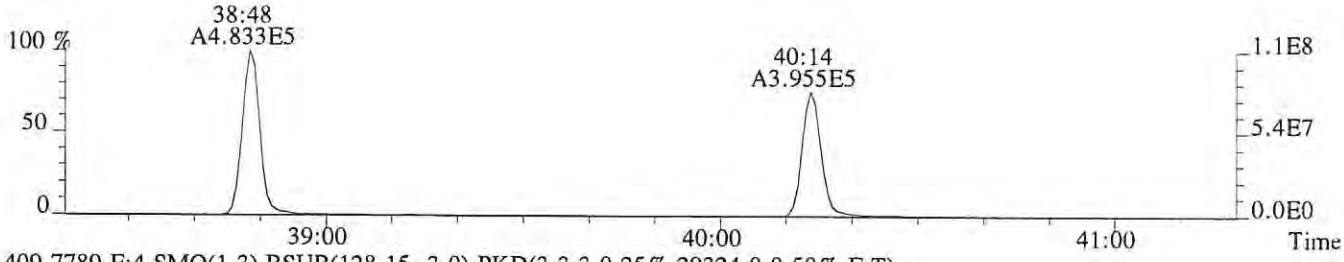
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2400.0,0.40%,F,T)



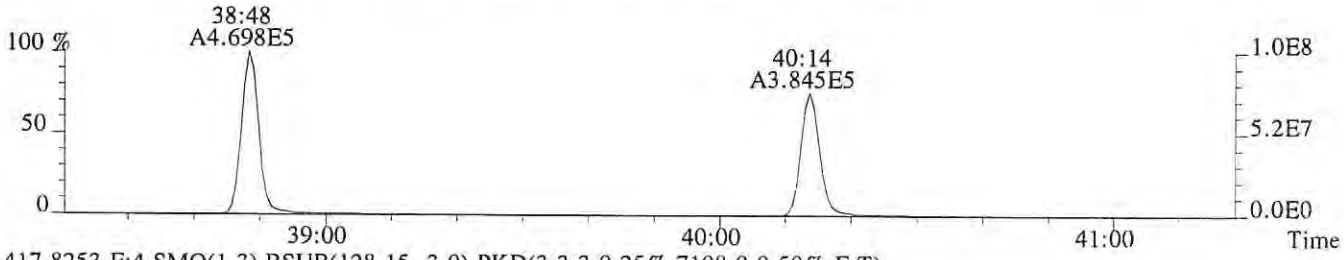
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



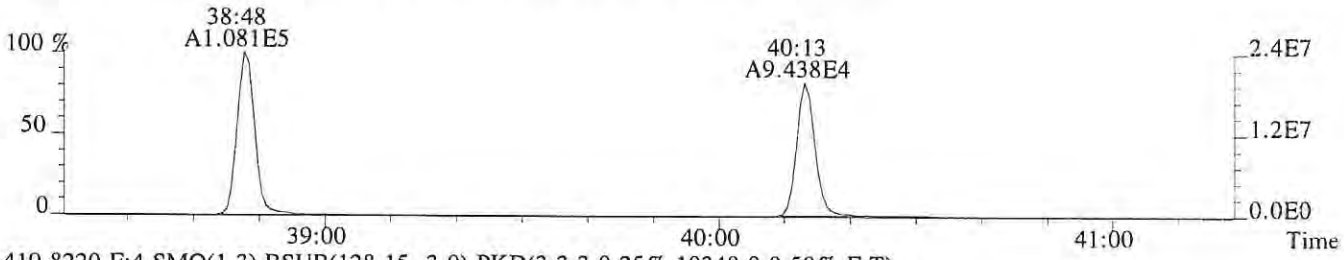
File:P513854 #1-268 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,17516.0,0.50%,F,T)



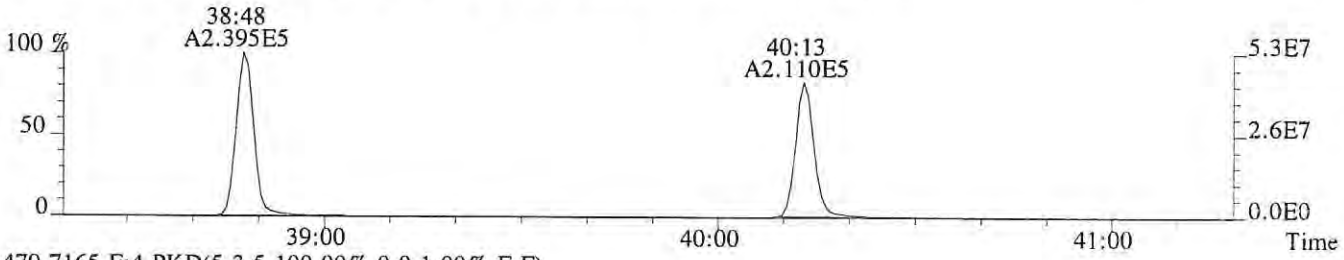
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,29324.0,0.50%,F,T)



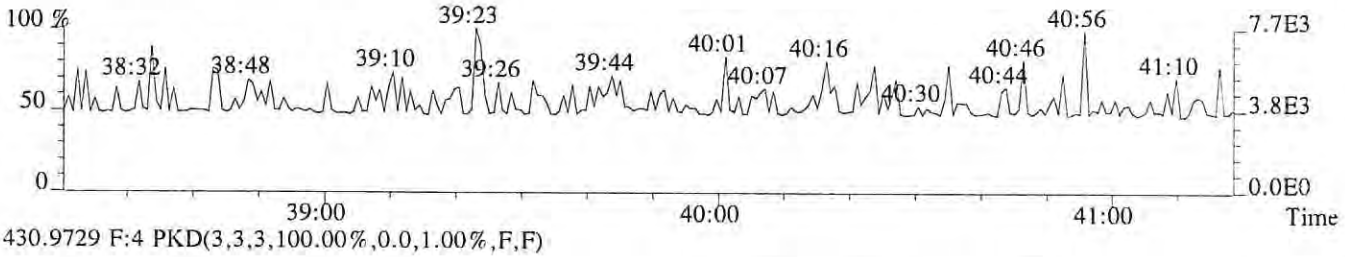
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7108.0,0.50%,F,T)



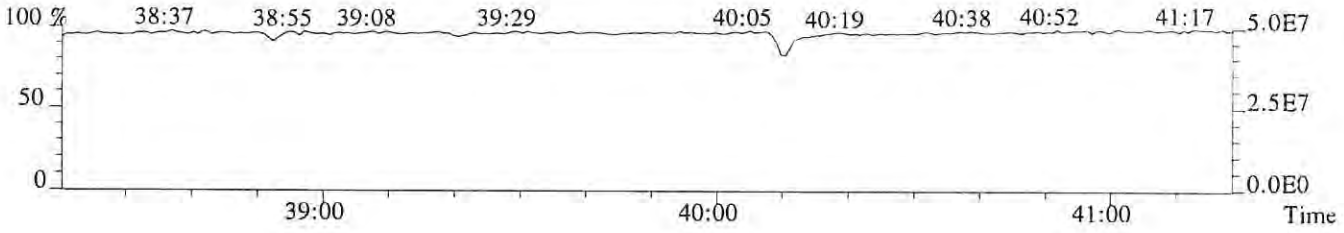
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,10348.0,0.50%,F,T)



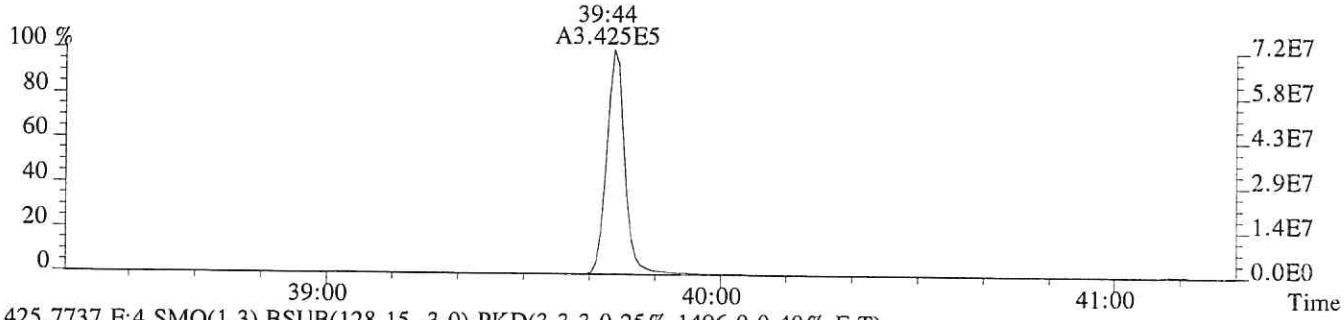
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



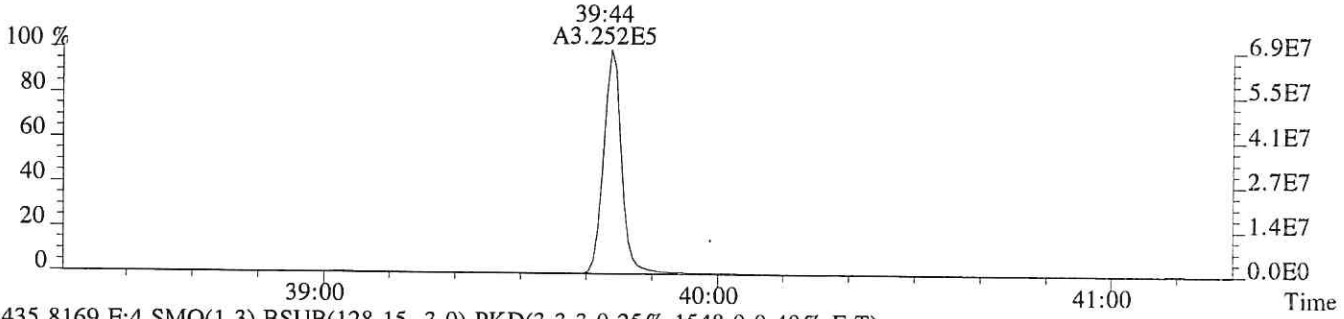
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



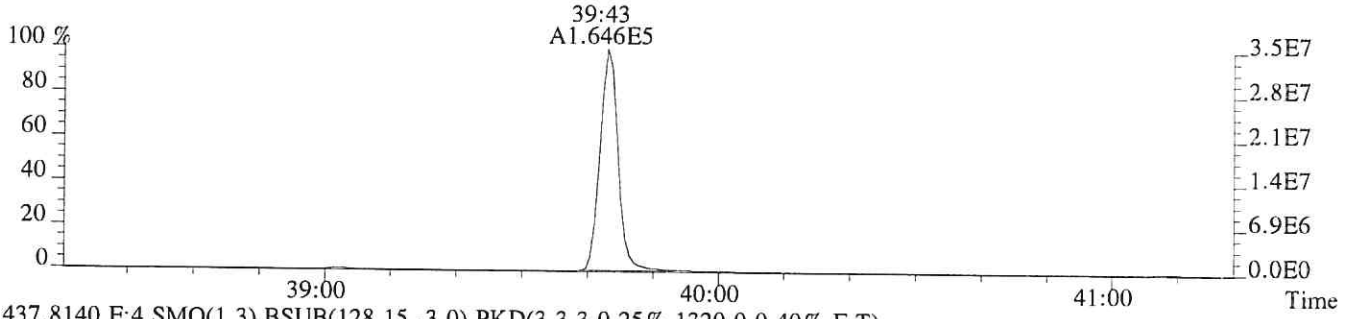
File:P513854 #1-268 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1516.0,0.40%,F,T)



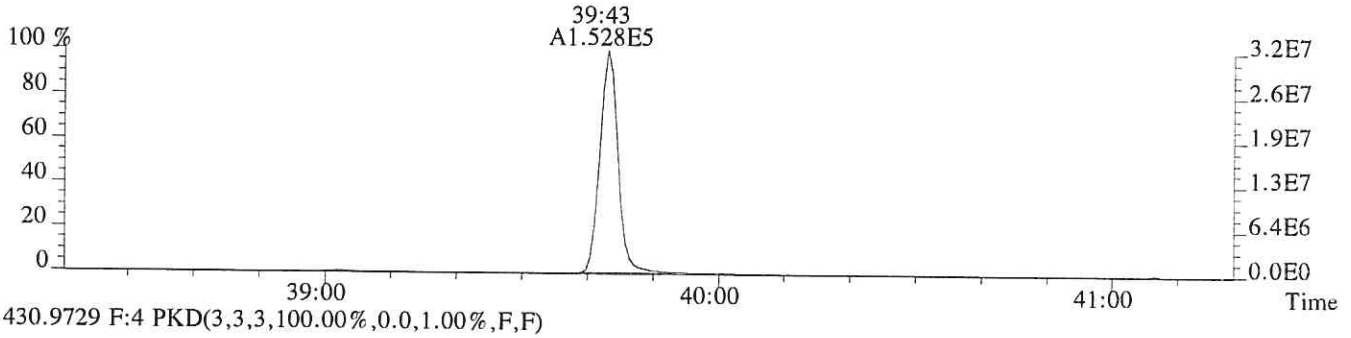
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1496.0,0.40%,F,T)



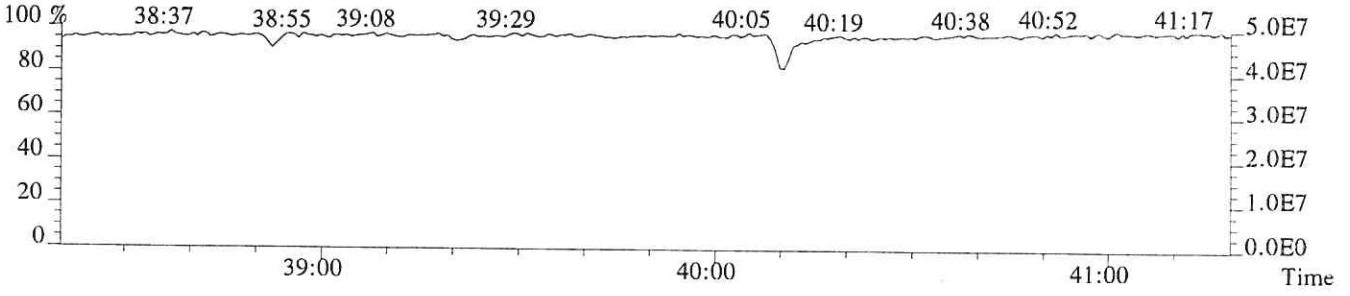
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1548.0,0.40%,F,T)



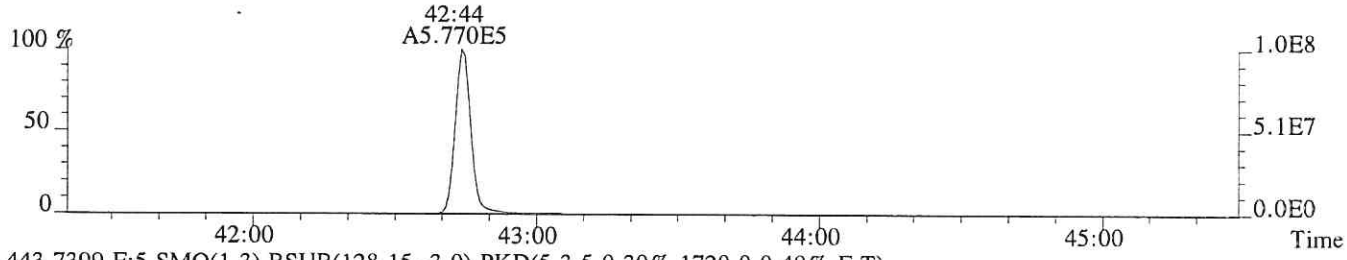
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1320.0,0.40%,F,T)



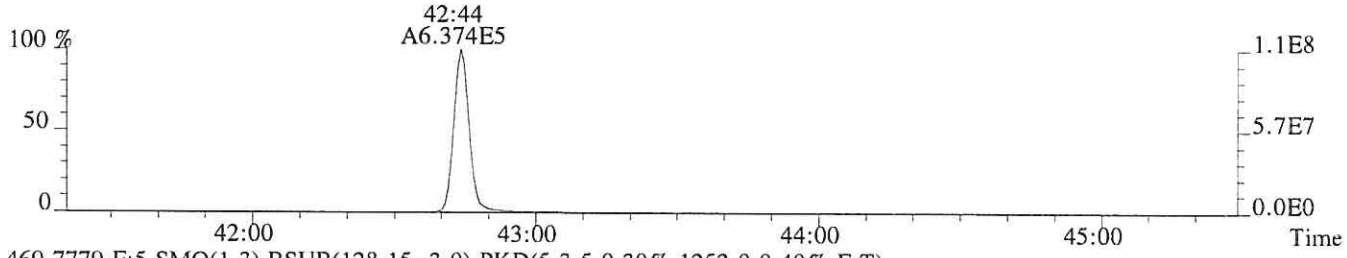
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



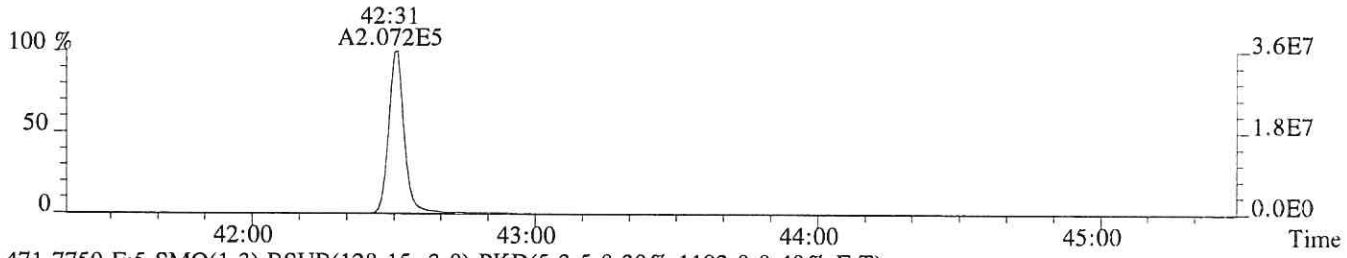
File:P513854 #1-373 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,504.0,0.40%,F,T)



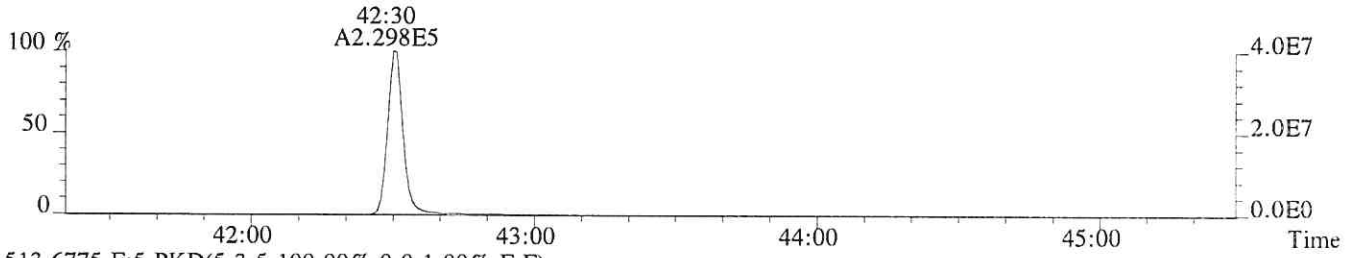
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1720.0,0.40%,F,T)



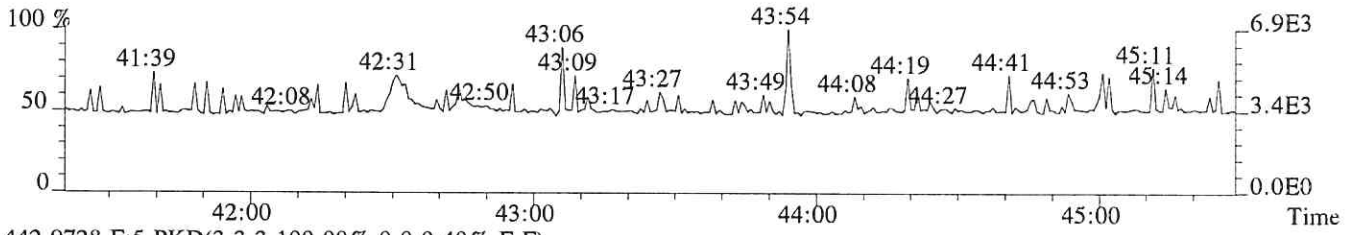
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1252.0,0.40%,F,T)



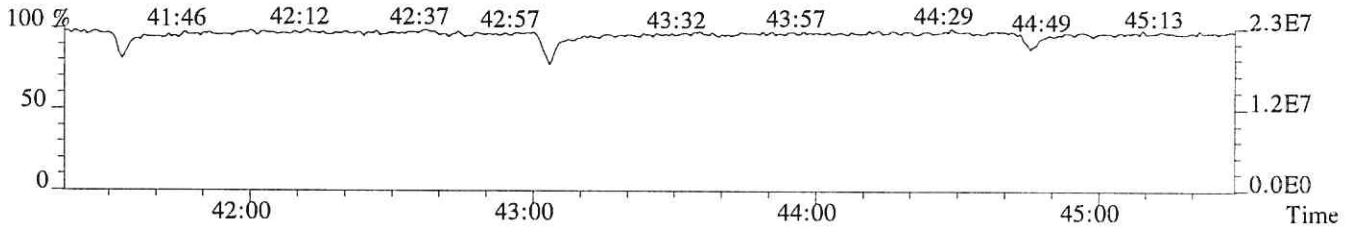
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1192.0,0.40%,F,T)



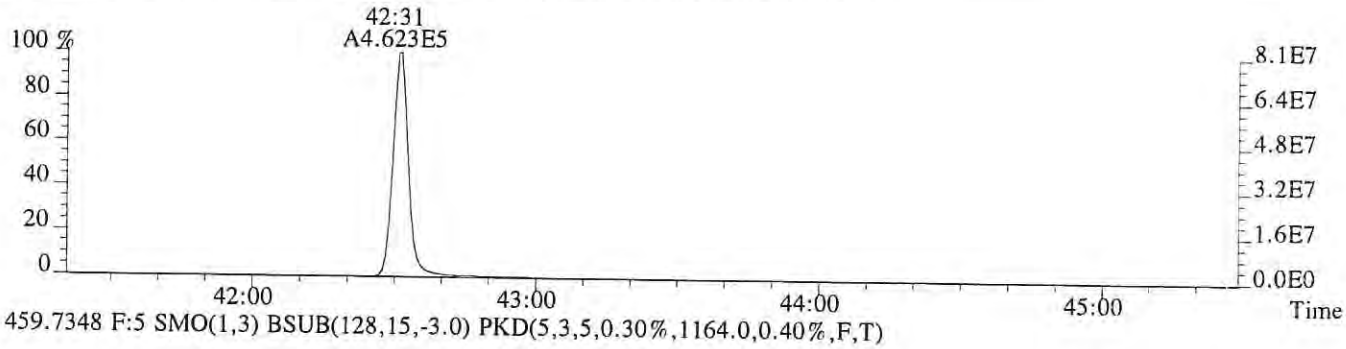
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



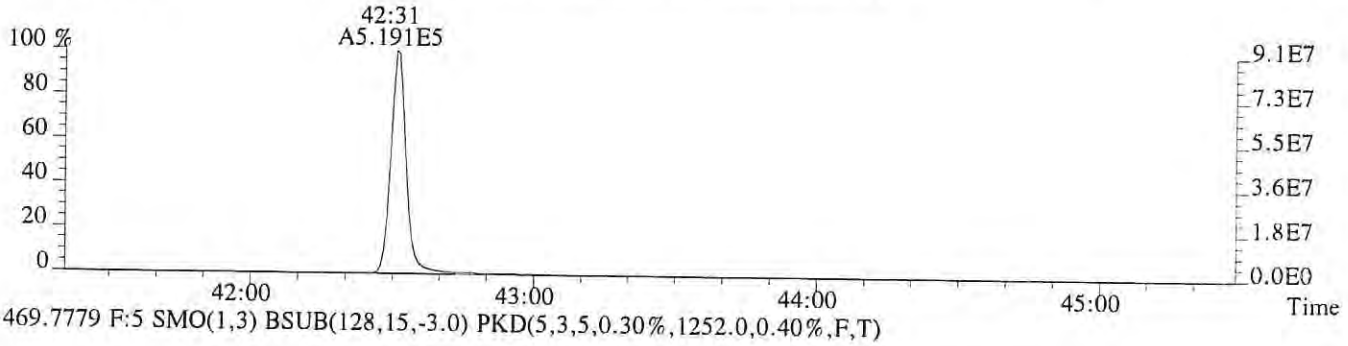
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



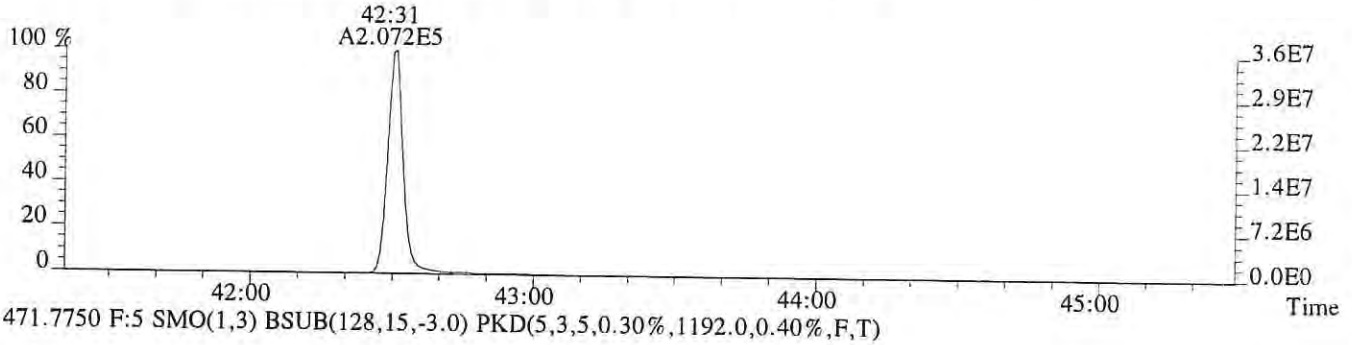
File:P513854 #1-373 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,736.0,0.40%,F,T)



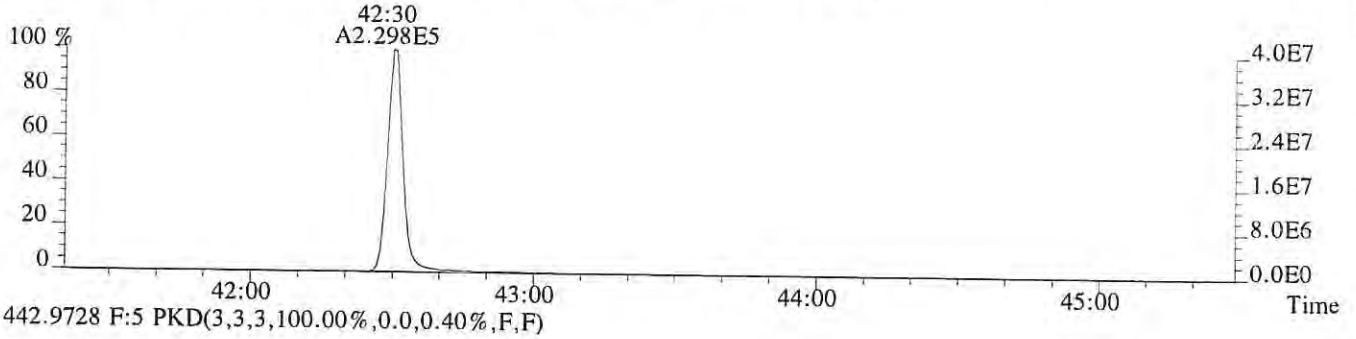
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1164.0,0.40%,F,T)



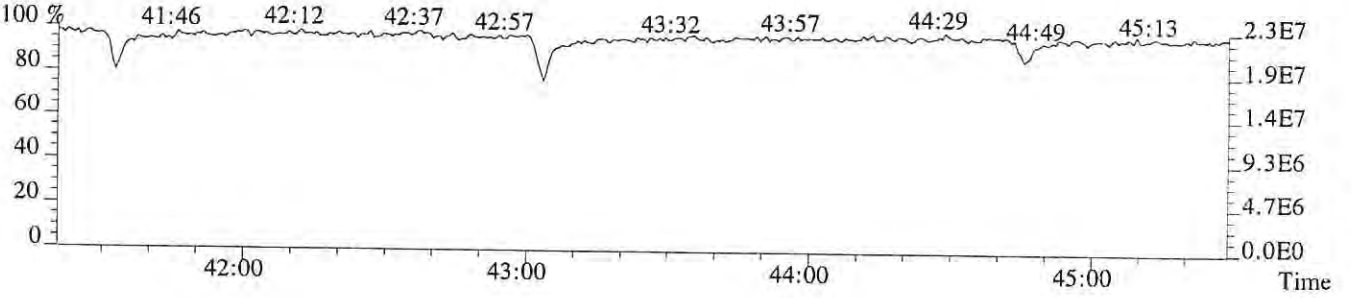
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1252.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1192.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
185657

Run #6 Filename P513855 Samp: 1 Inj: 1 Acquired: 24-JAN-18 17:43:48
Processed: 25-JAN-18 08:12:42 Sample ID: CS5

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:48	2.519e+05	3.290e+05	0.77	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	2.059e+06	1.330e+06	1.55	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:42	1.928e+06	1.251e+06	1.54	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:17	1.692e+06	1.377e+06	1.23	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:23	1.772e+06	1.434e+06	1.24	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:53	1.608e+06	1.317e+06	1.22	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	1.433e+06	1.167e+06	1.23	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:49	1.339e+06	1.290e+06	1.04	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	1.080e+06	1.042e+06	1.04	yes	no	1.258
10	Unk	OCDF	42:45	1.595e+06	1.756e+06	0.91	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:32	1.888e+05	2.423e+05	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:58	1.263e+06	8.057e+05	1.57	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	37:00	1.121e+06	8.925e+05	1.26	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:05	1.092e+06	8.671e+05	1.26	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:19	1.145e+06	9.139e+05	1.25	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:45	9.236e+05	8.810e+05	1.05	yes	no	1.025
17	Unk	OCDD	42:32	1.236e+06	1.384e+06	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:47	1.298e+05	1.639e+05	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:48	1.958e+05	1.231e+05	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	1.948e+05	1.236e+05	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:16	8.374e+04	1.594e+05	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:23	9.521e+04	1.780e+05	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:52	8.554e+04	1.650e+05	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:37	7.556e+04	1.441e+05	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:49	5.927e+04	1.314e+05	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	5.166e+04	1.153e+05	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:31	8.633e+04	1.080e+05	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	1.308e+05	8.218e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	1.058e+05	8.279e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:04	1.031e+05	8.205e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:44	8.934e+04	8.409e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	42:31	1.103e+05	1.236e+05	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:57	8.893e+04	1.085e+05	0.82	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:18	1.136e+05	9.051e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:32	4.366e+05				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
185657

Run #6 Filename P513855 Samp: 1 Inj: 1 Acquired: 24-JAN-18 17:43:48
Processed: 25-JAN-18 08:12:42 LAB. ID: CS5

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	5.13e+07	1.02e+03	5.0e+04	6.69e+07	2.00e+03	3.3e+04
2	1,2,3,7,8-PeCDF	4.18e+08	1.72e+03	2.4e+05	2.69e+08	4.25e+03	6.3e+04
3	2,3,4,7,8-PeCDF	4.06e+08	1.72e+03	2.4e+05	2.60e+08	4.25e+03	6.1e+04
4	1,2,3,4,7,8-HxCDF	3.87e+08	3.18e+03	1.2e+05	3.12e+08	2.28e+03	1.4e+05
5	1,2,3,6,7,8-HxCDF	3.87e+08	3.18e+03	1.2e+05	3.14e+08	2.28e+03	1.4e+05
6	2,3,4,6,7,8-HxCDF	3.59e+08	3.18e+03	1.1e+05	2.88e+08	2.28e+03	1.3e+05
7	1,2,3,7,8,9-HxCDF	3.14e+08	3.18e+03	9.9e+04	2.53e+08	2.28e+03	1.1e+05
8	1,2,3,4,6,7,8-HpCDF	2.94e+08	4.87e+04	6.0e+03	2.86e+08	4.51e+04	6.3e+03
9	1,2,3,4,7,8,9-HpCDF	2.17e+08	4.87e+04	4.5e+03	2.12e+08	4.51e+04	4.7e+03
10	OCDF	2.95e+08	6.68e+02	4.4e+05	3.20e+08	1.53e+03	2.1e+05
11	2,3,7,8-TCDD	4.01e+07	1.56e+03	2.6e+04	5.16e+07	1.78e+03	2.9e+04
12	1,2,3,7,8-PeCDD	2.63e+08	1.48e+03	1.8e+05	1.68e+08	6.04e+02	2.8e+05
13	1,2,3,4,7,8-HxCDD	2.57e+08	1.76e+03	1.5e+05	2.02e+08	1.10e+03	1.8e+05
14	1,2,3,6,7,8-HxCDD	2.40e+08	1.76e+03	1.4e+05	1.94e+08	1.10e+03	1.8e+05
15	1,2,3,7,8,9-HxCDD	2.55e+08	1.76e+03	1.5e+05	2.05e+08	1.10e+03	1.9e+05
16	1,2,3,4,6,7,8-HpCDD	1.92e+08	4.16e+03	4.6e+04	1.82e+08	2.40e+03	7.6e+04
17	OCDD	2.24e+08	1.92e+02	1.2e+06	2.52e+08	1.77e+03	1.4e+05
18	13C-2,3,7,8-TCDF	2.56e+07	8.72e+03	2.9e+03	3.23e+07	4.65e+03	7.0e+03
19	13C-1,2,3,7,8-PeCDF	3.90e+07	1.47e+03	2.7e+04	2.42e+07	1.14e+03	2.1e+04
20	13C-2,3,4,7,8-PeCDF	3.95e+07	1.47e+03	2.7e+04	2.53e+07	1.14e+03	2.2e+04
21	13C-1,2,3,4,7,8-HxCDF	1.87e+07	1.28e+03	1.5e+04	3.55e+07	3.08e+03	1.2e+04
22	13C-1,2,3,6,7,8-HxCDF	2.06e+07	1.28e+03	1.6e+04	3.85e+07	3.08e+03	1.3e+04
23	13C-2,3,4,6,7,8-HxCDF	1.90e+07	1.28e+03	1.5e+04	3.60e+07	3.08e+03	1.2e+04
24	13C-1,2,3,7,8,9-HxCDF	1.65e+07	1.28e+03	1.3e+04	3.12e+07	3.08e+03	1.0e+04
25	13C-1,2,3,4,6,7,8-HpCDF	1.32e+07	1.18e+04	1.1e+03	2.87e+07	5.77e+03	5.0e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.03e+07	1.18e+04	8.7e+02	2.29e+07	5.77e+03	4.0e+03
27	13C-2,3,7,8-TCDD	1.81e+07	7.00e+03	2.6e+03	2.26e+07	3.08e+03	7.3e+03
28	13C-1,2,3,7,8-PeCDD	2.76e+07	1.47e+03	1.9e+04	1.74e+07	7.76e+02	2.2e+04
29	13C-1,2,3,4,7,8-HxCDD	2.40e+07	2.43e+03	9.9e+03	1.87e+07	1.70e+03	1.1e+04
30	13C-1,2,3,6,7,8-HxCDD	2.24e+07	2.43e+03	9.2e+03	1.82e+07	1.70e+03	1.1e+04
31	13C-1,2,3,4,6,7,8-HpCDD	1.84e+07	1.79e+03	1.0e+04	1.72e+07	1.40e+03	1.2e+04
32	13C-OCDD	1.97e+07	1.62e+03	1.2e+04	2.22e+07	1.42e+03	1.6e+04
33	13C-1,2,3,4-TCDD	1.83e+07	7.00e+03	2.6e+03	2.22e+07	3.08e+03	7.2e+03
34	13C-1,2,3,7,8,9-HxCDD	2.50e+07	2.43e+03	1.0e+04	1.99e+07	1.70e+03	1.2e+04
35	37Cl-2,3,7,8-TCDD	9.29e+07	1.57e+03	5.9e+04			

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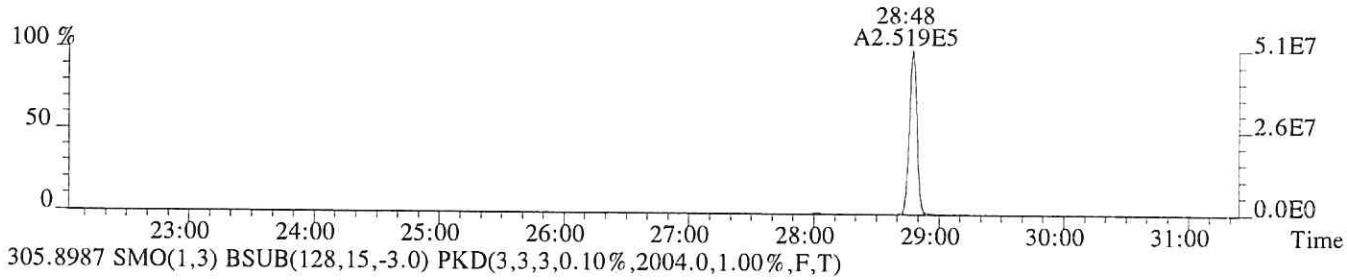
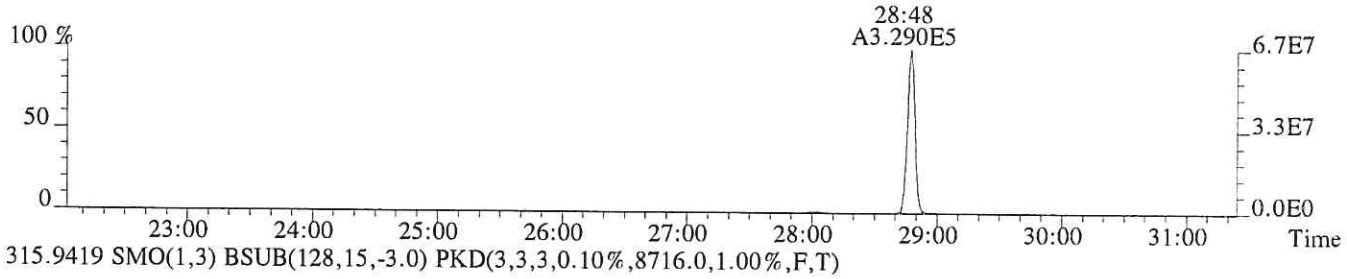
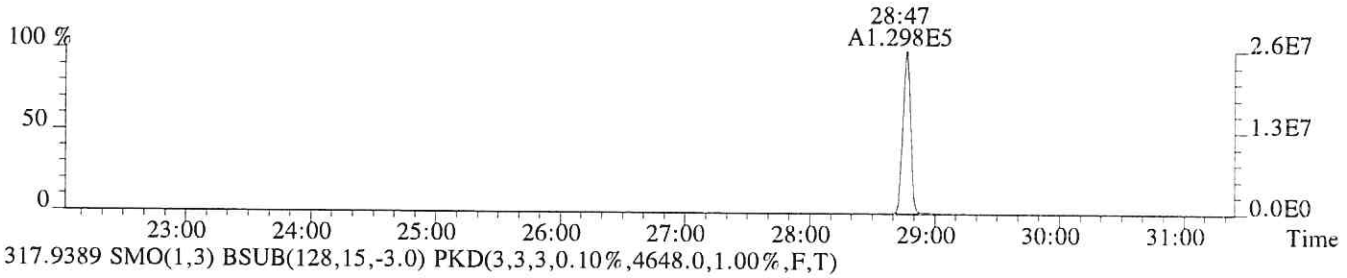
File:P513855 #1-665 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1024.0,1.00%,F,T)



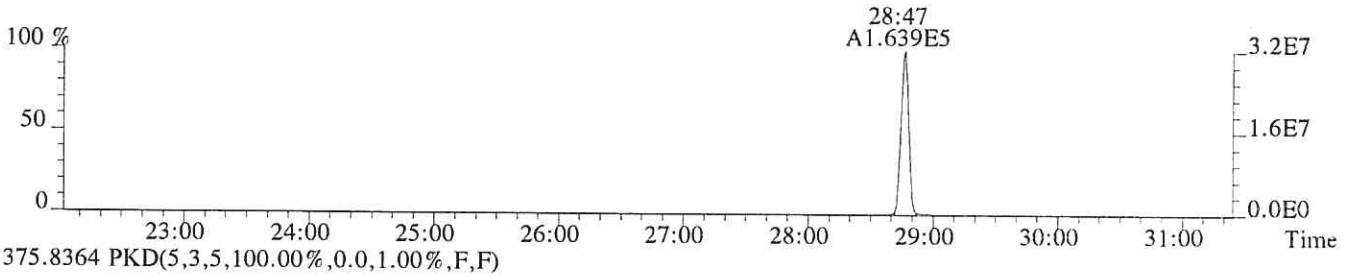
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2004.0,1.00%,F,T)



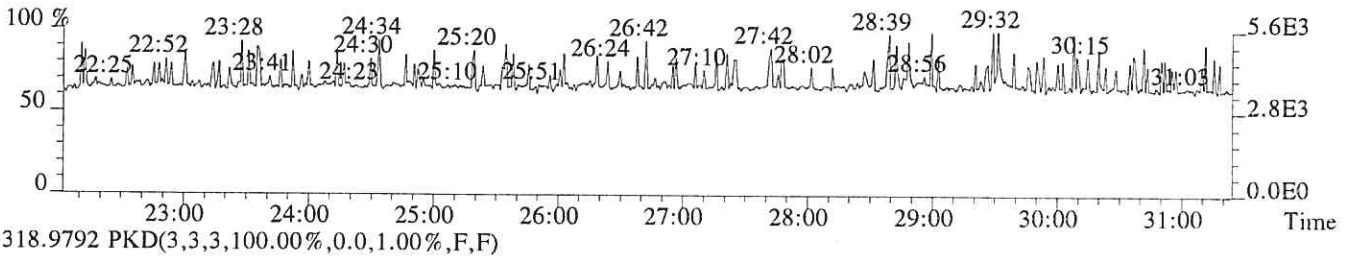
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8716.0,1.00%,F,T)



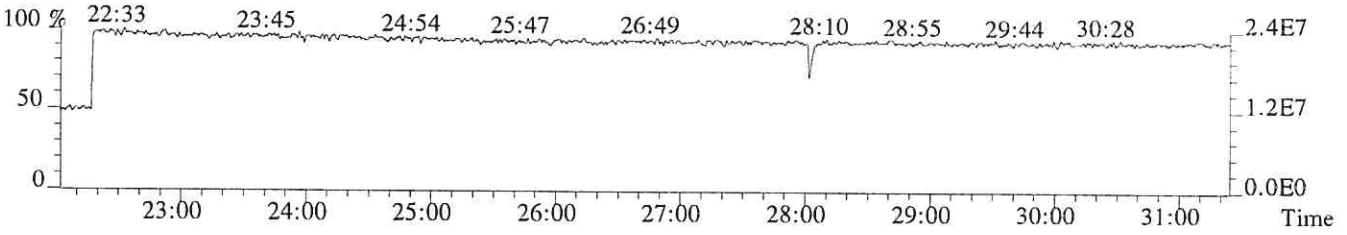
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4648.0,1.00%,F,T)



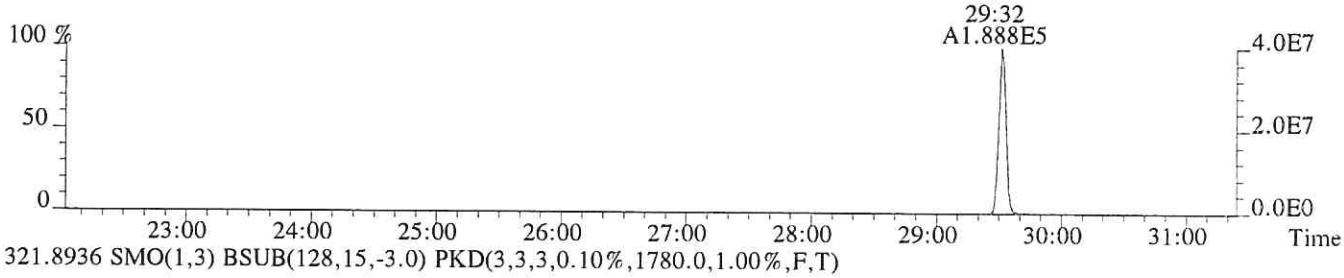
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



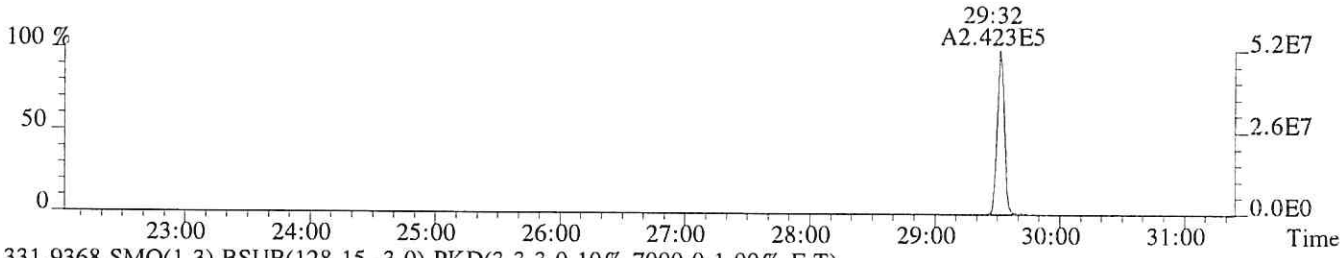
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



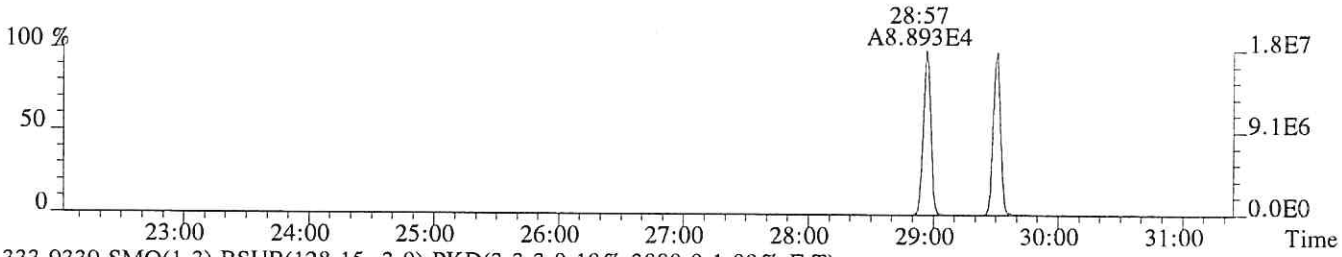
File:P513855 #1-665 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1556.0,1.00%,F,T)



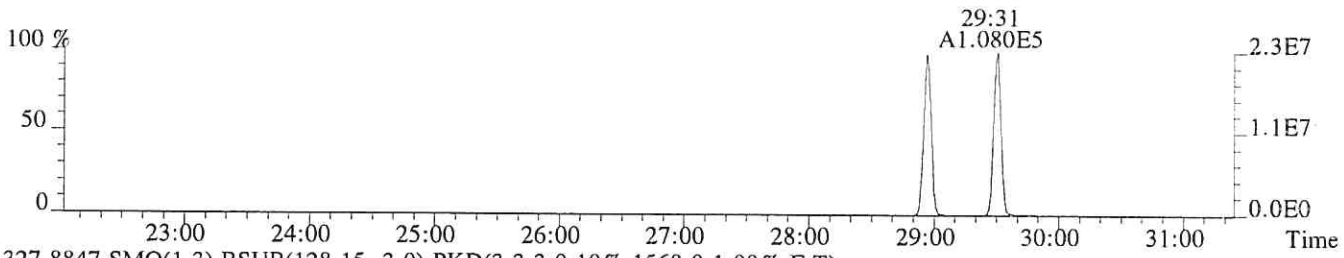
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1780.0,1.00%,F,T)



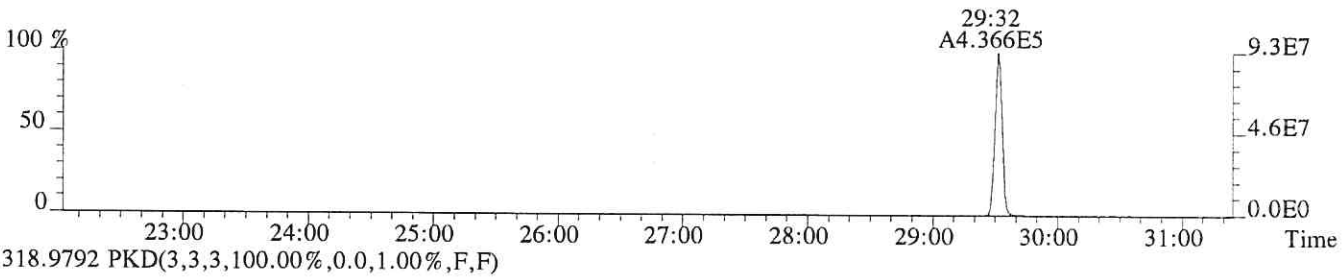
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7000.0,1.00%,F,T)



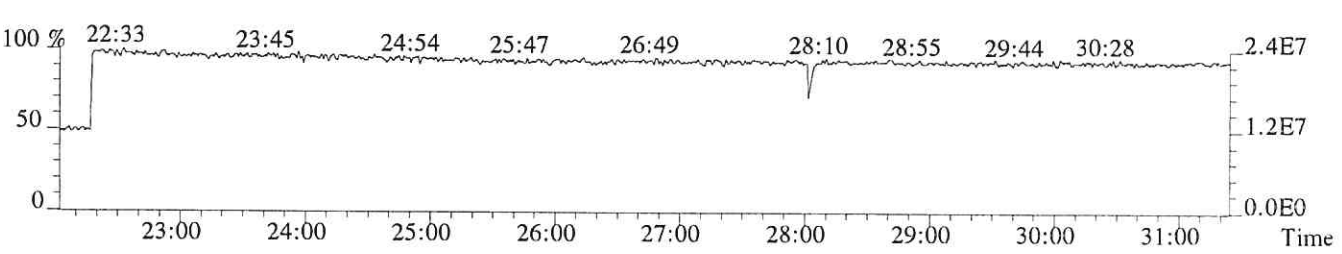
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3080.0,1.00%,F,T)



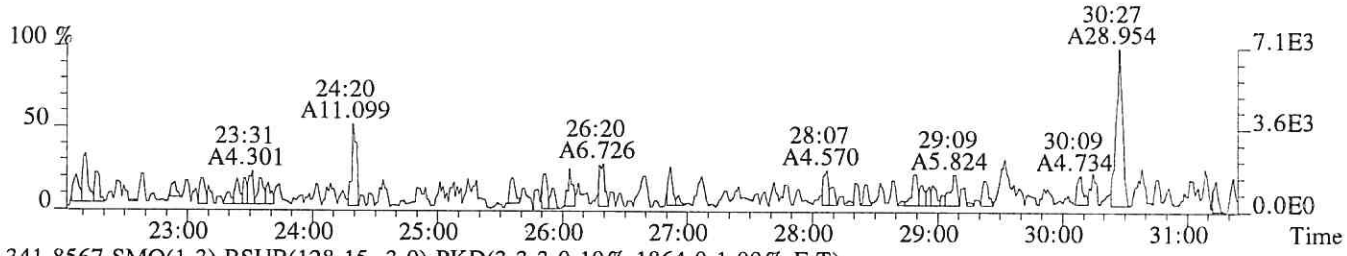
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1568.0,1.00%,F,T)



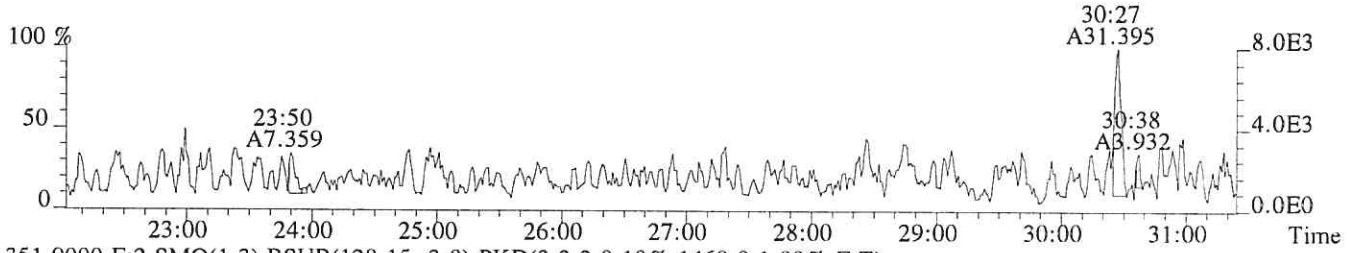
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



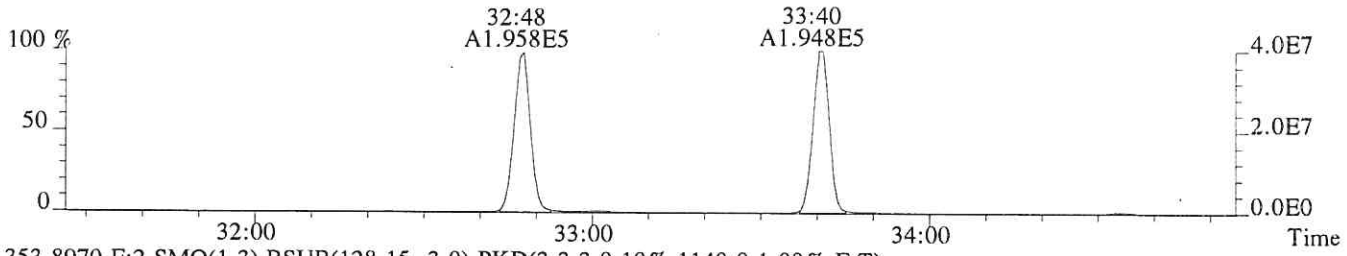
File:P513855 #1-665 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:185657
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,696.0,1.00%,F,T)



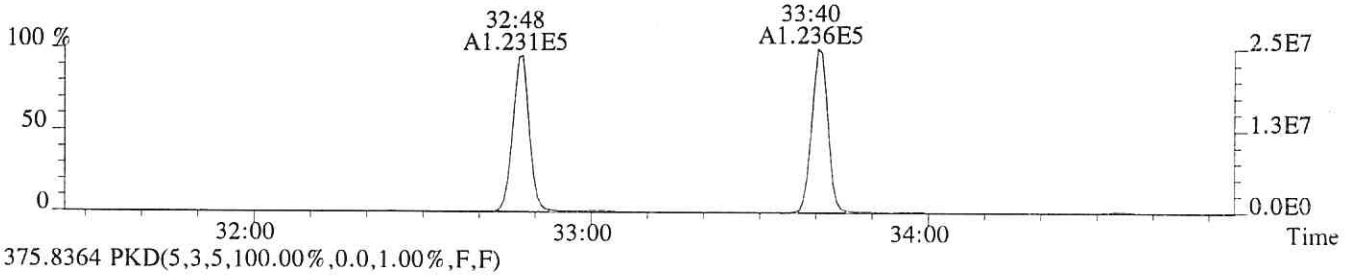
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1864.0,1.00%,F,T)



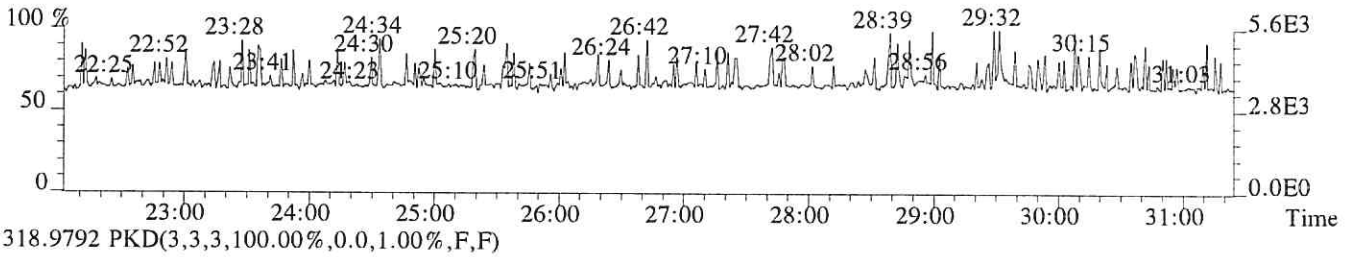
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1468.0,1.00%,F,T)



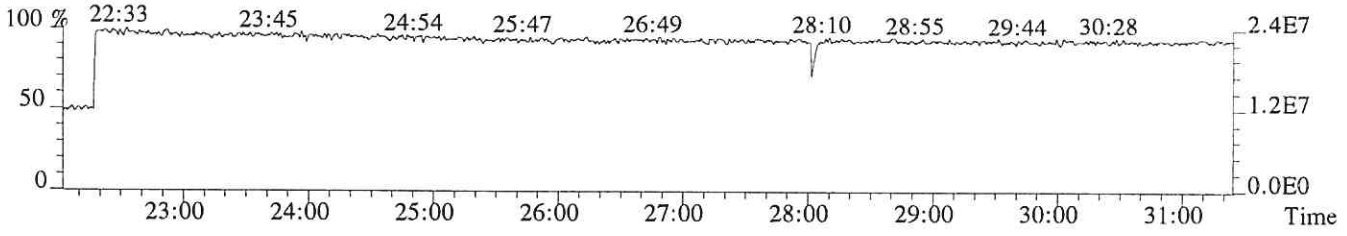
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1140.0,1.00%,F,T)



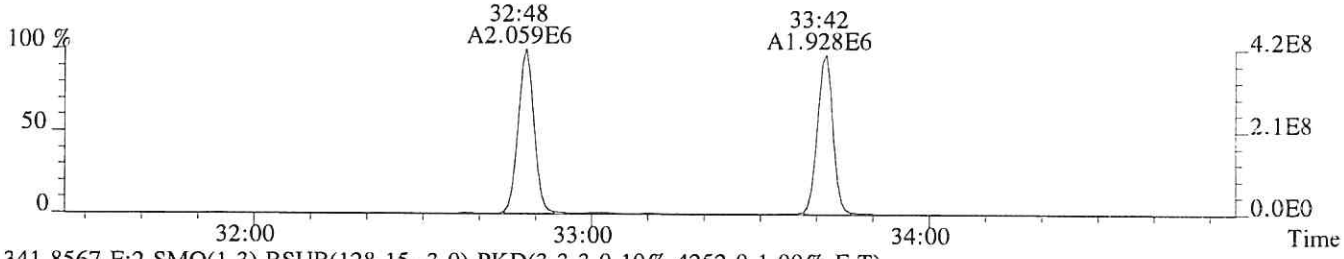
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



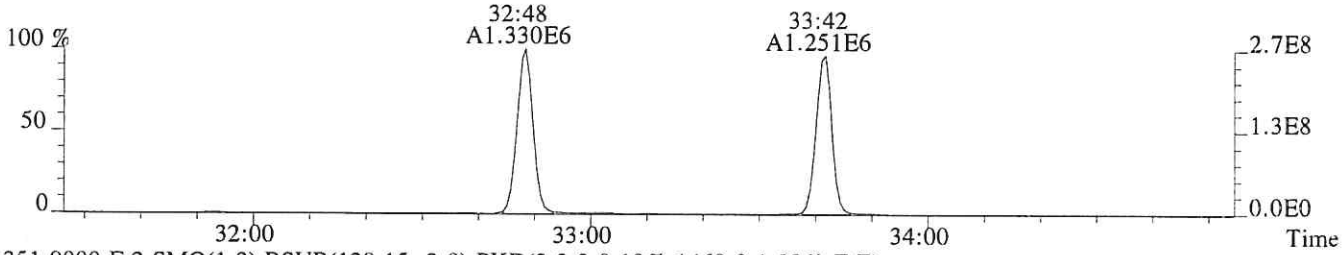
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



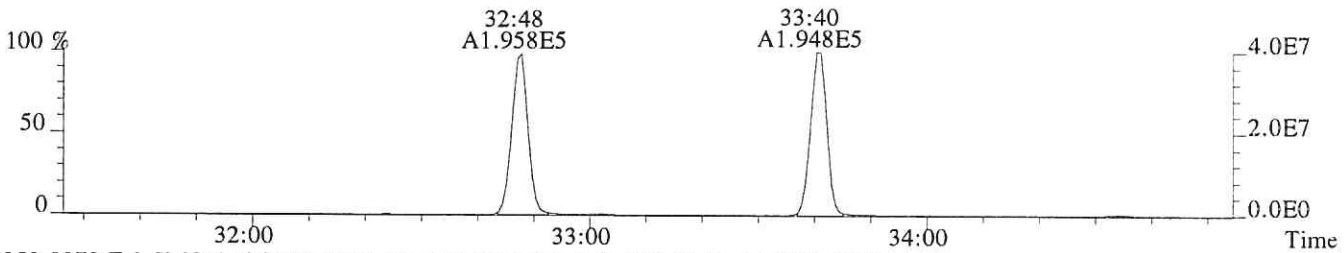
File:P513855 #1-313 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1724.0,1.00%,F,T)



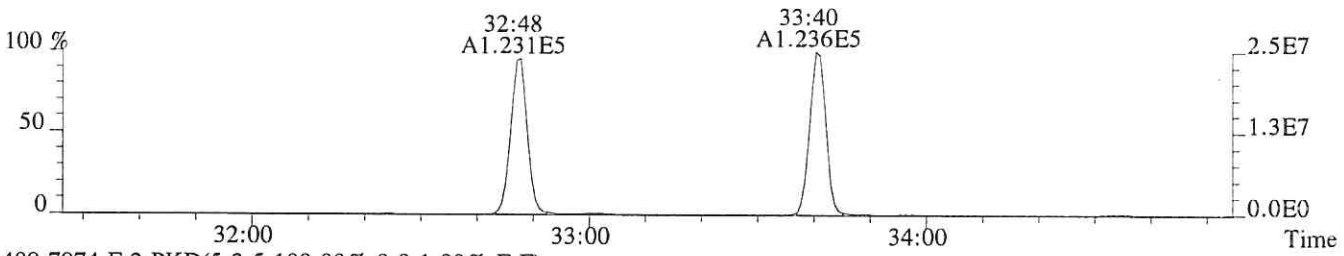
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4252.0,1.00%,F,T)



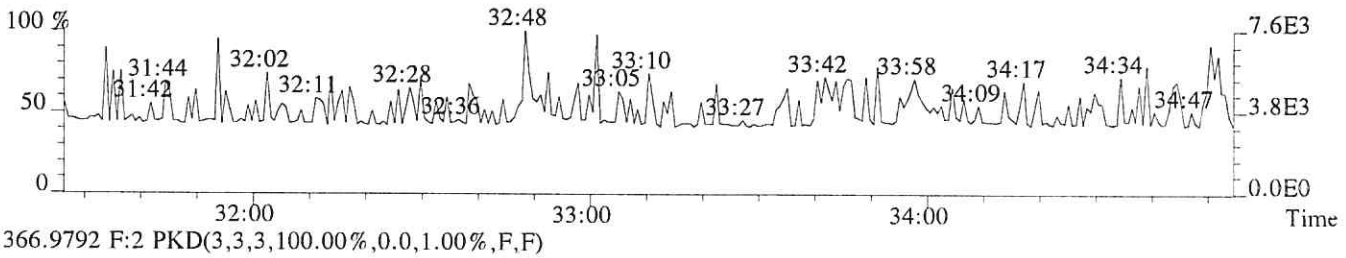
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1468.0,1.00%,F,T)



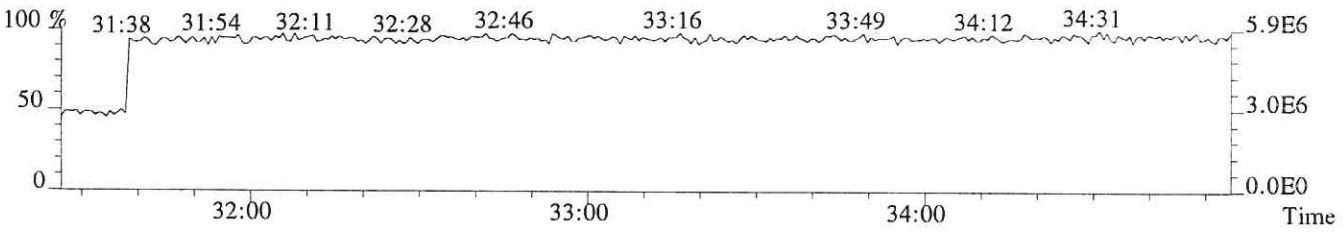
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1140.0,1.00%,F,T)



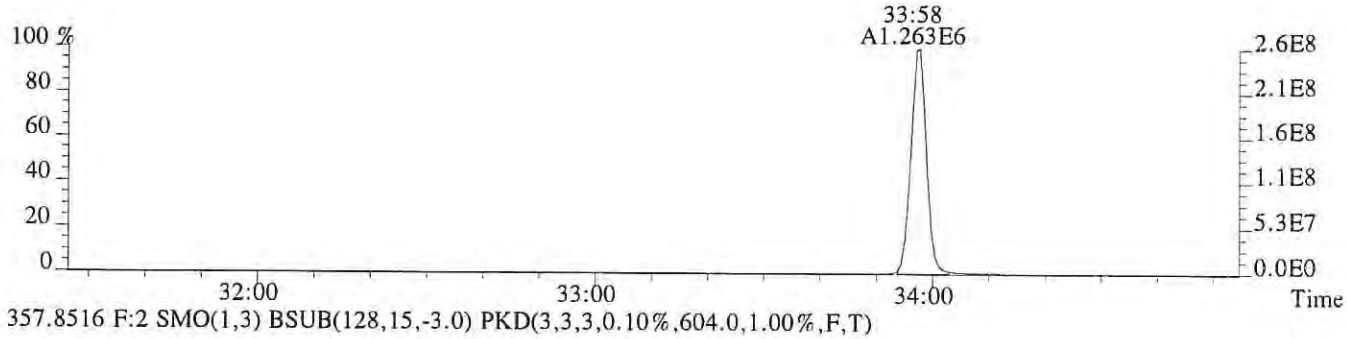
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



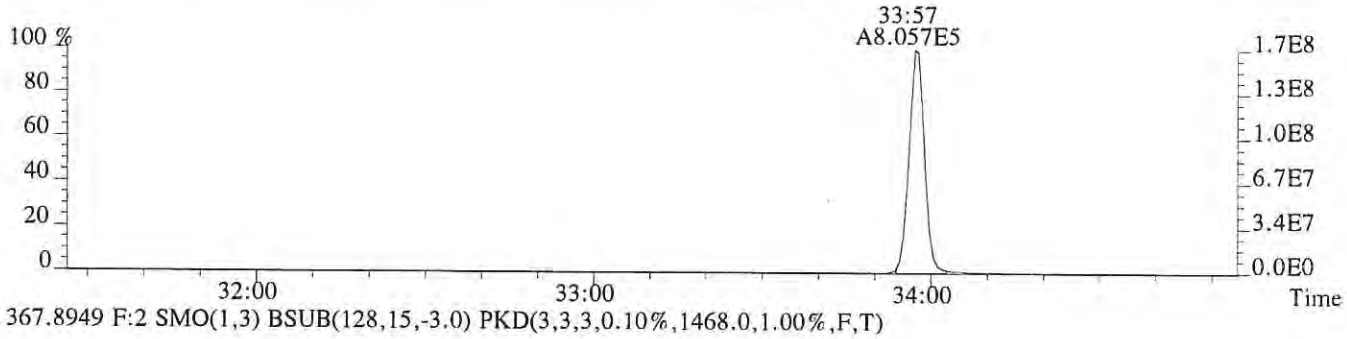
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



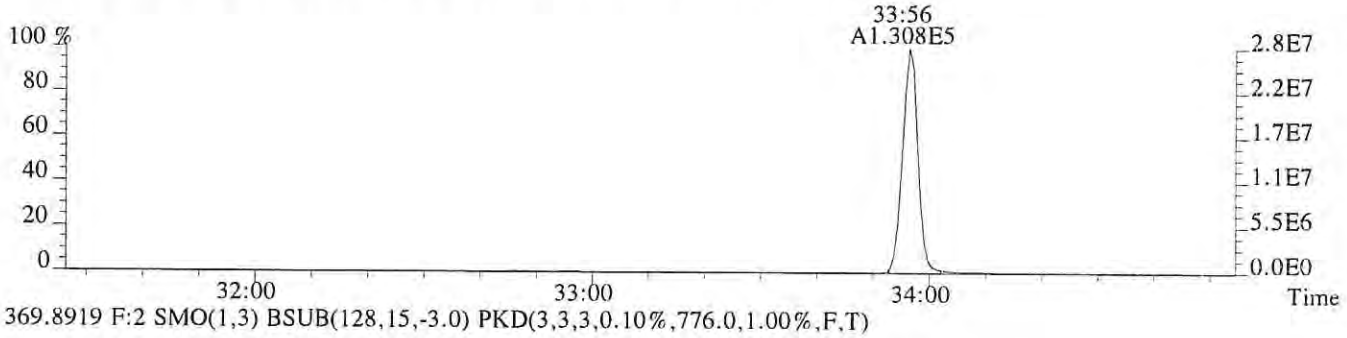
File:P513855 #1-313 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1476.0,1.00%,F,T)



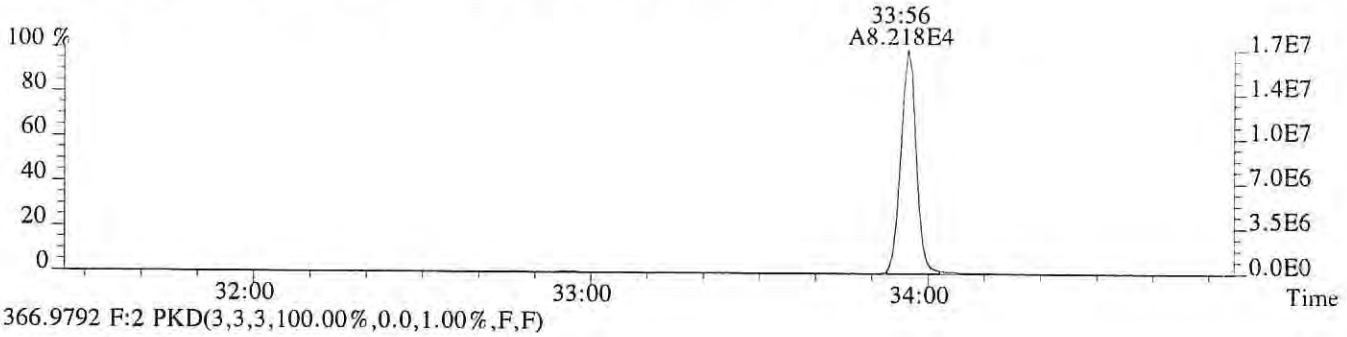
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,604.0,1.00%,F,T)



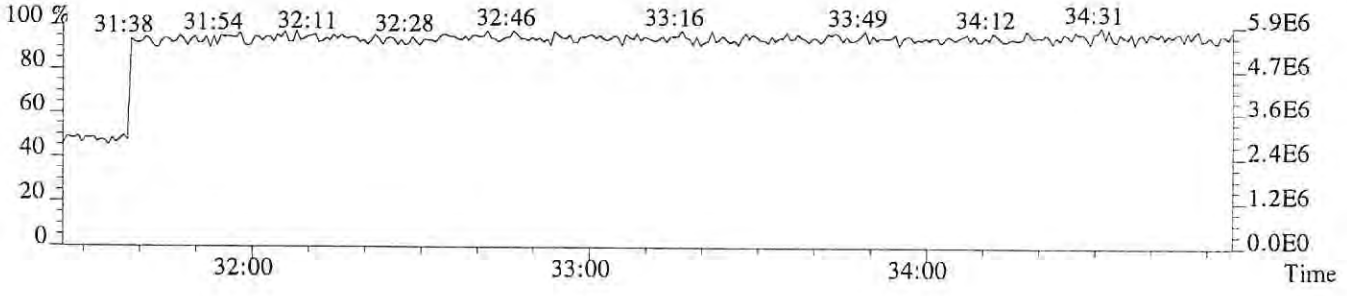
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1468.0,1.00%,F,T)



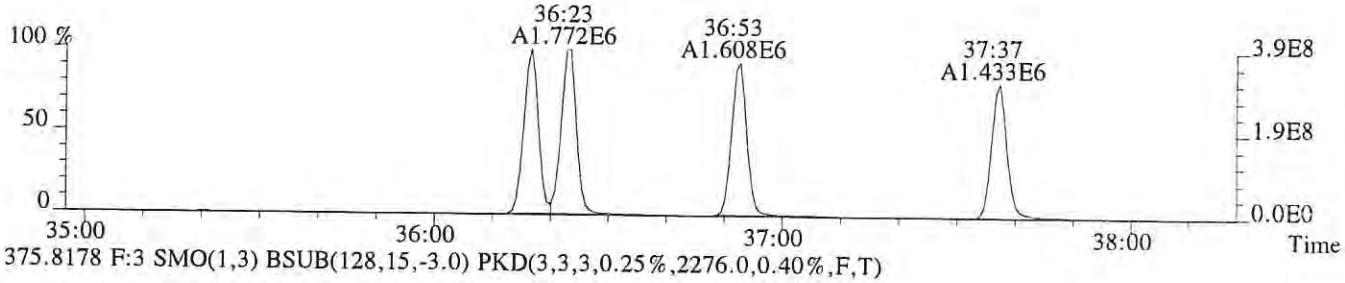
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,776.0,1.00%,F,T)



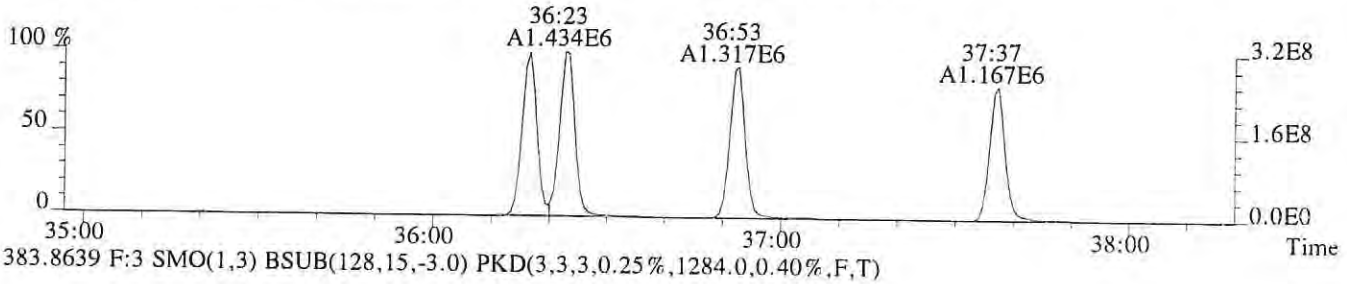
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



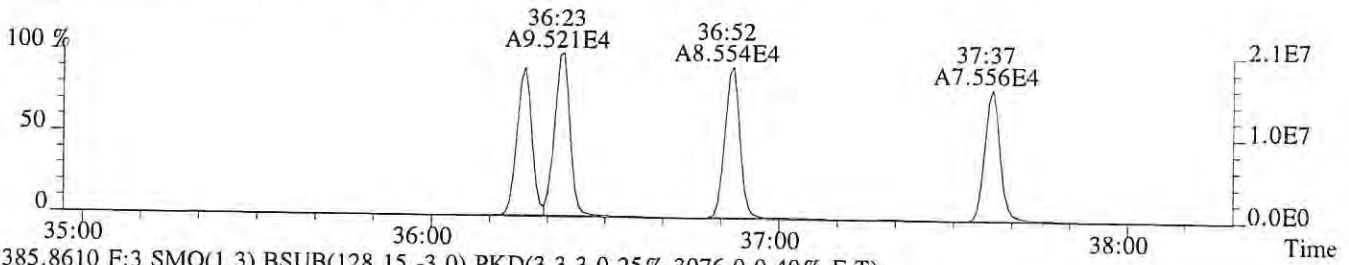
File:P513855 #1-303 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3180.0,0.40%,F,T)



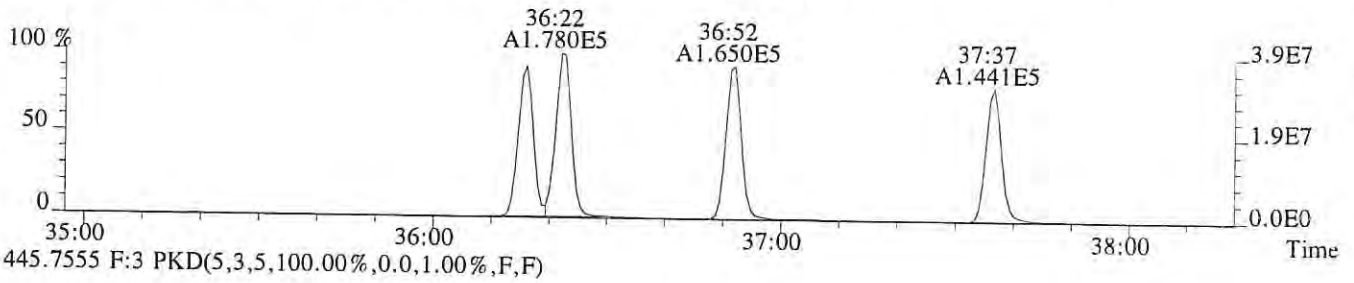
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2276.0,0.40%,F,T)



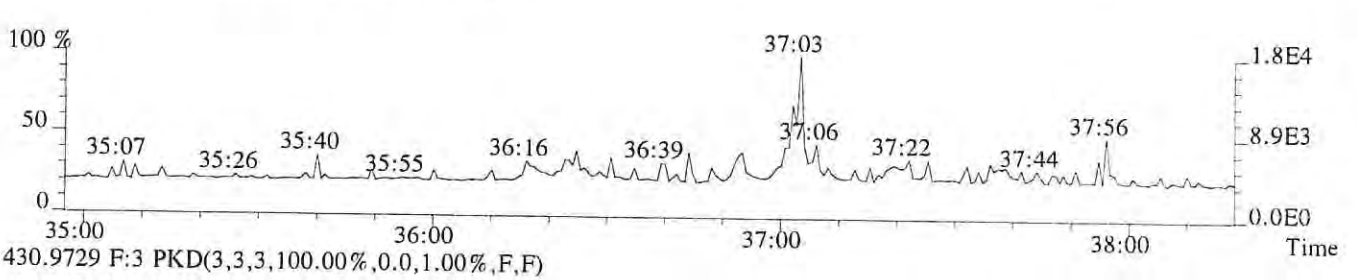
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1284.0,0.40%,F,T)



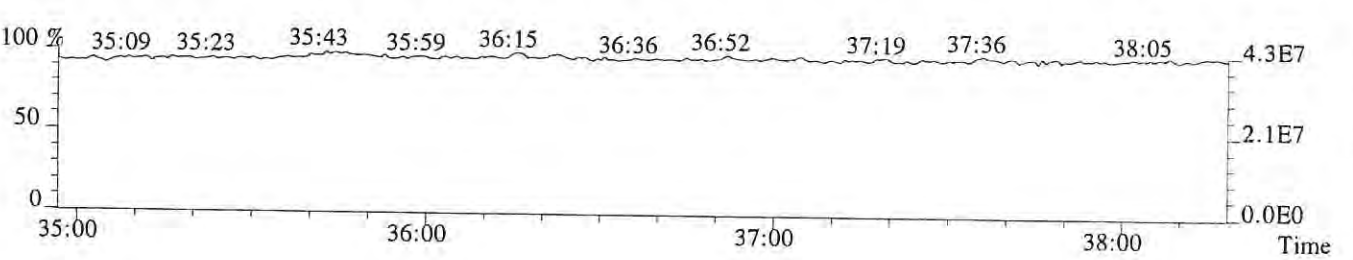
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3076.0,0.40%,F,T)



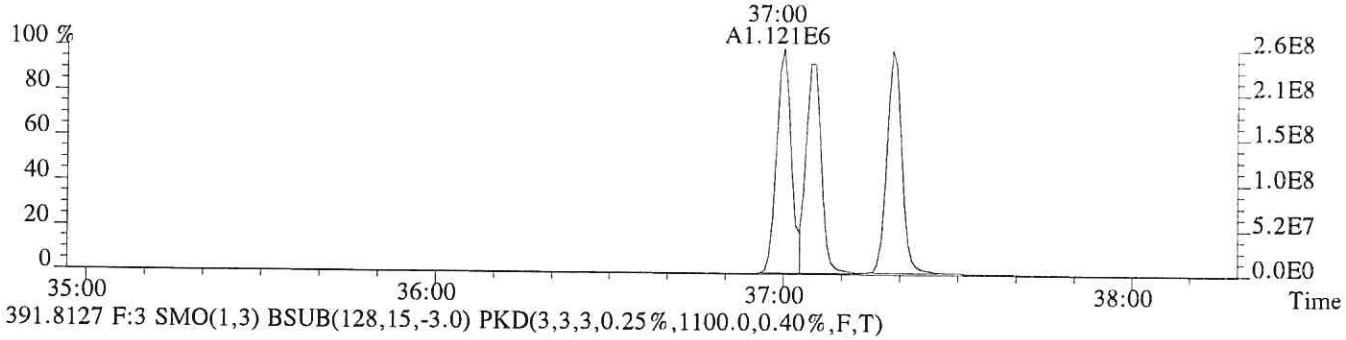
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



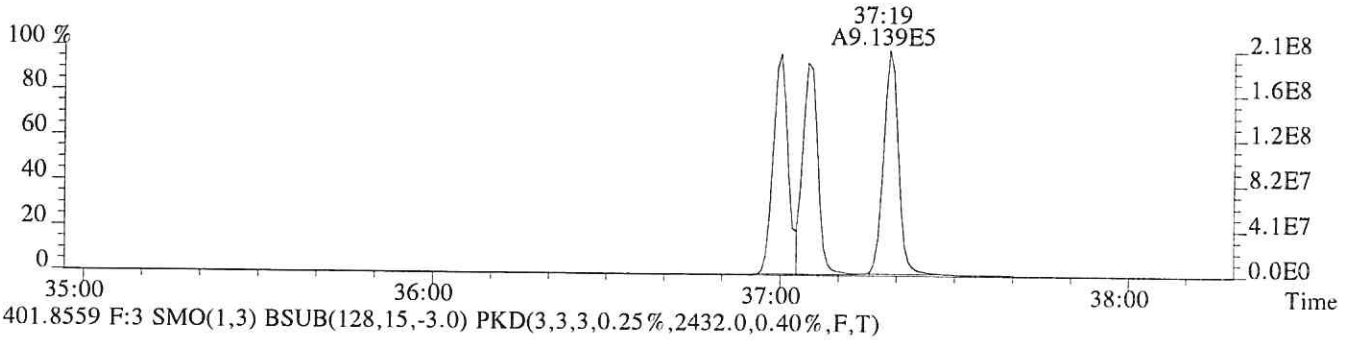
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



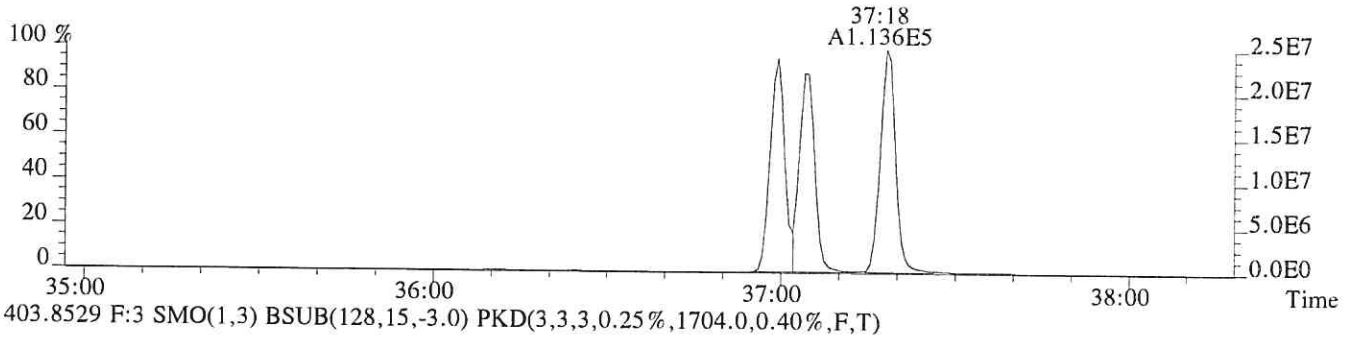
File:P513855 #1-303 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1760.0,0.40%,F,T)



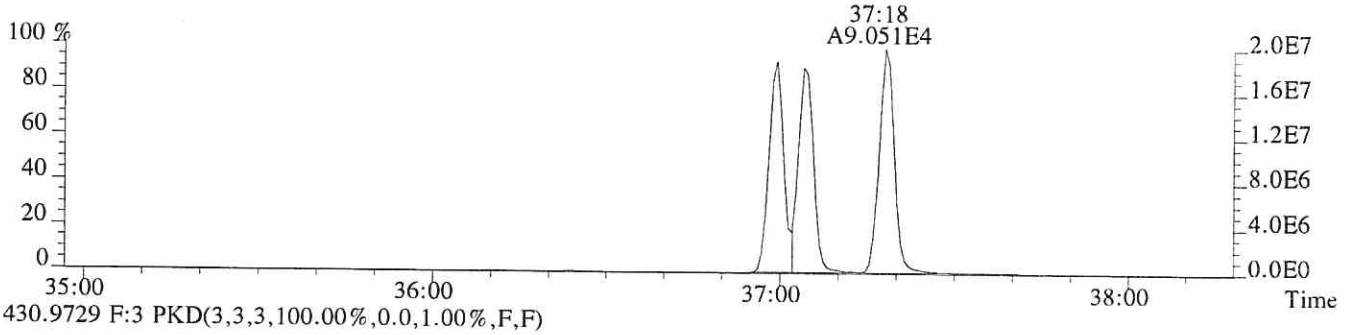
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1100.0,0.40%,F,T)



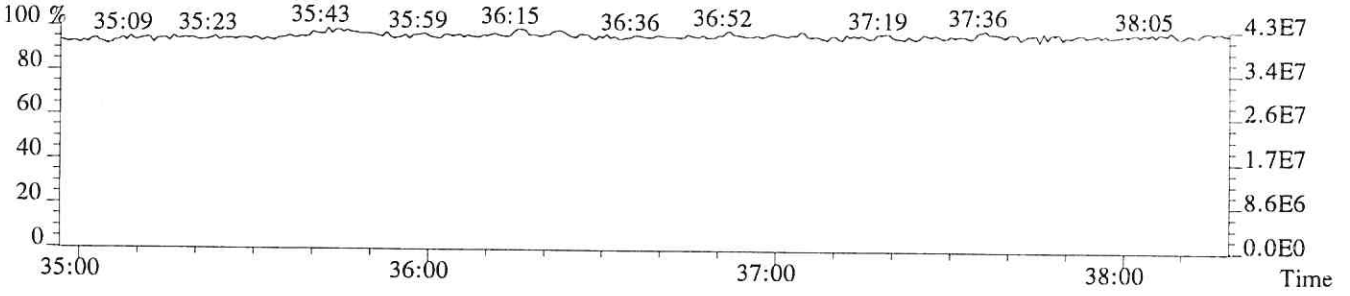
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2432.0,0.40%,F,T)



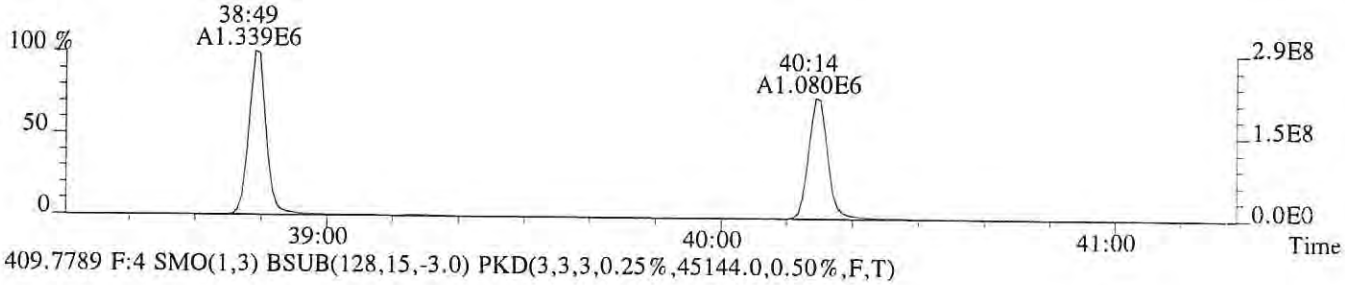
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1704.0,0.40%,F,T)



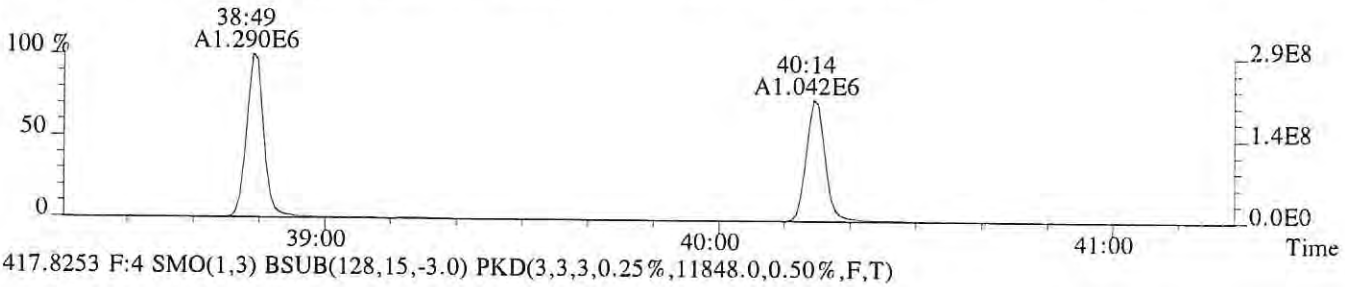
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



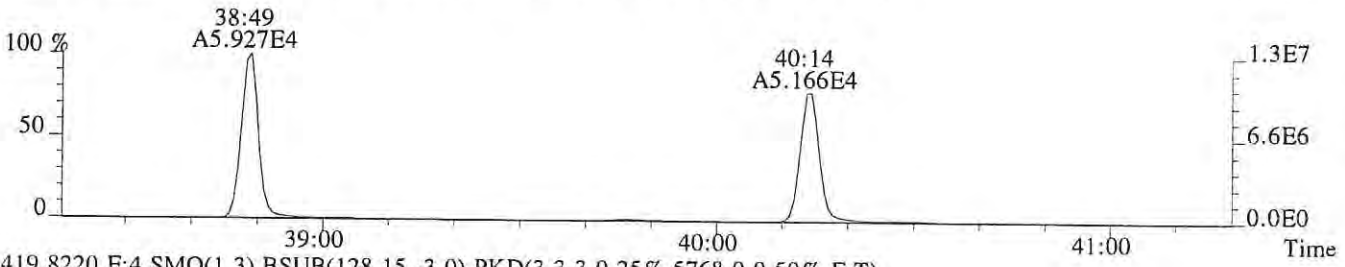
File:P513855 #1-268 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,48736.0,0.50%,F,T)



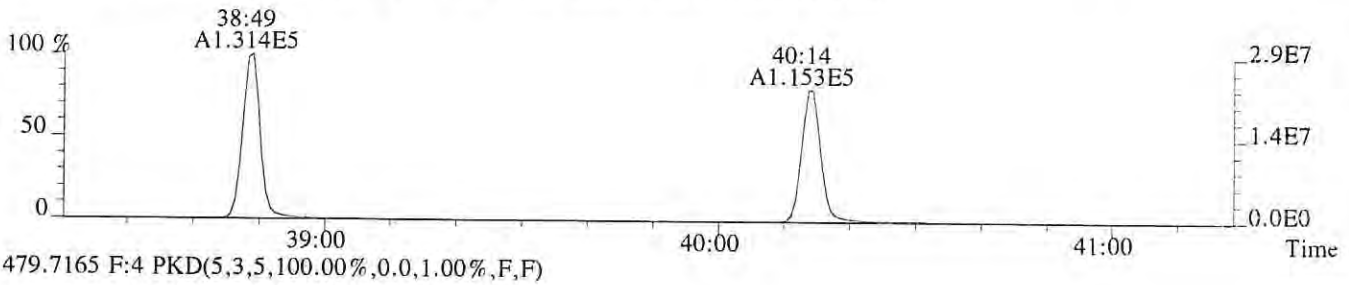
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,45144.0,0.50%,F,T)



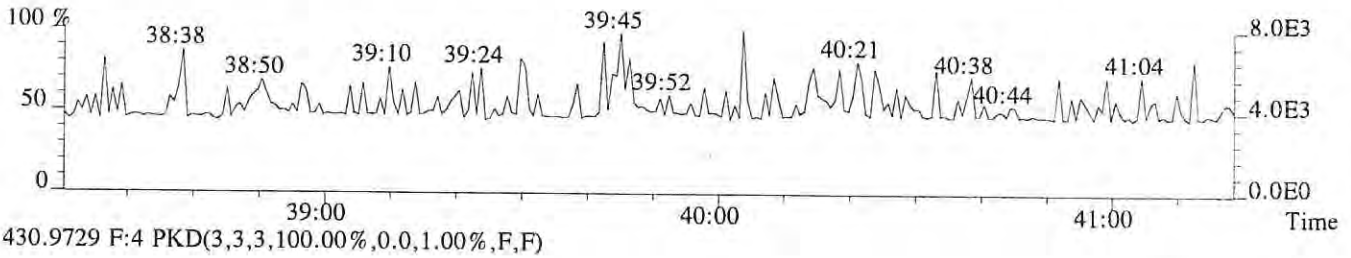
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,11848.0,0.50%,F,T)



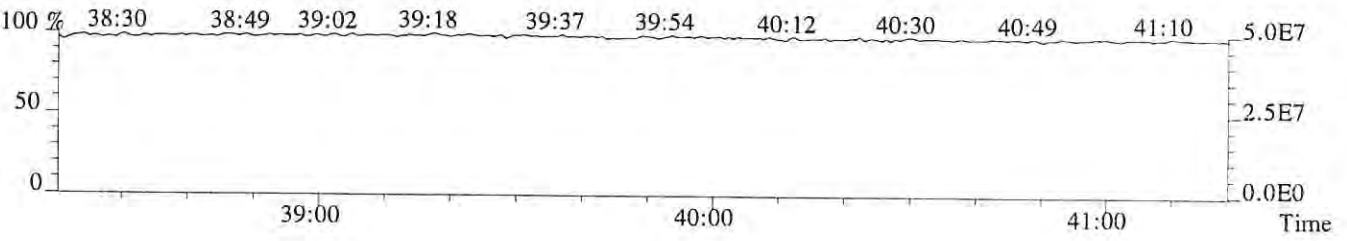
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5768.0,0.50%,F,T)



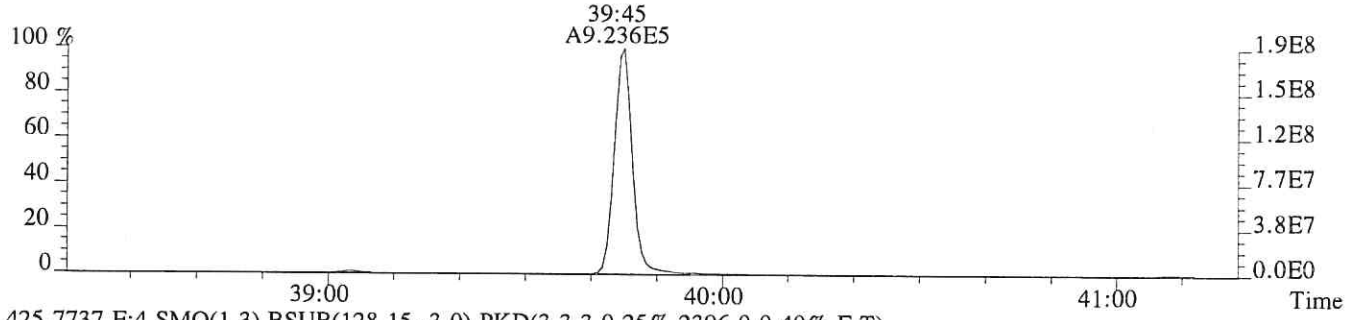
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



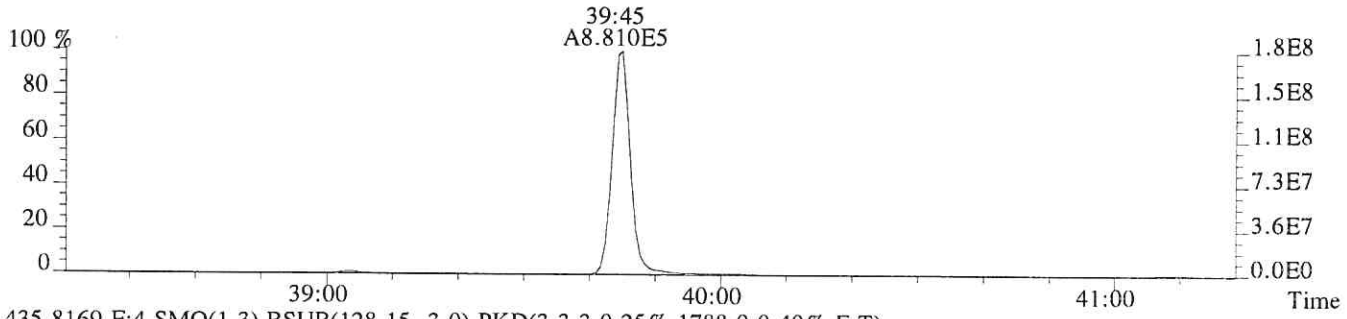
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



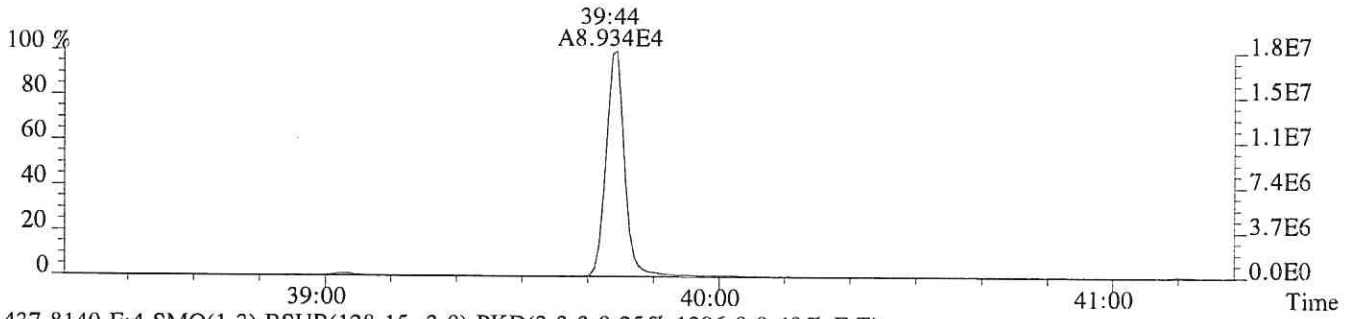
File:P513855 #1-268 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4156.0,0.40%,F,T)



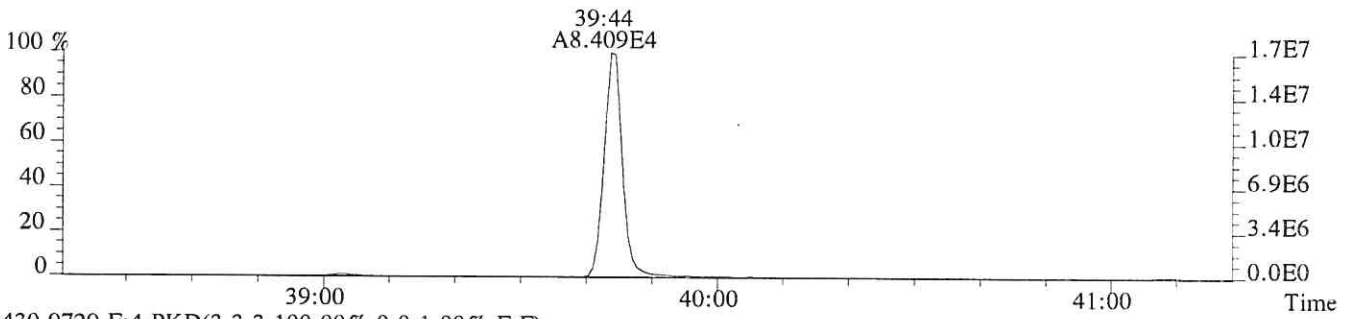
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2396.0,0.40%,F,T)



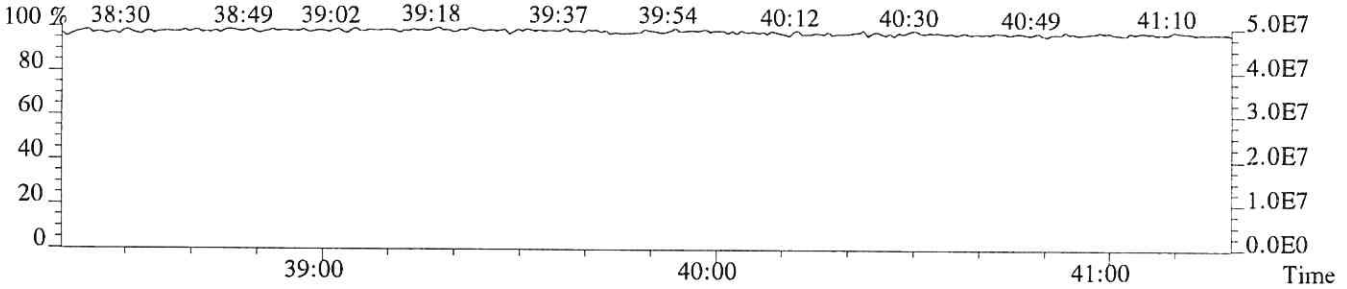
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1788.0,0.40%,F,T)



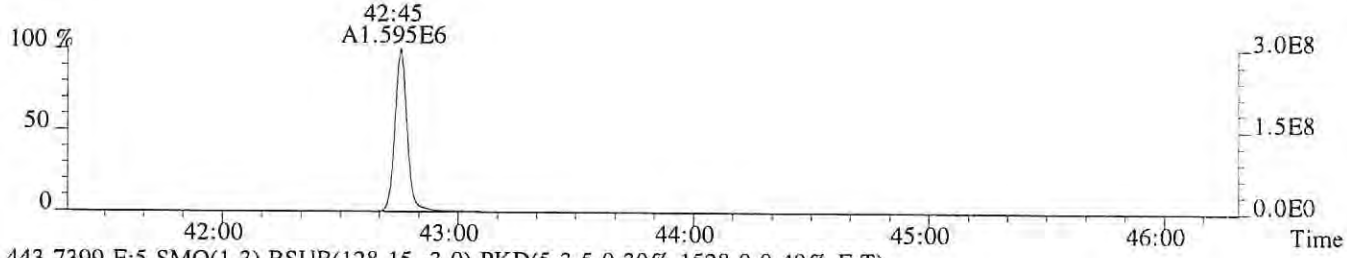
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1396.0,0.40%,F,T)



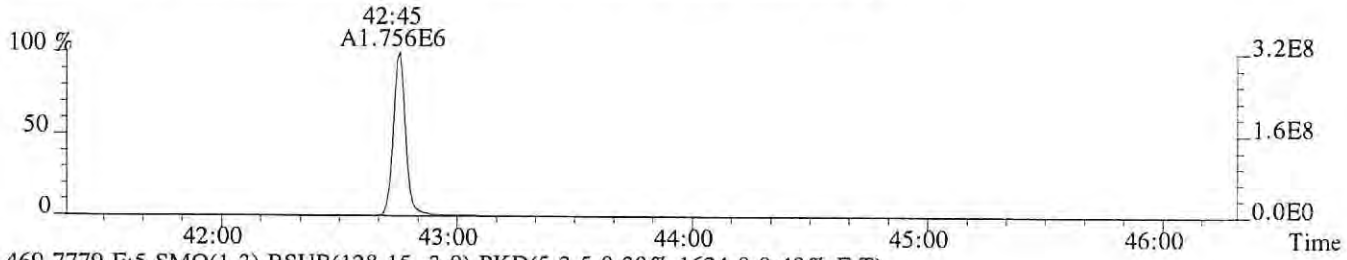
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



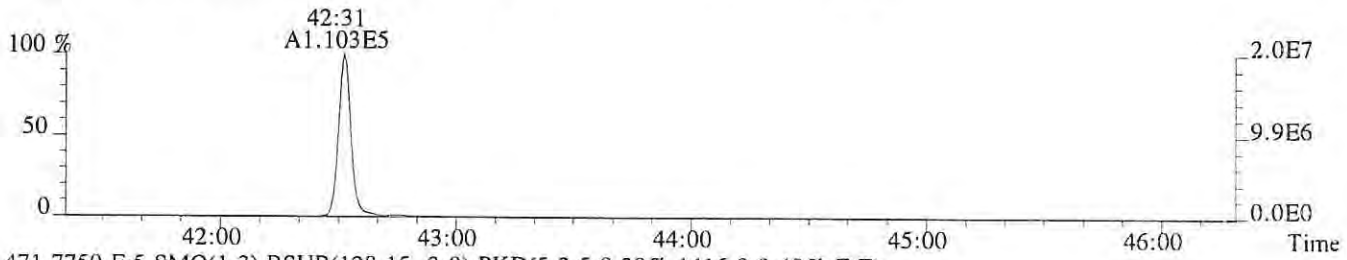
File:P513855 #1-448 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,668.0,0.40%,F,T)



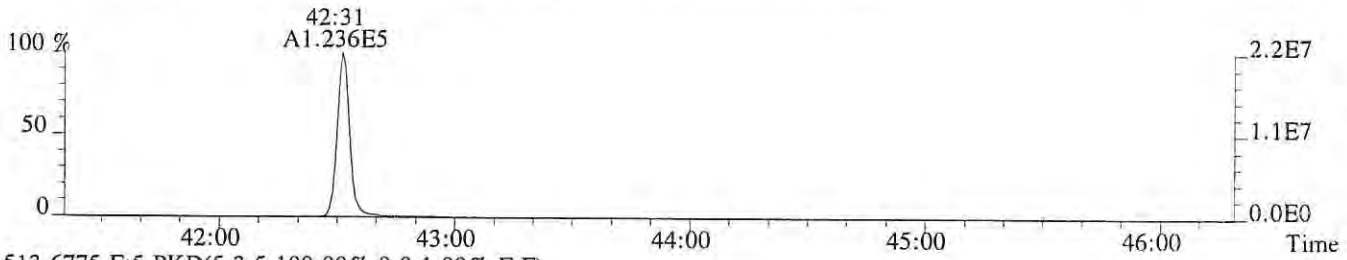
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1528.0,0.40%,F,T)



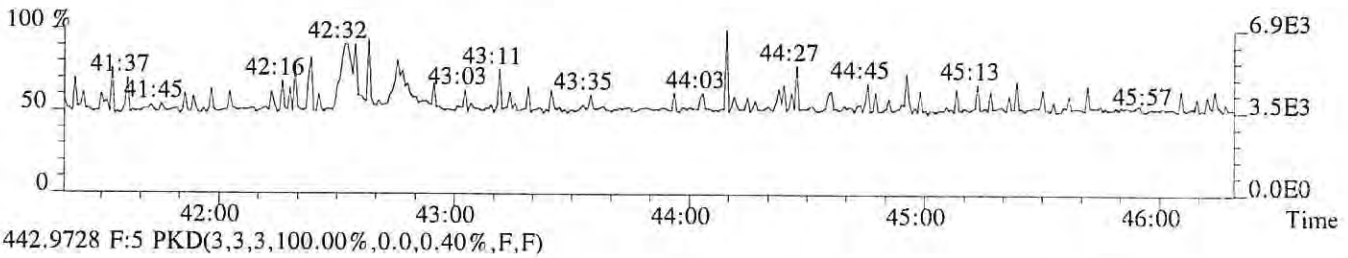
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1624.0,0.40%,F,T)



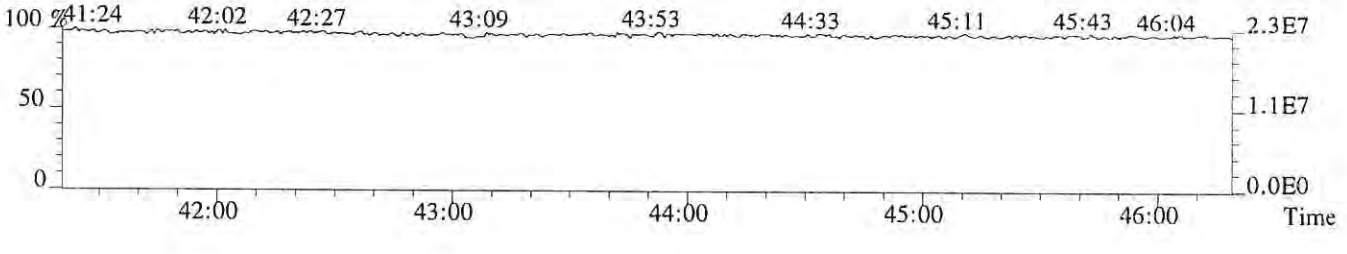
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1416.0,0.40%,F,T)



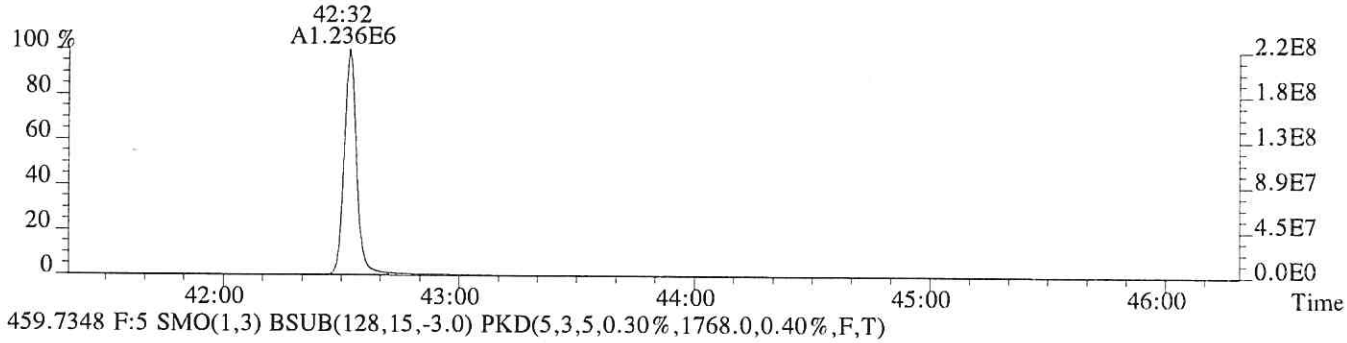
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



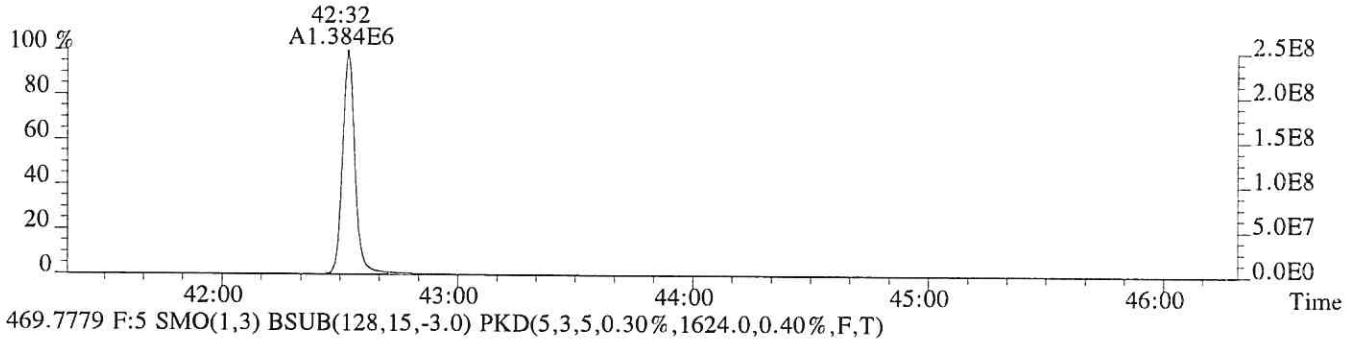
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



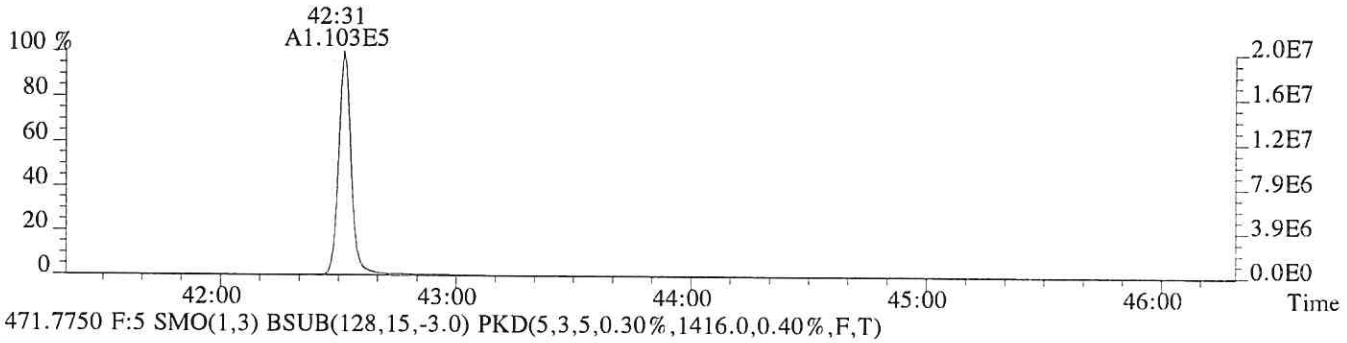
File:P513855 #1-448 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,192.0,0.40%,F,T)



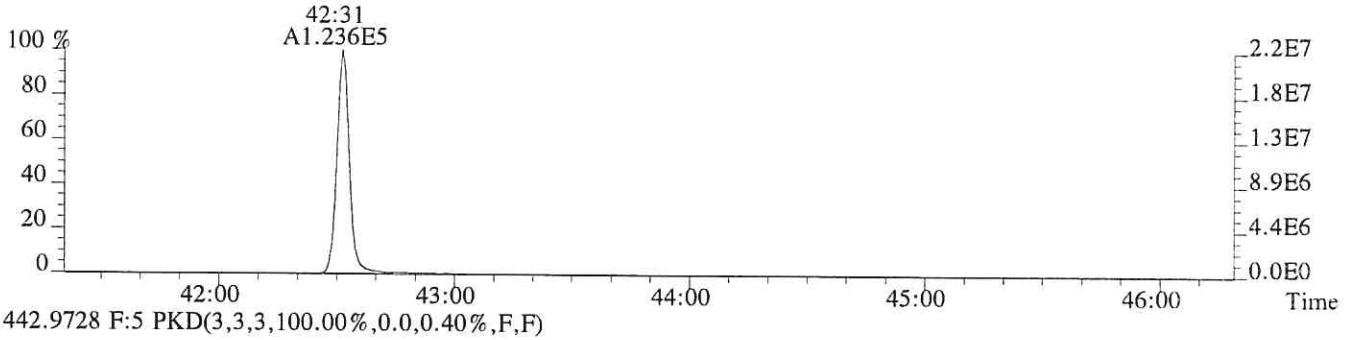
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1768.0,0.40%,F,T)



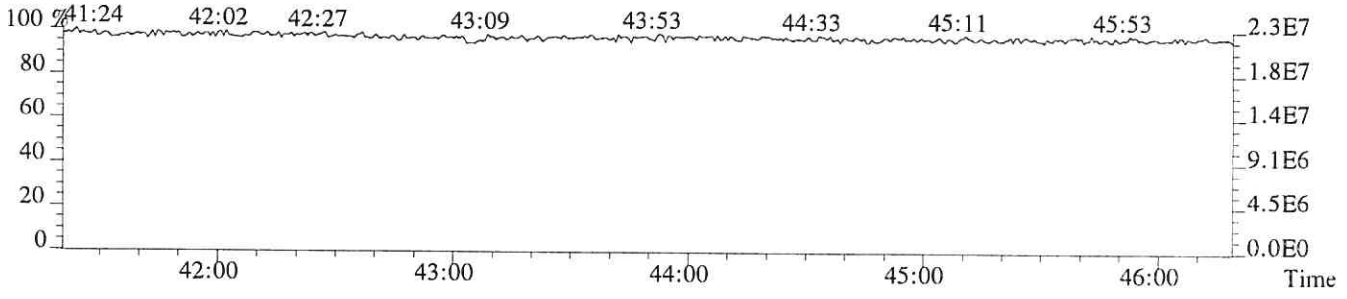
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1624.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1416.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P513857 Analysis Date: 24-JAN-18 Time: 19:21:06

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	9.9	7.8 - 12.9	-0.8
1,2,3,7,8-PeCDD	M+2/M+4	1.55	1.32-1.78	50	39 - 65	0.9
1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	50	39 - 64	0.2
1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	50	39 - 64	0.8
1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	50	41 - 61	-0.7
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	51	43 - 58	1.6
OCDD	M+2/M+4	0.89	0.76-1.02	101	79 - 126	1.5
2,3,7,8-TCDF	M/M+2	0.71	0.65-0.89	10.2	8.4 - 12.0	2.1
1,2,3,7,8-PeCDF	M+2/M+4	1.51	1.32-1.78	51	41 - 60	2.7
2,3,4,7,8-PeCDF	M+2/M+4	1.52	1.32-1.78	50	41 - 61	0.8
1,2,3,4,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	52	45 - 56	4.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	50	44 - 57	-0.1
1,2,3,7,8,9-HxCDF	M+2/M+4	1.23	1.05-1.43	51	45 - 56	2.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	50	44 - 57	0.8
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.00	0.88-1.20	50	45 - 55	0.3
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.00	0.88-1.20	50	43 - 58	0.1
OCDF	M+2/M+4	0.89	0.76-1.02	100	63 - 159	0.0

(1) See Table 8, Method 1613B, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.

(3) Contract-required concentration range as specified in Table 6, Method 1613B, under VER.

(4) The beginning CCAL %RSD for the 17 unlabeled standard must not exceed +/- 20%, Section 7.7.4.1. The ending CCAL must not exceed +/-25%, Section 8.3.2.4, Method 8290

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P513857 Analysis Date: 24-JAN-18 Time: 19:21:06

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	98	82 - 121	-1.7
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.59	1.32-1.78	92	62 - 160	-8.5
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	101	85 - 117	1.4
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	103	85 - 118	2.7
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	113	72 - 138	13.3
13C-OCDD	M+2/M+4	0.89	0.76-1.02	253	96 - 415	26.3
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	94	71 - 140	-6.2
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	94	76 - 130	-6.3
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	94	77 - 130	-6.4
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	97	76 - 131	-2.6
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	102	70 - 143	1.7
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	104	74 - 135	3.6
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	105	73 - 137	4.9
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	112	78 - 129	11.6
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.44	0.37-0.51	116	77 - 129	16.1
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD				10.1	7.8 - 12.7	0.9

(1) See Table 8, Method 1613B, for m/z specifications.
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.
(3) Contract-required concentration range, as specified in Table 6, Method 1613B, under VER.
(4) No ion abundance ratio; report concentration found.
(5) The beginnning CCAL %RSD for the labeled standard must not exceed +/- 30% Section 7.7.4.2. The ending CCAL must not exceed +/- 35%, Sec 8.3.2.4 (8290)

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
75080

Run #7 Filename P513857 Samp: 1 Inj: 1 Acquired: 24-JAN-18 19:21:06
Processed: 25-JAN-18 08:41:26 Sample ID: 2ND SOURCE

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:48	5.152e+03	7.223e+03	0.71	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	3.916e+04	2.586e+04	1.51	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:41	3.607e+04	2.366e+04	1.52	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:16	3.202e+04	2.632e+04	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:23	3.416e+04	2.839e+04	1.20	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:52	3.150e+04	2.633e+04	1.20	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	2.836e+04	2.314e+04	1.23	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:49	2.874e+04	2.862e+04	1.00	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	2.352e+04	2.346e+04	1.00	yes	no	1.258
10	Unk	OCDF	42:45	3.688e+04	4.148e+04	0.89	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:32	3.845e+03	5.032e+03	0.76	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:57	2.377e+04	1.531e+04	1.55	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:59	2.145e+04	1.680e+04	1.28	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:05	2.240e+04	1.756e+04	1.28	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:19	2.219e+04	1.741e+04	1.27	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:44	2.034e+04	1.933e+04	1.05	yes	no	1.025
17	Unk	OCDD	42:31	3.083e+04	3.462e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:46	5.681e+04	7.189e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:47	7.678e+04	4.833e+04	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	7.550e+04	4.814e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:15	3.216e+04	6.216e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:22	3.808e+04	7.348e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:51	3.589e+04	6.747e+04	0.53	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:36	3.054e+04	5.771e+04	0.53	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:48	2.616e+04	5.845e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	2.287e+04	5.181e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:30	3.654e+04	4.587e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	4.972e+04	3.125e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	4.147e+04	3.207e+04	1.29	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:04	4.264e+04	3.379e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:44	3.921e+04	3.703e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	42:31	5.445e+04	6.090e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:57	4.052e+04	5.019e+04	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:18	4.325e+04	3.518e+04	1.23	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:32	9.276e+03				no	1.014

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
75080

Run #7 Filename P513857 Samp: 1 Inj: 1 Acquired: 24-JAN-18 19:21:06
Processed: 25-JAN-18 08:41:26 LAB. ID: 2ND SOURCE

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.04e+06	1.03e+03	1.0e+03	1.42e+06	2.00e+03	7.1e+02
2	1,2,3,7,8-PeCDF	7.88e+06	8.44e+02	9.3e+03	5.19e+06	1.52e+03	3.4e+03
3	2,3,4,7,8-PeCDF	7.53e+06	8.44e+02	8.9e+03	4.93e+06	1.52e+03	3.2e+03
4	1,2,3,4,7,8-HxCDF	7.21e+06	1.53e+03	4.7e+03	5.89e+06	1.36e+03	4.3e+03
5	1,2,3,6,7,8-HxCDF	7.34e+06	1.53e+03	4.8e+03	6.08e+06	1.36e+03	4.5e+03
6	2,3,4,6,7,8-HxCDF	7.02e+06	1.53e+03	4.6e+03	5.88e+06	1.36e+03	4.3e+03
7	1,2,3,7,8,9-HxCDF	6.10e+06	1.53e+03	4.0e+03	4.95e+06	1.36e+03	3.6e+03
8	1,2,3,4,6,7,8-HpCDF	6.16e+06	5.00e+03	1.2e+03	6.13e+06	6.59e+03	9.3e+02
9	1,2,3,4,7,8,9-HpCDF	4.58e+06	5.00e+03	9.1e+02	4.45e+06	6.59e+03	6.7e+02
10	OCDF	6.54e+06	1.44e+02	4.5e+04	7.12e+06	8.36e+02	8.5e+03
11	2,3,7,8-TCDD	8.13e+05	1.92e+03	4.2e+02	1.05e+06	1.26e+03	8.3e+02
12	1,2,3,7,8-PeCDD	4.95e+06	8.52e+02	5.8e+03	3.18e+06	2.84e+02	1.1e+04
13	1,2,3,4,7,8-HxCDD	4.98e+06	7.64e+02	6.5e+03	3.93e+06	4.12e+02	9.5e+03
14	1,2,3,6,7,8-HxCDD	4.78e+06	7.64e+02	6.3e+03	3.77e+06	4.12e+02	9.2e+03
15	1,2,3,7,8,9-HxCDD	4.67e+06	7.64e+02	6.1e+03	3.64e+06	4.12e+02	8.8e+03
16	1,2,3,4,6,7,8-HpCDD	4.20e+06	1.17e+03	3.6e+03	3.99e+06	7.20e+01	5.5e+04
17	OCDD	5.25e+06	1.60e+02	3.3e+04	5.90e+06	1.22e+03	4.8e+03
18	13C-2,3,7,8-TCDF	1.11e+07	9.00e+03	1.2e+03	1.40e+07	3.76e+03	3.7e+03
19	13C-1,2,3,7,8-PeCDF	1.52e+07	6.36e+02	2.4e+04	9.62e+06	1.34e+03	7.2e+03
20	13C-2,3,4,7,8-PeCDF	1.56e+07	6.36e+02	2.5e+04	9.99e+06	1.34e+03	7.5e+03
21	13C-1,2,3,4,7,8-HxCDF	7.22e+06	7.60e+02	9.5e+03	1.40e+07	1.60e+03	8.8e+03
22	13C-1,2,3,6,7,8-HxCDF	8.16e+06	7.60e+02	1.1e+04	1.57e+07	1.60e+03	9.8e+03
23	13C-2,3,4,6,7,8-HxCDF	7.92e+06	7.60e+02	1.0e+04	1.49e+07	1.60e+03	9.3e+03
24	13C-1,2,3,7,8,9-HxCDF	6.41e+06	7.60e+02	8.4e+03	1.22e+07	1.60e+03	7.6e+03
25	13C-1,2,3,4,6,7,8-HpCDF	5.67e+06	2.84e+03	2.0e+03	1.26e+07	6.70e+03	1.9e+03
26	13C-1,2,3,4,7,8,9-HpCDF	4.44e+06	2.84e+03	1.6e+03	1.00e+07	6.70e+03	1.5e+03
27	13C-2,3,7,8-TCDD	7.51e+06	5.77e+03	1.3e+03	9.42e+06	2.25e+03	4.2e+03
28	13C-1,2,3,7,8-PeCDD	1.01e+07	1.06e+03	9.5e+03	6.31e+06	5.88e+02	1.1e+04
29	13C-1,2,3,4,7,8-HxCDD	9.57e+06	2.66e+03	3.6e+03	7.40e+06	1.57e+03	4.7e+03
30	13C-1,2,3,6,7,8-HxCDD	9.03e+06	2.66e+03	3.4e+03	7.14e+06	1.57e+03	4.6e+03
31	13C-1,2,3,4,6,7,8-HpCDD	7.97e+06	1.17e+03	6.8e+03	7.51e+06	7.00e+02	1.1e+04
32	13C-OCDD	9.30e+06	2.60e+02	3.6e+04	1.03e+07	4.00e+02	2.6e+04
33	13C-1,2,3,4-TCDD	8.25e+06	5.77e+03	1.4e+03	1.02e+07	2.25e+03	4.5e+03
34	13C-1,2,3,7,8,9-HxCDD	9.23e+06	2.66e+03	3.5e+03	7.29e+06	1.57e+03	4.6e+03
35	37Cl-2,3,7,8-TCDD	1.94e+06	1.18e+03	1.6e+03			

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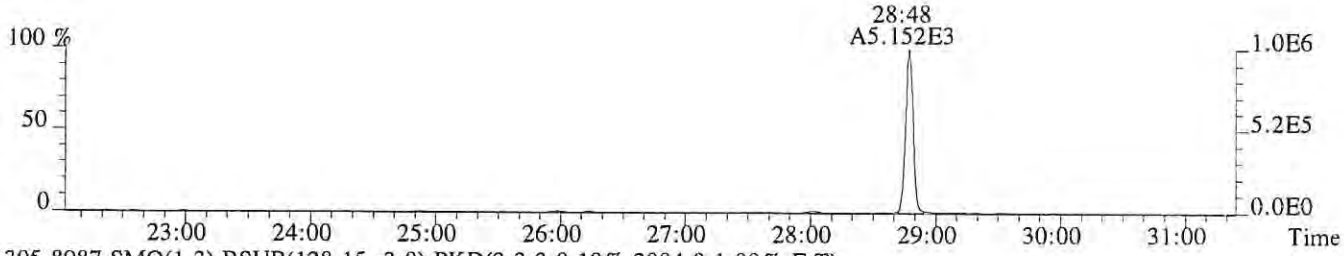
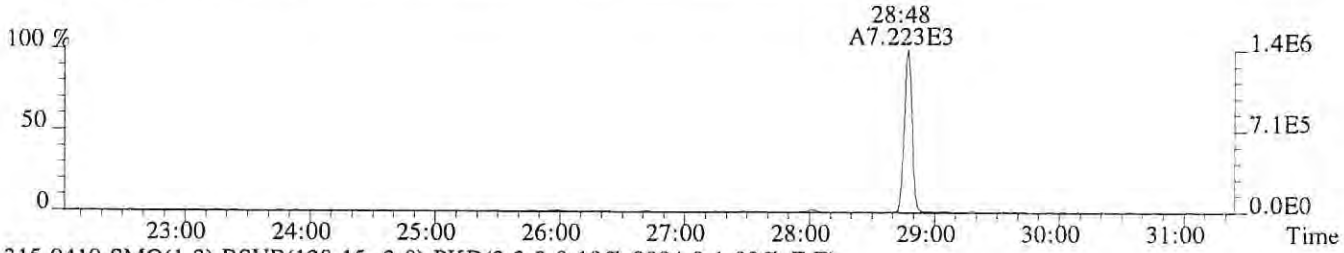
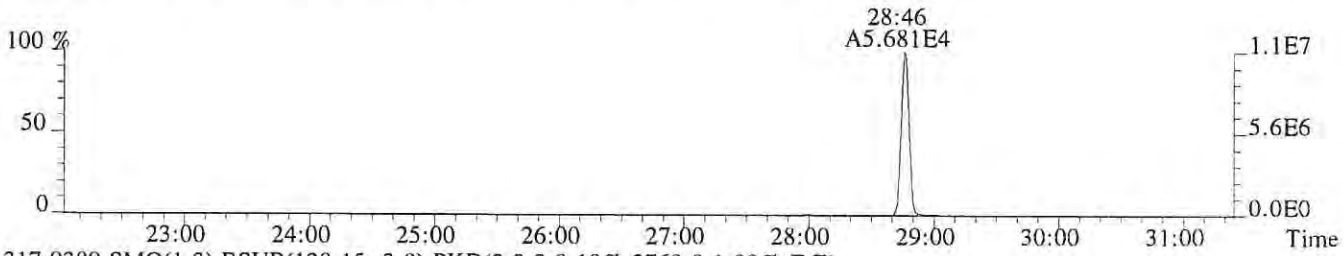
File:P513857 #1-665 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:75080
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1032.0,1.00%,F,T)



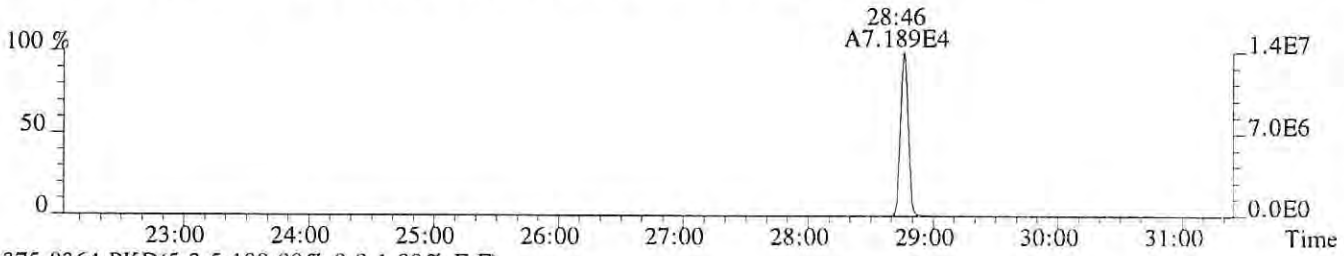
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2004.0,1.00%,F,T)



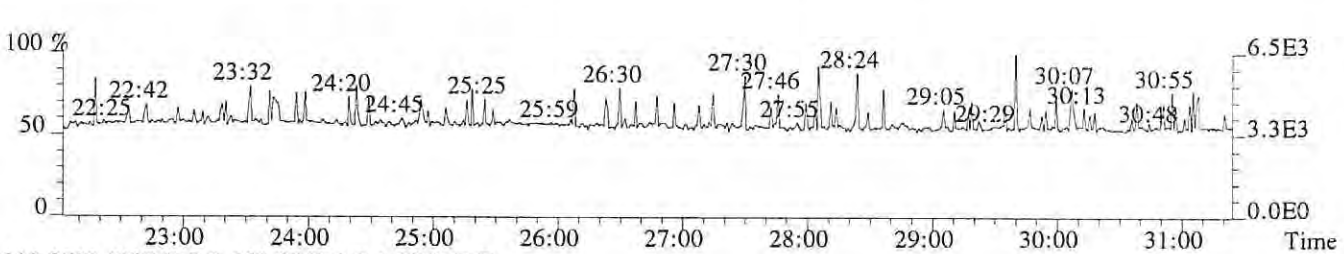
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9004.0,1.00%,F,T)



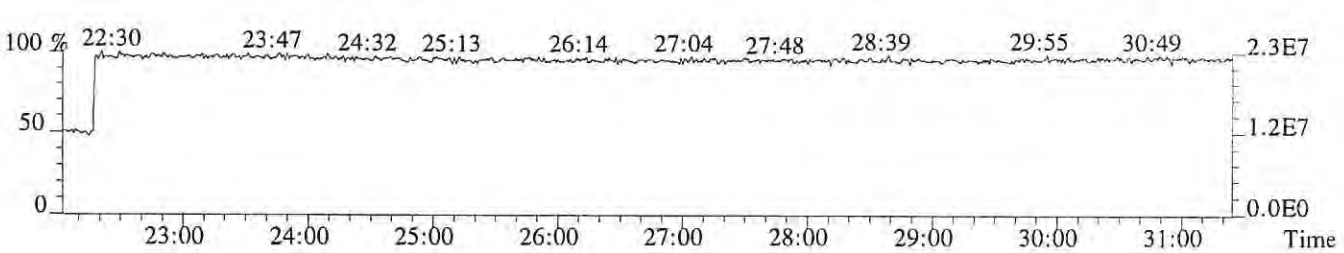
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3760.0,1.00%,F,T)



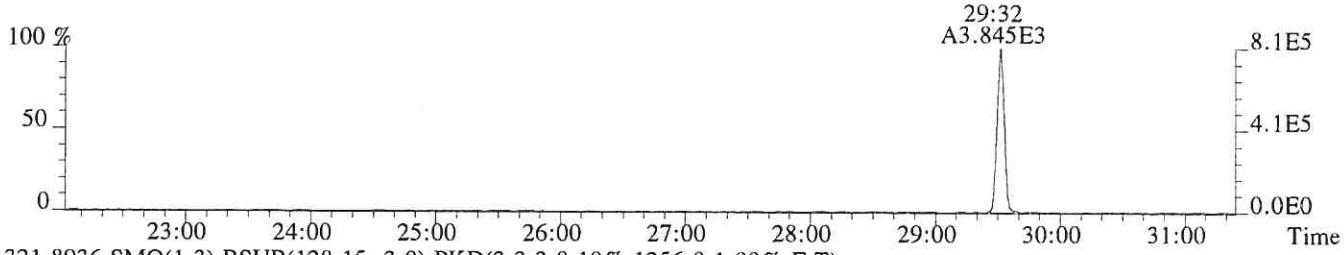
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



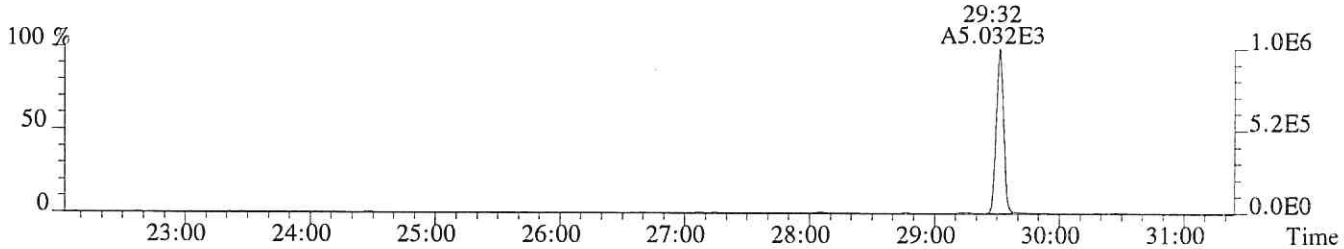
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



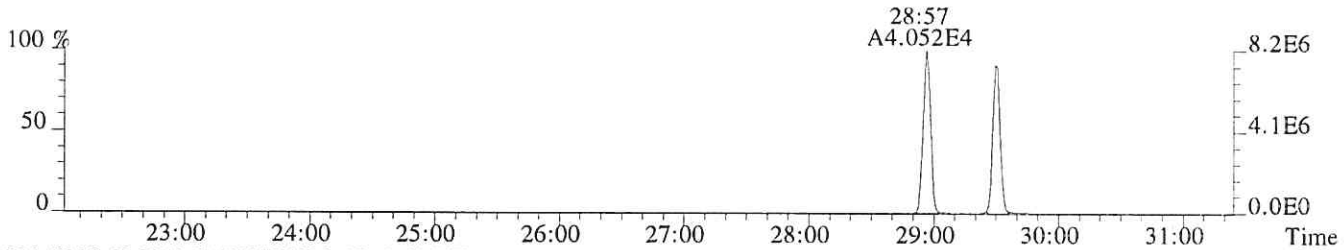
File:P513857 #1-665 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1924.0,1.00%,F,T)



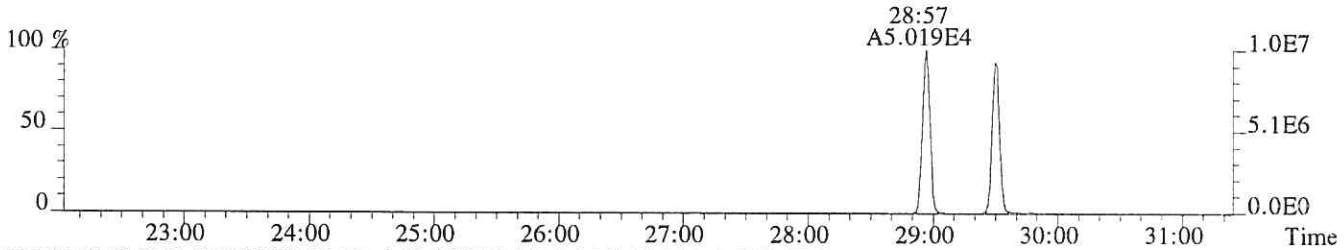
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1256.0,1.00%,F,T)



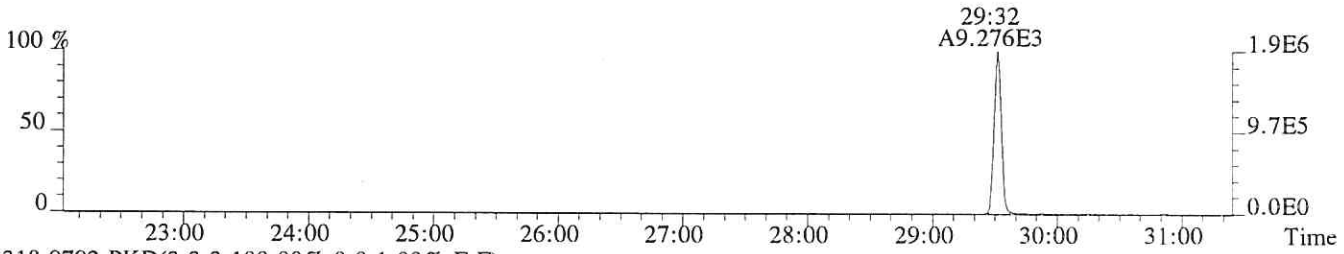
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5772.0,1.00%,F,T)



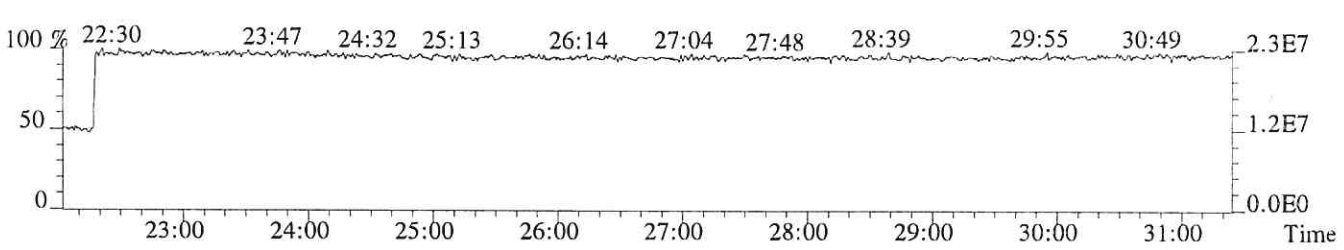
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2248.0,1.00%,F,T)



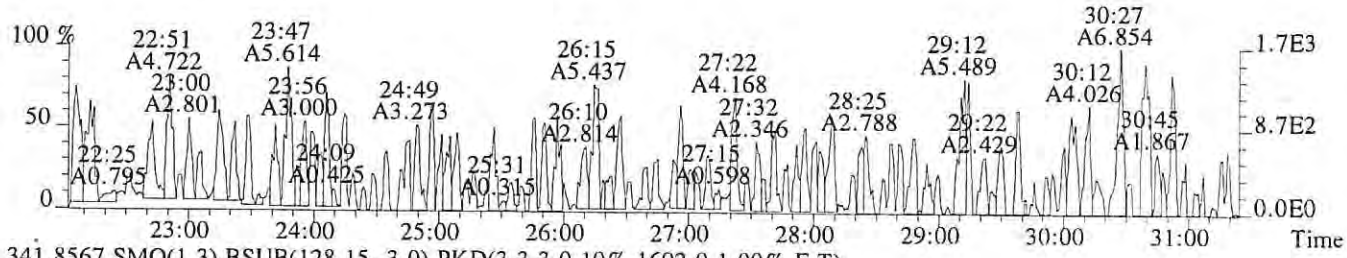
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1184.0,1.00%,F,T)



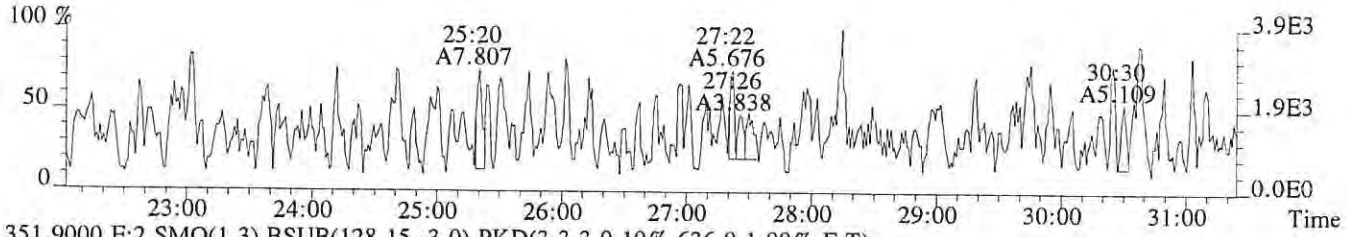
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



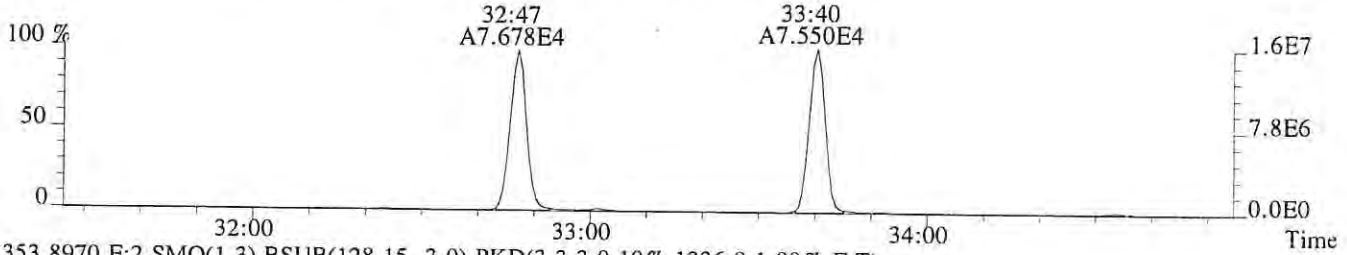
File:P513857 #1-665 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,188.0,1.00%,F,T)



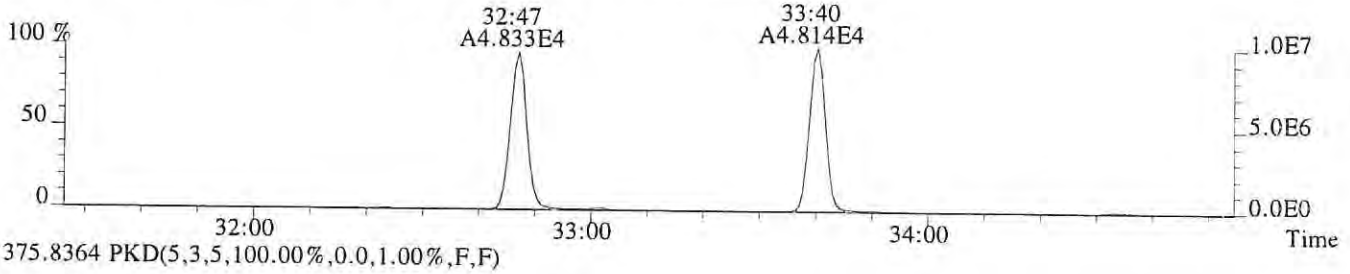
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1692.0,1.00%,F,T)



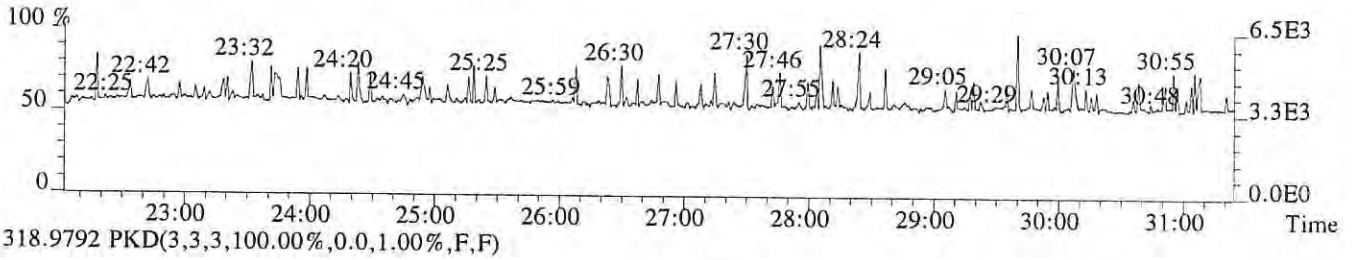
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,636.0,1.00%,F,T)



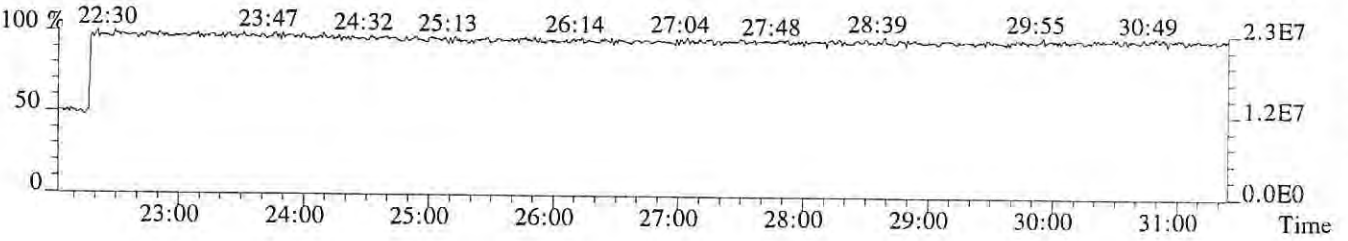
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1336.0,1.00%,F,T)



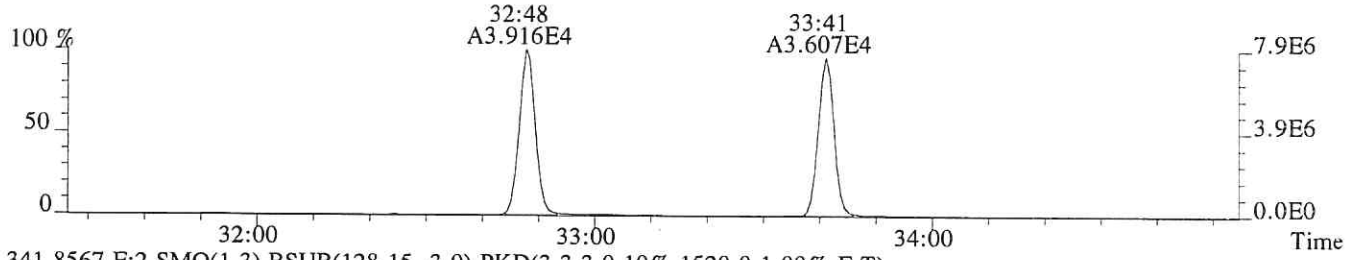
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



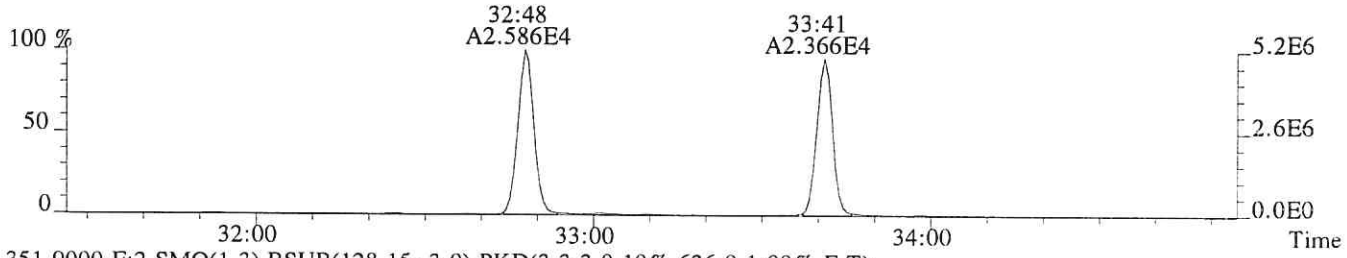
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



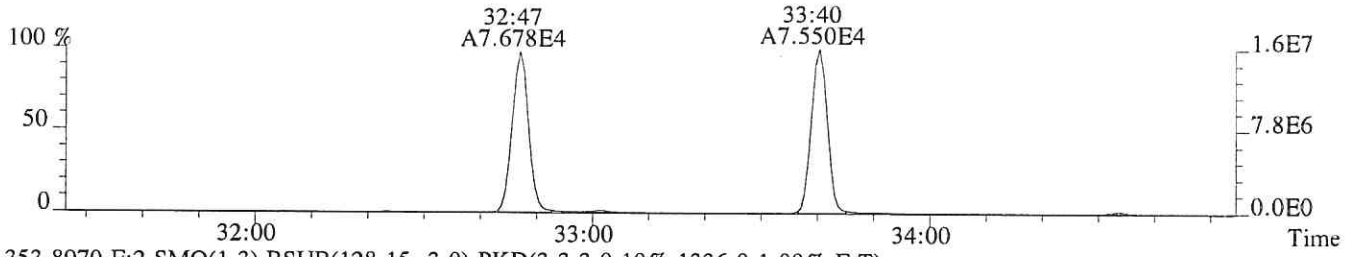
File:P513857 #1-313 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,844.0,1.00%,F,T)



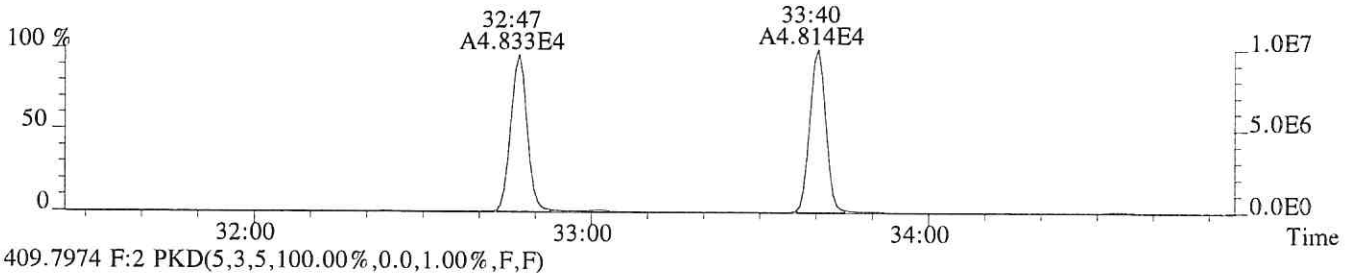
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1520.0,1.00%,F,T)



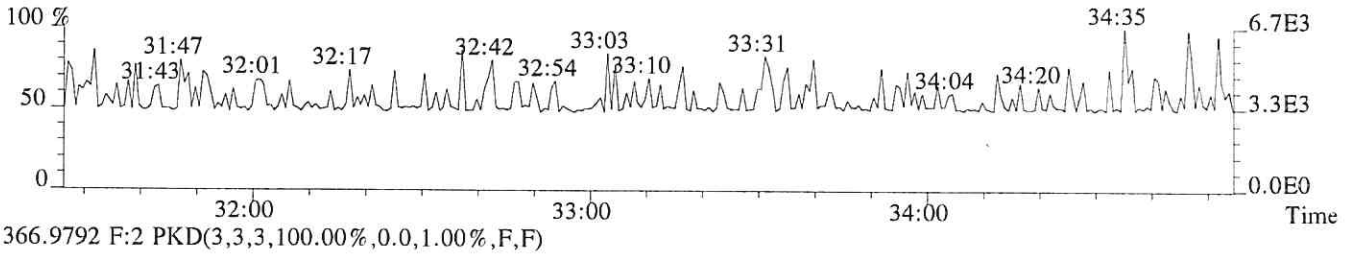
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,636.0,1.00%,F,T)



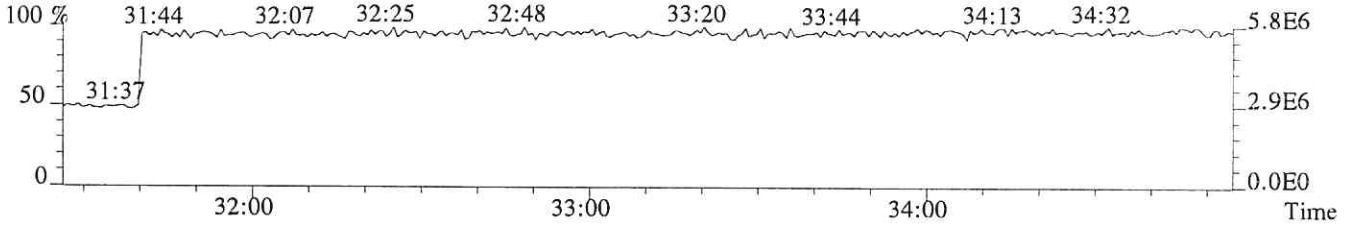
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1336.0,1.00%,F,T)



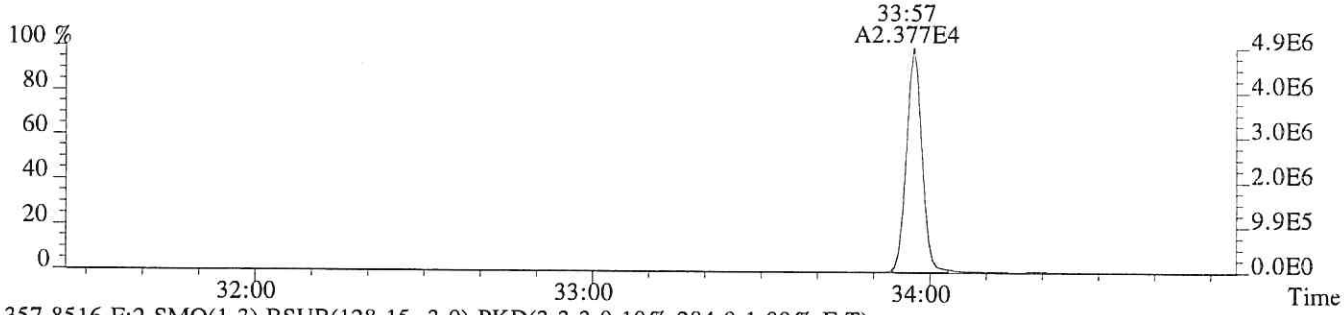
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



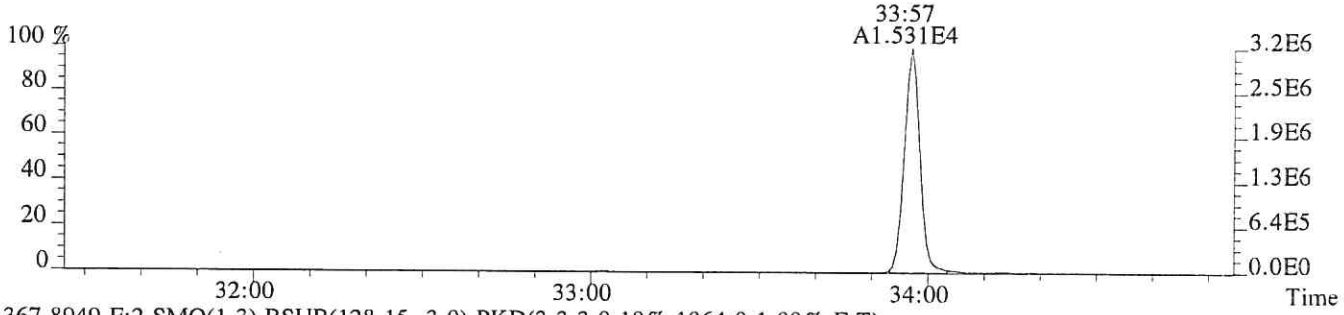
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



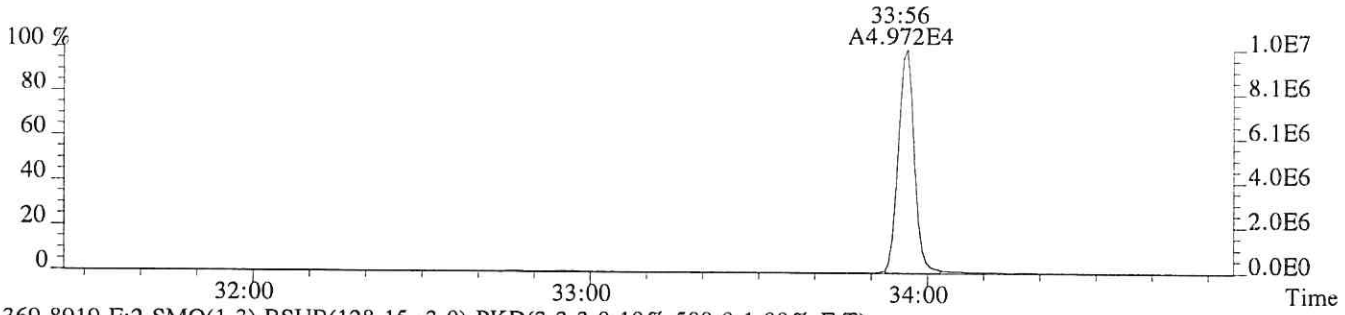
File:P513857 #1-313 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,852.0,1.00%,F,T)



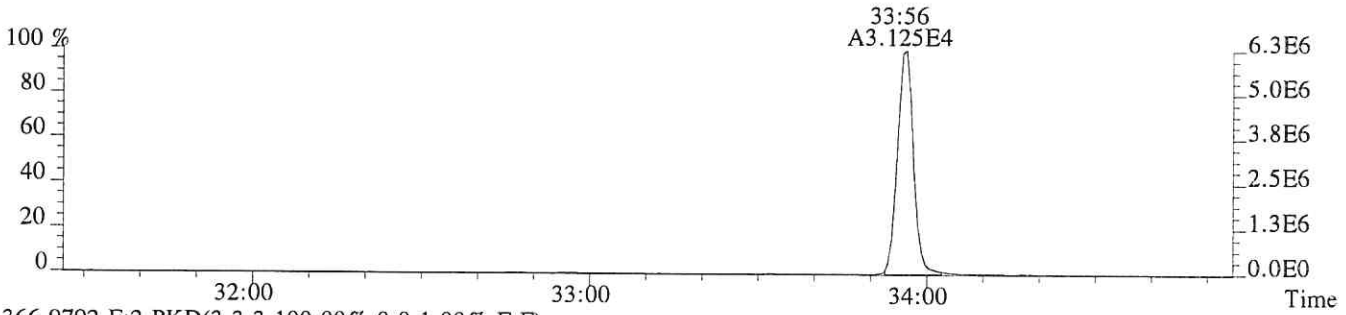
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,284.0,1.00%,F,T)



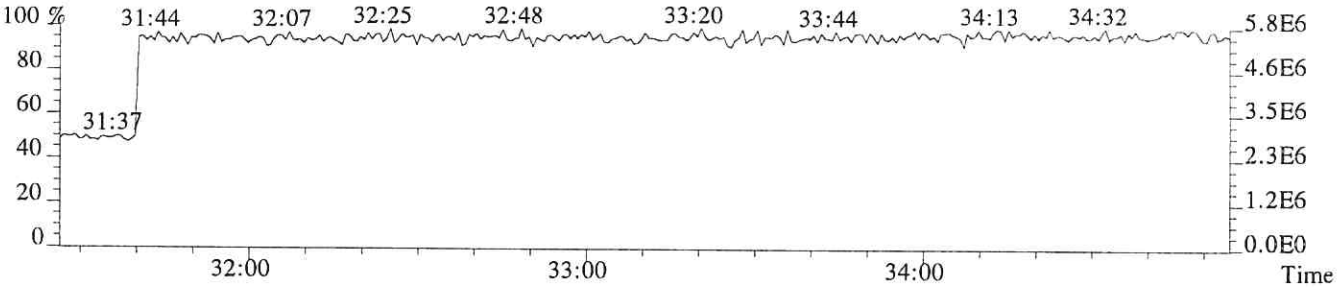
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1064.0,1.00%,F,T)



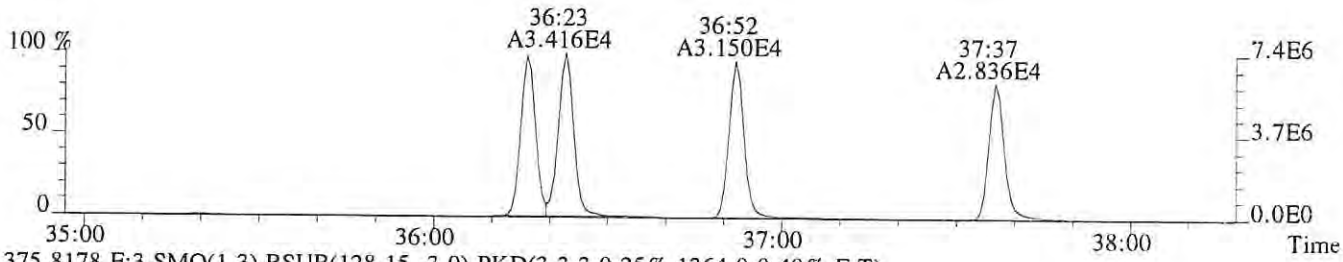
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,588.0,1.00%,F,T)



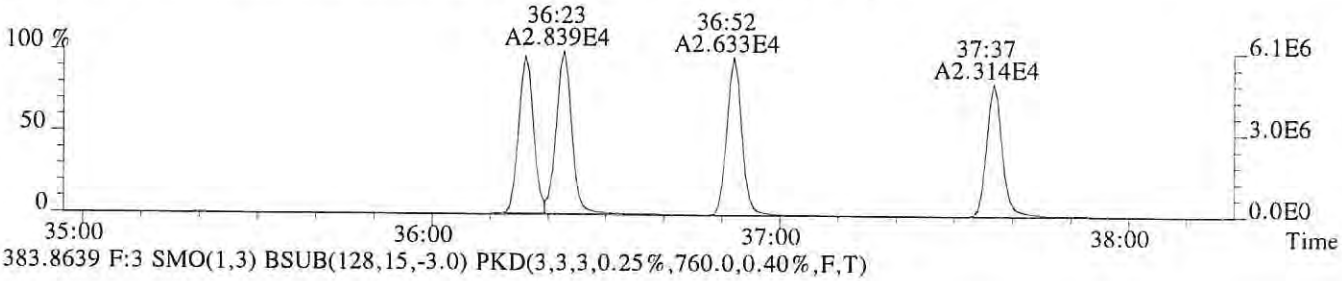
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



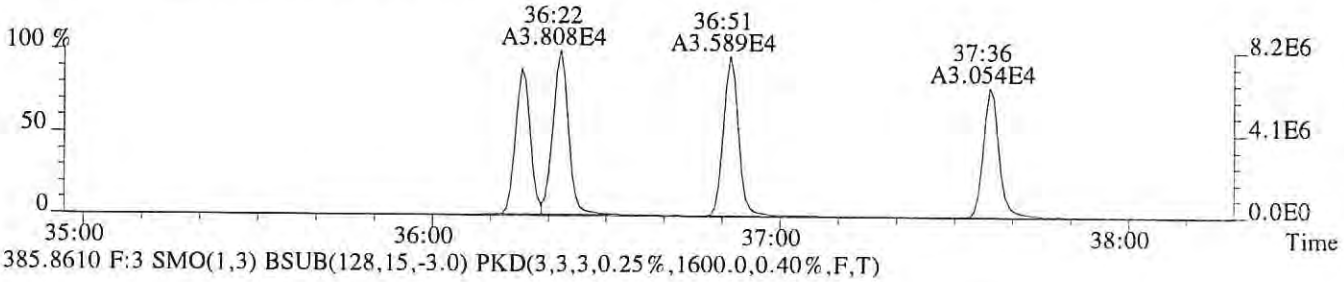
File:P513857 #1-303 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1528.0,0.40%,F,T)



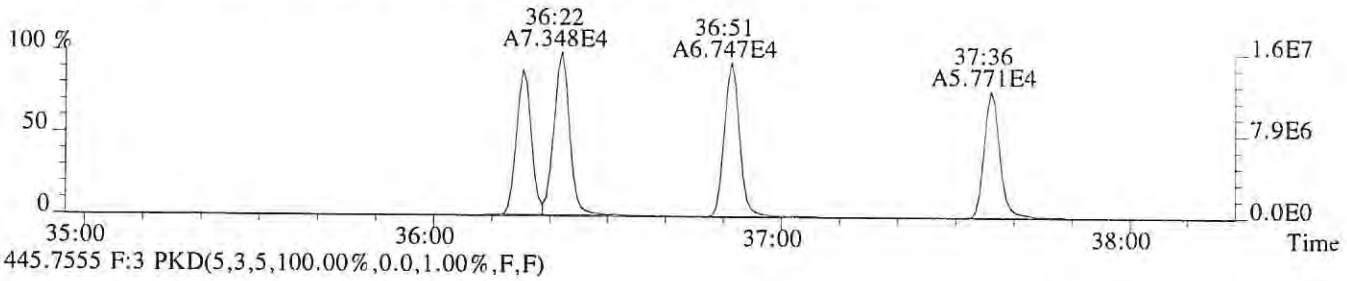
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1364.0,0.40%,F,T)



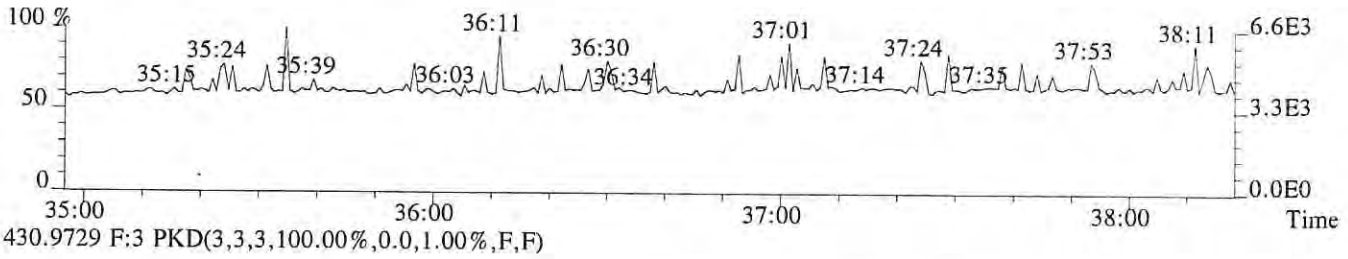
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,760.0,0.40%,F,T)



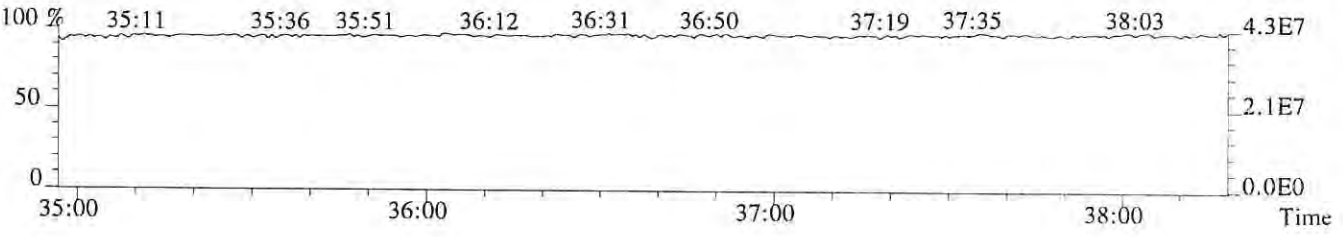
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1600.0,0.40%,F,T)



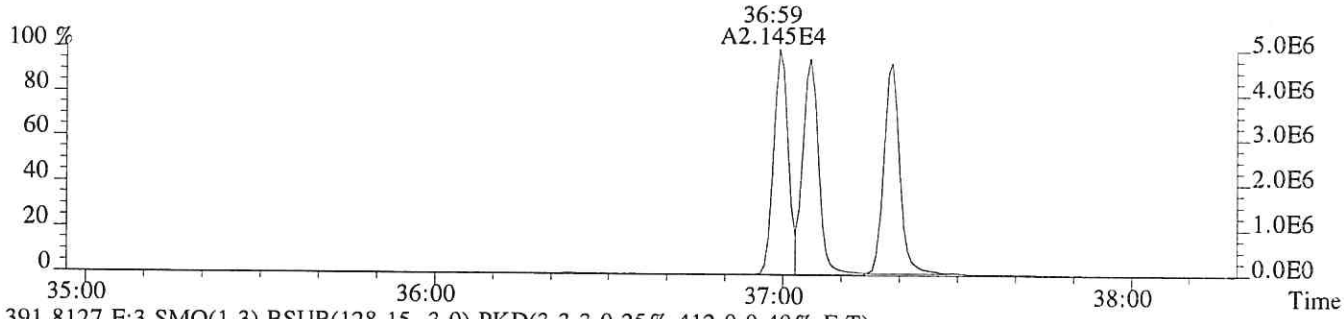
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



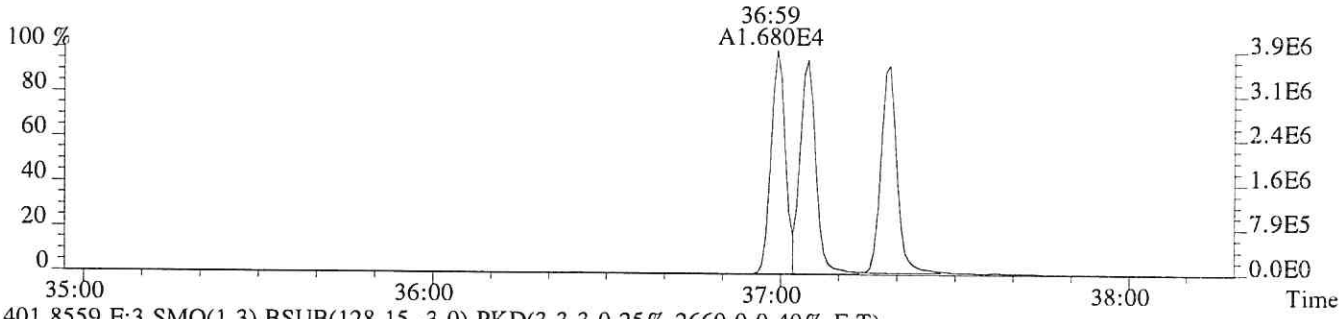
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



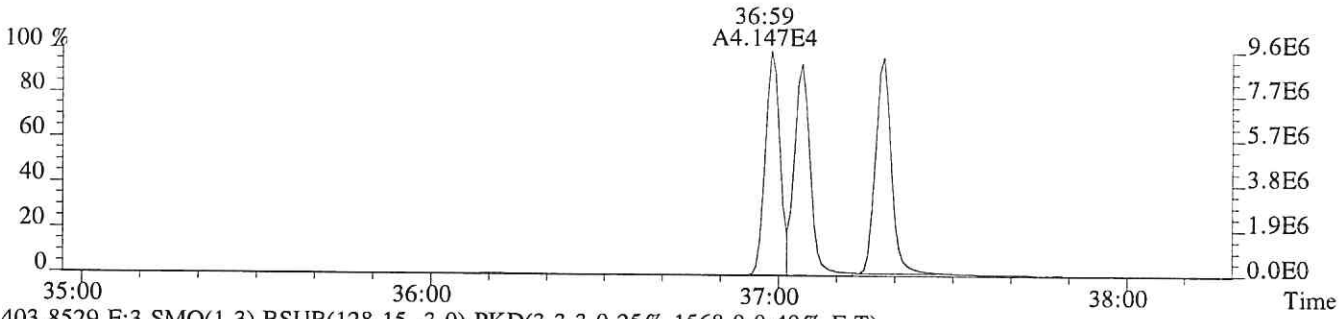
File:P513857 #1-303 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,764.0,0.40%,F,T)



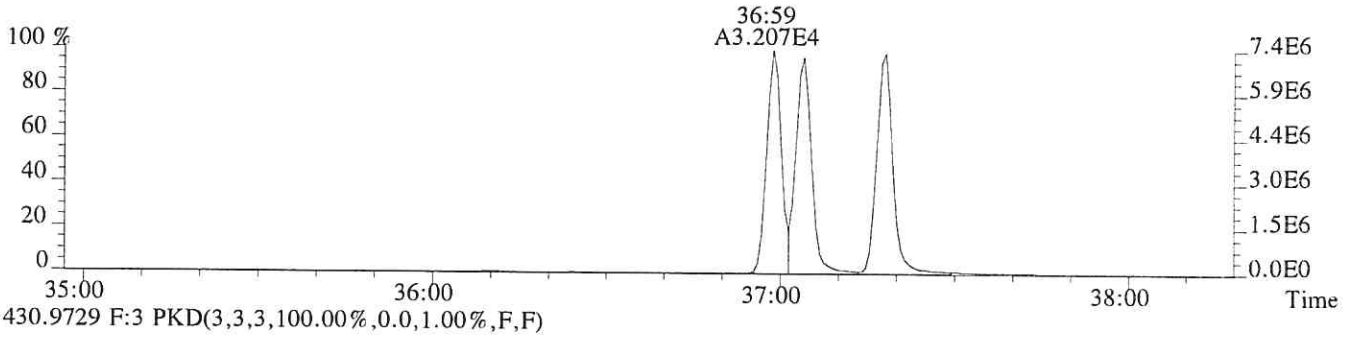
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,412.0,0.40%,F,T)



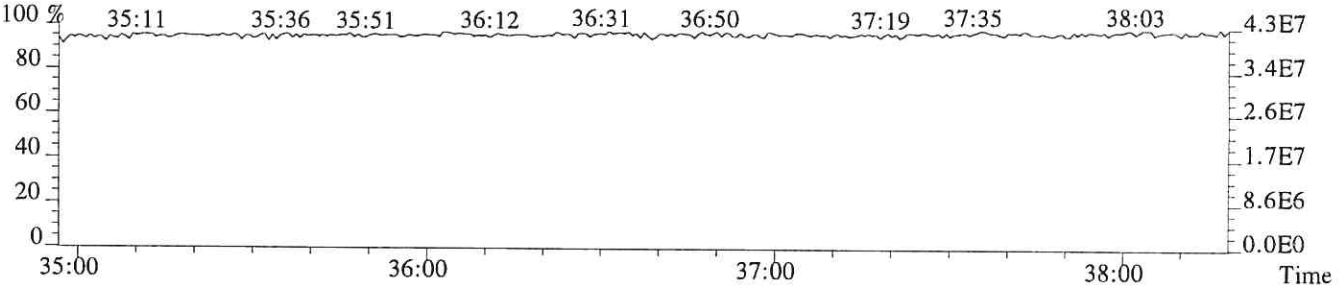
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2660.0,0.40%,F,T)



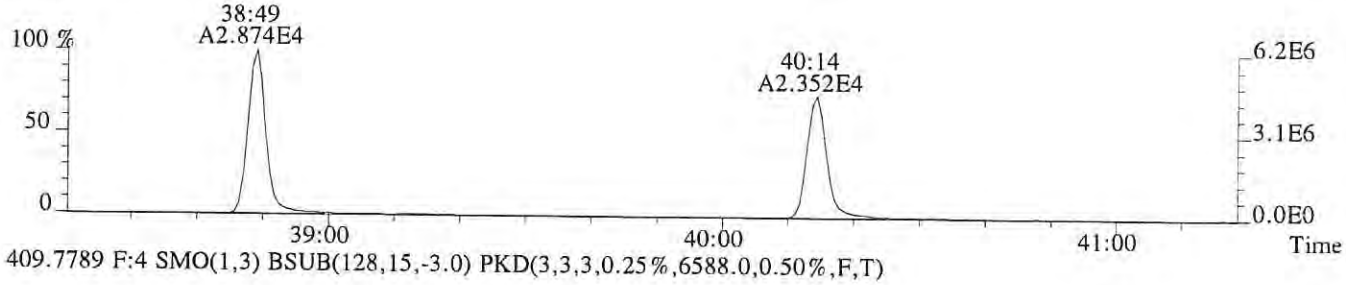
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1568.0,0.40%,F,T)



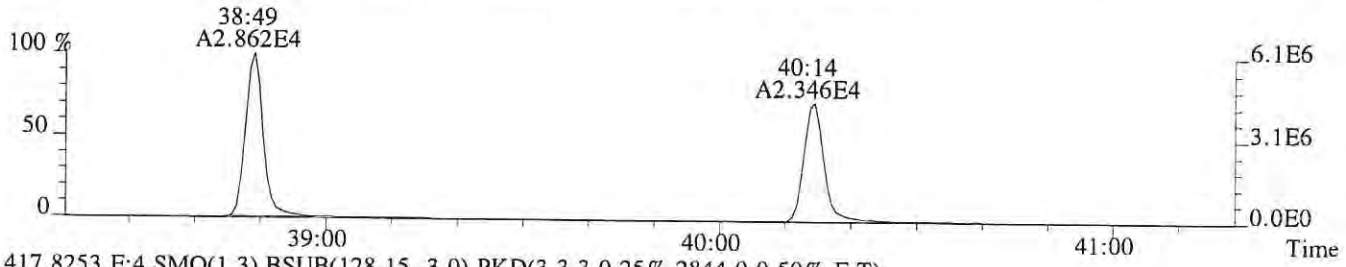
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



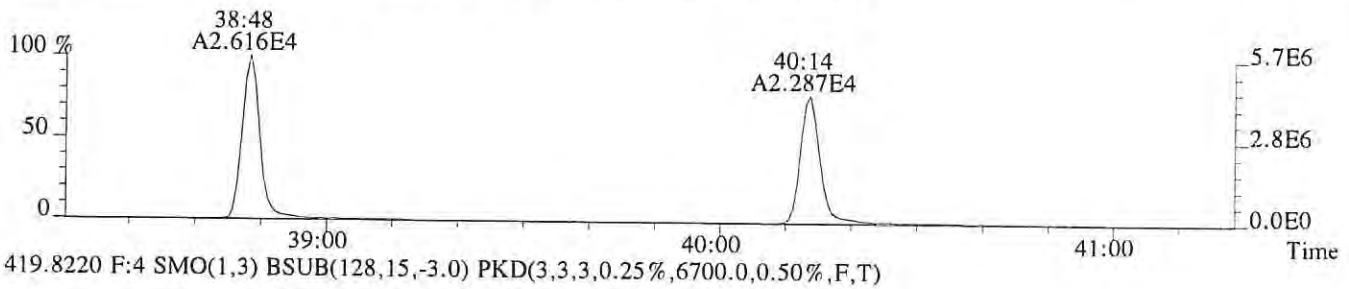
File:P513857 #1-268 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5004.0,0.50%,F,T)



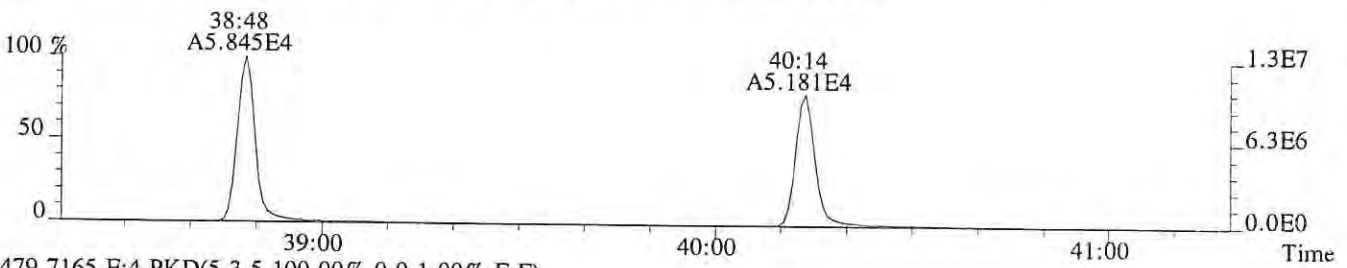
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6588.0,0.50%,F,T)



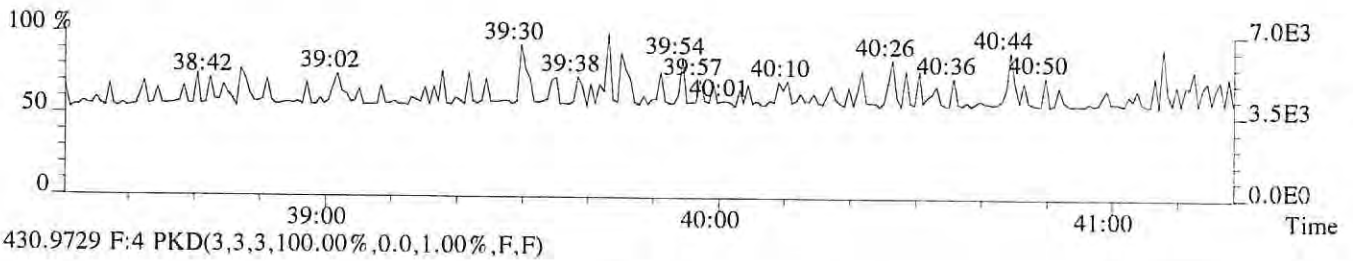
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2844.0,0.50%,F,T)



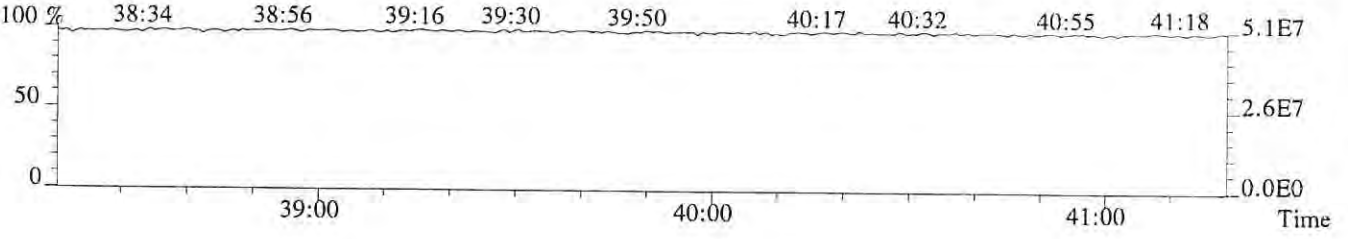
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6700.0,0.50%,F,T)



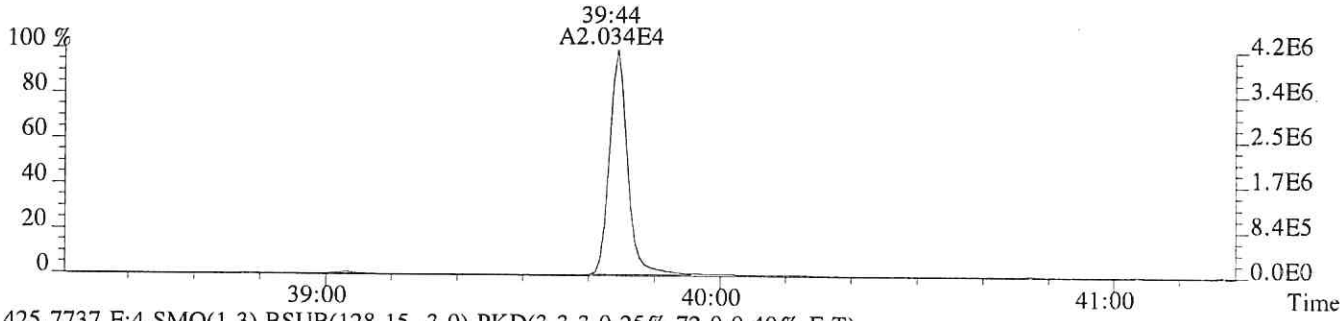
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



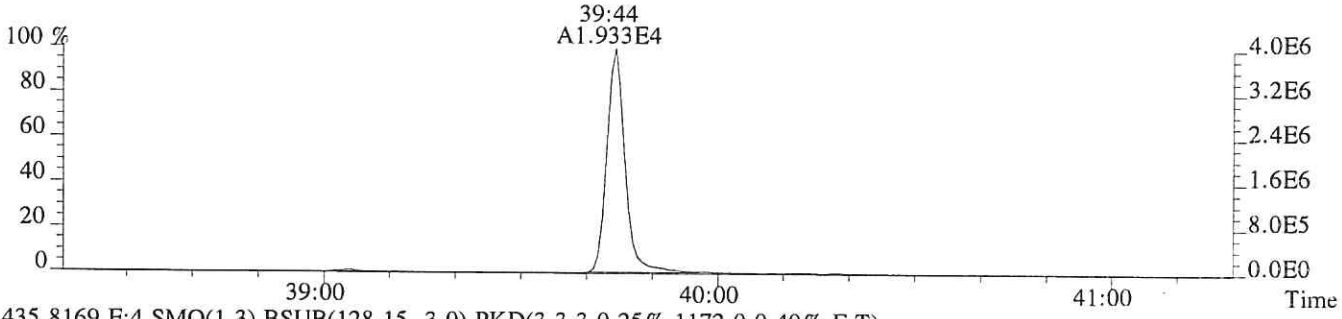
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



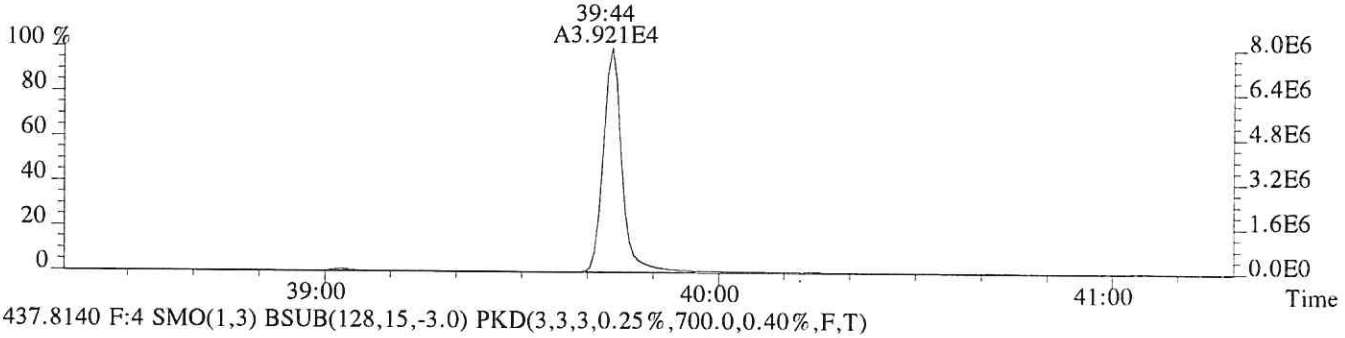
File:P513857 #1-268 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1168.0,0.40%,F,T)



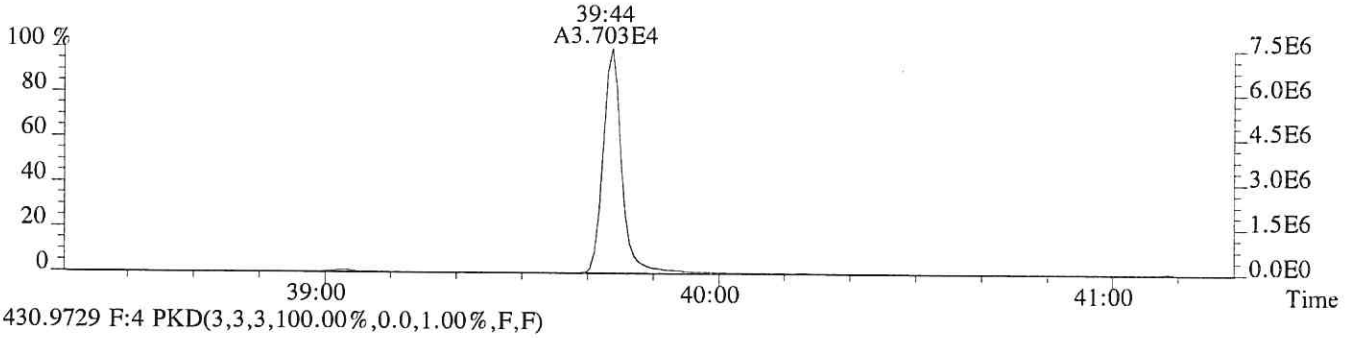
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,72.0,0.40%,F,T)



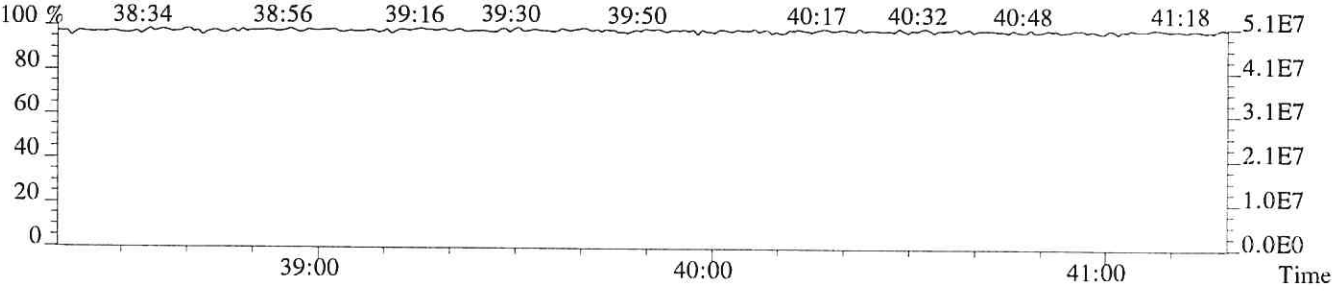
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1172.0,0.40%,F,T)



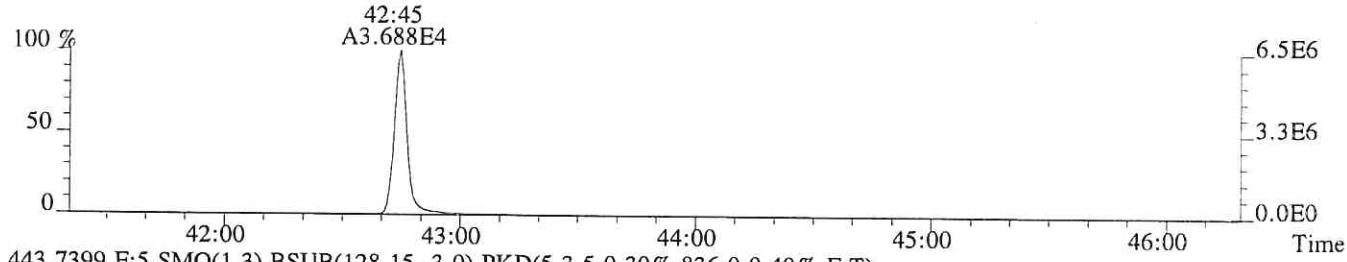
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,700.0,0.40%,F,T)



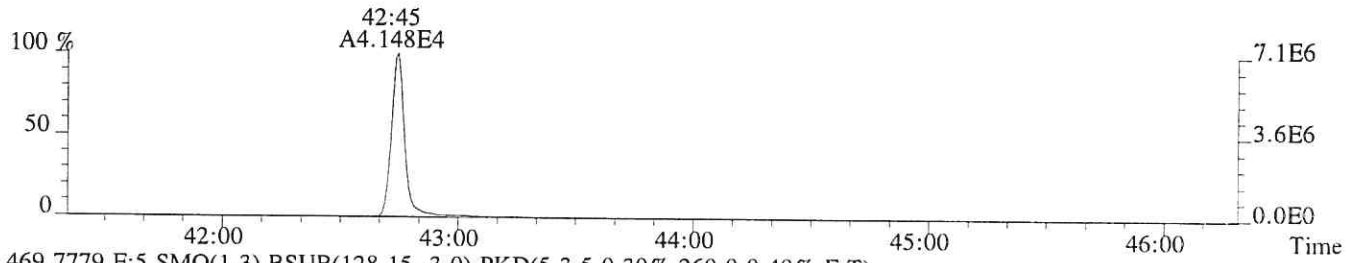
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



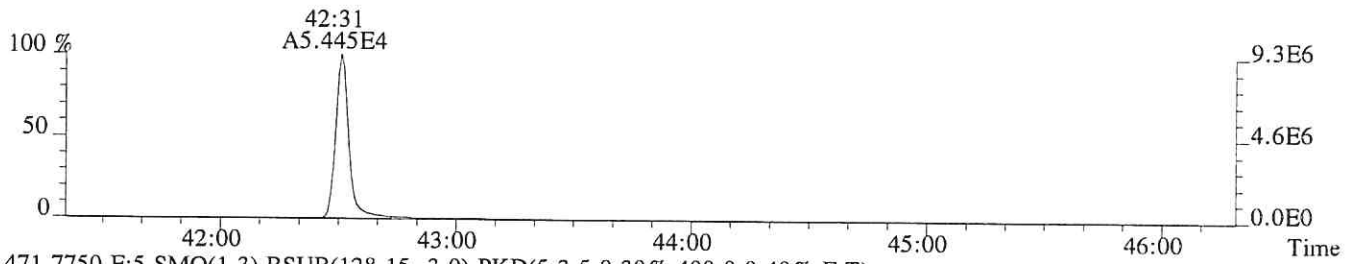
File:P513857 #1-448 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,144.0,0.40%,F,T)



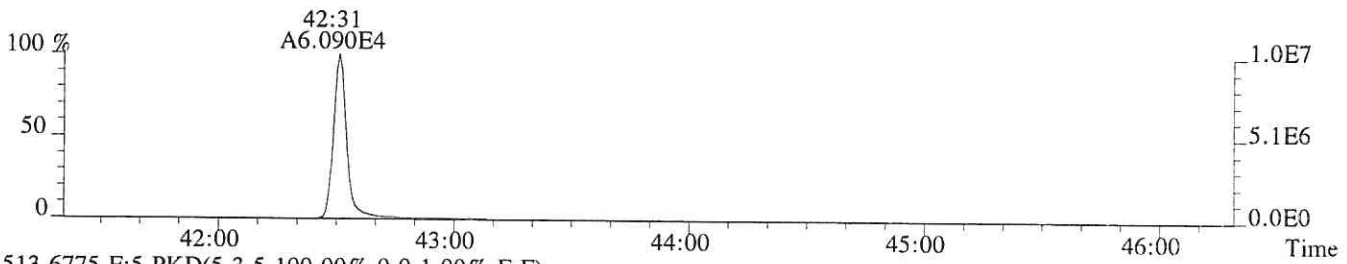
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,836.0,0.40%,F,T)



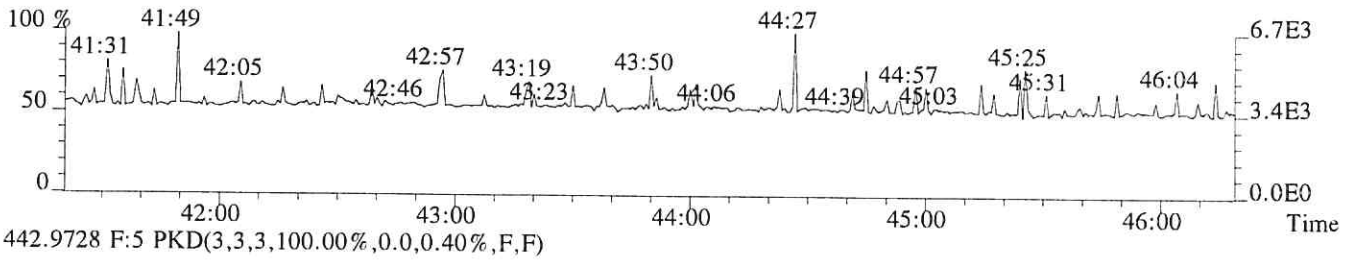
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,260.0,0.40%,F,T)



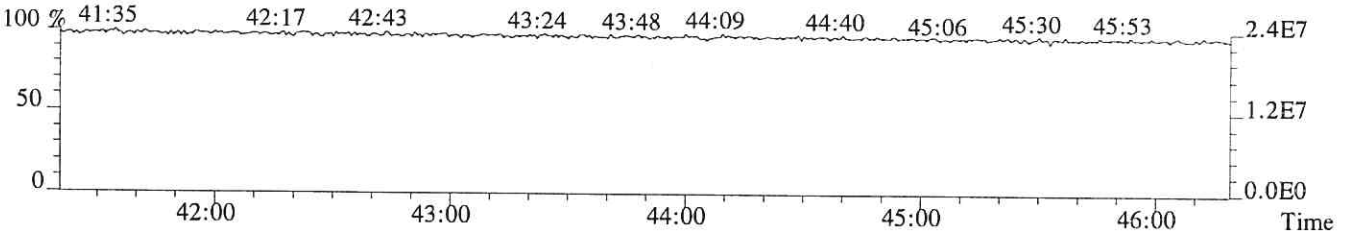
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,400.0,0.40%,F,T)



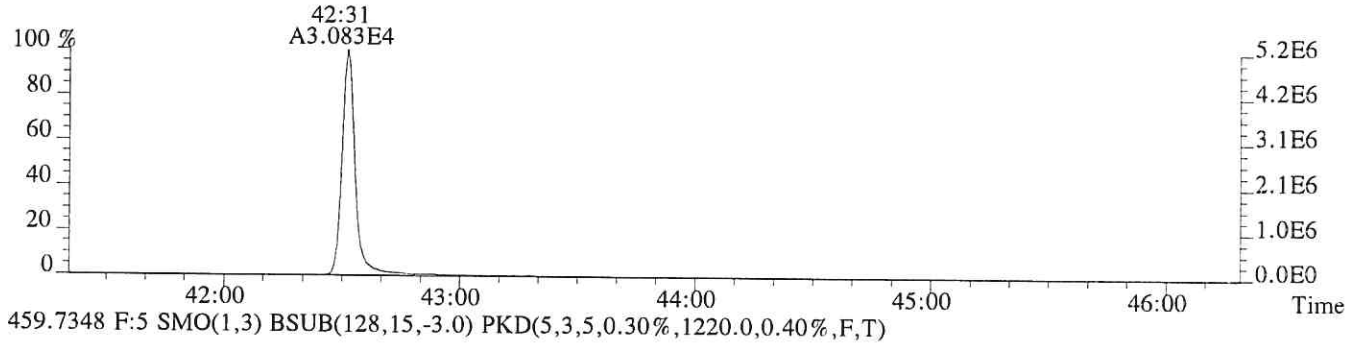
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



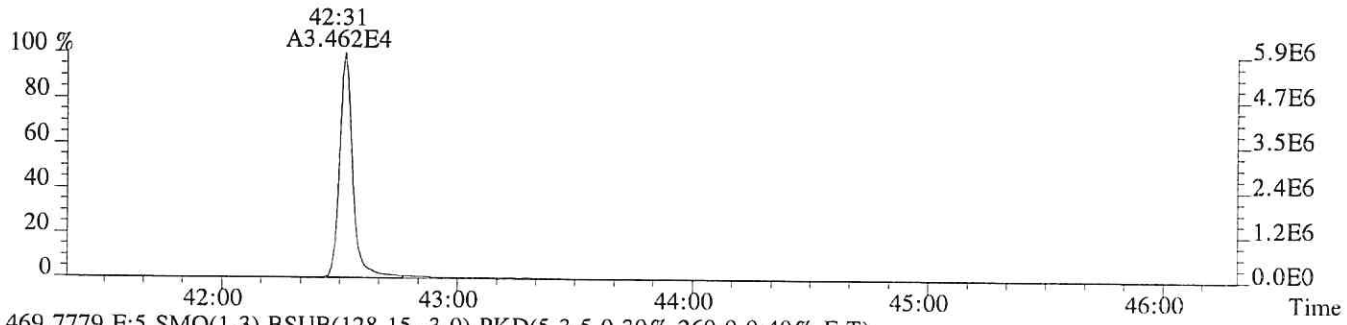
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



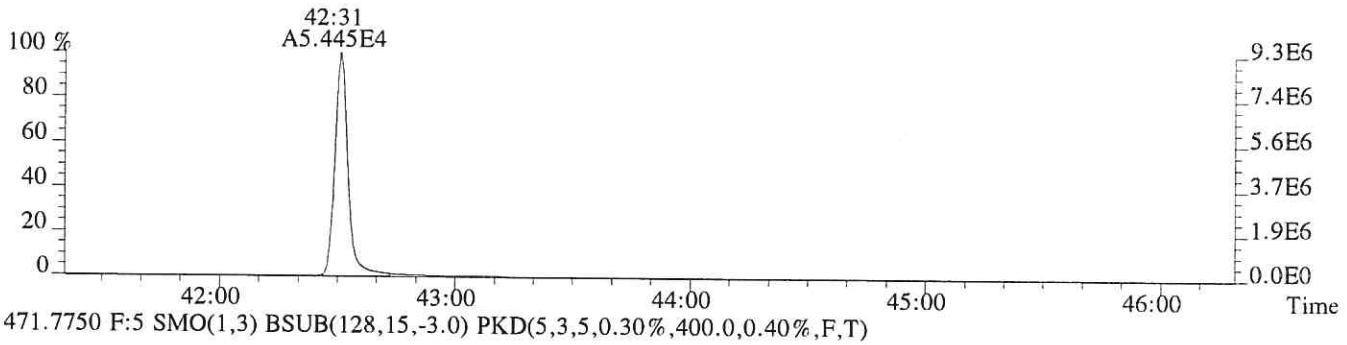
File:P513857 #1-448 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,160.0,0.40%,F,T)



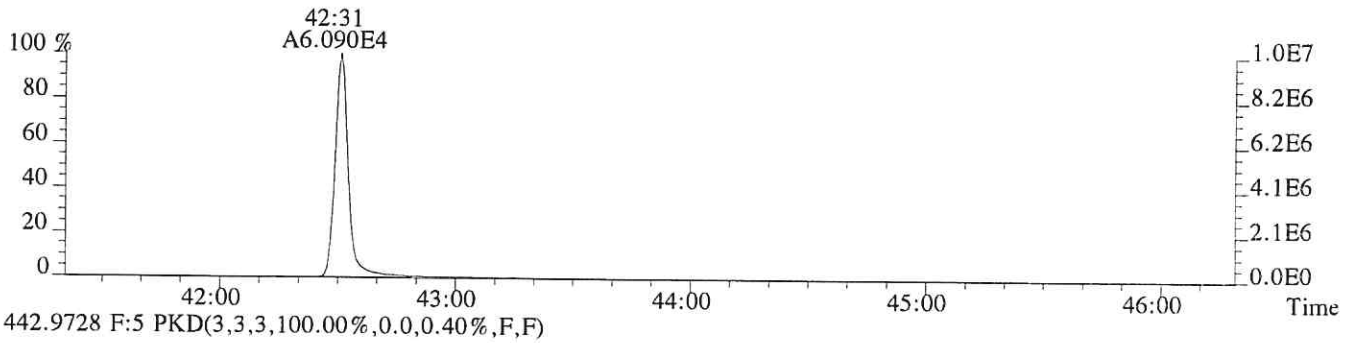
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1220.0,0.40%,F,T)



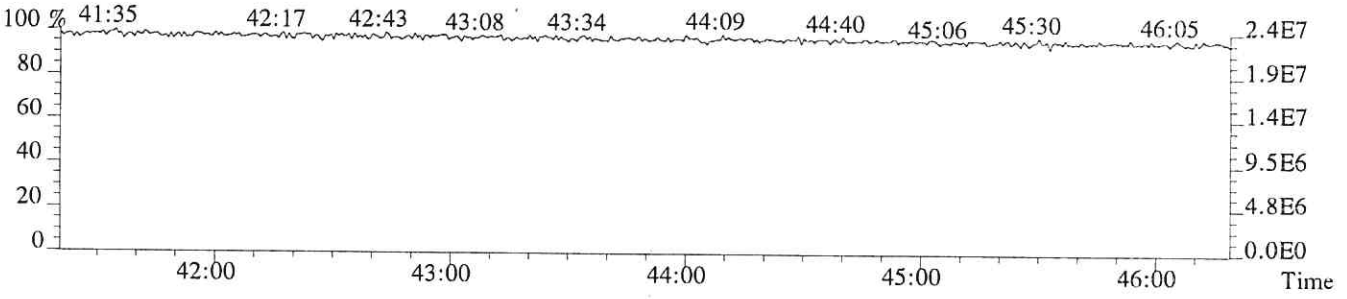
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,260.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,400.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS Environmental
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January 18, 2019

Analytical Report for Service Request No: K1811438

Craig Hutchings
Integral Consulting, Inc.
1205 West Bay Drive NW
Olympia, WA 98502-4670

RE: San Jacinto / C1844-0501

Dear Craig,

Enclosed are the results of the sample(s) submitted to our laboratory November 21, 2018
For your reference, these analyses have been assigned our service request number **K1811438.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Integral Consulting, Incorporated
Project: San Jacinto
Sample Matrix: Soil

Service Request: K1811438
Date Received: 11/21/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt:

Two soil samples were received for analysis at ALS Environmental on 11/21/2018. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

Semivolatiles by GC/MS:

Method 8270D, TCLP Semivolatile Organic Compounds by GC/MS 01/08/2019: The upper control criterion was exceeded for Hexachlorobenzene, TCLP and 2,4,6-Tribromophenol in Continuing Calibration Verification (CCV) MS07\0107F014.D. The field samples analyzed in this sequence did not contain the analytes in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method 8270D, TCLP Semivolatile Organic Compounds by GC/MS 01/08/2019: The upper control criterion was exceeded for 2,4,6-Tribromophenol in sample SL0547. No target analytes were detected in the sample. The error associated with an elevated recovery equated to a high bias. The quality of the sample data was not significantly affected. No further corrective action was appropriate.

Semivoa GC:

Method 8081B, Toxicity Characteristic Leaching Procedure (TCLP) Organochlorine Pesticides 12/24/18: The recoveries of Heptachlor in Matrix Spikes (MS/DMS) KWG1806260-1/2 and Laboratory Control Sample KWG1806260-5 were outside the control limits listed in the results summary. The limits are default values temporarily in use until sufficient data points are generated to calculate statistical control limits. Based on the method and historic data, the recoveries observed were in the range expected for this procedure. The field samples analyzed in this sequence did not contain the analyte(s) in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Metals:

No significant anomalies were noted with this analysis.

General Chemistry:

No significant anomalies were noted with this analysis.

Subcontracted Analytical Parameters:

Cyanide Reactivity
This analysis was performed at ALS Environmental in Holland, MI. The data for this analysis is included in the corresponding section of this report.

Volatiles by GC/MS:

Method 8260C, 11/27/2018:The upper control criterion was exceeded for Dibromofluoromethane in samples SL0547 and SL0554. No target analytes were detected in the sample. The error associated with an elevated recovery equated to a high bias. The quality of the sample data was not significantly affected. No further corrective action was appropriate.

Method 8260C, 11/27/2018:The upper control criterion was exceeded for Dibromofluoromethane in Method Blank KWG1806352-2. No target analytes were detected in the Method Blank. Since the apparent problem equates to a high bias, the data quality was not significantly affected. No further corrective action was appropriate.

Approved by  Date 01/18/2019

Method 8260C, 11/27/2018:The spike recovery of 2-Butanone for Laboratory Control Sample (LCS) KWG1806350-1 was outside the lower control criterion. The analyte in question was not detected in the associated field samples. The error associated with reduced recovery indicated a potential low bias. Additional analysis of the associated field sample was not performed because insufficient sample hold time remained for testing. The data was flagged to indicate the problem.

Approved by _____ Date 01/18/2019

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

1811438

5035 TERRATURES

K+811381

CHAIN OF CUSTODY FORM

Project: C1887 - 0501

Samplers: SARAH KISSELL + BEN PETRI

Integral Contact: Craig Hutchings
Phone 360-705-3354 ext 417

Ship to: Lab Name ALS - Houston
Address 10450 Stancliff Road
Suite 210
Houston, TX USA 77099
Contact Kristin Brown
Phone 281-575-2195

integral consulting inc.

ANALYSES REQUESTED

Sample No.	Tag #	Date	Time	Matrix	PCDD/F by 1613B	Flashpoint by 1020B, pH by 9045D, Reactive Sulfide by 9030M	Reactive Cyanide by EPA 7.3.3.2	TCLP Metals, VOCs, SVOCs, Pesticides, Herbicides	TPH-GRO by 8015C	TPH-DRO by 8015C	PCB Aroclors by 8082	Asbestos by 600/R-93-116	Extra Container	Archive	Comments
SL0198	0331	11/15/18	0850	SOIL										X	
SL0199	0332		0855											X	
SL0200	0333		0900											X	
SL0201	0334		0905											X	
SL0202	0336		0910											X	
SL0203	0335		0915		X										
SL0204	0434		0920		X										
SL0205	0349		0955						X						
SL0206	0337		1045											X	
SL0207	0338		1050											X	
SL0208	0339		1055											X	
SL0209	0340		1100											X	
SL0210	0341		1105											X	
SL0211	0354		1320											X	
SL0212	0355		1325											X	
SL0213	0356		1330											X	
SL0214	0357		1335											X	
SL0215	0358		1340											X	
SL0216	0292		1410											X	
SL0217	0293	11/15/18	1415	SOIL										X	

Analysis Turn Time: Normal Rush **Rush Results Needed By:**
X Rush SL0205 TAG # 0349 48HR HOLDING TIME

Shipped by: **Shipping Tracking No.**

Matrix Code: GW - Groundwater
SL - Soil SW - Surface water
SD - Sediment Other:

Condition of Samples Upon Receipt: **Custody Seal Intact?**

Relinquished by: [signature] (signature) **Date/Time:** 11/16/18 0840 **Received by:** [signature] (signature) **Date/Time:**

Relinquished by: (signature) **Date/Time:** **Received by:** [signature] 11/16/18 1400 (signature) **Date/Time:**

Special Instructions: If reactive sulfide is detected run sample for total sulfur by 9056A and total sulfate by 300M, For TCLP analyses use methods 601B/7470A for metals, 8260C for VOCs, 8270D for SVOCs, 8081B for pesticides, and 8015C for herbicides.

RELINQUISHED BY: [signature] FOREY G 11/20/18 1700 RECEIVED BY [signature] 11/21/18 1120

E1801055 5

Integral Consulting, Inc.
C1844-0501 North Impoundment

CHAIN OF CUSTODY FORM

Project: C1844 - 0501 North Impoundment

Samplers: D. Hargrave

Integral Contact: Craig Hutchings
Phone 360-705-3354 ext 417

Ship to: Lab Name ALS - Houston
Address 10450 Stancliff Road
Suite 210
Houston, TX USA 77099
Contact Kristin Brown
Phone 281-575-2195

integral consulting inc.

Sample No.	Tag #	Date	Time	Matrix	PCDD/F by 1613B	Flashpoint by 1020B, pH by 9045D, Reactive Sulfide by 8030M	Reactive Cyanide by EPA 7.3.3.2	TCLP Metals, VOCs, SVOCs, Pesticides, Herbicides	TCLP extraction (EPA 1311)	Ignitibility, Flashpoint (SW1030) pH Corrosivity (EPA 9040)	Reactive Sulfides (SW 9034)		Extra Container	Archive	Comments
SL0538	0538	11/15/18	0847	SL	X										
SL0545	0545	11/14/18	1050	SL	X										
SL0546	0546	11/14/18	1105	SL	X										
SL0549	0549	11/15/18	1725	SL	X										
SL0550	0548	11/16/18	1730	SL	X										
SL0551	0549	11/15/18	1735	SL	X									X	homogenize well before Sampl
SL0548	0548	11/15/18	1504	SL											
SL0552	0550	11/15/18	1740	SL	X										
SL0547	1645	11/15/18	1845	SL			X		X	X	X				

Relinquished by: [signature] 11/16/2018

Analysis Turn Time: Normal ✓ Rush **Rush Results Needed By:**

Shipped by: **Shipping Tracking No.**

Condition of Samples Upon Receipt: **Custody Seal Intact?**

Relinquished by: [signature] (signature) **Date/Time:** 11/16/18 0840 **Received by:** [signature] (signature) **Date/Time:**

Relinquished by: (signature) **Date/Time:** **Received by:** [signature] (signature) **Date/Time:** 11/16/18 1120

Matrix Code:	
GW - Groundwater	
SL - Soil	SW - Surface water
SD -Sediment	Other:

Special Instructions: If reactive sulfide is detected run sample for total sulfur by 9056A and total sulfate by 300M, For TCLP analyses use methods 601B/7470A for metals, 8260C for VOCs, 8270D for SVOCs, 8081B for pesticides, and 8015C for herbicides.

RELINQUISHED BY: [signature] 11/16/18 1700 RECEIVED BY: [signature] 11/20/18 1120

E1801057 5

Integral Consulting, Inc.
C1844-0501 North Impoundmnet

CHAIN OF CUSTODY FORM

Page 1 of 1

Project: C1844 - 0501 North Impoundment

Samplers: O. Hargrave

Integral Contact: Craig Hutchings
Phone 360-705-3354 ext 417

Ship to: Lab Name ALS - Houston
Address 10450 Stancliff Road
Suite 210
Houston, TX USA 77099
Contact Kristin Brown
Phone 281-575-2195

integral consulting inc.

ANALYSES REQUESTED

Sample No.	Tag #	Date	Time	Matrix	PCDD/F by 1613B	Flashpoint by 1020B, pH by 9045D, Reactive Sulfide by 9030M	Reactive Cyanide by EPA 7.3.3.2	TCLP Metals, VOCs, SVOCs, Pesticides, Herbicides					Extra Container	Archive	Comments
SL0553	0563	11/16/18	1120	SL	X										
SL0554	[illegible]	11/16/18	1650	SL		X	X	X							0098, 0104, 0105, 0096
SL0555	0599	11/16/18	1445	SL										X	Homogenize before sampling
SL0556	0039	11/16/18	1655	SL	X										
SL0557	0040	11/16/18	1700	SL	X										
SL0558	0041	11/16/18	1705	SL	X										
SL0559	0042	11/16/18	1710	SL	X										
SL0560	0043	11/16/18	1715	SL	X										

Analysis Turn Time: Normal ✓ Rush Rush Results Needed By:

Shipped by: Shipping Tracking No.

Matrix Code: GW - Groundwater; SL - Soil; SW - Surface water; SD -Sediment; Other:

Condition of Samples Upon Receipt: Custody Seal Intact?

Relinquished by: [signature] (signature) **Date/Time:** 11/17/18 0952 **Received by:** [signature] (signature) **Date/Time:** 11/17/18 0952

Relinquished by: _____ (signature) **Date/Time:** _____ **Received by:** _____ (signature) **Date/Time:** _____

Special Instructions: If reactive sulfide is detected run sample for total sulfur by 9056A and total sulfate by 300M. For TCLP analyses use methods 601B/7470A for metals, 8260C for VOCs, 8270D for SVOCs, 8081B for pesticides, and 8015C for herbicides.

3197 0.6
blue 2.8
blue 2.3
Red bucket 15.2
IR11 +0.4
C/F

RELINQUISHED BY: [signature] COREY G 11/20/18 1700 RECEIVED BY: [signature] 11/21/18 1120

5035 TERRATURES 1045

CHAIN OF CUSTODY FORM

Page 1 of 1

Project: C1887 - 0501 Southern Impoundment

Samplers: A. Lutey, O. Hargrave, C. Shaw, B. Petri

Integral Contact: Craig Hutchings
Phone 360-705-3354 ext 417

Ship to: Lab Name ALS - Houston
Address 10450 Stancliff Road
Suite 210
Houston, TX USA 77099
Contact Kristin Brown
Phone 281-575-2195

integral consulting inc.

ANALYSES REQUESTED

Sample No.	Tag #	Date	Time	Matrix	PCDD/F by 1613B	Flashpoint by 1020B, pH by 9045D, Reactive Sulfide by 9030M	Reactive Cyanide by EPA 7.3.3.2	TCLP Metals, VOCs, SVOCs, Pesticides, Herbicides	TPH-GRO by 8015C	TPH-DRO by 8015C	PCB Aroclors by 8082	Asbestos by 600/R-93-116	Extra Container	Archive	Comments
SL0148	0318	11/13/18	1150	SL										X	
SL0149	0319		1155											X	
SL0150	0320		1200											X	
SL0151	0321		1205											X	
SL0152	0322		1210											X	
SL0153	0418		1215		X	X	X	X	X	X	X	X			0419, 0420, 0421, 0422, 0423, 0424, 0425
SL0154	0323		1415											X	
SL0155	0324		1420											X	
SL0156	0325		1425											X	
SL0157	0326		1430											X	
SL0158	0327		1435											X	
SL0159	0328		1520											X	
SL0160	0329		1525											X	
SL0161	0330		1530											X	
SL0162	0574		1535											X	
SL0163	0575		1540											X	
SL0164	0426		1545		X										
SL0141	0210		0940											X	
SL0142	0314		0945											X	
SL0143	0315		0950											X	

Analysis Turn Time: Normal ✓ Rush **Rush Results Needed By:**

Shipped by: **Shipping Tracking No.**

Condition of Samples Upon Receipt: **Custody Seal Intact?**

Matrix Code: GW - Groundwater; SL - Soil; SW - Surface water; SD - Sediment; Other:

Relinquished by: Amber Lutey (signature) **Date/Time:** 11/14/18 0925 **Received by:** [signature] (signature) **Date/Time:** 11-14-18 0527

Relinquished by: (signature) **Date/Time:** **Received by:** LH 11/14/18 1212 (signature) **Date/Time:**

Special Instructions: If reactive sulfide is detected run sample for total sulfur by 9056A and total sulfate by 300M, For TCLP analyses use methods 601B/7470A for metals, 8260C for VOCs, 8270D for SVOCs, 8081B for pesticides, and 8015C for herbicides.

RELINQUISHED BY [signature] LUTEY 4 11/20/18 1700 RECEIVED BY [signature] 11/21/18 1170

1045

CHAIN OF CUSTODY FORM

Page 1 of 1

Project: C1887 - 0501 Southern Impoundment

Samplers: A. Lutey, O. Hargrave, C. Shaw, B. Petri

Integral Contact: Craig Hutchings
Phone 360-705-3354 ext 417

Ship to: Lab Name ALS - Houston
Address 10450 Stancliff Road
Suite 210
Houston, TX USA 77099
Contact Kristin Brown
Phone 281-575-2195

integral consulting inc.

ANALYSES REQUESTED

Sample No.	Tag #	Date	Time	Matrix	PCDD/F by 1613B	Flashpoint by 1020B, pH by 9045D, Reactive Sulfide by 9030M	Reactive Cyanide by EPA 7.3.3.2	TCLP Metals, VOCs, SVOCs, Pesticides, Herbicides	TPH-GRO by 8015C	TPH-DRO by 8015C	PCB Aroclors by 8082	Asbestos by 600/R-93-116	Extra Container	Archive	Comments
SL0148	0318	11/13/18	1150	SL										X	
SL0149	0319		1155											X	
SL0150	0320		1200											X	
SL0151	0321		1205											X	
SL0152	0322		1210											X	
SL0153	0418		1215		X	X	X	X	X	X	X	X			0419, 0420, 0421, 0422, 0423, 0424, 0425
SL0154	0323		1415											X	
SL0155	0324		1420											X	
SL0156	0325		1425											X	
SL0157	0326		1430											X	
SL0158	0327		1435											X	
SL0159	0328		1520											X	
SL0160	0329		1525											X	
SL0161	0330		1530											X	
SL0162	0574		1535											X	
SL0163	0575		1540											X	
SL0164	0426		1545		X										
SL0141	0210		0940											X	
SL0142	0314		0945											X	
SL0143	0315		0950											X	

Analysis Turn Time: Normal ✓ Rush Rush Results Needed By:

Shipped by: Shipping Tracking No.

Condition of Samples Upon Receipt: Custody Seal Intact?

Matrix Code: GW - Groundwater; SL - Soil; SW - Surface water; SD - Sediment; Other:

Relinquished by: Amber Lutey (signature) **Date/Time:** 11/14/18 0925 **Received by:** [signature] (signature) **Date/Time:** 11-14-18 0527

Relinquished by: (signature) **Date/Time:** **Received by:** CL 11/14/18 1212 (signature) **Date/Time:**

Special Instructions: If reactive sulfide is detected run sample for total sulfur by 9056A and total sulfate by 300M. For TCLP analyses use methods 601B/7470A for metals, 8260C for VOCs, 8270D for SVOCs, 8081B for pesticides, and 8015C for herbicides.

RELINQUISHED BY: CURET G 11/20/18 1700 RECEIVED BY: [signature] 11/21/18 1120

SBS TERRACON? 1045

CHAIN OF CUSTODY FORM

integral consulting inc.

Project: C1887 - 0501 Southern Impoundment

Samplers: A. Lutey, O. Hamman, C. Shaw, B. Petri

Integral Contact: Craig Hutchings
Phone 360-705-3354 ext 417

Ship to: Lab Name ALS - Houston
Address 10450 Stancliff Road
Suite 210
Houston, TX USA 77099
Contact Kristin Brown
Phone 281-575-2195

Sample No.	Tag #	Date	Time	Matrix	PCDD/F by 1613B	Flashpoint by 1020B, pH by 9045D, Reactive Sulfide by 9030M	Reactive Cyanide by EPA 7.3.3.2	TCLP Metals, VOCs, SVOCs, Pesticides, Herbicides	TPH-GRO by 8015C	TPH-DRO by 8015C	PCB Aroclors by 8082	Asbestos by 600/R-93-116	Extra Container	Archive	Comments
SL0144	0316	11/13/18	0955	SL										X	
SL0145	0317	↓	1000											X	
SL0146	0306	↓	1005		X	X	X	X	X	X		X			0302, 0303, 0309, 0310, 0311, 0312, 0313
SL0136	0205	11/12/18	1525											X	
SL0137	0206	↓	1530											X	
SL0138	0207	↓	1535											X	
SL0139	0208	↓	1540											X	
SL0140	0209	↓	1545											X	
SL0131	0217	↓	1405											X	
SL0132	0239	↓	1410											X	
SL0133	0237	↓	1415											X	
SL0134	0240	↓	1420											X	
SL0135	0204	↓	1425											X	
SL0147	0400	11/13/18	1010			X									only analyze EPA 9010

Analysis Turn Time: Normal ✓ Rush **Rush Results Needed By:**

Shipped by: **Shipping Tracking No.**

Condition of Samples Upon Receipt: **Custody Seal Intact?**

Matrix Code:	
GW - Groundwater	
SL - Soil	SW - Surface water
SD -Sediment	Other:

Relinquished by: Amber Lutey (signature) **Date/Time:** 11/14/18 0927 **Received by:** Kristin Brown (signature) **Date/Time:** 11-14-18 0927

Relinquished by: _____ (signature) **Date/Time:** _____ **Received by:** CH 11/14/18 12:2 (signature) **Date/Time:** _____

Special Instructions: If reactive sulfide is detected run sample for total sulfur by 9056A and total sulfate by 300M, For TCLP analyses use methods 601B/7470A for metals, 8260C for VOCs, 8270D for SVOCs, 8081B for pesticides, and 8015C for herbicides.

RELINQUISHED BY: CHRIS G 11/20/18 1700 RECEIVED BY: 11/21/18 1120

1045

CHAIN OF CUSTODY FORM

Project: C1887 - 0501 Southern Impoundment

Samplers: A. Lutey, A. Hargrave, C. Shaw, B. Petri

integral consulting inc.

Integral Contact: Craig Hutchings
Phone 360-705-3354 ext 417

Ship to: Lab Name ALS - Houston
Address 10450 Stancliff Road
Suite 210
Houston, TX USA 77099
Contact Kristin Brown
Phone 281-575-2195

Sample No.	Tag #	Date	Time	Matrix	PCDD/F by 1613B	Flashpoint by 1020B, pH by 9045D, Reactive Sulfide by 9030M	Reactive Cyanide by EPA 7.3.3.2	TCLP Metals, VOCs, SVOCs, Pesticides, Herbicides	TPH-GRO by 8015C	TPH-DRO by 8015C	PCB Aroclors by 8082	Asbestos by 600/R-93-116	Extra Container	Archive	Comments
SL0144	0316	11/13/18	0955	SL										X	
SL0145	0317	↓	1000											X	
SL0146	0306	↓	1005		X	X	X	X	X	X		X			0302, 0303, 0309, 0310, 0311, 0312, 0313
SL0136	0205	11/12/18	1525											X	
SL0137	0206	↓	1530											X	
SL0138	0207	↓	1535											X	
SL0139	0208	↓	1540											X	
SL0140	0209	↓	1545											X	
SL0131	0217	↓	1405											X	
SL0132	0239	↓	1410											X	
SL0133	0237	↓	1415											X	
SL0134	0240	↓	1420											X	
SL0135	0204	↓	1425											X	
SL0147	0400	11/13/18	1010			X									DO NOT analyze EPA 9040

Analysis Turn Time: Normal ✓ Rush **Rush Results Needed By:**

Shipped by: **Shipping Tracking No.**

Condition of Samples Upon Receipt: **Custody Seal Intact?**

Matrix Code:	
GW - Groundwater	
SL - Soil	SW - Surface water
SD - Sediment	Other:

Relinquished by: Amber Lutey (signature) **Date/Time:** 11/14/18 0927 **Received by:** Paul Adone (signature) **Date/Time:** 11-14-18 0927

Relinquished by: (signature) **Date/Time:** **Received by:** CH 11/14/18 1212 (signature) **Date/Time:**

Special Instructions: If reactive sulfide is detected run sample for total sulfur by 9056A and total sulfate by 300M, For TCLP analyses use methods 6010B/7470A for metals, 8260C for VOCs, 8270D for SVOCs, 8081B for pesticides, and 8015C for herbicides.

RELINQUISHED BY: 11/21/18 1700 RECEIVED BY: 11/21/18

ALS

1738 PC MH

Cooler Receipt and Preservation Form

Client Internal Service Request *K18* ~~H381~~

Received: 11/21/18 Opened: 11/21/18 By: BR Unloaded: 11/21/18 By: BR

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? Front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
-5.5	-5.5	FROZEN	0.0	0.0	352	2/2	438095348280	
-0.2	-0.3	0.9	0.6	-0.1	358	1/2	438095348270	

4. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* (*Wet Ice*) (*Dry Ice*) *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	11/15/18 - 11/16/18
Sample Matrix:	Soil	**Date Received:**	11/21/18
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	Dry

Solids, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
SL0547	K1811438-001	**67.1**	-	-	1	11/26/18 16:30	
SL0554	K1811438-002	**70.0**	-	-	1	11/26/18 16:30	

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	11/15/18 - 11/16/18
Sample Matrix:	Soil	**Date Received:**	11/21/18
Analysis Method:	1020A Modified	**Units:**	deg C
Prep Method:	None	**Basis:**	Dry

Flash Point

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
SL0547	K1811438-001	**>110**	-	-	1	12/13/18 08:45	
SL0554	K1811438-002	**>110**	-	-	1	12/13/18 08:45	
Method Blank	K1811438-MB	**>110**	-	-	1	12/13/18 08:45	

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	12/13/18
Sample Matrix:	Soil	**Date Extracted:**	NA

Lab Control Sample Summary
Flash Point

Analysis Method:	1020A Modified	**Units:**	deg C
Prep Method:	None	**Basis:**	Dry
		Analysis Lot:	618614

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1811438-LCS1	27.0	27.0	100	85-115

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	11/15/18 - 11/16/18
Sample Matrix:	Soil	**Date Received:**	11/21/18
Analysis Method:	9034 Modified	**Units:**	mg/Kg
Prep Method:	SW-846 Ch 7, 7.3.4.2	**Basis:**	Dry

Sulfide, Reactive

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
SL0547	K1811438-001	ND U	48	-	1	11/29/18 13:30	11/29/18	
SL0554	K1811438-002	ND U	46	-	1	11/29/18 13:30	11/29/18	
Method Blank	K1811438-MB	ND U	32	-	1	11/29/18 13:30	11/29/18	

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project	San Jacinto/C1844-0501	**Date Collected:**	11/15/18
Sample Matrix:	Soil	**Date Received:**	11/21/18
		Date Analyzed:	11/29/18

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	SL0547	**Units:**	mg/Kg
Lab Code:	K1811438-001	**Basis:**	Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample K1811438-001DUP Result	Average	RPD	RPD Limit
Sulfide, Reactive	9034 Modified	48	-	ND U	ND U	NC	NC	20

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

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

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

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	11/29/18
Sample Matrix:	Soil	**Date Extracted:**	11/29/18

Lab Control Sample Summary
Sulfide, Reactive

Analysis Method:	9034 Modified	**Units:**	mg/Kg
Prep Method:	SW-846 Ch 7, 7.3.4.2	**Basis:**	Dry
		Analysis Lot:	616914

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1811438-LCS1	761	802	95	60-130
Lab Control Sample	K1811438-LCS2	761	802	95	60-130
Lab Control Sample	K1811438-LCS3	761	802	95	60-130
Lab Control Sample	K1811438-LCS4	745	802	93	60-130

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	11/15/18 - 11/16/18
Sample Matrix:	Soil	**Date Received:**	11/21/18
Analysis Method:	9045D	**Units:**	pH Units
Prep Method:	None	**Basis:**	Dry

pH

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
SL0547	K1811438-001	**8.09**	-	-	1	11/27/18 16:00	H
SL0554	K1811438-002	**8.54**	-	-	1	11/27/18 16:02	H

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project	San Jacinto/C1844-0501	**Date Collected:**	11/15/18
Sample Matrix:	Soil	**Date Received:**	11/21/18
		Date Analyzed:	11/27/18

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	SL0547	**Units:**	pH Units
Lab Code:	K1811438-001	**Basis:**	Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample K1811438-001DUP Result	Average	RPD	RPD Limit
pH	9045D	-	-	8.09	8.04	8.07	<1	20

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

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

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

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	11/27/18
Sample Matrix:	Soil	**Date Extracted:**	NA

Lab Control Sample Summary
pH

Analysis Method:	9045D	**Units:**	pH Units
Prep Method:	None	**Basis:**	Dry
		Analysis Lot:	616345

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1811438-LCS1	8.59	8.64	99	85-115

Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	11/15/18 18:45
Sample Matrix:	Soil	**Date Received:**	11/21/18 11:20
Sample Name:	SL0547	**Basis:**	NA
Lab Code:	K1811438-001		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	**0.021 J**	mg/L	0.050	0.020	5	12/10/18 13:58	11/27/18	
Barium	6010C	**1.6**	mg/L	1.0	0.5	5	12/10/18 13:58	11/27/18	
Cadmium	6010C	**0.002 J**	mg/L	0.050	0.001	5	12/10/18 13:58	11/27/18	
Chromium	6010C	ND U	mg/L	0.050	0.010	5	12/10/18 13:58	11/27/18	
Lead	6010C	ND U	mg/L	0.050	0.015	5	12/10/18 13:58	11/27/18	
Mercury	7470A	ND U	mg/L	0.0010	0.0001	1	12/04/18 11:34	11/29/18	
Selenium	6010C	ND U	mg/L	0.10	0.02	5	12/10/18 13:58	11/27/18	
Silver	6010C	ND U	mg/L	0.050	0.004	5	12/10/18 13:58	11/27/18	

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	11/16/18 16:50
Sample Matrix:	Soil	**Date Received:**	11/21/18 11:20
Sample Name:	SL0554	**Basis:**	NA
Lab Code:	K1811438-002		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND U	mg/L	0.050	0.020	5	12/10/18 13:22	11/27/18	
Barium	6010C	**1.4**	mg/L	1.0	0.5	5	12/10/18 13:22	11/27/18	
Cadmium	6010C	**0.001 J**	mg/L	0.050	0.001	5	12/10/18 13:22	11/27/18	
Chromium	6010C	ND U	mg/L	0.050	0.010	5	12/10/18 13:22	11/27/18	
Lead	6010C	ND U	mg/L	0.050	0.015	5	12/10/18 13:22	11/27/18	
Mercury	7470A	ND U	mg/L	0.0010	0.0001	1	12/04/18 10:54	11/29/18	
Selenium	6010C	**0.02 J**	mg/L	0.10	0.02	5	12/10/18 13:22	11/27/18	
Silver	6010C	ND U	mg/L	0.050	0.004	5	12/10/18 13:22	11/27/18	

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	KQ1817274-02		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND U	mg/L	0.050	0.020	5	12/10/18 13:02	11/27/18	
Barium	6010C	ND U	mg/L	1.0	0.5	5	12/10/18 13:02	11/27/18	
Cadmium	6010C	ND U	mg/L	0.050	0.001	5	12/10/18 13:02	11/27/18	
Chromium	6010C	ND U	mg/L	0.050	0.010	5	12/10/18 13:02	11/27/18	
Lead	6010C	ND U	mg/L	0.050	0.015	5	12/10/18 13:02	11/27/18	
Selenium	6010C	ND U	mg/L	0.10	0.02	5	12/10/18 13:02	11/27/18	
Silver	6010C	ND U	mg/L	0.050	0.004	5	12/10/18 13:02	11/27/18	

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	KQ1817275-02		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND U	mg/L	0.050	0.020	5	12/10/18 13:54	11/27/18	
Barium	6010C	ND U	mg/L	1.0	0.5	5	12/10/18 13:54	11/27/18	
Cadmium	6010C	ND U	mg/L	0.050	0.001	5	12/10/18 13:54	11/27/18	
Chromium	6010C	ND U	mg/L	0.050	0.010	5	12/10/18 13:54	11/27/18	
Lead	6010C	ND U	mg/L	0.050	0.015	5	12/10/18 13:54	11/27/18	
Selenium	6010C	ND U	mg/L	0.10	0.02	5	12/10/18 13:54	11/27/18	
Silver	6010C	ND U	mg/L	0.050	0.004	5	12/10/18 13:54	11/27/18	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	KQ1817276-01		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7470A	ND U	mg/L	0.0010	0.0001	1	12/04/18 10:43	11/29/18	

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	KQ1817277-01		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7470A	ND U	mg/L	0.0010	0.0001	1	12/04/18 11:30	11/29/18	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project	San Jacinto/C1844-0501	**Date Collected:**	11/15/18
Sample Matrix:	Soil	**Date Received:**	11/21/18
		Date Analyzed:	12/10/18

Replicate Sample Summary
TCLP Metals

Sample Name:	SL0547	**Units:**	mg/L
Lab Code:	K1811438-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ1817275-03 Result	Average	RPD	RPD Limit
Arsenic	6010C	0.050	0.020	0.021 J	ND U	NC	NC	20
Barium	6010C	1.0	0.5	1.6	1.7	1.7	6	20
Cadmium	6010C	0.050	0.001	0.002 J	0.002 J	0.002	<1	20
Chromium	6010C	0.050	0.010	ND U	ND U	ND	-	20
Lead	6010C	0.050	0.015	ND U	ND U	ND	-	20
Selenium	6010C	0.10	0.02	ND U	ND U	ND	-	20
Silver	6010C	0.050	0.004	ND U	ND U	ND	-	20

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

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

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

Printed 1/17/2019 12:05:32 PM Superset Reference:

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project	San Jacinto/C1844-0501	**Date Collected:**	11/15/18
Sample Matrix:	Soil	**Date Received:**	11/21/18
		Date Analyzed:	12/04/18

Replicate Sample Summary
TCLP Metals

Sample Name:	SL0547	**Units:**	mg/L
Lab Code:	K1811438-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ1817277-03 Result	Average	RPD	RPD Limit
Mercury	7470A	0.0010	0.0001	ND U	ND U	ND	-	20

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

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

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

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	11/15/18
Sample Matrix:	Soil	**Date Received:**	11/21/18
		Date Analyzed:	12/10/18
		Date Extracted:	11/27/18

Matrix Spike Summary
TCLP Metals

Sample Name:	SL0547	**Units:**	mg/L
Lab Code:	K1811438-001	**Basis:**	NA
Analysis Method:	6010C		
Prep Method:	EPA 3010A		

Matrix Spike
KQ1817275-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.021 J	4.82	5.00	96	75-125
Barium	1.6	11.6	10.0	99	75-125
Cadmium	0.002 J	0.969	1.00	97	75-125
Chromium	ND U	4.73	5.00	95	75-125
Lead	ND U	4.68	5.00	94	75-125
Selenium	ND U	0.96	1.00	96	75-125
Silver	ND U	0.836	1.00	84	75-125

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

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

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

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Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	11/15/18
Sample Matrix:	Soil	**Date Received:**	11/21/18
		Date Analyzed:	12/4/18
		Date Extracted:	11/29/18

Matrix Spike Summary
TCLP Metals

Sample Name:	SL0547	**Units:**	mg/L
Lab Code:	K1811438-001	**Basis:**	NA
Analysis Method:	7470A		
Prep Method:	Method		

Matrix Spike
KQ1817277-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Mercury	ND U	0.0049	0.0050	98	75-125

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

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

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

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Integral Consulting, Incorporated
Project: San Jacinto/C1844-0501
Sample Matrix: Soil

Service Request: K1811438
Date Analyzed: 12/10/18

Lab Control Sample Summary
TCLP Metals

Units:mg/L
Basis:NA

Lab Control Sample
KQ1817274-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6010C	4.58	5.00	92	80-120
Barium	6010C	9.0	10.0	90	80-120
Cadmium	6010C	0.901	1.00	90	80-120
Chromium	6010C	4.41	5.00	88	80-120
Lead	6010C	4.24	5.00	85	80-120
Selenium	6010C	0.90	1.00	90	80-120
Silver	6010C	0.810	1.00	81	80-120

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Integral Consulting, Incorporated
Project: San Jacinto/C1844-0501
Sample Matrix: Soil

Service Request: K1811438
Date Analyzed: 12/10/18

Lab Control Sample Summary
TCLP Metals

Units:mg/L
Basis:NA

Lab Control Sample
KQ1817275-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6010C	4.95	5.00	99	80-120
Barium	6010C	9.8	10.0	98	80-120
Cadmium	6010C	0.960	1.00	96	80-120
Chromium	6010C	4.62	5.00	92	80-120
Lead	6010C	4.85	5.00	97	80-120
Selenium	6010C	0.97	1.00	97	80-120
Silver	6010C	0.982	1.00	98	80-120

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Integral Consulting, Incorporated
Project: San Jacinto/C1844-0501
Sample Matrix: Soil

Service Request: K1811438
Date Analyzed: 12/04/18

Lab Control Sample Summary
TCLP Metals

Units:mg/L
Basis:NA

Lab Control Sample
KQ1817276-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7470A	0.0048	0.0050	95	80-120

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Integral Consulting, Incorporated
Project: San Jacinto/C1844-0501
Sample Matrix: Soil

Service Request: K1811438
Date Analyzed: 12/04/18

Lab Control Sample Summary
TCLP Metals

Units:mg/L
Basis:NA

Lab Control Sample
KQ1817277-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7470A	0.0048	0.0050	96	80-120

Prep Summary Report

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501
Sample Matrix: Soil

Metals

Prep Method: EPA 3010A **Extraction Lot:** 327150
Analytical Method: 6010C **Extraction Date:** 11/27/18 12:09

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
SL0547	K1811438-001	11/15/18	11/21/18	25 mL	25 mL	
Lab Control Sample	KQ1817275-01LCS	NA	NA	25 mL	25 mL	
Method Blank	KQ1817275-02MB	NA	NA	25 mL	25 mL	
Duplicate	KQ1817275-03DUP	11/15/18	11/21/18	25 mL	25 mL	
Matrix Spike	KQ1817275-04MS	11/15/18	11/21/18	25 mL	25 mL	

Prep Summary Report

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501
Sample Matrix: Soil

Metals

Prep Method: EPA 3010A **Extraction Lot:** 327149
Analytical Method: 6010C **Extraction Date:** 11/27/18 12:09

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
SL0554	K1811438-002	11/16/18	11/21/18	25 mL	25 mL	
Lab Control Sample	KQ1817274-01LCS	NA	NA	25 mL	25 mL	
Method Blank	KQ1817274-02MB	NA	NA	25 mL	25 mL	

Prep Summary Report

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501
Sample Matrix: Soil

Metals

Prep Method: Method **Extraction Lot:** 327152
Analytical Method: 7470A **Extraction Date:** 11/29/18 12:30

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
SL0547	K1811438-001	11/15/18	11/21/18	20 mL	20 mL	
Method Blank	KQ1817277-01MB	NA	NA	20 mL	20 mL	
Lab Control Sample	KQ1817277-02LCS	NA	NA	20 mL	20 mL	
Duplicate	KQ1817277-03DUP	11/15/18	11/21/18	20 mL	20 mL	
Matrix Spike	KQ1817277-04MS	11/15/18	11/21/18	20 mL	20 mL	

Prep Summary Report

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501
Sample Matrix: Soil

Metals

Prep Method: Method **Extraction Lot:** 327151
Analytical Method: 7470A **Extraction Date:** 11/29/18 12:30

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
SL0554	K1811438-002	11/16/18	11/21/18	20 mL	20 mL	
Method Blank	KQ1817276-01MB	NA	NA	20 mL	20 mL	
Lab Control Sample	KQ1817276-02LCS	NA	NA	20 mL	20 mL	

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 12/04/18 10:35						
Mercury	7470A	617425	5.2	5.0	104	90-110
CCV 12/04/18 10:40						
Mercury	7470A	617425	5.2	5.0	105	90-110
CCV 12/04/18 10:59						
Mercury	7470A	617425	5.1	5.0	102	90-110
ICV 12/04/18 11:22						
Mercury	7470A	617433	5.2	5.0	104	90-110
CCV 12/04/18 11:27						
Mercury	7470A	617433	5.2	5.0	105	90-110
CCV 12/04/18 11:47						
Mercury	7470A	617433	5.2	5.0	104	90-110
ICV 12/10/18 09:10						
Arsenic	6010C	618090	2470	2500	99	90-110
Barium	6010C	618090	4800	5000	96	90-110
Cadmium	6010C	618090	1200	1250	96	90-110
Chromium	6010C	618090	454	500	91	90-110
Lead	6010C	618090	2390	2500	96	90-110
Selenium	6010C	618090	2440	2500	98	90-110
Silver	6010C	618090	587	625	94	90-110
CCVB 12/10/18 09:23						
Arsenic	6010C	618090	1000	1000	100	90-110
Barium	6010C	618090	10100	10000	101	90-110
CCVA 12/10/18 09:26						
Cadmium	6010C	618090	251	250	100	90-110
Chromium	6010C	618090	242	250	97	90-110
Lead	6010C	618090	250	250	100	90-110
Selenium	6010C	618090	250	250	100	90-110
Silver	6010C	618090	252	250	101	90-110
CCVB 12/10/18 10:15						
Arsenic	6010C	618090	1030	1000	103	90-110
Barium	6010C	618090	9700	10000	97	90-110
CCVA 12/10/18 10:17						
Cadmium	6010C	618090	248	250	99	90-110
Chromium	6010C	618090	238	250	95	90-110
Lead	6010C	618090	249	250	100	90-110
Selenium	6010C	618090	257	250	103	90-110

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCVA 12/10/18 10:17						
Silver	6010C	618090	257	250	103	90-110
CCVB 12/10/18 10:48						
Arsenic	6010C	618090	1020	1000	102	90-110
Barium	6010C	618090	9690	10000	97	90-110
CCVA 12/10/18 10:50						
Cadmium	6010C	618090	249	250	100	90-110
Chromium	6010C	618090	236	250	94	90-110
Lead	6010C	618090	248	250	99	90-110
Selenium	6010C	618090	253	250	101	90-110
Silver	6010C	618090	252	250	101	90-110
CCVB 12/10/18 11:23						
Arsenic	6010C	618090	1040	1000	104	90-110
Barium	6010C	618090	9960	10000	100	90-110
CCVA 12/10/18 11:25						
Cadmium	6010C	618090	249	250	100	90-110
Chromium	6010C	618090	239	250	96	90-110
Lead	6010C	618090	249	250	100	90-110
Selenium	6010C	618090	253	250	101	90-110
Silver	6010C	618090	259	250	104	90-110
CCVB 12/10/18 12:03						
Arsenic	6010C	618090	1040	1000	104	90-110
Barium	6010C	618090	9830	10000	98	90-110
CCVA 12/10/18 12:06						
Cadmium	6010C	618090	251	250	100	90-110
Chromium	6010C	618090	249	250	100	90-110
Lead	6010C	618090	248	250	99	90-110
Selenium	6010C	618090	253	250	101	90-110
Silver	6010C	618090	247	250	99	90-110
CCVB 12/10/18 12:26						
Arsenic	6010C	618090	1040	1000	104	90-110
Barium	6010C	618090	10100	10000	101	90-110
CCVA 12/10/18 12:29						
Cadmium	6010C	618090	250	250	100	90-110
Chromium	6010C	618090	243	250	97	90-110
Lead	6010C	618090	251	250	100	90-110
Selenium	6010C	618090	253	250	101	90-110

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCVA	12/10/18 12:29						
	Silver	6010C	618090	256	250	102	90-110
CCVB	12/10/18 13:27						
	Arsenic	6010C	618090	1040	1000	104	90-110
	Barium	6010C	618090	9890	10000	99	90-110
CCVA	12/10/18 13:30						
	Cadmium	6010C	618090	249	250	99	90-110
	Chromium	6010C	618090	232	250	93	90-110
	Lead	6010C	618090	249	250	100	90-110
	Selenium	6010C	618090	254	250	102	90-110
	Silver	6010C	618090	258	250	103	90-110
CCVB	12/10/18 14:08						
	Arsenic	6010C	618090	1030	1000	103	90-110
	Barium	6010C	618090	9690	10000	97	90-110
CCVA	12/10/18 14:11						
	Cadmium	6010C	618090	250	250	100	90-110
	Chromium	6010C	618090	237	250	95	90-110
	Lead	6010C	618090	249	250	100	90-110
	Selenium	6010C	618090	253	250	101	90-110
	Silver	6010C	618090	254	250	102	90-110
CCVB	12/10/18 14:23						
	Arsenic	6010C	618090	1070	1000	107	90-110
	Barium	6010C	618090	10000	10000	100	90-110
CCVA	12/10/18 14:25						
	Cadmium	6010C	618090	253	250	101	90-110
	Chromium	6010C	618090	248	250	99	90-110
	Lead	6010C	618090	251	250	100	90-110
	Selenium	6010C	618090	255	250	102	90-110
	Silver	6010C	618090	253	250	101	90-110

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 12/04/18 10:37				
Mercury	7470A	617425	1.0	U
CCB 12/04/18 10:42				
Mercury	7470A	617425	1.0	U
CCB 12/04/18 11:01				
Mercury	7470A	617425	1.0	U
ICB 12/04/18 11:24				
Mercury	7470A	617433	1.0	U
CCB 12/04/18 11:29				
Mercury	7470A	617433	1.0	U
CCB 12/04/18 11:48				
Mercury	7470A	617433	1.0	U
ICB 12/10/18 09:12				
Arsenic	6010C	618090	5	U
Barium	6010C	618090	0.9	U
Cadmium	6010C	618090	0.4	U
Chromium	6010C	618090	2	U
Lead	6010C	618090	3	U
Selenium	6010C	618090	7	U
Silver	6010C	618090	2	U
CCB 12/10/18 09:28				
Arsenic	6010C	618090	4	U
Barium	6010C	618090	100	U
Cadmium	6010C	618090	0.2	U
Chromium	6010C	618090	2	U
Lead	6010C	618090	3	U
Selenium	6010C	618090	4	U
Silver	6010C	618090	0.8	U
CCB 12/10/18 10:20				
Arsenic	6010C	618090	4	U
Barium	6010C	618090	100	U
Cadmium	6010C	618090	0.2	U
Chromium	6010C	618090	2	U
Lead	6010C	618090	3	U
Selenium	6010C	618090	4	U
Silver	6010C	618090	0.8	U

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/10/18 10:52				
Arsenic	6010C	618090	4	U
Barium	6010C	618090	100	U
Cadmium	6010C	618090	0.2	U
Chromium	6010C	618090	2	U
Lead	6010C	618090	3	U
Selenium	6010C	618090	4	U
Silver	6010C	618090	0.8	U
CCB 12/10/18 11:32				
Arsenic	6010C	618090	4	U
Barium	6010C	618090	100	U
Cadmium	6010C	618090	0.2	U
Chromium	6010C	618090	2	U
Lead	6010C	618090	3	U
Selenium	6010C	618090	4	U
Silver	6010C	618090	0.8	U
CCB 12/10/18 12:11				
Arsenic	6010C	618090	4	U
Barium	6010C	618090	100	U
Cadmium	6010C	618090	0.2	U
Chromium	6010C	618090	2	U
Lead	6010C	618090	3	U
Selenium	6010C	618090	4	U
Silver	6010C	618090	0.8	U
CCB 12/10/18 12:31				
Arsenic	6010C	618090	4	U
Barium	6010C	618090	100	U
Cadmium	6010C	618090	0.2	U
Chromium	6010C	618090	2	U
Lead	6010C	618090	3	U
Selenium	6010C	618090	4	U
Silver	6010C	618090	0.8	U
CCB 12/10/18 13:32				
Arsenic	6010C	618090	4	U
Barium	6010C	618090	100	U
Cadmium	6010C	618090	0.2	U
Chromium	6010C	618090	2	U

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/10/18 13:32				
Lead	6010C	618090	3	U
Selenium	6010C	618090	4	U
Silver	6010C	618090	-0.800	J
CCB 12/10/18 14:13				
Arsenic	6010C	618090	4	U
Barium	6010C	618090	100	U
Cadmium	6010C	618090	0.2	U
Chromium	6010C	618090	2	U
Lead	6010C	618090	3	U
Selenium	6010C	618090	4	U
Silver	6010C	618090	0.8	U
CCB 12/10/18 14:28				
Arsenic	6010C	618090	4	U
Barium	6010C	618090	100	U
Cadmium	6010C	618090	0.2	J
Chromium	6010C	618090	2	U
Lead	6010C	618090	3	U
Selenium	6010C	618090	4	U
Silver	6010C	618090	0.8	U

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICV							
Mercury	7470A	617425	0.18	0.2	90	50-199	12/04/18 10:38
LLICV							
Mercury	7470A	617433	0.20	0.2	98	50-199	12/04/18 11:25
LLICV							
Arsenic	6010C	618090	10.2	10.0	102	70-130	12/10/18 09:17
Cadmium	6010C	618090	1.0	1.0	100	70-130	12/10/18 09:17
Chromium	6010C	618090	3.9	4.0	98	70-130	12/10/18 09:17
Lead	6010C	618090	8.2	10.0	82	70-130	12/10/18 09:17
Selenium	6010C	618090	20.7	20.0	104	70-130	12/10/18 09:17
Silver	6010C	618090	4.0	4.0	100	70-130	12/10/18 09:17
LLICV							
Barium	6010C	618090	201	200	101	70-130	12/10/18 09:31
LLCCV							
Arsenic	6010C	618090	12.2	10.0	122	70-130	12/10/18 14:30
Cadmium	6010C	618090	1.1	1.0	110	70-130	12/10/18 14:30
Chromium	6010C	618090	3.6	4.0	90	70-130	12/10/18 14:30
Lead	6010C	618090	9.4	10.0	94	70-130	12/10/18 14:30
Selenium	6010C	618090	22.0	20.0	110	70-130	12/10/18 14:30
Silver	6010C	618090	3.1	4.0	78	70-130	12/10/18 14:30
LLCCV							
Barium	6010C	618090	188	200	94	70-130	12/10/18 14:38

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

ICP INTERFERENCE CHECK SAMPLE

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

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Arsenic	6010C	618090	5	-	-	-	12/10/18 09:34
Barium	6010C	618090	0.9	-	-	-	12/10/18 09:34
Cadmium	6010C	618090	-5.50	-	-	-	12/10/18 09:34
Chromium	6010C	618090	2	-	-	-	12/10/18 09:34
Lead	6010C	618090	-10.3	-	-	-	12/10/18 09:34
Selenium	6010C	618090	7	-	-	-	12/10/18 09:34
Silver	6010C	618090	2	-	-	-	12/10/18 09:34

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSAB **Concentration Units:** ug/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Arsenic	6010C	618090	5	-	-	-	12/10/18 09:37
Barium	6010C	618090	540	500	108	80-120	12/10/18 09:37
Cadmium	6010C	618090	929	1000	93	80-120	12/10/18 09:37
Chromium	6010C	618090	489	500	98	80-120	12/10/18 09:37
Lead	6010C	618090	874	1000	87	80-120	12/10/18 09:37
Selenium	6010C	618090	7	-	-	-	12/10/18 09:37
Silver	6010C	618090	908	1000	91	80-120	12/10/18 09:37

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

POST SPIKE SAMPLE RECOVERY

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Initial Sample Result	Post Spike Result	True Value	% Rec	% Rec. Limits	Analysis Date
K1811438-001A								
Mercury	7470A	617433	1.0 U	4.9	5.0	98	85-115	12/04/18 11:35
K1811438-001A								
Arsenic	6010C	618090	0.03 U	4760	5000	95	80-120	12/10/18 14:18
Barium	6010C	618090	0.7 U	10000	10000	97	80-120	12/10/18 14:18
Cadmium	6010C	618090	0.001 U	958	1000	96	80-120	12/10/18 14:18
Chromium	6010C	618090	0.02 U	4780	5000	96	80-120	12/10/18 14:18
Lead	6010C	618090	0.02 U	4660	5000	96	80-120	12/10/18 14:18
Selenium	6010C	618090	0.03 U	940	1000	93	80-120	12/10/18 14:18
Silver	6010C	618090	0.006 U	831	1000	93	80-120	12/10/18 14:18

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

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

ICP SERIAL DILUTIONS

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Initial Sample Result	Serial Dillution Result	% Diff	% Diff. Limit	Analysis Date
K1811438-001SDL							
Arsenic	6010C	618090	20	50 U	126	10	12/10/18 14:01
Barium	6010C	618090	1600	1600 U	0	10	12/10/18 14:01
Cadmium	6010C	618090	2	3 U	67	10	12/10/18 14:01
Chromium	6010C	618090	1	-10.0 U	1100	10	12/10/18 14:01
Lead	6010C	618090	10	-7.50 U	160	10	12/10/18 14:01
Selenium	6010C	618090	20	40 U	174	10	12/10/18 14:01
Silver	6010C	618090	1	-20.0 J	2100	10	12/10/18 14:01

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

Detection Limits

Instrument: K-CVAA-02 **Matrix:** Soil

Analyte	Wavelength (nm)	Units	MRL	MDL	Method
Mercury	253	ug/L	1.0	0.1	7470A

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

Detection Limits

Instrument: K-ICP-AES-03 **Matrix:** Soil

Analyte	Wavelength (nm)	Units	MRL	MDL	Method
Arsenic	1890	ug/L	10	4	6010C
Barium	4554	ug/L	200	100	6010C
Cadmium	2265	ug/L	10	0.2	6010C
Chromium	2677	ug/L	10	2	6010C
Lead	2203	ug/L	10	3	6010C
Selenium	1960	ug/L	20	4	6010C
Silver	3280	ug/L	10	0.8	6010C

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

ICP Linear Range (Quarterly)

Instrument: K-ICP-AES-03

Analyte	Concentration (ug/L)	Method
Arsenic 1890	90000	6010C
Barium 4554	45000	6010C
Cadmium 2265	23500	6010C
Chromium 2677	45000	6010C
Lead 2203	22500	6010C
Selenium 1960	45000	6010C
Silver 3280	1800	6010C

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

Analysis Run Log

Instrument ID: **K-CVAA-02** **Analytical BatchID:** **617425**

Sample	Dilution Factor	Date/Time	Hg
ZZZZZZ	1	12/04/18 10:25	
ZZZZZZ	1	12/04/18 10:27	
ZZZZZZ	1	12/04/18 10:29	
ZZZZZZ	1	12/04/18 10:30	
ZZZZZZ	1	12/04/18 10:32	
ZZZZZZ	1	12/04/18 10:33	
ICV1	1	12/04/18 10:35	X
ICB1	1	12/04/18 10:37	X
LLICV1	1	12/04/18 10:38	X
CCV1	1	12/04/18 10:40	X
CCB1	1	12/04/18 10:42	X
KQ1817276-01MB	1	12/04/18 10:43	X
KQ1817276-02LCS	1	12/04/18 10:45	X
ZZZZZZ	1	12/04/18 10:46	
ZZZZZZ	1	12/04/18 10:48	
ZZZZZZ	1	12/04/18 10:50	
ZZZZZZ	1	12/04/18 10:51	
ZZZZZZ	1	12/04/18 10:53	
K1811438-002	1	12/04/18 10:54	X
ZZZZZZ	1	12/04/18 10:56	
ZZZZZZ	1	12/04/18 10:58	
CCV2	1	12/04/18 10:59	X
CCB2	1	12/04/18 11:01	X
ZZZZZZ	1	12/04/18 11:03	
ZZZZZZ	1	12/04/18 11:04	
ZZZZZZ	1	12/04/18 11:06	
ZZZZZZ	1	12/04/18 11:07	
ZZZZZZ	1	12/04/18 11:09	
ZZZZZZ	1	12/04/18 11:11	

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

Analysis Run Log

Instrument ID: **K-CVAA-02** **Analytical BatchID:** **617433**

Sample	Dilution Factor	Date/Time	Hg
ZZZZZZ	1	12/04/18 11:13	
ZZZZZZ	1	12/04/18 11:14	
ZZZZZZ	1	12/04/18 11:16	
ZZZZZZ	1	12/04/18 11:17	
ZZZZZZ	1	12/04/18 11:19	
ZZZZZZ	1	12/04/18 11:21	
ICV1	1	12/04/18 11:22	X
ICB1	1	12/04/18 11:24	X
LLICV1	1	12/04/18 11:25	X
CCV1	1	12/04/18 11:27	X
CCB1	1	12/04/18 11:29	X
KQ1817277-01MB	1	12/04/18 11:30	X
KQ1817277-02LCS	1	12/04/18 11:32	X
K1811438-001	1	12/04/18 11:34	X
K1811438-001PS	1	12/04/18 11:35	X
K1811438-001DUP	1	12/04/18 11:37	X
K1811438-001MS	1	12/04/18 11:38	X
ZZZZZZ	1	12/04/18 11:40	
ZZZZZZ	1	12/04/18 11:42	
ZZZZZZ	1	12/04/18 11:43	
ZZZZZZ	1	12/04/18 11:45	
CCV2	1	12/04/18 11:47	X
CCB2	1	12/04/18 11:48	X
ZZZZZZ	1	12/04/18 11:50	
ZZZZZZ	1	12/04/18 11:51	
ZZZZZZ	1	12/04/18 11:53	
ZZZZZZ	1	12/04/18 11:55	

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

Analysis Run Log

Instrument ID: **K-ICP-AES-03** **Analytical BatchID:** **618090**

Sample	Dilution Factor	Date/Time	As	Ba	Cd	Cr	Pb	Se	Ag
ZZZZZZ	1	12/10/18 09:00							
ZZZZZZ	1	12/10/18 09:02							
ZZZZZZ	1	12/10/18 09:04							
ZZZZZZ	1	12/10/18 09:07							
ICV	1	12/10/18 09:10	X	X	X	X	X	X	X
ICB	1	12/10/18 09:12	X	X	X	X	X	X	X
ZZZZZZ	1	12/10/18 09:15							
LLICV	1	12/10/18 09:17	X		X	X	X	X	X
ZZZZZZ	0.5	12/10/18 09:21							
CCVB1	1	12/10/18 09:23	X	X					
CCVA1	1	12/10/18 09:26			X	X	X	X	X
CCB	1	12/10/18 09:28	X	X	X	X	X	X	X
LLICV-TCLP	1	12/10/18 09:31		X					
ICSA	1	12/10/18 09:34	X	X	X	X	X	X	X
ICSAB	1	12/10/18 09:37	X	X	X	X	X	X	X
ZZZZZZ	1.111	12/10/18 09:49							
ZZZZZZ	100	12/10/18 09:52							
ZZZZZZ	100	12/10/18 09:54							
ZZZZZZ	100	12/10/18 09:57							
ZZZZZZ	100	12/10/18 09:59							
ZZZZZZ	1	12/10/18 10:02							
ZZZZZZ	1	12/10/18 10:05							
ZZZZZZ	1	12/10/18 10:07							
ZZZZZZ	1	12/10/18 10:10							
ZZZZZZ	1	12/10/18 10:12							
CCVB	1	12/10/18 10:15	X	X					
CCVA	1	12/10/18 10:17			X	X	X	X	X
CCB	1	12/10/18 10:20	X	X	X	X	X	X	X
ZZZZZZ	1	12/10/18 10:22							
ZZZZZZ	1	12/10/18 10:24							
ZZZZZZ	1	12/10/18 10:27							
ZZZZZZ	1	12/10/18 10:30							
ZZZZZZ	1	12/10/18 10:32							
ZZZZZZ	1	12/10/18 10:35							
ZZZZZZ	1	12/10/18 10:37							
ZZZZZZ	1	12/10/18 10:40							
ZZZZZZ	1	12/10/18 10:42							

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

Analysis Run Log

Instrument ID: **K-ICP-AES-03** **Analytical BatchID:** **618090**

Sample	Dilution Factor	Date/Time	As	Ba	Cd	Cr	Pb	Se	Ag
ZZZZZZ	1	12/10/18 10:45							
CCVB	1	12/10/18 10:48	X	X					
CCVA	1	12/10/18 10:50			X	X	X	X	X
CCB	1	12/10/18 10:52	X	X	X	X	X	X	X
ZZZZZZ	1.111	12/10/18 10:55							
ZZZZZZ	1.111	12/10/18 10:57							
ZZZZZZ	1.111	12/10/18 11:00							
ZZZZZZ	1.111	12/10/18 11:02							
ZZZZZZ	1	12/10/18 11:08							
ZZZZZZ	1	12/10/18 11:10							
ZZZZZZ	1	12/10/18 11:13							
ZZZZZZ	1	12/10/18 11:15							
ZZZZZZ	1	12/10/18 11:18							
ZZZZZZ	1	12/10/18 11:20							
CCVB	1	12/10/18 11:23	X	X					
CCVA	1	12/10/18 11:25			X	X	X	X	X
ZZZZZZ	1	12/10/18 11:28							
CCB	1	12/10/18 11:32	X	X	X	X	X	X	X
ZZZZZZ	1	12/10/18 11:35							
ZZZZZZ	1	12/10/18 11:38							
ZZZZZZ	1	12/10/18 11:40							
ZZZZZZ	1	12/10/18 11:43							
ZZZZZZ	1	12/10/18 11:45							
ZZZZZZ	1	12/10/18 11:48							
ZZZZZZ	1	12/10/18 11:50							
ZZZZZZ	1	12/10/18 11:53							
ZZZZZZ	1	12/10/18 11:56							
ZZZZZZ	1	12/10/18 11:58							
ZZZZZZ	1	12/10/18 12:01							
CCVB	1	12/10/18 12:03	X	X					
CCVA	1	12/10/18 12:06			X	X	X	X	X
ZZZZZZ	1	12/10/18 12:08							
CCB	1	12/10/18 12:11	X	X	X	X	X	X	X
ZZZZZZ	1	12/10/18 12:13							
ZZZZZZ	1	12/10/18 12:16							
ZZZZZZ	1	12/10/18 12:18							
ZZZZZZ	1	12/10/18 12:21							

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

Analysis Run Log

Instrument ID: **K-ICP-AES-03** **Analytical BatchID:** **618090**

Sample	Dilution Factor	Date/Time	As	Ba	Cd	Cr	Pb	Se	Ag
ZZZZZZ	1	12/10/18 12:23							
CCVB	1	12/10/18 12:26	X	X					
CCVA	1	12/10/18 12:29			X	X	X	X	X
CCB	1	12/10/18 12:31	X	X	X	X	X	X	X
ZZZZZZ	1	12/10/18 12:34							
ZZZZZZ	1	12/10/18 12:41							
ZZZZZZ	0.5	12/10/18 12:44							
KQ1817274-02MB	5	12/10/18 13:02	X	X	X	X	X	X	X
KQ1817274-01LCS	5	12/10/18 13:04	X	X	X	X	X	X	X
ZZZZZZ	5	12/10/18 13:07							
ZZZZZZ	25	12/10/18 13:09							
ZZZZZZ	5	12/10/18 13:12							
ZZZZZZ	5	12/10/18 13:15							
ZZZZZZ	5	12/10/18 13:17							
ZZZZZZ	5	12/10/18 13:20							
K1811438-002	5	12/10/18 13:22	X	X	X	X	X	X	X
ZZZZZZ	5	12/10/18 13:25							
CCVB	1	12/10/18 13:27	X	X					
CCVA	1	12/10/18 13:30			X	X	X	X	X
CCB	1	12/10/18 13:32	X	X	X	X	X	X	X
ZZZZZZ	5	12/10/18 13:35							
ZZZZZZ	5	12/10/18 13:37							
ZZZZZZ	5	12/10/18 13:40							
ZZZZZZ	5	12/10/18 13:42							
ZZZZZZ	5	12/10/18 13:51							
KQ1817275-02MB	5	12/10/18 13:54	X	X	X	X	X	X	X
KQ1817275-01LCS	5	12/10/18 13:56	X	X	X	X	X	X	X
K1811438-001	5	12/10/18 13:58	X	X	X	X	X	X	X
K1811438-001SDL	25	12/10/18 14:01	X	X	X	X	X	X	X
K1811438-001DUP	5	12/10/18 14:04	X	X	X	X	X	X	X
CCVB	1	12/10/18 14:08	X	X					
CCVA	1	12/10/18 14:11			X	X	X	X	X
CCB	1	12/10/18 14:13	X	X	X	X	X	X	X
K1811438-001MS	5	12/10/18 14:15	X	X	X	X	X	X	X
K1811438-001PS	5	12/10/18 14:18	X	X	X	X	X	X	X
KQ1817274-01LCS	5	12/10/18 14:20	X	X	X	X	X	X	X
CCVB	1	12/10/18 14:23	X	X					

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

Analysis Run Log

Instrument ID: **K-ICP-AES-03** **Analytical BatchID:** **618090**

Sample	Dilution Factor	Date/Time	As	Ba	Cd	Cr	Pb	Se	Ag
CCVA	1	12/10/18 14:25			X	X	X	X	X
CCB	1	12/10/18 14:28	X	X	X	X	X	X	X
LLCCV	1	12/10/18 14:30	X		X	X	X	X	X
ZZZZZZ	0.5	12/10/18 14:33							
LLCCV-TCLP	1	12/10/18 14:38		X					
ZZZZZZ	1	12/10/18 14:41							
ZZZZZZ	1	12/10/18 14:44							
ZZZZZZ	1	12/10/18 14:46							
ZZZZZZ	5	12/10/18 14:49							
ZZZZZZ	1	12/10/18 14:52							
ZZZZZZ	1	12/10/18 14:54							
ZZZZZZ	1	12/10/18 14:57							
ZZZZZZ	1	12/10/18 14:59							
ZZZZZZ	1	12/10/18 15:02							
ZZZZZZ	1	12/10/18 15:05							
ZZZZZZ	1	12/10/18 15:08							
ZZZZZZ	1	12/10/18 15:10							
ZZZZZZ	1	12/10/18 15:13							
ZZZZZZ	1	12/10/18 15:15							
ZZZZZZ	1	12/10/18 15:18							
ZZZZZZ	1	12/10/18 15:25							
ZZZZZZ	1	12/10/18 15:28							
ZZZZZZ	1	12/10/18 15:30							
ZZZZZZ	1	12/10/18 15:33							
ZZZZZZ	1	12/10/18 15:36							
ZZZZZZ	1	12/10/18 15:39							
ZZZZZZ	1	12/10/18 15:41							
ZZZZZZ	1	12/10/18 15:44							
ZZZZZZ	1	12/10/18 15:47							
ZZZZZZ	1	12/10/18 15:50							
ZZZZZZ	1	12/10/18 15:53							
ZZZZZZ	1	12/10/18 15:55							
ZZZZZZ	1	12/10/18 15:58							
ZZZZZZ	1	12/10/18 16:02							
ZZZZZZ	1	12/10/18 16:04							
ZZZZZZ	1	12/10/18 16:07							
ZZZZZZ	1	12/10/18 16:10							

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Al 167.079 {502}	☒	2	Fe	0.001107	0.000000	No
			Mg	0.000027	0.000000	No
Al 394.401 { 85}	☒	4	Ca	0.000032	0.000000	No
			Mg	0.000029	0.000000	No
			Mo	0.000263	0.000000	No
			V	0.000343	0.000000	No
Sb 206.833 {463}	☒	2	Cr	0.014673	0.000000	No
			Ti	0.000551	0.000000	No
Sb 217.581 {455}	☒	5	Fe	-0.000282	0.000000	No
			Pb	-0.000404	0.000000	No
			Mn	-0.000813	0.000000	No
			V	0.002032	0.000000	No
			Cu	-0.000853	0.000000	No
As 189.042 {478}	☒	4	Cr	0.000454	0.000000	No
			Al	0.000046	0.000000	No
			Mn	-0.000282	0.000000	No
			Mo	0.000942	0.000000	No
Ba 455.403 { 74}	☒	None				
Be 234.861 {144}	☒	2	Mn	-0.000061	0.000000	No
			Mo	-0.000388	0.000000	No
B 249.678 {135}	☒	4	Fe	-0.000573	0.000000	No
			Co	0.003033	0.000000	No
			Mo	-0.001572	0.000000	No
			V	-0.000400	0.000000	No
Cd 214.438 {457}	☒	2	Al	-0.000003	0.000000	No
			Fe	0.000029	0.000000	No
Cd 226.502 {449}	☒	3	Fe	0.000142	0.000000	No
			Mo	-0.000024	0.000000	No
			Ti	0.000092	0.000000	No
Ca 315.887 {107}	☒	1	Cr	-0.001266	0.000000	No
Ca 393.366 { 86}	☒	None				
Cr 267.716 {126}	☒	2	Cd	-0.000111	0.000000	No
			Mn	0.000323	0.000000	No
Co 228.616 {447}	☒	4	Mo	-0.000876	0.000000	No
			Ni	0.000137	0.000000	No
			Ti	0.002243	0.000000	No
			Ba	-0.000058	0.000000	No
Co 230.786 {446}	☒	2	Mo	0.000169	0.000000	No
			Ni	0.000907	0.000000	No
Cu 224.700 {450}	☒	6	Fe	0.000480	0.000000	No
			Pb	0.002225	0.000000	No
			Co	0.000179	0.000000	No
			Mo	0.002076	0.000000	No
			Ni	-0.004791	0.000000	No
			Ti	0.000416	0.000000	No
Cu 327.396 {103}	☒	5	Ca	0.000013	0.000000	No
			Co	0.000271	0.000000	No
			Mo	-0.000261	0.000000	No
			Ti	0.000116	0.000000	No
			V	-0.000091	0.000000	No
Fe 259.940 {130}	☒	None				
Pb 220.353 {453}	☒	4	Al	-0.000081	0.000000	No
			Mo	-0.000514	0.000000	No
			Si	0.000255	0.000000	No
			Cu	0.000840	0.000000	No
Li 670.784 { 50}	☒	None				
Mg 279.079 {121}	☒	None				
Mg 279.553 {121}	☒	1	Ca	0.000033	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Mg 285.213 {118}	☒	3	Ca	0.000031	0.000000	No
			Mo	-0.000114	0.000000	No
			V	-0.000108	0.000000	No
Mn 257.610 {131}	☒	1	Fe	0.000008	0.000000	No
Mn 260.569 {129}	☒	None				
Mo 202.030 {467}	☒	None				
Ni 221.647 {452}	☒	4	Cr	-0.000463	0.000000	No
			Co	-0.000144	0.000000	No
			Si	0.000389	0.000000	No
			Ti	-0.001225	0.000000	No
Ni 231.604 {446}	☒	2	Co	-0.000299	0.000000	No
			Mo	-0.000090	0.000000	No
P 178.284 {489}	☒	None				
P 214.914 {457}	☒	6	Al	-0.000698	0.000000	No
			Cd	-0.002905	0.000000	No
			Fe	0.001085	0.000000	No
			Mo	0.007710	0.000000	No
			V	-0.001592	0.000000	No
			Cu	0.001402	0.000000	No
K 766.490 { 44}	☒	None				
Se 196.090 {472}	☒	2	Fe	-0.000219	0.000000	No
			Mn	0.000496	0.000000	No
Si 251.611 {134}	☒	1	Mo	0.011921	0.000000	No
Ag 328.068 {103}	☒	2	Mn	0.000158	0.000000	No
			V	0.000093	0.000000	No
Na 589.592 { 57}	☒	None				
Sr 407.771 { 83}	☒	None				
Tl 190.856 {477}	☒	4	Cr	0.000239	0.000000	No
			Co	0.003317	0.000000	No
			Ti	-0.000314	0.000000	No
			V	0.001634	0.000000	No
Sn 189.989 {477}	☒	None				
Ti 336.121 {100}	☒	3	Ca	0.000012	0.000000	No
			Ni	0.000112	0.000000	No
			V	0.000041	0.000000	No
V 292.402 {115}	☒	4	Cr	-0.006361	0.000000	No
			Mn	-0.000269	0.000000	No
			Mo	-0.000108	0.000000	No
			Ti	0.000520	0.000000	No
Zn 206.200 {463}	☒	2	Cr	-0.000140	0.000000	No
			Mo	0.000288	0.000000	No
Zn 213.856 {458}	☒	5	Fe	0.000107	0.000000	No
			Mo	-0.000105	0.000000	No
			Ni	0.005388	0.000000	No
			Ti	-0.000404	0.000000	No
			Cu	0.001082	0.000000	No
Y 224.306 {450}*	☒	None				
Y 360.073 { 94}*	☒	None				
Y 360.073 { 94}2*	☒	None				
In 230.606 {446}	☒	None				
Bi 223.061 {451}	☒	4	Cr	0.001414	0.000000	No
			Co	-0.004457	0.000000	No
			V	-0.001103	0.000000	No
			Cu	-0.002070	0.000000	No
S 182.034 {485}	☒	1	Mn	0.003490	0.000000	No

Organochlorine Pesticides

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

Cover Page - Organic Analysis Data Package
Organochlorine Pesticides

Sample Name	Lab Code	Date Collected	Date Received
SL0547	K1811438-001	11/15/2018	11/21/2018
SL0554	K1811438-002	11/16/2018	11/21/2018

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	11/15/2018
Sample Matrix:	Soil	**Date Received:**	11/21/2018
		Date Prepared:	11/26/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Organochlorine Pesticides

Sample Name:	SL0547	**Units:**	mg/L
Lab Code:	K1811438-001	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 3511		
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
gamma-BHC (Lindane)	ND	U	0.00010	0.00010	0.4	1	12/03/18	12/24/18	
Heptachlor	ND	U	0.00010	0.00010	0.008	1	12/03/18	12/24/18	*
Heptachlor Epoxide	ND	U	0.00010	0.00010	0.008	1	12/03/18	12/24/18	
Endrin	ND	U	0.00010	0.00010	0.02	1	12/03/18	12/24/18	
Methoxychlor	ND	U	0.00010	0.00010	10	1	12/03/18	12/24/18	
Chlordane	ND	U	0.0010	0.0010	0.03	1	12/03/18	12/24/18	
Toxaphene	ND	U	0.0020	0.0020	0.5	1	12/03/18	12/24/18	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Note
Tetrachloro-m-xylene	98	70-130	Acceptable
Decachlorobiphenyl	85	70-130	Acceptable

Comments:

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	11/16/2018
Sample Matrix:	Soil	**Date Received:**	11/21/2018
		Date Prepared:	11/26/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Organochlorine Pesticides

Sample Name:	SL0554	**Units:**	mg/L
Lab Code:	K1811438-002	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 3511		
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
gamma-BHC (Lindane)	ND	U	0.00010	0.00010	0.4	1	12/03/18	12/24/18	
Heptachlor	ND	U	0.00010	0.00010	0.008	1	12/03/18	12/24/18	*
Heptachlor Epoxide	ND	U	0.00010	0.00010	0.008	1	12/03/18	12/24/18	
Endrin	ND	U	0.00010	0.00010	0.02	1	12/03/18	12/24/18	
Methoxychlor	ND	U	0.00010	0.00010	10	1	12/03/18	12/24/18	
Chlordane	ND	U	0.0010	0.0010	0.03	1	12/03/18	12/24/18	
Toxaphene	ND	U	0.0020	0.0020	0.5	1	12/03/18	12/24/18	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Note
Tetrachloro-m-xylene	97	70-130	Acceptable
Decachlorobiphenyl	80	70-130	Acceptable

Comments:

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Prepared:	11/26/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Organochlorine Pesticides

Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KWG1806260-9	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 3511		
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
gamma-BHC (Lindane)	ND	U	0.00010	0.00010	0.4	1	12/03/18	12/24/18	
Heptachlor	ND	U	0.00010	0.00010	0.008	1	12/03/18	12/24/18	*
Heptachlor Epoxide	ND	U	0.00010	0.00010	0.008	1	12/03/18	12/24/18	
Endrin	ND	U	0.00010	0.00010	0.02	1	12/03/18	12/24/18	
Methoxychlor	ND	U	0.00010	0.00010	10	1	12/03/18	12/24/18	
Chlordane	ND	U	0.0010	0.0010	0.03	1	12/03/18	12/24/18	
Toxaphene	ND	U	0.0020	0.0020	0.5	1	12/03/18	12/24/18	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Note
Tetrachloro-m-xylene	82	70-130	Acceptable
Decachlorobiphenyl	86	70-130	Acceptable

Comments:

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501
Sample Matrix: Soil

Surrogate Recovery Summary
Toxicity Characteristic Leaching Procedure (TCLP)
Organochlorine Pesticides

Preparation Method: EPA 1311 **Units:** Percent
Extraction Method: EPA 3511 **Level:** Low
Analysis Method: 8081B

Sample Name	Lab Code	Sur1	Sur2
Batch QC	K1811381-004	100	92
SL0547	K1811438-001	98	85
SL0554	K1811438-002	97	80
Method Blank	KWG1806260-9	82	86
Batch QCMS	KWG1806260-1	100	86
Batch QCDMS	KWG1806260-2	91	80
Lab Control Sample	KWG1806260-5	90	79

Surrogate Recovery Control Limits (%)

Sur1	=	Tetrachloro-m-xylene	70-130
Sur2	=	Decachlorobiphenyl	70-130

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

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

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	12/24/2018
		Time Analyzed:	13:21

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID:	J:\GC34\DATA\122318\1223000036.D	**Lab Code:**	KWG1806753-9
Instrument ID:	GC34	**Analysis Lot:**	KWG1806753
Analysis Method:	8081B	**Column :**	DB XLB

		1-Bromo-2-nitrobenzene	
		Area	**RT**
	ICAL Average ==>	123,768,800	4.51
	Upper Limit ==>	247,537,600	5.01
	Lower Limit ==>	61,884,400	4.01
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1806753-9	124,150,600	4.48
Method Blank	KWG1806260-9	118,514,400	4.48
Lab Control Sample	KWG1806260-5	112,271,900	4.49
Batch QC	K1811381-004	116,082,100	4.47
Batch QCMS	KWG1806260-1	119,519,500	4.49
Batch QCDMS	KWG1806260-2	127,851,600	4.48
SL0547	K1811438-001	114,585,700	4.49
SL0554	K1811438-002	113,286,800	4.47

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

QA/QC Report

Client: Integral Consulting, Incorporated
Project: San Jacinto/C1844-0501

Service Request: K1811438
Date Analyzed: 12/24/2018
Time Analyzed: 13:21

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID: J:\GC34\DATA\122318\1223000036.D\1223000036C.
Instrument ID: GC34
Analysis Method: 8081B

Lab Code: KWG1806753-9
Analysis Lot: KWG1806753
Column : DB-35MS

		1-Bromo-2-nitrobenzene	
		Area	**RT**
	ICAL Average ==>	113,947,700	4.05
	Upper Limit ==>	227,895,400	4.55
	Lower Limit ==>	56,973,850	3.55
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1806753-9	154,321,600	4.04
Method Blank	KWG1806260-9	139,274,900	4.04
Lab Control Sample	KWG1806260-5	130,954,900	4.05
Batch QC	K1811381-004	140,192,800	4.03
Batch QCMS	KWG1806260-1	143,065,700	4.05
Batch QCDMS	KWG1806260-2	152,048,600	4.04
SL0547	K1811438-001	138,616,800	4.05
SL0554	K1811438-002	136,399,200	4.03

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

QA/QC Report

Client: Integral Consulting, Incorporated
Project: San Jacinto/C1844-0501

Service Request: K1811438
Date Analyzed: 12/24/2018
Time Analyzed: 13:57

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID: J:\GC34\DATA\122318\1223000037.D
Instrument ID: GC34
Analysis Method: 8081B

Lab Code: KWG1806753-9
Analysis Lot: KWG1806753
Column : DB XLB

		1-Bromo-2-nitrobenzene {2}	
		Area	**RT**
	ICAL Average ==>	137,386,400	4.51
	Upper Limit ==>	274,772,800	5.01
	Lower Limit ==>	68,693,200	4.01
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1806753-9	131,194,700	4.47
Method Blank	KWG1806260-9	118,514,400	4.48
Lab Control Sample	KWG1806260-5	122,386,100	4.49
Batch QC	K1811381-004	116,082,100	4.47
Batch QCMS	KWG1806260-1	105,817,200	4.47
Batch QCDMS	KWG1806260-2	116,949,700	4.48
SL0547	K1811438-001	114,585,700	4.49
SL0554	K1811438-002	113,286,800	4.47

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

QA/QC Report

Client: Integral Consulting, Incorporated
Project: San Jacinto/C1844-0501

Service Request: K1811438
Date Analyzed: 12/24/2018
Time Analyzed: 13:57

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID: J:\GC34\DATA\122318\1223000037.D\1223000037C.
Instrument ID: GC34
Analysis Method: 8081B

Lab Code: KWG1806753-9
Analysis Lot: KWG1806753
Column : DB-35MS

		1-Bromo-2-nitrobenzene {2}	
		Area	**RT**
	ICAL Average ==>	142,742,400	4.05
	Upper Limit ==>	285,484,800	4.55
	Lower Limit ==>	71,371,200	3.55
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1806753-9	157,132,300	4.03
Method Blank	KWG1806260-9	139,274,900	4.04
Lab Control Sample	KWG1806260-5	142,084,000	4.05
Batch QC	K1811381-004	140,192,800	4.03
Batch QCMS	KWG1806260-1	124,493,700	4.03
Batch QCDMS	KWG1806260-2	137,654,600	4.04
SL0547	K1811438-001	138,616,800	4.05
SL0554	K1811438-002	136,399,200	4.03

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

QA/QC Report

Client: Integral Consulting, Incorporated
Project: San Jacinto/C1844-0501

Service Request: K1811438
Date Analyzed: 12/24/2018
Time Analyzed: 14:33

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID: J:\GC34\DATA\122318\1223000038.D
Instrument ID: GC34
Analysis Method: 8081B

Lab Code: KWG1806753-9
Analysis Lot: KWG1806753
Column : DB XLB

		1-Bromo-2-nitrobenzene {3}	
		Area	**RT**
	ICAL Average ==>	134,764,000	4.51
	Upper Limit ==>	269,528,000	5.01
	Lower Limit ==>	67,382,000	4.01
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1806753-9	136,244,800	4.47
Method Blank	KWG1806260-9	118,514,400	4.48
Lab Control Sample	KWG1806260-5	122,386,100	4.49
Batch QC	K1811381-004	116,082,100	4.47
Batch QCMS	KWG1806260-1	105,817,200	4.47
Batch QCDMS	KWG1806260-2	116,949,700	4.48
SL0547	K1811438-001	114,585,700	4.49
SL0554	K1811438-002	113,286,800	4.47

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

QA/QC Report

Client: Integral Consulting, Incorporated
Project: San Jacinto/C1844-0501

Service Request: K1811438
Date Analyzed: 12/24/2018
Time Analyzed: 14:33

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID: J:\GC34\DATA\122318\1223000038.D\1223000038C.
Instrument ID: GC34
Analysis Method: 8081B

Lab Code: KWG1806753-9
Analysis Lot: KWG1806753
Column : DB-35MS

		1-Bromo-2-nitrobenzene {3}	
		Area	**RT**
	ICAL Average ==>	131,424,100	4.05
	Upper Limit ==>	262,848,200	4.55
	Lower Limit ==>	65,712,050	3.55
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1806753-9	159,656,500	4.03
Method Blank	KWG1806260-9	139,274,900	4.04
Lab Control Sample	KWG1806260-5	142,084,000	4.05
Batch QC	K1811381-004	140,192,800	4.03
Batch QCMS	KWG1806260-1	124,493,700	4.03
Batch QCDMS	KWG1806260-2	137,654,600	4.04
SL0547	K1811438-001	138,616,800	4.05
SL0554	K1811438-002	136,399,200	4.03

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

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Prepared:**	11/26/2018
Sample Matrix:	Soil	**Date Extracted:**	12/03/2018
		Date Analyzed:	12/24/2018

Matrix Spike/Duplicate Matrix Spike Summary
Organochlorine Pesticides

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	K1811381-004	**Basis:**	NA
Extraction Method:	EPA 1311/EPA 3511	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1806260

		Batch QCMS KWG1806260-1 Matrix Spike				Batch QCDMS KWG1806260-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
gamma-BHC (Lindane)	ND	0.000303	0.000250	121	0.000286	0.000250	115	70-130	6	30
Heptachlor	ND	0.000365	0.000250	146 *	0.000359	0.000250	144 *	70-130	2	30
Heptachlor Epoxide	ND	0.000258	0.000250	103	0.000264	0.000250	106	70-130	2	30
Endrin	ND	0.000281	0.000250	112	0.000282	0.000250	113	70-130	0	30
Methoxychlor	ND	0.000276	0.000250	110	0.000248	0.000250	99	70-130	10	30
Chlordane	ND	0.00496	0.00500	99	0.00414	0.00500	83	70-130	18	30
Toxaphene	ND	0.0106	0.0100	106	0.00978	0.0100	98	70-130	8	30

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

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

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

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Prepared:**	11/26/2018
Sample Matrix:	Soil	**Date Extracted:**	12/03/2018
		Date Analyzed:	12/24/2018

Lab Control Spike Summary
Organochlorine Pesticides

Extraction Method:	EPA 1311/EPA 3511	**Units:**	mg/L
Analysis Method:	8081B	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1806260

Lab Control Sample
KWG1806260-5
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec		%Rec Limits
gamma-BHC (Lindane)	0.000314	0.000250	126		70-130
Heptachlor	0.000341	0.000250	136	*	70-130
Heptachlor Epoxide	0.000255	0.000250	102		70-130
Endrin	0.000300	0.000250	120		70-130
Methoxychlor	0.000271	0.000250	108		70-130
Chlordane	0.00377	0.00500	75		70-130
Toxaphene	0.00900	0.0100	90		70-130

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

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

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Extracted:**	12/03/2018
Sample Matrix:	Soil	**Date Analyzed:**	12/24/2018
		Time Analyzed:	16:57

Method Blank Summary
Organochlorine Pesticides

Sample Name:	Method Blank	**Instrument ID:**	GC34
Lab Code:	KWG1806260-9	**File ID:**	J:\GC34\DATA\122318\1223000042.D
Extraction Method:	EPA 3511	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1806260

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1806260-5	J:\GC34\DATA\122318\1223000043.D	12/24/18	17:34
Lab Control Sample	KWG1806260-5	J:\GC34\DATA\122318\1223000044.D	12/24/18	18:10
Batch QC	K1811381-004	J:\GC34\DATA\122318\1223000045.D	12/24/18	18:46
Batch QCMS	KWG1806260-1	J:\GC34\DATA\122318\1223000046.D	12/24/18	19:22
Batch QCDMS	KWG1806260-2	J:\GC34\DATA\122318\1223000047.D	12/24/18	19:58
Batch QCMS	KWG1806260-1	J:\GC34\DATA\122318\1223000048.D	12/24/18	20:34
Batch QCDMS	KWG1806260-2	J:\GC34\DATA\122318\1223000049.D	12/24/18	21:10
SL0547	K1811438-001	J:\GC34\DATA\122318\1223000051.D	12/24/18	22:23
SL0554	K1811438-002	J:\GC34\DATA\122318\1223000052.D	12/24/18	22:58

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Extracted:**	12/03/2018
Sample Matrix:	Soil	**Date Analyzed:**	12/24/2018
		Time Analyzed:	17:34

Lab Control Sample Summary
Organochlorine Pesticides

Sample Name:	Lab Control Sample	**Instrument ID:**	GC34
Lab Code:	KWG1806260-5	**File ID:**	J:\GC34\DATA\122318\1223000043.D
Extraction Method:	EPA 3511	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1806260

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1806260-9	J:\GC34\DATA\122318\1223000042.D	12/24/18	16:57
Batch QC	K1811381-004	J:\GC34\DATA\122318\1223000045.D	12/24/18	18:46
Batch QCMS	KWG1806260-1	J:\GC34\DATA\122318\1223000046.D	12/24/18	19:22
Batch QCDMS	KWG1806260-2	J:\GC34\DATA\122318\1223000047.D	12/24/18	19:58
Batch QCMS	KWG1806260-1	J:\GC34\DATA\122318\1223000048.D	12/24/18	20:34
Batch QCDMS	KWG1806260-2	J:\GC34\DATA\122318\1223000049.D	12/24/18	21:10
SL0547	K1811438-001	J:\GC34\DATA\122318\1223000051.D	12/24/18	22:23
SL0554	K1811438-002	J:\GC34\DATA\122318\1223000052.D	12/24/18	22:58

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Extracted:**	12/03/2018
Sample Matrix:	Soil	**Date Analyzed:**	12/24/2018
		Time Analyzed:	18:10

Lab Control Sample Summary
Organochlorine Pesticides

Sample Name:	Lab Control Sample	**Instrument ID:**	GC34
Lab Code:	KWG1806260-5	**File ID:**	J:\GC34\DATA\122318\1223000044.D
Extraction Method:	EPA 3511	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1806260

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1806260-9	J:\GC34\DATA\122318\1223000042.D	12/24/18	16:57
Batch QC	K1811381-004	J:\GC34\DATA\122318\1223000045.D	12/24/18	18:46
Batch QCMS	KWG1806260-1	J:\GC34\DATA\122318\1223000046.D	12/24/18	19:22
Batch QCDMS	KWG1806260-2	J:\GC34\DATA\122318\1223000047.D	12/24/18	19:58
Batch QCMS	KWG1806260-1	J:\GC34\DATA\122318\1223000048.D	12/24/18	20:34
Batch QCDMS	KWG1806260-2	J:\GC34\DATA\122318\1223000049.D	12/24/18	21:10
SL0547	K1811438-001	J:\GC34\DATA\122318\1223000051.D	12/24/18	22:23
SL0554	K1811438-002	J:\GC34\DATA\122318\1223000052.D	12/24/18	22:58

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501 **Calibration Date:** 11/26/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15914 **Column:** DB XLB
Instrument ID: GC34

Level ID	File ID
A	J:\GC34\DATA\112618\1126000008.D
B	J:\GC34\DATA\112618\1126000009.D
C	J:\GC34\DATA\112618\1126000011.D
D	J:\GC34\DATA\112618\1126000012.D
E	J:\GC34\DATA\112618\1126000013.D
F	J:\GC34\DATA\112718CAL\1127000006.D
G	J:\GC34\DATA\121218CAL\1212000004.D
H	J:\GC34\DATA\121218CAL\1212000005.D
I	J:\GC34\DATA\121218CAL\1212000006.D
J	J:\GC34\DATA\121218CAL\1212000007.D
K	J:\GC34\DATA\121218CAL\1212000008.D
L	J:\GC34\DATA\121218CAL\1212000009.D
M	J:\GC34\DATA\121218CAL\1212000011.D
N	J:\GC34\DATA\121218CAL\1212000012.D
O	J:\GC34\DATA\121218CAL\1212000013.D
P	J:\GC34\DATA\121218CAL\1212000014.D
Q	J:\GC34\DATA\121218CAL\1212000015.D
R	J:\GC34\DATA\121218CAL\1212000016.D
S	J:\GC34\DATA\121218CAL\1212000019.D
T	J:\GC34\DATA\121218CAL\1212000020.D
U	J:\GC34\DATA\121218CAL\1212000021.D
V	J:\GC34\DATA\121218CAL\1212000022.D
W	J:\GC34\DATA\121218CAL\1212000023.D
X	J:\GC34\DATA\121218CAL\1212000024.D
Y	J:\GC34\DATA\121218CAL\1212000026.D
Z	J:\GC34\DATA\121218CAL\1212000027.D
AA	J:\GC34\DATA\121218CAL\1212000028.D
AB	J:\GC34\DATA\121218CAL\1212000029.D
AC	J:\GC34\DATA\121218CAL\1212000030.D
AD	J:\GC34\DATA\121218CAL\1212000031.D
AE	J:\GC34\DATA\121218CAL\1212000032.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Tetrachloro-m-xylene	A	0.20	1.06	B	0.50	0.995	C	2.0	0.938	D	5.0	0.928	E	10	0.911
	F	1.0	1.01												
Decachlorobiphenyl	A	0.20	1.17	B	0.50	1.34	C	2.0	1.33	D	5.0	1.28	E	10	1.23
	F	1.0	1.25												
gamma-BHC (Lindane)	A	0.20	1.05	B	0.50	1.03	C	2.0	1.02	D	5.0	1.04	E	10	1.07
	F	1.0	1.04												

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

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501 **Calibration Date:** 11/26/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15914 **Column:** DB XLB
Instrument ID: GC34

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Heptachlor	A	0.20	0.923	B	0.50	0.938	C	2.0	1.04	D	5.0	1.06	E	10	1.08
	F	1.0	1.04												
Heptachlor Epoxide	A	0.20	1.19	B	0.50	1.21	C	2.0	1.20	D	5.0	1.12	E	10	1.10
	F	1.0	1.18												
Endrin	A	0.20	0.944	B	0.50	1.00	C	2.0	1.09	D	5.0	1.09	E	10	1.08
	F	1.0	1.15												
Methoxychlor	A	0.20	0.656	B	0.50	0.592	C	2.0	0.626	D	5.0	0.626	E	10	0.613
	F	1.0	0.598												
Chlordane {1}													Y	2.0	0.0421
	Z	5.0	0.0421	AA	10	0.0430	AB	20	0.0381	AC	50	0.0464	AD	100	0.0438
	AE	200	0.0438												

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Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501 **Calibration Date:** 11/26/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15914 **Column:** DB XLB
Instrument ID: GC34

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Chlordane {2}													Y	2.0	0.0581
	Z	5.0	0.0583	AA	10	0.0582	AB	20	0.0492	AC	50	0.0603	AD	100	0.0592
	AE	200	0.0596												
Chlordane {3}													Y	2.0	0.0494
	Z	5.0	0.0441	AA	10	0.0457	AB	20	0.0391	AC	50	0.0464	AD	100	0.0431
	AE	200	0.0420												
Chlordane {4}													Y	2.0	0.120
	Z	5.0	0.140	AA	10	0.141	AB	20	0.104	AC	50	0.132	AD	100	0.119
	AE	200	0.125												
Chlordane {5}													Y	2.0	0.133
	Z	5.0	0.134	AA	10	0.123	AB	20	0.109	AC	50	0.112	AD	100	0.107
	AE	200	0.108												
Chlordane {6}													Y	2.0	0.0857
	Z	5.0	0.0872	AA	10	0.0792	AB	20	0.0707	AC	50	0.0811	AD	100	0.0775
	AE	200	0.0775												

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Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501 **Calibration Date:** 11/26/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15914 **Column:** DB XLB
Instrument ID: GC34

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Toxaphene {1}										S	10	0.00365	T	20	0.00542
	U	50	0.00402	V	100	0.00477	W	250	0.00459	X	500	0.00415			
Toxaphene {2}										S	10	0.00249	T	20	0.0133
	U	50	0.0119	V	100	0.0140	W	250	0.0124	X	500	0.0116			
Toxaphene {3}										S	10	0.0104	T	20	0.0152
	U	50	0.0154	V	100	0.0191	W	250	0.0182	X	500	0.0164			
Toxaphene {4}										S	10	0.0165	T	20	0.0195
	U	50	0.0178	V	100	0.0201	W	250	0.0201	X	500	0.0193			
Toxaphene {5}										S	10	0.00896	T	20	0.00787
	U	50	0.0112	V	100	0.0123	W	250	0.0122	X	500	0.0122			

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Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501 **Calibration Date:** 11/26/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15914 **Column:** DB XLB
Instrument ID: GC34

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Toxaphene {6}															
										S	10	0.00384	T	20	0.00323
	U	50	0.00411	V	100	0.00486	W	250	0.00471	X	500	0.00438			

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Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501 **Calibration Date:** 11/26/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15914 **Column:** DB XLB
Instrument ID: GC34

		Calibration Evaluation					RRF Evaluation		
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**	**Average RRF**	**Q**	**Minimum RRF**
Tetrachloro-m-xylene	SURR	AverageRF	% RSD	6.1		≤ 20	0.975		
Decachlorobiphenyl	SURR	AverageRF	% RSD	5.0		≤ 20	1.27		
gamma-BHC (Lindane)	MS	AverageRF	% RSD	1.8		≤ 20	1.04		
Heptachlor	MS	AverageRF	% RSD	6.5		≤ 20	1.01		
Heptachlor Epoxide	MS	AverageRF	% RSD	4.0		≤ 20	1.17		
Endrin	MS	AverageRF	% RSD	6.9		≤ 20	1.06		
Methoxychlor	MS	AverageRF	% RSD	3.8		≤ 20	0.619		
Chlordane {1}	MULTI	AverageRF	% RSD	5.9		≤ 20	0.0427		
Chlordane {2}	MULTI	AverageRF	% RSD	6.6		≤ 20	0.0576		
Chlordane {3}	MULTI	AverageRF	% RSD	7.5		≤ 20	0.0443		
Chlordane {4}	MULTI	AverageRF	% RSD	10.4		≤ 20	0.126		
Chlordane {5}	MULTI	AverageRF	% RSD	10.0		≤ 20	0.118		
Chlordane {6}	MULTI	AverageRF	% RSD	6.9		≤ 20	0.0798		
Toxaphene {1}	MULTI	AverageRF	% RSD	14.2		≤ 20	0.00443		
Toxaphene {2}	MULTI	Quadratic	COD	0.999		≥ 0.990	0.0109		
Toxaphene {3}	MULTI	AverageRF	% RSD	19.3		≤ 20	0.0158		
Toxaphene {4}	MULTI	AverageRF	% RSD	7.6		≤ 20	0.0189		
Toxaphene {5}	MULTI	AverageRF	% RSD	17.7		≤ 20	0.0108		
Toxaphene {6}	MULTI	AverageRF	% RSD	14.3		≤ 20	0.00419		

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QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto/C1844-0501

Service Request: K1811438
Calibration Date: 11/26/2018
Date Analyzed: 11/27/2018 - 12/13/2018

Second Source Calibration Verification
Organochlorine Pesticides

Calibration Type: Internal Standard
Analysis Method: 8081B

Calibration ID: CAL15914
Units: ug/L

File ID: J:\GC34\DATA\112718CAL\1127000007.D
J:\GC34\DATA\121218CAL\1212000017.D
J:\GC34\DATA\121218CAL\1212000018.D
J:\GC34\DATA\121318ICV\1213000005.D
J:\GC34\DATA\121218CAL\1212000033.D
J:\GC34\DATA\121218CAL\1212000025.D

Column ID: DB XLB

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
gamma-BHC (Lindane)	2.0	2.1	1.04	1.10	5	NA	± 20 %	AverageRF
Heptachlor	2.0	2.1	1.01	1.09	7	NA	± 20 %	AverageRF
Heptachlor Epoxide	2.0	2.4	1.17	1.37	18	NA	± 20 %	AverageRF
Endrin	2.0	2.2	1.06	1.18	11	NA	± 20 %	AverageRF
Methoxychlor	2.0	2.2	0.619	0.665	8	NA	± 20 %	AverageRF
Chlordane {1}	50	39	0.0427	0.0335	-22	NA	± 100 %	AverageRF
Chlordane {2}	50	35	0.0576	0.0408	-29	NA	± 100 %	AverageRF
Chlordane {3}	50	61	0.0443	0.0538	21	NA	± 100 %	AverageRF
Chlordane {4}	50	45	0.126	0.114	-9	NA	± 100 %	AverageRF
Chlordane {5}	50	42	0.118	0.100	-15	NA	± 100 %	AverageRF
Chlordane {6}	50	52	0.0798	0.0838	5	NA	± 100 %	AverageRF
Chlordane	50	46	NA	NA	NA	-8	± 20 %	NA
Toxaphene {1}	200	250	0.00443	0.00561	26	NA	± 100 %	AverageRF
Toxaphene {2}	200	240	0.0109	0.0152	NA	20	± 100 %	Quadratic
Toxaphene {3}	200	240	0.0158	0.0191	21	NA	± 100 %	AverageRF
Toxaphene {4}	200	210	0.0189	0.0199	5	NA	± 100 %	AverageRF
Toxaphene {5}	200	230	0.0108	0.0125	16	NA	± 100 %	AverageRF
Toxaphene {6}	200	240	0.00419	0.00493	18	NA	± 100 %	AverageRF
Toxaphene	200	240	NA	NA	NA	18	± 20 %	NA

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† SPCC Compound **‡ CCC Compound**

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501 **Calibration Date:** 11/26/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15914 **Column:** DB-35MS
Instrument ID: GC34

Level ID	File ID
A	J:\GC34\DATA\112618\1126000008.D\1126000008c.d
B	J:\GC34\DATA\112618\1126000009.D\1126000009c.d
C	J:\GC34\DATA\112618\1126000011.D\1126000011c.d
D	J:\GC34\DATA\112618\1126000012.D\1126000012c.d
E	J:\GC34\DATA\112618\1126000013.D\1126000013c.d
F	J:\GC34\DATA\112718CAL\1127000006.D\1127000006c.d
G	J:\GC34\DATA\121218CAL\1212000004.D\1212000004c.d
H	J:\GC34\DATA\121218CAL\1212000005.D\1212000005c.d
I	J:\GC34\DATA\121218CAL\1212000006.D\1212000006c.d
J	J:\GC34\DATA\121218CAL\1212000007.D\1212000007c.d
K	J:\GC34\DATA\121218CAL\1212000008.D\1212000008c.d
L	J:\GC34\DATA\121218CAL\1212000009.D\1212000009c.d
M	J:\GC34\DATA\121218CAL\1212000011.D\1212000011c.d
N	J:\GC34\DATA\121218CAL\1212000012.D\1212000012c.d
O	J:\GC34\DATA\121218CAL\1212000013.D\1212000013c.d
P	J:\GC34\DATA\121218CAL\1212000014.D\1212000014c.d
Q	J:\GC34\DATA\121218CAL\1212000015.D\1212000015c.d
R	J:\GC34\DATA\121218CAL\1212000016.D\1212000016c.d
S	J:\GC34\DATA\121218CAL\1212000019.D\1212000019c.d
T	J:\GC34\DATA\121218CAL\1212000020.D\1212000020c.d
U	J:\GC34\DATA\121218CAL\1212000021.D\1212000021c.d
V	J:\GC34\DATA\121218CAL\1212000022.D\1212000022c.d
W	J:\GC34\DATA\121218CAL\1212000023.D\1212000023c.d
X	J:\GC34\DATA\121218CAL\1212000024.D\1212000024c.d
Y	J:\GC34\DATA\121218CAL\1212000026.D\1212000026c.d
Z	J:\GC34\DATA\121218CAL\1212000027.D\1212000027c.d
AA	J:\GC34\DATA\121218CAL\1212000028.D\1212000028c.d
AB	J:\GC34\DATA\121218CAL\1212000029.D\1212000029c.d
AC	J:\GC34\DATA\121218CAL\1212000030.D\1212000030c.d
AD	J:\GC34\DATA\121218CAL\1212000031.D\1212000031c.d
AE	J:\GC34\DATA\121218CAL\1212000032.D\1212000032c.d

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Tetrachloro-m-xylene	A	0.20	1.45	B	0.50	1.35	C	2.0	1.24	D	5.0	1.14	E	10	1.04
	F	1.0	1.36												
Decachlorobiphenyl	A	0.20	1.84	B	0.50	1.66	C	2.0	1.60	D	5.0	1.52	E	10	1.40
	F	1.0	1.74												
gamma-BHC (Lindane)	A	0.20	1.64	B	0.50	1.54	C	2.0	1.49	D	5.0	1.42	E	10	1.33
	F	1.0	1.66												

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Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501 **Calibration Date:** 11/26/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15914 **Column:** DB-35MS
Instrument ID: GC34

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Heptachlor	A	0.20	1.57	B	0.50	1.68	C	2.0	1.66	D	5.0	1.54	E	10	1.41
	F	1.0	1.83												
Heptachlor Epoxide	A	0.20	1.62	B	0.50	1.63	C	2.0	1.56	D	5.0	1.46	E	10	1.34
	F	1.0	1.70												
Endrin	A	0.20	1.66	B	0.50	1.50	C	2.0	1.54	D	5.0	1.46	E	10	1.35
	F	1.0	1.76												
Methoxychlor	A	0.20	0.868	B	0.50	0.984	C	2.0	0.859	D	5.0	0.841	E	10	0.763
	F	1.0	0.927												
Chlordane {1}													Y	2.0	0.0708
	Z	5.0	0.0739	AA	10	0.0704	AB	20	0.0597	AC	50	0.0649	AD	100	0.0585
	AE	200	0.0510												

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Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501 **Calibration Date:** 11/26/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15914 **Column:** DB-35MS
Instrument ID: GC34

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Chlordane {2}													Y	2.0	0.0928
	Z	5.0	0.0977	AA	10	0.0946	AB	20	0.0783	AC	50	0.0887	AD	100	0.0794
	AE	200	0.0698												
Chlordane {3}													Y	2.0	0.0612
	Z	5.0	0.0485	AA	10	0.0478	AB	20	0.0392	AC	50	0.0441	AD	100	0.0412
	AE	200	0.0378												
Chlordane {4}													Y	2.0	0.205
	Z	5.0	0.219	AA	10	0.194	AB	20	0.160	AC	50	0.173	AD	100	0.154
	AE	200	0.140												
Chlordane {5}													Y	2.0	0.128
	Z	5.0	0.131	AA	10	0.122	AB	20	0.106	AC	50	0.114	AD	100	0.101
	AE	200	0.0869												
Chlordane {6}													Y	2.0	0.182
	Z	5.0	0.192	AA	10	0.178	AB	20	0.150	AC	50	0.161	AD	100	0.142
	AE	200	0.124												

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Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501 **Calibration Date:** 11/26/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15914 **Column:** DB-35MS
Instrument ID: GC34

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Toxaphene {1}										S	10	0.00823	T	20	0.00622
	U	50	0.00729	V	100	0.00744	W	250	0.00700	X	500	0.00554			
Toxaphene {2}										S	10	0.0159	T	20	0.0123
	U	50	0.0100	V	100	0.0104	W	250	0.00960	X	500	0.00745			
Toxaphene {3}										S	10	0.0291	T	20	0.0364
	U	50	0.0350	V	100	0.0375	W	250	0.0338	X	500	0.0273			
Toxaphene {4}										S	10	0.0283	T	20	0.0228
	U	50	0.0239	V	100	0.0240	W	250	0.0218	X	500	0.0171			
Toxaphene {5}										S	10	0.0178	T	20	0.0180
	U	50	0.0189	V	100	0.0219	W	250	0.0193	X	500	0.0160			

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Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501 **Calibration Date:** 11/26/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15914 **Column:** DB-35MS
Instrument ID: GC34

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Toxaphene {6}										S	10	0.0340	T	20	0.0338
	U	50	0.0295	V	100	0.0293	W	250	0.0266	X	500	0.0247			

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Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501 **Calibration Date:** 11/26/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15914 **Column:** DB-35MS
Instrument ID: GC34

		Calibration Evaluation					RRF Evaluation		
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**	**Average RRF**	**Q**	**Minimum RRF**
Tetrachloro-m-xylene	SURR	AverageRF	% RSD	12.2		≤ 20	1.26		
Decachlorobiphenyl	SURR	AverageRF	% RSD	9.8		≤ 20	1.63		
gamma-BHC (Lindane)	MS	AverageRF	% RSD	8.4		≤ 20	1.51		
Heptachlor	MS	AverageRF	% RSD	8.8		≤ 20	1.62		
Heptachlor Epoxide	MS	AverageRF	% RSD	8.3		≤ 20	1.55		
Endrin	MS	AverageRF	% RSD	9.3		≤ 20	1.55		
Methoxychlor	MS	AverageRF	% RSD	8.6		≤ 20	0.874		
Chlordane {1}	MULTI	AverageRF	% RSD	12.8		≤ 20	0.0642		
Chlordane {2}	MULTI	AverageRF	% RSD	11.9		≤ 20	0.0859		
Chlordane {3}	MULTI	AverageRF	% RSD	17.5		≤ 20	0.0457		
Chlordane {4}	MULTI	AverageRF	% RSD	16.4		≤ 20	0.178		
Chlordane {5}	MULTI	AverageRF	% RSD	14.1		≤ 20	0.113		
Chlordane {6}	MULTI	AverageRF	% RSD	15.2		≤ 20	0.161		
Toxaphene {1}	MULTI	AverageRF	% RSD	13.7		≤ 20	0.00695		
Toxaphene {2}	MULTI	Quadratic	COD	0.999		≥ 0.990	0.0109		
Toxaphene {3}	MULTI	AverageRF	% RSD	12.3		≤ 20	0.0332		
Toxaphene {4}	MULTI	AverageRF	% RSD	15.7		≤ 20	0.0230		
Toxaphene {5}	MULTI	AverageRF	% RSD	10.6		≤ 20	0.0187		
Toxaphene {6}	MULTI	AverageRF	% RSD	12.7		≤ 20	0.0297		

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

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto/C1844-0501

Service Request: K1811438
Calibration Date: 11/26/2018
Date Analyzed: 11/27/2018 - 12/13/2018

Second Source Calibration Verification
Organochlorine Pesticides

Calibration Type: Internal Standard
Analysis Method: 8081B

Calibration ID: CAL15914
Units: ug/L

File ID: J:\GC34\DATA\112718CAL\1127000007.D\1127000007c.d
J:\GC34\DATA\121218CAL\1212000017.D\1212000017c.d
J:\GC34\DATA\121218CAL\1212000018.D\1212000018c.d
J:\GC34\DATA\121218CAL\1212000033.D\1212000033c.d
J:\GC34\DATA\121218CAL\1212000025.D\1212000025c.d
J:\GC34\DATA\121318ICV\1213000005.D\1213000005c.d

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
gamma-BHC (Lindane)	2.0	2.2	1.51	1.65	9	NA	± 20 %	AverageRF
Heptachlor	2.0	2.2	1.62	1.81	12	NA	± 20 %	AverageRF
Heptachlor Epoxide	2.0	2.1	1.55	1.61	4	NA	± 20 %	AverageRF
Endrin	2.0	2.1	1.55	1.64	6	NA	± 20 %	AverageRF
Methoxychlor	2.0	2.2	0.874	0.939	8	NA	± 20 %	AverageRF
Chlordane {1}	50	37	0.0642	0.0472	-26	NA	± 100 %	AverageRF
Chlordane {2}	50	34	0.0859	0.0589	-31	NA	± 100 %	AverageRF
Chlordane {3}	50	49	0.0457	0.0447	-2	NA	± 100 %	AverageRF
Chlordane {4}	50	42	0.178	0.151	-15	NA	± 100 %	AverageRF
Chlordane {5}	50	50	0.113	0.114	1	NA	± 100 %	AverageRF
Chlordane {6}	50	44	0.161	0.141	-13	NA	± 100 %	AverageRF
Chlordane	50	43	NA	NA	NA	-15	± 20 %	NA
Toxaphene {1}	200	230	0.00695	0.00815	17	NA	± 100 %	AverageRF
Toxaphene {2}	200	210	0.0109	0.0104	NA	7	± 100 %	Quadratic
Toxaphene {3}	200	200	0.0332	0.0330	-1	NA	± 100 %	AverageRF
Toxaphene {4}	200	200	0.0230	0.0231	1	NA	± 100 %	AverageRF
Toxaphene {5}	200	220	0.0187	0.0201	8	NA	± 100 %	AverageRF
Toxaphene {6}	200	180	0.0297	0.0260	-12	NA	± 100 %	AverageRF
Toxaphene	200	210	NA	NA	NA	3	± 20 %	NA

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

† SPCC Compound **‡ CCC Compound**

Client: Integral Consulting, Incorporated
Project: San Jacinto/C1844-0501

Service Request: K1811438
Date Analyzed: 12/24/2018

Continuing Calibration Verification Summary
Organochlorine Pesticides

Calibration Type: External Standard
Analysis Method: 8081B

Calibration Date: 11/26/2018
Calibration ID: CAL15914
Analysis Lot: KWG1806753
Units: ug/L

File ID: J:\GC34\DATA\122318\1223000036.D
J:\GC34\DATA\122318\1223000037.D
J:\GC34\DATA\122318\1223000038.D

Column ID: DB XLB

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tetrachloro-m-xylene	2.0	2.2		0.975	1.06	8	NA	± 20	AverageRF
Decachlorobiphenyl	2.0	2.0		1.27	1.30	2	NA	± 20	AverageRF
gamma-BHC (Lindane)	2.0	2.3		1.04	1.19	14	NA	± 20	AverageRF
Heptachlor	2.0	2.4		1.01	1.21	20	NA	± 20	AverageRF
Heptachlor Epoxide	2.0	2.1		1.17	1.24	6	NA	± 20	AverageRF
Endrin	2.0	2.3		1.06	1.22	15	NA	± 20	AverageRF
Methoxychlor	2.0	1.9		0.619	0.593	-4	NA	± 20	AverageRF
Chlordane {1}	20	22		0.0427	0.0467	9	NA	± 100	AverageRF
Chlordane {2}	20	22		0.0576	0.0625	9	NA	± 100	AverageRF
Chlordane {3}	20	20		0.0443	0.0435	-2	NA	± 100	AverageRF
Chlordane {4}	20	19		0.126	0.119	-6	NA	± 100	AverageRF
Chlordane {5}	20	18		0.118	0.106	-11	NA	± 100	AverageRF
Chlordane {6}	20	20		0.0798	0.0802	0	NA	± 100	AverageRF
Chlordane	20	20		NA	NA	NA	0	± 20	NA
Toxaphene {1}	100	110		0.00443	0.00467	5	NA	± 100	AverageRF
Toxaphene {2}	100	99		0.0109	0.0129	NA	-1	± 100	Quadratic
Toxaphene {3}	100	130		0.0158	0.0209	32	NA	± 100	AverageRF
Toxaphene {4}	100	140		0.0189	0.0260	38	NA	± 100	AverageRF
Toxaphene {5}	100	110		0.0108	0.0123	14	NA	± 100	AverageRF
Toxaphene {6}	100	120		0.00419	0.00507	21	NA	± 100	AverageRF
Toxaphene	100	120		NA	NA	NA	18	± 20	NA

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

Client: Integral Consulting, Incorporated
Project: San Jacinto/C1844-0501

Service Request: K1811438
Date Analyzed: 12/24/2018

Continuing Calibration Verification Summary
Organochlorine Pesticides

Calibration Type: External Standard
Analysis Method: 8081B

Calibration Date: 11/26/2018
Calibration ID: CAL15914
Analysis Lot: KWG1806753
Units: ug/L

File ID: J:\GC34\DATA\122318\1223000036.D\1223000036C.
J:\GC34\DATA\122318\1223000037.D\1223000037C.
J:\GC34\DATA\122318\1223000038.D\1223000038C.

Column ID: DB-35MS

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D		%Drift	Criteria	Curve Fit
Tetrachloro-m-xylene	2.0	2.2		1.26	1.41	12		NA	± 20	AverageRF
Decachlorobiphenyl	2.0	1.9		1.63	1.55	-5		NA	± 20	AverageRF
gamma-BHC (Lindane)	2.0	2.3		1.51	1.78	17		NA	± 20	AverageRF
Heptachlor	2.0	2.4		1.62	1.96	21	*	NA	± 20	AverageRF
Heptachlor Epoxide	2.0	2.3		1.55	1.82	17		NA	± 20	AverageRF
Endrin	2.0	2.3		1.55	1.81	17		NA	± 20	AverageRF
Methoxychlor	2.0	2.1		0.874	0.930	7		NA	± 20	AverageRF
Chlordane {1}	20	20		0.0642	0.0653	2		NA	± 100	AverageRF
Chlordane {2}	20	23		0.0859	0.0984	15		NA	± 100	AverageRF
Chlordane {3}	20	19		0.0457	0.0436	-5		NA	± 100	AverageRF
Chlordane {4}	20	21		0.178	0.185	4		NA	± 100	AverageRF
Chlordane {5}	20	21		0.113	0.116	3		NA	± 100	AverageRF
Chlordane {6}	20	21		0.161	0.172	7		NA	± 100	AverageRF
Chlordane	20	21		NA	NA	NA		4	± 20	NA
Toxaphene {1}	100	120		0.00695	0.00806	16		NA	± 100	AverageRF
Toxaphene {2}	100	100		0.0109	0.0109	NA		2	± 100	Quadratic
Toxaphene {3}	100	120		0.0332	0.0398	20		NA	± 100	AverageRF
Toxaphene {4}	100	110		0.0230	0.0255	11		NA	± 100	AverageRF
Toxaphene {5}	100	120		0.0187	0.0219	17		NA	± 100	AverageRF
Toxaphene {6}	100	100		0.0297	0.0308	4		NA	± 100	AverageRF
Toxaphene	100	110		NA	NA	NA		12	± 20	NA

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

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

Analysis Run Log
Organochlorine Pesticides

Analysis Method: 8081B **Analysis Lot:** KWG1806753
Instrument ID: GC34
Column: DB XLB

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
23000004.D	Performance Evaluation Mixture	KWG1806753-2	12/23/2018	18:05		12/23/2018	18:37
23000006.D	Continuing Calibration Verification	KWG1806753-3	12/23/2018	19:17		12/23/2018	19:49
23000007.D	Continuing Calibration Verification	KWG1806753-3	12/23/2018	19:53		12/23/2018	20:25
23000008.D	Continuing Calibration Verification	KWG1806753-3	12/23/2018	20:29		12/23/2018	21:01
23000009.D	Instrument Blank	KWG1806753-1	12/23/2018	21:05		12/23/2018	21:37
23000010.D	ZZZZZZ	ZZZZZZ	12/23/2018	21:41		12/23/2018	22:13
23000011.D	ZZZZZZ	ZZZZZZ	12/23/2018	22:18		12/23/2018	22:49
23000012.D	ZZZZZZ	ZZZZZZ	12/23/2018	22:54		12/23/2018	23:26
23000013.D	ZZZZZZ	ZZZZZZ	12/23/2018	23:30		12/24/2018	00:02
23000014.D	ZZZZZZ	ZZZZZZ	12/24/2018	00:06		12/24/2018	00:38
23000015.D	ZZZZZZ	ZZZZZZ	12/24/2018	00:42		12/24/2018	01:14
23000016.D	ZZZZZZ	ZZZZZZ	12/24/2018	01:18		12/24/2018	01:50
23000017.D	ZZZZZZ	ZZZZZZ	12/24/2018	01:54		12/24/2018	02:26
23000018.D	ZZZZZZ	ZZZZZZ	12/24/2018	02:30		12/24/2018	03:02
23000019.D	ZZZZZZ	ZZZZZZ	12/24/2018	03:06		12/24/2018	03:38
23000020.D	ZZZZZZ	ZZZZZZ	12/24/2018	03:42		12/24/2018	04:14
23000022.D	Performance Evaluation Mixture	KWG1806753-5	12/24/2018	04:54		12/24/2018	05:25
23000023.D	Continuing Calibration Verification	KWG1806753-6	12/24/2018	05:30		12/24/2018	06:02
23000024.D	Continuing Calibration Verification	KWG1806753-6	12/24/2018	06:06		12/24/2018	06:38
23000025.D	Continuing Calibration Verification	KWG1806753-6	12/24/2018	06:42		12/24/2018	07:14
23000026.D	Instrument Blank	KWG1806753-4	12/24/2018	07:18		12/24/2018	07:50
23000027.D	ZZZZZZ	ZZZZZZ	12/24/2018	07:55		12/24/2018	08:27
23000028.D	ZZZZZZ	ZZZZZZ	12/24/2018	08:31		12/24/2018	09:03
23000029.D	ZZZZZZ	ZZZZZZ	12/24/2018	09:07		12/24/2018	09:39
23000030.D	ZZZZZZ	ZZZZZZ	12/24/2018	09:43		12/24/2018	10:15
23000031.D	ZZZZZZ	ZZZZZZ	12/24/2018	10:20		12/24/2018	10:52
23000032.D	ZZZZZZ	ZZZZZZ	12/24/2018	10:56		12/24/2018	11:28
23000033.D	ZZZZZZ	ZZZZZZ	12/24/2018	11:32		12/24/2018	12:04
23000034.D	ZZZZZZ	ZZZZZZ	12/24/2018	12:08		12/24/2018	12:40
23000035.D	Performance Evaluation Mixture	KWG1806753-8	12/24/2018	12:45		12/24/2018	13:17
23000036.D	Continuing Calibration Verification	KWG1806753-9	12/24/2018	13:21		12/24/2018	13:53
23000037.D	Continuing Calibration Verification	KWG1806753-9	12/24/2018	13:57		12/24/2018	14:29
23000038.D	Continuing Calibration Verification	KWG1806753-9	12/24/2018	14:33		12/24/2018	15:04
23000039.D	Instrument Blank	KWG1806753-7	12/24/2018	15:09		12/24/2018	15:41
23000040.D	ZZZZZZ	ZZZZZZ	12/24/2018	15:45		12/24/2018	16:17

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

Analysis Run Log
Organochlorine Pesticides

Analysis Method: 8081B **Analysis Lot:** KWG1806753
Instrument ID: GC34
Column: DB XLB

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
23000041.D	ZZZZZZ	ZZZZZZ	12/24/2018	16:21		12/24/2018	16:53
23000042.D	Method Blank	KWG1806260-9	12/24/2018	16:57		12/24/2018	17:29
23000043.D	Lab Control Sample	KWG1806260-5	12/24/2018	17:34		12/24/2018	18:05
23000044.D	Lab Control Sample	KWG1806260-5	12/24/2018	18:10		12/24/2018	18:42
23000045.D	Batch QC	K1811381-004	12/24/2018	18:46		12/24/2018	19:18
23000046.D	Batch QCMS	KWG1806260-1	12/24/2018	19:22		12/24/2018	19:54
23000047.D	Batch QCDMS	KWG1806260-2	12/24/2018	19:58		12/24/2018	20:30
23000048.D	Batch QCMS	KWG1806260-1	12/24/2018	20:34		12/24/2018	21:06
23000049.D	Batch QCDMS	KWG1806260-2	12/24/2018	21:10		12/24/2018	21:42
23000050.D	ZZZZZZ	ZZZZZZ	12/24/2018	21:46		12/24/2018	22:18
23000051.D	SL0547	K1811438-001	12/24/2018	22:23		12/24/2018	22:55
23000052.D	SL0554	K1811438-002	12/24/2018	22:58		12/24/2018	23:30
23000053.D	Performance Evaluation Mixture	KWG1806753-11	12/24/2018	23:34		12/25/2018	00:06
23000054.D	Continuing Calibration Verification	KWG1806753-12	12/25/2018	00:10		12/25/2018	00:42
23000055.D	Continuing Calibration Verification	KWG1806753-12	12/25/2018	00:47		12/25/2018	01:19
23000056.D	Continuing Calibration Verification	KWG1806753-12	12/25/2018	01:23		12/25/2018	01:55
23000057.D	Instrument Blank	KWG1806753-10	12/25/2018	01:59		12/25/2018	02:31
23000058.D	ZZZZZZ	ZZZZZZ	12/25/2018	02:35		12/25/2018	03:07
23000059.D	ZZZZZZ	ZZZZZZ	12/25/2018	03:12		12/25/2018	03:44
23000060.D	ZZZZZZ	ZZZZZZ	12/25/2018	03:48		12/25/2018	04:20
23000061.D	ZZZZZZ	ZZZZZZ	12/25/2018	04:24		12/25/2018	04:56
23000062.D	ZZZZZZ	ZZZZZZ	12/25/2018	05:00		12/25/2018	05:32
23000063.D	ZZZZZZ	ZZZZZZ	12/25/2018	05:36		12/25/2018	06:08
23000064.D	ZZZZZZ	ZZZZZZ	12/25/2018	06:12		12/25/2018	06:44
23000065.D	ZZZZZZ	ZZZZZZ	12/25/2018	06:48		12/25/2018	07:20
23000066.D	ZZZZZZ	ZZZZZZ	12/25/2018	07:24		12/25/2018	07:56
23000067.D	ZZZZZZ	ZZZZZZ	12/25/2018	08:00		12/25/2018	08:32
23000068.D	ZZZZZZ	ZZZZZZ	12/25/2018	08:36		12/25/2018	09:08
23000069.D	ZZZZZZ	ZZZZZZ	12/25/2018	09:12		12/25/2018	09:44
23000070.D	ZZZZZZ	ZZZZZZ	12/25/2018	09:48		12/25/2018	10:20
23000071.D	ZZZZZZ	ZZZZZZ	12/25/2018	10:24		12/25/2018	10:56
23000072.D	ZZZZZZ	ZZZZZZ	12/25/2018	11:00		12/25/2018	11:32

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Prepared:**	11/26/2018
Sample Matrix:	Soil	**Date Extracted:**	12/03/2018

Extraction Prep Log
Organochlorine Pesticides

Preparation Method:	EPA 1311	**Extraction Lot:**	KWG1806260
Extraction Method:	EPA 3511	**Level:**	Low
Analysis Method:	8081B		

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
SL0547	K1811438-001	11/15/18	11/21/18	100ml	5ml	NA	
SL0554	K1811438-002	11/16/18	11/21/18	100ml	5ml	NA	
Method Blank	KWG1806260-9	NA	NA	100ml	5ml	NA	
Batch QC	K1811381-004	NA	NA	100ml	5ml	NA	
Batch QCMS	KWG1806260-1	NA	NA	100ml	5ml	NA	
Batch QCDMS	KWG1806260-2	NA	NA	100ml	5ml	NA	
Lab Control Sample	KWG1806260-5	NA	NA	100ml	5ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Chlorinated Herbicides by GC

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	11/15/18 18:45
Sample Matrix:	Soil	**Date Received:**	11/21/18 11:20
Sample Name:	SL0547	**Units:**	ug/L
Lab Code:	K1811438-001	**Basis:**	Dry

TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Pre-Prep Method:**	EPA 1311
Prep Method:	Method	**Pre-Prep Date:**	11/26/18

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D, TCLP	ND U	150	150	1	12/11/18 10:19	11/30/18	
2,4,5-TP (Silvex), TCLP	ND U	30	30	1	12/11/18 10:19	11/30/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	76	17 - 113	12/11/18 10:19	

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	11/16/18 16:50
Sample Matrix:	Soil	**Date Received:**	11/21/18 11:20
Sample Name:	SL0554	**Units:**	ug/L
Lab Code:	K1811438-002	**Basis:**	Dry

TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Pre-Prep Method:**	EPA 1311
Prep Method:	Method	**Pre-Prep Date:**	11/26/18

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D, TCLP	ND U	150	150	1	12/10/18 21:10	11/30/18	
2,4,5-TP (Silvex), TCLP	ND U	29	29	1	12/10/18 21:10	11/30/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	74	17 - 113	12/10/18 21:10	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KQ1817502-04	**Basis:**	Dry

TCLP Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D, TCLP	ND U	100	100	1	12/10/18 17:59	11/30/18	
2,4,5-TP (Silvex), TCLP	ND U	20	20	1	12/10/18 17:59	11/30/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	77	17 - 113	12/10/18 17:59	

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KQ1817502-05	**Basis:**	Dry

TCLP Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D, TCLP	ND U	100	100	1	12/10/18 18:22	11/30/18	
2,4,5-TP (Silvex), TCLP	ND U	20	20	1	12/10/18 18:22	11/30/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	79	17 - 113	12/10/18 18:22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KQ1817502-06	**Basis:**	Dry

TCLP Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D, TCLP	ND U	100	100	1	12/10/18 18:47	11/30/18	
2,4,5-TP (Silvex), TCLP	ND U	20	20	1	12/10/18 18:47	11/30/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	77	17 - 113	12/10/18 18:47	

Confirmation Results

Client: Integral Consulting, Incorporated
Project: San Jacinto/C1844-0501
SRM Matrix: Soil

Service Request: K1811438
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: KQ1817502-03

Units: ug/L
Basis: Dry

TCLP Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-TP (Silvex), TCLP	20	227	237	4		1	12/11/18 10:44
2,4-D, TCLP	100	217	223	3		1	12/11/18 10:44

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
TCLP Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	DCAA 17-113
SL0547	K1811438-001	76
SL0554	K1811438-002	74
Method Blank	KQ1817502-04	77
Method Blank	KQ1817502-05	79
Method Blank	KQ1817502-06	77
Lab Control Sample	KQ1817502-03	85

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	12/11/18
Sample Matrix:	Soil	**Date Extracted:**	11/30/18

Lab Control Sample Summary
TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Units:**	ug/L
Prep Method:	Method	**Basis:**	Dry
		Analysis Lot:	618249

Lab Control Sample
KQ1817502-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-TP (Silvex), TCLP	227	250	91	37-114
2,4-D, TCLP	217	250	87	35-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	12/10/18 18:47
Sample Matrix:	Soil	**Date Extracted:**	11/30/18

Method Blank Summary
TCLP Chlorinated Herbicides by GC

Sample Name:	Method Blank	**Instrument ID:**	K-GC-24
Lab Code:	KQ1817502-06	**File ID:**	J:\gc24\data\121018\12100018.D\
Analysis Method:	8151A	**Analysis Lot:**	618249
Prep Method:	Method	**Extraction Lot:**	327384
Pre-Prep Method:	EPA 1311		

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
SL0554	K1811438-002	J:\gc24\data\121018\12100024.D\	12/10/18 21:10
SL0547	K1811438-001	J:\gc24\data\121018\12100040.D\	12/11/18 10:19
Lab Control Sample	KQ1817502-03	J:\gc24\data\121018\12100041.D\	12/11/18 10:44

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	12/10/18 18:47
Sample Matrix:	Soil	**Date Extracted:**	11/30/18

Method Blank Summary
TCLP Chlorinated Herbicides by GC

Sample Name:	Method Blank	**Instrument ID:**	K-GC-24
Lab Code:	KQ1817502-06	**File ID:**	J:\gc24\data\121018\12100018.D\
Analysis Method:	8151A	**Analysis Lot:**	618249
Prep Method:	Method	**Extraction Lot:**	327384
Pre-Prep Method:	EPA 1311		

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
SL0554	K1811438-002	J:\gc24\data\121018\12100024.D\	12/10/18 21:10
SL0547	K1811438-001	J:\gc24\data\121018\12100040.D\	12/11/18 10:19
Lab Control Sample	KQ1817502-03	J:\gc24\data\121018\12100041.D\	12/11/18 10:44

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	12/10/18 18:47
Sample Matrix:	Soil	**Date Extracted:**	11/30/18

Method Blank Summary
TCLP Chlorinated Herbicides by GC

Sample Name:	Method Blank	**Instrument ID:**	K-GC-24
Lab Code:	KQ1817502-06	**File ID:**	J:\gc24\data\121018\12100018.D\
Analysis Method:	8151A	**Analysis Lot:**	618249
Prep Method:	Method	**Extraction Lot:**	327384
Pre-Prep Method:	EPA 1311		

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
SL0554	K1811438-002	J:\gc24\data\121018\12100024.D\	12/10/18 21:10
SL0547	K1811438-001	J:\gc24\data\121018\12100040.D\	12/11/18 10:19
Lab Control Sample	KQ1817502-03	J:\gc24\data\121018\12100041.D\	12/11/18 10:44

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	12/11/18 10:44
Sample Matrix:	Soil	**Date Extracted:**	11/30/18

Lab Control Sample Summary
TCLP Chlorinated Herbicides by GC

Sample Name:	Lab Control Sample	**Instrument ID:**	K-GC-24
Lab Code:	KQ1817502-03	**File ID:**	J:\gc24\data\121018\12100041.D\
Analysis Method:	8151A	**Analysis Lot:**	618249
Prep Method:	Method	**Extraction Lot:**	327384

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1817502-04	J:\gc24\data\121018\12100016.D\	12/10/18 17:59
Method Blank	KQ1817502-05	J:\gc24\data\121018\12100017.D\	12/10/18 18:22
Method Blank	KQ1817502-06	J:\gc24\data\121018\12100018.D\	12/10/18 18:47
SL0554	K1811438-002	J:\gc24\data\121018\12100024.D\	12/10/18 21:10
SL0547	K1811438-001	J:\gc24\data\121018\12100040.D\	12/11/18 10:19

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto **Calibration Date:** 10/31/2018

Initial Calibration Summary
TCLP Chlorinated Herbicides by GC

Calibration ID: KC1800499 **Signal ID:** RTX-CLP2
Instrument ID: K-GC-24

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1800499-01	HERB ICAL 10	J:\gc24\data\103118\10310103.D	10/31/2018 16:27
02	KC1800499-02	HERB ICAL 25	J:\gc24\data\103118\10310104.D	10/31/2018 16:51
03	KC1800499-03	HERB ICAL 100	J:\gc24\data\103118\10310106.D	10/31/2018 17:40
04	KC1800499-04	HERB ICAL 125	J:\gc24\data\103118\10310107.D	10/31/2018 18:05
05	KC1800499-05	HERB ICAL 150	J:\gc24\data\103118\10310108.D	10/31/2018 18:29
06	KC1800499-06	HERB ICAL 175	J:\gc24\data\103118\10310109.D	10/31/2018 18:54
07	KC1800499-07	HERB ICAL 200	J:\gc24\data\103118\10310110.D	10/31/2018 19:18
08	KC1800499-08	HERB ICAL 75	J:\gc24\data\110118\11010003.D	11/01/2018 10:58

Analyte

2,4,5-TP (Silvex), TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.510	8.153E4	02	23.760	7.593E4	08	71.300	7.174E4	03	95.100	6.98E4
04	118.820	6.871E4	05	142.580	6.525E4	06	166.340	6.468E4	07	190.100	6.407E4

2,4-D, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.400	2.227E4	02	23.510	1.997E4	08	70.500	1.83E4	03	94.000	1.781E4
04	117.540	1.735E4	05	141.050	1.651E4	06	164.560	1.627E4	07	188.060	1.594E4

DCAA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.020	2.092E4	02	22.550	1.879E4	08	67.600	1.66E4	03	90.200	1.594E4
04	112.730	1.556E4	05	135.280	1.47E4	06	157.830	1.446E4	07	180.370	1.405E4

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811438
Calibration Date: 10/31/2018

Initial Calibration Summary
TCLP Chlorinated Herbicides by GC

Calibration ID: KC1800499
Instrument ID: K-GC-24

Signal ID: RTX-CLP2

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
2,4,5-TP (Silvex), TCLP	TRG	Average RF	% RSD	8.7	≤20	7.021E4	
2,4-D, TCLP	TRG	Average RF	% RSD	11.9	≤20	1.805E4	
DCAA	SURR	Average RF	% RSD	14.4	≤20	1.638E4	

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto **Calibration Date:** 10/31/2018

Initial Calibration Summary
TCLP Chlorinated Herbicides by GC

Calibration ID: KC1800499 **Signal ID:** ZB-XLB-HT
Instrument ID: K-GC-24

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1800499-01	HERB ICAL 10	J:\gc24\data\103118\10310103.D	10/31/2018 16:27
02	KC1800499-02	HERB ICAL 25	J:\gc24\data\103118\10310104.D	10/31/2018 16:51
03	KC1800499-03	HERB ICAL 100	J:\gc24\data\103118\10310106.D	10/31/2018 17:40
04	KC1800499-04	HERB ICAL 125	J:\gc24\data\103118\10310107.D	10/31/2018 18:05
05	KC1800499-05	HERB ICAL 150	J:\gc24\data\103118\10310108.D	10/31/2018 18:29
06	KC1800499-06	HERB ICAL 175	J:\gc24\data\103118\10310109.D	10/31/2018 18:54
07	KC1800499-07	HERB ICAL 200	J:\gc24\data\103118\10310110.D	10/31/2018 19:18
08	KC1800499-08	HERB ICAL 75	J:\gc24\data\110118\11010003.D	11/01/2018 10:58

Analyte

2,4,5-TP (Silvex), TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.510	7.003E4	02	23.760	6.444E4	08	71.300	6.354E4	03	95.100	6.156E4
04	118.820	6.158E4	05	142.580	6E4	06	166.340	6.189E4	07	190.100	5.884E4

2,4-D, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.400	2.057E4	02	23.510	1.77E4	08	70.500	1.61E4	03	94.000	1.539E4
04	117.540	1.519E4	05	141.050	1.477E4	06	164.560	1.514E4	07	188.060	1.419E4

DCAA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.020	1.961E4	02	22.550	1.67E4	08	67.600	1.425E4	03	90.200	1.383E4
04	112.730	1.356E4	05	135.280	1.31E4	06	157.830	1.335E4	07	180.370	1.251E4

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto **Calibration Date:** 10/31/2018

Initial Calibration Summary
TCLP Chlorinated Herbicides by GC

Calibration ID: KC1800499 **Signal ID:** ZB-XLB-HT
Instrument ID: K-GC-24

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
2,4,5-TP (Silvex), TCLP	TRG	Average RF	% RSD	5.5	≤20	6.274E4	
2,4-D, TCLP	TRG	Average RF	% RSD	12.9	≤20	1.613E4	
DCAA	SURR	Average RF	% RSD	16.3	≤20	1.461E4	

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto **Calibration Date:** 10/31/2018

Initial Calibration Verification Summary
TCLP Chlorinated Herbicides by GC

Calibration ID: KC1800499 **Signal ID:** RTX-CLP2
Instrument ID: K-GC-24

#	Lab Code	Sample Name	File Location	Acquisition Date
09	KC1800499-09	HERB ICV 100	J:\gc24\data\110118\11010004.D	11/01/2018 11:23

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
2,4-D, TCLP	94.0	94.0	1.805E4	1.805E4	-0.022	±20	Average RF
2,4,5-TP (Silvex), TCLP	95.1	102	7.021E4	7.562E4	7.70	±20	Average RF

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto **Calibration Date:** 10/31/2018

Initial Calibration Verification Summary
TCLP Chlorinated Herbicides by GC

Calibration ID: KC1800499 **Signal ID:** ZB-XLB-HT
Instrument ID: K-GC-24

#	Lab Code	Sample Name	File Location	Acquisition Date
09	KC1800499-09	HERB ICV 100	J:\gc24\data\110118\11010004.D	11/01/2018 11:23

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
2,4-D, TCLP	94.0	90.8	1.613E4	1.558E4	-3.432	±20	Average RF
2,4,5-TP (Silvex), TCLP	95.1	102	6.274E4	6.709E4	6.94	±20	Average RF

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	12/10/18 13:48

Continuing Calibration Verification (CCV) Summary
TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Calibration Date:**	10/31/2018
File ID:	J:\gc24\data\121018\12100009.D\	**Calibration ID:**	KC1800499
Signal ID:	RTX-CLP2	**Analysis Lot:**	618249
		Units:	ppb

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4-D, TCLP	100	93.6	1.805E4	1.689E4	-6.4	NA	±20	Average RF
2,4,5-TP (Silvex), TCLP	100	97.1	7.021E4	6.819E4	-2.9	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
DCAA	100	90.4	1.638E4	1.48E4	-9.6	NA	±20	Average RF

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	12/10/18 13:48

Continuing Calibration Verification (CCV) Summary
TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Calibration Date:**	10/31/2018
File ID:	J:\gc24\data\121018\12100009.D\	**Calibration ID:**	KC1800499
Signal ID:	ZB-XLB-HT	**Analysis Lot:**	618249
		Units:	ppb

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4-D, TCLP	100	94.7	1.613E4	1.528E4	-5.3	NA	±20	Average RF
2,4,5-TP (Silvex), TCLP	100	99.8	6.274E4	6.264E4	-0.2	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
DCAA	100	92.1	1.461E4	1.345E4	-7.9	NA	±20	Average RF

Client: Integral Consulting, Incorporated
Project: San Jacinto/C1844-0501

Service Request: K1811438
Date Analyzed: 12/10/18 15:06

Continuing Calibration Verification (CCV) Summary
TCLP Chlorinated Herbicides by GC

Analysis Method: 8151A
File ID: J:\gc24\data\121018\12100012.D\
Signal ID: ZB-XLB-HT

Calibration Date: 10/31/2018
Calibration ID: KC1800499
Analysis Lot: 618249
Units: ppb

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4-D, TCLP	100	93.1	1.613E4	1.502E4	-6.9	NA	±20	Average RF
2,4,5-TP (Silvex), TCLP	100	99.3	6.274E4	6.231E4	-0.7	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
DCAA	100	91.0	1.461E4	1.329E4	-9.0	NA	±20	Average RF

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	12/10/18 15:06

Continuing Calibration Verification (CCV) Summary
TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Calibration Date:**	10/31/2018
File ID:	J:\gc24\data\121018\12100012.D\	**Calibration ID:**	KC1800499
Signal ID:	RTX-CLP2	**Analysis Lot:**	618249
		Units:	ppb

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4-D, TCLP	100	95.8	1.805E4	1.73E4	-4.2	NA	±20	Average RF
2,4,5-TP (Silvex), TCLP	100	99.5	7.021E4	6.988E4	-0.5	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
DCAA	100	91.9	1.638E4	1.506E4	-8.1	NA	±20	Average RF

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	12/10/18 21:34

Continuing Calibration Verification (CCV) Summary
TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Calibration Date:**	10/31/2018
File ID:	J:\gc24\data\121018\12100025.D\	**Calibration ID:**	KC1800499
Signal ID:	RTX-CLP2	**Analysis Lot:**	618249
		Units:	ppb

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4-D, TCLP	100	91.1	1.805E4	1.645E4	-8.9	NA	±20	Average RF
2,4,5-TP (Silvex), TCLP	100	94.5	7.021E4	6.634E4	-5.5	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
DCAA	100	86.7	1.638E4	1.42E4	-13.3	NA	±20	Average RF

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	12/10/18 21:34

Continuing Calibration Verification (CCV) Summary
TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Calibration Date:**	10/31/2018
File ID:	J:\gc24\data\121018\12100025.D\	**Calibration ID:**	KC1800499
Signal ID:	ZB-XLB-HT	**Analysis Lot:**	618249
		Units:	ppb

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4-D, TCLP	100	93.2	1.613E4	1.503E4	-6.8	NA	±20	Average RF
2,4,5-TP (Silvex), TCLP	100	98.7	6.274E4	6.19E4	-1.3	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
DCAA	100	89.2	1.461E4	1.303E4	-10.8	NA	±20	Average RF

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	12/11/18 01:56

Continuing Calibration Verification (CCV) Summary
TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Calibration Date:**	10/31/2018
File ID:	J:\gc24\data\121018\12100036.D\	**Calibration ID:**	KC1800499
Signal ID:	ZB-XLB-HT	**Analysis Lot:**	618249
		Units:	ppb

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4-D, TCLP	100	93.0	1.613E4	1.5E4	-7.0	NA	±20	Average RF
2,4,5-TP (Silvex), TCLP	100	101	6.274E4	6.344E4	1.1	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
DCAA	100	90.6	1.461E4	1.324E4	-9.4	NA	±20	Average RF

Client: Integral Consulting, Incorporated
Project: San Jacinto/C1844-0501

Service Request: K1811438
Date Analyzed: 12/11/18 01:56

Continuing Calibration Verification (CCV) Summary
TCLP Chlorinated Herbicides by GC

Analysis Method: 8151A
File ID: J:\gc24\data\121018\12100036.D\
Signal ID: RTX-CLP2

Calibration Date: 10/31/2018
Calibration ID: KC1800499
Analysis Lot: 618249
Units: ppb

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4-D, TCLP	100	94.6	1.805E4	1.708E4	-5.4	NA	±20	Average RF
2,4,5-TP (Silvex), TCLP	100	98.0	7.021E4	6.879E4	-2.0	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
DCAA	100	92.1	1.638E4	1.508E4	-7.9	NA	±20	Average RF

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	12/11/18 11:08

Continuing Calibration Verification (CCV) Summary
TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Calibration Date:**	10/31/2018
File ID:	J:\gc24\data\121018\12100042.D\	**Calibration ID:**	KC1800499
Signal ID:	ZB-XLB-HT	**Analysis Lot:**	618249
		Units:	ppb

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4-D, TCLP	100	99.7	1.613E4	1.608E4	-0.3	NA	±20	Average RF
2,4,5-TP (Silvex), TCLP	100	106	6.274E4	6.665E4	6.2	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
DCAA	100	97.0	1.461E4	1.417E4	-3.0	NA	±20	Average RF

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	12/11/18 11:08

Continuing Calibration Verification (CCV) Summary
TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Calibration Date:**	10/31/2018
File ID:	J:\gc24\data\121018\12100042.D\	**Calibration ID:**	KC1800499
Signal ID:	RTX-CLP2	**Analysis Lot:**	618249
		Units:	ppb

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4-D, TCLP	100	101	1.805E4	1.823E4	1.0	NA	±20	Average RF
2,4,5-TP (Silvex), TCLP	100	105	7.021E4	7.392E4	5.3	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
DCAA	100	97.4	1.638E4	1.595E4	-2.6	NA	±20	Average RF

Client: Integral Consulting, Incorporated **Service Request:**K1811438
Project: San Jacinto/C1844-0501

Analysis Run Log
TCLP Chlorinated Herbicides by GC

Analysis Method: **Analysis Lot:**618249
Instrument ID:K-GC-24

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\gc24\data\121018\12100003.D\	ZZZZZZZ	ZZZZZZZ	12/10/2018	10:48:00	
J:\gc24\data\121018\12100004.D\	Continuing Calibration Blank	KQ1818013-02	12/10/2018	11:49:00	
J:\gc24\data\121018\12100005.D\	ZZZZZZZ	ZZZZZZZ	12/10/2018	12:13:00	
J:\gc24\data\121018\12100006.D\	ZZZZZZZ	ZZZZZZZ	12/10/2018	12:36:00	
J:\gc24\data\121018\12100007.D\	ZZZZZZZ	ZZZZZZZ	12/10/2018	13:00:00	
J:\gc24\data\121018\12100008.D\	ZZZZZZZ	ZZZZZZZ	12/10/2018	13:24:00	
J:\gc24\data\121018\12100009.D\	Continuing Calibration Verification	KQ1818013-03	12/10/2018	13:48:00	
J:\gc24\data\121018\12100010.D\	Continuing Calibration Blank	KQ1818013-04	12/10/2018	14:11:00	
J:\gc24\data\121018\12100012.D\	Continuing Calibration Verification	KQ1818013-05	12/10/2018	15:06:00	
J:\gc24\data\121018\12100013.D\	Continuing Calibration Blank	KQ1818013-06	12/10/2018	15:30:00	
J:\gc24\data\121018\12100016.D\	Method Blank	KQ1817502-04	12/10/2018	17:59:00	
J:\gc24\data\121018\12100017.D\	Method Blank	KQ1817502-05	12/10/2018	18:22:00	
J:\gc24\data\121018\12100018.D\	Method Blank	KQ1817502-06	12/10/2018	18:47:00	
J:\gc24\data\121018\12100019.D\	ZZZZZZZ	ZZZZZZZ	12/10/2018	19:10:00	
J:\gc24\data\121018\12100020.D\	ZZZZZZZ	ZZZZZZZ	12/10/2018	19:34:00	
J:\gc24\data\121018\12100021.D\	ZZZZZZZ	ZZZZZZZ	12/10/2018	19:58:00	
J:\gc24\data\121018\12100022.D\	ZZZZZZZ	ZZZZZZZ	12/10/2018	20:22:00	
J:\gc24\data\121018\12100024.D\	SL0554	K1811438-002	12/10/2018	21:10:00	
J:\gc24\data\121018\12100025.D\	Continuing Calibration Verification	KQ1818013-07	12/10/2018	21:34:00	
J:\gc24\data\121018\12100025.D\	ZZZZZZZ	ZZZZZZZ	12/10/2018	21:34:00	
J:\gc24\data\121018\12100026.D\	Continuing Calibration Blank	KQ1818013-08	12/10/2018	21:57:00	
J:\gc24\data\121018\12100026.D\	ZZZZZZZ	ZZZZZZZ	12/10/2018	21:57:00	
J:\gc24\data\121018\12100027.D\	ZZZZZZZ	ZZZZZZZ	12/10/2018	22:21:00	
J:\gc24\data\121018\12100028.D\	ZZZZZZZ	ZZZZZZZ	12/10/2018	22:45:00	
J:\gc24\data\121018\12100029.D\	ZZZZZZZ	ZZZZZZZ	12/10/2018	23:09:00	
J:\gc24\data\121018\12100030.D\	ZZZZZZZ	ZZZZZZZ	12/10/2018	23:33:00	
J:\gc24\data\121018\12100031.D\	ZZZZZZZ	ZZZZZZZ	12/10/2018	23:57:00	
J:\gc24\data\121018\12100032.D\	ZZZZZZZ	ZZZZZZZ	12/11/2018	00:20:00	
J:\gc24\data\121018\12100033.D\	ZZZZZZZ	ZZZZZZZ	12/11/2018	00:44:00	
J:\gc24\data\121018\12100034.D\	ZZZZZZZ	ZZZZZZZ	12/11/2018	01:08:00	
J:\gc24\data\121018\12100035.D\	ZZZZZZZ	ZZZZZZZ	12/11/2018	01:32:00	
J:\gc24\data\121018\12100036.D\	Continuing Calibration Verification	KQ1818013-15	12/11/2018	01:56:00	
J:\gc24\data\121018\12100036.D\	ZZZZZZZ	ZZZZZZZ	12/11/2018	01:56:00	
J:\gc24\data\121018\12100037.D\	Continuing Calibration Blank	KQ1818013-16	12/11/2018	02:19:00	
J:\gc24\data\121018\12100037.D\	ZZZZZZZ	ZZZZZZZ	12/11/2018	02:19:00	
J:\gc24\data\121018\12100040.D\	SL0547	K1811438-001	12/11/2018	10:19:00	
J:\gc24\data\121018\12100041.D\	Lab Control Sample	KQ1817502-03	12/11/2018	10:44:00	
J:\gc24\data\121018\12100042.D\	Continuing Calibration Verification	KQ1818013-17	12/11/2018	11:08:00	
J:\gc24\data\121018\12100042.D\	ZZZZZZZ	ZZZZZZZ	12/11/2018	11:08:00	
J:\gc24\data\121018\12100043.D\	ZZZZZZZ	ZZZZZZZ	12/11/2018	11:32:00	
J:\gc24\data\121018\12100043.D\	Continuing Calibration Blank	KQ1818013-18	12/11/2018	11:32:00	

Prep Summary Report

Client: Integral Consulting, Incorporated **Service Request:**K1811438
Project: San Jacinto/C1844-0501
Sample Matrix: Soil

Toxicity Characteristics Leachate Procedure (TCLP)
TCLP Chlorinated Herbicides by GC

Prep Method: Method **Extraction Lot:** 327384
Analytical Method: 8151A **Extraction Date:** 11/30/18 08:47

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
SL0547	K1811438-001	11/15/18	11/21/18	10.00 mL	20 mL	67.1
SL0554	K1811438-002	11/16/18	11/21/18	10.00 mL	20 mL	70.0
Lab Control Sample	KQ1817502-03LCS	NA	NA	10.00 mL	20 mL	
Method Blank	KQ1817502-04MB	NA	NA	10.00 mL	20 mL	
Method Blank	KQ1817502-05MB	NA	NA	10.00 mL	20 mL	
Method Blank	KQ1817502-06MB	NA	NA	10.00 mL	20 mL	

Volatile Organic Compounds

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

Cover Page - Organic Analysis Data Package
Volatile Organic Compounds

Sample Name	Lab Code	Date Collected	Date Received
SL0547	K1811438-001	11/15/2018	11/21/2018
SL0554	K1811438-002	11/16/2018	11/21/2018

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	11/15/2018
Sample Matrix:	Soil	**Date Received:**	11/21/2018
		Date Prepared:	11/26/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Volatile Organic Compounds

Sample Name:	SL0547	**Units:**	mg/L
Lab Code:	K1811438-001	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 5035A/5030B		
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
Vinyl Chloride	ND	U	0.080	0.030	0.2	1	11/27/18	11/27/18	
1,1-Dichloroethene	ND	U	0.20	0.032	0.7	1	11/27/18	11/27/18	
2-Butanone (MEK)	ND	U	8.0	0.76	200	1	11/27/18	11/27/18	*
Chloroform	ND	U	0.20	0.029	6	1	11/27/18	11/27/18	
Carbon Tetrachloride	ND	U	0.20	0.039	0.5	1	11/27/18	11/27/18	
Benzene	ND	U	0.20	0.025	0.5	1	11/27/18	11/27/18	
1,2-Dichloroethane (EDC)	ND	U	0.20	0.032	0.5	1	11/27/18	11/27/18	
Trichloroethene (TCE)	ND	U	0.20	0.040	0.5	1	11/27/18	11/27/18	
Tetrachloroethene (PCE)	ND	U	0.20	0.040	0.7	1	11/27/18	11/27/18	
Chlorobenzene	ND	U	0.20	0.044	100	1	11/27/18	11/27/18	
1,4-Dichlorobenzene	ND	U	0.20	0.048	7.5	1	11/27/18	11/27/18	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Note
Dibromofluoromethane	126	73-122	Outside Control Limits
Toluene-d8	103	65-144	Acceptable
4-Bromofluorobenzene	90	68-117	Acceptable

Comments:

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	11/16/2018
Sample Matrix:	Soil	**Date Received:**	11/21/2018
		Date Prepared:	11/26/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Volatile Organic Compounds

Sample Name:	SL0554	**Units:**	mg/L
Lab Code:	K1811438-002	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 5035A/5030B		
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
Vinyl Chloride	ND	U	0.080	0.030	0.2	1	11/27/18	11/27/18	
1,1-Dichloroethene	ND	U	0.20	0.032	0.7	1	11/27/18	11/27/18	
2-Butanone (MEK)	ND	U	8.0	0.76	200	1	11/27/18	11/27/18	*
Chloroform	ND	U	0.20	0.029	6	1	11/27/18	11/27/18	
Carbon Tetrachloride	ND	U	0.20	0.039	0.5	1	11/27/18	11/27/18	
Benzene	ND	U	0.20	0.025	0.5	1	11/27/18	11/27/18	
1,2-Dichloroethane (EDC)	ND	U	0.20	0.032	0.5	1	11/27/18	11/27/18	
Trichloroethene (TCE)	ND	U	0.20	0.040	0.5	1	11/27/18	11/27/18	
Tetrachloroethene (PCE)	ND	U	0.20	0.040	0.7	1	11/27/18	11/27/18	
Chlorobenzene	ND	U	0.20	0.044	100	1	11/27/18	11/27/18	
1,4-Dichlorobenzene	ND	U	0.20	0.048	7.5	1	11/27/18	11/27/18	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Note
Dibromofluoromethane	125	73-122	Outside Control Limits
Toluene-d8	104	65-144	Acceptable
4-Bromofluorobenzene	88	68-117	Acceptable

Comments:

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Prepared:	11/26/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KWG1806352-2	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 5035A/5030B		
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
Vinyl Chloride	ND	U	0.080	0.030	0.2	1	11/27/18	11/27/18	
1,1-Dichloroethene	ND	U	0.20	0.032	0.7	1	11/27/18	11/27/18	
2-Butanone (MEK)	ND	U	8.0	0.76	200	1	11/27/18	11/27/18	*
Chloroform	ND	U	0.20	0.029	6	1	11/27/18	11/27/18	
Carbon Tetrachloride	ND	U	0.20	0.039	0.5	1	11/27/18	11/27/18	
Benzene	ND	U	0.20	0.025	0.5	1	11/27/18	11/27/18	
1,2-Dichloroethane (EDC)	ND	U	0.20	0.032	0.5	1	11/27/18	11/27/18	
Trichloroethene (TCE)	ND	U	0.20	0.040	0.5	1	11/27/18	11/27/18	
Tetrachloroethene (PCE)	ND	U	0.20	0.040	0.7	1	11/27/18	11/27/18	
Chlorobenzene	ND	U	0.20	0.044	100	1	11/27/18	11/27/18	
1,4-Dichlorobenzene	ND	U	0.20	0.048	7.5	1	11/27/18	11/27/18	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Note
Dibromofluoromethane	123	73-122	Outside Control Limits
Toluene-d8	103	65-144	Acceptable
4-Bromofluorobenzene	91	68-117	Acceptable

Comments:

QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501
Sample Matrix: Soil

Surrogate Recovery Summary
Toxicity Characteristic Leaching Procedure (TCLP)
Volatile Organic Compounds

Preparation Method: EPA 1311 **Units:** Percent
Extraction Method: EPA 5035A/5030B **Level:** Low
Analysis Method: 8260C

Sample Name	Lab Code	Sur1		Sur2	Sur3
SL0547	K1811438-001	126	*	103	90
SL0554	K1811438-002	125	*	104	88
Method Blank	KWG1806352-2	123	*	103	91
Lab Control Sample	KWG1806329-3	106		110	106

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	73-122
Sur2	=	Toluene-d8	65-144
Sur3	=	4-Bromofluorobenzene	68-117

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

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

QA/QC Report

Client: Integral Consulting, Incorporated
Project: San Jacinto/C1844-0501

Service Request: K1811438
Date Analyzed: 11/27/2018
Time Analyzed: 10:58

Internal Standard Area and RT Summary
Volatile Organic Compounds

File ID: J:\MS27\DATA\112718\1127F005.D
Instrument ID: MS27
Analysis Method: 8260C

Lab Code: KWG1806328-2
Analysis Lot: KWG1806328

		Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	675,814	6.51	276,059	9.68	276,591	12.01
	Upper Limit ==>	1,351,628	7.01	552,118	10.18	553,182	12.51
	Lower Limit ==>	337,907	6.01	138,030	9.18	138,296	11.51
	ICAL Result ==>	667,944	6.52	267,768	9.68	262,009	12.01
Associated Analyses							
Lab Control Sample	KWG1806329-3	661,818	6.51	269,787	9.68	279,580	12.01
Method Blank	KWG1806352-2	544,058	6.52	221,961	9.68	199,000	12.01
SL0547	K1811438-001	497,971	6.52	202,014	9.68	178,147	12.01
SL0554	K1811438-002	507,823	6.52	209,769	9.68	184,631	12.01

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

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Prepared:**	11/26/2018
Sample Matrix:	Water	**Date Extracted:**	11/27/2018
		Date Analyzed:	11/27/2018

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 1311/EPA 5035A/5030B	**Units:**	mg/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1806352

Lab Control Sample
KWG1806329-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Vinyl Chloride	3.79	4.00	95	55-123
1,1-Dichloroethene	3.51	4.00	88	66-129
2-Butanone (MEK)	13.7	20.0	69 *	71-149
Chloroform	4.12	4.00	103	70-129
Carbon Tetrachloride	3.98	4.00	100	55-140
Benzene	4.15	4.00	104	69-124
1,2-Dichloroethane (EDC)	4.29	4.00	107	56-142
Trichloroethene (TCE)	4.16	4.00	104	67-128
Tetrachloroethene (PCE)	4.01	4.00	100	62-126
Chlorobenzene	4.36	4.00	109	72-116
1,4-Dichlorobenzene	4.26	4.00	107	73-115

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

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

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Extracted:**	11/27/2018
Sample Matrix:	Soil	**Date Analyzed:**	11/27/2018
		Time Analyzed:	16:50

Method Blank Summary
Volatile Organic Compounds

Sample Name:	Method Blank	**Instrument ID:**	MS27
Lab Code:	KWG1806352-2	**File ID:**	J:\MS27\DATA\112718\1127F015.D
Extraction Method:	EPA 5035A/5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1806352

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1806329-3	J:\MS27\DATA\112718\1127F006.D	11/27/18	11:33
SL0547	K1811438-001	J:\MS27\DATA\112718\1127F023.D	11/27/18	19:46
SL0554	K1811438-002	J:\MS27\DATA\112718\1127F024.D	11/27/18	20:08

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Extracted:**	11/27/2018
Sample Matrix:	Water	**Date Analyzed:**	11/27/2018
		Time Analyzed:	11:33

Lab Control Sample Summary
Volatile Organic Compounds

Sample Name:	Lab Control Sample	**Instrument ID:**	MS27
Lab Code:	KWG1806329-3	**File ID:**	J:\MS27\DATA\112718\1127F006.D
Extraction Method:	EPA 5035A/5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1806352

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1806352-2	J:\MS27\DATA\112718\1127F015.D	11/27/18	16:50
SL0547	K1811438-001	J:\MS27\DATA\112718\1127F023.D	11/27/18	19:46
SL0554	K1811438-002	J:\MS27\DATA\112718\1127F024.D	11/27/18	20:08

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto/C1844-0501

Service Request: K1811438
Date Analyzed: 11/27/2018
Time Analyzed: 10:38

Tune Summary
Volatile Organic Compounds

File ID: J:\MS27\DATA\112718\1127F004.D
Instrument ID: MS27
Column:

Analysis Method: 8260C
Analysis Lot: KWG1806328

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	16.4	13638	PASS
75	95	30	60	46.1	38213	PASS
95	95	100	100	100.0	82930	PASS
96	95	5	9	7.0	5791	PASS
173	174	0	2	1.7	1264	PASS
174	95	50	120	89.7	74421	PASS
175	174	5	9	8.6	6415	PASS
176	174	95	101	99.2	73792	PASS
177	176	5	9	6.9	5116	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1806328-2	J:\MS27\DATA\112718\1127F005.D	11/27/2018	10:58	
Lab Control Sample	KWG1806329-3	J:\MS27\DATA\112718\1127F006.D	11/27/2018	11:33	
Method Blank	KWG1806352-2	J:\MS27\DATA\112718\1127F015.D	11/27/2018	16:50	
SL0547	K1811438-001	J:\MS27\DATA\112718\1127F023.D	11/27/2018	19:46	
SL0554	K1811438-002	J:\MS27\DATA\112718\1127F024.D	11/27/2018	20:08	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501 **Calibration Date:** 11/08/2018

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15885 **Column:** MS
Instrument ID: MS27

Level ID	File ID
A	J:\MS27\DATA\110818\1108F005.D
B	J:\MS27\DATA\110818\1108F006.D
C	J:\MS27\DATA\110818\1108F007.D
D	J:\MS27\DATA\110818\1108F008.D
E	J:\MS27\DATA\110818\1108F009.D
F	J:\MS27\DATA\110818\1108F010.D
G	J:\MS27\DATA\110818\1108F011.D
H	J:\MS27\DATA\110818\1108F012.D
I	J:\MS27\DATA\110818\1108F013.D
J	J:\MS27\DATA\110818\1108F014.D
K	J:\MS27\DATA\110818\1108F015.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Vinyl Chloride	A	0.10	0.244	B	0.20	0.319	C	0.50	0.303	D	1.0	0.317	E	2.0	0.346
	F	5.0	0.360	G	10	0.342	H	20	0.290	I	40	0.308	J	60	0.330
	K	80	0.324												
1,1-Dichloroethene	A	0.10	0.274	B	0.20	0.247	C	0.50	0.263	D	1.0	0.251	E	2.0	0.255
	F	5.0	0.272	G	10	0.250	H	20	0.216	I	40	0.228	J	60	0.247
	K	80	0.241												
2-Butanone (MEK)	A	4.0	0.0184	B	8.0	0.0173	C	20	0.0169	D	40	0.0177	E	80	0.0178
	F	100	0.0168	G	200	0.0176	H	400	0.0179	I	800	0.0173	J	1600	0.0190
	K	2000	0.0188												
Chloroform	A	0.10	0.551	B	0.20	0.544	C	0.50	0.493	D	1.0	0.546	E	2.0	0.530
	F	5.0	0.537	G	10	0.500	H	20	0.474	I	40	0.482	J	60	0.484
	K	80	0.479												
Carbon Tetrachloride	A	0.10	0.258	B	0.20	0.280	C	0.50	0.313	D	1.0	0.364	E	2.0	0.371
	F	5.0	0.394	G	10	0.361	H	20	0.318	I	40	0.342	J	60	0.370
	K	80	0.364												
Benzene	A	0.10	1.11	B	0.20	1.04	C	0.50	1.05	D	1.0	1.08	E	2.0	1.10
	F	5.0	1.13	G	10	1.09	H	20	1.01	I	40	1.06	J	60	1.10
	K	80	1.08												
1,2-Dichloroethane (EDC)	A	0.10	0.302	B	0.20	0.333	C	0.50	0.321	D	1.0	0.351	E	2.0	0.342
	F	5.0	0.346	G	10	0.334	H	20	0.323	I	40	0.315	J	60	0.316
	K	80	0.308												
Trichloroethene (TCE)	A	0.10	0.228	B	0.20	0.279	C	0.50	0.268	D	1.0	0.307	E	2.0	0.295
	F	5.0	0.304	G	10	0.290	H	20	0.264	I	40	0.275	J	60	0.288
	K	80	0.285												
Tetrachloroethene (PCE)	A	0.10	0.520	B	0.20	0.624	C	0.50	0.547	D	1.0	0.602	E	2.0	0.608
	F	5.0	0.669	G	10	0.616	H	20	0.548	I	40	0.590	J	60	0.628
	K	80	0.620												
Chlorobenzene	A	0.10	1.90	B	0.20	1.75	C	0.50	1.97	D	1.0	1.94	E	2.0	2.02
	F	5.0	2.03	G	10	1.97	H	20	1.89	I	40	1.97	J	60	1.99
	K	80	1.95												

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

† SPCC Compound **‡ CCC Compound**

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501 **Calibration Date:** 11/08/2018

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15885 **Column:** MS
Instrument ID: MS27

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
1,4-Dichlorobenzene	A	0.10	1.61	B	0.20	1.61	C	0.50	1.74	D	1.0	1.68	E	2.0	1.76
	F	5.0	1.70	G	10	1.67	H	20	1.61	I	40	1.63	J	60	1.69
	K	80	1.65												
Dibromofluoromethane										D	4.0	0.277	E	6.0	0.265
	F	8.0	0.268	G	10	0.264	H	12	0.249	I	14	0.247	J	16	0.246
	K	20	0.250												
Toluene-d8										D	4.0	0.746	E	6.0	0.909
	F	8.0	0.891	G	10	0.950	H	12	0.859	I	14	0.840	J	16	0.852
	K	20	0.878												
4-Bromofluorobenzene										D	4.0	0.740	E	6.0	0.812
	F	8.0	0.868	G	10	0.878	H	12	0.848	I	14	0.830	J	16	0.815
	K	20	0.800												

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

† SPCC Compound **‡ CCC Compound**

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501 **Calibration Date:** 11/08/2018

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15885 **Column:** MS
Instrument ID: MS27

		Calibration Evaluation					RRF Evaluation		
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**	**Average RRF**	**Q**	**Minimum RRF**
Vinyl Chloride	MS	AverageRF	% RSD	9.9		≤ 20	0.317		0.1
1,1-Dichloroethene	MS	AverageRF	% RSD	6.9		≤ 20	0.250		0.1
2-Butanone (MEK)	MS	AverageRF	% RSD	4.1		≤ 20	0.0178		0.01
Chloroform	MS	AverageRF	% RSD	6.0		≤ 20	0.511		0.2
Carbon Tetrachloride	MS	AverageRF	% RSD	12.4		≤ 20	0.340		0.1
Benzene	MS	AverageRF	% RSD	3.2		≤ 20	1.08		0.5
1,2-Dichloroethane (EDC)	MS	AverageRF	% RSD	4.9		≤ 20	0.326		0.1
Trichloroethene (TCE)	MS	AverageRF	% RSD	7.9		≤ 20	0.280		0.2
Tetrachloroethene (PCE)	MS	AverageRF	% RSD	7.3		≤ 20	0.598		0.2
Chlorobenzene	MS	AverageRF	% RSD	4.0		≤ 20	1.94		0.5
1,4-Dichlorobenzene	MS	AverageRF	% RSD	3.1		≤ 20	1.67		0.5
Dibromofluoromethane	SURR	AverageRF	% RSD	4.6		≤ 20	0.258		0.01
Toluene-d8	SURR	AverageRF	% RSD	6.9		≤ 20	0.866		0.01
4-Bromofluorobenzene	SURR	AverageRF	% RSD	5.3		≤ 20	0.824		0.01

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

† SPCC Compound **‡ CCC Compound**

Client: Integral Consulting, Incorporated
Project: San Jacinto/C1844-0501

Service Request: K1811438
Calibration Date: 11/08/2018
Date Analyzed: 11/08/2018

Second Source Calibration Verification
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration ID: CAL15885
Units: PPB

File ID: J:\MS27\DATA\110818\1108F019.D
J:\MS27\DATA\110818\1108F020.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Vinyl Chloride	10	11	0.317	0.342	8	NA	± 30 %	AverageRF
1,1-Dichloroethene	10	9.8	0.250	0.245	-2	NA	± 30 %	AverageRF
2-Butanone (MEK)	50	50	0.0178	0.0178	0	NA	± 30 %	AverageRF
Chloroform	10	9.4	0.511	0.481	-6	NA	± 30 %	AverageRF
Carbon Tetrachloride	10	11	0.340	0.368	8	NA	± 30 %	AverageRF
Benzene	10	10	1.08	1.07	0	NA	± 30 %	AverageRF
1,2-Dichloroethane (EDC)	10	9.6	0.326	0.313	-4	NA	± 30 %	AverageRF
Trichloroethene (TCE)	10	10	0.280	0.285	2	NA	± 30 %	AverageRF
Tetrachloroethene (PCE)	10	10	0.598	0.626	5	NA	± 30 %	AverageRF
Chlorobenzene	10	10	1.94	1.94	0	NA	± 30 %	AverageRF
1,4-Dichlorobenzene	10	9.9	1.67	1.65	-1	NA	± 30 %	AverageRF

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

† SPCC Compound **‡ CCC Compound**

Client: Integral Consulting, Incorporated
Project: San Jacinto/C1844-0501

Service Request: K1811438
Date Analyzed: 11/27/2018

Continuing Calibration Verification Summary
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 11/08/2018
Calibration ID: CAL15885
Analysis Lot: KWG1806328
Units: PPB

File ID: J:\MS27\DATA\112718\1127F005.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Vinyl Chloride	10	12	0.1	0.317	0.380	20	NA	± 20	AverageRF
1,1-Dichloroethene	10	10	0.1	0.250	0.258	3	NA	± 20	AverageRF
2-Butanone (MEK)	200	190	0.01	0.0178	0.0173	-3	NA	± 20	AverageRF
Chloroform	10	10	0.2	0.511	0.534	5	NA	± 20	AverageRF
Carbon Tetrachloride	10	11	0.1	0.340	0.380	12	NA	± 20	AverageRF
Benzene	10	11	0.5	1.08	1.16	7	NA	± 20	AverageRF
1,2-Dichloroethane (EDC)	10	10	0.1	0.326	0.339	4	NA	± 20	AverageRF
Trichloroethene (TCE)	10	11	0.2	0.280	0.314	12	NA	± 20	AverageRF
Tetrachloroethene (PCE)	10	11	0.2	0.598	0.652	9	NA	± 20	AverageRF
Chlorobenzene	10	11	0.5	1.94	2.07	7	NA	± 20	AverageRF
1,4-Dichlorobenzene	10	10	0.5	1.67	1.75	5	NA	± 20	AverageRF
Dibromofluoromethane	10	11	0.01	0.258	0.278	8	NA	± 20	AverageRF
Toluene-d8	10	12	0.01	0.866	1.02	18	NA	± 20	AverageRF
4-Bromofluorobenzene	10	11	0.01	0.824	0.915	11	NA	± 20	AverageRF

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

† SPCC Compound **‡ CCC Compound**

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501

Analysis Run Log
Volatile Organic Compounds

Analysis Method: 8260C **Analysis Lot:** KWG1806328
Instrument ID: MS27

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1127F004.D	GC/MS Tuning - Bromofluorobenzene	KWG1806328-1	11/27/2018	10:38		11/27/2018	10:41
1127F005.D	Continuing Calibration Verification	KWG1806328-2	11/27/2018	10:58		11/27/2018	11:15
1127F006.D	Lab Control Sample	KWG1806329-3	11/27/2018	11:33		11/27/2018	11:50
1127F007.D	ZZZZZZ	ZZZZZZ	11/27/2018	11:55		11/27/2018	12:12
1127F008.D	ZZZZZZ	ZZZZZZ	11/27/2018	14:16		11/27/2018	14:33
1127F009.D	ZZZZZZ	ZZZZZZ	11/27/2018	14:38		11/27/2018	14:55
1127F012.D	ZZZZZZ	ZZZZZZ	11/27/2018	15:44		11/27/2018	16:01
1127F013.D	ZZZZZZ	ZZZZZZ	11/27/2018	16:06		11/27/2018	16:23
1127F014.D	ZZZZZZ	ZZZZZZ	11/27/2018	16:28		11/27/2018	16:45
1127F015.D	Method Blank	KWG1806352-2	11/27/2018	16:50		11/27/2018	17:07
1127F016.D	ZZZZZZ	ZZZZZZ	11/27/2018	17:12		11/27/2018	17:29
1127F017.D	ZZZZZZ	ZZZZZZ	11/27/2018	17:34		11/27/2018	17:51
1127F018.D	ZZZZZZ	ZZZZZZ	11/27/2018	17:56		11/27/2018	18:13
1127F019.D	ZZZZZZ	ZZZZZZ	11/27/2018	18:18		11/27/2018	18:35
1127F020.D	ZZZZZZ	ZZZZZZ	11/27/2018	18:40		11/27/2018	18:57
1127F021.D	ZZZZZZ	ZZZZZZ	11/27/2018	19:02		11/27/2018	19:19
1127F022.D	ZZZZZZ	ZZZZZZ	11/27/2018	19:24		11/27/2018	19:41
1127F023.D	SL0547	K1811438-001	11/27/2018	19:46		11/27/2018	20:03
1127F024.D	SL0554	K1811438-002	11/27/2018	20:08		11/27/2018	20:25
1127F025.D	ZZZZZZ	ZZZZZZ	11/27/2018	20:30		11/27/2018	20:47
1127F026.D	ZZZZZZ	ZZZZZZ	11/27/2018	20:52		11/27/2018	21:09
1127F027.D	ZZZZZZ	ZZZZZZ	11/27/2018	21:14		11/27/2018	21:31
1127F028.D	ZZZZZZ	ZZZZZZ	11/27/2018	21:36		11/27/2018	21:53
1127F029.D	ZZZZZZ	ZZZZZZ	11/27/2018	21:58		11/27/2018	22:15

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Prepared:**	11/26/2018
Sample Matrix:	Soil	**Date Extracted:**	11/27/2018

Extraction Prep Log
Volatile Organic Compounds

Preparation Method:	EPA 1311	**Extraction Lot:**	KWG1806352
Extraction Method:	EPA 5035A/5030B	**Level:**	Low
Analysis Method:	8260C		

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
SL0547	K1811438-001	11/15/18	11/21/18	125uL	50ml	NA	
SL0554	K1811438-002	11/16/18	11/21/18	125uL	50ml	NA	
Method Blank	KWG1806352-2	NA	NA	125uL	50ml	NA	
Lab Control Sample	KWG1806329-3	NA	NA	125uL	50ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Semi-Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	11/15/18 18:45
Sample Matrix:	Soil	**Date Received:**	11/21/18 11:20
Sample Name:	SL0547	**Units:**	mg/L
Lab Code:	K1811438-001	**Basis:**	Dry

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 3510C	**Pre-Prep Date:**	11/26/18

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-Trichlorophenol, TCLP	ND U	0.15	0.013	1	01/08/19 05:48	1/3/18	
2,4,6-Trichlorophenol, TCLP	ND U	0.15	0.011	1	01/08/19 05:48	1/3/18	
2,4-Dinitrotoluene, TCLP	ND U	0.15	0.020	1	01/08/19 05:48	1/3/18	
2-Methylphenol, TCLP	ND U	0.15	0.013	1	01/08/19 05:48	1/3/18	
4-Methylphenol, TCLP	ND U	0.15	0.0070	1	01/08/19 05:48	1/3/18	
Hexachlorobenzene, TCLP	ND U	0.15	0.014	1	01/08/19 05:48	1/3/18	*
Hexachlorobutadiene, TCLP	ND U	0.15	0.0095	1	01/08/19 05:48	1/3/18	
Hexachloroethane, TCLP	ND U	0.15	0.0071	1	01/08/19 05:48	1/3/18	
Nitrobenzene, TCLP	ND U	0.15	0.012	1	01/08/19 05:48	1/3/18	
Pentachlorophenol (PCP), TCLP	ND U	0.37	0.016	1	01/08/19 05:48	1/3/18	
Pyridine, TCLP	ND U	0.75	0.38	1	01/08/19 05:48	1/3/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	124	52 - 122	01/08/19 05:48	*
2-Fluorobiphenyl	84	44 - 114	01/08/19 05:48	
Nitrobenzene-d5	88	45 - 122	01/08/19 05:48	
Phenol-d6	74	35 - 105	01/08/19 05:48	
p-Terphenyl-d14	108	50 - 145	01/08/19 05:48	

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	11/16/18 16:50
Sample Matrix:	Soil	**Date Received:**	11/21/18 11:20
Sample Name:	SL0554	**Units:**	mg/L
Lab Code:	K1811438-002	**Basis:**	Dry

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 3510C	**Pre-Prep Date:**	11/26/18

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-Trichlorophenol, TCLP	ND U	0.14	0.013	1	01/08/19 06:28	1/3/18	
2,4,6-Trichlorophenol, TCLP	ND U	0.14	0.0099	1	01/08/19 06:28	1/3/18	
2,4-Dinitrotoluene, TCLP	ND U	0.14	0.019	1	01/08/19 06:28	1/3/18	
2-Methylphenol, TCLP	ND U	0.14	0.013	1	01/08/19 06:28	1/3/18	
4-Methylphenol, TCLP	ND U	0.14	0.0067	1	01/08/19 06:28	1/3/18	
Hexachlorobenzene, TCLP	ND U	0.14	0.014	1	01/08/19 06:28	1/3/18	*
Hexachlorobutadiene, TCLP	ND U	0.14	0.0091	1	01/08/19 06:28	1/3/18	
Hexachloroethane, TCLP	ND U	0.14	0.0068	1	01/08/19 06:28	1/3/18	
Nitrobenzene, TCLP	ND U	0.14	0.012	1	01/08/19 06:28	1/3/18	
Pentachlorophenol (PCP), TCLP	ND U	0.36	0.016	1	01/08/19 06:28	1/3/18	
Pyridine, TCLP	ND U	0.71	0.36	1	01/08/19 06:28	1/3/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	118	52 - 122	01/08/19 06:28	
2-Fluorobiphenyl	80	44 - 114	01/08/19 06:28	
Nitrobenzene-d5	86	45 - 122	01/08/19 06:28	
Phenol-d6	70	35 - 105	01/08/19 06:28	
p-Terphenyl-d14	109	50 - 145	01/08/19 06:28	

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KQ1818690-03	**Basis:**	Dry

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-Trichlorophenol, TCLP	ND U	0.10	0.0087	1	01/10/19 20:23	1/3/18	
2,4,6-Trichlorophenol, TCLP	ND U	0.10	0.0069	1	01/10/19 20:23	1/3/18	
2,4-Dinitrotoluene, TCLP	ND U	0.10	0.013	1	01/10/19 20:23	1/3/18	
2-Methylphenol, TCLP	ND U	0.10	0.0086	1	01/10/19 20:23	1/3/18	
4-Methylphenol, TCLP	ND U	0.10	0.0047	1	01/10/19 20:23	1/3/18	
Hexachlorobenzene, TCLP	ND U	0.10	0.0094	1	01/10/19 20:23	1/3/18	
Hexachlorobutadiene, TCLP	ND U	0.10	0.0064	1	01/10/19 20:23	1/3/18	
Hexachloroethane, TCLP	ND U	0.10	0.0048	1	01/10/19 20:23	1/3/18	
Nitrobenzene, TCLP	ND U	0.10	0.0079	1	01/10/19 20:23	1/3/18	
Pentachlorophenol (PCP), TCLP	ND U	0.25	0.011	1	01/10/19 20:23	1/3/18	
Pyridine, TCLP	ND U	0.50	0.25	1	01/10/19 20:23	1/3/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	120	52 - 122	01/10/19 20:23	
2-Fluorobiphenyl	81	44 - 114	01/10/19 20:23	
Nitrobenzene-d5	90	45 - 122	01/10/19 20:23	
Phenol-d6	73	35 - 105	01/10/19 20:23	
p-Terphenyl-d14	104	50 - 145	01/10/19 20:23	

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KQ1818690-04	**Basis:**	Dry

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-Trichlorophenol, TCLP	ND U	0.10	0.0087	1	01/08/19 01:46	1/3/18	
2,4,6-Trichlorophenol, TCLP	ND U	0.10	0.0069	1	01/08/19 01:46	1/3/18	
2,4-Dinitrotoluene, TCLP	ND U	0.10	0.013	1	01/08/19 01:46	1/3/18	
2-Methylphenol, TCLP	ND U	0.10	0.0086	1	01/08/19 01:46	1/3/18	
4-Methylphenol, TCLP	ND U	0.10	0.0047	1	01/08/19 01:46	1/3/18	
Hexachlorobenzene, TCLP	ND U	0.10	0.0094	1	01/08/19 01:46	1/3/18	
Hexachlorobutadiene, TCLP	ND U	0.10	0.0064	1	01/08/19 01:46	1/3/18	
Hexachloroethane, TCLP	ND U	0.10	0.0048	1	01/08/19 01:46	1/3/18	
Nitrobenzene, TCLP	ND U	0.10	0.0079	1	01/08/19 01:46	1/3/18	
Pentachlorophenol (PCP), TCLP	ND U	0.25	0.011	1	01/08/19 01:46	1/3/18	
Pyridine, TCLP	ND U	0.50	0.25	1	01/08/19 01:46	1/3/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	103	52 - 122	01/08/19 01:46	
2-Fluorobiphenyl	69	44 - 114	01/08/19 01:46	
Nitrobenzene-d5	74	45 - 122	01/08/19 01:46	
Phenol-d6	60	35 - 105	01/08/19 01:46	
p-Terphenyl-d14	98	50 - 145	01/08/19 01:46	

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KQ1818690-05	**Basis:**	Dry

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-Trichlorophenol, TCLP	ND U	0.10	0.0087	1	01/10/19 19:43	1/3/18	
2,4,6-Trichlorophenol, TCLP	ND U	0.10	0.0069	1	01/10/19 19:43	1/3/18	
2,4-Dinitrotoluene, TCLP	ND U	0.10	0.013	1	01/10/19 19:43	1/3/18	
2-Methylphenol, TCLP	ND U	0.10	0.0086	1	01/10/19 19:43	1/3/18	
4-Methylphenol, TCLP	ND U	0.10	0.0047	1	01/10/19 19:43	1/3/18	
Hexachlorobenzene, TCLP	ND U	0.10	0.0094	1	01/10/19 19:43	1/3/18	
Hexachlorobutadiene, TCLP	ND U	0.10	0.0064	1	01/10/19 19:43	1/3/18	
Hexachloroethane, TCLP	ND U	0.10	0.0048	1	01/10/19 19:43	1/3/18	
Nitrobenzene, TCLP	ND U	0.10	0.0079	1	01/10/19 19:43	1/3/18	
Pentachlorophenol (PCP), TCLP	ND U	0.25	0.011	1	01/10/19 19:43	1/3/18	
Pyridine, TCLP	ND U	0.50	0.25	1	01/10/19 19:43	1/3/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	105	52 - 122	01/10/19 19:43	
2-Fluorobiphenyl	69	44 - 114	01/10/19 19:43	
Nitrobenzene-d5	71	45 - 122	01/10/19 19:43	
Phenol-d6	58	35 - 105	01/10/19 19:43	
p-Terphenyl-d14	102	50 - 145	01/10/19 19:43	

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3510C

Sample Name	Lab Code	2,4,6-Tribromophenol 52-122	2-Fluorobiphenyl 44-114	Nitrobenzene-d5 45-122
SL0547	K1811438-001	124*	84	88
SL0554	K1811438-002	118	80	86
Method Blank	KQ1818690-03	120	81	90
Method Blank	KQ1818690-04	103	69	74
Method Blank	KQ1818690-05	105	69	71
Lab Control Sample	KQ1818690-01	125*	80	86

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto/C1844-0501
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3510C

Sample Name	Lab Code	Phenol-d6 35-105	p-Terphenyl-d14 50-145
SL0547	K1811438-001	74	108
SL0554	K1811438-002	70	109
Method Blank	KQ1818690-03	73	104
Method Blank	KQ1818690-04	60	98
Method Blank	KQ1818690-05	58	102
Lab Control Sample	KQ1818690-01	69	82

Client: Integral Consulting, Incorporated **Service Request:**K1811438
Project: San Jacinto/C1844-0501 **Date Analyzed:**01/07/19 23:45

Internal Standard Area and RT SUMMARY
TCLP Semivolatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\010719\0107F014.D\ **Lab Code:**KQ1900278-02
Instrument ID: K-MS-07 **Analysis Lot:**621348
Analysis Method: 8270D **Signal ID:**1

		1,4-Dichlorobenzene-d4		Acenaphthene-d10		Chrysene-d12	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Result ==>	45,827	9.42	98,428	14.38	121,991	21.28
	Upper Limit ==>	91,654	9.92	196,856	14.88	243,982	21.78
	Lower Limit ==>	22,914	8.92	49,214	13.88	60,996	20.78
Associated Analyses							
Method Blank	KQ1818690-04	35502	9.42	70034	14.38	84290	21.27
Lab Control Sample	KQ1818690-01	35533	9.42	76961	14.38	99998	21.27
SL0547	K1811438-001	35837	9.42	70839	14.38	80419	21.27
SL0554	K1811438-002	37604	9.42	74043	14.38	82838	21.26

Client: Integral Consulting, Incorporated **Service Request:**K1811438
Project: San Jacinto/C1844-0501 **Date Analyzed:**01/07/19 23:45

Internal Standard Area and RT SUMMARY
TCLP Semivolatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\010719\0107F014.D\ **Lab Code:**KQ1900278-02
Instrument ID: K-MS-07 **Analysis Lot:**621348
Analysis Method: 8270D **Signal ID:**1

		Naphthalene-d8		Perylene-d12		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Result ==>	163,058	11.52	129,370	24.52	125,440	16.80
	Upper Limit ==>	326,116	12.02	258,740	25.02	250,880	17.30
	Lower Limit ==>	81,529	11.02	64,685	24.02	62,720	16.30
Associated Analyses							
Method Blank	KQ1818690-04	120120	11.51	99934	24.51	106647	16.79
Lab Control Sample	KQ1818690-01	128629	11.52	103996	24.51	110454	16.80
SL0547	K1811438-001	126367	11.51	96608	24.51	100780	16.79
SL0554	K1811438-002	129279	11.52	104806	24.50	109299	16.80

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	01/08/19
Sample Matrix:	Soil	**Date Extracted:**	01/03/18

Lab Control Sample Summary
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Units:**	mg/L
Prep Method:	EPA 3510C	**Basis:**	Dry
		Analysis Lot:	621348

Lab Control Sample
KQ1818690-01

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-Trichlorophenol, TCLP	0.827	1.00	83	63-107
2,4,6-Trichlorophenol, TCLP	0.785	1.00	78	64-108
2,4-Dinitrotoluene, TCLP	0.860	1.00	86	55-121
2-Methylphenol, TCLP	0.747	1.00	75	51-104
4-Methylphenol, TCLP	0.697	1.00	70	53-101
Hexachlorobenzene, TCLP	0.914	1.00	91	59-113
Hexachlorobutadiene, TCLP	0.696	1.00	70	45-98
Hexachloroethane, TCLP	0.652	1.00	65	41-97
Nitrobenzene, TCLP	0.753	1.00	75	50-107
Pentachlorophenol (PCP), TCLP	0.723	1.00	72	52-122
Pyridine, TCLP	0.905	2.00	45	10-117

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	01/10/19 20:23
Sample Matrix:	Soil	**Date Extracted:**	01/03/18

Method Blank Summary
TCLP Semivolatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Instrument ID:**	K-MS-07
Lab Code:	KQ1818690-03	**File ID:**	J:\MS07\DATA\011019\0110F006.D\
Analysis Method:	8270D	**Analysis Lot:**	621348,621711
Prep Method:	EPA 3510C	**Extraction Lot:**	328856

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1818690-01	J:\MS07\DATA\010719\0107F018.D\	01/08/19 02:26
SL0547	K1811438-001	J:\MS07\DATA\010719\0107F023.D\	01/08/19 05:48
SL0554	K1811438-002	J:\MS07\DATA\010719\0107F024.D\	01/08/19 06:28

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	01/10/19 20:23
Sample Matrix:	Soil	**Date Extracted:**	01/03/18

Method Blank Summary
TCLP Semivolatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Instrument ID:**	K-MS-07
Lab Code:	KQ1818690-03	**File ID:**	J:\MS07\DATA\011019\0110F006.D\
Analysis Method:	8270D	**Analysis Lot:**	621348,621711
Prep Method:	EPA 3510C	**Extraction Lot:**	328856

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1818690-01	J:\MS07\DATA\010719\0107F018.D\	01/08/19 02:26
SL0547	K1811438-001	J:\MS07\DATA\010719\0107F023.D\	01/08/19 05:48
SL0554	K1811438-002	J:\MS07\DATA\010719\0107F024.D\	01/08/19 06:28

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	01/10/19 20:23
Sample Matrix:	Soil	**Date Extracted:**	01/03/18

Method Blank Summary
TCLP Semivolatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Instrument ID:**	K-MS-07
Lab Code:	KQ1818690-03	**File ID:**	J:\MS07\DATA\011019\0110F006.D\
Analysis Method:	8270D	**Analysis Lot:**	621348,621711
Prep Method:	EPA 3510C	**Extraction Lot:**	328856

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1818690-01	J:\MS07\DATA\010719\0107F018.D\	01/08/19 02:26
SL0547	K1811438-001	J:\MS07\DATA\010719\0107F023.D\	01/08/19 05:48
SL0554	K1811438-002	J:\MS07\DATA\010719\0107F024.D\	01/08/19 06:28

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	01/08/19 02:26
Sample Matrix:	Soil	**Date Extracted:**	01/03/18

Lab Control Sample Summary
TCLP Semivolatile Organic Compounds by GC/MS

Sample Name:	Lab Control Sample	**Instrument ID:**	K-MS-07
Lab Code:	KQ1818690-01	**File ID:**	J:\MS07\DATA\010719\0107F018.D\
Analysis Method:	8270D	**Analysis Lot:**	621348,621711
Prep Method:	EPA 3510C	**Extraction Lot:**	328856

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1818690-04	J:\MS07\DATA\010719\0107F017.D\	01/08/19 01:46
SL0547	K1811438-001	J:\MS07\DATA\010719\0107F023.D\	01/08/19 05:48
SL0554	K1811438-002	J:\MS07\DATA\010719\0107F024.D\	01/08/19 06:28
Method Blank	KQ1818690-05	J:\MS07\DATA\011019\0110F005.D\	01/10/19 19:43
Method Blank	KQ1818690-03	J:\MS07\DATA\011019\0110F006.D\	01/10/19 20:23

Client: Integral Consulting, Incorporated **Service Request:**K1811438
Project: San Jacinto/C1844-0501 **Date Analyzed:**01/07/19 23:05

Tune Summary
TCLP Semivolatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\010719\0107F013.D\ **Analytical Method:** 8270D
Instrument ID: K-MS-07 **Analysis Lot:** 621348

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
443	442	15	24	18.50	4229	Pass
51	198	30	80	68.92	20900	Pass
68	69	0	2	0.00	0	Pass
69	198	0	100	63.06	19123	Pass
70	69	0	2	0.00	0	Pass
127	198	25	75	44.55	13509	Pass
197	198	0	1	0.00	0	Pass
198	198	100	100	100.00	30323	Pass
199	198	5	9	6.80	2063	Pass
275	198	10	30	26.10	7913	Pass
365	198	0.75	100	4.33	1314	Pass
441	443	0.01	100	84.49	3573	Pass
442	198	40	110	75.40	22863	Pass

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	KQ1900278-02	J:\MS07\DATA\010719\0107F014.D\	01/07/19 23:45	
Method Blank	KQ1818690-04	J:\MS07\DATA\010719\0107F017.D\	01/08/19 01:46	
Lab Control Sample	KQ1818690-01	J:\MS07\DATA\010719\0107F018.D\	01/08/19 02:26	
SL0547	K1811438-001	J:\MS07\DATA\010719\0107F023.D\	01/08/19 05:48	
SL0554	K1811438-002	J:\MS07\DATA\010719\0107F024.D\	01/08/19 06:28	

Client: Integral Consulting, Incorporated **Service Request:**K1811438
Project: San Jacinto/C1844-0501 **Date Analyzed:**01/10/19 19:43

Tune Summary
TCLP Semivolatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\011019\0110F005.D\ **Analytical Method:** 8270D
Instrument ID: K-MS-07 **Analysis Lot:** 621711

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Method Blank	KQ1818690-05	J:\MS07\DATA\011019\0110F005.D\	01/10/19 19:43	
Method Blank	KQ1818690-03	J:\MS07\DATA\011019\0110F006.D\	01/10/19 20:23	

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto **Calibration Date:** 12/7/2018

Initial Calibration Summary
TCLP Semivolatile Organic Compounds by GC/MS

Calibration ID: KC1800550 **Signal ID:** 1
Instrument ID: K-MS-07

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1800550-01	8270/P ICAL @ 1ppm | SVM59-92D	J:\MS07\DATA\120718\1207F003.D	12/07/2018 16:32
02	KC1800550-02	8270/P ICAL @ 5ppm | SVM59-92E	J:\MS07\DATA\120718\1207F004.D	12/07/2018 17:13
03	KC1800550-03	8270/P ICAL @ 10ppm | SVM59-92F	J:\MS07\DATA\120718\1207F005.D	12/07/2018 17:54
04	KC1800550-04	8270/P ICAL @ 20ppm | SVM59-92G	J:\MS07\DATA\120718\1207F006.D	12/07/2018 18:35
05	KC1800550-05	8270/P ICAL @ 50ppm | SVM59-92H	J:\MS07\DATA\120718\1207F007.D	12/07/2018 19:16
06	KC1800550-06	8270/P ICAL @ 80ppm | SVM59-92I	J:\MS07\DATA\120718\1207F008.D	12/07/2018 19:57
07	KC1800550-07	8270/P ICAL @ 100ppm | SVM59-92J	J:\MS07\DATA\120718\1207F009.D	12/07/2018 20:38
08	KC1800550-08	8270/P ICAL @ 120ppm | SVM59-92K	J:\MS07\DATA\120718\1207F010.D	12/07/2018 21:19
09	KC1800550-09	8270/P ICAL @ 160ppm | SVM59-92L	J:\MS07\DATA\120718\1207F011.D	12/07/2018 22:00
10	KC1800550-10	8270/P ICAL @ 200ppm | SVM59-92M	J:\MS07\DATA\120718\1207F012.D	12/07/2018 22:41

Analyte

2,4,5-Trichlorophenol, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.3342	03	10.000	0.3787	04	20.000	0.4188	05	50.000	0.4343
06	80.000	0.4482	07	100.000	0.4467	08	120.000	0.4492	09	160.000	0.4659
10	200.000	0.4681									

2,4,6-Tribromophenol

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.08702	03	10.000	0.09326	04	20.000	0.108	05	50.000	0.1188
06	80.000	0.1161	07	100.000	0.1209	08	120.000	0.1225	09	160.000	0.1323
10	200.000	0.1368									

2,4,6-Trichlorophenol, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
03	10.000	0.3219	04	20.000	0.372	05	50.000	0.4205	06	80.000	0.4115
07	100.000	0.4363	08	120.000	0.4615	09	160.000	0.4781	10	200.000	0.458

2,4-Dinitrotoluene, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.2905	03	10.000	0.3367	04	20.000	0.3639	05	50.000	0.3729
06	80.000	0.3707	07	100.000	0.3847	08	120.000	0.4266	09	160.000	0.4107
10	200.000	0.3948									

2-Fluorobiphenyl

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	1.342	03	10.000	1.346	04	20.000	1.373	05	50.000	1.441
06	80.000	1.441	07	100.000	1.539	08	120.000	1.602	09	160.000	1.677
10	200.000	1.677									

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto **Calibration Date:** 12/7/2018

Initial Calibration Summary
TCLP Semivolatile Organic Compounds by GC/MS

Calibration ID: KC1800550 **Signal ID:** 1
Instrument ID: K-MS-07

Analyte

2-Methylphenol, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.8401	03	10.000	0.8617	04	20.000	0.8502	05	50.000	0.9191
06	80.000	0.872	07	100.000	0.8993	08	120.000	0.9072	09	160.000	0.9818
10	200.000	0.9986									

4-Methylphenol, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	1.203	03	10.000	1.327	04	20.000	1.359	05	50.000	1.443
06	80.000	1.368	07	100.000	1.396	08	120.000	1.408	09	160.000	1.568
10	200.000	1.552									

Hexachlorobenzene, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.218	03	10.000	0.2389	04	20.000	0.2346	05	50.000	0.2423
06	80.000	0.2363	07	100.000	0.2444	08	120.000	0.2466	09	160.000	0.2577
10	200.000	0.2661									

Hexachlorobutadiene, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.254	03	10.000	0.2551	04	20.000	0.2655	05	50.000	0.2789
06	80.000	0.2722	07	100.000	0.2757	08	120.000	0.2938	09	160.000	0.3003
10	200.000	0.3227									

Hexachloroethane, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.6058	03	10.000	0.6486	04	20.000	0.6865	05	50.000	0.6912
06	80.000	0.6937	07	100.000	0.6824	08	120.000	0.726	09	160.000	0.7366
10	200.000	0.7723									

Nitrobenzene, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	1.254	03	10.000	1.274	04	20.000	1.313	05	50.000	1.439
06	80.000	1.359	07	100.000	1.351	08	120.000	1.387	09	160.000	1.493
10	200.000	1.528									

Nitrobenzene-d5

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	1.3	03	10.000	1.212	04	20.000	1.347	05	50.000	1.428
06	80.000	1.352	07	100.000	1.386	08	120.000	1.385	09	160.000	1.471
10	200.000	1.468									

Pentachlorophenol (PCP), TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
04	20.000	0.1084	05	50.000	0.1372	06	80.000	0.1556	07	100.000	0.1606
08	120.000	0.1759	09	160.000	0.1842	10	200.000	0.2013			

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto **Calibration Date:** 12/7/2018

Initial Calibration Summary
TCLP Semivolatile Organic Compounds by GC/MS

Calibration ID: KC1800550 **Signal ID:** 1
Instrument ID: K-MS-07

Analyte

Phenol-d6

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	1.099	03	10.000	1.161	04	20.000	1.244	05	50.000	1.317
06	80.000	1.267	07	100.000	1.284	08	120.000	1.332	09	160.000	1.46
10	200.000	1.504									

Pyridine, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.8956	03	10.000	0.9641	04	20.000	0.9161	05	50.000	0.9975
06	80.000	0.9927	07	100.000	1.008	08	120.000	1.065	09	160.000	1.107
10	200.000	1.125									

p-Terphenyl-d14

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.000	1.068	02	5.000	0.7574	03	10.000	0.7451	04	20.000	0.7884
05	50.000	0.8636	06	80.000	0.9328	07	100.000	0.9382	08	120.000	0.9779
09	160.000	1.053	10	200.000	1.042						

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto **Calibration Date:** 12/7/2018

Initial Calibration Summary
TCLP Semivolatile Organic Compounds by GC/MS

Calibration ID: KC1800550 **Signal ID:** 1
Instrument ID: K-MS-07

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
2,4,5-Trichlorophenol, TCLP	TRG	Average RF	% RSD	10.3	≤20	0.4271	0.200
2,4,6-Tribromophenol	SURR	Average RF	% RSD	14.4	≤20	0.1151	0.010
2,4,6-Trichlorophenol, TCLP	TRG	Average RF	% RSD	12.3	≤20	0.42	0.200
2,4-Dinitrotoluene, TCLP	TRG	Average RF	% RSD	10.9	≤20	0.3724	0.200
2-Fluorobiphenyl	SURR	Average RF	% RSD	9.1	≤20	1.493	0.010
2-Methylphenol, TCLP	TRG	Average RF	% RSD	6.2	≤20	0.9033	0.700
4-Methylphenol, TCLP	TRG	Average RF	% RSD	8.0	≤20	1.403	0.600
Hexachlorobenzene, TCLP	TRG	Average RF	% RSD	5.7	≤20	0.2428	0.100
Hexachlorobutadiene, TCLP	TRG	Average RF	% RSD	8.0	≤20	0.2798	0.010
Hexachloroethane, TCLP	TRG	Average RF	% RSD	7.0	≤20	0.6937	0.300
Nitrobenzene, TCLP	TRG	Average RF	% RSD	6.9	≤20	1.377	0.200
Nitrobenzene-d5	SURR	Average RF	% RSD	6.0	≤20	1.372	0.010
Pentachlorophenol (PCP), TCLP	TRG	Quadratic	COD	0.9994	≥0.990	0.1605	0.050
Phenol-d6	SURR	Average RF	% RSD	9.9	≤20	1.296	0.010
Pyridine, TCLP	TRG	Average RF	% RSD	7.9	≤20	1.008	0.010
p-Terphenyl-d14	SURR	Average RF	% RSD	13.4	≤20	0.9166	0.010

Client: Integral Consulting, Incorporated **Service Request:** K1811438
Project: San Jacinto **Calibration Date:** 12/7/2018

Initial Calibration Verification Summary
TCLP Semivolatile Organic Compounds by GC/MS

Calibration ID: KC1800550 **Signal ID:** 1
Instrument ID: K-MS-07

#	Lab Code	Sample Name	File Location	Acquisition Date
11	KC1800550-11	8270 ICV @ 80ppm | SVM59-93C	J:\MS07\DATA\120718\1207F013.D	12/07/2018 23:22
12	KC1800550-12	PAPER ICV @ 80ppm | SVM58-87A	J:\MS07\DATA\120718\1207F014.D	12/08/2018 00:03
13	KC1800550-13	Benzidine ICV @ 50ppm | SVM59-93D	J:\MS07\DATA\120718\1207F015.D	12/08/2018 00:44

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
2,4,5-Trichlorophenol, TCLP	80.0	91.0	4.271E-1	4.859E-1	13.75	±30	Average RF
2,4,6-Trichlorophenol, TCLP	80.0	83.8	4.2E-1	4.4E-1	4.78	±30	Average RF
2,4-Dinitrotoluene, TCLP	80.0	85.7	3.724E-1	3.991E-1	7.18	±30	Average RF
2-Methylphenol, TCLP	80.0	81.1	9.033E-1	9.159E-1	1.40	±30	Average RF
4-Methylphenol, TCLP	160	147	1.403E0	1.286E0	-8.287	±30	Average RF
Hexachlorobenzene, TCLP	80.0	84.3	2.428E-1	2.557E-1	5.35	±30	Average RF
Hexachlorobutadiene, TCLP	80.0	81.1	2.798E-1	2.837E-1	1.41	±30	Average RF
Hexachloroethane, TCLP	80.0	79.4	6.937E-1	6.885E-1	-0.748	±30	Average RF
Nitrobenzene, TCLP	80.0	82.9	1.377E0	1.428E0	3.69	±30	Average RF
Pentachlorophenol (PCP), TCLP	80.0	84.5	1.605E-1	1.657E-1	5.62	±30	Quadratic
Pyridine, TCLP	80.0	76.2	1.008E0	9.602E-1	-4.735	±30	Average RF

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
2,4,6-Tribromophenol	80.0	89.4	1.151E-1	1.285E-1	11.70	±30	Average RF
2-Fluorobiphenyl	80.0	80.5	1.493E0	1.502E0	0.574	±30	Average RF
Nitrobenzene-d5	80.0	81.1	1.372E0	1.391E0	1.35	±30	Average RF
Phenol-d6	80.0	77.4	1.296E0	1.254E0	-3.277	±30	Average RF
p-Terphenyl-d14	80.0	79.7	9.166E-1	9.129E-1	-0.401	±30	Average RF

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811438
Project:	San Jacinto/C1844-0501	**Date Analyzed:**	01/07/19 23:45

Continuing Calibration Verification (CCV) Summary
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Calibration Date:**	12/7/2018
File ID:	J:\MS07\DATA\010719\0107F014.D\	**Calibration ID:**	KC1800550
Signal ID:	1	**Analysis Lot:**	621348
		Units:	ug/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4,5-Trichlorophenol, TCLP	80.0	81.7	0.4271	0.436	2.1	NA	±20	Average RF
2,4,6-Trichlorophenol, TCLP	80.0	79.8	0.42	0.4188	-0.3	NA	±20	Average RF
2,4-Dinitrotoluene, TCLP	80.0	78.7	0.3724	0.3662	-1.7	NA	±20	Average RF
2-Methylphenol, TCLP	80.0	83.8	0.9033	0.9458	4.7	NA	±20	Average RF
4-Methylphenol, TCLP	80.0	75.3	1.4026	1.3197	-5.9	NA	±20	Average RF
Hexachlorobenzene, TCLP	80.0	97.6	0.2428	0.2961	22.0*	NA	±20	Average RF
Hexachlorobutadiene, TCLP	80.0	85.7	0.2798	0.2997	7.1	NA	±20	Average RF
Hexachloroethane, TCLP	80.0	81.9	0.6937	0.71	2.3	NA	±20	Average RF
Nitrobenzene, TCLP	80.0	82.1	1.3775	1.4127	2.6	NA	±20	Average RF
Pentachlorophenol (PCP), TCLP	80.0	83.3	0.1605	0.1627	NA	4.1	±20	Quadratic
Pyridine, TCLP	80.0	70.2	1.0079	0.8847	-12.2	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4,6-Tribromophenol	80.0	120	0.1151	0.1722	49.7*	NA	±20	Average RF
2-Fluorobiphenyl	80.0	76.8	1.4933	1.4328	-4.1	NA	±20	Average RF
Nitrobenzene-d5	80.0	86.0	1.3722	1.4747	7.5	NA	±20	Average RF
Phenol-d6	80.0	78.7	1.2965	1.2752	-1.6	NA	±20	Average RF
p-Terphenyl-d14	80.0	80.5	0.9166	0.9223	0.6	NA	±20	Average RF

Client: Integral Consulting, Incorporated **Service Request:**K1811438
Project: San Jacinto/C1844-0501

Analysis Run Log
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: **Analysis Lot:**621348
Instrument ID:K-MS-07

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\MS07\DATA\010719\0107F013.D\	ZZZZZZZ	ZZZZZZZ	1/7/2019	23:05:00	
J:\MS07\DATA\010719\0107F014.D\	Continuing Calibration Verification	KQ1900278-02	1/7/2019	23:45:00	
J:\MS07\DATA\010719\0107F017.D\	Method Blank	KQ1818690-04	1/8/2019	01:46:00	
J:\MS07\DATA\010719\0107F018.D\	Lab Control Sample	KQ1818690-01	1/8/2019	02:26:00	
J:\MS07\DATA\010719\0107F019.D\	ZZZZZZZ	ZZZZZZZ	1/8/2019	03:07:00	
J:\MS07\DATA\010719\0107F020.D\	ZZZZZZZ	ZZZZZZZ	1/8/2019	03:47:00	
J:\MS07\DATA\010719\0107F021.D\	ZZZZZZZ	ZZZZZZZ	1/8/2019	04:27:00	
J:\MS07\DATA\010719\0107F022.D\	ZZZZZZZ	ZZZZZZZ	1/8/2019	05:08:00	
J:\MS07\DATA\010719\0107F023.D\	SL0547	K1811438-001	1/8/2019	05:48:00	
J:\MS07\DATA\010719\0107F024.D\	SL0554	K1811438-002	1/8/2019	06:28:00	

Client: Integral Consulting, Incorporated **Service Request:**K1811438
Project: San Jacinto/C1844-0501

Analysis Run Log
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: **Analysis Lot:**621711
Instrument ID:K-MS-07

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\MS07\DATA\011019\0110F001.D\	ZZZZZZZ	ZZZZZZZ	1/10/2019	17:01:00	
J:\MS07\DATA\011019\0110F002.D\	ZZZZZZZ	ZZZZZZZ	1/10/2019	17:42:00	
J:\MS07\DATA\011019\0110F005.D\	Method Blank	KQ1818690-05	1/10/2019	19:43:00	
J:\MS07\DATA\011019\0110F006.D\	Method Blank	KQ1818690-03	1/10/2019	20:23:00	

Prep Summary Report

Client: Integral Consulting, Incorporated **Service Request:**K1811438
Project: San Jacinto/C1844-0501
Sample Matrix: Soil

Toxicity Characteristics Leachate Procedure (TCLP)
TCLP Semivolatile Organic Compounds by GC/MS

Prep Method: EPA 3510C **Extraction Lot:** 328856
Analytical Method: 8270D **Extraction Date:** 01/03/18 10:12

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
SL0547	K1811438-001	11/15/18	11/21/18	100 mL	1 mL	67.1
SL0554	K1811438-002	11/16/18	11/21/18	100 mL	1 mL	70.0
Lab Control Sample	KQ1818690-01LCS	NA	NA	100 mL	1 mL	
Method Blank	KQ1818690-03MB	NA	NA	100 mL	1 mL	
Method Blank	KQ1818690-04MB	NA	NA	100 mL	1 mL	
Method Blank	KQ1818690-05MB	NA	NA	100 mL	1 mL	

Subcontract Lab Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Environmental

Work Order: 18111898

Project Name:

K1811438

ALS Environmental

Mark Harris
1317 S. 13th Avenue
Kelso, WA 98626

11-Jan-2019

Certificate No: MN 026-999-449

ADDRESS 3352 128th Ave Holland, Michigan 49424 | PHONE (616) 399-6070 | FAX (616) 399-6185

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Environmental www.alsglobal.com

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Contents

Section I: Case Narrative

Section II: Sample Receipt

Section III: Analytical Data

Section IV: Attachments

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Section I

CASE NARRATIVE

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Client:	ALS Environmental
Project:	K1811438
Work Order:	18111898

Case Narrative

Section II

SAMPLE RECEIPT

-Sample Summary

-Shipping Documents*

-Chain of Custody

-Receipt Checklist

(* = As applicable)

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Client: ALS Environmental
Project: K1811438
Work Order: **18111898**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
18111898-01	K1811438-001	Soil		11/15/2018 18:45	11/30/2018 09:30	☐
18111898-02	K1811438-002	Soil		11/16/2018 16:50	11/30/2018 09:30	☐

ALS Environmental Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

ALS Contact: Mark Harris

1811898

Project Number: K1811438
Project Manager: Mark Harris
QAP: LAB QAP

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	CN React 9014
K1811438-001	SL0547	1	Soil	11/15/18	1845	Holland ALS	X
K1811438-002	SL0554	1	Soil	11/16/18	1650	Holland ALS	X

Test Comments

CN React - 9014	K1811438-001,2	EPA 7.3.3.2

Folder Comments:
Samples are a re-issue from K1811381.
See attached Form V for special project requirements.

Special Instructions/Comments
Please provide the electronic (PDF and EDD) report to the following e-mail address:
ALKLS.Data@alsglobal.com.

H - Test is On Hold P - Test is Authorized for Prep Only

Turnaround Requirements
____RUSH (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
__✓__ STANDARD
Requested FAX Date: _____
Requested Report Date: 12/18/18

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
__✓__ IV. Data Validation Report with Raw Data
PQL/MDL/J Y
EDD Y

Invoice Information
PO# 51K1811438
Bill to

Relinquished By: Cody Cravens 11/28/18 0900 Received By: 11/30/18 0930 Airbill Number:

ALS Group, USA

Sample Receipt Checklist

Client Name: ***ALS - KELSO*** Date/Time Received: ***30-Nov-18 09:30***

Work Order: ***18111898*** Received by: ***DS***

Checklist completed by Diane Shaw (eSignature) 30-Nov-18 (Date) Reviewed by: Ehrland Bosworth (eSignature) 30-Nov-18 (Date)

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.6/4.6 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	11/30/2018 11:43:13 AM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

Section III

Analytical Data

-Analysis Data Sheet

-QC Summary

-QC Batch Report

-Summary Forms (if applicable)

-Raw Data

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Raw Data Format

Organic Ordering

-Field Sample Data

-Calibration Data

-Initial

-Continuing

-Instrument QC Data (BFB, DFTPP, etc. as applicable)

-QC Data

-Sequence Logs

-Extraction Logs

Inorganic Ordering

-Instrument Data

-Digestion/Preparation Data

-Calculation Data (if applicable)

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Wet Chemistry

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1 CLIENT SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

K1811438-001

Lab Name: ALS Group, USA

Lab Code: MI01262 Case No. SAS No SDG No. 18111898

Matrix: Water Lab Sample ID: 18111898-01A

Level (low/med): LOW Date Received: 11/30/2018

% Moisture: not dec. 0 Date Prep:

CONCENTRATION UNITS: mg/Kg

CAS NO.	COMPOUND	CONCENTRATION	C	Q	M
RCYAN	Cyanide, Reactive	100	U		

CLIENT SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

K1811438-002

Lab Name: ALS Group, USA

Lab Code: MI01262 Case No. SAS No SDG No. 18111898

Matrix: Water Lab Sample ID: 18111898-02A

Level (low/med): LOW Date Received: 11/30/2018

% Moisture: not dec. 0 Date Prep:

CONCENTRATION UNITS: mg/Kg

CAS NO.	COMPOUND	CONCENTRATION	C	Q	M
RCYAN	Cyanide, Reactive	100	U		

Batch ID: **R250402** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **MB-R250402-R250402** Units: **mg/Kg** Analysis Date: **12/3/2018 06:00 AM**
Client ID: Run ID: **WETCHEM_181203A** SeqNo: **5412904** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	U	100								

LCS Sample ID: **LCS-R250402-R250402** Units: **mg/Kg** Analysis Date: **12/3/2018 06:00 AM**
Client ID: Run ID: **WETCHEM_181203A** SeqNo: **5412905** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	117.4	100	125	0	94	84-112	0			

MS Sample ID: **18111900-01A MS** Units: **mg/Kg** Analysis Date: **12/3/2018 06:00 AM**
Client ID: Run ID: **WETCHEM_181203A** SeqNo: **5412909** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	100	250	0	99.8	84-112	0			

MSD Sample ID: **18111900-01A MSD** Units: **mg/Kg** Analysis Date: **12/3/2018 06:00 AM**
Client ID: Run ID: **WETCHEM_181203A** SeqNo: **5412910** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	100	250	0	99.8	84-112	249.6	0	8	

The following samples were analyzed in this batch:

18111898-01A	18111898-02A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC Page: 1 of 1

Reactive Cyanide

Book Number 2061

ALS Environmental

Batch ID: WCN8120 3A

Analyst: DT
Date: 12-3-18

Standard BPL: 3072-1685
Check Standard BPL: 3072-1685
Indicator BPL: 3072-176-10
Titrant BPL: 3081-31-10

Entry	Sample Lab ID	Sample Weight	Sample Volume	Titration			Total Used for Blank	Net Volume Used	Initial Conc.	Reported Conc.	Comments
				Final Volume	Initial Volume	Volume of Titrant					
#		(g)	(mL)	(mL)	(mL)	(mL)	(mL)	(mL)	(mg/L)	(mg/Kg)	
1	BLK		100	10.05	10.00	0.05	0.05	0.00	0	0	
2	LCS		100	10.90	10.05	0.85		0.80	5.872	117.44	
3	1811900-01A		100	10.95	10.90	0.05		0.00	0	0	
4	-01AMS		50	11.85	10.95	0.90		0.85	12.478	249.56	
5	-01AMSD		50	12.75	11.85	0.90		0.85	12.478	249.56	
6	-02A		100	12.80	12.75	0.05		0.00	0	0	
7	1811898-01A		100	12.85	12.80	0.05		0.00	0	0	
8	-02A		100	12.90	12.85	0.05		0.00	0	0	
9											
10											
11											
12											
14											
15											
16											
17											
18											
19											
20											
21											

Initial Conc (mg/L) = $\frac{(\text{Net Volume}_{\text{Titrant}}) \times 0.734 \times 1000}{\text{Sample Volume Titrated(mL)}}$

Final Conc (mg/Kg)= $\frac{(\text{Initial Conc} \times 0.1\text{L}) \times 1000}{\text{Sample Wt (g)}}$

Reviewed By: JB
Date Reviewed: 12/3/18

File Name: Reactive CN Analysis Log-R2-2013

Section IV

ATTACHMENTS

-Previously Issued Report(s)

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07-Dec-2018

Mark Harris
ALS Environmental
1317 S. 13th Avenue
Kelso, WA 98626

Re: **K1811438** Work Order: **18111898**

Dear Mark,

ALS Environmental received 2 samples on 30-Nov-2018 for the analyses presented in the following report.

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

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

The total number of pages in this report is 8.

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

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

Sincerely,

Ehrland Bosworth

Electronically approved by: Ehrland Bosworth

Ehrland Bosworth
Project Manager

Report of Laboratory Analysis

Certificate No: MN 998501

ALS Group, USA

Date: 07-Dec-18

Client: ALS Environmental
Project: K1811438
Work Order: **18111898**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
18111898-01	K1811438-001	Soil		11/15/2018 18:45	11/30/2018 09:30	☐
18111898-02	K1811438-002	Soil		11/16/2018 16:50	11/30/2018 09:30	☐

Client: ALS Environmental
Project: K1811438
WorkOrder: **18111898**

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
mg/Kg	Milligrams per Kilogram

ALS Group, USA

Date: *07-Dec-18*

Client: ALS Environmental
Project: K1811438
Sample ID: K1811438-001
Collection Date: 11/15/2018 06:45 PM

Work Order: 18111898
Lab ID: 18111898-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE		Method: **SW7.3.3.2**					Analyst: **DTV**
Cyanide, Reactive	U		17	100	mg/Kg	1	12/3/2018 06:00

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *07-Dec-18*

Client: ALS Environmental
Project: K1811438
Sample ID: K1811438-002
Collection Date: 11/16/2018 04:50 PM

Work Order: 18111898
Lab ID: 18111898-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE		Method: **SW7.3.3.2**					Analyst: **DTV**
Cyanide, Reactive	U		17	100	mg/Kg	1	12/3/2018 06:00

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 07-Dec-18

Client: ALS Environmental

Work Order: 18111898

Project: K1811438

QC BATCH REPORT

Batch ID: **R250402** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **MB-R250402-R250402** Units: **mg/Kg** Analysis Date: **12/3/2018 06:00 AM**

Client ID: Run ID: **WETCHEM_181203A** SeqNo: **5412904** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	U	17	100								

LCS Sample ID: **LCS-R250402-R250402** Units: **mg/Kg** Analysis Date: **12/3/2018 06:00 AM**

Client ID: Run ID: **WETCHEM_181203A** SeqNo: **5412905** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	117.4	17	100	125	0	94	84-112	0			

MS Sample ID: **18111900-01A MS** Units: **mg/Kg** Analysis Date: **12/3/2018 06:00 AM**

Client ID: Run ID: **WETCHEM_181203A** SeqNo: **5412909** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	17	100	250	0	99.8	84-112	0			

MSD Sample ID: **18111900-01A MSD** Units: **mg/Kg** Analysis Date: **12/3/2018 06:00 AM**

Client ID: Run ID: **WETCHEM_181203A** SeqNo: **5412910** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	17	100	250	0	99.8	84-112	249.6	0	8	

The following samples were analyzed in this batch:

18111898-01A	18111898-02A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC Page: 1 of 1

ALS Environmental Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

ALS Contact: Mark Harris

1811898

Project Number: K1811438
Project Manager: Mark Harris
QAP: LAB QAP

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	CN React 9014
K1811438-001	SL0547	1	Soil	11/15/18	1845	Holland ALS	X
K1811438-002	SL0554	1	Soil	11/16/18	1650	Holland ALS	X

Page 204 of 209

Test Comments

CN React - 9014	K1811438-001,2	EPA 7.3.3.2

Folder Comments:

Samples are a re-issue from K1811381.
See attached Form V for special project requirements.

Special Instructions/Comments	Turnaround Requirements	Report Requirements	Invoice Information
Please provide the electronic (PDF and EDD) report to the following e-mail address: ALKLS.Data@alsglobal.com. H - Test is On Hold P - Test is Authorized for Prep Only	____RUSH (Surcharges Apply) **PLEASE CIRCLE WORK DAYS** 1 2 3 4 5 __✓__ **STANDARD** Requested FAX Date: _____ Requested Report Date: 12/18/18	____ I. Results Only ____ II. Results + QC Summaries ____ III. Results + QC and Calibration Summaries __✓__ IV. Data Validation Report with Raw Data PQL/MDL/J Y EDD Y	PO# 51K1811438 Bill to

Relinquished By: Cody Cramer 11/28/18 0900 Received By: 11/30/18 0930 Airbill Number: 48

ALS Group, USA

Sample Receipt Checklist

Client Name: **ALS - KELSO** Date/Time Received: **30-Nov-18 09:30**

Work Order: **18111898** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 30-Nov-18 (Date) Reviewed by: Ehrland Bosworth (eSignature) 30-Nov-18 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.6/4.6 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	11/30/2018 11:43:13 AM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

Raw Data

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Benchsheet

Service Request #:	**K1811381, KQ1817191, K1811423, K1811433, K1811438**	**Run #:**	**616230**
Test:	**TS**	**Balance ID:**	**K-BALANCE-48**
Method:	**160.3 Modified**		

Matrix	Lab Code	Tare (g)	Wet Wt. (g)	Tare + Dry Wt. (g)	Dry Weight (g)	% Total Solids	RPD
Soil	K1811381-001	1.270	10.084	8.234	6.96	69.1	
Soil	K1811381-004	1.268	10.155	9.599	8.33	82.0	
Soil	K1811381-004DUP	1.279	10.439	9.835	8.56	82.0	<1
Soil	K1811381-005	1.291	13.061	9.582	8.29	63.5	
Soil	K1811423-001	1.303	10.973	11.882	10.6	96.4	
Soil	K1811423-001DUP	1.302	10.085	11.016	9.71	96.3	<1
Ash	K1811433-001	1.298	11.552	7.508	6.21	53.8	
Ash	K1811433-001DUP	1.289	11.630	7.686	6.40	55.0	2
Soil	K1811438-001	1.270	12.147	9.421	8.15	67.1	
Soil	K1811438-002	1.281	12.443	9.986	8.71	70.0	

	Oven ID	Temp In	Temp Out	Date In	Time In	Date Out	Time Out	Thermometer ID
Oven1	**K-OVEN-07**	**105**	**105**	**11/26/2018**	**16:30**	**11/27/2018**	**08:35**	

	Cal EQID	Cal Start Value	Cal End Value	Start Date	Start Time	End Date	End Time
Calibration1	**K-BALANCE-48**	**1.000, 99.999**	**1.000, 99.999**	**11/26/2018**	**09:30**	**11/26/2018**	**16:30**
Calibration2	**K-BALANCE-48**	**1.001, 99.999**	**1.000, 100.000**	**11/27/2018**	**09:25**	**1/27/2019**	**09:27**

Comments: APosey SN#42868 Reviewed by SC 11/27/18

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Work Request # K1811938, 11381, 11438, J1808469

Tier: I IV IV II

Date Analyzed: 12/13/18

Analyst: Jonathan Madison

Run # 618614

Analysis: 1020A/Flashpoint

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:

Final Approved by: [signature] Date: 12/13/18

DQREPORT

Analytical Results Summary

Instrument Name: K-FlashPoint-01 **Analyst:** JMADISON **Analysis Lot:** 618614 **Method/Testcode:** 1020A/IgnitClosedCup

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
J1808469-001	Flash Point	N/A		Water	>110 deg C	2 mL	>110 deg C	1					12/13/18 08:45:00	N	II
K1811381-004	Flash Point	N/A		Soil	>110 deg C	2 g	>110 deg C	1					12/13/18 08:45:00	N	IV
K1811381-005	Flash Point	N/A		Soil	>110 deg C	2 g	>110 deg C	1					12/13/18 08:45:00	N	IV
K1811438-001	Flash Point	N/A		Soil	>110 deg C	2 g	>110 deg C	1					12/13/18 08:45:00	N	IV
K1811438-002	Flash Point	N/A		Soil	>110 deg C	2 g	>110 deg C	1					12/13/18 08:45:00	N	IV
K1811938-001	Flash Point	N/A		Misc. Liquid	>110 deg C	2 mL	>110 deg C	1					12/13/18 08:45:00	N	I
KQ1818146-01	Flash Point	MB		Misc. Liquid	>110 deg C	2 mL	>110 deg C	1					12/13/18 08:45:00	N	I
KQ1818146-02	Flash Point	MB		Water	>110 deg C	2 mL	>110 deg C	1					12/13/18 08:45:00	N	II
KQ1818146-03	Flash Point	MB		Soil	>110 deg C	2 g	>110 deg C	1					12/13/18 08:45:00	N	IV
KQ1818146-04	Flash Point	LCS		Misc. Liquid	27.00 deg C	2 mL	27.0 deg C	1			100		12/13/18 08:45:00	N	I
KQ1818146-05	Flash Point	LCS		Water	27.00 deg C	2 mL	27.0 deg C	1			100		12/13/18 08:45:00	N	II
KQ1818146-06	Flash Point	LCS		Soil	27.00 deg C	2 g	27.0 deg C	1			100		12/13/18 08:45:00	N	IV
KQ1818146-07	Flash Point	DUP	K1811938-001	Misc. Liquid	>110 deg C	2 mL	>110 deg C	1				NC	12/13/18 08:45:00	N	I
KQ1818146-08	Flash Point	DUP	J1808469-001	Water	>110 deg C	2 mL	>110 deg C	1				NC	12/13/18 08:45:00	N	II
KQ1818146-09	Flash Point	DUP	K1811381-004	Soil	>110 deg C	2 g	>110 deg C	1				NC	12/13/18 08:45:00	N	IV

12/13/18

12/13/18

' indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

ALS Environmental

Service Request: K1811938, 11381, 11438, J1808469

Analysis For: Flashpoint Method: EPA 1020

p-xylene STD 1 | 1-butanol STD 2 | DI Water Blank | Sample #: K1811938-001 | Sample #: K1811938-001D

°C	Yes	No	°C	Yes	No	°C	Yes	No	°C	Yes	No	°C	Yes	No
20			20			20		X	20		X	20		
25		X	25			25			25			25		
30			30			30			30			30		
35			35		X	35			35			35		
40			40			40		X	40		X	40		
45			45			45			45			45		
50			50			50			50			50		
55			55			55			55			55		
60			60			60		X	60		X	60		
65			65			65			65			65		
70			70			70			70			70		
75			75			75			75			75		
80			80			80		X	80		X	80		
85			85			85			85			85		
90			90			90			90			90		
95			95			95			95			95		
100			100			100		X	100		X	100		
105			105			105			105			105		
110			110			110		X	110		X	110		X
26		X	36		X									
27	X		37	X										

Verification			Verification			Verification			Verification			Verification		
26		X	36		X	110		X	110		X	110		X
27	X		37	X										
Obs. Flash =		27	Obs. Flash =		37	Obs. Flash =		>110	Obs. Flash =		>110	Obs. Flash =		>110
Flashpoint =		27	Flashpoint =		37	Flashpoint =		>110	Flashpoint =		>110	Flashpoint =		>110

Standard 1: **p-xylene T.V. = 27.0 °C ±0.5 Lot #:** **10191795 %REC=** **Barometric Pressure**

Standard 2: **1-butanol T.V. = 37.0 °C ±1. Lot #:** **186512 %REC=** **Beginning :** **762.762**

Actual Flashpoint (°C) Observed flashpoint + 0.03 (760 - Avg. barometric pressure (mm Hg)) **763** **End :** **762.762**

Comments: Instrument ID: K-Flashpoint-01

Analyst: JM		Date: 12/13/2018	Time: 8:45
Reviewed By:		Date: 12/13/18	

Revision 1-R:/WET/ANALYSES/FLASH/TEMPLATE/fpointF&C

ALS Environmental

Service Request:

Analysis For: Flashpoint

Method: EPA 1020

Sample #: J1808469-001			Sample #: J1808469-001D			Sample #: K1811381-004			Sample #: K1811381-004D			Sample #: K1811381-005		
°C	Yes	No	°C	Yes	No	°C	Yes	No	°C	Yes	No	°C	Yes	No
20		X	20			20		X	20			20		X
25			25			25			25			25		
30			30			30			30			30		
35			35			35			35			35		
40		X	40			40		X	40			40		X
45			45			45			45			45		
50			50			50			50			50		
55			55			55			55			55		
60		X	60			60		X	60			60		X
65			65			65			65			65		
70			70			70			70			70		
75			75			75			75			75		
80		X	80			80		X	80			80		X
85			85			85			85			85		
90			90			90			90			90		
95			95			95			95			95		
100		X	100			100		X	100			100		X
105			105			105			105			105		
110		X	110		X	110		X	110		X	110		X
Verification			Verification			Verification			Verification			Verification		
110		X	110		X	110		X	110		X	110		X
Obs. Flash =		>110	Obs. Flash =		>110	Obs. Flash =		>110	Obs. Flash =		>110	Obs. Flash =		>110
Flashpoint =		>110	Flashpoint =		>110	Flashpoint =		>110	Flashpoint =		>110	Flashpoint =		>110

Comments:

Analyst: JM	Date:	12/13/2018	Time: 8:45
Reviewed By:	Date:	12/13/18	

ALS Environmental

Service Request:
Analysis For: Flashpoint Method: EPA 1020

Sample #:	K1811438-001		Sample #:	K1811438-002		Sample #:			Sample #:			Sample #:		
°C	Yes	No	°C	Yes	No	°C	Yes	No	°C	Yes	No	°C	Yes	No
20		X	20		X	20			20			20		
25			25			25			25			25		
30			30			30			30			30		
35			35			35			35			35		
40		X	40		X	40			40			40		
45			45			45			45			45		
50			50			50			50			50		
55			55			55			55			55		
60		X	60		X	60			60			60		
65			65			65			65			65		
70			70			70			70			70		
75			75			75			75			75		
80		X	80		X	80			80			80		
85			85			85			85			85		
90			90			90			90			90		
95			95			95			95			95		
100		X	100		X	100			100			100		
105			105			105			105			105		
110		X	110		X	110			110			110		
Verification			Verification			Verification			Verification			Verification		
110		X	110		X									
Obs. Flash =		>110	Obs. Flash =		>110	Obs. Flash =			Obs. Flash =			Obs. Flash =		
Flashpoint =		>110	Flashpoint =		>110	Flashpoint =			Flashpoint =			Flashpoint =		

Comments:

Analyst: JM	Date:	12/13/2018	Time: 8:45
Reviewed By:	Date:	12/13/18	

Work Request # Original ( ) K1811438

Tier: IV

Date Analyzed: 11/29/18

Analyst: BCD

Run # 616914

Analysis: Reactive Sulfide

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS: K1811438-1/2 were received past hold time.

Final Approved by: [signature] Date: 11/30/18

DQREPORT

C:\Documents and Settings\adam.bradbury\My Documents\DATAQUAL.DOC

Analytical Results Summary

Instrument Name: K-Buret-01 **Analyst:** BDITZLER **Analysis Lot:** 616914 **Method/Testcode:** 9034 Modified/Sulfide React

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
1811438-001	Sulfide, Reactive	N/A		Soil	9.47 mg/Kg	4.2310 g	48 mg/Kg U	1		48			11/29/18 13:30:00	N	IV
1811438-002	Sulfide, Reactive	N/A		Soil	5.35 mg/Kg	4.4960 g	46 mg/Kg U	1		46			11/29/18 13:30:00	N	IV
Q1817493-01	Sulfide, Reactive	MB		Soil	0.00 mg/Kg	2.5000 g	32 mg/Kg U	1		32			11/29/18 13:30:00	N	IV
Q1817493-02	Sulfide, Reactive	LCS		Soil	760.00 mg/Kg	2.5000 g	760 mg/Kg	1		32	95		11/29/18 13:30:00	N	IV
Q1817493-03	Sulfide, Reactive	DUP	K1811438-001	Soil	20.28 mg/Kg	2.5690 g	48 mg/Kg U	1		48		NC	11/29/18 13:30:00	N	IV
Q1817493-04	Sulfide, Reactive	LCS		Soil	760.00 mg/Kg	2.5000 g	760 mg/Kg	1		32	95		11/29/18 13:30:00	N	IV
Q1817493-05	Sulfide, Reactive	LCS		Soil	761.00 mg/Kg	2.5000 g	761 mg/Kg	1		32	95		11/29/18 13:30:00	N	IV
Q1817493-06	Sulfide, Reactive	LCS		Soil	745.00 mg/Kg	2.5000 g	745 mg/Kg	1		32	93		11/29/18 13:30:00	N	IV

11/30/18

BCD 11/29/18

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Work Order #.: KB1438 Method: SM 9034M or SM 9034 Distilled

Analysis: Reactive Sulfides

Sample Number	MB	LCS1	LCS2	LCS3	LCS4	1438-1	1438-1d
Sample Wt./Vol. (g) or (ml)	2.5	2.5	2.5	2.5	2.5	4.231	2.569
Scrubber Volume (ml)	40	40	40	40	40	40	40
Titrated Volume (ml)	40	40	40	40	40	40	40
I_2 Volume (ml)	1.0	5.0	5.0	5.0	5.0	1.0	1.0
S_2O_3 Volume (ml)	1.00	0.255	0.255	0.25	0.35	0.90	0.87
S as received mg/Kg/mg/L	0.0	760	760	761	745	9.47	20.28
S Dry Weight mg/Kg		761	761				

Sample Number	1438-2
Sample Wt./Vol. (g) or (ml)	4.496
Scrubber Volume (ml)	40
Titrated Volume (ml)	40
I_2 Volume (ml)	1.0
S_2O_3 Volume (ml)	0.94
S as received mg/Kg/mg/L	5.35
S Dry Weight mg/Kg	

BCD 11/29/18

$[S_2O_3]$ = 0.025N $[I_2]$ = 0.025 N Titrated 5.0 mls I2 with 4.99 mls S_2O_3.

Sulfide Standard ID# = S2/3-2-E

Comments:

LCS= (0.5ml)(4010mg/L)/2.5g = 802mg/Kg

X= RPD=

Sulfide mg/Kg or mg/L = [(ml of I_2 X N of I_2)-(ml of titrant X N of titrant)](16030)(Scrubber Vol) / sample weight (g) x Scrubber Titrated (ml)

Analyst: BCD	Date Analyzed: 11/29/18 1049
Reviewed By:	Date Reviewed: 11/30/18

StarLims Run #: 616914

Analysis: **Reactive Sulfide**

Method: **9034M**

Iodine Solution: S2/4-62-Z

HCl (6N): S2/4-62-J

Sodium Thiosulfate 0.025N: 1807J62

Sodium Thiosulfate 0.025N (ICV): 196983

Starch Indicator Solution: 17D075007

Sulfide Standard: S2/3-2-E

Equipment: K-Buret-01

Pipettes: N11314F

Analyzed By: BCD	Date Analyzed: 11/29/18
Reviewed By: [signature]	Date Reviewed: 11/30/18

Work Request # 11438 11381 11433

Tier: IV IV T

Date Analyzed: 11-27-18

Analyst: A Chenthey

Analysis: PH/SM1 9045D

Run # 416451 Re 416345

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no/NA
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:

Final Approved by: [signature] Date: 11/28/18

DQREPORT

Analytical Results Summary

Instrument Name: K-pH-14 **Analyst:** ACHEATLEY **Analysis Lot:** 616345 **Method/Testcode:** 9045D/pH

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K1811381-004	pH	N/A		Soil	8.33 pH Units	10.107 g	8.33 pH Units	1					11/27/18 16:03:00	N	IV
K1811381-005	pH	N/A		Soil	9.62 pH Units	10.089 g	9.62 pH Units	1					11/27/18 16:04:00	N	IV
K1811433-001	pH	N/A		Ash	10.44 pH Units	10.229 g	10.4 pH Units	1					11/27/18 16:05:00	N	I
K1811438-001	pH	N/A		Soil	8.09 pH Units	10.289 g	8.09 pH Units	1					11/27/18 16:00:00	N	IV
K1811438-002	pH	N/A		Soil	8.54 pH Units	10.018 g	8.54 pH Units	1					11/27/18 16:02:00	N	IV
KQ1817240-01	pH	DUP	K1811438-001	Soil	8.04 pH Units	10.335 g	8.04 pH Units	1				<1	11/27/18 16:01:00	N	IV
KQ1817240-02	pH	LCS		Soil	8.59 pH Units	10.000 g	8.59 pH Units	1			99		11/27/18 11:33:00	N	IV

11/28/18

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

ALS ENVIRONMENTAL

Service Request #: _____ Method: 9045D

Analysis: pH Corrosivity Matrix: Soil/Solid

Calibration						
Buffer	1.00	4.00	7.00	10.00	12.45	Value of Buffers at 25 °C
Reading	1.00	4.00	7.00	10.00	12.45	pH Slope: 99.5-1.
Temp °C	25.6	25.7	25.5	26.0	24.9	Slope Acceptance: 92-102%

Sample Number	Sample Wt. (g)	Vol of Ext Sol (mLs)	pH	Time Analyzed	Temp °C	% Solids
Buffer Check	**Buffer Value:**	4.00	3.99	1132	25.5	
LCS	--	--	8.59	1133	25.4	
11438-1	10.289	10	8.09	1600	24.9	
-1d	10.335		8.04	1601	25.6	
-2	10.018		8.54	1602	25.0	
11381-4	10.107		8.33	1603	24.4	
-5	10.089		9.62	1604	24.9	
11433-1	10.229	20	10.44	1605	24.5	
Buffer ✓	Buf. Val	4.00	3.99	1606	25.1	
Buffer Check	**Buffer Value:**					
Buffer Check	**Buffer Value:**					

LCS: ERA **Lot #** S244-779 **ID #** 12-GEN-pH-001-1-H **T. V. =** 8.64 **% REC =** _____

pH 4.00 buffer: 12-GEN. pH-001-22 G pH 7.00 buffer: 12-GEN. pH-001-36 D pH 10.00 buffer: 12-GEN. pH-001-50 D

ph 1.00 buffer: 12-GEN. pH-001-12 A pH 12.45 buffer: 12-GEN. pH-001-64 D

Probe ID# 12-GEN.pH-001-73-E Meter ID# K-pH-14 Water Bath ID# K-Waterbath-pH

Extraction Solution: DI Water

Comments:

Analyst: A Chatterley	Date: 11-27-18 1127
Reviewed By:	Date: 11/28/18

R: WET/Analysis/PH/Templates/SOILPH Revison: 2

Sequence #IC08112918 Ion Chromatography Data Quality Report Run # 616826
Inorganics

1. Holding times met for all samples analyzed? **yes**/no/NA

2. Are dilutions within upper limits of the curve? **yes**/no/NA

3. Were peaks manually integrated? **yes**/no/NA
   a.)Does DOD QUAPP apply? yes/no/**NA**
4. Are detection limits reported correctly? **yes**/no/NA

5. Are all quality control criteria met?

   a. Method Blanks, CCV's, CCB's, LCS's, Dups, and Spikes analyzed at the proper frequency? **yes**/no/NA
   b. Are CCV's and CCB's all within acceptance limits? **yes**/no/NA
   c. Are results for Method Blanks all ND? **yes**/no/NA
   d. Are all QC samples within acceptance criteria? (LCS% rec, MS% rec, Duplicate RPD's, etc.) **yes**/no/NA
   e. Are all exceptions explained? yes/no/**NA**

6. Are all samples labelled correctly? **yes**/no/NA

CAS Standard Identification Codes and Abbreviated Footnotes for Chromatograms

G1 Sample was analyzed past the end of recommended holding time. See Nonconformity sheet.
G2 Sample was reanalyzed past holding time. Initial analysis was performed within recommended holding time.
G4 Sample was received past the end of recommended holding time.
R1 High RPD is because the duplicate sample results are less than three times the method reporting limit.
i MRL is elevated because of matrix interferences and the sample required diluting.
F Sample filtered primary to analysis.

LCS	ALS ID # = 15-AN13/1-89-GG	Expires 11/29/18	
Fluoride	True Value = 5.0ppm	10K ALS ID # = 13GEN-AN1-7-P	
Chloride	True Value = 5.0ppm	10K ALS ID # = 13-GEN-AN1-7-Q	
Nitrite	True Value = 2.5 ppm	10K ALS ID # = 13-GEN-AN-1-7R	
Bromide	True Value = 2.5 ppm	10K ALS ID # = 13-GEN-AN1-7-S	Expires:4/24/19
Nitrate	True Value = 2.5 ppm	10K ALS ID # = 13-GEN-AN1-7-T	
Sulfate	True Value = 5.0 ppm	10K ALS ID # = 13-GEN-AN1-7-U	
CCV	ALS ID # = 15-AN13/1-24-GG	Expires 11/29/18	
Fluoride	True Value = 5.0 ppm	10K ALS ID # = 13-GEN-AN1-7-J	
Chloride	True Value = 5.0 ppm	10K ALS ID # = 13-GEN-AN1-7-K	
Nitrite	True Value = 2.5 ppm	10K ALS ID # = 13-GEN-AN1-7-L	
Bromide	True Value = 2.5 ppm	10K ALS ID # = 13-GEN-AN1-7-M	Expires:4/24/19
Nitrate	True Value = 2.5 ppm	10K ALS ID # = 13-GEN-AN1-7-N	
Sulfate	True Value = 5.0 ppm	10K ALS ID # = 13-GEN-AN1-7-O	

Spike			
2.0ppm X dilution factor	ALS ID# = 15-AN13/1-57-GG	Expires 11/29/18	
Fluoride	10K ALS ID # = 13GEN-AN1-7-P		
Chloride	10K ALS ID # = 13-GEN-AN1-7-Q		
Nitrite	10K ALS ID # = 13-GEN-AN-1-7R		
Bromide	10K ALS ID # = 13-GEN-AN1-7-S		Expires:4/24/19
Nitrate	10K ALS ID # = 13-GEN-AN1-7-T		
Sulfate	10K ALS ID # = 13-GEN-AN1-7-U		

Analyst:MV Date:11/29/18

First Review:MR Date:12/04/18

Final Review: Date: 12/4/18
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Analytical Results Summary

Instrument Name: K-IC-08 **Analyst:** MVALVERDE **Analysis Lot:** 616826 **Method/Testcode:** 9056A Modified/Cl Tot Bomb HL

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K1810603-001	Chloride	N/A		Misc. Solid	2.30 mg/L	0.5817 g	223 mg/Kg	2		19			11/29/18 13:17:00	N	I
K1810603-001	Chlorine	N/A		Misc. Solid		0.5817 g		2						N	I
K1810603-002	Chloride	N/A		Misc. Solid	2.45 mg/L	0.6177 g	204 mg/Kg	2		17			11/29/18 13:28:00	N	I
K1810603-002	Chlorine	N/A		Misc. Solid		0.6177 g		2						N	I
K1810603-003	Chloride	N/A		Misc. Solid	2.75 mg/L	0.6171 g	229 mg/Kg	2		17			11/29/18 13:49:00	N	I
K1810603-003	Chlorine	N/A		Misc. Solid		0.6171 g		2						N	I
1810748-001	Chloride	N/A		Sludge, Solid	6.62 mg/L	0.6697 g	500 mg/Kg	2		15			11/29/18 14:21:00	N	I
1810748-001	Chlorine	N/A		Sludge, Solid		0.6697 g		2						N	I
1810748-002	Chloride	N/A		Solid Fuel	0.54 mg/L	0.5344 g	52 mg/Kg	2		19			11/29/18 14:32:00	N	I
1810748-002	Chlorine	N/A		Solid Fuel		0.5344 g		2						N	I
1810748-003	Chloride	N/A		Solid Fuel	1.74 mg/L	0.5432 g	162 mg/Kg	2		19			11/29/18 14:42:00	N	I
1810748-003	Chlorine	N/A		Solid Fuel		0.5432 g		2						N	I
1811381-004	Sulfur	N/A		Soil	3.65 mg/L	0.5040 g	442 mg/Kg	2		8.1			11/29/18 14:53:00	N	IV
1811381-005	Sulfur	N/A		Soil	16.83 mg/L	0.5098 g	2600 mg/Kg	10		52			11/29/18 20:37:00	N	IV
1811438-001	Sulfur	N/A		Soil	11.84 mg/L	1.0000 g	882 mg/Kg	5		12			11/29/18 20:47:00	N	IV
1811438-002	Sulfur	N/A		Soil	8.70 mg/L	1.0000 g	622 mg/Kg	5		12			11/29/18 20:58:00	N	IV
1811581-001	Nitrate as Nitrogen	N/A		Drinking Water	0.09 mg/L	5 mL	0.10 mg/L U	2	0.01	0.10			11/29/18 12:01:00	N	I
1811608-001	Chloride	N/A		Water	8.43 mg/L	5 mL	8.43 mg/L	2	0.06	0.20			11/29/18 16:18:00	N	II
1811608-001	Nitrate as Nitrogen	N/A		Water	0.31 mg/L	5 mL	0.31 mg/L	2	0.01	0.10			11/29/18 16:18:00	N	II
1811608-001	Nitrite as Nitrogen	N/A		Water	0.00 mg/L	5 mL	0.10 mg/L U	2	0.004	0.10			11/29/18 16:18:00	N	II
1811608-001.R01	Fluoride	N/A		Water	2.04 mg/L	5 mL	2.04 mg/L	2	0.02	0.20			11/29/18 16:18:00	N	II
1811610-001	Chloride, Dissolved	N/A		Water	8.57 mg/L	5 mL	8.57 mg/L	2	0.06	0.20			11/29/18 15:46:00	N	II
1811610-001	Nitrate as Nitrogen, Dissolved	N/A		Water	0.38 mg/L	5 mL	0.38 mg/L	2	0.01	0.10			11/29/18 15:46:00	N	II
1811610-001.R01	Sulfate, Dissolved	N/A		Water	33.75 mg/L	5 mL	33.8 mg/L	2	0.02	0.20			11/29/18 15:46:00	N	II
1811612-001	Chloride	N/A		Water	1.62 mg/L	5 mL	1.62 mg/L	2	0.06	0.20			11/29/18 17:01:00	N	II
1811612-001	Nitrate as Nitrogen	N/A		Water	0.51 mg/L	5 mL	0.51 mg/L	2	0.01	0.10			11/29/18 17:01:00	N	II
1811612-001	Nitrite as Nitrogen	N/A		Water	0.00 mg/L	5 mL	0.10 mg/L U	2	0.004	0.10			11/29/18 17:01:00	N	II
1811612-001	Sulfate	N/A		Water	0.33 mg/L	5 mL	0.33 mg/L	2	0.02	0.20			11/29/18 17:01:00	N	II
1811612-001.R01	Fluoride	N/A		Water	0.06 mg/L	5 mL	0.20 mg/L U	2	0.02	0.20			11/29/18 17:01:00	N	II
1811612-002	Chloride	N/A		Water	1.32 mg/L	5 mL	1.32 mg/L	2	0.06	0.20			11/29/18 17:46:00	N	II
1811612-002	Nitrate as Nitrogen	N/A		Water	0.04 mg/L	5 mL	0.10 mg/L U	2	0.01	0.10			11/29/18 17:46:00	N	II
1811612-002	Nitrite as Nitrogen	N/A		Water	0.00 mg/L	5 mL	0.10 mg/L U	2	0.004	0.10			11/29/18 17:46:00	N	II
1811612-002	Sulfate	N/A		Water	1.09 mg/L	5 mL	1.09 mg/L	2	0.02	0.20			11/29/18 17:46:00	N	II

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-IC-08 **Analyst:** MVALVERDE **Analysis Lot:** 616826 **Method/Testcode:** 300.0/F

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K1811612-002.R01	Fluoride	N/A		Water	0.38 mg/L	5 mL	0.38 mg/L B	2	0.02	0.20			11/29/18 17:46:00	N	II
K1811612-003	Chloride	N/A		Water	1.67 mg/L	5 mL	1.67 mg/L	2	0.06	0.20			11/29/18 17:57:00	N	II
K1811612-003	Nitrate as Nitrogen	N/A		Water	2.60 mg/L	5 mL	2.60 mg/L	2	0.01	0.10			11/29/18 17:57:00	N	II
K1811612-003	Nitrite as Nitrogen	N/A		Water	0.00 mg/L	5 mL	0.10 mg/L U	2	0.004	0.10			11/29/18 17:57:00	N	II
K1811612-003	Sulfate	N/A		Water	1.11 mg/L	5 mL	1.11 mg/L	2	0.02	0.20			11/29/18 17:57:00	N	II
K1811612-003.R01	Fluoride	N/A		Water	0.04 mg/L	5 mL	0.20 mg/L U	2	0.02	0.20			11/29/18 17:57:00	N	II
K1811625-001	Chloride	N/A		Ground Water	23.80 mg/L	5 mL	23.8 mg/L	5	0.15	0.50			11/29/18 18:40:00	N	I
K1811625-001	Nitrate as Nitrogen	N/A		Ground Water	0.00 mg/L	5 mL	0.10 mg/L U	2	0.01	0.10			11/29/18 18:29:00	N	I
K1811625-001	Sulfate	N/A		Ground Water	0.37 mg/L	5 mL	0.37 mg/L	2	0.02	0.20			11/29/18 18:29:00	N	I
K1811625-002	Chloride	N/A		Ground Water	98.53 mg/L	5 mL	98.5 mg/L	20	0.6	2.0			11/29/18 19:01:00	N	I
K1811625-002	Nitrate as Nitrogen	N/A		Ground Water	1.14 mg/L	5 mL	1.14 mg/L	2	0.01	0.10			11/29/18 18:50:00	N	I
K1811625-002	Sulfate	N/A		Ground Water	0.50 mg/L	5 mL	0.50 mg/L	2	0.02	0.20			11/29/18 18:50:00	N	I
K1811625-003	Chloride	N/A		Ground Water	7.44 mg/L	5 mL	7.44 mg/L	2	0.06	0.20			11/29/18 19:11:00	N	I
K1811625-003	Nitrate as Nitrogen	N/A		Ground Water	0.00 mg/L	5 mL	0.10 mg/L U	2	0.01	0.10			11/29/18 19:11:00	N	I
K1811625-003	Sulfate	N/A		Ground Water	500.97 mg/L	5 mL	501 mg/L	100	1	10			11/29/18 19:22:00	N	I
K1811625-004	Chloride	N/A		Ground Water	5.41 mg/L	5 mL	5.41 mg/L	2	0.06	0.20			11/29/18 19:33:00	N	I
K1811625-004	Nitrate as Nitrogen	N/A		Ground Water	0.00 mg/L	5 mL	0.10 mg/L U	2	0.01	0.10			11/29/18 19:33:00	N	I
K1811625-004	Sulfate	N/A		Ground Water	28.92 mg/L	5 mL	28.9 mg/L	20	0.2	2.0			11/29/18 19:43:00	N	I
K1811625-005	Chloride	N/A		Ground Water	13.47 mg/L	5 mL	13.5 mg/L	2	0.06	0.20			11/29/18 19:54:00	N	I
K1811625-005	Nitrate as Nitrogen	N/A		Ground Water	12.57 mg/L	5 mL	12.6 mg/L	10	0.05	0.50			11/29/18 20:04:00	N	I
K1811625-005	Sulfate	N/A		Ground Water	45.42 mg/L	5 mL	45.4 mg/L	10	0.1	1.0			11/29/18 20:04:00	N	I
KQ1817432-01	Chloride	MB		Misc. Solid	0.00 mg/L	0.5000 g	10 mg/Kg U	1		10			11/29/18	N	I
KQ1817432-01	Chlorine	MB		Misc. Solid		0.5000 g		1					11/29/18	N	I
KQ1817432-01	Sulfur	MB		Misc. Solid		0.5000 g		1					11/29/18	N	I
KQ1817432-02	Chloride	LCS		Misc. Solid	201.44 mg/L	1.0000 mL	10100 mg/Kg	50		250	101		11/29/18 12:35:00	N	I
KQ1817432-02	Chlorine	LCS		Misc. Solid		1.0000 mL		50						N	I
KQ1817432-03	Chloride	LCS		Misc. Solid	192.83 mg/L	1.0000 mL	9640 mg/Kg	50		250	96		11/29/18 12:46:00	N	I

# indicates Final Result is not yet adjust d for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-IC-08 **Analyst:** MVALVERDE **Analysis Lot:** 616826 **Method/Testcode:** 9056A Modified/Cl Tot Bomb HL

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ1817432-03	Chlorine	LCS		Misc. Solid		1.0000 mL		50						N	I
KQ1817432-04	Sulfur	LCS		Soil	31.80 mg/Kg	0.1677 g	9480 mg/Kg	1		10	89		11/29/18 11:39:00	N	IV
KQ1817432-05	Sulfur	LCS		Soil	31.44 mg/Kg	0.1615 g	9730 mg/Kg	50		520	91		11/29/18 13:07:00	N	IV
KQ1817432-06	Sulfur	DUP	K1811381-004	Soil	3.08 mg/L	0.4917 g	382 mg/Kg	2		8.3		14	11/29/18 15:04:00	N	IV
KQ1817432-07	Chloride	DUP	K1810603-002	Misc. Solid	1.91 mg/L	0.4936 g	199 mg/Kg	2		21		2	11/29/18 13:39:00	N	I
KQ1817432-07	Chlorine	DUP	K1810603-002	Misc. Solid		0.4936 g		2						N	I
KQ1817562-01	Chloride	DUP	K1811608-001	Water	8.41 mg/L	5 mL	8.41 mg/L	2	0.06	0.20		<1	11/29/18 16:29:00	N	II
KQ1817562-01	Fluoride	DUP	K1811608-001	Water	2.02 mg/L	5 mL	2.02 mg/L	2	0.02	0.20		1	11/29/18 16:29:00	N	II
Q1817562-01	Nitrate as Nitrogen	DUP	K1811608-001	Water	0.31 mg/L	5 mL	0.31 mg/L	2	0.01	0.10		2	11/29/18 16:29:00	N	II
Q1817562-01	Nitrite as Nitrogen	DUP	K1811608-001	Water	0.00 mg/L	5 mL	0.10 mg/L U	2	0.004	0.10		NC	11/29/18 16:29:00	N	II
Q1817562-02	Chloride	MS	K1811608-001	Water	16.22 mg/L	5 mL	16.2 mg/L	4	0.12	0.40	97		11/29/18 16:39:00	N	II
Q1817562-02	Fluoride	MS	K1811608-001	Water	9.58 mg/L	5 mL	9.58 mg/L	4	0.04	0.40	94		11/29/18 16:39:00	N	II
Q1817562-02	Nitrate as Nitrogen	MS	K1811608-001	Water	8.38 mg/L	5 mL	8.38 mg/L	4	0.02	0.20	101		11/29/18 16:39:00	N	II
Q1817562-02	Nitrite as Nitrogen	MS	K1811608-001	Water	7.97 mg/L	5 mL	7.97 mg/L	4	0.008	0.20	100		11/29/18 16:39:00	N	II
Q1817562-03	Chloride	DMS	K1811608-001	Water	16.35 mg/L	5 mL	16.4 mg/L	4	0.12	0.40	99	<1	11/29/18 16:50:00	N	II
Q1817562-03	Fluoride	DMS	K1811608-001	Water	9.74 mg/L	5 mL	9.74 mg/L	4	0.04	0.40	96	2	11/29/18 16:50:00	N	II
Q1817562-03	Nitrate as Nitrogen	DMS	K1811608-001	Water	8.50 mg/L	5 mL	8.50 mg/L	4	0.02	0.20	102	1	11/29/18 16:50:00	N	II
Q1817562-03	Nitrite as Nitrogen	DMS	K1811608-001	Water	8.08 mg/L	5 mL	8.08 mg/L	4	0.008	0.20	101	1	11/29/18 16:50:00	N	II
Q1817562-04	Chloride	DUP	K1811612-001	Water	1.61 mg/L	5 mL	1.61 mg/L	2	0.06	0.20		<1	11/29/18 17:11:00	N	II
Q1817562-04	Fluoride	DUP	K1811612-001	Water	0.02 mg/L	5 mL	0.20 mg/L U	2	0.02	0.20		NC	11/29/18 17:11:00	N	II
Q1817562-04	Nitrate as Nitrogen	DUP	K1811612-001	Water	0.50 mg/L	5 mL	0.50 mg/L	2	0.01	0.10		4	11/29/18 17:11:00	N	II
Q1817562-04	Nitrite as Nitrogen	DUP	K1811612-001	Water	0.00 mg/L	5 mL	0.10 mg/L U	2	0.004	0.10		NC	11/29/18 17:11:00	N	II
Q1817562-04	Sulfate	DUP	K1811612-001	Water	0.31 mg/L	5 mL	0.31 mg/L	2	0.02	0.20		4	11/29/18 17:11:00	N	II
Q1817562-05	Chloride	MS	K1811612-001	Water	9.45 mg/L	5 mL	9.45 mg/L	4	0.12	0.40	98		11/29/18 17:25:00	N	II
Q1817562-05	Fluoride	MS	K1811612-001	Water	7.28 mg/L	5 mL	7.28 mg/L	4	0.04	0.40	91		11/29/18 17:25:00	N	II
Q1817562-05	Nitrate as Nitrogen	MS	K1811612-001	Water	8.78 mg/L	5 mL	8.78 mg/L	4	0.02	0.20	103		11/29/18 17:25:00	N	II
Q1817562-05	Nitrite as Nitrogen	MS	K1811612-001	Water	8.13 mg/L	5 mL	8.13 mg/L	4	0.008	0.20	102		11/29/18 17:25:00	N	II
Q1817562-05	Sulfate	MS	K1811612-001	Water	8.60 mg/L	5 mL	8.60 mg/L	4	0.04	0.40	103		11/29/18 17:25:00	N	II
Q1817562-06	Chloride	DMS	K1811612-001	Water	9.54 mg/L	5 mL	9.54 mg/L	4	0.12	0.40	99	<1	11/29/18 17:35:00	N	II
Q1817562-06	Fluoride	DMS	K1811612-001	Water	7.54 mg/L	5 mL	7.54 mg/L	4	0.04	0.40	94	4	11/29/18 17:35:00	N	II
Q1817562-06	Nitrate as Nitrogen	DMS	K1811612-001	Water	8.80 mg/L	5 mL	8.80 mg/L	4	0.02	0.20	104	<1	11/29/18 17:35:00	N	II
Q1817562-06	Nitrite as Nitrogen	DMS	K1811612-001	Water	8.15 mg/L	5 mL	8.15 mg/L	4	0.008	0.20	102	<1	11/29/18 17:35:00	N	II
Q1817562-06	Sulfate	DMS	K1811612-001	Water	8.54 mg/L	5 mL	8.54 mg/L	4	0.04	0.40	103	<1	11/29/18 17:35:00	N	II
Q1817562-07	Chloride	CCB		Water	0.02 mg/L	5 mL	0.10 mg/L U	1	0.03	0.10			11/29/18 11:50:00	N	II

indicates Final Result is not yet adjuste for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-IC-08 **Analyst:** MVALVERDE **Analysis Lot:** 616826 **Method/Testcode:** 300.0/Cl D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
Q1817562-07	Chloride, Dissolved	CCB		Water	0.02 mg/L	5 mL	0.10 mg/L U	1	0.03	0.10			11/29/18 11:50:00	N	II
Q1817562-07	Fluoride	CCB		Water	0.03 mg/L	5 mL	0.03 mg/L J	1	0.009	0.10			11/29/18 11:50:00	N	II
Q1817562-07	Nitrate as Nitrogen	CCB		Water	0.01 mg/L	5 mL	0.009 mg/L J	1	0.005	0.050			11/29/18 11:50:00	N	II
Q1817562-07	Nitrate as Nitrogen, Dissolved	CCB		Water	0.01 mg/L	5 mL	0.009 mg/L J	1	0.005	0.050			11/29/18 11:50:00	N	II
Q1817562-07	Nitrite as Nitrogen	CCB		Water	0.00 mg/L	5 mL	0.050 mg/L U	1	0.002	0.050			11/29/18 11:50:00	N	II
Q1817562-07	Sulfate	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.01	0.10			11/29/18 11:50:00	N	II
Q1817562-07	Sulfate, Dissolved	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.01	0.10			11/29/18 11:50:00	N	II
Q1817562-08	Chloride	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.03	0.10			11/29/18 14:10:00	N	II
Q1817562-08	Chloride, Dissolved	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.03	0.10			11/29/18 14:10:00	N	II
Q1817562-08	Fluoride	CCB		Water	0.06 mg/L	5 mL	0.06 mg/L J	1	0.009	0.10			11/29/18 14:10:00	N	II
Q1817562-08	Nitrate as Nitrogen	CCB		Water	0.00 mg/L	5 mL	0.050 mg/L U	1	0.005	0.050			11/29/18 14:10:00	N	II
Q1817562-08	Nitrate as Nitrogen, Dissolved	CCB		Water	0.00 mg/L	5 mL	0.050 mg/L U	1	0.005	0.050			11/29/18 14:10:00	N	II
Q1817562-08	Nitrite as Nitrogen	CCB		Water	0.00 mg/L	5 mL	0.050 mg/L U	1	0.002	0.050			11/29/18 14:10:00	N	II
Q1817562-08	Sulfate	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.01	0.10			11/29/18 14:10:00	N	II
Q1817562-08	Sulfate, Dissolved	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.01	0.10			11/29/18 14:10:00	N	II
Q1817562-09	Chloride	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.03	0.10			11/29/18 16:07:00	N	II
Q1817562-09	Chloride, Dissolved	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.03	0.10			11/29/18 16:07:00	N	II
Q1817562-09	Fluoride	CCB		Water	0.06 mg/L	5 mL	0.06 mg/L J	1	0.009	0.10			11/29/18 16:07:00	N	II
Q1817562-09	Nitrate as Nitrogen	CCB		Water	0.00 mg/L	5 mL	0.050 mg/L U	1	0.005	0.050			11/29/18 16:07:00	N	II
Q1817562-09	Nitrate as Nitrogen, Dissolved	CCB		Water	0.00 mg/L	5 mL	0.050 mg/L U	1	0.005	0.050			11/29/18 16:07:00	N	II
Q1817562-09	Nitrite as Nitrogen	CCB		Water	0.00 mg/L	5 mL	0.050 mg/L U	1	0.002	0.050			11/29/18 16:07:00	N	II
Q1817562-09	Sulfate	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.01	0.10			11/29/18 16:07:00	N	II
Q1817562-09	Sulfate, Dissolved	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.01	0.10			11/29/18 16:07:00	N	II
Q1817562-10	Chloride	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.03	0.10			11/29/18 18:18:00	N	II
Q1817562-10	Chloride, Dissolved	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.03	0.10			11/29/18 18:18:00	N	II
Q1817562-10	Fluoride	CCB		Water	0.03 mg/L	5 mL	0.03 mg/L J	1	0.009	0.10			11/29/18 18:18:00	N	II
Q1817562-10	Nitrate as Nitrogen	CCB		Water	0.00 mg/L	5 mL	0.050 mg/L U	1	0.005	0.050			11/29/18 18:18:00	N	II
Q1817562-10	Nitrate as Nitrogen, Dissolved	CCB		Water	0.00 mg/L	5 mL	0.050 mg/L U	1	0.005	0.050			11/29/18 18:18:00	N	II
Q1817562-10	Nitrite as Nitrogen	CCB		Water	0.00 mg/L	5 mL	0.050 mg/L U	1	0.002	0.050			11/29/18 18:18:00	N	II
Q1817562-10	Sulfate	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.01	0.10			11/29/18 18:18:00	N	II
Q1817562-10	Sulfate, Dissolved	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.01	0.10			11/29/18 18:18:00	N	II
Q1817562-11	Chloride	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.03	0.10			11/29/18 20:26:00	N	II
Q1817562-11	Chloride, Dissolved	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.03	0.10			11/29/18 20:26:00	N	II

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-IC-08 **Analyst:** MVALVERDE **Analysis Lot:** 616826 **Method/Testcode:** 300.0/F

Lab Code	Target Ana ytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ1817562-11	Fluoride	CCB		Water	0.02 mg/L	5 mL	0.02 mg/L J	1	0.009	0.10			11/29/18 20:26:00	N	II
KQ1817562-11	Nitrate as Nitrogen	CCB		Water	0.00 mg/L	5 mL	0.050 mg/L U	1	0.005	0.050			11/29/18 20:26:00	N	II
KQ1817562-11	Nitrate as Nitrogen, Dissolved	CCB		Water	0.00 mg/L	5 mL	0.050 mg/L U	1	0.005	0.050			11/29/18 20:26:00	N	II
KQ1817562-11	Nitrite as Nitrogen	CCB		Water	0.00 mg/L	5 mL	0.050 mg/L U	1	0.002	0.050			11/29/18 20:26:00	N	II
KQ1817562-11	Sulfate	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.01	0.10			11/29/18 20:26:00	N	II
KQ1817562-11	Sulfate, Dissolved	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.01	0.10			11/29/18 20:26:00	N	II
KQ1817562-12	Chloride	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.03	0.10			11/29/18 21:19:00	N	II
KQ1817562-12	Chloride, Dissolved	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.03	0.10			11/29/18 21:19:00	N	II
KQ1817562-12	Fluoride	CCB		Water	0.04 mg/L	5 mL	0.04 mg/L J	1	0.009	0.10			11/29/18 21:19:00	N	II
KQ1817562-12	Nitrate as Nitrogen	CCB		Water	0.00 mg/L	5 mL	0.050 mg/L U	1	0.005	0.050			11/29/18 21:19:00	N	II
KQ1817562-12	Nitrate as Nitrogen, Dissolved	CCB		Water	0.00 mg/L	5 mL	0.050 mg/L U	1	0.005	0.050			11/29/18 21:19:00	N	II
KQ1817562-12	Nitrite as Nitrogen	CCB		Water	0.00 mg/L	5 mL	0.050 mg/L U	1	0.002	0.050			11/29/18 21:19:00	N	II
KQ1817562-12	Sulfate	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.01	0.10			11/29/18 21:19:00	N	II
KQ1817562-12	Sulfate, Dissolved	CCB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.01	0.10			11/29/18 21:19:00	N	II
KQ1817562-13	Chloride	CCV		Water	4.73 mg/L	5 mL	4.73 mg/L	1					11/29/18 12:14:00	N	II
KQ1817562-13	Chloride, Dissolved	CCV		Water	4.73 mg/L	5 mL	4.73 mg/L	1					11/29/18 12:14:00	N	II
KQ1817562-13	Fluoride	CCV		Water	4.61 mg/L	5 mL	4.61 mg/L	1					11/29/18 12:14:00	N	II
KQ1817562-13	Nitrate as Nitrogen	CCV		Water	2.43 mg/L	5 mL	2.43 mg/L	1					11/29/18 12:14:00	N	II
KQ1817562-13	Nitrate as Nitrogen, Dissolved	CCV		Water	2.43 mg/L	5 mL	2.43 mg/L	1					11/29/18 12:14:00	N	II
Q1817562-13	Nitrite as Nitrogen	CCV		Water	2.45 mg/L	5 mL	2.45 mg/L	1					11/29/18 12:14:00	N	II
Q1817562-13	Sulfate	CCV		Water	4.93 mg/L	5 mL	4.93 mg/L	1					11/29/18 12:14:00	N	II
Q1817562-13	Sulfate, Dissolved	CCV		Water	4.93 mg/L	5 mL	4.93 mg/L	1					11/29/18 12:14:00	N	II
Q1817562-14	Chloride	CCV		Water	4.77 mg/L	5 mL	4.77 mg/L	1					11/29/18 14:00:00	N	II
Q1817562-14	Chloride, Dissolved	CCV		Water	4.77 mg/L	5 mL	4.77 mg/L	1					11/29/18 14:00:00	N	II
Q1817562-14	Fluoride	CCV		Water	4.71 mg/L	5 mL	4.71 mg/L	1					11/29/18 14:00:00	N	II
Q1817562-14	Nitrate as Nitrogen	CCV		Water	2.61 mg/L	5 mL	2.61 mg/L	1					11/29/18 14:00:00	N	II
Q1817562-14	Nitrate as Nitrogen, Dissolved	CCV		Water	2.61 mg/L	5 mL	2.61 mg/L	1					11/29/18 14:00:00	N	II
Q1817562-14	Nitrite as Nitrogen	CCV		Water	2.48 mg/L	5 mL	2.48 mg/L	1					11/29/18 14:00:00	N	II
Q1817562-14	Sulfate	CCV		Water	5.16 mg/L	5 mL	5.16 mg/L	1					11/29/18 14:00:00	N	II
Q1817562-14	Sulfate, Dissolved	CCV		Water	5.16 mg/L	5 mL	5.16 mg/L	1					11/29/18 14:00:00	N	II
Q1817562-15	Chloride	CCV		Water	4.89 mg/L	5 mL	4.89 mg/L	1					11/29/18 15:56:00	N	II
Q1817562-15	Chloride, Dissolved	CCV		Water	4.89 mg/L	5 mL	4.89 mg/L	1					11/29/18 15:56:00	N	II
Q1817562-15	Fluoride	CCV		Water	4.79 mg/L	5 mL	4.79 mg/L	1					11/29/18 15:56:00	N	II

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-IC-08 **Analyst:** MVALVERDE **Analysis Lot:** 616826 **Method/Testcode:** 300.0/NO3

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ1817562-15	Nitrate as Nitrogen	CCV		Water	2.50 mg/L	5 mL	2.50 mg/L	1					11/29/18 15:56:00	N	II
KQ1817562-15	Nitrate as Nitrogen, Dissolved	CCV		Water	2.50 mg/L	5 mL	2.50 mg/L	1					11/29/18 15:56:00	N	II
KQ1817562-15	Nitrite as Nitrogen	CCV		Water	2.52 mg/L	5 mL	2.52 mg/L	1					11/29/18 15:56:00	N	II
KQ1817562-15	Sulfate	CCV		Water	5.16 mg/L	5 mL	5.16 mg/L	1					11/29/18 15:56:00	N	II
KQ1817562-15	Sulfate, Dissolved	CCV		Water	5.16 mg/L	5 mL	5.16 mg/L	1					11/29/18 15:56:00	N	II
KQ1817562-16	Chloride	CCV		Water	4.85 mg/L	5 mL	4.85 mg/L	1					11/29/18 18:07:00	N	II
KQ1817562-16	Chloride, Dissolved	CCV		Water	4.85 mg/L	5 mL	4.85 mg/L	1					11/29/18 18:07:00	N	II
KQ1817562-16	Fluoride	CCV		Water	4.69 mg/L	5 mL	4.69 mg/L	1					11/29/18 18:07:00	N	II
KQ1817562-16	Nitrate as Nitrogen	CCV		Water	2.49 mg/L	5 mL	2.49 mg/L	1					11/29/18 18:07:00	N	II
KQ1817562-16	Nitrate as Nitrogen, Dissolved	CCV		Water	2.49 mg/L	5 mL	2.49 mg/L	1					11/29/18 18:07:00	N	II
KQ1817562-16	Nitrite as Nitrogen	CCV		Water	2.50 mg/L	5 mL	2.50 mg/L	1					11/29/18 18:07:00	N	II
KQ1817562-16	Sulfate	CCV		Water	5.01 mg/L	5 mL	5.01 mg/L	1					11/29/18 18:07:00	N	II
KQ1817562-16	Sulfate, Dissolved	CCV		Water	5.01 mg/L	5 mL	5.01 mg/L	1					11/29/18 18:07:00	N	II
KQ1817562-17	Chloride	CCV		Water	4.90 mg/L	5 mL	4.90 mg/L	1					11/29/18 20:15:00	N	II
KQ1817562-17	Chloride, Dissolved	CCV		Water	4.90 mg/L	5 mL	4.90 mg/L	1					11/29/18 20:15:00	N	II
KQ1817562-17	Fluoride	CCV		Water	4.75 mg/L	5 mL	4.75 mg/L	1					11/29/18 20:15:00	N	II
KQ1817562-17	Nitrate as Nitrogen	CCV		Water	2.50 mg/L	5 mL	2.50 mg/L	1					11/29/18 20:15:00	N	II
KQ1817562-17	Nitrate as Nitrogen, Dissolved	CCV		Water	2.50 mg/L	5 mL	2.50 mg/L	1					11/29/18 20:15:00	N	II
KQ1817562-17	Nitrite as Nitrogen	CCV		Water	2.52 mg/L	5 mL	2.52 mg/L	1					11/29/18 20:15:00	N	II
KQ1817562-17	Sulfate	CCV		Water	5.03 mg/L	5 mL	5.03 mg/L	1					11/29/18 20:15:00	N	II
KQ1817562-17	Sulfate, Dissolved	CCV		Water	5.03 mg/L	5 mL	5.03 mg/L	1					11/29/18 20:15:00	N	II
KQ1817562-18	Chloride	CCV		Water	4.84 mg/L	5 mL	4.84 mg/L	1					11/29/18 21:09:00	N	II
KQ1817562-18	Chloride, Dissolved	CCV		Water	4.84 mg/L	5 mL	4.84 mg/L	1					11/29/18 21:09:00	N	II
KQ1817562-18	Fluoride	CCV		Water	4.81 mg/L	5 mL	4.81 mg/L	1					11/29/18 21:09:00	N	II
KQ1817562-18	Nitrate as Nitrogen	CCV		Water	2.52 mg/L	5 mL	2.52 mg/L	1					11/29/18 21:09:00	N	II
KQ1817562-18	Nitrate as Nitrogen, Dissolved	CCV		Water	2.52 mg/L	5 mL	2.52 mg/L	1					11/29/18 21:09:00	N	II
KQ1817562-18	Nitrite as Nitrogen	CCV		Water	2.51 mg/L	5 mL	2.51 mg/L	1					11/29/18 21:09:00	N	II
KQ1817562-18	Sulfate	CCV		Water	5.12 mg/L	5 mL	5.12 mg/L	1					11/29/18 21:09:00	N	II
KQ1817562-18	Sulfate, Dissolved	CCV		Water	5.12 mg/L	5 mL	5.12 mg/L	1					11/29/18 21:09:00	N	II
KQ1817562-19	Chloride	MB		Water	0.00 mg/L	5 mL	0.20 mg/L U	2	0.06	0.20			11/29/18 12:24:00	N	II
KQ1817562-19	Chloride, Dissolved	MB		Water	0.00 mg/L	5 mL	0.20 mg/L U	2	0.06	0.20			11/29/18 12:24:00	N	II
KQ1817562-19	Fluoride	MB		Water	0.21 mg/L	5 mL	0.21 mg/L	2	0.02	0.20			11/29/18 12:24:00	N	II
KQ1817562-19	Nitrate as Nitrogen	MB		Water	0.00 mg/L	5 mL	0.10 mg/L U	2	0.01	0.10			11/29/18 12:24:00	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-IC-08 **Analyst:** MVALVERDE **Analysis Lot:** 616826 **Method/Testcode:** 300.0/NO3 Diss

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ1817562-19	Nitrate as Nitrogen, Dissolved	MB		Water	0.00 mg/L	5 mL	0.10 mg/L U	2	0.01	0.10			11/29/18 12:24:00	N	II
KQ1817562-19	Nitrite as Nitrogen	MB		Water	0.00 mg/L	5 mL	0.10 mg/L U	2	0.004	0.10			11/29/18 12:24:00	N	II
KQ1817562-19	Sulfate	MB		Water	0.20 mg/L	5 mL	0.20 mg/L J	2	0.02	0.20			11/29/18 12:24:00	N	II
KQ1817562-19	Sulfate, Dissolved	MB		Water	0.20 mg/L	5 mL	0.20 mg/L J	2	0.02	0.20			11/29/18 12:24:00	N	II
KQ1817562-20	Chloride	MB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.03	0.10			11/29/18 11:14:00	N	II
KQ1817562-20	Chloride, Dissolved	MB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.03	0.10			11/29/18 11:14:00	N	II
KQ1817562-20	Fluoride	MB		Water	0.01 mg/L	5 mL	0.10 mg/L U	1	0.009	0.10			11/29/18 11:14:00	N	II
KQ1817562-20	Nitrate as Nitrogen	MB		Water	0.00 mg/L	5 mL	0.050 mg/L U	1	0.005	0.050			11/29/18 11:14:00	N	II
KQ1817562-20	Nitrate as Nitrogen, Dissolved	MB		Water	0.00 mg/L	5 mL	0.050 mg/L U	1	0.005	0.050			11/29/18 11:14:00	N	II
KQ1817562-20	Nitrite as Nitrogen	MB		Water	0.00 mg/L	5 mL	0.050 mg/L U	1	0.002	0.050			11/29/18 11:14:00	N	II
KQ1817562-20	Sulfate	MB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.01	0.10			11/29/18 11:14:00	N	II
KQ1817562-20	Sulfate, Dissolved	MB		Water	0.00 mg/L	5 mL	0.10 mg/L U	1	0.01	0.10			11/29/18 11:14:00	N	II
KQ1817562-21	Chloride	LCS		Water	4.73 mg/L	5 mL	4.73 mg/L	1	0.03	0.10	95		11/29/18 11:39:00	N	II
KQ1817562-21	Chloride, Dissolved	LCS		Water	4.73 mg/L	5 mL	4.73 mg/L	1	0.03	0.10	95		11/29/18 11:39:00	N	II
KQ1817562-21	Fluoride	LCS		Water	4.65 mg/L	5 mL	4.65 mg/L	1	0.009	0.10	93		11/29/18 11:39:00	N	II
KQ1817562-21	Nitrate as Nitrogen	LCS		Water	2.45 mg/L	5 mL	2.45 mg/L	1	0.005	0.050	98		11/29/18 11:39:00	N	II
KQ1817562-21	Nitrate as Nitrogen, Dissolved	LCS		Water	2.45 mg/L	5 mL	2.45 mg/L	1	0.005	0.050	98		11/29/18 11:39:00	N	II
KQ1817562-21	Nitrite as Nitrogen	LCS		Water	2.43 mg/L	5 mL	2.43 mg/L	1	0.002	0.050	97		11/29/18 11:39:00	N	II
KQ1817562-21	Sulfate	LCS		Water	4.96 mg/L	5 mL	4.96 mg/L	1	0.01	0.10	99		11/29/18 11:39:00	N	II
KQ1817562-21	Sulfate, Dissolved	LCS		Water	4.96 mg/L	5 mL	4.96 mg/L	1	0.01	0.10	99		11/29/18 11:39:00	N	II

# indicates Final Result is not yet adju ted for Solids because it has not yet been determined.

Sequence: IC08112918
Operator: ALKLS.NoUser
Printed: 11/30/2018 9:18:25 AM

Title:
Datasource: ACQWET10_local
Location: IC08\Runs2016
Timebase: IC08
#Samples: 72

Created: 11/29/2018 10:35:36 AM by ALKLS.NoUser
Last Update: 11/29/2018 5:13:09 PM by ALKLS.NoUser

o.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time
1	STD2/LVL2	Standard	12	25.0	epa300	epa300	Finished	7/31/2018 2:02:52 PM
2	STD3/LVL3	Standard	13	25.0	epa300	epa300	Finished	7/31/2018 2:13:28 PM
3	STD4/LVL4	Standard	14	25.0	epa300	epa300	Finished	7/31/2018 2:24:04 PM
4	STD5/LVL5	Standard	15	25.0	epa300	epa300	Finished	7/31/2018 2:34:40 PM
5	STD6/LVL6	Standard	16	25.0	epa300	epa300	Finished	7/31/2018 2:45:15 PM
6	STD7/LVL7	Standard	17	25.0	epa300	epa300	Finished	7/31/2018 3:31:47 PM
7	STD8/LVL8	Standard	18	25.0	epa300	epa300	Finished	7/31/2018 3:42:26 PM
8	STD1/LVL1	Standard	11	25.0	epa300	epa300	Finished	7/31/2018 5:05:44 PM
9	STD2/LVL2	Standard	12	25.0	epa300	epa300	Finished	10/26/2018 3:08:38 PM
10	STD2/LVL2	Standard	12	25.0	epa300	epa300	Finished	10/26/2018 3:19:22 PM
11	STD3/LVL3	Standard	13	25.0	epa300	epa300	Finished	10/26/2018 3:28:53 PM
12	STD4/LVL4	Standard	14	25.0	epa300	epa300	Finished	10/26/2018 3:39:31 PM
13	STD5/LVL5	Standard	15	25.0	epa300	epa300	Finished	10/26/2018 3:50:06 PM
14	STD6/LVL6	Standard	16	25.0	epa300	epa300	Finished	10/26/2018 4:00:42 PM
15	STD1/LVL1	Standard	17	25.0	epa300	epa300	Finished	10/26/2018 4:11:17 PM
16	STD1/LVL1	Standard	17	25.0	epa300	epa300	Finished	10/26/2018 4:21:52 PM
17	lcs	Unknown	2	25.0	epa300	epa300	Finished	11/29/2018 11:39:56 AM
18	mb	Unknown	1	25.0	epa300	epa300	Finished	11/29/2018 11:14:16 AM
19	ccv1	Unknown	46	25.0	epa300	epa300	Finished	11/29/2018 12:14:32 PM
20	ccb1	Unknown	47	25.0	epa300	epa300	Finished	11/29/2018 11:50:29 AM
21	k1811581-001	Unknown	3	25.0	epa300	epa300	Finished	11/29/2018 12:01:09 PM
22	mb bomb	Unknown	4	25.0	epa300	epa300	Finished	11/29/2018 12:24:57 PM
23	tcp1	Unknown	5	25.0	epa300	epa300	Finished	11/29/2018 12:35:35 PM
24	tcp2	Unknown	6	25.0	epa300	epa300	Finished	11/29/2018 12:46:10 PM
25	lcs1	Unknown	7	25.0	epa300	epa300	Finished	11/29/2018 12:56:46 PM
26	lcs2	Unknown	8	25.0	epa300	epa300	Finished	11/29/2018 1:07:21 PM
27	k1810603-001	Unknown	9	25.0	epa300	epa300	Finished	11/29/2018 1:17:56 PM
28	k1810603-002	Unknown	10	25.0	epa300	epa300	Finished	11/29/2018 1:28:32 PM
29	k1810603-002d	Unknown	11	25.0	epa300	epa300	Finished	11/29/2018 1:39:07 PM
30	k1810603-003	Unknown	12	25.0	epa300	epa300	Finished	11/29/2018 1:49:43 PM
31	ccv2	Unknown	48	25.0	epa300	epa300	Finished	11/29/2018 2:00:18 PM
32	ccb2	Unknown	49	25.0	epa300	epa300	Finished	11/29/2018 2:10:59 PM
33	k1810748-001	Unknown	13	25.0	epa300	epa300	Finished	11/29/2018 2:21:35 PM
34	k1810748-002	Unknown	14	25.0	epa300	epa300	Finished	11/29/2018 2:32:15 PM
35	k1810748-003	Unknown	15	25.0	epa300	epa300	Finished	11/29/2018 2:42:50 PM
36	k1811381-004	Unknown	16	25.0	epa300	epa300	Finished	11/29/2018 2:53:25 PM
37	k1811381-004d	Unknown	17	25.0	epa300	epa300	Finished	11/29/2018 3:04:00 PM
38	k1811381-005	Unknown	18	25.0	epa300	epa300	Finished	11/29/2018 3:14:35 PM
39	k1811438-001	Unknown	19	25.0	epa300	epa300	Finished	11/29/2018 3:25:11 PM
40	k1811438-002	Unknown	20	25.0	epa300	epa300	Finished	11/29/2018 3:35:46 PM
41	k1811610-001	Unknown	21	25.0	epa300	epa300	Finished	11/29/2018 3:46:22 PM
42	ccv3	Unknown	46	25.0	epa300	epa300	Finished	11/29/2018 3:56:57 PM

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Title:
Datasource: ACQWET10_local
Location: IC08\Runs2016
Timebase: IC08
#Samples: 72
Created: 11/29/2018 10:35:36 AM by ALKLS.NoUser
Last Update: 11/29/2018 5:13:09 PM by ALKLS.NoUser

No.	Name	Dil. Factor	Commen
1	STD2/LVL2	1.0000	
2	STD3/LVL3	1.0000	
3	STD4/LVL4	1.0000	
4	STD5/LVL5	1.0000	
5	STD6/LVL6	1.0000	
6	STD7/LVL7	1.0000	
7	STD8/LVL8	1.0000	
8	STD1/LVL1	1.0000	
9	STD2/LVL2	1.0000	
10	STD2/LVL2	1.0000	
11	STD3/LVL3	1.0000	
12	STD4/LVL4	1.0000	
13	STD5/LVL5	1.0000	
14	STD6/LVL6	1.0000	
15	STD1/LVL1	1.0000	
16	STD1/LVL1	1.0000	
17	lcs	1.0000	
18	mb	1.0000	
19	ccv1	1.0000	
20	ccb1	1.0000	
21	k1811581-001	2.0000	
22	mb bomb	2.0000	bomb
23	tcp1	50.0000	bomb
24	tcp2	50.0000	bomb
25	lcs1	50.0000	bomb
26	lcs2	50.0000	bomb
27	k1810603-001	2.0000	bomb
28	k1810603-002	2.0000	bomb
29	k1810603-002d	2.0000	bomb
30	k1810603-003	2.0000	bomb
31	ccv2	1.0000	
32	ccb2	1.0000	
33	k1810748-001	2.0000	bomb
34	k1810748-002	2.0000	bomb
35	k1810748-003	2.0000	bomb
36	k1811381-004	2.0000	bomb
37	k1811381-004d	2.0000	bomb
38	k1811381-005	2.0000	bomb
39	k1811438-001	2.0000	bomb
40	k1811438-002	2.0000	bomb
41	k1811610-001	2.0000	
42	ccv3	1.0000	

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Title:
Datasource: ACQWET10_local
Location: IC08\Runs2016
Timebase: IC08
#Samples: 72
Created: 11/29/2018 10:35:36 AM by ALKLS.NoUser
Last Update: 11/29/2018 5:13:09 PM by ALKLS.NoUser

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Tim
43	ccb3	Unknown	47	25.0	epa300	epa300	Finished	11/29/2018 4:07:53 PM
44	k1811608-001	Unknown	22	25.0	epa300	epa300	Finished	11/29/2018 4:18:32 PM
45	k1811608-001d	Unknown	23	25.0	epa300	epa300	Finished	11/29/2018 4:29:16 PM
46	k1811608-001ms	Unknown	24	25.0	epa300	epa300	Finished	11/29/2018 4:39:50 PM
47	k1811608-001dms	Unknown	25	25.0	epa300	epa300	Finished	11/29/2018 4:50:26 PM
48	k1811612-001	Unknown	26	25.0	epa300	epa300	Finished	11/29/2018 5:01:01 PM
49	k1811612-001d	Unknown	27	25.0	epa300	epa300	Finished	11/29/2018 5:11:37 PM
50	k1811612-001ms	Unknown	28	25.0	epa300	epa300	Finished	11/29/2018 5:25:15 PM
51	k1811612-001dms	Unknown	29	25.0	epa300	epa300	Finished	11/29/2018 5:35:51 PM
52	k1811612-002	Unknown	30	25.0	epa300	epa300	Finished	11/29/2018 5:46:27 PM
53	k1811612-003	Unknown	31	25.0	epa300	epa300	Finished	11/29/2018 5:57:02 PM
54	ccv4	Unknown	48	25.0	epa300	epa300	Finished	11/29/2018 6:07:38 PM
55	ccb4	Unknown	49	25.0	epa300	epa300	Finished	11/29/2018 6:18:31 PM
56	k1811625-001	Unknown	32	25.0	epa300	epa300	Finished	11/29/2018 6:29:19 PM
57	k1811625-001	Unknown	33	25.0	epa300	epa300	Finished	11/29/2018 6:40:03 PM
58	k1811625-002	Unknown	34	25.0	epa300	epa300	Finished	11/29/2018 6:50:39 PM
59	k1811625-002	Unknown	35	25.0	epa300	epa300	Finished	11/29/2018 7:01:15 PM
60	k1811625-003	Unknown	36	25.0	epa300	epa300	Finished	11/29/2018 7:11:50 PM
61	k1811625-003	Unknown	37	25.0	epa300	epa300	Finished	11/29/2018 7:22:26 PM
62	k1811625-004	Unknown	38	25.0	epa300	epa300	Finished	11/29/2018 7:33:01 PM
63	k1811625-004	Unknown	39	25.0	epa300	epa300	Finished	11/29/2018 7:43:36 PM
64	k1811625-005	Unknown	40	25.0	epa300	epa300	Finished	11/29/2018 7:54:11 PM
65	k1811625-005	Unknown	41	25.0	epa300	epa300	Finished	11/29/2018 8:04:47 PM
66	ccv5	Unknown	46	25.0	epa300	epa300	Finished	11/29/2018 8:15:23 PM
67	ccb5	Unknown	47	25.0	epa300	epa300	Finished	11/29/2018 8:26:20 PM
68	k1811381-005	Unknown	42	25.0	epa300	epa300	Finished	11/29/2018 8:37:12 PM
69	k1811438-001	Unknown	43	25.0	epa300	epa300	Finished	11/29/2018 8:47:51 PM
70	k1811438-002	Unknown	44	25.0	epa300	epa300	Finished	11/29/2018 8:58:27 PM
71	ccv6	Unknown	48	25.0	epa300	epa300	Finished	11/29/2018 9:09:02 PM
72	ccb6	Unknown	49	25.0	epa300	epa300	Finished	11/29/2018 9:19:59 PM

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Title:
Datasource: ACQWET10_local
Location: IC08\Runs2016
Timebase: IC08
#Samples: 72
Created: 11/29/2018 10:35:36 AM by ALKLS.NoUser
Last Update: 11/29/2018 5:13:09 PM by ALKLS.NoUser

No.	Name	Dil. Factor	Commen
43	ccb3	1.0000	
44	k1811608-001	2.0000	
45	k1811608-001d	2.0000	
46	k1811608-001ms	4.0000	
47	k1811608-001dms	4.0000	^
48	k1811612-001	2.0000	
49	k1811612-001d	2.0000	
50	k1811612-001ms	4.0000	
51	k1811612-001dms	4.0000	
52	k1811612-002	2.0000	
53	k1811612-003	2.0000	
54	ccv4	1.0000	
55	ccb4	1.0000	
56	k1811625-001	2.0000	
57	k1811625-001	5.0000	
58	k1811625-002	2.0000	
59	k1811625-002	20.0000	
60	k1811625-003	2.0000	
61	k1811625-003	100.0000	
62	k1811625-004	2.0000	
63	k1811625-004	20.0000	
64	k1811625-005	2.0000	
65	k1811625-005	10.0000	
66	ccv5	1.0000	
67	ccb5	1.0000	
68	k1811381-005	10.0000	bomb
69	k1811438-001	5.0000	bomb
70	k1811438-002	5.0000	bomb
71	ccv6	1.0000	
72	ccb6	1.0000	

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Work Order #.: K10603 K10748 Method: 5050/9056/~~9252~~

Analysis: Chloride Prep # 327323

Date Prepared	Sample Name Lab Code	dilution	Initial Wt./Vol. (g) or (ml)	Final Volume (ml)	mg/L (in solution)	mg/L - mg/kg As Rec'd	% Solids	mg/kg Dry Wt.
11/28/18	MB		0.5g	50ml				
	TCP1		1.0ml					
	TCP2		1.0ml					
	K10603-1		0.5817					
	-2		0.6177					
	-2d		0.4936					
	-3		0.6171					
	K10748-1		0.6697					
	-2		0.5344					
	-3		0.5432					
	LCS-1		0.1677					
	LCS-2		0.1615					
	K11381-4		0.5040					
	-4d		0.4917					
	-5		0.4940					
	K11488-1		0.5256					
	-2		0.5098					
					N/A			

MB=10ml Bicarb/carb rinse of bomb ID#= 15-GEN-001-94A

TCP= 1.0ml x 10,000ppm Cl= 10,000 ID#=15-GEN-001-77F TV = 10000mg/Kg %REC =

MS= N/A Pipet ID: COD/TX

LCS=SRM 2692c 15-GEN-001-61B TV=1064 Balance ID:K-BALANCE-34

Prepared By: GBeatty	Date Prepared: 11/28/18
Analyzed By:	Date Analyzed:
Reviewed By:	Date Reviewed:

#616826

Service Request	Tier	QC	Hold Time	Due Date	Anions	Initial	Final	Done?
11-29-18					F			
					Cl			
K1811581-1 (SH)					NO2			
1008112918 -RUSH-					Br			
					NO3	2X		✓
					SO4			
					F			
					Cl ✓			
K1810603-1 BOMBS					NO2	2X		
					Br			
					NO3			✓
					SO4			
					F			
					Cl ✓			
-2					NO2			
					Br			✓
					NO3			
					SO4			
					F			
					Cl ✓			
-3					NO2			
					Br			✓
					NO3			
					SO4			
					F			
					Cl ✓	2X		
K1810748-1					NO2			✓
					Br			
					NO3			
					SO4			
					F			
					Cl ✓			
-2					NO2			✓
					Br			
					NO3			
					SO4			
					F			
					Cl ✓			
-3					NO2			✓
					Br			
					NO3			
					SO4			
					F			
					Cl			
K1811381-4					NO2			
9056A Sulfur					Br			✓
					NO3			
					SO4 ✓			
					F			
					Cl			
-5					NO2			
9056A Sulfur					Br			
					NO3			
					SO4 ✓		(10X) ✓	✓
					F			
					Cl			
K1811438-1					NO2			
9056A Sulfur					Br			
					NO3			
					SO4 ✓		(5X) ✓	✓

5

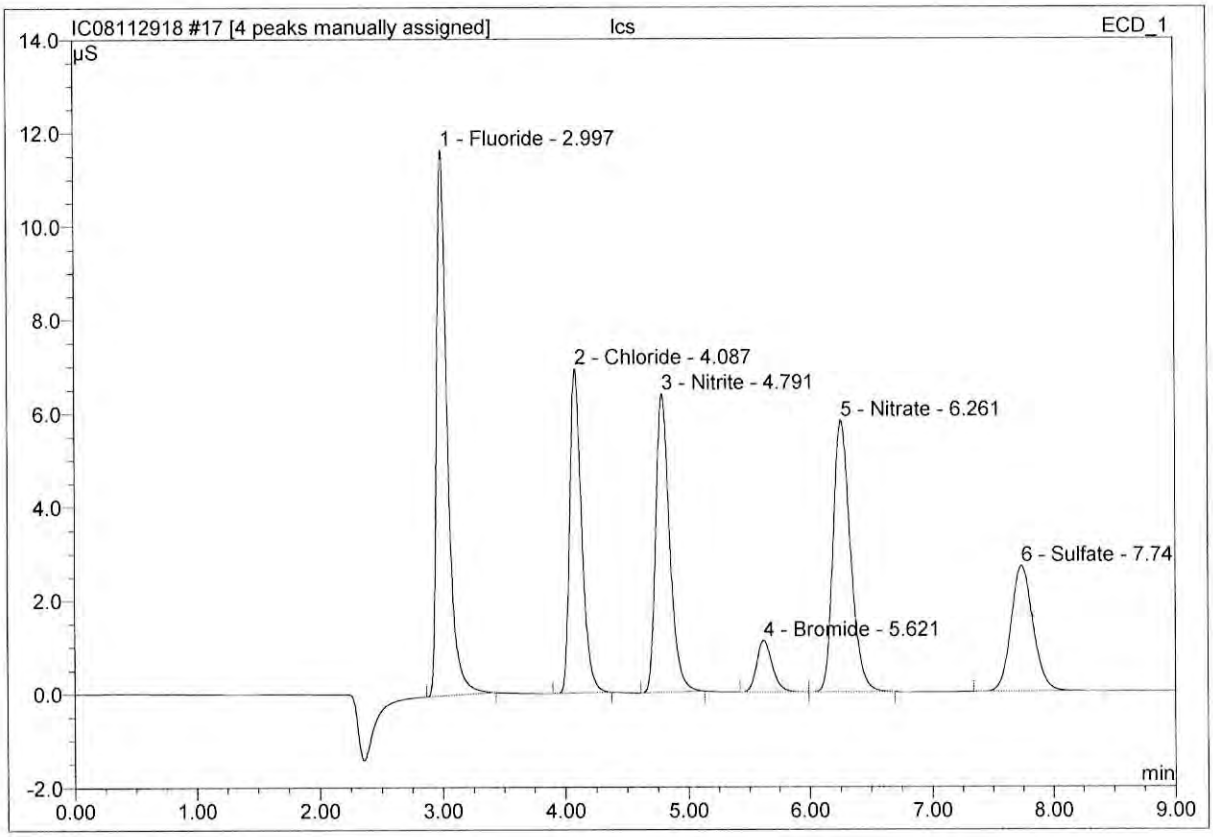
Service Request	Tier	QC	Hold Time	Due Date	Anions	Initial	Final	Done?	
					F				
					Cl				
K1811438-2					NO2				
9056A Sulfur			BOMBS		Br				
					NO3				
					SO4 ✓	2X	5X ✓	✓	
					F ✓		2.0448	94	96
					Cl ✓		8.4329	97	100
K1811608-1			SH	QC	NO2 ✓		0	100	101
					Br	2X	✓		
					NO3 ✓		0.3135	101	102
					SO4				
					F				
					Cl ✓				
K1811610-1			SH		NO2	2X			
					Br				
					NO3 ✓				
					SO4	10X	10X		
			µS = 30.58		F ✓		0.0646	90	93
					Cl ✓		1.6229	98	99
K1811612-1				SH	NO2 ✓		0	102	102
				QC	Br	2X			
					NO3 ✓		0.5145	103	104
					SO4 ✓		0.3259	103	103
					F ✓				
					Cl ✓				
-2				SH	NO2 ✓				
					Br			✓	
					NO3 ✓				
					SO4 ✓				
					F ✓				
					Cl ✓				
-3					NO2 ✓				
					Br			✓	
					NO3 ✓				
					SO4 ✓				
					F				
					Cl ✓	5X			
K1811625-1			F: 21878429		NO2				
					Br			✓	
					NO3 ✓				
					SO4 ✓	2X			
					F				
					Cl ✓	20X			
-2					NO2				
					Br			✓	
					NO3 ✓				
					SO4 ✓	2X			
					F				
					Cl ✓				
-3					NO2	2X			
					Br			✓	
					NO3 ✓				
					SO4 ✓	100X			
					F				
					Cl ✓				
-4					NO2	2X			
					Br			✓	
					NO3 ✓				
					SO4 ✓	20X			

Service Request	Tier	QC	Hold Time	Due Date	Anions	Initial	Final	Done?
					F			
					Cl	✓ 10X		
					NO2			
K1811625-5					Br			✓
					NO3	✓ ~~2X~~ N22X		
					SO4	✓ 10X		
					F			
					Cl			
					NO2			
					Br			
					NO3			
					SO4			
					F			
					Cl			
					NO2			
					Br			
					NO3			
					SO4			
					F			
					Cl			
					NO2			
					Br			
					NO3			
					SO4			
					F			
					Cl			
					NO2			
					Br			
					NO3			
					SO4			
					F			
					Cl			
					NO2			
					Br			
					NO3			
					SO4			
					F			
					Cl			
					NO2			
					Br			
					NO3			
					SO4			
					F			
					Cl			
					NO2			
					Br			
					NO3			
					SO4			
					F			
					Cl			
					NO2			
					Br			
					NO3			
					SO4			

47

17 lcs

Sample Name:	**lcs**	*Injection Volume:*	**25.0**
Vial Number:	**2**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/29/2018 11:39**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

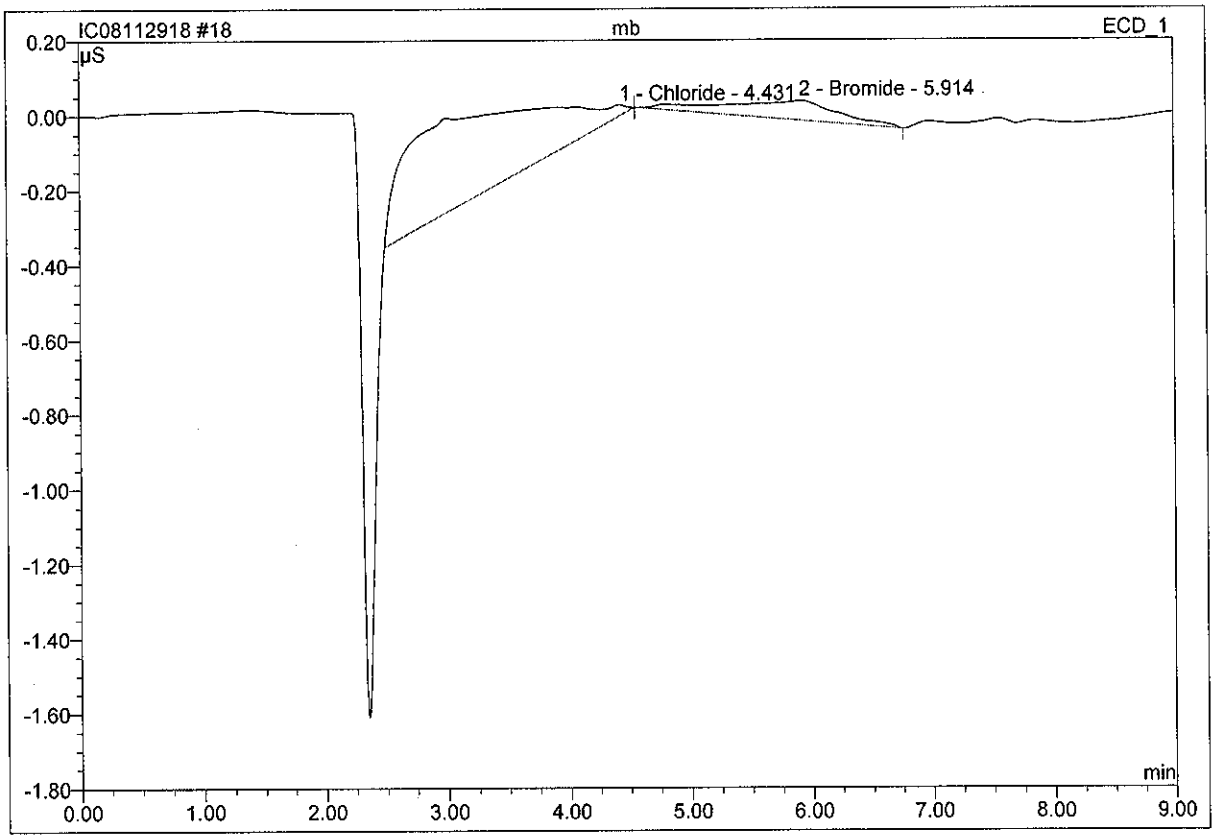


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.00	Fluoride	11.671	1.196	26.61	4.649	BMB
2	4.09	Chloride	6.930	0.773	17.19	4.729	BMB^
3	4.79	Nitrite	6.386	0.838	18.64	2.433	BMB^
4	5.62	Bromide	1.095	0.163	3.62	2.439	BMb^
5	6.26	Nitrate	5.801	0.958	21.32	2.449	bMB^
6	7.74	Sulfate	2.681	0.567	12.62	4.965	BMB
Total:			34.563	4.496	100.00	21.664	

92
95
97
98
99

18 mb

Sample Name:	**mb**	*Injection Volume:*	**25.0**
Vial Number:	**1**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/29/2018 11:14**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.43	Chloride	0.030	0.315	85.18	1.928	BMB
2	5.91	Bromide	0.052	0.055	14.82	0.822	bMB
Total:			0.082	0.370	100.00	2.750	

Before

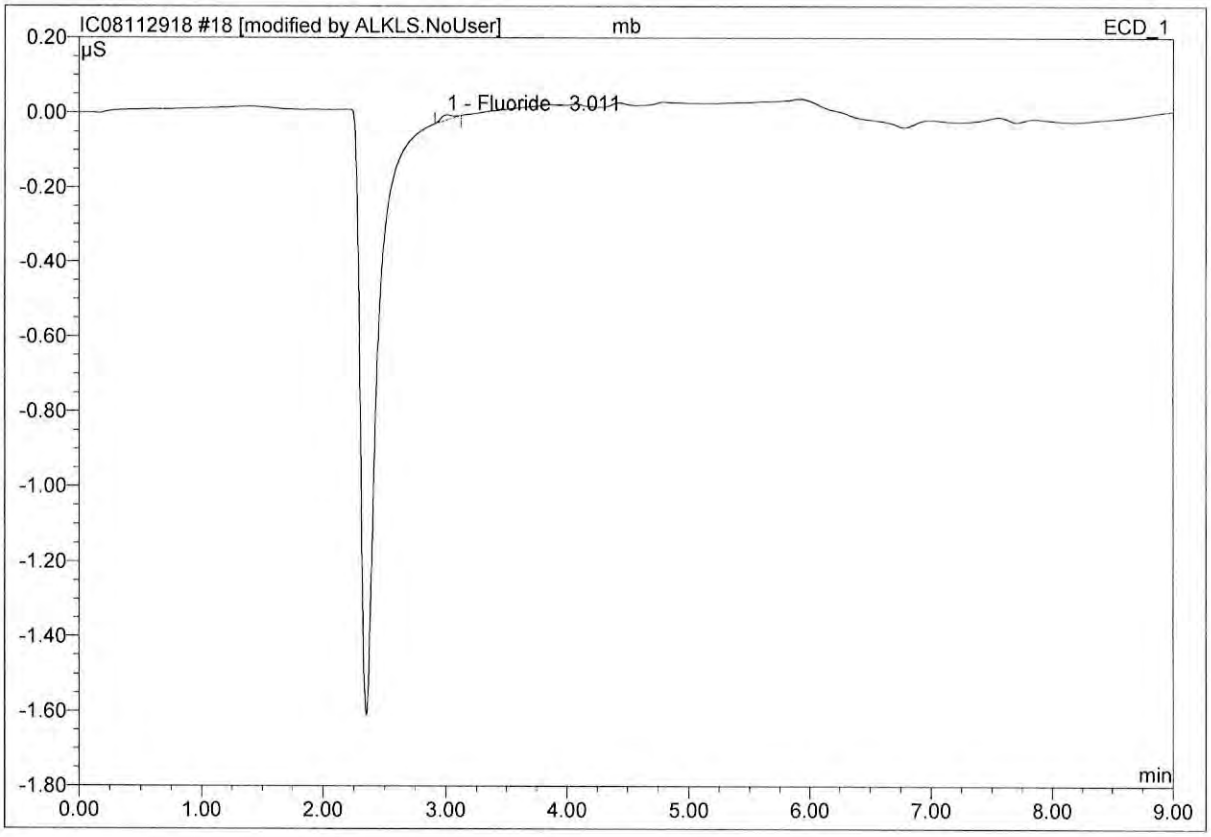
NOV 30 2018

default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

18 mb

Sample Name:	**mb**	*Injection Volume:*	**25.0**
Vial Number:	**1**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/29/2018 11:14**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.01	Fluoride	0.014	0.001	100.00	0.006	BMB*
Total:			0.014	0.001	100.00	0.006	

<0.005 WD

After Initials MR

NOV 30 2018

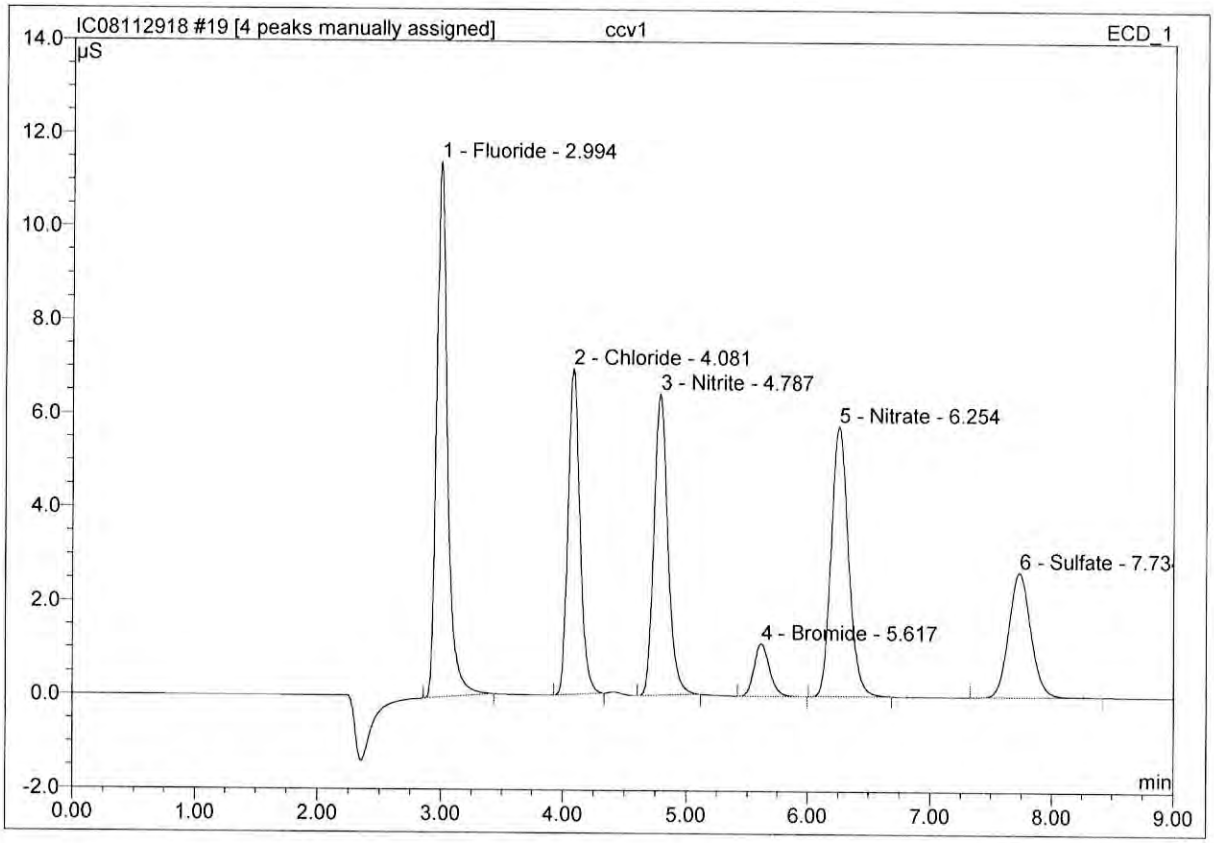
☐ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other

default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

19 ccv1

Sample Name:	**ccv1**	*Injection Volume:*	**25.0**
Vial Number:	**46**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/29/2018 12:14**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

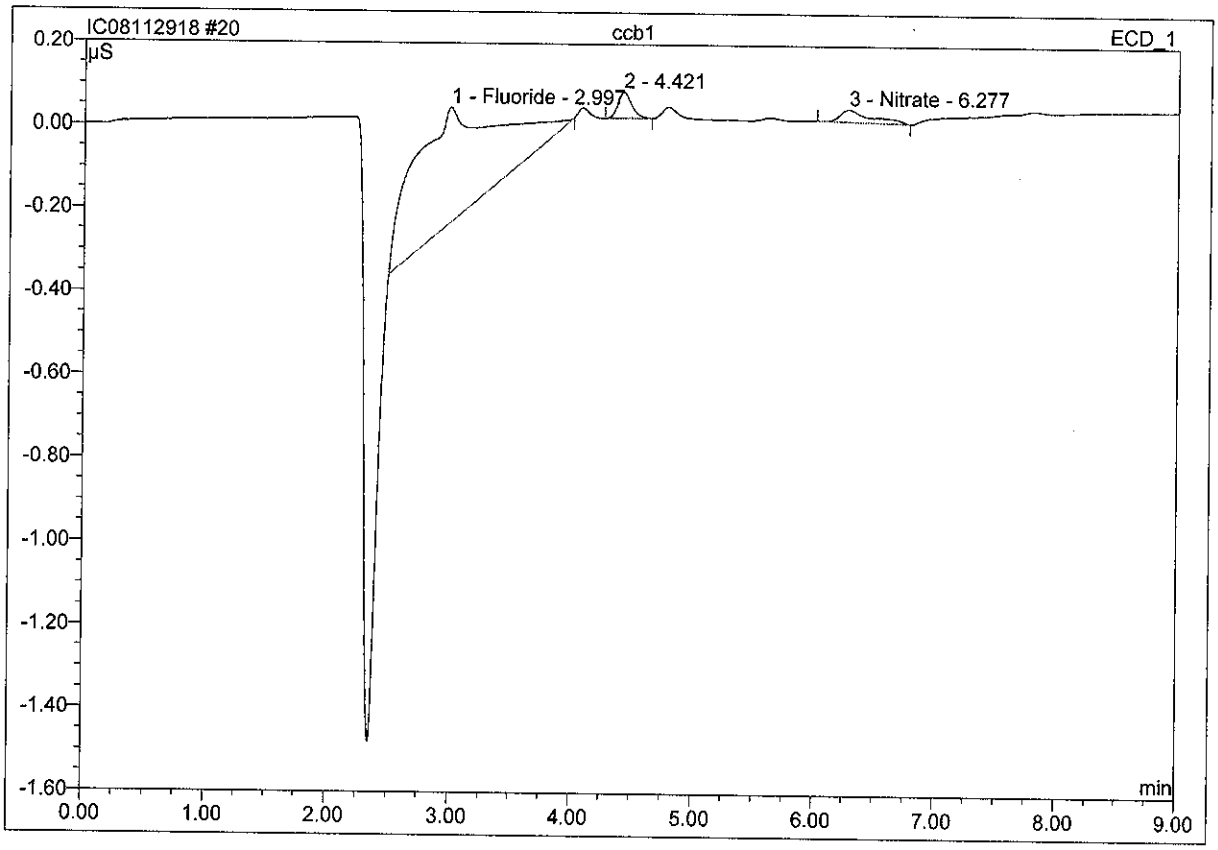


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	11.444	1.186	26.45	4.609	BMB
2	4.08	Chloride	6.949	0.773	17.25	4.731	BMB^
3	4.79	Nitrite	6.428	0.844	18.83	2.452	BMB^
4	5.62	Bromide	1.110	0.165	3.68	2.474	BMB^
5	6.25	Nitrate	5.756	0.952	21.22	2.432	BMB^
6	7.73	Sulfate	2.662	0.564	12.57	4.935	BMB
Total:			34.349	4.484	100.00	21.632	

92
95
98
97
94

20 ccb1

Sample Name:	**ccb1**	*Injection Volume:*	**25.0**
Vial Number:	**47**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/29/2018 11:50**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.00	Fluoride	0.276	0.219	92.88	0.850	BMB
2	4.42	n.a.	0.062	0.008	3.36	n.a.	BMB
3	6.28	Nitrate	0.029	0.009	3.75	0.023	BMB
Total:			0.367	0.235	100.00	0.873	

Before

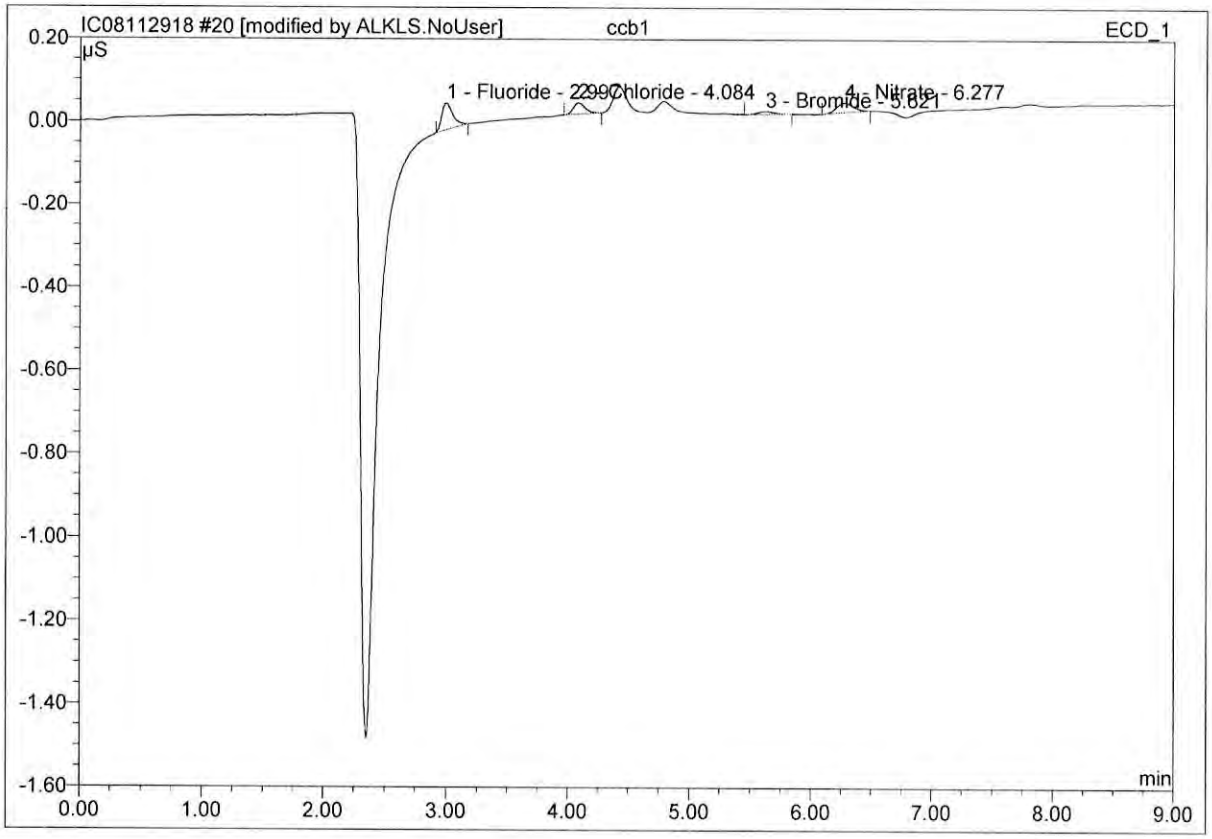
NOV 30 2018

default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

20 ccb1

Sample Name:	**ccb1**	*Injection Volume:*	**25.0**
Vial Number:	**47**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/29/2018 11:50**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.00	Fluoride	0.063	0.007	46.85	0.026	BMB*
2	4.08	Chloride	0.026	0.003	20.74	0.018	BMB*
3	5.62	Bromide	0.006	0.001	6.24	0.013	BMB*
4	6.28	Nitrate	0.023	0.004	26.17	0.009	BMB*
Total:			0.118	0.014	100.00	0.066	

Looks NG

After
Initials MR

NOV 3 0 2018

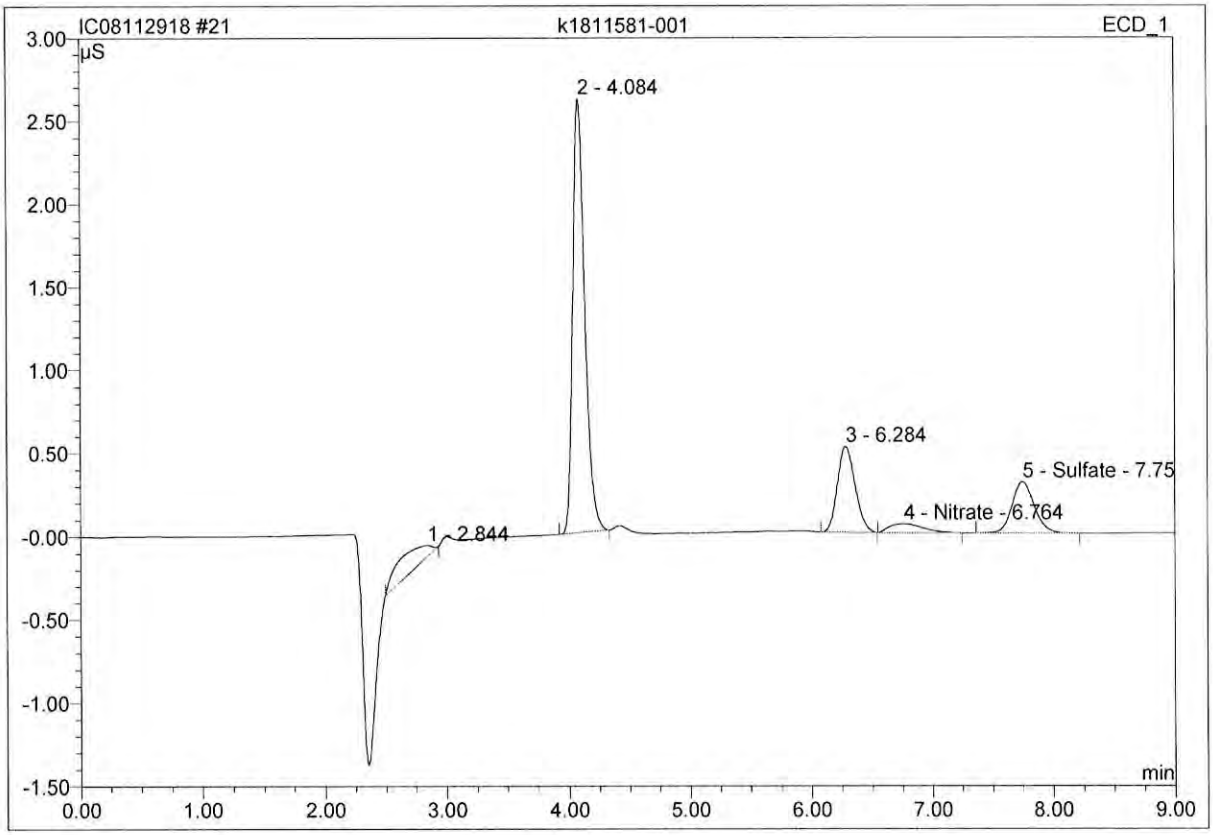
☐Wrong Peak/Peak not Found
☑Baseline/shoulder Incorrect
☐Other

default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

21 k1811581-001

Sample Name:	**k1811581-001**	*Injection Volume:*	**25.0**
Vial Number:	**3**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 12:01**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

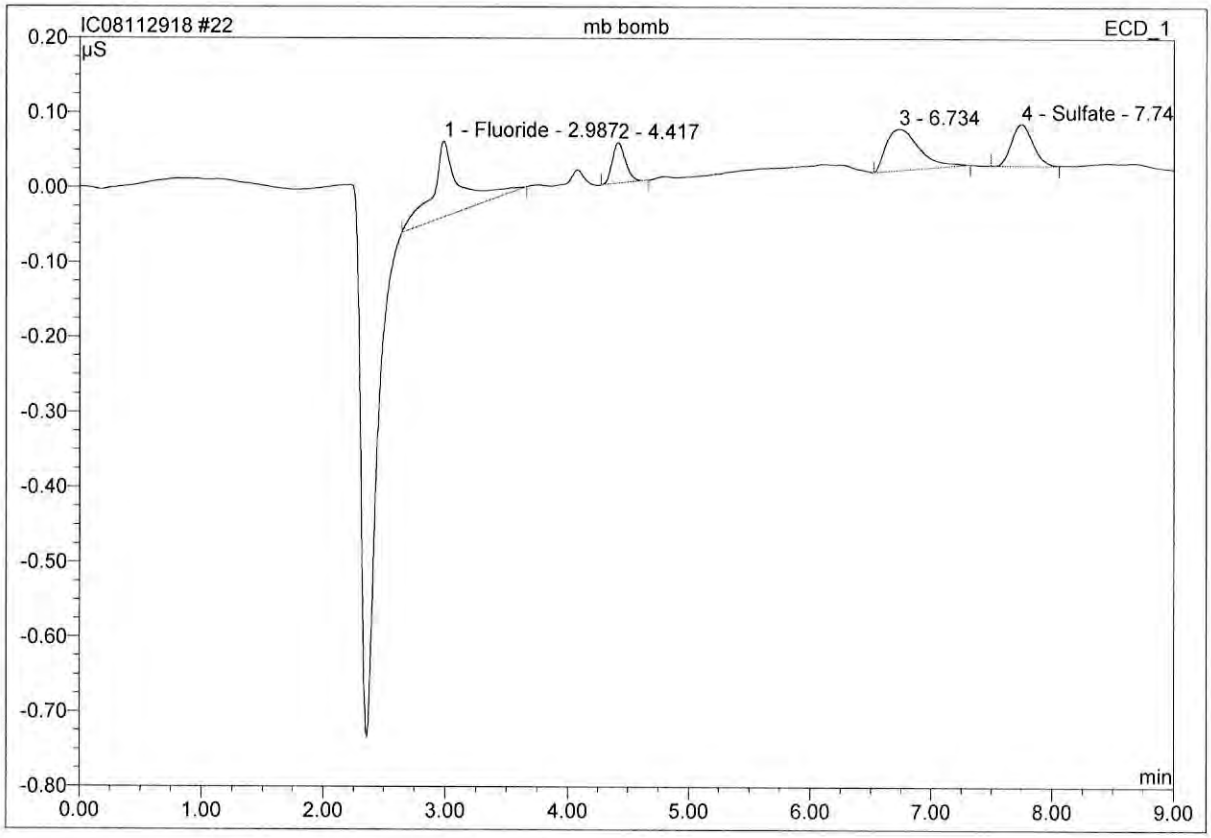


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.84	n.a.	0.067	0.040	7.88	n.a.	BMB
2	4.08	n.a.	2.608	0.295	58.63	n.a.	BMB
3	6.28	n.a.	0.513	0.086	17.17	n.a.	BMB
4	6.76	Nitrate	0.054	0.017	3.45	0.089	BMB
5	7.75	Sulfate	0.307	0.065	12.87	1.133	BMB
Total:			3.548	0.503	100.00	1.222	

22 mb bomb

bomb

Sample Name:	**mb bomb**	*Injection Volume:*	**25.0**
Vial Number:	**4**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 12:24**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

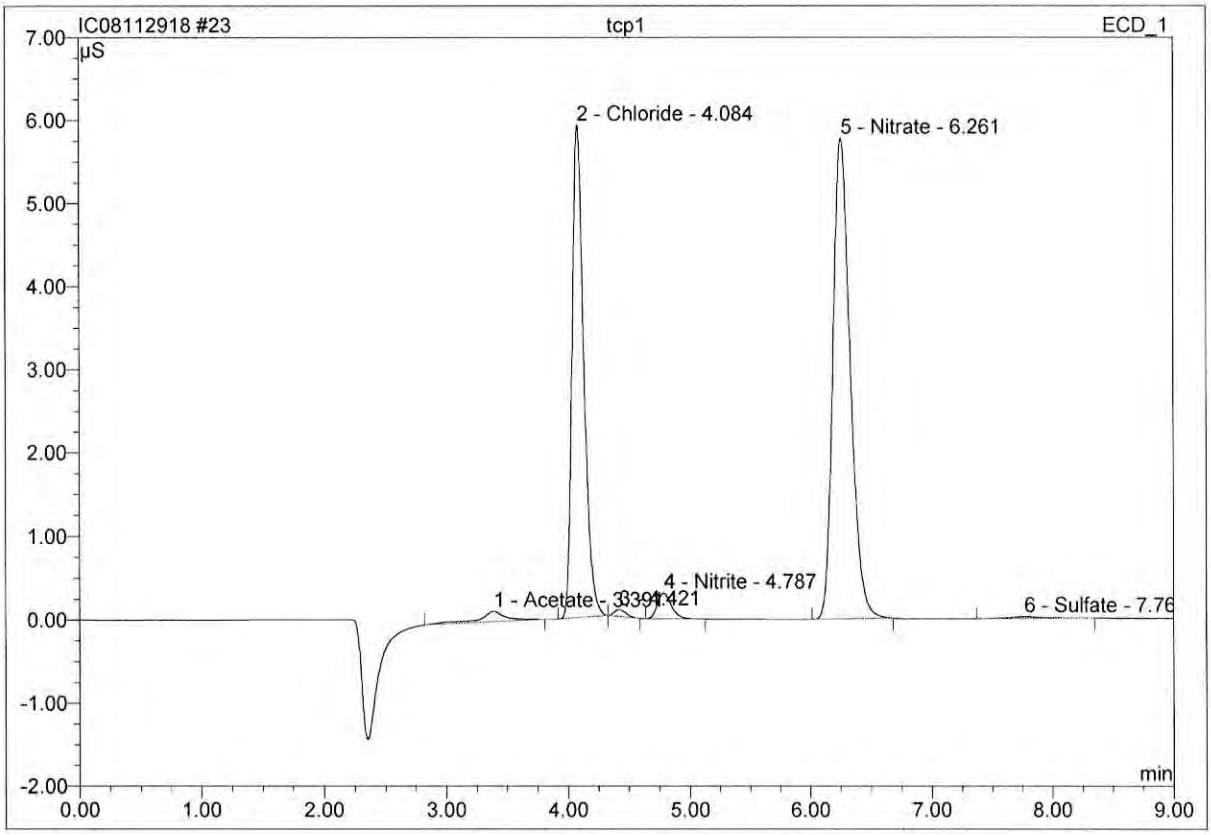


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.101	0.027	42.42	0.206	BMB
2	4.42	n.a.	0.054	0.007	11.11	n.a.	BMB
3	6.73	n.a.	0.055	0.018	28.42	n.a.	BMB
4	7.75	Sulfate	0.056	0.011	18.06	0.198	BMB
Total:			0.267	0.063	100.00	0.404	

23 tcp1

bomb

Sample Name:	**tcp1**	*Injection Volume:*	**25.0**
Vial Number:	**5**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**50.0000**
Recording Time:	**11/29/2018 12:35**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

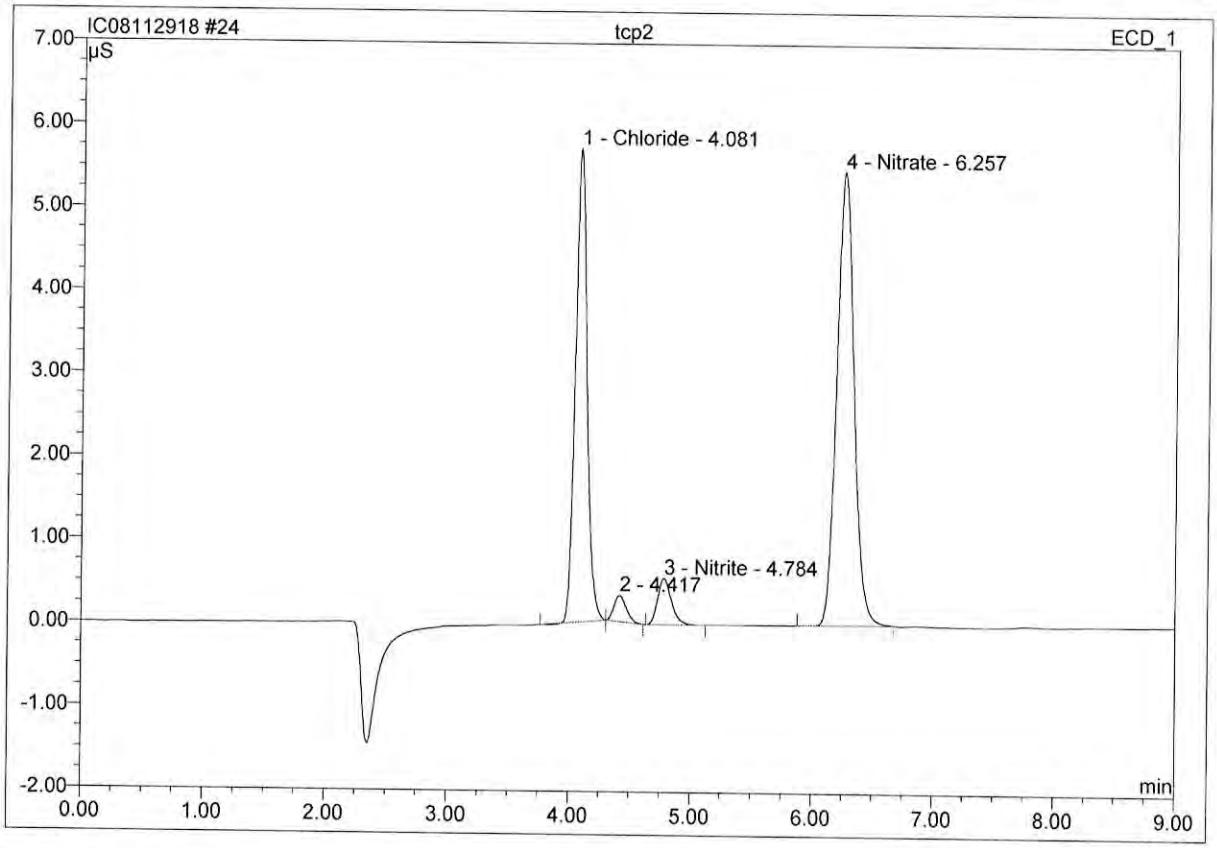


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.39	Acetate	0.125	0.033	1.95	22.322	BMB
2	4.08	Chloride	5.918	0.658	38.70	201.436	BMb
3	4.42	n.a.	0.085	0.009	0.55	n.a.	bMB
4	4.79	Nitrite	0.309	0.041	2.38	5.888	BMB
5	6.26	Nitrate	5.773	0.952	55.95	121.640	BMB
6	7.77	Sulfate	0.023	0.008	0.46	3.462	BMB
Total:			12.233	1.701	100.00	354.749	

24 tcp2

bomb

Sample Name:	**tcp2**	*Injection Volume:*	**25.0**
Vial Number:	**6**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**50.0000**
Recording Time:	**11/29/2018 12:46**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

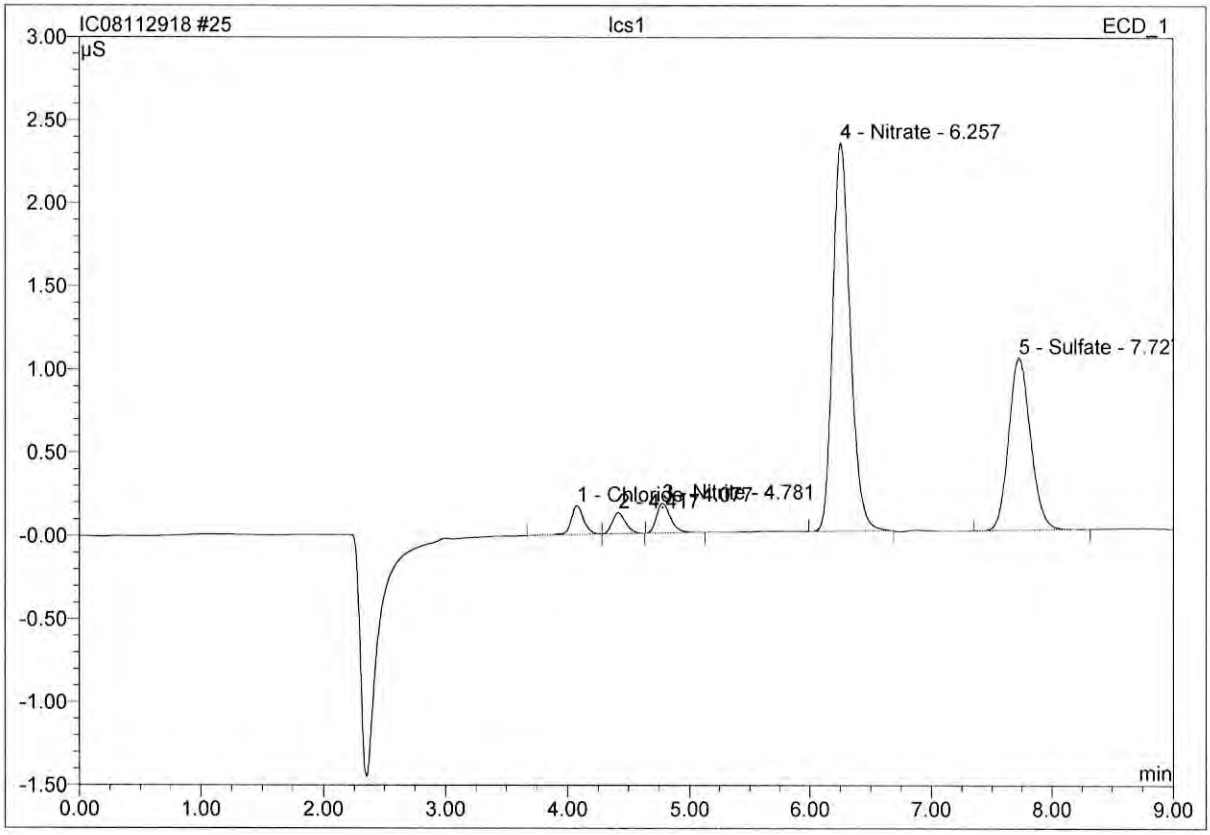


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.08	Chloride	5.695	0.630	38.37	192.831	BMb
2	4.42	n.a.	0.314	0.037	2.27	n.a.	bMB
3	4.78	Nitrite	0.554	0.073	4.45	10.607	BMB
4	6.26	Nitrate	5.457	0.902	54.92	115.298	BMB
Total:			12.020	1.643	100.00	318.736	

25 lcs1

bomb

Sample Name:	**lcs1**	*Injection Volume:*	**25.0**
Vial Number:	**7**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**50.0000**
Recording Time:	**11/29/2018 12:56**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

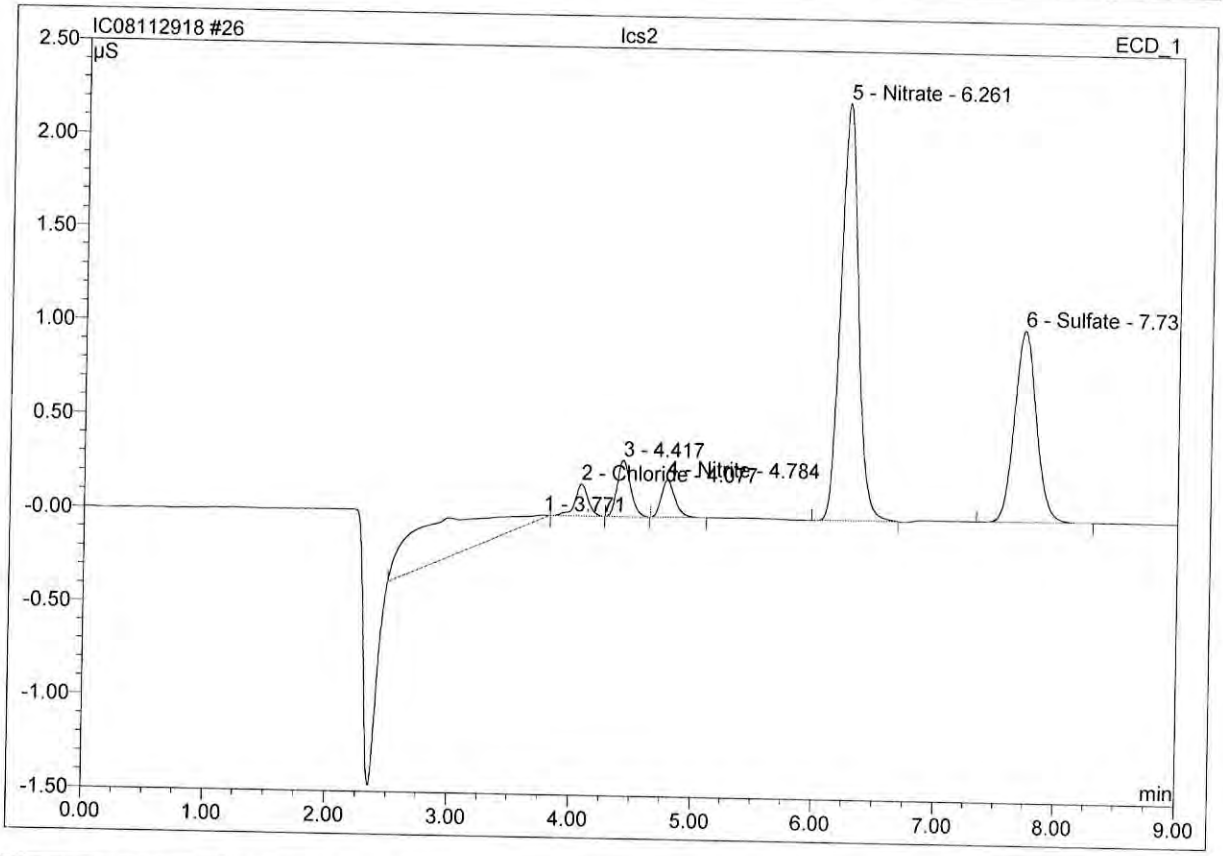


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.08	Chloride	0.170	0.020	3.00	6.128	BMB
2	4.42	n.a.	0.124	0.016	2.34	n.a.	bMB
3	4.78	Nitrite	0.175	0.023	3.50	3.390	BMB
4	6.26	Nitrate	2.335	0.391	58.54	49.919	BMB
5	7.73	Sulfate	1.033	0.218	32.62	95.255	BMB
Total:			3.837	0.667	100.00	154.693	

26 lcs2

bomb

Sample Name:	**lcs2**	*Injection Volume:*	**25.0**
Vial Number:	**8**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**50.0000**
Recording Time:	**11/29/2018 13:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

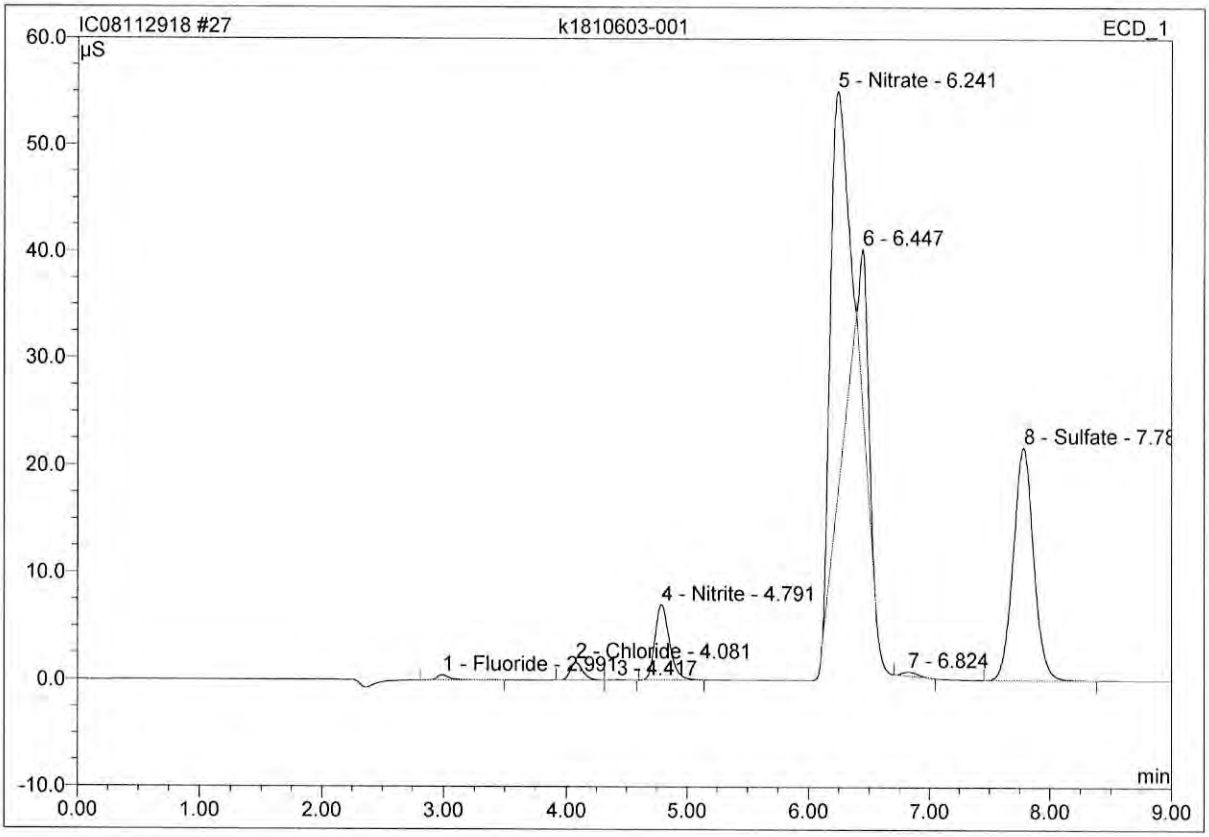


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.77	n.a.	0.017	0.176	20.73	n.a.	BMB
2	4.08	Chloride	0.170	0.021	2.49	6.463	bMB
3	4.42	n.a.	0.297	0.038	4.45	n.a.	BMB
4	4.78	Nitrite	0.196	0.026	3.04	3.748	BMB
5	6.26	Nitrate	2.231	0.373	43.94	47.652	BMB
6	7.73	Sulfate	1.019	0.215	25.36	94.186	BMB
Total:			3.930	0.849	100.00	152.049	

27 k1810603-001

bomb

Sample Name:	**k1810603-001**	*Injection Volume:*	**25.0**
Vial Number:	**9**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 13:17**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

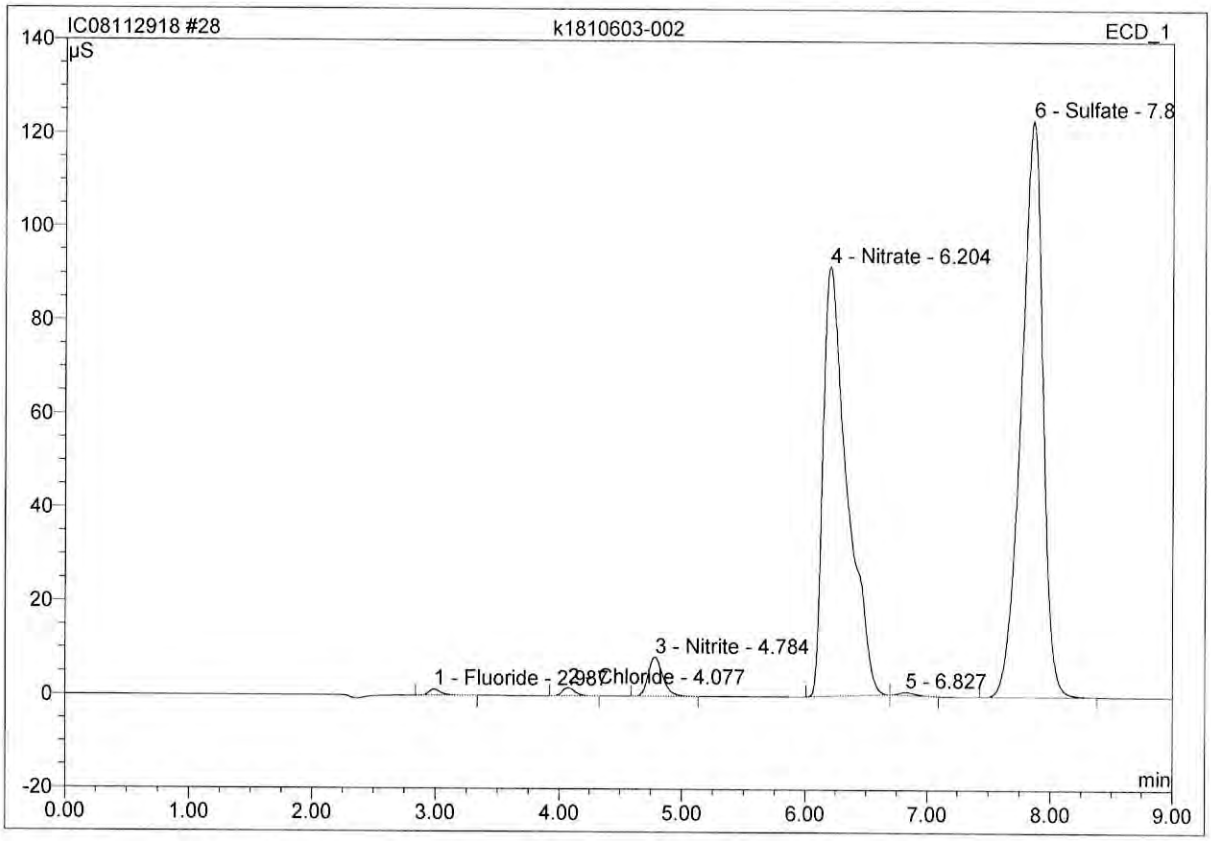


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.461	0.057	0.46	0.445	BMB
2	4.08	Chloride	1.609	0.188	1.52	2.302	BMb
3	4.42	n.a.	0.045	0.005	0.04	n.a.	bMB
4	4.79	Nitrite	6.994	0.967	7.79	5.614	BMB
5	6.24	Nitrate	37.810	5.692	45.90	29.093	BMb
6	6.45	n.a.	14.967	1.217	9.81	n.a.	bMB
7	6.82	n.a.	0.388	0.060	0.48	n.a.	BMB
8	7.78	Sulfate	21.690	4.216	33.99	73.794	BMB
Total:			83.964	12.402	100.00	111.249	

28 k1810603-002

bomb

Sample Name:	**k1810603-002**	*Injection Volume:*	**25.0**
Vial Number:	**10**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 13:28**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

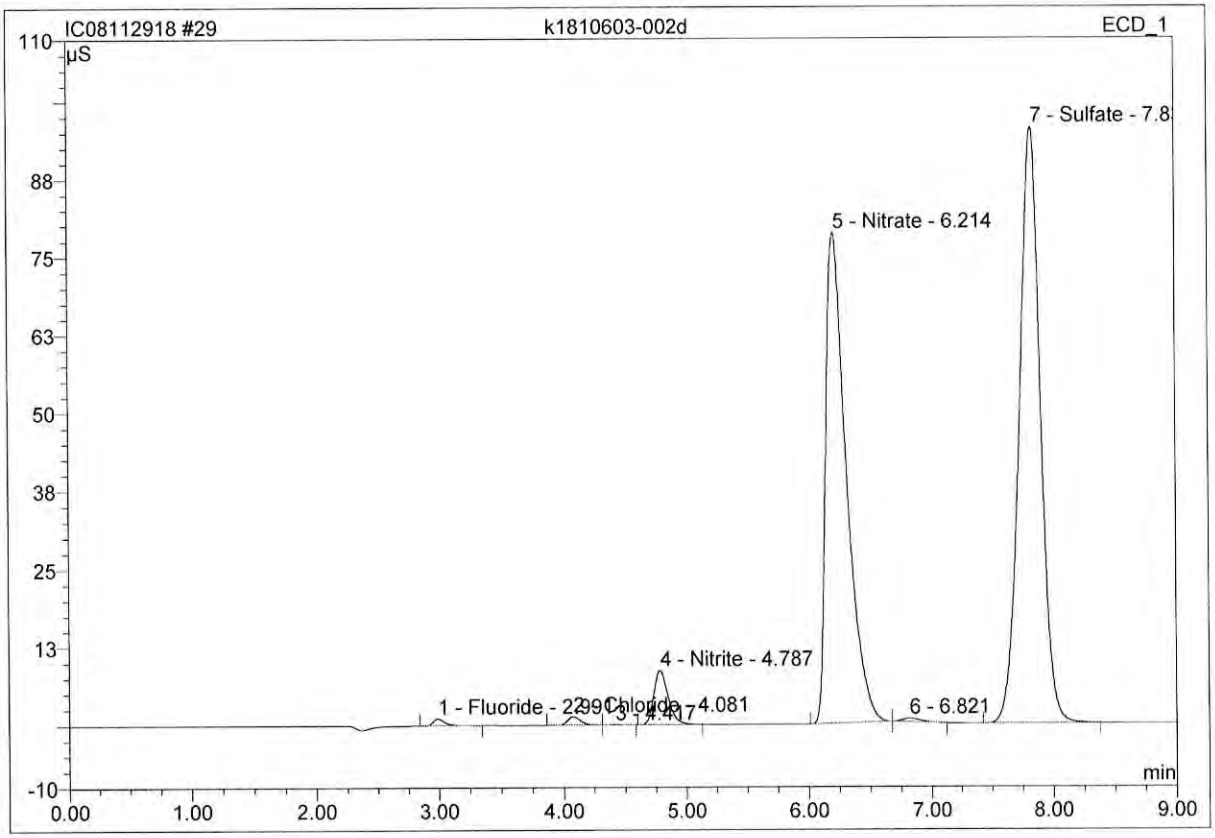


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	1.288	0.148	0.31	1.149	BMB
2	4.08	Chloride	1.720	0.200	0.42	2.450	BMB
3	4.78	Nitrite	8.210	1.125	2.37	6.534	BMB
4	6.20	Nitrate	91.676	20.937	44.19	107.007	BMb
5	6.83	n.a.	0.609	0.102	0.22	n.a.	bMB
6	7.86	Sulfate	123.136	24.864	52.48	435.247	BMB
Total:			226.638	47.376	100.00	552.387	

29 k1810603-002d

bomb

Sample Name:	**k1810603-002d**	*Injection Volume:*	**25.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 13:39**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

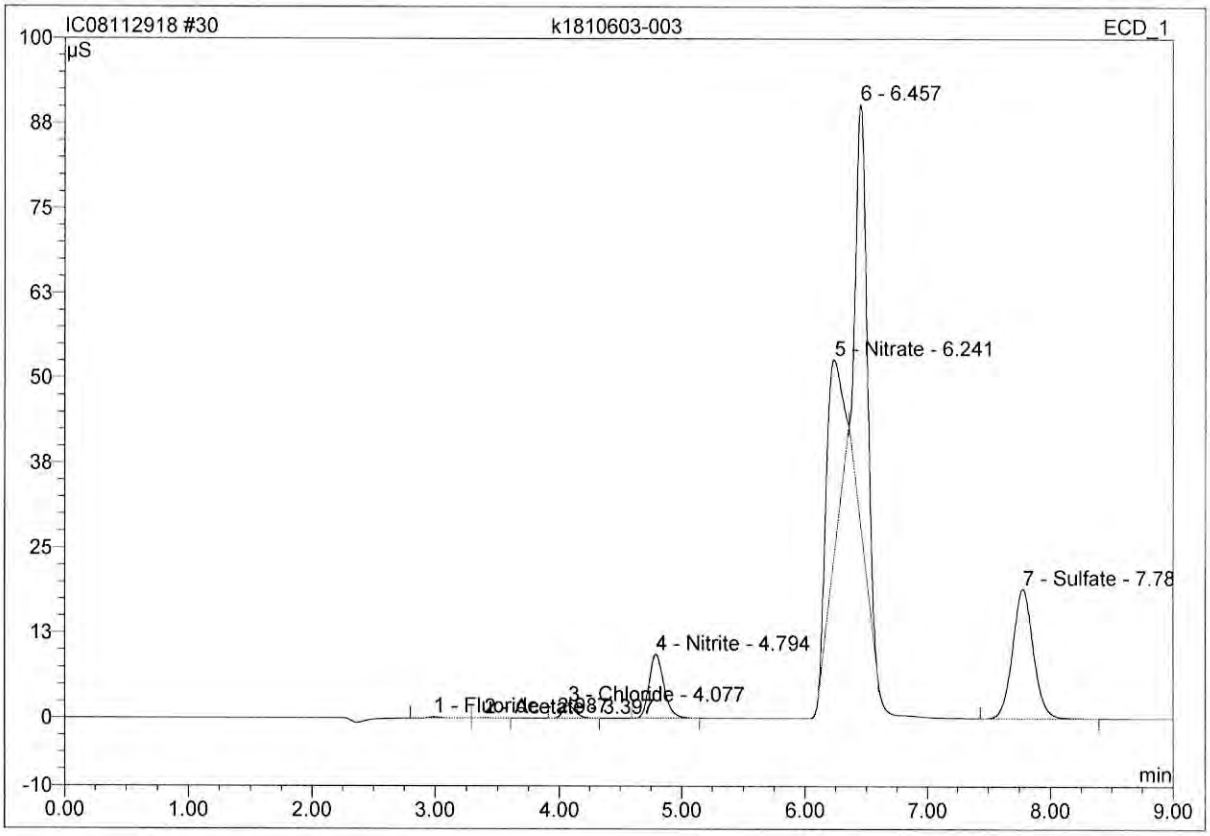


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	1.085	0.122	0.34	0.947	BMB
2	4.08	Chloride	1.350	0.156	0.44	1.911	BMb
3	4.42	n.a.	0.054	0.007	0.02	n.a.	bMB
4	4.79	Nitrite	8.652	1.169	3.28	6.790	BMB
5	6.21	Nitrate	78.604	15.129	42.46	77.322	BMb
6	6.82	n.a.	0.572	0.103	0.29	n.a.	bMB
7	7.84	Sulfate	95.644	18.941	53.17	331.564	BMB
Total:			185.962	35.627	100.00	418.534	

30 k1810603-003

bomb

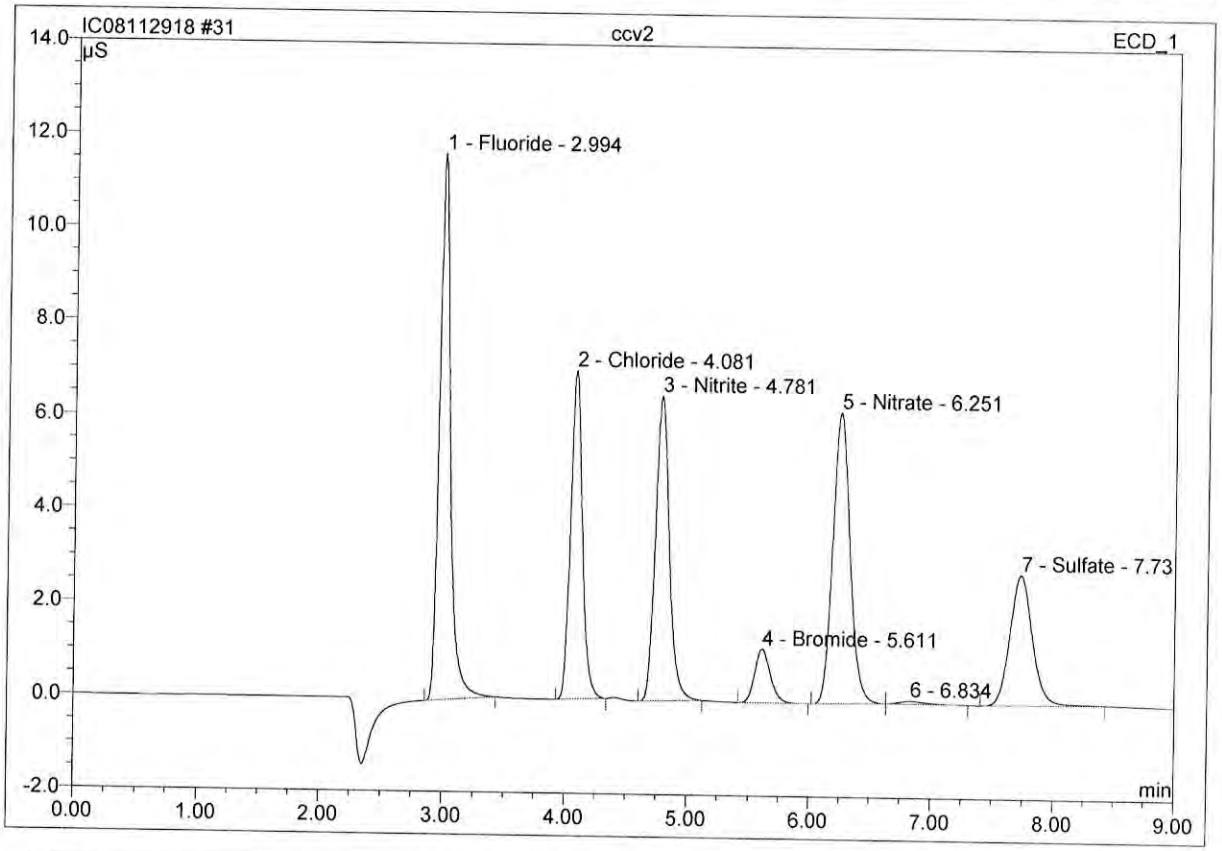
Sample Name:	**k1810603-003**	*Injection Volume:*	**25.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 13:49**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.204	0.026	0.16	0.200	BMB
2	3.40	Acetate	0.057	0.006	0.04	0.166	bMB
3	4.08	Chloride	1.890	0.224	1.42	2.745	BMB
4	4.79	Nitrite	9.380	1.324	8.40	7.688	BMB
5	6.24	Nitrate	28.183	3.984	25.28	20.364	BMb
6	6.46	n.a.	62.720	6.498	41.23	n.a.	bMB
7	7.78	Sulfate	18.998	3.698	23.46	64.728	BMB
Total:			121.432	15.760	100.00	95.891	

31 ccv2

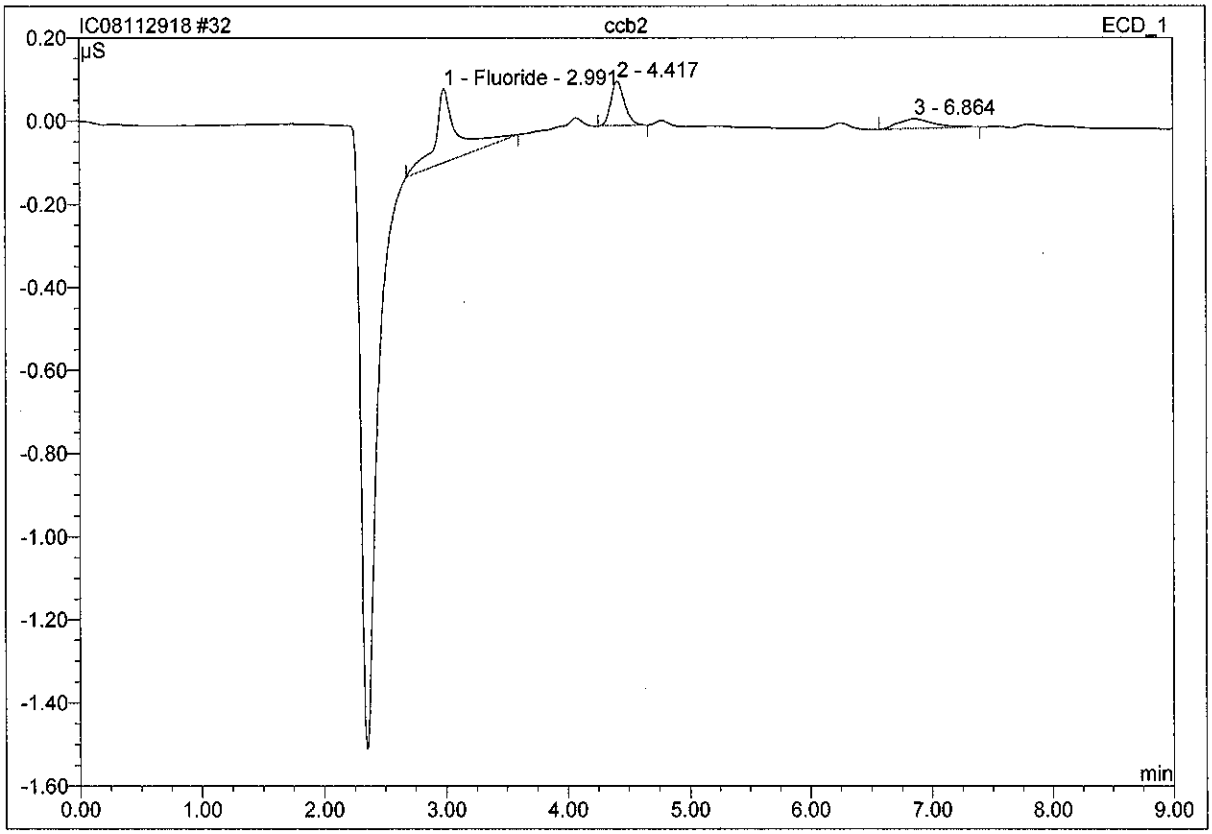
Sample Name:	**ccv2**	*Injection Volume:*	**25.0**
Vial Number:	**48**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/29/2018 14:00**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	11.664	1.213	26.11	4.712	BMB
2	4.08	Chloride	7.008	0.779	16.78	4.768	BMB
3	4.78	Nitrite	6.508	0.855	18.41	2.482	BMB
4	5.61	Bromide	1.136	0.168	3.63	2.525	BMB
5	6.25	Nitrate	6.211	1.023	22.02	2.613	BMB
6	6.83	n.a.	0.062	0.016	0.34	n.a.	bMB
7	7.73	Sulfate	2.776	0.590	12.71	5.165	BMB
Total:			35.364	4.644	100.00	22.266	

32 ccb2

Sample Name:	**ccb2**	*Injection Volume:*	**25.0**
Vial Number:	**49**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/29/2018 14:10**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.176	0.038	63.97	0.147	BMB
2	4.42	n.a.	0.106	0.014	23.15	n.a.	BMB
3	6.86	n.a.	0.023	0.008	12.88	n.a.	BMB
Total:			0.305	0.059	100.00	0.147	

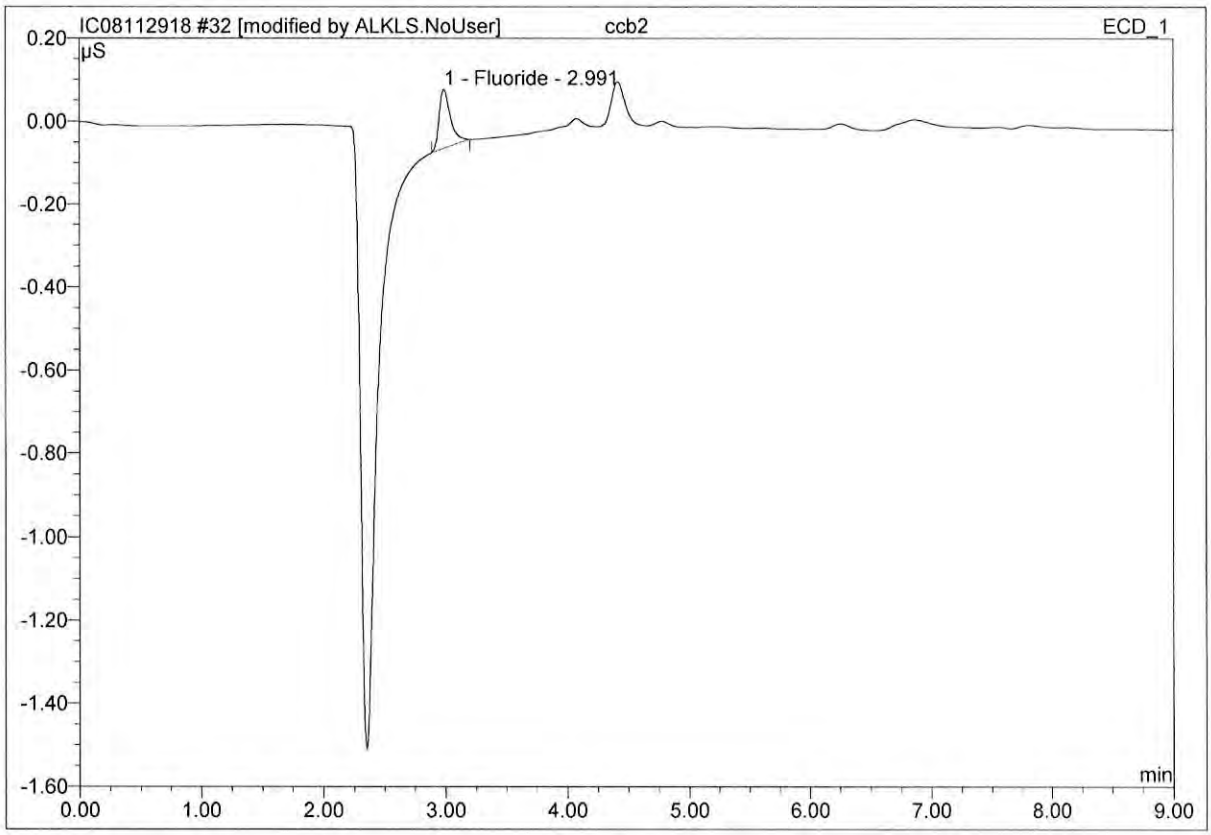
Before

NOV 30 2018

ML

32 ccb2

Sample Name:	**ccb2**	*Injection Volume:*	**25.0**
Vial Number:	**49**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/29/2018 14:10**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.141	0.015	100.00	0.059	BMB*
Total:			0.141	0.015	100.00	0.059	

After
Initials MR

NOV 30 2018

☐Wrong Peak/Peak not Found
☑Baseline/shoulder Incorrect
☐Other

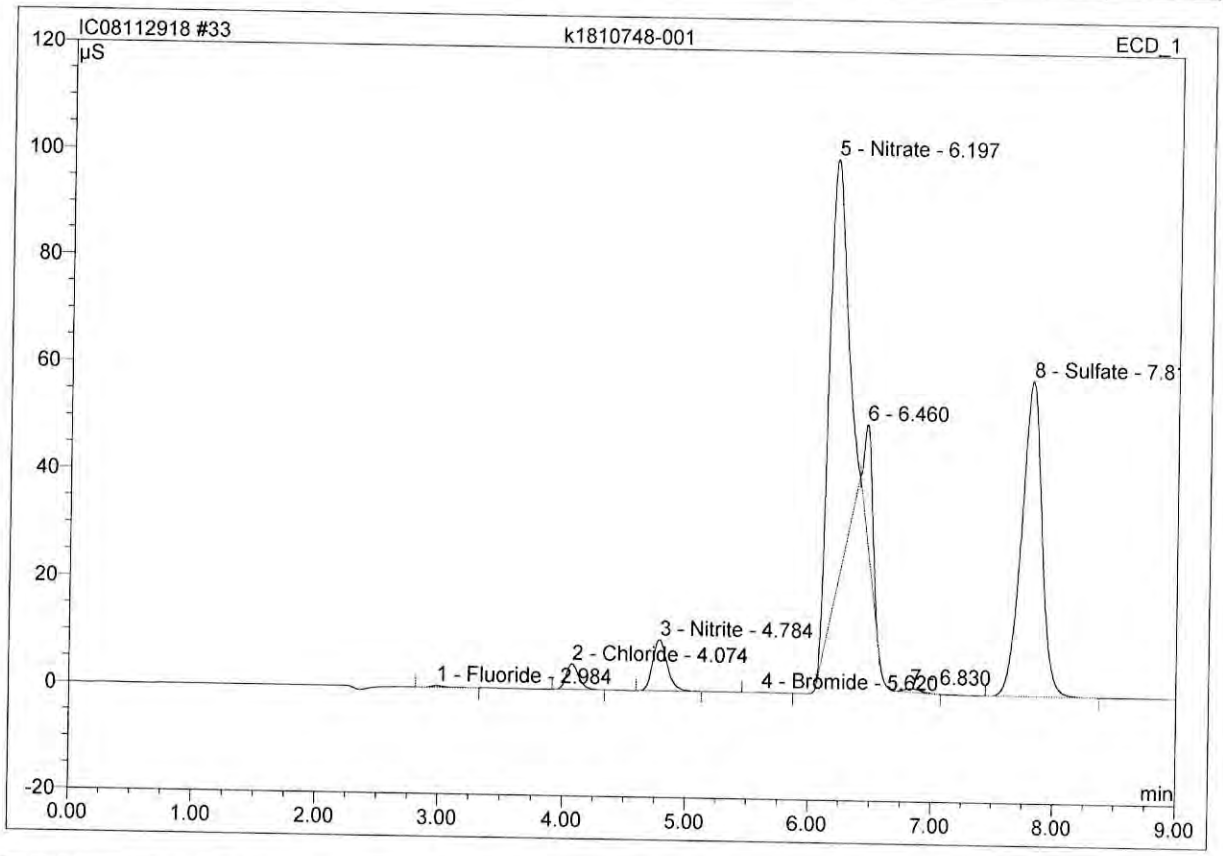
default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

33 k1810748-001

bomb

Sample Name:	**k1810748-001**	*Injection Volume:*	**25.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 14:21**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.98	Fluoride	0.306	0.036	0.13	0.278	BMB
2	4.07	Chloride	4.680	0.541	1.90	6.618	BMB
3	4.78	Nitrite	9.537	1.306	4.59	7.585	BMB
4	5.62	Bromide	0.097	0.014	0.05	0.412	BMB
5	6.20	Nitrate	82.839	13.434	47.18	68.659	BMb
6	6.46	n.a.	20.851	1.702	5.98	n.a.	bMB
7	6.83	n.a.	0.673	0.107	0.38	n.a.	BMB
8	7.82	Sulfate	58.792	11.332	39.80	198.374	BMB
Total:			177.773	28.471	100.00	281.925	

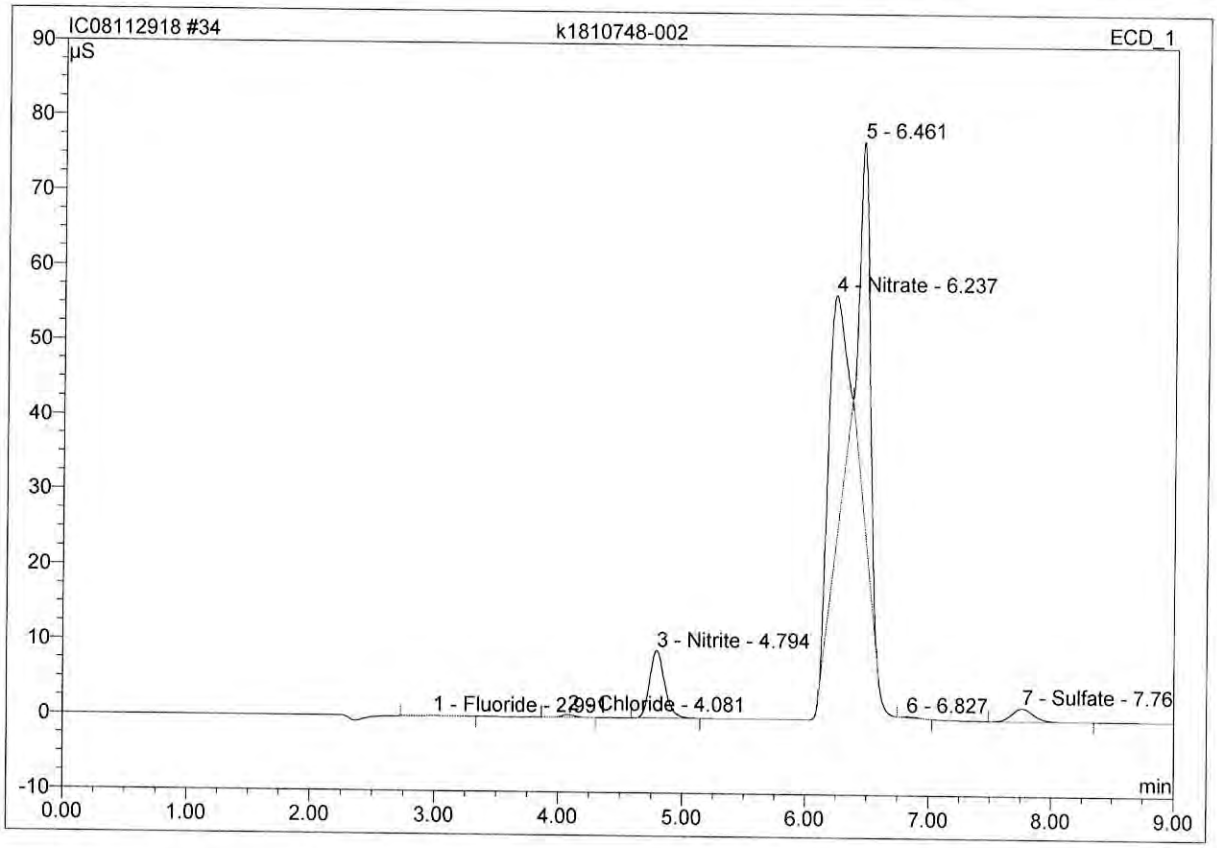
default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

34 k1810748-002

bomb

Sample Name:	**k1810748-002**	*Injection Volume:*	**25.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 14:32**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

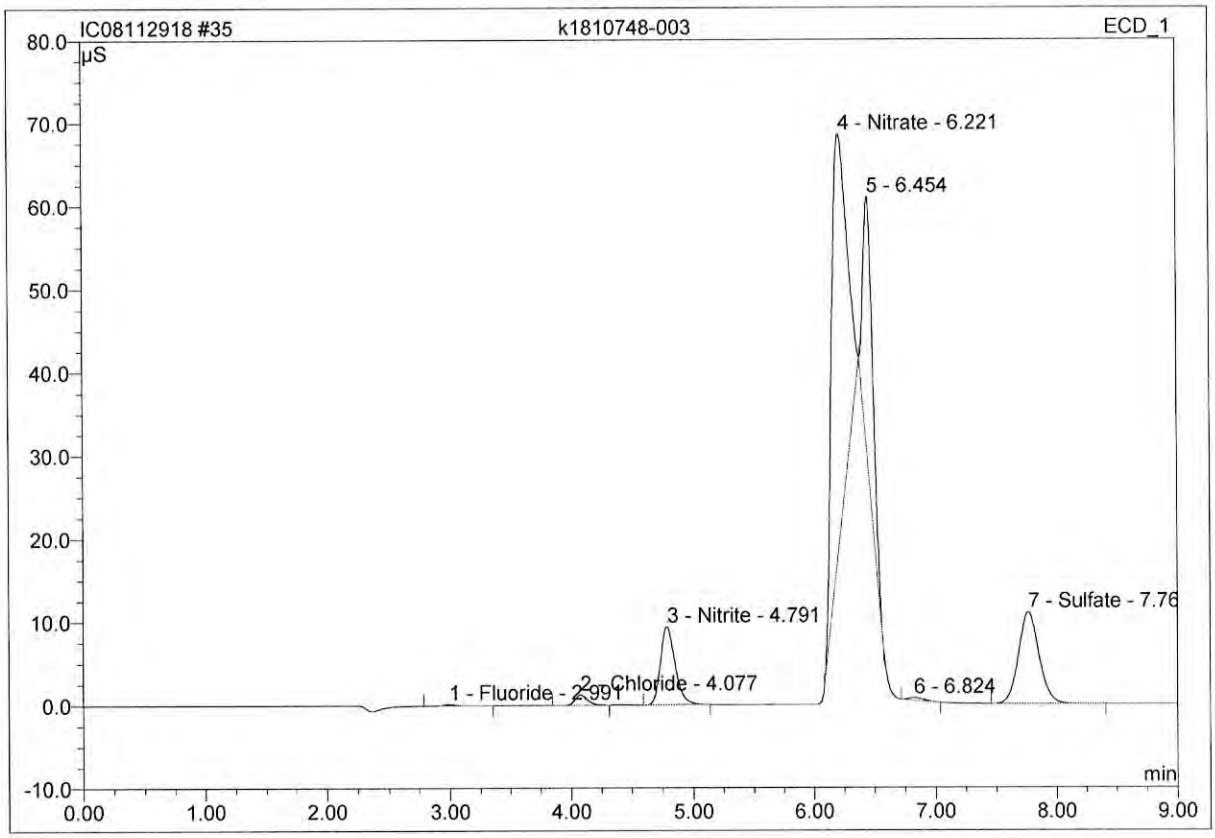


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.101	0.015	0.13	0.114	BMB
2	4.08	Chloride	0.373	0.044	0.39	0.542	BMB
3	4.79	Nitrite	9.004	1.253	11.01	7.279	BMB
4	6.24	Nitrate	34.210	4.936	43.38	25.228	BMb
5	6.46	n.a.	48.839	4.760	41.83	n.a.	bMB
6	6.83	n.a.	0.119	0.018	0.16	n.a.	BMB
7	7.76	Sulfate	1.733	0.353	3.10	6.182	BMB
Total:			94.379	11.380	100.00	39.346	

35 k1810748-003

bomb

Sample Name:	**k1810748-003**	*Injection Volume:*	**25.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 14:42**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.159	0.019	0.14	0.149	BMB
2	4.08	Chloride	1.215	0.142	1.02	1.739	BMB
3	4.79	Nitrite	9.343	1.287	9.27	7.472	BMB
4	6.22	Nitrate	48.619	7.335	52.85	37.490	BMb
5	6.45	n.a.	32.005	2.883	20.78	n.a.	bMB
6	6.82	n.a.	0.298	0.044	0.32	n.a.	BMB
7	7.77	Sulfate	10.996	2.167	15.62	37.941	BMB
Total:			102.634	13.878	100.00	84.791	

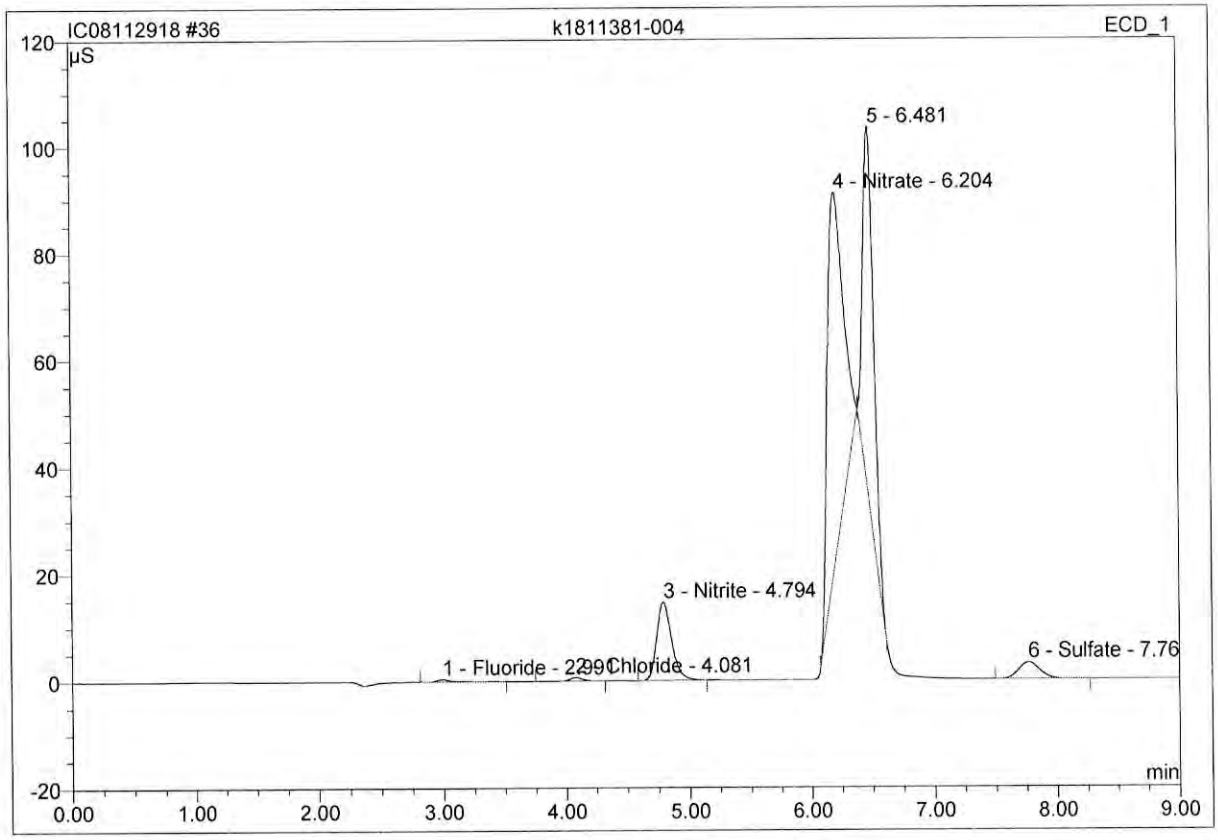
default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

36 k1811381-004

bomb

Sample Name:	**k1811381-004**	*Injection Volume:*	**25.0**
Vial Number:	**16**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 14:53**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

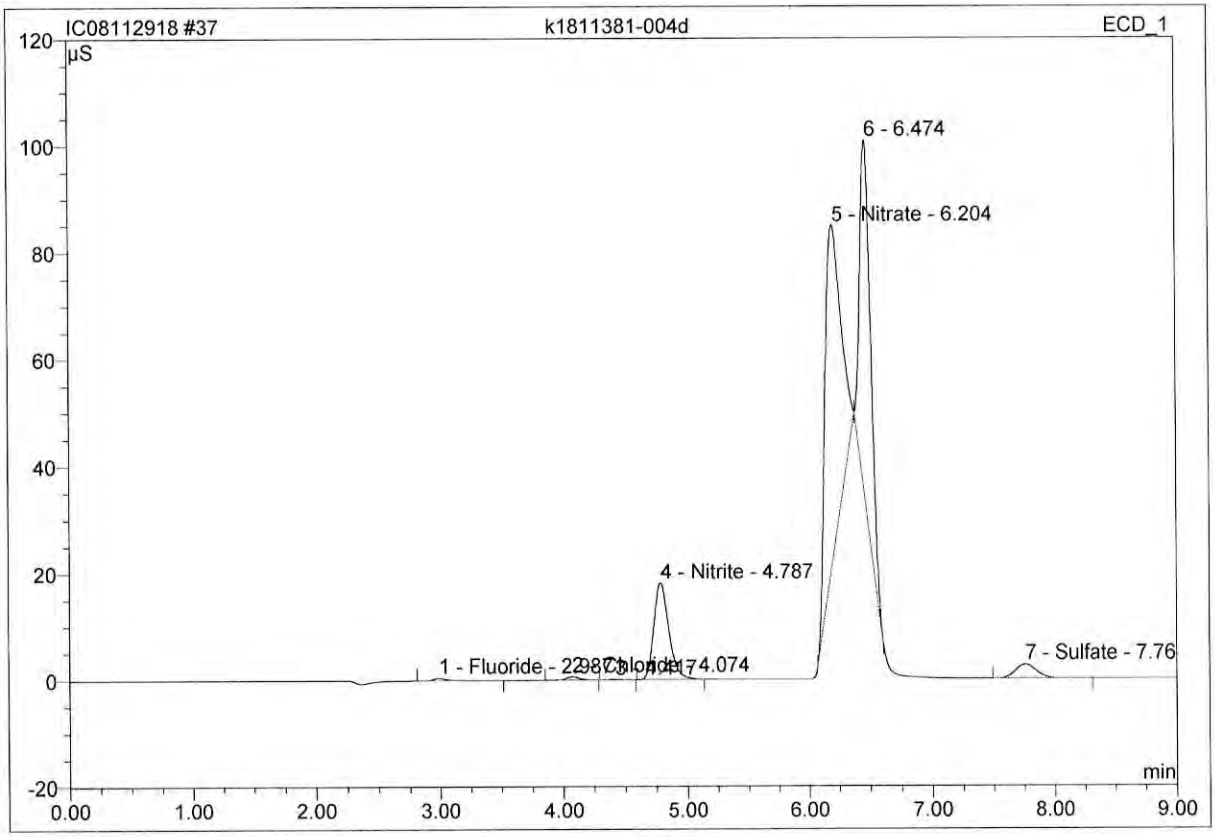


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.428	0.055	0.27	0.429	BMB
2	4.08	Chloride	0.638	0.076	0.37	0.924	BMB
3	4.79	Nitrite	14.591	2.015	9.92	11.700	BMB
4	6.20	Nitrate	68.860	10.620	52.27	54.278	BMb
5	6.48	n.a.	70.045	6.926	34.09	n.a.	bMB
6	7.77	Sulfate	3.114	0.625	3.07	10.933	BMB
Total:			157.676	20.316	100.00	78.265	

37 k1811381-004d

bomb

Sample Name:	**k1811381-004d**	*Injection Volume:*	**25.0**
Vial Number:	**17**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 15:04**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



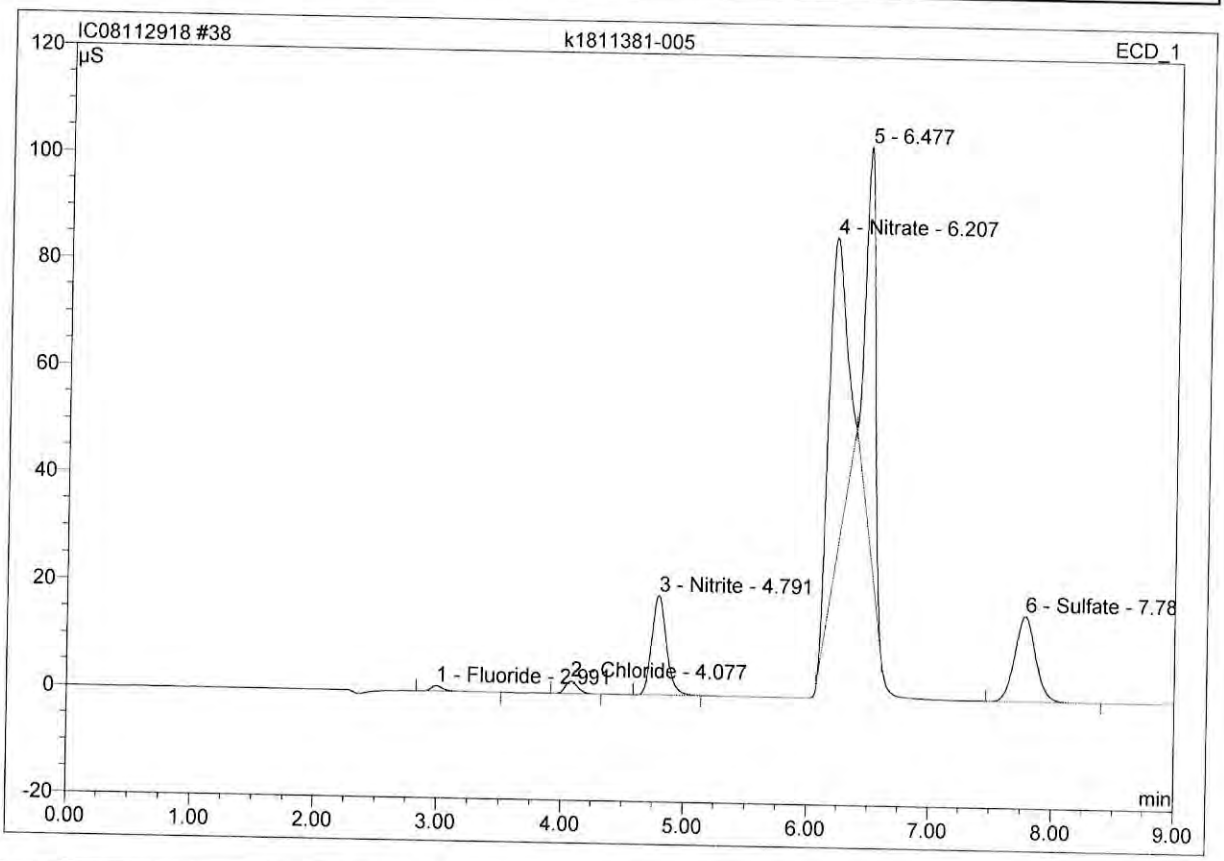
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.451	0.058	0.30	0.454	BMB
2	4.07	Chloride	0.611	0.072	0.37	0.877	BMB
3	4.42	n.a.	0.101	0.013	0.06	n.a.	BMB
4	4.79	Nitrite	18.065	2.496	12.83	14.493	BMB
5	6.20	Nitrate	62.165	9.525	48.98	48.681	BMb
6	6.47	n.a.	68.596	6.757	34.75	n.a.	bMB
7	7.76	Sulfate	2.623	0.527	2.71	9.229	BMB
Total:			152.612	19.448	100.00	73.734	

38 k1811381-005

bomb

Sample Name:	**k1811381-005**	*Injection Volume:*	**25.0**
Vial Number:	**18**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 15:14**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

NR

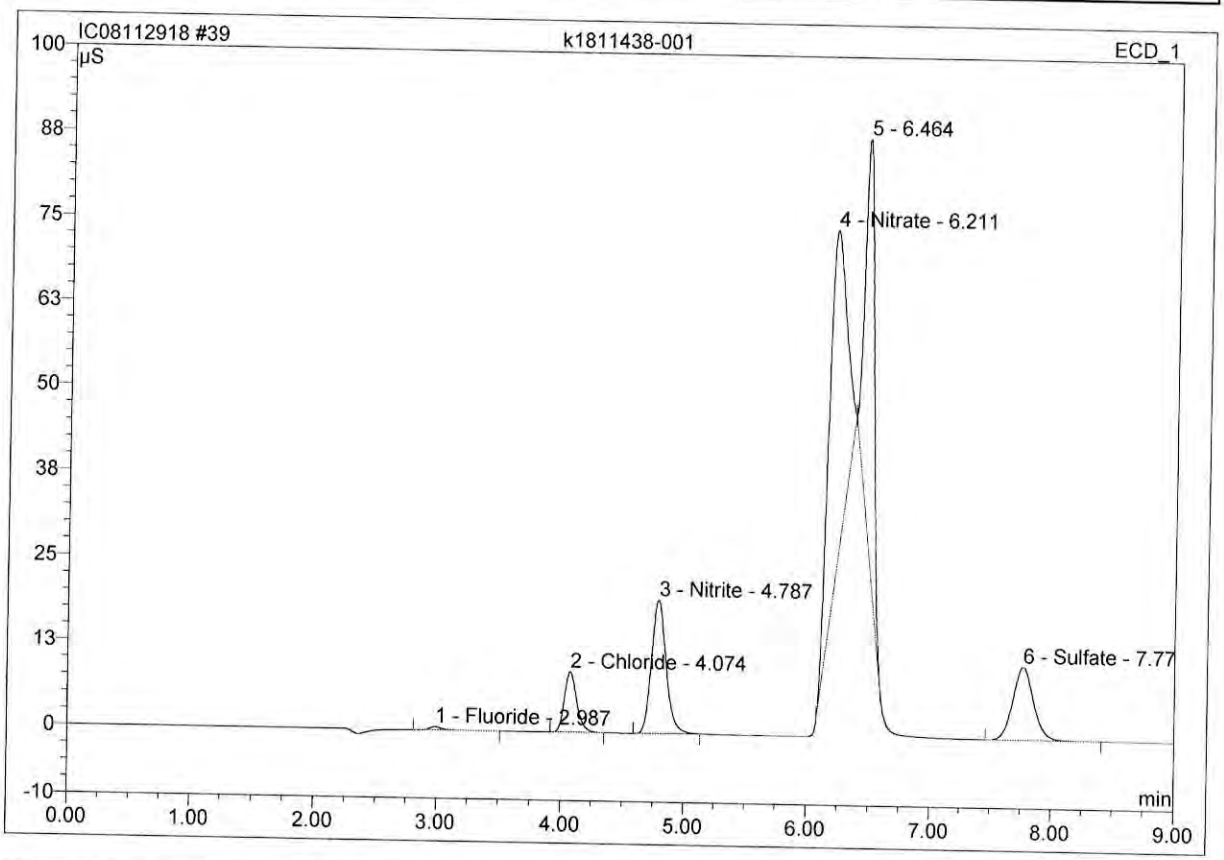


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	1.017	0.123	0.54	0.956	BMB
2	4.08	Chloride	2.307	0.270	1.19	3.307	BMB
3	4.79	Nitrite	18.591	2.574	11.31	14.947	BMB
4	6.21	Nitrate	63.072	9.692	42.57	49.536	BMb
5	6.48	n.a.	70.580	6.992	30.71	n.a.	bMB
6	7.78	Sulfate	15.972	3.115	13.68	54.529	BMB
Total:			171.540	22.766	100.00	123.276	

39 k1811438-001

bomb

Sample Name:	**k1811438-001**	*Injection Volume:*	**25.0**
Vial Number:	**19**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 15:25**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



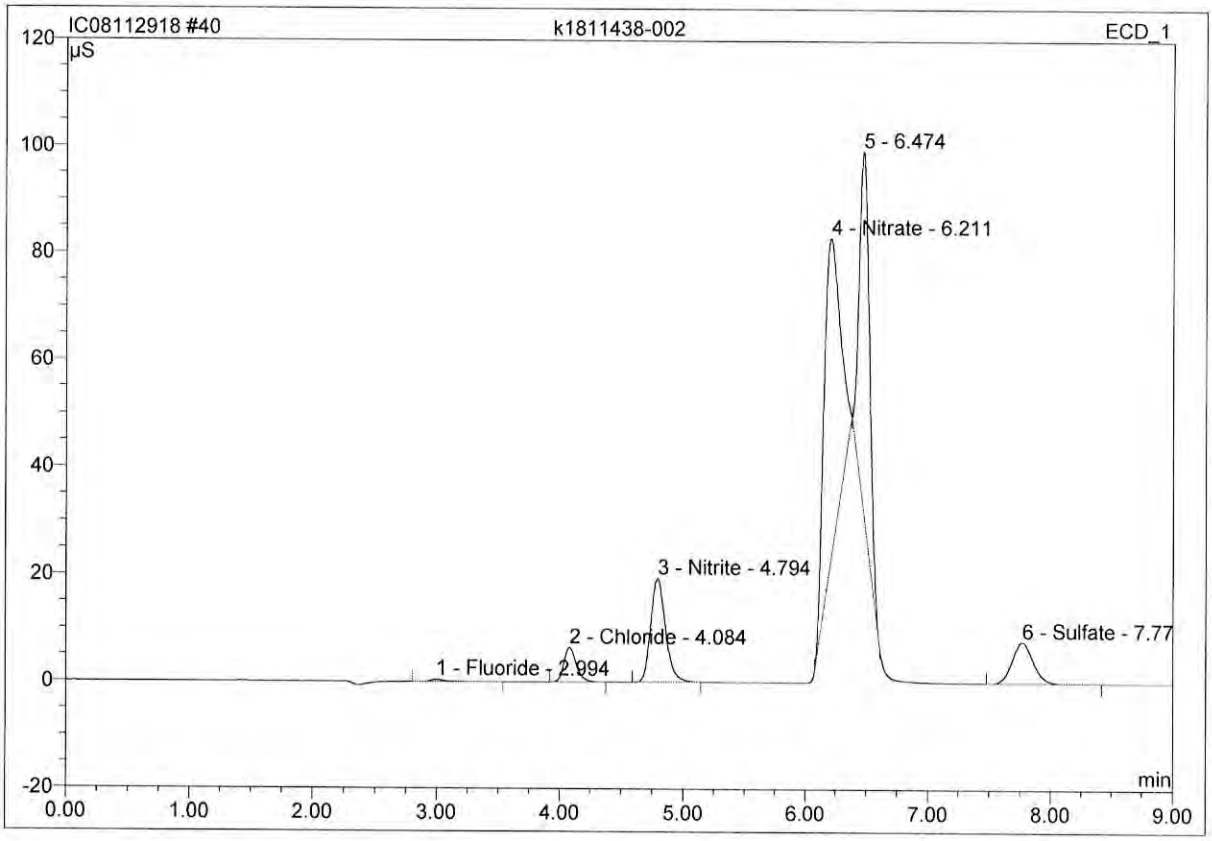
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.499	0.065	0.34	0.502	BMB
2	4.07	Chloride	8.818	1.013	5.26	12.399	BMB
3	4.79	Nitrite	19.633	2.715	14.09	15.764	BMB
4	6.21	Nitrate	52.398	7.870	40.84	40.223	BMb
5	6.46	n.a.	56.787	5.495	28.52	n.a.	bMB
6	7.77	Sulfate	10.670	2.113	10.97	36.992	BMB
Total:			148.805	19.271	100.00	105.882	

40 k1811438-002

bomb

Sample Name:	**k1811438-002**	*Injection Volume:*	**25.0**
Vial Number:	**20**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 15:35**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

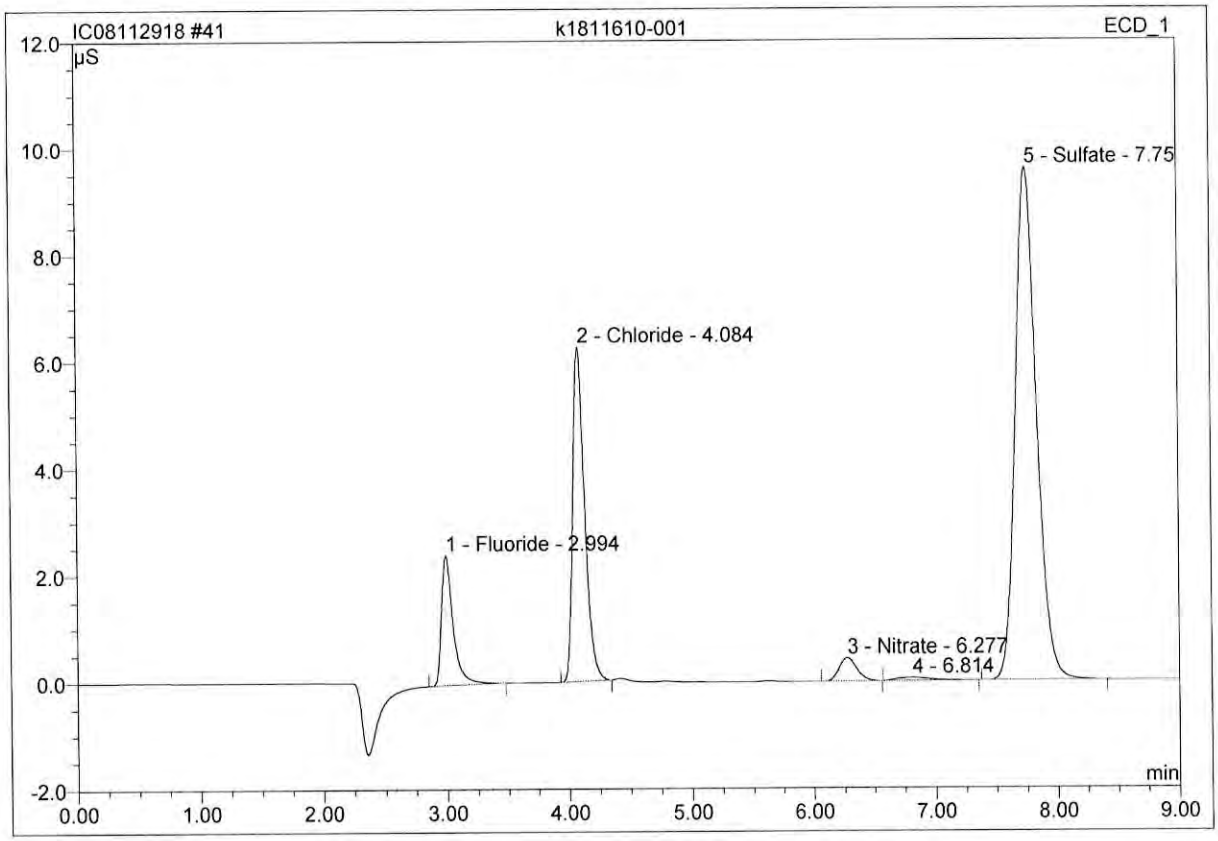
NR



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.390	0.053	0.25	0.409	BMB
2	4.08	Chloride	6.345	0.735	3.54	8.997	BMB
3	4.79	Nitrite	19.346	2.672	12.88	15.516	BMB
4	6.21	Nitrate	60.078	9.173	44.20	46.882	BMb
5	6.47	n.a.	66.667	6.601	31.81	n.a.	bMB
6	7.77	Sulfate	7.628	1.518	7.31	26.564	BMB
Total:			160.454	20.751	100.00	98.368	

41 k1811610-001

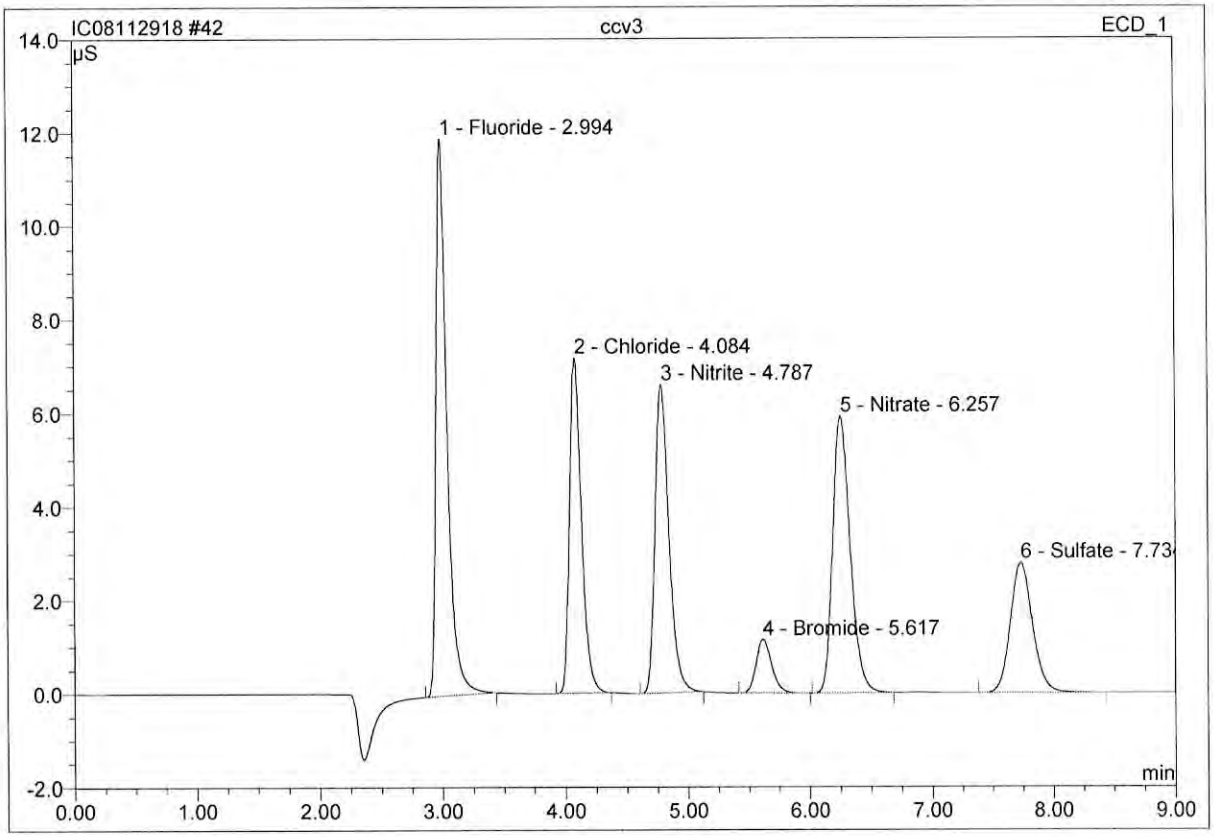
Sample Name:	**k1811610-001**	*Injection Volume:*	**25.0**
Vial Number:	**21**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 15:46**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	2.425	0.271	9.04	2.102	BMB
2	4.08	Chloride	6.249	0.700	23.39	8.565	BMB
3	6.28	Nitrate	0.440	0.074	2.48	0.380	BMB
4	6.81	n.a.	0.060	0.020	0.66	n.a.	BMB
5	7.75	Sulfate	9.590	1.928	64.43	33.753	BMB
Total:			18.764	2.993	100.00	44.801	

42 ccv3

Sample Name:	**ccv3**	*Injection Volume:*	**25.0**
Vial Number:	**46**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/29/2018 15:56**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

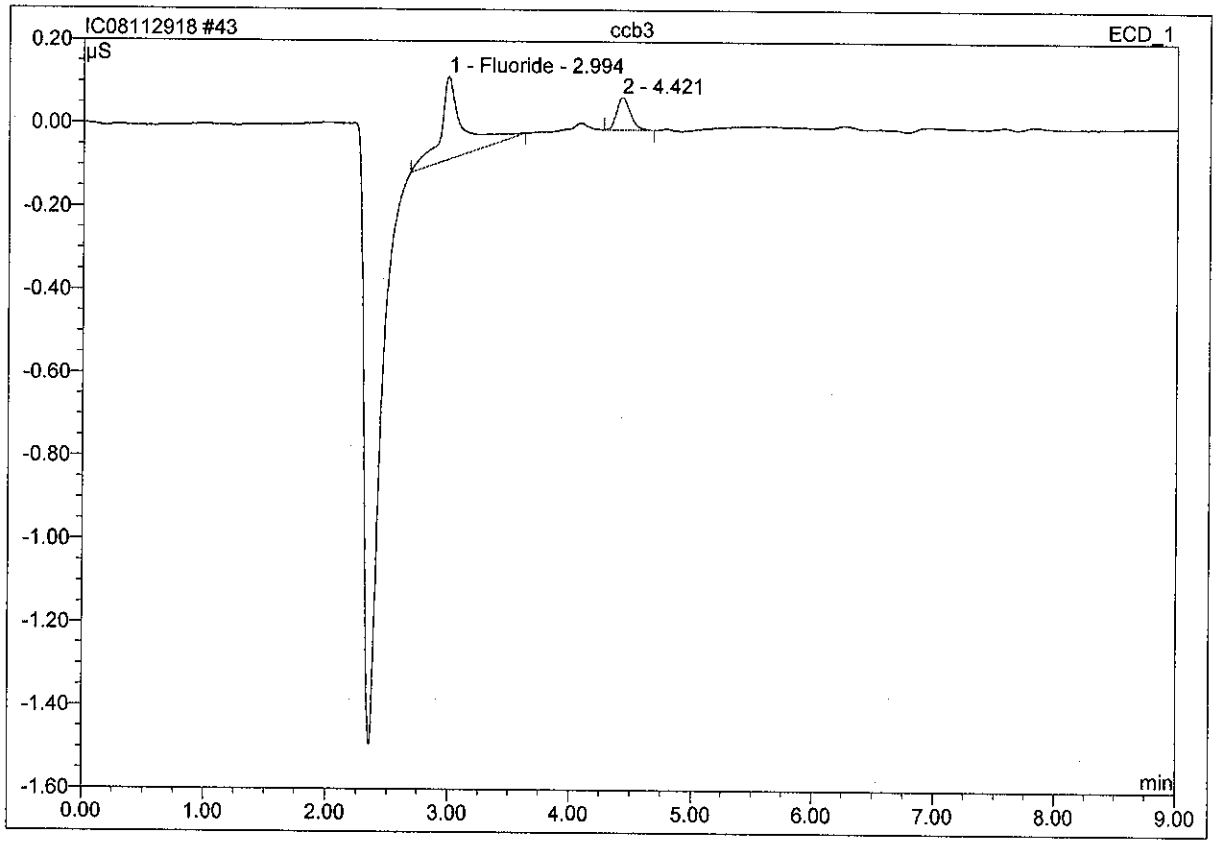


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	11.923	1.233	26.61	4.793	BMB
2	4.08	Chloride	7.158	0.799	17.24	4.888	BMB
3	4.79	Nitrite	6.592	0.868	18.73	2.520	BMB
4	5.62	Bromide	1.139	0.169	3.65	2.536	BMB
5	6.26	Nitrate	5.916	0.977	21.07	2.495	BMB
6	7.73	Sulfate	2.781	0.589	12.71	5.157	BMB
Total:			35.508	4.635	100.00	22.390	

98
101
103

43 ccb3

Sample Name:	**ccb3**	*Injection Volume:*	**25.0**
Vial Number:	**47**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/29/2018 16:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.199	0.043	81.38	0.169	BMB
2	4.42	n.a.	0.077	0.010	18.62	n.a.	BMB
Total:			0.276	0.053	100.00	0.169	

Before

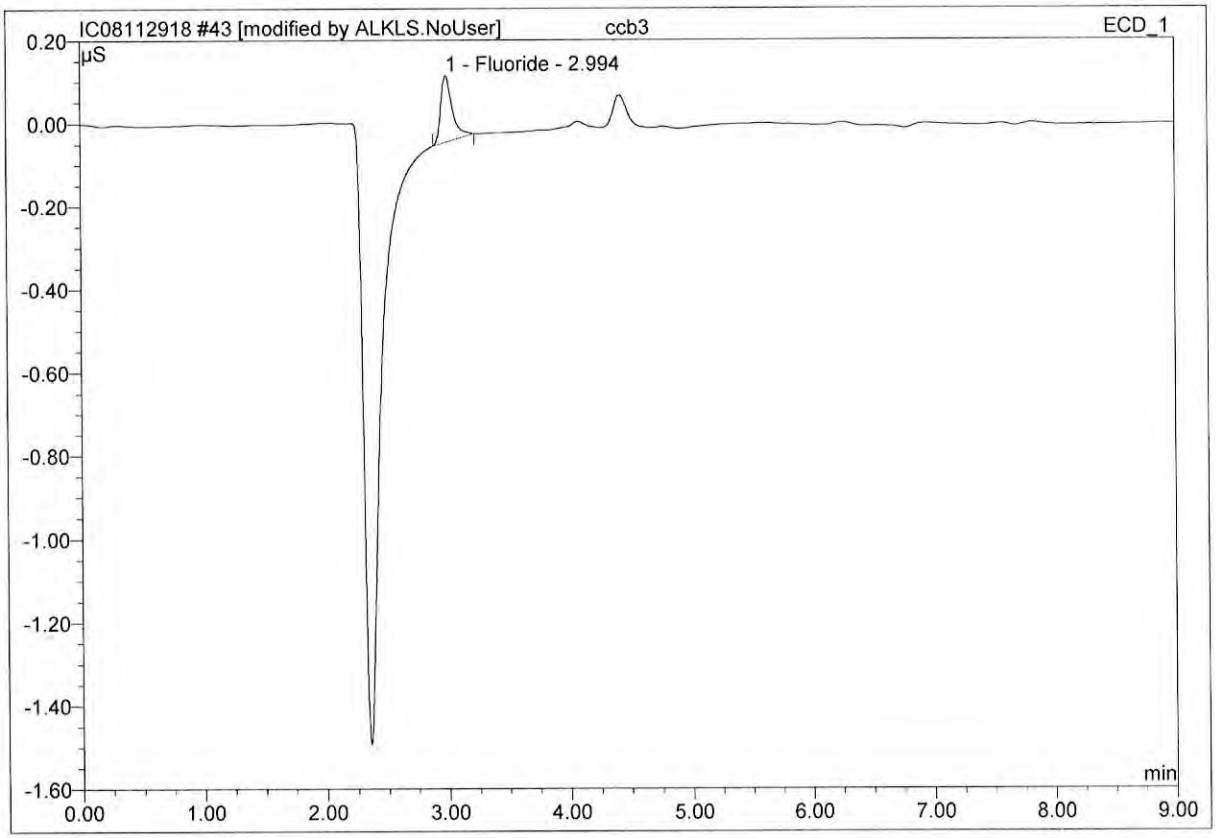
NOV 30 2018

default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

43 ccb3

Sample Name:	**ccb3**	*Injection Volume:*	**25.0**
Vial Number:	**47**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/29/2018 16:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.159	0.017	100.00	0.068	BMB*
Total:			0.159	0.017	100.00	0.068	

After
Initials MR

NOV 30 2018

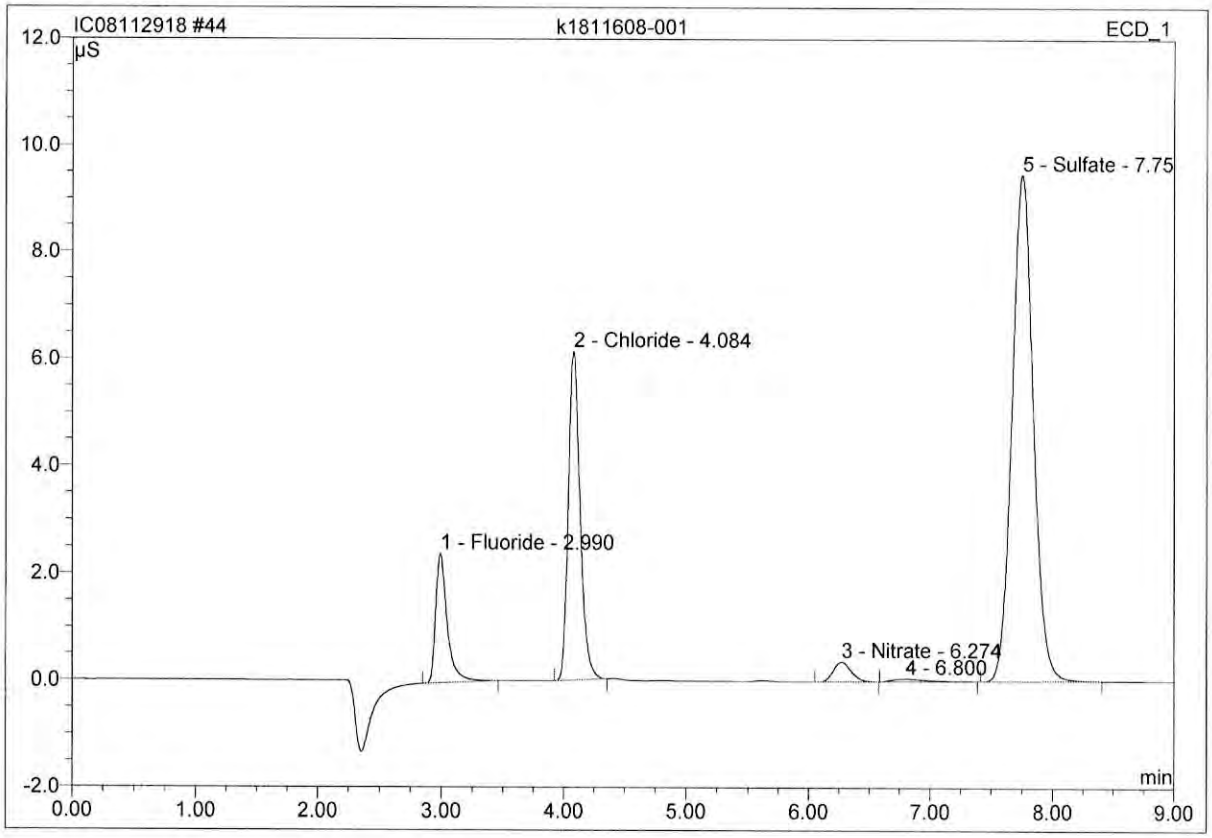
☐Wrong Peak/Peak not Found
☑Baseline/shoulder incorrect
☐Other

default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

44 k1811608-001

Sample Name:	**k1811608-001**	*Injection Volume:*	**25.0**
Vial Number:	**22**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 16:18**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	2.413	0.263	8.98	2.045	BMB
2	4.08	Chloride	6.141	0.689	23.52	8.433	BMB
3	6.27	Nitrate	0.364	0.061	2.09	0.313	BMB
4	6.80	n.a.	0.049	0.016	0.54	n.a.	BMB
5	7.75	Sulfate	9.464	1.901	64.86	33.270	BMB
Total:			18.431	2.930	100.00	44.062	

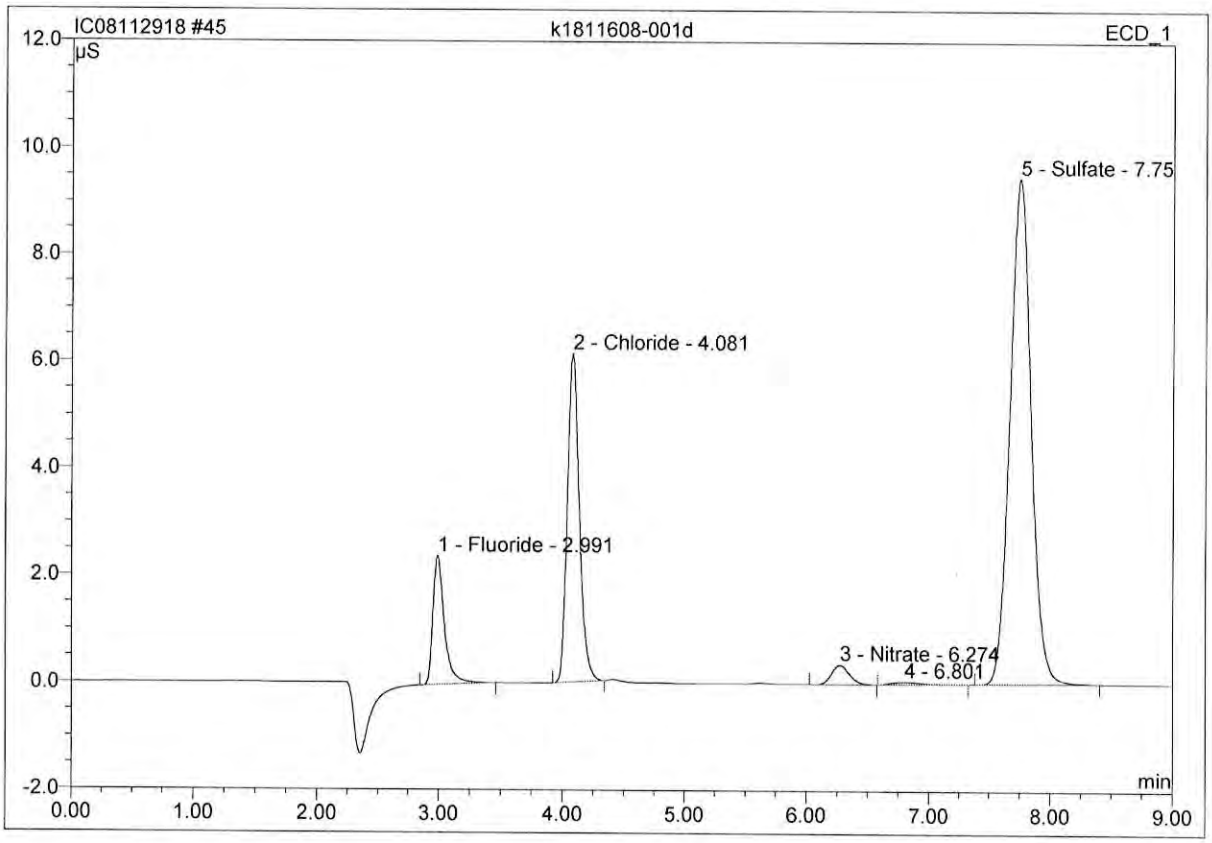
NO2 Lo.)

default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

45 k1811608-001d

Sample Name:	**k1811608-001d**	*Injection Volume:*	**25.0**
Vial Number:	**23**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 16:29**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

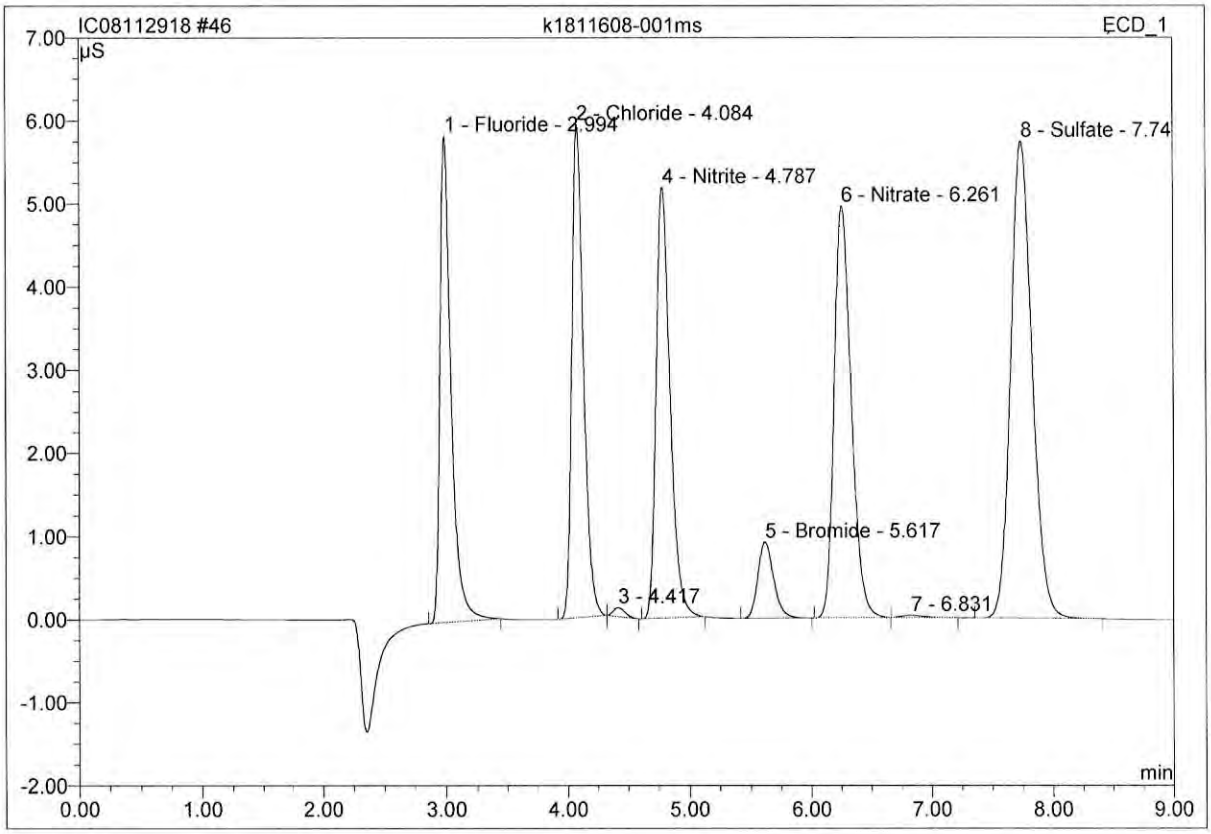


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	2.400	0.260	8.90	2.024	BMB
2	4.08	Chloride	6.129	0.687	23.47	8.406	BMB
3	6.27	Nitrate	0.358	0.060	2.06	0.309	BMB
4	6.80	n.a.	0.048	0.015	0.50	n.a.	BMB
5	7.75	Sulfate	9.451	1.904	65.06	33.338	BMB
Total:			18.386	2.927	100.00	44.077	

No2 < 0.1

46 k1811608-001ms

Sample Name:	**k1811608-001ms**	*Injection Volume:*	**25.0**
Vial Number:	**24**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**4.0000**
Recording Time:	**11/29/2018 16:39**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



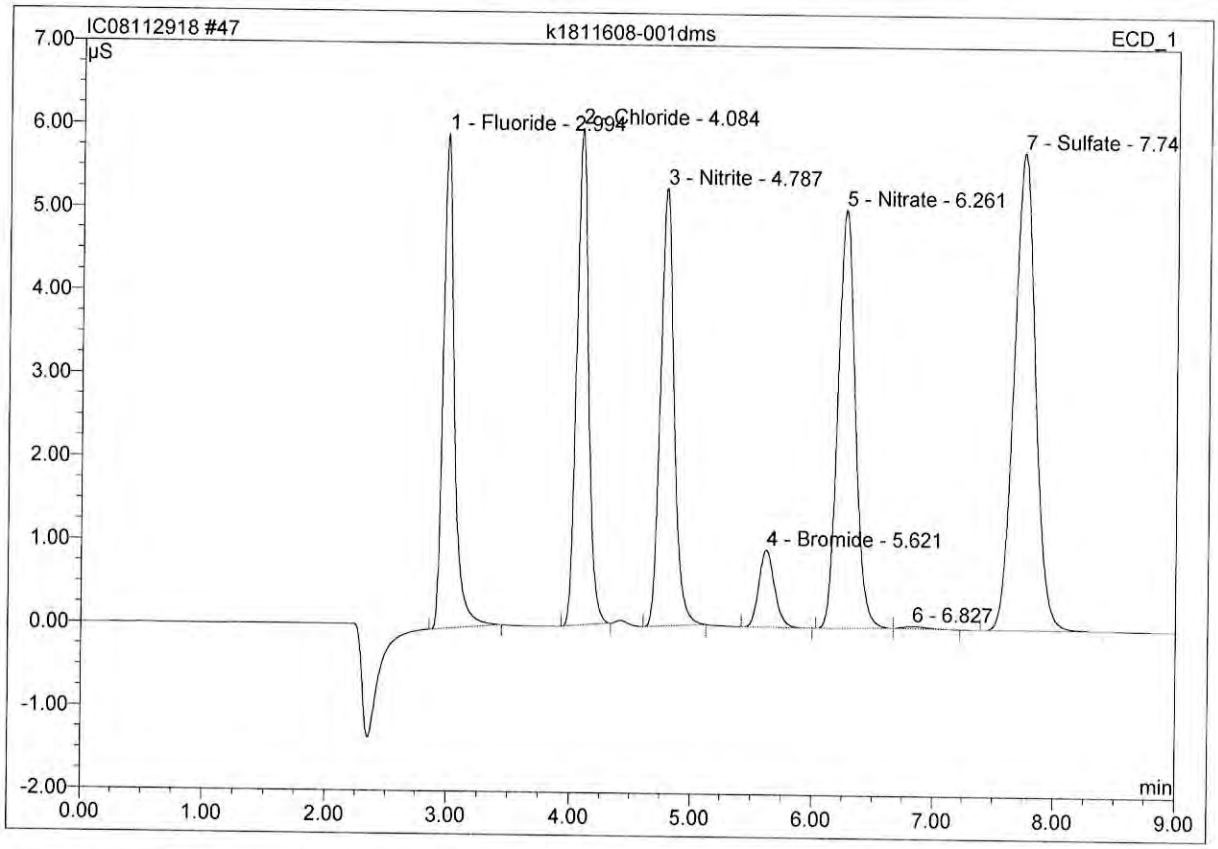
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	5.854	0.616	14.99	9.579	BMB
2	4.08	Chloride	5.936	0.663	16.12	16.221	BMb
3	4.42	n.a.	0.108	0.012	0.29	n.a.	bMB
4	4.79	Nitrite	5.178	0.686	16.68	7.967	BMB
5	5.62	Bromide	0.920	0.139	3.37	8.309	BMB
6	6.26	Nitrate	4.952	0.820	19.93	8.378	BMB
7	6.83	n.a.	0.027	0.006	0.15	n.a.	BMB
8	7.74	Sulfate	5.740	1.171	28.48	41.003	BMB
Total:			28.715	4.113	100.00	91.458	

94
17
100
101

47 k1811608-001dms

^

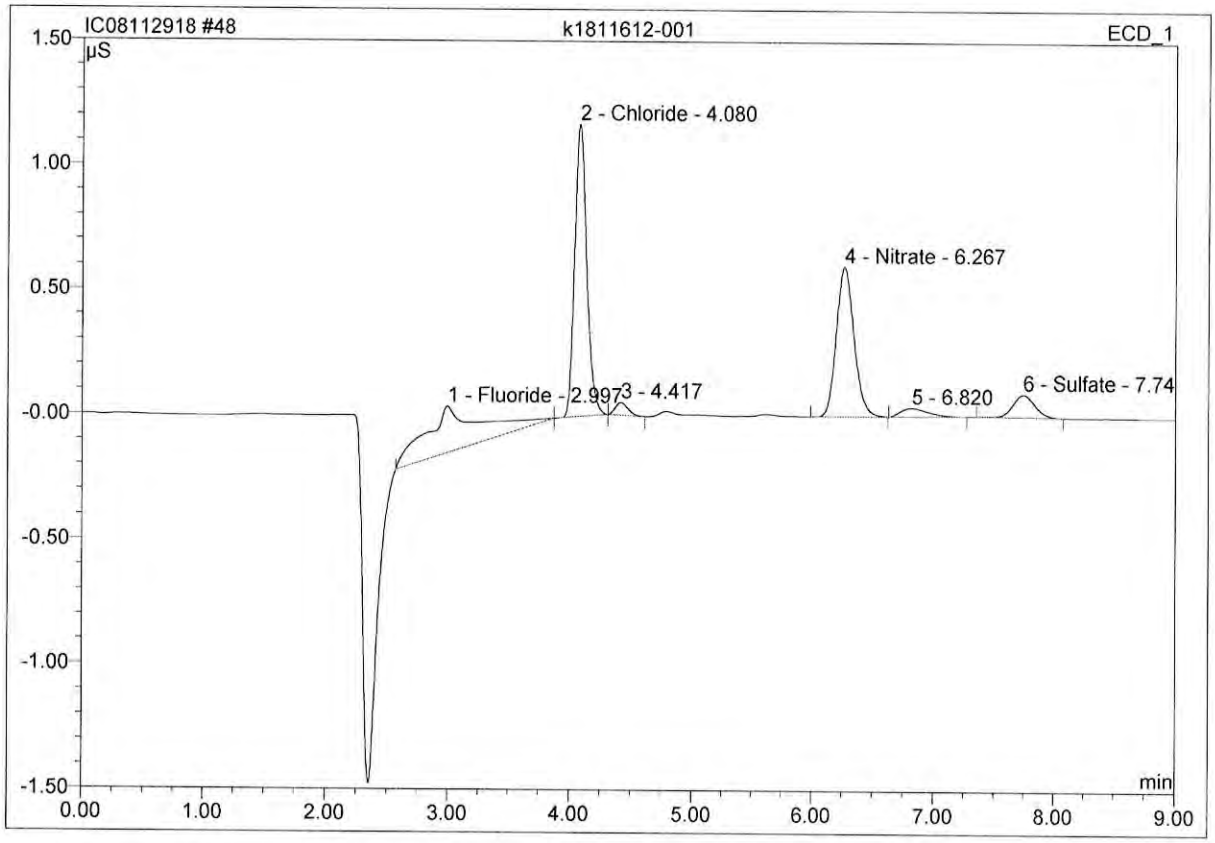
Sample Name:	**k1811608-001dms**	*Injection Volume:*	**25.0**
Vial Number:	**25**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**4.0000**
Recording Time:	**11/29/2018 16:50**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	5.945	0.627	15.14	9.740	BMB
2	4.08	Chloride	5.973	0.668	16.14	16.354	BMB
3	4.79	Nitrite	5.256	0.696	16.81	8.083	BMB
4	5.62	Bromide	0.929	0.139	3.36	8.335	BMB
5	6.26	Nitrate	5.026	0.832	20.10	8.505	BMb
6	6.83	n.a.	0.029	0.007	0.17	n.a.	bMB
7	7.74	Sulfate	5.735	1.171	28.28	40.982	BMB
Total:			28.894	4.139	100.00	91.999	

48 k1811612-001

Sample Name:	**k1811612-001**	*Injection Volume:*	**25.0**
Vial Number:	**26**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 17:01**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.00	Fluoride	0.186	0.095	26.30	0.742	BMB
2	4.08	Chloride	1.172	0.133	36.53	1.623	bMB
3	4.42	n.a.	0.050	0.006	1.64	n.a.	BMB
4	6.27	Nitrate	0.597	0.101	27.73	0.514	BMB
5	6.82	n.a.	0.034	0.009	2.46	n.a.	BMB
6	7.74	Sulfate	0.091	0.019	5.34	0.339	BMB
Total:			2.131	0.363	100.00	3.219	

No < 0.1

Before

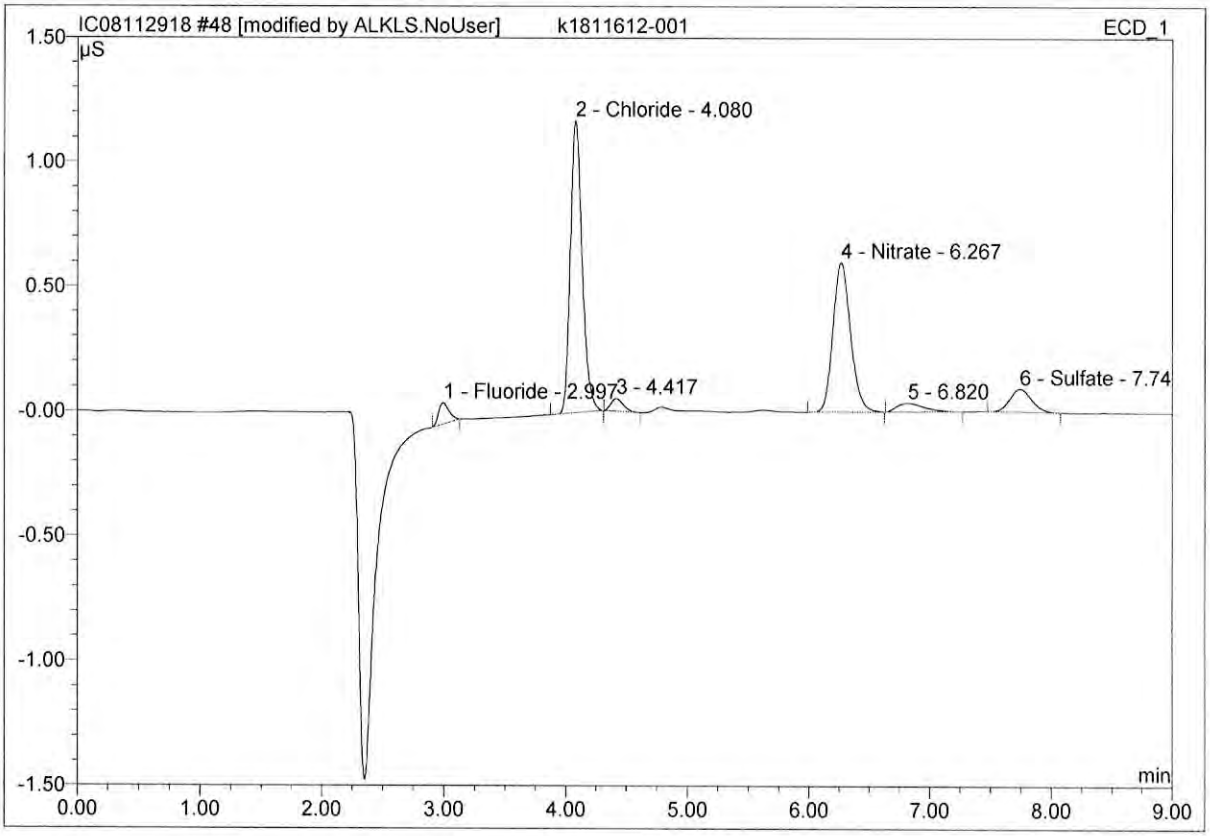
NOV 30 2018

default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

48 k1811612-001

Sample Name:	**k1811612-001**	*Injection Volume:*	**25.0**
Vial Number:	**26**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 17:01**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.00	Fluoride	0.084	0.008	3.02	0.065	BMB*
2	4.08	Chloride	1.172	0.133	48.21	1.623	BMB*
3	4.42	n.a.	0.050	0.006	2.16	n.a.	BMB
4	6.27	Nitrate	0.597	0.101	36.59	0.514	BMB
5	6.82	n.a.	0.034	0.009	3.24	n.a.	BMB
6	7.74	Sulfate	0.089	0.019	6.77	0.326	BMB*
Total:			2.027	0.275	100.00	2.528	

NO2<0.1

After
Initials MV

NOV 30 2018

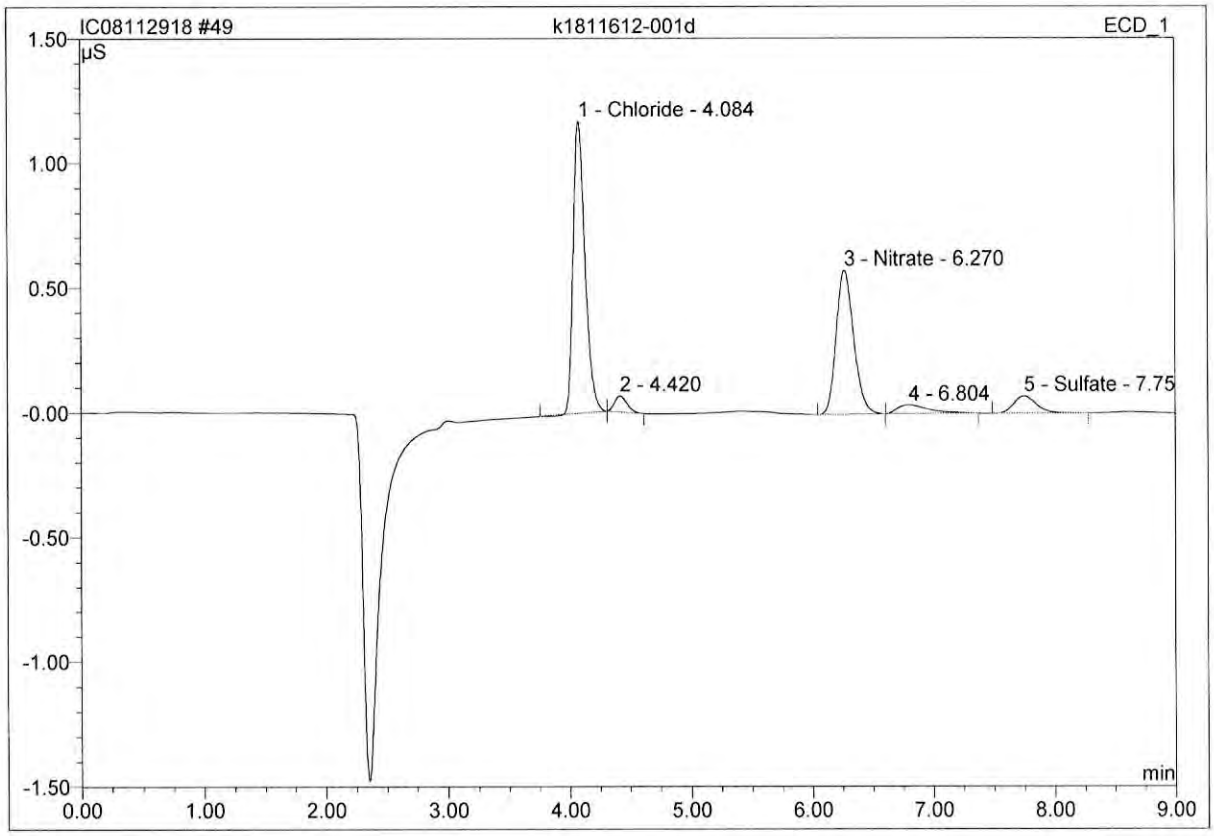
☐Wrong Peak/Peak not Found
☑Baseline/shoulder Incorrect
☐Other

default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

49 k1811612-001d

Sample Name:	**k1811612-001d**	*Injection Volume:*	**25.0**
Vial Number:	**27**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 17:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.08	Chloride	1.169	0.132	50.22	1.611	BMb
2	4.42	n.a.	0.064	0.008	2.94	n.a.	bMB
3	6.27	Nitrate	0.577	0.097	36.93	0.495	BMB
4	6.80	n.a.	0.035	0.011	4.09	n.a.	BMB
5	7.75	Sulfate	0.070	0.015	5.83	0.268	BMB
Total:			1.915	0.262	100.00	2.374	

FLO 2

NO2 20.1

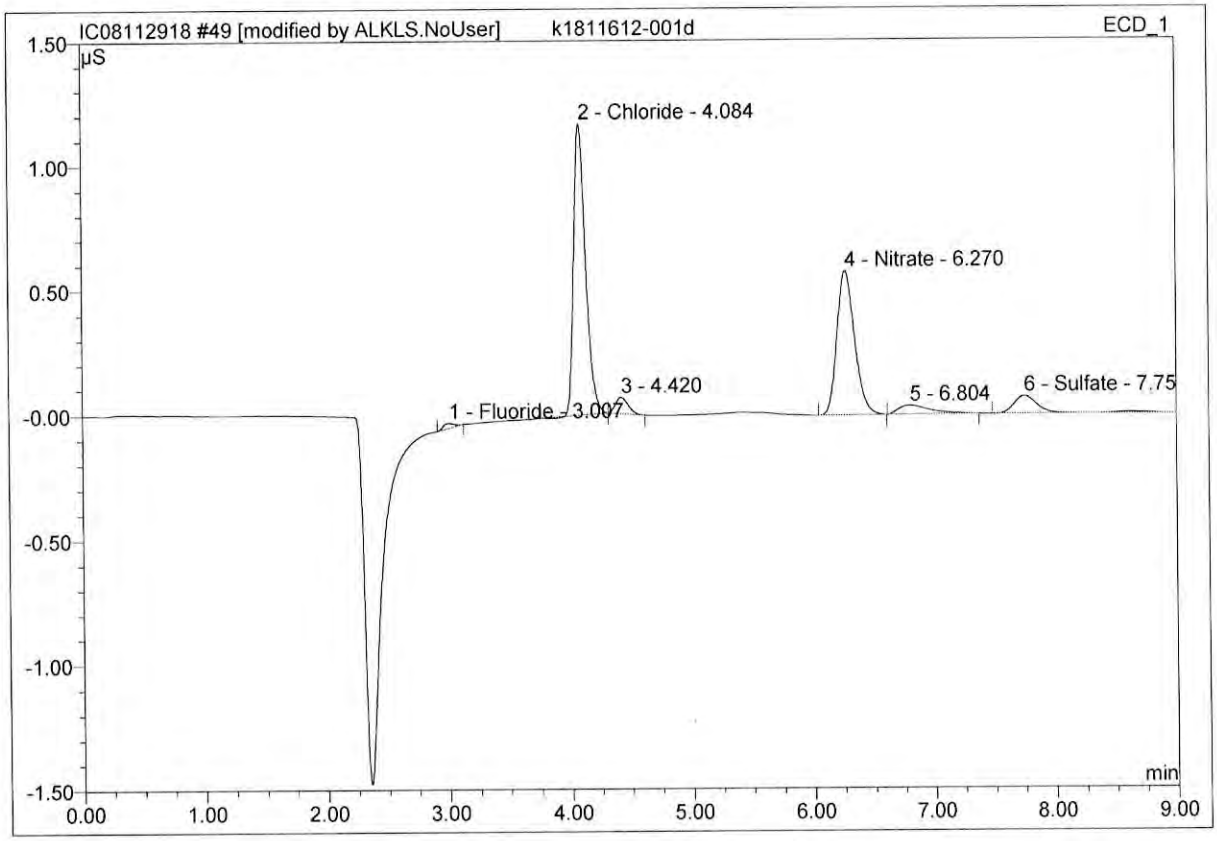
Before
M
NOV 30 2018

default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

49 k1811612-001d

Sample Name:	**k1811612-001d**	*Injection Volume:*	**25.0**
Vial Number:	**27**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 17:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.01	Fluoride	0.021	0.002	0.81	0.017	BMB*
2	4.08	Chloride	1.169	0.132	49.33	1.611	BMb
3	4.42	n.a.	0.064	0.008	2.89	n.a.	bMB
4	6.27	Nitrate	0.577	0.097	36.28	0.495	BMB
5	6.80	n.a.	0.035	0.011	4.01	n.a.	BMB
6	7.75	Sulfate	0.070	0.018	6.68	0.312	BMB*
Total:			1.937	0.267	100.00	2.435	

NO2 < 0.1

After
Initials MV

NOV 30 2018

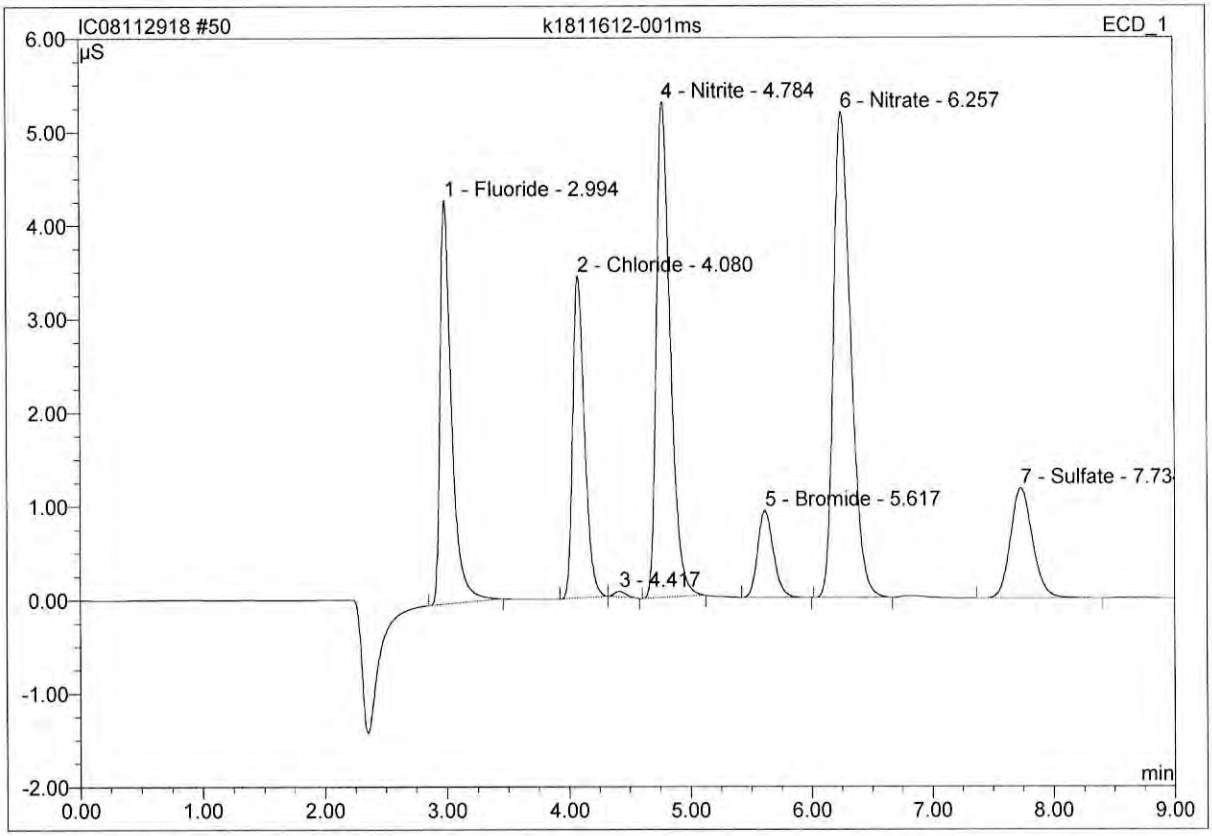
☐Wrong Peak/Peak not Found
☑Baseline/shoulder Incorrect
☐Other _____

default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

50 k1811612-001ms

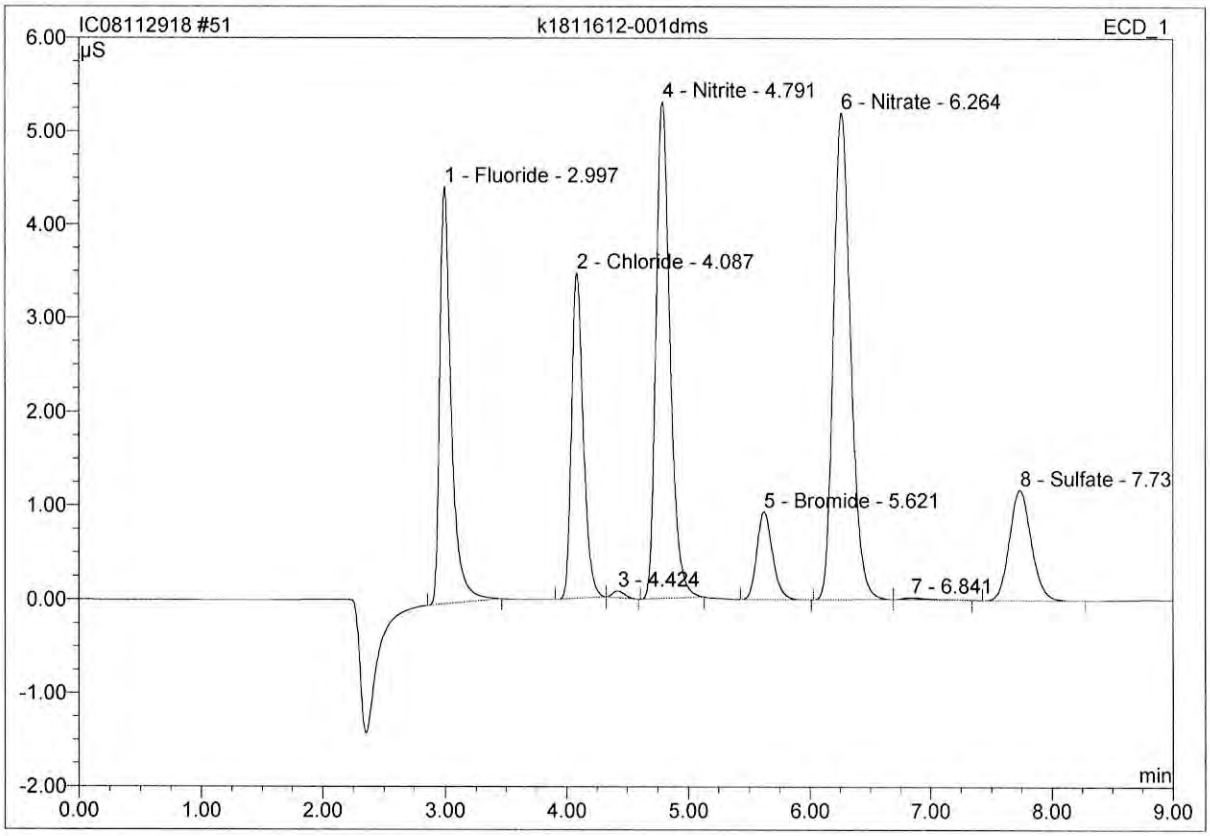
Sample Name:	**k1811612-001ms**	*Injection Volume:*	**25.0**
Vial Number:	**28**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**4.0000**
Recording Time:	**11/29/2018 17:25**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type	
1	2.99	Fluoride	4.307	0.468	16.71	7.280	BMB	90
2	4.08	Chloride	3.435	0.386	13.77	9.448	BMb	98
3	4.42	n.a.	0.060	0.007	0.24	n.a.	bMB	
4	4.78	Nitrite	5.288	0.700	24.96	8.127	BMB	102
5	5.62	Bromide	0.926	0.138	4.91	8.255	BMB	
6	6.26	Nitrate	5.185	0.859	30.64	8.778	BMB	103
7	7.73	Sulfate	1.171	0.246	8.77	8.603	BMB	103
Total:			20.371	2.803	100.00	50.491		

51 k1811612-001dms

Sample Name:	**k1811612-001dms**	*Injection Volume:*	**25.0**
Vial Number:	**29**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**4.0000**
Recording Time:	**11/29/2018 17:35**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

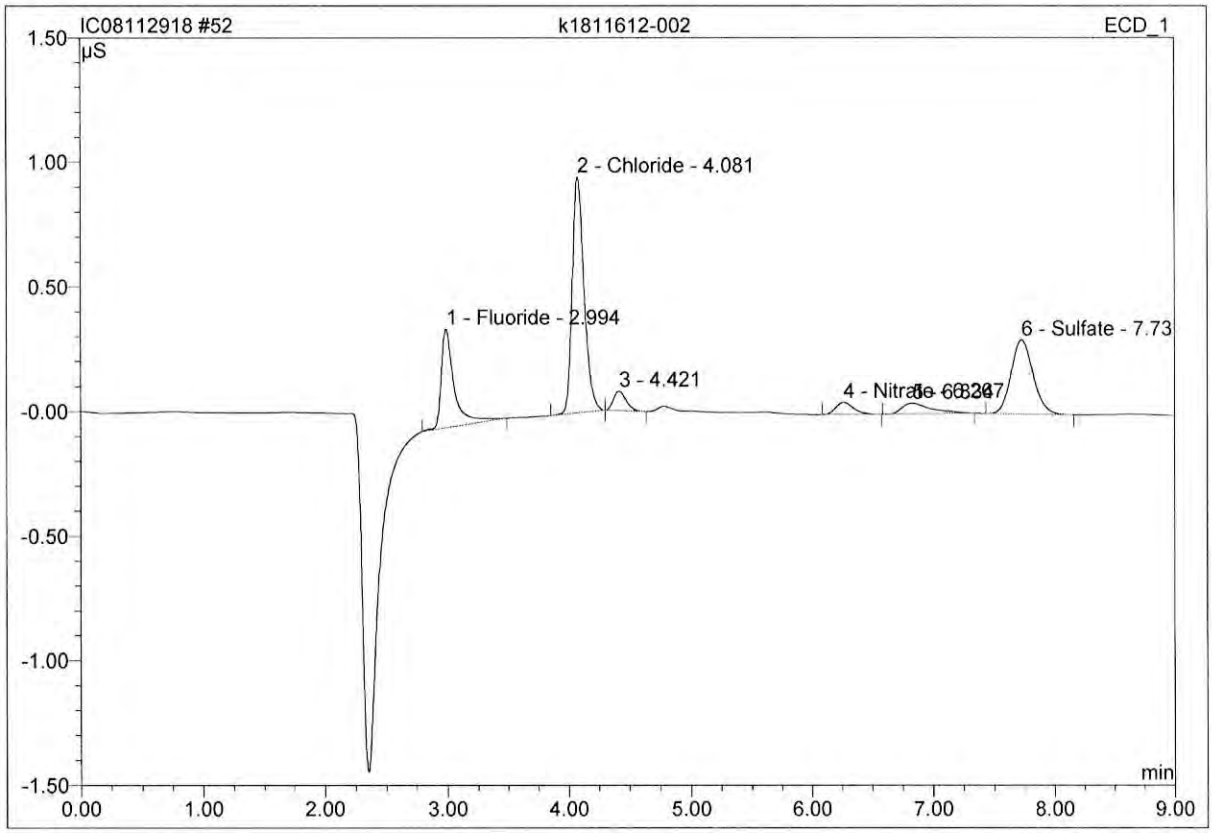


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.00	Fluoride	4.453	0.485	17.12	7.540	BMB
2	4.09	Chloride	3.468	0.390	13.75	9.537	BMb
3	4.42	n.a.	0.071	0.008	0.28	n.a.	bMB
4	4.79	Nitrite	5.303	0.702	24.76	8.149	BMB
5	5.62	Bromide	0.931	0.139	4.92	8.364	BMB
6	6.26	Nitrate	5.198	0.860	30.37	8.796	BMB
7	6.84	n.a.	0.020	0.005	0.19	n.a.	BMB
8	7.74	Sulfate	1.172	0.244	8.61	8.543	BMB
Total:			20.616	2.834	100.00	50.929	

93
99
102
104
103

52 k1811612-002

Sample Name:	**k1811612-002**	*Injection Volume:*	**25.0**
Vial Number:	**30**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 17:46**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

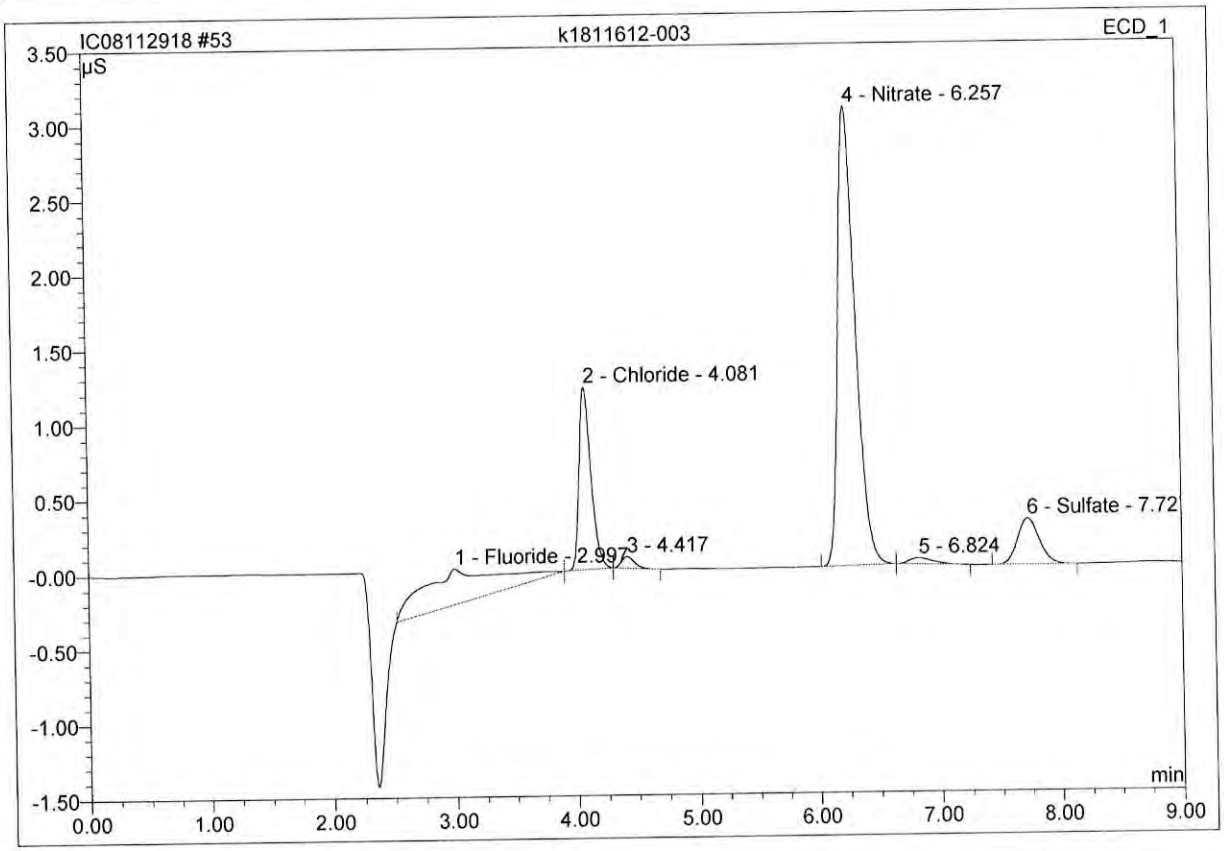


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.395	0.049	19.68	0.380	BMB
2	4.08	Chloride	0.947	0.108	43.31	1.317	BMb
3	4.42	n.a.	0.078	0.009	3.80	n.a.	bMB
4	6.27	Nitrate	0.049	0.008	3.38	0.043	BMB
5	6.83	n.a.	0.043	0.012	4.80	n.a.	BMB
6	7.73	Sulfate	0.296	0.062	25.03	1.089	BMB
Total:			1.809	0.249	100.00	2.830	

NO2 Co.1

53 k1811612-003

Sample Name:	**k1811612-003**	*Injection Volume:*	**25.0**
Vial Number:	**31**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 17:57**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.00	Fluoride	0.235	0.166	18.59	1.290	BMB
2	4.08	Chloride	1.212	0.137	15.32	1.673	bMB
3	4.42	n.a.	0.076	0.009	1.05	n.a.	BMB
4	6.26	Nitrate	3.063	0.508	56.91	2.596	BMb
5	6.82	n.a.	0.040	0.009	1.02	n.a.	bMB
6	7.73	Sulfate	0.304	0.063	7.11	1.111	BMB
Total:			4.931	0.893	100.00	6.671	

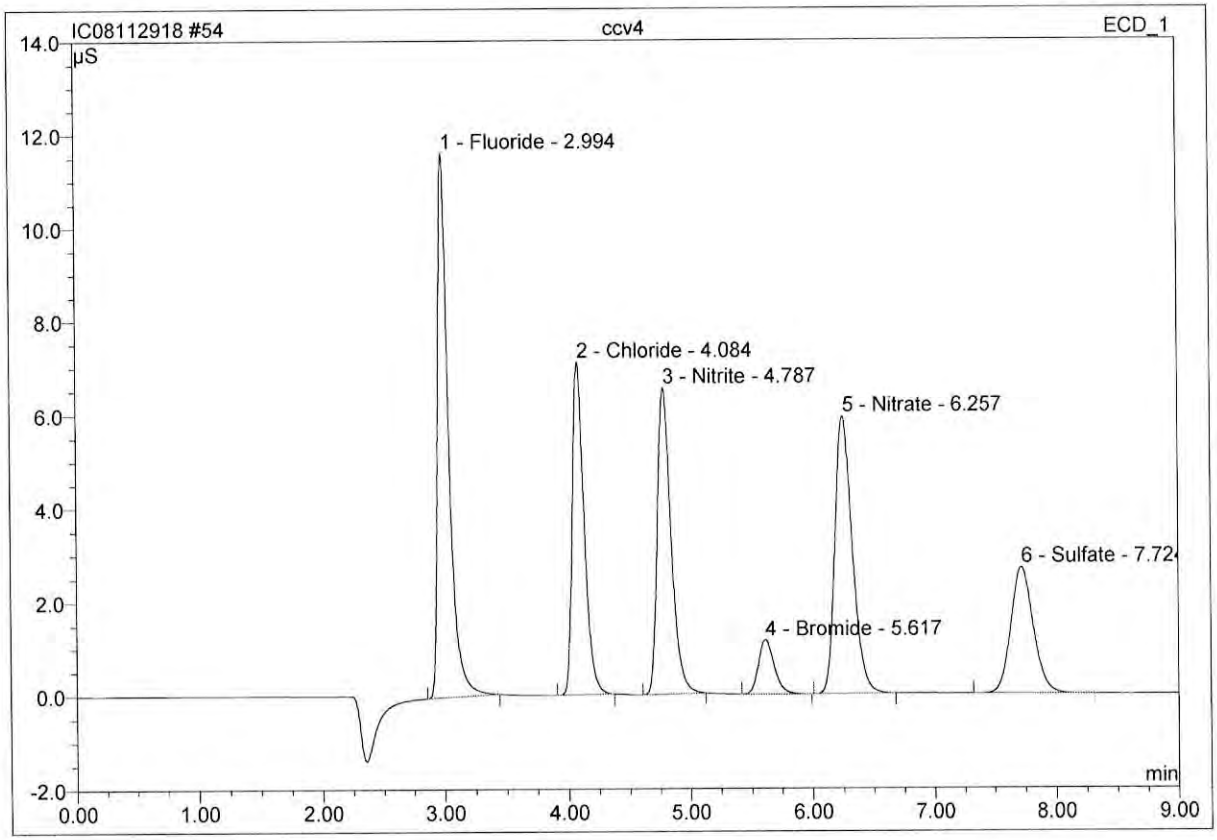
NO2 20.1

default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

54 ccv4

Sample Name:	**ccv4**	*Injection Volume:*	**25.0**
Vial Number:	**48**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/29/2018 18:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



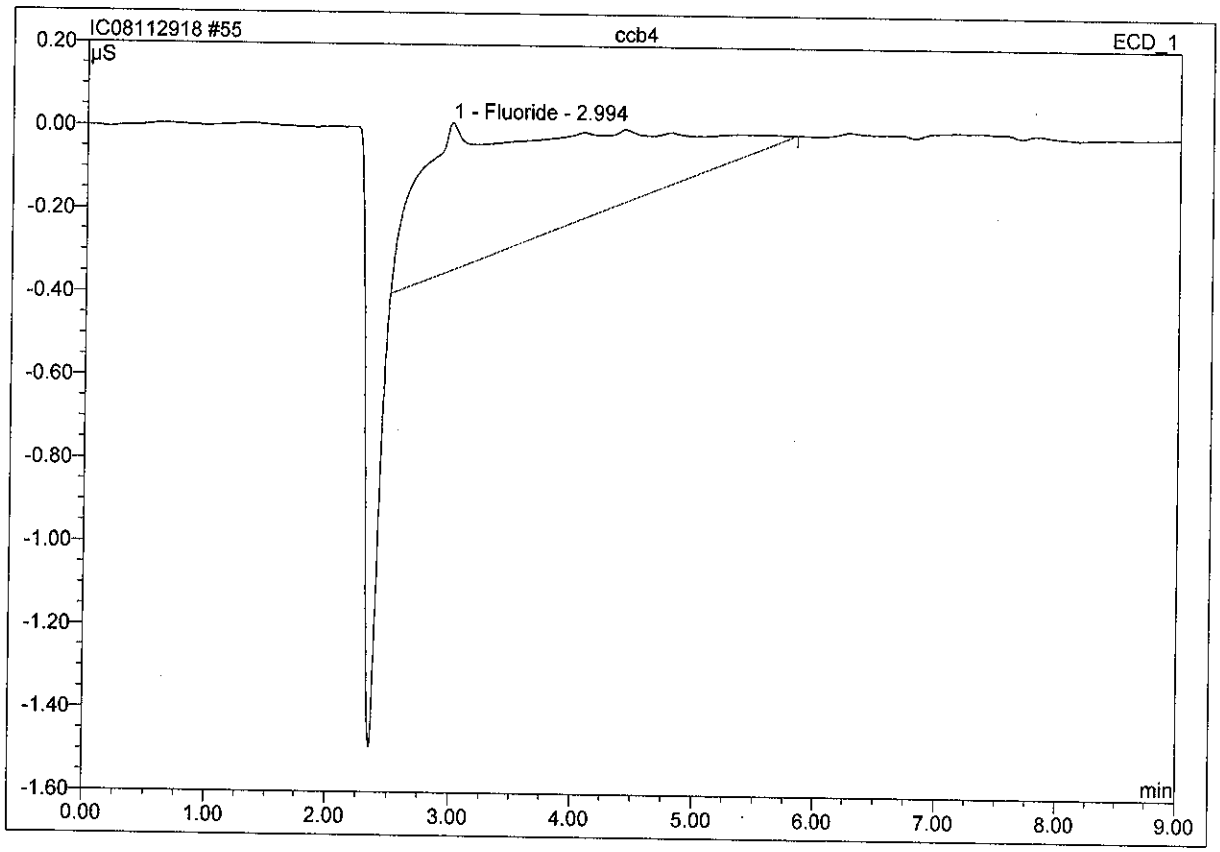
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type	
1	2.99	Fluoride	11.637	1.207	26.37	4.689	BMB	94
2	4.08	Chloride	7.097	0.792	17.31	4.847	BMB	97
3	4.79	Nitrite	6.539	0.861	18.82	2.501	BMB	100
4	5.62	Bromide	1.150	0.170	3.72	2.554	BMB	102
5	6.26	Nitrate	5.921	0.974	21.28	2.489	BMB	100
6	7.72	Sulfate	2.697	0.572	12.50	5.008	BMB	100
Total:			35.041	4.577	100.00	22.087		

default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

55 ccb4

Sample Name:	**ccb4**	*Injection Volume:*	**25.0**
Vial Number:	**49**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/29/2018 18:18**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.355	0.574	100.00	2.232	BMB
Total:			0.355	0.574	100.00	2.232	

Before

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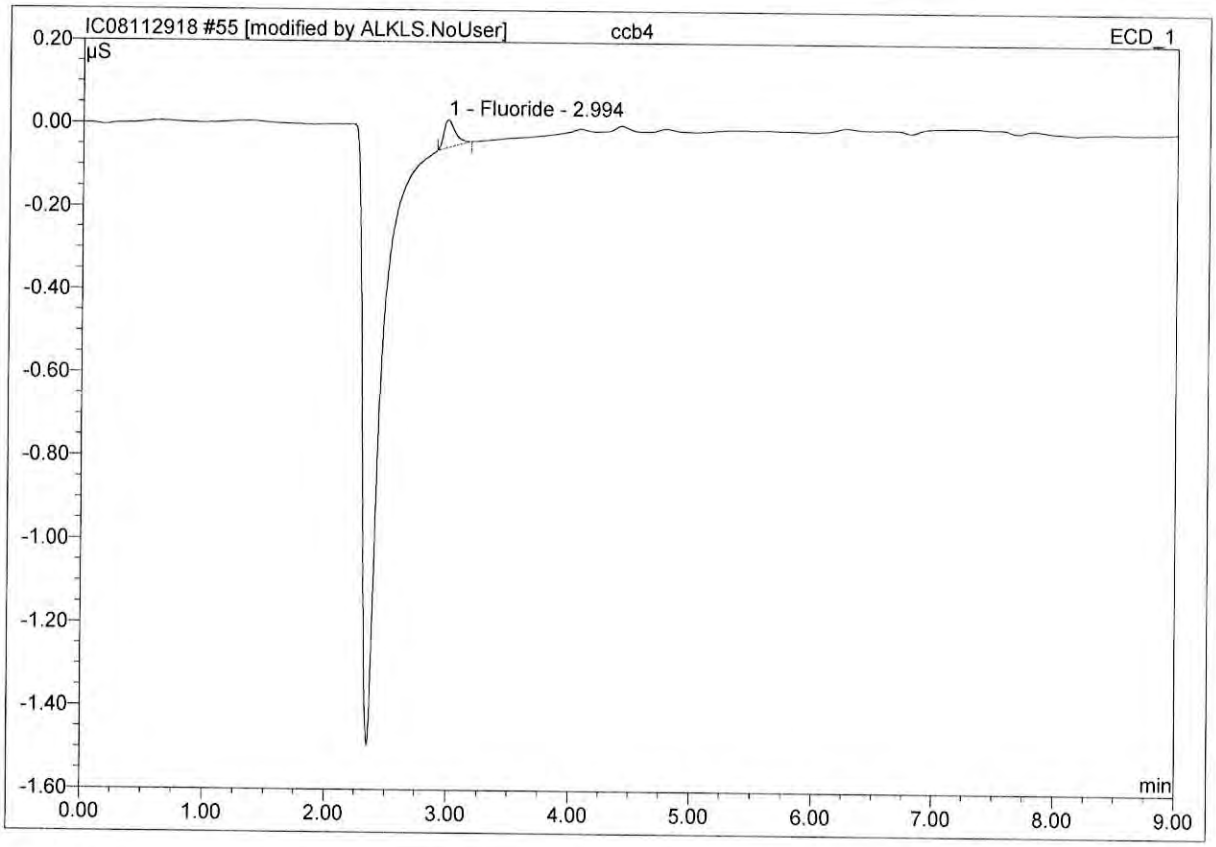
default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

55 ccb4

Sample Name:	**ccb4**	*Injection Volume:*	**25.0**
Vial Number:	**49**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/29/2018 18:18**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.067	0.007	100.00	0.028	BMB*
Total:			0.067	0.007	100.00	0.028	

<0.05MD

After
Initials ML

NOV 30 2018

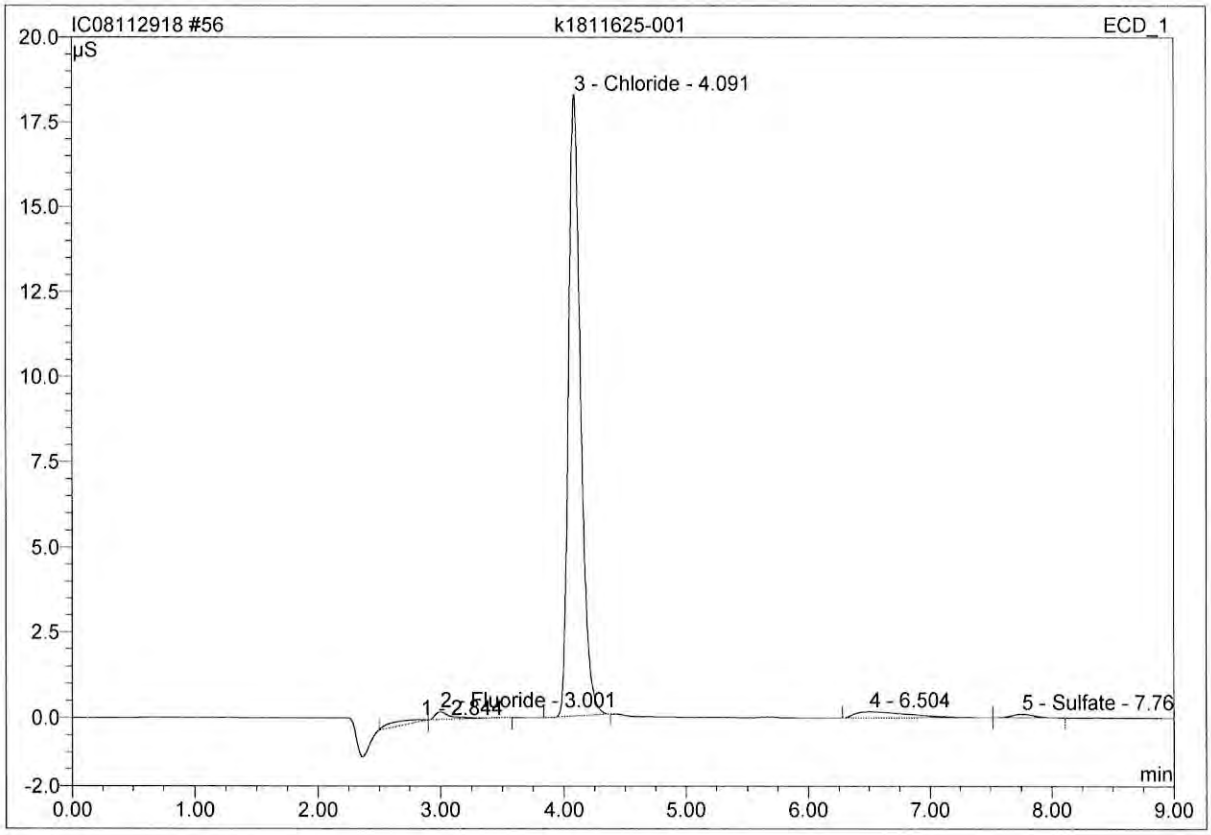
☐Wrong Peak/Peak not Found
☑Baseline/shoulder Incorrect
☐Other

default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

56 k1811625-001

Sample Name:	**k1811625-001**	*Injection Volume:*	**25.0**
Vial Number:	**32**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 18:29**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

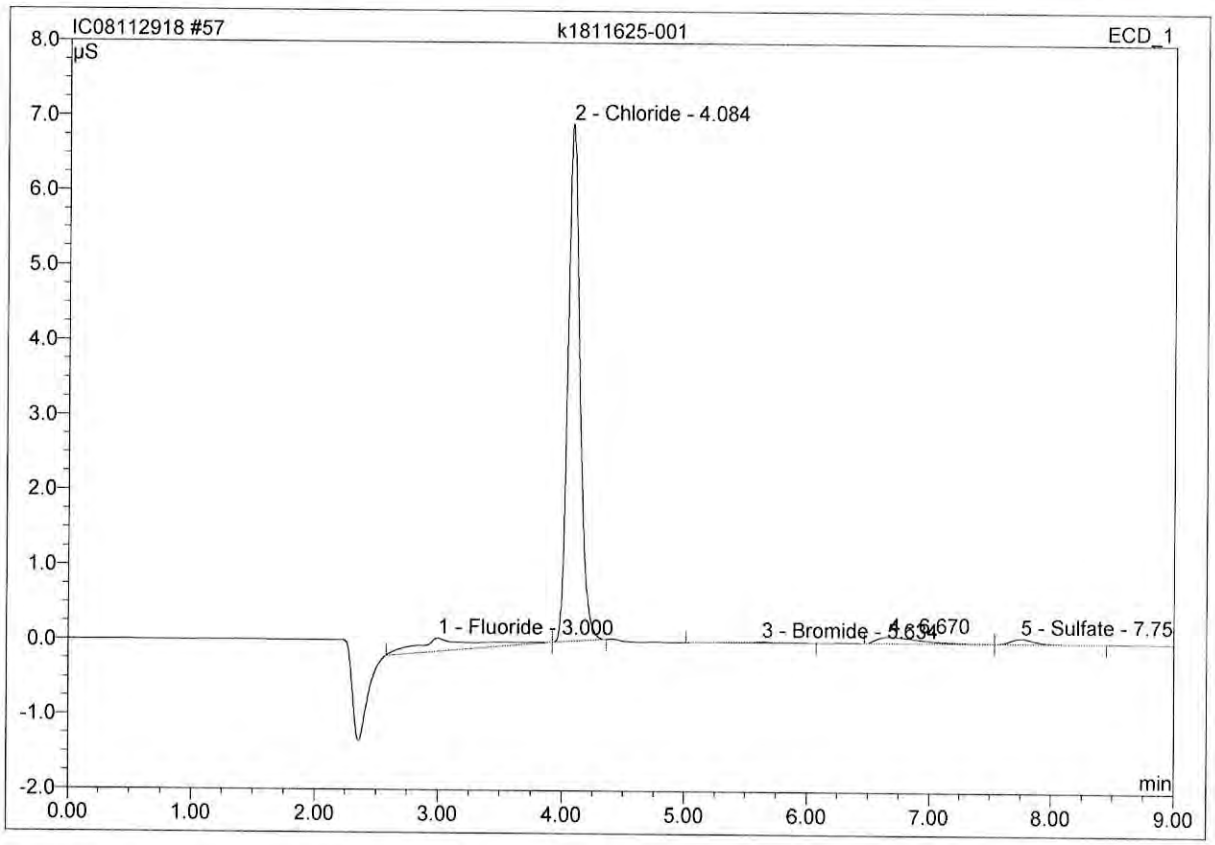


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.84	n.a.	0.051	0.036	1.59	n.a.	BMb
2	3.00	Fluoride	0.221	0.036	1.58	0.279	bMB
3	4.09	Chloride	18.246	2.077	91.67	25.413	BMB
4	6.50	n.a.	0.182	0.096	4.23	n.a.	BMb
5	7.76	Sulfate	0.099	0.021	0.93	0.368	bMB
Total:			18.799	2.266	100.00	26.059	

NO3 <0.1

57 k1811625-001

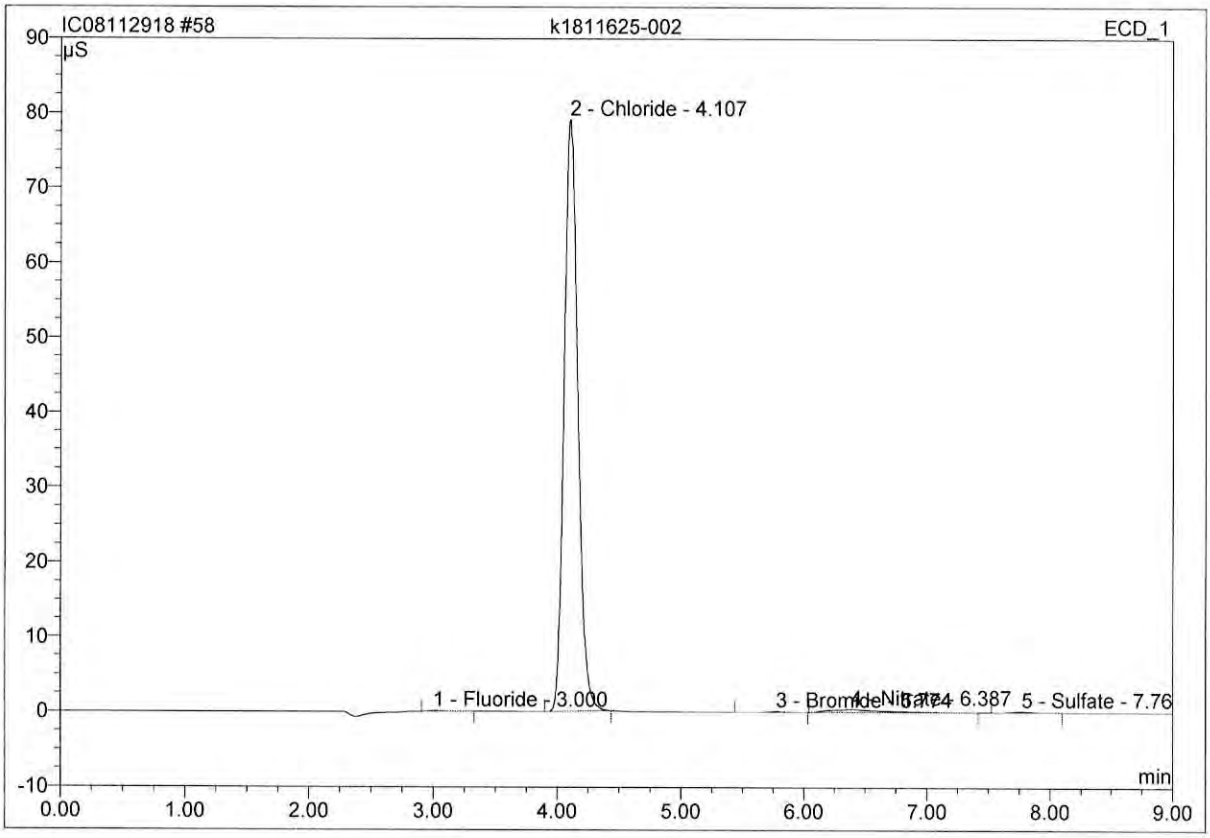
Sample Name:	**k1811625-001**	*Injection Volume:*	**25.0**
Vial Number:	**33**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**5.0000**
Recording Time:	**11/29/2018 18:40**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.00	Fluoride	0.179	0.095	10.14	1.838	BMB
2	4.08	Chloride	6.908	0.778	83.38	23.799	bMB
3	5.63	Bromide	0.018	0.006	0.65	0.455	BMB
4	6.67	n.a.	0.089	0.038	4.07	n.a.	BMb
5	7.75	Sulfate	0.071	0.016	1.77	0.721	bMB
Total:			7.266	0.933	100.00	26.813	

58 k1811625-002

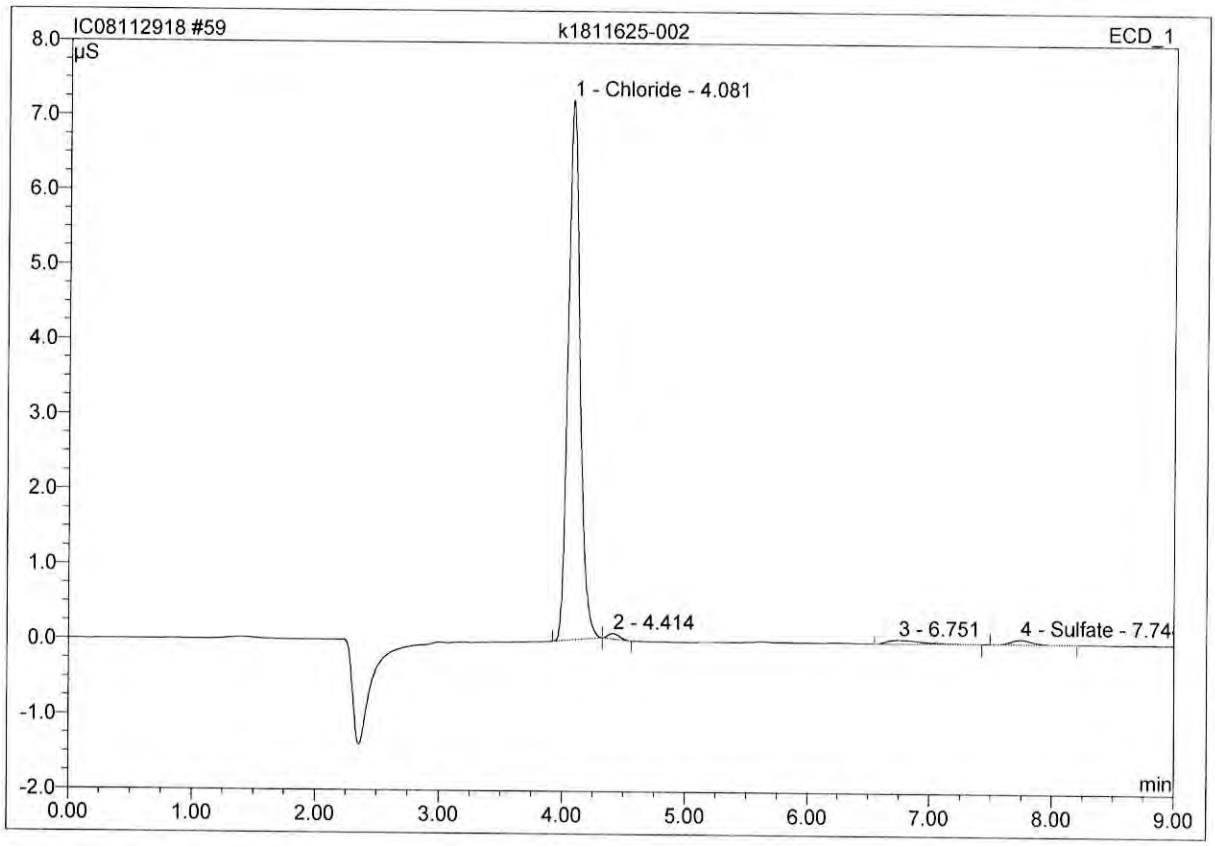
Sample Name:	**k1811625-002**	*Injection Volume:*	**25.0**
Vial Number:	**34**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 18:50**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.00	Fluoride	0.108	0.015	0.15	0.120	BMB
2	4.11	Chloride	79.075	10.181	97.26	124.579	BMB
3	5.77	Bromide	0.119	0.019	0.18	0.577	BMB
4	6.39	Nitrate	0.419	0.223	2.13	1.140	BMB
5	7.77	Sulfate	0.140	0.029	0.27	0.501	BMB
Total:			79.861	10.467	100.00	126.917	

59 k1811625-002

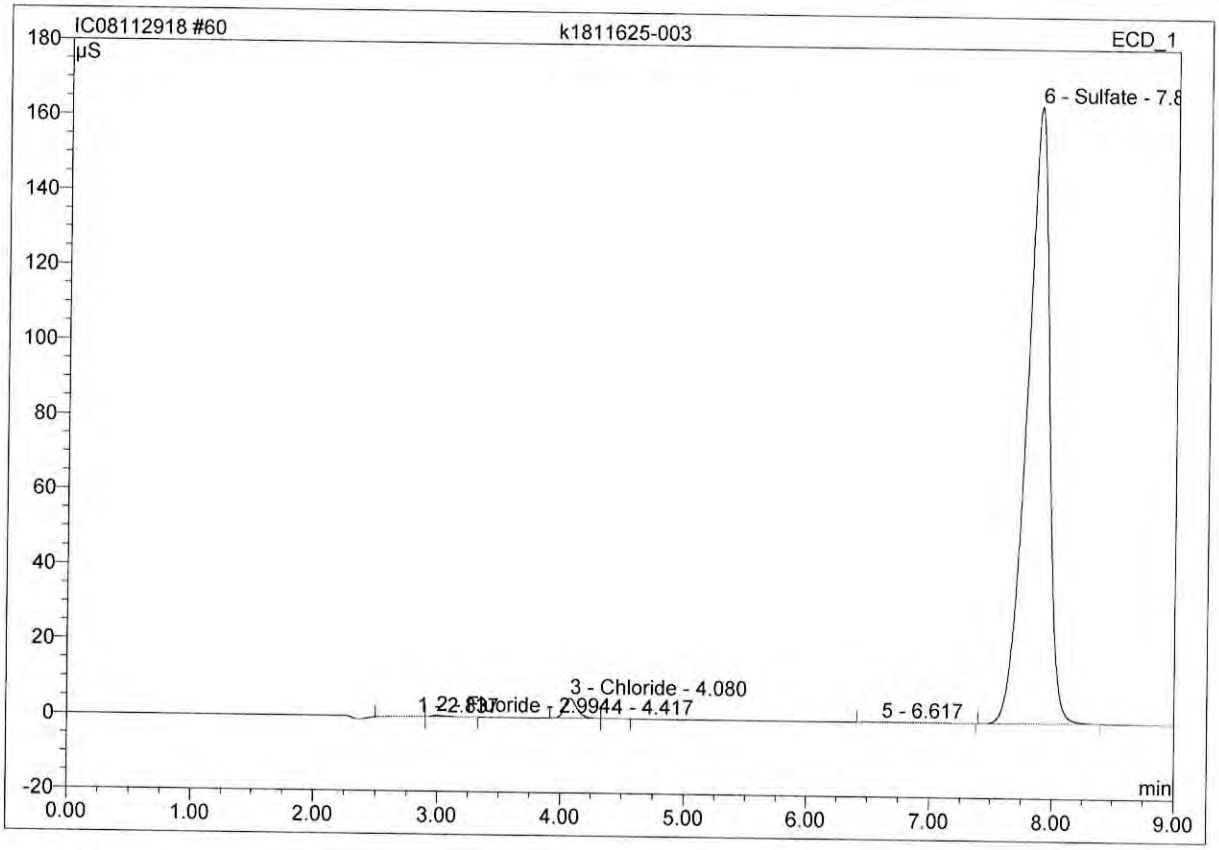
Sample Name:	**k1811625-002**	*Injection Volume:*	**25.0**
Vial Number:	**35**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**20.0000**
Recording Time:	**11/29/2018 19:01**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.08	Chloride	7.214	0.805	95.32	98.531	BMb
2	4.41	n.a.	0.072	0.008	0.91	n.a.	bMB
3	6.75	n.a.	0.054	0.019	2.26	n.a.	BMB
4	7.74	Sulfate	0.061	0.013	1.52	2.242	BMB
Total:			7.401	0.845	100.00	100.773	

60 k1811625-003

Sample Name:	**k1811625-003**	*Injection Volume:*	**25.0**
Vial Number:	**36**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 19:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.84	n.a.	0.046	0.030	0.09	n.a.	BMB
2	2.99	Fluoride	0.364	0.045	0.13	0.351	bMB
3	4.08	Chloride	5.277	0.608	1.72	7.435	BMb
4	4.42	n.a.	0.052	0.006	0.02	n.a.	bMB
5	6.62	n.a.	0.099	0.045	0.13	n.a.	BMB
6	7.89	Sulfate	164.700	34.683	97.93	607.126	BMB
Total:			170.538	35.417	100.00	614.913	

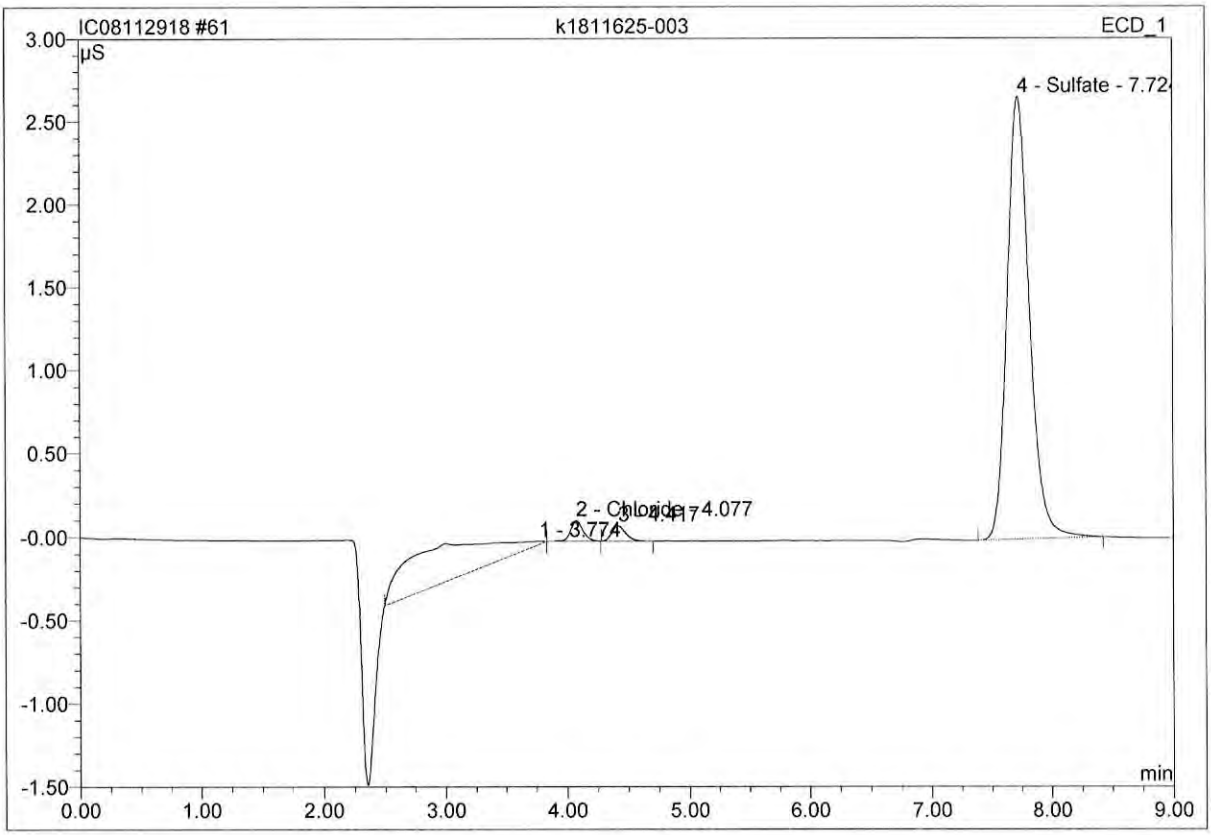
NO3 <0.1

default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

61 k1811625-003

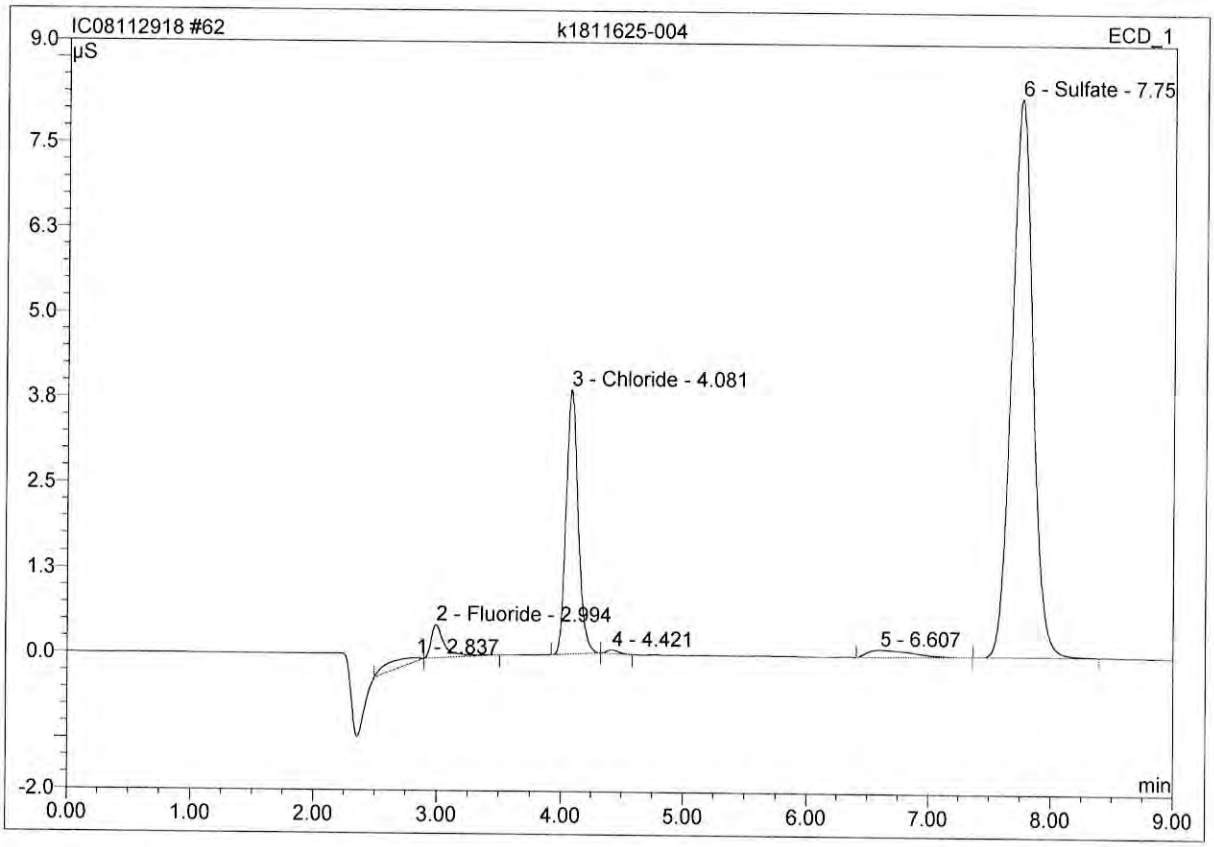
Sample Name:	**k1811625-003**	*Injection Volume:*	**25.0**
Vial Number:	**37**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**100.0000**
Recording Time:	**11/29/2018 19:22**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.77	n.a.	0.018	0.194	24.51	n.a.	BMB
2	4.08	Chloride	0.121	0.014	1.77	8.564	bMB
3	4.42	n.a.	0.090	0.012	1.47	n.a.	BMB
4	7.72	Sulfate	2.658	0.572	72.26	500.972	BMB
Total:			2.887	0.792	100.00	509.535	

62 k1811625-004

Sample Name:	**k1811625-004**	*Injection Volume:*	**25.0**
Vial Number:	**38**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 19:33**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



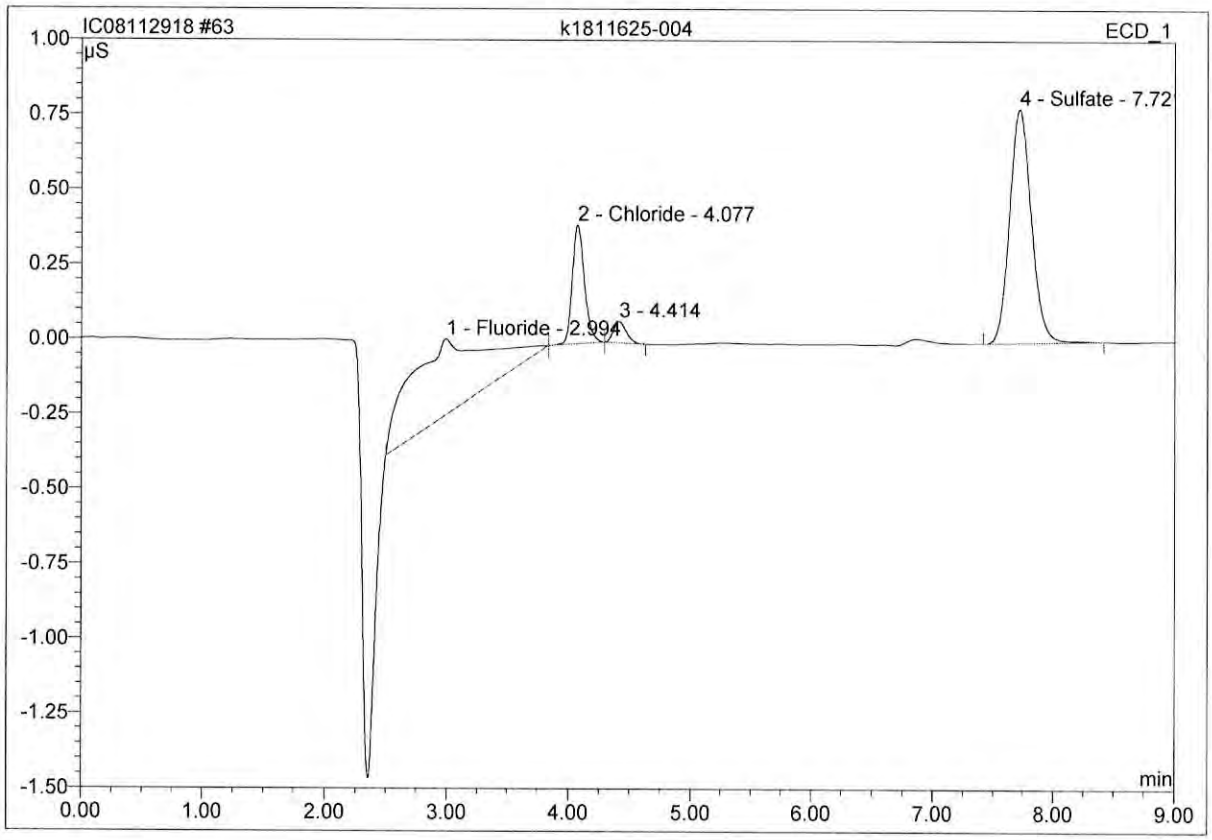
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.84	n.a.	0.054	0.035	1.57	n.a.	BMB
2	2.99	Fluoride	0.490	0.061	2.73	0.472	bMB
3	4.08	Chloride	3.875	0.442	19.87	5.414	BMb
4	4.42	n.a.	0.054	0.006	0.27	n.a.	bMB
5	6.61	n.a.	0.108	0.046	2.06	n.a.	BMB
6	7.75	Sulfate	8.199	1.636	73.50	28.643	BMB
Total:			12.778	2.226	100.00	34.529	

NO_3 Lo-1

default/Integration

63 k1811625-004

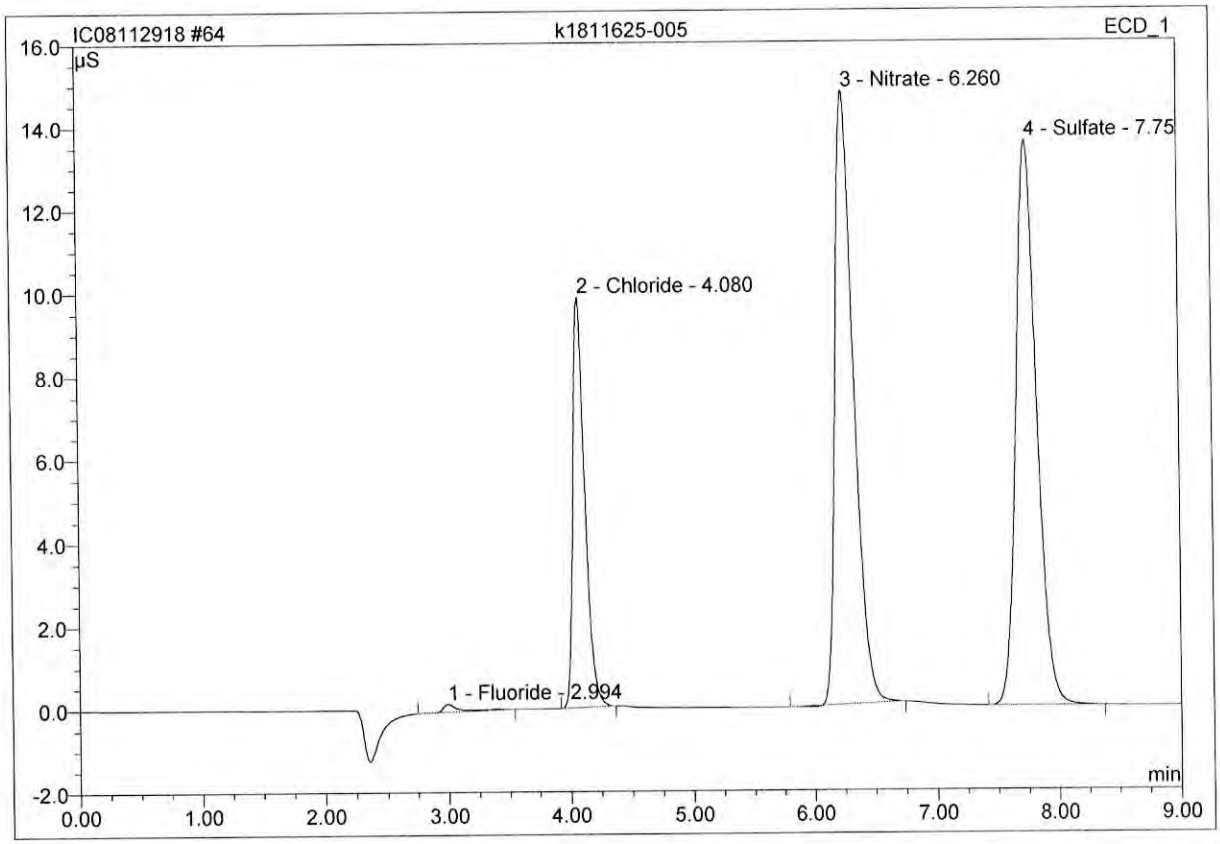
Sample Name:	**k1811625-004**	*Injection Volume:*	**25.0**
Vial Number:	**39**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**20.0000**
Recording Time:	**11/29/2018 19:43**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.253	0.185	45.80	14.409	BMB
2	4.08	Chloride	0.396	0.046	11.24	5.569	bMb
3	4.41	n.a.	0.071	0.009	2.15	n.a.	bMB
4	7.72	Sulfate	0.782	0.165	40.81	28.919	BMB
Total:			1.502	0.405	100.00	48.896	

64 k1811625-005

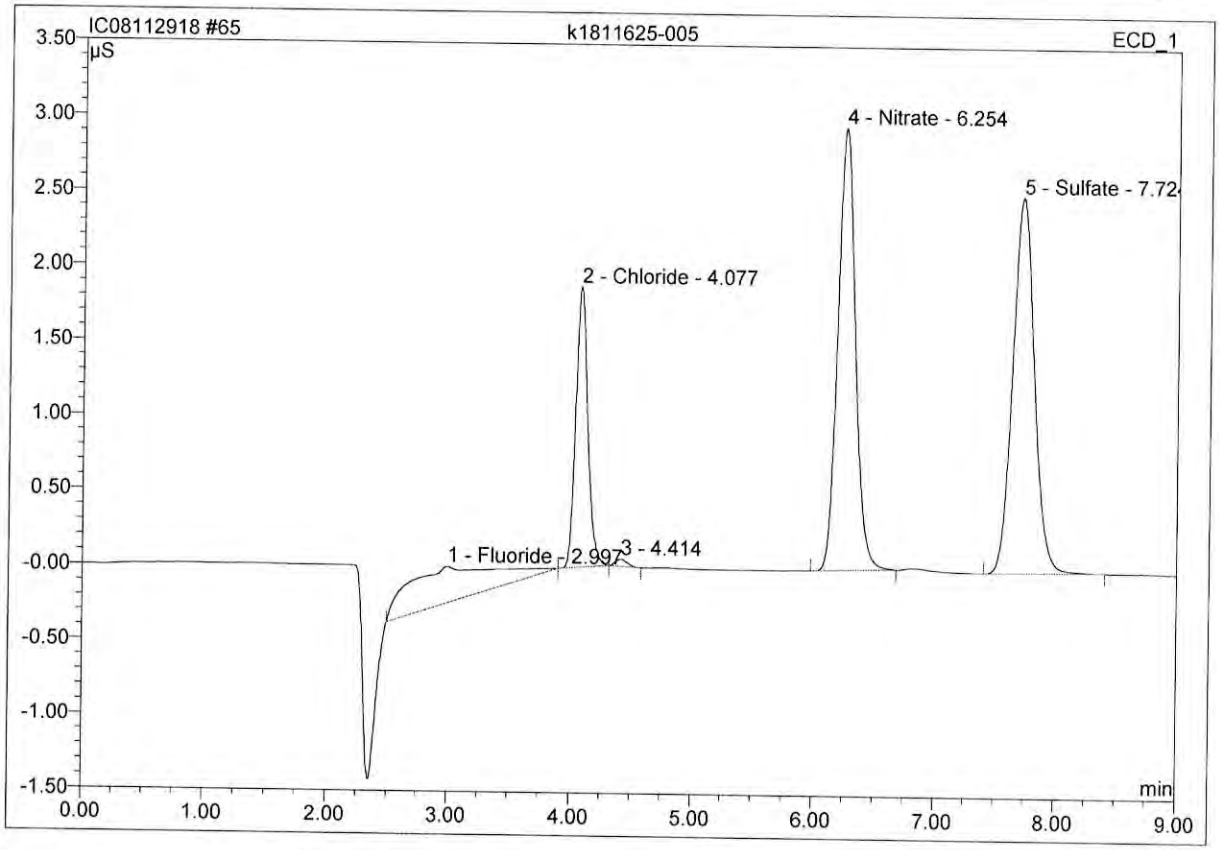
Sample Name:	**k1811625-005**	*Injection Volume:*	**25.0**
Vial Number:	**40**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**11/29/2018 19:54**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.189	0.030	0.47	0.232	BMB
2	4.08	Chloride	9.848	1.101	17.24	13.472	BMB
3	6.26	Nitrate	14.737	2.577	40.35	13.170	BMB
4	7.75	Sulfate	13.575	2.679	41.94	46.889	BMB
Total:			38.349	6.386	100.00	73.763	

65 k1811625-005

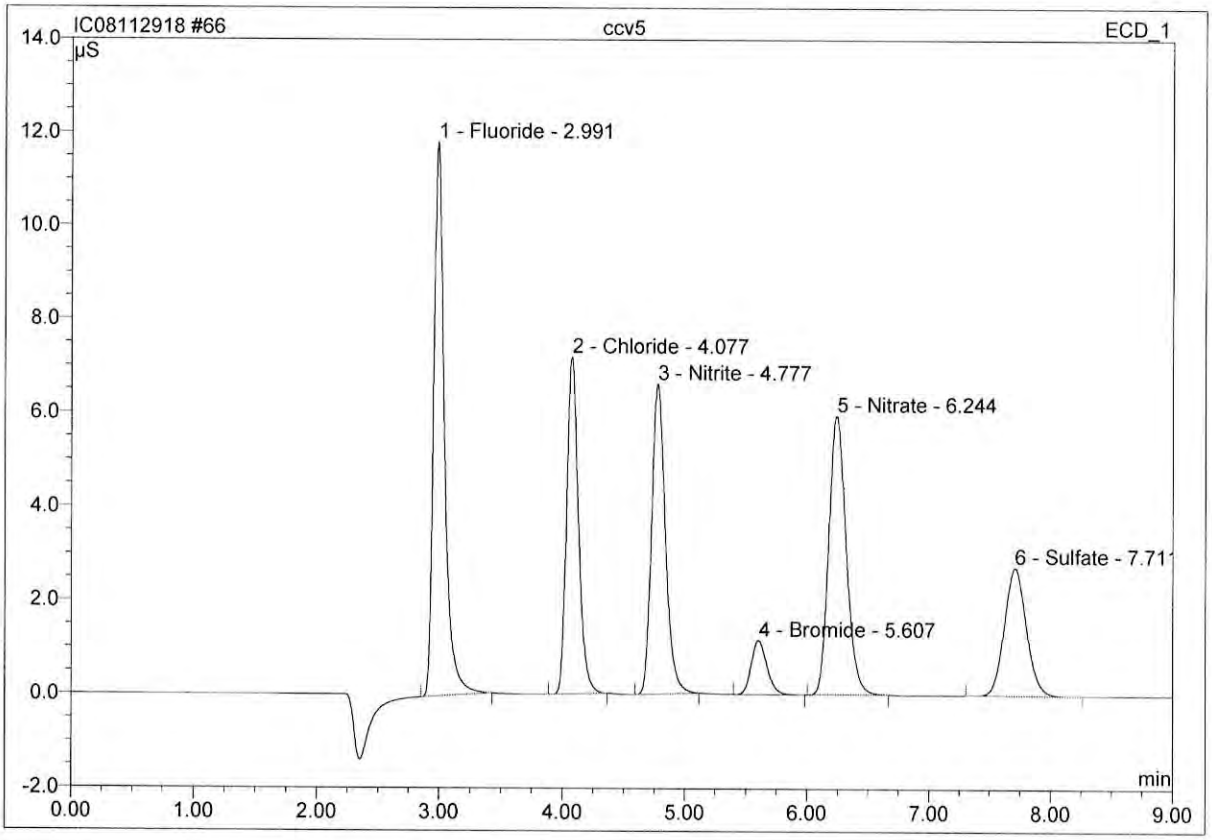
Sample Name:	**k1811625-005**	*Injection Volume:*	**25.0**
Vial Number:	**41**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**10.0000**
Recording Time:	**11/29/2018 20:04**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.00	Fluoride	0.243	0.198	13.86	7.677	BMB
2	4.08	Chloride	1.869	0.212	14.84	12.943	bMB
3	4.41	n.a.	0.046	0.005	0.36	n.a.	bMB
4	6.25	Nitrate	2.950	0.492	34.52	12.572	BMB
5	7.72	Sulfate	2.506	0.519	36.41	45.417	BMB
Total:			7.613	1.425	100.00	78.610	

66 ccv5

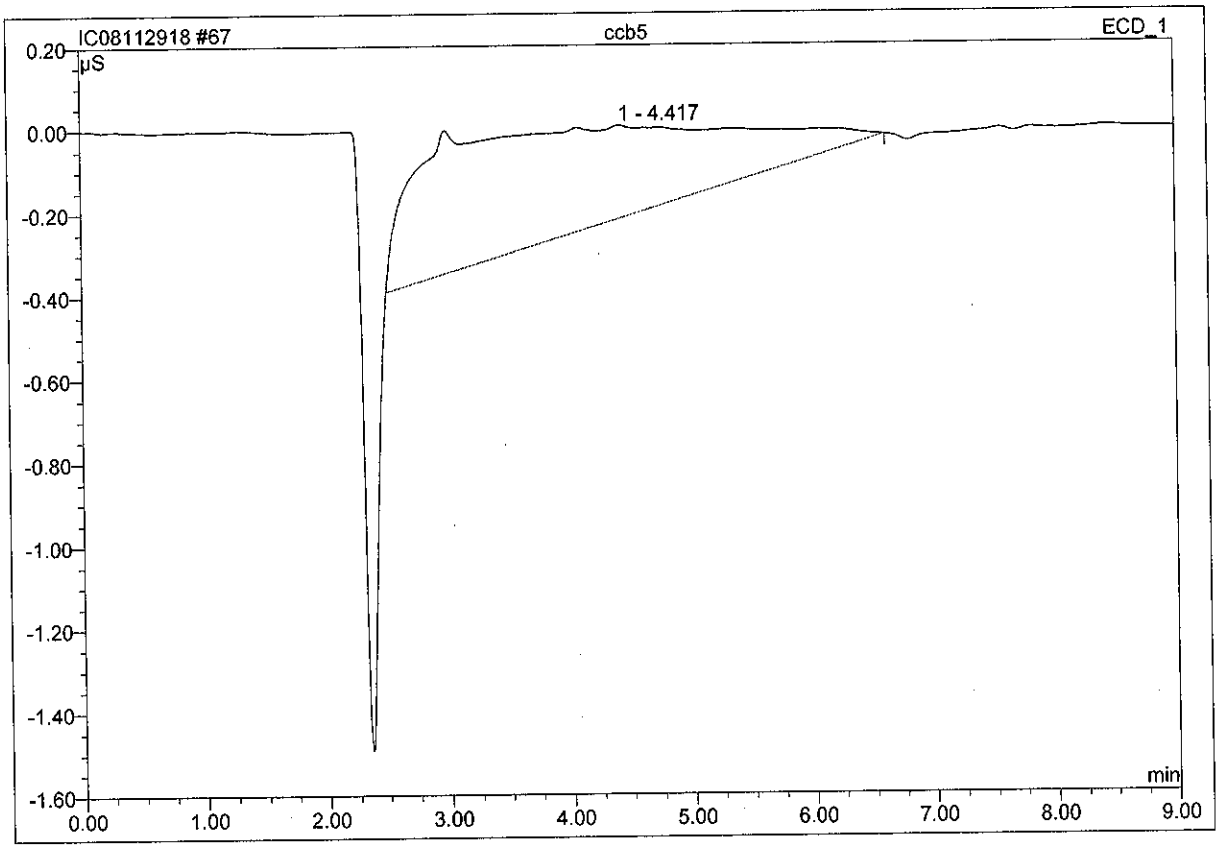
Sample Name:	**ccv5**	*Injection Volume:*	**25.0**
Vial Number:	**46**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/29/2018 20:15**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type	
1	2.99	Fluoride	11.841	1.223	26.50	4.752	BMB	95
2	4.08	Chloride	7.180	0.801	17.36	4.901	BMB	98
3	4.78	Nitrite	6.609	0.869	18.82	2.522	BMB	101
4	5.61	Bromide	1.145	0.169	3.67	2.541	BMB	
5	6.24	Nitrate	5.942	0.978	21.20	2.500	BMB	100
6	7.71	Sulfate	2.727	0.575	12.45	5.029	BMB	101
Total:			35.444	4.615	100.00	22.245		

67 ccb5

Sample Name:	**ccb5**	*Injection Volume:*	**25.0**
Vial Number:	**47**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/29/2018 20:26**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.42	n.a.	0.223	0.745	100.00	n.a.	BMB
Total:			0.223	0.745	100.00	0.000	

Before

NOV 30 2018

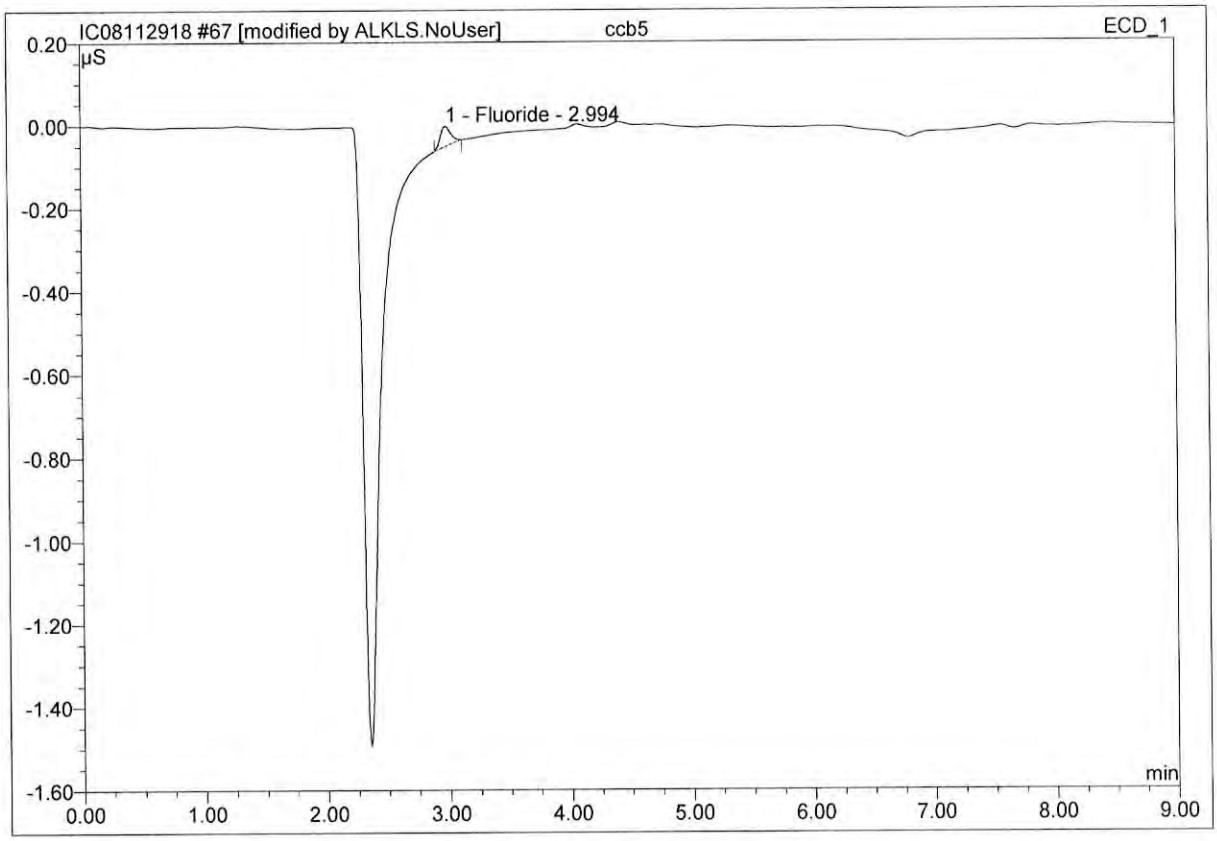
MR

default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

67 ccb5

Sample Name:	**ccb5**	*Injection Volume:*	**25.0**
Vial Number:	**47**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/29/2018 20:26**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.048	0.005	100.00	0.019	BMB*
Total:			0.048	0.005	100.00	0.019	

LOD=ND

After Initials ML

NOV 30 2018

☐Wrong Peak/Peak not Found
☑Baseline/shoulder Incorrect
☐Other

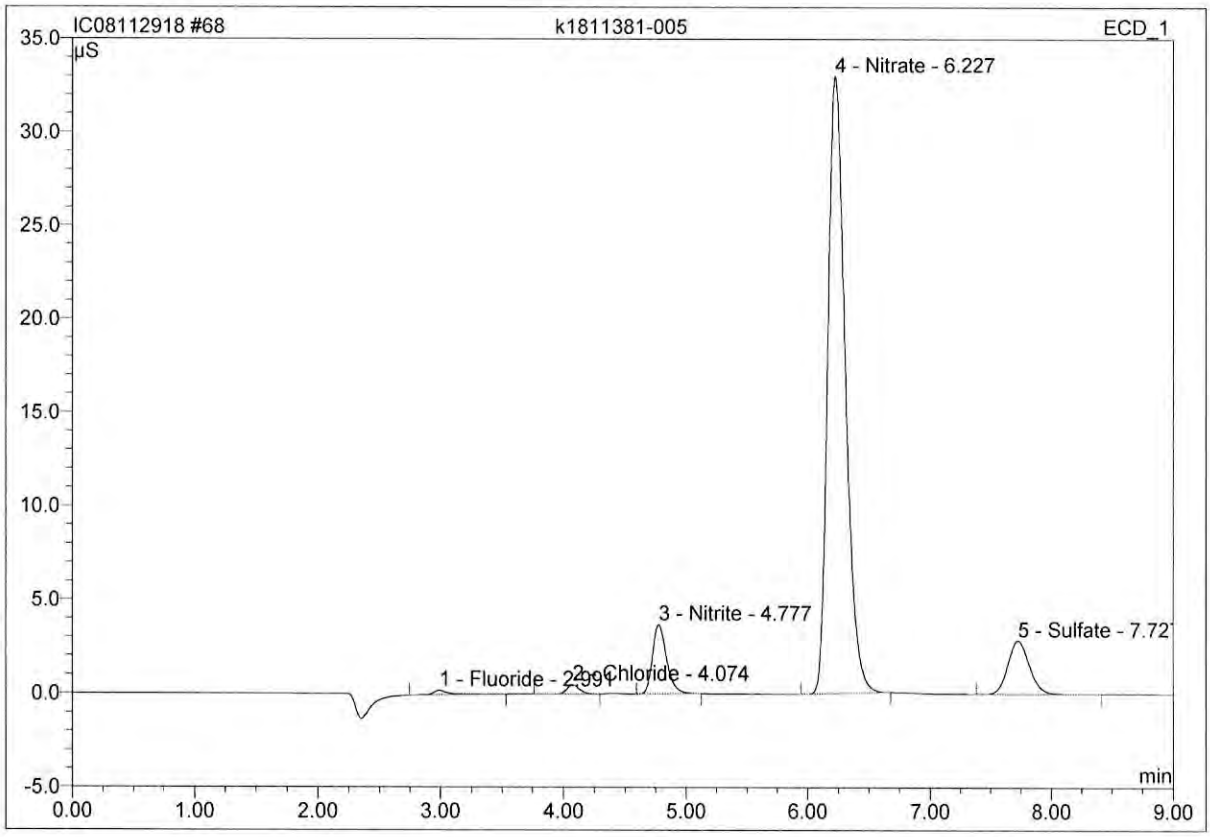
default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

68 k1811381-005

bomb

Sample Name:	**k1811381-005**	*Injection Volume:*	**25.0**
Vial Number:	**42**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**10.0000**
Recording Time:	**11/29/2018 20:37**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

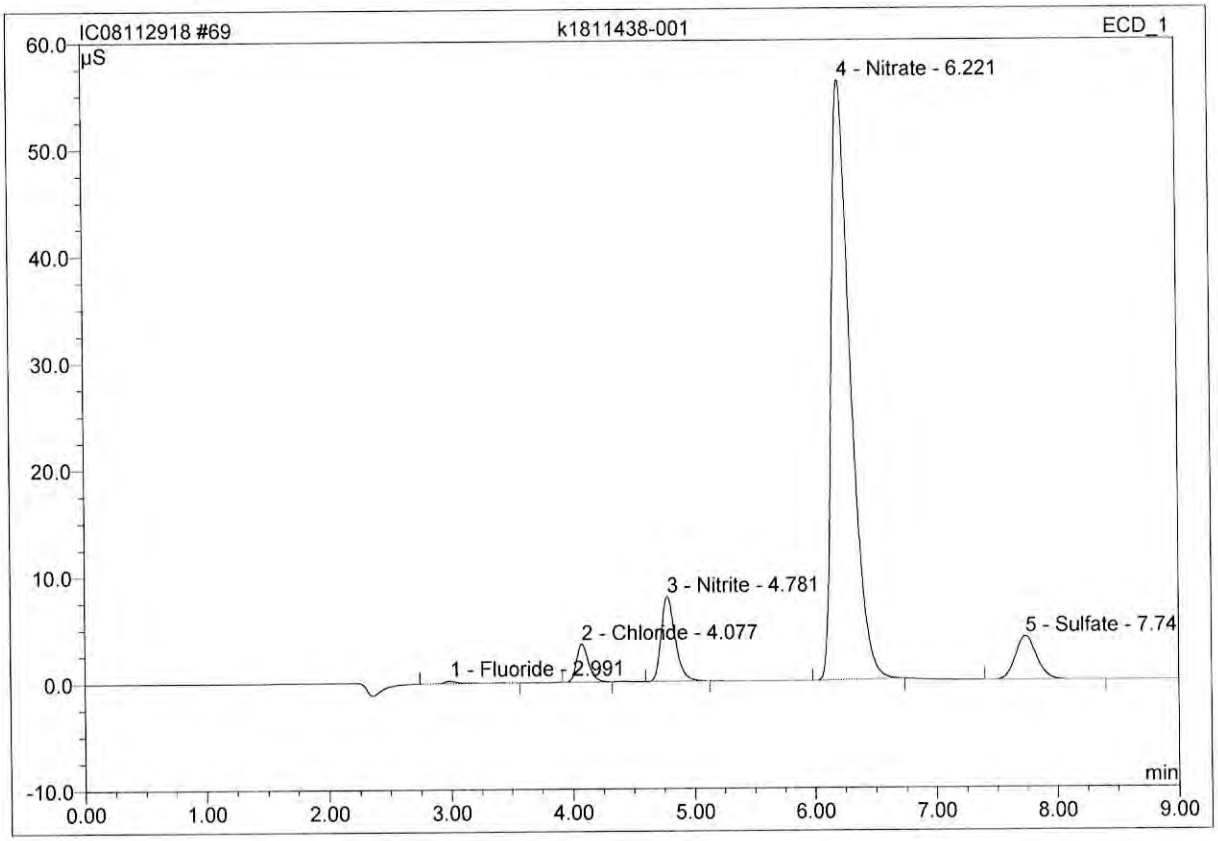


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.229	0.036	0.54	1.380	BMB
2	4.07	Chloride	0.471	0.054	0.82	3.280	BMB
3	4.78	Nitrite	3.669	0.489	7.43	14.187	BMB
4	6.23	Nitrate	32.957	5.420	82.45	138.503	BMB
5	7.73	Sulfate	2.809	0.576	8.76	50.424	BMB
Total:			40.134	6.574	100.00	207.773	

69 k1811438-001

bomb

Sample Name:	**k1811438-001**	*Injection Volume:*	**25.0**
Vial Number:	**43**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**5.0000**
Recording Time:	**11/29/2018 20:47**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

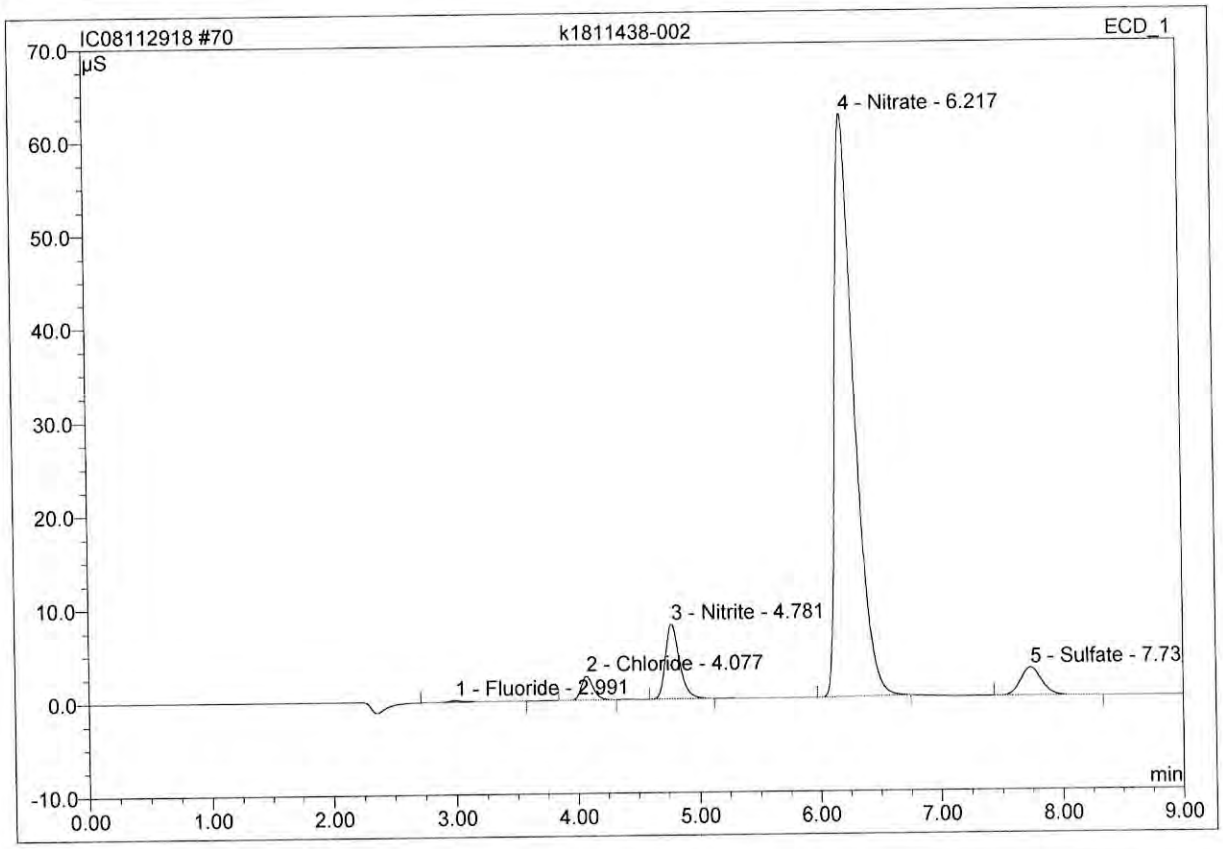


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.219	0.038	0.30	0.730	BMB
2	4.08	Chloride	3.501	0.397	3.19	12.139	BMB
3	4.78	Nitrite	7.918	1.057	8.51	15.344	BMB
4	6.22	Nitrate	56.112	10.120	81.47	129.306	BMB
5	7.74	Sulfate	4.015	0.810	6.52	35.462	BMB
Total:			71.766	12.421	100.00	192.981	

70 k1811438-002

bomb

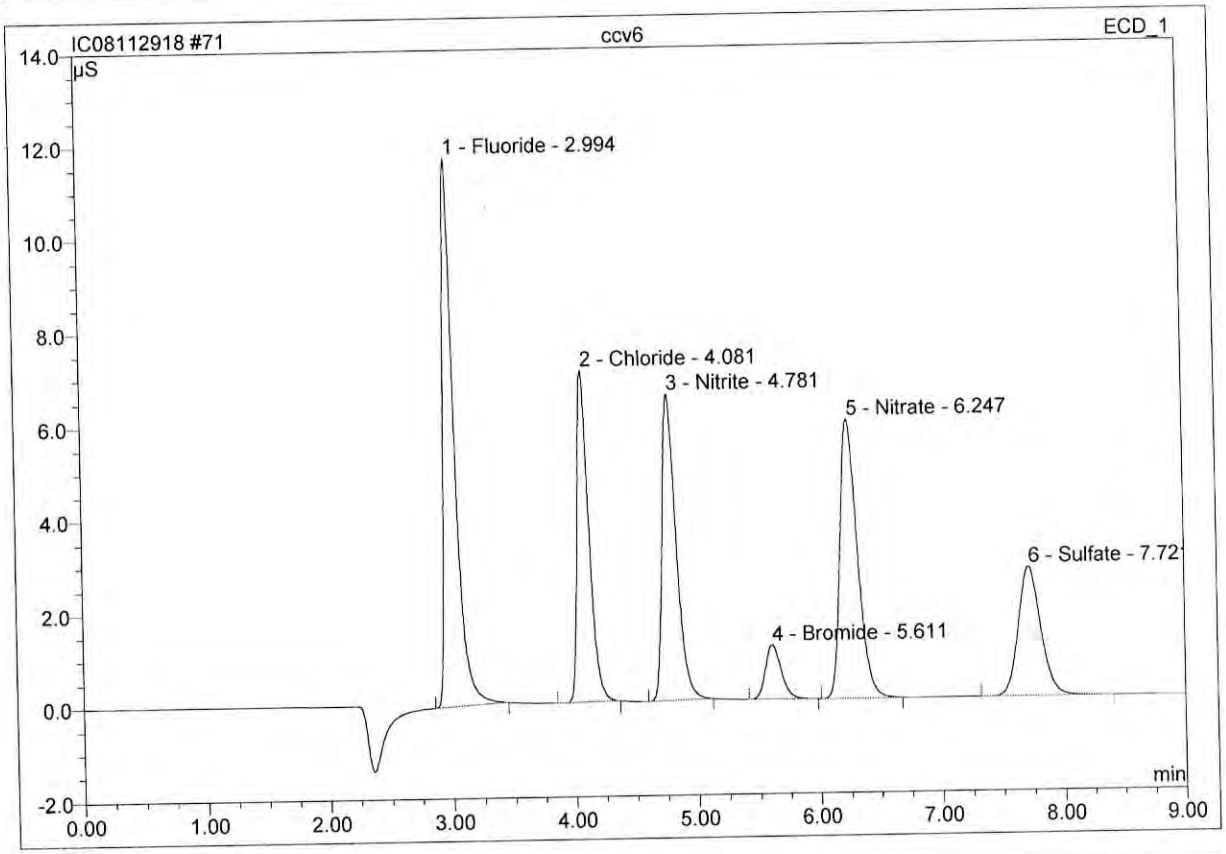
Sample Name:	**k1811438-002**	*Injection Volume:*	**25.0**
Vial Number:	**44**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**5.0000**
Recording Time:	**11/29/2018 20:58**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.181	0.033	0.24	0.635	BMB
2	4.08	Chloride	2.537	0.289	2.15	8.844	BMB
3	4.78	Nitrite	7.978	1.064	7.93	15.454	BMB
4	6.22	Nitrate	62.182	11.448	85.24	146.278	BMB
5	7.74	Sulfate	2.944	0.596	4.44	26.070	BMB
Total:			75.822	13.430	100.00	197.281	

71 ccv6

Sample Name:	**ccv6**	*Injection Volume:*	**25.0**
Vial Number:	**48**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/29/2018 21:09**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	11.727	1.238	26.71	4.809	BMB
2	4.08	Chloride	7.082	0.791	17.08	4.841	BMB
3	4.78	Nitrite	6.543	0.863	18.62	2.505	BMB
4	5.61	Bromide	1.149	0.171	3.69	2.566	BMB
5	6.25	Nitrate	5.963	0.985	21.27	2.518	BMB
6	7.72	Sulfate	2.755	0.585	12.62	5.119	BMB
Total:			35.220	4.633	100.00	22.359	

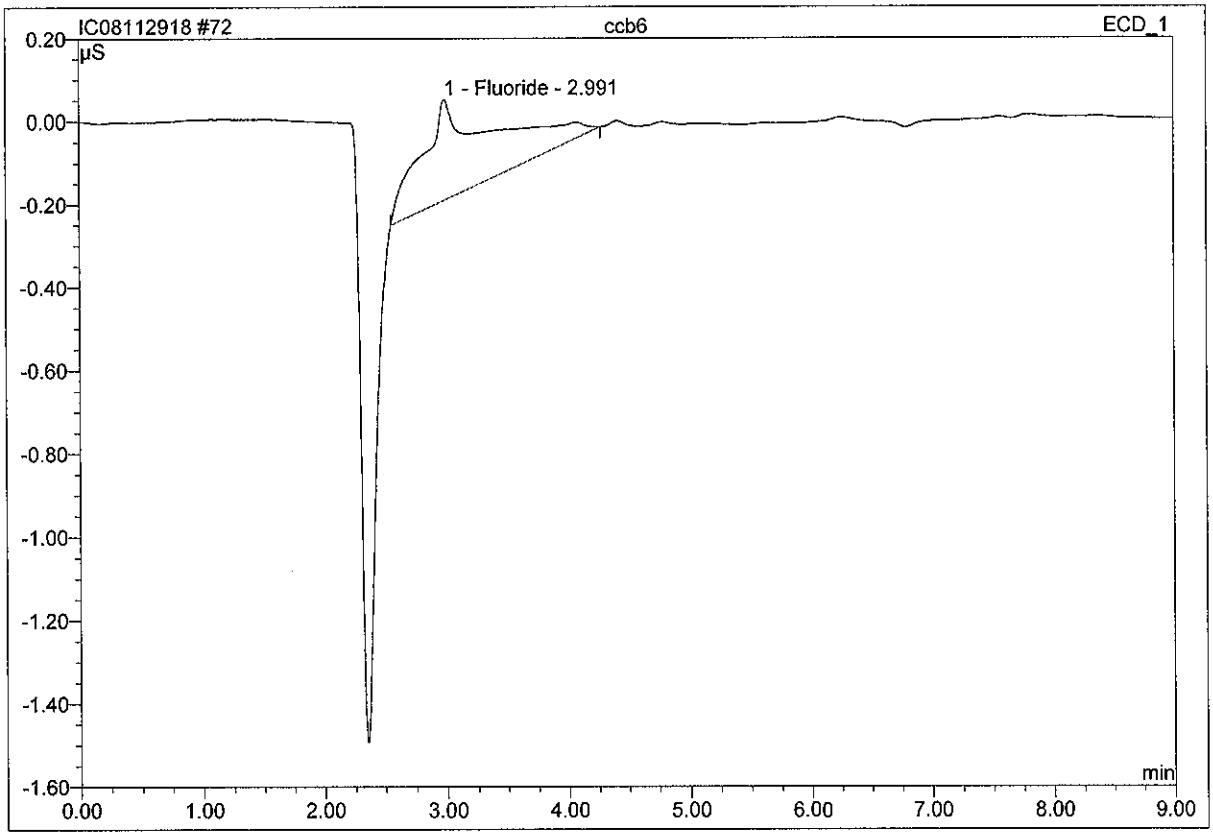
107

default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

72 ccb6

Sample Name:	**ccb6**	*Injection Volume:*	**25.0**
Vial Number:	**49**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/29/2018 21:19**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.242	0.166	100.00	0.645	BMB
Total:			0.242	0.166	100.00	0.645	

Before

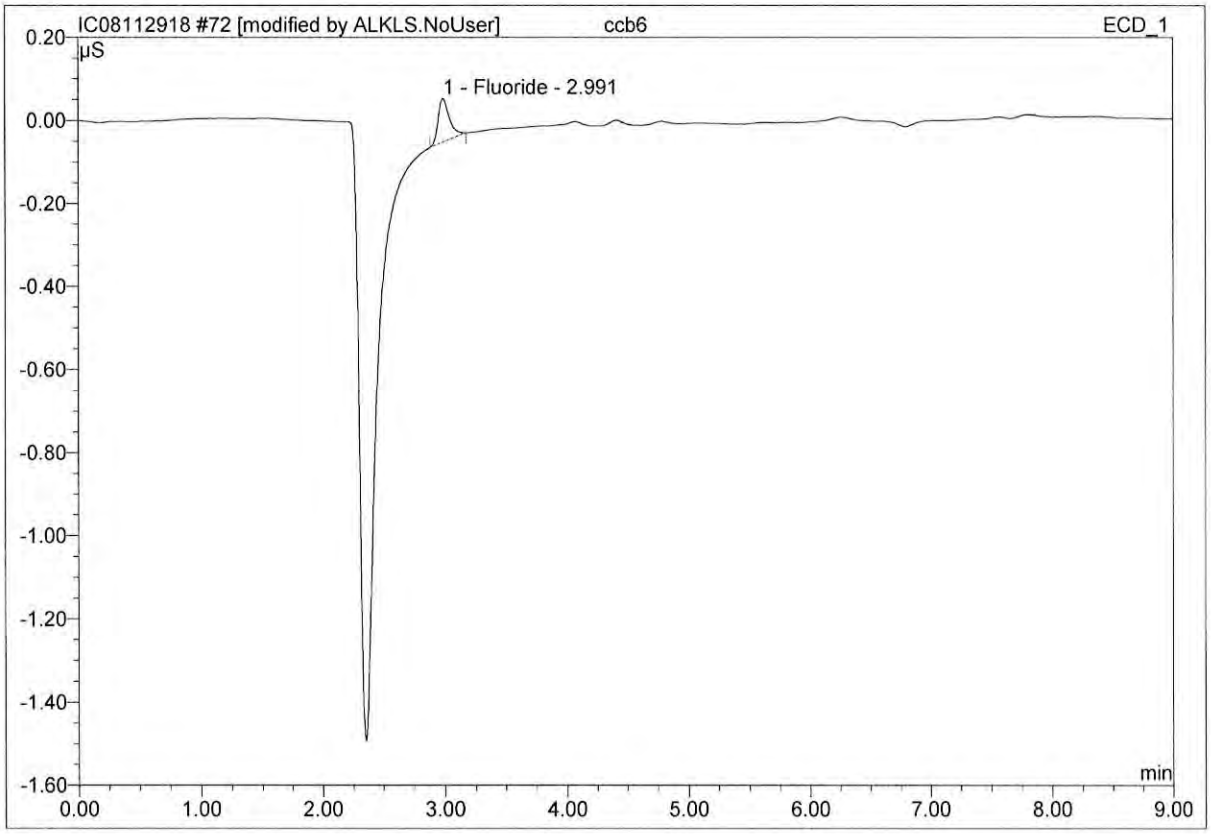
NOV 30 2018

default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

72 ccb6

Sample Name:	**ccb6**	*Injection Volume:*	**25.0**
Vial Number:	**49**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/29/2018 21:19**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.99	Fluoride	0.104	0.011	100.00	0.043	BMB*
Total:			0.104	0.011	100.00	0.043	

<0.05WD

After Initials MR

NOV 30 2018

☐Wrong Peak/Peak not Found
☑Baseline/shoulder Incorrect
☐Other

default/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11d Build 3302 (196279)

Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Preparation Information Benchsheet

Prep Run: 327149
Team: Metals
Analyst: JHINSON

Prep Workflow: MetDigLP
Prep Method: EPA 3010A
Rush/NPDES: N/A

Status: Prepped
Current Step: Digestion

Prep Date: 11/27/2018 12:09
Due Date: 11/30/2018
Hold Date: 05/25/2019

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1817274-02	Method Blank		25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
KQ1817274-01	Lab Control Sample		25 mL	25 mL	0.25 mL	189554	Metals TCLP	6%HNO3, 5%HCl
K1811381-004	SL0153	.15	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1811381-004: KQ1817274-03	Duplicate	.15	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1811381-004: KQ1817274-04	Matrix Spike	.15	25 mL	25 mL	0.25 mL	189554	Metals TCLP	6%HNO3, 5%HCl
K1811381-005	SL0146	.15	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1811438-002	SL0554	.09	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl

7 Total Samples consisting of 3 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET TCLP (ALS-57-R1)	Spike	189554	4/19/2019

Preparation Materials

Step	Name	ID
Digestion	K-MET 50ml Centrifuge Tube	192468
Digestion	K-MET HNO3	193780

Step	Name	ID
Digestion	K-MET HCL	194595

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-DG 250C			
Digestion	K-HotPlate-04	Corrected Temperture	95	deg C
Digestion	K-HotPlate-04	Correction Factor	0	deg C

Step	Name	Property	Value	
Digestion	K-HotPlate-04	Observed Temperature	95	deg C
Digestion	K-HotPlate-04	Thermometer ID 660993		deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	27-NOV-18 12:09	27-NOV-18 15:14	JHINSON		N	

Comments

Review

Reviewed by: _____ Date: 11/28/18

TCLP Spike Solution

Lims Solution ID 189554

Expires 4/19/19

Analyte	Solution Concentration
Ag	100
Pb	500
As	500
Ba	1000
Cd	100
Cr	500
Se	100
Cu	100
Ni	100
Zn	1000

Additional spikes						
Element	Source	Lot #	mls of	ppm	Exp. date	Initials and date

This solution is a custom mix: ALS-57-R1

1209 - 1514
MP4

Preparation Information Benchsheet

Prep Run: 327149
Team: Metals
Analyst: JHINSON

Prep Workflow: MetDigLP
Prep Method: EPA 3010A
Rush/NPDES: N/A

Status: Draft
Current Step: Digestion

Prep Date: 11/27/2018 12:07
Due Date: 11/30/2018
Hold Date: 05/25/2019

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1817274-02	Method Blank		25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
KQ1817274-01	Lab Control Sample		25 mL	25 mL	0.25 mL	189554	Metals TCLP	6%HNO3, 5%HCl
K1811381-004	SL0153	.15	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1811381-004: KQ1817274-03	Duplicate	.15	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1811381-004: KQ1817274-04	Matrix Spike	.15	25 mL	25 mL	0.25 mL	189554	Metals TCLP	6%HNO3, 5%HCl
K1811381-005	SL0146	.15	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1811438-002	SL0554	.09	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl

7 Total Samples consisting of 3 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET TCLP (ALS-57-R1)	Spike	189554	4/19/2019

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion					N	

Comments

Review

Reviewed by: _____ Date: _____

Preparation Information Benchsheet

Prep Run: 327150
Team: Metals
Analyst: JHINSON

Prep Workflow: MetDigLP
Prep Method: EPA 3010A
Rush/NPDES: N/A

Status: Prepped
Current Step: Digestion

Prep Date: 11/27/2018 12:09
Due Date: 12/04/2018
Hold Date: 05/25/2019

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1817275-02	Method Blank		25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
KQ1817275-01	Lab Control Sample		25 mL	25 mL	0.25 mL	189554	Metals TCLP	6%HNO3, 5%HCl
K1811438-001	SL0547	.17	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1811438-001: KQ1817275-03	Duplicate	.17	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1811438-001: KQ1817275-04	Matrix Spike	.17	25 mL	25 mL	0.25 mL	189554	Metals TCLP	6%HNO3, 5%HCl

5 Total Samples consisting of 1 Client Sample, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET TCLP (ALS-57-R1)	Spike	189554	4/19/2019

Preparation Materials

Step	Name	ID
Digestion	K-MET 50ml Centrifuge Tube	192468
Digestion	K-MET HNO3	193780

Step	Name	ID
Digestion	K-MET HCL	194595

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-DG 250C			
Digestion	K-HotPlate-02	Corrected Temperature	95	deg C
Digestion	K-HotPlate-02	Correction Factor	0	deg C

Step	Name	Property	Value	
Digestion	K-HotPlate-02	Observed Temperature	95	deg C
Digestion	K-HotPlate-02	Thermometer ID 662485		deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	27-NOV-18 12:09	27-NOV-18 15:14	JHINSON		N	

Comments

Review

Reviewed by: _____ Date: 11/28/18

TCLP Spike Solution

Lims Solution ID 189554

Expires 4/19/19

Analyte	Solution Concentration
Ag	100
Pb	500
As	500
Ba	1000
Cd	100
Cr	500
Se	100
Cu	100
Ni	100
Zn	1000

Additional spikes

Element	Source	Lot #	mls of	ppm	Exp. date	Initials and date

This solution is a custom mix: ALS-57-R1

1209-1514
HP2

Preparation Information Benchsheet

Prep Run: 327150
Team: Metals
Analyst: JHINSON

Prep Workflow: MetDigLP
Prep Method: EPA 3010A
Rush/NPDES: N/A

Status: Draft
Current Step: Digestion

Prep Date: 11/27/2018 12:12
Due Date: 12/04/2018
Hold Date: 05/25/2019

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1817275-02	Method Blank		25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
KQ1817275-01	Lab Control Sample		25 mL	25 mL	0.25 mL	189554	Metals TCLP	6%HNO3, 5%HCl
K1811438-001	SL0547	.17	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1811438-001: KQ1817275-03	Duplicate	.17	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1811438-001: KQ1817275-04	Matrix Spike	.17	25 mL	25 mL	0.25 mL	189554	Metals TCLP	6%HNO3, 5%HCl

5 Total Samples consisting of 1 Client Sample, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET TCLP (ALS-57-R1)	Spike	189554	4/19/2019

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion					N	

Comments

Review

Reviewed by: _____ Date: _____

TCLP Extraction Worksheet

Service Request Number(s): K1811346, 1381, 1438

If Autofluff sample is used please place an X in this box ☐ Prep Run# : 327052

Method : TCLP 1311 ☒ SPLP 1312 ☐ Wet Ext. ☐ MEP ☐

Note: 1 Blank needed per every 20 extracts.

Sample Number	Teflon Extraction Vessel #	Sample Description (Solid, Liquid, Multiphasic)	Partical Size < 1cm ?	Solution Determination Weight (g)	Initial pH	Aliquot of 1N HCl (mL)	Final pH	Solution To Be Used	Extraction Weight (g)	Extraction Solution Volume (mL)	Post-Extraction pH
K1811346-1	19	S	Y	5.093	8.32	3.5	2.26	1	100.42	2000	6.14
2	14			5.194	8.68		2.01	1	100.18		5.14
~~K1811346-2~~ K1811438-1	9			5.176	9.46		5.34	2	100.55		4.93
3	1			5.055	9.64		4.11	1	100.08		6.10
K1811381 - 4 CCL 11/26	8			5.064	9.37		1.87	1	100.03		5.22
5	13			5.122	10.04		3.05	1	100.38		6.20
MB	18							1	—		—
MB	32							2	—		—
				CCL 11/27							

pH Meter Calibrated at pH4 & pH7 Today? ☒ 11/26/18 11/27/18 pH Meter I.D. K-pH-08 Balance I.D. 48, 52 Date Balance Checked: 11/26/18, 11/26/18

Extraction Solution Prep date: 11/26/18, 11/6/18 Tumbler # 4 Thermometer# 664244 Hot Plate Temp °C(50°C): 50

Today's Solution pH: 4.95, 2.87 11/26/18 Extraction Solution I.D. MET-06-26-D MET-06-73-I Filter Lot # 162105 HCl I.D. REI-48-A

Extraction Started Time: 15:49 Date: 11/26/18 Disposable Extraction Vessel Lot #: —

Extraction Finished Time: 8:14 Date: 11/27/18

Tumbler Rotational Speed (28 - 32 rpm): 29.7

Room Temperature at the Beginning of Extraction (Temp. Range 21° C - 25°C): 21.75

Analyst: Caly Hill Date: 11/26/18 Reviewer: [signature] Date: 11/27/18

Pre-Prep Information Benchsheet

Prep Run #: ~~320886~~ 327052 **Prep Method:** **Team:** **Container Lot No:** 100m-1802043 2L-NALAGEN **Prep Due Date:** Nov-23-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1811346-001	.01	TCLP	100.42g	NALGENE BLANK #18, Sample 1 Btl 19	PrepComments:APOSEY K-BALANCE-52 11202018
2	K1811346-001 DUP KQ1817093-01	.01	TCLP	5.093g		PrepComments:APOSEY K-BALANCE-48 11202018
3	K1811346-002	.01	TCLP	100.18g	Btl 14	PrepComments:APOSEY K-BALANCE-52 11202018
4	K1811346-002 DUP KQ1817093-02	.01	TCLP	5.194g		PrepComments:APOSEY K-BALANCE-48 11202018APOSEY K-BALANCE-52 11202018

Relinquished By:	Date/Time:	Received By:	Date/Time:
APY	11-20-2018 18:16		11/26/18 11:57

Pre-Prep Information Benchsheet

Prep Run #: 327052 **Prep Method:** **Team:** **Container Lot No:** **Prep Due Date:** Nov-30-2018

CEL 11/26

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	~~K1811381-002~~ K1811438-1	.09	TCLP	100.55g	Blank Nalgene #38	PrepComments:CLUKKEN K-Balance-52
2	~~K1811381-002 DUP~~ KQ1817213-01	.09	TCLP	5.176g		PrepComments:APOSEY K-BALANCE-48 11262018
3	~~K1811381-003~~ K1811438-2	.01	TCLP	100.08g		PrepComments:CLUKKEN K-Balance-52
4	~~K1811381-003 DUP~~ KQ1817213-02	.01	TCLP	5.055g		PrepComments:APOSEY K-BALANCE-48 11262018
5	K1811381-004	.01	TCLP	100.03g		PrepComments:CLUKKEN K-Balance-52
6	K1811381-004 DUP KQ1817213-03	.01	TCLP	5.064g		PrepComments:APOSEY K-BALANCE-48 11262018
7	K1811381-005	.01	TCLP	100.38g	fuel smell	PrepComments:CLUKKEN K-Balance-52
8	K1811381-005 DUP KQ1817213-04	.01	TCLP	5.122g		PrepComments:APOSEY K-BALANCE-48 11262018

Relinquished By:	Date/Time:	Received By:	Date/Time:
Caby Hall	11/26/18 11:41	Caby Hall	11/26/18 11:57

Pre-Prep Information Benchsheet

Prep Run #: 327083 **Prep Method:** **Team:** **Container Lot No:** 100818-5 **Prep Due Date:** Dec-04-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1811438-001	.09	TCLP	100.55g		PrepComments:APOSEY K-BALANCE-48 11262018
2	K1811438-001 DUP KQ1817239-01	.09	TCLP	5.176g		PrepComments:APOSEY K-BALANCE-48 11262018
3	K1811438-002	.01	TCLP	100.08g		PrepComments:Cody L K-BALANCE-52 APOSEY K-BALANCE-48 11262018
4	K1811438-002 DUP KQ1817239-02	.01	TCLP	5.055g		PrepComments:APOSEY K-BALANCE-48 11262018

Relinquished By: DPy	Date/Time: 11-26-2018 15:49	Received By: Cody	Date/Time: 11/26/18 1557

Service Request # K1811772, K1811775, K1811608, K1811610, K1811658, K1811741, K1811743, K1811746, K1811433 (TCLP), K1811381 (TCLP), K1811438 (TCLP), K1811468
Instrument ID# K-ICP-AES-03
Calibration 121018AICP03
ALS LIMS Run # 618090
Pipette IDs: OU18256, 242761252, DJ07632
Pipette Calibration Due: 12/25/18

ICP-OES Data Review Form

		Yes	No
1.	Appropriate standardization completed	X	
2.	ICV within control limits	X	
3.	CCV's in control	X	
4.	ICB/CCB's below MRL	X	
4.	LLICV standard analyzed and in control	X	
5.	ICS standards within 20% of true value	X	
7.	All analytes within instrument linear range	X	
7.	Adequate rinse out time allowed	X	
8.	Was the run terminated? If so, why.		X

See Benchsheet exception report for sample batch QC information.
Comments:
6010: NR Ti
After 11:35 MRL for Na=2X
After 12:11 NR Si
After 14:38 NR Al1670, Na, K
After 15:18 NR Ca3933, Mg2795, S

Primary Review by _____ Date 12/10/18

Secondary Review by _____ Date 12/11/18

Data Review Form

Instrument ID#: **K-ICP-AES-03**
DataFile Name: **R:\ICP\WIP\DATA\K-ICP-AES-03 (6500)\121018AICP03.txt**
RUNNO: **618090**

K1811381

No exceptions to report.

K1811433

No exceptions to report.

K1811438

No exceptions to report.

K1811468

No exceptions to report.

K1811608

No exceptions to report.

K1811610

No exceptions to report.

K1811658

No exceptions to report.

K1811707 Send back for redigest

No exceptions to report.

K1811741

No exceptions to report.

K1811743

No exceptions to report.

K1811746

No exceptions to report.

K1811772

No exceptions to report.

Primary Approver: 12/10/18
Secondary Approver:

Data Review Form

Instrument ID#: **K-ICP-AES-03**
DataFile Name: **R:\ICP\WIP\DATA\K-ICP-AES-03 (6500)\121018AICP03.txt**
RUNNO: **618090**

K1811775

No exceptions to report.

Sample Name: BLK Acquired: 12/10/2018 9:00:07 Type: Cal
Method: 2018B-6010-ICP-03(v21) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: INT.STD.ICP17-85-C

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.0003	-48.06	3.470	2.292	.0085	1.2211	25.55
Stddev	.0001	6.01	.225	.396	.0007	1.3744	.66
%RSD	14.61	12.50	6.495	17.29	7.968	112.55	2.593
#1	-.0003	-43.81	3.629	2.012	.0090	2.1930	26.02
#2	-.0004	-52.30	3.310	2.573	.0080	.24930	25.08

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.0005	-.0002	.0024	.0651	.0000	.0003	-.0005
Stddev	.0002	.0002	.0011	.0019	.000	.0002	.0001
%RSD	36.11	92.97	45.69	2.856	43.29	73.59	30.35
#1	-.0006	-.0001	.0016	.0664	.0000	.0004	-.0004
#2	-.0003	-.0003	.0032	.0637	.0000	.0001	-.0006

Elem	Cu3273	Fe2599	Pb2203	Li6707	Mg2790	Mg2795	Mg2852
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-215.1	.0003	.0001	-38.43	-.0001	.0011	-7.734
Stddev	11.9	.0004	.0000	7.76	.0004	.0000	2.240
%RSD	5.550	158.5	47.04	20.20	641.4	3.880	28.97
#1	-206.7	.0000	.0001	-32.94	-.0003	.0011	-6.150
#2	-223.6	.0006	.0001	-43.92	.0002	.0011	-9.318

Elem	Mn2576	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00000	.0000	.0002	.0002	.0002	66.31	-.0001
Stddev	.0000	.000	.0001	.0001	.0001	10.95	.0000
%RSD	1160.5	42.52	70.98	72.18	69.39	16.52	10.54
#1	.00002	.0000	.0001	.0001	.0001	58.57	-.0001
#2	-.00002	.0000	.0003	.0002	.0002	74.05	-.0001

Sample Name: BLK Acquired: 12/10/2018 9:00:07 Type: Cal
Method: 2018B-6010-ICP-03(v21) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: INT.STD.ICP17-85-C

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.419	-6.655	261.7	-.00440	-.0001	.0001	.0068
Stddev	.043	1.796	1.2	.00058	.0002	.0001	.0000
%RSD	1.272	26.99	.4396	13.237	213.9	81.23	.3384
#1	3.450	-7.925	262.5	-.00399	-.0002	.0001	.0068
#2	3.388	-5.385	260.9	-.00481	.0000	.0000	.0068

Elem	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0001	.0000	1.769	.0009	-1.696
Stddev	.0000	.0001	1.183	.0001	.024
%RSD	24.57	528.9	66.87	12.40	1.413
#1	.0000	-.0001	.9328	.0009	-1.679
#2	.0001	.0001	2.606	.0010	-1.713

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6440.0	106310.	7930.3
Stddev	5.9	295.	55.0
%RSD	.09205	.27739	.69375
#1	6444.2	106100.	7891.4
#2	6435.8	106520.	7969.2

AReu 12/10/18

Sample Name: STD A Acquired: 12/10/2018 9:02:33 Type: Cal
Method: 2018B-6010-ICP-03(v21) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-82-A

Elem	Al1670	Sb2068	Be2348	B_2496	Cd2144	Cd2265	Ca3933	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0906	276.6	26915.	2748.	1.262	1.032	16.95	.0580
Stddev	.0005	2.5	5.	3.	.003	.003	.18	.0009
%RSD	.5491	.8924	.01875	.1118	.2563	.2555	1.075	1.571
#1	.0910	278.3	26919.	2746.	1.264	1.034	17.08	.0586
#2	.0903	274.8	26912.	2750.	1.260	1.030	16.82	.0574

Elem	Co2307	Cu2247	Cu3273	Pb2203	Mg2795	Mn2576	Mo2020	Ni2216
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.3840	.2154	8845.	.0859	3.006	.40713	.2890	.4114
Stddev	.0001	.0004	5.	.0001	.037	.00558	.0001	.0008
%RSD	.0152	.1708	.0596	.1370	1.220	1.3712	.0385	.1823
#1	.3840	.2151	8848.	.0860	3.032	.41107	.2889	.4120
#2	.3839	.2157	8841.	.0858	2.980	.40318	.2891	.4109

Elem	Se1960	Ag3280	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0307	11260.	.0584	.0684	.2586	.0815	.3247	6034.
Stddev	.0001	33.	.0000	.0001	.0030	.0009	.0011	48.
%RSD	.2123	.2894	.0826	.0734	1.172	1.071	.3512	.7973
#1	.0307	11240.	.0584	.0685	.2607	.0821	.3255	6068.
#2	.0308	11290.	.0584	.0684	.2564	.0809	.3239	6000.

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6383.7	105670.	7790.1
Stddev	47.1	1571.	76.3
%RSD	.73824	1.4868	.97898
#1	6417.0	104550.	7736.1
#2	6350.3	106780.	7844.0

Sample Name: STD B Acquired: 12/10/2018 9:04:50 Type: Cal
Method: 2018B-6010-ICP-03(v21) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-85-B

Elem	Al3944	As1890	Ba4554	Ca3158	Fe2599	Li6707	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	125300.	709.6	105.2	2.217	2.262	27710.	.4144
Stddev	1967.	2.8	2.6	.016	.001	67.	.0021
%RSD	1.570	.3963	2.431	.7187	.0380	.2418	.5155
#1	126700.	711.6	103.4	2.228	2.263	27750.	.4159
#2	123900.	707.6	107.0	2.205	2.261	27660.	.4129

Elem	Mg2852	Mn2605	P_1782	K_7664	Si2516	Na5895	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	54720.	.0539	1.048	9420.	5401.	41810.	21.062
Stddev	328.	.0003	.002	95.	10.	227.	.134
%RSD	.5998	.6259	.1707	1.006	.1844	.5438	.63514
#1	54950.	.0542	1.049	9487.	5408.	41970.	21.157
#2	54490.	.0537	1.046	9353.	5394.	41650.	20.967

Elem	Bi2230	S_1820
Units	Cts/S	Cts/S
Avg	.2480	385.9
Stddev	.0009	1.0
%RSD	.3550	.2607
#1	.2486	386.6
#2	.2473	385.2

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6222.0	102950.	7874.8
Stddev	3.7	248.	6.9
%RSD	.05883	.24105	.08795
#1	6224.6	102780.	7879.7
#2	6219.4	103130.	7869.9

Sample Name: ICVB Acquired: 12/10/2018 9:07:46 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-82-D

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9167	.9702	-.0014	.0046	.0012	.00011	1.997	-.0001
Stddev	.0037	.0153	.0016	.0003	.0001	.00008	.009	.0000
%RSD	.4088	1.580	109.9	6.749	8.116	75.077	.4742	43.39
#1	.9194	.9811	-.0025	.0044	.0012	.00017	1.991	-.0001
#2	.9141	.9594	-.0003	.0049	.0013	.00005	2.004	-.0001
Check ?	Chk Pass	None	None	None	None	None	Chk Pass	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	4.926	4.643	-.0006	.0006	.0007	-.0004	9.969
Stddev	.0001	.010	.058	.0002	.0002	.0001	.0000	.035
%RSD	22.70	.2086	1.243	33.50	36.13	17.32	.5071	.3493
#1	-.0002	4.933	4.684	-.0007	.0004	.0006	-.0004	9.994
#2	-.0003	4.918	4.603	-.0005	.0008	.0008	-.0004	9.945
Check ?	None	None	Chk Pass	None	None	None	None	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	2.012	4.869	4.648	5.016	9.0949	9.547	-.0002
Stddev	.0006	.006	.042	.020	.005	.0968	.026	.0004
%RSD	73.45	.3227	.8617	.4269	.1034	1.0644	.2777	176.5
#1	.0004	2.017	4.899	4.662	5.020	9.1633	9.566	.0001
#2	.0012	2.008	4.839	4.633	5.012	9.0264	9.528	-.0005
Check ?	None	Chk Pass	None	Chk Pass	None	None	Chk Pass	None
Value								
Range								

Sample Name: ICVB Acquired: 12/10/2018 9:07:46 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-82-D

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	4.942	-.0436	.0013	5.053	-.0006	13.95	1.9916
Stddev	.0002	.016	.0149	.0017	.028	.0004	.01	.0096
%RSD	28.64	.3199	34.14	128.5	.5573	70.35	.1053	.48057
#1	.0009	4.953	-.0330	.0026	5.033	-.0003	13.96	1.9984
#2	.0006	4.931	-.0541	.0001	5.072	-.0009	13.94	1.9848
Check ?	None	Chk Pass	None	None	Chk Pass	None	None	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	4.746	-.0020	.0015	.0002	.0006	5.026	4.948
Stddev	.0003	.011	.0004	.0001	.0002	.0001	.017	.008
%RSD	36.41	.2203	22.86	7.826	73.69	11.26	.3319	.1698
#1	-.0007	4.753	-.0016	.0016	.0004	.0005	5.038	4.954
#2	-.0011	4.739	-.0023	.0014	.0001	.0006	5.014	4.942
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6349.9	107210.	8002.1
Stddev	8.3	577.	43.0
%RSD	.13143	.53790	.53693
#1	6344.0	106810.	7971.7
#2	6355.8	107620.	8032.5

Sample Name: ICV Acquired: 12/10/2018 9:10:22 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-90-A

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.235	5.097	2.359	2.467	4.796	.12392	.0033	1.203
Stddev	.026	.040	.009	.007	.007	.00037	.0008	.004
%RSD	.6112	.7886	.3857	.2747	.1513	.29844	25.30	.3359
#1	4.253	5.069	2.365	2.471	4.791	.12366	.0039	1.206
#2	4.217	5.126	2.353	2.462	4.801	.12418	.0027	1.200
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.198	12.07	11.37	.4544	1.182	.5989	.5667	2.488
Stddev	.005	.12	.01	.0021	.002	.0006	.0034	.011
%RSD	.4300	1.020	.0858	.4665	.1951	.1030	.5968	.4383
#1	1.202	11.98	11.37	.4529	1.184	.5993	.5643	2.480
#2	1.195	12.16	11.38	.4559	1.180	.5984	.5691	2.495
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.392	.0005	12.17	10.97	12.32	1.1328	1.166	.4941
Stddev	.004	.0017	.05	.11	.04	.0053	.002	.0014
%RSD	.1795	361.7	.3874	1.048	.2978	.46926	.1481	.2825
#1	2.395	.0017	12.14	10.89	12.34	1.1290	1.167	.4951
#2	2.389	-.0007	12.21	11.05	12.29	1.1366	1.165	.4931
Check ?	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: ICV Acquired: 12/10/2018 9:10:22 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-90-A

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.181	.0037	12.13	2.443	.0034	.5868	12.43	.00105
Stddev	.004	.0022	.05	.006	.0149	.0027	.13	.00010
%RSD	.3658	57.83	.3746	.2352	437.1	.4686	1.026	9.6575
#1	1.184	.0053	12.16	2.447	-.0071	.5849	12.52	.00112
#2	1.178	.0022	12.10	2.439	.0139	.5888	12.34	.00097
Check ?	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.391	.0048	1.919	1.188	1.200	1.178	.0042	.0037
Stddev	.005	.0002	.014	.004	.006	.004	.0020	.0018
%RSD	.2117	3.709	.7476	.3081	.5011	.3308	48.23	49.24
#1	2.394	.0049	1.909	1.186	1.204	1.181	.0027	.0024
#2	2.387	.0047	1.929	1.191	1.196	1.175	.0056	.0050
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6273.4	108680.	8091.0
Stddev	1.9	151.	46.8
%RSD	.03106	.13855	.57865
#1	6274.8	108790.	8124.2
#2	6272.0	108580.	8057.9

Sample Name: ICB Acquired: 12/10/2018 9:12:44 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	-.0009	.0190	.0010	.0002	-.00001	.0012
Stddev	.0000	.0017	.0020	.0010	.0001	.00002	.0002
%RSD	1.705	188.4	10.40	99.54	29.35	235.72	17.26
#1	.0010	-.0021	.0176	.0003	.0002	.00000	.0011
#2	.0010	.0003	.0204	.0017	.0003	-.00002	.0014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0001	-.0045	.0005	-.0003	.0000	.0003
Stddev	.0000	.0001	.0047	.0000	.0003	.0002	.0003
%RSD	28.30	102.3	103.5	8.240	126.6	526.0	75.40
#1	.0001	.0000	-.0078	.0005	-.0005	-.0001	.0005
#2	.0001	.0001	-.0012	.0005	.0000	.0002	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cu3273	Fe2599	Pb2203	Li6707	Mg2790	Mg2795	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.0044	.0004	-.0016	-.0030	.0002	.0002
Stddev	.0001	.0019	.0007	.0014	.0021	.0000	.0013
%RSD	11.37	42.47	199.4	91.30	69.78	17.17	683.4
#1	.0009	.0031	.0009	-.0006	-.0045	.0002	.0011
#2	.0011	.0057	-.0002	-.0026	-.0015	.0002	-.0007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ICB Acquired: 12/10/2018 9:12:44 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Mn2576	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00018	-.0002	.0015	.0005	.0026	-.0192	.0060
Stddev	.00005	.0005	.0001	.0003	.0013	.0251	.0040
%RSD	25.939	201.7	6.630	64.30	49.34	130.7	66.69
#1	.00015	.0001	.0016	.0003	.0017	-.0369	.0032
#2	.00022	-.0006	.0014	.0007	.0035	-.0015	.0088
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	-.0004	-.0422	.00004	.0070	.0008	F -.0021
Stddev	.0050	.0000	.0035	.00026	.0015	.0003	.0003
%RSD	1716.	9.637	8.381	632.89	20.96	31.43	13.88
#1	.0032	-.0004	-.0397	-.00014	.0060	.0010	-.0023
#2	-.0038	-.0005	-.0447	.00022	.0081	.0006	-.0019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.0020
Low Limit							-.0020

Elem	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0000	.0001	-.0016	.0018
Stddev	.0001	.000	.0000	.0018	.0022
%RSD	37.97	478.9	20.20	113.6	118.8
#1	.0001	.0000	.0001	-.0003	.0034
#2	.0003	-.0001	.0001	-.0029	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

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Sample Name: ICB Acquired: 12/10/2018 9:12:44 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6329.7	109700.	8031.8
Stddev	20.8	694.	115.9
%RSD	.32836	.63229	1.4430
#1	6315.0	110190.	8113.8
#2	6344.4	109210.	7949.8

Sample Name: LLICV Acquired: 12/10/2018 9:15:14 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-91-C 0.5/50mL

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0111	.0106	.0210	.0119	.0042	.00106	.0210
Stddev	.0000	.0001	.0019	.0002	.0001	.00007	.0011
%RSD	.0208	.8096	8.835	1.448	3.140	6.8212	5.279
#1	.0111	.0107	.0197	.0118	.0041	.00101	.0203
#2	.0111	.0106	.0223	.0121	.0043	.00111	.0218
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	.0010	.0173	.0197	.0037	.0021	.0043
Stddev	.0000	.0001	.0122	.0005	.0008	.0002	.0006
%RSD	2.245	7.014	70.40	2.609	20.12	7.791	12.96
#1	.0011	.0010	.0259	.0201	.0043	.0022	.0047
#2	.0011	.0011	.0087	.0193	.0032	.0020	.0039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cu3273	Fe2599	Pb2203	Li6707	Mg2790	Mg2795	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045	.0233	.0089	.0217	.0001	.0051	.0056
Stddev	.0005	.0003	.0005	.0005	.0063	.0005	.0007
%RSD	11.77	1.348	5.760	2.138	4867.	10.57	12.41
#1	.0049	.0231	.0085	.0221	.0046	.0055	.0061
#2	.0041	.0235	.0092	.0214	-.0043	.0047	.0051
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
Value							
Range							

See rerun
AKm 12/10/18

Sample Name: LLICV Acquired: 12/10/2018 9:15:14 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-91-C 0.5/50mL

Elem	Mn2576	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .00134	.0003	.0039	.0040	.0396	.1666	.0230
Stddev	.00047	.0002	.0000	.0001	.0020	.0467	.0014
%RSD	34.837	68.82	.6546	1.347	5.107	28.02	5.922
#1	.00167	.0002	.0039	.0039	.0381	.1336	.0240
#2	.00101	.0004	.0039	.0040	.0410	.1996	.0221
Check ?	Chk Fail	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.00100						
Range	30.000%						

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2015	.0033	.1785	.00105	.0107	.0201	F .0001
Stddev	.0020	.0003	.0091	.00013	.0000	.0004	.0004
%RSD	.9751	9.214	5.074	12.743	.0111	1.897	652.9
#1	.2029	.0031	.1849	.00115	.0107	.0204	.0003
#2	.2002	.0035	.1721	.00096	.0107	.0199	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							.0020
Range							-30.00%

Elem	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0037	.0037	.0039	.0212	.0416
Stddev	.0001	.0000	.0001	.0005	.0010
%RSD	4.052	1.188	1.295	2.422	2.341
#1	.0038	.0038	.0039	.0216	.0422
#2	.0036	.0037	.0039	.0209	.0409
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

ARm 12/10/18

Sample Name: LLICV Acquired: 12/10/2018 9:15:14 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-91-C 0.5/50mL

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6391.2	108540.	8053.0
Stddev	13.9	1228.	98.7
%RSD	.21718	1.1310	1.2258
#1	6381.4	109410.	8122.8
#2	6401.0	107670.	7983.2

AR cm 12/10/18

Sample Name: LLICV Acquired: 12/10/2018 9:17:52 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-91-C 0.5/50mL RERUN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0103	.0099	.0186	.0102	.0036	.00109	.0193
Stddev	.0002	.0009	.0010	.0011	.0000	.00006	.0006
%RSD	1.467	8.714	5.140	10.69	1.003	5.6138	2.901
#1	.0102	.0093	.0180	.0095	.0036	.00104	.0197
#2	.0104	.0105	.0193	.0110	.0036	.00113	.0189
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	.0010	F .0130	.0192	.0039	.0019	.0043
Stddev	.0000	.0000	.0091	.0002	.0003	.0001	.0002
%RSD	2.918	3.545	69.97	.9493	8.476	4.944	3.489
#1	.0011	.0010	.0065	.0193	.0037	.0018	.0044
#2	.0011	.0011	.0194	.0190	.0041	.0020	.0042
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.0200				
Range			-30.00%				

Elem	Cu3273	Fe2599	Pb2203	Li6707	Mg2790	Mg2795	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037	.0221	.0082	.0209	-.0028	.0045	.0060
Stddev	.0000	.0037	.0012	.0001	.0366	.0001	.0000
%RSD	1.306	16.78	14.98	.6811	1291.	3.187	.4258
#1	.0036	.0195	.0074	.0208	-.0287	.0046	.0060
#2	.0037	.0247	.0091	.0210	.0230	.0044	.0060
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
Value							
Range							

Sample Name: LLICV Acquired: 12/10/2018 9:17:52 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-91-C 0.5/50mL RERUN

Elem	Mn2576	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00093	.0008	.0036	.0041	.0415	.1622	.0207
Stddev	.00003	.0006	.0002	.0001	.0023	.0253	.0010
%RSD	3.0277	72.89	5.786	2.073	5.459	15.60	4.919
#1	.00091	.0012	.0038	.0041	.0399	.1443	.0200
#2	.00095	.0004	.0035	.0042	.0431	.1801	.0214
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1924	.0040	.1602	.00099	.0108	.0206	F -.0001
Stddev	.0045	.0001	.0028	.00001	.0005	.0004	.0001
%RSD	2.314	2.289	1.724	.85219	4.512	2.122	58.77
#1	.1955	.0041	.1622	.00098	.0111	.0209	-.0002
#2	.1892	.0040	.1583	.00099	.0104	.0203	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							.0020
Range							-30.00%

Elem	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0034	.0038	.0038	.0214	.0441
Stddev	.0002	.0001	.0001	.0009	.0048
%RSD	6.193	2.009	2.138	4.090	10.83
#1	.0036	.0037	.0038	.0221	.0475
#2	.0033	.0038	.0039	.0208	.0407
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Sample Name: LLICV Acquired: 12/10/2018 9:17:52 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-91-C 0.5/50mL RERUN

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6344.7	107770.	8026.7
Stddev	22.3	668.	111.6
%RSD	.35111	.61945	1.3906
#1	6329.0	107300.	7947.8
#2	6360.5	108250.	8105.6

Sample Name: LLICV,0.5 Acquired: 12/10/2018 9:21:02 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-91-C 1/50mL

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0204	.0210	.0397	.0218	.0074	.00195	.0396	.0021
Stddev	.0004	.0021	.0016	.0012	.0001	.00006	.0007	.0000
%RSD	2.126	9.977	4.009	5.469	1.248	2.8875	1.785	.5813
#1	.0207	.0225	.0385	.0226	.0074	.00199	.0391	.0021
#2	.0201	.0196	.0408	.0209	.0075	.00191	.0401	.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	.0354	.0376	.0064	.0036	.0078	.0083	.0410
Stddev	.0000	.0072	.0001	.0003	.0003	.0001	.0007	.0033
%RSD	1.773	20.32	.3477	3.975	7.221	1.560	8.631	7.994
#1	.0019	.0405	.0375	.0062	.0034	.0077	.0078	.0387
#2	.0020	.0303	.0377	.0066	.0038	.0079	.0088	.0434
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0183	.0395	.0063	.0089	.0101	.00176	.0017	.0074
Stddev	.0004	.0001	.0307	.0001	.0004	.00010	.0006	.0002
%RSD	2.294	.2894	484.8	.7262	3.860	5.5847	34.33	2.225
#1	.0180	.0394	-.0154	.0089	.0104	.00169	.0013	.0075
#2	.0186	.0396	.0281	.0090	.0098	.00183	.0022	.0073
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

AKen 12/10/18

Sample Name: LLICV,0.5 Acquired: 12/10/2018 9:21:02 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-91-C 1/50mL

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0078	.0784	.3782	.0426	.4026	.0079	.3658	.00185
Stddev	.0002	.0003	.1130	.0024	.0010	.0002	.0098	.00009
%RSD	2.861	.4082	29.89	5.741	.2547	2.827	2.672	4.7909
#1	.0080	.0787	.2983	.0443	.4019	.0080	.3589	.00192
#2	.0077	.0782	.4581	.0408	.4033	.0077	.3727	.00179
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0208	.0388	F .0018	.0068	.0073	.0077	.0445	.0818
Stddev	.0004	.0001	.0002	.0005	.0001	.0002	.0002	.0007
%RSD	2.040	.1896	8.443	7.044	1.292	1.961	.3525	.9111
#1	.0211	.0387	.0019	.0064	.0072	.0078	.0446	.0813
#2	.0205	.0388	.0017	.0071	.0074	.0076	.0444	.0823
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.0040					
Range			-30.00%					

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6443.2	109520.	8134.8
Stddev	18.4	1055.	14.7
%RSD	.28627	.96320	.18122
#1	6456.3	110270.	8145.2
#2	6430.2	108780.	8124.4

AB 12/20/18

Sample Name: CCVB1 Acquired: 12/10/2018 9:23:32 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.152	10.30	-.0004	1.001	10.07	.00007	.0006	-.0001
Stddev	.284	.02	.0004	.007	.02	.00009	.0001	.0000
%RSD	3.976	.1592	97.05	.7040	.1552	135.21	15.51	49.04
#1	7.353	10.31	-.0001	.9964	10.09	.00013	.0007	.0000
#2	6.951	10.29	-.0006	1.006	10.06	.00000	.0005	-.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	9.964	9.477	-.0003	.0001	-.0001	.0005	10.14
Stddev	.0000	.065	.056	.0000	.0001	.0000	.0003	.00
%RSD	15.19	.6523	.5875	7.028	88.53	25.89	57.71	.0048
#1	-.0002	10.01	9.438	-.0003	.0000	-.0001	.0003	10.14
#2	-.0003	9.918	9.516	-.0003	.0001	-.0001	.0007	10.14
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0018	1.005	10.00	9.198	9.978	.94722	.9770	-.0005
Stddev	.0012	.010	.02	.091	.012	.01178	.0116	.0002
%RSD	67.48	.9563	.2022	.9924	.1171	1.2436	1.185	51.57
#1	-.0009	.9981	10.02	9.262	9.969	.95555	.9852	-.0003
#2	-.0026	1.012	9.990	9.133	9.986	.93889	.9688	-.0006
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB1 Acquired: 12/10/2018 9:23:32 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	10.20	9.903	.0012	10.04	-.0006	9.990	.99718
Stddev	.0000	.03	.120	.0004	.04	.0001	.087	.00191
%RSD	21.77	.3261	1.208	29.41	.3994	19.53	.8746	.19181
#1	-.0002	10.22	9.818	.0010	10.01	-.0007	9.928	.99853
#2	-.0001	10.18	9.987	.0015	10.07	-.0005	10.05	.99583
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0004	-.0014	.0001	.0001	.0002	1.032	1.003
Stddev	.0018	.0005	.0001	.0003	.0000	.0000	.002	.003
%RSD	1399.	119.0	10.36	286.2	14.28	12.16	.1895	.3304
#1	-.0014	.0001	-.0013	.0003	.0001	.0002	1.034	1.000
#2	.0012	.0007	-.0015	-.0001	.0001	.0002	1.031	1.005
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6223.2	105190.	7871.1
Stddev	10.2	1322.	6.8
%RSD	.16348	1.2571	.08600
#1	6216.0	104260.	7866.3
#2	6230.4	106130.	7875.9

Sample Name: CCVA1 Acquired: 12/10/2018 9:26:13 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2399	.2815	.2490	.2601	.2555	.25139	.2483	.2513
Stddev	.0028	.0006	.0022	.0012	.0025	.00003	.0003	.0008
%RSD	1.184	.2242	.8681	.4545	.9948	.01206	.1368	.3167
#1	.2419	.2811	.2474	.2609	.2537	.25141	.2486	.2519
#2	.2379	.2820	.2505	.2592	.2573	.25137	.2481	.2507
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2509	.5070	.4914	.2419	.2502	.2520	.2465	.2648
Stddev	.0014	.0097	.0062	.0019	.0006	.0018	.0016	.0080
%RSD	.5741	1.912	1.271	.7679	.2223	.7295	.6551	3.019
#1	.2520	.5001	.4870	.2406	.2506	.2533	.2453	.2592
#2	.2499	.5138	.4958	.2432	.2498	.2507	.2476	.2705
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2499	-.0023	.2453	.2441	.2579	.24640	.2489	.2505
Stddev	.0041	.0017	.0171	.0030	.0003	.00114	.0042	.0021
%RSD	1.639	74.88	6.974	1.212	.1227	.46184	1.676	.8572
#1	.2527	-.0011	.2332	.2421	.2577	.24559	.2459	.2521
#2	.2470	-.0035	.2574	.2462	.2581	.24720	.2518	.2490
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA1 Acquired: 12/10/2018 9:26:13 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2513	.0032	2.546	.2502	.1260	.2523	.2181	.00032
Stddev	.0022	.0016	.016	.0027	.0103	.0009	.0083	.00038
%RSD	.8844	51.03	.6428	1.060	8.136	.3750	3.798	119.55
#1	.2529	.0044	2.558	.2521	.1188	.2530	.2239	.00059
#2	.2497	.0020	2.535	.2483	.1333	.2517	.2122	.00005
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2529	.2503	.2462	.2457	.2501	.2510	.0000	-.0019
Stddev	.0017	.0006	.0011	.0011	.0004	.0005	.0002	.0000
%RSD	.6602	.2303	.4353	.4447	.1582	.1794	458.5	.5098
#1	.2541	.2499	.2454	.2450	.2504	.2513	.0002	-.0019
#2	.2517	.2508	.2469	.2465	.2498	.2507	-.0001	-.0019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6372.6	107500.	7985.3
Stddev	28.3	527.	117.7
%RSD	.44361	.49056	1.4740
#1	6352.6	107870.	8068.5
#2	6392.6	107120.	7902.0

Sample Name: CCB Acquired: 12/10/2018 9:28:31 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	-.0028	-.0024	.0005	-.0004	.00000	-.0003	.0000
Stddev	.0002	.0001	.0012	.0011	.0002	.0000	.0003	.0000
%RSD	39.28	2.486	49.97	203.4	47.99	509.40	81.42	168.0
#1	.0006	-.0029	-.0015	-.0002	-.0003	-.00001	-.0005	.0000
#2	.0003	-.0028	-.0032	.0013	-.0006	.00001	-.0001	.0001
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0075	.0002	.0000	-.0002	.0000	.0003	.0046
Stddev	.0000	.0123	.0000	.000	.0003	.000	.0005	.0014
%RSD	107.8	163.4	7.617	461.9	161.7	28.69	197.3	31.48
#1	.0000	.0012	.0002	.0001	.0000	.0000	.0006	.0056
#2	.0001	-.0162	.0002	-.0002	-.0004	-.0001	-.0001	.0036
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	-.0011	-.0142	.0001	.0002	.00004	.0012	.0006
Stddev	.0006	.0001	.0072	.0000	.0004	.00000	.0005	.0000
%RSD	292.0	8.475	50.72	12.36	165.9	5.1475	42.24	4.982
#1	.0002	-.0012	-.0193	.0001	.0000	.00004	.0008	.0006
#2	-.0006	-.0011	-.0091	.0001	.0005	.00003	.0015	.0006
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 12/10/2018 9:28:31 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0003	-.0088	.0020	-.0047	-.0004	-.0420	-.00003
Stddev	.0001	.0006	.0435	.0011	.0042	.0004	.0029	.00015
%RSD	33.77	185.9	495.9	55.54	89.07	105.4	6.916	559.38
#1	.0003	.0008	.0220	.0012	-.0017	-.0007	-.0399	.00008
#2	.0005	-.0001	-.0395	.0028	-.0077	-.0001	-.0440	-.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0051	.0009	-.0008	-.0004	-.0001	.0000	-.0006	.0030
Stddev	.0014	.0005	.0002	.0002	.0000	.0001	.0045	.0015
%RSD	26.75	52.45	29.03	50.88	56.52	523.2	768.6	51.16
#1	.0041	.0006	-.0009	-.0003	.0000	.0001	.0026	.0019
#2	.0060	.0012	-.0006	-.0006	-.0001	-.0001	-.0038	.0041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6437.2	105620.	7843.1
Stddev	14.9	644.	52.5
%RSD	.23146	.60947	.66892
#1	6426.7	106070.	7880.2
#2	6447.7	105160.	7806.0

Sample Name: LLICV-TCLP Acquired: 12/10/2018 9:31:19 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-81-I 0.2/10mL

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-.0006	-.0021	-.0011	.2013	.00005	.0002	.0000
Stddev	.0002	.0010	.0002	.0013	.0017	.00002	.0003	.0000
%RSD	31.19	171.7	9.716	112.6	.8477	54.881	137.4	48.40
#1	.0004	-.0012	-.0020	-.0002	.2025	.00006	.0004	.0001
#2	.0006	.0001	-.0023	-.0020	.2001	.00003	.0000	.0000
Check ?	None	None	None	None	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0004	.0023	-.0004	.0000	.0001	.0000	.0012
Stddev	.0001	.0031	.0003	.0005	.000	.0001	.0009	.0019
%RSD	70.01	797.6	12.05	127.8	7323.	48.87	2338.	158.3
#1	.0001	-.0025	.0025	-.0008	-.0001	.0002	.0007	.0025
#2	.0002	.0018	.0021	.0000	.0001	.0001	-.0006	-.0001
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	-.0014	-.0249	.0009	.0016	.00002	.0004	.0001
Stddev	.0002	.0007	.0002	.0002	.0019	.00004	.0004	.0002
%RSD	17.87	49.76	.9129	17.94	119.7	224.61	108.0	180.6
#1	-.0010	-.0009	-.0247	.0010	.0002	.00005	.0006	.0000
#2	-.0013	-.0019	-.0250	.0008	.0029	-.00001	.0001	.0003
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Sample Name: LLICV-TCLP Acquired: 12/10/2018 9:31:19 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-81-I 0.2/10mL

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0010	-.0204	.0014	-.0040	-.0009	-.0190	.00008
Stddev	.0002	.0008	.0169	.0012	.0008	.0001	.0004	.00014
%RSD	52.01	81.09	82.89	88.65	19.79	6.602	1.971	188.91
#1	.0002	.0004	-.0324	.0023	-.0045	-.0010	-.0193	.00018
#2	.0004	.0016	-.0084	.0005	-.0034	-.0009	-.0188	-.00003
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0001	-.0006	-.0007	.1902	.1981	.0004	.0006
Stddev	.0005	.0006	.0001	.0001	.0001	.0003	.0005	.0014
%RSD	121.4	640.8	21.80	13.52	.0497	.1521	141.9	212.8
#1	.0008	.0005	-.0005	-.0006	.1902	.1979	.0007	.0016
#2	.0001	-.0003	-.0007	-.0007	.1903	.1983	.0000	-.0003
Check ?	None	None	None	None	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6523.5	108750.	8101.3
Stddev	8.1	59.	3.1
%RSD	.12397	.05445	.03836
#1	6529.3	108790.	8103.5
#2	6517.8	108710.	8099.1

Sample Name: ICSA Acquired: 12/10/2018 9:34:26 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-79-A

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.25	378.2	.0060	-.0001	-.0002	.00062	.0116	-.0014
Stddev	.04	3.1	.0021	.0022	.0002	.00004	.0005	.0000
%RSD	.1972	.8149	34.07	1673.	77.06	6.2119	4.266	2.097
#1	20.22	380.4	.0075	-.0017	-.0003	.00064	.0112	-.0014
#2	20.28	376.0	.0046	.0014	-.0001	.00059	.0119	-.0013
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0055	471.1	*****	.0015	-.0030	-.0111	-.0009	187.3
Stddev	.0002	2.3	-----	.0001	.0001	.0006	.0001	.2
%RSD	2.965	.4979	-----	7.188	4.952	5.332	15.18	.0917
#1	-.0054	472.8	-----	.0014	-.0031	-.0115	-.0009	187.2
#2	-.0056	469.5	-----	.0016	-.0029	-.0107	-.0008	187.5
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0103	.0059	516.0	*****	440.1	-.00158	-.0121	-.0008
Stddev	.0004	.0002	.3	-----	5.1	.00008	.0004	.0005
%RSD	3.770	2.991	.0573	-----	1.164	4.9789	3.607	63.55
#1	-.0106	.0058	515.8	-----	443.7	-.00152	-.0118	-.0004
#2	-.0100	.0061	516.2	-----	436.5	-.00163	-.0125	-.0011
Check ?	None	None	Chk Pass	None	None	None	None	None
Value								
Range								

Sample Name: ICSA Acquired: 12/10/2018 9:34:26 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-79-A

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024	.0093	.0385	.0060	-.0079	-.0003	-.0369	.00454
Stddev	.0001	.0029	.0378	.0009	.0038	.0003	.0071	.00001
%RSD	5.290	30.84	98.11	15.40	47.78	84.70	19.26	.11784
#1	.0023	.0113	.0653	.0053	-.0106	-.0005	-.0419	.00454
#2	.0024	.0072	.0118	.0066	-.0053	-.0001	-.0319	.00454
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050	.0008	-.0012	.0011	.0007	-.0007	.0168	.0095
Stddev	.0001	.0012	.0003	.0006	.0000	.0003	.0013	.0046
%RSD	1.432	153.9	20.85	58.03	2.328	41.66	7.747	48.30
#1	.0051	-.0001	-.0011	.0015	.0007	-.0005	.0178	.0127
#2	.0050	.0017	-.0014	.0006	.0007	-.0009	.0159	.0062
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5700.1	93503.	7573.7
Stddev	13.8	375.	20.3
%RSD	.24256	.40112	.26797
#1	5709.8	93768.	7559.4
#2	5690.3	93237.	7588.1

Sample Name: ICSAB Acquired: 12/10/2018 9:37:12 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-74-C

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.40	403.6	.8989	-.0046	.5376	.48648	.0127	.9488
Stddev	.15	1.1	.0005	.0004	.0122	.00145	.0026	.0024
%RSD	.7326	.2621	.0598	8.650	2.277	.29903	20.15	.2507
#1	20.51	402.8	.8986	-.0049	.5462	.48545	.0145	.9505
#2	20.29	404.3	.8993	-.0043	.5289	.48751	.0109	.9472
Check ?	None	None	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9293	504.4	*****	.4891	.4636	.4660	.4565	200.3
Stddev	.0003	11.9	-----	.0025	.0009	.0010	.0006	3.7
%RSD	.0317	2.366	-----	.5207	.1976	.2114	.1293	1.834
#1	.9295	512.8	-----	.4909	.4642	.4653	.4569	202.9
#2	.9291	495.9	-----	.4873	.4629	.4667	.4561	197.7
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8735	.0050	554.6	*****	476.2	.47527	.5287	-.0007
Stddev	.0016	.0003	11.8	-----	3.2	.00068	.0017	.0002
%RSD	.1887	6.140	2.131	-----	.6783	.14299	.3272	33.01
#1	.8747	.0052	562.9	-----	478.5	.47575	.5275	-.0009
#2	.8723	.0048	546.2	-----	473.9	.47479	.5299	-.0005
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	None
Value								
Range								

Sample Name: ICSAB Acquired: 12/10/2018 9:37:12 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-74-C

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9090	.0127	-.0328	.0056	-.0004	.9079	-.0339	.00475
Stddev	.0012	.0036	.0101	.0025	.0109	.0041	.0126	.00014
%RSD	.1291	28.12	30.90	44.21	3078.	.4487	37.05	2.9021
#1	.9098	.0102	-.0399	.0039	.0073	.9050	-.0250	.00485
#2	.9082	.0153	-.0256	.0074	-.0080	.9108	-.0428	.00465
Check ?	Chk Pass	None	None	None	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017	.0020	-.0014	.5246	.9381	.8863	.0187	.0116
Stddev	.0004	.0023	.0001	.0010	.0022	.0003	.0019	.0029
%RSD	23.13	114.4	7.015	.1896	.2336	.0332	10.01	25.18
#1	.0019	.0036	-.0015	.5253	.9397	.8861	.0200	.0095
#2	.0014	.0004	-.0013	.5239	.9366	.8865	.0174	.0136
Check ?	None	None	None	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5632.7	94114.	7643.6
Stddev	8.0	485.	161.9
%RSD	.14136	.51544	2.1182
#1	5627.1	93771.	7529.1
#2	5638.4	94457.	7758.0

Sample Name: KQ1817918-01 Acquired: 12/10/2018 9:49:47 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1.111 Test Type: Sample Type:
Comment: AM 121018A K1811772-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0058	-.0004	.0020	-.0005	-.00002	-.0017	.0001
#1	.0069	-.0024	.0023	-.0004	-.00008	-.0027	.0001
#2	.0047	.0017	.0017	-.0006	.00004	-.0008	.0002

Elem	Cd2265	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0048	.0001	.0000	.0003	-.0003	.0068
#1	.0002	.0014	.0003	-.0001	.0004	-.0004	.0042
#2	-.0001	.0083	.0000	.0001	.0002	-.0003	.0094

Elem	Pb2203	Li6707	Mg2795	Mn2576	Mo2020	Ni2216	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	-.0009	.0036	.00000	-.0001	.0006	.0005
#1	-.0001	-.0014	.0002	.00002	.0000	.0003	-.0006
#2	-.0018	-.0004	.0071	-.00002	-.0003	.0008	.0015

Elem	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0237	.0013	-.0109	-.0004	-.0658	.00004	.0001
#1	-.0213	-.0005	-.0182	-.0006	-.0732	.00003	-.0010
#2	-.0261	.0032	-.0036	-.0002	-.0584	.00005	.0012

Elem	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	F -.0021	.0000	.0002	.0001	.0001	.0001
#1	-.0001	-.0020	.0001	.0001	.0000	-.0004	-.0008
#2	.0002	-.0021	-.0002	.0002	.0001	.0007	.0009

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6358.2	108620.	8023.0
#1	6383.2	109030.	7982.0
#2	6333.2	108200.	8063.9

Sample Name: K1811772-001 Acquired: 12/10/2018 9:52:17 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 100 Test Type: Sample Type:
Comment: AM 121018A 1/100

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	-.0008	.0010	-.0002	.00000	-.0013	.0000	.0001
#1	.0019	-.0029	.0028	.0001	.00002	-.0021	.0000	.0000
#2	.0022	.0012	-.0008	-.0004	-.00002	-.0005	.0000	.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	-.0001	.0002	.0000	-.0002	.0048	-.0002	-.0007
#1	.0009	-.0003	.0001	-.0001	-.0001	.0047	-.0003	-.0012
#2	.0010	.0001	.0002	.0002	-.0003	.0050	-.0001	-.0003

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.00008	-.0002	.0003	.0023	-.0076	.0003	-.0126
#1	.0002	.00007	-.0002	.0002	.0026	-.0325	.0011	-.0088
#2	.0000	.00009	-.0001	.0004	.0021	.0174	-.0004	-.0164

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	-.0659	-.00017	.0010	.0001	-.0015	-.0004	.0000
#1	-.0003	-.0634	-.00013	.0027	.0003	-.0016	-.0002	.0000
#2	-.0005	-.0683	-.00021	-.0006	-.0002	-.0013	-.0007	-.0001

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0001	.0003	.0001
#1	.0001	-.0002	.0017
#2	.0001	.0007	-.0014

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6322.2	105760.	7836.1
#1	6306.1	106360.	7834.0
#2	6338.3	105170.	7838.2

overdiluted sample
See 9/10 run
ABm 12/10/18

Sample Name: KQ1817918-02 Acquired: 12/10/2018 9:54:46 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 100 Test Type: Sample Type:
Comment: AM 121018A K1811772-001D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	-.0001	-.0001	-.0005	-.00003	-.0007	.0000	.0001
#1	.0015	-.0003	.0021	-.0003	-.00002	-.0006	.0000	.0001
#2	.0016	.0001	-.0024	-.0006	-.00003	-.0007	-.0001	.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0000	.0002	.0002	.0002	.0010	-.0001	.0009
#1	.0016	.0000	.0002	.0003	.0003	.0015	.0005	.0014
#2	.0014	-.0001	.0002	.0000	.0000	.0005	-.0006	.0005

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.00005	-.0002	.0002	.0028	-.0089	.0006	-.0001
#1	.0010	.00005	-.0002	.0001	.0037	.0081	.0000	-.0080
#2	.0007	.00006	-.0002	.0003	.0020	-.0259	.0012	.0079

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.0702	-.00002	-.0003	.0009	-.0018	-.0002	.0000
#1	-.0002	-.0697	-.00006	-.0006	.0008	-.0020	-.0001	.0001
#2	.0000	-.0707	.00003	.0000	.0010	-.0016	-.0003	.0000

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0001	-.0013	.0034
#1	.0001	-.0028	.0043
#2	.0001	.0003	.0025

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6441.4	109120.	8156.9
#1	6441.5	109270.	8206.7
#2	6441.3	108970.	8107.2

AT 12/10/18

Sample Name: K1811772-002 Acquired: 12/10/2018 9:57:15 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 100 Test Type: Sample Type:
Comment: AM 121018A 1/100

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	-.0010	-.0001	-.0005	.00000	-.0019	.0001	.0001
#1	.0009	-.0015	-.0003	-.0004	.00004	-.0013	.0001	.0000
#2	.0018	-.0005	.0001	-.0005	-.00004	-.0024	.0001	.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027	.0001	.0001	-.0002	-.0007	.0021	-.0006	.0020
#1	.0027	.0000	.0001	-.0002	-.0011	.0043	-.0008	.0023
#2	.0028	.0002	.0001	-.0003	-.0004	-.0001	-.0004	.0016

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.00002	-.0002	.0002	.0031	.0444	.0021	-.0031
#1	.0001	.00005	-.0003	.0002	.0041	.0431	.0020	-.0038
#2	.0002	-.00002	-.0001	.0002	.0020	.0457	.0023	-.0025

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	-.0604	.00004	.0016	.0009	-.0013	-.0004	-.0001
#1	-.0001	-.0602	.00006	.0011	.0006	-.0014	-.0004	-.0003
#2	-.0005	-.0605	.00002	.0021	.0012	-.0012	-.0003	.0000

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0001	.0010	.0029
#1	.0000	-.0007	.0021
#2	.0001	.0026	.0038

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6484.1	108690.	8071.3
#1	6458.6	109180.	8068.8
#2	6509.5	108210.	8073.9

AR 12/10/18

Sample Name: K1811775-001 Acquired: 12/10/2018 9:59:45 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 100 Test Type: Sample Type:
Comment: AM 121018A 1/100

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	-.0014	.0010	-.0003	.00009	-.0013	.0001	.0001
#1	.0016	-.0013	.0014	-.0007	.00018	-.0017	.0001	.0001
#2	.0011	-.0015	.0005	.0001	-.00001	-.0009	.0000	.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	-.0001	.0000	.0004	-.0007	.0023	-.0009	.0005
#1	.0011	-.0001	.0000	-.0001	-.0007	.0038	.0000	.0004
#2	.0011	-.0001	-.0001	.0008	-.0007	.0008	-.0019	.0005

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.00003	-.0002	.0002	.0027	-.0236	.0017	-.0013
#1	.0001	.00003	-.0003	.0005	.0021	-.0586	.0040	.0007
#2	.0002	.00004	-.0002	.0000	.0034	.0113	-.0006	-.0032

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	-.0576	-.00003	.0001	.0005	.0004	-.0002	-.0002
#1	-.0001	-.0601	.00011	-.0001	.0009	.0006	.0002	-.0003
#2	-.0006	-.0551	-.00017	.0003	.0000	.0002	-.0007	-.0001

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0000	-.0005	.0017
#1	.0001	-.0010	.0015
#2	.0000	.0000	.0019

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6577.0	107630.	8117.0
#1	6593.8	107130.	8045.3
#2	6560.3	108130.	8188.7

AMem 12/10/18

Sample Name: KQ1817683-02 Acquired: 12/10/2018 10:02:46 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A K1811707-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019	-.0008	-.0016	-.0004	-.00003	-.0013	.0000	.0000
#1	.0017	.0005	-.0046	-.0003	-.00003	-.0013	.0000	.0000
#2	.0020	-.0022	.0013	-.0005	-.00003	-.0013	.0000	.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027	-.0002	.0001	.0001	-.0014	.0044	-.0016	-.0004
#1	.0027	-.0004	.0004	.0001	-.0017	.0034	-.0018	-.0007
#2	.0027	.0000	-.0002	.0002	-.0010	.0054	-.0015	.0000

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.00001	.0000	.0001	.0232	.0005	.0008	.0253
#1	.0002	-.00001	.0001	.0001	.0235	.0581	.0008	.0246
#2	.0003	.00003	-.0001	.0002	.0230	-.0571	.0008	.0261

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	-.0618	.00010	-.0010	.0004	-.0002	-.0004	.0000
#1	-.0002	-.0569	.00019	-.0014	.0007	-.0004	-.0003	-.0002
#2	-.0005	-.0667	.00001	-.0007	.0000	-.0001	-.0005	.0002

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0002	-.0002	-.0021
#1	.0002	-.0006	-.0038
#2	.0002	.0002	-.0005

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6557.3	110030.	8230.7
#1	6559.8	109940.	8262.5
#2	6554.8	110120.	8199.0

Wrong spike solution used. Send back for redigest
AMm 12/10/18

Sample Name: KQ1817683-01 Acquired: 12/10/2018 10:05:16 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A K1811707-LCSW

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 6.530	2.151	2.134	5.115	.14373	F .0104	1.061	1.053
#1	6.565	2.151	2.131	5.114	.14379	.0100	1.059	1.050
#2	6.496	2.152	2.137	5.116	.14368	.0108	1.064	1.057

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.51	.5684	1.437	.7110	.7233	2.957	2.436	.0001
#1	10.53	.5660	1.433	.7102	.7275	2.959	2.433	.0016
#2	10.49	.5708	1.440	.7119	.7191	2.955	2.438	-.0013

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.83	1.3936	F .0250	1.398	.0180	10.74	F 1.926	.0237
#1	10.86	1.3870	.0250	1.395	.0194	10.74	1.925	.0304
#2	10.80	1.4001	.0250	1.402	.0167	10.75	1.927	.0170

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5294	10.89	.00025	2.083	-.0005	-.0012	1.453	1.406
#1	.5316	10.92	.00024	2.082	-.0005	-.0013	1.446	1.403
#2	.5272	10.87	.00027	2.085	-.0004	-.0012	1.461	1.410

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.380	.0029	-.0012
#1	1.378	.0030	-.0033
#2	1.382	.0028	.0009

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6357.6	105660.	7978.0
#1	6358.5	106260.	8016.9
#2	6356.7	105070.	7939.1

wrong splice
ARun 12/10/18

Sample Name: K1811707-001 Acquired: 12/10/2018 10:07:38 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5046	-.0016	-.0003	.0204	.00000	.1125	.0001	.0002
#1	.5016	-.0008	-.0007	.0218	.00002	.1124	.0001	.0002
#2	.5076	-.0024	.0001	.0189	-.00002	.1126	.0001	.0002

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.91	-.0003	.0008	.0037	.0026	.6633	-.0007	.0156
#1	43.97	-.0005	.0011	.0037	.0025	.6638	-.0009	.0155
#2	43.85	.0000	.0005	.0036	.0026	.6628	-.0006	.0157

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.22	.07048	.0005	.0031	.1744	2.263	.0063	7.058
#1	13.23	.07007	.0007	.0030	.1758	2.254	.0057	7.057
#2	13.22	.07089	.0003	.0031	.1730	2.271	.0069	7.058

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	33.62	.68207	.0249	.0001	.0140	.0017	.0078
#1	-.0003	33.77	.68619	.0217	.0002	.0138	.0017	.0079
#2	-.0001	33.48	.67795	.0280	-.0001	.0142	.0016	.0076

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0081	.0019	63.92
#1	.0081	.0030	64.10
#2	.0081	.0008	63.74

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6229.9	106740.	8150.4
#1	6247.2	107380.	8100.3
#2	6212.5	106090.	8200.6

AMcen 12/20/18

Sample Name: KQ1817683-03 Acquired: 12/10/2018 10:10:12 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A K1811707-001D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4955	-.0002	-.0021	.0170	-.00005	.1123	.0001	.0001
#1	.4910	-.0005	-.0031	.0167	-.00008	.1121	.0000	.0002
#2	.5001	.0000	-.0011	.0172	-.00002	.1125	.0002	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.78	.0000	.0005	.0039	.0030	.6695	-.0008	.0127
#1	43.55	.0001	.0008	.0039	.0032	.6681	-.0008	.0115
#2	44.01	-.0001	.0002	.0040	.0028	.6709	-.0008	.0140

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.15	.07061	.0003	.0030	.1769	2.222	.0037	7.115
#1	13.17	.07079	.0004	.0030	.1766	2.192	.0044	7.116
#2	13.14	.07042	.0002	.0031	.1771	2.252	.0029	7.115

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	33.38	.67651	-.0008	.0002	.0139	.0015	.0079
#1	-.0002	33.40	.67310	.0011	.0003	.0140	.0018	.0079
#2	-.0011	33.36	.67992	-.0027	.0002	.0137	.0013	.0080

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0080	.0016	64.28
#1	.0081	-.0003	64.49
#2	.0080	.0035	64.08

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6217.8	106990.	8174.3
#1	6213.8	106650.	8214.2
#2	6221.7	107330.	8134.4

AHm 12/10/18

Sample Name: KQ1817683-04 Acquired: 12/10/2018 10:12:45 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A K1811707-001S

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.938	.7524	.8087	1.630	.07825	.1198	.0785	.0772
#1	3.964	.7519	.8086	1.611	.07850	.1209	.0785	.0773
#2	3.913	.7529	.8088	1.650	.07801	.1188	.0786	.0770

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	51.21	.2988	.7923	.3976	.3846	2.349	.7640	.0128
#1	50.68	.2988	.7940	.3984	.3861	2.334	.7678	.0122
#2	51.74	.2988	.7907	.3969	.3830	2.365	.7603	.0135

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.19	.82438	.0247	.7781	.1685	10.64	.7530	7.082
#1	21.12	.82509	.0248	.7799	.1693	10.61	.7557	7.063
#2	21.25	.82368	.0246	.7763	.1678	10.67	.7503	7.101

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0741	40.89	.66413	.1569	.0002	.0138	.8095	.7929
#1	.0746	40.77	.65707	.1561	-.0002	.0138	.8099	.7940
#2	.0735	41.00	.67120	.1577	.0006	.0138	.8090	.7919

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.7513	.0026	61.69
#1	.7520	.0031	61.68
#2	.7505	.0022	61.71

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6132.7	105700.	8020.5
#1	6128.8	105780.	8065.8
#2	6136.5	105630.	7975.2

AMcm 12/10/18

Sample Name: CCVB Acquired: 12/10/2018 10:15:08 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.719	10.73	.0015	1.025	9.702	.00009	-.0002	.0001
Stddev	.007	.01	.0007	.002	.126	.00001	.0004	.0000
%RSD	.0887	.1385	49.65	.1626	1.301	11.950	176.9	18.08
#1	7.724	10.74	.0010	1.027	9.613	.00009	.0001	.0001
#2	7.714	10.72	.0020	1.024	9.791	.00008	-.0005	.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	9.846	9.452	.0001	.0001	-.0003	-.0003	10.26
Stddev	.0000	.105	.044	.0007	.0001	.0004	.0007	.00
%RSD	14.42	1.067	.4611	743.8	137.0	137.4	256.0	.0309
#1	-.0001	9.772	9.483	-.0004	.0001	-.0006	.0002	10.26
#2	-.0001	9.921	9.421	.0006	.0000	.0000	-.0008	10.26
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	1.022	10.18	9.327	10.35	.94389	.9998	-.0004
Stddev	.0005	.001	.10	.037	.05	.00751	.0025	.0003
%RSD	625.2	.1011	.9503	.3924	.4798	.79538	.2490	67.28
#1	-.0004	1.022	10.11	9.301	10.31	.94920	1.002	-.0002
#2	.0003	1.021	10.25	9.353	10.38	.93858	.9980	-.0006
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 12/10/2018 10:15:08 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	10.26	10.01	.0035	10.54	-.0006	10.28	.98769
Stddev	.000	.02	.10	.0016	.01	.0002	.01	.00911
%RSD	675.3	.1597	1.014	46.33	.0628	32.24	.0550	.92206
#1	-.0002	10.25	9.940	.0024	10.54	-.0005	10.28	.98125
#2	.0001	10.28	10.08	.0047	10.55	-.0007	10.27	.99413
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027	.0000	-.0023	.0000	.0001	.0004	1.045	1.056
Stddev	.0034	.000	.0001	.0004	.0001	.0000	.004	.001
%RSD	127.9	852.6	5.145	1327.	126.9	5.784	.4285	.0848
#1	.0003	.0002	-.0024	.0003	.0002	.0004	1.042	1.057
#2	.0051	-.0003	-.0022	-.0002	.0000	.0004	1.048	1.056
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6342.4	107900.	8131.8
Stddev	10.9	723.	30.2
%RSD	.17139	.67019	.37148
#1	6350.1	107390.	8153.2
#2	6334.7	108410.	8110.5

Sample Name: CCVA Acquired: 12/10/2018 10:17:48 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2653	.2926	.2506	.2591	.2518	.25613	.2543	.2495
Stddev	.0002	.0054	.0001	.0015	.0017	.00394	.0058	.0002
%RSD	.0587	1.858	.0333	.5885	.6816	1.5399	2.278	.0751
#1	.2654	.2964	.2506	.2602	.2505	.25892	.2584	.2496
#2	.2652	.2887	.2505	.2581	.2530	.25334	.2502	.2493
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2477	.5012	.4920	.2384	.2506	.2526	.2502	.2704
Stddev	.0000	.0007	.0009	.0025	.0008	.0005	.0030	.0002
%RSD	.0042	.1299	.1779	1.031	.3145	.2099	1.187	.0846
#1	.2477	.5017	.4914	.2366	.2511	.2523	.2523	.2702
#2	.2477	.5008	.4926	.2401	.2500	.2530	.2481	.2705
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2489	-.0009	.2676	.2458	.2654	.24572	.2528	.2515
Stddev	.0006	.0002	.0083	.0004	.0023	.00175	.0060	.0008
%RSD	.2465	19.07	3.092	.1796	.8631	.71087	2.373	.3057
#1	.2493	-.0008	.2735	.2455	.2670	.24448	.2486	.2521
#2	.2484	-.0010	.2618	.2461	.2637	.24695	.2571	.2510
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 12/10/2018 10:17:48 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2491	.0001	2.559	.2568	.1299	.2565	.1913	.00019
Stddev	.0004	.0009	.020	.0038	.0024	.0061	.0029	.00005
%RSD	.1618	863.7	.7866	1.484	1.860	2.364	1.514	23.636
#1	.2494	.0007	2.545	.2595	.1317	.2608	.1893	.00022
#2	.2488	-.0005	2.573	.2542	.1282	.2522	.1934	.00016
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2539	.2507	.2477	.2468	.2503	.2521	.0017	.0019
Stddev	.0027	.0010	.0028	.0012	.0000	.0006	.0004	.0047
%RSD	1.052	.4147	1.137	.4791	.0121	.2342	23.29	245.8
#1	.2558	.2514	.2457	.2460	.2503	.2525	.0020	.0052
#2	.2520	.2500	.2497	.2476	.2503	.2517	.0014	-.0014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6383.0	108490.	8063.0
Stddev	4.3	2137.	18.2
%RSD	.06755	1.9700	.22621
#1	6386.1	110010.	8075.9
#2	6380.0	106980.	8050.1

Sample Name: CCB Acquired: 12/10/2018 10:20:07 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	-.0013	-.0013	-.0009	-.0001	.00011	-.0015
Stddev	.0001	.0018	.0042	.0003	.0002	.00005	.0006
%RSD	13.01	140.5	323.4	29.34	272.4	45.481	38.22
#1	.0007	-.0025	.0017	-.0011	.0001	.00008	-.0011
#2	.0006	.0000	-.0043	-.0007	-.0002	.00015	-.0018
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0001	-.0003	.0001	-.0004	.0005	.0005
Stddev	.0000	.0001	.0020	.0000	.0000	.0002	.0005
%RSD	54.71	109.1	573.4	32.58	5.753	43.19	94.71
#1	.0001	.0000	.0011	.0001	-.0004	.0003	.0009
#2	.0000	.0002	-.0018	.0001	-.0004	.0006	.0002
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cu3273	Fe2599	Pb2203	Li6707	Mg2790	Mg2795	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	.0031	-.0001	.0009	.0059	.0001	.0006
Stddev	.0002	.0076	.0013	.0016	.0339	.0001	.0019
%RSD	112.1	248.4	1184.	170.1	574.7	230.1	349.1
#1	.0000	-.0023	.0008	.0020	.0299	.0000	.0019
#2	-.0004	.0085	-.0010	-.0002	-.0181	.0002	-.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None
High Limit							
Low Limit							

Sample Name: CCB Acquired: 12/10/2018 10:20:07 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Mn2576	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00004	-.0005	.0004	.0002	.0000	-.0391	.0022
Stddev	.00004	.0011	.0001	.0001	.0004	.0247	.0007
%RSD	107.75	222.7	22.88	61.86	2659.	63.13	31.27
#1	.00007	.0003	.0004	.0003	-.0003	-.0216	.0017
#2	.00001	-.0013	.0003	.0001	.0003	-.0566	.0027
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0000	-.0863	.00002	.0060	.0012	F -.0021
Stddev	.0079	.0000	.0083	.00001	.0002	.0003	.0002
%RSD	1181.	349.4	9.671	54.975	3.752	26.88	9.195
#1	.0062	.0000	-.0804	.00001	.0058	.0010	-.0022
#2	-.0049	.0000	-.0922	.00003	.0062	.0014	-.0019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.0020
Low Limit							-.0020

Elem	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	-.0001	.0001	-.0013	.0014
Stddev	.0002	.0001	.0000	.0004	.0024
%RSD	70.51	50.87	5.115	29.04	170.3
#1	-.0002	-.0001	.0001	-.0016	-.0003
#2	-.0005	-.0002	.0001	-.0010	.0031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Sample Name: CCB Acquired: 12/10/2018 10:20:07 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6402.7	108290.	8049.1
Stddev	38.3	436.	45.5
%RSD	.59820	.40271	.56575
#1	6375.6	108600.	8016.9
#2	6429.8	107990.	8081.3

Sample Name: K1811707-001A Acquired: 12/10/2018 10:22:39 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A A=0.05/10mL CICV1,3

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.608	-.0004	2.340	4.947	.11538	.1083	1.139	1.131
#1	5.644	.0011	2.334	4.933	.11543	.1077	1.140	1.133
#2	5.571	-.0018	2.345	4.961	.11534	.1089	1.137	1.129

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	56.11	.4580	1.167	.5832	.5660	3.164	2.243	.0141
#1	55.92	.4567	1.170	.5844	.5683	3.170	2.246	.0149
#2	56.31	.4593	1.164	.5821	.5637	3.159	2.240	.0132

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.13	1.1991	.0000	1.149	.1744	14.58	2.153	7.346
#1	25.10	1.1983	-.0003	1.152	.1751	14.55	2.158	7.340
#2	25.17	1.1998	.0002	1.146	.1738	14.62	2.149	7.353

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5413	45.20	.68886	2.253	-.0005	.0300	1.208	1.161
#1	.5419	45.12	.68682	2.255	-.0012	.0301	1.206	1.161
#2	.5407	45.29	.69090	2.250	.0002	.0299	1.209	1.160

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.101	.0048	62.23
#1	1.100	.0054	62.29
#2	1.101	.0041	62.18

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6074.1	103220.	7873.3
#1	6057.5	103250.	7883.5
#2	6090.6	103190.	7863.1

AKim 12/10/18

Sample Name: K1811707-002 Acquired: 12/10/2018 10:24:59 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4362	.0022	-.0001	.0079	.00003	.0038	.0004	.0005
#1	.4389	.0035	-.0003	.0078	.00004	.0039	.0004	.0006
#2	.4335	.0009	.0001	.0080	.00002	.0037	.0005	.0004

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.447	.0003	.0004	.0040	.0037	.4996	-.0019	.0014
#1	4.495	.0008	.0005	.0043	.0036	.5020	-.0016	.0017
#2	4.400	-.0003	.0004	.0037	.0039	.4971	-.0022	.0010

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.097	.01380	.0001	.0006	.1974	.6137	.0081	8.244
#1	1.097	.01381	.0001	.0005	.1978	.6343	.0073	8.241
#2	1.098	.01379	.0002	.0007	.1970	.5930	.0089	8.248

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	4.551	.03443	.0005	-.0002	.0105	.0014	.0046
#1	-.0009	4.555	.03438	.0007	-.0001	.0104	.0010	.0047
#2	-.0006	4.547	.03448	.0002	-.0003	.0106	.0017	.0046

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0052	.0010	.8433
#1	.0051	-.0005	.8473
#2	.0052	.0026	.8393

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6331.3	108310.	8019.5
#1	6325.9	108150.	8033.6
#2	6336.8	108460.	8005.4

AMcm 12/10/18

Sample Name: K1811707-003 Acquired: 12/10/2018 10:27:32 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6170	-.0022	-.0023	.0285	.00003	.1487	.0001	.0001
#1	.6168	-.0008	-.0009	.0280	.00000	.1494	.0001	.0002
#2	.6172	-.0036	-.0037	.0291	.00005	.1481	.0000	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	87.68	.0005	.0013	.0029	.0019	1.146	-.0013	.0198
#1	87.59	.0005	.0016	.0027	.0023	1.147	-.0013	.0183
#2	87.77	.0004	.0010	.0031	.0015	1.145	-.0013	.0214

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.57	.31718	.0001	.0049	.3768	3.793	.0025	5.982
#1	23.58	.31702	.0003	.0051	.3752	3.717	.0043	5.944
#2	23.55	.31733	-.0002	.0046	.3784	3.869	.0008	6.019

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	53.82	1.3438	.0002	.0002	.0197	.0021	.0087
#1	-.0007	53.73	1.3381	.0000	.0002	.0198	.0025	.0085
#2	-.0005	53.91	1.3495	.0004	.0003	.0196	.0017	.0088

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0086	.0016	111.2
#1	.0086	.0017	111.4
#2	.0086	.0014	110.9

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6038.2	101640.	7768.5
#1	6053.4	101760.	7795.8
#2	6022.9	101520.	7741.1

12/10/18

Sample Name: K1811707-004 Acquired: 12/10/2018 10:30:06 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9737	.0007	.0018	.0210	.00002	.0278	.0002	.0003
#1	.9756	.0024	.0022	.0209	.00007	.0268	.0002	.0003
#2	.9719	-.0011	.0014	.0211	-.00003	.0288	.0002	.0003

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.54	.0008	.0006	.0039	.0035	1.415	-.0010	.0043
#1	11.52	.0009	.0008	.0039	.0038	1.403	-.0008	.0037
#2	11.56	.0007	.0005	.0038	.0033	1.427	-.0012	.0049

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.644	.07578	-.0001	.0016	1.025	1.765	.0015	9.561
#1	2.636	.07620	-.0003	.0017	1.030	1.757	.0014	9.580
#2	2.651	.07536	.0000	.0015	1.020	1.773	.0016	9.542

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	10.87	.13397	-.0010	.0000	.0289	.0024	.0093
#1	-.0003	10.91	.13332	-.0020	.0001	.0293	.0022	.0094
#2	-.0002	10.84	.13462	.0001	-.0001	.0284	.0026	.0093

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0093	.0000	4.046
#1	.0094	.0007	4.047
#2	.0093	-.0007	4.045

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6207.4	104930.	7815.0
#1	6198.3	104310.	7871.8
#2	6216.6	105550.	7758.1

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Sample Name: K1811707-005 Acquired: 12/10/2018 10:32:32 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4855	.0002	-.0011	.0066	.00000	.0039	.0001	.0001
#1	.4865	-.0011	-.0010	.0068	.00006	.0039	.0000	.0001
#2	.4845	.0015	-.0011	.0065	-.00005	.0040	.0001	.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.481	.0005	.0004	.0028	.0021	.4664	-.0009	.0018
#1	6.518	.0002	.0005	.0026	.0017	.4660	-.0009	.0014
#2	6.443	.0007	.0004	.0031	.0025	.4669	-.0008	.0021

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.688	.01089	-.0003	.0004	.7305	.8440	.0028	9.569
#1	1.694	.01087	-.0003	.0006	.7278	.8379	.0012	9.549
#2	1.682	.01091	-.0002	.0002	.7332	.8501	.0045	9.590

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	5.169	.04623	-.0008	-.0004	.0145	.0020	.0029
#1	-.0005	5.149	.04638	-.0009	-.0001	.0146	.0020	.0028
#2	-.0004	5.189	.04608	-.0007	-.0007	.0145	.0020	.0030

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0033	.0018	.9084
#1	.0033	.0014	.9143
#2	.0033	.0023	.9024

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Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6379.4	107040.	8144.7
#1	6366.5	107420.	8088.2
#2	6392.4	106650.	8201.2

Sample Name: K1811707-006 Acquired: 12/10/2018 10:35:01 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4515	.0008	-.0018	.0041	-.00005	.0038	.0000	.0000
#1	.4399	.0005	-.0027	.0040	-.00006	.0026	.0000	.0000
#2	.4630	.0011	-.0010	.0042	-.00004	.0049	.0000	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.679	.0005	.0006	.0026	.0025	.4515	-.0031	.0012
#1	6.652	.0004	.0005	.0024	.0025	.4533	-.0036	.0021
#2	6.707	.0005	.0007	.0027	.0025	.4497	-.0026	.0004

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.733	.00903	-.0003	.0002	.0342	.4614	.0024	10.27
#1	1.740	.00902	-.0004	.0003	.0328	.4244	.0022	10.29
#2	1.727	.00903	-.0002	.0002	.0356	.4984	.0026	10.25

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	4.671	.04221	-.0011	-.0005	.0141	.0020	.0072
#1	-.0004	4.671	.04239	-.0019	-.0008	.0141	.0018	.0073
#2	-.0006	4.670	.04202	-.0003	-.0003	.0142	.0023	.0072

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0078	-.0032	.4914
#1	.0078	-.0035	.4949
#2	.0077	-.0028	.4878

AMcm 12/10/18

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6499.9	107470.	8152.4
#1	6486.9	107480.	8134.1
#2	6512.8	107460.	8170.7

Sample Name: K1811707-007 Acquired: 12/10/2018 10:37:34 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0652	-.0005	-.0011	.0254	-.00004	.0665	.0001	.0001
#1	.0650	-.0024	-.0012	.0255	.00000	.0672	.0001	.0000
#2	.0654	.0013	-.0011	.0254	-.00009	.0658	.0001	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	27.58	-.0004	.0001	.0017	.0005	.1069	-.0011	.0082
#1	27.52	-.0003	-.0001	.0016	-.0004	.1024	-.0010	.0082
#2	27.63	-.0004	.0003	.0018	.0014	.1114	-.0012	.0083

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.99	.04598	.0002	.0036	.0953	.9703	.0022	.4369
#1	13.91	.04618	.0002	.0035	.0953	.9981	.0017	.4415
#2	14.08	.04577	.0002	.0037	.0953	.9425	.0027	.4324

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	29.31	.42812	.0004	-.0001	.0037	.0001	.0027
#1	-.0002	29.13	.42590	.0014	.0002	.0038	-.0001	.0028
#2	-.0004	29.49	.43034	-.0005	-.0004	.0036	.0002	.0026

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0029	-.0007	33.14
#1	.0028	-.0014	33.26
#2	.0029	.0000	33.01

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6381.7	104430.	7992.3
#1	6397.6	103790.	7982.0
#2	6365.8	105070.	8002.6

AMm 12/10/18

Sample Name: K1811707-008 Acquired: 12/10/2018 10:40:13 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2493	-.0002	-.0021	.0171	-.00004	.0079	.0002	.0000
#1	.2503	.0004	-.0029	.0170	-.00006	.0087	.0002	.0001
#2	.2483	-.0008	-.0014	.0171	-.00002	.0070	.0002	-.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.931	.0002	.0008	.0033	.0036	1.096	-.0011	.0024
#1	2.954	.0002	.0007	.0033	.0029	1.091	-.0020	.0020
#2	2.909	.0001	.0009	.0033	.0042	1.100	-.0003	.0028

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.080	.03476	.0001	.0017	.7014	1.570	.0029	5.734
#1	1.074	.03490	.0000	.0016	.7026	1.583	.0029	5.726
#2	1.085	.03463	.0002	.0018	.7002	1.558	.0029	5.743

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	6.091	.03967	-.0003	.0003	.0065	.0000	.0140
#1	-.0004	6.052	.03929	.0004	-.0003	.0066	-.0001	.0141
#2	-.0001	6.129	.04004	-.0011	.0008	.0064	.0001	.0138

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0142	-.0003	2.718
#1	.0143	.0011	2.716
#2	.0142	-.0018	2.719

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6495.7	105870.	7989.2
#1	6501.0	105640.	8009.6
#2	6490.5	106110.	7968.9

ARm 12/10/18

Sample Name: K1811707-009 Acquired: 12/10/2018 10:42:46 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4769	.0004	.0001	.0207	.00001	.2728	.0000	.0001
#1	.4765	.0008	.0006	.0207	.00011	.2723	.0000	.0002
#2	.4773	.0000	-.0003	.0207	-.00009	.2732	.0000	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	113.6	.0005	.0020	.0022	.0012	1.047	-.0014	.0403
#1	113.6	.0004	.0020	.0026	.0021	1.049	-.0014	.0391
#2	113.7	.0006	.0020	.0019	.0003	1.045	-.0014	.0415

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	34.04	.22052	.0007	.0070	.2342	4.746	.0022	4.937
#1	33.89	.22029	.0007	.0069	.2356	4.709	.0027	4.932
#2	34.19	.22075	.0008	.0072	.2328	4.783	.0017	4.942

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	87.11	1.8610	.0008	.0012	.0169	.0012	.0123
#1	-.0006	86.49	1.8566	.0010	.0002	.0170	.0015	.0124
#2	-.0003	87.73	1.8654	.0007	.0021	.0167	.0010	.0121

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0122	.0022	173.8
#1	.0122	.0027	174.1
#2	.0121	.0017	173.5

AMm 12/10/18

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6159.5	102840.	8077.2
#1	6173.7	102920.	8046.2
#2	6145.4	102760.	8108.1

Sample Name: K1811707-010 Acquired: 12/10/2018 10:45:21 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0979	-.0002	-.0027	.0498	-.00003	.0785	.0007	.0008
#1	.0979	-.0004	-.0024	.0497	-.00005	.0781	.0007	.0007
#2	.0978	.0000	-.0030	.0499	-.00001	.0788	.0007	.0008

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.09	.0003	.0000	.0036	.0033	.3352	.0001	.0049
#1	20.94	.0000	.0000	.0039	.0036	.3328	.0000	.0038
#2	21.23	.0006	.0001	.0034	.0030	.3376	.0002	.0060

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.214	.08153	-.0001	.0008	.3125	.9683	.0020	3.672
#1	9.200	.08176	.0000	.0010	.3140	.9920	.0015	3.655
#2	9.229	.08130	-.0001	.0007	.3110	.9447	.0025	3.689

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	5.486	.40806	-.0009	-.0002	.0013	.0002	.0050
#1	-.0005	5.449	.40496	-.0010	-.0003	.0012	-.0001	.0050
#2	-.0004	5.523	.41116	-.0009	-.0002	.0014	.0005	.0049

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0051	.0021	5.917
#1	.0050	.0015	5.901
#2	.0052	.0028	5.933

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6291.8	107140.	7948.5
#1	6258.2	106710.	7992.4
#2	6325.3	107560.	7904.7

AMcm 12/10/18

Sample Name: CCVB Acquired: 12/10/2018 10:48:00 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.619	10.31	.0001	1.017	9.689	.00009	-.0027	.0000
Stddev	.148	.02	.0010	.004	.093	.00005	.0001	.0001
%RSD	1.941	.1538	752.8	.4042	.9603	56.870	3.797	236.6
#1	7.724	10.32	.0009	1.020	9.623	.00013	-.0026	.0000
#2	7.515	10.30	-.0006	1.014	9.754	.00006	-.0028	.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	9.958	9.289	-.0004	.0003	.0000	.0004	10.36
Stddev	.0000	.080	.117	.0000	.0001	.0003	.0006	.10
%RSD	.1653	.8032	1.264	1.603	22.03	1296.	159.5	.9480
#1	-.0002	9.901	9.206	-.0004	.0002	-.0002	.0008	10.29
#2	-.0002	10.01	9.372	-.0004	.0003	.0003	.0000	10.43
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.9999	10.25	9.391	10.29	.95168	1.012	-.0007
Stddev	.0002	.0048	.10	.046	.03	.00651	.012	.0002
%RSD	180.5	.4755	.9302	.4924	.2791	.68423	1.227	25.95
#1	.0000	1.003	10.18	9.358	10.31	.95629	1.020	-.0005
#2	.0002	.9965	10.31	9.423	10.27	.94708	1.003	-.0008
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 12/10/2018 10:48:00 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	10.28	9.813	.0018	10.64	-.0011	10.05	.98619
Stddev	.0000	.02	.042	.0004	.01	.0005	.07	.00197
%RSD	73.60	.1773	.4281	21.50	.1083	46.73	.6805	.19939
#1	.0000	10.30	9.843	.0015	10.63	-.0007	10.10	.98480
#2	-.0001	10.27	9.783	.0021	10.64	-.0015	9.999	.98758
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.0001	-.0025	.0000	.0000	.0002	1.031	1.040
Stddev	.0006	.0005	.0001	.000	.0000	.0001	.005	.002
%RSD	62.75	388.2	5.085	1297.	266.7	41.14	.4493	.1559
#1	.0006	.0004	-.0024	.0002	.0000	.0002	1.028	1.041
#2	.0014	-.0002	-.0026	-.0003	.0000	.0003	1.034	1.039
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6322.5	106970.	8101.9
Stddev	.1	862.	62.2
%RSD	.00124	.80562	.76712
#1	6322.5	106360.	8145.8
#2	6322.6	107580.	8057.9

Sample Name: CCVA Acquired: 12/10/2018 10:50:40 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2681	.2800	.2493	.2615	.2457	.25428	.2506	.2511
Stddev	.0001	.0020	.0029	.0020	.0001	.00063	.0009	.0011
%RSD	.0407	.7111	1.154	.7648	.0343	.24808	.3737	.4352
#1	.2682	.2786	.2472	.2601	.2456	.25472	.2513	.2519
#2	.2680	.2814	.2513	.2629	.2457	.25383	.2500	.2504
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2492	.4813	.4857	.2359	.2502	.2542	.2455	.2708
Stddev	.0004	.0013	.0023	.0011	.0001	.0003	.0018	.0018
%RSD	.1408	.2610	.4788	.4652	.0317	.1340	.7426	.6629
#1	.2494	.4804	.4874	.2367	.2501	.2544	.2443	.2721
#2	.2489	.4822	.4841	.2351	.2503	.2539	.2468	.2695
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2484	.0018	.2673	.2421	.2634	.24415	.2546	.2515
Stddev	.0002	.0005	.0235	.0003	.0014	.00011	.0031	.0013
%RSD	.1002	26.72	8.803	.1231	.5387	.04314	1.218	.5283
#1	.2482	.0015	.2507	.2418	.2624	.24423	.2524	.2524
#2	.2486	.0021	.2840	.2423	.2644	.24408	.2568	.2506
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 12/10/2018 10:50:40 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2499	.0014	2.472	.2529	.1374	.2520	.1733	.00025
Stddev	.0002	.0009	.036	.0027	.0111	.0013	.0073	.00012
%RSD	.0727	63.14	1.443	1.080	8.083	.4961	4.194	49.187
#1	.2500	.0020	2.497	.2509	.1296	.2529	.1682	.00016
#2	.2497	.0008	2.446	.2548	.1453	.2511	.1785	.00034
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2519	.2513	.2463	.2453	.2530	.2534	.0013	.0021
Stddev	.0009	.0004	.0001	.0013	.0023	.0018	.0020	.0003
%RSD	.3715	.1784	.0435	.5455	.8896	.7072	152.0	15.37
#1	.2526	.2510	.2463	.2462	.2546	.2521	-.0001	.0023
#2	.2513	.2516	.2464	.2444	.2514	.2547	.0027	.0019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6423.2	109070.	8220.2
Stddev	48.8	398.	15.1
%RSD	.75970	.36488	.18323
#1	6388.7	109350.	8209.6
#2	6457.7	108790.	8230.9

Sample Name: CCB Acquired: 12/10/2018 10:52:59 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	-.0003	-.0008	.0006	.0008	.00010	-.0025
Stddev	.0003	.0003	.0010	.0011	.0005	.00009	.0013
%RSD	36.90	138.4	126.7	173.5	59.02	97.137	52.64
#1	.0007	.0000	-.0015	-.0001	.0004	.00003	-.0035
#2	.0012	-.0005	-.0001	.0014	.0011	.00016	-.0016
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0001	-.0090	.0018	-.0003	.0001	.0003
Stddev	.0000	.0001	.0005	.0020	.0004	.0002	.0003
%RSD	30.17	102.1	5.631	115.9	134.2	180.8	78.95
#1	.0000	.0001	-.0086	.0003	.0000	.0002	.0001
#2	.0001	.0000	-.0093	.0032	-.0006	.0000	.0005
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cu3273	Fe2599	Pb2203	Li6707	Mg2790	Mg2795	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	-.0012	-.0002	.0013	-.0018	.0010	.0033
Stddev	.0004	.0038	.0000	.0010	.0161	.0011	.0009
%RSD	72.70	319.2	11.88	75.04	915.3	100.9	28.93
#1	-.0008	-.0038	-.0001	.0020	-.0131	.0003	.0026
#2	-.0003	.0015	-.0002	.0006	.0096	.0018	.0039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None
High Limit							
Low Limit							

Sample Name: CCB Acquired: 12/10/2018 10:52:59 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Mn2576	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00019	.0011	.0005	.0005	.0025	-.0057	.0039
Stddev	.00001	.0001	.0004	.0000	.0023	.0049	.0015
%RSD	5.0875	12.53	87.02	7.894	95.17	85.55	39.08
#1	.00020	.0012	.0002	.0005	.0041	-.0091	.0049
#2	.00018	.0010	.0008	.0005	.0008	-.0022	.0028
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0103	-.0001	-.0836	.00012	.0037	.0003	F -.0023
Stddev	.0063	.0001	.0012	.00008	.0000	.0003	.0001
%RSD	61.09	48.98	1.494	62.385	.4655	115.9	5.818
#1	-.0058	-.0002	-.0845	.00007	.0037	.0001	-.0024
#2	-.0147	-.0001	-.0827	.00017	.0037	.0005	-.0022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.0020
Low Limit							-.0020

Elem	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	.0001	.0000	.0003	.0050
Stddev	.0001	.0001	.0000	.0015	.0008
%RSD	81.33	119.5	15.33	487.9	16.39
#1	-.0003	.0001	.0000	.0014	.0045
#2	-.0001	.0000	.0000	-.0007	.0056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Sample Name: CCB Acquired: 12/10/2018 10:52:59 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6446.1	109610.	8360.2
Stddev	8.8	306.	7.8
%RSD	.13643	.27887	.09370
#1	6452.3	109390.	8365.7
#2	6439.9	109820.	8354.6

Sample Name: K1811772-001 Acquired: 12/10/2018 10:55:31 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1.111 Test Type: Sample Type:
Comment: AM 121018A 9/10

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0454	.0024	-.0003	-.0004	.00009	-.0010	.0001	.0001
#1	.0463	.0025	-.0006	-.0006	.00009	-.0001	.0002	.0002
#2	.0444	.0022	.0000	-.0003	.00010	-.0018	.0001	.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0092	.0034	-.0001	.0004	-.0016	.0180	-.0003	.0002
#1	.0091	.0035	-.0001	.0006	-.0016	.0177	-.0006	.0013
#2	.0092	.0034	-.0001	.0002	-.0015	.0183	.0000	-.0009

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028	.00039	.0005	.0025	3.761	3.376	.0007	.0248
#1	.0029	.00039	.0005	.0027	3.771	3.420	.0023	.0275
#2	.0028	.00038	.0005	.0023	3.752	3.331	-.0009	.0221

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	2.002	.00006	.0002	1.811	-.0013	-.0001	.0006
#1	-.0009	1.998	.00009	-.0009	1.815	-.0011	-.0001	.0007
#2	-.0005	2.006	.00002	.0014	1.808	-.0014	-.0001	.0006

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0006	-.0003	.0060
#1	.0007	-.0007	.0051
#2	.0005	.0001	.0070

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6420.4	110240.	8264.1
#1	6418.2	109420.	8298.4
#2	6422.6	111050.	8229.8

Sample Name: KQ1817918-02 Acquired: 12/10/2018 10:57:59 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1.111 Test Type: Sample Type:
Comment: AM 121018A 9/10

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0447	-.0005	.0002	-.0001	.00002	-.0023	.0001	.0001
#1	.0450	-.0014	.0007	-.0001	.00000	-.0022	.0001	.0001
#2	.0445	.0003	-.0003	-.0001	.00005	-.0025	.0001	.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0087	.0036	.0002	.0002	-.0012	.0208	-.0006	.0012
#1	.0087	.0034	.0004	.0003	-.0013	.0192	-.0005	.0000
#2	.0086	.0037	.0001	.0002	-.0010	.0224	-.0007	.0025

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030	.00048	.0001	.0025	3.787	3.402	.0015	.0204
#1	.0030	.00050	.0001	.0024	3.788	3.373	.0023	.0194
#2	.0031	.00046	.0000	.0026	3.786	3.432	.0007	.0213

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	1.989	.00014	.0000	1.816	-.0014	-.0004	.0005
#1	-.0013	1.983	.00016	.0001	1.818	-.0016	-.0001	.0006
#2	-.0003	1.996	.00011	.0000	1.815	-.0012	-.0008	.0004

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0006	-.0006	.0042
#1	.0005	-.0007	.0075
#2	.0006	-.0005	.0010

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6417.7	109280.	8314.7
#1	6416.5	109870.	8332.0
#2	6418.8	108690.	8297.4

Sample Name: K1811772-002 Acquired: 12/10/2018 11:00:26 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1.111 Test Type: Sample Type:
Comment: AM 121018A 9/10

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0604	-.0009	-.0004	.0001	.00002	-.0007	.0001	.0000
#1	.0624	-.0005	-.0004	.0002	-.00001	-.0008	.0002	.0000
#2	.0585	-.0013	-.0004	-.0001	.00004	-.0005	.0000	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0313	.0033	-.0001	.0004	-.0013	.0219	-.0004	.0014
#1	.0315	.0029	.0001	.0008	-.0018	.0207	-.0003	.0013
#2	.0312	.0037	-.0003	.0000	-.0009	.0230	-.0005	.0015

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0092	.00040	-.0002	.0025	4.195	3.435	.0023	.0480
#1	.0092	.00043	-.0001	.0024	4.210	3.426	.0040	.0496
#2	.0093	.00036	-.0002	.0026	4.180	3.444	.0006	.0464

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	2.188	.00021	.0006	1.906	-.0019	.0003	.0006
#1	.0000	2.196	.00023	.0005	1.907	-.0019	.0001	.0006
#2	-.0009	2.180	.00018	.0008	1.904	-.0020	.0005	.0007

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0007	.0005	.0037
#1	.0007	-.0001	.0063
#2	.0006	.0012	.0011

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6296.7	107210.	8183.3
#1	6286.6	107180.	8206.1
#2	6306.7	107230.	8160.5

Sample Name: K1811775-001 Acquired: 12/10/2018 11:02:53 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1.111 Test Type: Sample Type:
Comment: AM 121018A 9/10

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0370	-.0013	.0019	-.0001	.00004	-.0001	.0001	.0000
#1	.0369	-.0036	.0016	.0000	.00002	-.0010	.0001	.0000
#2	.0371	.0009	.0022	-.0003	.00006	.0008	.0001	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0068	.0042	.0003	.0003	-.0009	.0175	.0010	-.0004
#1	.0068	.0045	.0003	.0005	-.0010	.0188	.0010	-.0010
#2	.0067	.0038	.0002	.0000	-.0009	.0161	.0009	.0002

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0976	.00042	.0001	.0024	7.598	3.176	.0012	.0146
#1	.0968	.00046	.0002	.0022	7.639	3.211	-.0002	.0075
#2	.0983	.00038	-.0001	.0027	7.558	3.141	.0026	.0216

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	2.199	.00004	-.0004	1.759	-.0015	-.0005	.0004
#1	-.0004	2.215	.00002	-.0004	1.763	-.0015	-.0003	.0004
#2	-.0005	2.183	.00007	-.0003	1.755	-.0015	-.0006	.0004

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0003	-.0004	.0055
#1	.0003	-.0001	.0035
#2	.0003	-.0006	.0075

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6447.0	108500.	8345.3
#1	6439.8	108260.	8403.9
#2	6454.3	108740.	8286.7

Sample Name: KQ1817837-02 Acquired: 12/10/2018 11:08:09 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A Redigest K1811608-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	-.0001	-.0002	-.0003	-.00007	-.0030	-.0001	-.0001
#1	.0011	.0006	-.0001	.0002	-.00007	-.0032	-.0001	.0000
#2	.0010	-.0008	-.0003	-.0007	-.00007	-.0028	.0000	-.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	-.0004	.0001	.0002	-.0007	.0028	-.0014	-.0003
#1	.0041	-.0003	.0004	.0002	-.0004	.0065	-.0001	.0001
#2	.0040	-.0006	-.0002	.0001	-.0010	-.0009	-.0027	-.0006

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.00007	.0001	.0002	.0182	.0655	.0034	.0257
#1	.0003	.00007	.0000	.0001	.0179	.0726	.0032	.0256
#2	.0004	.00007	.0002	.0004	.0184	.0585	.0036	.0258

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	-.0894	-.00002	-.0004	.0108	-.0012	-.0001	.0001
#1	-.0004	-.0902	-.00004	-.0012	.0089	-.0012	-.0002	.0002
#2	-.0006	-.0885	.00000	.0003	.0127	-.0012	.0000	.0000

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0005	.0009	.0009
#1	.0004	.0000	.0005
#2	.0005	.0017	.0013

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6528.1	110140.	8148.1
#1	6528.7	110950.	8152.5
#2	6527.6	109330.	8143.7

Sample Name: KQ1817837-02 Acquired: 12/10/2018 11:10:39 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A Redigest K1811608-LCSW

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.769	1.710	2.159	4.292	.10529	.4111	1.023	1.010
#1	4.729	1.712	2.152	4.302	.10543	.4110	1.021	1.008
#2	4.810	1.708	2.166	4.282	.10515	.4111	1.024	1.012

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.55	.4064	1.047	.5168	.5271	2.150	2.024	.0028
#1	10.56	.4050	1.045	.5159	.5232	2.167	2.020	.0027
#2	10.53	.4078	1.049	.5176	.5311	2.133	2.028	.0029

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.35	1.0004	.8709	1.016	.0219	11.21	F 1.931	.0226
#1	11.34	1.0005	.8701	1.013	.0207	11.28	1.931	.0274
#2	11.37	1.0004	.8718	1.018	.0230	11.14	1.931	.0177

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4985	11.29	.00027	2.079	.0024	-.0012	1.049	1.030
#1	.4977	11.31	.00027	2.081	.0018	-.0016	1.050	1.028
#2	.4992	11.28	.00028	2.078	.0030	-.0009	1.049	1.032

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.021	.0033	-.0013
#1	1.020	.0035	.0022
#2	1.021	.0031	-.0048

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6449.7	107130.	8267.1
#1	6455.9	107270.	8228.4
#2	6443.5	107000.	8305.7

Sample Name: K1811608-001 Acquired: 12/10/2018 11:13:00 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A Redigest

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1724	.0004	.0067	.1187	.00000	.2229	.0001	.0001
#1	.1748	.0022	.0052	.1188	-.00001	.2231	.0001	.0000
#2	.1700	-.0013	.0081	.1185	.00001	.2226	.0001	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.46	.0001	.0006	.0000	-.0013	.4451	-.0009	.2014
#1	19.53	.0002	.0006	.0000	-.0014	.4429	-.0015	.2003
#2	19.40	.0000	.0005	.0001	-.0012	.4472	-.0004	.2025

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.816	.02959	.0042	-.0002	.0181	13.71	.0069	13.27
#1	5.838	.02939	.0041	-.0003	.0183	13.75	.0077	13.22
#2	5.795	.02980	.0043	-.0001	.0180	13.67	.0060	13.32

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	36.82	.56033	.0246	.0007	.0011	.0007	.0008
#1	-.0004	36.85	.55982	.0223	.0003	.0012	.0008	.0009
#2	-.0009	36.79	.56084	.0268	.0011	.0010	.0006	.0007

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0012	.0005	9.644
#1	.0013	.0013	9.690
#2	.0012	-.0003	9.597

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6330.2	105640.	8136.6
#1	6349.1	106150.	8117.8
#2	6311.4	105130.	8155.4

Sample Name: K1811610-001 Acquired: 12/10/2018 11:15:33 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: AM 121018A Redigest DISS

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1818	-.0006	.0044	.1144	-.00003	.2222	.0001	.0002
#1	.1818	.0005	.0032	.1141	-.00002	.2231	.0000	.0002
#2	.1818	-.0016	.0056	.1147	-.00005	.2213	.0003	.0002

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.17	-.0006	.0005	.0005	.0002	.4082	-.0011	.1985
#1	19.07	-.0009	.0004	.0005	.0001	.4085	-.0010	.1983
#2	19.27	-.0003	.0006	.0004	.0004	.4079	-.0013	.1987

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.649	.02876	.0029	-.0003	.0170	13.48	.0038	13.24
#1	5.623	.02888	.0029	-.0002	.0161	13.45	.0033	13.26
#2	5.675	.02864	.0030	-.0004	.0179	13.50	.0044	13.22

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	36.17	.54815	.0004	.0004	.0003	.0007	.0014
#1	-.0007	36.25	.54649	.0004	-.0003	.0003	.0006	.0013
#2	.0003	36.10	.54982	.0005	.0012	.0002	.0007	.0015

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0017	.0010	9.537
#1	.0016	-.0001	9.551
#2	.0018	.0021	9.523

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6322.7	107990.	8249.6
#1	6318.9	107810.	8299.3
#2	6326.5	108170.	8199.9

Sample Name: K1811658-001 Acquired: 12/10/2018 11:18:06 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A Redigest

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	-.0027	.0012	.2391	-.00013	.2161	-.0001	.0000
#1	.0010	-.0029	.0004	.2401	-.00015	.2155	-.0001	.0000
#2	.0020	-.0025	.0021	.2381	-.00011	.2168	.0000	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	82.53	.0000	.0008	.0002	-.0012	1.105	-.0010	.0162
#1	82.54	-.0002	.0008	.0005	-.0009	1.104	-.0001	.0180
#2	82.51	.0003	.0009	.0000	-.0015	1.106	-.0020	.0143

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	32.37	.43134	.0177	.0018	.0455	44.35	.0025	8.834
#1	32.49	.42965	.0178	.0019	.0446	44.56	.0034	8.821
#2	32.26	.43303	.0177	.0017	.0464	44.14	.0016	8.847

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	106.4	.12572	-.0007	.0009	-.0031	.0004	.0005
#1	-.0003	106.7	.12574	-.0001	.0004	-.0033	.0004	.0003
#2	-.0001	106.2	.12570	-.0013	.0014	-.0029	.0003	.0007

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0007	.0025	9.026
#1	.0006	.0037	8.998
#2	.0007	.0013	9.054

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6069.8	103520.	8267.6
#1	6068.3	103700.	8294.1
#2	6071.2	103340.	8241.0

Sample Name: KQ1817837-03 Acquired: 12/10/2018 11:20:40 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A Redigest K1811658-001D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	-.0004	-.0004	.2346	-.00010	.2144	-.0001	-.0001
#1	.0012	.0004	-.0007	.2370	-.00010	.2131	.0000	-.0001
#2	.0011	-.0011	-.0002	.2322	-.00009	.2157	-.0002	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	81.92	-.0001	.0005	.0000	-.0012	1.096	-.0006	.0122
#1	82.46	.0000	.0005	.0001	-.0010	1.100	.0007	.0122
#2	81.39	-.0001	.0004	.0000	-.0015	1.093	-.0019	.0122

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	31.85	.42504	.0182	.0021	.0431	43.26	.0032	8.715
#1	31.85	.42162	.0184	.0022	.0439	43.30	.0019	8.698
#2	31.85	.42846	.0180	.0020	.0423	43.22	.0045	8.732

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	103.9	.12407	-.0008	.0001	-.0027	.0007	.0003
#1	-.0005	103.9	.12507	-.0013	.0003	-.0031	.0008	.0004
#2	-.0002	103.9	.12308	-.0004	-.0001	-.0023	.0006	.0002

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0006	.0009	9.006
#1	.0006	.0001	9.020
#2	.0006	.0016	8.993

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6041.1	103810.	8227.9
#1	6036.3	104320.	8176.2
#2	6045.9	103290.	8279.7

Sample Name: CCVB Acquired: 12/10/2018 11:23:17 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.731	10.89	.0016	1.035	9.956	.00005	-.0013	.0000
Stddev	.024	.03	.0038	.000	.076	.00001	.0002	.0001
%RSD	.3129	.3206	239.3	.0155	.7630	24.832	18.74	936.6
#1	7.748	10.87	-.0011	1.035	10.01	.00004	-.0011	.0001
#2	7.714	10.92	.0043	1.035	9.902	.00005	-.0014	-.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	9.918	9.449	.0000	.0004	-.0006	-.0009	10.40
Stddev	.0000	.046	.036	.000	.0002	.0005	.0001	.05
%RSD	12.87	.4648	.3766	20680.	56.24	88.00	7.880	.5205
#1	-.0003	9.951	9.475	.0002	.0006	-.0002	-.0009	10.43
#2	-.0002	9.886	9.424	-.0002	.0002	-.0009	-.0008	10.36
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	1.053	10.20	9.573	10.68	.95511	1.043	-.0001
Stddev	.0012	.013	.02	.066	.10	.01375	.022	.0003
%RSD	103.2	1.254	.1506	.6848	.9488	1.4393	2.106	586.3
#1	-.0003	1.062	10.21	9.527	10.75	.96483	1.059	.0002
#2	-.0021	1.044	10.18	9.620	10.61	.94539	1.028	-.0003
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 12/10/2018 11:23:17 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	10.36	10.34	-.0006	11.00	-.0004	10.49	1.0009
Stddev	.000	.01	.18	.0002	.05	.0008	.15	.0095
%RSD	526.0	.0580	1.741	26.57	.4350	225.6	1.475	.94598
#1	-.0002	10.35	10.47	-.0005	11.03	.0002	10.60	1.0076
#2	.0001	10.36	10.21	-.0008	10.97	-.0009	10.38	.99421
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0002	-.0020	-.0001	.0000	.0002	1.052	1.055
Stddev	.0004	.0002	.0002	.0003	.000	.0001	.002	.004
%RSD	690.0	73.30	11.95	544.4	182.2	32.96	.2010	.3404
#1	-.0004	.0001	-.0021	-.0003	-.0001	.0003	1.050	1.058
#2	.0002	.0003	-.0018	.0001	.0000	.0002	1.053	1.053
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6384.2	108050.	8260.9
Stddev	13.4	1365.	12.7
%RSD	.20919	1.2631	.15409
#1	6393.7	107080.	8269.9
#2	6374.8	109010.	8251.9

Sample Name: CCVA Acquired: 12/10/2018 11:25:58 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2683	.2983	.2523	.2626	.2547	.25968	.2563	.2508
Stddev	.0014	.0045	.0019	.0054	.0026	.00105	.0054	.0003
%RSD	.5175	1.504	.7449	2.052	1.006	.40329	2.107	.1109
#1	.2673	.2952	.2536	.2588	.2565	.25894	.2525	.2506
#2	.2693	.3015	.2509	.2664	.2529	.26042	.2601	.2510
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2494	.5200	.5145	.2393	.2506	.2535	.2542	.2755
Stddev	.0008	.0002	.0064	.0016	.0007	.0005	.0015	.0058
%RSD	.3332	.0427	1.249	.6727	.2639	.2139	.6067	2.099
#1	.2488	.5199	.5190	.2404	.2502	.2531	.2531	.2796
#2	.2500	.5202	.5100	.2381	.2511	.2539	.2553	.2714
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2490	.0002	.2723	.2579	.2836	.24499	.2588	.2534
Stddev	.0002	.0008	.0098	.0050	.0027	.00015	.0001	.0008
%RSD	.0654	349.0	3.585	1.940	.9669	.05955	.0305	.3322
#1	.2489	.0008	.2792	.2614	.2855	.24509	.2589	.2540
#2	.2491	-.0003	.2654	.2544	.2816	.24488	.2588	.2528
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 12/10/2018 11:25:58 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2499	.0016	2.661	.2533	.1453	.2589	.2318	.00058
Stddev	.0005	.0023	.018	.0016	.0057	.0014	.0137	.00022
%RSD	.2108	147.8	.6799	.6347	3.919	.5539	5.921	37.641
#1	.2503	.0032	2.648	.2522	.1413	.2578	.2415	.00073
#2	.2496	-.0001	2.674	.2545	.1493	.2599	.2221	.00043
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2531	.2517	.2474	.2461	.2515	.2550	.0001	.0027
Stddev	.0032	.0017	.0006	.0011	.0010	.0007	.0002	.0052
%RSD	1.245	.6587	.2231	.4343	.3883	.2654	312.3	189.3
#1	.2509	.2506	.2478	.2469	.2508	.2546	-.0001	-.0009
#2	.2553	.2529	.2470	.2454	.2522	.2555	.0002	.0064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6456.8	110380.	8286.1
Stddev	5.0	394.	43.6
%RSD	.07722	.35684	.52604
#1	6453.3	110110.	8255.3
#2	6460.3	110660.	8316.9

Sample Name: CCB Acquired: 12/10/2018 11:28:18 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	.0004	-.0026	-.0002	.0013	.00001	-.0005	.0001
Stddev	.0006	.0016	.0006	.0009	.0001	.00005	.0006	.0000
%RSD	67.86	431.5	22.03	578.6	9.703	516.37	125.7	2.633
#1	.0013	.0015	-.0029	.0005	.0012	.00005	-.0009	.0001
#2	.0005	-.0008	-.0022	-.0008	.0014	-.00003	-.0001	.0001
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0087	.0115	-.0005	.0000	.0001	-.0002	.0027
Stddev	.0000	.0053	.0000	.0001	.000	.0002	.0000	.0030
%RSD	87.18	60.79	.3282	12.99	286.7	359.1	5.386	110.9
#1	.0000	.0124	.0116	-.0006	-.0001	.0002	-.0002	.0006
#2	.0000	.0049	.0115	-.0005	.0000	-.0001	-.0003	.0049
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	.0008	.0014	F .0050	.0064	.00021	.0000	.0004
Stddev	.0005	.0013	.0003	.0001	.0010	.00008	.000	.0000
%RSD	89.40	149.9	22.89	2.620	15.93	37.694	908.3	.2333
#1	-.0010	-.0001	.0016	.0051	.0071	.00027	.0002	.0004
#2	-.0002	.0017	.0011	.0049	.0057	.00016	-.0003	.0004
Check ?	Chk Pass	Chk Pass	None	Chk Fail	None	Chk Pass	None	Chk Pass
High Limit				.0050				
Low Limit				-.0050				

See review
AKm 12/10/18

Sample Name: CCB Acquired: 12/10/2018 11:28:18 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0012	-.0125	.0033	.0025	-.0003	-.0683	.00027
Stddev	.0001	.0013	.0285	.0003	.0060	.0005	.0023	.00001
%RSD	44.22	105.5	228.2	9.593	240.8	149.8	3.335	5.0440
#1	.0004	.0003	.0077	.0036	.0067	-.0006	-.0667	.00026
#2	.0002	.0022	-.0326	.0031	-.0017	.0000	-.0699	.00028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050	.0004	-.0020	.0002	.0000	.0002	.0013	.0001
Stddev	.0004	.0005	.0004	.0005	.000	.0001	.0022	.0003
%RSD	8.730	132.3	19.54	223.5	822.1	44.82	171.6	434.5
#1	.0046	.0007	-.0017	-.0001	.0001	.0002	-.0003	-.0001
#2	.0053	.0000	-.0022	.0005	-.0002	.0001	.0029	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6471.4	109430.	8316.0
Stddev	8.2	534.	16.0
%RSD	.12677	.48786	.19235
#1	6477.2	109060.	8327.3
#2	6465.6	109810.	8304.7

AB 12/10/18

Sample Name: CCB Acquired: 12/10/2018 11:32:24 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0001	-.0022	-.0004	-.0002	.00001	-.0014	.0001
Stddev	.0000	.0009	.0004	.0020	.0000	.00002	.0001	.0001
%RSD	6.523	922.8	19.47	497.6	2.318	305.48	8.308	186.6
#1	.0004	.0007	-.0019	.0010	-.0002	-.00001	-.0015	.0000
#2	.0004	-.0005	-.0025	-.0018	-.0002	.00002	-.0014	.0002
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0026	.0001	.0003	.0000	.0004	-.0005	-.0010
Stddev	.0000	.0008	.0000	.0006	.000	.0002	.0005	.0004
%RSD	18.66	32.68	44.97	219.0	764.1	46.41	111.6	34.14
#1	.0001	-.0020	.0001	-.0001	.0001	.0003	-.0008	-.0013
#2	.0001	-.0032	.0001	.0007	-.0002	.0005	-.0001	-.0008
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	.0013	-.0070	.0000	.0010	.00004	.0004	-.0002
Stddev	.0005	.0004	.0081	.0000	.0010	.00001	.0007	.0000
%RSD	57.08	30.12	116.5	12.40	101.9	26.151	170.3	2.394
#1	-.0011	.0010	-.0127	.0000	.0003	.00004	.0009	-.0002
#2	-.0005	.0015	-.0012	.0000	.0017	.00003	-.0001	-.0002
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 12/10/2018 11:32:24 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	-.0008	-.0162	.0022	.0087	-.0005	-.0736	.00007
Stddev	.0001	.0034	.0114	.0020	.0028	.0001	.0028	.00006
%RSD	25.51	400.7	70.38	90.68	31.55	24.73	3.756	88.382
#1	.0005	.0016	-.0081	.0008	.0068	-.0004	-.0755	.00012
#2	.0003	-.0033	-.0243	.0036	.0107	-.0006	-.0716	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0002	-.0018	-.0002	-.0001	.0000	-.0007	-.0016
Stddev	.0004	.0010	.0001	.0000	.0001	.000	.0004	.0002
%RSD	331.4	444.2	6.217	21.04	87.60	22.89	57.01	11.98
#1	.0004	.0009	-.0019	-.0002	.0000	.0000	-.0004	-.0015
#2	-.0002	-.0005	-.0017	-.0002	-.0002	.0000	-.0009	-.0018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6532.6	110020.	8383.1
Stddev	9.9	711.	94.9
%RSD	.15106	.64583	1.1321
#1	6525.7	109510.	8450.2
#2	6539.6	110520.	8316.0

Sample Name: LLCCV Acquired: 12/10/2018 11:35:21 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0109	.0110	.0188	.0092	.0037	.00109	.0186	.0011
Stddev	.0000	.0006	.0032	.0003	.0000	.00009	.0005	.0000
%RSD	.2382	5.671	17.24	3.206	.1150	8.1160	2.800	4.196
#1	.0110	.0114	.0165	.0094	.0037	.00103	.0189	.0011
#2	.0109	.0105	.0211	.0090	.0037	.00115	.0182	.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	.0146	.0202	.0035	.0019	.0039	.0037	.0217
Stddev	.0000	.0053	.0001	.0002	.0000	.0005	.0006	.0019
%RSD	4.057	36.59	.6711	5.476	1.533	13.08	14.81	8.531
#1	.0011	.0108	.0201	.0037	.0019	.0036	.0033	.0230
#2	.0011	.0183	.0202	.0034	.0019	.0043	.0041	.0204
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0092	.0242	-.0073	.0052	.0064	.00098	.0003	.0039
Stddev	.0006	.0017	.0358	.0000	.0011	.00005	.0016	.0000
%RSD	6.345	7.125	487.7	.0788	16.45	4.8958	484.1	1.125
#1	.0088	.0229	.0180	.0052	.0071	.00095	.0014	.0039
#2	.0096	.0254	-.0327	.0052	.0057	.00101	-.0008	.0038
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLCCV Acquired: 12/10/2018 11:35:21 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	.0383	.2265	.0229	.2205	.0040	.1451	.00108
Stddev	.0001	.0001	.0057	.0003	.0108	.0004	.0051	.00001
%RSD	2.737	.2946	2.534	1.228	4.896	9.178	3.491	1.2047
#1	.0040	.0384	.2306	.0227	.2281	.0038	.1415	.00107
#2	.0042	.0383	.2225	.0231	.2129	.0043	.1487	.00109
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0116	.0215	F .0013	.0035	.0041	.0041	.0248	.0461
Stddev	.0007	.0009	.0002	.0001	.0001	.0001	.0012	.0018
%RSD	5.782	4.294	12.44	2.867	2.150	1.333	5.003	3.916
#1	.0111	.0222	.0012	.0034	.0040	.0040	.0257	.0448
#2	.0121	.0209	.0015	.0036	.0041	.0041	.0239	.0474
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.0020					
Range			-30.00%					

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6571.3	108930.	8185.3
Stddev	14.1	664.	56.3
%RSD	.21447	.60957	.68738
#1	6581.2	108460.	8145.5
#2	6561.3	109400.	8225.1

Sample Name: KQ1817837-04 Acquired: 12/10/2018 11:38:31 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A Redigest K1811658-001S

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.539	1.651	.3922	.8200	1.079	.03996	.6009	.0400
#1	1.540	1.660	.3949	.8217	1.078	.03998	.6052	.0399
#2	1.538	1.643	.3896	.8183	1.080	.03994	.5966	.0400

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0391	90.46	.1604	.4035	.1992	.1947	1.933	.3775
#1	.0393	90.11	.1613	.4034	.1993	.1965	1.924	.3769
#2	.0390	90.81	.1595	.4036	.1992	.1929	1.941	.3781

Elem	Li6707	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0145	40.30	.80932	.8827	.3913	.0417	52.12	.7698
#1	.0140	40.36	.81651	.8834	.3909	.0416	52.18	.7727
#2	.0151	40.23	.80213	.8819	.3918	.0419	52.06	.7668

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.529	.0365	111.3	.12468	.1514	.0003	-.0013	.4237
#1	8.524	.0368	111.9	.12476	.1520	.0003	-.0014	.4273
#2	8.534	.0362	110.6	.12460	.1509	.0004	-.0012	.4200

Elem	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm
Avg	.4036	.3841	.0013	8.768
#1	.4037	.3845	.0017	8.787
#2	.4035	.3836	.0009	8.750

*- 4X

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Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6093.2	100920.	8103.7
#1	6097.8	100620.	8115.5
#2	6088.5	101220.	8091.9

Sample Name: K1811658-001A Acquired: 12/10/2018 11:40:53 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A Redigest A=0.05/10mL CICV1,3

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.741	-.0010	2.375	5.138	.11849	.2105	1.139	1.119
#1	4.739	-.0021	2.372	5.089	.11867	.2112	1.141	1.121
#2	4.744	.0001	2.378	5.187	.11831	.2098	1.137	1.117

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	95.35	.4643	1.164	.5835	.5636	3.601	2.181	.0144
#1	94.36	.4647	1.167	.5848	.5626	3.557	2.180	.0142
#2	96.33	.4638	1.162	.5821	.5645	3.644	2.181	.0146

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.52	1.5577	.0186	1.133	.0416	55.74	2.206	8.774
#1	44.64	1.5643	.0188	1.135	.0409	55.88	2.209	8.785
#2	44.39	1.5511	.0184	1.131	.0423	55.60	2.203	8.762

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5322	115.5	.12569	2.175	.0002	-.0020	1.226	1.173
#1	.5323	115.8	.12477	2.179	-.0002	-.0022	1.231	1.175
#2	.5321	115.2	.12661	2.172	.0006	-.0018	1.221	1.171

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.114	.0031	8.903
#1	1.115	.0032	8.918
#2	1.112	.0031	8.888

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6070.4	101630.	8055.2
#1	6064.8	101280.	8145.2
#2	6076.0	101980.	7965.2

* - NA

12/10/18

Sample Name: K1811658-002 Acquired: 12/10/2018 11:43:13 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A Redigest

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	.0002	-.0004	.0345	-.00006	.0438	.0000	.0000
#1	.0023	.0005	.0009	.0352	-.00010	.0445	.0000	.0001
#2	.0019	-.0001	-.0018	.0338	-.00001	.0431	.0000	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	84.80	.0106	.0005	.0005	-.0010	.0606	-.0010	.0057
#1	84.51	.0107	.0005	.0002	-.0009	.0613	-.0010	.0064
#2	85.09	.0104	.0004	.0008	-.0012	.0599	-.0011	.0049

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	33.10	.00215	.0011	.0010	.0175	2.348	.0053	9.132
#1	32.96	.00213	.0012	.0009	.0164	2.383	.0051	9.094
#2	33.24	.00218	.0011	.0011	.0186	2.312	.0055	9.170

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	60.63	.10353	.0013	.0005	-.0032	.0002	.0001
#1	-.0006	60.28	.10342	.0015	.0006	-.0033	.0004	.0001
#2	-.0004	60.99	.10365	.0011	.0004	-.0031	.0000	.0001

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0006	.0008	11.36
#1	.0007	.0006	11.36
#2	.0005	.0011	11.37

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6258.5	107250.	8432.9
#1	6287.9	107370.	8442.9
#2	6229.2	107120.	8422.9

Sample Name: K1811658-003 Acquired: 12/10/2018 11:45:48 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A Redigest

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	.0023	-.0009	.3137	-.00003	.3758	-.0001	.0001
#1	.0016	.0007	-.0019	.3145	-.00004	.3753	-.0001	.0001
#2	.0009	.0039	.0002	.3129	-.00003	.3763	.0000	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	69.70	.0004	.0009	.0002	-.0010	.6628	-.0019	.0094
#1	69.64	.0006	.0009	.0004	-.0014	.6556	-.0026	.0091
#2	69.77	.0002	.0010	.0000	-.0006	.6700	-.0012	.0097

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.29	.36899	.0009	.0084	.0424	39.26	.0024	8.048
#1	26.32	.36800	.0009	.0082	.0431	39.22	.0022	8.045
#2	26.27	.36997	.0010	.0085	.0417	39.31	.0027	8.052

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	92.55	.12428	.0001	.0002	-.0036	.0004	.0001
#1	-.0004	92.33	.12408	-.0001	.0004	-.0035	.0006	.0001
#2	-.0007	92.77	.12449	.0002	.0000	-.0037	.0003	.0002

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0007	.0012	4.180
#1	.0007	.0022	4.179
#2	.0007	.0003	4.181

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6107.5	105500.	8306.5
#1	6127.7	105840.	8303.0
#2	6087.4	105150.	8310.0

Sample Name: K1811658-004 Acquired: 12/10/2018 11:48:23 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A Redigest

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030	-.0003	-.0019	.2627	-.00004	.2526	-.0001	.0000
#1	.0031	-.0007	-.0008	.2622	-.00003	.2539	.0000	.0001
#2	.0030	.0001	-.0031	.2631	-.00004	.2513	-.0001	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	84.63	-.0004	.0004	.0010	-.0012	1.185	-.0008	.0167
#1	84.09	-.0002	.0004	.0012	-.0007	1.176	-.0008	.0156
#2	85.17	-.0006	.0005	.0007	-.0016	1.195	-.0009	.0178

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	32.58	.43480	.0202	.0021	.0456	50.01	.0008	8.983
#1	32.85	.43158	.0200	.0022	.0463	50.63	.0018	9.060
#2	32.30	.43802	.0203	.0021	.0450	49.40	-.0002	8.906

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	115.9	.13030	-.0005	.0002	-.0031	.0005	.0005
#1	-.0003	117.6	.13014	-.0010	-.0006	-.0032	.0002	.0007
#2	-.0006	114.3	.13046	.0001	.0009	-.0030	.0008	.0002

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0006	.0019	8.598
#1	.0007	.0032	8.612
#2	.0006	.0006	8.584

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5995.3	103370.	8162.4
#1	5989.6	104370.	8250.2
#2	6001.0	102370.	8074.5

Sample Name: K1811658-005 Acquired: 12/10/2018 11:50:57 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A Redigest

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019	.0000	-.0008	-.0002	-.00007	-.0013	.0000	.0000
#1	.0019	-.0005	-.0003	.0000	-.00007	-.0004	.0000	.0000
#2	.0019	.0006	-.0013	-.0005	-.00008	-.0022	.0000	-.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0413	.0000	.0001	.0011	.0005	.0047	-.0005	.0005
#1	.0429	-.0001	.0003	.0014	.0009	.0054	-.0014	.0014
#2	.0397	.0000	-.0001	.0009	.0002	.0040	.0004	-.0003

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0052	.00019	-.0001	.0003	.0171	.0798	.0022	.2116
#1	.0058	.00020	-.0002	.0001	.0159	.1167	.0021	.2098
#2	.0047	.00018	.0000	.0004	.0182	.0428	.0023	.2134

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	.1550	.00008	.0000	-.0009	-.0024	-.0005	.0006
#1	-.0006	.1606	-.00002	.0007	-.0006	-.0024	-.0004	.0006
#2	-.0007	.1494	.00017	-.0006	-.0011	-.0025	-.0005	.0005

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0011	-.0002	.0028
#1	.0011	-.0016	.0034
#2	.0011	.0013	.0021

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6460.9	109780.	8351.3
#1	6457.4	109250.	8367.2
#2	6464.4	110310.	8335.5

Sample Name: K1811658-001 Acquired: 12/10/2018 11:53:27 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: AM 121018A Redigest DISS

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	-.0018	.0014	.2280	-.00005	.2005	.0000	.0000
#1	.0007	-.0025	.0027	.2272	-.00009	.2001	.0000	.0000
#2	.0010	-.0012	.0001	.2289	-.00002	.2010	.0000	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	82.66	.0004	.0006	.0001	-.0011	1.000	-.0012	.0137
#1	82.29	.0002	.0008	.0002	-.0010	.9924	-.0010	.0126
#2	83.03	.0005	.0005	-.0001	-.0012	1.008	-.0013	.0148

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	31.31	.42090	.0174	.0022	.0398	40.10	.0037	8.675
#1	31.37	.42090	.0175	.0022	.0374	40.27	.0032	8.671
#2	31.25	.42090	.0173	.0022	.0421	39.93	.0041	8.679

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	95.52	.12207	-.0006	.0002	-.0024	.0002	.0003
#1	.0006	95.96	.12182	-.0014	.0008	-.0022	.0004	.0003
#2	-.0004	95.09	.12233	.0002	-.0005	-.0026	.0000	.0002

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0006	.0002	8.955
#1	.0007	.0007	8.978
#2	.0006	-.0002	8.932

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6035.6	102470.	7990.9
#1	6039.0	102240.	8023.6
#2	6032.2	102700.	7958.1

Sample Name: K1811658-002 Acquired: 12/10/2018 11:56:02 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: AM 121018A Redigest DISS

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	.0007	-.0009	.0355	-.00001	.0450	-.0001	.0000
#1	.0013	.0010	.0012	.0353	-.00008	.0457	-.0001	.0000
#2	.0019	.0004	-.0030	.0358	.00006	.0443	-.0001	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	91.44	-.0009	.0000	.0002	-.0007	.0068	-.0014	.0064
#1	90.49	-.0010	.0005	.0002	-.0011	.0076	-.0021	.0058
#2	92.39	-.0009	-.0005	.0002	-.0002	.0059	-.0007	.0071

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	33.45	.00094	.0005	.0010	.0249	2.395	.0041	9.306
#1	33.39	.00132	.0005	.0010	.0249	2.446	.0034	9.273
#2	33.50	.00056	.0005	.0010	.0249	2.344	.0049	9.339

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	60.02	.11108	.0003	.0001	-.0022	.0004	.0005
#1	-.0006	59.98	.11024	-.0005	-.0005	-.0021	.0005	.0006
#2	-.0003	60.05	.11191	.0010	.0008	-.0024	.0004	.0003

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0006	.0015	11.75
#1	.0007	.0035	11.73
#2	.0006	-.0005	11.78

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5974.8	100910.	7910.6
#1	5968.5	101370.	7974.1
#2	5981.2	100440.	7847.0

Sample Name: K1811658-003 Acquired: 12/10/2018 11:58:37 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: AM 121018A Redigest DISS

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	-.0011	-.0016	.3335	.00001	.3935	.0000	.0000
#1	.0009	.0007	-.0014	.3386	-.00001	.3948	.0000	.0000
#2	.0013	-.0030	-.0019	.3285	.00002	.3921	.0000	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	69.85	.0002	.0008	.0000	-.0015	.7691	-.0006	.0064
#1	70.47	.0005	.0006	-.0004	-.0026	.7710	-.0016	.0056
#2	69.22	.0000	.0009	.0004	-.0004	.7673	.0003	.0071

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.27	.36497	.0004	.0084	.0457	42.74	.0007	7.903
#1	25.36	.36614	.0006	.0085	.0461	43.15	.0018	7.874
#2	25.18	.36379	.0003	.0083	.0454	42.32	-.0004	7.932

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	94.76	.12976	-.0004	-.0002	-.0025	.0003	.0005
#1	-.0002	95.32	.13057	-.0006	-.0003	-.0023	.0003	.0008
#2	.0001	94.20	.12895	-.0001	-.0001	-.0028	.0004	.0003

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0008	.0021	3.473
#1	.0008	.0034	3.471
#2	.0008	.0009	3.476

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6058.4	102520.	8043.8
#1	6049.5	102330.	7993.6
#2	6067.3	102700.	8094.1

Sample Name: K1811658-004 Acquired: 12/10/2018 12:01:11 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: AM 121018A Redigest DISS

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	-.0005	-.0003	.2264	-.00004	.2028	.0000	.0000
#1	.0007	-.0016	-.0004	.2248	-.00004	.2033	.0000	.0000
#2	.0002	.0006	-.0002	.2280	-.00003	.2023	.0000	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	82.64	-.0002	.0004	.0004	-.0005	1.027	-.0004	.0133
#1	82.14	-.0005	.0005	.0003	-.0001	1.021	-.0009	.0141
#2	83.13	.0002	.0003	.0005	-.0008	1.034	.0000	.0124

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	31.13	.42638	.0175	.0020	.0434	39.66	.0001	8.601
#1	30.94	.42638	.0178	.0022	.0444	39.26	.0006	8.574
#2	31.31	.42638	.0172	.0017	.0425	40.07	-.0005	8.629

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	96.22	.12150	.0004	.0002	-.0027	.0004	.0005
#1	-.0001	95.21	.12045	-.0004	-.0001	-.0027	.0002	.0004
#2	.0001	97.24	.12256	.0011	.0006	-.0028	.0006	.0005

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0008	.0014	8.808
#1	.0008	.0017	8.778
#2	.0007	.0011	8.838

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5988.8	101140.	8014.5
#1	5985.7	101450.	8027.1
#2	5991.8	100840.	8001.8

Sample Name: CCVB Acquired: 12/10/2018 12:03:48 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.893	10.46	-.0007	1.038	9.830	.00007	-.0015	.0000
Stddev	.127	.04	.0001	.005	.016	.00011	.0001	.0000
%RSD	1.609	.4306	19.30	.5159	.1643	156.94	5.302	110.8
#1	7.803	10.43	-.0008	1.042	9.818	-.00001	-.0014	.0001
#2	7.982	10.49	-.0006	1.034	9.841	.00014	-.0015	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	10.19	9.418	-.0001	.0005	-.0008	-.0002	10.50
Stddev	.0000	.06	.038	.0000	.0005	.0001	.0002	.01
%RSD	9.067	.5648	.4016	53.38	91.59	7.678	68.11	.1367
#1	-.0002	10.15	9.392	-.0001	.0008	-.0008	-.0004	10.51
#2	-.0002	10.23	9.445	-.0001	.0002	-.0008	-.0001	10.49
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0014	1.003	10.56	9.813	10.49	.97126	1.052	-.0003
Stddev	.0004	.002	.03	.074	.02	.00611	.003	.0000
%RSD	27.38	.1645	.2846	.7531	.2154	.62941	.2930	15.82
#1	-.0016	1.001	10.59	9.760	10.51	.96694	1.054	-.0003
#2	-.0011	1.004	10.54	9.865	10.48	.97558	1.050	-.0002
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 12/10/2018 12:03:48 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	10.20	9.944	.0019	10.79	-.0003	10.03	.99998
Stddev	.0001	.02	.142	.0004	.03	.0001	.02	.00235
%RSD	46.93	.1626	1.426	22.67	.2611	38.40	.1514	.23508
#1	-.0001	10.21	9.844	.0016	10.81	-.0003	10.01	.99832
#2	-.0002	10.18	10.04	.0022	10.77	-.0002	10.04	1.0016
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0005	-.0009	-.0003	.0000	.0002	1.028	1.046
Stddev	.0013	.0008	.0003	.0003	.0000	.0000	.007	.003
%RSD	709.3	149.6	35.72	97.00	114.8	9.584	.7258	.2645
#1	-.0008	-.0011	-.0012	-.0001	.0000	.0002	1.033	1.044
#2	.0011	.0000	-.0007	-.0004	.0001	.0002	1.023	1.048
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6408.3	105310.	8027.0
Stddev	5.7	561.	28.2
%RSD	.08962	.53302	.35146
#1	6404.3	105710.	8047.0
#2	6412.4	104920.	8007.1

Sample Name: CCVA Acquired: 12/10/2018 12:06:30 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2700	.2823	.2528	.2636	.2541	.25353	.2489	.2544
Stddev	.0032	.0048	.0010	.0045	.0063	.00078	.0001	.0002
%RSD	1.195	1.700	.4131	1.702	2.467	.30910	.0208	.0870
#1	.2723	.2789	.2521	.2604	.2585	.25298	.2490	.2546
#2	.2678	.2857	.2536	.2667	.2497	.25409	.2489	.2543
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2507	.5144	.4851	.2492	.2544	.2550	.2503	.2739
Stddev	.0005	.0106	.0085	.0007	.0004	.0001	.0008	.0053
%RSD	.2117	2.064	1.757	.2864	.1408	.0500	.3332	1.939
#1	.2511	.5220	.4911	.2497	.2542	.2551	.2497	.2777
#2	.2503	.5069	.4790	.2487	.2547	.2549	.2508	.2702
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2480	-.0003	.2677	.2580	.2698	.25106	.2711	.2533
Stddev	.0005	.0014	.0021	.0059	.0002	.00007	.0013	.0010
%RSD	.2038	405.3	.8021	2.268	.0913	.02973	.4826	.4047
#1	.2477	-.0013	.2662	.2621	.2696	.25112	.2702	.2526
#2	.2484	.0006	.2692	.2538	.2700	.25101	.2720	.2541
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 12/10/2018 12:06:30 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2512	-.0008	2.614	.2527	.1406	.2470	.1935	.00012
Stddev	.0001	.0018	.029	.0003	.0076	.0010	.0084	.00002
%RSD	.0314	230.0	1.110	.1378	5.402	.4131	4.333	20.638
#1	.2512	.0005	2.635	.2524	.1459	.2463	.1994	.00010
#2	.2513	-.0020	2.594	.2529	.1352	.2477	.1876	.00014
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2537	.2548	.2527	.2495	.2580	.2563	.0019	.0010
Stddev	.0012	.0011	.0019	.0002	.0006	.0006	.0017	.0050
%RSD	.4651	.4387	.7528	.0661	.2334	.2322	88.72	480.2
#1	.2545	.2556	.2540	.2496	.2585	.2559	.0007	.0046
#2	.2528	.2540	.2513	.2494	.2576	.2567	.0032	-.0025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6461.4	105800.	8059.3
Stddev	12.9	28.	148.3
%RSD	.19988	.02603	1.8400
#1	6452.2	105820.	7954.5
#2	6470.5	105780.	8164.2

Sample Name: CCB Acquired: 12/10/2018 12:08:49 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033	.0028	-.0001	.0007	.0018	.00004	-.0016	.0001
Stddev	.0005	.0016	.0001	.0039	.0001	.00004	.0002	.0000
%RSD	15.90	58.45	86.80	567.8	4.572	81.968	11.81	3.264
#1	.0036	.0039	.0000	.0035	.0017	.00007	-.0017	.0001
#2	.0029	.0016	-.0002	-.0021	.0018	.00002	-.0014	.0001
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0209	F .0228	-.0001	.0002	.0001	-.0004	-.0016
Stddev	.0001	.0021	.0017	.0001	.0002	.0006	.0001	.0009
%RSD	499.7	10.27	7.597	102.1	113.7	863.3	32.64	55.53
#1	.0001	.0194	.0216	.0000	.0003	.0005	-.0003	-.0010
#2	-.0001	.0224	.0241	-.0001	.0000	-.0004	-.0005	-.0023
Check ?	Chk Pass	None	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			.0200					
Low Limit			-.0200					

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0010	.0007	.0129	F .0098	.0101	.00033	.0009	.0007
Stddev	.0009	.0007	.0226	.0008	.0000	.00010	.0014	.0001
%RSD	90.16	100.1	174.8	8.313	.3838	29.950	156.0	21.30
#1	-.0016	.0012	.0289	.0092	.0102	.00040	-.0001	.0008
#2	-.0004	.0002	-.0031	.0104	.0101	.00026	.0019	.0006
Check ?	Chk Pass	Chk Pass	None	Chk Fail	None	Chk Pass	None	Chk Pass
High Limit				.0050				
Low Limit				-.0050				

See rerun
Atm 12/10/18

Sample Name: CCB Acquired: 12/10/2018 12:08:49 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0047	.0673	.0020	.0050	-.0005	-.0417	.00026
Stddev	.0002	.0005	.0099	.0031	.0001	.0002	.0019	.00011
%RSD	61.25	11.65	14.72	154.7	2.646	45.44	4.548	40.609
#1	.0006	.0043	.0603	.0042	.0049	-.0003	-.0431	.00034
#2	.0002	.0051	.0743	-.0002	.0051	-.0006	-.0404	.00019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0064	.0011	-.0009	-.0003	.0000	.0000	.0002	.0031
Stddev	.0006	.0004	.0001	.0002	.0002	.0000	.0023	.0009
%RSD	8.693	37.92	14.35	60.66	504.9	19.25	1334.	27.53
#1	.0060	.0014	-.0008	-.0002	.0001	.0000	.0018	.0037
#2	.0067	.0008	-.0009	-.0005	-.0001	.0000	-.0014	.0025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6458.6	106610.	7975.6
Stddev	16.5	554.	18.2
%RSD	.25598	.51945	.22785
#1	6470.3	107000.	7962.8
#2	6446.9	106220.	7988.5

12/10/18

Sample Name: CCB Acquired: 12/10/2018 12:11:20 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0014	-.0011	-.0005	-.0001	.00005	-.0021	.0001
Stddev	.000	.0019	.0005	.0004	.0001	.00007	.0020	.0000
%RSD	375.3	138.2	41.21	85.56	145.3	140.11	93.13	6.516
#1	.0001	-.0027	-.0008	-.0008	-.0002	.00010	-.0035	.0001
#2	-.0001	.0000	-.0014	-.0002	.0000	.00000	-.0007	.0001
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0027	.0002	-.0006	.0001	.0003	-.0001	.0039
Stddev	.0000	.0037	.0001	.0005	.0001	.0003	.0004	.0029
%RSD	12.82	136.2	31.64	73.92	75.34	108.4	318.1	74.04
#1	.0002	-.0001	.0003	-.0010	.0002	.0005	.0002	.0019
#2	.0001	-.0053	.0002	-.0003	.0001	.0001	-.0004	.0060
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	.0011	-.0084	.0001	-.0004	.00005	-.0005	.0001
Stddev	.0009	.0013	.0073	.0001	.0001	.00002	.0008	.0000
%RSD	271.8	119.2	86.87	132.5	28.14	30.044	165.0	25.02
#1	-.0010	.0002	-.0135	.0002	-.0005	.00004	.0001	.0001
#2	.0003	.0021	-.0032	.0000	-.0003	.00006	-.0011	.0001
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 12/10/2018 12:11:20 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0014	.0497	.0018	.0054	-.0004	-.0691	.00003
Stddev	.0001	.0001	.0057	.0011	.0046	.0002	.0068	.00002
%RSD	14.29	6.042	11.38	63.16	85.71	56.84	9.878	67.618
#1	.0005	.0014	.0457	.0010	.0021	-.0002	-.0739	.00004
#2	.0006	.0015	.0536	.0026	.0086	-.0005	-.0642	.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	-.0003	-.0018	.0000	-.0002	.0000	.0008	.0001
Stddev	.0006	.0003	.0001	.001	.0000	.0001	.0001	.0025
%RSD	374.4	85.34	3.619	1589.	16.86	1418.	14.23	2688.
#1	-.0006	-.0001	-.0018	.0005	-.0002	.0001	.0007	.0018
#2	.0003	-.0005	-.0017	-.0006	-.0002	-.0001	.0009	-.0017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6402.2	107780.	8111.5
Stddev	22.3	394.	3.6
%RSD	.34884	.36575	.04445
#1	6418.0	108060.	8114.1
#2	6386.4	107500.	8109.0

Sample Name: 0000192813 Acquired: 12/10/2018 12:13:52 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A HCl 5% SCREEN

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	-.0018	.0000	.0006	.00007	-.0018	.0001
#1	.0013	-.0024	.0001	.0004	.00008	-.0018	.0001
#2	.0010	-.0013	-.0001	.0007	.00006	-.0018	.0001

Elem	Cd2265	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0048	-.0002	.0000	.0003	-.0007	.0016
#1	.0000	.0047	-.0001	-.0001	.0005	-.0007	.0016
#2	.0000	.0049	-.0004	.0001	.0002	-.0007	.0016

Elem	Pb2203	Li6707	Mg2795	Mn2576	Mo2020	Ni2216	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0015	.0014	.0020	.00011	.0000	.0002	.0036
#1	-.0012	-.0001	.0020	.00011	.0001	.0003	.0045
#2	-.0018	.0028	.0021	.00011	-.0001	.0001	.0027

Elem	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0291	.0021	-.0092	-.0004	-.0728	.00017	-.0003
#1	.0194	.0021	-.0088	-.0003	-.0635	.00015	-.0013
#2	.0388	.0021	-.0095	-.0006	-.0821	.00018	.0007

Elem	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	F -.0025	-.0002	.0001	.0000	.0004	-.0027
#1	.0001	-.0022	-.0004	-.0001	.0000	-.0010	-.0007
#2	.0004	-.0027	.0000	.0002	.0000	.0018	-.0048

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6485.2	111650.	8393.5
#1	6485.8	111840.	8415.9
#2	6484.7	111470.	8371.0

12/10/18

Sample Name: K1811658-005 Acquired: 12/10/2018 12:16:24 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: AM 121018A Redigest DISS

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	.0008	-.0016	-.0001	-.00003	-.0019	.0000	-.0001
#1	.0021	.0022	-.0024	-.0004	.00001	-.0025	.0000	.0000
#2	.0021	-.0006	-.0008	.0001	-.00007	-.0014	.0000	-.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0366	-.0002	-.0003	.0014	.0001	.0046	.0000	.0020
#1	.0367	.0002	-.0001	.0013	.0002	.0059	.0008	.0023
#2	.0366	-.0006	-.0005	.0014	.0001	.0034	-.0008	.0016

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031	.00013	.0000	.0002	.0187	.0281	.0015	.2204
#1	.0032	.00011	-.0001	.0003	.0202	.0366	.0001	.2190
#2	.0031	.00015	.0001	.0001	.0172	.0196	.0029	.2219

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	.1235	.00011	.0003	.0004	-.0031	-.0003	.0007
#1	-.0005	.1201	.00012	.0007	.0001	-.0029	.0000	.0005
#2	-.0003	.1269	.00010	-.0001	.0007	-.0032	-.0007	.0008

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0011	-.0004	-.0001
#1	.0010	-.0009	-.0002
#2	.0011	.0001	.0000

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6476.7	111800.	8496.0
#1	6469.5	111840.	8472.5
#2	6483.8	111770.	8519.5

Sample Name: K1811741-001 Acquired: 12/10/2018 12:18:55 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A Redigest

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1469	.0002	-.0014	.0031	-.00014	-.0018	.0000	.0001
#1	.1478	.0020	-.0034	.0033	-.00012	-.0014	.0000	.0001
#2	.1460	-.0015	.0006	.0029	-.00016	-.0021	.0000	.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3830	.0005	.0005	.0028	.0021	.1956	-.0009	.0014
#1	.3818	.0003	.0004	.0028	.0029	.1991	-.0007	.0015
#2	.3842	.0007	.0006	.0029	.0013	.1920	-.0011	.0012

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0861	.00635	.0000	.0008	.0317	.2510	.0033	.3048
#1	.0858	.00637	-.0001	.0008	.0332	.2027	.0027	.2939
#2	.0863	.00632	.0001	.0008	.0302	.2992	.0039	.3157

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	.1997	.00197	-.0005	-.0001	.0071	.0006	.0240
#1	-.0004	.1932	.00190	-.0003	.0003	.0073	.0006	.0240
#2	-.0008	.2062	.00204	-.0008	-.0005	.0069	.0005	.0239

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0244	.0014	.1260
#1	.0243	.0011	.1280
#2	.0244	.0016	.1240

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6488.7	111400.	8509.7
#1	6465.2	111410.	8487.2
#2	6512.3	111390.	8532.3

Sample Name: K1811743-001 Acquired: 12/10/2018 12:21:24 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A Redigest

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4309	-.0005	-.0018	.0118	-.00003	.0008	.0004	.0004
#1	.4320	-.0010	-.0008	.0117	-.00006	.0010	.0004	.0005
#2	.4297	.0000	-.0028	.0119	.00000	.0007	.0004	.0004

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7545	.0019	.0005	.0092	.0088	.7315	.0007	.0028
#1	.7514	.0016	.0008	.0094	.0088	.7286	.0015	.0028
#2	.7575	.0021	.0002	.0089	.0089	.7344	-.0002	.0029

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1614	.01580	.0011	.0015	.0523	.3299	.0020	.8515
#1	.1607	.01587	.0010	.0014	.0527	.3507	.0021	.8636
#2	.1622	.01573	.0011	.0016	.0519	.3091	.0019	.8394

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	.3185	.00418	-.0013	.0005	.0310	.0016	.0529
#1	-.0008	.3181	.00429	-.0011	.0001	.0310	.0019	.0529
#2	-.0007	.3190	.00407	-.0015	.0008	.0310	.0013	.0529

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0530	.0003	.1454
#1	.0527	-.0013	.1476
#2	.0534	.0018	.1432

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6417.8	110190.	8395.2
#1	6408.5	109700.	8456.5
#2	6427.1	110690.	8333.9

Sample Name: K1811746-001 Acquired: 12/10/2018 12:23:51 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A Redigest

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5927	-.0001	-.0019	.0093	.00001	.0118	.0000	.0000
#1	.5852	.0005	-.0015	.0089	.00002	.0129	.0001	.0000
#2	.6002	-.0007	-.0022	.0097	.00000	.0107	.0000	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.86	.0125	.0005	.0056	.0053	1.143	.0024	.0032
#1	12.79	.0125	.0006	.0056	.0062	1.135	.0025	.0016
#2	12.93	.0125	.0005	.0056	.0045	1.151	.0023	.0049

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8782	.06053	.0027	.0011	.0739	.6715	.0024	3.709
#1	.8740	.06094	.0024	.0013	.0743	.7156	.0014	3.707
#2	.8824	.06012	.0030	.0010	.0735	.6274	.0034	3.711

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	.6991	.03670	.0003	-.0003	.0304	.0115	.0290
#1	-.0006	.6923	.03650	-.0005	.0002	.0307	.0112	.0288
#2	-.0006	.7059	.03691	.0011	-.0008	.0302	.0118	.0291

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0295	.0016	.3894
#1	.0295	.0028	.3878
#2	.0296	.0004	.3909

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6466.4	110750.	8446.5
#1	6487.6	109940.	8496.8
#2	6445.2	111570.	8396.2

Sample Name: CCVB Acquired: 12/10/2018 12:26:25 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.856	10.80	-.0017	1.039	10.06	.00007	-.0014	.0000
Stddev	.097	.05	.0005	.002	.10	.00004	.0010	.0001
%RSD	1.240	.4659	28.91	.2295	.9602	56.165	73.39	468.0
#1	7.925	10.77	-.0014	1.041	9.992	.00004	-.0007	.0001
#2	7.787	10.84	-.0021	1.037	10.13	.00010	-.0021	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	10.00	9.425	-.0004	.0005	-.0006	-.0003	10.52
Stddev	.0000	.03	.047	.0001	.0001	.0003	.0007	.08
%RSD	2.835	.2867	.4973	36.91	26.95	45.26	258.2	.7541
#1	-.0002	10.02	9.392	-.0005	.0006	-.0004	.0002	10.58
#2	-.0002	9.981	9.458	-.0003	.0004	-.0008	-.0007	10.47
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0013	1.045	10.34	9.699	10.71	.96027	1.048	-.0003
Stddev	.0002	.003	.05	.055	.02	.00290	.001	.0003
%RSD	15.63	.2373	.4597	.5625	.2222	.30157	.0454	108.4
#1	-.0012	1.047	10.37	9.660	10.70	.96232	1.047	-.0005
#2	-.0014	1.044	10.30	9.738	10.73	.95823	1.048	-.0001
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 12/10/2018 12:26:25 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	10.34	10.31	.0012	F 11.13	-.0009	10.40	1.0065
Stddev	.0001	.02	.05	.0026	.04	.0001	.03	.0030
%RSD	35.64	.1581	.5139	225.8	.3528	9.836	.3244	.29575
#1	-.0005	10.35	10.35	.0030	11.10	-.0010	10.42	1.0086
#2	-.0003	10.33	10.27	-.0007	11.16	-.0008	10.37	1.0044
Check ?	None	Chk Pass	Chk Pass	None	Chk Fail	None	Chk Pass	Chk Pass
Value					10.00			
Range					10.44%			

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	.0001	-.0017	.0006	.0001	.0002	1.049	1.054
Stddev	.0007	.0008	.0001	.0002	.0002	.0000	.001	.003
%RSD	44.24	783.0	3.742	32.51	246.3	17.76	.0572	.2825
#1	.0011	-.0005	-.0018	.0008	-.0001	.0002	1.049	1.056
#2	.0021	.0007	-.0017	.0005	.0002	.0002	1.050	1.052
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6399.5	107740.	8213.9
Stddev	8.4	233.	39.6
%RSD	.13192	.21581	.48256
#1	6393.5	107570.	8185.9
#2	6405.5	107900.	8241.9

- NR Si after 12:11

APM 12/10/18

Sample Name: CCVA Acquired: 12/10/2018 12:29:13 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2734	.2940	.2555	.2635	.2592	.25705	.2547	.2521
Stddev	.0053	.0008	.0020	.0039	.0096	.00023	.0012	.0009
%RSD	1.926	.2610	.7792	1.493	3.690	.09068	.4581	.3603
#1	.2771	.2934	.2541	.2607	.2660	.25689	.2539	.2527
#2	.2697	.2945	.2569	.2662	.2524	.25722	.2556	.2514
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2498	.5120	.4980	.2426	.2536	.2548	.2556	.2784
Stddev	.0015	.0116	.0156	.0011	.0021	.0013	.0002	.0131
%RSD	.6042	2.266	3.128	.4538	.8175	.5218	.0952	4.712
#1	.2509	.5203	.5090	.2434	.2551	.2557	.2554	.2877
#2	.2488	.5038	.4870	.2418	.2522	.2538	.2557	.2692
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2512	.0014	.2674	.2575	.2802	.24802	.2675	.2557
Stddev	.0000	.0011	.0059	.0090	.0134	.00037	.0032	.0020
%RSD	.0018	80.88	2.193	3.505	4.778	.14831	1.195	.7672
#1	.2512	.0022	.2632	.2639	.2897	.24828	.2698	.2571
#2	.2512	.0006	.2715	.2512	.2708	.24776	.2653	.2543
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 12/10/2018 12:29:13 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2519	.0010	2.615	.2528	.1429	.2559	.1955	.00100
Stddev	.0014	.0006	.004	.0028	.0140	.0011	.0192	.00111
%RSD	.5643	59.18	.1404	1.089	9.805	.4310	9.814	110.94
#1	.2529	.0006	2.617	.2509	.1528	.2551	.2090	.00178
#2	.2509	.0014	2.612	.2548	.1330	.2567	.1819	.00022
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2539	.2551	.2507	.2478	.2533	.2572	.0007	.0007
Stddev	.0008	.0016	.0002	.0011	.0011	.0004	.0026	.0006
%RSD	.3054	.6319	.0764	.4300	.4342	.1372	367.6	84.15
#1	.2544	.2563	.2506	.2470	.2541	.2570	-.0011	.0011
#2	.2533	.2540	.2509	.2485	.2525	.2575	.0026	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6459.5	108420.	8268.4
Stddev	51.3	391.	69.7
%RSD	.79482	.36099	.84264
#1	6423.2	108140.	8317.6
#2	6495.8	108700.	8219.1

Sample Name: CCB Acquired: 12/10/2018 12:31:31 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019	.0009	-.0014	.0015	.0022	.00010	-.0021	.0001
Stddev	.0013	.0011	.0006	.0032	.0000	.00002	.0010	.0001
%RSD	66.32	125.3	44.78	213.3	.4872	22.764	48.29	64.94
#1	.0028	.0001	-.0010	-.0008	.0022	.00011	-.0028	.0002
#2	.0010	.0016	-.0019	.0038	.0022	.00008	-.0014	.0001
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0058	.0038	.0000	.0002	.0002	.0003	.0013
Stddev	.0000	.0029	.0002	.000	.0004	.0003	.0008	.0014
%RSD	26.67	50.19	5.297	435.9	245.7	130.6	266.3	103.2
#1	.0002	-.0037	.0040	.0000	-.0001	.0005	.0008	.0023
#2	.0001	-.0078	.0037	.0000	.0004	.0000	-.0003	.0004
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	-.0009	-.0039	.0022	.0040	.00032	.0005	.0006
Stddev	.0004	.0006	.0008	.0001	.0019	.00001	.0011	.0000
%RSD	47.28	68.52	21.32	4.664	48.18	1.5944	209.2	.6903
#1	-.0012	-.0013	-.0045	.0022	.0026	.00033	-.0002	.0006
#2	-.0006	-.0005	-.0033	.0021	.0053	.00032	.0012	.0006
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 12/10/2018 12:31:31 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0034	.0056	.0031	.0003	-.0003	-.0859	.00023
Stddev	.0006	.0005	.0241	.0022	.0081	.0004	.0167	.00003
%RSD	152.9	16.11	432.1	71.98	2918.	132.8	19.50	12.431
#1	.0000	.0030	.0227	.0015	.0060	-.0005	-.0740	.00021
#2	.0008	.0038	-.0115	.0046	-.0055	.0000	-.0977	.00025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0052	.0006	-.0016	-.0002	.0000	.0001	-.0005	-.0002
Stddev	.0010	.0011	.0000	.0006	.000	.0000	.0005	.0003
%RSD	19.51	171.5	2.684	393.0	3683.	34.40	98.74	111.7
#1	.0045	.0014	-.0016	.0003	.0003	.0001	-.0009	-.0001
#2	.0059	-.0001	-.0017	-.0006	-.0003	.0001	-.0002	-.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6445.1	109210.	8278.5
Stddev	7.5	898.	80.1
%RSD	.11582	.82244	.96769
#1	6439.8	108570.	8335.1
#2	6450.4	109840.	8221.8

Sample Name: LLCCV Acquired: 12/10/2018 12:34:03 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0118	.0106	.0172	.0112	.0036	.00112	.0178	.0011
Stddev	.0000	.0000	.0009	.0017	.0001	.00003	.0006	.0001
%RSD	.3518	.4460	5.160	15.11	2.421	2.5657	3.352	7.460
#1	.0118	.0106	.0166	.0123	.0035	.00110	.0183	.0010
#2	.0118	.0106	.0178	.0100	.0036	.00114	.0174	.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	F .0124	.0199	.0033	.0020	.0043	.0038	.0216
Stddev	.0001	.0015	.0000	.0000	.0001	.0003	.0012	.0013
%RSD	10.70	12.10	.0513	.2828	5.057	7.673	31.73	5.982
#1	.0011	.0135	.0199	.0033	.0021	.0046	.0030	.0207
#2	.0009	.0114	.0199	.0033	.0019	.0041	.0047	.0225
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.0200						
Range		-30.00%						

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0098	.0230	.0070	.0049	.0069	.00095	.0008	.0040
Stddev	.0006	.0029	.0153	.0001	.0001	.00008	.0011	.0002
%RSD	6.055	12.78	218.2	2.876	1.452	8.0121	144.6	5.655
#1	.0094	.0209	-.0038	.0048	.0068	.00089	.0015	.0038
#2	.0102	.0251	.0178	.0050	.0070	.00100	.0000	.0041
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

See rerun
Attached 12/10/18

Sample Name: LLCCV Acquired: 12/10/2018 12:34:03 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	.0408	.2145	.0227	.2193	.0041	F .1207	.00099
Stddev	.0000	.0002	.0137	.0005	.0038	.0001	.0046	.00014
%RSD	.5683	.5345	6.392	2.304	1.714	1.504	3.829	14.516
#1	.0042	.0409	.2048	.0230	.2166	.0042	.1174	.00089
#2	.0042	.0406	.2242	.0223	.2219	.0041	.1240	.00109
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value							.2000	
Range							-30.00%	

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0118	.0202	F .0002	.0038	.0039	.0041	.0228	.0442
Stddev	.0007	.0002	.0003	.0001	.0002	.0001	.0033	.0007
%RSD	5.787	.9764	124.4	3.013	6.034	2.330	14.28	1.683
#1	.0113	.0203	.0000	.0039	.0037	.0041	.0251	.0447
#2	.0123	.0201	.0004	.0037	.0040	.0040	.0205	.0436
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.0020					
Range			-30.00%					

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6445.9	109200.	8175.1
Stddev	25.4	424.	56.0
%RSD	.39414	.38819	.68466
#1	6427.9	109500.	8214.7
#2	6463.9	108900.	8135.5

12/10/18

Sample Name: LLCCV Acquired: 12/10/2018 12:41:49 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0112	.0109	.0177	.0096	.0034	.00106	.0195	.0010
Stddev	.0002	.0014	.0004	.0023	.0000	.00001	.0004	.0000
%RSD	1.378	12.49	2.478	23.72	.4087	1.1503	1.835	4.469
#1	.0111	.0100	.0180	.0080	.0034	.00106	.0192	.0010
#2	.0113	.0119	.0174	.0112	.0034	.00105	.0198	.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	F .0062	.0199	.0037	.0020	.0038	.0038	.0244
Stddev	.0000	.0052	.0004	.0005	.0001	.0003	.0005	.0003
%RSD	3.261	85.13	2.021	14.35	2.939	6.989	12.81	1.150
#1	.0011	.0099	.0196	.0033	.0019	.0040	.0042	.0242
#2	.0010	.0025	.0201	.0041	.0020	.0036	.0035	.0246
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.0200						
Range		-30.00%						

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0093	.0223	-.0074	.0050	.0068	.00092	.0013	.0037
Stddev	.0001	.0004	.0184	.0000	.0007	.00001	.0003	.0001
%RSD	1.222	1.619	249.1	.3869	10.52	1.2681	22.98	1.907
#1	.0093	.0221	.0056	.0050	.0073	.00091	.0015	.0037
#2	.0092	.0226	-.0204	.0050	.0063	.00093	.0011	.0038
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLCCV Acquired: 12/10/2018 12:41:49 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040	.0397	.2545	.0223	.2299	.0039	F .1380	.00111
Stddev	.0002	.0011	.0154	.0008	.0014	.0004	.0114	.00001
%RSD	6.016	2.885	6.041	3.735	.6298	10.27	8.282	.63943
#1	.0038	.0389	.2653	.0217	.2310	.0036	.1461	.00111
#2	.0042	.0405	.2436	.0229	.2289	.0041	.1299	.00110
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value							.2000	
Range							-30.00%	

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0095	.0206	.0015	.0034	.0038	.0040	.0212	.0414
Stddev	.0001	.0002	.0000	.0002	.0001	.0000	.0020	.0019
%RSD	.6046	1.105	2.917	7.092	2.998	.7688	9.489	4.483
#1	.0095	.0208	.0015	.0032	.0037	.0040	.0197	.0427
#2	.0094	.0205	.0014	.0035	.0039	.0041	.0226	.0401
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6725.0	110560.	8349.8
Stddev	32.4	612.	46.7
%RSD	.48178	.55368	.55945
#1	6747.9	110120.	8382.8
#2	6702.1	110990.	8316.8

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A Kim 12/10/18

Sample Name: LLCCV,0.5 Acquired: 12/10/2018 12:44:47 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0219	.0239	.0416	.0209	.0074	.00210	.0398	.0021
Stddev	.0004	.0023	.0017	.0001	.0001	.00013	.0006	.0001
%RSD	1.932	9.820	4.026	.6709	.7532	5.9618	1.574	2.790
#1	.0216	.0223	.0427	.0210	.0074	.00201	.0403	.0020
#2	.0222	.0256	.0404	.0208	.0074	.00219	.0394	.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	.0488	.0392	.0078	.0038	.0077	.0073	.0433
Stddev	.0000	.0013	.0000	.0002	.0002	.0001	.0003	.0020
%RSD	.0655	2.680	.0977	1.989	4.088	1.846	3.909	4.645
#1	.0020	.0479	.0392	.0077	.0037	.0078	.0071	.0419
#2	.0020	.0498	.0393	.0079	.0039	.0076	.0075	.0447
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0185	.0439	.0189	.0100	.0115	.00193	.0016	.0079
Stddev	.0017	.0008	.0016	.0000	.0014	.00006	.0011	.0000
%RSD	9.281	1.745	8.473	.0115	11.80	3.0637	68.43	.2241
#1	.0197	.0434	.0178	.0100	.0125	.00189	.0024	.0079
#2	.0173	.0445	.0200	.0100	.0105	.00197	.0008	.0079
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLCCV,0.5 Acquired: 12/10/2018 12:44:47 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0077	.0793	.4721	.0434	.4456	.0081	.3489	.00198
Stddev	.0000	.0009	.0154	.0010	.0016	.0003	.0092	.00005
%RSD	.0125	1.139	3.267	2.247	.3528	3.811	2.625	2.3094
#1	.0077	.0787	.4830	.0440	.4445	.0079	.3424	.00201
#2	.0077	.0799	.4612	.0427	.4467	.0083	.3554	.00194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0216	.0413	.0031	.0077	.0078	.0081	.0442	.0909
Stddev	.0005	.0009	.0004	.0002	.0000	.0001	.0015	.0020
%RSD	2.169	2.114	13.88	2.299	.4179	.8988	3.294	2.171
#1	.0220	.0407	.0028	.0076	.0078	.0080	.0432	.0923
#2	.0213	.0419	.0034	.0078	.0078	.0081	.0453	.0895
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6521.7	108370.	8212.2
Stddev	14.2	206.	42.3
%RSD	.21734	.19051	.51447
#1	6511.7	108520.	8182.4
#2	6531.7	108220.	8242.1

Sample Name: KQ1817274-02 Acquired: 12/10/2018 13:02:20 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 121018A 1/5 E K1811381-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023	-.0013	-.0015	-.0002	.00002	.0031	.0000	.0000
#1	.0019	-.0005	-.0010	-.0002	.00001	.0018	.0001	.0000
#2	.0028	-.0021	-.0021	-.0002	.00003	.0044	.0000	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0300	.0000	-.0001	.0010	-.0002	.0078	-.0003	.0014
#1	.0298	.0000	.0000	.0012	-.0001	.0098	.0002	.0013
#2	.0301	.0000	-.0001	.0009	-.0004	.0059	-.0008	.0015

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	.00015	-.0001	.0008	.0039	.0493	.0014	.0861
#1	.0034	.00010	.0000	.0010	.0041	.0628	.0003	.0846
#2	.0035	.00020	-.0002	.0007	.0037	.0358	.0025	.0876

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	255.8	.00021	.0002	-.0004	-.0028	.0001	.0011
#1	.0000	256.7	.00021	.0004	-.0004	-.0029	.0002	.0010
#2	.0000	254.9	.00021	.0001	-.0004	-.0027	-.0001	.0013

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0011	.0006	.0016
#1	.0010	-.0002	.0023
#2	.0011	.0013	.0009

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6054.7	100080.	7972.2
#1	6037.2	99893.	7919.3
#2	6072.2	100260.	8025.0

Sample Name: KQ1817274-01 Acquired: 12/10/2018 13:04:51 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 121018A 1/5 E K1811381-LCSE

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0038	-.0006	.8957	1.793	-.00002	-.0005	.1824	.1781
#1	.0041	-.0005	.8983	1.787	-.00006	-.0007	.1818	.1778
#2	.0036	-.0007	.8931	1.800	.00003	-.0002	.1830	.1784

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0306	.8706	.0001	.1775	.1618	.0032	.8405	.0020
#1	.0304	.8767	-.0002	.1773	.1613	.0046	.8382	.0020
#2	.0308	.8645	.0005	.1776	.1623	.0018	.8429	.0019

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	.00009	-.0002	.1753	.0036	.0306	.1761	.0076
#1	.0035	.00007	-.0001	.1750	.0042	.0194	.1757	-.0042
#2	.0036	.00011	-.0003	.1757	.0030	.0418	.1765	.0195

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .1593	253.8	.00035	.0002	.0007	-.0029	.0026	1.841
#1	.1600	254.2	.00031	.0004	.0004	-.0027	.0026	1.838
#2	.1586	253.3	.00038	.0000	.0011	-.0031	.0026	1.845

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.683	.0002	.0045
#1	1.682	-.0013	.0056
#2	1.685	.0018	.0034

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6015.2	99624.	7999.5
#1	6016.9	99099.	8051.5
#2	6013.4	100150.	7947.5

See Rerun.
AEM 12/10/18

Sample Name: K1811381-004 Acquired: 12/10/2018 13:07:19 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 121018A 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0113	-.0035	-.0007	.1704	.00005	.0066	.0007	.0007
#1	.0113	-.0043	.0013	.1727	.00000	.0066	.0007	.0007
#2	.0114	-.0027	-.0027	.1681	.00011	.0066	.0007	.0007

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	66.38	.0000	.0023	.0030	.0021	.0034	.0006	.0027
#1	67.28	-.0007	.0021	.0030	.0022	.0032	.0001	.0016
#2	65.49	.0006	.0025	.0031	.0020	.0036	.0011	.0037

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.772	.49238	.0001	.0050	.0162	1.133	.0029	.9858
#1	4.837	.49040	.0000	.0051	.0158	1.149	.0018	.9813
#2	4.706	.49436	.0002	.0049	.0166	1.117	.0040	.9903

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	268.5	.13948	-.0004	.0007	-.0027	-.0001	.0701
#1	-.0006	269.4	.14139	-.0005	.0005	-.0026	-.0009	.0702
#2	-.0006	267.7	.13758	-.0003	.0008	-.0028	.0007	.0700

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0649	.0021	1.116
#1	.0651	.0038	1.121
#2	.0648	.0004	1.111

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5954.6	99044.	7925.0
#1	5965.6	99930.	7840.7
#2	5943.7	98158.	8009.4

Sample Name: K1811381-004L Acquired: 12/10/2018 13:09:55 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 25 Test Type: E Sample Type:
Comment: AM 121018A 1/25 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032	-.0014	.0000	.0353	.00007	-.0006	.0002	.0002
#1	.0034	-.0014	-.0011	.0346	.00011	-.0012	.0002	.0002
#2	.0029	-.0013	.0011	.0359	.00004	-.0001	.0002	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.42	.0000	.0006	.0005	.0002	.0011	-.0004	.0019
#1	13.47	.0001	.0006	.0006	.0001	.0012	-.0010	.0012
#2	13.36	.0000	.0007	.0005	.0003	.0010	.0002	.0027

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9745	.10254	-.0002	.0013	.0032	.2691	.0020	.2065
#1	.9768	.10237	-.0002	.0013	.0046	.2560	.0036	.2089
#2	.9722	.10271	-.0003	.0012	.0017	.2823	.0004	.2041

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	57.36	.02844	.0001	.0006	-.0023	-.0002	.0145
#1	-.0008	56.92	.02851	-.0018	.0010	-.0026	-.0002	.0145
#2	-.0002	57.79	.02838	.0020	.0002	-.0020	-.0002	.0145

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0138	-.0015	.2294
#1	.0140	-.0013	.2300
#2	.0137	-.0017	.2289

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6200.0	103940.	8117.7
#1	6205.4	104050.	8073.6
#2	6194.6	103830.	8161.7

Sample Name: KQ1817274-03 Acquired: 12/10/2018 13:12:29 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 121018A 1/5 E K1811381-004D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0127	-.0012	.0004	.1680	.00005	.0078	.0007	.0008
#1	.0122	-.0001	-.0020	.1671	.00000	.0077	.0007	.0009
#2	.0132	-.0023	.0028	.1689	.00011	.0078	.0007	.0007

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	65.07	-.0004	.0026	.0029	.0023	.0040	.0003	.0036
#1	64.79	-.0010	.0025	.0028	.0022	.0058	.0004	.0021
#2	65.36	.0002	.0028	.0031	.0023	.0023	.0001	.0050

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.651	.48705	.0001	.0050	.0147	1.064	.0011	1.188
#1	4.644	.48881	.0001	.0052	.0160	1.069	.0018	1.191
#2	4.658	.48528	.0001	.0048	.0135	1.059	.0003	1.185

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	266.4	.13657	-.0011	.0005	-.0025	.0000	.0691
#1	.0000	263.9	.13599	-.0022	-.0001	-.0024	.0000	.0697
#2	-.0004	268.8	.13715	.0000	.0012	-.0026	.0000	.0685

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0636	.0015	1.093
#1	.0637	.0044	1.097
#2	.0635	-.0014	1.088

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5942.6	98892.	7933.0
#1	5938.2	98254.	7961.0
#2	5947.0	99530.	7905.0

Sample Name: KQ1817274-04 Acquired: 12/10/2018 13:15:05 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 121018A 1/5 E K1811381-004S

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0139	-.0013	.9702	2.121	.00010	.0085	.1967	.1928
#1	.0141	-.0039	.9705	2.128	.00014	.0087	.1959	.1925
#2	.0138	.0013	.9699	2.114	.00006	.0083	.1975	.1930

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	65.89	.9372	.0027	.1951	.1776	.0028	.9074	.0043
#1	65.95	.9334	.0026	.1954	.1769	.0026	.9064	.0055
#2	65.84	.9410	.0027	.1949	.1782	.0031	.9083	.0030

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.709	.49229	-.0002	.1931	.0150	1.074	.1898	1.032
#1	4.714	.49109	-.0003	.1929	.0165	1.069	.1874	1.031
#2	4.704	.49348	-.0002	.1933	.0134	1.079	.1922	1.033

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1741	269.7	.13920	.0008	.0003	-.0025	.0039	2.042
#1	.1742	267.8	.13995	.0018	.0002	-.0025	.0035	2.036
#2	.1739	271.6	.13845	-.0001	.0004	-.0025	.0043	2.048

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.874	-.0003	1.115
#1	1.868	-.0017	1.114
#2	1.879	.0011	1.116

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5967.0	99137.	7978.7
#1	5963.3	99238.	7944.5
#2	5970.8	99036.	8012.9

Sample Name: K1811381-004A Acquired: 12/10/2018 13:17:34 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 121018A 1/5 E A=0.1/10ml MET3-37-D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0143	-.0016	4.955	10.07	.00003	.0080	.9795	.9586
#1	.0144	-.0020	4.955	10.10	.00005	.0074	.9827	.9617
#2	.0141	-.0011	4.956	10.03	.00000	.0085	.9762	.9556

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	67.54	4.835	.0025	.9681	.8914	.0131	4.536	.0030
#1	67.41	4.808	.0026	.9723	.8881	.0102	4.549	.0040
#2	67.68	4.862	.0024	.9640	.8948	.0160	4.524	.0020

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.899	.50251	.0002	.9485	.0141	1.061	.9611	1.030
#1	4.893	.49945	.0001	.9526	.0125	1.114	.9638	1.020
#2	4.905	.50558	.0002	.9445	.0157	1.007	.9585	1.040

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8428	277.9	.14170	-.0006	.0001	-.0020	.0177	9.938
#1	.8390	275.3	.14133	-.0015	-.0002	-.0020	.0179	9.980
#2	.8467	280.5	.14207	.0003	.0005	-.0021	.0175	9.896

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	.0008	1.148
#1	8.896	.0006	1.145
#2	8.909	.0011	1.150

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6012.5	98529.	7933.8
#1	5986.6	98829.	7948.7
#2	6038.4	98228.	7918.9

Sample Name: K1811381-005 Acquired: 12/10/2018 13:20:07 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 121018A 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030	-.0017	.0014	.1384	.00011	.0263	.0000	-.0002
#1	.0032	-.0017	.0022	.1373	.00003	.0266	.0000	-.0001
#2	.0028	-.0018	.0006	.1395	.00019	.0260	.0000	-.0003

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	139.1	.0004	.0028	-.0002	-.0006	5.727	-.0007	.0117
#1	139.0	.0005	.0027	-.0006	-.0002	5.733	-.0006	.0118
#2	139.3	.0003	.0029	.0003	-.0011	5.721	-.0008	.0116

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.073	.81550	.0039	.0046	.0103	5.811	.0046	3.712
#1	6.060	.82089	.0040	.0044	.0109	5.822	.0028	3.716
#2	6.087	.81011	.0038	.0048	.0097	5.800	.0064	3.709

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	263.5	.34555	.0007	.0002	-.0015	.0000	.0891
#1	.0003	262.6	.34559	.0010	.0005	-.0017	.0003	.0892
#2	.0003	264.5	.34552	.0004	-.0001	-.0014	-.0002	.0891

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0835	.0020	3.005
#1	.0826	.0023	2.972
#2	.0843	.0017	3.038

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6004.0	96735.	7854.3
#1	5959.6	96312.	7862.3
#2	6048.4	97157.	7846.2

Sample Name: K1811438-002 Acquired: 12/10/2018 13:22:40 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 121018A 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067	-.0025	.0026	.2873	.00002	.0236	.0002	.0002
#1	.0070	-.0032	.0034	.2845	-.00003	.0241	.0002	.0003
#2	.0064	-.0018	.0018	.2901	.00006	.0230	.0002	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	143.1	.0009	.0040	.0007	-.0001	.0141	.0003	.0035
#1	142.8	.0012	.0041	.0008	.0002	.0141	.0014	.0035
#2	143.4	.0007	.0039	.0007	-.0005	.0140	-.0008	.0034

Elem	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.070	7.582	.71369	.0010	.0041	.0480	2.189	.0041
#1	7.028	7.533	.71477	.0010	.0044	.0461	2.201	.0022
#2	7.111	7.632	.71260	.0009	.0039	.0498	2.176	.0060

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.121	.0004	288.8	.42678	-.0012	-.0001	-.0021	.0031
#1	1.120	-.0001	291.1	.42445	-.0010	-.0001	-.0018	.0033
#2	1.122	.0008	286.4	.42911	-.0013	-.0001	-.0024	.0030

Elem	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm
Avg	.0197	.0185	.0017	.6777
#1	.0207	.0194	.0023	.6800
#2	.0187	.0177	.0010	.6754

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5983.5	97529.	7941.4
#1	5978.8	97420.	7942.9
#2	5988.2	97638.	7940.0

Sample Name: KQ1817417-02 Acquired: 12/10/2018 13:25:22 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 121018A 1/5 E K1811433-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0125	.0007	-.0012	.0120	.00002	.0659	.0001	.0001
#1	.0128	.0004	-.0034	.0120	.00003	.0657	.0001	.0001
#2	.0122	.0010	.0011	.0119	.00000	.0661	.0000	.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5110	-.0007	.0001	.0011	.0006	.0036	-.0009	.0014
#1	.5122	-.0004	-.0001	.0008	.0005	.0057	-.0007	.0021
#2	.5099	-.0010	.0002	.0015	.0007	.0016	-.0010	.0006

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0723	.00008	.0000	.0002	.0051	.1314	.0008	.1020
#1	.0722	.00009	.0000	.0002	.0065	.1417	-.0002	.1020
#2	.0723	.00007	.0000	.0003	.0037	.1210	.0019	.1020

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	3.900	.00077	-.0008	.0003	-.0017	-.0002	.0053
#1	.0002	3.897	.00082	-.0015	.0001	-.0014	-.0002	.0054
#2	.0000	3.903	.00072	-.0001	.0005	-.0020	-.0003	.0052

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0054	.0008	.0052
#1	.0054	.0004	.0035
#2	.0055	.0012	.0068

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6442.8	108710.	8149.9
#1	6431.8	108360.	8113.7
#2	6453.7	109070.	8186.0

Sample Name: CCVB Acquired: 12/10/2018 13:27:54 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.469	10.62	-.0016	1.037	9.893	.00003	-.0006	.0001
Stddev	.075	.03	.0001	.002	.117	.00006	.0005	.0001
%RSD	1.009	.2942	4.706	.1436	1.177	236.06	92.29	95.85
#1	7.416	10.60	-.0016	1.038	9.975	-.00002	-.0002	.0000
#2	7.522	10.64	-.0017	1.036	9.811	.00007	-.0010	.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	9.946	9.322	-.0001	.0001	-.0003	-.0002	10.56
Stddev	.0001	.020	.097	.0003	.0001	.0002	.0008	.08
%RSD	40.25	.1986	1.041	458.3	59.74	91.00	471.9	.7942
#1	-.0003	9.960	9.391	-.0003	.0002	-.0001	.0004	10.62
#2	-.0001	9.932	9.254	.0002	.0001	-.0004	-.0008	10.50
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	1.044	10.27	9.518	10.80	.95177	1.056	-.0002
Stddev	.0002	.001	.06	.207	.03	.00149	.005	.0000
%RSD	163.7	.1065	.5544	2.174	.2775	.15658	.4398	9.967
#1	.0002	1.043	10.31	9.664	10.77	.95071	1.053	-.0002
#2	.0000	1.045	10.23	9.371	10.82	.95282	1.059	-.0002
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 12/10/2018 13:27:54 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	10.37	10.25	.0029	F 11.29	-.0004	10.49	.99648
Stddev	.0003	.01	.07	.0030	.01	.0001	.08	.00251
%RSD	56.90	.0885	.6647	104.7	.0671	24.25	.7347	.25230
#1	-.0003	10.36	10.20	.0007	11.29	-.0005	10.43	.99826
#2	-.0007	10.37	10.30	.0050	11.30	-.0004	10.54	.99471
Check ?	None	Chk Pass	Chk Pass	None	Chk Fail	None	Chk Pass	Chk Pass
Value					10.00			
Range					10.44%			

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-.0004	-.0022	-.0001	.0003	.0006	1.043	1.056
Stddev	.0008	.0001	.0001	.0004	.0003	.0002	.001	.005
%RSD	273.0	24.61	3.061	569.3	98.41	36.67	.0932	.4459
#1	.0009	-.0004	-.0022	-.0003	.0005	.0007	1.043	1.060
#2	-.0003	-.0003	-.0021	.0002	.0001	.0004	1.042	1.053
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6388.8	108630.	8358.3
Stddev	1.8	623.	65.9
%RSD	.02782	.57331	.78837
#1	6387.6	109070.	8311.7
#2	6390.1	108190.	8404.9

Sample Name: CCVA Acquired: 12/10/2018 13:30:36 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2557	.2875	.2525	.2623	.2438	.26038	.2540	.2510
Stddev	.0043	.0009	.0007	.0001	.0017	.00133	.0015	.0005
%RSD	1.680	.3211	.2775	.0436	.7117	.51195	.6096	.1949
#1	.2587	.2882	.2529	.2622	.2425	.26133	.2551	.2514
#2	.2527	.2869	.2520	.2624	.2450	.25944	.2529	.2507
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2486	.4908	.4832	.2315	.2508	.2547	.2507	.2699
Stddev	.0004	.0076	.0004	.0002	.0004	.0009	.0011	.0017
%RSD	.1726	1.542	.0916	.0794	.1544	.3643	.4473	.6153
#1	.2489	.4962	.4835	.2313	.2511	.2540	.2514	.2711
#2	.2482	.4855	.4829	.2316	.2505	.2553	.2499	.2687
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2490	.0025	.2371	.2439	.2740	.24146	.2633	.2533
Stddev	.0000	.0002	.0040	.0004	.0027	.00150	.0022	.0007
%RSD	.0111	7.962	1.670	.1679	.9942	.62096	.8376	.2770
#1	.2490	.0024	.2399	.2436	.2721	.24040	.2618	.2538
#2	.2490	.0026	.2343	.2442	.2760	.24252	.2649	.2528
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 12/10/2018 13:30:36 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2499	.0020	2.576	.2541	.1515	.2575	.2131	.00011
Stddev	.0004	.0022	.035	.0015	.0006	.0016	.0063	.00006
%RSD	.1435	110.3	1.344	.5797	.3988	.6371	2.979	50.855
#1	.2502	.0004	2.601	.2551	.1510	.2586	.2176	.00007
#2	.2496	.0035	2.552	.2530	.1519	.2563	.2086	.00015
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2532	.2514	.2439	.2419	.2530	.2542	.0007	-.0005
Stddev	.0020	.0015	.0025	.0012	.0001	.0001	.0015	.0024
%RSD	.7904	.6129	1.033	.5026	.0254	.0345	219.6	449.2
#1	.2546	.2525	.2422	.2411	.2529	.2542	-.0004	-.0022
#2	.2518	.2503	.2457	.2428	.2530	.2541	.0017	.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6459.4	112160.	8496.3
Stddev	18.5	1132.	4.8
%RSD	.28603	1.0092	.05602
#1	6446.4	112960.	8499.7
#2	6472.5	111360.	8492.9

Sample Name: CCB Acquired: 12/10/2018 13:32:55 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027	-.0004	-.0005	-.0018	-.0004	.00007	-.0021
Stddev	.0007	.0000	.0007	.0003	.0000	.00001	.0005
%RSD	26.60	5.534	147.4	18.85	10.34	18.625	25.96
#1	.0032	-.0004	-.0010	-.0021	-.0003	.00006	-.0025
#2	.0022	-.0005	.0000	-.0016	-.0004	.00008	-.0017
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0000	-.0010	.0001	-.0004	.0001	.0005
Stddev	.0001	.0000	.0024	.0000	.0008	.0000	.0002
%RSD	57.12	63.50	237.5	8.643	189.1	16.99	41.56
#1	.0002	.0000	-.0027	.0001	-.0010	.0001	.0006
#2	.0001	.0001	.0007	.0001	.0001	.0001	.0003
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cu3273	Fe2599	Pb2203	Li6707	Mg2790	Mg2795	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0022	-.0001	.0011	-.0079	.0000	.0006
Stddev	.0001	.0004	.0005	.0006	.0016	.000	.0023
%RSD	12.50	19.10	500.8	56.37	20.37	207.5	369.7
#1	.0006	.0019	-.0005	.0006	-.0067	.0000	-.0010
#2	.0005	.0025	.0003	.0015	-.0090	.0000	.0022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None
High Limit							
Low Limit							

Sample Name: CCB Acquired: 12/10/2018 13:32:55 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Mn2576	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00008	.0004	.0007	.0005	.0049	.0371	.0013
Stddev	.00001	.0003	.0001	.0000	.0031	.0017	.0014
%RSD	9.2436	80.66	8.710	4.871	64.04	4.478	111.8
#1	.00007	.0006	.0007	.0005	.0071	.0359	.0003
#2	.00008	.0002	.0007	.0005	.0027	.0382	.0023
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0025	-.0008	-.0679	.00007	.0046	.0008	F -.0029
Stddev	.0073	.0002	.0063	.00017	.0020	.0008	.0000
%RSD	291.3	26.65	9.236	224.94	43.19	108.0	.7949
#1	.0027	-.0006	-.0723	-.00004	.0032	.0013	-.0029
#2	-.0077	-.0009	-.0635	.00019	.0060	.0002	-.0029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.0020
Low Limit							-.0020

Elem	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	.0002	.0003	-.0002	.0047
Stddev	.0002	.0001	.0000	.0000	.0024
%RSD	76.62	27.54	17.17	18.31	51.82
#1	-.0001	.0002	.0002	-.0002	.0030
#2	-.0004	.0002	.0003	-.0002	.0064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Sample Name: CCB Acquired: 12/10/2018 13:32:55 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6509.0	111930.	8498.3
Stddev	21.5	491.	29.2
%RSD	.33093	.43842	.34383
#1	6493.8	111590.	8519.0
#2	6524.3	112280.	8477.6

Sample Name: KQ1817417-01 Acquired: 12/10/2018 13:35:26 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 121018A 1/5 E K1811433-LCSE

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0148	.0014	.9716	1.840	-.00001	.0630	.1876	.1862
#1	.0148	.0014	.9709	1.835	-.00003	.0629	.1872	.1858
#2	.0148	.0015	.9723	1.846	.00002	.0631	.1880	.1867

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4803	.8772	.0000	.1918	.1912	.0070	.9348	.0033
#1	.4743	.8738	.0001	.1913	.1906	.0097	.9313	.0034
#2	.4863	.8805	.0000	.1923	.1918	.0043	.9384	.0031

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0649	.00006	.0001	.1884	.0031	.0942	.1816	.0818
#1	.0641	.00009	-.0001	.1883	.0035	.1055	.1804	.0849
#2	.0658	.00004	.0002	.1886	.0027	.0829	.1828	.0787

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1909	3.706	.00082	.0005	.0003	-.0024	.0028	1.871
#1	.1908	3.687	.00073	.0007	.0006	-.0024	.0032	1.867
#2	.1911	3.725	.00090	.0004	.0000	-.0025	.0025	1.876

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.880	-.0004	.0016
#1	1.879	.0001	.0037
#2	1.882	-.0010	-.0005

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6510.5	112310.	8604.0
#1	6523.2	112360.	8599.2
#2	6497.8	112250.	8608.7

Sample Name: K1811433-001 Acquired: 12/10/2018 13:37:48 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 121018A 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0193	-.0016	.0038	.7378	.00009	.1074	.0019	.0019
#1	.0192	-.0018	.0053	.7335	.00004	.1080	.0019	.0019
#2	.0195	-.0014	.0023	.7421	.00015	.1068	.0018	.0019

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	257.8	.0006	.0024	.0023	.0025	.0010	-.0019	.0091
#1	255.8	-.0001	.0023	.0022	.0031	-.0002	-.0030	.0079
#2	259.7	.0013	.0025	.0024	.0020	.0021	-.0009	.0102

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.06	3.0685	.0016	.0079	2.394	33.45	.0029	11.96
#1	16.10	3.0922	.0015	.0077	2.392	33.44	.0019	12.03
#2	16.02	3.0448	.0017	.0081	2.395	33.46	.0039	11.88

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	8.480	1.1769	-.0008	.0006	-.0024	.0019	.0148
#1	-.0004	8.496	1.1701	-.0005	.0002	-.0026	.0014	.0151
#2	.0008	8.465	1.1837	-.0012	.0009	-.0023	.0024	.0145

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0144	.0016	2.538
#1	.0145	.0013	2.537
#2	.0143	.0018	2.539

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6015.9	102970.	8182.2
#1	6008.0	102660.	8254.7
#2	6023.9	103280.	8109.7

Sample Name: KQ1817417-03 Acquired: 12/10/2018 13:40:21 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 121018A 1/5 E K1811433-001D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0167	-.0004	.0027	.7233	.00001	.1037	.0018	.0018
#1	.0166	-.0010	.0048	.7180	.00004	.1048	.0018	.0017
#2	.0167	.0002	.0006	.7285	-.00001	.1027	.0018	.0018

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	252.1	.0007	.0024	.0021	.0020	.0054	-.0015	.0086
#1	251.0	.0003	.0024	.0019	.0015	.0069	-.0035	.0088
#2	253.2	.0010	.0024	.0022	.0026	.0039	.0005	.0085

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.59	2.9961	.0022	.0076	2.339	32.55	-.0006	13.39
#1	15.56	2.9978	.0021	.0073	2.335	32.37	-.0014	13.52
#2	15.61	2.9944	.0024	.0078	2.342	32.73	.0002	13.26

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	8.176	1.1480	-.0007	.0013	-.0023	.0020	.0128
#1	.0000	8.153	1.1398	-.0008	.0013	-.0018	.0024	.0128
#2	-.0004	8.199	1.1562	-.0005	.0012	-.0027	.0016	.0128

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0125	.0030	2.465
#1	.0125	.0037	2.471
#2	.0125	.0023	2.459

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5990.6	103080.	8128.2
#1	5993.5	102980.	8139.5
#2	5987.7	103190.	8117.0

Sample Name: KQ1817417-04 Acquired: 12/10/2018 13:42:54 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 121018A 1/5 E K1811433-001S

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0191	-.0020	.9793	2.772	.00000	.1043	.1955	.1940
#1	.0193	-.0032	.9814	2.799	.00004	.1048	.1955	.1936
#2	.0189	-.0009	.9773	2.745	-.00004	.1037	.1955	.1944

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	261.3	.9428	.0025	.1965	.1861	.0058	.9277	.0082
#1	264.0	.9490	.0025	.1964	.1875	.0095	.9264	.0078
#2	258.7	.9366	.0025	.1967	.1847	.0021	.9289	.0086

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.98	3.0961	.0019	.1969	2.407	33.46	.1913	14.06
#1	15.94	3.1022	.0018	.1967	2.408	33.21	.1916	14.21
#2	16.03	3.0900	.0019	.1972	2.405	33.72	.1910	13.92

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1803	8.401	1.1946	-.0013	.0003	-.0019	.0057	1.928
#1	.1814	8.343	1.2035	-.0001	-.0007	-.0023	.0057	1.929
#2	.1792	8.460	1.1858	-.0026	.0012	-.0016	.0057	1.927

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.824	.0019	2.519
#1	1.824	.0062	2.518
#2	1.825	-.0024	2.520

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5972.2	101420.	8031.6
#1	5975.3	101390.	7928.7
#2	5969.0	101450.	8134.6

Sample Name: K1811433-001A Acquired: 12/10/2018 13:51:37 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 121018A 1/5 E A=0.1/10ml MET3-37-D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0214	.0009	4.912	10.66	-.00003	.1088	.9609	.9457
#1	.0211	-.0019	4.915	10.75	.00001	.1087	.9620	.9464
#2	.0217	.0037	4.909	10.57	-.00007	.1089	.9599	.9450

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	264.9	4.784	.0021	.9664	.9239	.0072	4.556	.0103
#1	266.4	4.797	.0021	.9685	.9273	.0101	4.559	.0109
#2	263.5	4.770	.0021	.9643	.9206	.0044	4.552	.0098

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.29	3.1601	.0023	.9454	2.389	33.90	.9454	12.09
#1	16.30	3.1712	.0024	.9450	2.387	34.02	.9458	12.11
#2	16.28	3.1490	.0022	.9459	2.390	33.79	.9450	12.08

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8606	8.511	1.2011	-.0021	.0008	-.0005	.0194	9.555
#1	.8615	8.535	1.2082	-.0037	.0012	-.0001	.0196	9.572
#2	.8597	8.487	1.1940	-.0005	.0005	-.0009	.0193	9.538

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	.0013	2.588
#1	8.829	.0019	2.589
#2	8.812	.0007	2.587

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6049.6	100590.	8068.1
#1	6046.6	100410.	8033.8
#2	6052.6	100780.	8102.4

Sample Name: KQ1817275-02 Acquired: 12/10/2018 13:54:06 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 121018A 1/5 E K1811438-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0068	-.0019	.0010	.0067	.00002	-.0001	.0001	.0001
#1	.0068	-.0020	-.0009	.0004	-.00002	-.0006	.0001	.0001
#2	.0069	-.0019	.0029	.0131	.00007	.0004	.0000	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	*****	-.0002	.0001	.0008	.0004	.0063	-.0001	.0013
#1	.0570	-.0004	-.0002	.0006	.0000	.0055	.0000	.0026
#2	-----	.0000	.0003	.0009	.0009	.0071	-.0002	.0001

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0165	.00018	.0001	.0003	.0040	.0237	.0024	.0441
#1	.0073	.00021	.0001	.0002	.0034	-.0335	.0000	.0394
#2	.0257	.00015	.0001	.0003	.0047	.0809	.0047	.0488

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	-.0093	.00099	-.0012	.0014	-.0011	-.0001	.0012
#1	.0000	-.0058	.00020	.0000	.0017	-.0012	-.0003	.0011
#2	-.0004	-.0128	.00177	-.0024	.0010	-.0011	.0000	.0013

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0013	-.0008	.0033
#1	.0013	-.0008	.0054
#2	.0014	-.0008	.0012

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6501.7	107850.	8274.0
#1	6495.9	107990.	8234.6
#2	6507.6	107710.	8313.5

Sample Name: KQ1817275-01 Acquired: 12/10/2018 13:56:36 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 121018A 1/5 E K1811438-LCSE

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0082	-.0002	.9894	1.952	-.00002	.0023	.1945	.1920
#1	.0083	-.0005	.9907	1.965	-.00001	.0015	.1950	.1929
#2	.0081	.0000	.9882	1.938	-.00003	.0031	.1939	.1910

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0606	.9240	.0002	.1986	.1990	.0082	.9707	.0028
#1	.0562	.9239	.0002	.1992	.1992	.0095	.9766	.0018
#2	.0649	.9240	.0003	.1980	.1988	.0070	.9649	.0037

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0073	.00108	.0000	.1945	.0047	.0651	.1938	.0509
#1	.0071	.00092	.0002	.1955	.0054	.0651	.1940	.0529
#2	.0074	.00124	-.0002	.1936	.0040	.0651	.1935	.0490

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1964	-.0141	.00030	-.0003	-.0001	-.0022	.0031	1.937
#1	.1963	-.0124	.00020	.0000	.0001	-.0021	.0033	1.940
#2	.1964	-.0158	.00039	-.0006	-.0002	-.0023	.0029	1.934

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.920	.0016	.0078
#1	1.923	-.0008	.0078
#2	1.917	.0039	.0079

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6435.3	109510.	8283.5
#1	6424.4	109870.	8252.7
#2	6446.2	109140.	8314.3

Sample Name: K1811438-001 Acquired: 12/10/2018 13:58:58 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 121018A 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0605	.0009	.0042	.3288	.00019	.0203	.0004	.0003
#1	.0604	.0009	.0055	.3281	.00016	.0194	.0005	.0004
#2	.0607	.0008	.0030	.3295	.00021	.0212	.0003	.0002

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	222.3	.0002	.0049	.0008	.0008	.1024	.0025	.0045
#1	222.1	.0006	.0051	.0010	.0001	.0957	.0020	.0047
#2	222.4	-.0002	.0047	.0006	.0015	.1090	.0029	.0044

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.144	1.2949	.0003	.0067	.1556	1.521	.0031	1.098
#1	6.162	1.2953	.0003	.0066	.1581	1.534	.0025	1.087
#2	6.127	1.2945	.0002	.0068	.1531	1.508	.0038	1.110

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	18.81	.59623	.0008	.0001	-.0028	.0019	.1168
#1	.0003	18.72	.59513	.0014	.0004	-.0027	.0019	.1167
#2	.0002	18.90	.59733	.0003	-.0002	-.0030	.0019	.1169

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1117	.0003	.5824
#1	.1117	.0008	.5854
#2	.1117	-.0001	.5793

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6079.1	103740.	8281.1
#1	6078.2	103960.	8286.0
#2	6080.1	103520.	8276.2

Sample Name: K1811438-001L Acquired: 12/10/2018 14:01:33 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 25 Test Type: E Sample Type:
Comment: AM 121018A 1/25 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0134	-.0004	.0019	.0659	.00006	.0020	.0002	.0001
#1	.0135	-.0002	.0034	.0653	-.00003	.0026	.0002	.0001
#2	.0133	-.0005	.0003	.0665	.00016	.0015	.0003	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.83	-.0004	.0009	.0000	.0002	.0213	-.0003	.0019
#1	44.54	-.0004	.0008	.0002	.0001	.0209	-.0001	.0010
#2	45.11	-.0003	.0010	-.0001	.0003	.0217	-.0006	.0029

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.269	.26457	.0001	.0015	.0324	.3123	.0017	.2221
#1	1.258	.26453	.0001	.0017	.0313	.3311	.0016	.2284
#2	1.281	.26461	.0000	.0014	.0335	.2935	.0019	.2158

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	3.699	.12111	.0005	.0003	-.0026	.0005	.0244
#1	-.0006	3.678	.12006	.0000	.0003	-.0026	.0006	.0245
#2	-.0010	3.720	.12215	.0011	.0002	-.0027	.0004	.0244

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0242	.0020	.1184
#1	.0241	.0002	.1173
#2	.0242	.0037	.1196

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6349.9	109350.	8376.3
#1	6352.5	109120.	8428.4
#2	6347.4	109580.	8324.1

Sample Name: KQ1817275-03 Acquired: 12/10/2018 14:04:04 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 121018A 1/5 E K1811438-001D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0621	-.0006	.0018	.3404	.00020	.0204	.0003	.0004
#1	.0627	-.0013	.0024	.3412	.00020	.0209	.0003	.0005
#2	.0614	.0000	.0013	.3396	.00020	.0199	.0004	.0003

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	228.1	-.0004	.0048	.0002	.0010	.1084	.0012	.0039
#1	229.4	-.0005	.0048	.0000	.0007	.1101	.0009	.0045
#2	226.9	-.0003	.0048	.0004	.0013	.1067	.0016	.0032

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.326	1.3298	.0001	.0071	.1578	1.590	.0024	1.164
#1	6.428	1.3246	.0001	.0072	.1604	1.593	.0035	1.155
#2	6.223	1.3351	.0002	.0069	.1553	1.586	.0013	1.173

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	19.42	.61665	-.0009	.0001	-.0028	.0011	.1182
#1	-.0002	19.32	.61854	-.0016	.0001	-.0029	.0012	.1183
#2	-.0001	19.52	.61476	-.0003	.0002	-.0026	.0010	.1182

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1136	.0024	.5853
#1	.1138	.0026	.5904
#2	.1135	.0022	.5803

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6044.4	103940.	8268.9
#1	6049.3	104590.	8218.1
#2	6039.6	103290.	8319.6

Sample Name: CCVB Acquired: 12/10/2018 14:08:21 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.970	10.34	-.0020	1.027	9.693	.00004	-.0020	.0000
Stddev	.030	.02	.0007	.001	.247	.00007	.0003	.000
%RSD	.3802	.1513	33.05	.0777	2.551	163.18	14.97	716.0
#1	7.992	10.33	-.0025	1.027	9.868	-.00001	-.0018	-.0001
#2	7.949	10.35	-.0016	1.026	9.518	.00009	-.0022	.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	9.755	9.340	-.0001	.0001	-.0003	.0001	10.44
Stddev	.0000	.051	.129	.0002	.0000	.0003	.0009	.04
%RSD	5.334	.5223	1.381	134.6	3.728	126.9	1311.	.4141
#1	-.0003	9.791	9.431	.0000	.0001	.0000	-.0006	10.47
#2	-.0003	9.719	9.249	-.0002	.0001	-.0005	.0007	10.41
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	1.029	10.13	9.479	10.68	.94846	1.058	-.0005
Stddev	.0007	.005	.02	.018	.01	.00208	.008	.0001
%RSD	79.69	.4996	.2202	.1951	.1039	.21914	.7960	10.90
#1	-.0004	1.025	10.15	9.466	10.67	.94699	1.052	-.0005
#2	-.0014	1.032	10.12	9.492	10.69	.94993	1.064	-.0006
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 12/10/2018 14:08:21 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	10.30	10.12	.0013	F 11.22	-.0003	10.30	.97842
Stddev	.0000	.01	.00	.0011	.01	.0005	.07	.00103
%RSD	2.950	.0987	.0121	85.93	.0945	141.5	.6426	.10476
#1	-.0004	10.30	10.12	.0021	11.21	.0000	10.25	.97914
#2	-.0004	10.31	10.12	.0005	11.23	-.0007	10.34	.97769
Check ?	None	Chk Pass	Chk Pass	None	Chk Fail	None	Chk Pass	Chk Pass
Value					10.00			
Range					10.44%			

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0004	-.0019	.0004	.0000	.0002	1.038	1.036
Stddev	.0007	.0001	.0000	.0002	.000	.0000	.003	.008
%RSD	424.6	34.28	2.216	64.99	1732.	23.41	.2699	.7726
#1	.0007	-.0004	-.0019	.0005	-.0003	.0002	1.040	1.030
#2	-.0003	-.0003	-.0019	.0002	.0002	.0002	1.036	1.041
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6369.7	107770.	8409.7
Stddev	5.6	615.	20.9
%RSD	.08846	.57103	.24826
#1	6365.7	108200.	8394.9
#2	6373.7	107330.	8424.5

Sample Name: CCVA Acquired: 12/10/2018 14:11:03 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2684	.2803	.2508	.2618	.2534	.25637	.2504	.2520
Stddev	.0010	.0040	.0002	.0010	.0053	.00157	.0016	.0001
%RSD	.3875	1.415	.0674	.3717	2.097	.61188	.6556	.0389
#1	.2676	.2831	.2507	.2611	.2571	.25526	.2492	.2519
#2	.2691	.2775	.2509	.2625	.2496	.25748	.2515	.2521
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2498	.5493	.5367	.2369	.2513	.2555	.2486	.2773
Stddev	.0007	.0207	.0149	.0031	.0007	.0005	.0023	.0077
%RSD	.2703	3.768	2.784	1.319	.2910	.2078	.9312	2.783
#1	.2503	.5640	.5472	.2391	.2508	.2551	.2503	.2828
#2	.2493	.5347	.5261	.2347	.2518	.2558	.2470	.2718
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2494	.0029	.2714	.2526	.2776	.24439	.2656	.2548
Stddev	.0001	.0015	.0019	.0051	.0020	.00235	.0025	.0002
%RSD	.0594	50.35	.7013	2.028	.7194	.96289	.9243	.0604
#1	.2495	.0040	.2700	.2563	.2791	.24605	.2673	.2546
#2	.2493	.0019	.2727	.2490	.2762	.24272	.2639	.2549
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 12/10/2018 14:11:03 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2515	.0058	2.602	.2525	.1490	.2541	.1820	.00063
Stddev	.0005	.0013	.000	.0032	.0052	.0015	.0031	.00037
%RSD	.2014	23.10	.0146	1.268	3.483	.5708	1.724	58.097
#1	.2511	.0048	2.602	.2502	.1527	.2531	.1842	.00089
#2	.2519	.0067	2.602	.2547	.1454	.2551	.1798	.00037
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2535	.2526	.2470	.2450	.2535	.2539	.0010	.0013
Stddev	.0020	.0008	.0030	.0021	.0004	.0006	.0024	.0022
%RSD	.7957	.3078	1.209	.8484	.1574	.2352	230.2	170.4
#1	.2521	.2521	.2491	.2465	.2532	.2534	-.0007	-.0003
#2	.2549	.2532	.2448	.2435	.2538	.2543	.0028	.0028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6433.7	110350.	8336.7
Stddev	5.2	1426.	78.0
%RSD	.08141	1.2922	.93526
#1	6430.0	109340.	8281.6
#2	6437.4	111360.	8391.9

Sample Name: CCB Acquired: 12/10/2018 14:13:22 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-.0020	-.0018	-.0008	-.0004	.00003	-.0029
Stddev	.0003	.0006	.0016	.0016	.0004	.00001	.0011
%RSD	62.44	28.91	88.84	189.8	99.31	40.508	39.26
#1	.0007	-.0016	-.0007	-.0019	-.0007	.00002	-.0021
#2	.0003	-.0024	-.0029	.0003	-.0001	.00004	-.0037
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0000	-.0039	.0001	-.0003	-.0001	-.0001
Stddev	.0000	.0001	.0018	.0001	.0001	.0001	.0004
%RSD	34.61	118.8	47.69	52.31	27.30	135.1	410.3
#1	.0000	.0001	-.0052	.0001	-.0003	-.0002	.0002
#2	.0000	.0000	-.0026	.0002	-.0002	.0000	-.0004
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cu3273	Fe2599	Pb2203	Li6707	Mg2790	Mg2795	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	.0041	-.0005	.0028	-.0041	.0000	-.0015
Stddev	.0006	.0001	.0011	.0001	.0241	.0000	.0001
%RSD	68.71	1.847	234.5	4.286	584.9	8.207	9.213
#1	.0013	.0041	.0003	.0027	-.0211	.0000	-.0017
#2	.0004	.0042	-.0012	.0029	.0129	.0000	-.0014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None
High Limit							
Low Limit							

Sample Name: CCB Acquired: 12/10/2018 14:13:22 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Mn2576	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00004	.0006	.0005	.0006	.0034	.0366	.0037
Stddev	.00001	.0005	.0000	.0000	.0010	.0324	.0019
%RSD	24.215	80.34	6.183	4.908	29.41	88.64	50.34
#1	.00005	.0003	.0005	.0007	.0027	.0595	.0050
#2	.00003	.0009	.0005	.0006	.0042	.0136	.0024
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031	-.0004	-.0945	.00000	.0054	.0006	F -.0021
Stddev	.0013	.0001	.0028	.00004	.0006	.0000	.0000
%RSD	42.60	30.28	2.923	1388.2	10.59	8.204	1.715
#1	.0021	-.0003	-.0965	.00003	.0050	.0006	-.0022
#2	.0040	-.0004	-.0926	-.00002	.0058	.0006	-.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.0020
Low Limit							-.0020

Elem	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0000	.0000	-.0001	-.0003
Stddev	.0004	.0004	.0001	.0013	.0012
%RSD	512.7	3650.	212.4	996.1	403.7
#1	-.0004	.0003	.0000	-.0010	.0005
#2	.0002	-.0003	.0001	.0008	-.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Sample Name: CCB Acquired: 12/10/2018 14:13:22 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6374.5	108330.	8139.3
Stddev	8.6	389.	.8
%RSD	.13465	.35884	.00980
#1	6368.5	108610.	8139.9
#2	6380.6	108060.	8138.7

Sample Name: KQ1817275-04 Acquired: 12/10/2018 14:15:56 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 121018A 1/5 E K1811438-001S

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0651	.0002	.9640	2.318	.00020	.0200	.1966	.1938
#1	.0654	.0019	.9618	2.319	.00022	.0203	.1971	.1941
#2	.0648	-.0015	.9661	2.316	.00018	.0196	.1962	.1935

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	238.7	.9467	.0048	.1959	.1772	.1097	.9358	.0053
#1	240.1	.9461	.0048	.1955	.1773	.1112	.9325	.0048
#2	237.3	.9473	.0049	.1962	.1771	.1082	.9390	.0058

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.537	1.3597	.0003	.1982	.1600	1.490	.1913	1.061
#1	6.576	1.3596	.0003	.1981	.1597	1.454	.1911	1.053
#2	6.498	1.3598	.0004	.1984	.1603	1.526	.1915	1.069

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1671	17.13	.61768	-.0014	.0008	-.0026	.0049	2.068
#1	.1671	16.87	.61814	-.0009	.0007	-.0026	.0054	2.078
#2	.1672	17.40	.61722	-.0020	.0009	-.0025	.0045	2.059

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.909	-.0013	.5704
#1	1.904	-.0014	.5719
#2	1.915	-.0013	.5688

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5924.0	98583.	7526.2
#1	5905.8	98719.	7430.3
#2	5942.3	98446.	7622.1

Sample Name: K1811438-001 Acquired: 12/10/2018 14:18:21 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 121018A 1/5 E A=0.1/10ml MET3-37-D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0647	-.0007	4.759	10.02	.00018	.0199	.9673	.9583
#1	.0656	-.0025	4.735	9.882	.00023	.0195	.9681	.9569
#2	.0637	.0010	4.783	10.16	.00014	.0204	.9664	.9596

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	233.9	4.777	.0048	.9706	.8615	.1009	4.661	.0036
#1	235.5	4.796	.0048	.9694	.8603	.1027	4.645	.0042
#2	232.4	4.757	.0047	.9717	.8628	.0992	4.676	.0029

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.374	1.3275	.0005	.9584	.1532	1.441	.9374	1.037
#1	6.456	1.3330	.0002	.9575	.1514	1.479	.9331	1.020
#2	6.293	1.3221	.0007	.9593	.1550	1.402	.9416	1.055

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8314	16.76	.60421	-.0008	.0003	-.0015	.0189	9.693
#1	.8270	16.61	.60575	-.0004	.0000	-.0013	.0191	9.715
#2	.8358	16.91	.60267	-.0012	.0005	-.0018	.0186	9.671

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	.0004	.5451
#1	8.631	.0004	.5386
#2	8.689	.0004	.5515

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5909.4	98345.	7518.8
#1	5899.8	97634.	7423.7
#2	5919.1	99056.	7613.9

Sample Name: KQ1817274-01 Acquired: 12/10/2018 14:20:53 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 121018A 1/5 E K1811381-LCSE RERUN

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	-.0014	.9167	1.801	.00006	-.0007	.1831	.1801
#1	.0032	.0007	.9139	1.808	.00006	-.0020	.1835	.1803
#2	.0036	-.0036	.9196	1.795	.00006	.0005	.1827	.1799

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1135	.8826	.0000	.1781	.1634	.0017	.8478	.0027
#1	.1069	.8802	-.0002	.1784	.1623	.0019	.8507	.0011
#2	.1201	.8850	.0001	.1777	.1644	.0016	.8449	.0044

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062	.00056	-.0001	.1765	.0032	.0314	.1808	.0194
#1	.0060	.00055	-.0001	.1770	.0029	.0493	.1792	.0129
#2	.0064	.00056	-.0002	.1760	.0035	.0136	.1825	.0260

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1619	247.6	.00049	-.0003	.0007	-.0023	.0030	1.848
#1	.1625	246.6	.00048	.0002	.0008	-.0024	.0030	1.851
#2	.1613	248.7	.00050	-.0009	.0007	-.0023	.0029	1.844

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.701	-.0014	.0057
#1	1.701	-.0023	.0061
#2	1.701	-.0006	.0053

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6066.5	100520.	7977.6
#1	6050.8	100730.	7887.5
#2	6082.3	100310.	8067.7

Sample Name: CCVB Acquired: 12/10/2018 14:23:23 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.447	10.52	-.0013	1.068	10.04	.00007	-.0018	.0001
Stddev	.163	.11	.0023	.003	.32	.00005	.0006	.0000
%RSD	2.186	1.090	172.3	.2377	3.192	73.644	31.74	5.618
#1	7.332	10.44	-.0030	1.066	9.815	.00010	-.0014	.0001
#2	7.563	10.61	.0003	1.069	10.27	.00003	-.0022	.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	10.10	9.400	-.0002	.0000	-.0008	.0005	10.58
Stddev	.0001	.01	.100	.0007	.001	.0003	.0010	.02
%RSD	30.10	.0959	1.063	334.4	2231.	34.20	195.3	.2109
#1	-.0003	10.10	9.329	.0003	-.0004	-.0009	-.0002	10.57
#2	-.0002	10.09	9.471	-.0007	.0004	-.0006	.0012	10.60
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0020	1.059	10.40	9.714	10.96	.96204	1.077	-.0002
Stddev	.0013	.012	.03	.099	.03	.00317	.002	.0002
%RSD	66.31	1.170	.2928	1.016	.2544	.32955	.1389	74.00
#1	-.0029	1.068	10.42	9.644	10.98	.95980	1.076	-.0004
#2	-.0011	1.051	10.38	9.784	10.94	.96428	1.078	-.0001
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 12/10/2018 14:23:23 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	10.30	10.49	.0012	F 11.41	-.0003	10.60	1.0125
Stddev	.0001	.04	.15	.0033	.02	.0003	.06	.0022
%RSD	26.26	.4111	1.447	275.7	.1604	101.4	.5778	.21423
#1	-.0005	10.33	10.60	-.0011	11.40	-.0001	10.64	1.0140
#2	-.0003	10.27	10.38	.0035	11.42	-.0006	10.55	1.0110
Check ?	None	Chk Pass	Chk Pass	None	Chk Fail	None	Chk Pass	Chk Pass
Value					10.00			
Range					10.44%			

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	-.0003	-.0015	.0002	.0001	.0004	1.046	1.068
Stddev	.0004	.0002	.0001	.0003	.0000	.0000	.007	.007
%RSD	153.8	63.48	7.224	169.7	27.65	2.191	.6315	.6141
#1	-.0005	-.0005	-.0015	.0004	.0002	.0003	1.051	1.064
#2	.0000	-.0002	-.0014	.0000	.0001	.0004	1.041	1.073
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6487.1	107960.	8343.9
Stddev	31.8	13.	31.2
%RSD	.48960	.01171	.37420
#1	6464.7	107950.	8365.9
#2	6509.6	107970.	8321.8

Sample Name: CCVA Acquired: 12/10/2018 14:25:59 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2667	.2862	.2579	.2708	.2585	.25985	.2515	.2551
Stddev	.0002	.0004	.0027	.0010	.0012	.00018	.0029	.0001
%RSD	.0596	.1538	1.031	.3624	.4568	.06985	1.166	.0340
#1	.2668	.2859	.2560	.2715	.2594	.25972	.2495	.2552
#2	.2666	.2865	.2597	.2701	.2577	.25998	.2536	.2550
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2526	.5146	.4909	.2483	.2551	.2554	.2569	.2735
Stddev	.0001	.0048	.0035	.0035	.0001	.0009	.0007	.0023
%RSD	.0356	.9240	.7096	1.422	.0543	.3636	.2638	.8267
#1	.2527	.5180	.4934	.2508	.2552	.2547	.2574	.2751
#2	.2525	.5112	.4885	.2458	.2550	.2560	.2564	.2719
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2506	.0016	.2530	.2597	.2794	.25203	.2784	.2566
Stddev	.0013	.0003	.0353	.0023	.0003	.00243	.0041	.0004
%RSD	.5335	20.91	13.96	.8907	.0968	.96301	1.474	.1368
#1	.2515	.0013	.2780	.2613	.2796	.25375	.2813	.2569
#2	.2496	.0018	.2280	.2581	.2792	.25032	.2755	.2564
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 12/10/2018 14:25:59 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2534	.0043	2.674	.2551	.1498	.2528	.1916	.00002
Stddev	.0001	.0014	.018	.0021	.0020	.0001	.0036	.00004
%RSD	.0433	33.06	.6619	.8074	1.360	.0526	1.871	183.33
#1	.2535	.0052	2.686	.2565	.1484	.2527	.1941	.00005
#2	.2533	.0033	2.661	.2536	.1513	.2529	.1890	-.00001
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2557	.2567	.2539	.2504	.2573	.2616	.0022	-.0014
Stddev	.0004	.0003	.0021	.0032	.0003	.0003	.0006	.0027
%RSD	.1444	.1199	.8392	1.281	.1121	.1104	28.53	193.2
#1	.2560	.2565	.2554	.2527	.2575	.2614	.0027	-.0033
#2	.2554	.2569	.2524	.2481	.2571	.2618	.0018	.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6575.5	108430.	8243.8
Stddev	6.1	925.	68.8
%RSD	.09254	.85313	.83466
#1	6571.2	107780.	8195.2
#2	6579.8	109080.	8292.5

Sample Name: CCB Acquired: 12/10/2018 14:28:17 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0025	-.0014	-.0008	-.0026	-.0001	.00005	-.0034	.0001
Stddev	.0000	.0021	.0004	.0010	.0002	.00001	.0000	.0001
%RSD	1.093	144.7	53.47	40.60	150.1	25.631	1.065	79.73
#1	.0025	.0000	-.0005	-.0033	.0000	.00004	-.0034	.0000
#2	.0025	-.0029	-.0011	-.0018	-.0002	.00006	-.0033	.0001
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0058	.0004	.0002	.0001	.0004	.0004	.0033
Stddev	.0002	.0024	.0001	.0005	.0002	.0000	.0004	.0006
%RSD	86.74	41.17	24.29	191.1	130.5	7.683	94.52	17.45
#1	.0001	-.0075	.0003	-.0001	.0003	.0004	.0001	.0029
#2	.0004	-.0041	.0005	.0006	.0000	.0005	.0007	.0038
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0013	.0149	.0001	.0019	.00006	.0002	.0004
Stddev	.000	.0014	.0145	.0001	.0013	.00006	.0014	.0001
%RSD	713.4	106.2	97.34	213.8	69.24	100.57	574.1	17.49
#1	-.0003	.0003	.0251	.0002	.0028	.00010	-.0008	.0004
#2	.0002	.0023	.0046	.0000	.0009	.00002	.0012	.0005
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 12/10/2018 14:28:17 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0025	-.0118	.0038	-.0016	-.0004	-.0842	.00004
Stddev	.0002	.0005	.0068	.0019	.0050	.0004	.0038	.00009
%RSD	29.02	22.22	57.99	50.18	318.3	97.26	4.559	244.39
#1	.0008	.0029	-.0070	.0052	.0020	-.0006	-.0869	-.00003
#2	.0005	.0021	-.0166	.0025	-.0051	-.0001	-.0815	.00010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0051	.0004	-.0008	-.0004	.0003	.0006	.0011	-.0008
Stddev	.0004	.0003	.0001	.0004	.0004	.0000	.0003	.0024
%RSD	8.494	85.69	19.74	86.28	113.6	1.462	27.66	291.9
#1	.0054	.0002	-.0007	-.0007	.0001	.0006	.0013	.0009
#2	.0048	.0007	-.0009	-.0002	.0006	.0006	.0009	-.0025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6560.7	108430.	8307.4
Stddev	13.1	279.	44.7
%RSD	.20032	.25722	.53771
#1	6570.0	108630.	8339.0
#2	6551.4	108230.	8275.8

Sample Name: LLCCV Acquired: 12/10/2018 14:30:49 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0116	.0091	.0178	.0122	.0038	.00114	.0191	.0011
Stddev	.0011	.0012	.0010	.0015	.0004	.00008	.0007	.0001
%RSD	9.242	13.78	5.480	12.23	10.99	7.1598	3.545	6.224
#1	.0109	.0082	.0171	.0112	.0041	.00109	.0195	.0011
#2	.0124	.0099	.0185	.0133	.0035	.00120	.0186	.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	F .0125	.0200	.0036	.0020	.0038	.0039	.0230
Stddev	.0001	.0032	.0001	.0002	.0003	.0003	.0003	.0041
%RSD	6.666	25.62	.4281	4.777	14.51	6.752	7.288	17.95
#1	.0010	.0147	.0199	.0037	.0018	.0036	.0037	.0201
#2	.0011	.0102	.0200	.0035	.0022	.0039	.0041	.0260
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.0200						
Range		-30.00%						

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0094	.0218	.0012	.0050	.0037	.00101	.0010	.0042
Stddev	.0002	.0020	.0077	.0000	.0021	.00001	.0011	.0002
%RSD	1.747	9.176	630.0	.3580	57.01	.93938	116.7	4.591
#1	.0095	.0204	.0067	.0050	.0022	.00100	.0018	.0044
#2	.0093	.0232	-.0042	.0050	.0051	.00101	.0002	.0041
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLCCV Acquired: 12/10/2018 14:30:49 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	.0412	.1760	.0220	.2250	.0031	F .1209	.00102
Stddev	.0001	.0006	.0140	.0029	.0050	.0002	.0016	.00006
%RSD	2.893	1.412	7.946	13.03	2.207	5.021	1.350	6.0881
#1	.0043	.0408	.1662	.0200	.2215	.0032	.1220	.00106
#2	.0041	.0416	.1859	.0240	.2285	.0030	.1197	.00097
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value							.2000	
Range							-30.00%	

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0105	.0208	F .0004	.0038	.0043	.0042	.0218	.0416
Stddev	.0020	.0002	.0004	.0001	.0002	.0002	.0015	.0004
%RSD	18.88	.7833	90.48	2.195	4.328	5.144	6.808	.9007
#1	.0119	.0207	.0007	.0039	.0042	.0041	.0228	.0413
#2	.0091	.0209	.0002	.0038	.0044	.0044	.0207	.0418
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.0020					
Range			-30.00%					

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6553.1	108820.	8294.9
Stddev	17.1	476.	25.0
%RSD	.26070	.43748	.30091
#1	6541.0	108480.	8277.3
#2	6565.1	109150.	8312.6

Sample Name: LLCCV,0.5 Acquired: 12/10/2018 14:33:19 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0215	.0228	.0395	.0228	.0076	.00220	.0395	.0021
Stddev	.0001	.0000	.0025	.0009	.0004	.00002	.0012	.0001
%RSD	.5627	.1014	6.448	4.112	5.071	1.0011	2.953	2.845
#1	.0216	.0228	.0413	.0234	.0073	.00221	.0386	.0022
#2	.0215	.0228	.0377	.0221	.0078	.00218	.0403	.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	.0356	.0398	.0072	.0041	.0080	.0082	.0444
Stddev	.0001	.0002	.0005	.0001	.0001	.0002	.0007	.0025
%RSD	2.732	.6155	1.285	1.006	1.737	2.507	8.510	5.556
#1	.0022	.0354	.0401	.0071	.0042	.0078	.0077	.0462
#2	.0021	.0357	.0394	.0072	.0041	.0081	.0087	.0427
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0185	.0452	.0025	.0099	.0123	.00193	.0024	.0078
Stddev	.0001	.0006	.0003	.0001	.0012	.00009	.0019	.0000
%RSD	.8040	1.361	13.33	.9925	10.05	4.6539	80.85	.4887
#1	.0184	.0456	.0028	.0100	.0115	.00200	.0010	.0078
#2	.0186	.0447	.0023	.0099	.0132	.00187	.0037	.0077
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLCCV,0.5 Acquired: 12/10/2018 14:33:19 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0080	.0798	.3414	.0432	.4452	.0078	.3595	.00198
Stddev	.0002	.0002	.0417	.0010	.0045	.0004	.0016	.00026
%RSD	1.992	.2644	12.22	2.268	1.001	5.301	.4428	13.010
#1	.0079	.0797	.3119	.0439	.4484	.0075	.3584	.00216
#2	.0082	.0800	.3709	.0425	.4421	.0081	.3606	.00180
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0220	.0411	F .0013	.0070	.0081	.0081	.0442	.0874
Stddev	.0000	.0009	.0001	.0000	.0002	.0001	.0001	.0022
%RSD	.0112	2.205	5.206	.5372	2.238	.6505	.2277	2.466
#1	.0220	.0417	.0013	.0070	.0083	.0081	.0442	.0889
#2	.0220	.0405	.0012	.0070	.0080	.0080	.0441	.0859
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.0040					
Range			-30.00%					

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6517.4	110960.	8476.0
Stddev	13.3	582.	118.7
%RSD	.20371	.52435	1.4006
#1	6508.0	110550.	8392.1
#2	6526.8	111370.	8560.0

Sample Name: LLCCV-TCLP Acquired: 12/10/2018 14:38:33 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	-.0013	-.0012	-.0018	.1876	.00003	-.0023	.0000
Stddev	.0004	.0002	.0012	.0015	.0009	.00002	.0007	.0000
%RSD	46.39	17.15	102.2	84.32	.4647	76.697	32.77	62.18
#1	.0006	-.0012	-.0020	-.0007	.1870	.00001	-.0018	.0000
#2	.0011	-.0015	-.0003	-.0029	.1882	.00005	-.0028	.0000
Check ?	None	None	None	None	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0045	.0016	-.0005	.0001	.0003	-.0001	.0010
Stddev	.0000	.0068	.0000	.0001	.0005	.0004	.0009	.0009
%RSD	147.4	148.8	.9667	27.23	551.3	142.1	710.8	85.71
#1	.0001	-.0093	.0016	-.0004	.0004	.0006	.0005	.0004
#2	.0000	.0002	.0016	-.0007	-.0002	.0000	-.0008	.0016
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	.0004	.0106	.0001	.0022	.00000	.0005	-.0001
Stddev	.0004	.0010	.0015	.0002	.0012	.0000	.0014	.0001
%RSD	89.47	249.5	14.11	288.4	52.94	420.18	300.7	75.31
#1	-.0001	-.0003	.0096	.0002	.0014	-.00002	.0015	-.0001
#2	-.0006	.0011	.0117	-.0001	.0030	.00001	-.0005	.0000
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Sample Name: LLCCV-TCLP Acquired: 12/10/2018 14:38:33 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0005	.0436	-.0005	-.0044	-.0002	-.0868	.00013
Stddev	.0002	.0020	.0011	.0007	.0025	.0002	.0078	.00007
%RSD	521.0	439.2	2.494	122.0	55.49	99.52	8.979	55.811
#1	.0002	.0019	.0428	-.0010	-.0027	-.0001	-.0813	.00008
#2	-.0001	-.0010	.0443	-.0001	-.0062	-.0003	-.0924	.00018
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	.0000	-.0028	-.0003	.1961	.1985	.0010	.0005
Stddev	.0006	.000	.0000	.0001	.0003	.0002	.0011	.0024
%RSD	192.0	149.2	.4079	53.06	.1590	.0913	103.9	495.0
#1	.0001	.0000	-.0028	-.0004	.1959	.1987	.0003	.0022
#2	-.0007	.0000	-.0028	-.0002	.1964	.1984	.0018	-.0012
Check ?	None	None	None	None	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6497.3	111260.	8525.8
Stddev	9.1	373.	68.0
%RSD	.14078	.33555	.79727
#1	6490.8	111000.	8573.9
#2	6503.7	111530.	8477.8

Sample Name: KQ1817452-02 Acquired: 12/10/2018 14:41:42 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A K1811468-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	.0001	-.0013	-.0002	-.00006	-.0018	.0000
#1	.0008	-.0009	-.0011	-.0002	-.00010	-.0013	.0000
#2	.0016	.0010	-.0015	-.0001	-.00003	-.0024	.0000

Elem	Cd2265	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0033	-.0002	.0000	.0004	-.0002	-.0006
#1	.0000	.0033	-.0001	-.0002	.0001	.0006	-.0003
#2	.0001	.0034	-.0003	.0001	.0006	-.0010	-.0009

Elem	Pb2203	Li6707	Mg2795	Mn2576	Mo2020	Ni2216	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0014	.0018	.0014	.00009	.0000	.0002	.0135
#1	-.0014	.0033	.0014	.00013	.0001	.0005	.0131
#2	-.0015	.0002	.0014	.00004	-.0001	.0000	.0140

Elem	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0401	.0022	.0328	-.0006	-.0731	.00009	-.0003
#1	-.0330	.0030	.0279	-.0002	-.0793	.00007	.0002
#2	-.0471	.0013	.0377	-.0009	-.0669	.00012	-.0007

Elem	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	F -.0029	.0001	.0000	.0004	.0015	.0001
#1	.0002	-.0030	.0001	.0000	.0004	.0037	.0024
#2	-.0001	-.0028	.0002	.0000	.0004	-.0007	-.0023

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6481.0	111920.	8448.2
#1	6468.7	111540.	8421.5
#2	6493.3	112300.	8475.0

Sample Name: KQ1817452-01 Acquired: 12/10/2018 14:44:07 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A K1811468-LCSW

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.359	1.745	2.083	4.087	.10187	F .3956	1.015
#1	4.363	1.749	2.081	4.092	.10156	.3944	1.016
#2	4.355	1.742	2.085	4.083	.10218	.3968	1.014

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9980	10.30	F .3957	1.027	.5114	.5033	2.174
#1	.9990	10.24	.3955	1.028	.5131	.5020	2.161
#2	.9970	10.36	.3959	1.026	.5096	.5047	2.186

Elem	Pb2203	Li6707	Mg2852	Mn2576	Mo2020	Ni2216	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.992	.0031	11.08	F .98468	.8747	1.005	.0185
#1	1.993	.0028	11.11	.98576	.8758	1.006	.0177
#2	1.991	.0035	11.04	.98361	.8735	1.004	.0192

Elem	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.52	F 1.857	.0531	F .4857	10.72	.00016	2.030
#1	10.66	1.858	.0598	.4852	10.81	.00014	2.035
#2	10.38	1.856	.0463	.4861	10.63	.00019	2.025

Elem	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.101	-.0022	1.033	1.022	F .9811	.0029	.0040
#1	8.117	-.0025	1.033	1.024	.9826	.0024	.0033
#2	8.084	-.0020	1.034	1.020	.9796	.0034	.0046

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6367.9	107760.	8311.6
#1	6368.4	107410.	8351.2
#2	6367.5	108110.	8272.1

Sample Name: K1811468-001 Acquired: 12/10/2018 14:46:28 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0848	-.0011	.0022	.0137	-.00004	2.377	.0000	.0001
#1	.0849	.0000	.0009	.0135	.00005	2.381	.0000	.0000
#2	.0847	-.0023	.0035	.0139	-.00012	2.373	-.0001	.0003

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	311.5	.0007	.0003	.0002	.0011	.1259	-.0018	.1224
#1	310.2	.0008	.0005	.0001	.0015	.1251	-.0024	.1221
#2	312.7	.0007	.0001	.0002	.0007	.1268	-.0012	.1227

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>540.0	.00277	.0106	.0015	.0377	275.9	.0034	1.313
#1	1095.	.00276	.0106	.0017	.0377	274.8	.0024	1.314
#2	1106.	.00278	.0106	.0014	.0378	276.9	.0044	1.312

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	*****	5.8641	.0141	.0073	.0001	.0040	.0012
#1	-.0003	-----	5.8171	.0134	.0062	.0003	.0038	.0009
#2	-.0008	-----	5.9110	.0147	.0085	.0000	.0042	.0016

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0015	.0048	>450.0
#1	.0015	.0041	550.1
#2	.0014	.0056	548.2

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4487.3	72682.	6910.9
#1	4496.4	72439.	6933.4
#2	4478.1	72925.	6888.4

Sample Name: K1811468-001L Acquired: 12/10/2018 14:49:15 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: Sample Type:
Comment: AM 121018A 1/5

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0239	-.0013	.0004	.0028	.00001	.5909	.0000	.0001
#1	.0249	-.0002	-.0005	.0030	-.00001	.5927	.0000	.0001
#2	.0229	-.0024	.0014	.0026	.00002	.5890	.0000	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	65.50	-.0001	-.0001	-.0003	-.0004	.0276	-.0022	.0280
#1	65.40	.0002	.0001	-.0005	-.0001	.0293	-.0016	.0284
#2	65.59	-.0005	-.0004	.0000	-.0008	.0260	-.0028	.0276

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	219.0	.00061	.0019	.0009	.0102	58.79	-.0001	.2834
#1	219.2	.00067	.0020	.0009	.0075	58.50	.0008	.2727
#2	218.9	.00055	.0018	.0010	.0128	59.08	-.0010	.2940

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	>450.0	1.1917	.0017	.0010	-.0027	.0014	.0003
#1	-.0004	1428.	1.1876	.0010	.0003	-.0027	.0010	.0004
#2	-.0011	1443.	1.1959	.0025	.0016	-.0028	.0018	.0002

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0004	.0016	132.4
#1	.0005	.0000	132.4
#2	.0004	.0031	132.5

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5448.2	88134.	7536.0
#1	5429.3	88445.	7546.6
#2	5467.1	87823.	7525.4

Sample Name: KQ1817452-03 Acquired: 12/10/2018 14:52:03 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A K1811468-001D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0950	-.0023	.0012	.0137	-.00001	2.376	.0000	.0002
#1	.0960	-.0030	.0019	.0136	-.00002	2.382	.0000	.0003
#2	.0941	-.0016	.0005	.0138	.00001	2.370	.0000	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	313.5	.0002	-.0001	.0002	.0009	.1310	-.0018	.1236
#1	313.5	-.0001	-.0002	.0003	.0006	.1330	-.0027	.1245
#2	313.4	.0004	.0001	.0002	.0012	.1291	-.0010	.1226

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>540.0	.00284	.0092	.0015	.0357	278.9	.0033	1.294
#1	1101.	.00285	.0091	.0017	.0355	278.9	.0040	1.306
#2	1100.	.00283	.0093	.0014	.0358	278.9	.0027	1.281

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	*****	5.8637	-.0006	-.0008	.0005	.0048	.0014
#1	-.0008	-----	5.8480	-.0009	.0002	.0005	.0044	.0015
#2	-.0003	-----	5.8793	-.0002	-.0018	.0005	.0052	.0013

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0014	.0039	>450.0
#1	.0014	.0041	548.0
#2	.0013	.0036	543.9

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4490.7	71830.	6895.1
#1	4494.7	72005.	6900.4
#2	4486.7	71656.	6889.9

Sample Name: KQ1817452-04 Acquired: 12/10/2018 14:54:49 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A K1811468-001S

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.560	.2998	.6910	.8148	.03473	2.551	.0383	.0370
#1	1.574	.2993	.6871	.8136	.03485	2.560	.0385	.0373
#2	1.546	.3002	.6949	.8160	.03460	2.542	.0382	.0367

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	310.4	.1566	.3629	.1844	.1401	1.003	.3310	.1163
#1	309.1	.1581	.3655	.1848	.1410	.9955	.3325	.1181
#2	311.8	.1550	.3604	.1840	.1393	1.010	.3296	.1145

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>540.0	.39538	.8525	.3604	.0359	273.8	.8329	1.345
#1	1066.	.39655	.8568	.3627	.0378	275.3	.8321	1.361
#2	1074.	.39420	.8482	.3581	.0339	272.2	.8336	1.329

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0312	*****	5.6432	.1154	7.144	.0010	.4397	.3953
#1	.0320	-----	5.6999	.1170	7.182	.0016	.4407	.3983
#2	.0304	-----	5.5866	.1137	7.105	.0003	.4388	.3924

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.3182	.0050	>450.0
#1	.3171	.0064	525.3
#2	.3193	.0037	530.9

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4513.5	72311.	6880.0
#1	4483.7	72356.	6940.8
#2	4543.3	72266.	6819.3

Sample Name: K1811468-001A Acquired: 12/10/2018 14:57:23 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A A=0.05/10mL CICV1,3+Mo, Sn 1000ppm

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.712	.0009	2.001	4.725	.10408	2.358	1.103	1.058
#1	2.720	-.0024	2.001	4.735	.10391	2.352	1.100	1.056
#2	2.704	.0041	2.000	4.715	.10426	2.364	1.105	1.060

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	319.6	.4565	1.066	.5405	.4122	2.598	1.920	.1214
#1	321.0	.4544	1.063	.5391	.4107	2.618	1.918	.1187
#2	318.1	.4586	1.069	.5419	.4137	2.578	1.923	.1241

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>540.0	1.1335	4.784	1.057	.0402	288.2	2.390	1.274
#1	1096.	1.1292	4.778	1.058	.0389	286.4	2.389	1.271
#2	1088.	1.1377	4.791	1.057	.0414	289.9	2.391	1.278

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4558	*****	5.6470	1.682	4.140	.0013	1.252	1.166
#1	.4531	-----	5.6720	1.684	4.130	.0013	1.247	1.163
#2	.4585	-----	5.6219	1.681	4.150	.0013	1.256	1.168

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.9329	.0049	>450.0
#1	.9334	.0018	549.1
#2	.9323	.0081	547.9

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4525.7	73396.	7015.9
#1	4533.6	73373.	6954.5
#2	4517.8	73420.	7077.4

Sample Name: K1811468-002 Acquired: 12/10/2018 14:59:53 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0121	-.0020	.0023	.0077	.00002	2.858	.0001	.0001
#1	-.0109	-.0024	.0034	.0079	.00000	2.861	.0000	.0001
#2	-.0134	-.0016	.0012	.0075	.00003	2.855	.0001	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	381.5	.0009	.0001	-.0005	.0014	.0248	-.0017	.1488
#1	378.7	.0006	.0001	-.0006	.0018	.0204	-.0024	.1495
#2	384.3	.0012	.0001	-.0004	.0010	.0292	-.0011	.1481

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>540.0	.00066	.0164	.0005	.0119	346.2	.0055	.1323
#1	1353.	.00067	.0159	.0006	.0104	346.4	.0068	.1325
#2	1374.	.00065	.0169	.0004	.0134	345.9	.0042	.1322

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	*****	7.2602	.0153	.0067	.0006	.0021	.0014
#1	-.0001	-----	7.2314	.0151	.0072	.0005	.0017	.0014
#2	.0000	-----	7.2890	.0155	.0063	.0008	.0026	.0014

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0015	.0025	>450.0
#1	.0016	.0019	653.6
#2	.0014	.0031	655.9

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4408.6	68586.	6788.3
#1	4368.4	68984.	6833.1
#2	4448.8	68187.	6743.5

Sample Name: K1811468-003 Acquired: 12/10/2018 15:02:40 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0040	-.0024	.0008	.0069	-.00001	2.842	.0005	.0004
#1	-.0018	-.0022	.0021	.0073	-.00001	2.851	.0008	.0008
#2	-.0062	-.0026	-.0005	.0064	-.00001	2.832	.0001	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	387.8	.0007	.0008	-.0003	.0008	.0293	.0013	.1483
#1	390.9	.0005	.0012	-.0002	.0007	.0326	.0032	.1477
#2	384.6	.0009	.0003	-.0004	.0008	.0260	-.0005	.1489

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>540.0	.00087	.0133	.0010	.0139	351.5	.0019	.1099
#1	1388.	.00083	.0146	.0012	.0141	353.3	.0047	.1081
#2	1374.	.00090	.0121	.0009	.0136	349.8	-.0009	.1116

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	*****	7.3359	.0005	.0037	.0002	.0030	.0023
#1	-.0001	-----	7.3053	-.0004	.0058	.0003	.0029	.0027
#2	-.0007	-----	7.3665	.0014	.0016	.0001	.0031	.0018

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0024	.0028	>450.0
#1	.0028	.0012	651.5
#2	.0020	.0043	647.4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4451.6	68783.	6708.6
#1	4416.2	68946.	6678.2
#2	4486.9	68621.	6738.9

Sample Name: K1811468-004 Acquired: 12/10/2018 15:05:26 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1070	-.0029	.0009	.0147	.00003	2.326	.0000	.0000
#1	.1068	-.0039	-.0006	.0149	.00000	2.300	.0000	.0000
#2	.1072	-.0019	.0023	.0146	.00006	2.352	.0000	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	304.3	.0011	.0002	.0005	.0017	.1488	-.0025	.1169
#1	306.8	.0019	.0000	.0002	.0019	.1482	-.0018	.1146
#2	301.7	.0003	.0003	.0008	.0014	.1494	-.0033	.1192

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>540.0	.00315	.0094	.0017	.0369	273.5	.0034	1.521
#1	1074.	.00311	.0096	.0015	.0367	273.5	.0030	1.512
#2	1055.	.00319	.0092	.0019	.0372	273.6	.0037	1.530

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	*****	5.6795	-.0014	.0007	.0008	.0048	.0010
#1	-.0008	-----	5.6782	-.0016	.0008	.0009	.0046	.0012
#2	.0000	-----	5.6809	-.0012	.0006	.0006	.0050	.0008

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0011	.0057	>450.0
#1	.0011	.0044	539.8
#2	.0010	.0070	536.0

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4608.4	72992.	6938.8
#1	4589.0	72914.	6886.9
#2	4627.7	73070.	6990.8

Sample Name: CCVB Acquired: 12/10/2018 15:08:15 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.074	10.22	-.0003	1.030	9.734	.00007	.0073	.0000
Stddev	.064	.02	.0013	.001	.124	.00000	.0004	.000
%RSD	.7951	.1562	413.0	.1089	1.273	2.6517	5.699	100.4
#1	8.119	10.21	-.0013	1.029	9.646	.00007	.0070	.0000
#2	8.028	10.23	.0006	1.031	9.821	.00007	.0076	-.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	9.893	9.189	.0000	.0001	-.0001	.0002	10.33
Stddev	.0000	.035	.132	.0005	.0002	.0003	.0005	.00
%RSD	1.078	.3508	1.436	1680.	118.1	244.0	184.2	.0124
#1	-.0003	9.917	9.096	.0004	.0003	-.0003	-.0001	10.33
#2	-.0003	9.868	9.282	-.0003	.0000	.0001	.0006	10.33
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	1.005	10.46	9.470	10.64	.94990	1.035	.0000
Stddev	.0003	.000	.22	.050	.20	.00047	.001	.0002
%RSD	39.48	.0210	2.063	.5270	1.909	.04985	.0859	1358.
#1	-.0005	1.005	10.62	9.505	10.78	.95023	1.034	-.0001
#2	-.0008	1.006	10.31	9.435	10.50	.94956	1.035	.0002
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

See rerun
AKm 12/10/18

Sample Name: CCVB Acquired: 12/10/2018 15:08:15 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	10.16	10.57	.0014	10.99	-.0003	F 12.17	.97797
Stddev	.0000	.01	.07	.0009	.03	.0001	1.55	.00210
%RSD	9.274	.1146	.6717	67.25	.2572	18.07	12.76	.21476
#1	-.0002	10.15	10.62	.0007	11.01	-.0004	13.27	.97649
#2	-.0003	10.17	10.52	.0021	10.97	-.0003	11.08	.97946
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Fail	Chk Pass
Value							10.00	
Range							10.44%	

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	-.0001	-.0022	.0004	.0000	.0001	1.009	F 1.241
Stddev	.0004	.0003	.0002	.0002	.0001	.0000	.006	.255
%RSD	97.74	405.3	9.379	40.26	456.1	17.34	.5648	20.53
#1	.0007	.0001	-.0020	.0005	.0001	.0001	1.014	1.060
#2	.0001	-.0003	-.0023	.0003	-.0001	.0002	1.005	1.421
Check ?	None	None	None	None	None	None	Chk Pass	Chk Fail
Value								1.000
Range								10.44%

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6490.2	109310.	8335.6
Stddev	7.7	101.	29.1
%RSD	.11850	.09197	.34887
#1	6484.8	109380.	8356.1
#2	6495.7	109240.	8315.0

12/10/18

Sample Name: CCVB Acquired: 12/10/2018 15:10:57 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.232	10.14	-.0010	1.022	9.765	.00002	.0043	.0001
Stddev	.107	.17	.0017	.003	.103	.00001	.0006	.0001
%RSD	1.294	1.698	181.4	.3120	1.050	41.963	13.45	94.53
#1	8.307	10.26	.0003	1.024	9.693	.00003	.0038	.0000
#2	8.157	10.02	-.0022	1.019	9.838	.00001	.0047	.0002
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	9.908	9.450	-.0001	.0001	-.0004	.0009	10.50
Stddev	.0001	.040	.223	.0003	.0002	.0008	.0009	.03
%RSD	17.09	.4013	2.359	411.4	263.1	228.5	96.42	.2952
#1	-.0003	9.880	9.292	-.0003	.0002	.0002	.0003	10.48
#2	-.0004	9.937	9.608	.0001	-.0001	-.0009	.0015	10.53
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0010	1.001	10.40	9.437	10.46	.95080	1.027	-.0001
Stddev	.0007	.004	.06	.031	.07	.00349	.001	.0002
%RSD	71.95	.4012	.5475	.3303	.6364	.36756	.1302	234.6
#1	-.0015	1.003	10.44	9.415	10.50	.95328	1.028	-.0002
#2	-.0005	.9977	10.36	9.459	10.41	.94833	1.026	.0000
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 12/10/2018 15:10:57 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	10.26	10.20	.0014	10.94	-.0005	10.89	.98196
Stddev	.0003	.02	.03	.0002	.01	.0001	.42	.00191
%RSD	99.77	.2397	.3422	17.96	.0894	25.79	3.860	.19443
#1	-.0005	10.28	10.23	.0016	10.95	-.0006	11.18	.98061
#2	-.0001	10.25	10.18	.0012	10.93	-.0004	10.59	.98331
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	.0003	-.0026	-.0001	.0002	.0002	1.020	1.043
Stddev	.0001	.0005	.0003	.0003	.0003	.0000	.005	.010
%RSD	14.00	162.1	10.16	339.6	185.4	12.39	.4590	.9634
#1	-.0005	.0000	-.0024	.0001	.0004	.0002	1.017	1.036
#2	-.0006	.0007	-.0028	-.0003	-.0001	.0002	1.023	1.050
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6402.9	108970.	8278.4
Stddev	12.5	28.	40.8
%RSD	.19472	.02563	.49233
#1	6394.1	108950.	8307.2
#2	6411.7	108990.	8249.6

Sample Name: CCVA Acquired: 12/10/2018 15:13:37 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .2820	.2717	.2487	.2582	.2432	.25619	.2532	.2532
Stddev	.0004	.0012	.0008	.0010	.0029	.00053	.0012	.0004
%RSD	.1327	.4251	.3202	.3744	1.194	.20807	.4669	.1598
#1	.2818	.2726	.2493	.2575	.2452	.25582	.2524	.2534
#2	.2823	.2709	.2482	.2589	.2411	.25657	.2541	.2529
Check ?	Chk Fail	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value	.2500							
Range	10.44%							

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2493	.4939	.4803	.2355	.2523	.2547	.2437	.2699
Stddev	.0001	.0050	.0052	.0024	.0006	.0000	.0014	.0024
%RSD	.0532	1.015	1.083	1.017	.2326	.0018	.5780	.9023
#1	.2494	.4904	.4840	.2372	.2527	.2547	.2427	.2716
#2	.2492	.4975	.4766	.2338	.2519	.2547	.2447	.2682
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2476	.0027	.2404	.2456	.2651	.24500	.2586	.2534
Stddev	.0014	.0011	.0044	.0011	.0001	.00208	.0016	.0001
%RSD	.5562	39.95	1.844	.4550	.0423	.84915	.6076	.0211
#1	.2466	.0019	.2435	.2464	.2652	.24648	.2597	.2534
#2	.2485	.0034	.2372	.2448	.2650	.24353	.2575	.2534
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

F - NR Al1670 after 14:38
Akm 12/10/18

Sample Name: CCVA Acquired: 12/10/2018 15:13:37 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2495	.0045	2.785	.2491	.1383	.2484	.7272	.00010
Stddev	.0000	.0013	.035	.0042	.0056	.0001	.0084	.00010
%RSD	.0025	27.60	1.266	1.677	4.081	.0571	1.154	104.07
#1	.2495	.0037	2.810	.2461	.1343	.2483	.7331	.00017
#2	.2495	.0054	2.760	.2520	.1422	.2485	.7213	.00003
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2505	.2526	.2464	.2448	.2571	.2542	.0018	.0334
Stddev	.0025	.0018	.0002	.0012	.0007	.0009	.0011	.0272
%RSD	1.016	.7179	.0660	.4872	.2546	.3694	60.85	81.39
#1	.2523	.2513	.2463	.2456	.2576	.2536	.0010	.0142
#2	.2487	.2539	.2465	.2440	.2567	.2549	.0026	.0527
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6504.4	110240.	8314.5
Stddev	17.6	898.	4.8
%RSD	.27055	.81484	.05787
#1	6491.9	109600.	8311.1
#2	6516.8	110870.	8317.9

Sample Name: CCB Acquired: 12/10/2018 15:15:56 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	-.0021	-.0021	.0015	-.0001	.00011	.0021
Stddev	.0003	.0002	.0003	.0004	.0001	.00003	.0006
%RSD	47.30	11.96	12.60	24.51	62.60	29.108	27.45
#1	.0004	-.0022	-.0019	.0012	.0000	.00013	.0017
#2	.0008	-.0019	-.0023	.0017	-.0001	.00009	.0025
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0001	-.0038	.0005	.0001	-.0001	.0006
Stddev	.0000	.0000	.0007	.0005	.0007	.0001	.0000
%RSD	26.31	30.30	17.20	96.78	728.1	64.18	6.187
#1	.0000	.0001	-.0043	.0008	-.0004	-.0002	.0005
#2	.0000	.0001	-.0033	.0002	.0006	-.0001	.0006
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cu3273	Fe2599	Pb2203	Li6707	Mg2790	Mg2795	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0027	-.0015	.0020	-.0075	.0014	.0009
Stddev	.0007	.0036	.0006	.0010	.0084	.0014	.0005
%RSD	48.69	135.6	41.95	47.31	112.7	102.7	53.87
#1	.0020	.0052	-.0010	.0013	-.0015	.0024	.0013
#2	.0010	.0001	-.0019	.0027	-.0134	.0004	.0006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None
High Limit							
Low Limit							

See rerun
AKm 12/10/18

Sample Name: CCB Acquired: 12/10/2018 15:15:56 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Mn2576	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00006	.0009	.0006	.0003	.0008	.1963	.0013
Stddev	.00001	.0006	.0001	.0002	.0005	.0142	.0008
%RSD	9.8836	72.28	17.09	58.60	58.37	7.251	65.30
#1	.00006	.0004	.0007	.0004	.0005	.1862	.0019
#2	.00007	.0013	.0005	.0002	.0011	.2064	.0007
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	-.0002	F .3868	.00012	.0059	.0006	F -.0024
Stddev	.0122	.0000	.0151	.00004	.0004	.0002	.0000
%RSD	593.6	26.55	3.901	32.382	7.083	35.95	.0200
#1	.0107	-.0002	.3974	.00015	.0062	.0004	-.0024
#2	-.0066	-.0002	.3761	.00009	.0056	.0007	-.0024
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit			.2000				.0020
Low Limit			-.2000				-.0020

Elem	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	.0001	.0000	.0003	.0026
Stddev	.0009	.0001	.000	.0019	.0012
%RSD	196.7	148.4	123.5	577.7	46.80
#1	-.0011	.0002	-.0001	.0017	.0035
#2	.0002	.0000	.0000	-.0010	.0018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

12/10/18

Sample Name: CCB Acquired: 12/10/2018 15:15:56 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6409.4	108550.	8197.2
Stddev	10.3	36.	13.1
%RSD	.16101	.03321	.15958
#1	6402.1	108570.	8206.5
#2	6416.7	108520.	8188.0

12/10/18

Sample Name: CCB Acquired: 12/10/2018 15:18:27 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-.0027	-.0016	.0008	-.0002	.00000	.0012
Stddev	.0001	.0015	.0014	.0005	.0001	.0000	.0004
%RSD	24.98	54.18	83.88	58.99	30.94	632.14	30.12
#1	.0003	-.0038	-.0026	.0011	-.0002	-.00002	.0010
#2	.0002	-.0017	-.0007	.0005	-.0003	.00001	.0015
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0001	-.0063	.0004	-.0009	.0000	.0005
Stddev	.0000	.0001	.0008	.0003	.0002	.0005	.0003
%RSD	39.28	83.34	12.01	80.30	23.91	1076.	58.32
#1	.0001	.0002	-.0069	.0006	-.0007	-.0003	.0007
#2	.0000	.0001	-.0058	.0002	-.0010	.0004	.0003
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cu3273	Fe2599	Pb2203	Li6707	Mg2790	Mg2795	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0033	-.0002	.0027	.0091	.0011	.0034
Stddev	.0002	.0007	.0009	.0008	.0296	.0008	.0010
%RSD	21.92	22.56	515.8	28.69	325.3	68.88	28.18
#1	.0008	.0038	-.0008	.0033	.0301	.0017	.0041
#2	.0006	.0028	.0005	.0022	-.0118	.0006	.0028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None
High Limit							
Low Limit							

Sample Name: CCB Acquired: 12/10/2018 15:18:27 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Mn2576	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00006	-.0011	.0000	.0003	.0010	.1789	.0016
Stddev	.00001	.0004	.000	.0001	.0006	.0169	.0028
%RSD	18.016	35.31	3591.	37.94	55.79	9.464	169.3
#1	.00005	-.0014	-.0003	.0004	.0006	.1669	.0036
#2	.00007	-.0008	.0003	.0002	.0014	.1908	-.0003
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059	-.0004	F .3171	-.00002	.0007	-.0004	F -.0022
Stddev	.0016	.0002	.0116	.00006	.0007	.0001	.0002
%RSD	26.65	36.04	3.651	304.60	94.67	13.36	6.738
#1	.0047	-.0003	.3253	-.00006	.0012	-.0005	-.0021
#2	.0070	-.0006	.3089	.00002	.0002	-.0004	-.0024
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit			.2000				.0020
Low Limit			-.2000				-.0020

Elem	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	-.0001	-.0001	-.0005	.0017
Stddev	.0000	.0000	.0000	.0013	.0006
%RSD	8.302	44.99	65.01	290.2	35.46
#1	-.0003	.0000	-.0001	.0005	.0022
#2	-.0004	-.0001	.0000	-.0014	.0013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

F - NR Na after 14:38

AKeen 12/10/18

Sample Name: CCB Acquired: 12/10/2018 15:18:27 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6387.1	107510.	8116.6
Stddev	11.2	660.	92.1
%RSD	.17499	.61351	1.1350
#1	6379.2	107980.	8181.7
#2	6395.0	107050.	8051.4

Sample Name: K1811468-005 Acquired: 12/10/2018 15:25:19 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	-.0013	.0012	.0072	-.00006	2.813	-.0001	.0000
#1	.0001	-.0032	-.0015	.0070	-.00011	2.798	.0000	-.0001
#2	.0016	.0006	.0040	.0074	.00000	2.828	-.0001	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	371.8	-.0002	.0002	-.0006	.0015	.0398	-.0010	.1445
#1	374.3	-.0003	.0001	-.0005	.0012	.0421	-.0023	.1424
#2	369.2	-.0002	.0003	-.0007	.0017	.0376	.0002	.1467

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>540.0	.00093	.0109	.0009	.0144	334.5	.0013	.2077
#1	1334.	.00088	.0110	.0010	.0143	330.5	.0015	.2041
#2	1315.	.00098	.0108	.0008	.0145	338.6	.0010	.2113

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	*****	7.0656	-.0004	.0007	-.0007	.0034	.0007
#1	-.0011	-----	7.2049	-.0012	-.0002	-.0007	.0037	.0008
#2	-.0005	-----	6.9263	.0005	.0017	-.0007	.0030	.0006

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0008	.0050	>450.0
#1	.0008	.0033	640.7
#2	.0008	.0066	638.3

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4328.8	69998.	6683.1
#1	4350.3	69403.	6586.8
#2	4307.3	70593.	6779.4

Sample Name: K1811468-006 Acquired: 12/10/2018 15:28:02 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0961	-.0028	-.0017	.0074	-.00001	2.806	.0001	.0000
#1	.0972	-.0021	-.0011	.0077	-.00004	2.808	.0002	-.0002
#2	.0950	-.0036	-.0024	.0071	.00001	2.805	.0000	.0002

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	374.7	.0002	.0000	-.0008	.0025	.1272	.0059	.1447
#1	372.7	.0002	-.0006	-.0008	.0024	.1255	.0050	.1454
#2	376.8	.0003	.0005	-.0009	.0025	.1288	.0068	.1441

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>540.0	.00296	.0108	.0010	.0197	338.1	.0049	.2656
#1	1328.	.00289	.0112	.0013	.0184	340.4	.0039	.2594
#2	1344.	.00304	.0104	.0007	.0209	335.8	.0059	.2718

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	*****	7.0818	-.0005	.0001	.0031	.0028	.0013
#1	-.0002	-----	7.0559	.0002	.0004	.0034	.0029	.0014
#2	.0000	-----	7.1077	-.0012	-.0002	.0028	.0027	.0011

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0014	.0036	>450.0
#1	.0015	.0034	638.0
#2	.0014	.0038	633.2

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4408.3	69850.	6634.8
#1	4385.5	70080.	6682.3
#2	4431.1	69621.	6587.3

Sample Name: K1811468-007 Acquired: 12/10/2018 15:30:49 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1485	-.0023	-.0004	.0137	-.00002	2.275	.0000	.0001
#1	.1461	-.0014	-.0012	.0136	-.00010	2.275	.0000	.0001
#2	.1509	-.0032	.0003	.0138	.00005	2.276	.0001	.0002

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	302.5	.0008	-.0001	.0002	.0016	.1736	-.0011	.1167
#1	304.3	.0015	.0002	.0000	.0020	.1733	-.0013	.1151
#2	300.6	.0002	-.0003	.0004	.0011	.1740	-.0010	.1183

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>540.0	.00430	.0087	.0014	.0442	274.6	.0022	1.468
#1	1055.	.00443	.0085	.0016	.0432	273.5	.0021	1.454
#2	1042.	.00417	.0088	.0011	.0452	275.6	.0023	1.483

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	*****	5.7517	-.0011	.0005	.0015	.0042	.0032
#1	-.0005	-----	5.7974	-.0009	.0005	.0015	.0053	.0031
#2	-.0009	-----	5.7061	-.0013	.0005	.0015	.0032	.0033

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0029	.0039	>450.0
#1	.0028	.0039	533.2
#2	.0029	.0039	528.8

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4626.7	72665.	6823.4
#1	4652.0	72032.	6774.0
#2	4601.4	73298.	6872.8

Sample Name: K1811468-008 Acquired: 12/10/2018 15:33:36 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	-.0028	-.0015	.0077	-.00008	2.760	.0000	.0001
#1	-.0010	-.0016	-.0014	.0080	-.00005	2.766	.0000	.0002
#2	-.0014	-.0041	-.0015	.0073	-.00011	2.754	.0001	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	374.7	-.0012	.0004	.0002	.0017	.0301	-.0031	.1429
#1	371.5	.0000	.0000	-.0005	.0019	.0312	-.0039	.1456
#2	377.8	-.0023	.0007	.0009	.0016	.0290	-.0023	.1402

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>540.0	.00094	.0109	.0003	.0187	337.4	.0017	.1877
#1	1314.	.00102	.0109	.0000	.0177	338.8	.0017	.1960
#2	1329.	.00087	.0109	.0007	.0198	336.0	.0017	.1793

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	*****	7.1678	-.0007	.0011	.0000	.0024	.0012
#1	-.0002	-----	7.1722	-.0007	.0011	.0001	.0018	.0012
#2	-.0002	-----	7.1633	-.0007	.0012	-.0001	.0030	.0012

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0011	.0052	>450.0
#1	.0010	.0066	630.2
#2	.0011	.0038	631.1

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4407.5	68217.	6574.5
#1	4398.7	67934.	6630.7
#2	4416.4	68500.	6518.2

Sample Name: K1811468-009 Acquired: 12/10/2018 15:36:24 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0616	-.0017	.0009	.0074	.00002	2.846	.0000	.0000
#1	.0610	.0001	.0021	.0073	.00004	2.834	.0000	.0000
#2	.0621	-.0036	-.0003	.0076	.00000	2.858	-.0001	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	382.9	.0006	.0000	.0006	.0017	.1180	-.0009	.1475
#1	383.4	.0009	-.0001	-.0004	.0022	.1173	-.0012	.1469
#2	382.4	.0002	.0000	.0017	.0012	.1188	-.0006	.1480

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>540.0	.00299	.0108	.0010	.0194	345.6	.0025	.2590
#1	1351.	.00301	.0106	.0011	.0213	345.2	.0027	.2542
#2	1351.	.00296	.0110	.0008	.0174	346.0	.0023	.2638

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	*****	7.2370	-.0012	.0000	.0017	.0031	.0016
#1	-.0003	-----	7.2264	-.0003	.0013	.0017	.0034	.0016
#2	-.0010	-----	7.2475	-.0022	-.0013	.0017	.0028	.0016

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0013	.0034	>450.0
#1	.0013	.0031	646.1
#2	.0013	.0036	650.0

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4383.2	69952.	6547.6
#1	4381.9	69930.	6549.3
#2	4384.4	69974.	6545.9

Sample Name: K1811468-010 Acquired: 12/10/2018 15:39:11 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0902	-.0032	-.0004	.0073	.00007	2.837	.0000	.0000
#1	.0887	-.0041	-.0014	.0069	.00004	2.823	.0001	-.0001
#2	.0917	-.0024	.0005	.0078	.00009	2.850	.0000	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	378.7	.0007	.0002	-.0004	.0024	.1570	-.0032	.1484
#1	377.5	-.0002	.0000	-.0009	.0023	.1562	-.0042	.1496
#2	379.9	.0015	.0004	.0000	.0025	.1578	-.0023	.1472

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>540.0	.00381	.0104	.0013	.0174	344.1	.0005	.3390
#1	1335.	.00385	.0100	.0018	.0163	345.9	-.0008	.3311
#2	1350.	.00378	.0107	.0009	.0186	342.3	.0018	.3468

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	*****	7.2286	.0012	.0012	.0035	.0032	.0017
#1	-.0005	-----	7.1327	.0017	.0017	.0036	.0033	.0019
#2	.0001	-----	7.3245	.0007	.0007	.0034	.0031	.0015

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0016	.0031	>450.0
#1	.0017	.0019	654.8
#2	.0015	.0043	654.2

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4439.0	69458.	6606.0
#1	4435.5	68954.	6647.9
#2	4442.5	69962.	6564.1

Sample Name: K1811468-011 Acquired: 12/10/2018 15:41:58 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1453	-.0023	-.0010	.0136	-.00005	2.383	.0000	.0001
#1	.1446	-.0021	-.0011	.0135	-.00004	2.391	.0001	.0001
#2	.1459	-.0026	-.0010	.0136	-.00007	2.375	.0000	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	322.1	.0016	.0000	.0002	.0013	.2029	-.0021	.1226
#1	321.8	.0015	.0001	.0000	.0014	.2033	-.0022	.1234
#2	322.4	.0016	-.0001	.0004	.0013	.2025	-.0020	.1218

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>540.0	.00519	.0093	.0017	.0397	287.9	.0006	1.445
#1	1119.	.00521	.0090	.0017	.0406	287.0	.0016	1.444
#2	1116.	.00517	.0096	.0016	.0388	288.9	-.0003	1.446

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	*****	6.0654	.0009	.0002	.0025	.0043	.0014
#1	.0001	-----	6.0561	.0013	.0004	.0025	.0043	.0017
#2	-.0006	-----	6.0747	.0005	.0001	.0025	.0043	.0011

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0015	.0054	>450.0
#1	.0015	.0057	554.8
#2	.0014	.0051	555.1

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4602.2	71390.	6653.3
#1	4613.6	71294.	6637.8
#2	4590.8	71487.	6668.9

Sample Name: K1811468-012 Acquired: 12/10/2018 15:44:44 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3254	-.0020	-.0011	.0077	.00002	2.818	.0000	.0001
#1	.3315	-.0025	.0005	.0076	-.00001	2.802	.0000	.0000
#2	.3192	-.0014	-.0027	.0077	.00004	2.833	.0000	.0002

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	380.9	.0016	.0001	-.0001	.0022	.4402	-.0014	.1469
#1	383.7	.0018	.0001	-.0005	.0026	.4452	-.0023	.1470
#2	378.1	.0013	.0002	.0002	.0019	.4353	-.0006	.1469

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>540.0	.00881	.0105	.0013	.0243	346.3	.0006	.7883
#1	1360.	.00890	.0107	.0013	.0262	344.5	-.0025	.7686
#2	1341.	.00873	.0102	.0013	.0224	348.0	.0037	.8081

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	*****	7.2757	.0020	-.0004	.0125	.0043	.0025
#1	-.0003	-----	7.3609	.0015	.0000	.0126	.0046	.0025
#2	-.0012	-----	7.1905	.0024	-.0008	.0123	.0040	.0025

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0022	.0029	>450.0
#1	.0022	.0026	651.5
#2	.0021	.0033	648.7

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4489.4	69179.	6541.7
#1	4446.0	68831.	6481.6
#2	4532.8	69527.	6601.8

Sample Name: K1811468-013 Acquired: 12/10/2018 15:47:31 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2295	-.0012	.0018	.0125	-.00011	2.502	.0000	.0000
#1	.2308	-.0001	.0026	.0127	-.00009	2.504	.0000	.0000
#2	.2283	-.0024	.0011	.0123	-.00013	2.501	.0000	-.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	328.8	.0012	.0006	.0002	.0009	.2981	-.0015	.1296
#1	330.9	.0012	.0005	.0002	.0010	.2953	-.0025	.1285
#2	326.7	.0011	.0007	.0002	.0009	.3010	-.0005	.1308

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>540.0	.00728	.0094	.0020	.0387	301.4	.0005	1.508
#1	1161.	.00733	.0092	.0018	.0388	300.0	.0026	1.515
#2	1146.	.00722	.0095	.0022	.0385	302.8	-.0015	1.501

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	*****	6.2392	-.0004	-.0001	.0046	.0053	.0019
#1	-.0013	-----	6.2387	.0004	.0010	.0045	.0053	.0021
#2	-.0001	-----	6.2397	-.0013	-.0012	.0048	.0054	.0016

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0014	.0033	>450.0
#1	.0013	.0045	580.9
#2	.0015	.0020	578.1

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4594.1	72512.	6713.8
#1	4614.1	72099.	6652.2
#2	4574.2	72926.	6775.4

Sample Name: K1811468-014 Acquired: 12/10/2018 15:50:18 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8246	.0005	.0009	.0083	-.00004	2.825	-.0001	.0000
#1	.8292	-.0009	.0035	.0081	.00005	2.826	-.0001	.0000
#2	.8200	.0018	-.0016	.0086	-.00013	2.823	-.0001	-.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	371.2	.0024	.0003	.0007	.0021	1.031	-.0010	.1464
#1	371.6	.0025	.0003	.0009	.0024	1.027	-.0001	.1467
#2	370.8	.0023	.0003	.0004	.0017	1.035	-.0018	.1461

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>540.0	.01837	.0099	.0022	.0358	336.4	.0043	1.787
#1	1316.	.01847	.0097	.0022	.0346	336.0	.0063	1.779
#2	1314.	.01828	.0101	.0021	.0371	336.9	.0024	1.796

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	*****	7.0153	-.0003	-.0004	.0253	.0047	.0027
#1	-.0003	-----	7.0206	-.0001	-.0006	.0256	.0045	.0026
#2	.0001	-----	7.0100	-.0006	-.0003	.0250	.0048	.0028

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0025	.0005	>450.0
#1	.0025	.0008	642.5
#2	.0025	.0001	640.7

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4466.9	71222.	6586.7
#1	4454.6	70987.	6569.1
#2	4479.2	71458.	6604.2

Sample Name: CCVB Acquired: 12/10/2018 15:53:07 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.018	10.19	-.0010	1.032	9.653	.00003	.0117	-.0001
Stddev	.037	.03	.0012	.000	.030	.00005	.0013	.0000
%RSD	.4575	.2716	122.6	.0276	.3073	176.05	11.24	37.46
#1	8.044	10.21	-.0018	1.032	9.674	.00007	.0107	.0000
#2	7.992	10.17	-.0001	1.032	9.632	-.00001	.0126	-.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	9.906	9.320	-.0002	.0003	-.0005	.0011	10.19
Stddev	.0001	.008	.121	.0008	.0003	.0003	.0012	.05
%RSD	32.08	.0781	1.299	461.7	112.9	60.44	109.2	.4419
#1	-.0001	9.912	9.405	.0004	.0001	-.0003	.0020	10.23
#2	-.0002	9.901	9.234	-.0007	.0005	-.0008	.0003	10.16
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	.9939	10.66	9.691	10.50	.94745	.9656	-.0003
Stddev	.0001	.0076	.03	.002	.12	.00226	.0028	.0000
%RSD	25.47	.7636	.2429	.0204	1.167	.23868	.2938	9.966
#1	-.0003	.9886	10.68	9.690	10.42	.94905	.9676	-.0003
#2	-.0002	.9993	10.65	9.692	10.59	.94585	.9636	-.0003
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 12/10/2018 15:53:07 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	10.13	10.70	.0025	10.42	-.0002	F 15.06	.97383
Stddev	.0001	.01	.11	.0003	.01	.0002	.66	.00014
%RSD	142.3	.0996	1.044	11.41	.1257	155.7	4.394	.01437
#1	.0000	10.14	10.62	.0023	10.41	.0000	14.59	.97393
#2	-.0001	10.12	10.77	.0027	10.43	-.0003	15.53	.97373
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Fail	Chk Pass
Value							10.00	
Range							10.44%	

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0009	-.0026	.0000	-.0002	.0003	1.002	F 1.167
Stddev	.0019	.0004	.0004	.0005	.0001	.0001	.003	.088
%RSD	2579.	48.55	16.39	1016.	75.16	41.54	.3037	7.504
#1	-.0013	.0006	-.0023	.0004	-.0001	.0002	1.000	1.229
#2	.0014	.0012	-.0029	-.0003	-.0003	.0004	1.005	1.105
Check ?	None	None	None	None	None	None	Chk Pass	Chk Fail
Value								1.000
Range								10.44%

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6553.9	110650.	8162.3
Stddev	16.5	486.	40.6
%RSD	.25235	.43878	.49689
#1	6565.6	110300.	8133.6
#2	6542.2	110990.	8191.0

* — NR S after 15:18

ARm 12/10/18

Sample Name: CCVA Acquired: 12/10/2018 15:55:54 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .2820	.2703	.2498	.2583	.2446	.25710	.2576	.2524
Stddev	.0002	.0006	.0007	.0029	.0010	.00051	.0015	.0003
%RSD	.0689	.2271	.2991	1.123	.4055	.20011	.5961	.1123
#1	.2822	.2707	.2503	.2563	.2439	.25674	.2587	.2526
#2	.2819	.2699	.2493	.2604	.2453	.25747	.2565	.2522
Check ?	Chk Fail	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value	.2500							
Range	10.44%							

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2488	.6098	F .6020	.2340	.2500	.2530	.2439	.2623
Stddev	.0005	.1792	.1687	.0007	.0005	.0007	.0005	.0042
%RSD	.1984	29.38	28.03	.3199	.2077	.2871	.1989	1.583
#1	.2485	.4832	.4827	.2335	.2504	.2525	.2435	.2593
#2	.2492	.7365	.7213	.2345	.2497	.2535	.2442	.2652
Check ?	Chk Pass	None	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value			.5000					
Range			10.44%					

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2469	.0029	.6648	F *****	.6496	.24337	.2430	.2516
Stddev	.0007	.0013	.5758	-----	.5592	.00133	.0005	.0007
%RSD	.2756	42.79	86.61	-----	86.07	.54596	.1946	.2663
#1	.2464	.0021	.2577	.2415	.2542	.24243	.2427	.2521
#2	.2474	.0038	1.072	-----	1.045	.24431	.2434	.2511
Check ?	Chk Pass	None	None	Chk Fail	None	Chk Pass	None	Chk Pass
Value				.2500				
Range				-10.44%				

* - NR after 15:18
After 12/10/18

Sample Name: CCVA Acquired: 12/10/2018 15:55:54 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2498	.0011	3.065	.2445	.1350	.2498	4.449	.00248
Stddev	.0001	.0016	.174	.0007	.0162	.0004	4.602	.00343
%RSD	.0416	144.8	5.695	.2902	11.97	.1790	103.4	138.73
#1	.2498	.0000	2.941	.2440	.1464	.2495	1.195	.00005
#2	.2497	.0022	3.188	.2450	.1236	.2501	7.702	.00490
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2495	.2508	.2448	.2442	.2563	.2553	.0025	.0209
Stddev	.0002	.0002	.0006	.0000	.0008	.0005	.0014	.0111
%RSD	.0665	.0943	.2637	.0009	.2941	.1794	56.72	52.89
#1	.2496	.2506	.2444	.2442	.2557	.2556	.0015	.0287
#2	.2494	.2509	.2453	.2442	.2568	.2550	.0035	.0131
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6572.9	111620.	8055.4
Stddev	3.5	496.	37.8
%RSD	.05386	.44457	.46892
#1	6575.4	111970.	8028.7
#2	6570.4	111270.	8082.1

Sample Name: CCB Acquired: 12/10/2018 15:58:38 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	-.0024	.0001	-.0007	.0001	.00004	.0039
Stddev	.0002	.0009	.0002	.0015	.0005	.00001	.0016
%RSD	26.83	37.07	192.0	223.5	389.7	17.835	39.79
#1	.0010	-.0018	.0000	-.0017	.0005	.00004	.0050
#2	.0007	-.0030	.0003	.0004	-.0002	.00003	.0028
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0001	.0066	.0086	-.0001	.0003	.0000
Stddev	.0001	.0001	.0061	.0085	.0000	.0004	.0002
%RSD	69.41	135.1	92.39	99.01	22.75	122.9	1311.
#1	.0000	.0000	.0109	.0146	.0000	.0000	-.0001
#2	.0001	.0001	.0023	.0026	-.0001	.0006	.0002
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cu3273	Fe2599	Pb2203	Li6707	Mg2790	Mg2795	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	.0013	-.0016	.0032	.0287	F .0264	.0279
Stddev	.0007	.0034	.0009	.0005	.0378	.0261	.0256
%RSD	69.81	268.4	58.26	16.91	132.1	98.74	91.73
#1	.0005	.0037	-.0022	.0036	.0554	.0449	.0459
#2	.0014	-.0012	-.0009	.0028	.0019	.0080	.0098
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Fail	None
High Limit						.0050	
Low Limit						-.0050	

Sample Name: CCB Acquired: 12/10/2018 15:58:38 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Mn2576	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00007	.0012	.0003	.0003	.0012	F .3571	.0027
Stddev	.00009	.0006	.0002	.0002	.0013	.0080	.0011
%RSD	116.07	45.38	57.64	72.73	113.0	2.231	39.00
#1	.00001	.0016	.0002	.0001	.0002	.3628	.0035
#2	.00013	.0008	.0004	.0004	.0021	.3515	.0020
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.2000	
Low Limit						-.2000	

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0049	-.0004	F .9040	.00020	.0053	.0011	F -.0024
Stddev	.0081	.0006	.2335	.00024	.0006	.0004	.0004
%RSD	166.0	160.0	25.83	124.73	12.36	37.50	16.06
#1	-.0106	.0000	1.069	.00037	.0048	.0014	-.0026
#2	.0008	-.0008	.7389	.00002	.0057	.0008	-.0021
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit			.2000				.0020
Low Limit			-.2000				-.0020

Elem	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	.0001	.0000	-.0008	.0040
Stddev	.0001	.0001	.000	.0002	.0003
%RSD	24.80	51.79	92.14	21.06	6.693
#1	-.0006	.0001	-.0001	-.0009	.0038
#2	-.0004	.0001	.0000	-.0007	.0041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

* - NR K after 15:18

AEM 12/10/18

Sample Name: CCB Acquired: 12/10/2018 15:58:38 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6535.9	109960.	7963.1
Stddev	23.9	419.	24.1
%RSD	.36632	.38069	.30236
#1	6519.0	109670.	7980.2
#2	6552.9	110260.	7946.1

Sample Name: K1811468-015 Acquired: 12/10/2018 16:02:12 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8759	-.0012	.0008	.0089	.00007	2.772	.0000	.0001
#1	.8856	-.0006	.0011	.0086	.00009	2.733	-.0001	.0002
#2	.8662	-.0019	.0004	.0091	.00005	2.811	.0000	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	370.2	.0029	.0002	.0008	.0016	1.106	-.0003	.1443
#1	370.3	.0029	.0002	.0007	.0025	1.101	-.0008	.1457
#2	370.1	.0030	.0001	.0009	.0007	1.111	.0001	.1428

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>540.0	.02006	.0110	.0025	.0437	333.4	.0047	1.854
#1	1303.	.02019	.0109	.0023	.0427	336.0	.0059	1.866
#2	1308.	.01993	.0112	.0028	.0448	330.8	.0036	1.841

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	*****	7.0991	.0021	.0002	.0280	.0043	.0053
#1	-.0001	-----	7.1257	.0009	-.0008	.0282	.0038	.0054
#2	-.0004	-----	7.0725	.0034	.0012	.0278	.0048	.0051

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0045	.0041	>450.0
#1	.0045	.0043	638.9
#2	.0045	.0040	634.5

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4410.7	69407.	6501.4
#1	4410.3	68471.	6523.8
#2	4411.1	70342.	6479.0

Sample Name: K1811468-016 Acquired: 12/10/2018 16:04:54 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0668	-.0044	.0011	.0103	.00006	2.610	-.0001	.0002
#1	.0649	-.0042	.0030	.0106	.00005	2.612	-.0001	.0000
#2	.0687	-.0046	-.0009	.0101	.00006	2.607	-.0001	.0003

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	346.7	.0008	.0000	.0000	.0017	.1159	-.0031	.1347
#1	350.8	.0015	.0001	-.0004	.0015	.1176	-.0029	.1341
#2	342.6	.0002	.0000	.0005	.0018	.1142	-.0032	.1353

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>540.0	.00249	.0101	.0012	.0354	308.4	.0029	.8034
#1	1237.	.00248	.0102	.0011	.0354	307.0	.0034	.8000
#2	1206.	.00250	.0101	.0013	.0354	309.7	.0024	.8069

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	*****	6.6236	.0007	-.0004	.0004	.0048	.0020
#1	-.0004	-----	6.7005	.0002	-.0006	.0006	.0049	.0024
#2	-.0001	-----	6.5468	.0011	-.0003	.0002	.0046	.0017

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0020	.0040	>450.0
#1	.0020	.0049	601.0
#2	.0020	.0032	602.9

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4441.8	70535.	6437.3
#1	4423.4	70478.	6347.6
#2	4460.2	70593.	6527.0

Sample Name: K1811468-017 Acquired: 12/10/2018 16:07:41 Type: Unk
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 121018A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1127	-.0025	.0010	.0079	.00000	2.811	-.0001	.0001
#1	.1120	-.0041	.0002	.0079	.00005	2.804	.0000	.0000
#2	.1135	-.0010	.0018	.0080	-.00005	2.818	-.0001	.0003

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	376.1	.0010	.0000	.0004	.0012	.1482	-.0014	.1464
#1	374.1	.0010	-.0003	.0007	.0006	.1414	-.0020	.1478
#2	378.1	.0010	.0002	.0001	.0018	.1550	-.0008	.1450

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>540.0	.00266	.0103	.0011	.0178	337.4	-.0003	.4012
#1	1326.	.00262	.0099	.0011	.0185	338.3	.0014	.3968
#2	1343.	.00271	.0106	.0012	.0170	336.5	-.0019	.4057

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	*****	7.1721	-.0013	.0003	.0036	.0034	.0015
#1	-.0006	-----	7.1929	-.0012	.0001	.0039	.0036	.0020
#2	-.0003	-----	7.1513	-.0013	.0005	.0034	.0033	.0011

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0016	.0071	>450.0
#1	.0016	.0074	644.4
#2	.0016	.0067	643.7

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4485.4	69412.	6417.5
#1	4450.3	69319.	6464.8
#2	4520.4	69505.	6370.3

Sample Name: CCVB Acquired: 12/10/2018 16:10:29 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.146	10.45	.0001	1.066	10.15	.00005	.0095	.0001
Stddev	.033	.02	.0028	.007	.12	.00004	.0004	.0000
%RSD	.3993	.1910	2183.	.6504	1.168	79.296	4.689	55.74
#1	8.123	10.46	-.0018	1.071	10.23	.00002	.0092	.0001
#2	8.169	10.44	.0021	1.061	10.07	.00008	.0098	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	10.23	9.374	.0001	.0003	-.0007	.0004	10.29
Stddev	.0001	.05	.056	.0008	.0001	.0002	.0006	.02
%RSD	87.39	.4575	.5997	1116.	26.00	30.85	146.6	.1486
#1	-.0003	10.20	9.334	.0006	.0003	-.0005	.0008	10.28
#2	-.0001	10.27	9.414	-.0005	.0004	-.0008	.0000	10.30
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0010	1.017	10.57	9.709	10.18	.98875	1.008	-.0004
Stddev	.0015	.004	.05	.108	.06	.00116	.006	.0000
%RSD	143.8	.4064	.4304	1.107	.5484	.11701	.6056	9.215
#1	-.0021	1.020	10.54	9.633	10.22	.98957	1.012	-.0004
#2	.0000	1.014	10.61	9.785	10.14	.98794	1.004	-.0003
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 12/10/2018 16:10:29 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	10.21	10.82	.0002	10.36	-.0008	F 11.52	1.0147
Stddev	.0000	.00	.12	.0022	.06	.0005	.04	.0040
%RSD	9.462	.0419	1.092	964.8	.5498	67.73	.3345	.39664
#1	.0004	10.22	10.90	.0018	10.40	-.0011	11.55	1.0119
#2	.0003	10.21	10.74	-.0013	10.32	-.0004	11.50	1.0176
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Fail	Chk Pass
Value							10.00	
Range							10.44%	

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0004	-.0005	-.0002	.0001	.0002	1.025	1.075
Stddev	.0001	.0001	.0000	.0001	.0001	.0000	.003	.013
%RSD	134.1	23.95	2.095	57.18	46.89	22.71	.2694	1.189
#1	-.0002	.0004	-.0005	-.0002	.0001	.0002	1.027	1.084
#2	.0000	.0003	-.0005	-.0001	.0001	.0002	1.023	1.066
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6588.8	106550.	7911.3
Stddev	30.7	78.	59.5
%RSD	.46594	.07295	.75189
#1	6610.5	106500.	7953.3
#2	6567.1	106610.	7869.2

Sample Name: CCVA Acquired: 12/10/2018 16:13:11 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2750	.2801	.2531	.2632	.2477	.25816	.2595	.2495
Stddev	.0011	.0017	.0004	.0001	.0008	.00049	.0009	.0006
%RSD	.3914	.6239	.1586	.0458	.3384	.19137	.3511	.2259
#1	.2757	.2789	.2528	.2632	.2471	.25781	.2589	.2499
#2	.2742	.2813	.2534	.2633	.2483	.25851	.2602	.2491
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2451	.5052	.4870	.2393	.2489	.2494	.2490	.2574
Stddev	.0010	.0050	.0010	.0023	.0004	.0001	.0001	.0093
%RSD	.4199	.9990	.2016	.9631	.1413	.0288	.0237	3.621
#1	.2459	.5087	.4877	.2410	.2491	.2493	.2490	.2640
#2	.2444	.5016	.4863	.2377	.2486	.2494	.2490	.2508
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2433	.0007	.3009	.2727	.2862	.24508	.2448	.2483
Stddev	.0004	.0011	.0198	.0059	.0076	.00070	.0001	.0002
%RSD	.1609	149.4	6.596	2.178	2.651	.28556	.0325	.0620
#1	.2436	.0000	.3149	.2769	.2916	.24558	.2448	.2484
#2	.2430	.0015	.2869	.2685	.2809	.24459	.2449	.2482
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 12/10/2018 16:13:11 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2468	.0001	2.984	.2408	.1294	.2495	1.422	.00028
Stddev	.0005	.0022	.040	.0023	.0024	.0002	.078	.00000
%RSD	.2073	2967.	1.355	.9533	1.889	.0627	5.480	.89069
#1	.2472	-.0015	3.013	.2425	.1311	.2496	1.477	.00029
#2	.2464	.0016	2.956	.2392	.1277	.2494	1.367	.00028
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2495	.2489	.2467	.2445	.2540	.2563	.0001	.0065
Stddev	.0014	.0014	.0008	.0008	.0004	.0007	.0014	.0047
%RSD	.5800	.5474	.3266	.3405	.1668	.2555	1405.	72.14
#1	.2505	.2499	.2473	.2450	.2543	.2567	.0011	.0098
#2	.2484	.2480	.2462	.2439	.2537	.2558	-.0009	.0032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6683.6	110620.	8014.8
Stddev	13.6	622.	24.0
%RSD	.20297	.56245	.29923
#1	6693.2	110180.	8031.7
#2	6674.1	111060.	7997.8

Sample Name: CCB Acquired: 12/10/2018 16:15:30 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0001	-.0020	.0004	.0006	.00011	.0053
Stddev	.0006	.0003	.0001	.0014	.0002	.00003	.0003
%RSD	90.42	258.8	3.743	340.5	33.86	27.558	4.867
#1	.0010	-.0001	-.0020	-.0006	.0005	.00009	.0051
#2	.0002	.0003	-.0019	.0014	.0007	.00013	.0055
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0000	.0473	F .0485	.0003	.0003	.0001
Stddev	.0000	.000	.0017	.0023	.0004	.0003	.0003
%RSD	22.62	478.3	3.536	4.760	124.1	87.17	200.1
#1	.0001	-.0001	.0461	.0469	.0006	.0001	.0003
#2	.0001	.0000	.0485	.0501	.0000	.0005	-.0001
Check ?	Chk Pass	Chk Pass	None	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				.0200			
Low Limit				-.0200			

Elem	Cu3273	Fe2599	Pb2203	Li6707	Mg2790	Mg2795	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	.0042	-.0013	.0016	.1613	F .1541	.1592
Stddev	.0007	.0034	.0013	.0014	.0210	.0082	.0062
%RSD	62.19	81.37	103.5	88.74	12.99	5.307	3.872
#1	.0017	.0066	-.0022	.0025	.1465	.1483	.1548
#2	.0007	.0018	-.0003	.0006	.1761	.1599	.1635
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Fail	None
High Limit						.0050	
Low Limit						-.0050	

See rerun
AR 12/10/18

Sample Name: CCB Acquired: 12/10/2018 16:15:30 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Mn2576	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00019	.0007	.0005	.0003	.0025	F .3588	.0013
Stddev	.00000	.0000	.0001	.0000	.0010	.0204	.0004
%RSD	.79200	5.303	15.52	.7461	39.15	5.692	30.93
#1	.00019	.0007	.0005	.0003	.0032	.3444	.0010
#2	.00019	.0006	.0004	.0003	.0018	.3733	.0016
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.2000	
Low Limit						-.2000	

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063	-.0006	F 2.049	F .00101	.0043	.0004	-.0019
Stddev	.0025	.0005	.060	.00002	.0003	.0002	.0002
%RSD	39.43	82.82	2.941	1.9057	7.526	41.83	10.85
#1	.0046	-.0010	2.006	.00100	.0041	.0006	-.0020
#2	.0081	-.0003	2.092	.00103	.0046	.0003	-.0017
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			.2000	.00100			
Low Limit			-.2000	-.00100			

Elem	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	-.0001	.0000	.0003	.0232
Stddev	.0000	.0000	.0000	.0003	.0268
%RSD	4.992	14.06	35.56	111.3	115.9
#1	-.0004	-.0001	.0000	.0005	.0421
#2	-.0004	-.0001	.0000	.0001	.0042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

ATRun 12/10/18

Sample Name: CCB Acquired: 12/10/2018 16:15:30 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6605.0	109300.	7924.8
Stddev	16.9	444.	48.6
%RSD	.25609	.40623	.61299
#1	6617.0	109610.	7959.1
#2	6593.1	108990.	7890.4

12/10/18

Sample Name: CCB Acquired: 12/10/2018 16:18:01 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	-.0031	-.0020	-.0013	-.0001	.00004	.0040
Stddev	.0008	.0004	.0004	.0002	.0000	.00005	.0010
%RSD	82.72	14.04	17.58	19.86	16.18	118.50	24.66
#1	.0004	-.0034	-.0022	-.0011	-.0001	.00001	.0047
#2	.0015	-.0028	-.0017	-.0014	-.0001	.00008	.0033
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0001	-.0083	-.0002	-.0001	.0001	.0003
Stddev	.0000	.0000	.0029	.0001	.0002	.0003	.0001
%RSD	11.59	49.34	35.16	46.85	163.6	244.7	34.43
#1	.0001	.0001	-.0062	-.0001	.0000	-.0001	.0003
#2	.0001	.0001	-.0103	-.0003	-.0003	.0003	.0004
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cu3273	Fe2599	Pb2203	Li6707	Mg2790	Mg2795	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0031	.0000	.0012	-.0004	.0005	-.0011
Stddev	.0005	.0000	.001	.0003	.0460	.0000	.0004
%RSD	71.02	1.078	1681.	22.05	12720.	6.091	39.08
#1	.0011	.0030	-.0005	.0013	.0322	.0004	-.0014
#2	.0004	.0031	.0005	.0010	-.0329	.0005	-.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None
High Limit							
Low Limit							

Sample Name: CCB Acquired: 12/10/2018 16:18:01 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Mn2576	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00005	-.0022	.0001	.0002	.0015	F .2646	.0014
Stddev	.00006	.0011	.0002	.0002	.0014	.0385	.0014
%RSD	117.61	51.92	370.0	86.64	94.42	14.54	98.62
#1	.00010	-.0014	.0002	.0003	.0005	.2374	.0004
#2	.00001	-.0030	-.0001	.0001	.0024	.2918	.0025
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.2000	
Low Limit						-.2000	

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024	-.0004	F .6310	.00000	.0002	.0000	F -.0022
Stddev	.0069	.0004	.0014	.0000	.0006	.0001	.0004
%RSD	286.1	83.03	.2184	54.705	246.5	603.5	18.17
#1	-.0025	-.0007	.6301	.00000	-.0002	.0001	-.0025
#2	.0073	-.0002	.6320	.00000	.0006	-.0001	-.0019
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit			.2000				.0020
Low Limit			-.2000				-.0020

Elem	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	.0000	.0001	.0005	.0137
Stddev	.0006	.0001	.0001	.0016	.0149
%RSD	291.7	5114.	68.90	305.3	109.2
#1	-.0006	-.0001	.0001	-.0006	.0031
#2	.0002	.0001	.0002	.0016	.0242
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Sample Name: CCB Acquired: 12/10/2018 16:18:01 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6562.4	109320.	7898.9
Stddev	.6	3.	49.5
%RSD	.00842	.00318	.62684
#1	6562.0	109320.	7933.9
#2	6562.8	109310.	7863.9

Sample Name: LLCCV Acquired: 12/10/2018 16:20:56 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0116	.0086	.0198	.0124	.0031	.00108	.0241
Stddev	.0005	.0002	.0003	.0014	.0000	.00008	.0006
%RSD	4.234	2.307	1.489	11.07	.6465	7.1497	2.328
#1	.0112	.0087	.0196	.0115	.0031	.00103	.0245
#2	.0119	.0084	.0200	.0134	.0031	.00114	.0237
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	.0010	.0144	.0201	.0038	.0020	.0042
Stddev	.0000	.0000	.0027	.0001	.0000	.0000	.0005
%RSD	1.847	3.142	18.48	.5997	1.008	1.619	11.99
#1	.0011	.0011	.0163	.0202	.0038	.0020	.0038
#2	.0011	.0010	.0125	.0200	.0038	.0020	.0045
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cu3273	Fe2599	Pb2203	Li6707	Mg2790	Mg2795	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0046	.0230	.0092	.0218	.0150	.0052	.0032
Stddev	.0003	.0031	.0013	.0009	.0184	.0001	.0021
%RSD	6.157	13.38	14.18	3.904	122.9	.9764	66.47
#1	.0044	.0208	.0083	.0212	.0280	.0052	.0047
#2	.0048	.0252	.0102	.0224	.0020	.0051	.0017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None
Value							
Range							

Sample Name: LLCCV Acquired: 12/10/2018 16:20:56 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Mn2576	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00093	-.0003	.0038	.0042	.0392	F .4464	.0229
Stddev	.00001	.0014	.0001	.0003	.0007	.0449	.0007
%RSD	.99362	531.9	1.857	6.713	1.797	10.06	3.094
#1	.00092	.0007	.0037	.0044	.0397	.4782	.0234
#2	.00094	-.0012	.0038	.0040	.0387	.4146	.0224
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						.2000	
Range						30.00%	

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2029	.0037	F .7352	.00100	.0108	.0205	F -.0007
Stddev	.0060	.0001	.0048	.00017	.0000	.0008	.0002
%RSD	2.945	2.073	.6539	16.967	.2755	3.804	31.14
#1	.1987	.0037	.7386	.00112	.0107	.0199	-.0006
#2	.2071	.0036	.7318	.00088	.0108	.0210	-.0009
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value			.2000				.0020
Range			30.00%				-30.00%

Elem	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0039	.0041	.0041	.0220	.0430
Stddev	.0000	.0000	.0001	.0003	.0025
%RSD	1.056	.2531	1.560	1.218	5.744
#1	.0038	.0041	.0040	.0222	.0447
#2	.0039	.0041	.0041	.0218	.0412
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

* - NR after 14:38

AFan 12/10/18

Sample Name: LLCCV Acquired: 12/10/2018 16:20:56 Type: QC
Method: 2018B-6010-ICP-03(v21) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	6596.0	111460.	8014.5
Stddev	5.4	712.	22.0
%RSD	.08129	.63873	.27437
#1	6599.8	110950.	8030.1
#2	6592.2	111960.	7999.0

CVAA Mercury Data Review Form

K-CVAA-02

Element: Hg

Analysis Lot #: 120418B HG2

Starlims #: 617425

Cal. STD/CCV Source: HG3-15-X

Pipette IDs: U52540, HG2-5.0

16mL Tube Lot #: P7233936

Service Request Numbers:

K1811381, K1811438, K1811358

	Yes	No	NA
1) Appropriate standardization completed	X		
2) ICV within 10% of true value	X		
3) CCVs in control (+/- 10%)	X		
4) CCBs and or ICBs below MRL	X		
5) CCV/CCB check run every 10 samples	X		
6) All reported samples within calibration range	X		
7) Calculations correct	X		

Comments:

Data reviewed against service request(s) to ensure no samples were omitted: VV (Initials)

Primary Reviewed By: [signature] Date: 12-4-18

Secondary Reviewed By: [signature] Date: 12/5/18

Data Review Form

Instrument ID#: **K-CVAA-02**
DataFile Name: **R:\ICP\WIP\DATA\K-CVAA-02 (QUICKTRACE)\120418B HG2.CSV**
RUNNO: **617425**

K1811358

No exceptions to report.

K1811381

No exceptions to report.

K1811438

No exceptions to report.

Primary Approver: 12-4-18
Secondary Approver: 12/5/18

CVAA Hg ANALYTICAL WORKSHEET

Method: 7470A TCLP	Cal. Inter. Std* (100ppb): HG3-15-X 2nd Source Inter Std** (1ppm): HG3-15-A

Analysis For: Hg

DATA

Pos.	SAMPLE NUMBER	Measured (µg/L)	Dilution Factor	Recoveries (ICV, CCV, LCS, MS)		Comments:
1	Cal. Blk.	0.000	~	~		
2	Std 0.2*	0.200	~	(0.10-50mL)		
3	Std 0.5*	0.500	~	(0.25-50mL)		
4	Std 1.0*	1.000	~	(0.5-50mL)		
5	Std 5.0*	5.000	~	(2.5-50mL)		
6	Std 10.0*	10.000	~	(5.0-50mL)		
7	ICV1**	5.190	~	104%		
8	ICB1	-0.023	~	~		
9	LLICV1*	0.179	~	90%		
10	CCV1*	5.230	~	105%		
11	CCB1	-0.008	~	~		
12	KQ1817276-01	-0.012	~			
13	KQ1817276-02	4.760	~	95%		
14	K1811381-004 E	-0.009	~			
15	K1811381-004A E	4.730	~	95%		
16	KQ1817276-03	-0.024	~			
17	KQ1817276-04	4.670	~	93%		
18	K1811381-005 E	-0.019	~			
19	K1811438-002 E	-0.010	~			
20	KQ1817278-01	-0.012	~			
21	KQ1817278-02	4.860	~	97%		
22	CCV2	5.120	~	102%		
23	CCB2	-0.016	~			
24	K1811358-001 E	-0.005	~			
25	K1811358-001A E	4.770	~	95%		
26	KQ1817278-03	-0.023	~			
27	KQ1817278-04	4.950	~	99%		
28	CCV3	5.150	~	103%		
29	CCB3	-0.020	~			
30						
31						
32						

Comments:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD	Post-Spike @ 5ppb
7470A Water	5.0 µg/L	0.2 µg/L	80-120%	75-125%	20%	+/- 20%
245.1 Water	5.0 µg/L	0.2 µg/L	85-115%	70-130%	20%	+/- 20%
7470A TCLP	5.0 µg/L	1.0 µg/L	80-120%	75-125%	20%	+/- 20%
7471A Soil LCSS	12mg/kg	0.02 mg/kg	51-149%	80-120%	20%	+/- 20%
7471A Tissue Dorm	0.41 mg/kg	0.02 mg/kg	68-136%	80-120%	20%	+/- 20%

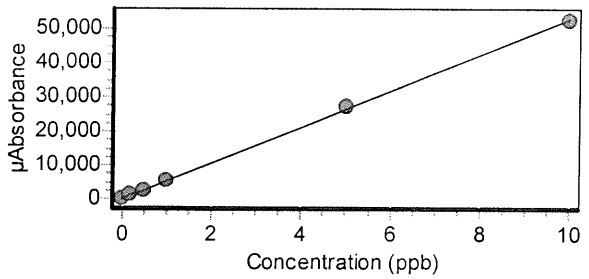
Report Generated By CETAC QuickTrace
Analyst: alkls.alklsxp196
Worksheet file: C:\Program Files\QuickTrace\Worksheets\120418B HG2.wsz
Date Started: 12/4/2018 9:20:21 AM
Comment:

Results

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
Calibration Blank				STD	12/04/18 10:25:48 am	0.000	203	23.04	
Replicates	167.6	195.1	178.5	271.2					
Standard #1				STD	12/04/18 10:27:24 am	0.200	1212	3.13	
Replicates	1212.9	1229.1	1248.1	1159.8					
Standard #2				STD	12/04/18 10:29:01 am	0.500	2678	2.63	
Replicates	2742.4	2683.4	2707.2	2578.9					
Standard #3				STD	12/04/18 10:30:39 am	1.000	5509	0.49	
Replicates	5522.4	5535.2	5506.7	5472.2					
Standard #4				STD	12/04/18 10:32:17 am	5.000	27151	0.27	
Replicates	27121.3	27183.5	27233.8	27064.3					
Standard #5				STD	12/04/18 10:33:55 am	10.000	52307	0.63	
Replicates	52532.4	52503.5	52372.5	51821.2					

Calibration

Equation: A = 203.114 + 5246.069C
R2: 0.99965
SEE: 472.1031
Flags:



ICV1				ICV	12/04/18 10:35:35 am	5.190	27456	2.22	
Replicates	26807.4	27070.6	27898.2	28046.6					
% Recovery	103.90								
ICB1				ICB	12/04/18 10:37:10 am	-0.023	83	29.92	
Replicates	51.6	112.1	81.3	88.9					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
LLICV1				CRDL	12/04/18 10:38:46 am	0.179	1143	1.27	
Replicates	1149.6	1149.9	1120.9	1150.2					
% Recovery	89.55								
CCV1				CCV	12/04/18 10:40:24 am	5.230	27619	0.24	
Replicates	27592.6	27625.9	27708.3	27549.7					
% Recovery	104.52								
CCB1				CCB	12/04/18 10:42:00 am	-0.008	160	20.79	
Replicates	126.3	158.4	205.2	149.0					
KQ1817276-01				UNK	12/04/18 10:43:36 am	-0.012	142	18.96	
Replicates	139.5	156.8	167.0	105.5					
KQ1817276-02				UNK	12/04/18 10:45:12 am	4.760	25152	0.45	
Replicates	25083.7	25170.6	25305.4	25049.1					
K1811381-004 E				UNK	12/04/18 10:46:48 am	-0.009	153	18.71	
Replicates	181.7	161.9	155.9	113.5					
K1811381-004A E				UNK	12/04/18 10:48:24 am	4.730	25013	0.51	
Replicates	25015.7	25070.4	25129.8	24835.6					
KQ1817276-03				UNK	12/04/18 10:50:01 am	-0.024	76	76.02	
Replicates	126.6	61.8	0.5	116.9					
KQ1817276-04				UNK	12/04/18 10:51:38 am	4.670	24705	0.27	
Replicates	24624.7	24715.3	24787.1	24691.7					
K1811381-005 E				UNK	12/04/18 10:53:16 am	-0.019	101	50.48	
Replicates	125.2	24.9	132.9	122.8					
K1811438-002 E				UNK	12/04/18 10:54:53 am	-0.010	149	17.81	
Replicates	131.4	122.5	180.0	160.4					
KQ1817278-01				UNK	12/04/18 10:56:31 am	-0.012	139	8.66	
Replicates	121.3	143.0	148.5	142.7					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
KQ1817278-02				UNK	12/04/18 10:58:09 am	4.860	25725	0.35	
Replicates	25697.7	25763.9	25822.9	25614.5					
CCV2				CCV	12/04/18 10:59:47 am	5.120	27048	0.42	
Replicates	26990.2	27124.5	27159.2	26919.7					
% Recovery	102.34								
CCB2				CCB	12/04/18 11:01:23 am	-0.016	120	25.70	
Replicates	108.7	83.8	132.4	155.6					
K1811358-001 E				UNK	12/04/18 11:03:02 am	-0.005	177	17.41	
Replicates	132.1	188.6	201.7	187.4					
K1811358-001A E				UNK	12/04/18 11:04:40 am	4.770	25238	0.28	
Replicates	25248.5	25301.3	25262.7	25139.2					
KQ1817278-03				UNK	12/04/18 11:06:16 am	-0.023	84	20.76	
Replicates	102.9	83.6	60.8	87.0					
KQ1817278-04				UNK	12/04/18 11:07:51 am	4.950	26167	0.75	
Replicates	26243.8	26317.6	26227.2	25879.8					
CCV3				CCV	12/04/18 11:09:29 am	5.150	27206	0.62	
Replicates	27194.4	27350.4	27303.8	26974.3					
% Recovery	102.94								
CCB3				CCB	12/04/18 11:11:05 am	-0.020	97	27.23	
Replicates	121.6	72.7	75.1	117.1					

Preparation Information Benchsheet

Prep Run#: 327151
Team: Metals/KLINN
Number of Copies to make: 2

Prep WorkFlow: HgDigLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/29/18 12:30 PM

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	KQ1817276-01	MB		7470A/Hg TCLP		Solid	20mL	20.00mL	
2	KQ1817276-02	LCS		7470A/Hg TCLP		Solid	20mL	20.00mL	
3	K1811381-004	SL0153	.15	7470A/Hg TCLP		Soil	20mL	20.00mL	
4	KQ1817276-03	K1811381-004 DUP	.15	7470A/Hg TCLP		Solid	20mL	20.00mL	
5	KQ1817276-04	K1811381-004 MS	.15	7470A/Hg TCLP		Solid	20mL	20.00mL	
6	K1811381-005	SL0146	.15	7470A/Hg TCLP		Soil	20mL	20.00mL	fuel smell
7	K1811438-002	SL0554	.09	7470A/Hg TCLP		Soil	20mL	20.00mL	

Spiking Solutions

Name: K-MET Hg Source Standard 1000 ug/L Inventory ID 194629 Logbook Ref: HG3-15-A Expires On: 12/04/2018

KQ1817276-02 0.10mL KQ1817276-04 0.10mL

Preparation Materials

K-MET 100ml Centrifuge Tube	1712272 (188568)	K-MET 50ml Centrifuge Tube	P7265114 (192825)	K-MET H2SO4 Hg	57011 (185918)
K-MET HCl Hg	0000192813 (194700)	K-MET KMnO4 Hg	0000177909 (190708)	K-MET HNO3 Hg	0000197345 (194625)
K-MET SnCl Hg	0000208736 (195097)	K-MET NH2OH-HCl Hg	0000199595 (193565)	K-MET K2S2O8 Hg	0000166617 (186360)
K-MET NACl Hg	0000164455 (184228)				

Preparation Steps

Step: Digestion
Started: 11/29/18 12:30
Finished: 11/29/18 14:30
By: KLINN
Comments

Preparation Equipment

K-Block-Digester-14	Digestion	Corrected Temperature	95 deg C	K-Block-Digester-14	Digestion	Correction Factor	0 deg C
K-Block-Digester-14	Digestion	Observed Temperature	95 deg C	K-Block-Digester-14	Digestion	Thermometer ID 661495	NONE
K-Block-Digester-14	Digestion	Thermometer Location	22 NONE	K-BlockDigester-08	Digestion	Corrected Temperature	95 deg C
K-BlockDigester-08	Digestion	Correction Factor	0 deg C	K-BlockDigester-08	Digestion	Observed Temperature	95 deg C
K-BlockDigester-08	Digestion	Thermometer ID 4184960	NONE	K-BlockDigester-08	Digestion	Thermometer Location	8 NONE
K-HG2-5.0	Digestion			K-DG500A	Digestion		
K-DG250A	Digestion			K-DG1000C	Digestion		
K-DG100A	Digestion			K-U52540	Digestion		

Comments: Cal. Std./CCV Source: HG3-15-X.

Preparation Information Benchsheet

Prep Run#: 327151
Team: Metals/KLINN

Prep WorkFlow: HgDigLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/29/18 12:30 PM

Reviewed By: _____ Date: 12/5/18

Preparation Information Benchsheet

Prep Run#: 327151
Team: Metals/KLINN
Number of Copies to make: 2

Prep WorkFlow: HgDigLP
Prep Method: Method TCLP 1

Status: Draft
Prep Date/Time: 11/27/18 12:13 PM

#	Lab Code	Client ID	B#	√	Method /Test	Matrix	Amt. Ext.	pH	Int. Vol	Final Vol	Surr Amt	Spike Amt
1	**KQ1817276-01**	MB			7470A / Hg TCLP	Solid						
2	**KQ1817276-02**	LCS			7470A / Hg TCLP	Solid						
3	**K1811381-004**	SL0153	.15		7470A / Hg TCLP	Soil						
4	**KQ1817276-03**	K1811381-004 DUP	.15		7470A / Hg TCLP	Solid						
5	**KQ1817276-04**	K1811381-004 MS	.15		7470A / Hg TCLP	Solid						
6	**K1811381-005**	SL0146	.15		7470A / Hg TCLP	Soil						
7	**K1811438-002**	SL0554	.09		7470A / Hg TCLP	Soil						

Lot 4 2 5

Comments: HG3.15.X BD14, 8 T95, 95 R22, 8 11.29.18 1230-1430

Surrogate ID: _____ Spike ID: _____

Witnessed By: _____

Analyst: _____ Assisted By: _____

Preparation Information Benchsheet

Prep Run#: 327153
Team: Metals/KLINN
Number of Copies to make: 1

Prep WorkFlow: HgDigLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/29/18 12:30 PM

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	KQ1817278-01	MB		7470A/Hg TCLP		Solid	20mL	20.00mL	
2	KQ1817278-02	LCS		7470A/Hg TCLP		Solid	20mL	20.00mL	
3	K1811358-001	Glass Bead Debris	.02	7470A/Hg TCLP		Misc. Solid	20mL	20.00mL	
4	KQ1817278-03	K1811358-001 DUP	.02	7470A/Hg TCLP		Solid	20mL	20.00mL	
5	KQ1817278-04	K1811358-001 MS	.02	7470A/Hg TCLP		Solid	20mL	20.00mL	

Spiking Solutions

Name: K-MET Hg Source Standard 1000 ug/L Inventory ID 194629 Logbook Ref: HG3-15-A Expires On: 12/04/2018

KQ1817278-02 0.10mL KQ1817278-04 0.10mL

Preparation Materials

K-MET 100ml Centrifuge Tube	1712272 (188568)	K-MET 50ml Centrifuge Tube	P7265114 (192825)	K-MET H2SO4 Hg	57011 (185918)
K-MET HCl Hg	0000192813 (194700)	K-MET K2S2O8 Hg	0000166617 (186360)	K-MET KMnO4 Hg	0000177909 (190708)
K-MET NACl Hg	0000164455 (184228)	K-MET NH2OH-HCl Hg	0000199595 (193565)	K-MET HNO3 Hg	0000197345 (194625)
K-MET SnCl Hg	0000208736 (195097)				

Preparation Steps

Step: Digestion
Started: 11/29/18 12:30
Finished: 11/29/18 14:30
By: KLINN
Comments

Preparation Equipment

K-Block-Digester-14	Digestion	Corrected Temperature	95 deg C	K-Block-Digester-14	Digestion	Correction Factor	0 deg C
K-Block-Digester-14	Digestion	Observed Temperature	95 deg C	K-Block-Digester-14	Digestion	Thermometer ID 661495	NONE
K-Block-Digester-14	Digestion	Thermometer Location	22 NONE	K-BlockDigester-08	Digestion	Corrected Temperature	95 deg C
K-BlockDigester-08	Digestion	Correction Factor	0 deg C	K-BlockDigester-08	Digestion	Observed Temperature	95 deg C
K-BlockDigester-08	Digestion	Thermometer ID 4184960	NONE	K-BlockDigester-08	Digestion	Thermometer Location	8 NONE
K-DG100A	Digestion			K-HG2-5.0	Digestion		
K-DG500A	Digestion			K-DG250A	Digestion		
K-DG1000C	Digestion			K-U52540	Digestion		

Comments: Cal. Std./CCV Source: HG3-15-X.

Reviewed By: _____ Date: 12/5/18

Preparation Information Benchsheet

Prep Run#: 327153
Team: Metals/KLINN
Number of Copies to make: 1

Prep WorkFlow: HgDigLP
Prep Method: Method TCLP

Status: Draft
Prep Date/Time: 11/27/18 12:13 PM

#	Lab Code	Client ID	B#	√	Method /Test	Matrix	Amt. Ext.	pH	Int. Vol	Final Vol	Surr Amt	Spike Amt
1	**KQ1817278-01**	MB			7470A / Hg TCLP	Solid						
2	**KQ1817278-02**	LCS			7470A / Hg TCLP	Solid						
3	**K1811358-001**	Glass Bead Debris	.02		7470A / Hg TCLP	Misc. Solid						
4	**KQ1817278-03**	K1811358-001 DUP	.02		7470A / Hg TCLP	Solid						
5	**KQ1817278-04**	K1811358-001 MS	.02		7470A / Hg TCLP	Solid						

Comments: HG3-15-X BD14, 8 T9S, 95 R22, 8 11.29.18 1230-1430

Surrogate ID: _____ Spike ID: _____

Witnessed By: _____

Analyst: _____ Assisted By: _____

CVAA Mercury Data Review Form

K-CVAA-02

Element: Hg

Analysis Lot #: 120418C HG2

Starlims #: 617433

Cal. STD/CCV Source: HG3-15-X

Pipette IDs: U52540, HG2-5.0

16mL Tube Lot #: P7233936

Service Request Numbers:

K1811438, K1811433

	Yes	No	NA
1) Appropriate standardization completed	X		
2) ICV within 10% of true value	X		
3) CCVs in control (+/- 10%)	X		
4) CCBs and or ICBs below MRL	X		
5) CCV/CCB check run every 10 samples	X		
6) All reported samples within calibration range	X		
7) Calculations correct	X		

Comments:

Data reviewed against service request(s) to ensure no samples were omitted: KW (Initials)

Primary Reviewed By: Keith Z Date: 12-4-18

Secondary Reviewed By: S Date: 12/5/18

Data Review Form

Instrument ID#: **K-CVAA-02**
DataFile Name: **R:\ICP\WIP\DATA\K-CVAA-02 (QUICKTRACE)\120418C HG2.csv**
RUNNO: **617433**

K1811433

No exceptions to report.

K1811438

No exceptions to report.

Primary Approver: 12-4-18
Secondary Approver: 12/5/18

CVAA Hg ANALYTICAL WORKSHEET

Method: 7470A TCLP	Cal. Inter. Std* (100ppb): HG3-15-X 2nd Source Inter Std** (1ppm): HG3-15-A

Analysis For: Hg **DATA**

Pos.	SAMPLE NUMBER	Measured (µg/L)	Dilution Factor	Recoveries (ICV, CCV, LCS, MS)		Comments:
1	Cal. Blk.	0.000	~	~		
2	Std 0.2*	0.200	~	(0.10-50mL)		
3	Std 0.5*	0.500	~	(0.25-50mL)		
4	Std 1.0*	1.000	~	(0.5-50mL)		
5	Std 5.0*	5.000	~	(2.5-50mL)		
6	Std 10.0*	10.000	~	(5.0-50mL)		
7	ICV1**	5.190	~	104%		
8	ICB1	-0.004	~	~		
9	LLICV1*	0.196	~	98%		
10	CCV1*	5.240	~	105%		
11	CCB1	-0.004	~	~		
12	KQ1817277-01	-0.004	~			
13	KQ1817277-02	4.790	~	96%		
14	K1811438-001 E	-0.011	~			
15	K1811438-001A E	4.940	~	99%		
16	KQ1817277-03	-0.013	~			
17	KQ1817277-04	4.910	~	98%		
18	KQ1817406-01	-0.010	~			
19	KQ1817406-02	4.750	~	95%		
20	K1811433-001 E	-0.012	~			
21	K1811433-001A E	4.840	~	97%		
22	CCV2	5.190	~	104%		
23	CCB2	-0.002	~			
24	KQ1817406-03	0.008	~			
25	KQ1817406-04	4.870	~	97%		
26	CCV3	5.160	~	103%		
27	CCB3	-0.006	~			
28						
29						
30						
31						
32						

Comments:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD	Post-Spike @ 5ppb
7470A Water	5.0 µg/L	0.2 µg/L	80-120%	75-125%	20%	+/- 20%
245.1 Water	5.0 µg/L	0.2 µg/L	85-115%	70-130%	20%	+/- 20%
7470A TCLP	5.0 µg/L	1.0 µg/L	80-120%	75-125%	20%	+/- 20%
7471A Soil LCSS	12mg/kg	0.02 mg/kg	51-149%	80-120%	20%	+/- 20%
7471A Tissue Dorm	0.41 mg/kg	0.02 mg/kg	68-136%	80-120%	20%	+/- 20%

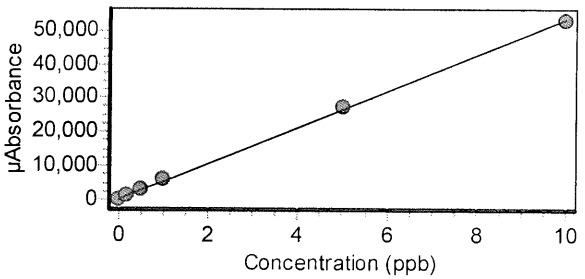
Report Generated By CETAC QuickTrace
Analyst: alkls.alklsxp196
Worksheet file: C:\Program Files\QuickTrace\Worksheets\120418C HG2.wsz
Date Started: 12/4/2018 9:23:41 AM
Comment:

Results

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
Calibration Blank				STD	12/04/18 11:13:01 am	0.000	144	18.51	
Replicates	170.4	128.9	162.2	114.5					
Standard #1				STD	12/04/18 11:14:37 am	0.200	1182	4.01	
Replicates	1120.2	1176.8	1233.4	1197.4					
Standard #2				STD	12/04/18 11:16:14 am	0.500	2945	2.04	
Replicates	2924.0	2908.0	3034.6	2913.7					
Standard #3				STD	12/04/18 11:17:52 am	1.000	5800	0.48	
Replicates	5826.6	5817.7	5766.1	5789.6					
Standard #4				STD	12/04/18 11:19:30 am	5.000	27441	0.38	
Replicates	27348.5	27357.3	27513.9	27546.1					
Standard #5				STD	12/04/18 11:21:08 am	10.000	52919	0.20	
Replicates	52866.5	52983.7	53027.3	52799.8					
ICV1				ICV	12/04/18 11:22:48 am	5.190	27761	0.38	
Replicates	27765.1	27827.1	27841.4	27609.2					
% Recovery	103.88								
ICB1				ICB	12/04/18 11:24:23 am	-0.004	120	53.77	
Replicates	196.3	127.1	119.2	38.3					

Calibration

Equation: A = 143.996 + 5317.163C
R2: 0.99959
SEE: 516.1539
Flags:



Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
LLICV1					CRDL	12/04/18 11:25:59 am	0.196	1187	2.70	
	Replicates	1223.8	1199.6	1149.1	1175.5					
	% Recovery	98.08								
CCV1					CCV	12/04/18 11:27:37 am	5.240	28027	0.41	
	Replicates	27988.9	28126.3	28111.1	27883.1					
	% Recovery	104.88								
CCB1					CCB	12/04/18 11:29:14 am	-0.004	121	17.05	
	Replicates	122.6	122.7	94.6	145.1					
KQ1817277-01					UNK	12/04/18 11:30:50 am	-0.004	125	11.14	
	Replicates	122.0	130.1	107.9	141.0					
KQ1817277-02					UNK	12/04/18 11:32:26 am	4.790	25632	0.44	
	Replicates	25685.2	25724.4	25648.6	25468.3					
K1811438-001 E					UNK	12/04/18 11:34:03 am	-0.010	88	21.46	
	Replicates	90.2	104.9	95.5	61.1					
K1811438-001A E					UNK	12/04/18 11:35:40 am	4.940	26409	0.90	
	Replicates	26605.0	26536.2	26426.3	26069.7					
KQ1817277-03					UNK	12/04/18 11:37:17 am	-0.013	76	36.44	
	Replicates	70.9	81.1	42.4	109.4					
KQ1817277-04					UNK	12/04/18 11:38:54 am	4.910	26259	2.57	
	Replicates	26633.1	26748.3	26383.0	25272.8					
KQ1817406-01					UNK	12/04/18 11:40:31 am	-0.010	89	22.44	
	Replicates	116.1	74.7	73.2	92.3					
KQ1817406-02					UNK	12/04/18 11:42:09 am	4.750	25399	3.00	
	Replicates	24439.2	25158.0	26145.6	25854.0					
K1811433-001 E					UNK	12/04/18 11:43:47 am	-0.012	79	23.84	
	Replicates	72.0	99.8	56.8	89.2					

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1811433-001A E					UNK	12/04/18 11:45:25 am	4.840	25870	0.55	
	Replicates	25967.8	25929.4	25925.5	25656.9					
CCV2					CCV	12/04/18 11:47:03 am	5.190	27764	0.45	
	Replicates	27760.6	27879.5	27825.1	27591.6					
	% Recovery	103.89								
CCB2					CCB	12/04/18 11:48:39 am	-0.002	136	20.43	
	Replicates	168.3	101.2	131.5	142.2					
KQ1817406-03					UNK	12/04/18 11:50:18 am	0.008	189	6.00	
	Replicates	193.2	174.6	201.1	185.4					
KQ1817406-04					UNK	12/04/18 11:51:57 am	4.870	26061	0.30	
	Replicates	26088.8	26117.7	26091.6	25944.7					
CCV3					CCV	12/04/18 11:53:35 am	5.160	27582	2.41	
	Replicates	26760.0	27325.0	28172.0	28072.0					
	% Recovery	103.21								
CCB3					CCB	12/04/18 11:55:11 am	-0.006	114	20.29	
	Replicates	124.2	140.0	88.4	101.5					

Preparation Information Benchsheet

Prep Run#: 327152
Team: Metals/KLINN
Number of Copies to make: 1

Prep WorkFlow: HgDigLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/29/18 12:30 PM

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	KQ1817277-01	MB		7470A/Hg TCLP		Solid	20mL	20.00mL	
2	KQ1817277-02	LCS		7470A/Hg TCLP		Solid	20mL	20.00mL	
3	K1811438-001	SL0547	.09	7470A/Hg TCLP		Soil	20mL	20.00mL	
4	KQ1817277-03	K1811438-001 DUP	.09	7470A/Hg TCLP		Solid	20mL	20.00mL	
5	KQ1817277-04	K1811438-001 MS	.09	7470A/Hg TCLP		Solid	20mL	20.00mL	

Spiking Solutions

Name: K-MET Hg Source Standard 1000 ug/L Inventory ID 194629 Logbook Ref: HG3-15-A Expires On: 12/04/2018

KQ1817277-02 0.10mL KQ1817277-04 0.10mL

Preparation Materials

K-MET 100ml Centrifuge Tube	1712272 (188568)	K-MET 50ml Centrifuge Tube	P7265114 (192825)	K-MET H2SO4 Hg	57011 (185918)
K-MET HCl Hg	0000192813 (194700)	K-MET K2S2O8 Hg	0000166617 (186360)	K-MET KMnO4 Hg	0000177909 (190708)
K-MET NACl Hg	0000164455 (184228)	K-MET NH2OH-HCl Hg	0000199595 (193565)	K-MET HNO3 Hg	0000197345 (194625)
K-MET SnCl Hg	0000208736 (195097)				

Preparation Steps

Step: Digestion
Started: 11/29/18 12:30
Finished: 11/29/18 14:30
By: KLINN
Comments

Preparation Equipment

K-Block-Digester-14	Digestion	Corrected Temperature	95 deg C	K-Block-Digester-14	Digestion	Correction Factor	0 deg C
K-Block-Digester-14	Digestion	Observed Temperature	95 deg C	K-Block-Digester-14	Digestion	Thermometer ID 661495	NONE
K-Block-Digester-14	Digestion	Thermometer Location	22 NONE	K-BlockDigester-08	Digestion	Corrected Temperature	95 deg C
K-BlockDigester-08	Digestion	Correction Factor	0 deg C	K-BlockDigester-08	Digestion	Observed Temperature	95 deg C
K-BlockDigester-08	Digestion	Thermometer ID 4184960	NONE	K-BlockDigester-08	Digestion	Thermometer Location	8 NONE
K-U52540	Digestion			K-DG1000C	Digestion		
K-DG250A	Digestion			K-DG100A	Digestion		
K-HG2-5.0	Digestion			K-DG500A	Digestion		

Comments: Cal. Std./CCV Source: HG3-15-X.

Reviewed By: _____ Date: 12/5/18

Preparation Information Benchsheet

Prep Run#: 327152
Team: Metals/KLINN
Number of Copies to make: 1

Prep WorkFlow: HgDigLP
Prep Method: Method TCLP 2

Status: Draft
Prep Date/Time: 11/27/18 12:13 PM

#	Lab Code	Client ID	B#	√	Method /Test	Matrix	Amt. Ext.	pH	Int. Vol	Final Vol	Surr Amt	Spike Amt
1	**KQ1817277-01**	MB			7470A / Hg TCLP	Solid						
2	**KQ1817277-02**	LCS			7470A / Hg TCLP	Solid						
3	**K1811438-001**	SL0547	.09		7470A / Hg TCLP	Soil						
4	**KQ1817277-03**	K1811438-001 DUP	.09		7470A / Hg TCLP	Solid						
5	**KQ1817277-04**	K1811438-001 MS	.09		7470A / Hg TCLP	Solid						

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Comments: HG3-15-X BD M, 8 T95, 95 TL22,8 11-29-18 1230-1430

Surrogate ID: _____ Spike ID: _____

Witnessed By: _____

Analyst: _____ Assisted By: _____

Preparation Information Benchsheet

Prep Run#: 327297
Team: Metals/KLINN
Number of Copies to make: 1

Prep WorkFlow: HgDigLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/29/18 12:30 PM

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	KQ1817406-01	MB		7470A/Hg TCLP		Solid	20mL	20.00mL	
2	KQ1817406-02	LCS		7470A/Hg TCLP		Solid	20mL	20.00mL	
3	K1811433-001	Boiler Ash Characterization	.02	7470A/Hg TCLP		Ash	20mL	20.00mL	Ash and Burnt Wood
4	KQ1817406-03	K1811433-001 DUP	.02	7470A/Hg TCLP		Solid	20mL	20.00mL	
5	KQ1817406-04	K1811433-001 MS	.02	7470A/Hg TCLP		Solid	20mL	20.00mL	

Spiking Solutions

Name: K-MET Hg Source Standard 1000 ug/L Inventory ID 194629 Logbook Ref: HG3-15-A Expires On: 12/04/2018

KQ1817406-02 0.10mL KQ1817406-04 0.10mL

Preparation Materials

K-MET 100ml Centrifuge Tube	1712272 (188568)	K-MET 50ml Centrifuge Tube	P7265114 (192825)	K-MET H2SO4 Hg	57011 (185918)
K-MET HCl Hg	0000192813 (194700)	K-MET K2S2O8 Hg	0000166617 (186360)	K-MET KMnO4 Hg	0000177909 (190708)
K-MET NACl Hg	0000164455 (184228)	K-MET NH2OH-HCl Hg	0000199595 (193565)	K-MET HNO3 Hg	0000197345 (194625)
K-MET SnCl Hg	0000208736 (195097)				

Preparation Steps

Step: Digestion
Started: 11/29/18 12:30
Finished: 11/29/18 14:30
By: KLINN
Comments

Preparation Equipment

K-Block-Digester-14	Digestion	Corrected Temperature	95 deg C	K-Block-Digester-14	Digestion	Correction Factor	0 deg C
K-Block-Digester-14	Digestion	Observed Temperature	95 deg C	K-Block-Digester-14	Digestion	Thermometer ID 661495	NONE
K-Block-Digester-14	Digestion	Thermometer Location	22 NONE	K-BlockDigester-08	Digestion	Corrected Temperature	95 deg C
K-BlockDigester-08	Digestion	Correction Factor	0 deg C	K-BlockDigester-08	Digestion	Observed Temperature	95 deg C
K-BlockDigester-08	Digestion	Thermometer ID 4184960	NONE	K-BlockDigester-08	Digestion	Thermometer Location	8 NONE
K-U52540	Digestion			K-HG2-5.0	Digestion		
K-DG100A	Digestion			K-DG500A	Digestion		
K-DG250A	Digestion			K-DG1000C	Digestion		

Comments: Cal. Std./CCV Source: HG3-15-X.

Reviewed By: _____ Date: 12/5/18

Preparation Information Benchsheet

Prep Run#: 327297
Team: Metals/KLINN
Number of Copies to make: 1

Prep WorkFlow: HgDigLP
Prep Method: Method

TCLP 2

Status: Draft
Prep Date/Time: 11/29/18 10:02 AM

#	Lab Code	Client ID	B#	√	Method /Test	Matrix	Amt. Ext.	pH	Int. Vol	Final Vol	Surr Amt	Spike Amt
1	**KQ1817406-01**	MB			7470A / Hg TCLP	Solid						
2	**KQ1817406-02**	LCS			7470A / Hg TCLP	Solid						
3	**K1811433-001**	Boiler Ash Characterization	.02		7470A / Hg TCLP	Ash						
4	**KQ1817406-03**	K1811433-001 DUP	.02		7470A / Hg TCLP	Solid						
5	**KQ1817406-04**	K1811433-001 MS	.02		7470A / Hg TCLP	Solid						

Comments: HG3-15-X BDL 4, 8 T95, 95 R 22, 8 11.29.18 1230-1430

Surrogate ID: _____ Spike ID: _____

Witnessed By: _____

Analyst: _____ Assisted By: _____

Organochlorine Pesticides

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000051.D
Lab ID: K1811438-001
RunType: SMPL
Matrix: SOIL

Date Acquired: 12/24/2018 22:23
Date Quantitated: 12/29/2018 11:28
Batch ID: KWG1806753
Analysis Method: 8081B
ListJoinID: LJ19075

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Toxaphene {5}	25	70	130	MCavg
	Toxaphene {6}	132	70	130	MCavg
	Chlordane {2}	63	70	130	MCavg

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000051.D\1223000051C.
Lab ID: K1811438-001
RunType: SMPL
Matrix: SOIL

Date Acquired: 12/24/2018 22:23
Date Quantitated: 12/29/2018 11:28
Batch ID: KWG1806753
Analysis Method: 8081B
ListJoinID: LJ19075

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Toxaphene {5}	25	70	130	MCavg
	Toxaphene {6}	132	70	130	
	Chlordane {2}	63	70	130	~~MCavg~~ MCavg

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000051.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000051.D\1223000051c.d			**Vial:**	74
Acqu Date:	12/24/2018 22:23	**Quant Date:**	12/29/2018 11:28	**Dilution:**	1.0
Run Type:	SMPL	**ListJoinID:**	LJ19075	**Soln Conc. Units:**	ug/L
Lab ID:	K1811438-001				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**	11/15/2018	**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806753	**Prep Lot:**	KWG1806260	**Report Group:**	K1811438
Analysis Method:	8081B	**Prep Method:**	EPA 3511		
Prep Ref:	1705208	**Prep Date:**	12/03/2018		

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:	Organochlorine Pesticides	**Report List ID:**	LJ19075
MB Ref:	J:\GC34\DATA\122318\1223000042.D	**Method ID:**	MJ1711
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.49	-0.02 c	4.05	+0.00 c	114585657	138616749	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	4.49	-0.02 c	4.05	+0.01 c	114585657	138616749	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	4.49	-0.02 c	4.05	+0.00 c	114585657	138616749	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt	
1	Tetrachloro-m-xylene	6.94		5.55		5455807	8093158	4.88		4.62				98	OK
							%Recovery =	98	OK	92	OK	**Limits =**	70-130		
1	Decachlorobiphenyl	29.99	+0.01	27.48		6159577	8647872	4.24		3.83				85	OK
							%Recovery =	85	OK	77	OK	**Limits =**	70-130		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-BHC (Lindane)	8.92	+0.02	7.54	+0.03	1256751	674635	1.05	0.3220	0.00010U	0.00010U	0.00010U
1	Heptachlor	10.78	-0.03	8.44		1320555	234111	1.14	0.1040	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide	14.52	+0.08			511240	0d	0.3820	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin			16.10		0d	124023	0.0000	0.0580	0.00010U	0.00010U	0.00010U
1	Methoxychlor					0	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
2	Toxaphene {1}			16.49	+0.04	0d	355886	0.0000	36.94	0.0020U	0.0020U	
	Toxaphene					0	0	0.0000	20.42	0.0020U	0.0020U	0.0020U
2	Toxaphene {2}			17.15	+0.02	0	66351	0.0000	3.91	0.0020U	0.0020U	
2	Toxaphene {3}					0d	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}					0d	0d	0.0000	0.0000	0.0020U	0.0020U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 12/29/18
2nd TP 01/02/19

Data File #1:	J:\GC34\DATA\122318\1223000051.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000051.D\1223000051c.d			**Vial:**	74
Acqu Date:	12/24/2018 22:23	**Quant Date:**	12/29/2018 11:28	**Dilution:**	1.0
Run Type:	SMPL	**ListJoinID:**	LJ19075	**Soln Conc. Units:**	ug/L
Lab ID:	K1811438-001				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
2	Toxaphene {5}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {6}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
3	Chlordane {1}	10.16	7.98 +0.05	247892	69490	5.06	0.7810	0.0010U	0.0010U	
	Chlordane			0	0	9.93	3.93	0.0010U	0.0010U	0.0010U
3	Chlordane {2}	10.93 -0.04	8.44 +0.01	568071	234111	8.61	1.97	0.0010U	0.0010U	
3	Chlordane {3}	12.48 +0.04	11.56	816947	219443	16.11	3.47	0.0010U	0.0010U	
3	Chlordane {4}		12.39 -0.01	0**d**	2337950	0.0000	9.49	0.0010U	0.0010U	
3	Chlordane {5}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {6}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000051.D Vial: 74
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 22:23:09 Operator: SMURRAY
Sample : K1811438-001 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 29 11:28:17 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	4.490	4.050	114.6E6	138.6E6	100.000	100.000
29)	1-Bromo-2...	4.490	4.050	114.6E6	138.6E6	100.000	100.000
36)	1-Bromo-2...	4.490	4.050	114.6E6	138.6E6	100.000	100.000
43)	1-Bromo-2...	4.490	4.050	114.6E6	138.6E6	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	6.943	5.553	5455807	8093158	4.884	4.622
28) s	Decachlor...	29.987	27.483	6159577	8647872	4.242	3.832
	Target Compounds						
3)	alpha-BHC	7.940	6.683	1155468	656220	0.910	0.304 #
4)	Hexachlor...	0.000	6.463	0	181618	N.D. d	0.070
5)	beta-BHC	9.880	8.227	295092	317059	0.414	0.277 #
6)	gamma-BHC...	8.917	7.537	1256751	674635	1.052	0.322 #
7)	delta-BHC	10.930f	8.980	568071	179139	0.406	0.083 #
8)	Heptachlor	10.777	8.437	1320555	234111	1.138	0.104 #
9)	Aldrin	0.000	9.420f	0	1577530	N.D. d	0.763
10)	Isodrin	0.000	10.773	0	273092	N.D. d	0.152
11)	Heptachlo...	14.517f	0.000	511240	0	0.382	N.D. d#
12)	gamma-Chl...	0.000	12.390	0	2337950	N.D. d	1.039
14)	alpha-Chl...	16.390f	0.000	1227508	0	0.926	N.D. d#
15)	Dieldrin	0.000	14.403	0	140693	N.D. d	0.065
16)	4,4'-DDE	0.000	14.017f	0	791284	N.D. d	0.379
17)	Endrin	0.000	16.100	0	124023	N.D. d	0.058
18)	Endosulfa...	0.000	17.813	0	343460	N.D. d	0.164
19)	4,4'-DDD	0.000	17.437	0	717761	N.D. d	0.420
21)	Endosulfa...	0.000	20.917	0	87344	N.D. d	0.039
23)	Endrin Ke...	25.217	0.000	26370229	0	19.760	N.D. d#
25)	2,4'-DDE	15.560	12.633f	1066438	1108132	0.995	0.621 #
26)	2,4'-DDD	18.330f	15.177	672625	1296320	0.710	0.771
27)	2,4'-DDT	20.317	0.000	188284	0	0.169	N.D. #
30)	Toxaphene	0.000	16.493	0	355886	N.D. d	36.935
31)	Toxaphene...	0.000	17.153	0	66351	N.D.	3.908 #
37)	Chlordane	10.157	7.980	247892	69490	5.061	0.781 #
38)	Chlordane...	10.930f	8.437	568071	234111	8.613	1.966 #
39)	Chlordane...	12.480	11.560	816947	219443	16.109	3.465 #
40)	Chlordane...	0.000	12.390	0	2337950	N.D. d	9.490
44)	Chlorpyrifos	12.207f	10.040f	221856	1558345	0.259	0.949 #
45)	Oxychlordane	14.347f	10.940	143011	434224	0.101	0.181 #
47)	trans-Non...	16.837f	12.493f	58379	59048	0.038	0.022 #
48)	Mirex	26.497f	24.227	798658	34883	0.847	0.015 #
49)	HCE	2.897	2.463	41781	48817	0.016	0.015
50)	HCBD	3.493	2.890	1122919	243873	0.555	0.095 #
51)	Perthane	19.113f	15.670	47538	557169	0.463	6.159 #

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

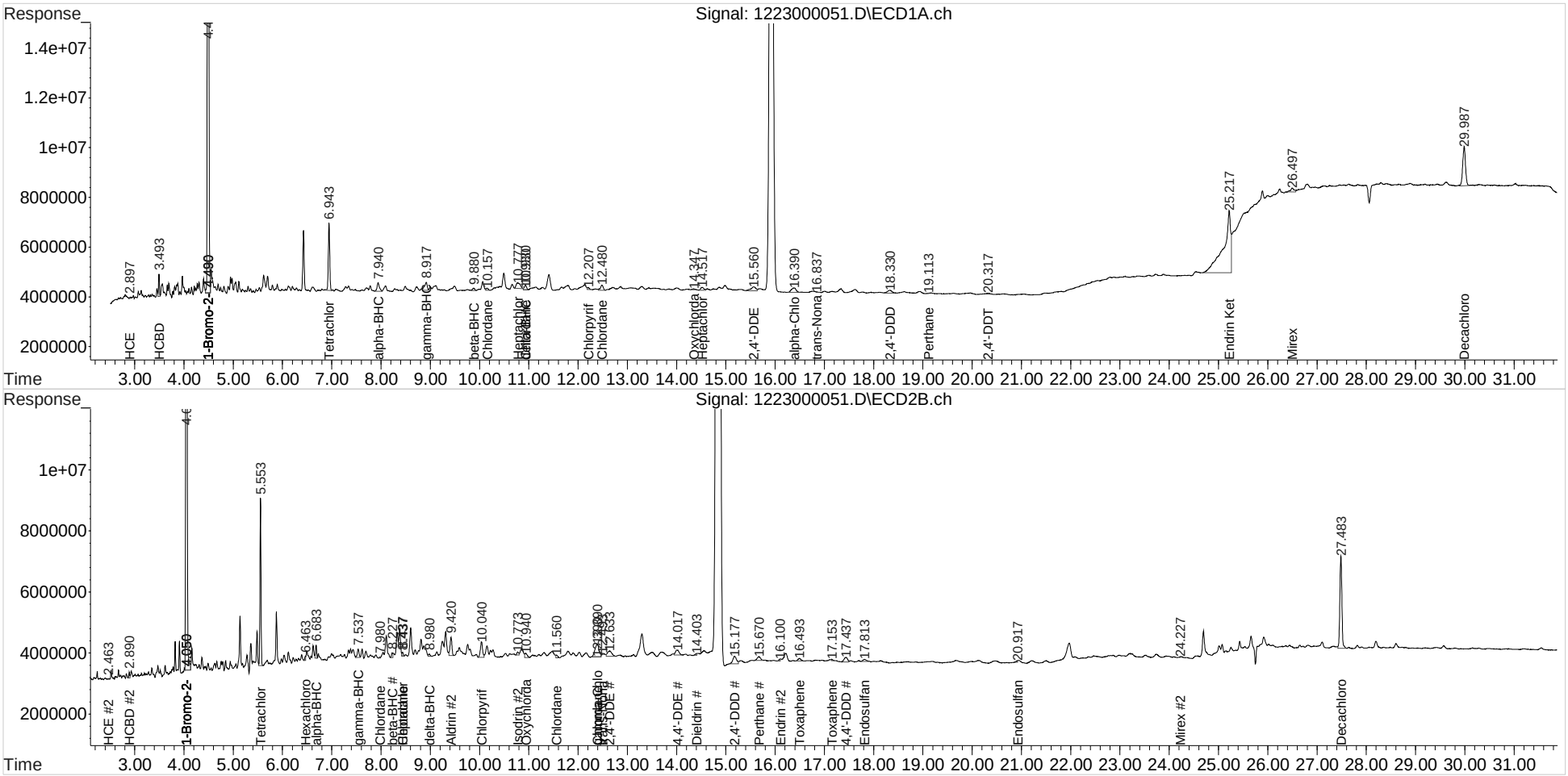
1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\122318\1223000051.D Vial: 74
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 22:23:09 Operator: SMURRAY
Sample : K1811438-001 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 29 11:28:17 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000052.D
Lab ID: K1811438-002
RunType: SMPL
Matrix: SOIL

Date Acquired: 12/24/2018 22:58
Date Quantitated: 12/29/2018 11:29
Batch ID: KWG1806753
Analysis Method: 8081B
ListJoinID: LJ19075

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA		x
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Toxaphene {5}	25	70	130	MCavg
	Toxaphene {6}	132	70	130	MCavg
	Chlordane {2}	63	70	130	MCavg
Retention Time	Heptachlor Epoxide	0.06	NA	0.05	int

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000052.D\1223000052C.
Lab ID: K1811438-002
RunType: SMPL
Matrix: SOIL

Date Acquired: 12/24/2018 22:58
Date Quantitated: 12/29/2018 11:29
Batch ID: KWG1806753
Analysis Method: 8081B
ListJoinID: LJ19075

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Toxaphene {5}	25	70	130	MCavg
	Toxaphene {6}	132	70	130	MCavg
	Chlordane {2}	63	70	130	MCavg

Primary Review: _____

Secondary Review: _____

1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000052.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000052.D\1223000052c.d			**Vial:**	75
Acqu Date:	12/24/2018 22:58	**Quant Date:**	12/29/2018 11:29	**Dilution:**	1.0
Run Type:	SMPL	**ListJoinID:**	LJ19075	**Soln Conc. Units:**	ug/L
Lab ID:	K1811438-002				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**	11/16/2018	**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806753	**Prep Lot:**	KWG1806260	**Report Group:**	K1811438
Analysis Method:	8081B	**Prep Method:**	EPA 3511		
Prep Ref:	1705209	**Prep Date:**	12/03/2018		

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:	Organochlorine Pesticides	**Report List ID:**	LJ19075
MB Ref:	J:\GC34\DATA\122318\1223000042.D	**Method ID:**	MJ1711
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.47	-0.04 c	4.03	-0.02 c	113286767	136399178	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	4.47	-0.04 c	4.03	-0.01 c	113286767	136399178	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	4.47	-0.04 c	4.03	-0.02 c	113286767	136399178	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt	
1	Tetrachloro-m-xylene	6.93	-0.01	5.54	-0.01	5328599	8096450	4.83		4.70				97	OK
						%Recovery =		97	OK	94	OK	**Limits =**	70-130		
1	Decachlorobiphenyl	29.98		27.48		5768706	7836379	4.02		3.53				80	OK
						%Recovery =		80	OK	71	OK	**Limits =**	70-130		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-BHC (Lindane)	8.91	+0.01	7.52	+0.01	301559	322993	0.2550	0.1570	0.00010U	0.00010U	0.00010U
1	Heptachlor	10.77	-0.04	8.43	-0.01	1187696	114409	1.04	0.0520	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide	14.50*	+0.06			5012635	0d	3.79	0.0000	0.00019	0.00010U	0.00010U
1	Endrin			16.11	+0.01	0	284590	0.0000	0.1350	0.00010U	0.00010U	0.00010U
1	Methoxychlor					0	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
2	Toxaphene {1}					0d	0d	0.0000	0.0000	0.0020U	0.0020U	
	Toxaphene					0	0	0.0000	145.85	0.0020U	0.0073	0.0020U
2	Toxaphene {2}			17.16	+0.03	0	2051700	0.0000	145.85	0.0020U	0.0073	
2	Toxaphene {3}					0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}					0d	0d	0.0000	0.0000	0.0020U	0.0020U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 12/29/18
2nd TP 01/02/19

Data File #1:	J:\GC34\DATA\122318\1223000052.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000052.D\1223000052c.d			**Vial:**	75
Acqu Date:	12/24/2018 22:58	**Quant Date:**	12/29/2018 11:29	**Dilution:**	1.0
Run Type:	SMPL	**ListJoinID:**	LJ19075	**Soln Conc. Units:**	ug/L
Lab ID:	K1811438-002				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
2	Toxaphene {5}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {6}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
3	Chlordane {1}		7.88 -0.05	0**d**	116836	0.0000	1.34	0.0010U	0.0010U	
	Chlordane			0	0	0.0000	2.82	0.0010U	0.0010U	0.0010U
3	Chlordane {2}		8.43	0**d**	114409	0.0000	0.9770	0.0010U	0.0010U	
3	Chlordane {3}			0**d**	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {4}		12.38 -0.02	0**d**	2785928	0.0000	11.49	0.0010U	0.0010U	
3	Chlordane {5}		12.60 +0.06	0**d**	29101	0.0000	0.1890	0.0010U	0.0010U	
3	Chlordane {6}		12.79 -0.06	0**d**	27086	0.0000	0.1230	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000052.D Vial: 75
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 22:58:50 Operator: SMURRAY
Sample : K1811438-002 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 29 11:29:38 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	4.473	4.033	113.3E6	136.4E6	100.000	100.000	
29)	1-Bromo-2...	4.473	4.033	113.3E6	136.4E6	100.000	100.000	
36)	1-Bromo-2...	4.473	4.033	113.3E6	136.4E6	100.000	100.000	
43)	1-Bromo-2...	4.537	4.033	1163453	136.4E6	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	6.930	5.540	5328599	8096450	4.825	4.699	
28) s	Decachlor...	29.983	27.483	5768706	7836379	4.018	3.529	
	Target Compounds							
3)	alpha-BHC	7.930	6.670	637317	273039	0.508	0.129	#
4)	Hexachlor...	8.140	6.480	33378	128925	0.018	0.051	#
5)	beta-BHC	0.000	8.237f	0	367575	N.D. d	0.326	
6)	gamma-BHC...	8.907	7.520	301559	322993	0.255	0.157	#
7)	delta-BHC	0.000	8.973	0	60254	N.D. d	0.028	
8)	Heptachlor	10.773	8.427	1187696	114409	1.035	0.052	#
9)	Aldrin	0.000	9.410f	0	1938342	N.D.	0.953	#
10)	Isodrin	0.000	10.857f	0	115776	N.D. d	0.066	
11)	Heptachlo...	14.503f	0.000	5012635	0	3.788	N.D. d	#
12)	gamma-Chl...	0.000	12.383	0	2785928	N.D. d	1.258	
13)	Endosulfan I	0.000	13.033	0	17580	N.D.	0.009	#
14)	alpha-Chl...	0.000	12.787f	0	27086	N.D. d	0.013	
15)	Dieldrin	0.000	14.407	0	5593292	N.D.	2.645	#
16)	4,4'-DDE	0.000	14.147	0	22056	N.D.	0.011	#
17)	Endrin	0.000	16.110	0	284590	N.D.	0.135	#
19)	4,4'-DDD	0.000	17.413	0	51205	N.D. d	0.030	
23)	Endrin Ke...	25.217	0.000	24706840	0	18.726	N.D.	#
25)	2,4'-DDE	15.563	12.597	439232	29101	0.414	0.017	#
26)	2,4'-DDD	18.303	15.170	53009	440996	0.057	0.266	#
27)	2,4'-DDT	20.360	0.000	49492	0	0.045	N.D.	#
31)	Toxaphene...	0.000	17.157	0	2051700	N.D.	145.851	#
37)	Chlordane	0.000	7.883f	0	116836	N.D. d	1.335	
38)	Chlordane...	0.000	8.427	0	114409	N.D. d	0.977	
40)	Chlordane...	0.000	12.383	0	2785928	N.D. d	11.492	
41)	Chlordane...	0.000	12.597f	0	29101	N.D. d	0.189	
42)	Chlordane...	0.000	12.787f	0	27086	N.D. d	0.123	
44)	Chlorpyrifos	12.193f	10.027	124741	801784	14.323	0.496	#
45)	Oxychlordane	14.333f	10.927	29766	2037721	2.072	0.865	#
47)	trans-Non...	16.973f	12.597	42525	29101	2.703	0.011	#
48)	Mirex	26.500f	24.230	241955	24383541	25.273	10.624	#
49)	HCE	2.910	2.470	66347	35169	2.576	0.011	#
50)	HCBD	3.477	2.877	64043	107980	3.120	0.043	#
51)	Perthane	19.167	15.663	107708	289813	103.387	3.256	#

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

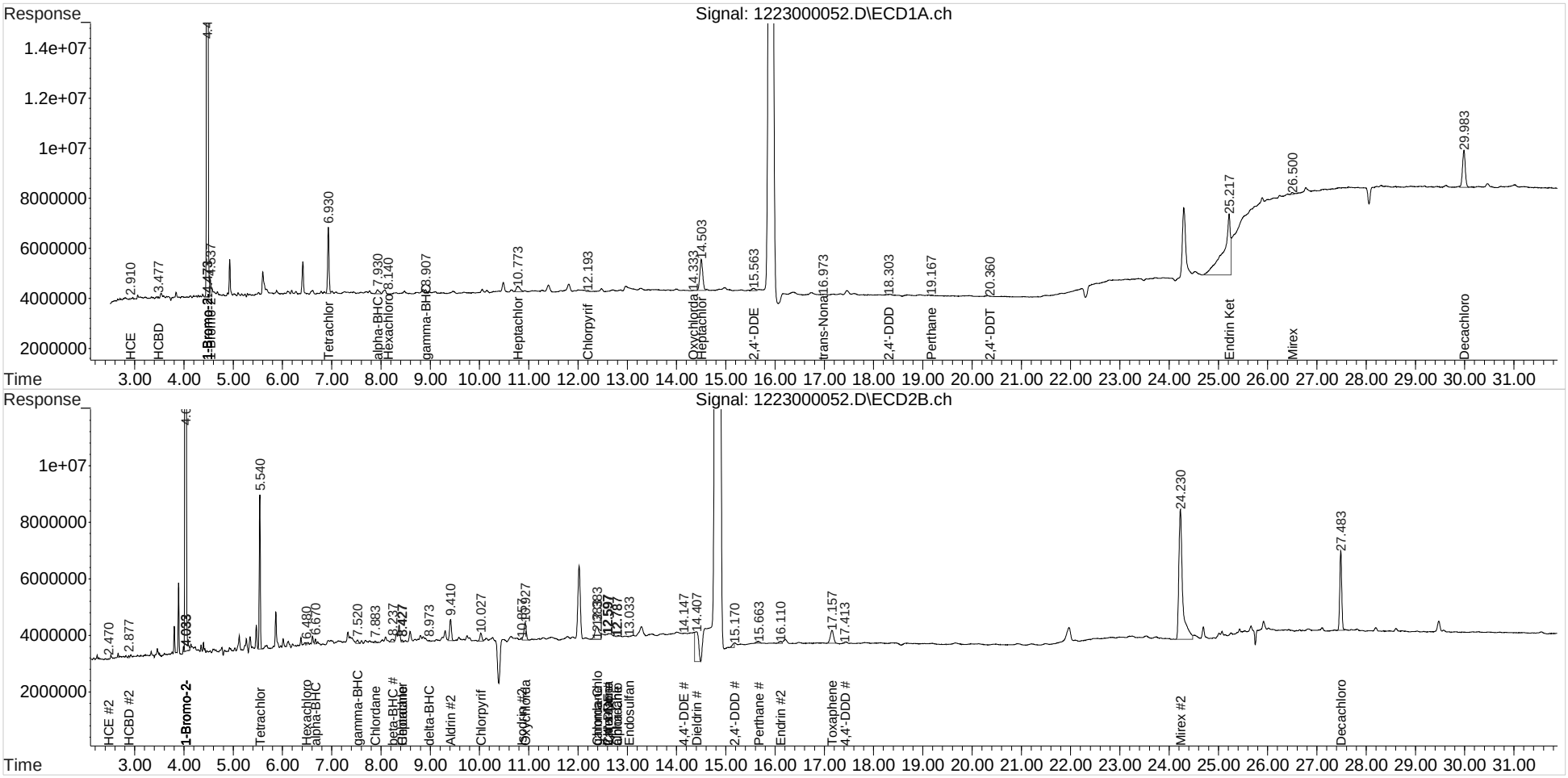
1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\122318\1223000052.D Vial: 75
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 22:58:50 Operator: SMURRAY
Sample : K1811438-002 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 29 11:29:38 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000042.D
Lab ID: KWG1806260-9
RunType: MB
Matrix: SOIL

Date Acquired: 12/24/2018 16:57
Date Quantitated: 12/29/2018 11:18
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA		x
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	gamma-Chlordane	23.6	NA	20	ICVOK
	Endrin Aldehyde	-21.9	NA	20	ICVOK
Continuing Calibration Recovery	Endrin Ketone	229.7	NA	20	CCV+ND
Retention Time	Heptachlor Epoxide	0.06	NA	0.05	int
Above Highest ICAL Level	Heptachlor Epoxide	11.38	NA	10	intE
	Endrin Ketone	18.75	NA	10	intE

Primary Review: _____

Secondary Review: _____

Printed: 12/29/2018 11:50:56
u:\Stealth\Crystal.rpt\except2.rpt

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000042.D\1223000042C.
Lab ID: KWG1806260-9
RunType: MB
Matrix: SOIL

Date Acquired: 12/24/2018 16:57
Date Quantitated: 12/29/2018 11:18
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000042.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000042.D\1223000042c.d			**Vial:**	65
Acqu Date:	12/24/2018 16:57	**Quant Date:**	12/29/2018 11:18	**Dilution:**	1.0
Run Type:	MB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806260-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/06/2018

Analysis Lot:	KWG1806753	**Prep Lot:**	KWG1806260	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511		
Prep Ref:	1705218	**Prep Date:**	12/03/2018		

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:		**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.48	-0.03 c	4.04	-0.01 c	118514427	139274861	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	4.48	-0.02 c	4.04	-0.01 c	118514427	139274861	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	4.48	-0.03 c	4.04	-0.01 c	118514427	139274861	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	4.48	c	4.04	c	118514427	139274861	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt	
1	Tetrachloro-m-xylene	6.93	-0.01	5.54	-0.01	4706242	7201230	4.07		4.09				82	OK
						%Recovery =		81	OK	82	OK	**Limits =**	70-130		
1	Decachlorobiphenyl	29.98		27.49	+0.01	6485923	8731426	4.32		3.85				86	OK
						%Recovery =		86	OK	77	OK	**Limits =**	70-130		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC					0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Hexachlorobenzene			6.53	+0.07	0**d**	103280	0.0000	0.0400	0.00010U	0.00010U	0.00010U
1	beta-BHC			8.21	+0.03	0	47231	0.0000	0.0410	0.00010U	0.00010U	0.00010U
1	gamma-BHC (Lindane)					0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	delta-BHC					0**d**	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor					0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Aldrin			9.41	+0.04	0**d**	5722343	0.0000	2.75	0.00010U	0.000138	0.00010U
1	Isodrin					0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide	14.50*	+0.06			15754457	0	11.38	0.0000	0.000569E	0.00010U	0.00010U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\122318\1223000042.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000042.D\1223000042c.d			**Vial:**	65
Acqu Date:	12/24/2018 16:57	**Quant Date:**	12/29/2018 11:18	**Dilution:**	1.0
Run Type:	MB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806260-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan I			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	alpha-Chlordane			0**d**	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Dieldrin			0	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDE			0	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin			0	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan II			0**d**	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDD			0**d**	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin Aldehyde			0**d**	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan Sulfate			0**d**	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDT			0**d**	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin Ketone	25.22 +0.01		25885396	0	18.75CCV	0.0000	0.000938E	0.00010U	0.00010U
1	Methoxychlor			0	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDE			0**d**	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDD		15.17	0	176616	0.0000	0.1040	0.00010U	0.00010U	0.00010U
1	2,4'-DDT			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	0.0000	0.0000	0.00200U	0.00200U	0.00200U
2	Toxaphene {1}			0	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {2}			0	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {3}			0	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {5}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {6}			0	0**d**	0.0000	0.0000	0.0020U	0.0020U	
	Chlordane			0	0	0.0000	0.0000	0.00100U	0.00100U	0.00100U
3	Chlordane {1}			0**d**	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {2}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {3}			0	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {4}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {5}			0**d**	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {6}			0**d**	0	0.0000	0.0000	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000042.D Vial: 65
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 16:57:43 Operator: SMURRAY
Sample : KWG1806260-9 MB Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 29 11:18:38 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	4.477	4.037	118.5E6	139.3E6	100.000	100.000	
29)	1-Bromo-2...	4.477	4.037	118.5E6	139.3E6	100.000	100.000	
36)	1-Bromo-2...	4.477	4.037	118.5E6	139.3E6	100.000	100.000	
43)	1-Bromo-2...	4.477	4.037	118.5E6	139.3E6	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	6.933	5.543	4706242	7201230	4.073	4.094	
28) s	Decachlor...	29.983	27.487	6485923	8731426	4.319	3.851	
	Target Compounds							
4)	Hexachlor...	0.000	6.530f	0	103280	N.D. d	0.040	
5)	beta-BHC	0.000	8.210	0	47231	N.D.	0.041	#
9)	Aldrin	0.000	9.413f	0	5722343	N.D. d	2.754	
11)	Heptachlo...	14.503f	0.000	15754457	0	11.381	N.D.	#
23)	Endrin Ke...	25.217	0.000	25885396	0	18.754	N.D.	#
26)	2,4'-DDD	0.000	15.173	0	176616	N.D.	0.104	#
44)	Chlorpyrifos	12.353f	0.000	26528	0	0.030	N.D.	#
45)	Oxychlordane	14.503f	10.927	15754457	5834001	10.768	2.426	#
48)	Mirex	0.000	24.230	0	38784365	N.D.	16.549	#
49)	HCE	0.000	2.473	0	33134	N.D.	0.010	#
50)	HCBD	3.457f	2.883	27604	28602	0.013	0.011	
51)	Perthane	19.177	0.000	144319	0	1.360	N.D.	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

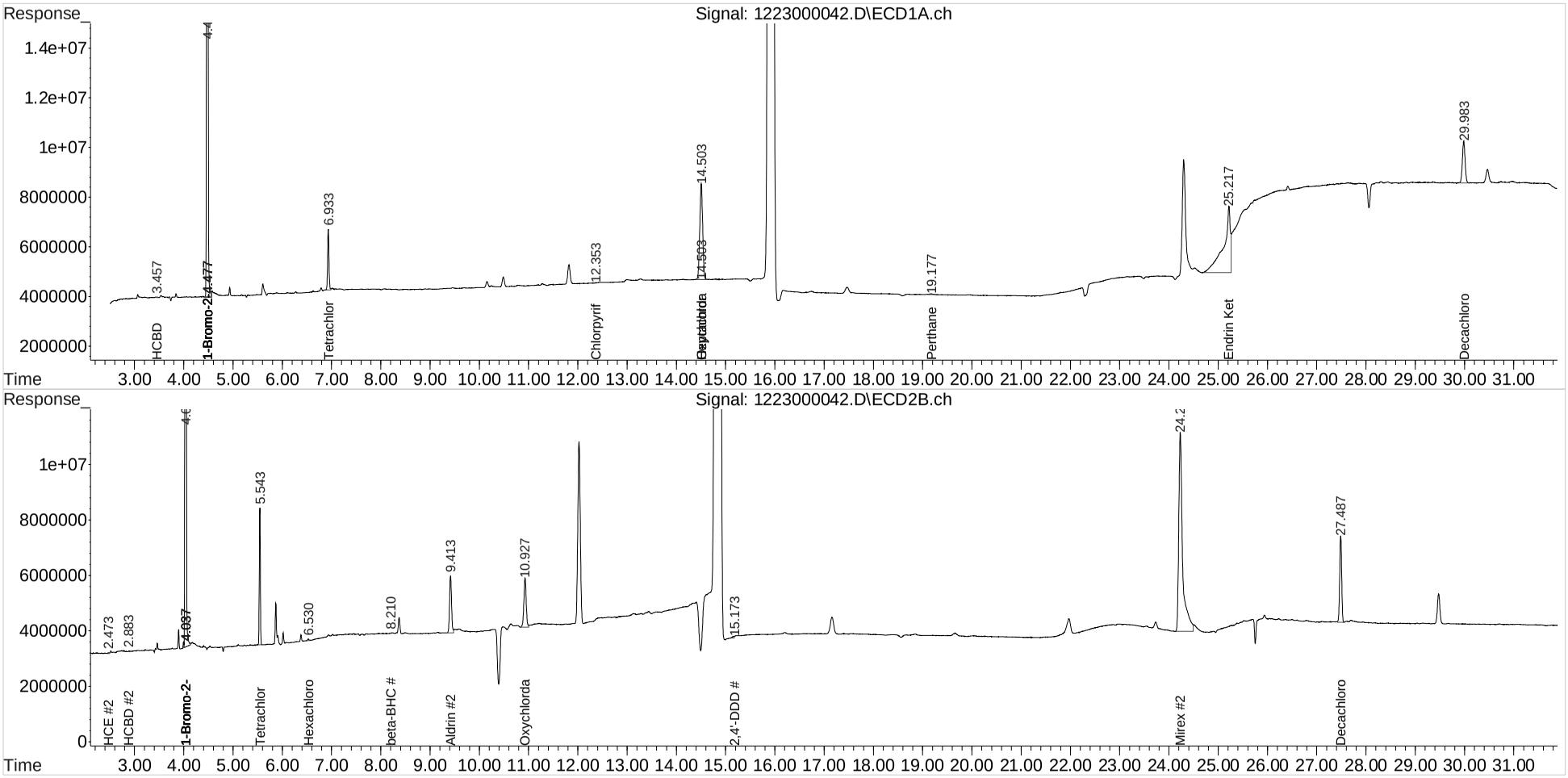
Quantitation Report (QT Reviewed)

1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000042.D Vial: 65
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 16:57:43 Operator: SMURRAY
Sample : KWG1806260-9 MB Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 29 11:18:38 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000045.D
Lab ID: K1811381-004
RunType: SMPL
Matrix: SOIL

Date Acquired: 12/24/2018 18:46
Date Quantitated: 12/29/2018 11:21
Batch ID: KWG1806753
Analysis Method: 8081B
ListJoinID: LJ19075

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA		x
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Toxaphene {5}	25	70	130	MCavg
	Toxaphene {6}	132	70	130	MCavg
	Chlordane {2}	63	70	130	MCavg
Retention Time	Heptachlor Epoxide	0.06	NA	0.05	intE
Above Highest ICAL Level	Heptachlor Epoxide	10.17	NA	10	intE

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000045.D\1223000045C.
Lab ID: K1811381-004
RunType: SMPL
Matrix: SOIL

Date Acquired: 12/24/2018 18:46
Date Quantitated: 12/29/2018 11:21
Batch ID: KWG1806753
Analysis Method: 8081B
ListJoinID: LJ19075

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Toxaphene {5}	25	70	130	MCavg
	Toxaphene {6}	132	70	130	MCavg
	Chlordane {2}	63	70	130	MCavg

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000045.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000045.D\1223000045c.d			**Vial:**	68
Acqu Date:	12/24/2018 18:46	**Quant Date:**	12/29/2018 11:21	**Dilution:**	1.0
Run Type:	SMPL	**ListJoinID:**	LJ19075	**Soln Conc. Units:**	ug/L
Lab ID:	K1811381-004				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**	11/13/2018	**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806753	**Prep Lot:**	KWG1806260	**Report Group:**	K1811381
Analysis Method:	8081B	**Prep Method:**	EPA 3511		
Prep Ref:	1705206	**Prep Date:**	12/03/2018		

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:	Organochlorine Pesticides	**Report List ID:**	LJ19075
MB Ref:	J:\GC34\DATA\122318\1223000042.D	**Method ID:**	MJ1711
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.47	-0.04 c	4.03	-0.02 c	116082147	140192776	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	4.47	-0.04 c	4.03	-0.01 c	116082147	140192776	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	4.47	-0.04 c	4.03	-0.02 c	116082147	140192776	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt	
1	Tetrachloro-m-xylene	6.93	-0.01	5.54	-0.01	5676873	8374553	5.02		4.73				100	OK
							%Recovery =	100	OK	95	OK	**Limits =**	70-130		
1	Decachlorobiphenyl	29.98		27.48		6797906	9110373	4.62		3.99				92	OK
							%Recovery =	92	OK	80	OK	**Limits =**	70-130		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-BHC (Lindane)	8.91	+0.01			232166	0**d**	0.1920	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor	10.77	-0.04			2155520	0**d**	1.83	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide	14.50*****	+0.06			13781433	0	10.17	0.0000	0.00051E	0.00010U	0.00010U
1	Endrin			16.20	+0.10	0	117609	0.0000	0.0540	0.00010U	0.00010U	0.00010U
1	Methoxychlor					0	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
2	Toxaphene {1}					0	0	0.0000	0.0000	0.0020U	0.0020U	
	Toxaphene					0	0	0.0000	0.0000	0.0020U	0.0020U	0.0020U
2	Toxaphene {2}					0	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {3}					0**d**	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}					0	0**d**	0.0000	0.0000	0.0020U	0.0020U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 12/29/18
2nd TP 01/02/19

Data File #1:	J:\GC34\DATA\122318\1223000045.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000045.D\1223000045c.d			**Vial:**	68
Acqu Date:	12/24/2018 18:46	**Quant Date:**	12/29/2018 11:21	**Dilution:**	1.0
Run Type:	SMPL	**ListJoinID:**	LJ19075	**Soln Conc. Units:**	ug/L
Lab ID:	K1811381-004				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
2	Toxaphene {5}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {6}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
3	Chlordane {1}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
	Chlordane			0	0	0.0000	0.0000	0.0010U	0.0010U	0.0010U
3	Chlordane {2}			0	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {3}			0	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {4}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {5}			0**d**	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {6}			0**d**	0	0.0000	0.0000	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000045.D Vial: 68
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 18:46:10 Operator: SMURRAY
Sample : K1811381-004 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 29 11:21:56 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	4.473	4.033	116.1E6	140.2E6	100.000	100.000
29)	1-Bromo-2...	4.473	4.033	116.1E6	140.2E6	100.000	100.000
36)	1-Bromo-2...	4.473	4.033	116.1E6	140.2E6	100.000	100.000
43)	1-Bromo-2...	4.473f	4.033	116.1E6	140.2E6	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	6.933	5.540	5676873	8374553	5.016	4.729
28) s	Decachlor...	29.983	27.480	6797906	9110373	4.621	3.992
	Target Compounds						
3)	alpha-BHC	0.000	6.620	0	25185	N.D. d	0.012
4)	Hexachlor...	0.000	6.443	0	86378	N.D. d	0.033
5)	beta-BHC	0.000	8.203	0	111552	N.D.	0.096 #
6)	gamma-BHC...	8.913	0.000	232166	0	0.192	N.D. d#
7)	delta-BHC	0.000	9.057f	0	80309	N.D.	0.037 #
8)	Heptachlor	10.770	0.000	2155520	0	1.833	N.D. d#
9)	Aldrin	0.000	9.413f	0	7379713	N.D.	3.529 #
11)	Heptachlo...	14.503f	0.000	13781433	0	10.165	N.D. #
13)	Endosulfan I	0.000	13.033	0	62276	N.D.	0.030 #
15)	Dieldrin	0.000	14.393f	0	41330	N.D.	0.019 #
16)	4,4'-DDE	0.000	14.060	0	77384	N.D.	0.037 #
17)	Endrin	0.000	16.197f	0	117609	N.D.	0.054 #
23)	Endrin Ke...	25.217	0.000	29565126	0	21.869	N.D. d#
26)	2,4'-DDD	0.000	15.193	0	333283	N.D.	0.196 #
45)	Oxychlordane	14.503f	10.927	13781433	5366138	9.617	2.217 #
48)	Mirex	26.537	24.227	138358	58574144	0.145	24.830 #
49)	HCE	2.920f	2.470	27698	30795	0.011	0.009
50)	HCBD	3.453f	2.877	122062	66138	0.060	0.025 #
51)	Perthane	19.167	0.000	308432	0	2.967	N.D. #

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

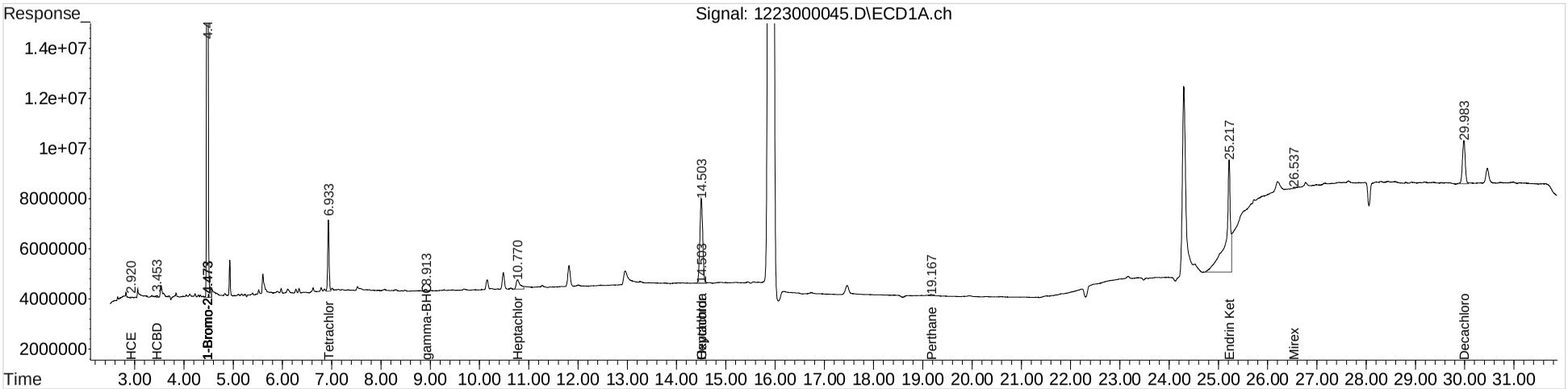
Quantitation Report (QT Reviewed)

1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000045.D Vial: 68
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 18:46:10 Operator: SMURRAY
Sample : K1811381-004 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 29 11:21:56 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



1st SM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000046.D
Lab ID: KWG1806260-1 -- K1811381-004MS
RunType: MS
Matrix: SOIL

Date Acquired: 12/24/2018 19:22
Date Quantitated: 12/29/2018 11:23
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	gamma-Chlordane	23.6	NA	20	ICVOK
	Endrin Aldehyde	-21.9	NA	20	ICVOK
Continuing Calibration Recovery	Endrin Ketone	229.7	NA	20	RO
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	693190.3333	4772761.333	NR
	1-Bromo-2-nitrobenzene {3}	0	381986.6428	9527946.571	NR

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000046.D\1223000046C.
Lab ID: KWG1806260-1 -- K1811381-004MS
RunType: MS
Matrix: SOIL

Date Acquired: 12/24/2018 19:22
Date Quantitated: 12/29/2018 11:23
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	beta-BHC	20.8	NA	20	RO
	delta-BHC	23.1	NA	20	RO
	Heptachlor	21.0	NA	20	RO
	Endrin Aldehyde	27.4	NA	20	RO
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	371179.4166	5484717.666	NR
	1-Bromo-2-nitrobenzene {3}	0	712037.8571	2848151.428	NR

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000046.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000046.D\1223000046c.d			**Vial:**	69
Acqu Date:	12/24/2018 19:22	**Quant Date:**	12/29/2018 11:23	**Dilution:**	1.0
Run Type:	MS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806260-1 -- K1811381-004MS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/06/2018

Analysis Lot:	KWG1806753	**Prep Lot:**	KWG1806260	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511		
Prep Ref:	1705210	**Prep Date:**	12/03/2018		

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:	J:\GC34\DATA\122318\1223000042.D	**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.49	-0.02	4.05	+0.00	119519516	143065748	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt	
1	Tetrachloro-m-xylene	6.94	5.55	5837464	8621536	5.01		4.77				100	OK
				%Recovery =		100	OK	95	OK	**Limits =**	70-130		
1	Decachlorobiphenyl	29.98	27.48	6499203	8801268	4.29		3.78				86	OK
				%Recovery =		86	OK	76	OK	**Limits =**	70-130		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC	7.95		6.67		8141372	13067891	6.15	5.87	0.000307	0.000294	**0.000294**
1	Hexachlorobenzene	8.17	+0.01	6.47	+0.01	10110971	12098250	5.19	4.54	0.000260	0.000227	**0.000227**
1	beta-BHC	9.87		8.18		4386227	6904129	5.89	5.85^{CCV}	0.000295	0.000292	**0.000292**
1	gamma-BHC (Lindane)	8.90		7.51		8102707	13130215	6.50	6.07	0.000325	0.000303	**0.000303**
1	delta-BHC	10.97		9.00		8495178	13042961	5.83	5.83^{CCV}	0.000291	0.000291	**0.000291**
1	Heptachlor	10.81		8.44		8847250	12868196	7.31	5.56^{CCV}	0.000365	0.000278	**0.000278**
1	Aldrin	12.29		9.37		7461731	12117337	5.60	5.68	0.000280	0.000284	**0.000280**
1	Isodrin	13.80		10.81		7165035	9977558	6.46	5.38	0.000323	0.000269	**0.000269**
1	Heptachlor Epoxide	14.47	+0.03	11.40		7613305**m**	11435080	5.45	5.16	0.000273	0.000258	**0.000258**

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\122318\1223000046.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000046.D\1223000046c.d			**Vial:**	69
Acqu Date:	12/24/2018 19:22	**Quant Date:**	12/29/2018 11:23	**Dilution:**	1.0
Run Type:	MS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806260-1 -- K1811381-004MS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane	16.21	12.41	12189843	13622860	8.50	5.86	0.000425	0.000293	**0.000293**
1	Endosulfan I	16.58	13.02	6951837	10805617	5.64	5.12	0.000282	0.000256	**0.000256**
1	alpha-Chlordane	16.46 +0.01	12.85	7847164	11782384	5.68	5.30	0.000284	0.000265	**0.000265**
1	Dieldrin	18.13	14.44 -0.01	7254080	9812636**m**	5.46	4.42	0.000273	0.000221	**0.000221**
1	4,4'-DDE	17.72	14.10	8172684	10693004	5.77	4.96	0.000289	0.000248	**0.000248**
1	Endrin	19.57 +0.01	16.10	7635877	12413965	6.04	5.62	0.000302	0.000281	**0.000281**
1	Endosulfan II	21.75	17.81	7838759	11948434	6.19	5.54	0.000310	0.000277	**0.000277**
1	4,4'-DDD	21.49	17.42	6361725	9956137	6.31	5.65	0.000315	0.000282	**0.000282**
1	Endrin Aldehyde	22.35 +0.01	19.40	4891727**m**	10587352	4.50	6.08CCV	0.000225	0.000304	**0.000225**
1	Endosulfan Sulfate	23.67	20.99	7944539	12433887	6.13	5.43	0.000307	0.000271	**0.000271**
1	4,4'-DDT	22.96	19.16 -0.01	6999877	11231799	5.74	5.64	0.000287	0.000282	**0.000282**
1	Endrin Ketone	25.20 -0.01	23.88	12428738	12517621	8.93CCV	4.99	0.000446	0.000250	**0.000250**P
1	Methoxychlor	25.07 +0.01	23.62	4073585**m**	7256986	5.51	5.81	0.000276	0.000290	**0.000276**
1	2,4'-DDE			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDD			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDT			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	0.0000	0.0000	0.00200U	0.00200U	NR
2	Toxaphene {1}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {2}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {3}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {5}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {6}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
	Chlordane			0	0	0.0000	0.0000	0.00100U	0.00100U	NR
3	Chlordane {1}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {2}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {3}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {4}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {5}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {6}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000046.D Vial: 69
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 19:22:25 Operator: SMURRAY
Sample : K1811381-004MS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 29 11:23:07 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	4.487	4.047	119.5E6	143.1E6	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	6.940	5.550	5837464	8621536	5.010	4.771	
28) s	Decachlor...	29.983	27.483	6499203	8801268	4.291	3.779	
	Target Compounds							
3)	alpha-BHC	7.950	6.673	8141372	13067891	6.148	5.874	
4)	Hexachlor...	8.167	6.467	10110971	12098250	5.193	4.536	
5)	beta-BHC	9.873	8.183	4386227	6904129	5.894	5.846	
6)	gamma-BHC...	8.900	7.510	8102707	13130215	6.502	6.066	
7)	delta-BHC	10.973	8.997	8495178	13042961	5.826	5.829	
8)	Heptachlor	10.807	8.440	8847250	12868196	7.307	5.562	
9)	Aldrin	12.290	9.370	7461731	12117337	5.603	5.678	
10)	Isodrin	13.800	10.810	7165035	9977558	6.458	5.384	
11)	Heptachlo...	14.467	11.400	7613305	11435080	5.454m	5.156	
12)	gamma-Chl...	16.207	12.407	12189843	13622860	8.501	5.864	#
13)	Endosulfan I	16.580	13.023	6951837	10805617	5.635	5.116	
14)	alpha-Chl...	16.457	12.850	7847164	11782384	5.678	5.295	
15)	Dieldrin	18.127	14.437	7254080	9812636	5.456	4.424m	
16)	4,4'-DDE	17.723	14.103	8172684	10693004	5.770	4.964	
17)	Endrin	19.567	16.100	7635877	12413965	6.038	5.616	
18)	Endosulfa...	21.753	17.807	7838759	11948434	6.193	5.543	
19)	4,4'-DDD	21.490	17.423	6361725	9956137	6.305	5.646	
20)	Endrin Al...	22.347	19.400	4891727	10587352	4.498m	6.078	#
21)	Endosulfa...	23.667	20.987	7944539	12433887	6.132	5.427	
22)	4,4'-DDT	22.963	19.163	6999877	11231799	5.744	5.639	
23)	Endrin Ke...	25.197	23.877	12428738	12517621	8.929	4.993	#
24)	Methoxychlor	25.067	23.617	4073585	7256986	5.510m	5.807	

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

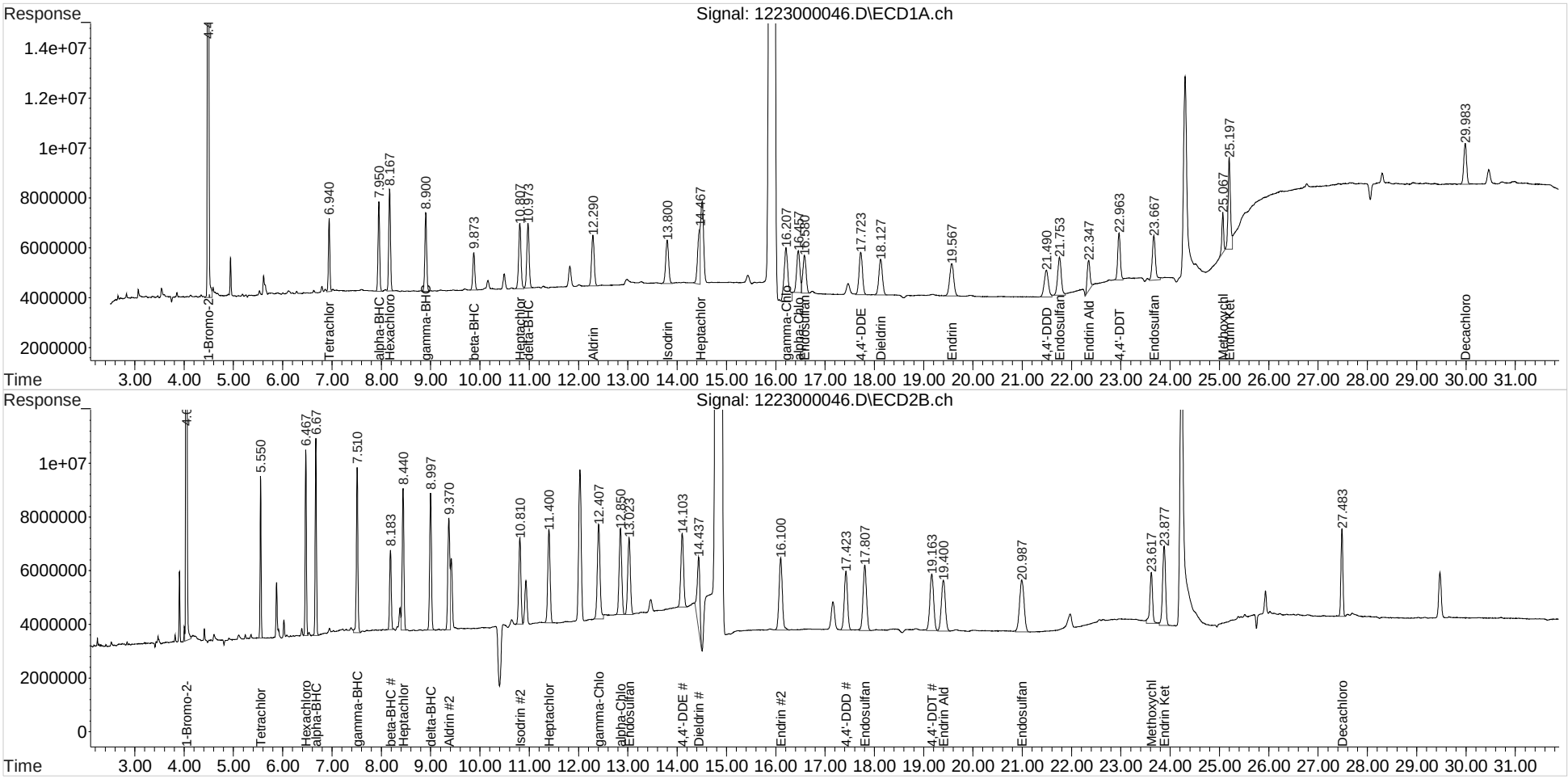
1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\122318\1223000046.D Vial: 69
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 19:22:25 Operator: SMURRAY
Sample : K1811381-004MS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 29 11:23:07 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



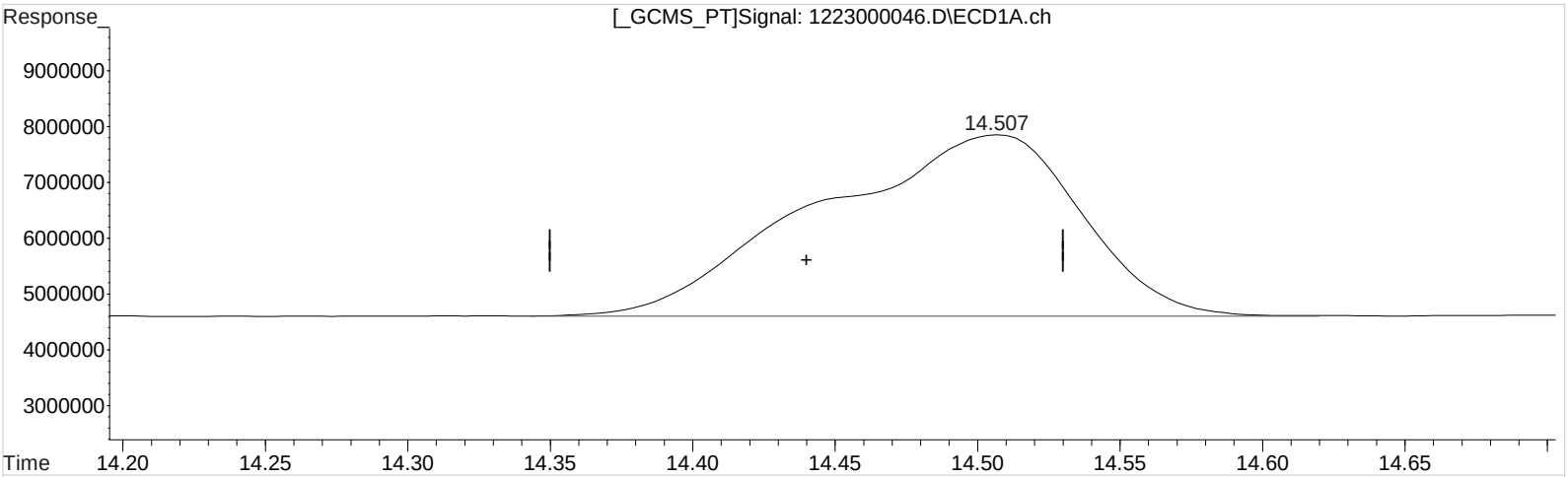
Quantitation Report (Qedit)

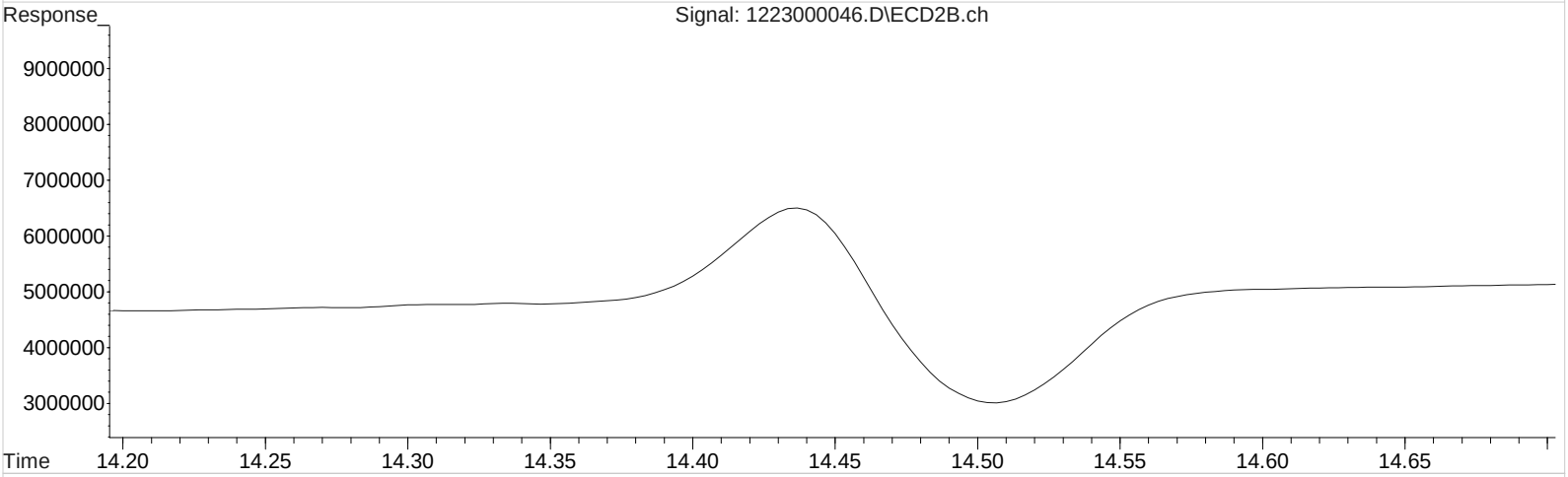
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000046.D Vial: 69
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 19:22:25 Operator: SMURRAY
Sample : K1811381-004MS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:56 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(11) Heptachlor Epoxide

14.507min 14.850 ug/L

response 20730572

Manual Integration:

Before

12/29/18

(11) Heptachlor Epoxide #2

11.400min 5.156 ug/L

response 11435080

(+) = Expected Retention Time

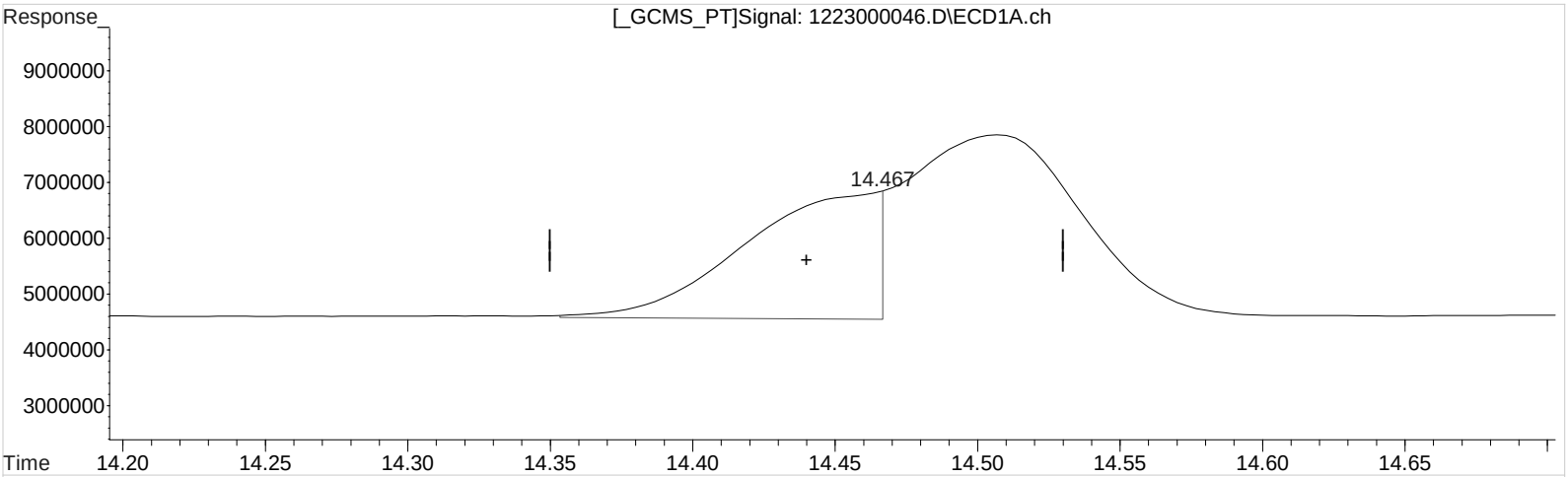
Quantitation Report (Qedit)

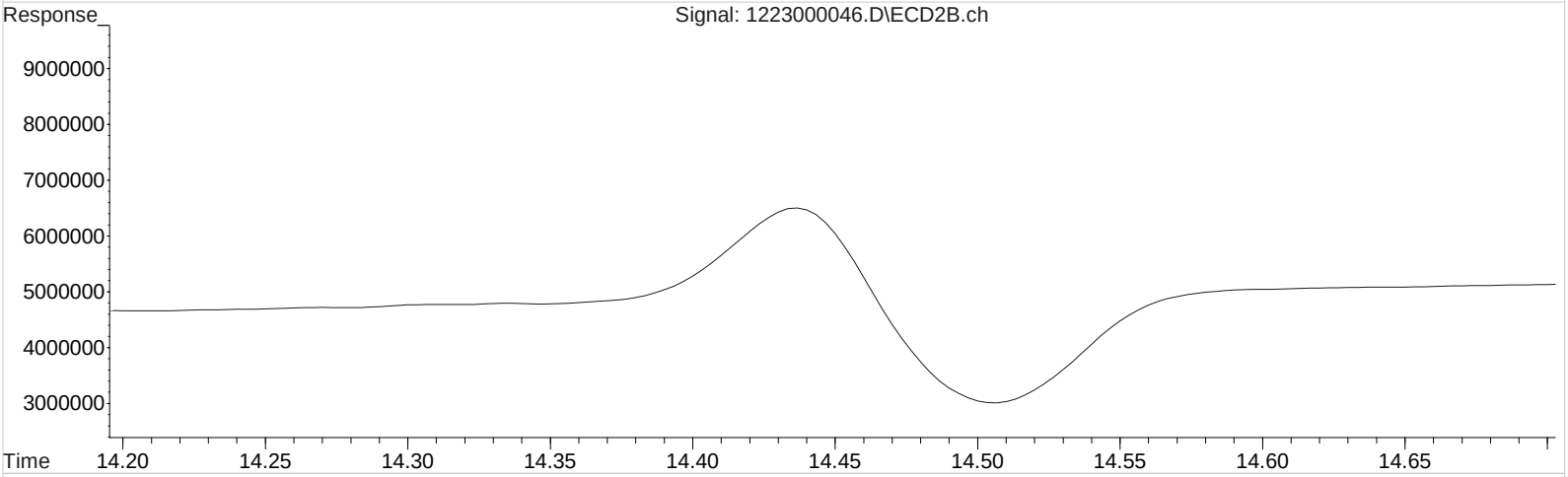
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000046.D Vial: 69
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 19:22:25 Operator: SMURRAY
Sample : K1811381-004MS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:56 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(11) Heptachlor Epoxide

14.467min 5.454 ug/L m

response 7613305

Manual Integration:

After

Wrong Peak

12/29/18

(11) Heptachlor Epoxide #2

11.400min 5.156 ug/L

response 11435080

(+) = Expected Retention Time

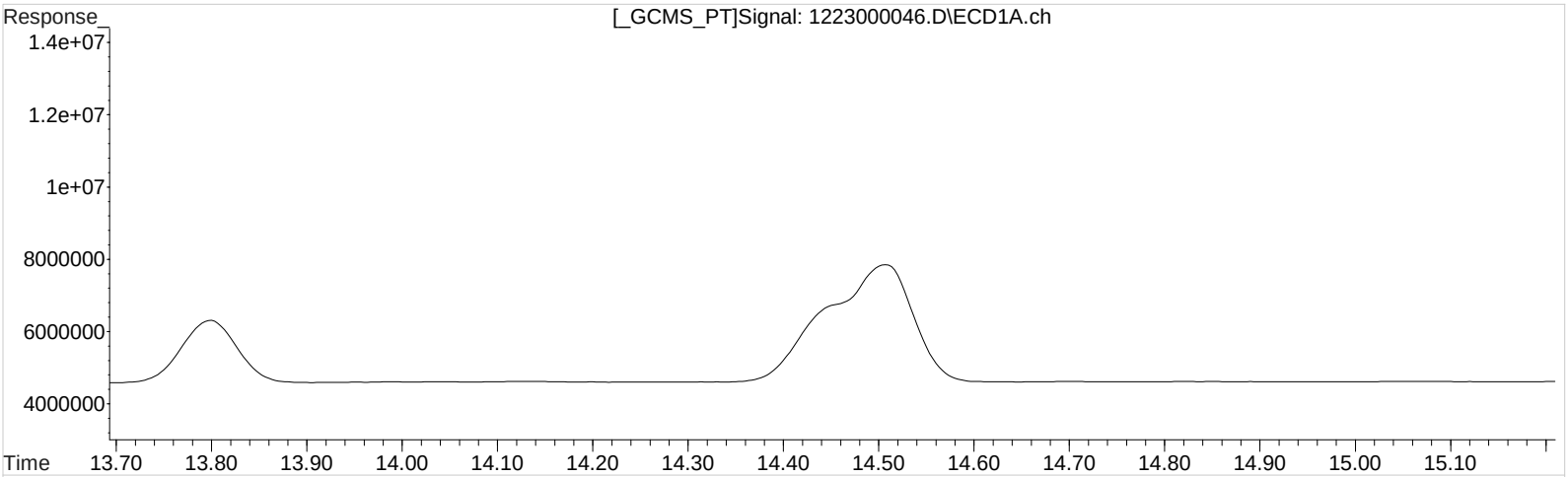
Quantitation Report (Qedit)

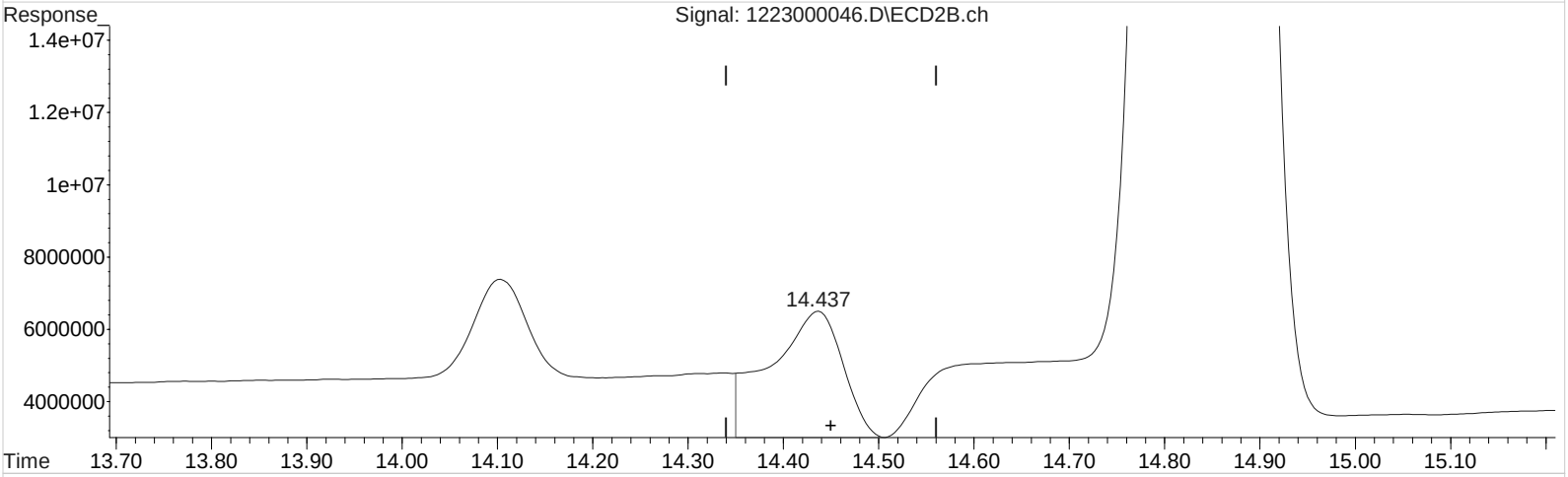
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000046.D Vial: 69
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 19:22:25 Operator: SMURRAY
Sample : K1811381-004MS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:56 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(15) Dieldrin

18.127min 5.456 ug/L

response 7254080

Manual Integration:

Before

12/29/18

(15) Dieldrin #2

14.437min 8.309 ug/L

response 18428075

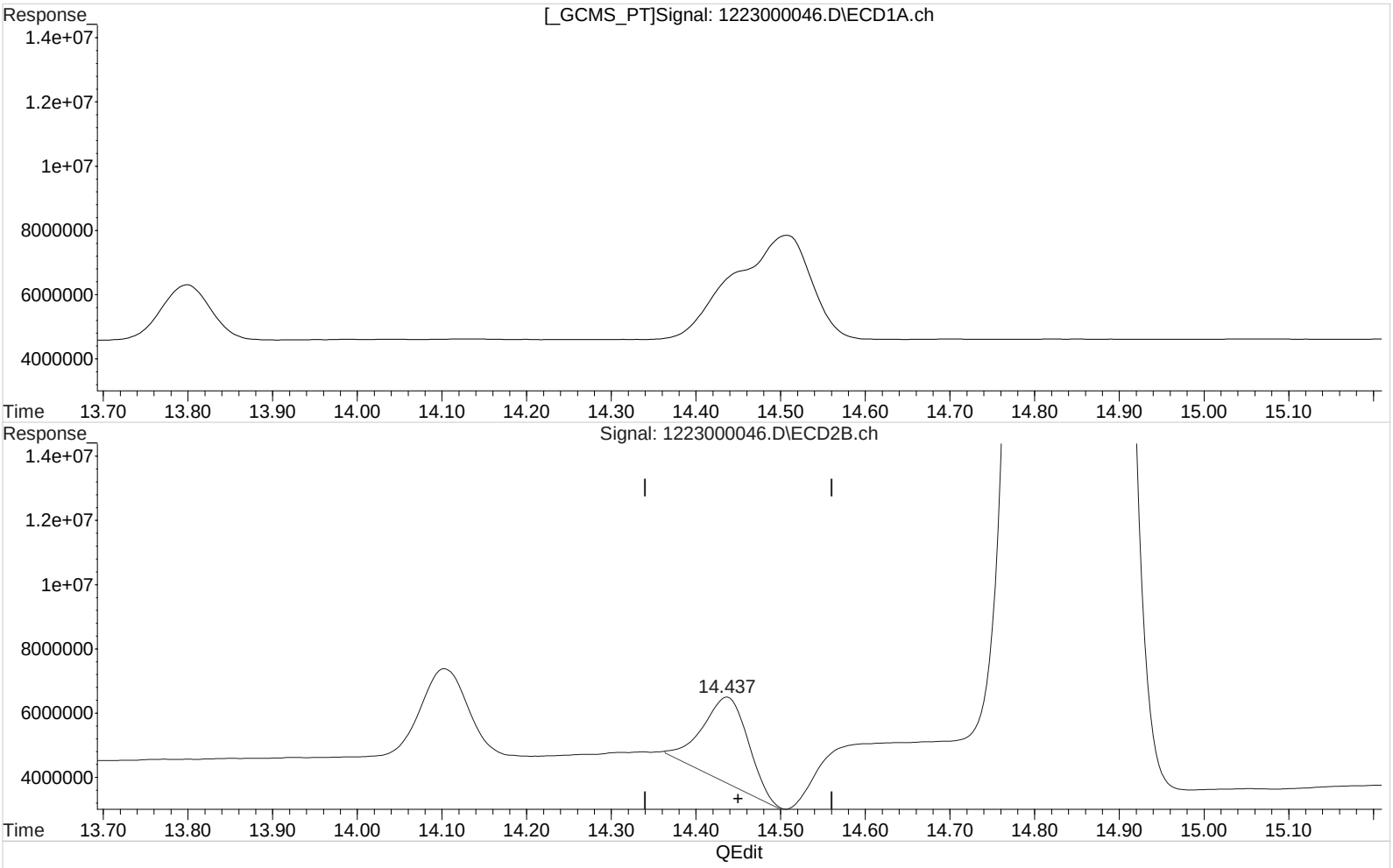
(+) = Expected Retention Time

1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000046.D Vial: 69
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 19:22:25 Operator: SMURRAY
Sample : K1811381-004MS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:56 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(15) Dieldrin

18.127min 5.456 ug/L

response 7254080

Manual Integration:

After

Baseline/Shoulder

12/29/18

(15) Dieldrin #2

14.437min 4.424 ug/L m

response 9812636

(+) = Expected Retention Time

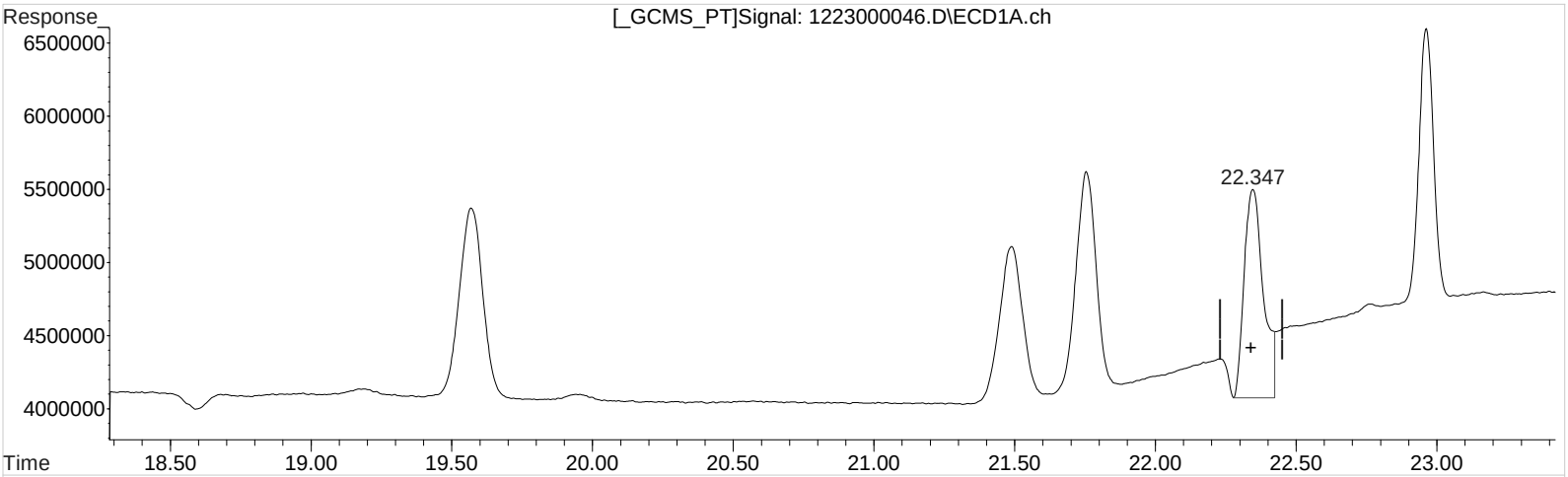
Quantitation Report (Qedit)

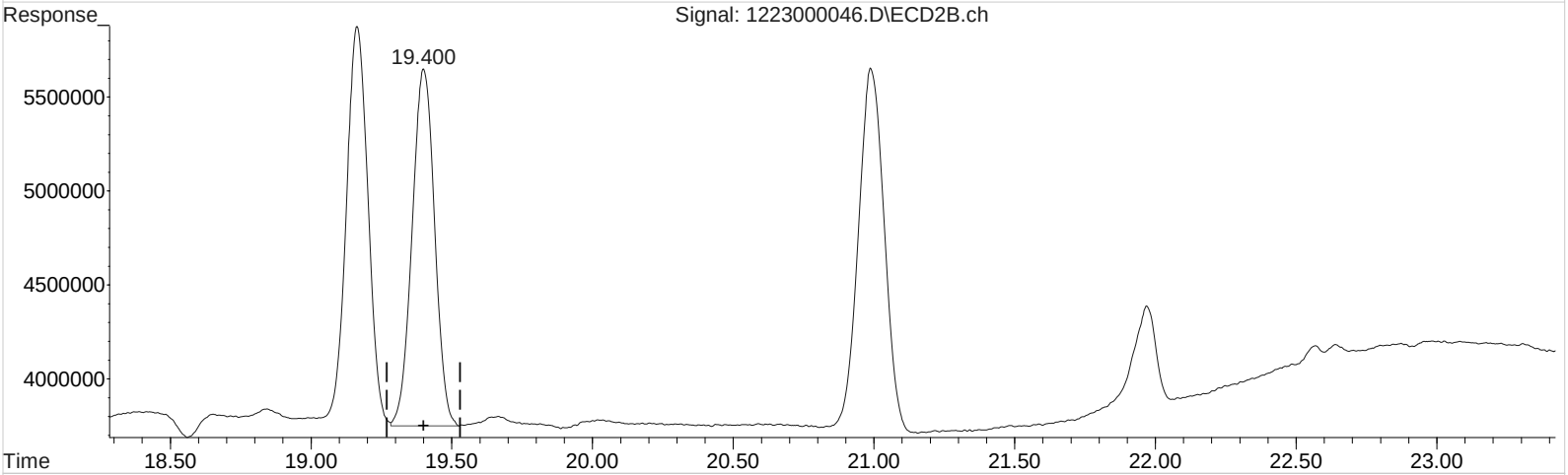
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000046.D Vial: 69
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 19:22:25 Operator: SMURRAY
Sample : K1811381-004MS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:56 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(20) Endrin Aldehyde

22.347min 6.280 ug/L

response 6828866

(20) Endrin Aldehyde #2

19.400min 6.078 ug/L

response 10587352

Manual Integration:

Before

12/29/18

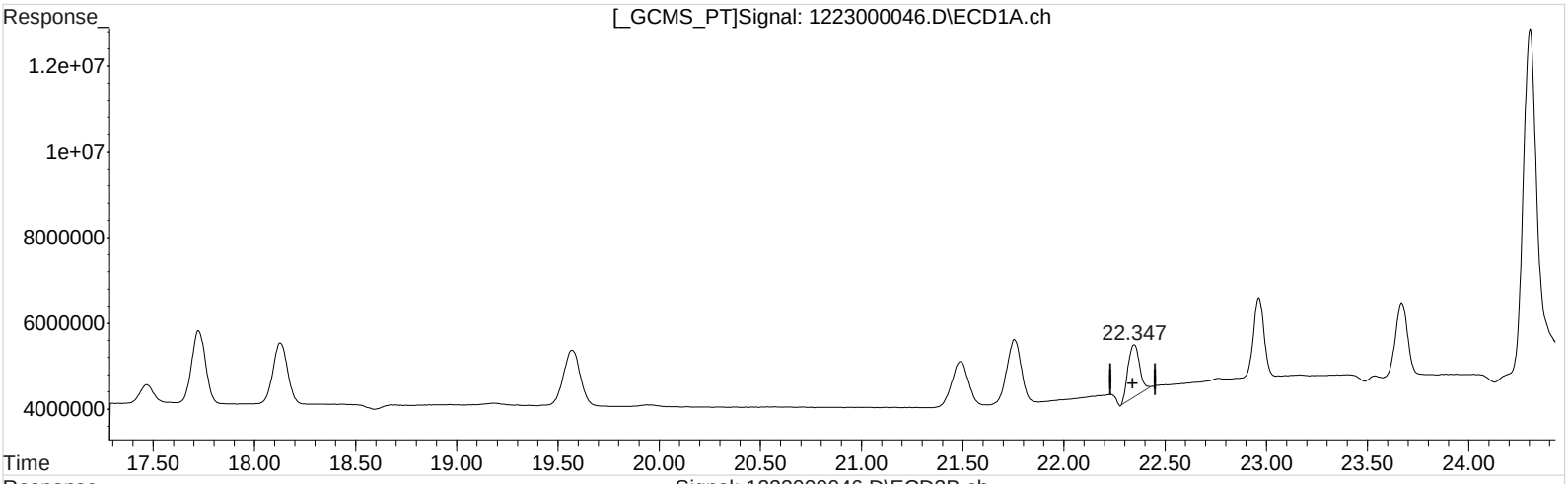
(+) = Expected Retention Time

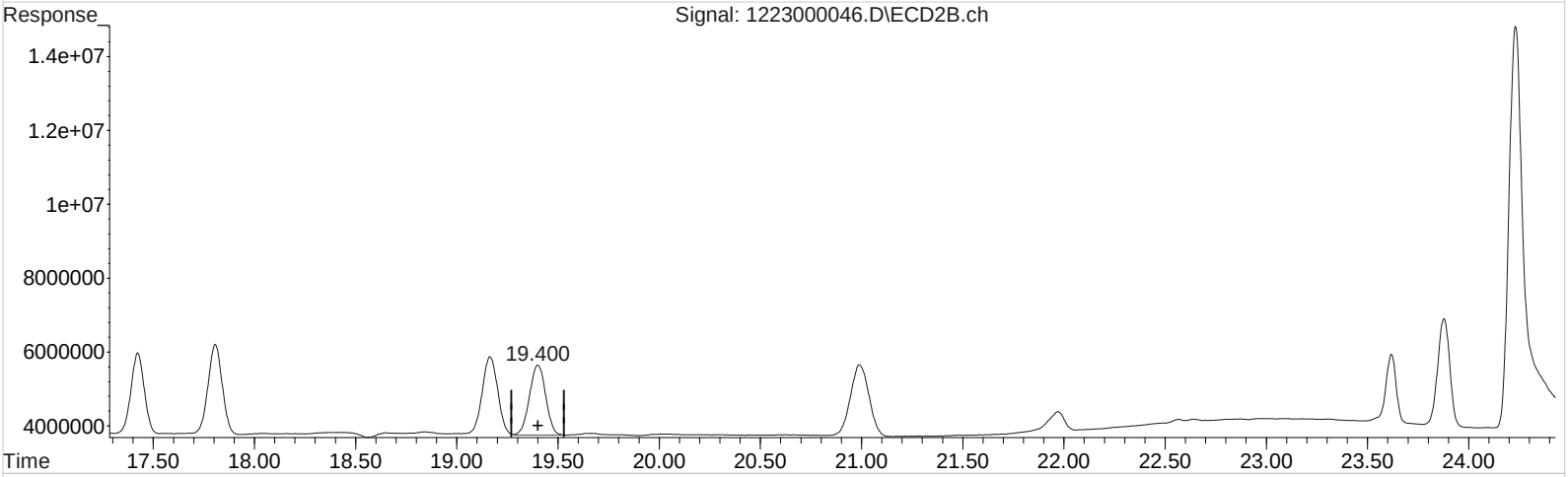
1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000046.D Vial: 69
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 19:22:25 Operator: SMURRAY
Sample : K1811381-004MS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:56 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(20) Endrin Aldehyde

22.347min 4.498 ug/L m

response 4891727

Manual Integration:

After

Baseline/Shoulder

12/29/18

(20) Endrin Aldehyde #2

19.400min 6.078 ug/L

response 10587352

(+) = Expected Retention Time

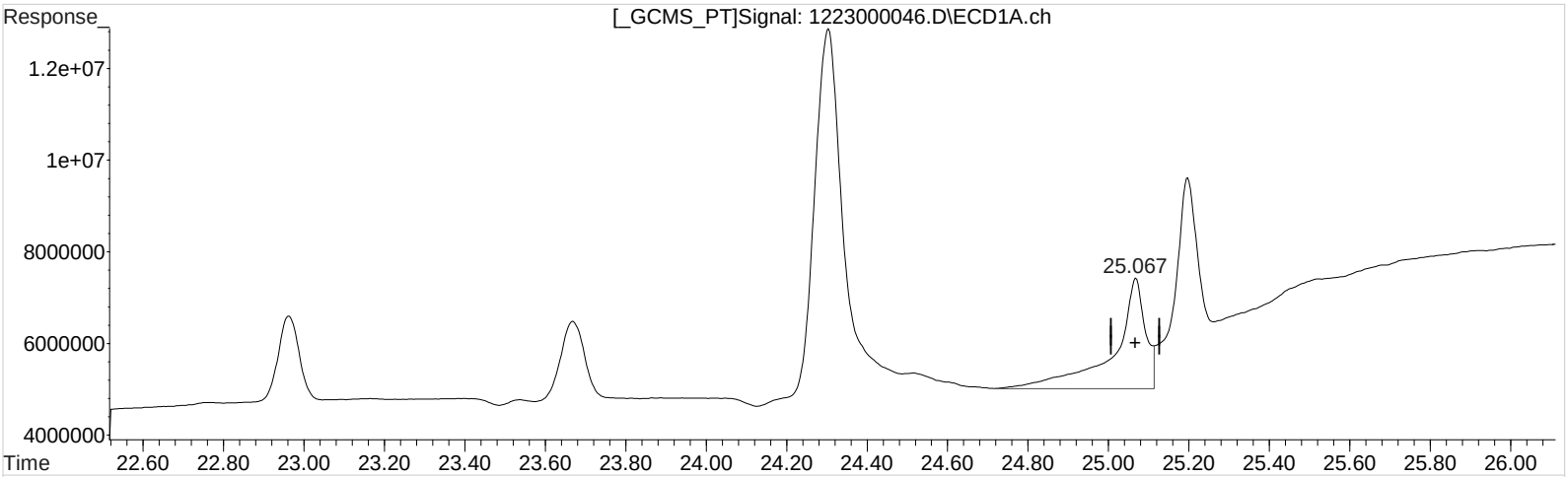
Quantitation Report (Qedit)

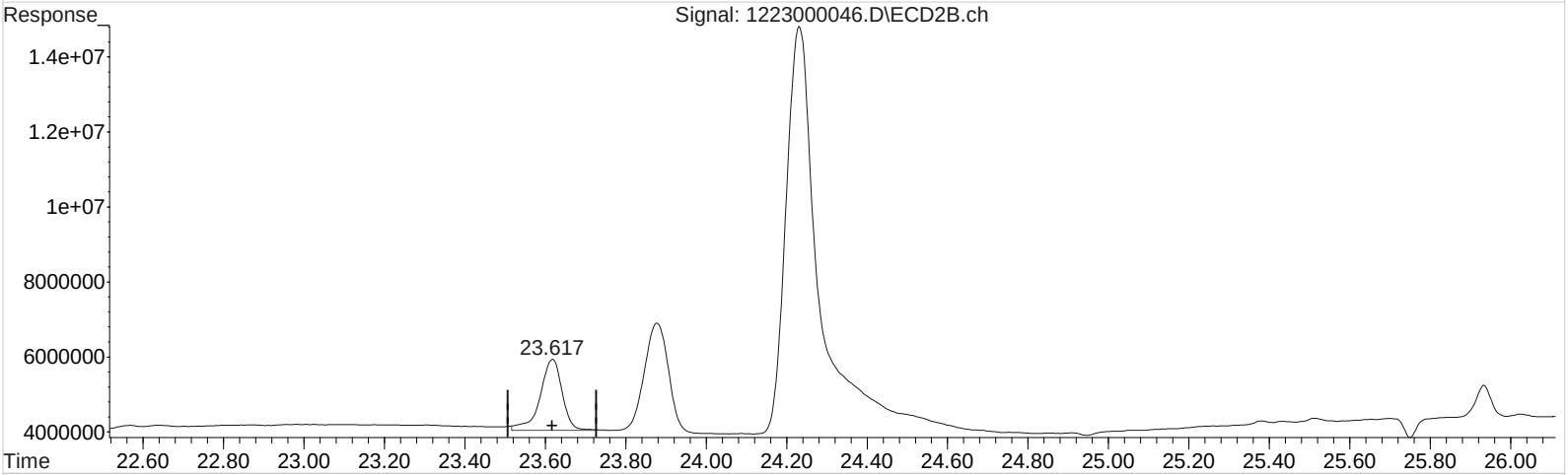
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000046.D Vial: 69
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 19:22:25 Operator: SMURRAY
Sample : K1811381-004MS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:56 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(24) Methoxychlor

25.067min 18.055 ug/L

response 13347301

Manual Integration:

Before

12/29/18

(24) Methoxychlor #2

23.617min 5.807 ug/L

response 7256986

(+) = Expected Retention Time

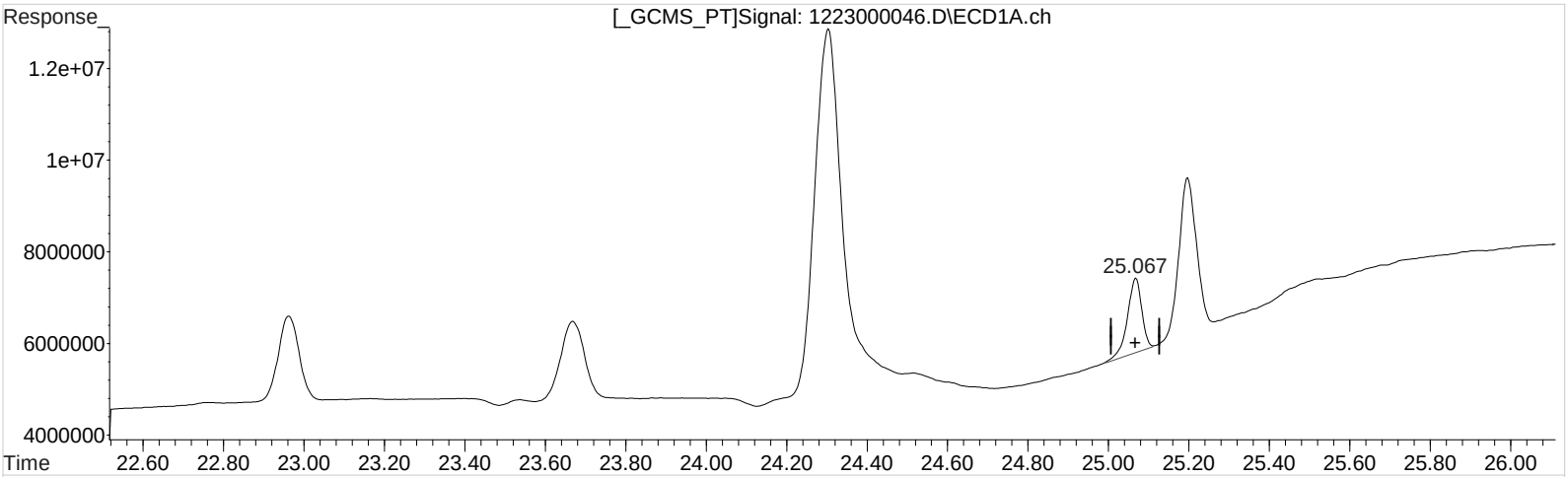
Quantitation Report (Qedit)

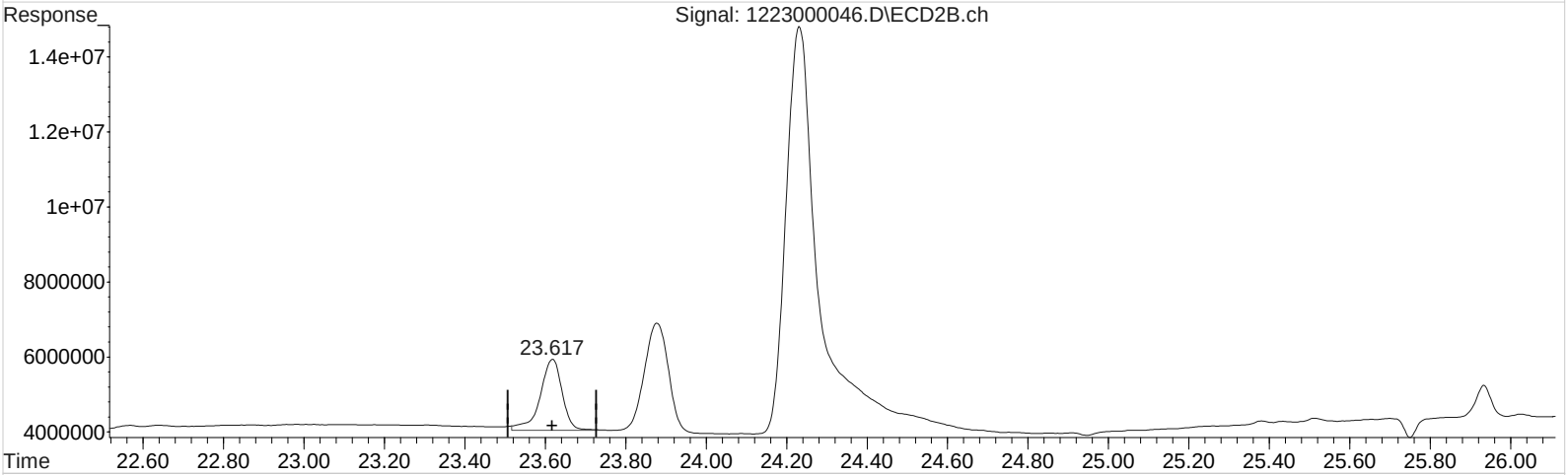
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000046.D Vial: 69
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 19:22:25 Operator: SMURRAY
Sample : K1811381-004MS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:56 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(24) Methoxychlor

25.067min 5.510 ug/L m

response 4073585

Manual Integration:

After

Baseline/Shoulder

12/29/18

(24) Methoxychlor #2

23.617min 5.807 ug/L

response 7256986

(+) = Expected Retention Time

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000048.D
Lab ID: KWG1806260-1 -- K1811381-004MS
RunType: MS
Matrix: SOIL

Date Acquired: 12/24/2018 20:34
Date Quantitated: 12/29/2018 11:24
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	gamma-Chlordane	23.6	NA	20	NR
	Endrin Aldehyde	-21.9	NA	20	NR

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000048.D\1223000048C.
Lab ID: KWG1806260-1 -- K1811381-004MS
RunType: MS
Matrix: SOIL

Date Acquired: 12/24/2018 20:34
Date Quantitated: 12/29/2018 11:24
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000048.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000048.D\1223000048c.d			**Vial:**	71
Acqu Date:	12/24/2018 20:34	**Quant Date:**	12/29/2018 11:24	**Dilution:**	1.0
Run Type:	MS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806260-1 -- K1811381-004MS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/06/2018

Analysis Lot:	KWG1806753	**Prep Lot:**	KWG1806260	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511		
Prep Ref:	1705210	**Prep Date:**	12/03/2018		

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:	J:\GC34\DATA\122318\1223000042.D	**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.47	-0.04 c	4.03	-0.02 c	105817246	124493707	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	4.47	-0.04 c	4.03	-0.01 c	105817246	124493707	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	4.47	-0.04 c	4.03	-0.02 c	105817246	124493707	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt
1	Tetrachloro-m-xylene	6.93	-0.01	5.54	-0.01	5430691	8131847	5.26		5.17				NR
						%Recovery =		105	OK	103	OK	**Limits =**	70-130	
1	Decachlorobiphenyl	29.98		27.48		6192006	8517934	4.62		4.20				NR
						%Recovery =		92	OK	84	OK	**Limits =**	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Hexachlorobenzene			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	beta-BHC			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	gamma-BHC (Lindane)			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	NR
1	delta-BHC			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	NR
1	Aldrin			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Isodrin			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\122318\1223000048.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000048.D\1223000048c.d			**Vial:**	71
Acqu Date:	12/24/2018 20:34	**Quant Date:**	12/29/2018 11:24	**Dilution:**	1.0
Run Type:	MS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806260-1 -- K1811381-004MS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan I			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	alpha-Chlordane			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Dieldrin			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDE			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	NR
1	Endosulfan II			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDD			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin Aldehyde			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan Sulfate			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDT			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin Ketone			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Methoxychlor			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	NR
1	2,4'-DDE			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDD			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDT			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	211.74	229.40	0.0106	0.0115	**0.0106**
2	Toxaphene {1}	18.91 -0.01	16.45	1222775	2253828	260.68	260.44	0.0130	0.0130	
2	Toxaphene {2}	19.50		3593201	0**d**	270.44	0.0000	0.0135	0.0020U	
2	Toxaphene {3}	21.67	18.02	3138724**m**	8815570	187.83	213.43	0.00939	0.0107	
2	Toxaphene {4}	22.12	19.56	3936109	6246908	196.89	218.20	0.00984	0.0109	
2	Toxaphene {5}	22.31	22.27	690477	5204018	60.46	224.08	0.00302	0.0112	RPD
2	Toxaphene {6}	23.71	23.02	1304320**m**	8527400	294.15	230.87	0.0147	0.0115	
	Chlordane			0	0	123.34	99.28	0.00617	0.00496	**0.00496**
3	Chlordane {1}	10.16	7.93	5412103	6732424	119.65	84.28	0.00598	0.00421	
3	Chlordane {2}	10.97	8.43	5392876	8127011	88.54	76.00	0.00443	0.00380	
3	Chlordane {3}	12.44	11.56	6986239	6467450	149.18	113.70	0.00746	0.00569	
3	Chlordane {4}	16.20	12.40	17335321	24219949	130.02	109.46	0.00650	0.00547	
3	Chlordane {5}	16.45	12.54	13163189	16226049	105.33	115.54	0.00527	0.00578	
3	Chlordane {6}	16.79	12.85	12443375	19432685	147.30	96.68	0.00736	0.00483	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000048.D Vial: 71
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 20:34:21 Operator: SMURRAY
Sample : K1811381-004MS T/C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 29 11:24:45 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	4.473	4.033	105.8E6	124.5E6	100.000	100.000	
29)	1-Bromo-2...	4.473	4.033	105.8E6	124.5E6	100.000	100.000	
36)	1-Bromo-2...	4.473	4.033	105.8E6	124.5E6	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	6.933	5.540	5430691	8131847	5.264	5.171	
28) s	Decachlor...	29.983	27.483	6192006	8517934	4.618	4.203	
	Target Compounds							
30)	Toxaphene	18.913	16.453	1222775	2253828	260.676	260.442	
31)	Toxaphene...	19.497	0.000	3593201	0	270.437	N.D.	d#
32)	Toxaphene...	21.670	18.020	3138724	8815570	187.829m	213.426	
33)	Toxaphene...	22.123	19.557	3936109	6246908	196.886	218.196	
34)	Toxaphene...	22.307	22.273	690477	5204018	60.460	224.081	#
35)	Toxaphene...	23.713	23.017	1304320	8527400	294.148m	230.868	
37)	Chlordane	10.163	7.933	5412103	6732424	119.647	84.279	#
38)	Chlordane...	10.967	8.433	5392876	8127011	88.543	76.003	
39)	Chlordane...	12.443	11.560	6986239	6467450	149.175	113.703	
40)	Chlordane...	16.203	12.403	17335321	24219949	130.020	109.460	
41)	Chlordane...	16.453	12.543	13163189	16226049	105.331	115.541	
42)	Chlordane...	16.787	12.847	12443375	19432685	147.296	96.682	#

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

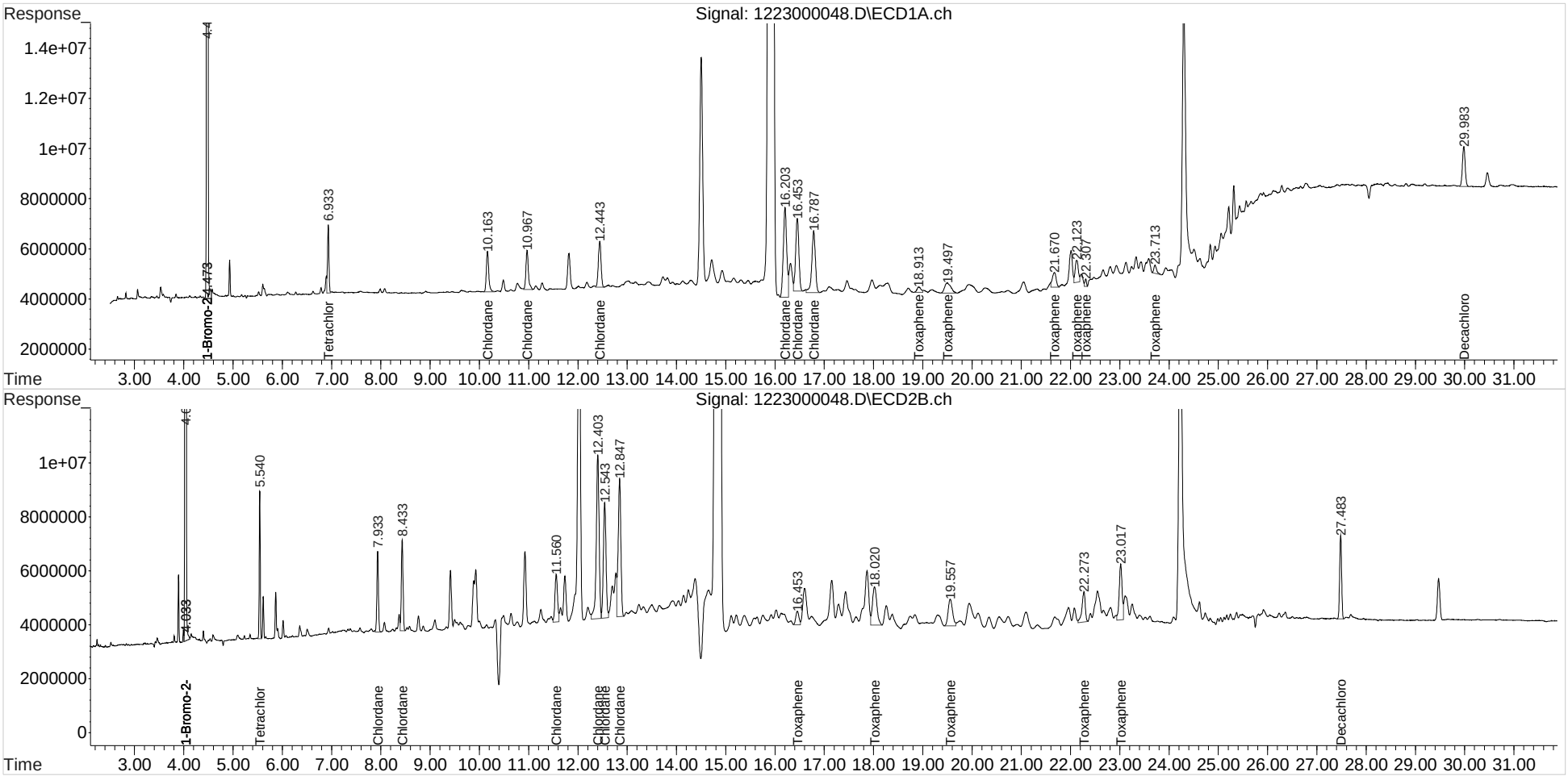
1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\122318\1223000048.D Vial: 71
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 20:34:21 Operator: SMURRAY
Sample : K1811381-004MS T/C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 29 11:24:45 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



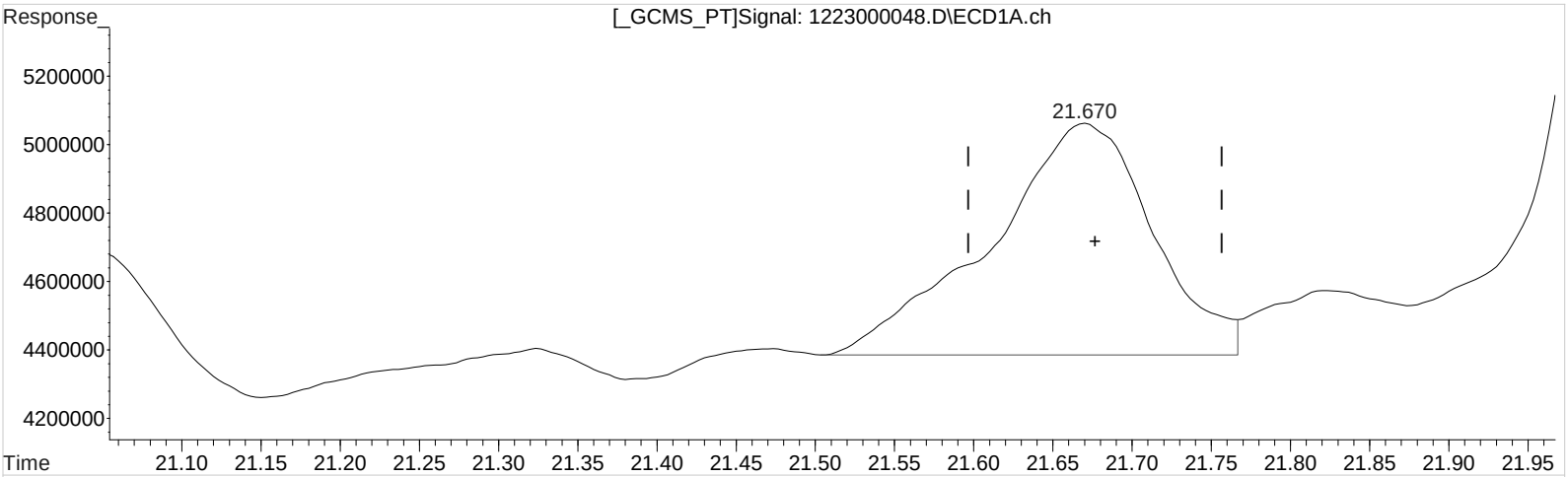
Quantitation Report (Qedit)

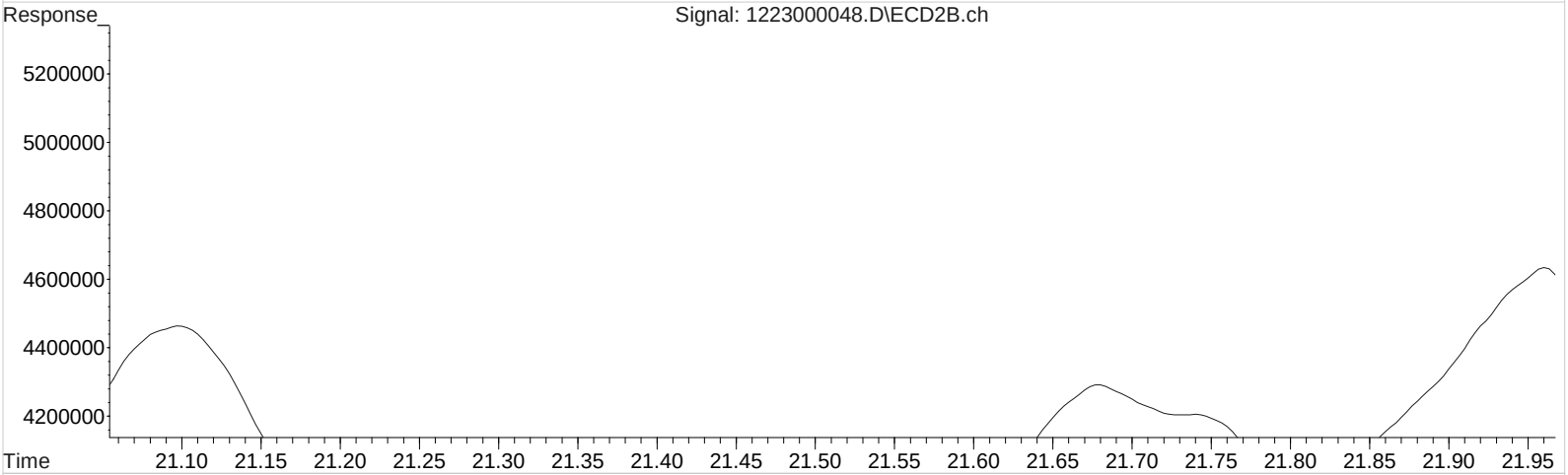
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000048.D Vial: 71
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 20:34:21 Operator: SMURRAY
Sample : K1811381-004MS T/C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:25:04 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(32) Toxaphene {3}

21.670min 288.063 ug/L

response 4813693

Manual Integration:

Before

12/29/18

(32) Toxaphene {3} #2

18.020min 213.426 ug/L

response 8815570

(+) = Expected Retention Time

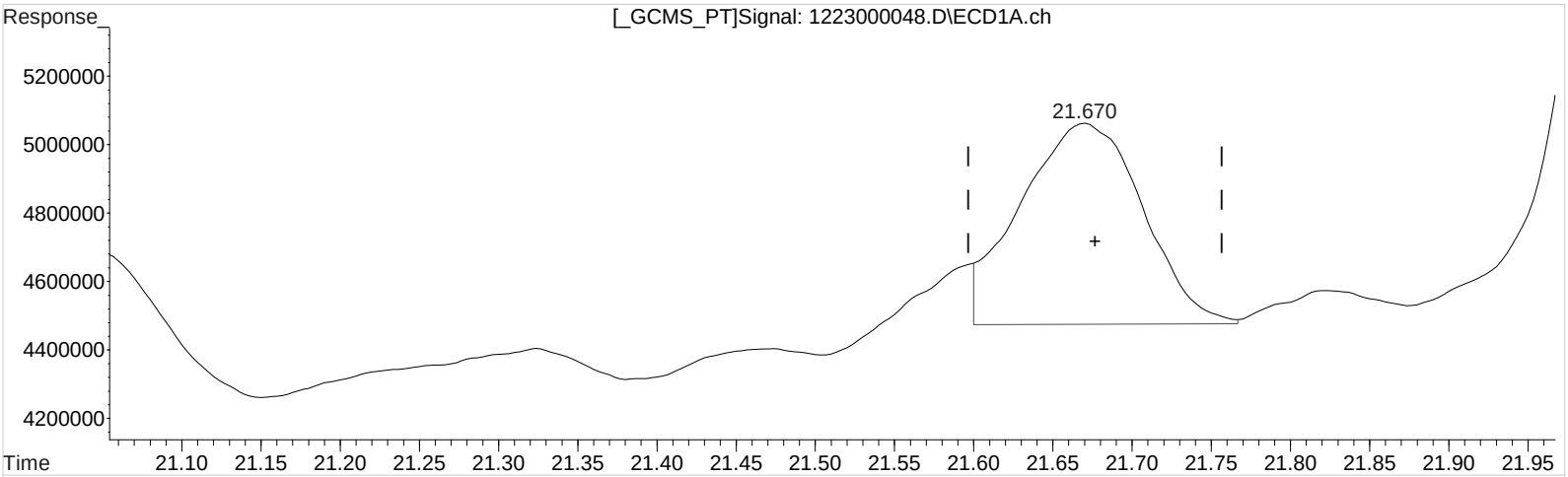
Quantitation Report (Qedit)

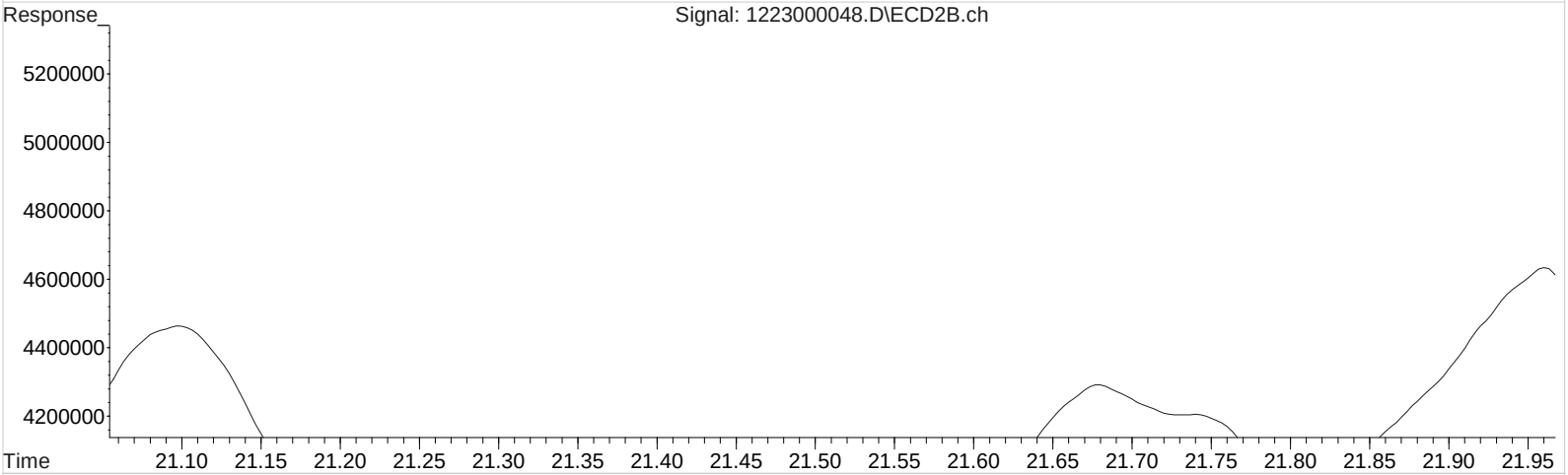
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000048.D Vial: 71
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 20:34:21 Operator: SMURRAY
Sample : K1811381-004MS T/C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:25:04 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(32) Toxaphene {3}

21.670min 187.829 ug/L m

response 3138724

Manual Integration:

After

Baseline/Shoulder

12/29/18

(32) Toxaphene {3} #2

18.020min 213.426 ug/L

response 8815570

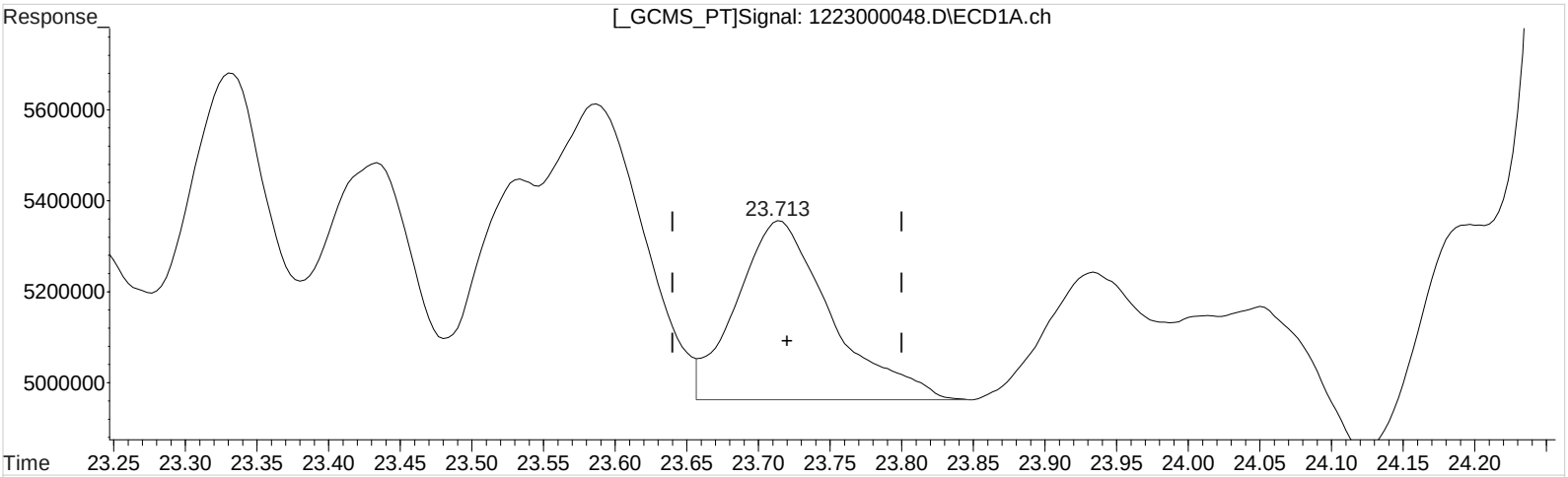
(+) = Expected Retention Time

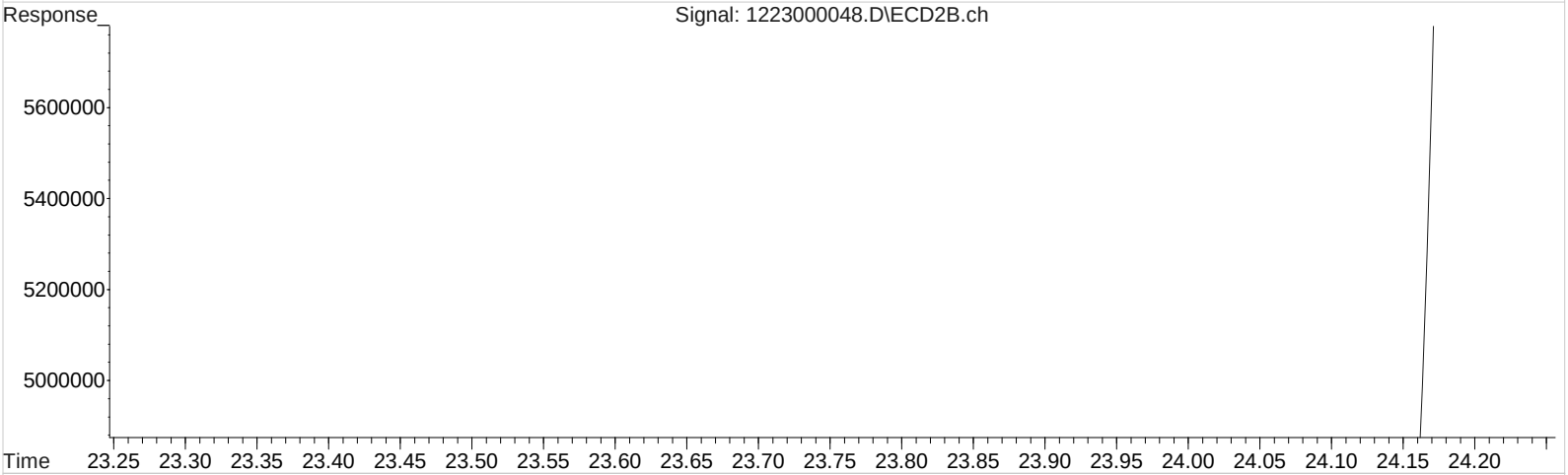
1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000048.D Vial: 71
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 20:34:21 Operator: SMURRAY
Sample : K1811381-004MS T/C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:25:04 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(35) Toxaphene {6}

23.713min 405.201 ug/L

response 1796758

Manual Integration:

Before

12/29/18

(35) Toxaphene {6} #2

23.017min 230.868 ug/L

response 8527400

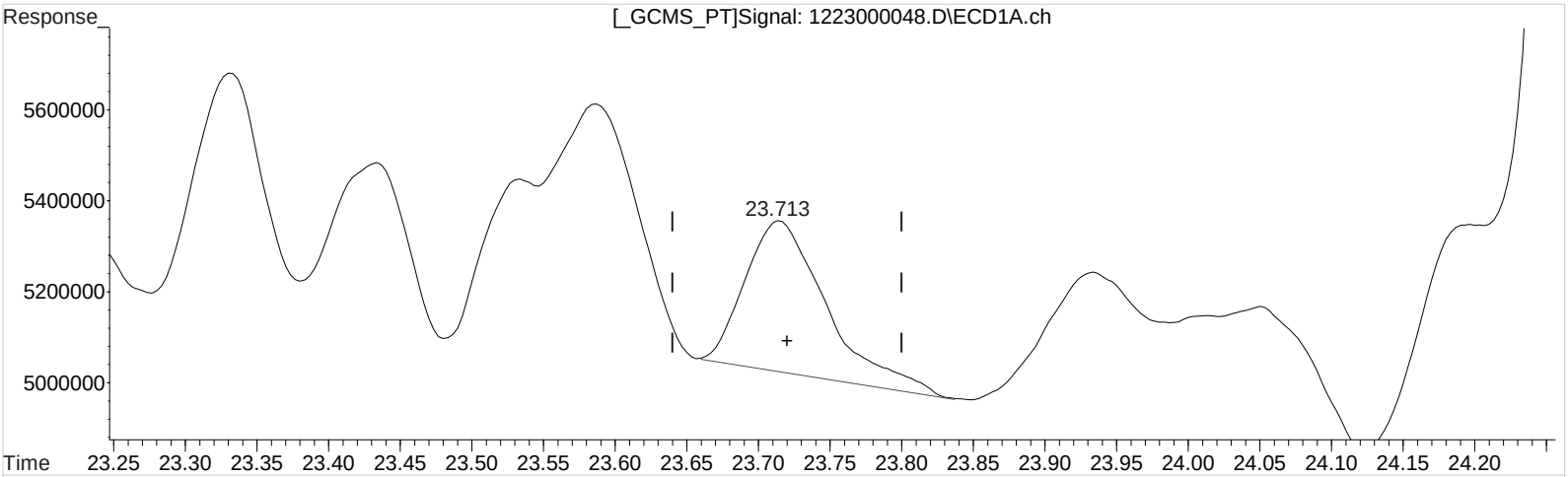
(+) = Expected Retention Time

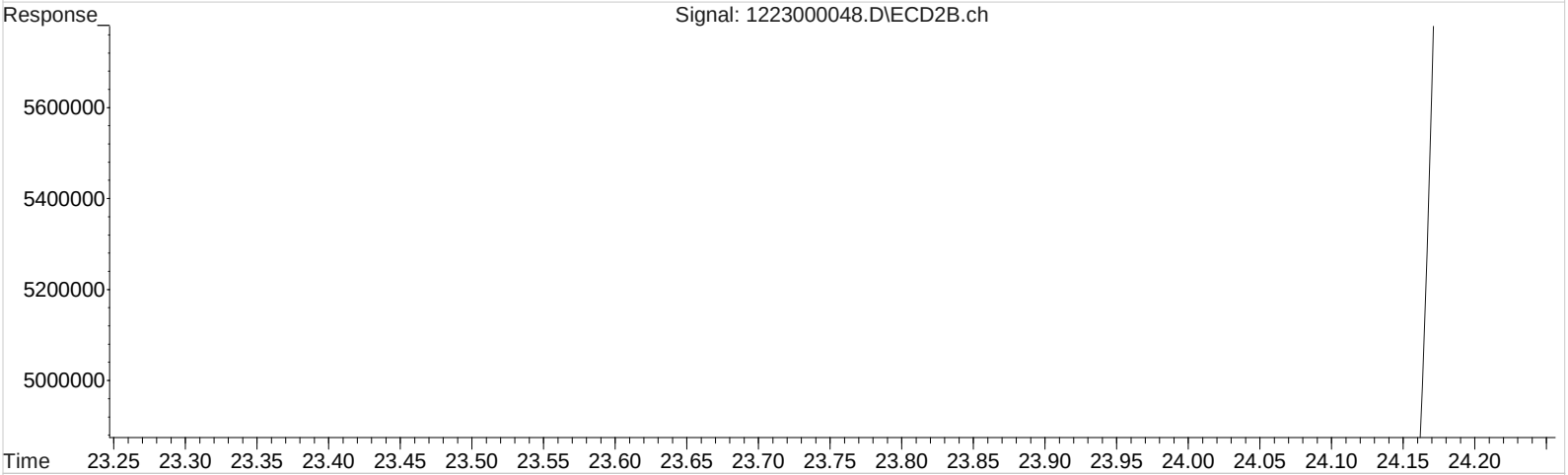
1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000048.D Vial: 71
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 20:34:21 Operator: SMURRAY
Sample : K1811381-004MS T/C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:25:04 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(35) Toxaphene {6}

23.713min 294.148 ug/L m

response 1304320

Manual Integration:

After

Baseline/Shoulder

12/29/18

(35) Toxaphene {6} #2

23.017min 230.868 ug/L

response 8527400

(+) = Expected Retention Time

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000047.D
Lab ID: KWG1806260-2 -- K1811381-004DMS
RunType: DMS
Matrix: SOIL

Date Acquired: 12/24/2018 19:58
Date Quantitated: 12/29/2018 11:23
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	gamma-Chlordane	23.6	NA	20	ICVOK
	Endrin Aldehyde	-21.9	NA	20	ICVOK
Continuing Calibration Recovery	Endrin Ketone	229.7	NA	20	
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	693190.3333	4772761.333	NR
	1-Bromo-2-nitrobenzene {3}	0	381986.6428	9527946.571	NR

Primary Review: _____

Secondary Review: _____

Printed: 12/29/2018 11:51:26
u:\Stealth\Crystal.rpt\except2.rpt

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000047.D\1223000047C.
Lab ID: KWG1806260-2 -- K1811381-004DMS
RunType: DMS
Matrix: SOIL

Date Acquired: 12/24/2018 19:58
Date Quantitated: 12/29/2018 11:23
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	beta-BHC	20.8	NA	20	RO
	delta-BHC	23.1	NA	20	RO
	Heptachlor	21.0	NA	20	RO
	Endrin Aldehyde	27.4	NA	20	RO
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	371179.4166	5484717.666	NR
	1-Bromo-2-nitrobenzene {3}	0	712037.8571	2848151.428	NR

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000047.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000047.D\1223000047c.d			**Vial:**	70
Acqu Date:	12/24/2018 19:58	**Quant Date:**	12/29/2018 11:23	**Dilution:**	1.0
Run Type:	DMS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806260-2 -- K1811381-004DMS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/06/2018

Analysis Lot:	KWG1806753	**Prep Lot:**	KWG1806260	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511		
Prep Ref:	1705211	**Prep Date:**	12/03/2018		

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:	J:\GC34\DATA\122318\1223000042.D	**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.48	-0.03	4.04	-0.01	127851631	152048571	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2				Rpt	
1	Tetrachloro-m-xylene	6.94	5.55	5652896	8596296	4.54	4.48				91	OK
				%Recovery =		91	OK	90	OK	**Limits =** 70-130		
1	Decachlorobiphenyl	29.98	27.48	6486390	9234913	4.00	3.73				80	OK
				%Recovery =		80	OK	75	OK	**Limits =** 70-130		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC	7.95		6.67		8154077	13126309	5.76	5.55	0.000288	0.000278	**0.000278**
1	Hexachlorobenzene	8.17	+0.01	6.47	+0.01	10307285	12547126	4.95	4.43	0.000247	0.000221	**0.000221**
1	beta-BHC	9.87		8.18		4407611	7418041	5.54	5.91CCV	0.000277	0.000296	**0.000277**
1	gamma-BHC (Lindane)	8.90		7.51		8022461	13177668	6.02	5.73	0.000301	0.000286	**0.000286**
1	delta-BHC	10.97		9.00		8557988	13996655	5.49	5.89CCV	0.000274	0.000294	**0.000274**
1	Heptachlor	10.81		8.44		9306501	13354834	7.19	5.43CCV	0.000359	0.000272	**0.000272**
1	Aldrin	12.29		9.37		7389886	12785373	5.19	5.64	0.000259	0.000282	**0.000259**
1	Isodrin	13.80		10.81		7019208	11444514	5.92	5.81	0.000296	0.000291	**0.000291**
1	Heptachlor Epoxide	14.44		11.40		7892682	12565314	5.29	5.33	0.000264	0.000267	**0.000264**

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\122318\1223000047.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000047.D\1223000047c.d			**Vial:**	70
Acqu Date:	12/24/2018 19:58	**Quant Date:**	12/29/2018 11:23	**Dilution:**	1.0
Run Type:	DMS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806260-2 -- K1811381-004DMS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane	16.21	12.41	8392177	13335399	5.47	5.40	0.000274	0.000270	**0.000270**
1	Endosulfan I	16.58	13.02	7211911	12188567	5.47	5.43	0.000273	0.000272	**0.000272**
1	alpha-Chlordane	16.45	12.85	8265995	13312622	5.59	5.63	0.000280	0.000281	**0.000280**
1	Dieldrin	18.13	14.45	7288799	12325547	5.13	5.23	0.000256	0.000261	**0.000256**
1	4,4'-DDE	17.72	14.10	8406748	12125549	5.55	5.30	0.000277	0.000265	**0.000265**
1	Endrin	19.57 +0.01	16.10	7647465	13257875	5.65	5.64	0.000283	0.000282	**0.000282**
1	Endosulfan II	21.75	17.80 -0.01	8004530	12783600	5.91	5.58	0.000296	0.000279	**0.000279**
1	4,4'-DDD	21.49	17.42	6735619	10918928	6.24	5.83	0.000312	0.000291	**0.000291**
1	Endrin Aldehyde	22.34	19.40	6316510**m**	11275641	5.43	6.09CCV	0.000272	0.000305	**0.000272**
1	Endosulfan Sulfate	23.67	20.99	7126954	13278972	5.14	5.45	0.000257	0.000273	**0.000257**
1	4,4'-DDT	22.96	19.16 -0.01	7077729	11789858	5.43	5.57	0.000272	0.000278	**0.000272**
1	Endrin Ketone	25.19 -0.02	23.88	12633654	12746110	8.49CCV	4.78	0.000424	0.000239	**0.000239**P
1	Methoxychlor	25.07 +0.01	23.62	3929669**m**	6938063	4.97	5.22	0.000248	0.000261	**0.000248**
1	2,4'-DDE			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDD			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDT			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	0.0000	0.0000	0.00200U	0.00200U	NR
2	Toxaphene {1}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {2}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {3}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {5}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {6}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
	Chlordane			0	0	0.0000	0.0000	0.00100U	0.00100U	NR
3	Chlordane {1}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {2}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {3}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {4}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {5}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {6}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000047.D Vial: 70
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 19:58:33 Operator: SMURRAY
Sample : K1811381-004DMS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 29 11:23:51 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	4.483	4.043	127.9E6	152.0E6	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	6.940	5.550	5652896	8596296	4.535	4.476	
28) s	Decachlor...	29.983	27.483	6486390	9234913	4.004	3.731	
	Target Compounds							
3)	alpha-BHC	7.947	6.670	8154077	13126309	5.756	5.552	
4)	Hexachlor...	8.167	6.467	10307285	12547126	4.949	4.427	
5)	beta-BHC	9.873	8.183	4407611	7418041	5.537	5.910	
6)	gamma-BHC...	8.900	7.507	8022461	13177668	6.018	5.728	
7)	delta-BHC	10.973	8.997	8557988	13996655	5.486	5.885	
8)	Heptachlor	10.807	8.440	9306501	13354834	7.186	5.432	
9)	Aldrin	12.290	9.367	7389886	12785373	5.187	5.637	
10)	Isodrin	13.797	10.807	7019208	11444514	5.915	5.811	
11)	Heptachlo...	14.440	11.397	7892682	12565314	5.285	5.331	
12)	gamma-Chl...	16.210	12.407	8392177	13335399	5.471	5.401	
13)	Endosulfan I	16.583	13.023	7211911	12188567	5.465	5.430	
14)	alpha-Chl...	16.453	12.847	8265995	13312622	5.592	5.629	
15)	Dieldrin	18.127	14.450	7288799	12325547	5.125	5.229	
16)	4,4'-DDE	17.723	14.103	8406748	12125549	5.549	5.296	
17)	Endrin	19.570	16.097	7647465	13257875	5.653	5.643	
18)	Endosulfa...	21.750	17.803	8004530	12783600	5.912	5.580	
19)	4,4'-DDD	21.487	17.423	6735619	10918928	6.240	5.826	
20)	Endrin Al...	22.340	19.400	6316510	11275641	5.430m	6.091	
21)	Endosulfa...	23.670	20.990	7126954	13278972	5.142	5.454	
22)	4,4'-DDT	22.960	19.163	7077729	11789858	5.430	5.569	
23)	Endrin Ke...	25.193	23.877	12633654	12746110	8.485	4.784	#
24)	Methoxychlor	25.067	23.617	3929669	6938063	4.969m	5.223	

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

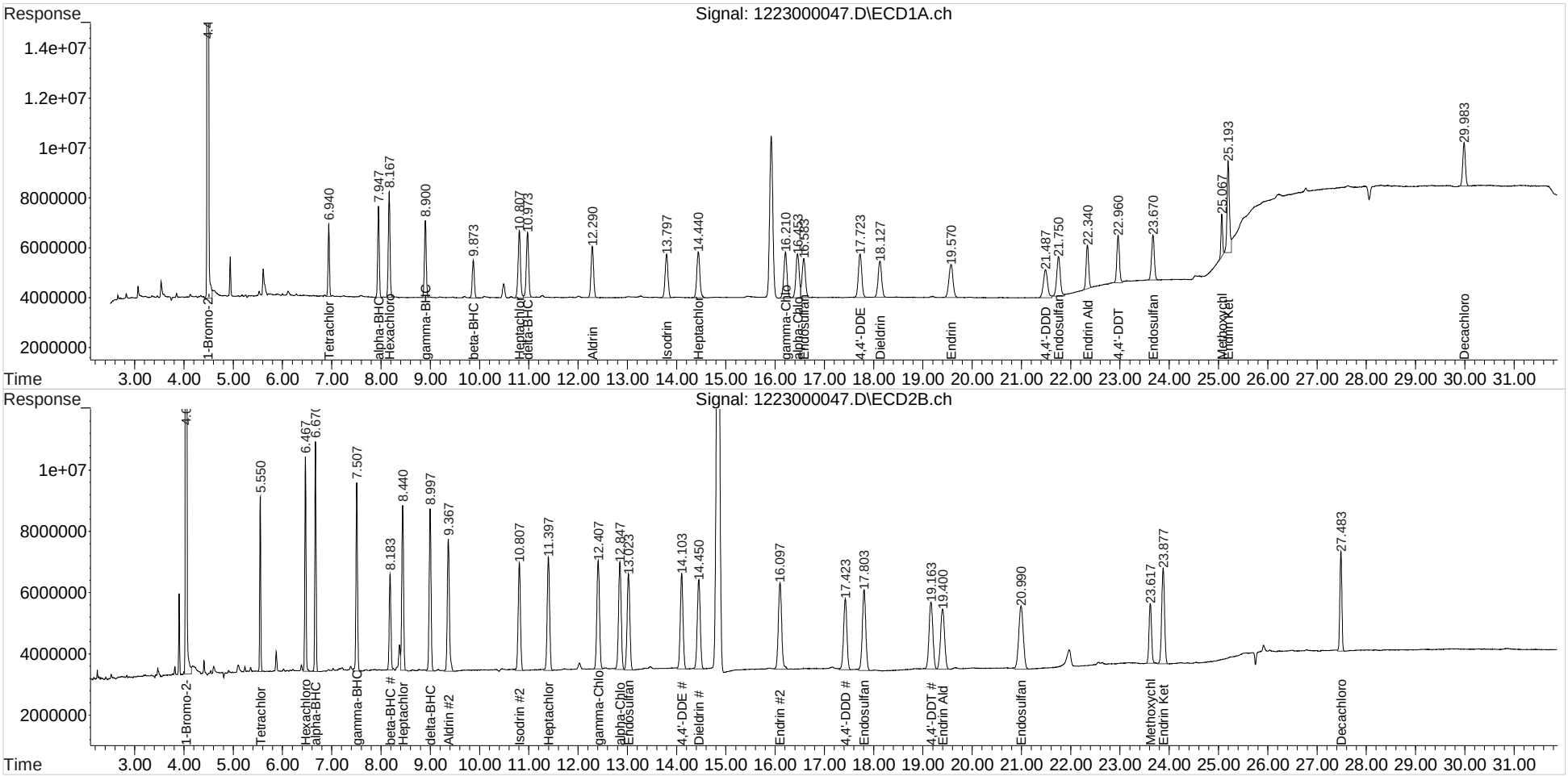
1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\122318\1223000047.D Vial: 70
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 19:58:33 Operator: SMURRAY
Sample : K1811381-004DMS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 29 11:23:51 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



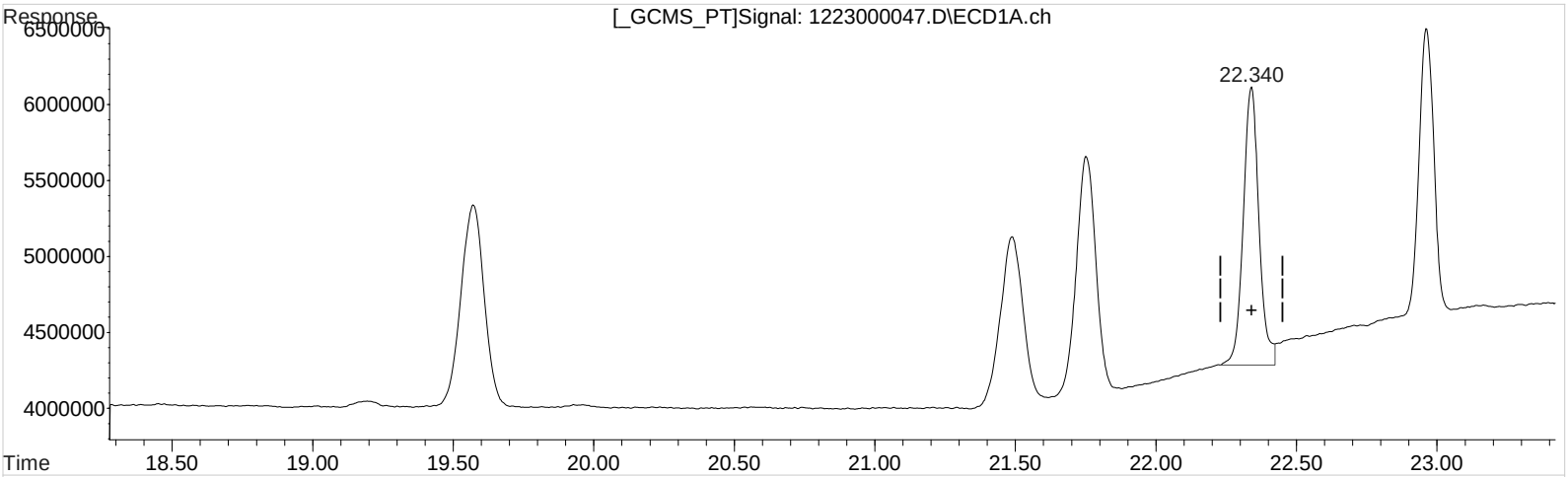
Quantitation Report (Qedit)

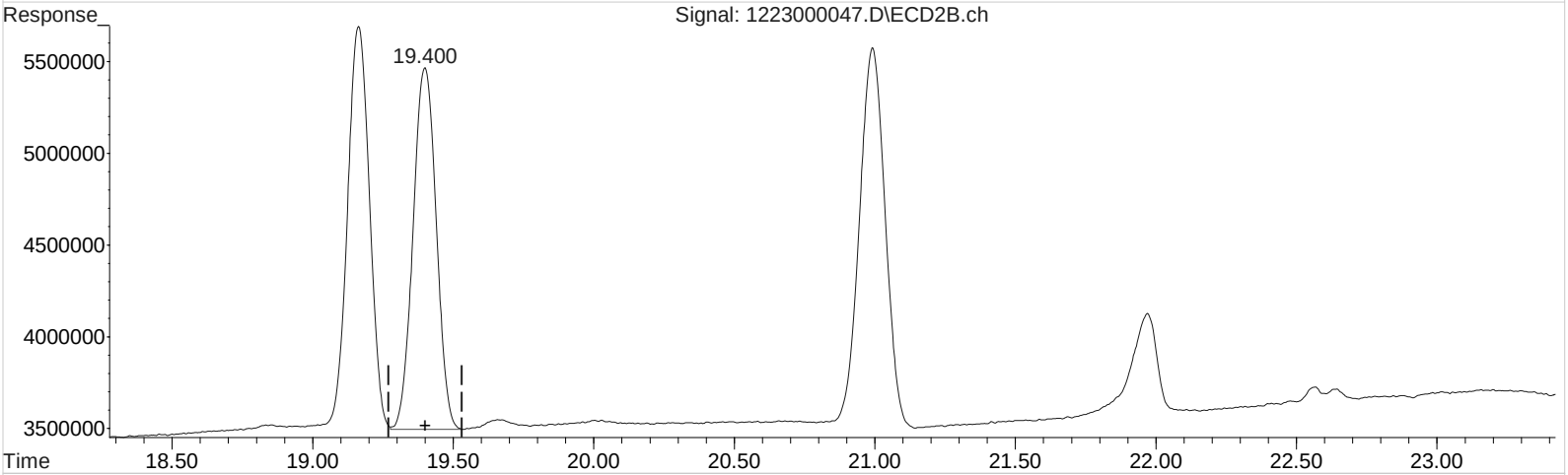
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000047.D Vial: 70
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 19:58:33 Operator: SMURRAY
Sample : K1811381-004DMS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:25:00 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(20) Endrin Aldehyde

22.340min 6.168 ug/L

response 7174872

(20) Endrin Aldehyde #2

19.400min 6.091 ug/L

response 11275641

Manual Integration:

Before

12/29/18

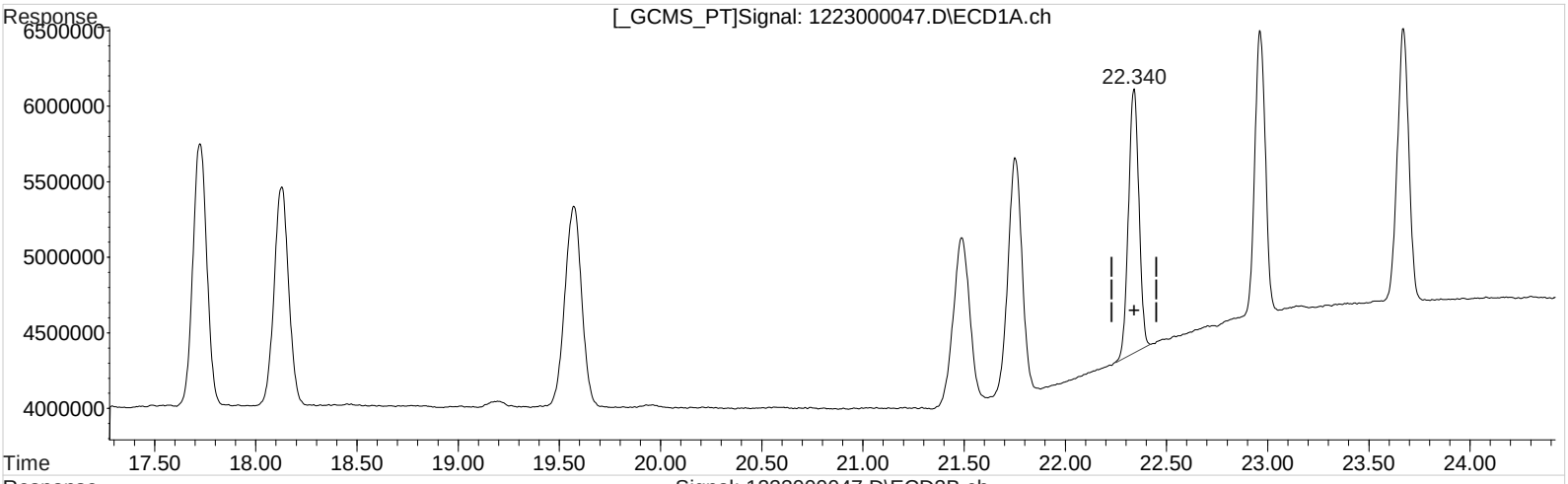
(+) = Expected Retention Time

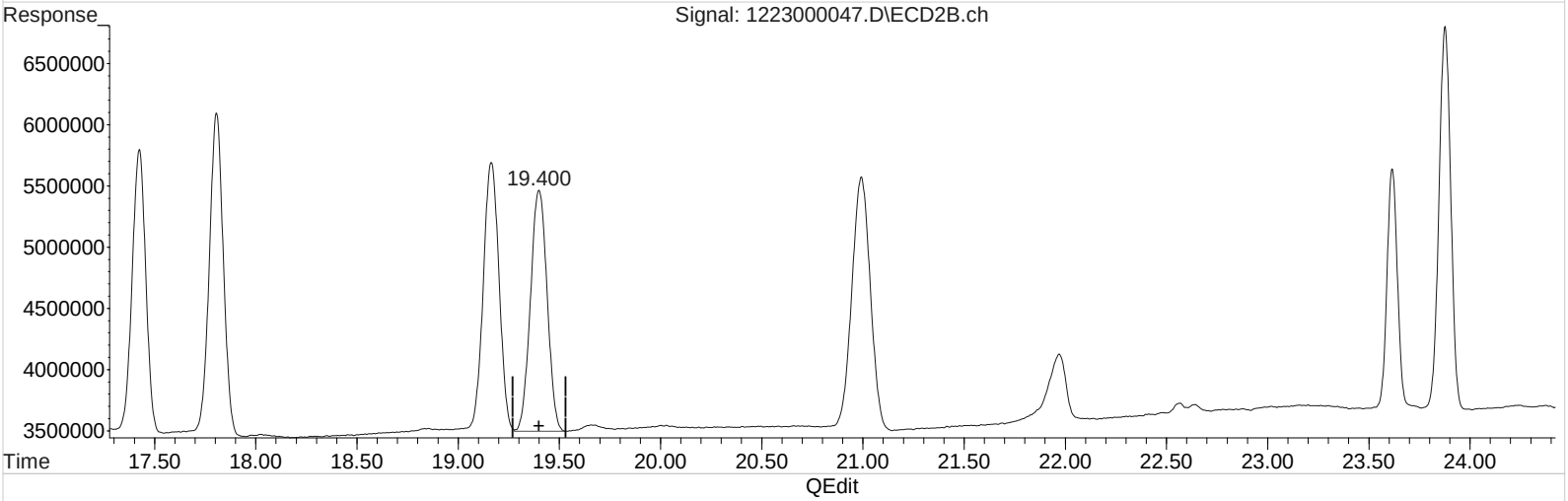
1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000047.D Vial: 70
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 19:58:33 Operator: SMURRAY
Sample : K1811381-004DMS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:25:00 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(20) Endrin Aldehyde

22.340min 5.430 ug/L m

response 6316510

Manual Integration:

After

Baseline/Shoulder

12/29/18

(20) Endrin Aldehyde #2

19.400min 6.091 ug/L

response 11275641

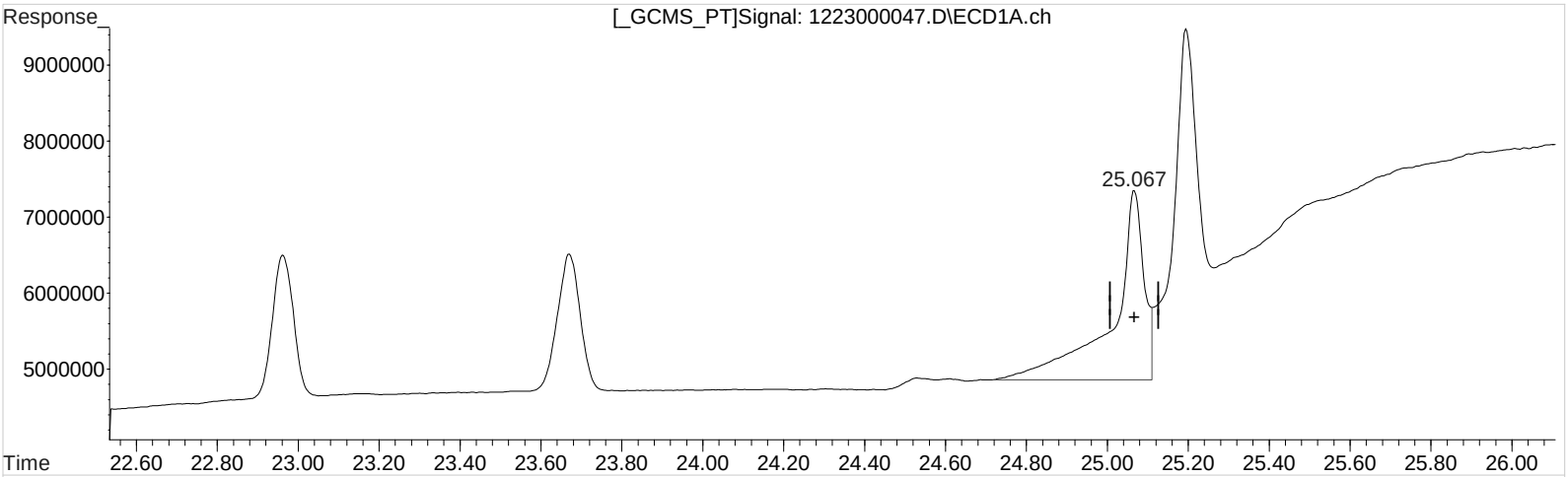
(+) = Expected Retention Time

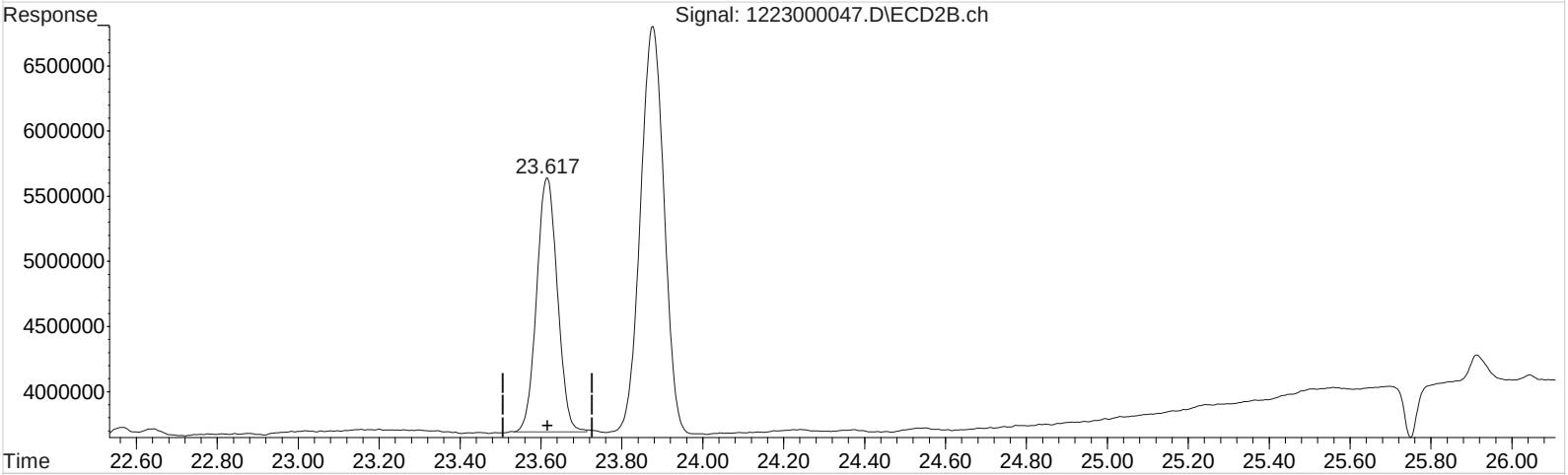
1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000047.D Vial: 70
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 19:58:33 Operator: SMURRAY
Sample : K1811381-004DMS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:25:00 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(24) Methoxychlor

25.067min 17.049 ug/L

response 13482299

Manual Integration:

Before

12/29/18

(24) Methoxychlor #2

23.617min 5.223 ug/L

response 6938063

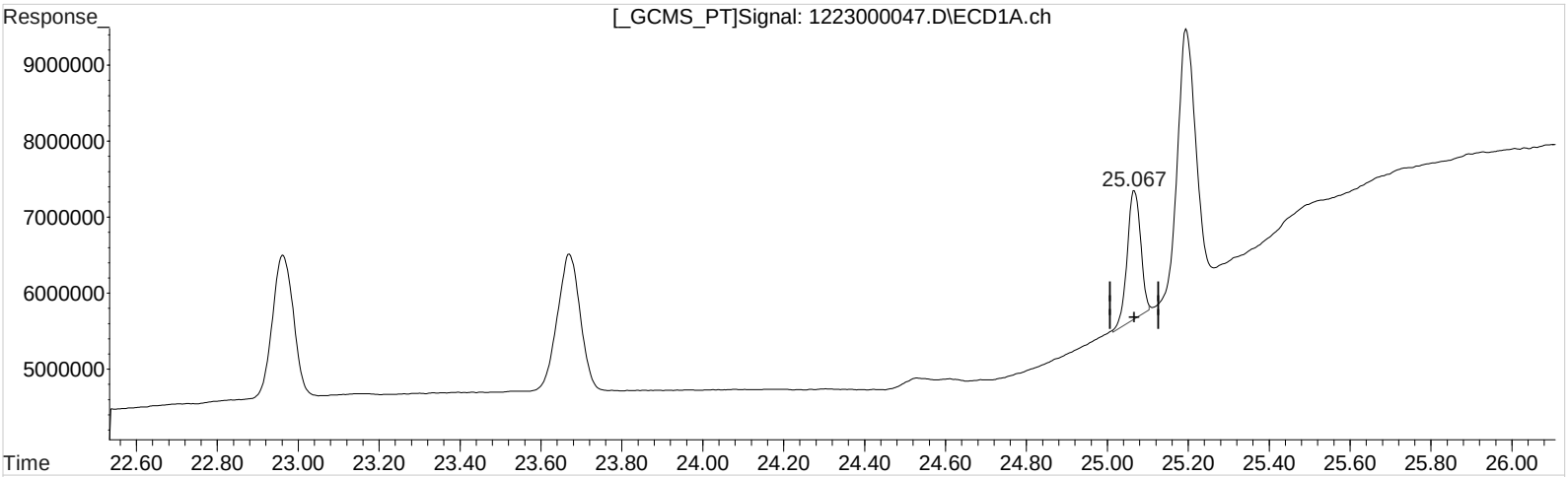
(+) = Expected Retention Time

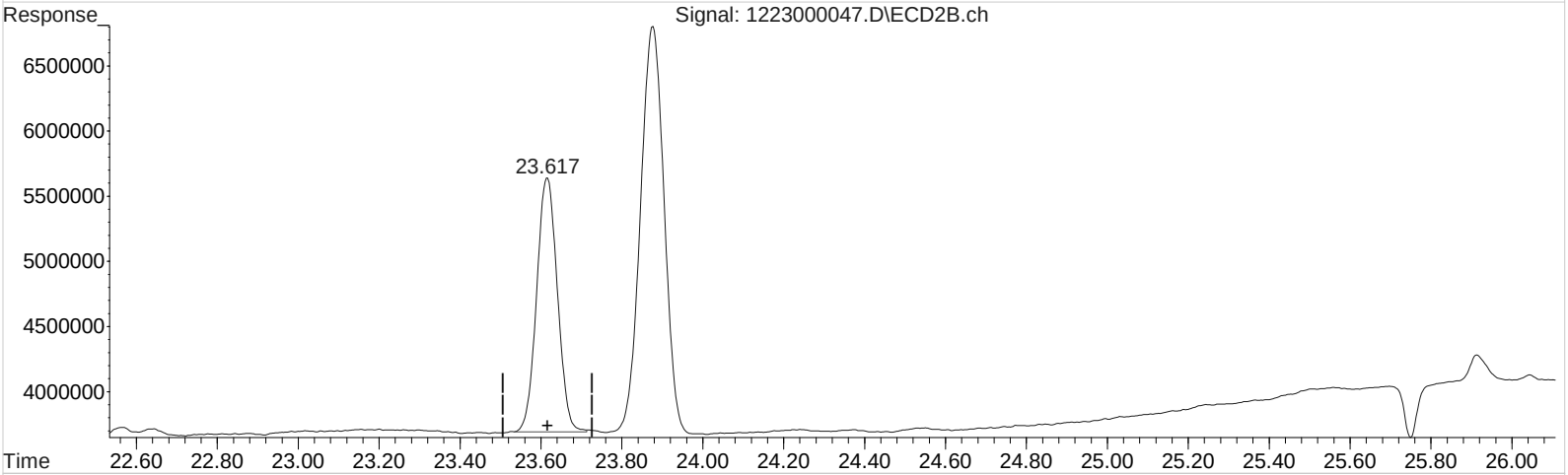
1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000047.D Vial: 70
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 19:58:33 Operator: SMURRAY
Sample : K1811381-004DMS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:25:00 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(24) Methoxychlor

25.067min 4.969 ug/L m

response 3929669

Manual Integration:

After

Baseline/Shoulder

12/29/18

(24) Methoxychlor #2

23.617min 5.223 ug/L

response 6938063

(+) = Expected Retention Time

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000049.D
Lab ID: KWG1806260-2 -- K1811381-004DMS
RunType: DMS
Matrix: SOIL

Date Acquired: 12/24/2018 21:10
Date Quantitated: 12/29/2018 11:25
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	gamma-Chlordane	23.6	NA	20	NR
	Endrin Aldehyde	-21.9	NA	20	NR

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000049.D\1223000049C.
Lab ID: KWG1806260-2 -- K1811381-004DMS
RunType: DMS
Matrix: SOIL

Date Acquired: 12/24/2018 21:10
Date Quantitated: 12/29/2018 11:25
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000049.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000049.D\1223000049c.d			**Vial:**	72
Acqu Date:	12/24/2018 21:10	**Quant Date:**	12/29/2018 11:25	**Dilution:**	1.0
Run Type:	DMS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806260-2 -- K1811381-004DMS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/06/2018

Analysis Lot:	KWG1806753	**Prep Lot:**	KWG1806260	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511		
Prep Ref:	1705211	**Prep Date:**	12/03/2018		

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:	J:\GC34\DATA\122318\1223000042.D	**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.48	-0.03 c	4.04	-0.01 c	116949726	137654619	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	4.48	-0.02 c	4.04	-0.01 c	116949726	137654619	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	4.48	-0.03 c	4.04	-0.01 c	116949726	137654619	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt
1	Tetrachloro-m-xylene	6.94		5.55		5990393	8669321	5.25		4.99				NR
						%Recovery =		105	OK	100	OK	**Limits =**	70-130	
1	Decachlorobiphenyl	29.99	+0.01	27.48		6527515	8842865	4.41		3.95				NR
						%Recovery =		88	OK	79	OK	**Limits =**	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Hexachlorobenzene			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	beta-BHC			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	gamma-BHC (Lindane)			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	NR
1	delta-BHC			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	NR
1	Aldrin			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Isodrin			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st SM 12/29/18
2nd TP 01/02/19

Data File #1:	J:\GC34\DATA\122318\1223000049.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000049.D\1223000049c.d			**Vial:**	72
Acqu Date:	12/24/2018 21:10	**Quant Date:**	12/29/2018 11:25	**Dilution:**	1.0
Run Type:	DMS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806260-2 -- K1811381-004DMS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan I			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	alpha-Chlordane			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Dieldrin			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDE			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	NR
1	Endosulfan II			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDD			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin Aldehyde			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan Sulfate			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDT			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin Ketone			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Methoxychlor			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	NR
1	2,4'-DDE			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDD			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDT			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	199.56	195.60	0.00998	0.00978	**0.00978**
2	Toxaphene {1}	18.92	16.45	1211939**m**	2106673	233.77	220.16	0.0117	0.0110	
2	Toxaphene {2}	19.50		3506670	0**d**	236.41	0.0000	0.0118	0.0020U	
2	Toxaphene {3}	21.67	18.02	4827456	9371290	261.39	205.19	0.0131	0.0103	
2	Toxaphene {4}	22.12	19.56	4070331	5964860	184.22	188.43	0.00921	0.00942	
2	Toxaphene {5}	22.31	22.27	387276	4993113	30.68	194.44	0.0020U	0.00972	
2	Toxaphene {6}	23.71	23.02	1229681**m**	6934575	250.92	169.79	0.0125	0.00849	
	Chlordane			0	0	114.87	82.82	0.00574	0.00414	**0.00414**
3	Chlordane {1}	10.17 +0.01	7.94 +0.01	6559543	6458628	131.21	73.12	0.00656	0.00366	
3	Chlordane {2}	10.97	8.44 +0.01	5378749	7785234	79.91	65.85	0.00400	0.00329	
3	Chlordane {3}	12.45 +0.01	11.56	6987436	6013027	135.00	95.61	0.00675	0.00478	
3	Chlordane {4}	16.20	12.41 +0.01	17405497	21519226	118.12	87.96	0.00591	0.00440	
3	Chlordane {5}	16.46 +0.01	12.54	13246444	14340492	95.91	92.35	0.00480	0.00462	
3	Chlordane {6}	16.79	12.85	12049902	18238296	129.06	82.06	0.00645	0.00410	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000049.D Vial: 72
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 21:10:27 Operator: SMURRAY
Sample : K1811381-004DMS T/C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 29 11:25:38 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	4.480	4.040	116.9E6	137.7E6	100.000	100.000	
29)	1-Bromo-2...	4.480	4.040	116.9E6	137.7E6	100.000	100.000	
36)	1-Bromo-2...	4.480	4.040	116.9E6	137.7E6	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	6.937	5.547	5990393	8669321	5.254	4.986	
28) s	Decachlor...	29.987	27.483	6527515	8842865	4.405	3.946	
	Target Compounds							
30)	Toxaphene	18.920	16.453	1211939	2106673	233.772m	220.163	
31)	Toxaphene...	19.497	0.000	3506670	0	236.408	N.D.	d#
32)	Toxaphene...	21.667	18.023	4827456	9371290	261.388	205.189	
33)	Toxaphene...	22.123	19.563	4070331	5964860	184.219	188.425	
34)	Toxaphene...	22.310	22.270	387276	4993113	30.683	194.444	#
35)	Toxaphene...	23.713	23.017	1229681	6934575	250.918m	169.794	#
37)	Chlordane	10.167	7.940	6559543	6458628	131.210	73.121	#
38)	Chlordane...	10.970	8.437	5378749	7785234	79.905	65.846	
39)	Chlordane...	12.447	11.563	6987436	6013027	134.998	95.607	#
40)	Chlordane...	16.203	12.407	17405497	21519226	118.120	87.956	#
41)	Chlordane...	16.457	12.543	13246444	14340492	95.907	92.352	
42)	Chlordane...	16.790	12.847	12049902	18238296	129.060	82.064	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

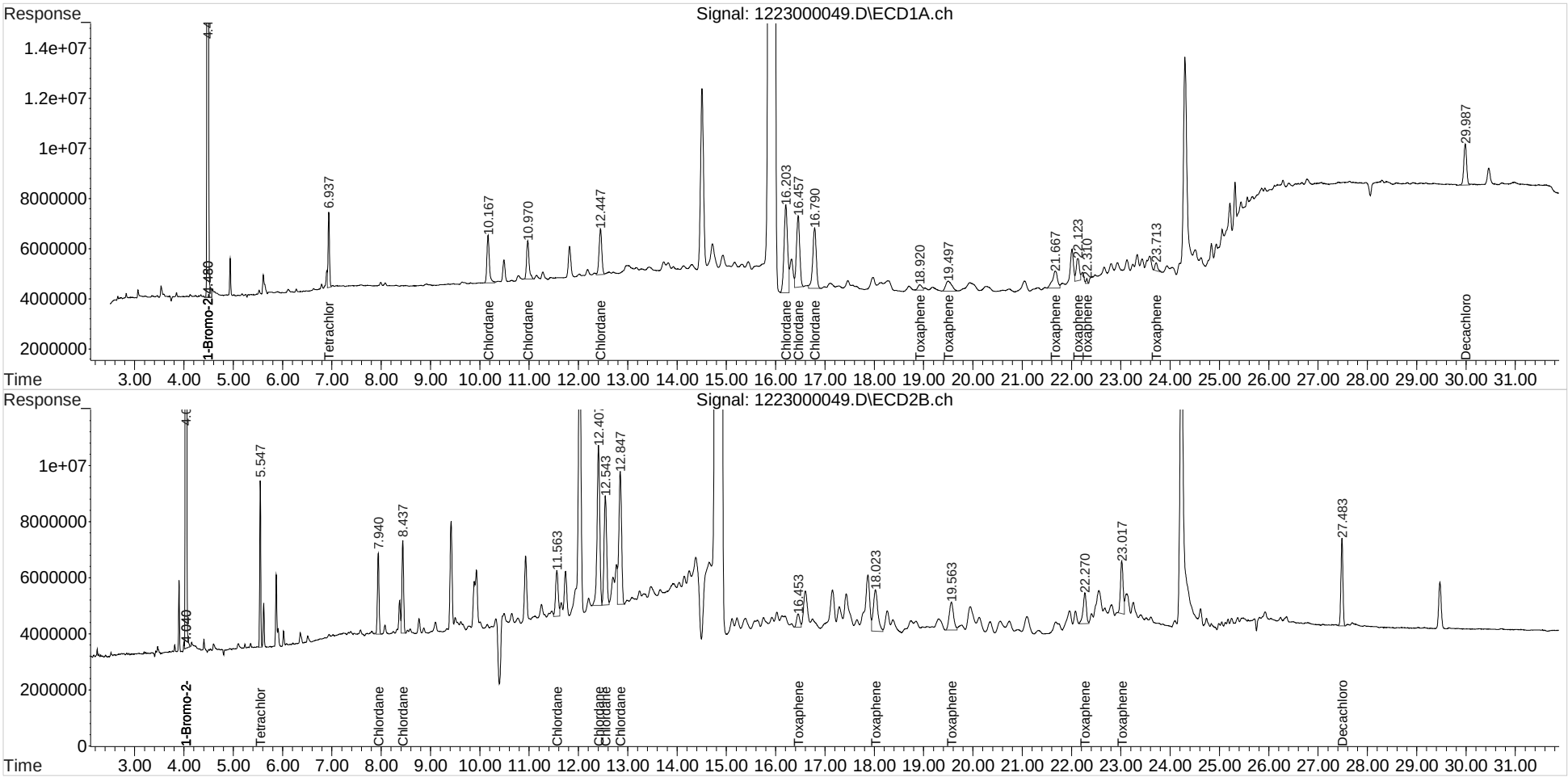
1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\122318\1223000049.D Vial: 72
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 21:10:27 Operator: SMURRAY
Sample : K1811381-004DMS T/C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 29 11:25:38 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



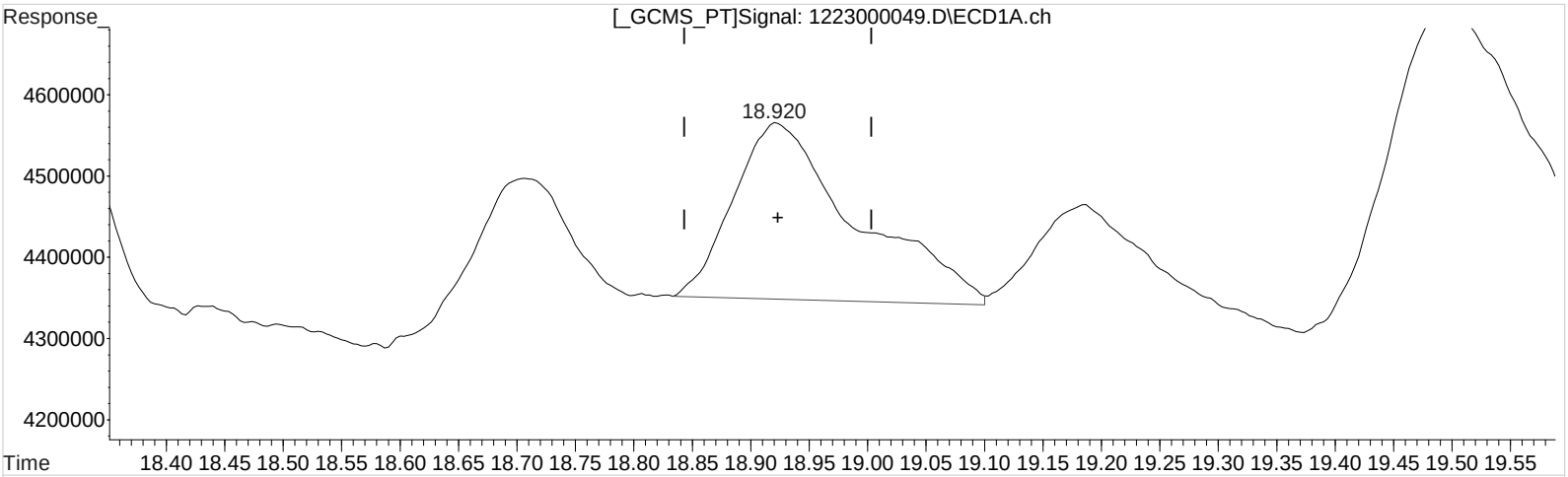
Quantitation Report (Qedit)

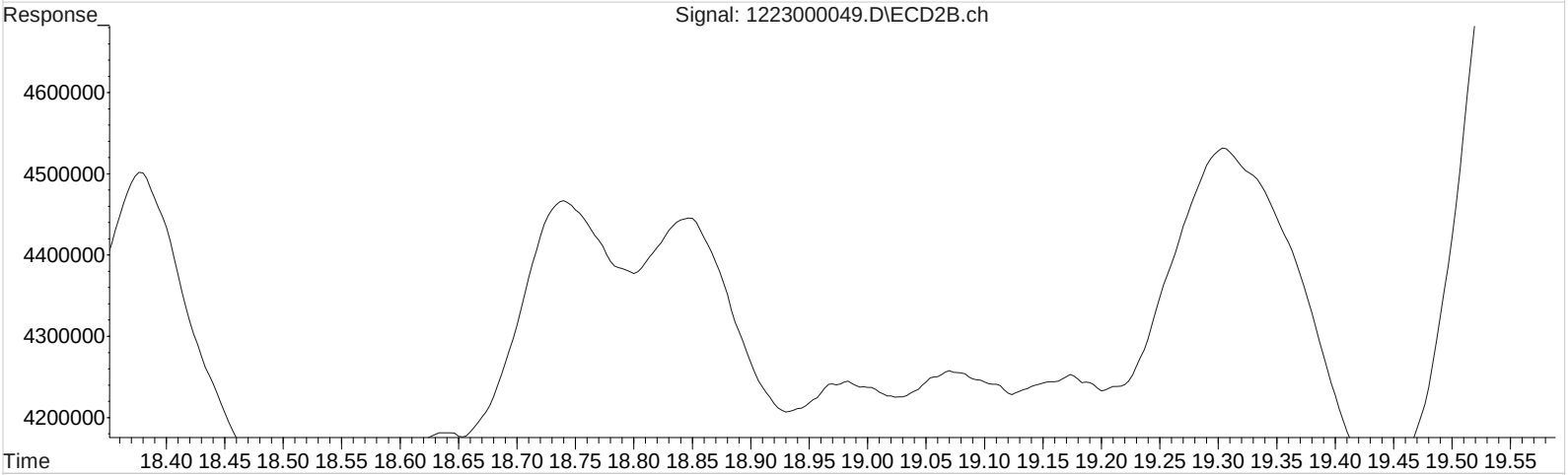
1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000049.D Vial: 72
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 21:10:27 Operator: SMURRAY
Sample : K1811381-004DMS T/C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:25:08 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(30) Toxaphene

18.920min 305.659 ug/L

response 1584622

Manual Integration:

Before

12/29/18

(30) Toxaphene #2

16.453min 220.163 ug/L

response 2106673

(+) = Expected Retention Time

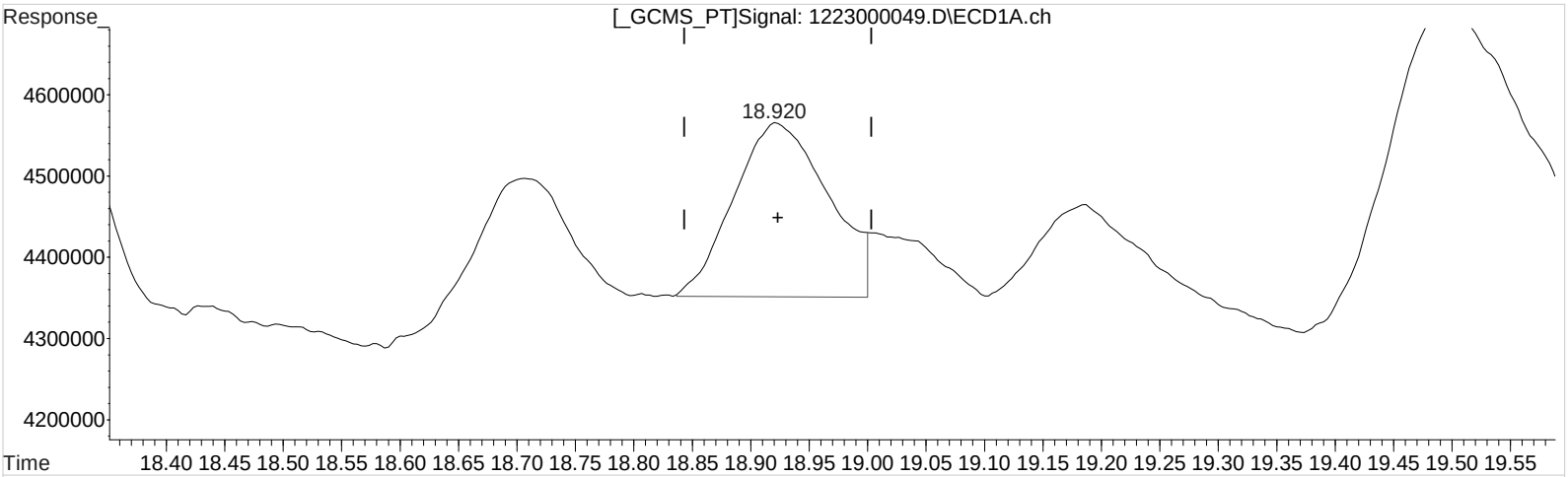
Quantitation Report (Qedit)

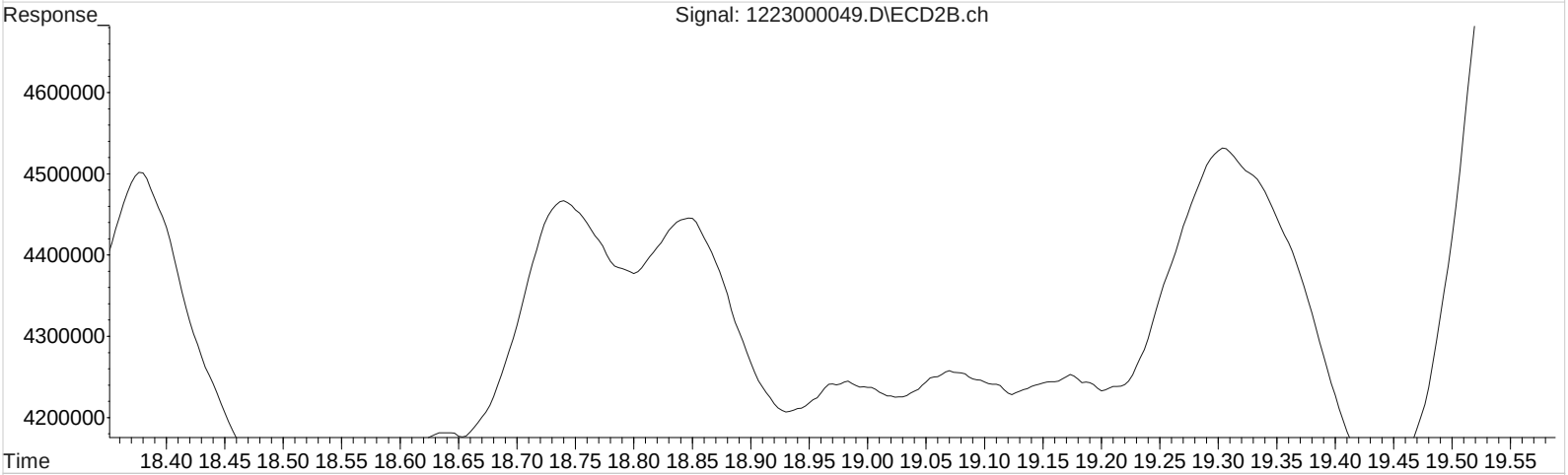
1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000049.D Vial: 72
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 21:10:27 Operator: SMURRAY
Sample : K1811381-004DMS T/C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:25:08 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(30) Toxaphene

18.920min 233.772 ug/L m

response 1211939

Manual Integration:

After

Baseline/Shoulder

12/29/18

(30) Toxaphene #2

16.453min 220.163 ug/L

response 2106673

(+) = Expected Retention Time

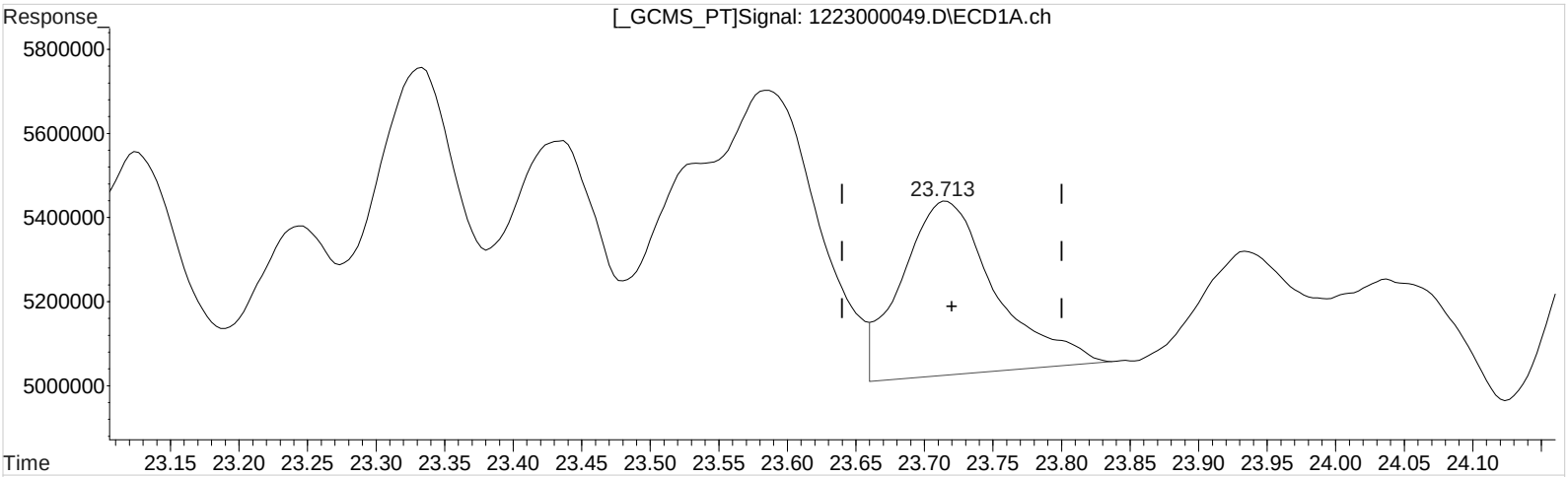
Quantitation Report (Qedit)

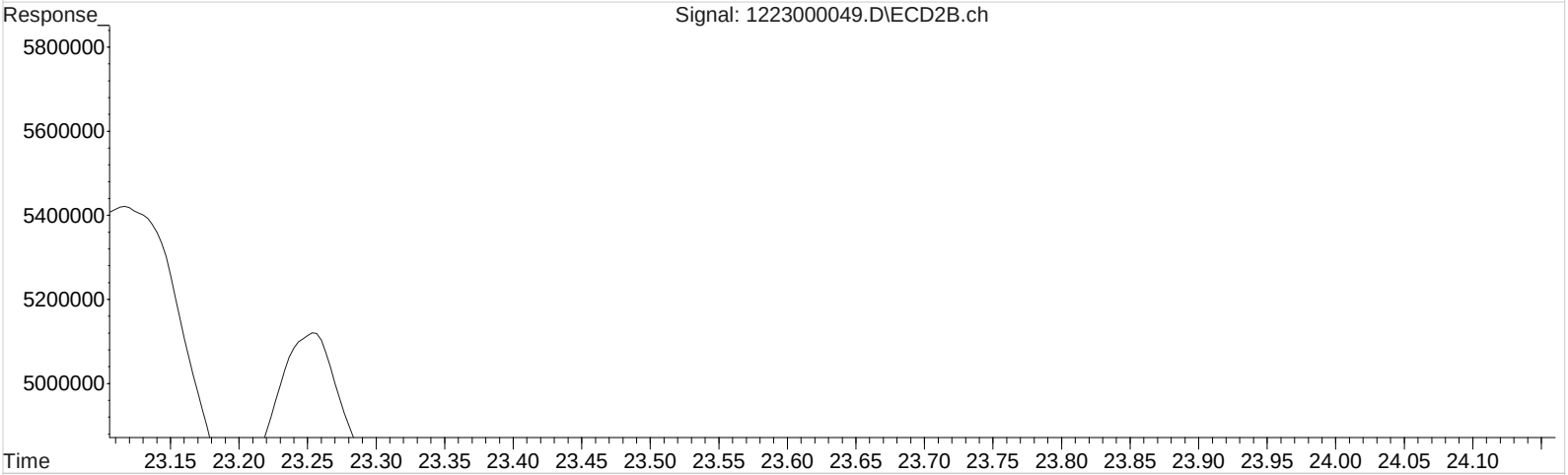
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000049.D Vial: 72
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 21:10:27 Operator: SMURRAY
Sample : K1811381-004DMS T/C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:25:08 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(35) Toxaphene {6}

23.713min 400.557 ug/L

response 1963025

Manual Integration:

Before

12/29/18

(35) Toxaphene {6} #2

23.017min 169.794 ug/L

response 6934575

(+) = Expected Retention Time

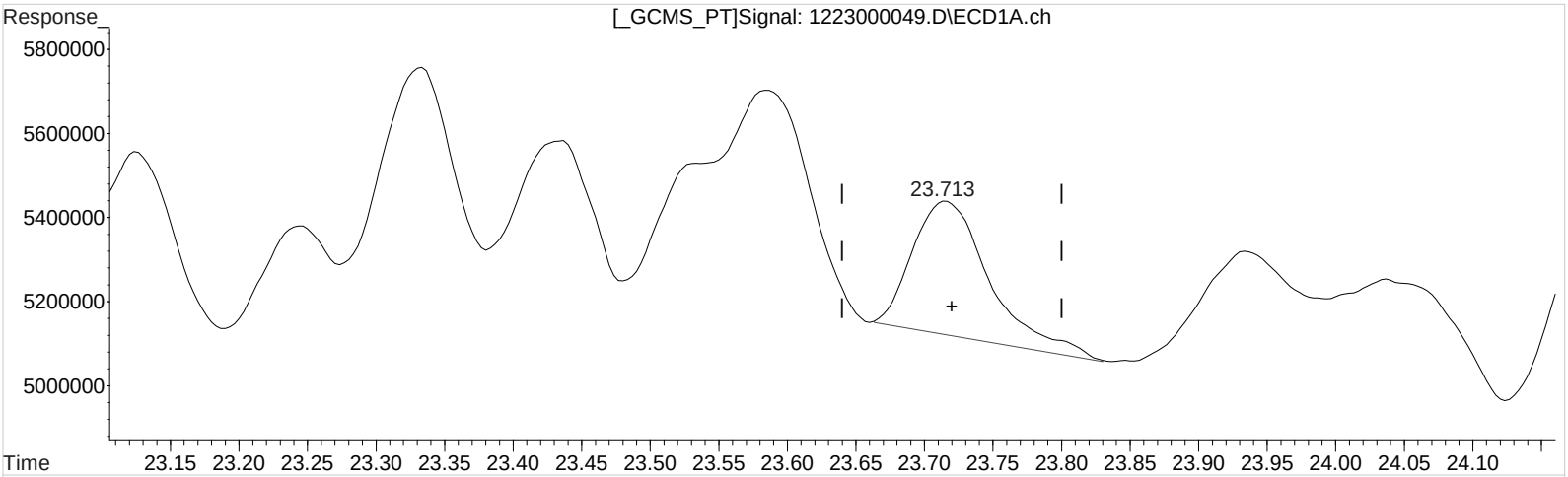
Quantitation Report (Qedit)

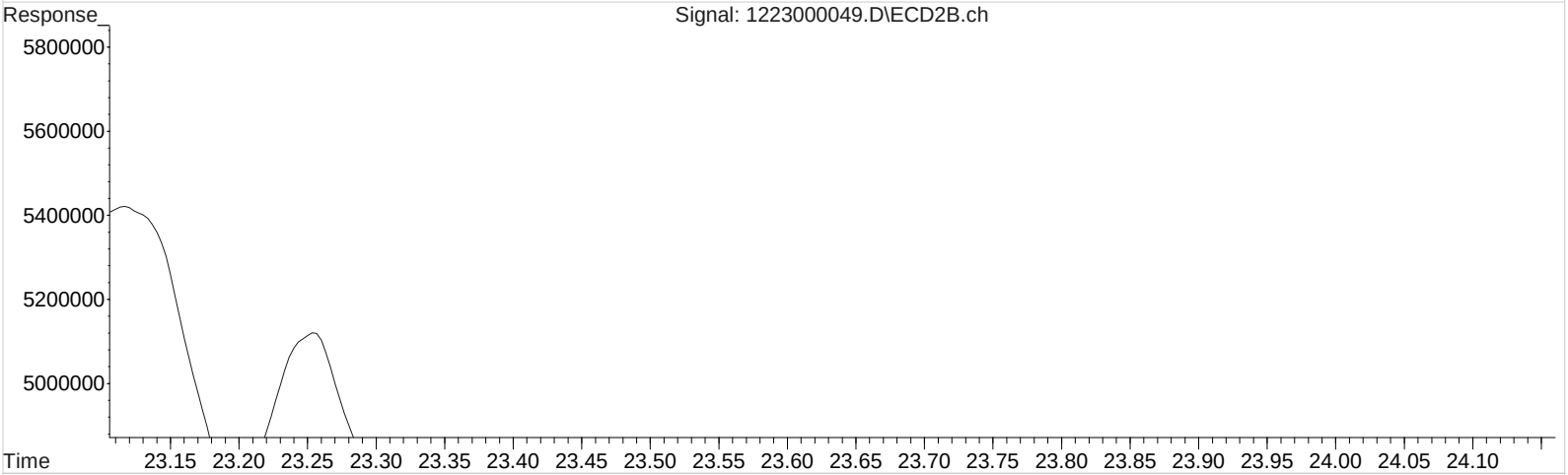
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000049.D Vial: 72
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 21:10:27 Operator: SMURRAY
Sample : K1811381-004DMS T/C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:25:08 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(35) Toxaphene {6}

23.713min 250.918 ug/L m

response 1229681

Manual Integration:

After

Baseline/Shoulder

12/29/18

(35) Toxaphene {6} #2

23.017min 169.794 ug/L

response 6934575

(+) = Expected Retention Time

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000043.D
Lab ID: KWG1806260-5
RunType: LCS
Matrix: SOIL

Date Acquired: 12/24/2018 17:34
Date Quantitated: 12/29/2018 11:19
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	gamma-Chlordane	23.6	NA	20	ICVOK
	Endrin Aldehyde	-21.9	NA	20	ICVOK
Continuing Calibration Recovery	Endrin Ketone	229.7	NA	20	RO
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	693190.3333	4772761.333	NR
	1-Bromo-2-nitrobenzene {3}	0	381986.6428	9527946.571	NR

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000043.D\1223000043C.
Lab ID: KWG1806260-5
RunType: LCS
Matrix: SOIL

Date Acquired: 12/24/2018 17:34
Date Quantitated: 12/29/2018 11:19
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	beta-BHC	20.8	NA	20	RO
	delta-BHC	23.1	NA	20	
	Heptachlor	21.0	NA	20	
	Endrin Aldehyde	27.4	NA	20	
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	371179.4166	5484717.666	NR
	1-Bromo-2-nitrobenzene {3}	0	712037.8571	2848151.428	NR

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000043.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000043.D\1223000043c.d			**Vial:**	66
Acqu Date:	12/24/2018 17:34	**Quant Date:**	12/29/2018 11:19	**Dilution:**	1.0
Run Type:	LCS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806260-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/06/2018

Analysis Lot:	KWG1806753	**Prep Lot:**	KWG1806260	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511		
Prep Ref:	1705214	**Prep Date:**	12/03/2018		

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:	J:\GC34\DATA\122318\1223000042.D	**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.49	-0.02	4.05	+0.00	112271875	130954900	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2				Rpt	
1	Tetrachloro-m-xylene	6.94	5.55	4872071	7463464	4.45	4.51				90	OK
				%Recovery =		89	OK	90	OK	**Limits =** 70-130		
1	Decachlorobiphenyl	29.98	27.48	5648417	7832951	3.97	3.67				79	OK
				%Recovery =		79	OK	73	OK	**Limits =** 70-130		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC	7.95		6.67		8022833	12399127	6.45	6.09	0.000322	0.000304	**0.000304**
1	Hexachlorobenzene	8.17	+0.01	6.47	+0.01	9092723	11064935	4.97	4.53	0.000249	0.000227	**0.000227**
1	beta-BHC	9.88	+0.01	8.19	+0.01	4179420	7129173	5.98	6.60^{CCV}	0.000299	0.000330	**0.000299**
1	gamma-BHC (Lindane)	8.90		7.51		7486636	12432993	6.40	6.28	0.000320	0.000314	**0.000314**
1	delta-BHC	10.98	+0.01	9.00		7562236	12858466	5.52	6.28^{CCV}	0.000276	0.000314	**0.000276**
1	Heptachlor	10.81		8.44		7747394	12087562	6.81	5.71^{CCV}	0.000341	0.000285	**0.000285**
1	Aldrin	12.29		9.37		6726937	12162194	5.38	6.23	0.000269	0.000311	**0.000269**
1	Isodrin	13.80		10.81		6380580	9836644	6.12	5.80	0.000306	0.000290	**0.000290**
1	Heptachlor Epoxide	14.46	+0.02	11.40		6696495**m**	11499993	5.11	5.66	0.000255	0.000283	**0.000255**

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 12/29/18
2nd TP 01/02/19

Data File #1:	J:\GC34\DATA\122318\1223000043.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000043.D\1223000043c.d			**Vial:**	66
Acqu Date:	12/24/2018 17:34	**Quant Date:**	12/29/2018 11:19	**Dilution:**	1.0
Run Type:	LCS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806260-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane	16.21	12.41	9643405**m**	12970048	7.16	6.10	0.000358	0.000305	**0.000305**
1	Endosulfan I	16.58	13.02	6719373	10952731	5.80	5.67	0.000290	0.000283	**0.000283**
1	alpha-Chlordane	16.46 +0.01	12.85	7530704	12016783	5.80	5.90	0.000290	0.000295	**0.000290**
1	Dieldrin	18.13	14.44 -0.01	6853882	9629509**m**	5.49	4.74	0.000274	0.000237	**0.000237**
1	4,4'-DDE	17.72	14.10	7793365	10942580	5.86	5.55	0.000293	0.000277	**0.000277**
1	Endrin	19.57 +0.01	16.10	7245535	12152064	6.10	6.01	0.000305	0.000300	**0.000300**
1	Endosulfan II	21.76 +0.01	17.81	7417047	11725556	6.24	5.94	0.000312	0.000297	**0.000297**
1	4,4'-DDD	21.49	17.42	6110990	9807325	6.45	6.08	0.000322	0.000304	**0.000304**
1	Endrin Aldehyde	22.34	19.40	4732777**m**	10287979	4.63	6.45^{CCV}	0.000232	0.000323	**0.000232**
1	Endosulfan Sulfate	23.67	20.99	7069388	12137613	5.81	5.79	0.000290	0.000289	**0.000289**
1	4,4'-DDT	22.96	19.16 -0.01	6738163	10878053	5.89	5.97	0.000294	0.000298	**0.000294**
1	Endrin Ketone	25.19 -0.02	23.88	12357681	11807305	9.45^{CCV}	5.15	0.000473	0.000257	**0.000257**P
1	Methoxychlor	25.07 +0.01	23.62	3762974**m**	6230440	5.42	5.45	0.000271	0.000272	**0.000271**
1	2,4'-DDE			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDD			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDT			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	0.0000	0.0000	0.00200U	0.00200U	NR
2	Toxaphene {1}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {2}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {3}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {5}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {6}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
	Chlordane			0	0	0.0000	0.0000	0.00100U	0.00100U	NR
3	Chlordane {1}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {2}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {3}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {4}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {5}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {6}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000043.D Vial: 66
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 17:34:03 Operator: SMURRAY
Sample : KWG1806260-LCS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 29 11:19:53 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	4.487	4.047	112.3E6	131.0E6	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	6.943	5.553	4872071	7463464	4.451	4.512
28) s	Decachlor...	29.983	27.483	5648417	7832951	3.970	3.674
	Target Compounds						
3)	alpha-BHC	7.950	6.673	8022833	12399127	6.449	6.089
4)	Hexachlor...	8.170	6.470	9092723	11064935	4.972	4.533
5)	beta-BHC	9.877	8.187	4179420	7129173	5.979	6.595
6)	gamma-BHC...	8.903	7.510	7486636	12432993	6.396	6.275
7)	delta-BHC	10.977	9.000	7562236	12858466	5.521	6.277
8)	Heptachlor	10.810	8.443	7747394	12087562	6.812	5.708
9)	Aldrin	12.293	9.370	6726937	12162194	5.377	6.226
10)	Isodrin	13.800	10.810	6380580	9836644	6.123	5.799
11)	Heptachlo...	14.460	11.400	6696495	11499993	5.107m	5.664
12)	gamma-Chl...	16.210	12.410	9643405	12970048	7.160m	6.099
13)	Endosulfan I	16.583	13.023	6719373	10952731	5.798	5.665
14)	alpha-Chl...	16.457	12.850	7530704	12016783	5.801	5.900
15)	Dieldrin	18.130	14.443	6853882	9629509	5.488	4.743m
16)	4,4'-DDE	17.723	14.103	7793365	10942580	5.858	5.549
17)	Endrin	19.570	16.100	7245535	12152064	6.099	6.006
18)	Endosulfa...	21.757	17.807	7417047	11725556	6.238	5.943
19)	4,4'-DDD	21.490	17.423	6110990	9807325	6.447	6.076
20)	Endrin Al...	22.343	19.400	4732777	10287979	4.633m	6.452 #
21)	Endosulfa...	23.667	20.993	7069388	12137613	5.809	5.788
22)	4,4'-DDT	22.960	19.163	6738163	10878053	5.887	5.966
23)	Endrin Ke...	25.193	23.877	12357681	11807305	9.451	5.145 #
24)	Methoxychlor	25.067	23.617	3762974	6230440	5.419m	5.446
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

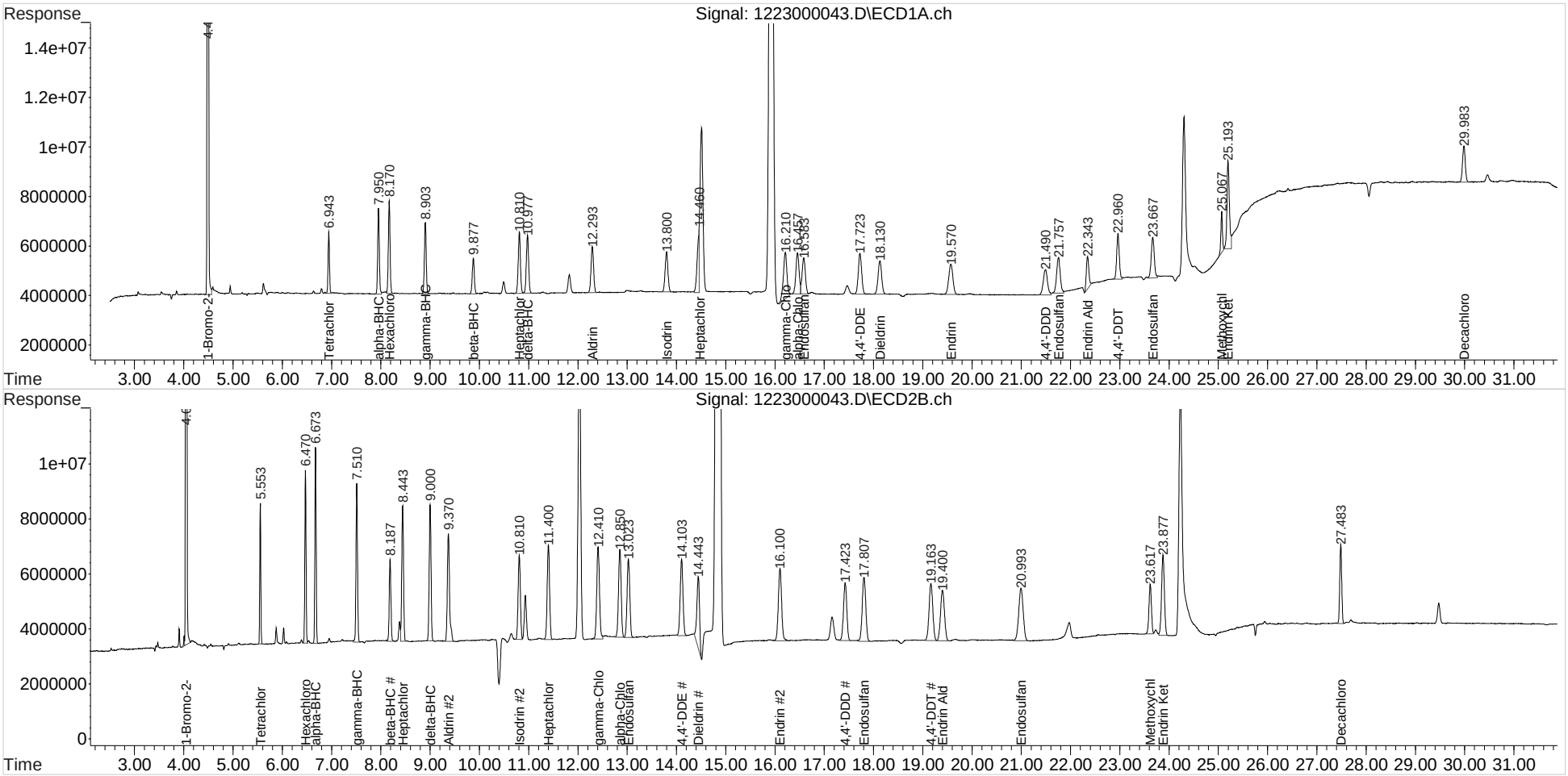
1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\122318\1223000043.D Vial: 66
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 17:34:03 Operator: SMURRAY
Sample : KWG1806260-LCS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 29 11:19:53 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



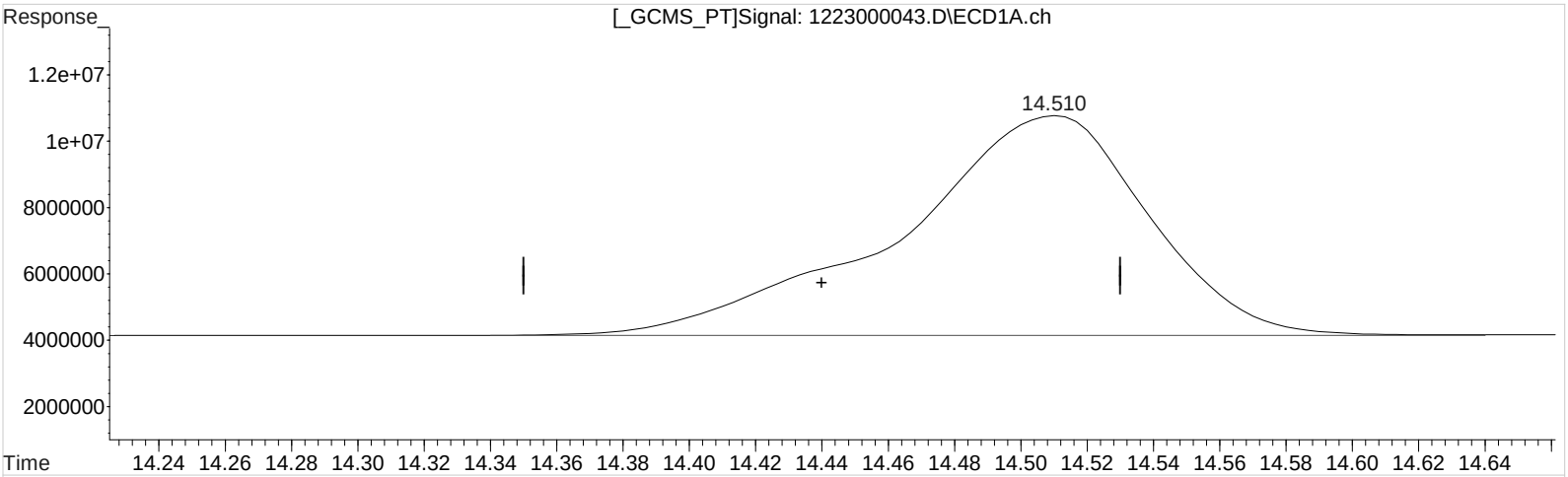
Quantitation Report (Qedit)

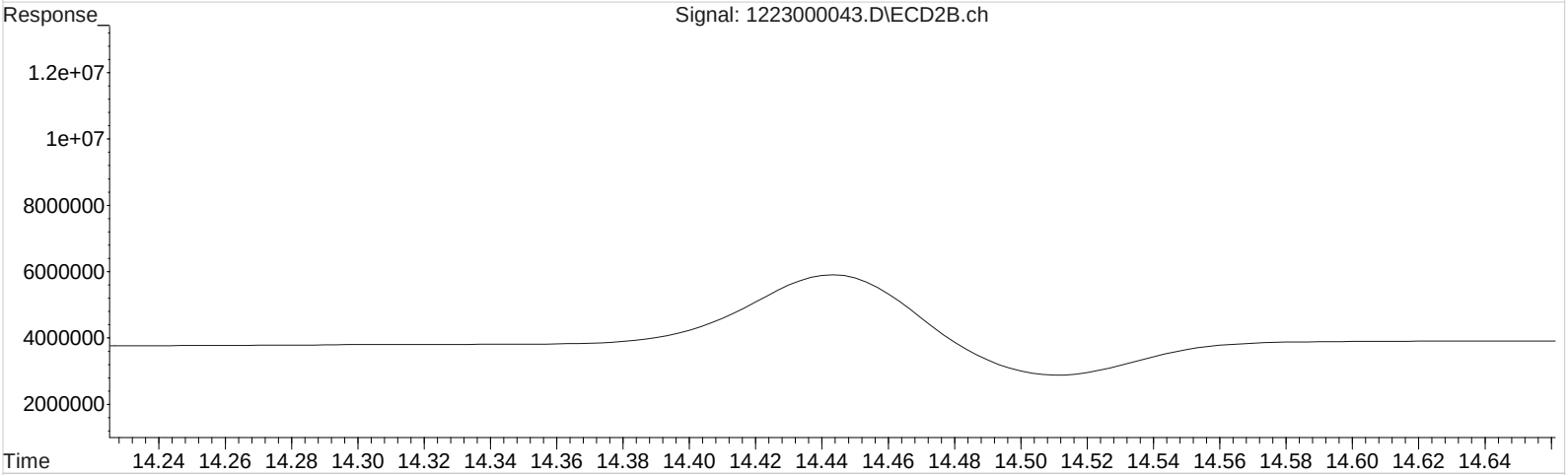
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000043.D Vial: 66
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 17:34:03 Operator: SMURRAY
Sample : KWG1806260-LCS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:41 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(11) Heptachlor Epoxide

14.510min 26.178 ug/L

response 34327122

Manual Integration:

Before

12/29/18

(11) Heptachlor Epoxide #2

11.400min 5.664 ug/L

response 11499993

(+) = Expected Retention Time

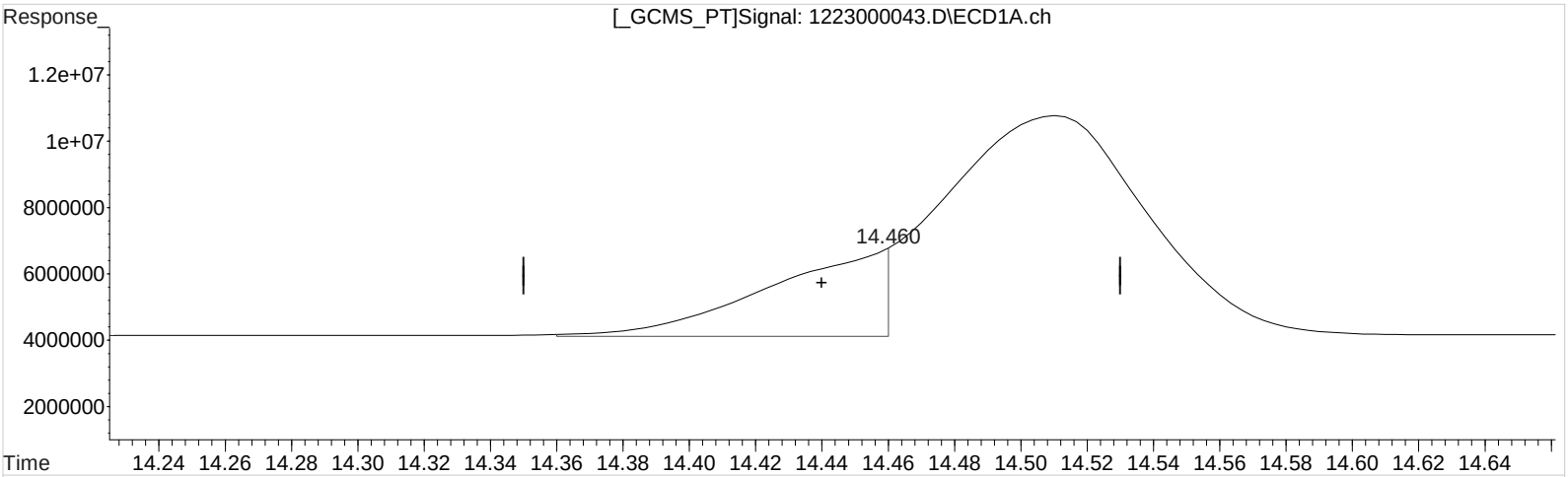
Quantitation Report (Qedit)

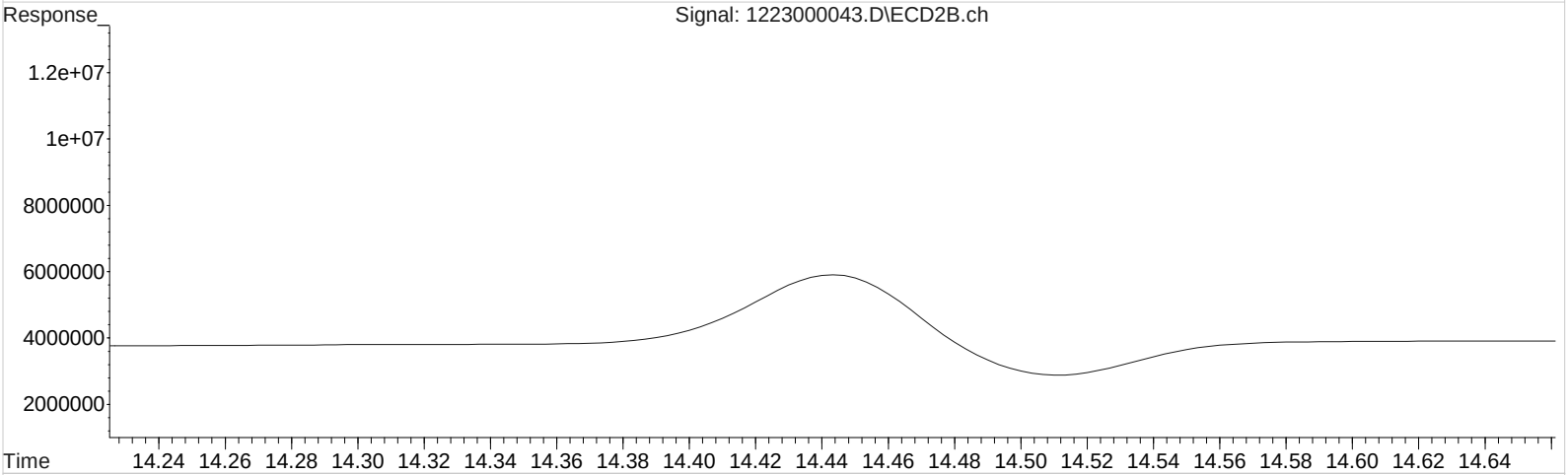
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000043.D Vial: 66
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 17:34:03 Operator: SMURRAY
Sample : KWG1806260-LCS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:41 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(11) Heptachlor Epoxide

14.460min 5.107 ug/L m

response 6696495

Manual Integration:

After

Wrong Peak

12/29/18

(11) Heptachlor Epoxide #2

11.400min 5.664 ug/L

response 11499993

(+) = Expected Retention Time

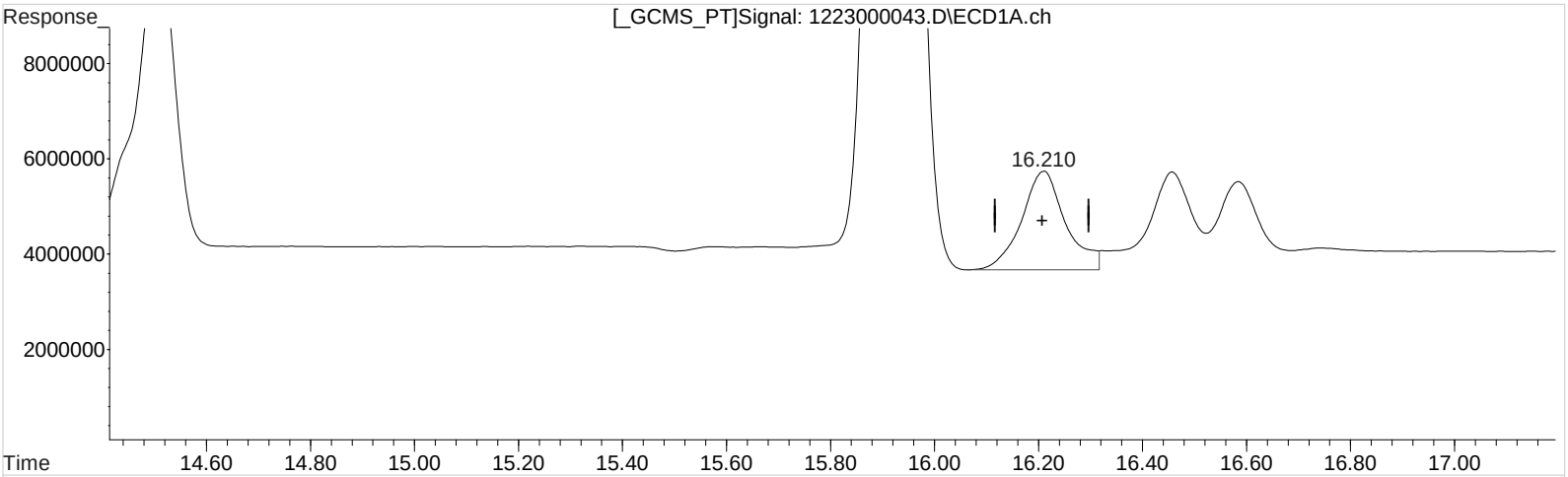
Quantitation Report (Qedit)

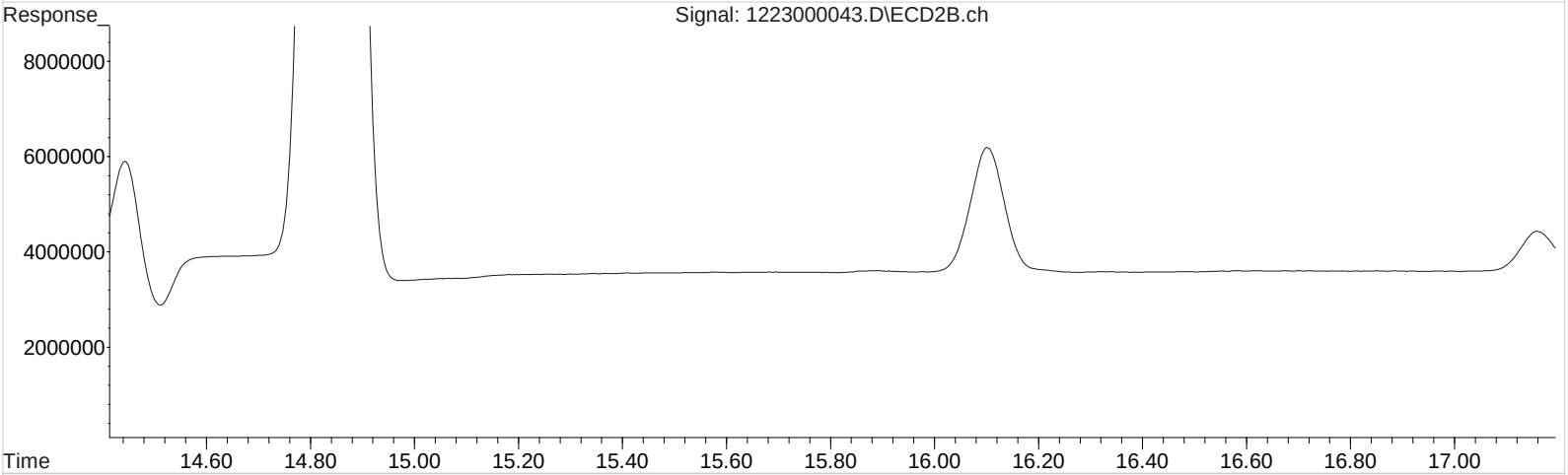
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000043.D Vial: 66
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 17:34:03 Operator: SMURRAY
Sample : KWG1806260-LCS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:41 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(12) gamma-Chlordane

16.210min 9.097 ug/L

response 12252720

Manual Integration:

Before

12/29/18

(12) gamma-Chlordane #2

12.410min 6.099 ug/L

response 12970048

(+) = Expected Retention Time

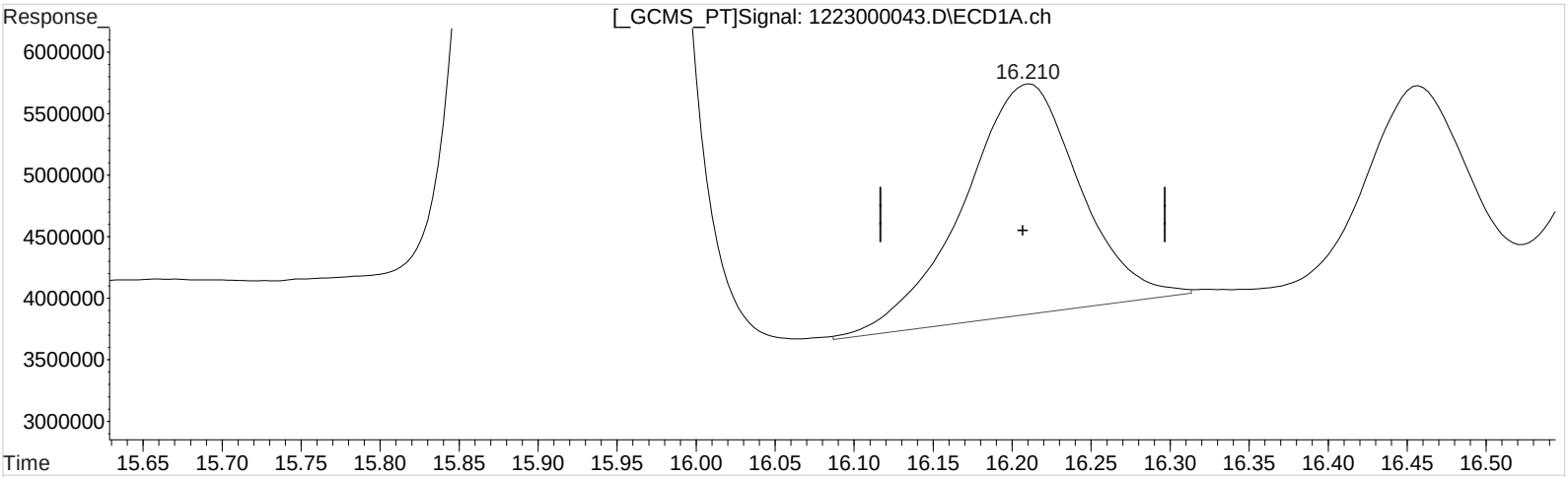
Quantitation Report (Qedit)

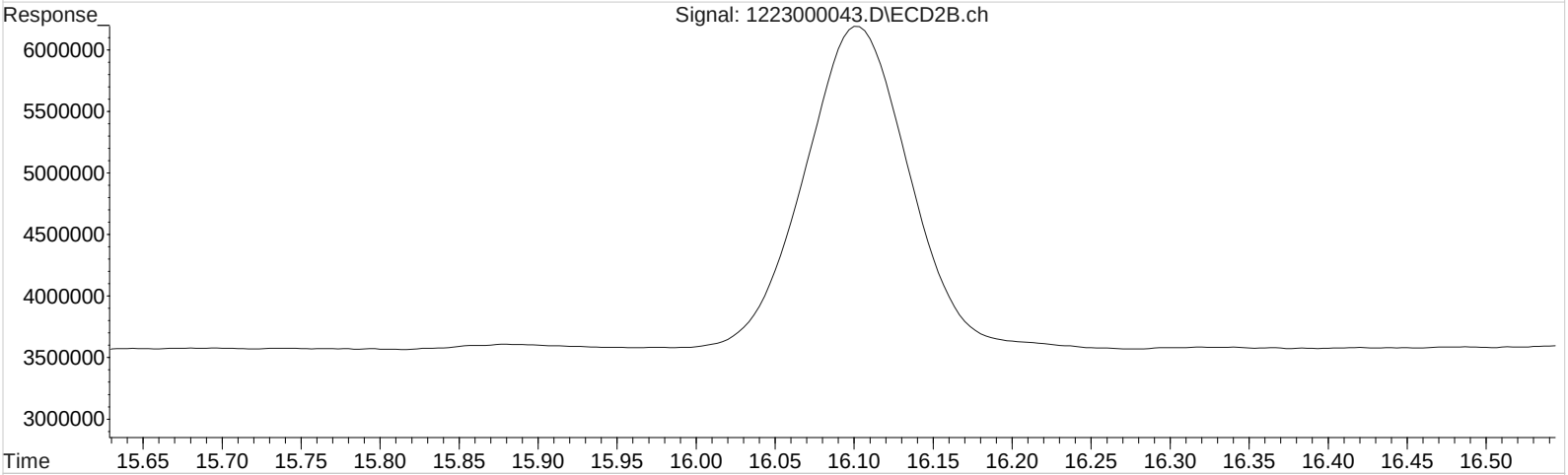
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000043.D Vial: 66
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 17:34:03 Operator: SMURRAY
Sample : KWG1806260-LCS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:41 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(12) gamma-Chlordane

16.210min 7.160 ug/L m

response 9643405

Manual Integration:

After

Baseline/Shoulder

12/29/18

(12) gamma-Chlordane #2

12.410min 6.099 ug/L

response 12970048

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000043.D Vial: 66
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 17:34:03 Operator: SMURRAY
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Misc : Multiplr: 1.00
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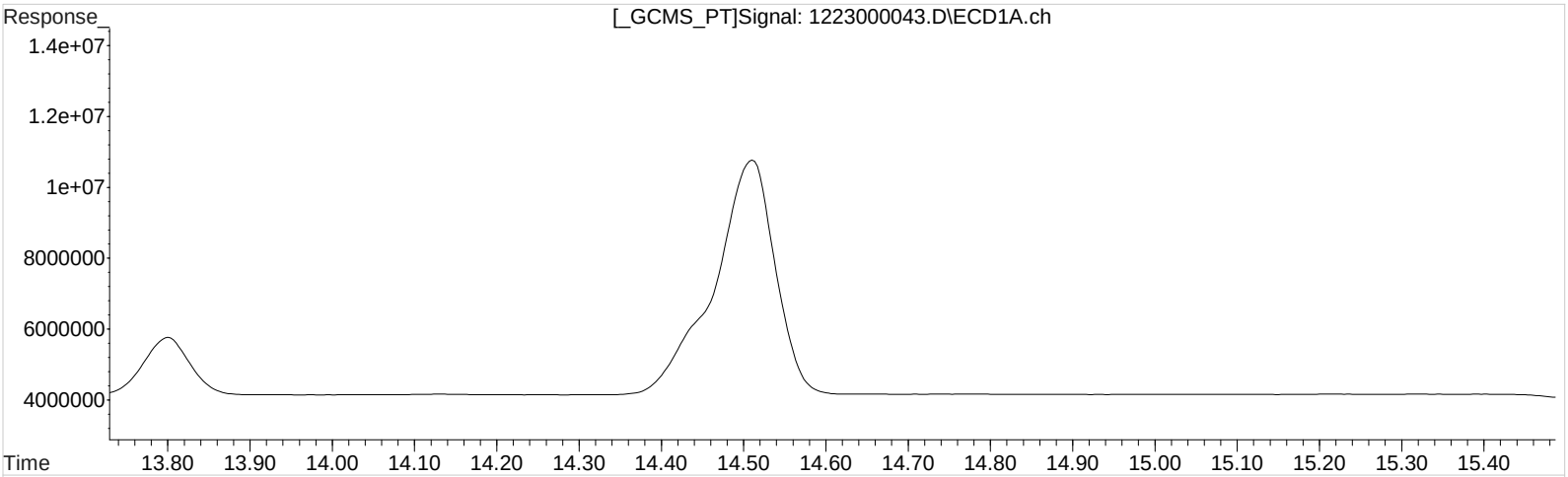
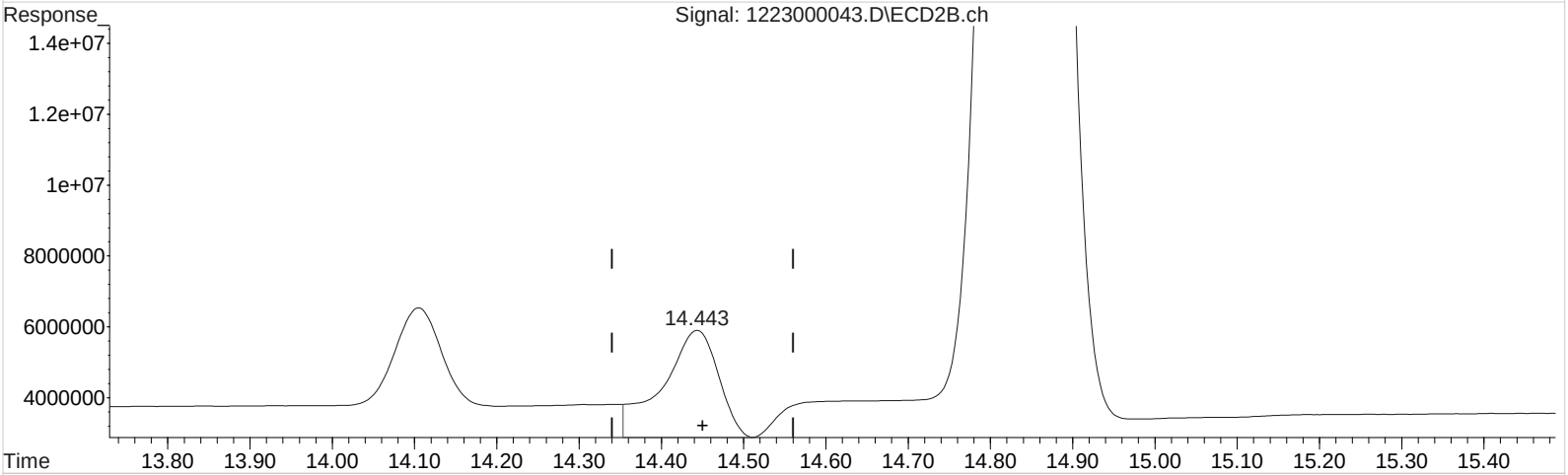
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(15) Dieldrin

18.130min 5.488 ug/L

response 6853882

Manual Integration:

Before

12/29/18

(15) Dieldrin #2

14.443min 7.007 ug/L

response 14224883

(+) = Expected Retention Time

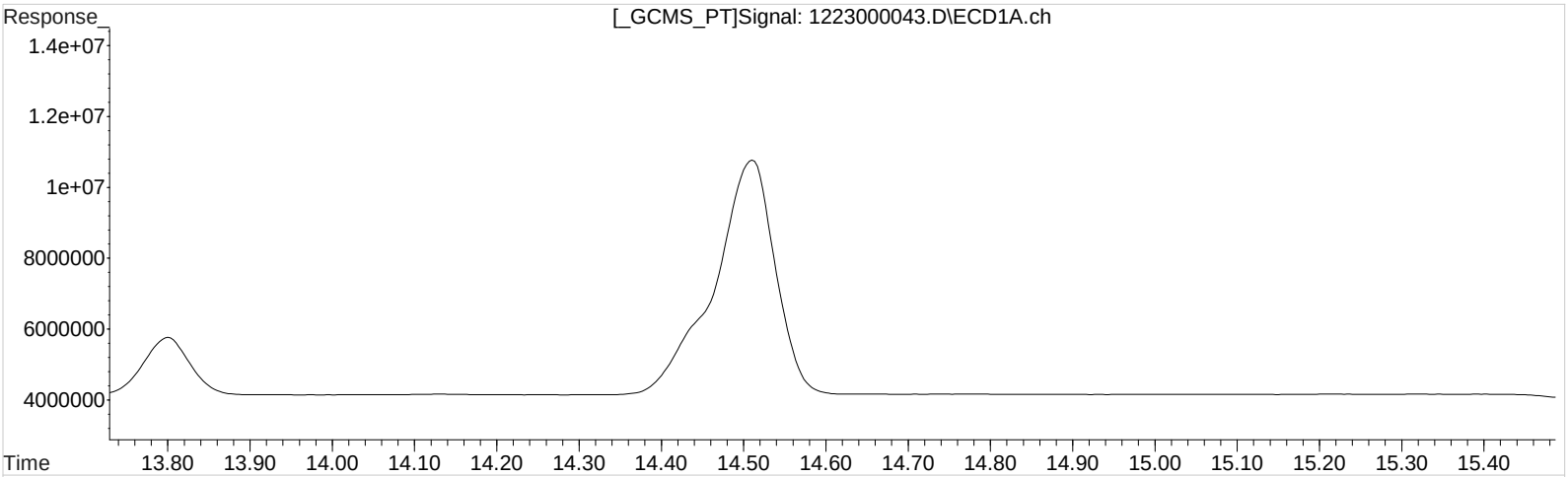
Quantitation Report (Qedit)

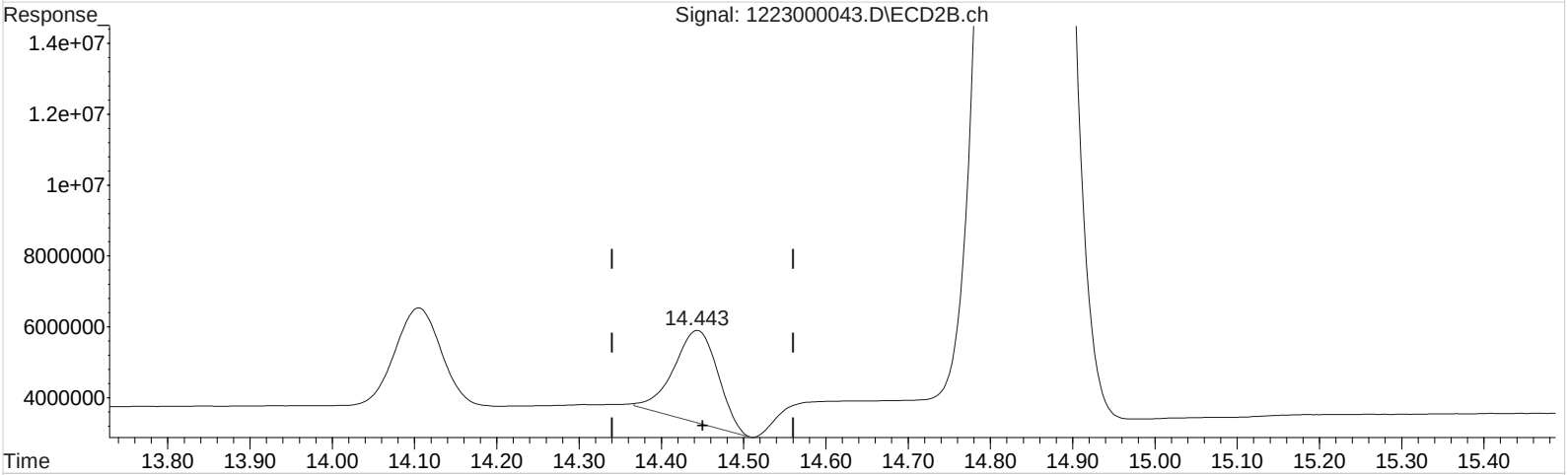
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000043.D Vial: 66
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 17:34:03 Operator: SMURRAY
Sample : KWG1806260-LCS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:41 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(15) Dieldrin

18.130min 5.488 ug/L

response 6853882

Manual Integration:

After

Baseline/Shoulder

12/29/18

(15) Dieldrin #2

14.443min 4.743 ug/L m

response 9629509

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000043.D Vial: 66
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 17:34:03 Operator: SMURRAY
Sample : KWG1806260-LCS 81 Inst : GCI
Misc : Multiplr: 1.00
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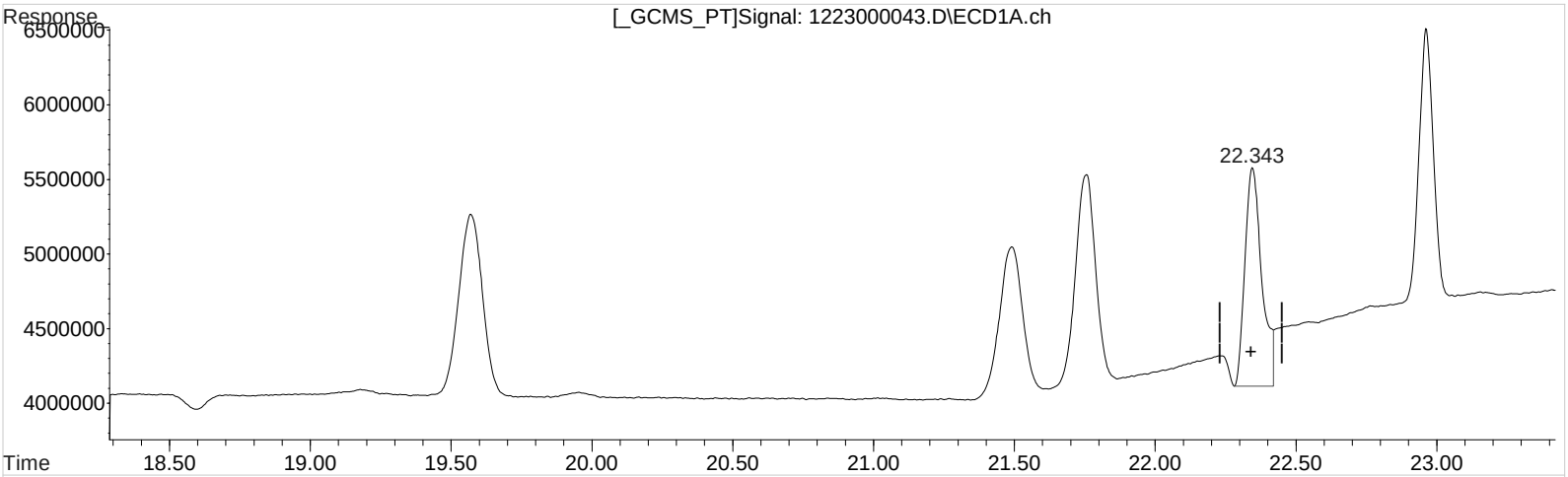
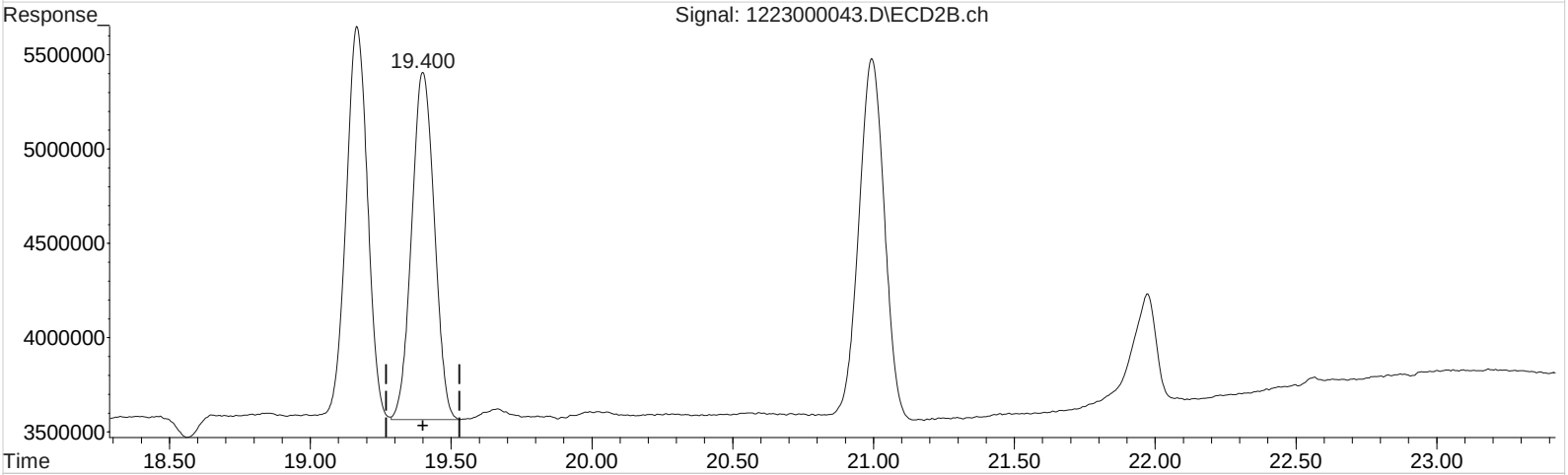
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(20) Endrin Aldehyde

22.343min 6.030 ug/L

response 6159234

(20) Endrin Aldehyde #2

19.400min 6.452 ug/L

response 10287979

Manual Integration:

Before

12/29/18

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000043.D Vial: 66
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 17:34:03 Operator: SMURRAY
Sample : KWG1806260-LCS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:41 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
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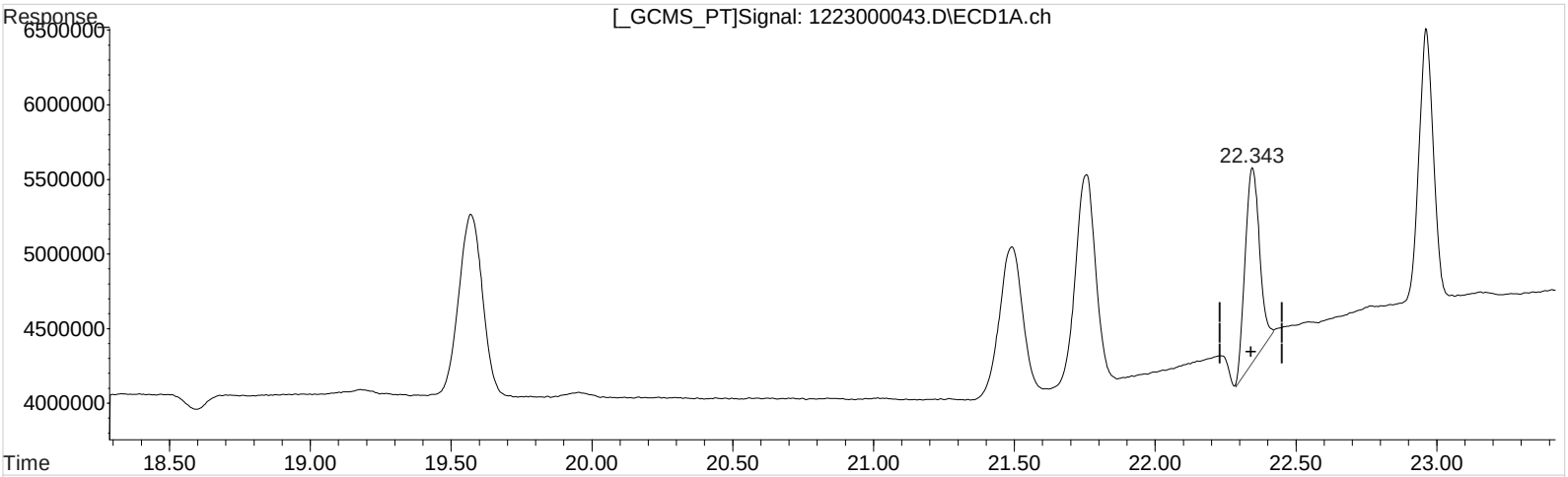
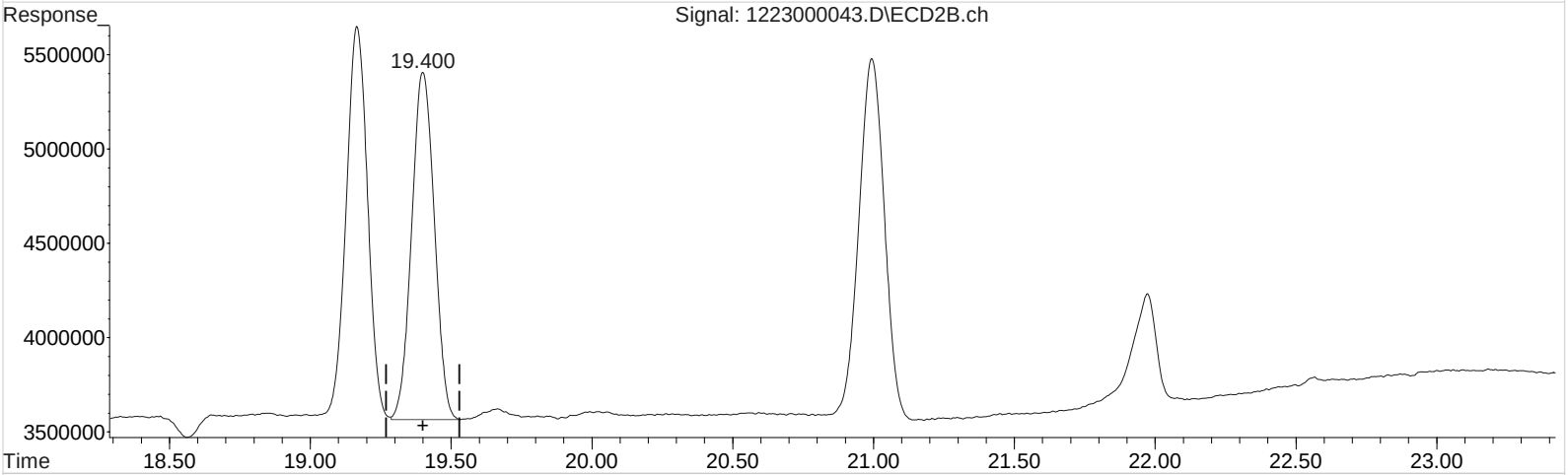
Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(20) Endrin Aldehyde

22.343min 4.633 ug/L m

response 4732777

Manual Integration:

After

Baseline/Shoulder

12/29/18

(20) Endrin Aldehyde #2

19.400min 6.452 ug/L

response 10287979

(+) = Expected Retention Time

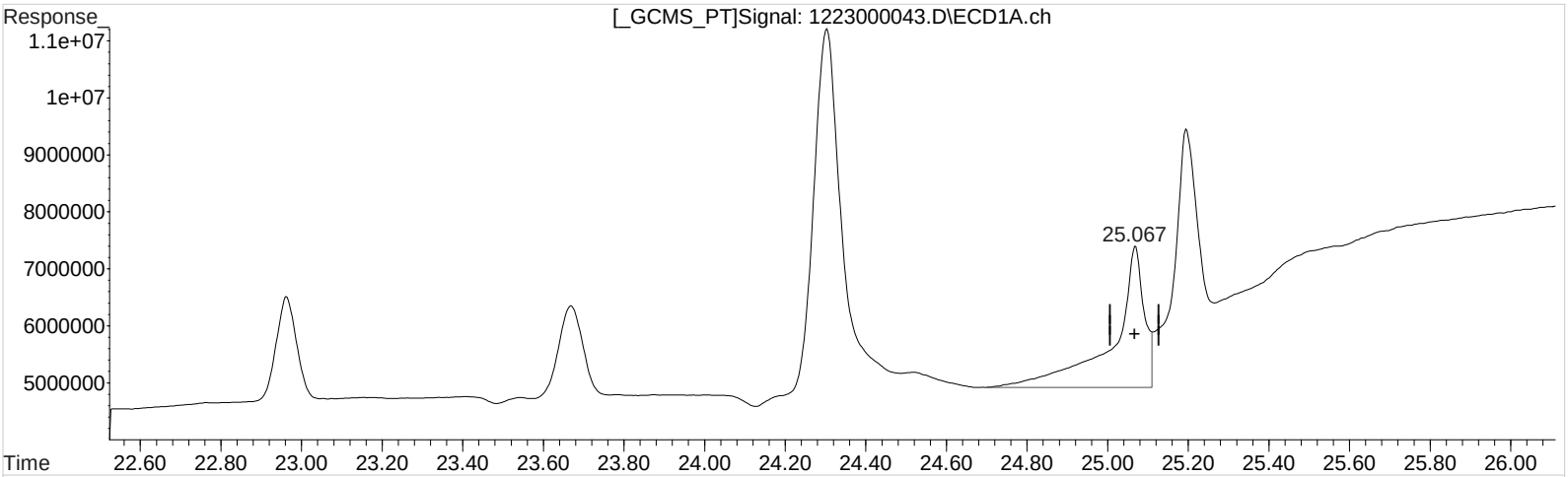
Quantitation Report (Qedit)

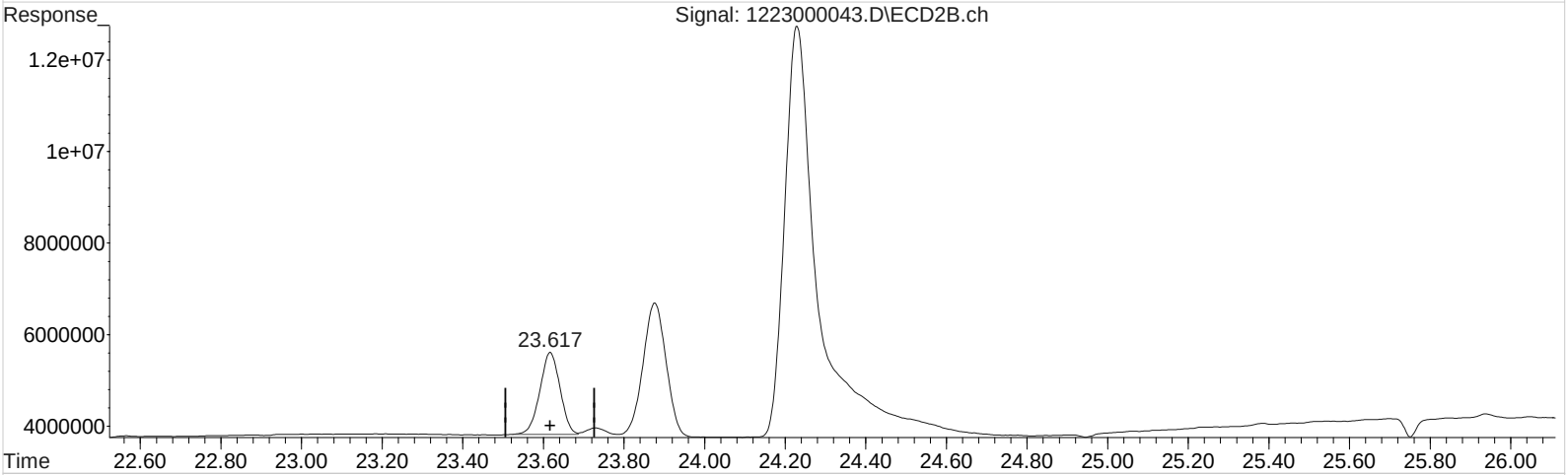
1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000043.D Vial: 66
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 17:34:03 Operator: SMURRAY
Sample : KWG1806260-LCS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:41 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(24) Methoxychlor

25.067min 19.488 ug/L

response 13533393

(24) Methoxychlor #2

23.617min 5.446 ug/L

response 6230440

Manual Integration:

Before

12/29/18

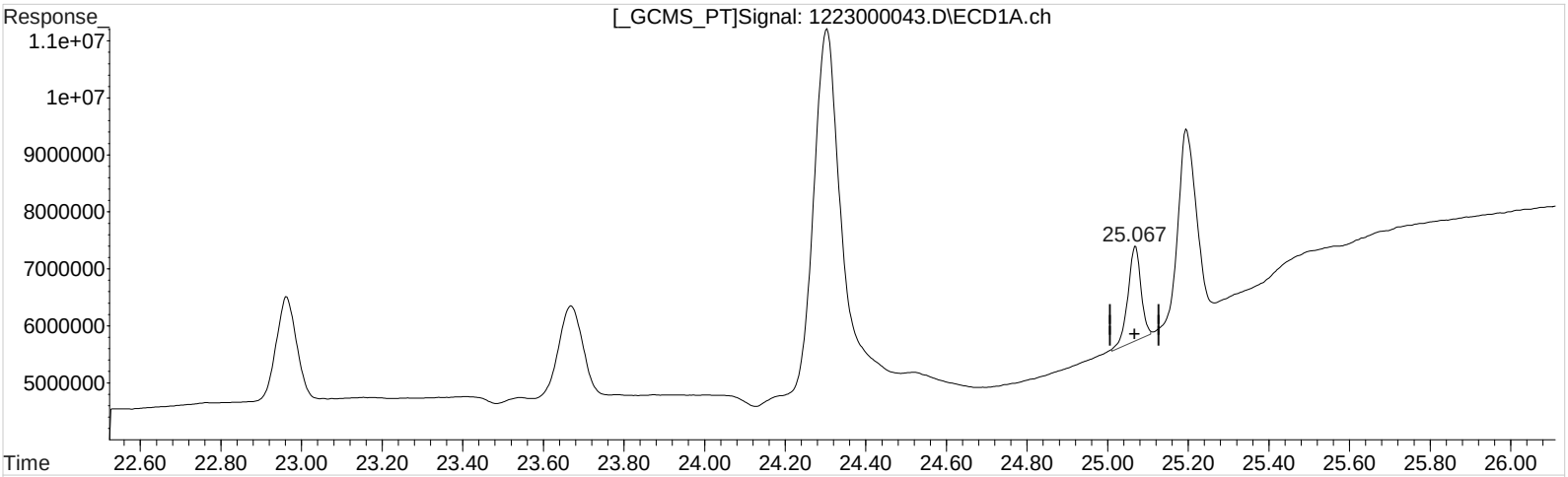
(+) = Expected Retention Time

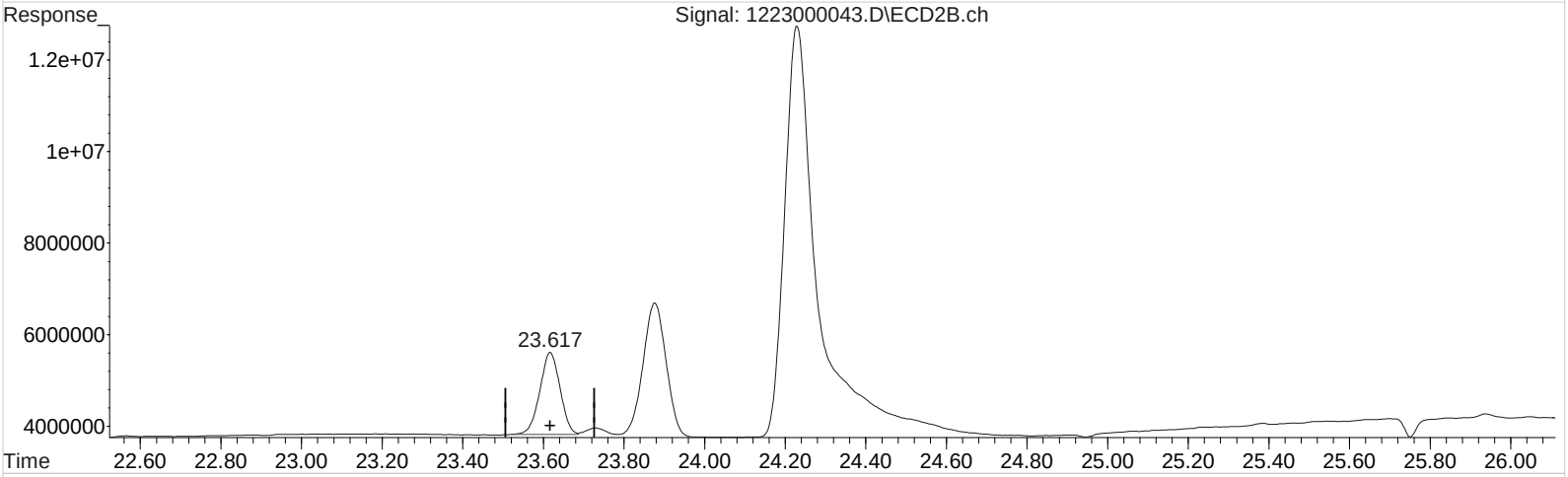
1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000043.D Vial: 66
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 17:34:03 Operator: SMURRAY
Sample : KWG1806260-LCS 81 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:41 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(24) Methoxychlor

25.067min 5.419 ug/L m

response 3762974

(24) Methoxychlor #2

23.617min 5.446 ug/L

response 6230440

Manual Integration:

After

Baseline/Shoulder

12/29/18

(+) = Expected Retention Time

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000044.D
Lab ID: KWG1806260-5
RunType: LCS
Matrix: SOIL

Date Acquired: 12/24/2018 18:10
Date Quantitated: 12/29/2018 11:20
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	gamma-Chlordane	23.6	NA	20	NR
	Endrin Aldehyde	-21.9	NA	20	NR

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000044.D\1223000044C.
Lab ID: KWG1806260-5
RunType: LCS
Matrix: SOIL

Date Acquired: 12/24/2018 18:10
Date Quantitated: 12/29/2018 11:20
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000044.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000044.D\1223000044c.d			**Vial:**	67
Acqu Date:	12/24/2018 18:10	**Quant Date:**	12/29/2018 11:20	**Dilution:**	1.0
Run Type:	LCS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806260-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/06/2018

Analysis Lot:	KWG1806753	**Prep Lot:**	KWG1806260	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511		
Prep Ref:	1705214	**Prep Date:**	12/03/2018		

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:	J:\GC34\DATA\122318\1223000042.D	**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.49	-0.02 c	4.05	+0.00 c	122386078	142084046	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	4.49	-0.02 c	4.05	+0.01 c	122386078	142084046	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	4.49	-0.02 c	4.05	+0.00 c	122386078	142084046	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0 **d**	0 **d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt
1	Tetrachloro-m-xylene	6.94	5.55	6238100	8721853	5.23		4.86				NR
				%Recovery =		105	OK	97	OK	**Limits =**	70-130	
1	Decachlorobiphenyl	29.98	27.48	6748609	8883828	4.35		3.84				NR
				%Recovery =		87	OK	77	OK	**Limits =**	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC			0 **d**	0 **d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Hexachlorobenzene			0 **d**	0 **d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	beta-BHC			0 **d**	0 **d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	gamma-BHC (Lindane)			0 **d**	0 **d**	0.0000	0.0000	0.00010U	0.00010U	NR
1	delta-BHC			0 **d**	0 **d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor			0 **d**	0 **d**	0.0000	0.0000	0.00010U	0.00010U	NR
1	Aldrin			0 **d**	0 **d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Isodrin			0 **d**	0 **d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide			0 **d**	0 **d**	0.0000	0.0000	0.00010U	0.00010U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\122318\1223000044.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000044.D\1223000044c.d			**Vial:**	67
Acqu Date:	12/24/2018 18:10	**Quant Date:**	12/29/2018 11:20	**Dilution:**	1.0
Run Type:	LCS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806260-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan I			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	alpha-Chlordane			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Dieldrin			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDE			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	NR
1	Endosulfan II			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDD			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin Aldehyde			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan Sulfate			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDT			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin Ketone			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Methoxychlor			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	NR
1	2,4'-DDE			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDD			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDT			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	179.98	188.98	0.00900	0.00945	**0.00900**
2	Toxaphene {1}	18.93 +0.01	16.46 +0.01	1151169**m**	2181629	212.19	220.89	0.0106	0.0110	
2	Toxaphene {2}	19.50		3409214	0**d**	218.54	0.0000	0.0109	0.0020U	
2	Toxaphene {3}	21.67	18.03 +0.01	3159716**m**	8327667	163.49	176.65	0.00817	0.00883	
2	Toxaphene {4}	22.13 +0.01	19.56	3956583	6021780	171.12	184.29	0.00856	0.00921	
2	Toxaphene {5}	22.31	22.27	668077	5417572	50.58	204.40	0.00253	0.0102	RPD
2	Toxaphene {6}	23.71	23.02	1353740**m**	6687979	263.96	158.65	0.0132	0.00793	
	Chlordane			0	0	127.26	75.34	0.00636	0.00377	**0.00377**P
3	Chlordane {1}	10.17 +0.01	7.94 +0.01	9535653	6361958	182.27	69.78	0.00911	0.00349	
3	Chlordane {2}	10.98 +0.01	8.44 +0.01	5900516	7674685	83.76	62.89	0.00419	0.00314	
3	Chlordane {3}	12.45 +0.01	11.57 +0.01	7340649	4932568	135.52	75.98	0.00678	0.00380	
3	Chlordane {4}	16.21 +0.01	12.41 +0.01	18987945	21282061	123.14	84.28	0.00616	0.00421	
3	Chlordane {5}	16.46 +0.01	12.55 +0.01	14291138	13511146	98.88	84.30	0.00494	0.00421	
3	Chlordane {6}	16.79	12.85	13679799	17159310	140.01	74.80	0.00700	0.00374	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000044.D Vial: 67
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 18:10:25 Operator: SMURRAY
Sample : KWG1806260-LCS T/C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 29 11:20:51 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	4.487	4.047	122.4E6	142.1E6	100.000	100.000	
29)	1-Bromo-2...	4.487	4.047	122.4E6	142.1E6	100.000	100.000	
36)	1-Bromo-2...	4.487	4.047	122.4E6	142.1E6	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	6.943	5.553	6238100	8721853	5.228	4.860	
28) s	Decachlor...	29.983	27.483	6748609	8883828	4.352	3.841	
	Target Compounds							
30)	Toxaphene	18.930	16.457	1151169	2181629	212.187m	220.889	
31)	Toxaphene...	19.497	0.000	3409214	0	218.542	N.D.	d#
32)	Toxaphene...	21.673	18.027	3159716	8327667	163.486m	176.654	
33)	Toxaphene...	22.130	19.563	3956583	6021780	171.117	184.293	
34)	Toxaphene...	22.310	22.273	668077	5417572	50.579	204.397	#
35)	Toxaphene...	23.713	23.020	1353740	6687979	263.962m	158.651	#
37)	Chlordane	10.170	7.943	9535653	6361958	182.268	69.781	#
38)	Chlordane...	10.977	8.443	5900516	7674685	83.762	62.888	
39)	Chlordane...	12.450	11.567	7340649	4932568	135.523	75.983	#
40)	Chlordane...	16.210	12.410	18987945	21282061	123.135	84.275	#
41)	Chlordane...	16.457	12.550	14291138	13511146	98.875	84.298	
42)	Chlordane...	16.793	12.853	13679799	17159310	140.009	74.802	#

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

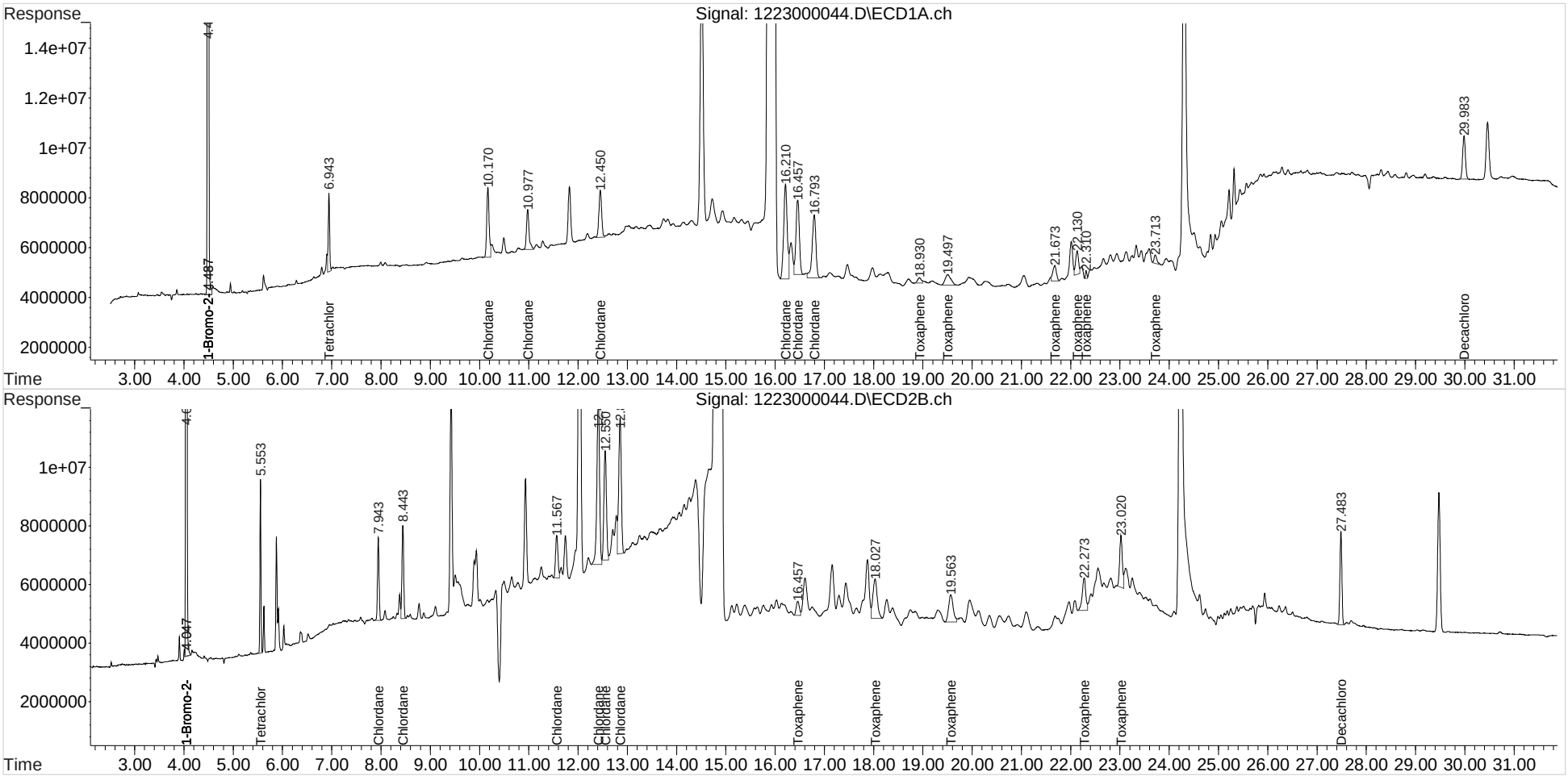
1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\122318\1223000044.D Vial: 67
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 18:10:25 Operator: SMURRAY
Sample : KWG1806260-LCS T/C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 29 11:20:51 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



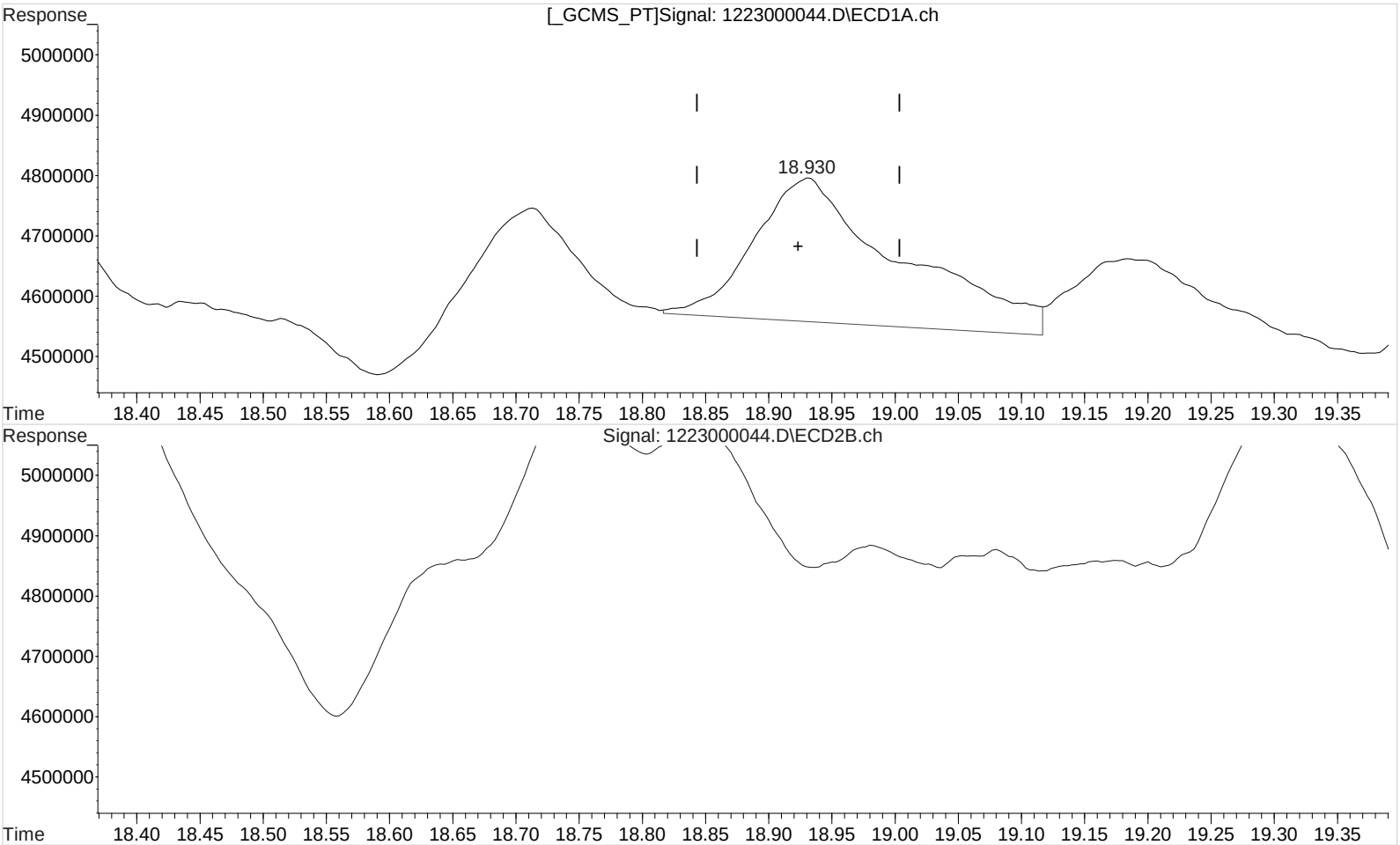
Quantitation Report (Qedit)

1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000044.D Vial: 67
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 18:10:25 Operator: SMURRAY
Sample : KWG1806260-LCS T/C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:46 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(30) Toxaphene

18.930min 354.341 ug/L

response 1922393

Manual Integration:

Before

12/29/18

(30) Toxaphene #2

16.457min 220.889 ug/L

response 2181629

(+) = Expected Retention Time

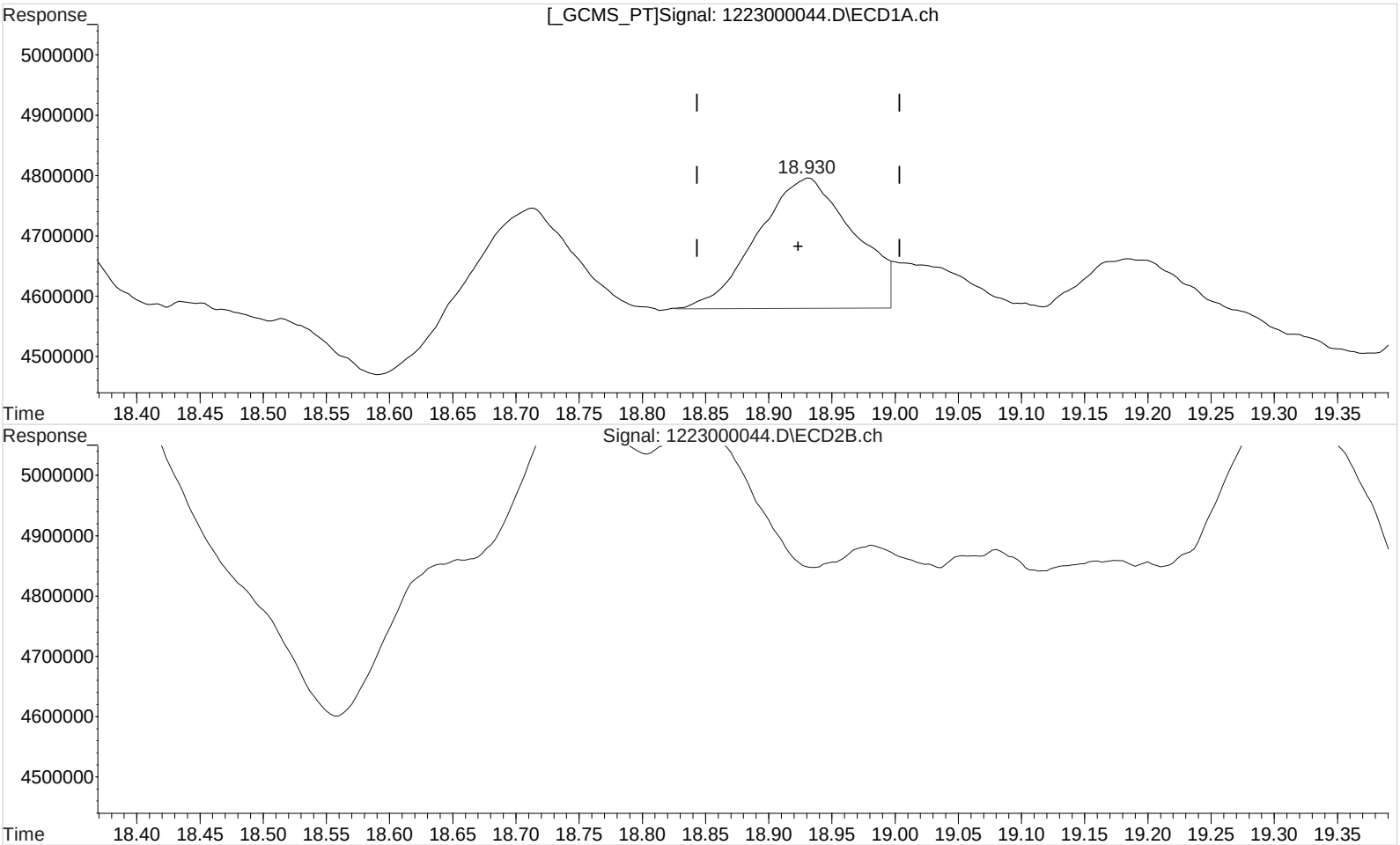
Quantitation Report (Qedit)

1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000044.D Vial: 67
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 18:10:25 Operator: SMURRAY
Sample : KWG1806260-LCS T/C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:46 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(30) Toxaphene

18.930min 212.187 ug/L m

response 1151169

Manual Integration:

After

Baseline/Shoulder

12/29/18

(30) Toxaphene #2

16.457min 220.889 ug/L

response 2181629

(+) = Expected Retention Time

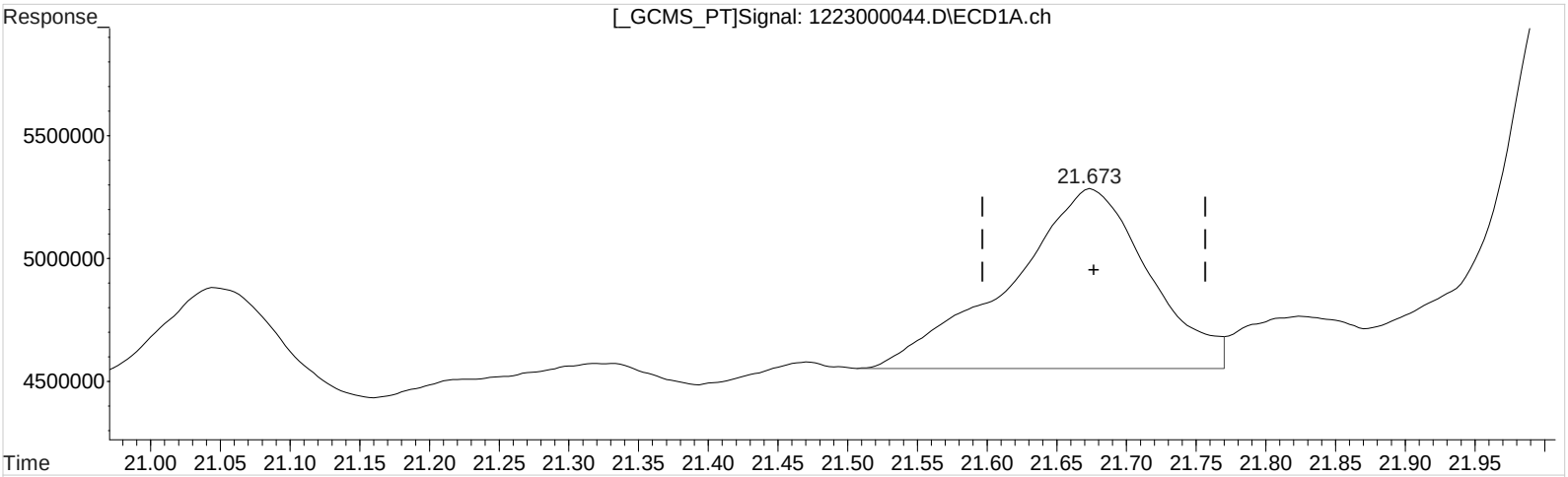
Quantitation Report (Qedit)

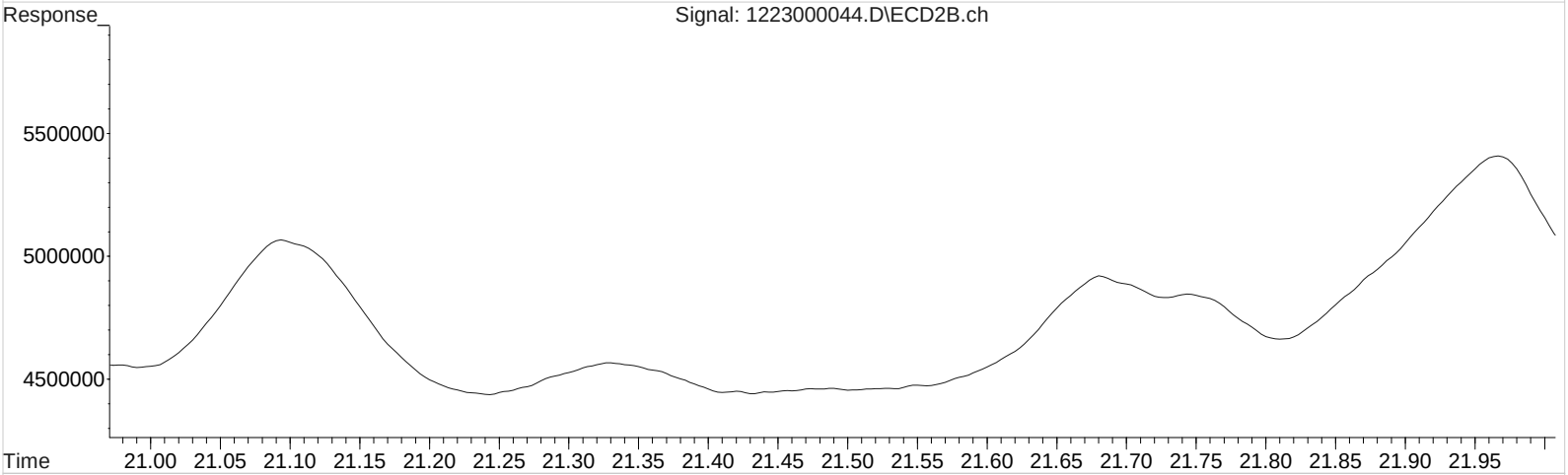
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000044.D Vial: 67
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 18:10:25 Operator: SMURRAY
Sample : KWG1806260-LCS T/C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:46 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(32) Toxaphene {3}

21.673min 263.781 ug/L

response 5098108

Manual Integration:

Before

12/29/18

(32) Toxaphene {3} #2

18.027min 176.654 ug/L

response 8327667

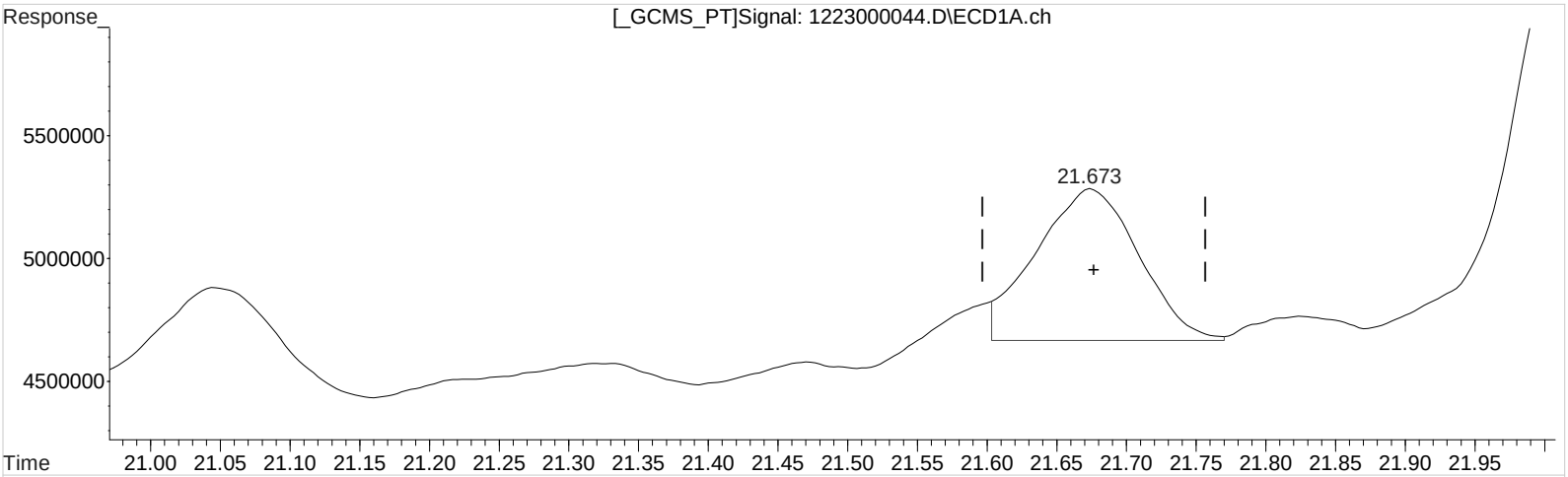
(+) = Expected Retention Time

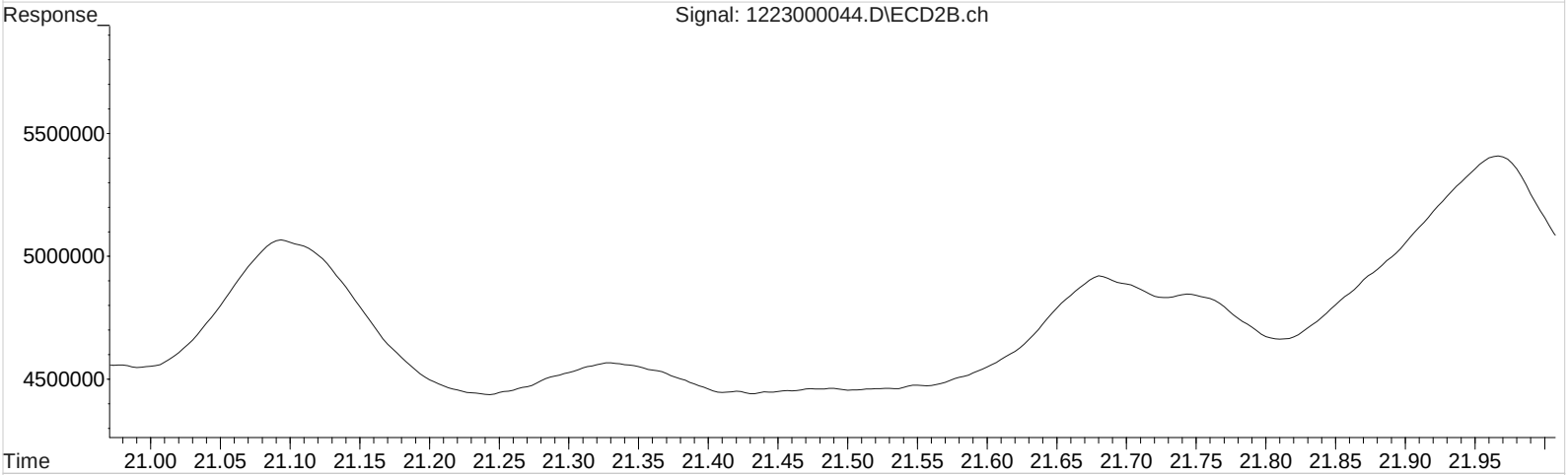
1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000044.D Vial: 67
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 18:10:25 Operator: SMURRAY
Sample : KWG1806260-LCS T/C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:46 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(32) Toxaphene {3}

21.673min 163.486 ug/L m

response 3159716

Manual Integration:

After

Baseline/Shoulder

12/29/18

(32) Toxaphene {3} #2

18.027min 176.654 ug/L

response 8327667

(+) = Expected Retention Time

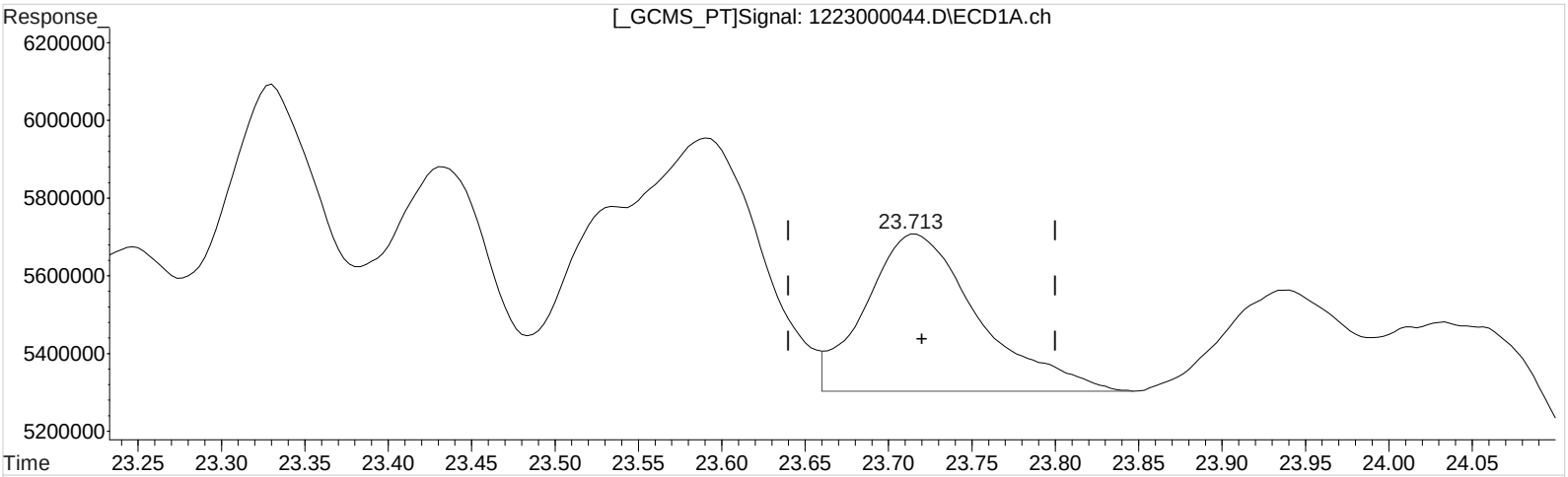
Quantitation Report (Qedit)

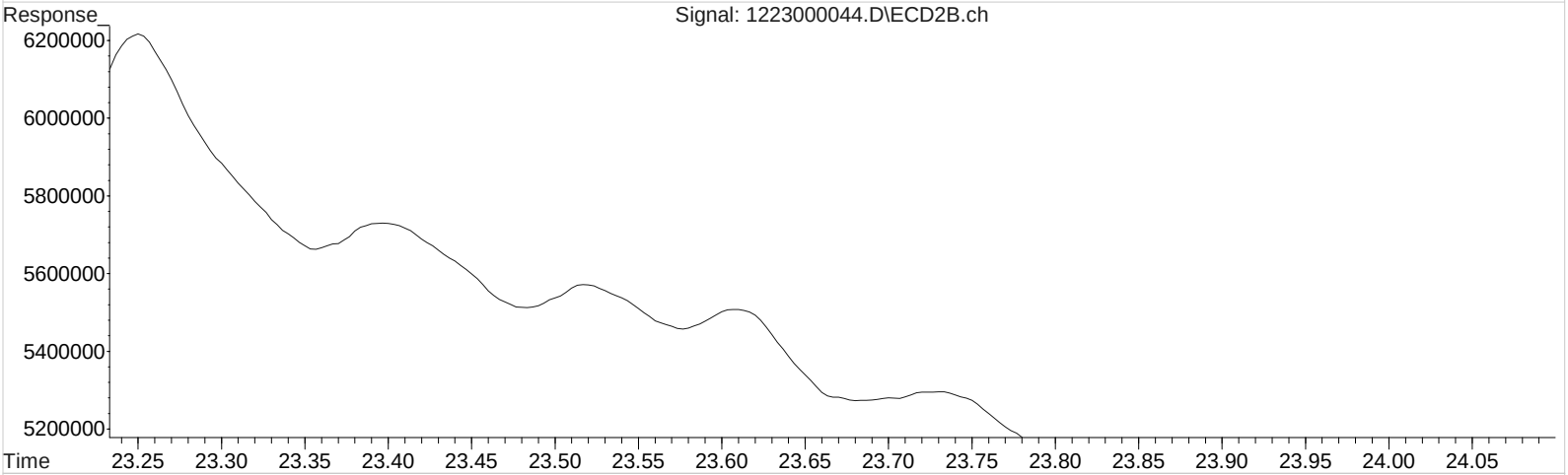
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000044.D Vial: 67
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 18:10:25 Operator: SMURRAY
Sample : KWG1806260-LCS T/C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:46 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(35) Toxaphene {6}

23.713min 369.600 ug/L

response 1895512

Manual Integration:

Before

12/29/18

(35) Toxaphene {6} #2

23.020min 158.651 ug/L

response 6687979

(+) = Expected Retention Time

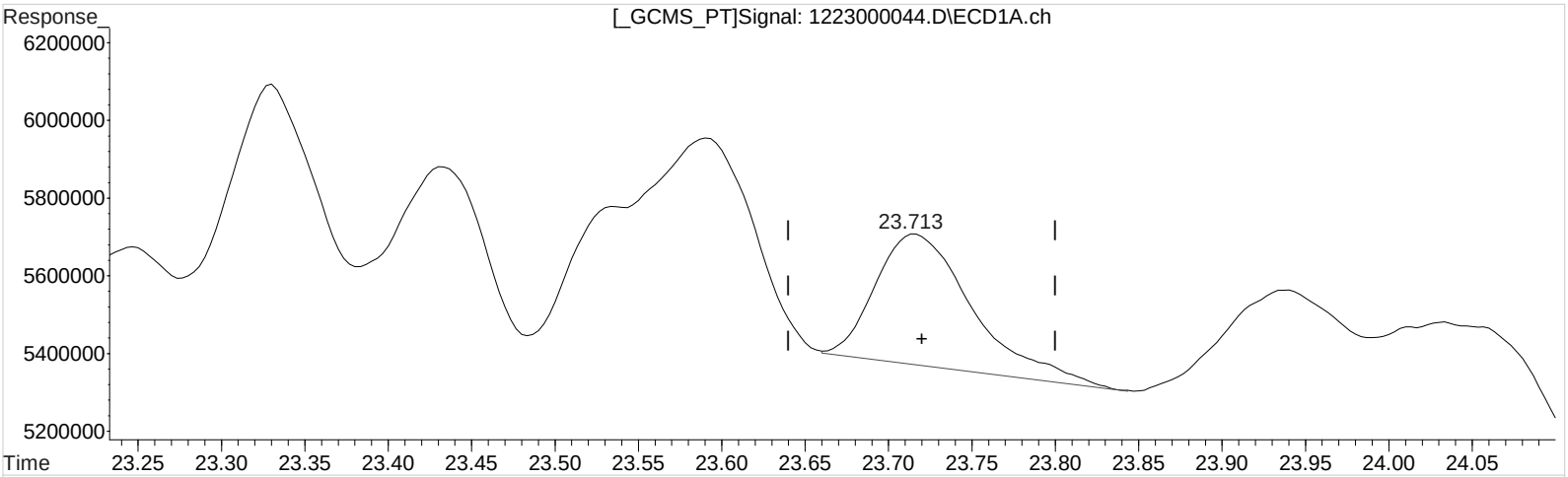
Quantitation Report (Qedit)

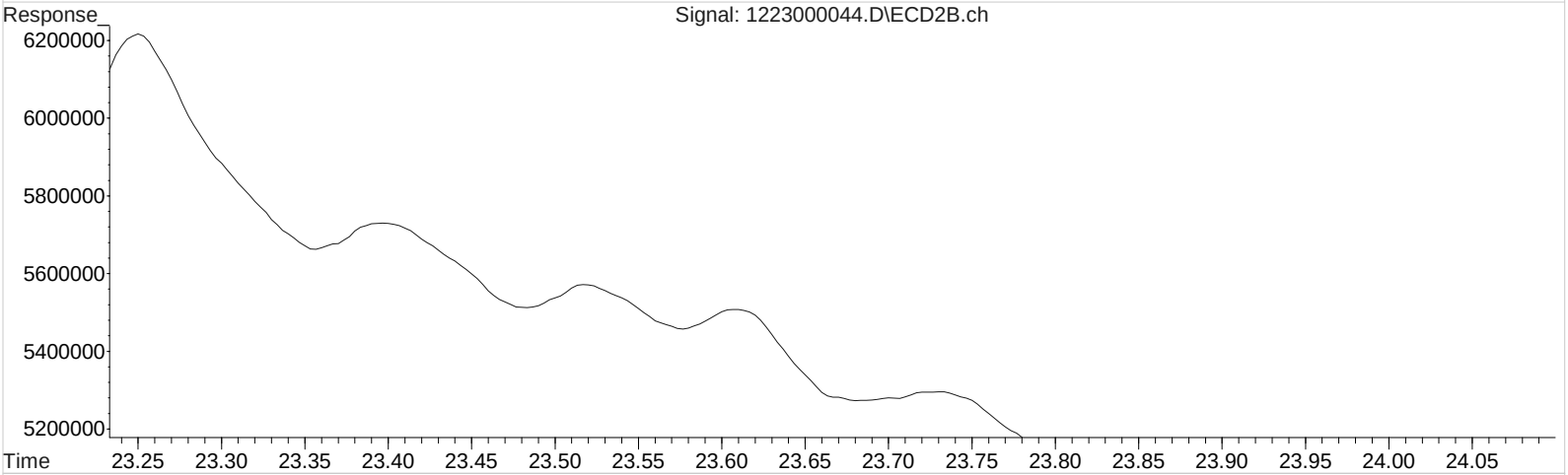
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000044.D Vial: 67
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 18:10:25 Operator: SMURRAY
Sample : KWG1806260-LCS T/C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:46 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(35) Toxaphene {6}

23.713min 263.962 ug/L m

response 1353740

Manual Integration:

After

Baseline/Shoulder

12/29/18

(35) Toxaphene {6} #2

23.020min 158.651 ug/L

response 6687979

(+) = Expected Retention Time

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000036.D
Lab ID: KWG1806753-9
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/24/2018 13:21
Date Quantitated: 12/25/2018 15:21
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1232

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	gamma-Chlordane	23.6	NA	20	ICVOK
	Endrin Aldehyde	-21.9	NA	20	ICVOK
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	693190.3333	4772761.333	NR
	1-Bromo-2-nitrobenzene {3}	0	381986.6428	9527946.571	NR
	1-Bromo-2-nitrobenzene {4}	0	65717944.75	262871779	NR

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000036.D\1223000036C.
Lab ID: KWG1806753-9
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/24/2018 13:21
Date Quantitated: 12/25/2018 15:21
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1232

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	371179.41666	484717.666	NR
	1-Bromo-2-nitrobenzene {3}	0	712037.8571	2848151.428	NR
	1-Bromo-2-nitrobenzene {4}	0	142911.0833	571644.333	NR

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000036.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000036.D\1223000036c.d			**Vial:**	87
Acqu Date:	12/24/2018 13:21	**Quant Date:**	12/25/2018 15:21	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1232	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:		**Method ID:**	MJ1232
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.48	-0.03	4.04	-0.01	124150609	154321558	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	6.94	5.55	2620992	4352922	2.17	2.23			NA
				%Recovery =		NA	NA	**Limits =**	20-106	
1	Decachlorobiphenyl	29.98	27.48	3221827	4776646	2.05	1.90			NA
				%Recovery =		NA	NA	**Limits =**	19-127	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC	7.95	6.67	3034469	5573302	2.21	2.32			
1	Hexachlorobenzene	8.16	6.46	4609436	6222605	2.28	2.16			
1	beta-BHC	9.87	8.18	1736973	3076709	2.25	2.42			
1	gamma-BHC (Lindane)	8.90	7.51	2949259	5482515	2.28	2.35			
1	delta-BHC	10.97	9.00	3241948	5940607	2.14	2.46			
1	Heptachlor	10.81	8.44	3007292	6040159	2.39	2.42			
1	Aldrin	12.29	9.37	2984323	5354940	2.16	2.33			
1	Isodrin	13.80	10.81	2608290	4764361	2.26	2.38			
1	Heptachlor Epoxide	14.44	11.40	3069912	5614082	2.12	2.35			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\122318\1223000036.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000036.D\1223000036c.d			**Vial:**	87
Acqu Date:	12/24/2018 13:21	**Quant Date:**	12/25/2018 15:21	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1232	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	gamma-Chlordane	16.21	12.41	3334265**m**	5732012	2.24	2.29			
1	Endosulfan I	16.58	13.02	2803501	5281277	2.19	2.32			
1	alpha-Chlordane	16.45	12.85	3155902	5645486	2.20	2.35			
1	Dieldrin	18.13	14.45	2983886	5320804	2.16	2.22			
1	4,4'-DDE	17.72	14.10	3284150	5240183	2.23	2.26			
1	Endrin	19.56	16.10	3018532	5577055	2.30	2.34			
1	Endosulfan II	21.75	17.81	2976663**m**	5383762	2.26	2.32			
1	4,4'-DDD	21.49	17.42	2441092**m**	4471413	2.33	2.35			
1	Endrin Aldehyde	22.34	19.40	2419990**m**	4786913	2.14	2.55			
1	Endosulfan Sulfate	23.67	20.99	2890901	5625363	2.15	2.28			
1	4,4'-DDT	22.96	19.17	2654408**m**	4940292	2.10	2.30			
1	Endrin Ketone	25.21	23.88	9533278**m**	5602721	6.59	2.07			
1	Methoxychlor	25.06	23.62	1472171**m**	2871737	1.92	2.13			
1	2,4'-DDE			0**d**	0**d**	0.0000	0.0000			NR
1	2,4'-DDD			0**d**	0**d**	0.0000	0.0000			NR
1	2,4'-DDT			0**d**	0**d**	0.0000	0.0000			NR
	Toxaphene			0	0	0.0000	0.0000			NR
2	Toxaphene {1}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {2}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {3}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {4}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {5}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {6}			0**d**	0**d**	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.0000			NR
3	Chlordane {1}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {2}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {3}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {4}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {5}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {6}			0**d**	0**d**	0.0000	0.0000			
4	Chlorpyrifos			0**d**	0**d**	0.0000	0.0000			NR
4	Oxychlordane			0**d**	0**d**	0.0000	0.0000			NR
4	cis-Nonachlor			0**d**	0**d**	0.0000	0.0000			NR
4	trans-Nonachlor			0**d**	0**d**	0.0000	0.0000			NR
4	Mirex			0**d**	0**d**	0.0000	0.0000			NR
4	Hexachloroethane			0**d**	0**d**	0.0000	0.0000			NR
4	Hexachlorobutadiene			0**d**	0**d**	0.0000	0.0000			NR
4	Perthane			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000036.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000036.D\1223000036c.d			**Vial:**	87
Acqu Date:	12/24/2018 13:21	**Quant Date:**	12/25/2018 15:21	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:		**Method ID:**	MJ1647
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.48	-0.03	4.04	-0.01	124150609	154321558	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	6.94	5.55	2620992	4352922	2.17	2.23			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	29.98	27.48	3221827	4776646	2.05	1.90			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC	7.95	6.67	3034469	5573302	2.21	2.32			
1	Hexachlorobenzene	8.16	6.46	4609436	6222605	2.28	2.16			
1	beta-BHC	9.87	8.18	1736973	3076709	2.25	2.42			
1	gamma-BHC (Lindane)	8.90	7.51	2949259	5482515	2.28	2.35			
1	delta-BHC	10.97	9.00	3241948	5940607	2.14	2.46			
1	Heptachlor	10.81	8.44	3007292	6040159	2.39	2.42			
1	Aldrin	12.29	9.37	2984323	5354940	2.16	2.33			
1	Isodrin	13.80	10.81	2608290	4764361	2.26	2.38			
1	Heptachlor Epoxide	14.44	11.40	3069912	5614082	2.12	2.35			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\122318\1223000036.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000036.D\1223000036c.d			**Vial:**	87
Acqu Date:	12/24/2018 13:21	**Quant Date:**	12/25/2018 15:21	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	gamma-Chlordane	16.21	12.41	3334265**m**	5732012	2.24	2.29			
1	Endosulfan I	16.58	13.02	2803501	5281277	2.19	2.32			
1	alpha-Chlordane	16.45	12.85	3155902	5645486	2.20	2.35			
1	Dieldrin	18.13	14.45	2983886	5320804	2.16	2.22			
1	4,4'-DDE	17.72	14.10	3284150	5240183	2.23	2.26			
1	Endrin	19.56	16.10	3018532	5577055	2.30	2.34			
1	Endosulfan II	21.75	17.81	2976663**m**	5383762	2.26	2.32			
1	4,4'-DDD	21.49	17.42	2441092**m**	4471413	2.33	2.35			
1	Endrin Aldehyde	22.34	19.40	2419990**m**	4786913	2.14	2.55			
1	Endosulfan Sulfate	23.67	20.99	2890901	5625363	2.15	2.28			
1	4,4'-DDT	22.96	19.17	2654408**m**	4940292	2.10	2.30			
1	Endrin Ketone	25.21	23.88	9533278**m**	5602721	6.59	2.07			
1	Methoxychlor	25.06	23.62	1472171**m**	2871737	1.92	2.13			
1	2,4'-DDE			0**d**	0**d**	0.0000	0.0000			NR
1	2,4'-DDD			0**d**	0**d**	0.0000	0.0000			NR
1	2,4'-DDT			0**d**	0**d**	0.0000	0.0000			NR
	Toxaphene			0	0	0.0000	0.0000			NR
2	Toxaphene {1}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {2}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {3}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {4}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {5}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {6}			0**d**	0**d**	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.0000			NR
3	Chlordane {1}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {2}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {3}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {4}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {5}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {6}			0**d**	0**d**	0.0000	0.0000			
4	Chlorpyrifos			0**d**	0**d**	0.0000	0.0000			NR
4	Oxychlordane			0**d**	0**d**	0.0000	0.0000			NR
4	cis-Nonachlor			0**d**	0**d**	0.0000	0.0000			NR
4	trans-Nonachlor			0**d**	0**d**	0.0000	0.0000			NR
4	Mirex			0**d**	0**d**	0.0000	0.0000			NR
4	Hexachloroethane			0**d**	0**d**	0.0000	0.0000			NR
4	Hexachlorobutadiene			0**d**	0**d**	0.0000	0.0000			NR
4	Perthane			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000036.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000036.D\1223000036c.d			**Vial:**	87
Acqu Date:	12/24/2018 13:21	**Quant Date:**	12/25/2018 15:21	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:		**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.48	-0.03	4.04	-0.01	124150609	154321558	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	6.94	5.55	2620992	4352922	2.17	2.23			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	29.98	27.48	3221827	4776646	2.05	1.90			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC	7.95	6.67	3034469	5573302	2.21	2.32			
1	Hexachlorobenzene	8.16	6.46	4609436	6222605	2.28	2.16			
1	beta-BHC	9.87	8.18	1736973	3076709	2.25	2.42			
1	gamma-BHC (Lindane)	8.90	7.51	2949259	5482515	2.28	2.35			
1	delta-BHC	10.97	9.00	3241948	5940607	2.14	2.46			
1	Heptachlor	10.81	8.44	3007292	6040159	2.39	2.42			
1	Aldrin	12.29	9.37	2984323	5354940	2.16	2.33			
1	Isodrin	13.80	10.81	2608290	4764361	2.26	2.38			
1	Heptachlor Epoxide	14.44	11.40	3069912	5614082	2.12	2.35			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 12/29/18
2nd TP 01/02/19

Data File #1:	J:\GC34\DATA\122318\1223000036.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000036.D\1223000036c.d			**Vial:**	87
Acqu Date:	12/24/2018 13:21	**Quant Date:**	12/25/2018 15:21	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane	16.21	12.41	3334265**m**	5732012	2.24	2.29			
1	Endosulfan I	16.58	13.02	2803501	5281277	2.19	2.32			
1	alpha-Chlordane	16.45	12.85	3155902	5645486	2.20	2.35			
1	Dieldrin	18.13	14.45	2983886	5320804	2.16	2.22			
1	4,4'-DDE	17.72	14.10	3284150	5240183	2.23	2.26			
1	Endrin	19.56	16.10	3018532	5577055	2.30	2.34			
1	Endosulfan II	21.75	17.81	2976663**m**	5383762	2.26	2.32			
1	4,4'-DDD	21.49	17.42	2441092**m**	4471413	2.33	2.35			
1	Endrin Aldehyde	22.34	19.40	2419990**m**	4786913	2.14	2.55			
1	Endosulfan Sulfate	23.67	20.99	2890901	5625363	2.15	2.28			
1	4,4'-DDT	22.96	19.17	2654408**m**	4940292	2.10	2.30			
1	Endrin Ketone	25.21	23.88	9533278**m**	5602721	6.59	2.07			
1	Methoxychlor	25.06	23.62	1472171**m**	2871737	1.92	2.13			
1	2,4'-DDE			0**d**	0**d**	0.0000	0.0000			NR
1	2,4'-DDD			0**d**	0**d**	0.0000	0.0000			NR
1	2,4'-DDT			0**d**	0**d**	0.0000	0.0000			NR
	Toxaphene			0	0	0.0000	0.0000			NR
2	Toxaphene {1}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {2}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {3}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {4}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {5}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {6}			0**d**	0**d**	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.0000			NR
3	Chlordane {1}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {2}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {3}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {4}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {5}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {6}			0**d**	0**d**	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
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E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000036.D Vial: 87
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 13:21:23 Operator: SMURRAY
Sample : 81 2PPB GCPS8-50D Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 15:21:13 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	4.480	4.040	124.2E6	154.3E6	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	6.937	5.547	2620992	4352922	2.165	2.233	
28) s	Decachlor...	29.980	27.480	3221827	4776646	2.048	1.901	
	Target Compounds							
3)	alpha-BHC	7.947	6.667	3034469	5573302	2.206	2.323	
4)	Hexachlor...	8.163	6.463	4609436	6222605	2.279	2.163	
5)	beta-BHC	9.873	8.183	1736973	3076709	2.247	2.415	
6)	gamma-BHC...	8.897	7.507	2949259	5482515	2.278	2.348	
7)	delta-BHC	10.970	8.997	3241948	5940607	2.140	2.461	
8)	Heptachlor	10.807	8.437	3007292	6040159	2.391	2.420	
9)	Aldrin	12.287	9.367	2984323	5354940	2.157	2.326	
10)	Isodrin	13.797	10.807	2608290	4764361	2.263	2.383	
11)	Heptachlo...	14.437	11.397	3069912	5614082	2.117	2.347	
12)	gamma-Chl...	16.207	12.407	3334265	5732012	2.239m	2.287	
13)	Endosulfan I	16.580	13.023	2803501	5281277	2.188	2.318	
14)	alpha-Chl...	16.453	12.850	3155902	5645486	2.198	2.352	
15)	Dieldrin	18.127	14.450	2983886	5320804	2.161	2.224	
16)	4,4'-DDE	17.723	14.103	3284150	5240183	2.232	2.255	
17)	Endrin	19.563	16.100	3018532	5577055	2.298	2.339	
18)	Endosulfa...	21.750	17.807	2976663	5383762	2.264m	2.315	
19)	4,4'-DDD	21.487	17.423	2441092	4471413	2.329m	2.351	
20)	Endrin Al...	22.340	19.400	2419990	4786913	2.142m	2.548	
21)	Endosulfa...	23.670	20.993	2890901	5625363	2.148	2.276	
22)	4,4'-DDT	22.960	19.167	2654408	4940292	2.097m	2.299	
23)	Endrin Ke...	25.213	23.880	9533278	5602721	6.593m	2.072	#
24)	Methoxychlor	25.063	23.617	1472171	2871737	1.917m	2.130	

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

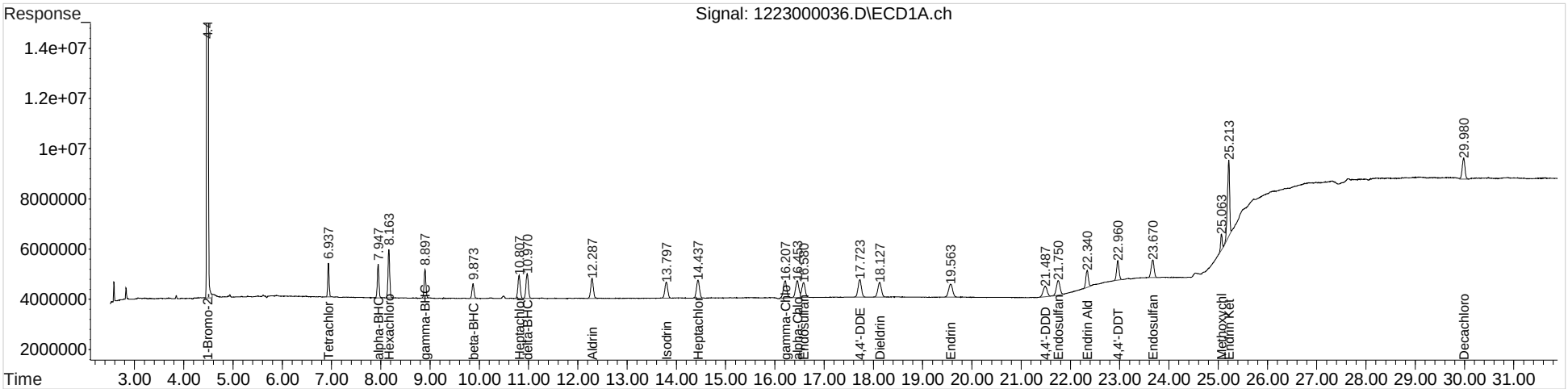
1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\122318\1223000036.D Vial: 87
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 13:21:23 Operator: SMURRAY
Sample : 81 2PPB GCPS8-50D Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 15:21:13 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



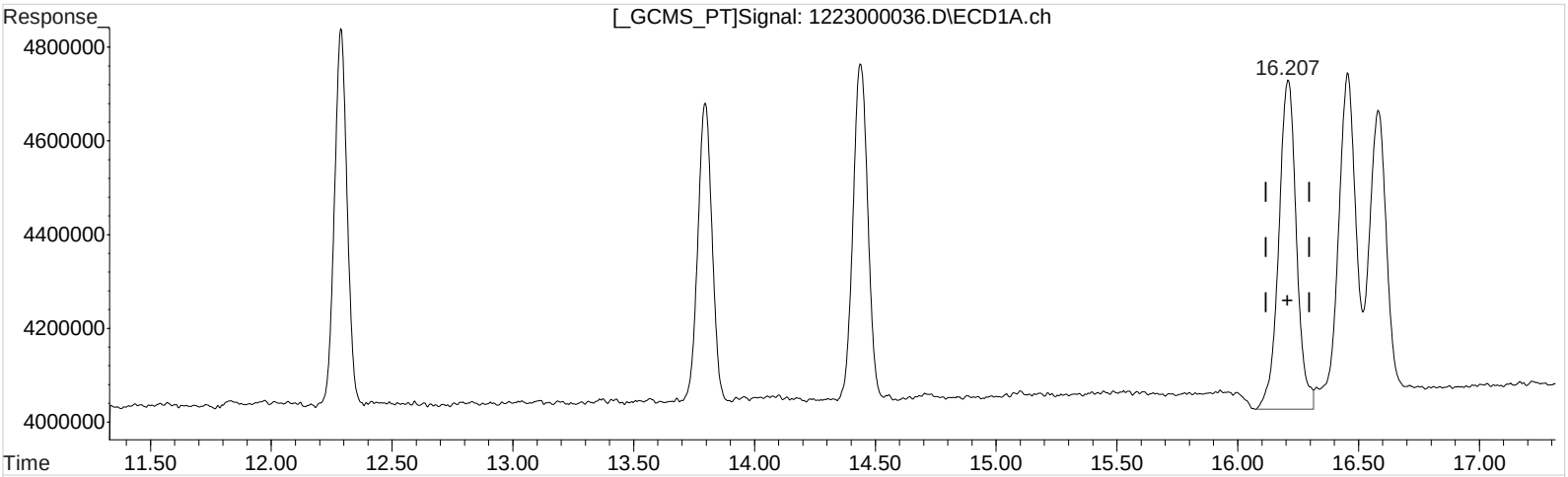
Quantitation Report (Qedit)

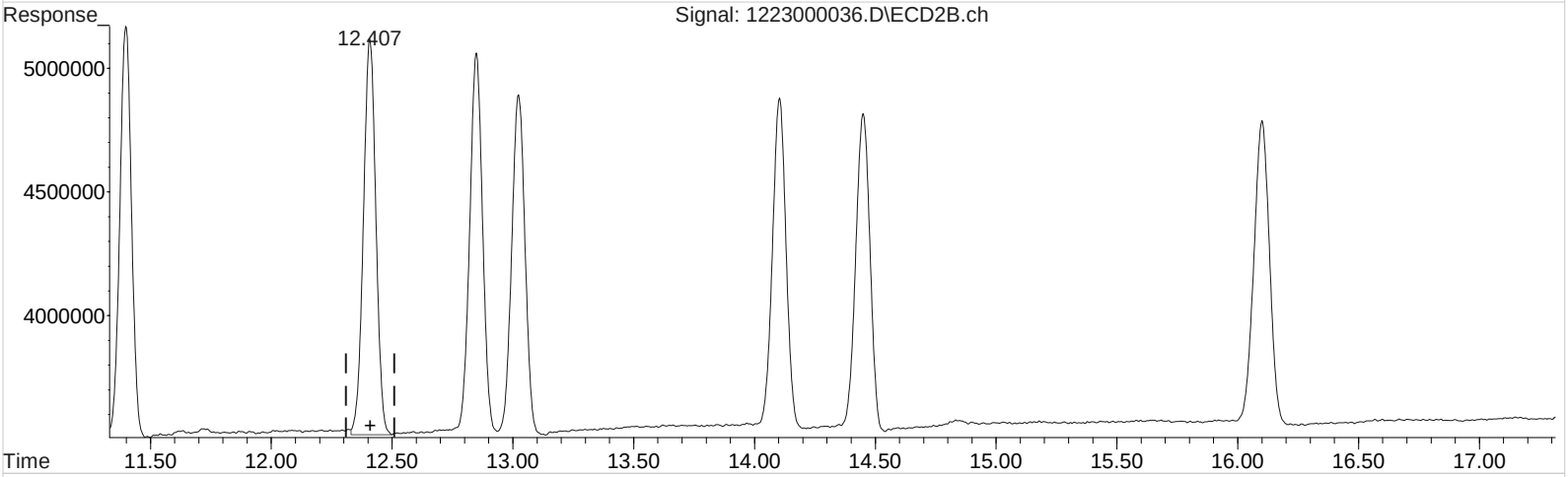
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000036.D Vial: 87
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 13:21:23 Operator: SMURRAY
Sample : 81 2PPB GCPS8-50D Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:09 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(12) gamma-Chlordane

16.207min 2.407 ug/L

response 3585083

Manual Integration:

Before

12/25/18

(12) gamma-Chlordane #2

12.407min 2.287 ug/L

response 5732012

(+) = Expected Retention Time

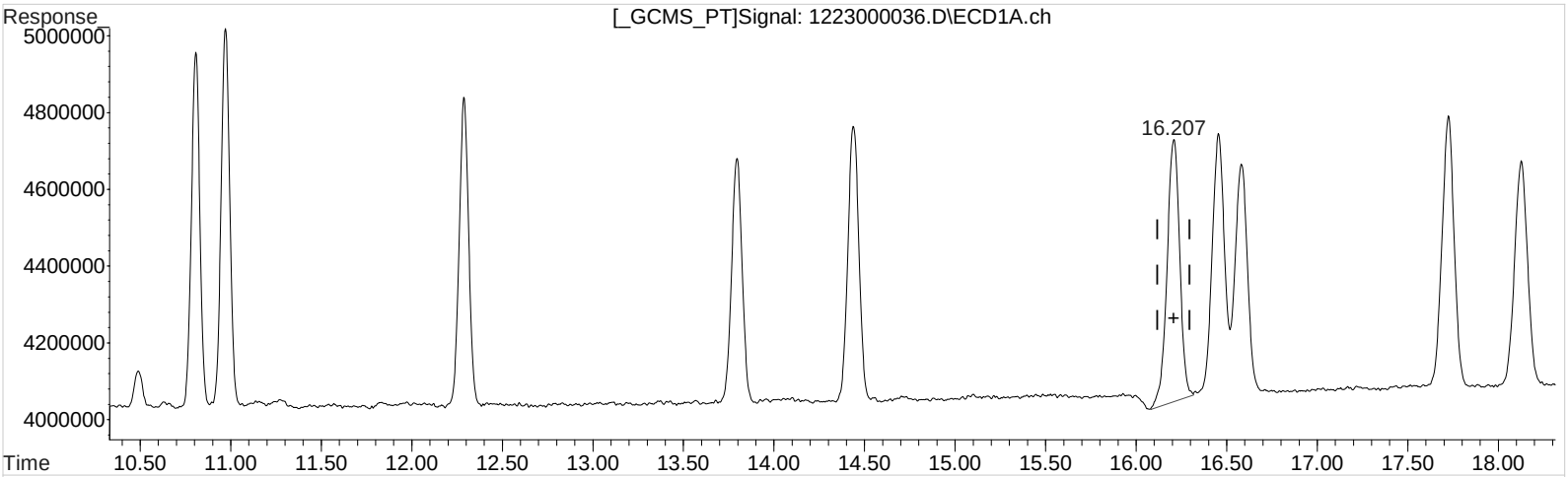
Quantitation Report (Qedit)

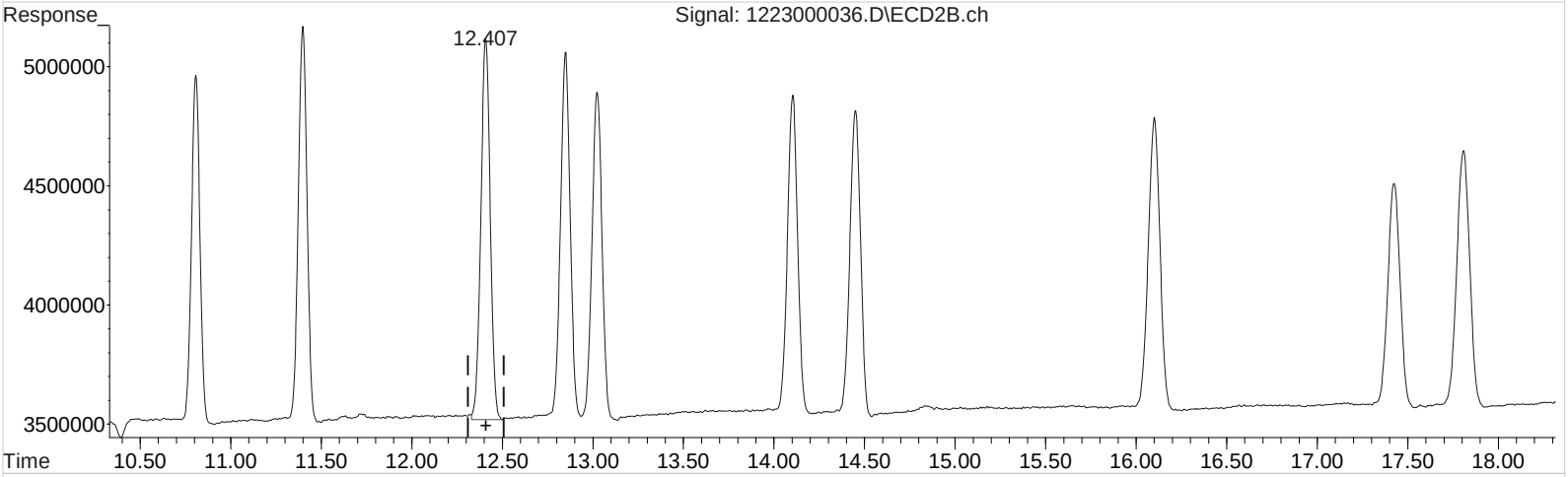
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000036.D Vial: 87
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 13:21:23 Operator: SMURRAY
Sample : 81 2PPB GCPS8-50D Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:09 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(12) gamma-Chlordane

16.207min 2.239 ug/L m

response 3334265

Manual Integration:

After

Baseline/Shoulder

12/25/18

(12) gamma-Chlordane #2

12.407min 2.287 ug/L

response 5732012

(+) = Expected Retention Time

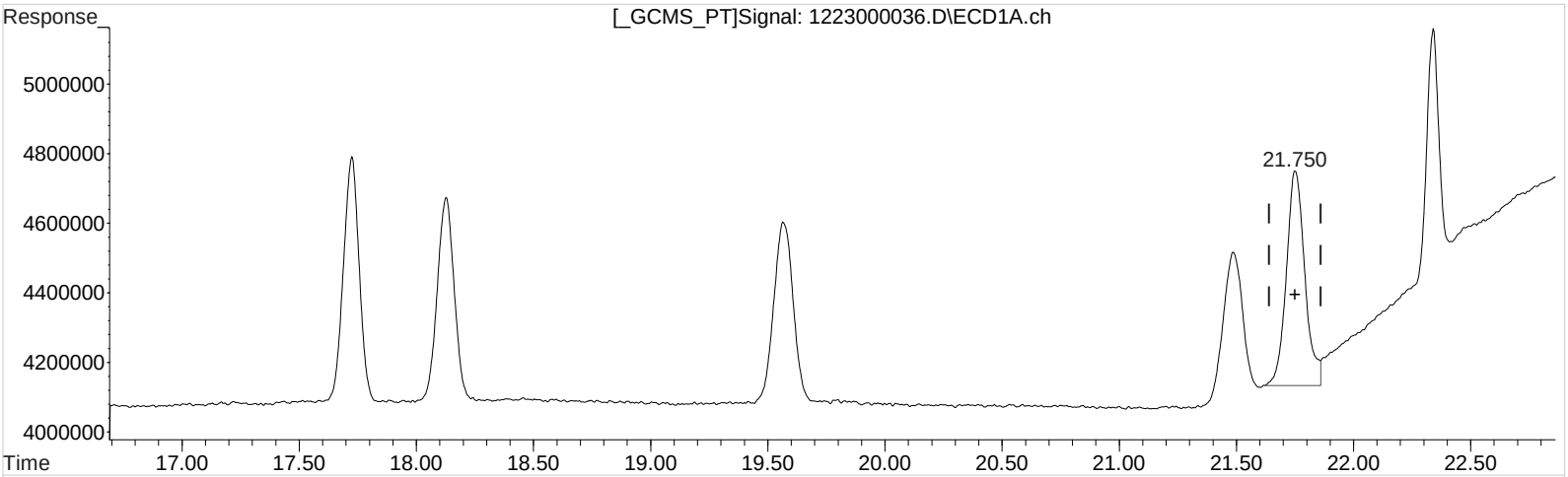
Quantitation Report (Qedit)

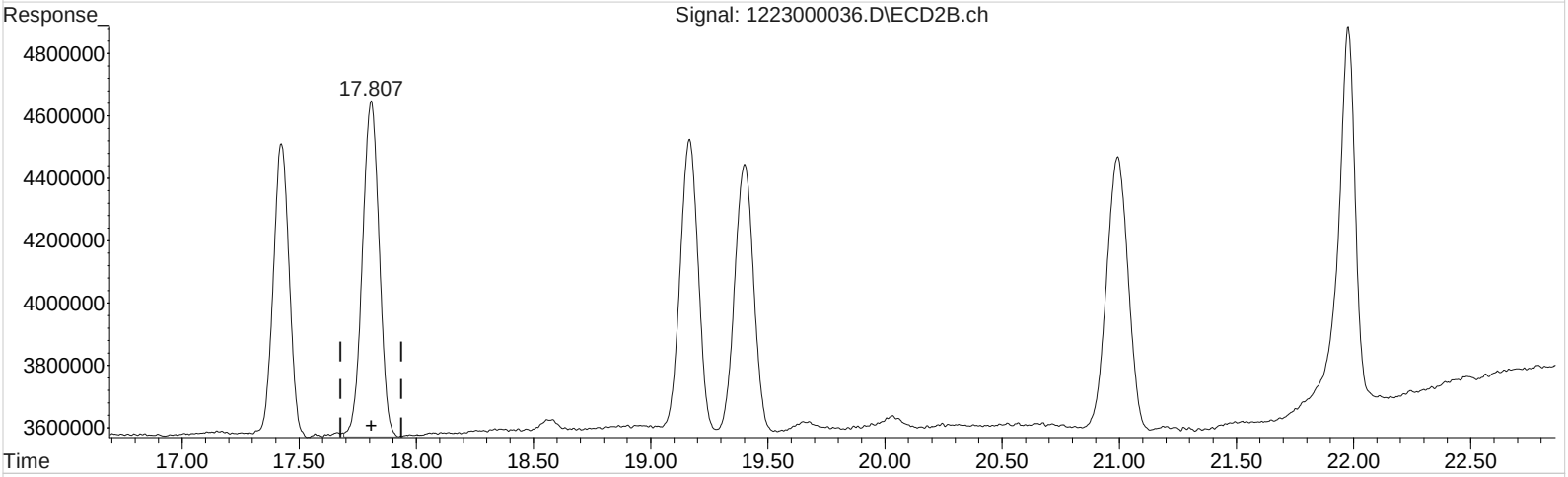
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000036.D Vial: 87
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 13:21:23 Operator: SMURRAY
Sample : 81 2PPB GCPS8-50D Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:09 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(18) Endosulfan II

21.750min 2.580 ug/L

response 3392228

Manual Integration:

Before

12/25/18

(18) Endosulfan II #2

17.807min 2.315 ug/L

response 5383762

(+) = Expected Retention Time

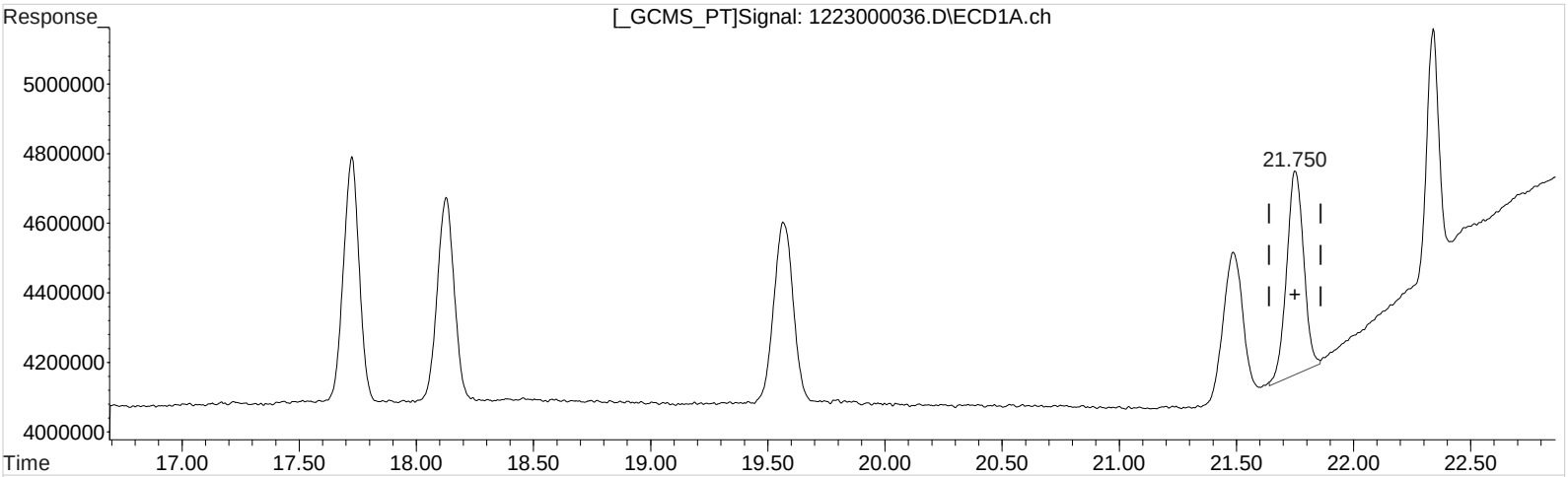
Quantitation Report (Qedit)

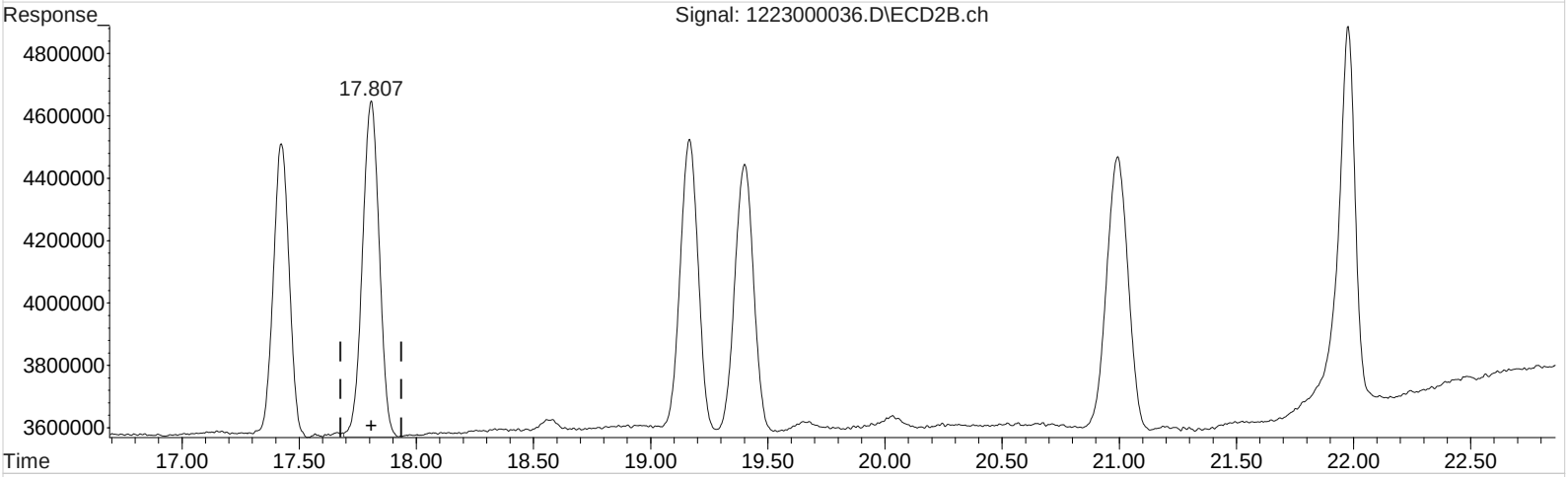
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000036.D Vial: 87
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 13:21:23 Operator: SMURRAY
Sample : 81 2PPB GCPS8-50D Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:09 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(18) Endosulfan II

21.750min 2.264 ug/L m

response 2976663

Manual Integration:

After

Baseline/Shoulder

12/25/18

(18) Endosulfan II #2

17.807min 2.315 ug/L

response 5383762

(+) = Expected Retention Time

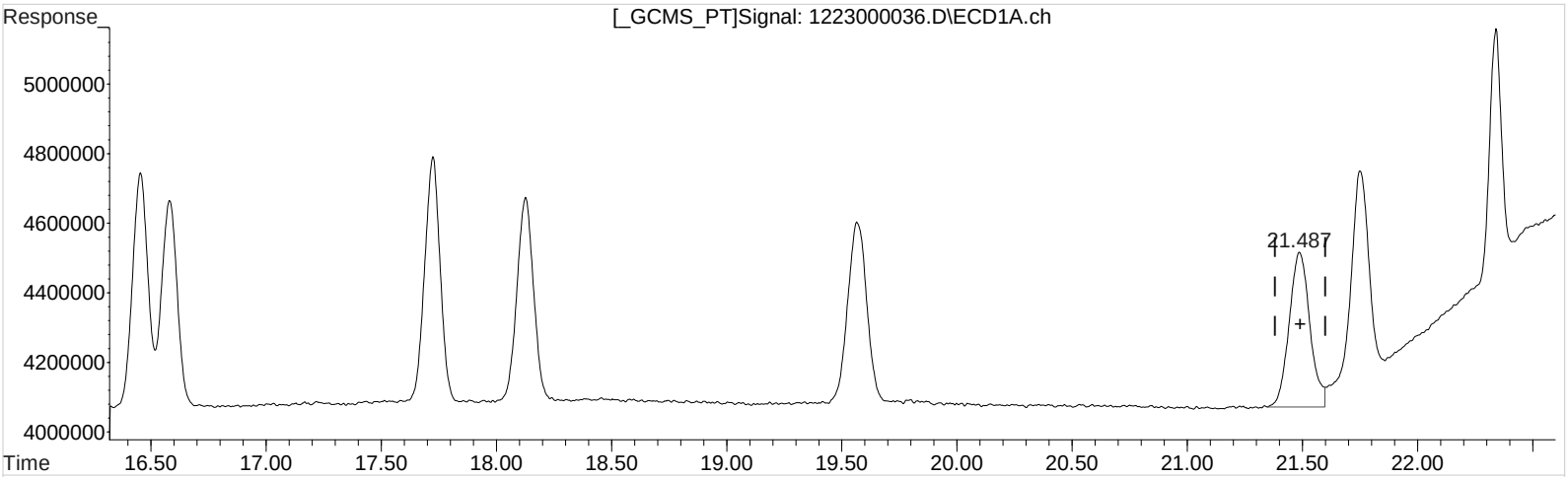
Quantitation Report (Qedit)

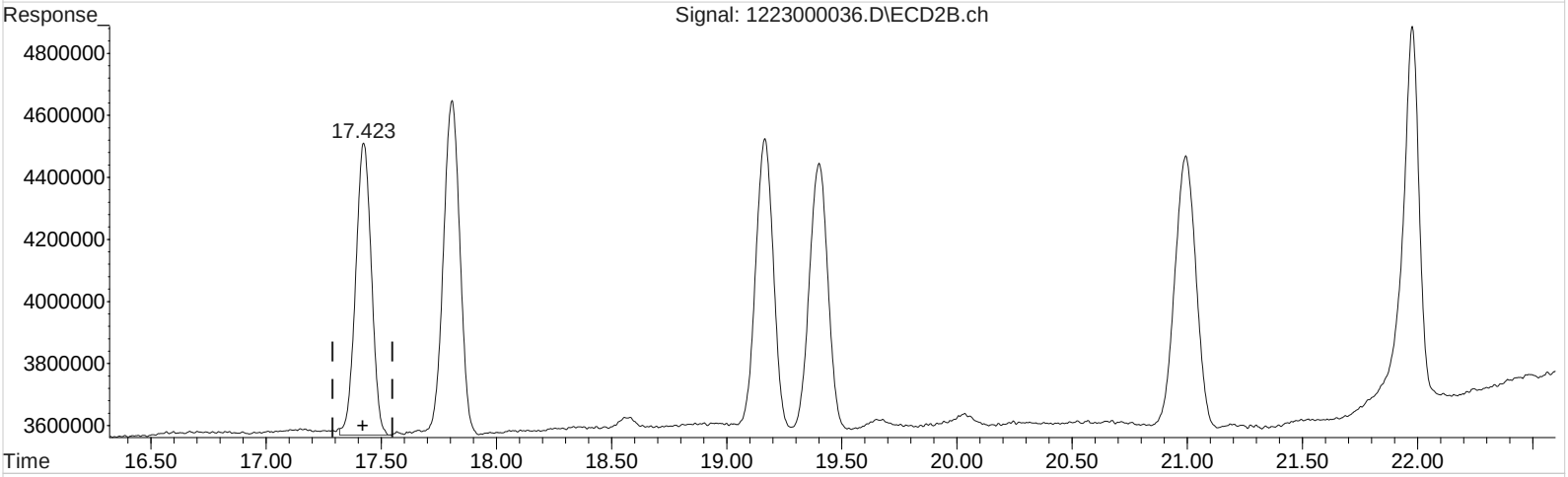
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000036.D Vial: 87
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 13:21:23 Operator: SMURRAY
Sample : 81 2PPB GCPS8-50D Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:09 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(19) 4,4'-DDD

21.487min 2.651 ug/L

response 2778864

Manual Integration:

Before

12/25/18

(19) 4,4'-DDD #2

17.423min 2.351 ug/L

response 4471413

(+) = Expected Retention Time

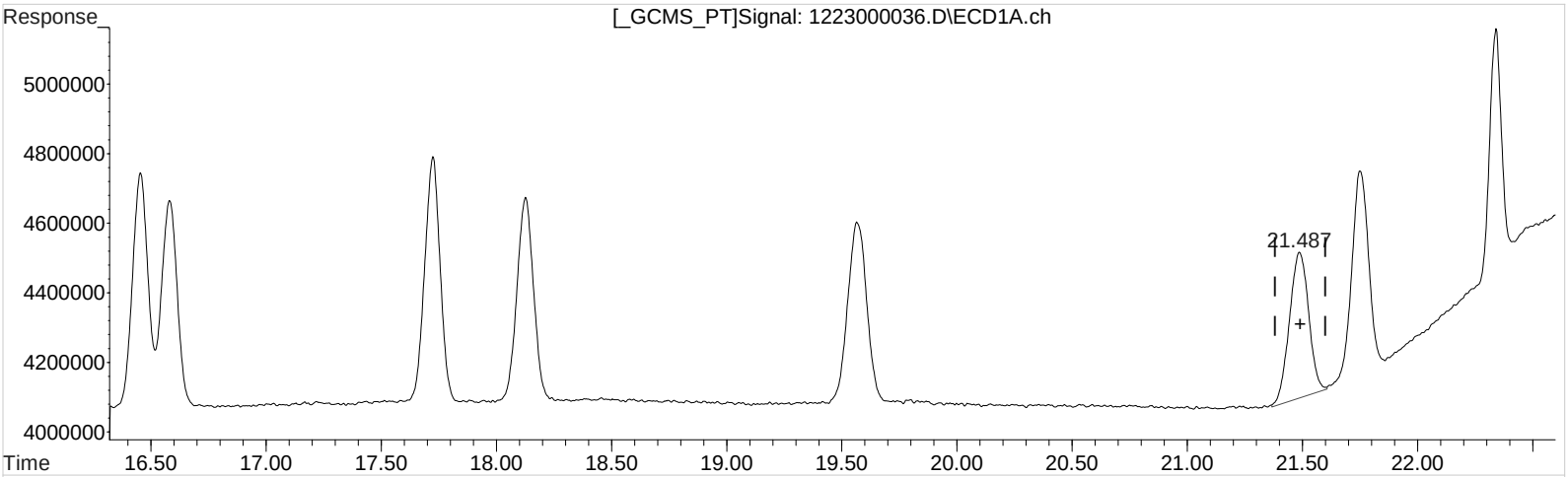
Quantitation Report (Qedit)

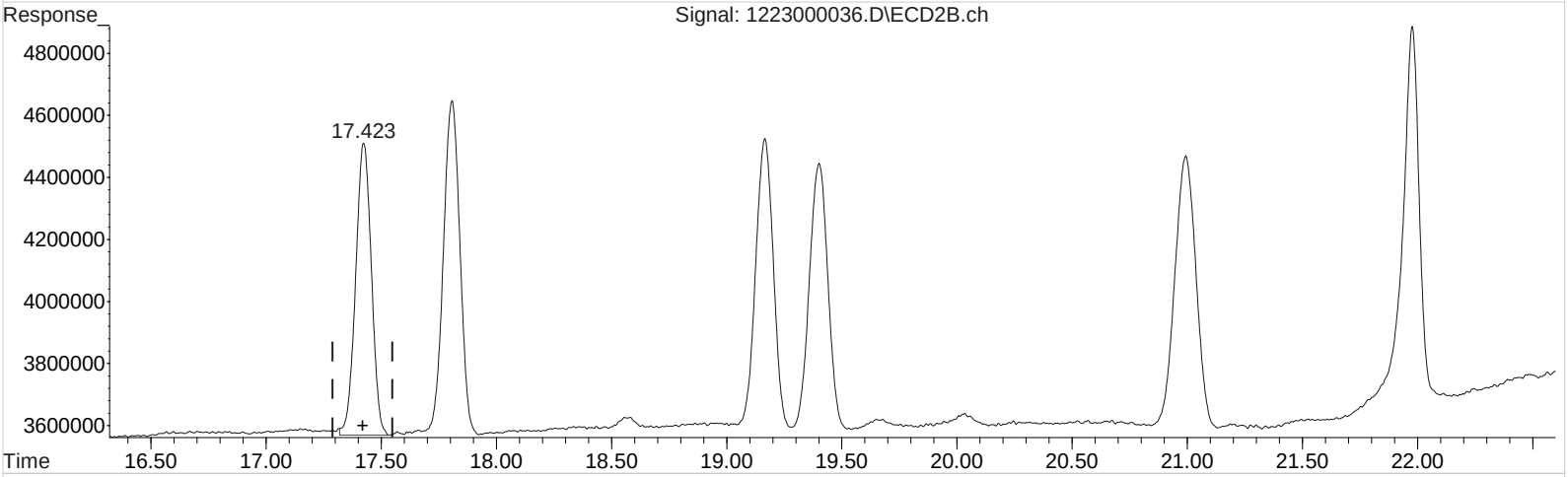
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000036.D Vial: 87
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 13:21:23 Operator: SMURRAY
Sample : 81 2PPB GCPS8-50D Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:09 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(19) 4,4'-DDD

21.487min 2.329 ug/L m

response 2441092

Manual Integration:

After

Baseline/Shoulder

12/25/18

(19) 4,4'-DDD #2

17.423min 2.351 ug/L

response 4471413

(+) = Expected Retention Time

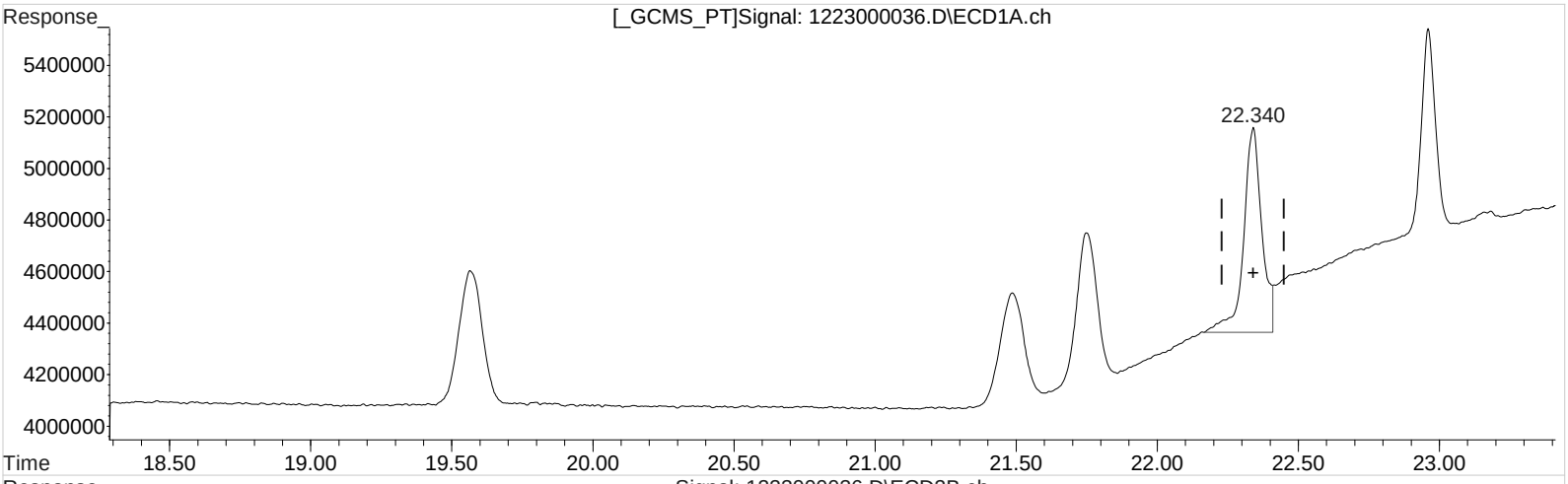
Quantitation Report (Qedit)

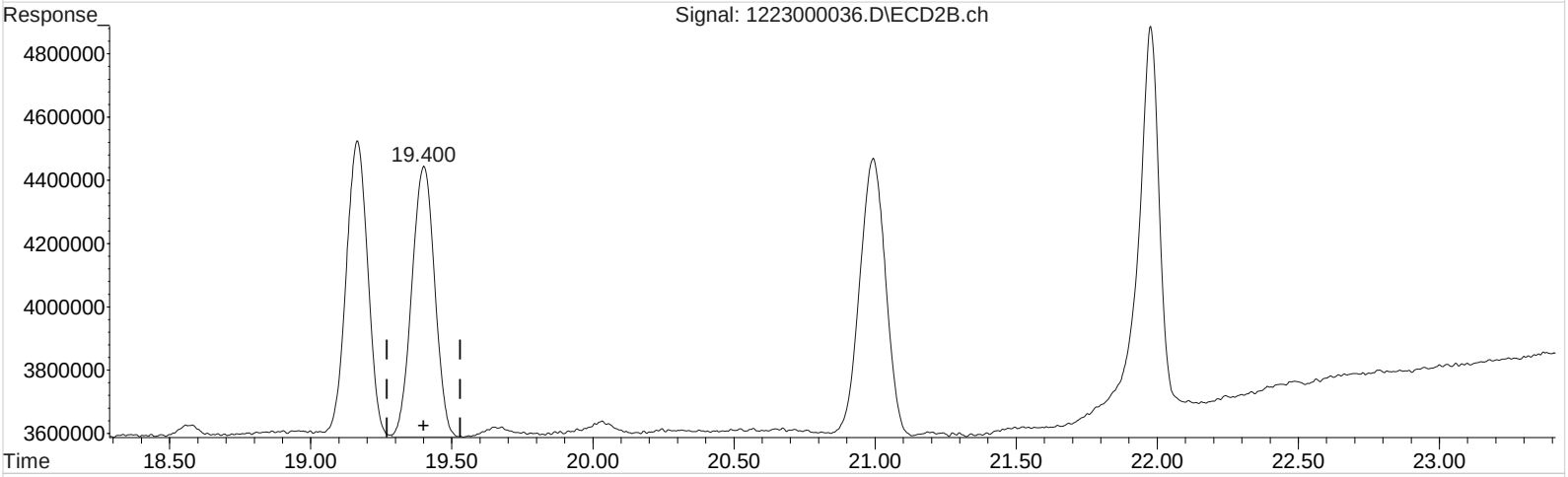
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000036.D Vial: 87
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 13:21:23 Operator: SMURRAY
Sample : 81 2PPB GCPS8-50D Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:09 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(20) Endrin Aldehyde

22.340min 3.160 ug/L

response 3570056

Manual Integration:

Before

12/25/18

(20) Endrin Aldehyde #2

19.400min 2.548 ug/L

response 4786913

(+) = Expected Retention Time

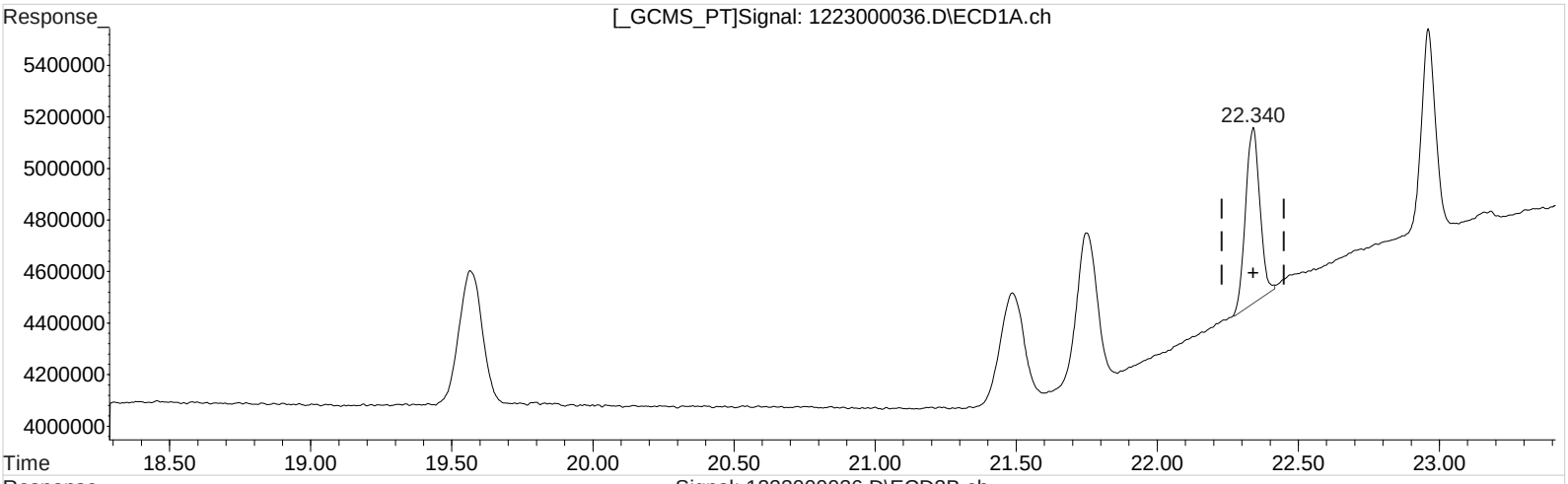
Quantitation Report (Qedit)

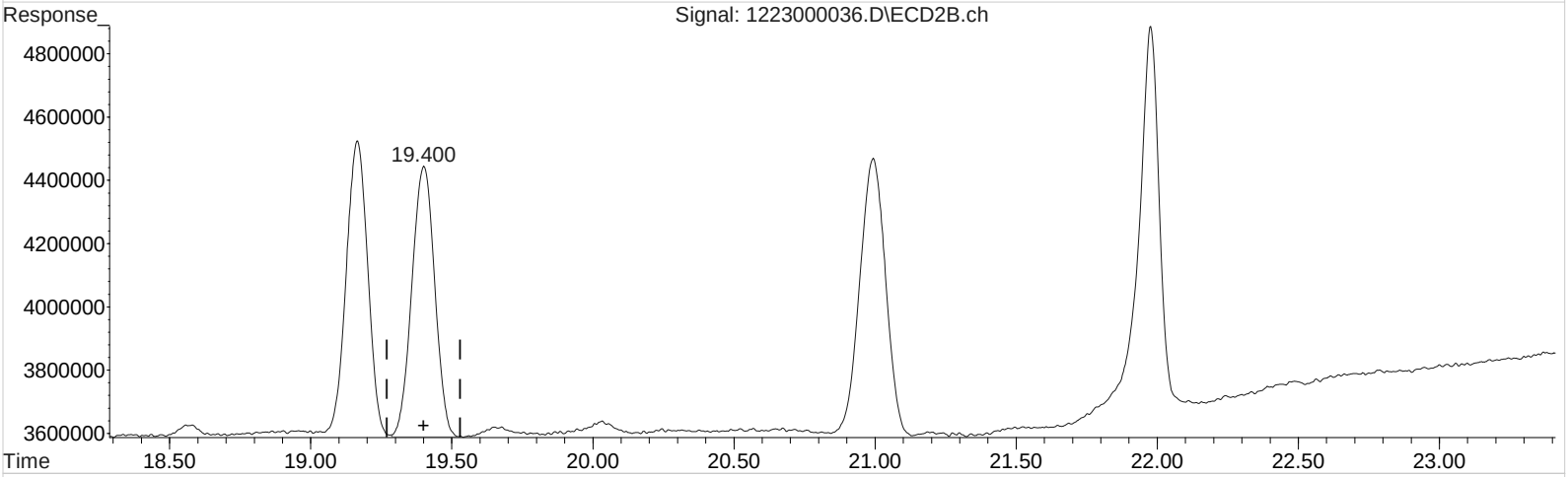
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000036.D Vial: 87
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 13:21:23 Operator: SMURRAY
Sample : 81 2PPB GCPS8-50D Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:09 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(20) Endrin Aldehyde

22.340min 2.142 ug/L m

response 2419990

Manual Integration:

After

Baseline/Shoulder

12/25/18

(20) Endrin Aldehyde #2

19.400min 2.548 ug/L

response 4786913

(+) = Expected Retention Time

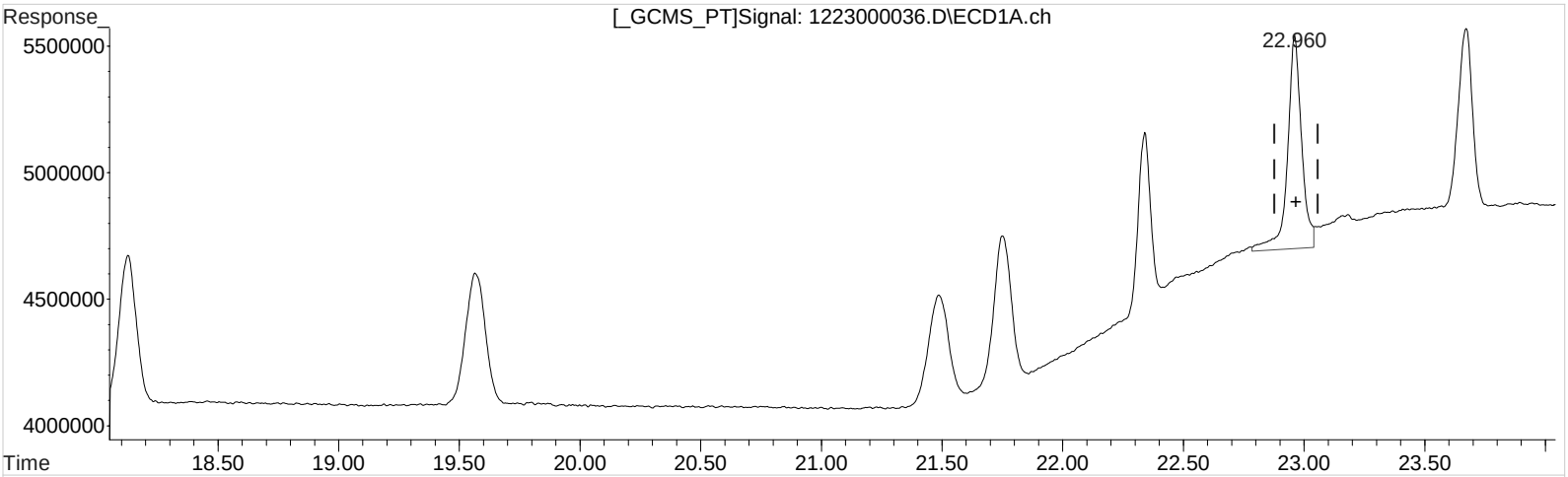
Quantitation Report (Qedit)

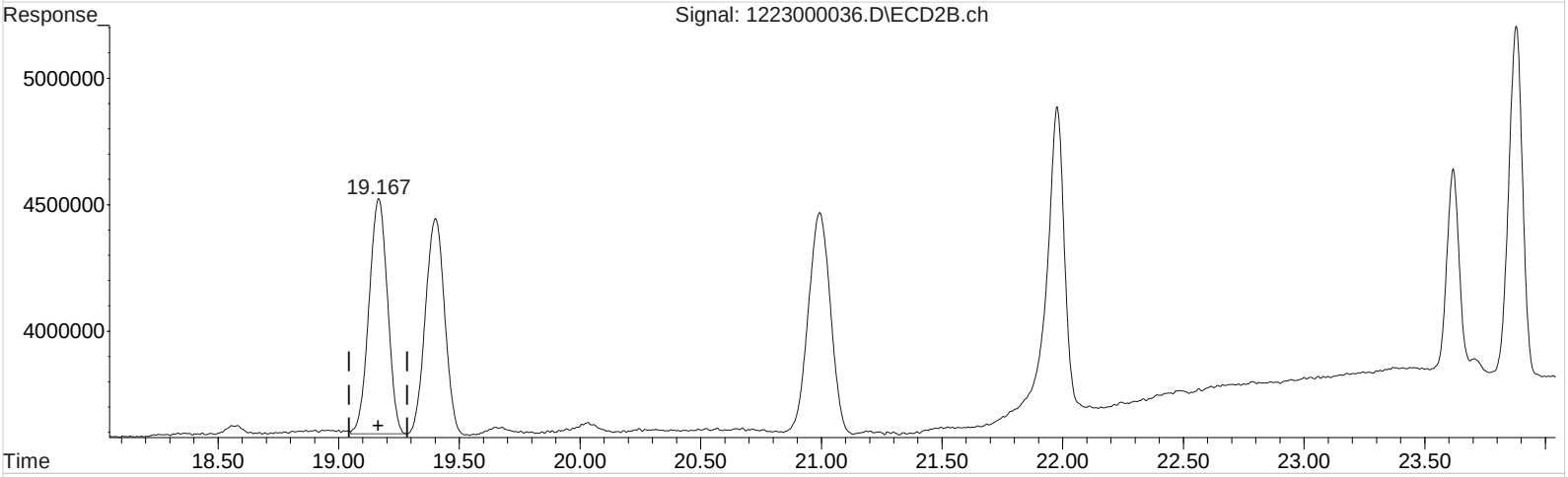
1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000036.D Vial: 87
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 13:21:23 Operator: SMURRAY
Sample : 81 2PPB GCPS8-50D Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:09 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(22) 4,4'-DDT

22.960min 2.703 ug/L

response 3420768

Manual Integration:

Before

12/25/18

(22) 4,4'-DDT #2

19.167min 2.299 ug/L

response 4940292

(+) = Expected Retention Time

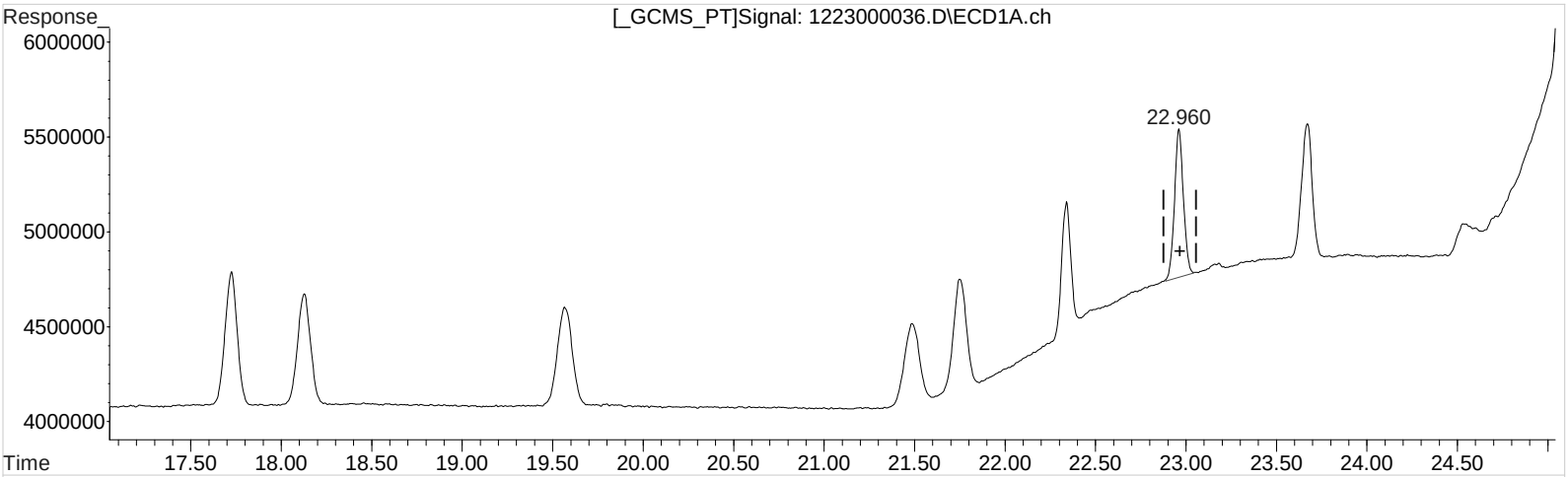
Quantitation Report (Qedit)

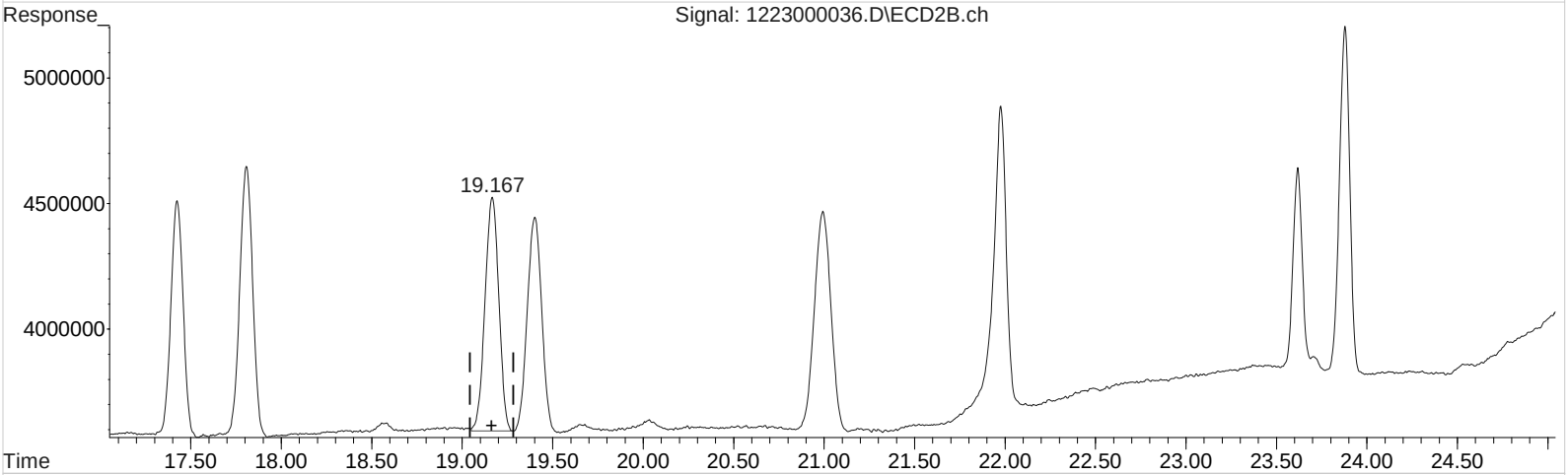
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000036.D Vial: 87
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 13:21:23 Operator: SMURRAY
Sample : 81 2PPB GCPS8-50D Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:09 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(22) 4,4'-DDT

22.960min 2.097 ug/L m

response 2654408

Manual Integration:

After

Baseline/Shoulder

12/25/18

(22) 4,4'-DDT #2

19.167min 2.299 ug/L

response 4940292

(+) = Expected Retention Time

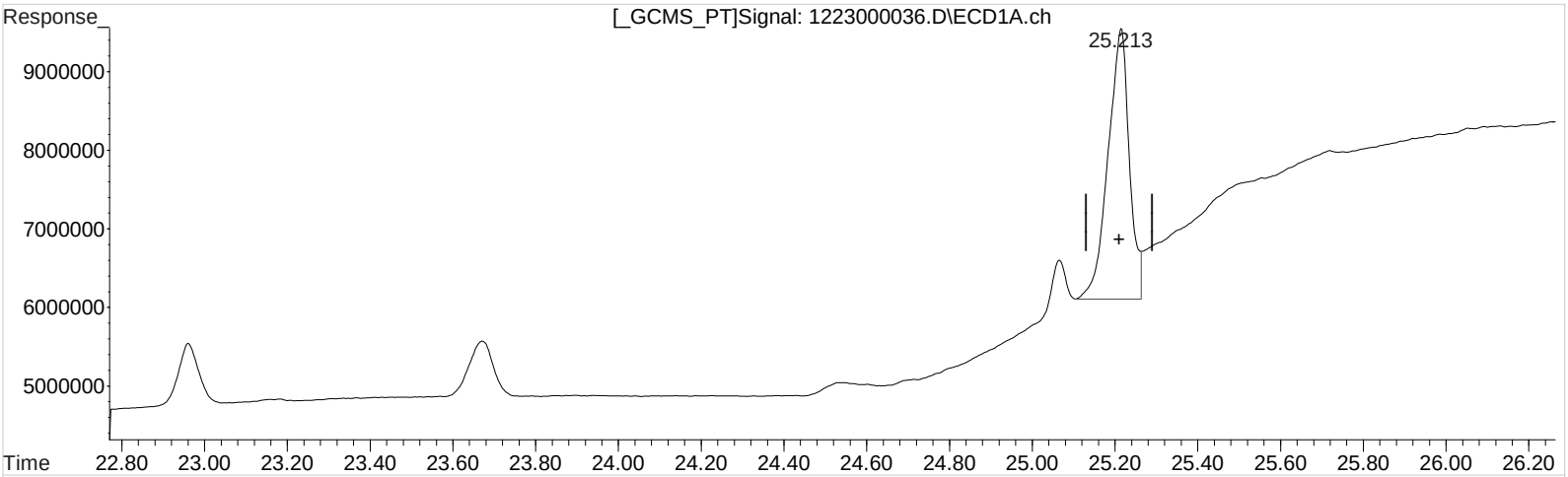
Quantitation Report (Qedit)

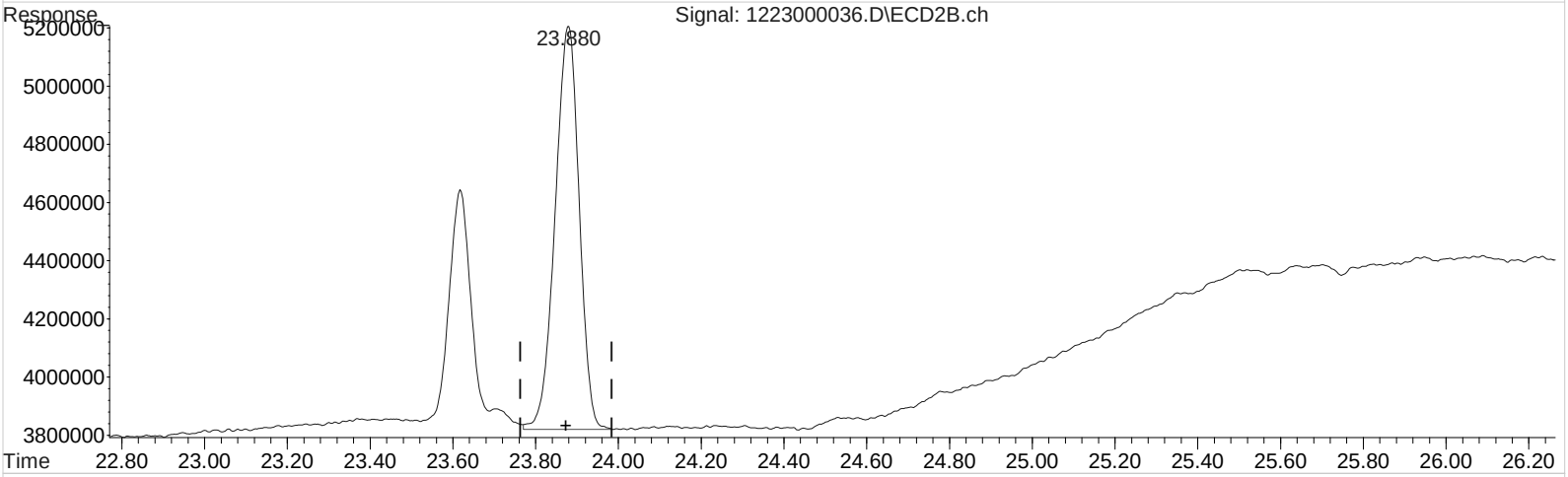
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000036.D Vial: 87
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 13:21:23 Operator: SMURRAY
Sample : 81 2PPB GCPS8-50D Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:09 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(23) Endrin Ketone

25.213min 8.551 ug/L

response 12363321

Manual Integration:

Before

12/25/18

(23) Endrin Ketone #2

23.880min 2.072 ug/L

response 5602721

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000036.D Vial: 87
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 13:21:23 Operator: SMURRAY
Sample : 81 2PPB GCPS8-50D Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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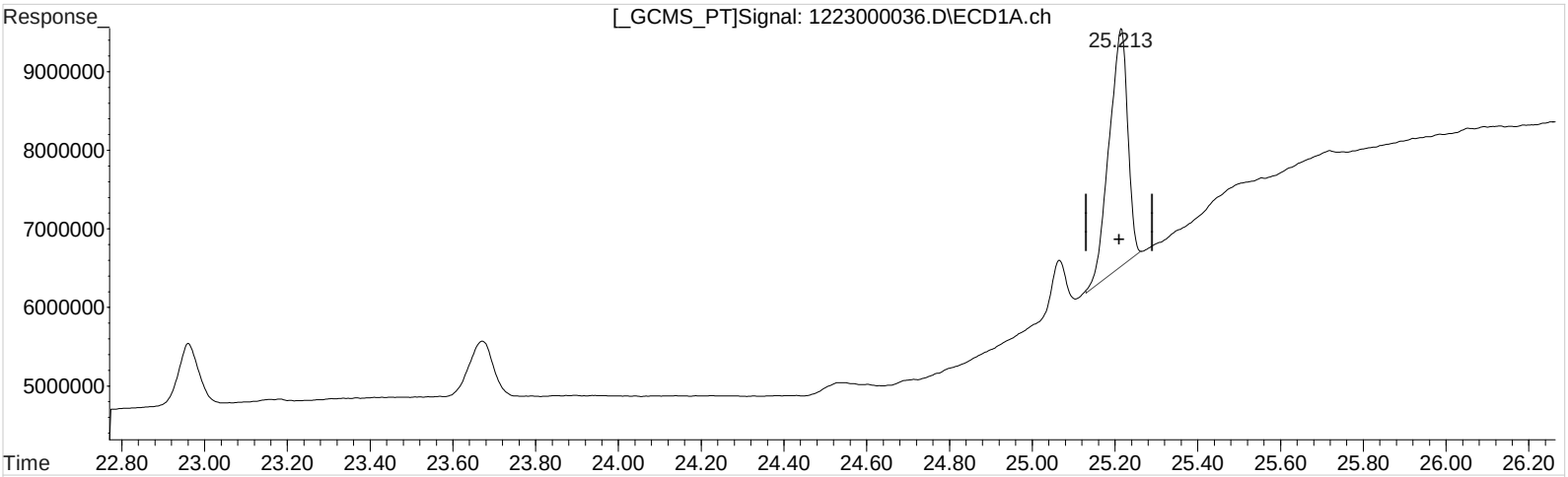
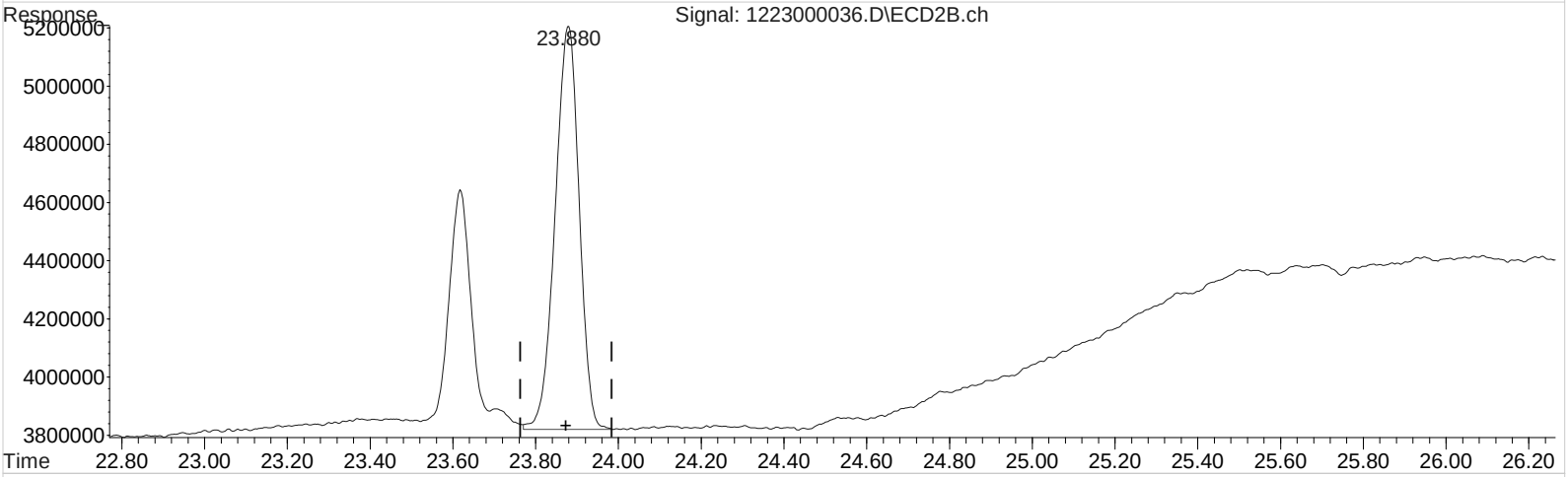
Quant Time: Dec 25 14:24:09 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(23) Endrin Ketone

25.213min 6.593 ug/L m

response 9533278

Manual Integration:

After

Baseline/Shoulder

12/25/18

(23) Endrin Ketone #2

23.880min 2.072 ug/L

response 5602721

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000036.D Vial: 87
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
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Sample : 81 2PPB GCPS8-50D Inst : GCI
Misc : Multiplr: 1.00
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Quant Method : J:\GC34\METHODS\GC34-121218.M
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Response via : Initial Calibration
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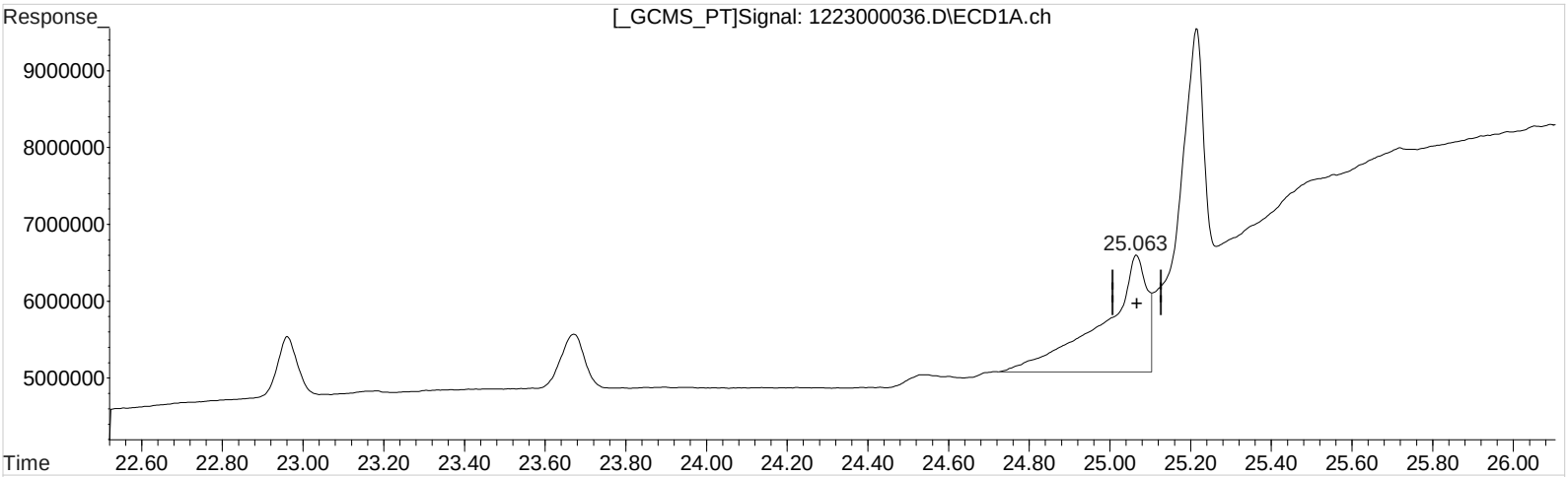
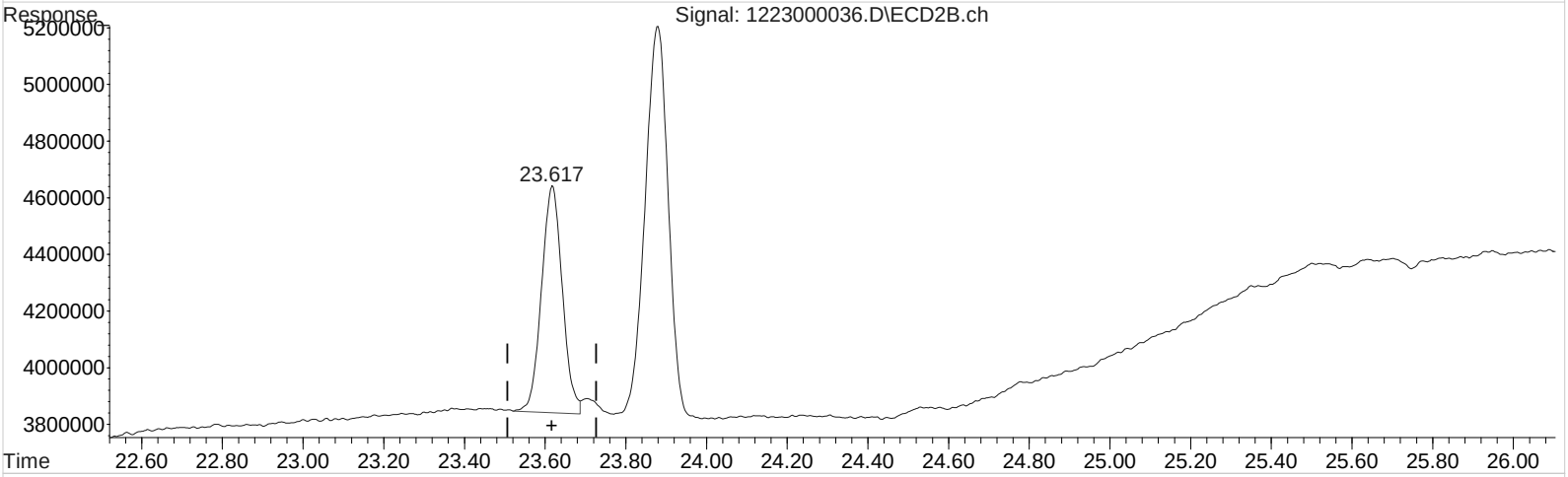
Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(24) Methoxychlor

25.063min 15.385 ug/L

response 11814743

Manual Integration:

Before

12/25/18

(24) Methoxychlor #2

23.617min 2.130 ug/L

response 2871737

(+) = Expected Retention Time

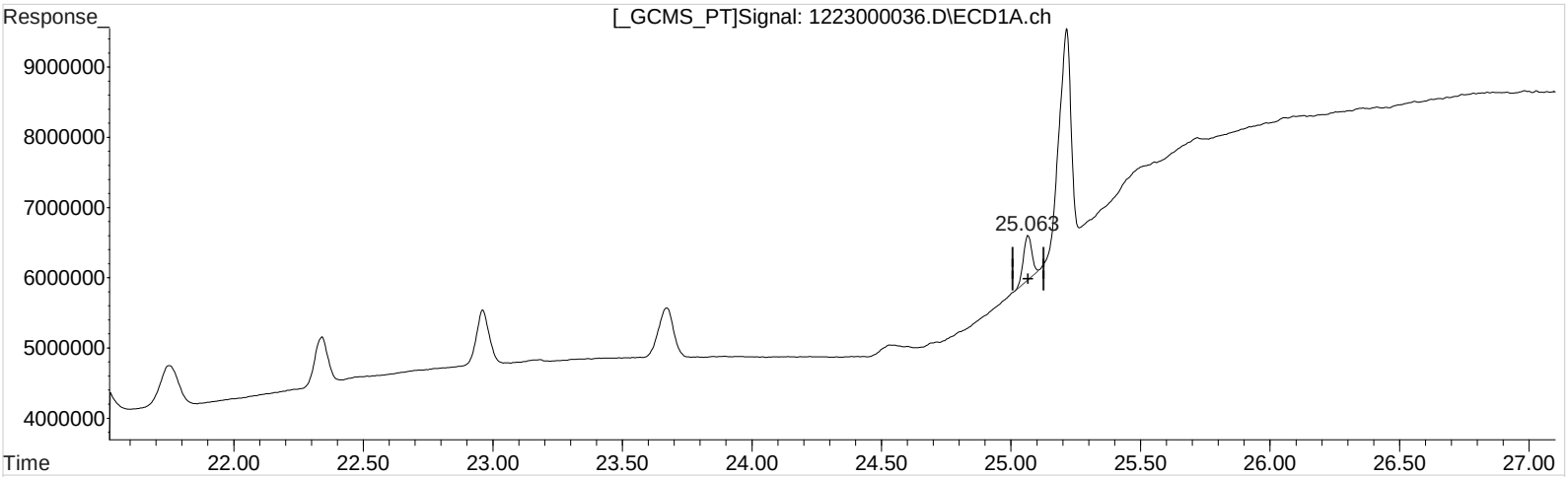
Quantitation Report (Qedit)

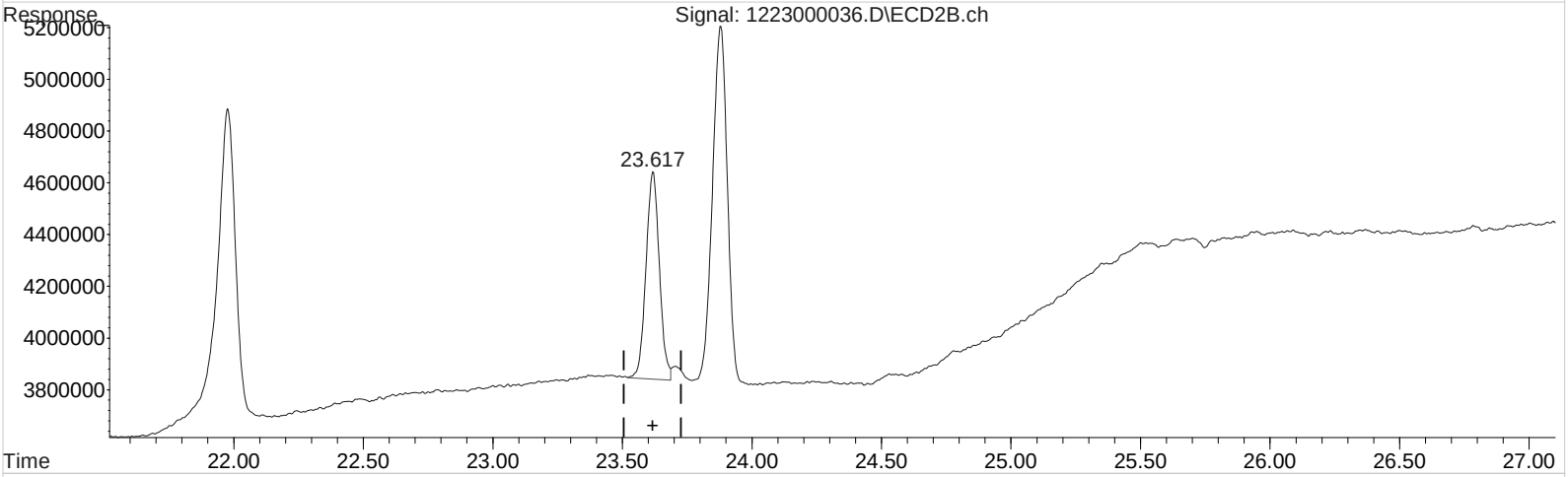
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000036.D Vial: 87
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 13:21:23 Operator: SMURRAY
Sample : 81 2PPB GCPS8-50D Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:09 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(24) Methoxychlor

25.063min 1.917 ug/L m

response 1472171

Manual Integration:

After

Baseline/Shoulder

12/25/18

(24) Methoxychlor #2

23.617min 2.130 ug/L

response 2871737

(+) = Expected Retention Time

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000037.D
Lab ID: KWG1806753-9
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/24/2018 13:57
Date Quantitated: 12/25/2018 15:22
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1232

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	gamma-Chlordane	23.6	NA	20	NR
	Endrin Aldehyde	-21.9	NA	20	
Internal Standards	1-Bromo-2-nitrobenzene	0	384411.4166	7537645.666	
	1-Bromo-2-nitrobenzene {3}	0	381986.6428	9527946.571	
	1-Bromo-2-nitrobenzene {4}	0	65717944.75	262871779	

Primary Review: _____

Secondary Review: _____

1st SM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000037.D\1223000037C.
Lab ID: KWG1806753-9
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/24/2018 13:57
Date Quantitated: 12/25/2018 15:22
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1232

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Internal Standards	1-Bromo-2-nitrobenzene	0	56973862.37	227895449.5	NR
	1-Bromo-2-nitrobenzene {3}	0	712037.8571	2848151.428	NR
	1-Bromo-2-nitrobenzene {4}	0	142911.0833	571644.333	NR

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000037.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000037.D\1223000037c.d			**Vial:**	88
Acqu Date:	12/24/2018 13:57	**Quant Date:**	12/25/2018 15:22	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1232	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:		**Method ID:**	MJ1232
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene					0**d**	0**d**	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	4.47	-0.04	4.03	-0.01	131194724	157132342	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	20-106	
1	Decachlorobiphenyl	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	19-127	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Hexachlorobenzene			0**d**	0**d**	0.0000	0.0000			NR
1	beta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	gamma-BHC (Lindane)			0**d**	0**d**	0.0000	0.0000			NR
1	delta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor			0**d**	0**d**	0.0000	0.0000			NR
1	Aldrin			0**d**	0**d**	0.0000	0.0000			NR
1	Isodrin			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor Epoxide			0**d**	0**d**	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\122318\1223000037.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000037.D\1223000037c.d			**Vial:**	88
Acqu Date:	12/24/2018 13:57	**Quant Date:**	12/25/2018 15:22	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1232	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000			NR
1	Endosulfan I			0d	0d	0.0000	0.0000			NR
1	alpha-Chlordane			0d	0d	0.0000	0.0000			NR
1	Dieldrin			0d	0d	0.0000	0.0000			NR
1	4,4'-DDE			0d	0d	0.0000	0.0000			NR
1	Endrin			0d	0d	0.0000	0.0000			NR
1	Endosulfan II			0d	0d	0.0000	0.0000			NR
1	4,4'-DDD			0d	0d	0.0000	0.0000			NR
1	Endrin Aldehyde			0d	0d	0.0000	0.0000			NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000			NR
1	4,4'-DDT			0d	0d	0.0000	0.0000			NR
1	Endrin Ketone			0d	0d	0.0000	0.0000			NR
1	Methoxychlor			0d	0d	0.0000	0.0000			NR
1	2,4'-DDE			0d	0d	0.0000	0.0000			NR
1	2,4'-DDD			0d	0d	0.0000	0.0000			NR
1	2,4'-DDT			0d	0d	0.0000	0.0000			NR
	Toxaphene			0	0	118.31	111.72			
2	Toxaphene {1}	18.92	16.45	612368	1266957	105.30	115.99			
2	Toxaphene {2}	19.50	17.13	1694334	1711889	99.41	102.08			
2	Toxaphene {3}	21.67	18.02	2742264	6261464	132.36	120.10			
2	Toxaphene {4}	22.12	19.56	3414304	4006799	137.75	110.88			
2	Toxaphene {5}	22.31	22.27	1615198	3440652	114.07	117.38			
2	Toxaphene {6}	23.71	23.02	665052	4844473	120.97	103.91			
	Chlordane			0	0	0.0000	0.0000			NR
3	Chlordane {1}			0d	0d	0.0000	0.0000			
3	Chlordane {2}			0d	0d	0.0000	0.0000			
3	Chlordane {3}			0d	0d	0.0000	0.0000			
3	Chlordane {4}			0d	0d	0.0000	0.0000			
3	Chlordane {5}			0d	0d	0.0000	0.0000			
3	Chlordane {6}			0d	0d	0.0000	0.0000			
4	Chlorpyrifos			0d	0d	0.0000	0.0000			NR
4	Oxychlordane			0d	0d	0.0000	0.0000			NR
4	cis-Nonachlor			0d	0d	0.0000	0.0000			NR
4	trans-Nonachlor			0d	0d	0.0000	0.0000			NR
4	Mirex			0d	0d	0.0000	0.0000			NR
4	Hexachloroethane			0d	0d	0.0000	0.0000			NR
4	Hexachlorobutadiene			0d	0d	0.0000	0.0000			NR
4	Perthane			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
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N: Presumptive evidence of compound

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NR: Analyte not reported from this analysis

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?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000037.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000037.D\1223000037c.d			**Vial:**	88
Acqu Date:	12/24/2018 13:57	**Quant Date:**	12/25/2018 15:22	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:		**Method ID:**	MJ1647
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene					0**d**	0**d**	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	4.47	-0.04	4.03	-0.01	131194724	157132342	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Hexachlorobenzene			0**d**	0**d**	0.0000	0.0000			NR
1	beta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	gamma-BHC (Lindane)			0**d**	0**d**	0.0000	0.0000			NR
1	delta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor			0**d**	0**d**	0.0000	0.0000			NR
1	Aldrin			0**d**	0**d**	0.0000	0.0000			NR
1	Isodrin			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor Epoxide			0**d**	0**d**	0.0000	0.0000			NR

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E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\122318\1223000037.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000037.D\1223000037c.d			**Vial:**	88
Acqu Date:	12/24/2018 13:57	**Quant Date:**	12/25/2018 15:22	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000			NR
1	Endosulfan I			0d	0d	0.0000	0.0000			NR
1	alpha-Chlordane			0d	0d	0.0000	0.0000			NR
1	Dieldrin			0d	0d	0.0000	0.0000			NR
1	4,4'-DDE			0d	0d	0.0000	0.0000			NR
1	Endrin			0d	0d	0.0000	0.0000			NR
1	Endosulfan II			0d	0d	0.0000	0.0000			NR
1	4,4'-DDD			0d	0d	0.0000	0.0000			NR
1	Endrin Aldehyde			0d	0d	0.0000	0.0000			NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000			NR
1	4,4'-DDT			0d	0d	0.0000	0.0000			NR
1	Endrin Ketone			0d	0d	0.0000	0.0000			NR
1	Methoxychlor			0d	0d	0.0000	0.0000			NR
1	2,4'-DDE			0d	0d	0.0000	0.0000			NR
1	2,4'-DDD			0d	0d	0.0000	0.0000			NR
1	2,4'-DDT			0d	0d	0.0000	0.0000			NR
	Toxaphene			0	0	118.31	111.72			
2	Toxaphene {1}	18.92	16.45	612368	1266957	105.30	115.99			
2	Toxaphene {2}	19.50	17.13	1694334	1711889	99.41	102.08			
2	Toxaphene {3}	21.67	18.02	2742264	6261464	132.36	120.10			
2	Toxaphene {4}	22.12	19.56	3414304	4006799	137.75	110.88			
2	Toxaphene {5}	22.31	22.27	1615198	3440652	114.07	117.38			
2	Toxaphene {6}	23.71	23.02	665052	4844473	120.97	103.91			
	Chlordane			0	0	0.0000	0.0000			NR
3	Chlordane {1}			0d	0d	0.0000	0.0000			
3	Chlordane {2}			0d	0d	0.0000	0.0000			
3	Chlordane {3}			0d	0d	0.0000	0.0000			
3	Chlordane {4}			0d	0d	0.0000	0.0000			
3	Chlordane {5}			0d	0d	0.0000	0.0000			
3	Chlordane {6}			0d	0d	0.0000	0.0000			
4	Chlorpyrifos			0d	0d	0.0000	0.0000			NR
4	Oxychlordane			0d	0d	0.0000	0.0000			NR
4	cis-Nonachlor			0d	0d	0.0000	0.0000			NR
4	trans-Nonachlor			0d	0d	0.0000	0.0000			NR
4	Mirex			0d	0d	0.0000	0.0000			NR
4	Hexachloroethane			0d	0d	0.0000	0.0000			NR
4	Hexachlorobutadiene			0d	0d	0.0000	0.0000			NR
4	Perthane			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
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E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

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m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000037.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000037.D\1223000037c.d			**Vial:**	88
Acqu Date:	12/24/2018 13:57	**Quant Date:**	12/25/2018 15:22	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:		**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene					0**d**	0**d**	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	4.47	-0.04	4.03	-0.01	131194724	157132342	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Hexachlorobenzene			0**d**	0**d**	0.0000	0.0000			NR
1	beta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	gamma-BHC (Lindane)			0**d**	0**d**	0.0000	0.0000			NR
1	delta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor			0**d**	0**d**	0.0000	0.0000			NR
1	Aldrin			0**d**	0**d**	0.0000	0.0000			NR
1	Isodrin			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor Epoxide			0**d**	0**d**	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 12/29/18
2nd TP 01/02/19

Data File #1:	J:\GC34\DATA\122318\1223000037.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000037.D\1223000037c.d			**Vial:**	88
Acqu Date:	12/24/2018 13:57	**Quant Date:**	12/25/2018 15:22	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000			NR
1	Endosulfan I			0d	0d	0.0000	0.0000			NR
1	alpha-Chlordane			0d	0d	0.0000	0.0000			NR
1	Dieldrin			0d	0d	0.0000	0.0000			NR
1	4,4'-DDE			0d	0d	0.0000	0.0000			NR
1	Endrin			0d	0d	0.0000	0.0000			NR
1	Endosulfan II			0d	0d	0.0000	0.0000			NR
1	4,4'-DDD			0d	0d	0.0000	0.0000			NR
1	Endrin Aldehyde			0d	0d	0.0000	0.0000			NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000			NR
1	4,4'-DDT			0d	0d	0.0000	0.0000			NR
1	Endrin Ketone			0d	0d	0.0000	0.0000			NR
1	Methoxychlor			0d	0d	0.0000	0.0000			NR
1	2,4'-DDE			0d	0d	0.0000	0.0000			NR
1	2,4'-DDD			0d	0d	0.0000	0.0000			NR
1	2,4'-DDT			0d	0d	0.0000	0.0000			NR
	Toxaphene			0	0	118.31	111.72			
2	Toxaphene {1}	18.92	16.45	612368	1266957	105.30	115.99			
2	Toxaphene {2}	19.50	17.13	1694334	1711889	99.41	102.08			
2	Toxaphene {3}	21.67	18.02	2742264	6261464	132.36	120.10			
2	Toxaphene {4}	22.12	19.56	3414304	4006799	137.75	110.88			
2	Toxaphene {5}	22.31	22.27	1615198	3440652	114.07	117.38			
2	Toxaphene {6}	23.71	23.02	665052	4844473	120.97	103.91			
	Chlordane			0	0	0.0000	0.0000			NR
3	Chlordane {1}			0d	0d	0.0000	0.0000			
3	Chlordane {2}			0d	0d	0.0000	0.0000			
3	Chlordane {3}			0d	0d	0.0000	0.0000			
3	Chlordane {4}			0d	0d	0.0000	0.0000			
3	Chlordane {5}			0d	0d	0.0000	0.0000			
3	Chlordane {6}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000037.D Vial: 88
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 13:57:16 Operator: SMURRAY
Sample : TOX 100PPB GCPS8-47B Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 15:22:13 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
29)	1-Bromo-2...	4.473	4.033	131.2E6	157.1E6	100.000	100.000
	System Monitoring Compounds						
	Target Compounds						
30)	Toxaphene	18.917	16.450	612368	1266957	105.295	115.994
31)	Toxaphene...	19.503	17.133	1694334	1711889	99.406	102.076
32)	Toxaphene...	21.667	18.020	2742264	6261464	132.361	120.103
33)	Toxaphene...	22.123	19.563	3414304	4006799	137.749	110.882
34)	Toxaphene...	22.307	22.270	1615198	3440652	114.074	117.379
35)	Toxaphene...	23.713	23.017	665052	4844473	120.970	103.914
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

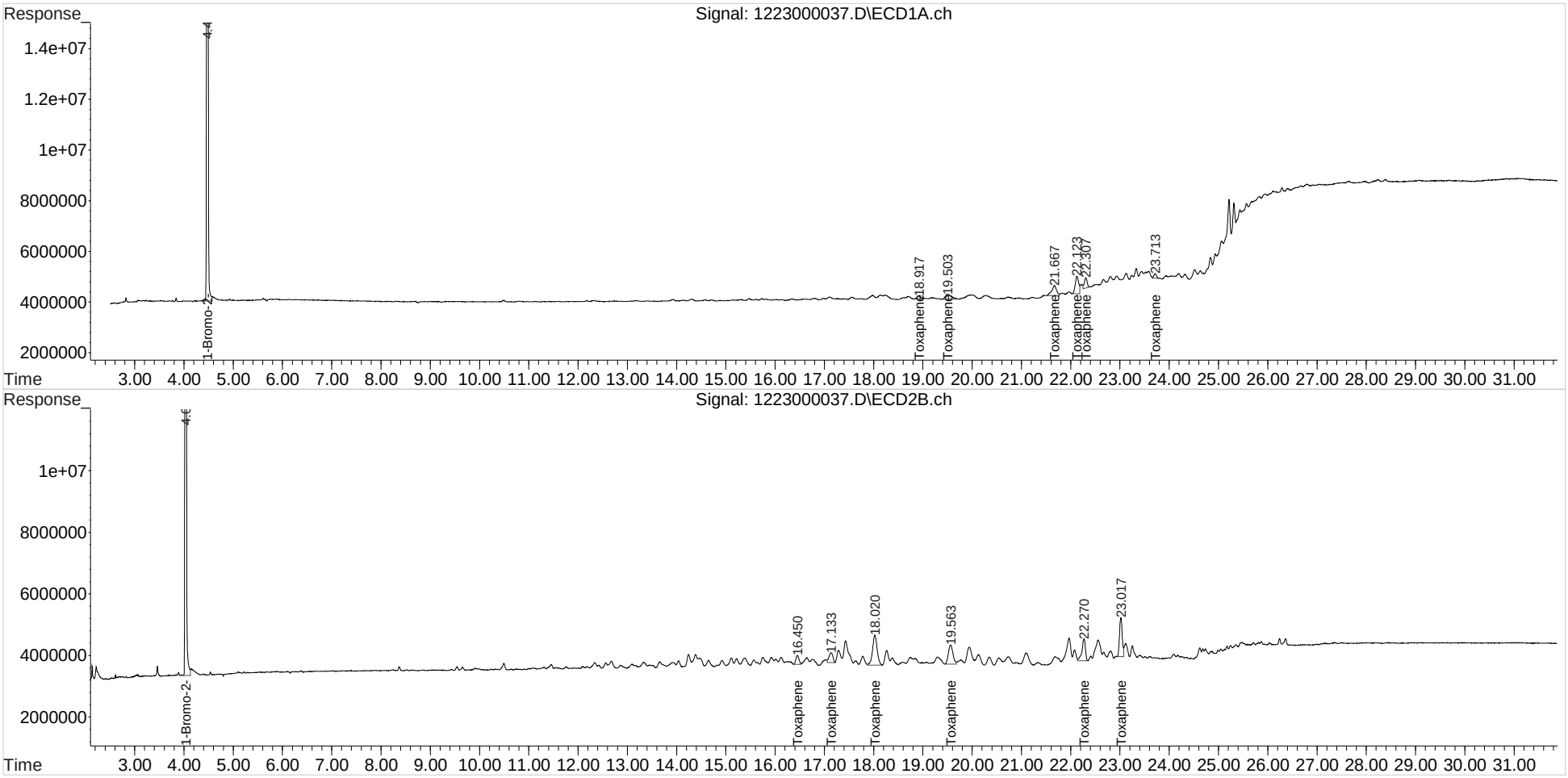
1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\122318\1223000037.D Vial: 88
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 13:57:16 Operator: SMURRAY
Sample : TOX 100PPB GCPS8-47B Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 15:22:13 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000038.D
Lab ID: KWG1806753-9
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/24/2018 14:33
Date Quantitated: 12/25/2018 15:22
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1232

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	gamma-Chlordane	23.6	NA	20	NR
	Endrin Aldehyde	-21.9	NA	20	
Internal Standards	1-Bromo-2-nitrobenzene	0	384411.4166	7537645.666	
	1-Bromo-2-nitrobenzene {2}	0	593190.3333	4772761.333	
	1-Bromo-2-nitrobenzene {4}	0	65717944.75	262871779	

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000038.D\1223000038C.
Lab ID: KWG1806753-9
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/24/2018 14:33
Date Quantitated: 12/25/2018 15:22
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1232

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Internal Standards	1-Bromo-2-nitrobenzene	0	56973862.37	227895449.5	NR
	1-Bromo-2-nitrobenzene {2}	0	371179.4166	5484717.666	NR
	1-Bromo-2-nitrobenzene {4}	0	142911.0833	571644.333	NR

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000038.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000038.D\1223000038c.d			**Vial:**	89
Acqu Date:	12/24/2018 14:33	**Quant Date:**	12/25/2018 15:22	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1232	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:		**Method ID:**	MJ1232
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene					0**d**	0**d**	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	4.47	-0.04	4.03	-0.02	136244852	159656514	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	20-106	
1	Decachlorobiphenyl	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	19-127	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Hexachlorobenzene			0**d**	0**d**	0.0000	0.0000			NR
1	beta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	gamma-BHC (Lindane)			0**d**	0**d**	0.0000	0.0000			NR
1	delta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor			0**d**	0**d**	0.0000	0.0000			NR
1	Aldrin			0**d**	0**d**	0.0000	0.0000			NR
1	Isodrin			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor Epoxide			0**d**	0**d**	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\122318\1223000038.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000038.D\1223000038c.d			**Vial:**	89
Acqu Date:	12/24/2018 14:33	**Quant Date:**	12/25/2018 15:22	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1232	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000			NR
1	Endosulfan I			0d	0d	0.0000	0.0000			NR
1	alpha-Chlordane			0d	0d	0.0000	0.0000			NR
1	Dieldrin			0d	0d	0.0000	0.0000			NR
1	4,4'-DDE			0d	0d	0.0000	0.0000			NR
1	Endrin			0d	0d	0.0000	0.0000			NR
1	Endosulfan II			0d	0d	0.0000	0.0000			NR
1	4,4'-DDD			0d	0d	0.0000	0.0000			NR
1	Endrin Aldehyde			0d	0d	0.0000	0.0000			NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000			NR
1	4,4'-DDT			0d	0d	0.0000	0.0000			NR
1	Endrin Ketone			0d	0d	0.0000	0.0000			NR
1	Methoxychlor			0d	0d	0.0000	0.0000			NR
1	2,4'-DDE			0d	0d	0.0000	0.0000			NR
1	2,4'-DDD			0d	0d	0.0000	0.0000			NR
1	2,4'-DDT			0d	0d	0.0000	0.0000			NR
	Toxaphene			0	0	0.0000	0.0000			NR
2	Toxaphene {1}			0d	0d	0.0000	0.0000			
2	Toxaphene {2}			0d	0d	0.0000	0.0000			
2	Toxaphene {3}			0d	0d	0.0000	0.0000			
2	Toxaphene {4}			0d	0d	0.0000	0.0000			
2	Toxaphene {5}			0d	0d	0.0000	0.0000			
2	Toxaphene {6}			0d	0d	0.0000	0.0000			
	Chlordane			0	0	20.00	20.84			
3	Chlordane {1}	10.16	7.93	1272094	2086619	21.84	20.37			
3	Chlordane {2}	10.97	8.43	1703615	3140927	21.72	22.91			
3	Chlordane {3}	12.44	11.56	1186305	1390677	19.67	19.07			
3	Chlordane {4}	16.20	12.40	3229237	5907538	18.81	20.82			
3	Chlordane {5}	16.45	12.54	2875713	3695956	17.87	20.52			
3	Chlordane {6}	16.79	12.85	2184563	5503523	20.08	21.35			
4	Chlorpyrifos			0d	0d	0.0000	0.0000			NR
4	Oxychlordane			0d	0d	0.0000	0.0000			NR
4	cis-Nonachlor			0d	0d	0.0000	0.0000			NR
4	trans-Nonachlor			0d	0d	0.0000	0.0000			NR
4	Mirex			0d	0d	0.0000	0.0000			NR
4	Hexachloroethane			0d	0d	0.0000	0.0000			NR
4	Hexachlorobutadiene			0d	0d	0.0000	0.0000			NR
4	Perthane			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000038.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000038.D\1223000038c.d			**Vial:**	89
Acqu Date:	12/24/2018 14:33	**Quant Date:**	12/25/2018 15:22	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:		**Method ID:**	MJ1647
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene					0**d**	0**d**	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	4.47	-0.04	4.03	-0.02	136244852	159656514	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Hexachlorobenzene			0**d**	0**d**	0.0000	0.0000			NR
1	beta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	gamma-BHC (Lindane)			0**d**	0**d**	0.0000	0.0000			NR
1	delta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor			0**d**	0**d**	0.0000	0.0000			NR
1	Aldrin			0**d**	0**d**	0.0000	0.0000			NR
1	Isodrin			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor Epoxide			0**d**	0**d**	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
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d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\122318\1223000038.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000038.D\1223000038c.d			**Vial:**	89
Acqu Date:	12/24/2018 14:33	**Quant Date:**	12/25/2018 15:22	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000			NR
1	Endosulfan I			0d	0d	0.0000	0.0000			NR
1	alpha-Chlordane			0d	0d	0.0000	0.0000			NR
1	Dieldrin			0d	0d	0.0000	0.0000			NR
1	4,4'-DDE			0d	0d	0.0000	0.0000			NR
1	Endrin			0d	0d	0.0000	0.0000			NR
1	Endosulfan II			0d	0d	0.0000	0.0000			NR
1	4,4'-DDD			0d	0d	0.0000	0.0000			NR
1	Endrin Aldehyde			0d	0d	0.0000	0.0000			NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000			NR
1	4,4'-DDT			0d	0d	0.0000	0.0000			NR
1	Endrin Ketone			0d	0d	0.0000	0.0000			NR
1	Methoxychlor			0d	0d	0.0000	0.0000			NR
1	2,4'-DDE			0d	0d	0.0000	0.0000			NR
1	2,4'-DDD			0d	0d	0.0000	0.0000			NR
1	2,4'-DDT			0d	0d	0.0000	0.0000			NR
	Toxaphene			0	0	0.0000	0.0000			NR
2	Toxaphene {1}			0d	0d	0.0000	0.0000			
2	Toxaphene {2}			0d	0d	0.0000	0.0000			
2	Toxaphene {3}			0d	0d	0.0000	0.0000			
2	Toxaphene {4}			0d	0d	0.0000	0.0000			
2	Toxaphene {5}			0d	0d	0.0000	0.0000			
2	Toxaphene {6}			0d	0d	0.0000	0.0000			
	Chlordane			0	0	20.00	20.84			
3	Chlordane {1}	10.16	7.93	1272094	2086619	21.84	20.37			
3	Chlordane {2}	10.97	8.43	1703615	3140927	21.72	22.91			
3	Chlordane {3}	12.44	11.56	1186305	1390677	19.67	19.07			
3	Chlordane {4}	16.20	12.40	3229237	5907538	18.81	20.82			
3	Chlordane {5}	16.45	12.54	2875713	3695956	17.87	20.52			
3	Chlordane {6}	16.79	12.85	2184563	5503523	20.08	21.35			
4	Chlorpyrifos			0d	0d	0.0000	0.0000			NR
4	Oxychlordane			0d	0d	0.0000	0.0000			NR
4	cis-Nonachlor			0d	0d	0.0000	0.0000			NR
4	trans-Nonachlor			0d	0d	0.0000	0.0000			NR
4	Mirex			0d	0d	0.0000	0.0000			NR
4	Hexachloroethane			0d	0d	0.0000	0.0000			NR
4	Hexachlorobutadiene			0d	0d	0.0000	0.0000			NR
4	Perthane			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000038.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000038.D\1223000038c.d			**Vial:**	89
Acqu Date:	12/24/2018 14:33	**Quant Date:**	12/25/2018 15:22	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:		**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene					0**d**	0**d**	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	4.47	-0.04	4.03	-0.02	136244852	159656514	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Hexachlorobenzene			0**d**	0**d**	0.0000	0.0000			NR
1	beta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	gamma-BHC (Lindane)			0**d**	0**d**	0.0000	0.0000			NR
1	delta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor			0**d**	0**d**	0.0000	0.0000			NR
1	Aldrin			0**d**	0**d**	0.0000	0.0000			NR
1	Isodrin			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor Epoxide			0**d**	0**d**	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st SM 12/29/18
2nd TP 01/02/19

Data File #1:	J:\GC34\DATA\122318\1223000038.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000038.D\1223000038c.d			**Vial:**	89
Acqu Date:	12/24/2018 14:33	**Quant Date:**	12/25/2018 15:22	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000			NR
1	Endosulfan I			0d	0d	0.0000	0.0000			NR
1	alpha-Chlordane			0d	0d	0.0000	0.0000			NR
1	Dieldrin			0d	0d	0.0000	0.0000			NR
1	4,4'-DDE			0d	0d	0.0000	0.0000			NR
1	Endrin			0d	0d	0.0000	0.0000			NR
1	Endosulfan II			0d	0d	0.0000	0.0000			NR
1	4,4'-DDD			0d	0d	0.0000	0.0000			NR
1	Endrin Aldehyde			0d	0d	0.0000	0.0000			NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000			NR
1	4,4'-DDT			0d	0d	0.0000	0.0000			NR
1	Endrin Ketone			0d	0d	0.0000	0.0000			NR
1	Methoxychlor			0d	0d	0.0000	0.0000			NR
1	2,4'-DDE			0d	0d	0.0000	0.0000			NR
1	2,4'-DDD			0d	0d	0.0000	0.0000			NR
1	2,4'-DDT			0d	0d	0.0000	0.0000			NR
	Toxaphene			0	0	0.0000	0.0000			NR
2	Toxaphene {1}			0d	0d	0.0000	0.0000			
2	Toxaphene {2}			0d	0d	0.0000	0.0000			
2	Toxaphene {3}			0d	0d	0.0000	0.0000			
2	Toxaphene {4}			0d	0d	0.0000	0.0000			
2	Toxaphene {5}			0d	0d	0.0000	0.0000			
2	Toxaphene {6}			0d	0d	0.0000	0.0000			
	Chlordane			0	0	20.00	20.84			
3	Chlordane {1}	10.16	7.93	1272094	2086619	21.84	20.37			
3	Chlordane {2}	10.97	8.43	1703615	3140927	21.72	22.91			
3	Chlordane {3}	12.44	11.56	1186305	1390677	19.67	19.07			
3	Chlordane {4}	16.20	12.40	3229237	5907538	18.81	20.82			
3	Chlordane {5}	16.45	12.54	2875713	3695956	17.87	20.52			
3	Chlordane {6}	16.79	12.85	2184563	5503523	20.08	21.35			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000038.D Vial: 89
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 14:33:04 Operator: SMURRAY
Sample : CHLOR 20PPB GCPS8-50F Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 15:22:49 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
36)	1-Bromo-2...	4.473	4.033	136.2E6	159.7E6	100.000	100.000
	System Monitoring Compounds						
	Target Compounds						
37)	Chlordane	10.163	7.933	1272094	2086619	21.842	20.368
38)	Chlordane...	10.967	8.433	1703615	3140927	21.724	22.905
39)	Chlordane...	12.440	11.560	1186305	1390677	19.674	19.065
40)	Chlordane...	16.203	12.400	3229237	5907538	18.811	20.819
41)	Chlordane...	16.453	12.543	2875713	3695956	17.872	20.522
42)	Chlordane...	16.787	12.847	2184563	5503523	20.084	21.351
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

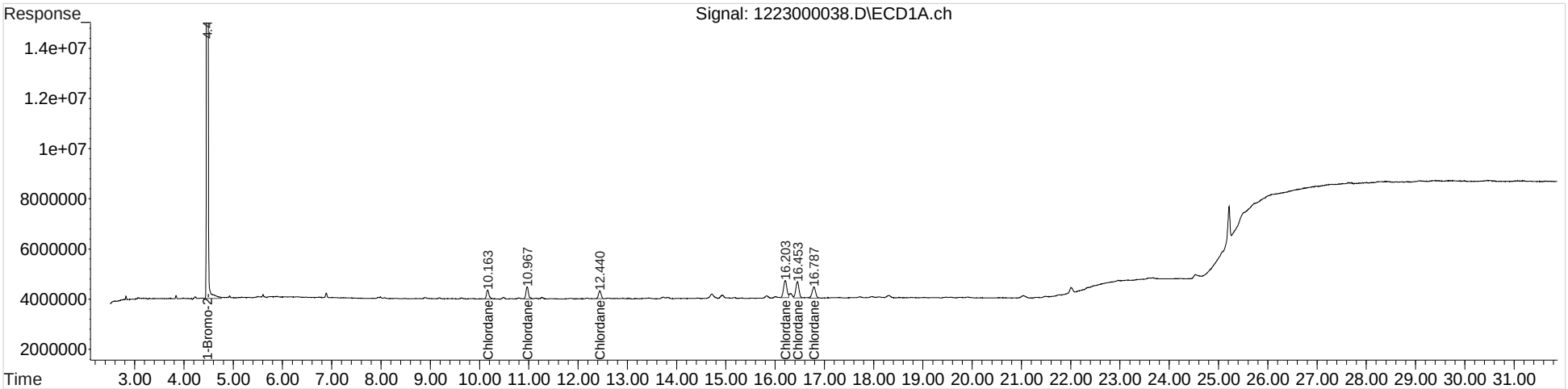
1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\122318\1223000038.D Vial: 89
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 14:33:04 Operator: SMURRAY
Sample : CHLOR 20PPB GCPS8-50F Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 15:22:49 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000009.D
Lab ID: KWG1806753-1
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 12/23/2018 21:05
Date Quantitated: 12/24/2018 10:22
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1232

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	gamma-Chlordane	23.6	NA	20	ICVOK
	Endrin Aldehyde	-21.9	NA	20	ICVOK
Above Highest ICAL Level	Endrin Ketone	21.76	NA	10	intE

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000009.D\1223000009C.
Lab ID: KWG1806753-1
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 12/23/2018 21:05
Date Quantitated: 12/24/2018 10:22
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1232

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000009.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000009.D\1223000009c.d			**Vial:**	97
Acqu Date:	12/23/2018 21:05	**Quant Date:**	12/24/2018 10:22	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1232	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-1				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:		**Method ID:**	MJ1232
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.48	c	4.04	c	118335040	151014507	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	4.48	c	4.04	c	118335040	151014507	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	4.48	c	4.04	c	118335040	151014507	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	4.48	c	4.04	c	118335040	151014507	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00	5.60	0	13003		0.0070			NA
				%Recovery =		NA	NA	**Limits =**	20-106	
1	Decachlorobiphenyl	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	19-127	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC		6.63	0	8808	0.0000	0.0040			
1	Hexachlorobenzene		6.48	0	8651	0.0000	0.0030			
1	beta-BHC		8.18	0	9225	0.0000	0.0070			
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000			
1	delta-BHC		8.93	0	11520	0.0000	0.0050			
1	Heptachlor	10.77	8.37	25124	228526	0.0210	0.0940			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin		10.77	0	9991	0.0000	0.0050			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

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d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\122318\1223000009.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000009.D\1223000009c.d			**Vial:**	97
Acqu Date:	12/23/2018 21:05	**Quant Date:**	12/24/2018 10:22	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1232	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-1				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	gamma-Chlordane	16.13	12.39	67965	8050	0.0480	0.0030			
1	Endosulfan I			0	0	0.0000	0.0000			
1	alpha-Chlordane		12.85	0	9549	0.0000	0.0040			
1	Dieldrin			0	0	0.0000	0.0000			
1	4,4'-DDE	17.66	14.10	33168	9506	0.0240	0.0040			
1	Endrin		16.04	0	14991	0.0000	0.0060			
1	Endosulfan II	21.75	17.73	47883	11127	0.0380	0.0050			
1	4,4'-DDD	21.51		53120	0	0.0530	0.0000			
1	Endrin Aldehyde	22.26	19.32	85003	8095	0.0790	0.0040			
1	Endosulfan Sulfate			0	0	0.0000	0.0000			
1	4,4'-DDT	22.97		94451	0	0.0780	0.0000			
1	Endrin Ketone	25.22		29992396	0	21.76	0.0000			
1	Methoxychlor		23.66	0	37700	0.0000	0.0290			
1	2,4'-DDE			0	0	0.0000	0.0000			
1	2,4'-DDD		15.22	0	8579	0.0000	0.0050			
1	2,4'-DDT			0	0	0.0000	0.0000			
	Toxaphene			0	0	11.68	0.4110			
2	Toxaphene {1}			0	0	0.0000	0.0000			
2	Toxaphene {2}		17.14	0	15407	0.0000	0.6110			
2	Toxaphene {3}	21.69		55855	0	2.99	0.0000			
2	Toxaphene {4}	22.12		567541	0	25.39	0.0000			
2	Toxaphene {5}	22.26	22.29	85003	11211	6.66	0.3980			
2	Toxaphene {6}		22.97	0	10038	0.0000	0.2240			
	Chlordane			0	0	0.0000	0.4012			
3	Chlordane {1}			0	0	0.0000	0.0000			
3	Chlordane {2}		8.37	0	228526	0.0000	1.76			
3	Chlordane {3}		11.54	0	8661	0.0000	0.1260			
3	Chlordane {4}		12.39	0	8050	0.0000	0.0300			
3	Chlordane {5}		12.49	0	8324	0.0000	0.0490			
3	Chlordane {6}		12.85	0	9549	0.0000	0.0390			
4	Chlorpyrifos		9.99	0	45801	0.0000	0.0260			
4	Oxychlordane			0	0	0.0000	0.0000			
4	cis-Nonachlor		16.59	0	13250	0.0000	0.0040			
4	trans-Nonachlor		12.49	0	8324	0.0000	0.0030			
4	Mirex	26.57	24.26	149478	8376	0.1540	0.0030			
4	Hexachloroethane		2.49	0	18232	0.0000	0.0050			
4	Hexachlorobutadiene		2.88	0	11673	0.0000	0.0040			
4	Perthane			0	0	0.0000	0.0000			

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E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

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d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000009.D Vial: 97
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 23-Dec-2018, 21:05:38 Operator: SMURRAY
Sample : IB Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 24 10:22:38 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:21:17 2018
QLast Update : Mon Dec 24 10:21:17 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	4.480	4.040	118.3E6	151.0E6	100.000	100.000	
29)	1-Bromo-2...	4.480	4.040	118.3E6	151.0E6	100.000	100.000	
36)	1-Bromo-2...	4.480	4.040	118.3E6	151.0E6	100.000	100.000	
43)	1-Bromo-2...	4.480	4.040	118.3E6	151.0E6	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	0.000	5.603f	0	13003	N.D.	0.007	#
	Target Compounds							
3)	alpha-BHC	0.000	6.633	0	8808	N.D.	0.004	#
4)	Hexachlor...	0.000	6.480	0	8651	N.D.	0.003	#
5)	beta-BHC	0.000	8.180	0	9225	N.D.	0.007	#
7)	delta-BHC	0.000	8.930f	0	11520	N.D.	0.005	#
8)	Heptachlor	10.767	8.373f	25124	228526	0.021	0.094	#
10)	Isodrin	0.000	10.770f	0	9991	N.D.	0.005	#
12)	gamma-Chl...	16.133f	12.393	67965	8050	0.048	0.003	#
14)	alpha-Chl...	0.000	12.850	0	9549	N.D.	0.004	#
16)	4,4'-DDE	17.657f	14.100	33168	9506	0.024	0.004	#
17)	Endrin	0.000	16.040	0	14991	N.D.	0.006	#
18)	Endosulfa...	21.753	17.727f	47883	11127	0.038	0.005	#
19)	4,4'-DDD	21.513	0.000	53120	0	0.053	N.D.	#
20)	Endrin Al...	22.260f	19.320f	85003	8095	0.079	0.004	#
22)	4,4'-DDT	22.970	0.000	94451	0	0.078	N.D.	#
23)	Endrin Ke...	25.220	0.000	29992396	0	21.762	N.D.	#
24)	Methoxychlor	0.000	23.657	0	37700	N.D.	0.029	#
26)	2,4'-DDD	0.000	15.217f	0	8579	N.D.	0.005	#
31)	Toxaphene...	0.000	17.140	0	15407	N.D.	0.611	#
32)	Toxaphene...	21.687	0.000	55855	0	2.989	N.D.	#
33)	Toxaphene...	22.123	0.000	567541	0	25.386	N.D.	#
34)	Toxaphene...	22.260	22.293	85003	11211	6.656	0.398	#
35)	Toxaphene...	0.000	22.973f	0	10038	N.D.	0.224	#
38)	Chlordane...	0.000	8.373f	0	228526	N.D.	1.762	#
39)	Chlordane...	0.000	11.540	0	8661	N.D.	0.126	#
40)	Chlordane...	0.000	12.393	0	8050	N.D.	0.030	#
41)	Chlordane...	0.000	12.490f	0	8324	N.D.	0.049	#
42)	Chlordane...	0.000	12.850	0	9549	N.D.	0.039	#
44)	Chlorpyrifos	0.000	9.987	0	45801	N.D.	0.026	#
46)	cis-Nonac...	0.000	16.587	0	13250	N.D.	0.004	#
47)	trans-Non...	0.000	12.490f	0	8324	N.D.	0.003	#
48)	Mirex	26.573	24.263	149478	8376	0.154	0.003	#
49)	HCE	0.000	2.487	0	18232	N.D.	0.005	#
50)	HCBD	0.000	2.880	0	11673	N.D.	0.004	#

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

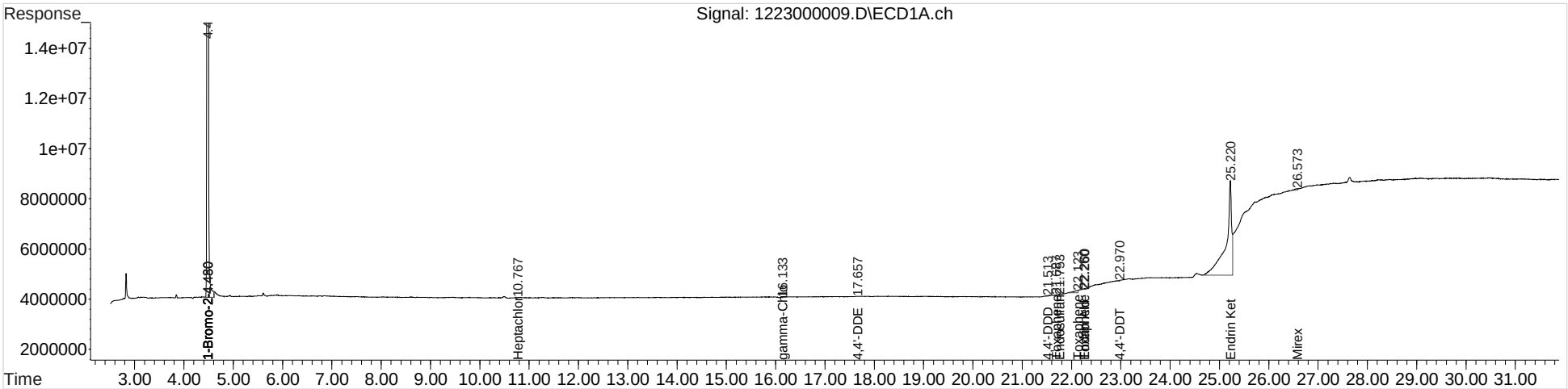
1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report (Not Reviewed)

Data File : J:\GC34\DATA\122318\1223000009.D Vial: 97
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 23-Dec-2018, 21:05:38 Operator: SMURRAY
Sample : IB Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 24 10:22:38 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:21:17 2018
QLast Update : Mon Dec 24 10:21:17 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



1st SM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000057.D
Lab ID: KWG1806753-10
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 12/25/2018 01:59
Date Quantitated: 12/25/2018 14:25
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1232

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	gamma-Chlordane	23.6	NA	20	ICVOK
	Endrin Aldehyde	-21.9	NA	20	ICVOK
Above Highest ICAL Level	Endrin Ketone	91.62	NA	10	intE

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000057.D\1223000057C.
Lab ID: KWG1806753-10
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 12/25/2018 01:59
Date Quantitated: 12/25/2018 14:25
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1232

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000057.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000057.D\1223000057c.d			**Vial:**	90
Acqu Date:	12/25/2018 01:59	**Quant Date:**	12/25/2018 14:25	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1232	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-10				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:		**Method ID:**	MJ1232
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.48	c	4.04	c	116362200	136812027	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	4.48	c	4.04	c	116362200	136812027	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	4.48	c	4.04	c	116362200	136812027	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	4.48	c	4.04	c	116362200	136812027	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00	5.54	0	17824		0.0100			NA
				%Recovery =		NA	NA	**Limits =**	20-106	
1	Decachlorobiphenyl	29.98	27.48	61644	34399	0.0420	0.0150			NA
				%Recovery =		NA	NA	**Limits =**	19-127	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC		6.61	0	23607	0.0000	0.0110			
1	Hexachlorobenzene		6.43	0	23707	0.0000	0.0090			
1	beta-BHC		8.21	0	1122812	0.0000	0.9940			
1	gamma-BHC (Lindane)		7.56	0	35961	0.0000	0.0170			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor	10.79	8.50	405860	55661	0.3440	0.0250			
1	Aldrin		9.40	0	18102	0.0000	0.0090			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\122318\1223000057.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000057.D\1223000057c.d			**Vial:**	90
Acqu Date:	12/25/2018 01:59	**Quant Date:**	12/25/2018 14:25	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1232	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-10				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	gamma-Chlordane	16.16	12.50	c	389241	28727	0.2790	0.0130			
1	Endosulfan I	16.65			167862	0	0.1400	0.0000			
1	alpha-Chlordane				0	0	0.0000	0.0000			
1	Dieldrin		14.39		0	15300	0.0000	0.0070			
1	4,4'-DDE				0	0	0.0000	0.0000			
1	Endrin	19.55			57070	0	0.0460	0.0000			
1	Endosulfan II	21.84			27365	0	0.0220	0.0000			
1	4,4'-DDD	21.55	17.47		387216	278962	0.3940	0.1650			
1	Endrin Aldehyde				0	0	0.0000	0.0000			
1	Endosulfan Sulfate	23.73			39156	0	0.0310	0.0000			
1	4,4'-DDT	22.99			53554	0	0.0450	0.0000			
1	Endrin Ketone	25.22	23.84		124158104	16134	91.62	0.0070			
1	Methoxychlor		23.71		0	5968109	0.0000	4.99			
1	2,4'-DDE	15.50	12.50	c	27456	28727	0.0250	0.0160			
1	2,4'-DDD				0	0	0.0000	0.0000			
1	2,4'-DDT				0	0	0.0000	0.0000			
	Toxaphene				0	0	12.53	1.96			
2	Toxaphene {1}				0	0	0.0000	0.0000			
2	Toxaphene {2}	19.55			57070	0	7.46	0.0000			
2	Toxaphene {3}		18.00		0	27447	0.0000	0.6050			
2	Toxaphene {4}	22.09	19.61		485638	122296	22.09	3.89			
2	Toxaphene {5}		22.23		0	35101	0.0000	1.38			
2	Toxaphene {6}	23.73			39156	0	8.03	0.0000			
	Chlordane				0	0	2.17	0.3300			
3	Chlordane {1}	10.15			83430	0	1.68	0.0000			
3	Chlordane {2}		8.50		0	55661	0.0000	0.4740			
3	Chlordane {3}				0	0	0.0000	0.0000			
3	Chlordane {4}	16.16			389241	0	2.66	0.0000			
3	Chlordane {5}		12.50		0	28727	0.0000	0.1860			
3	Chlordane {6}				0	0	0.0000	0.0000			
4	Chlorpyrifos				0	0	0.0000	0.0000			
4	Oxychlordane				0	0	0.0000	0.0000			
4	cis-Nonachlor				0	0	0.0000	0.0000			
4	trans-Nonachlor		12.50	c	0	28727	0.0000	0.0110			
4	Mirex	26.53			998886	0	1.04	0.0000			
4	Hexachloroethane	2.90	2.50		45269	46622	0.0180	0.0140			
4	Hexachlorobutadiene		2.90		0	15797	0.0000	0.0060			
4	Perthane				0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000057.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000057.D\1223000057c.d			**Vial:**	90
Acqu Date:	12/25/2018 01:59	**Quant Date:**	12/25/2018 14:25	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-10				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:		**Method ID:**	MJ1647
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.48	c	4.04	c	116362200	136812027	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	4.48	c	4.04	c	116362200	136812027	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	4.48	c	4.04	c	116362200	136812027	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	4.48	c	4.04	c	116362200	136812027	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00	5.54	0	17824		0.0100			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	29.98	27.48	61644	34399	0.0420	0.0150			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC		6.61	0	23607	0.0000	0.0110			
1	Hexachlorobenzene		6.43	0	23707	0.0000	0.0090			
1	beta-BHC		8.21	0	1122812	0.0000	0.9940			
1	gamma-BHC (Lindane)		7.56	0	35961	0.0000	0.0170			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor	10.79	8.50	405860	55661	0.3440	0.0250			
1	Aldrin		9.40	0	18102	0.0000	0.0090			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\122318\1223000057.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000057.D\1223000057c.d			**Vial:**	90
Acqu Date:	12/25/2018 01:59	**Quant Date:**	12/25/2018 14:25	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-10				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	gamma-Chlordane	16.16	12.50	c	389241	28727	0.2790	0.0130			
1	Endosulfan I	16.65			167862	0	0.1400	0.0000			
1	alpha-Chlordane				0	0	0.0000	0.0000			
1	Dieldrin		14.39		0	15300	0.0000	0.0070			
1	4,4'-DDE				0	0	0.0000	0.0000			
1	Endrin	19.55			57070	0	0.0460	0.0000			
1	Endosulfan II	21.84			27365	0	0.0220	0.0000			
1	4,4'-DDD	21.55	17.47		387216	278962	0.3940	0.1650			
1	Endrin Aldehyde				0	0	0.0000	0.0000			
1	Endosulfan Sulfate	23.73			39156	0	0.0310	0.0000			
1	4,4'-DDT	22.99			53554	0	0.0450	0.0000			
1	Endrin Ketone	25.22	23.84		124158104	16134	91.62	0.0070			
1	Methoxychlor		23.71		0	5968109	0.0000	4.99			
1	2,4'-DDE	15.50	12.50	c	27456	28727	0.0250	0.0160			
1	2,4'-DDD				0	0	0.0000	0.0000			
1	2,4'-DDT				0	0	0.0000	0.0000			
	Toxaphene				0	0	12.53	1.96			
2	Toxaphene {1}				0	0	0.0000	0.0000			
2	Toxaphene {2}	19.55			57070	0	7.46	0.0000			
2	Toxaphene {3}		18.00		0	27447	0.0000	0.6050			
2	Toxaphene {4}	22.09	19.61		485638	122296	22.09	3.89			
2	Toxaphene {5}		22.23		0	35101	0.0000	1.38			
2	Toxaphene {6}	23.73			39156	0	8.03	0.0000			
	Chlordane				0	0	2.17	0.3300			
3	Chlordane {1}	10.15			83430	0	1.68	0.0000			
3	Chlordane {2}		8.50		0	55661	0.0000	0.4740			
3	Chlordane {3}				0	0	0.0000	0.0000			
3	Chlordane {4}	16.16			389241	0	2.66	0.0000			
3	Chlordane {5}		12.50		0	28727	0.0000	0.1860			
3	Chlordane {6}				0	0	0.0000	0.0000			
4	Chlorpyrifos				0	0	0.0000	0.0000			
4	Oxychlordane				0	0	0.0000	0.0000			
4	cis-Nonachlor				0	0	0.0000	0.0000			
4	trans-Nonachlor		12.50	c	0	28727	0.0000	0.0110			
4	Mirex	26.53			998886	0	1.04	0.0000			
4	Hexachloroethane	2.90	2.50		45269	46622	0.0180	0.0140			
4	Hexachlorobutadiene		2.90		0	15797	0.0000	0.0060			
4	Perthane				0	0	0.0000	0.0000			

U: Undetected at or above MDL
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N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000057.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000057.D\1223000057c.d			**Vial:**	90
Acqu Date:	12/25/2018 01:59	**Quant Date:**	12/25/2018 14:25	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1695	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-10				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:		**Method ID:**	MJ1695
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.48	c	4.04	c	116362200	136812027	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	4.48	c	4.04	c	116362200	136812027	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	4.48	c	4.04	c	116362200	136812027	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	4.48	c	4.04	c	116362200	136812027	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00	5.54	0	17824		0.0100			NA
				%Recovery =		NA	NA	**Limits =**	10-147	
1	Decachlorobiphenyl	29.98	27.48	61644	34399	0.0420	0.0150			NA
				%Recovery =		NA	NA	**Limits =**	18-154	

Target Compounds

Final Conc. Units: ug/Kg

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC		6.61	0	23607	0.0000	0.0110			
1	Hexachlorobenzene		6.43	0	23707	0.0000	0.0090			
1	beta-BHC		8.21	0	1122812	0.0000	0.9940			
1	gamma-BHC (Lindane)		7.56	0	35961	0.0000	0.0170			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor	10.79	8.50	405860	55661	0.3440	0.0250			
1	Aldrin		9.40	0	18102	0.0000	0.0090			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\122318\1223000057.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000057.D\1223000057c.d			**Vial:**	90
Acqu Date:	12/25/2018 01:59	**Quant Date:**	12/25/2018 14:25	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1695	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-10				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ug/Kg

IS #	Parameter Name	RT #1	RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	gamma-Chlordane	16.16	12.50	c	389241	28727	0.2790	0.0130			
1	Endosulfan I	16.65			167862	0	0.1400	0.0000			
1	alpha-Chlordane				0	0	0.0000	0.0000			
1	Dieldrin		14.39		0	15300	0.0000	0.0070			
1	4,4'-DDE				0	0	0.0000	0.0000			
1	Endrin	19.55			57070	0	0.0460	0.0000			
1	Endosulfan II	21.84			27365	0	0.0220	0.0000			
1	4,4'-DDD	21.55	17.47		387216	278962	0.3940	0.1650			
1	Endrin Aldehyde				0	0	0.0000	0.0000			
1	Endosulfan Sulfate	23.73			39156	0	0.0310	0.0000			
1	4,4'-DDT	22.99			53554	0	0.0450	0.0000			
1	Endrin Ketone	25.22	23.84		124158104	16134	91.62	0.0070			
1	Methoxychlor		23.71		0	5968109	0.0000	4.99			
1	2,4'-DDE	15.50	12.50	c	27456	28727	0.0250	0.0160			
1	2,4'-DDD				0	0	0.0000	0.0000			
1	2,4'-DDT				0	0	0.0000	0.0000			
	Toxaphene				0	0	12.53	1.96			
2	Toxaphene {1}				0	0	0.0000	0.0000			
2	Toxaphene {2}	19.55			57070	0	7.46	0.0000			
2	Toxaphene {3}		18.00		0	27447	0.0000	0.6050			
2	Toxaphene {4}	22.09	19.61		485638	122296	22.09	3.89			
2	Toxaphene {5}		22.23		0	35101	0.0000	1.38			
2	Toxaphene {6}	23.73			39156	0	8.03	0.0000			
	Chlordane				0	0	2.17	0.3300			
3	Chlordane {1}	10.15			83430	0	1.68	0.0000			
3	Chlordane {2}		8.50		0	55661	0.0000	0.4740			
3	Chlordane {3}				0	0	0.0000	0.0000			
3	Chlordane {4}	16.16			389241	0	2.66	0.0000			
3	Chlordane {5}		12.50		0	28727	0.0000	0.1860			
3	Chlordane {6}				0	0	0.0000	0.0000			
4	Chlorpyrifos				0	0	0.0000	0.0000			
4	Oxychlordane				0	0	0.0000	0.0000			
4	cis-Nonachlor				0	0	0.0000	0.0000			
4	trans-Nonachlor		12.50	c	0	28727	0.0000	0.0110			
4	Mirex	26.53			998886	0	1.04	0.0000			
4	Hexachloroethane	2.90	2.50		45269	46622	0.0180	0.0140			
4	Hexachlorobutadiene		2.90		0	15797	0.0000	0.0060			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000057.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000057.D\1223000057c.d			**Vial:**	90
Acqu Date:	12/25/2018 01:59	**Quant Date:**	12/25/2018 14:25	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-10				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:		**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.48	c	4.04	c	116362200	136812027	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	4.48	c	4.04	c	116362200	136812027	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	4.48	c	4.04	c	116362200	136812027	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	4.48	c	4.04	c	116362200	136812027	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00	5.54	0	17824		0.0100			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	29.98	27.48	61644	34399	0.0420	0.0150			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC		6.61	0	23607	0.0000	0.0110			
1	Hexachlorobenzene		6.43	0	23707	0.0000	0.0090			
1	beta-BHC		8.21	0	1122812	0.0000	0.9940			
1	gamma-BHC (Lindane)		7.56	0	35961	0.0000	0.0170			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor	10.79	8.50	405860	55661	0.3440	0.0250			
1	Aldrin		9.40	0	18102	0.0000	0.0090			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\122318\1223000057.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000057.D\1223000057c.d			**Vial:**	90
Acqu Date:	12/25/2018 01:59	**Quant Date:**	12/25/2018 14:25	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-10				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane	16.16	12.50	c	389241	28727	0.2790	0.0130			
1	Endosulfan I	16.65			167862	0	0.1400	0.0000			
1	alpha-Chlordane				0	0	0.0000	0.0000			
1	Dieldrin		14.39		0	15300	0.0000	0.0070			
1	4,4'-DDE				0	0	0.0000	0.0000			
1	Endrin	19.55			57070	0	0.0460	0.0000			
1	Endosulfan II	21.84			27365	0	0.0220	0.0000			
1	4,4'-DDD	21.55	17.47		387216	278962	0.3940	0.1650			
1	Endrin Aldehyde				0	0	0.0000	0.0000			
1	Endosulfan Sulfate	23.73			39156	0	0.0310	0.0000			
1	4,4'-DDT	22.99			53554	0	0.0450	0.0000			
1	Endrin Ketone	25.22	23.84		124158104	16134	91.62	0.0070			
1	Methoxychlor		23.71		0	5968109	0.0000	4.99			
1	2,4'-DDE	15.50	12.50	c	27456	28727	0.0250	0.0160			
1	2,4'-DDD				0	0	0.0000	0.0000			
1	2,4'-DDT				0	0	0.0000	0.0000			
	Toxaphene				0	0	12.53	1.96			
2	Toxaphene {1}				0	0	0.0000	0.0000			
2	Toxaphene {2}	19.55			57070	0	7.46	0.0000			
2	Toxaphene {3}		18.00		0	27447	0.0000	0.6050			
2	Toxaphene {4}	22.09	19.61		485638	122296	22.09	3.89			
2	Toxaphene {5}		22.23		0	35101	0.0000	1.38			
2	Toxaphene {6}	23.73			39156	0	8.03	0.0000			
	Chlordane				0	0	2.17	0.3300			
3	Chlordane {1}	10.15			83430	0	1.68	0.0000			
3	Chlordane {2}		8.50		0	55661	0.0000	0.4740			
3	Chlordane {3}				0	0	0.0000	0.0000			
3	Chlordane {4}	16.16			389241	0	2.66	0.0000			
3	Chlordane {5}		12.50		0	28727	0.0000	0.1860			
3	Chlordane {6}				0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000057.D Vial: 90
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 25-Dec-2018, 01:59:34 Operator: SMURRAY
Sample : IB Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:25:45 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	4.483	4.043	116.4E6	136.8E6	100.000	100.000	
29)	1-Bromo-2...	4.483	4.043	116.4E6	136.8E6	100.000	100.000	
36)	1-Bromo-2...	4.483	4.043	116.4E6	136.8E6	100.000	100.000	
43)	1-Bromo-2...	4.483	4.043	116.4E6	136.8E6	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	0.000	5.540	0	17824	N.D.	0.010	#
28) s	Decachlor...	29.977	27.483	61644	34399	0.042	0.015	#
	Target Compounds							
3)	alpha-BHC	0.000	6.610f	0	23607	N.D.	0.011	#
4)	Hexachlor...	0.000	6.433	0	23707	N.D.	0.009	#
5)	beta-BHC	0.000	8.210	0	1122812	N.D.	0.994	#
6)	gamma-BHC...	0.000	7.557f	0	35961	N.D.	0.017	#
8)	Heptachlor	10.787	8.497f	405860	55661	0.344	0.025	#
9)	Aldrin	0.000	9.400	0	18102	N.D.	0.009	#
12)	gamma-Chl...	16.157f	12.500f	389241	28727	0.279	0.013	#
13)	Endosulfan I	16.647f	0.000	167862	0	0.140	N.D.	#
15)	Dieldrin	0.000	14.390f	0	15300	N.D.	0.007	#
17)	Endrin	19.553	0.000	57070	0	0.046	N.D.	#
18)	Endosulfa...	21.843f	0.000	27365	0	0.022	N.D.	#
19)	4,4'-DDD	21.553	17.467	387216	278962	0.394	0.165	#
21)	Endosulfa...	23.730	0.000	39156	0	0.031	N.D.	#
22)	4,4'-DDT	22.993	0.000	53554	0	0.045	N.D.	#
23)	Endrin Ke...	25.220	23.840	124.2E6	16134	91.616	0.007	#
24)	Methoxychlor	0.000	23.707f	0	5968109	N.D.	4.994	#
25)	2,4'-DDE	15.500	12.500f	27456	28727	0.025	0.016	#
31)	Toxaphene...	19.553	0.000	57070	0	7.455	N.D.	#
32)	Toxaphene...	0.000	18.000	0	27447	N.D.	0.605	#
33)	Toxaphene...	22.093	19.607	485638	122296	22.090	3.887	#
34)	Toxaphene...	0.000	22.230	0	35101	N.D.	1.375	#
35)	Toxaphene...	23.730	0.000	39156	0	8.030	N.D.	#
37)	Chlordane	10.147	0.000	83430	0	1.677	N.D.	#
38)	Chlordane...	0.000	8.497f	0	55661	N.D.	0.474	#
40)	Chlordane...	16.157f	0.000	389241	0	2.655	N.D.	#
41)	Chlordane...	0.000	12.500f	0	28727	N.D.	0.186	#
47)	trans-Non...	0.000	12.500f	0	28727	N.D.	0.011	#
48)	Mirex	26.533	0.000	998886	0	1.043	N.D.	#
49)	HCE	2.900	2.497f	45269	46622	0.018	0.014	
50)	HCBD	0.000	2.897	0	15797	N.D.	0.006	#

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

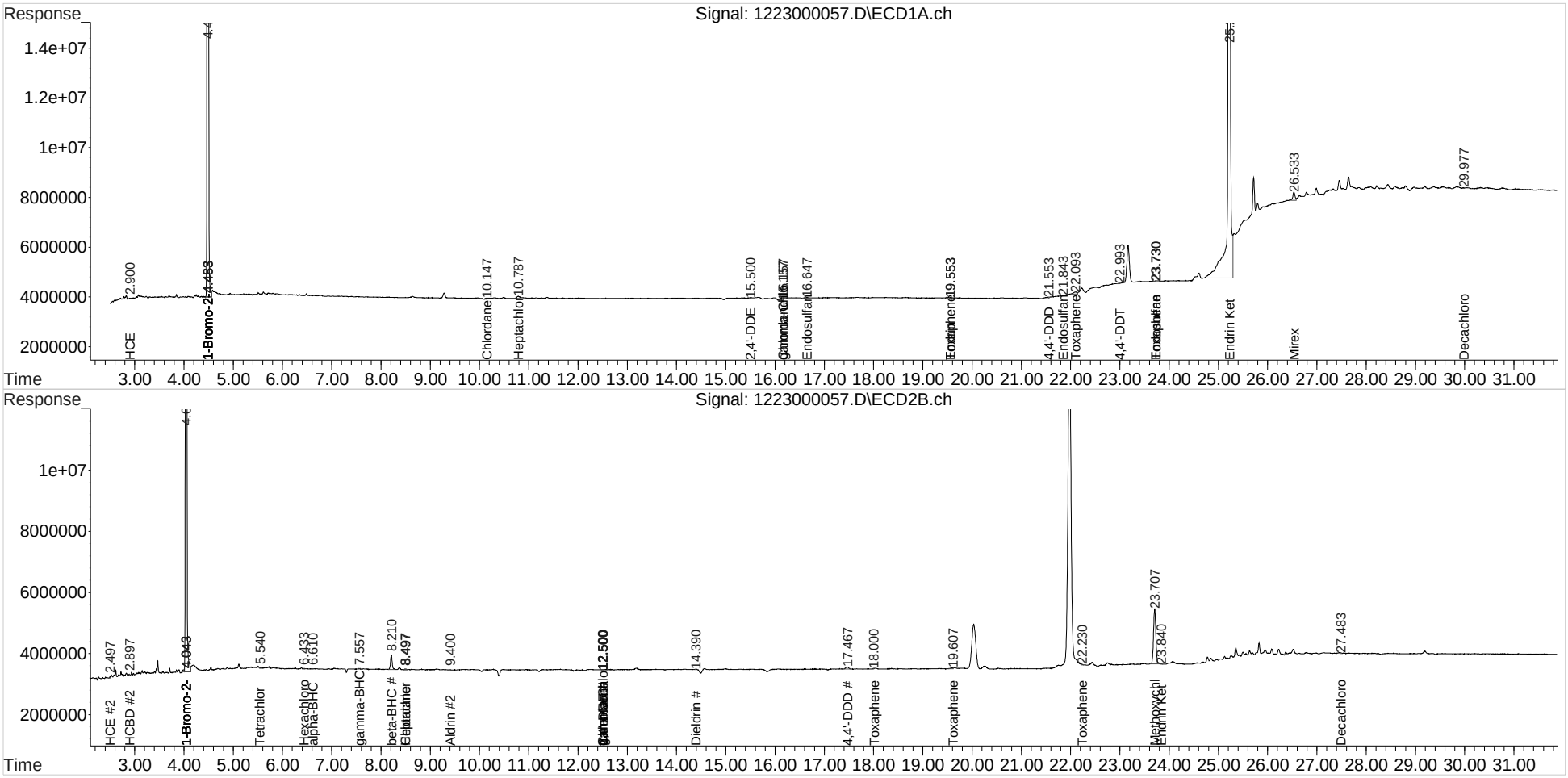
Quantitation Report (Not Reviewed)

1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000057.D Vial: 90
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 25-Dec-2018, 01:59:34 Operator: SMURRAY
Sample : IB Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:25:45 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000053.D
Lab ID: KWG1806753-11
RunType: PEM
Matrix: NOT APPLICABLE

Date Acquired: 12/24/2018 23:34
Date Quantitated: 12/25/2018 15:26
Batch ID: KWG1806753
Analysis Method: 8081B
ListJoinID: LJ17418

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Pesticide Breakdown	NA	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Endrin Aldehyde	-21.9	NA	20	ICVOK
Above Highest ICAL Level	4,4'-DDT	16.41	NA	10	breakdown ok
	Endrin Ketone	40.68	NA	10	intE
Pesticide Breakdown	Endrin	84.5	NA	15	intE

Primary Review: _____

Secondary Review: _____

Printed: 12/29/2018 12:35:07
u:\Stealth\Crystal.rpt\except2.rpt

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000053.D\1223000053C.
Lab ID: KWG1806753-11
RunType: PEM
Matrix: NOT APPLICABLE

Date Acquired: 12/24/2018 23:34
Date Quantitated: 12/25/2018 15:26
Batch ID: KWG1806753
Analysis Method: 8081B
ListJoinID: LJ17418

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Pesticide Breakdown	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	4,4'-DDT	16.27	NA	10	breakdown ok

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000053.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000053.D\1223000053c.d			**Vial:**	86
Acqu Date:	12/24/2018 23:34	**Quant Date:**	12/25/2018 15:26	**Dilution:**	1.0
Run Type:	PEM	**ListJoinID:**	LJ17418	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-11				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:	Organochlorine Pesticides	**Report List ID:**	LJ17418
MB Ref:		**Method ID:**	MJ1006
		Quant based on Report List	

BreakDown Results

Parameter Name	Resp #1	Respe #2	Percent Breakdown #1	Percent Breakdown #1
1-Bromo-2-nitrobenzene	101217853	119580161		
4,4'-DDE	0	0**d**		
Endrin	8808005	14806584	84.5 *	3.2
4,4'-DDD	0**d**	0**d**		
Endrin Aldehyde	0**d**	0**d**		
4,4'-DDT	16936283	27094039	0.0	0.0
Endrin Ketone	47950290	489167		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000053.D Vial: 86
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 23:34:36 Operator: SMURRAY
Sample : PEM GCPS8-49H Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 15:26:30 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	4.477	4.037	101.2E6	119.6E6	100.000	100.000	
	System Monitoring Compounds							
	Target Compounds							
17)	Endrin	19.563	16.097	8808005	14806584	8.224	8.014	
22)	4,4'-DDT	22.960	19.160	16936283	27094039	16.412	16.273	
23)	Endrin Ke...	25.220	23.873	47950290	489167	40.676	0.233	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

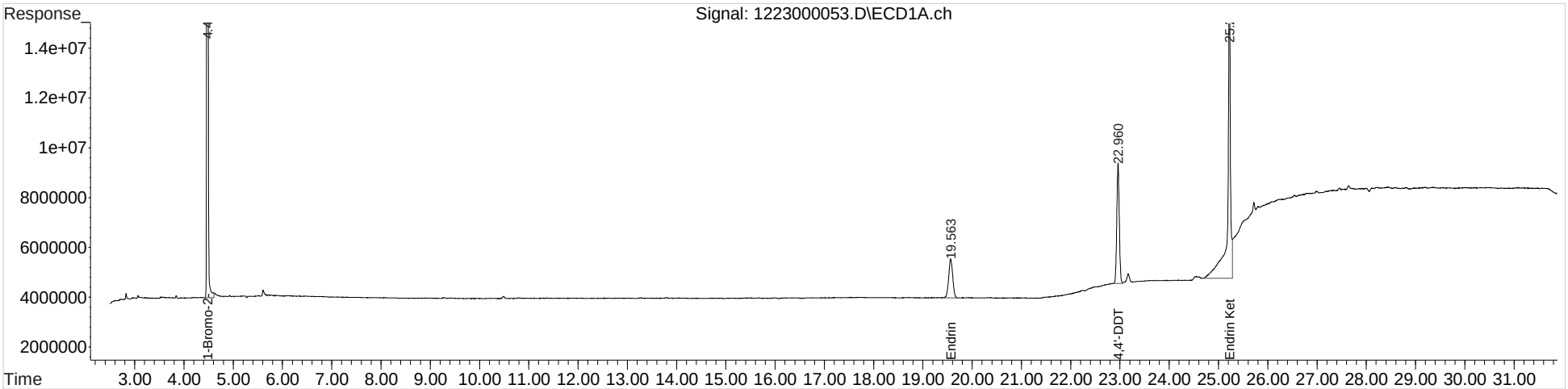
1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\122318\1223000053.D Vial: 86
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 23:34:36 Operator: SMURRAY
Sample : PEM GCPS8-49H Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 15:26:30 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000004.D
Lab ID: KWG1806753-2
RunType: PEM
Matrix: NOT APPLICABLE

Date Acquired: 12/23/2018 18:05
Date Quantitated: 12/24/2018 10:23
Batch ID: KWG1806753
Analysis Method: 8081B
ListJoinID: LJ17418

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Pesticide Breakdown	NA	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Endrin Aldehyde	-21.9	NA	20	ICVOK
Above Highest ICAL Level	4,4'-DDT	15.71	NA	10	breakdown ok
	Endrin Ketone	108.73	NA	10	intE
Pesticide Breakdown	Endrin	93.8	NA	15	int

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000004.D\1223000004C.
Lab ID: KWG1806753-2
RunType: PEM
Matrix: NOT APPLICABLE

Date Acquired: 12/23/2018 18:05
Date Quantitated: 12/24/2018 10:23
Batch ID: KWG1806753
Analysis Method: 8081B
ListJoinID: LJ17418

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Pesticide Breakdown	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	4,4'-DDT	15.21	NA	10	breakdown ok

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000004.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000004.D\1223000004c.d			**Vial:**	86
Acqu Date:	12/23/2018 18:05	**Quant Date:**	12/24/2018 10:23	**Dilution:**	1.0
Run Type:	PEM	**ListJoinID:**	LJ17418	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-2				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:	Organochlorine Pesticides	**Report List ID:**	LJ17418
MB Ref:		**Method ID:**	MJ1006
		Quant based on Report List	

BreakDown Results

Parameter Name	Resp #1	Respe #2	Percent Breakdown #1	Percent Breakdown #1
1-Bromo-2-nitrobenzene	106747067	124537676		
4,4'-DDE	0**d**	0		
Endrin	8978427	14186105	93.8 *	2.9
4,4'-DDD	0**d**	220815		
Endrin Aldehyde	0	0**d**		
4,4'-DDT	17096363	26373354	0.0	0.8
Endrin Ketone	135171156	426392		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000004.D Vial: 86
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 23-Dec-2018, 18:05:33 Operator: SMURRAY
Sample : PEM GCPS8-49H Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 24 10:23:17 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:21:17 2018
QLast Update : Mon Dec 24 10:21:17 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	4.480	4.037	106.7E6	124.5E6	100.000	100.000	
	System Monitoring Compounds							
	Target Compounds							
17)	Endrin	19.570	16.097	8978427	14186105	7.949	7.372	
19)	4,4'-DDD	0.000	17.460	0	220815	N.D. d	0.144	
22)	4,4'-DDT	22.963	19.163	17096363	26373354	15.709	15.210	
23)	Endrin Ke...	25.223	23.873	135.2E6	426392	108.726	0.195	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

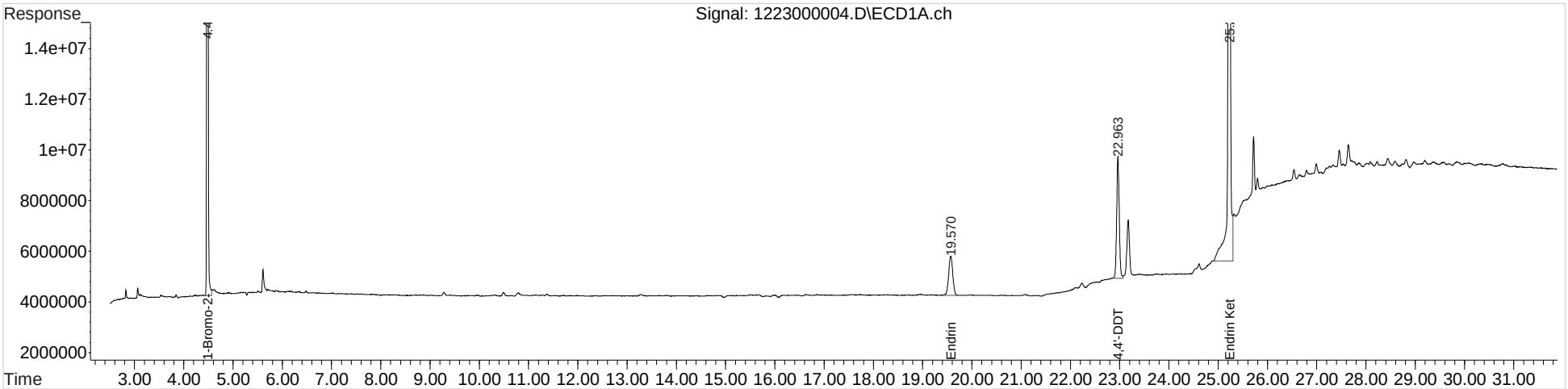
1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\122318\1223000004.D Vial: 86
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 23-Dec-2018, 18:05:33 Operator: SMURRAY
Sample : PEM GCPS8-49H Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 24 10:23:17 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:21:17 2018
QLast Update : Mon Dec 24 10:21:17 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000026.D
Lab ID: KWG1806753-4
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 12/24/2018 07:18
Date Quantitated: 12/24/2018 10:33
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1232

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	gamma-Chlordane	23.6	NA	20	ICVOK
	Endrin Aldehyde	-21.9	NA	20	ICVOK
Above Highest ICAL Level	Endrin Ketone	11.71	NA	10	intE
Enviroquant/Stealth Calibration Check	Perthane	Calc	S-0.000	I-0.268	NR

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000026.D\1223000026C.
Lab ID: KWG1806753-4
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 12/24/2018 07:18
Date Quantitated: 12/24/2018 10:33
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1232

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000026.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000026.D\1223000026c.d			**Vial:**	90
Acqu Date:	12/24/2018 07:18	**Quant Date:**	12/24/2018 10:33	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1232	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-4				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:		**Method ID:**	MJ1232
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.48	c	4.04	c	117505454	139015498	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	4.48	c	4.04	c	117505454	139015498	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	4.48	c	4.04	c	117505454	139015498	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	4.48	c	4.04	c	117505454	139015498	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	Limits =	20-106	
1	Decachlorobiphenyl	0.00	27.53	0	18983		0.0080			NA
				%Recovery =		NA	NA	Limits =	19-127	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC			0	0	0.0000	0.0000			
1	Hexachlorobenzene			0	0	0.0000	0.0000			
1	beta-BHC		8.21	0	219629	0.0000	0.1910			
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor		8.37	0	98604	0.0000	0.0440			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide	14.38	c	26223	0	0.0190	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 12/29/18
2nd TP 01/02/19

Data File #1:	J:\GC34\DATA\122318\1223000026.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000026.D\1223000026c.d			**Vial:**	90
Acqu Date:	12/24/2018 07:18	**Quant Date:**	12/24/2018 10:33	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1232	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-4				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1		RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	gamma-Chlordane	16.12			30023	0	0.0210	0.0000			
1	Endosulfan I			12.98	0	24998	0.0000	0.0120			
1	alpha-Chlordane				0	0	0.0000	0.0000			
1	Dieldrin			14.40	0	30913	0.0000	0.0140			
1	4,4'-DDE				0	0	0.0000	0.0000			
1	Endrin				0	0	0.0000	0.0000			
1	Endosulfan II	21.72			144049	0	0.1160	0.0000			
1	4,4'-DDD	21.50			193361	0	0.1950	0.0000			
1	Endrin Aldehyde				0**d**	0	0.0000	0.0000			
1	Endosulfan Sulfate				0	0	0.0000	0.0000			
1	4,4'-DDT	22.89			383613	0	0.3200	0.0000			
1	Endrin Ketone	25.22			16020737**m**	0	11.71	0.0000			
1	Methoxychlor			23.71	0	836686	0.0000	0.6890			
1	2,4'-DDE				0	0	0.0000	0.0000			
1	2,4'-DDD				0	0	0.0000	0.0000			
1	2,4'-DDT			16.74	0	15233	0.0000	0.0080			
	Toxaphene				0	0	27.18	0.8870			
2	Toxaphene {1}				0	0	0.0000	0.0000			
2	Toxaphene {2}				0	0	0.0000	0.0000			
2	Toxaphene {3}	21.72			144049	0	7.76	0.0000			
2	Toxaphene {4}	22.12			630352	0	28.39	0.0000			
2	Toxaphene {5}	22.27		22.25	575410	23002	45.37	0.8870			
2	Toxaphene {6}				0	0	0.0000	0.0000			
	Chlordane				0	0	0.2030	0.8260			
3	Chlordane {1}				0	0	0.0000	0.0000			
3	Chlordane {2}			8.37	0	98604	0.0000	0.8260			
3	Chlordane {3}				0	0	0.0000	0.0000			
3	Chlordane {4}	16.12			30023	0	0.2030	0.0000			
3	Chlordane {5}				0	0	0.0000	0.0000			
3	Chlordane {6}				0	0	0.0000	0.0000			
4	Chlorpyrifos				0	0	0.0000	0.0000			
4	Oxychlordane	14.38	c		26223	0	0.0180	0.0000			
4	cis-Nonachlor				0	0	0.0000	0.0000			
4	trans-Nonachlor				0	0	0.0000	0.0000			
4	Mirex	26.55			416813	0	0.4310	0.0000			
4	Hexachloroethane	2.92		2.49	72063	27036	0.0280	0.0080			
4	Hexachlorobutadiene			2.89	0	54275	0.0000	0.0210			
4	Perthane	19.11			28164	0	0.2680	0.0000			

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B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000026.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000026.D\1223000026c.d			**Vial:**	90
Acqu Date:	12/24/2018 07:18	**Quant Date:**	12/24/2018 10:33	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-4				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:		**Method ID:**	MJ1647
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.48	c	4.04	c	117505454	139015498	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	4.48	c	4.04	c	117505454	139015498	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	4.48	c	4.04	c	117505454	139015498	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	4.48	c	4.04	c	117505454	139015498	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00	27.53	0	18983		0.0080			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC			0	0	0.0000	0.0000			
1	Hexachlorobenzene			0	0	0.0000	0.0000			
1	beta-BHC		8.21	0	219629	0.0000	0.1910			
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor		8.37	0	98604	0.0000	0.0440			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide	14.38	c	26223	0	0.0190	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 12/29/18
2nd TP 01/02/19

Data File #1:	J:\GC34\DATA\122318\1223000026.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000026.D\1223000026c.d			**Vial:**	90
Acqu Date:	12/24/2018 07:18	**Quant Date:**	12/24/2018 10:33	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-4				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1		RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	gamma-Chlordane	16.12			30023	0	0.0210	0.0000			
1	Endosulfan I			12.98	0	24998	0.0000	0.0120			
1	alpha-Chlordane				0	0	0.0000	0.0000			
1	Dieldrin			14.40	0	30913	0.0000	0.0140			
1	4,4'-DDE				0	0	0.0000	0.0000			
1	Endrin				0	0	0.0000	0.0000			
1	Endosulfan II	21.72			144049	0	0.1160	0.0000			
1	4,4'-DDD	21.50			193361	0	0.1950	0.0000			
1	Endrin Aldehyde				0**d**	0	0.0000	0.0000			
1	Endosulfan Sulfate				0	0	0.0000	0.0000			
1	4,4'-DDT	22.89			383613	0	0.3200	0.0000			
1	Endrin Ketone	25.22			16020737**m**	0	11.71	0.0000			
1	Methoxychlor			23.71	0	836686	0.0000	0.6890			
1	2,4'-DDE				0	0	0.0000	0.0000			
1	2,4'-DDD				0	0	0.0000	0.0000			
1	2,4'-DDT			16.74	0	15233	0.0000	0.0080			
	Toxaphene				0	0	27.18	0.8870			
2	Toxaphene {1}				0	0	0.0000	0.0000			
2	Toxaphene {2}				0	0	0.0000	0.0000			
2	Toxaphene {3}	21.72			144049	0	7.76	0.0000			
2	Toxaphene {4}	22.12			630352	0	28.39	0.0000			
2	Toxaphene {5}	22.27		22.25	575410	23002	45.37	0.8870			
2	Toxaphene {6}				0	0	0.0000	0.0000			
	Chlordane				0	0	0.2030	0.8260			
3	Chlordane {1}				0	0	0.0000	0.0000			
3	Chlordane {2}			8.37	0	98604	0.0000	0.8260			
3	Chlordane {3}				0	0	0.0000	0.0000			
3	Chlordane {4}	16.12			30023	0	0.2030	0.0000			
3	Chlordane {5}				0	0	0.0000	0.0000			
3	Chlordane {6}				0	0	0.0000	0.0000			
4	Chlorpyrifos				0	0	0.0000	0.0000			
4	Oxychlordane	14.38	c		26223	0	0.0180	0.0000			
4	cis-Nonachlor				0	0	0.0000	0.0000			
4	trans-Nonachlor				0	0	0.0000	0.0000			
4	Mirex	26.55			416813	0	0.4310	0.0000			
4	Hexachloroethane	2.92		2.49	72063	27036	0.0280	0.0080			
4	Hexachlorobutadiene			2.89	0	54275	0.0000	0.0210			
4	Perthane	19.11			28164	0	0.2680	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000026.D Vial: 90
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 07:18:51 Operator: SMURRAY
Sample : IB Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 24 10:33:33 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	4.477	4.037	117.5E6	139.0E6	100.000	100.000	
29)	1-Bromo-2...	4.477	4.037	117.5E6	139.0E6	100.000	100.000	
36)	1-Bromo-2...	4.477	4.037	117.5E6	139.0E6	100.000	100.000	
43)	1-Bromo-2...	4.477	4.037	117.5E6	139.0E6	100.000	100.000	
	System Monitoring Compounds							
28) s	Decachlor...	0.000	27.527	0	18983	N.D.	0.008	#
	Target Compounds							
5)	beta-BHC	0.000	8.207	0	219629	N.D.	0.191	#
8)	Heptachlor	0.000	8.367f	0	98604	N.D.	0.044	#
11)	Heptachlo...	14.377f	0.000	26223	0	0.019	N.D.	#
12)	gamma-Chl...	16.120f	0.000	30023	0	0.021	N.D.	#
13)	Endosulfan I	0.000	12.977	0	24998	N.D.	0.012	#
15)	Dieldrin	0.000	14.403	0	30913	N.D.	0.014	#
18)	Endosulfa...	21.720	0.000	144049	0	0.116	N.D.	#
19)	4,4'-DDD	21.500	0.000	193361	0	0.195	N.D.	#
22)	4,4'-DDT	22.887f	0.000	383613	0	0.320	N.D.	#
23)	Endrin Ke...	25.217	0.000	16020737	0	11.707m	N.D.	#
24)	Methoxychlor	0.000	23.707f	0	836686	N.D.	0.689	#
27)	2,4'-DDT	0.000	16.743f	0	15233	N.D.	0.008	#
32)	Toxaphene...	21.720	0.000	144049	0	7.763	N.D.	#
33)	Toxaphene...	22.117	0.000	630352	0	28.394	N.D.	#
34)	Toxaphene...	22.270	22.253	575410	23002	45.373	0.887	#
38)	Chlordane...	0.000	8.367f	0	98604	N.D.	0.826	#
40)	Chlordane...	16.120f	0.000	30023	0	0.203	N.D.	#
45)	Oxychlordane	14.377	0.000	26223	0	0.018	N.D.	#
48)	Mirex	26.553	0.000	416813	0	0.431	N.D.	#
49)	HCE	2.917	2.493f	72063	27036	0.028	0.008	#
50)	HCBD	0.000	2.890	0	54275	N.D.	0.021	#
51)	Perthane	19.113f	0.000	28164	0	0.268	N.D.	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

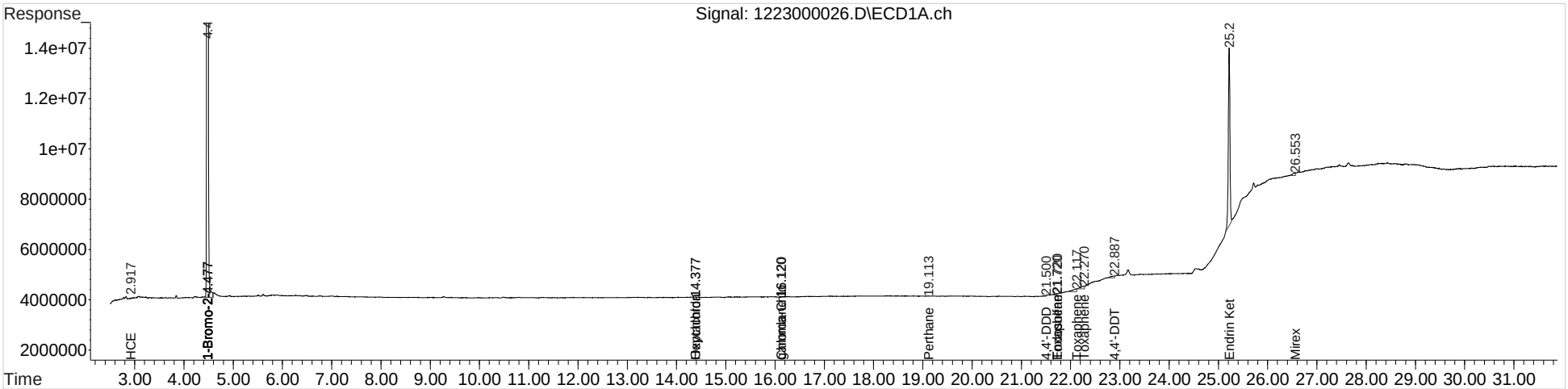
1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\122318\1223000026.D Vial: 90
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 07:18:51 Operator: SMURRAY
Sample : IB Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 24 10:33:33 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



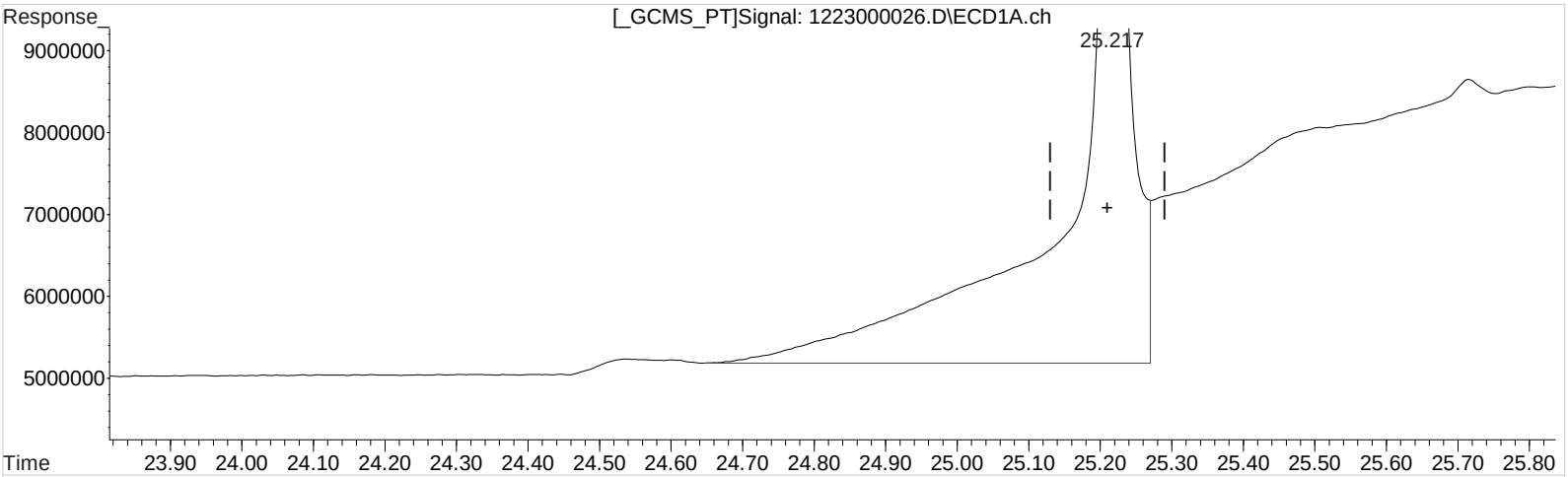
Quantitation Report (Qedit)

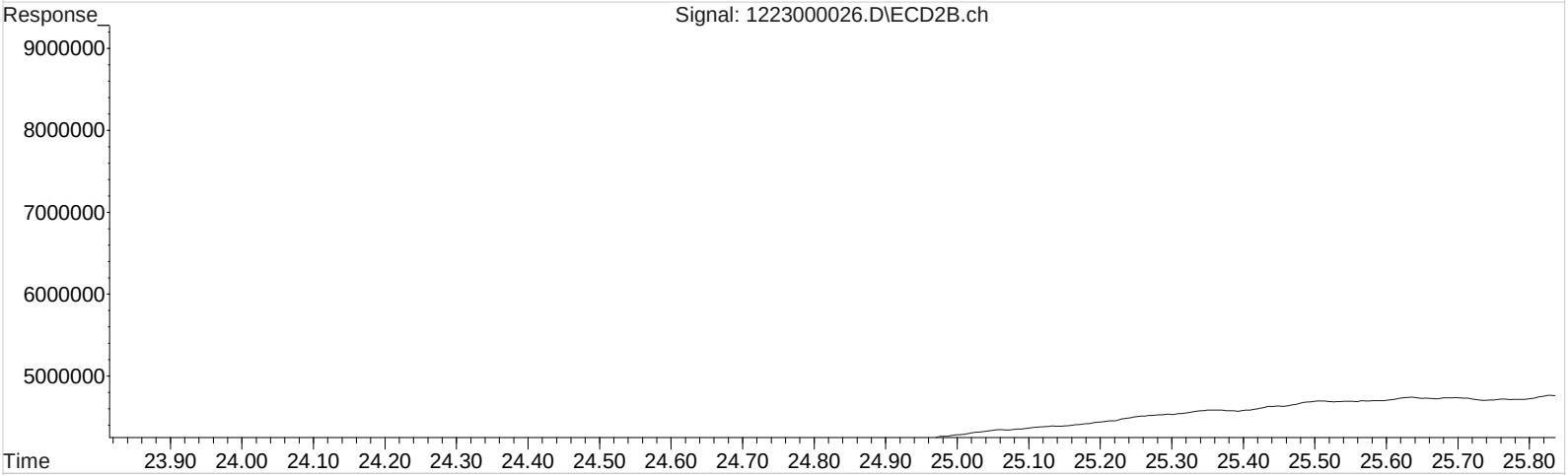
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000026.D Vial: 90
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 07:18:51 Operator: SMURRAY
Sample : IB Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 24 10:33:21 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(23) Endrin Ketone

25.217min 34.074 ug/L

response 46630837

Manual Integration:

Before

12/24/18

(23) Endrin Ketone #2

0.000min 0.000 ug/L

response 0

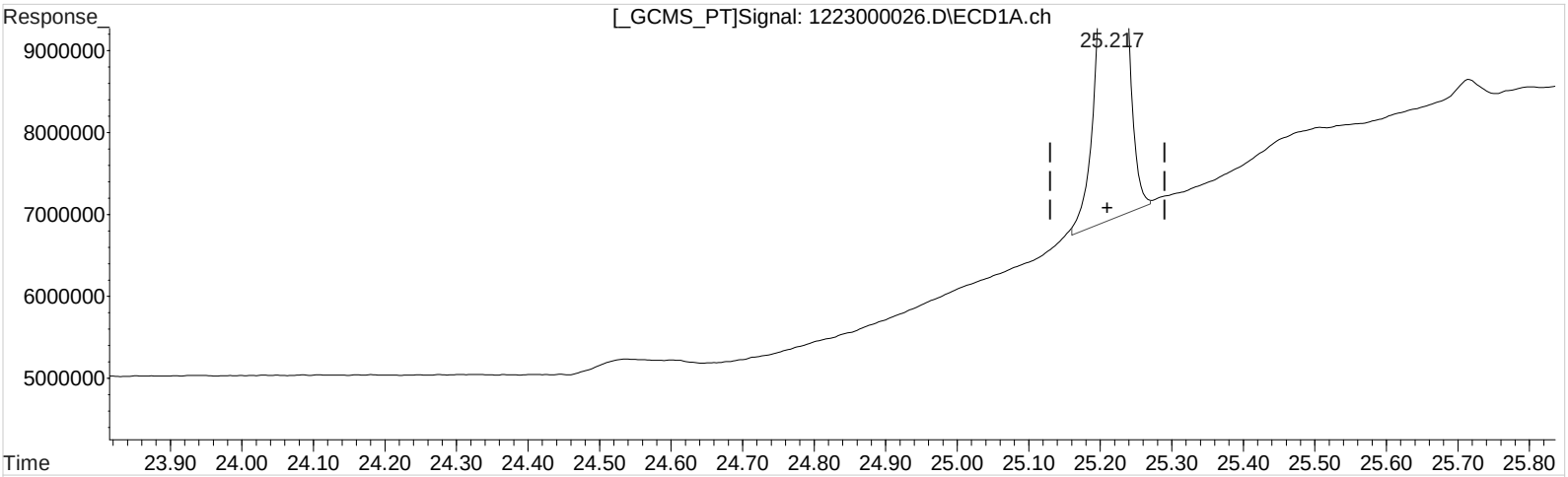
(+) = Expected Retention Time

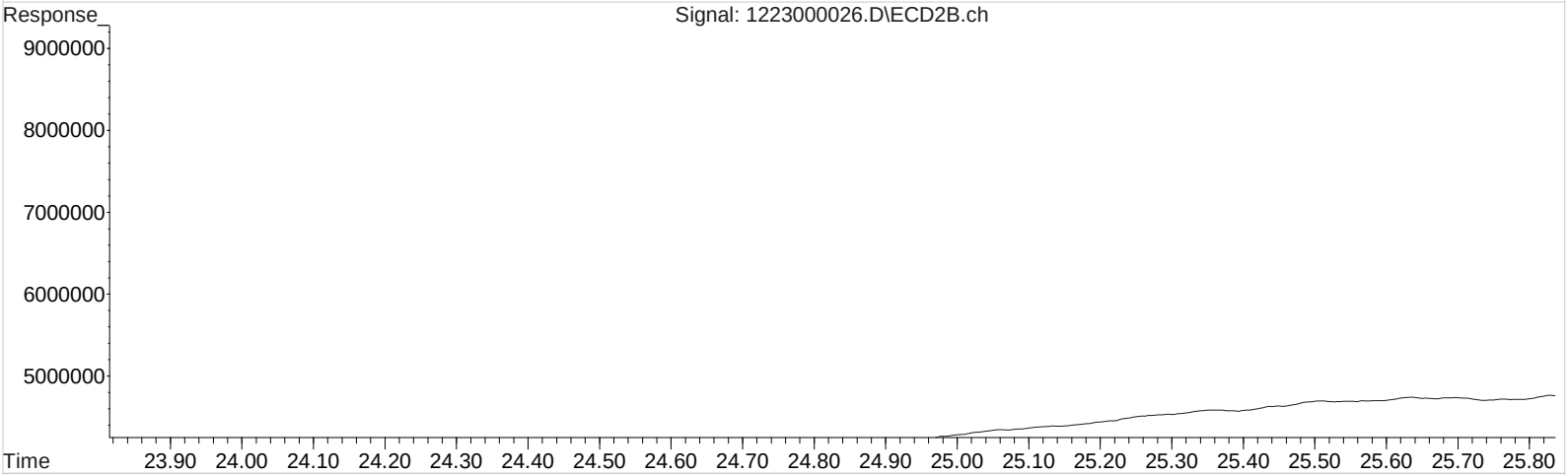
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000026.D Vial: 90
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 07:18:51 Operator: SMURRAY
Sample : IB Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 24 10:33:21 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(23) Endrin Ketone

25.217min 11.707 ug/L m

response 16020737

Manual Integration:

After

Baseline/Shoulder

12/24/18

(23) Endrin Ketone #2

0.000min 0.000 ug/L

response 0

(+) = Expected Retention Time

1st SM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000022.D
Lab ID: KWG1806753-5
RunType: PEM
Matrix: NOT APPLICABLE

Date Acquired: 12/24/2018 04:54
Date Quantitated: 12/24/2018 10:29
Batch ID: KWG1806753
Analysis Method: 8081B
ListJoinID: LJ17418

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Pesticide Breakdown	NA	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Endrin Aldehyde	-21.9	NA	20	ICVOK
Above Highest ICAL Level	4,4'-DDT	14.94	NA	10	breakdown ok
	Endrin Ketone	133.72	NA	10	intRO
Pesticide Breakdown	Endrin	94.7	NA	15	int

Primary Review: _____

Secondary Review: _____

Printed: 12/29/2018 10:26:19
u:\Stealth\Crystal.rpt\except2.rpt

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000022.D\1223000022C.
Lab ID: KWG1806753-5
RunType: PEM
Matrix: NOT APPLICABLE

Date Acquired: 12/24/2018 04:54
Date Quantitated: 12/24/2018 10:29
Batch ID: KWG1806753
Analysis Method: 8081B
ListJoinID: LJ17418

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Pesticide Breakdown	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	4,4'-DDT	15.26	NA	10	breakdown ok

Primary Review: _____

Secondary Review: _____

1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000022.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000022.D\1223000022c.d			**Vial:**	86
Acqu Date:	12/24/2018 04:54	**Quant Date:**	12/24/2018 10:29	**Dilution:**	1.0
Run Type:	PEM	**ListJoinID:**	LJ17418	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.			**Calibration ID:**	CAL15914
Title:	Organochlorine Pesticides			**Report List ID:**	LJ17418
MB Ref:				**Method ID:**	MJ1006
				Quant based on Report List	

BreakDown Results

Parameter Name	Resp #1	Respe #2	Percent Breakdown #1	Percent Breakdown #1
1-Bromo-2-nitrobenzene	105153709	123459900		
4,4'-DDE	0	0		
Endrin	9133041	14338256	94.7 *	2.9
4,4'-DDD	0**d**	628452		
Endrin Aldehyde	0	0		
4,4'-DDT	16018078**m**	26233355	0.0	2.3
Endrin Ketone	163766918	426744		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000022.D Vial: 86
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 04:54:05 Operator: SMURRAY
Sample : PEM GCPS8-49H Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 24 10:29:41 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:21:17 2018
QLast Update : Mon Dec 24 10:21:17 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	4.473	4.033	105.2E6	123.5E6	100.000	100.000	
	System Monitoring Compounds							
	Target Compounds							
17)	Endrin	19.560	16.097	9133041	14338256	8.209	7.516	
19)	4,4'-DDD	0.000	17.457	0	628452	N.D. d	0.413	
22)	4,4'-DDT	22.960	19.163	16018078	26233355	14.941m	15.261	
23)	Endrin Ke...	25.220	23.873	163.8E6	426744	133.724	0.197	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

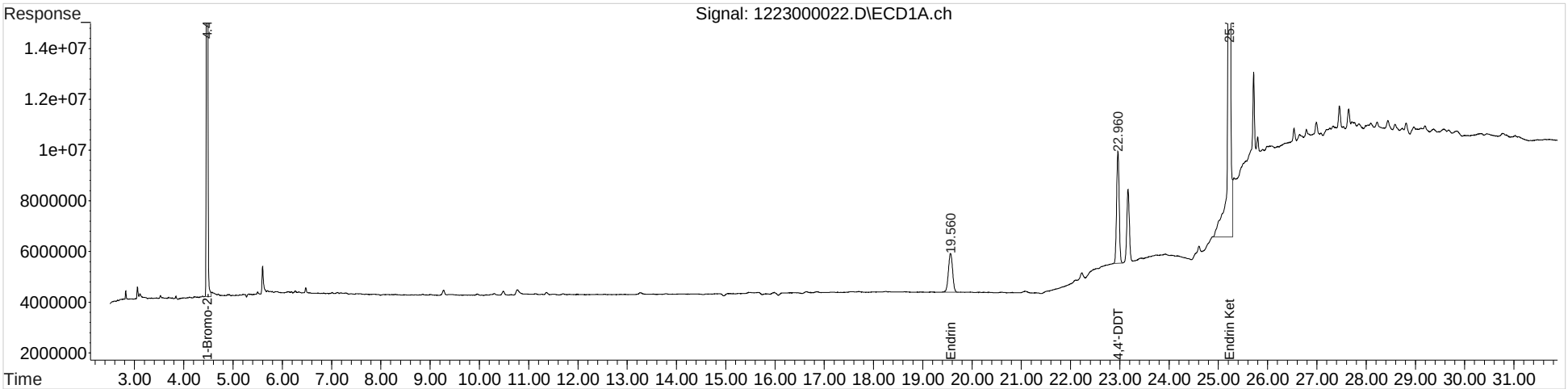
1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\122318\1223000022.D Vial: 86
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 04:54:05 Operator: SMURRAY
Sample : PEM GCPS8-49H Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 24 10:29:41 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:21:17 2018
QLast Update : Mon Dec 24 10:21:17 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



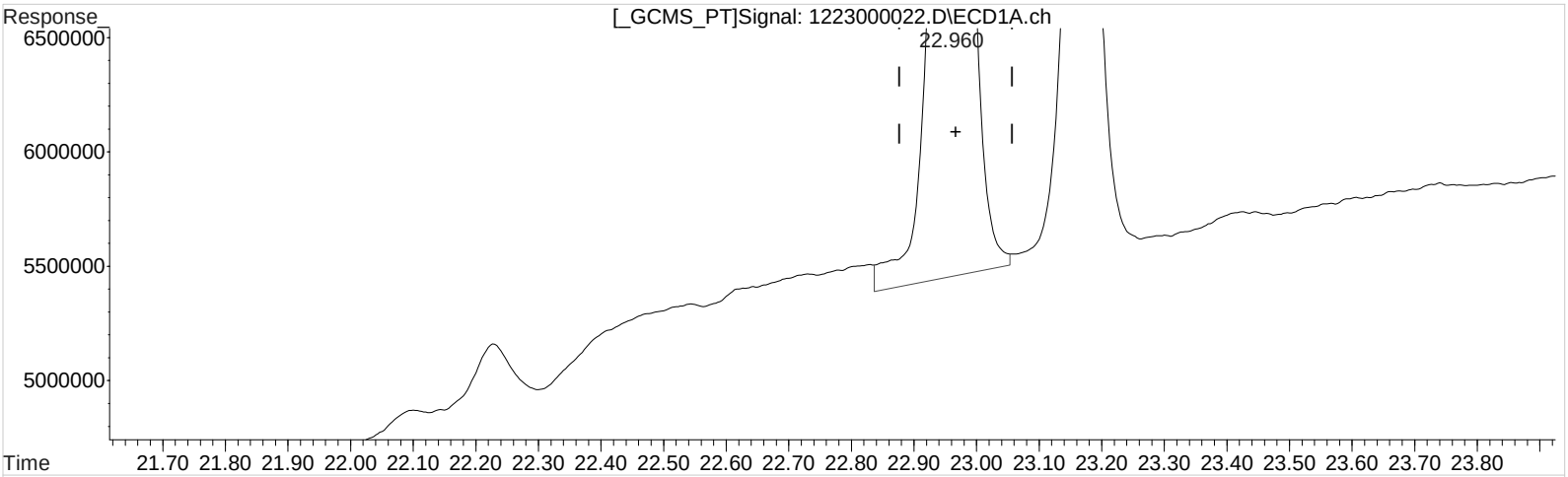
Quantitation Report (Qedit)

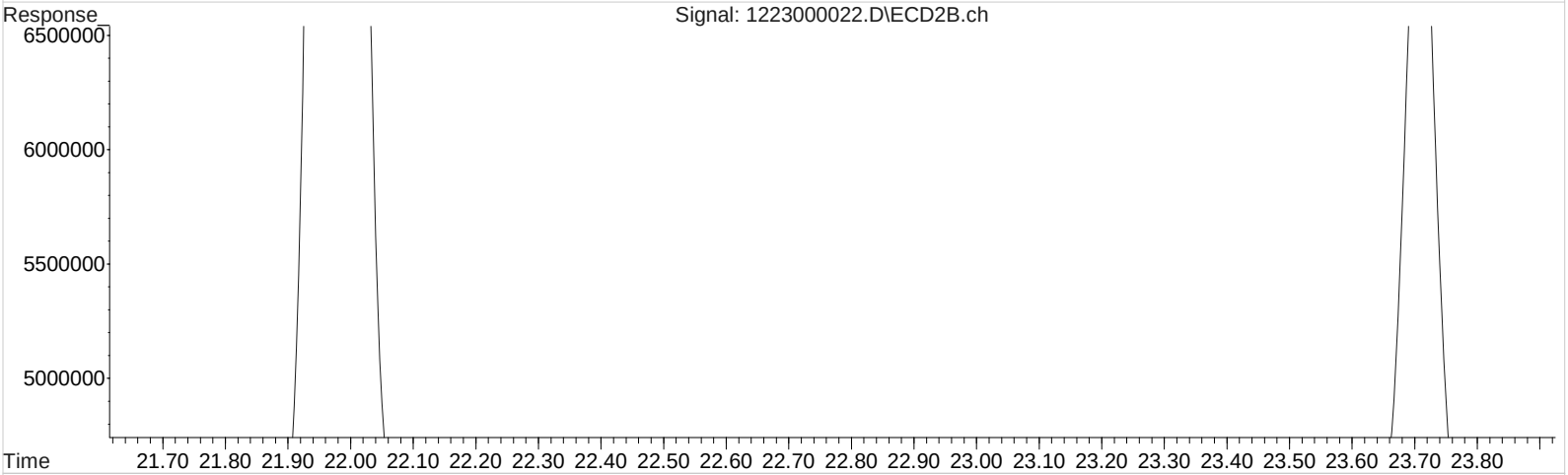
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000022.D Vial: 86
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 04:54:05 Operator: SMURRAY
Sample : PEM GCPS8-49H Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 24 10:24:30 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:21:17 2018
QLast Update : Mon Dec 24 10:21:17 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(22) 4,4'-DDT

22.960min 16.010 ug/L

response 17164271

Manual Integration:

Before

12/24/18

(22) 4,4'-DDT #2

19.163min 15.261 ug/L

response 26233355

(+) = Expected Retention Time

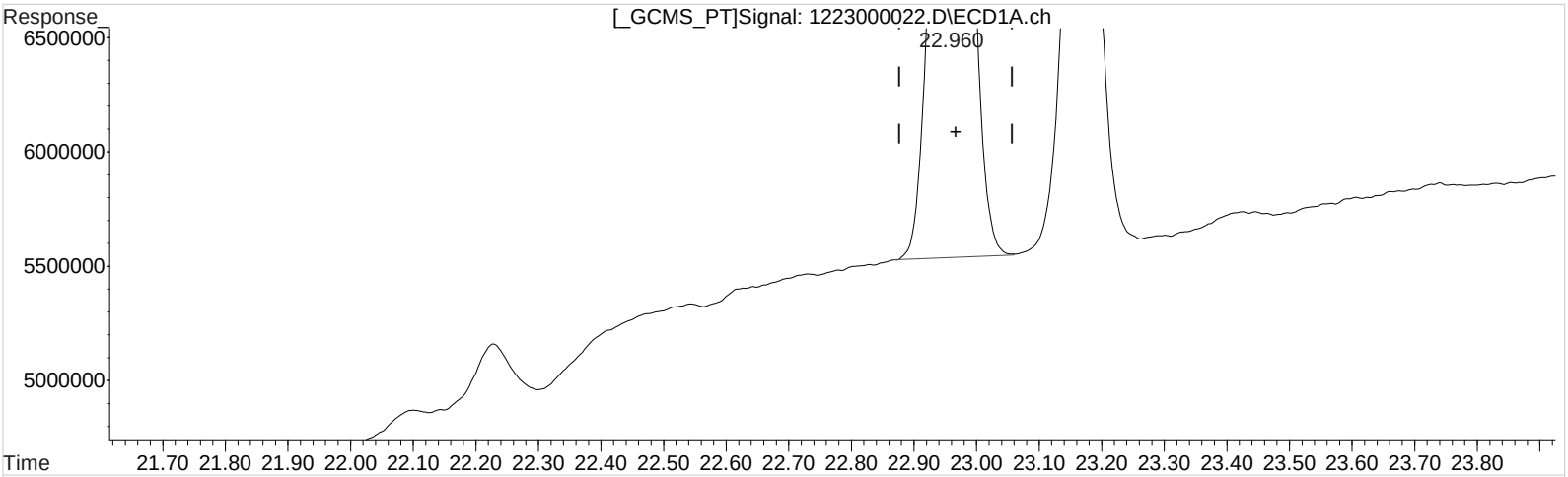
Quantitation Report (Qedit)

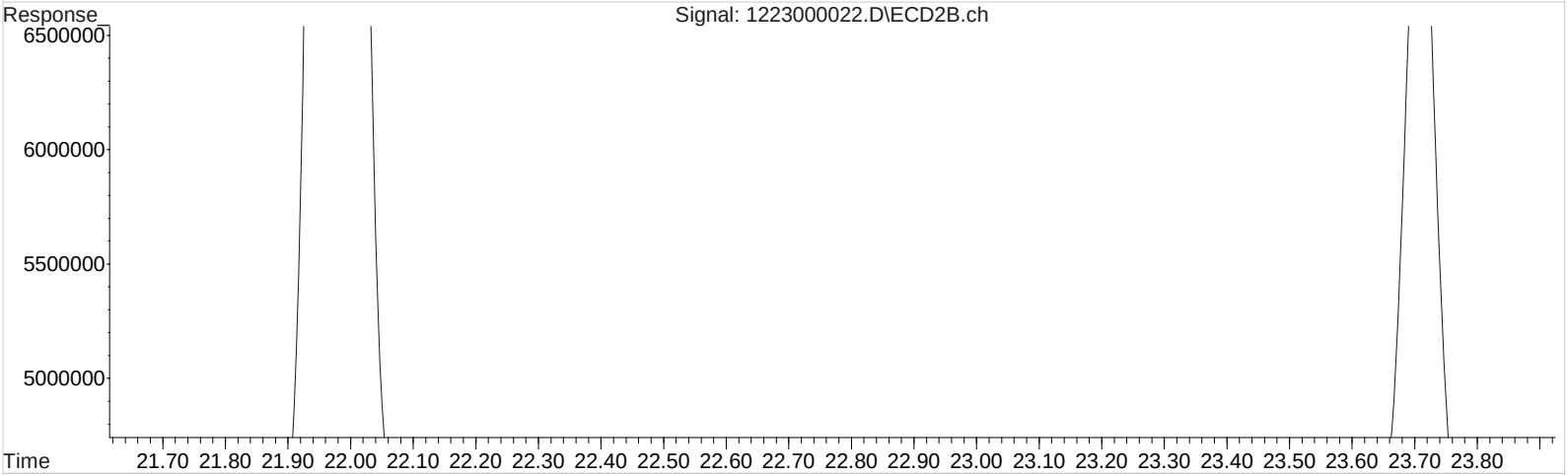
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000022.D Vial: 86
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 04:54:05 Operator: SMURRAY
Sample : PEM GCPS8-49H Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 24 10:24:30 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:21:17 2018
QLast Update : Mon Dec 24 10:21:17 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(22) 4,4'-DDT

22.960min 14.941 ug/L m

response 16018078

Manual Integration:

After

Baseline/Shoulder

12/24/18

(22) 4,4'-DDT #2

19.163min 15.261 ug/L

response 26233355

(+) = Expected Retention Time

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000039.D
Lab ID: KWG1806753-7
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 12/24/2018 15:09
Date Quantitated: 12/25/2018 14:24
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1232

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	gamma-Chlordane	23.6	NA	20	ICVOK
	Endrin Aldehyde	-21.9	NA	20	ICVOK
Above Highest ICAL Level	Endrin Ketone	79.91	NA	10	~~intE~~

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000039.D\1223000039C.
Lab ID: KWG1806753-7
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 12/24/2018 15:09
Date Quantitated: 12/25/2018 14:24
Batch ID: KWG1806753
Analysis Method: 8081B
MethodJoinID: MJ1232

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000039.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000039.D\1223000039c.d			**Vial:**	90
Acqu Date:	12/24/2018 15:09	**Quant Date:**	12/25/2018 14:24	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1232	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-7				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:		**Method ID:**	MJ1232
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.49	c	4.05	c	115531897	136067323	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	4.49	c	4.05	c	115531897	136067323	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	4.49	c	4.05	c	115531897	136067323	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	4.49	c	4.05	c	115531897	136067323	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	6.91	5.54	26641	18473	0.0240	0.0110			NA
				%Recovery =		NA	NA	**Limits =**	20-106	
1	Decachlorobiphenyl	0.00	27.47	0	56717		0.0260			NA
				%Recovery =		NA	NA	**Limits =**	19-127	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC			0	0	0.0000	0.0000			
1	Hexachlorobenzene		6.44	0	17117	0.0000	0.0070			
1	beta-BHC		8.21	0	985874	0.0000	0.8780			
1	gamma-BHC (Lindane)		7.56	0	34067	0.0000	0.0170			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor	10.79	8.49	461223	33100	0.3940	0.0150			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\122318\1223000039.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000039.D\1223000039c.d			**Vial:**	90
Acqu Date:	12/24/2018 15:09	**Quant Date:**	12/25/2018 14:24	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1232	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-7				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	gamma-Chlordane	16.14		263792	0	0.1900	0.0000			
1	Endosulfan I	16.64		115205	0	0.0970	0.0000			
1	alpha-Chlordane	16.49		31723	0	0.0240	0.0000			
1	Dieldrin		14.42	0	319446	0.0000	0.1510			
1	4,4'-DDE			0	0	0.0000	0.0000			
1	Endrin	19.51		25411	0	0.0210	0.0000			
1	Endosulfan II	21.74		54163	0	0.0440	0.0000			
1	4,4'-DDD	21.52	17.46	219398	133611	0.2250	0.0800			
1	Endrin Aldehyde			0	0	0.0000	0.0000			
1	Endosulfan Sulfate	23.73		25622	0	0.0200	0.0000			
1	4,4'-DDT	22.91		321596	0	0.2730	0.0000			
1	Endrin Ketone	25.22		107518868	0	79.91	0.0000			
1	Methoxychlor		23.71	0	5531561	0.0000	4.65			
1	2,4'-DDE			0	0	0.0000	0.0000			
1	2,4'-DDD			0	0	0.0000	0.0000			
1	2,4'-DDT			0	0	0.0000	0.0000			
	Toxaphene			0	0	8.78	2.05			
2	Toxaphene {1}		16.40	0	25052	0.0000	2.65			
2	Toxaphene {2}	19.51	17.15	25411	18192	5.52	0.8880			
2	Toxaphene {3}	21.65	18.04	86216	19635	4.73	0.4350			
2	Toxaphene {4}	22.10	19.59	427129	116555	19.57	3.73			
2	Toxaphene {5}		22.22	0	64325	0.0000	2.53			
2	Toxaphene {6}	23.73		25622	0	5.29	0.0000			
	Chlordane			0	0	1.04	0.2830			
3	Chlordane {1}	10.14		53790	0	1.09	0.0000			
3	Chlordane {2}		8.49	0	33100	0.0000	0.2830			
3	Chlordane {3}			0	0	0.0000	0.0000			
3	Chlordane {4}	16.14		263792	0	1.81	0.0000			
3	Chlordane {5}	16.49		31723	0	0.2330	0.0000			
3	Chlordane {6}			0	0	0.0000	0.0000			
4	Chlorpyrifos		9.97	0	212824	0.0000	0.1320			
4	Oxychlordane		10.95	0	16700	0.0000	0.0070			
4	cis-Nonachlor	21.08		122154	0	0.0730	0.0000			
4	trans-Nonachlor			0	0	0.0000	0.0000			
4	Mirex	26.53		708169	0	0.7450	0.0000			
4	Hexachloroethane		2.50	0	41332	0.0000	0.0130			
4	Hexachlorobutadiene	3.51	2.90	25710	25969	0.0130	0.0100			
4	Perthane			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000039.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000039.D\1223000039c.d			**Vial:**	90
Acqu Date:	12/24/2018 15:09	**Quant Date:**	12/25/2018 14:24	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-7				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:		**Method ID:**	MJ1647
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.49	c	4.05	c	115531897	136067323	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	4.49	c	4.05	c	115531897	136067323	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	4.49	c	4.05	c	115531897	136067323	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	4.49	c	4.05	c	115531897	136067323	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	6.91	5.54	26641	18473	0.0240	0.0110			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00	27.47	0	56717		0.0260			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC			0	0	0.0000	0.0000			
1	Hexachlorobenzene		6.44	0	17117	0.0000	0.0070			
1	beta-BHC		8.21	0	985874	0.0000	0.8780			
1	gamma-BHC (Lindane)		7.56	0	34067	0.0000	0.0170			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor	10.79	8.49	461223	33100	0.3940	0.0150			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
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Data File #1:	J:\GC34\DATA\122318\1223000039.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000039.D\1223000039c.d			**Vial:**	90
Acqu Date:	12/24/2018 15:09	**Quant Date:**	12/25/2018 14:24	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-7				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	gamma-Chlordane	16.14		263792	0	0.1900	0.0000			
1	Endosulfan I	16.64		115205	0	0.0970	0.0000			
1	alpha-Chlordane	16.49		31723	0	0.0240	0.0000			
1	Dieldrin		14.42	0	319446	0.0000	0.1510			
1	4,4'-DDE			0	0	0.0000	0.0000			
1	Endrin	19.51		25411	0	0.0210	0.0000			
1	Endosulfan II	21.74		54163	0	0.0440	0.0000			
1	4,4'-DDD	21.52	17.46	219398	133611	0.2250	0.0800			
1	Endrin Aldehyde			0	0	0.0000	0.0000			
1	Endosulfan Sulfate	23.73		25622	0	0.0200	0.0000			
1	4,4'-DDT	22.91		321596	0	0.2730	0.0000			
1	Endrin Ketone	25.22		107518868	0	79.91	0.0000			
1	Methoxychlor		23.71	0	5531561	0.0000	4.65			
1	2,4'-DDE			0	0	0.0000	0.0000			
1	2,4'-DDD			0	0	0.0000	0.0000			
1	2,4'-DDT			0	0	0.0000	0.0000			
	Toxaphene			0	0	8.78	2.05			
2	Toxaphene {1}		16.40	0	25052	0.0000	2.65			
2	Toxaphene {2}	19.51	17.15	25411	18192	5.52	0.8880			
2	Toxaphene {3}	21.65	18.04	86216	19635	4.73	0.4350			
2	Toxaphene {4}	22.10	19.59	427129	116555	19.57	3.73			
2	Toxaphene {5}		22.22	0	64325	0.0000	2.53			
2	Toxaphene {6}	23.73		25622	0	5.29	0.0000			
	Chlordane			0	0	1.04	0.2830			
3	Chlordane {1}	10.14		53790	0	1.09	0.0000			
3	Chlordane {2}		8.49	0	33100	0.0000	0.2830			
3	Chlordane {3}			0	0	0.0000	0.0000			
3	Chlordane {4}	16.14		263792	0	1.81	0.0000			
3	Chlordane {5}	16.49		31723	0	0.2330	0.0000			
3	Chlordane {6}			0	0	0.0000	0.0000			
4	Chlorpyrifos		9.97	0	212824	0.0000	0.1320			
4	Oxychlordane		10.95	0	16700	0.0000	0.0070			
4	cis-Nonachlor	21.08		122154	0	0.0730	0.0000			
4	trans-Nonachlor			0	0	0.0000	0.0000			
4	Mirex	26.53		708169	0	0.7450	0.0000			
4	Hexachloroethane		2.50	0	41332	0.0000	0.0130			
4	Hexachlorobutadiene	3.51	2.90	25710	25969	0.0130	0.0100			
4	Perthane			0	0	0.0000	0.0000			

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1st STM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000039.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000039.D\1223000039c.d			**Vial:**	90
Acqu Date:	12/24/2018 15:09	**Quant Date:**	12/25/2018 14:24	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-7				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.	**Calibration ID:**	CAL15914
Title:			
MB Ref:		**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.49	c	4.05	c	115531897	136067323	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	4.49	c	4.05	c	115531897	136067323	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	4.49	c	4.05	c	115531897	136067323	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	4.49	c	4.05	c	115531897	136067323	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	6.91	5.54	26641	18473	0.0240	0.0110			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00	27.47	0	56717		0.0260			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC			0	0	0.0000	0.0000			
1	Hexachlorobenzene		6.44	0	17117	0.0000	0.0070			
1	beta-BHC		8.21	0	985874	0.0000	0.8780			
1	gamma-BHC (Lindane)		7.56	0	34067	0.0000	0.0170			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor	10.79	8.49	461223	33100	0.3940	0.0150			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

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N: Presumptive evidence of compound

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m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

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e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 12/29/18
2nd TP 01/02/19

Data File #1:	J:\GC34\DATA\122318\1223000039.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000039.D\1223000039c.d			**Vial:**	90
Acqu Date:	12/24/2018 15:09	**Quant Date:**	12/25/2018 14:24	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-7				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane	16.14		263792	0	0.1900	0.0000			
1	Endosulfan I	16.64		115205	0	0.0970	0.0000			
1	alpha-Chlordane	16.49		31723	0	0.0240	0.0000			
1	Dieldrin		14.42	0	319446	0.0000	0.1510			
1	4,4'-DDE			0	0	0.0000	0.0000			
1	Endrin	19.51		25411	0	0.0210	0.0000			
1	Endosulfan II	21.74		54163	0	0.0440	0.0000			
1	4,4'-DDD	21.52	17.46	219398	133611	0.2250	0.0800			
1	Endrin Aldehyde			0	0	0.0000	0.0000			
1	Endosulfan Sulfate	23.73		25622	0	0.0200	0.0000			
1	4,4'-DDT	22.91		321596	0	0.2730	0.0000			
1	Endrin Ketone	25.22		107518868	0	79.91	0.0000			
1	Methoxychlor		23.71	0	5531561	0.0000	4.65			
1	2,4'-DDE			0	0	0.0000	0.0000			
1	2,4'-DDD			0	0	0.0000	0.0000			
1	2,4'-DDT			0	0	0.0000	0.0000			
	Toxaphene			0	0	8.78	2.05			
2	Toxaphene {1}		16.40	0	25052	0.0000	2.65			
2	Toxaphene {2}	19.51	17.15	25411	18192	5.52	0.8880			
2	Toxaphene {3}	21.65	18.04	86216	19635	4.73	0.4350			
2	Toxaphene {4}	22.10	19.59	427129	116555	19.57	3.73			
2	Toxaphene {5}		22.22	0	64325	0.0000	2.53			
2	Toxaphene {6}	23.73		25622	0	5.29	0.0000			
	Chlordane			0	0	1.04	0.2830			
3	Chlordane {1}	10.14		53790	0	1.09	0.0000			
3	Chlordane {2}		8.49	0	33100	0.0000	0.2830			
3	Chlordane {3}			0	0	0.0000	0.0000			
3	Chlordane {4}	16.14		263792	0	1.81	0.0000			
3	Chlordane {5}	16.49		31723	0	0.2330	0.0000			
3	Chlordane {6}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

1st SM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000039.D Vial: 90
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 15:09:18 Operator: SMURRAY
Sample : IB Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:23 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	4.487	4.047	115.5E6	136.1E6	100.000	100.000	
29)	1-Bromo-2...	4.487	4.047	115.5E6	136.1E6	100.000	100.000	
36)	1-Bromo-2...	4.487	4.047	115.5E6	136.1E6	100.000	100.000	
43)	1-Bromo-2...	4.487	4.047	115.5E6	136.1E6	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	6.913	5.543	26641	18473	0.024	0.011	#
28) s	Decachlor...	0.000	27.467	0	56717	N.D.	0.026	#
	Target Compounds							
4)	Hexachlor...	0.000	6.440	0	17117	N.D.	0.007	#
5)	beta-BHC	0.000	8.210	0	985874	N.D.	0.878	#
6)	gamma-BHC...	0.000	7.560f	0	34067	N.D.	0.017	#
8)	Heptachlor	10.787	8.490f	461223	33100	0.394	0.015	#
12)	gamma-Chl...	16.143f	0.000	263792	0	0.190	N.D.	#
13)	Endosulfan I	16.637f	0.000	115205	0	0.097	N.D.	#
14)	alpha-Chl...	16.493	0.000	31723	0	0.024	N.D.	#
15)	Dieldrin	0.000	14.420	0	319446	N.D.	0.151	#
17)	Endrin	19.510	0.000	25411	0	0.021	N.D.	#
18)	Endosulfa...	21.737	0.000	54163	0	0.044	N.D.	#
19)	4,4'-DDD	21.520	17.460	219398	133611	0.225	0.080	#
21)	Endosulfa...	23.727	0.000	25622	0	0.020	N.D.	#
22)	4,4'-DDT	22.910	0.000	321596	0	0.273	N.D.	#
23)	Endrin Ke...	25.220	0.000	107.5E6	0	79.908	N.D.	#
24)	Methoxychlor	0.000	23.707f	0	5531561	N.D.	4.654	#
30)	Toxaphene	0.000	16.397	0	25052	N.D.	2.649	#
31)	Toxaphene...	19.510	17.147	25411	18192	5.515	0.888	#
32)	Toxaphene...	21.647	18.043	86216	19635	4.726	0.435	#
33)	Toxaphene...	22.100	19.587	427129	116555	19.569	3.725	#
34)	Toxaphene...	0.000	22.217f	0	64325	N.D.	2.534	#
35)	Toxaphene...	23.727	0.000	25622	0	5.292	N.D.	#
37)	Chlordane	10.137	0.000	53790	0	1.089	N.D.	#
38)	Chlordane...	0.000	8.490f	0	33100	N.D.	0.283	#
40)	Chlordane...	16.143f	0.000	263792	0	1.812	N.D.	#
41)	Chlordane...	16.493	0.000	31723	0	0.233	N.D.	#
44)	Chlorpyrifos	0.000	9.973	0	212824	N.D.	0.132	#
45)	Oxychlordane	0.000	10.950	0	16700	N.D.	0.007	#
46)	cis-Nonac...	21.083f	0.000	122154	0	0.073	N.D.	#
48)	Mirex	26.533	0.000	708169	0	0.745	N.D.	#
49)	HCE	0.000	2.497f	0	41332	N.D.	0.013	#
50)	HCBD	3.513f	2.897	25710	25969	0.013	0.010	

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

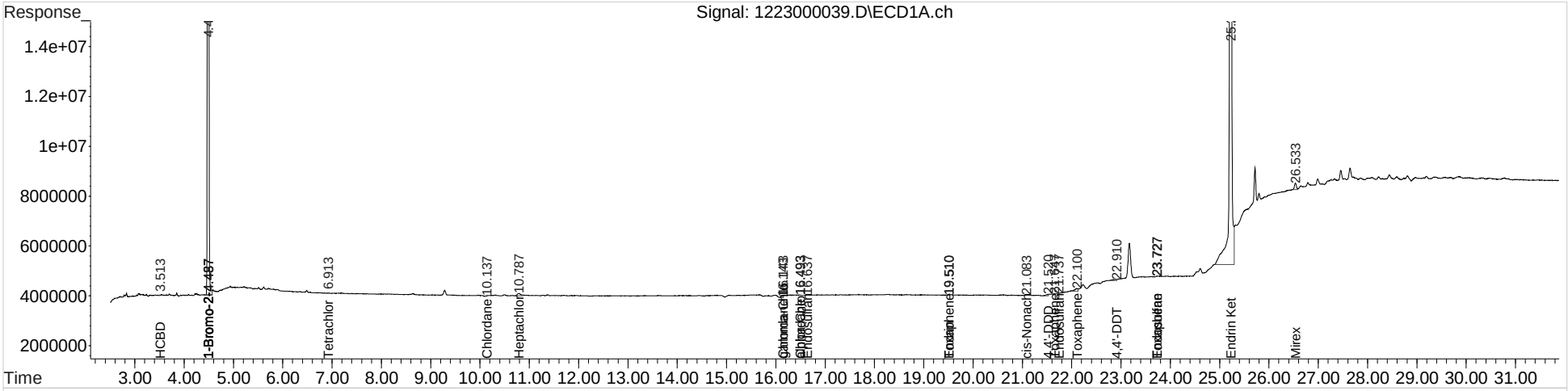
1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report (Not Reviewed)

Data File : J:\GC34\DATA\122318\1223000039.D Vial: 90
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 15:09:18 Operator: SMURRAY
Sample : IB Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:23 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



1st SM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000035.D
Lab ID: KWG1806753-8
RunType: PEM
Matrix: NOT APPLICABLE

Date Acquired: 12/24/2018 12:45
Date Quantitated: 12/25/2018 15:20
Batch ID: KWG1806753
Analysis Method: 8081B
ListJoinID: LJ17418

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Pesticide Breakdown	NA	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Endrin Aldehyde	-21.9	NA	20	ICVOK
Above Highest ICAL Level	4,4'-DDT	16.42	NA	10	breakdown ok
Pesticide Breakdown	Endrin	32.9	NA	15	int

Primary Review: _____

Secondary Review: _____

1st SM 12/29/18
2nd TP 01/02/19

Exception Report

Data File: J:\GC34\DATA\122318\1223000035.D\1223000035C.
Lab ID: KWG1806753-8
RunType: PEM
Matrix: NOT APPLICABLE

Date Acquired: 12/24/2018 12:45
Date Quantitated: 12/25/2018 15:20
Batch ID: KWG1806753
Analysis Method: 8081B
ListJoinID: LJ17418

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Pesticide Breakdown	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	4,4'-DDT	16.35	NA	10	breakdown ok

Primary Review: _____

Secondary Review: _____

1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report

Data File #1:	J:\GC34\DATA\122318\1223000035.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\122318\1223000035.D\1223000035c.d			**Vial:**	86
Acqu Date:	12/24/2018 12:45	**Quant Date:**	12/25/2018 15:20	**Dilution:**	1.0
Run Type:	PEM	**ListJoinID:**	LJ17418	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806753-8				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/28/2018

Analysis Lot:	KWG1806753	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC34\METHODS\GC34-121218.			**Calibration ID:**	CAL15914
Title:	Organochlorine Pesticides			**Report List ID:**	LJ17418
MB Ref:				**Method ID:**	MJ1006
				Quant based on Report List	

BreakDown Results

Parameter Name	Resp #1	Respe #2	Percent Breakdown #1	Percent Breakdown #1
1-Bromo-2-nitrobenzene	99078366	116469991		
4,4'-DDE	0	0		
Endrin	8579350	14372967	32.9 *	3.3
4,4'-DDD	0**d**	0**d**		
Endrin Aldehyde	0**d**	0		
4,4'-DDT	16582376	26511806	0.0	0.0
Endrin Ketone	4211553**m**	483245		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000035.D Vial: 86
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 12:45:14 Operator: SMURRAY
Sample : PEM GCPS8-49H Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 15:20:02 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	4.487	4.047	99078366	116.5E6	100.000	100.000
36)	1-Bromo-2...	4.487	4.047	99078366	116.5E6	100.000	100.000
	System Monitoring Compounds						
	Target Compounds						
17)	Endrin	19.567	16.103	8579350	14372967	8.184	7.987
22)	4,4'-DDT	22.963	19.167	16582376	26511806	16.416	16.349
23)	Endrin Ke...	25.213	23.877	4211553	483245	3.650m	0.237 #
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

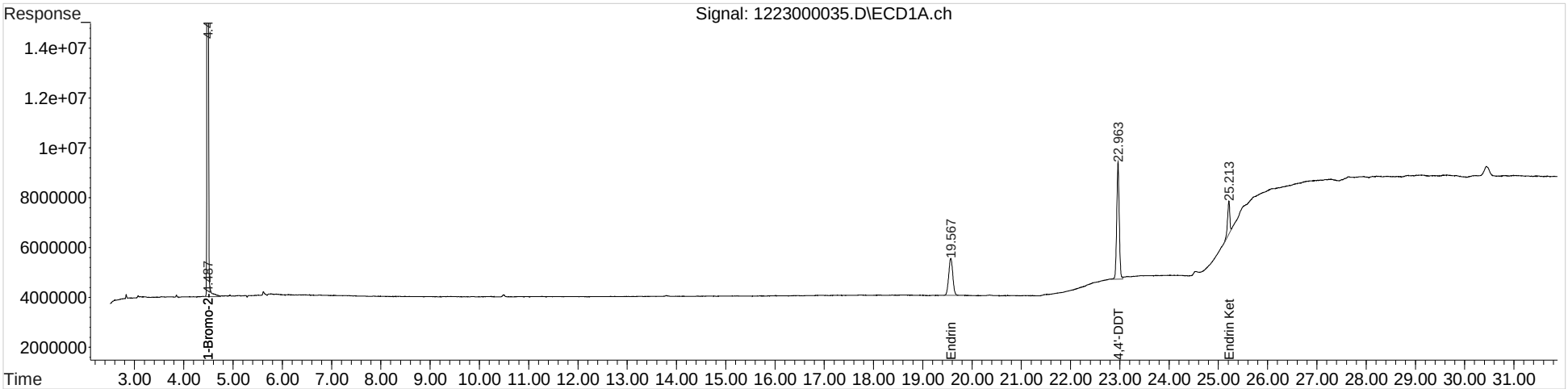
1st SM 12/29/18
2nd TP 01/02/19

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\122318\1223000035.D Vial: 86
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 12:45:14 Operator: SMURRAY
Sample : PEM GCPS8-49H Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 15:20:02 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



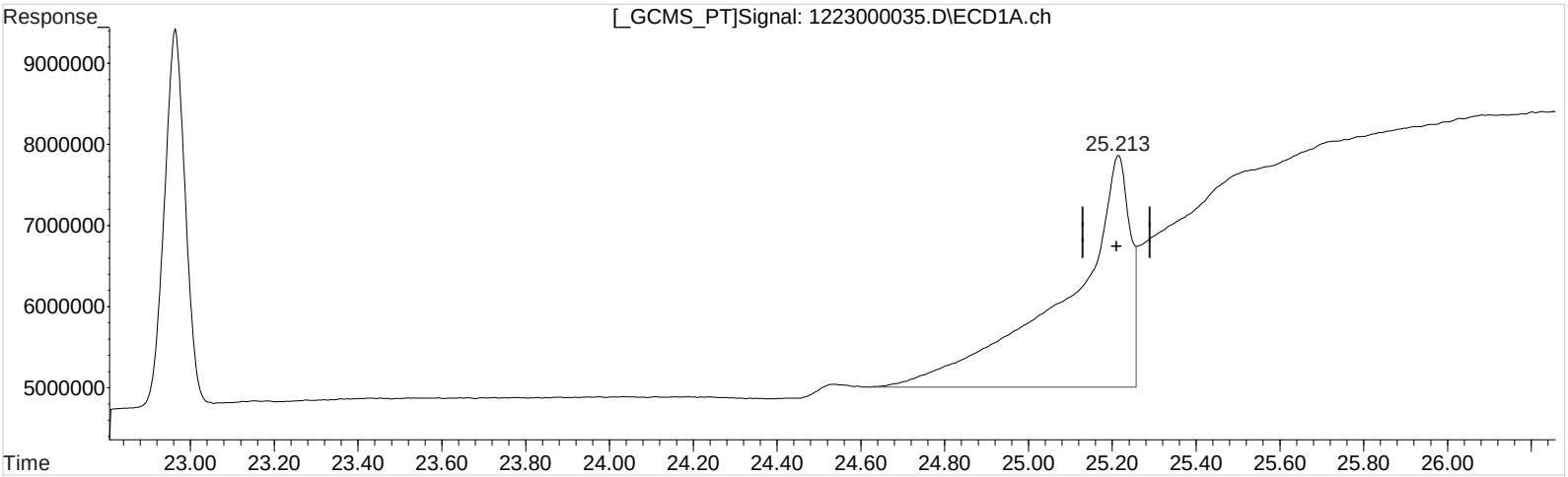
Quantitation Report (Qedit)

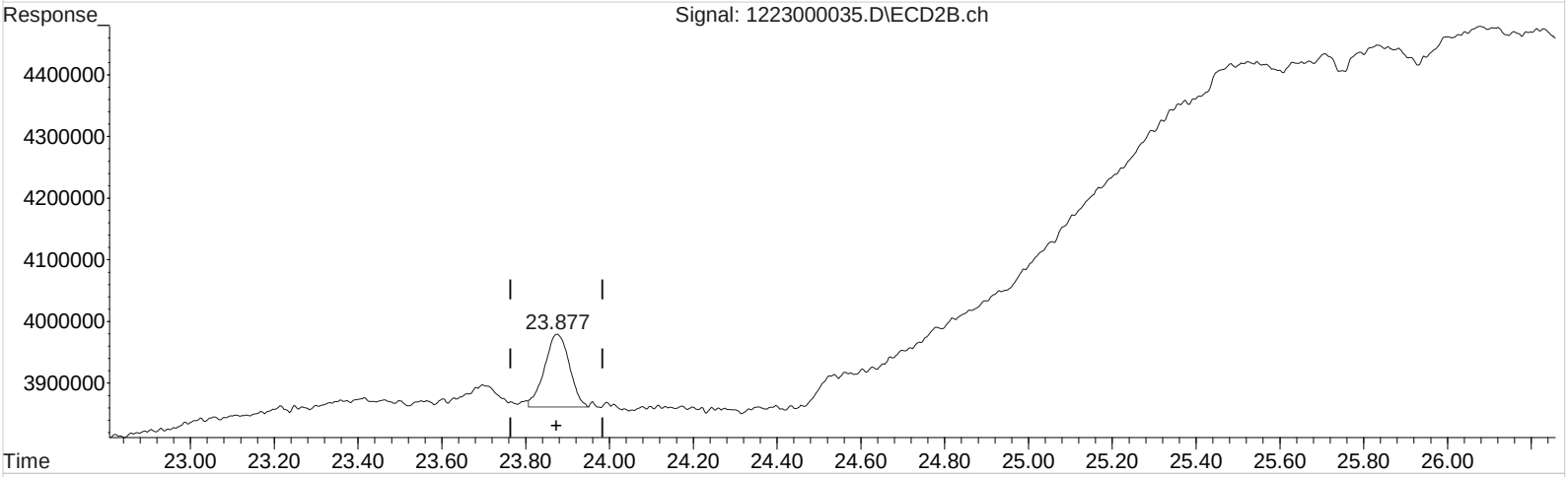
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000035.D Vial: 86
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 12:45:14 Operator: SMURRAY
Sample : PEM GCPS8-49H Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:04 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(23) Endrin Ketone

25.213min 26.275 ug/L

response 30319089

Manual Integration:

Before

12/25/18

(23) Endrin Ketone #2

23.877min 0.237 ug/L

response 483245

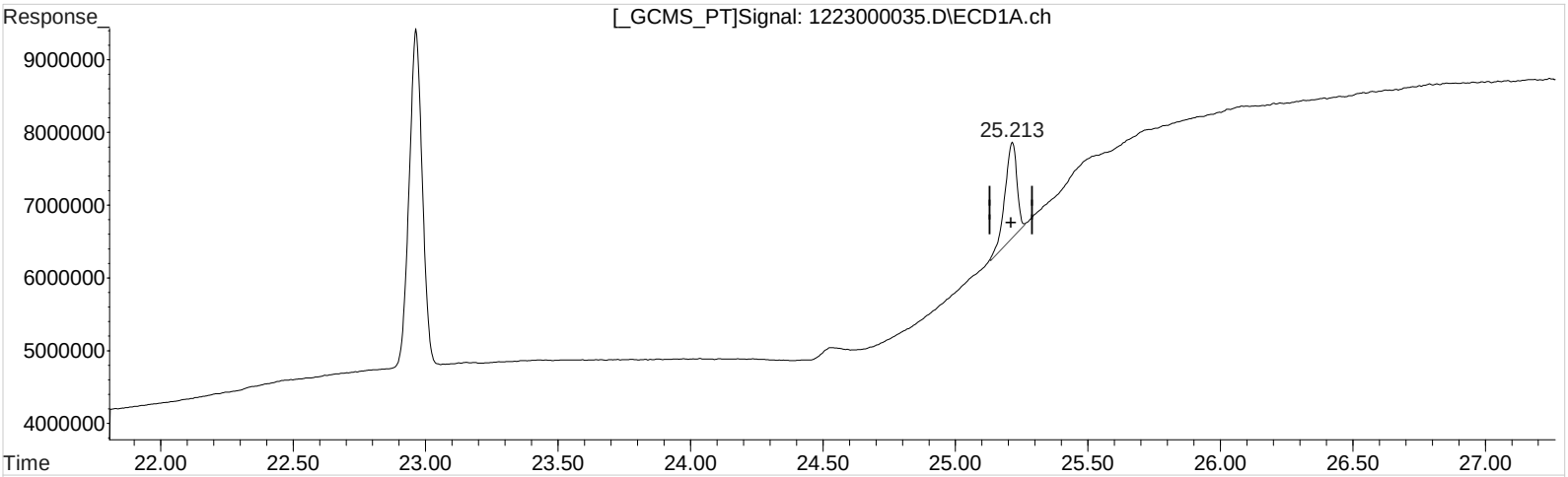
(+) = Expected Retention Time

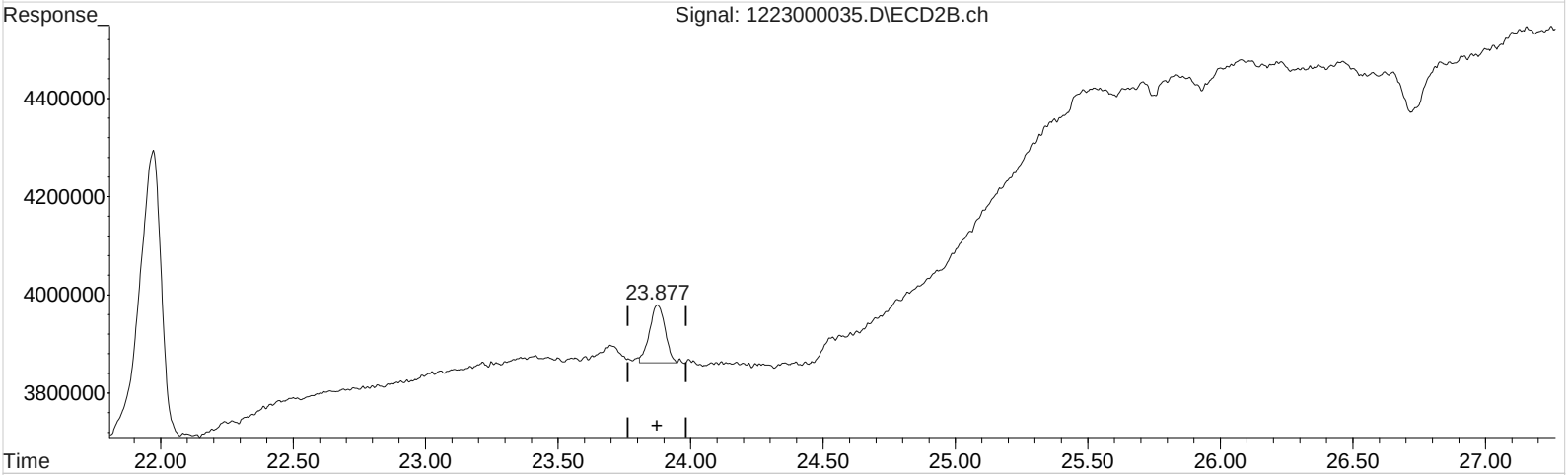
1st STM 12/29/18
2nd TP 01/02/19

Data File : J:\GC34\DATA\122318\1223000035.D Vial: 86
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 24-Dec-2018, 12:45:14 Operator: SMURRAY
Sample : PEM GCPS8-49H Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 25 14:24:04 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Mon Dec 24 10:32:42 2018
QLast Update : Mon Dec 24 10:32:42 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(23) Endrin Ketone

25.213min 3.650 ug/L m

response 4211553

Manual Integration:

After

Baseline/Shoulder

12/25/18

(23) Endrin Ketone #2

23.877min 0.237 ug/L

response 483245

(+) = Expected Retention Time

Cal: 15914

Sequence Table (Front Injector):

Line	Location	SampleName	Method Name	Data File
1	Vial 100	PRIMER	2UL10T1	
2	Vial 1	PEM GCPS8-49H	2UL10T1	
3	Vial 2	IB	2UL10T1	
4	Vial 3	24 .2PPB GCPS8-49K @10X	2UL10T1	
5	Vial 4	24 .5PPB GCPS8-49K @4X	2UL10T1	
6	Vial 5	24 1.0PPB GCPS8-49K @2X	2UL10T1	
7	Vial 6	24 2PPB GCPS8-49K	2UL10T1	
8	Vial 7	24 5PPB GCPS8-47D @4X	2UL10T1	
9	Vial 8	24 10PPB GCPS8-47D @2X	2UL10T1	
10	Vial 9	24 ICV 2PPB GCPS8-50A NR	2UL10T1-Re-run 11	
11	Vial 10	M/P .2/1PPB GCPS8-45G @5X	2UL10T1	
12	Vial 11	M/P .5/2.5PPB GCPS8-45D	2UL10T1	
13	Vial 12	M/P 1/5PPB GCPS8-45G	2UL10T1	
14	Vial 13	M/P 2/10PPB GCPS8-47M	2UL10T1	
15	Vial 14	M/P 5/25PPB GCPS8-45B	2UL10T1	
16	Vial 15	M/P 10/50PPB GCPS8-45C	2UL10T1	
17	Vial 16	MISC ICV 2PPB GCPS8-45I	2UL10T1	
18	Vial 17	PERTH ICV 25PPB GCPS8-45F	2UL10T1	
19	Vial 18	TOX 10PPB GCPS8-48F	2UL10T1	
20	Vial 19	TOX 20PPB GCPS8-48H	2UL10T1	
21	Vial 20	TOX 50PPB GCPS8-48G	2UL10T1	
22	Vial 21	TOX 100PPB GCPS8-47B	2UL10T1	
23	Vial 22	TOX 250PPB GCPS8-48J @2X	2UL10T1	
24	Vial 23	TOX 500PPB GCPS8-48J	2UL10T1	
25	Vial 24	TOX ICV 200 PPB GCPS8-48E	2UL10T1	
26	Vial 25	CHLOR 2PPB GCPS8-48D @10X	2UL10T1	
27	Vial 26	CHLOR 5PPB GCPS8-48D @4X	2UL10T1	
28	Vial 27	CHLOR 10PPB GCPS8-48D @2X	2UL10T1	
29	Vial 28	CHLOR 20PPB GCPS8-48D	2UL10T1	
30	Vial 29	CHLOR 50PPB CPS8-46J @4X	2UL10T1	
31	Vial 30	CHLOR 100PPB GCPS8-46J @2X	2UL10T1	
32	Vial 31	CHLOR 200PPB GCPS8-46J	2UL10T1	
33	Vial 32	CHLOR ICV 50PPB GCPS8-50B	2UL10T1	

Sequence Table (Front Injector):

Line	Location	SampleName	Method Name	Data File
1	Vial 90	PRIMER	2UL10T1	
2	Vial 89	PEM GCPS8-49H	2UL10T1	
3	Vial 88	IB	2UL10T1	
4	Vial 87	24 ICV 2PPB GCPS8-50C	2UL10T1 -NR 2,4 DDE ↑↑	
5	Vial 87	24 ICV 2PPB GCPS8-50C	2UL10T1	

Initial Calibration - Summary Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB XLB

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
Tetrachloro-m-xylene	SURR	AverageRF		0.975	20	6.1			NA	
alpha-BHC	MS	AverageRF		1.108	20	4.1			OK	
Hexachlorobenzene	MS	AverageRF		1.629	20	4.7			OK	
beta-BHC	MS	AverageRF		0.623	20	16.3			OK	
gamma-BHC (Lindane)	MS	AverageRF		1.043	20	1.8			OK	
delta-BHC	MS	AverageRF		1.220	20	3.4			OK	
Heptachlor	MS	AverageRF		1.013	20	6.5			OK	
Aldrin	MS	AverageRF		1.114	20	8.1			OK	
Isodrin	MS	AverageRF		0.928	20	3.7			OK	
Heptachlor Epoxide	MS	AverageRF		1.168	20	4.0			OK	
gamma-Chlordane	MS	AverageRF		1.200	20	8.0			OK	
Endosulfan I	MS	AverageRF		1.032	20	1.6			OK	
alpha-Chlordane	MS	AverageRF		1.156	20	6.4			OK	
Dieldrin	MS	AverageRF		1.112	20	3.5			OK	
4,4'-DDE	MS	AverageRF		1.185	20	5.4			OK	
Endrin	MS	AverageRF		1.058	20	6.9			OK	
Endosulfan II	MS	AverageRF		1.059	20	7.0			OK	
4,4'-DDD	MS	AverageRF		0.844	20	6.3			OK	
Endrin Aldehyde	MS	AverageRF		0.910	20	10.7			OK	
Endosulfan Sulfate	MS	AverageRF		1.084	20	5.0			OK	
4,4'-DDT	MS	AverageRF		1.020	20	3.2			OK	
Endrin Ketone	MS	AverageRF		1.165	20	6.9			OK	
Methoxychlor	MS	AverageRF		0.619	20	3.8			OK	
2,4'-DDE	MS	AverageRF		0.936	20	13.6			OK	
2,4'-DDD	MS	AverageRF		0.827	20	7.5			OK	
2,4'-DDT	MS	AverageRF		0.973	20	9.1			OK	
Decachlorobiphenyl	SURR	AverageRF		1.267	20	5.0			NA	
Toxaphene {1}	MULTI	AverageRF		0.004	20	14.2			OK	
Toxaphene {2}	MULTI	Quadratic		0.011			0.990	0.9990	OK	4.83
Toxaphene {3}	MULTI	AverageRF		0.016	20	19.3			OK	
Toxaphene {4}	MULTI	AverageRF		0.019	20	7.6			OK	
Toxaphene {5}	MULTI	AverageRF		0.011	20	17.7			OK	
Toxaphene {6}	MULTI	AverageRF		0.004	20	14.3			OK	
Chlordane {1}	MULTI	AverageRF		0.043	20	5.9			OK	
Chlordane {2}	MULTI	AverageRF		0.058	20	6.6			OK	
Chlordane {3}	MULTI	AverageRF		0.044	20	7.5			OK	
Chlordane {4}	MULTI	AverageRF		0.126	20	10.4			OK	
Chlordane {5}	MULTI	AverageRF		0.118	20	10.0			OK	
Chlordane {6}	MULTI	AverageRF		0.080	20	6.9			OK	
Chlorpyrifos	MS	AverageRF		0.749	20	3.9			OK	
Oxychlordane	MS	AverageRF		1.235	20	6.0			OK	
cis-Nonachlor	MS	AverageRF		1.452	20	6.9			OK	
trans-Nonachlor	MS	AverageRF		1.352	20	4.2			OK	
Mirex	MS	AverageRF		0.823	20	5.2			OK	
Hexachloroethane	MS	AverageRF		2.214	20	8.1			OK	
Hexachlorobutadiene	MS	AverageRF		1.764	20	3.3			OK	
Perthane	MS	AverageRF		0.090	20	12.5			OK	

Initial Calibration - Summary Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
Tetrachloro-m-xylene	SURR	AverageRF		1.263	20	12.2			NA	
alpha-BHC	MS	AverageRF		1.555	20	7.6			OK	
Hexachlorobenzene	MS	AverageRF		1.864	20	15.0			OK	
beta-BHC	MS	AverageRF		0.826	20	9.8			OK	
gamma-BHC (Lindane)	MS	AverageRF		1.513	20	8.4			OK	
delta-BHC	MS	AverageRF		1.564	20	7.1			OK	
Heptachlor	MS	AverageRF		1.617	20	8.8			OK	
Aldrin	MS	AverageRF		1.492	20	7.7			OK	
Isodrin	MS	AverageRF		1.295	20	7.1			OK	
Heptachlor Epoxide	MS	AverageRF		1.550	20	8.3			OK	
gamma-Chlordane	MS	AverageRF		1.624	20	9.7			OK	
Endosulfan I	MS	AverageRF		1.476	20	10.0			OK	
alpha-Chlordane	MS	AverageRF		1.555	20	7.9			OK	
Dieldrin	MS	AverageRF		1.550	20	7.9			OK	
4,4'-DDE	MS	AverageRF		1.506	20	7.3			OK	
Endrin	MS	AverageRF		1.545	20	9.3			OK	
Endosulfan II	MS	AverageRF		1.507	20	7.6			OK	
4,4'-DDD	MS	AverageRF		1.233	20	5.7			OK	
Endrin Aldehyde	MS	AverageRF		1.218	20	7.1			OK	
Endosulfan Sulfate	MS	AverageRF		1.601	20	8.0			OK	
4,4'-DDT	MS	AverageRF		1.392	20	5.8			OK	
Endrin Ketone	MS	AverageRF		1.752	20	10.6			OK	
Methoxychlor	MS	AverageRF		0.874	20	8.6			OK	
2,4'-DDE	MS	AverageRF		1.287	20	9.1			OK	
2,4'-DDD	MS	AverageRF		1.214	20	9.1			OK	
2,4'-DDT	MS	AverageRF		1.442	20	11.0			OK	
Decachlorobiphenyl	SURR	AverageRF		1.628	20	9.8			NA	
Toxaphene {1}	MULTI	AverageRF		0.007	20	13.7			OK	
Toxaphene {2}	MULTI	Quadratic		0.011			0.990	0.9991	OK	6.68
Toxaphene {3}	MULTI	AverageRF		0.033	20	12.3			OK	
Toxaphene {4}	MULTI	AverageRF		0.023	20	15.7			OK	
Toxaphene {5}	MULTI	AverageRF		0.019	20	10.6			OK	
Toxaphene {6}	MULTI	AverageRF		0.030	20	12.7			OK	
Chlordane {1}	MULTI	AverageRF		0.064	20	12.8			OK	
Chlordane {2}	MULTI	AverageRF		0.086	20	11.9			OK	
Chlordane {3}	MULTI	AverageRF		0.046	20	17.5			OK	
Chlordane {4}	MULTI	AverageRF		0.178	20	16.4			OK	
Chlordane {5}	MULTI	AverageRF		0.113	20	14.1			OK	
Chlordane {6}	MULTI	AverageRF		0.161	20	15.2			OK	
Chlorpyrifos	MS	AverageRF		1.185	20	13.4			OK	
Oxychlordane	MS	AverageRF		1.727	20	13.1			OK	
cis-Nonachlor	MS	AverageRF		2.097	20	10.4			OK	
trans-Nonachlor	MS	AverageRF		1.907	20	11.5			OK	
Mirex	MS	AverageRF		1.683	20	13.6			OK	
Hexachloroethane	MS	AverageRF		2.351	20	10.9			OK	
Hexachlorobutadiene	MS	AverageRF		1.851	20	13.7			OK	
Perthane	MS	AverageRF		0.065	20	10.6			OK	

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	285265	J:\GC34\DATA\112618\1126000008.D	11/26/2018 16:05	11/27/2018 09:18	12/13/2018 13:39
2	285267	J:\GC34\DATA\112618\1126000009.D	11/26/2018 16:41	11/27/2018 09:21	12/13/2018 13:39
3	285271	J:\GC34\DATA\112618\1126000011.D	11/26/2018 17:52	11/27/2018 09:32	12/13/2018 13:39
4	285273	J:\GC34\DATA\112618\1126000012.D	11/26/2018 18:28	11/27/2018 09:35	12/13/2018 13:40
5	285275	J:\GC34\DATA\112618\1126000013.D	11/26/2018 19:04	11/27/2018 09:38	12/13/2018 13:40
6	285277	J:\GC34\DATA\112718CAL\1127000006.D	11/27/2018 13:21	11/27/2018 14:08	12/13/2018 13:40
7	285633	J:\GC34\DATA\121218CAL\1212000004.D	12/12/2018 15:18	12/13/2018 10:15	12/13/2018 13:40
8	285635	J:\GC34\DATA\121218CAL\1212000005.D	12/12/2018 15:54	12/13/2018 10:16	12/13/2018 13:40
9	285637	J:\GC34\DATA\121218CAL\1212000006.D	12/12/2018 16:31	12/13/2018 10:16	12/13/2018 13:40
10	285639	J:\GC34\DATA\121218CAL\1212000007.D	12/12/2018 17:06	12/13/2018 10:17	12/13/2018 13:40
11	285641	J:\GC34\DATA\121218CAL\1212000008.D	12/12/2018 17:42	12/13/2018 10:18	12/13/2018 13:40
12	285643	J:\GC34\DATA\121218CAL\1212000009.D	12/12/2018 18:19	12/13/2018 10:18	12/13/2018 13:40
13	285645	J:\GC34\DATA\121218CAL\1212000011.D	12/12/2018 19:31	12/13/2018 10:27	12/13/2018 13:40
14	285647	J:\GC34\DATA\121218CAL\1212000012.D	12/12/2018 20:07	12/13/2018 10:29	12/13/2018 13:41
15	285649	J:\GC34\DATA\121218CAL\1212000013.D	12/12/2018 20:43	12/13/2018 10:30	12/13/2018 13:41
16	285651	J:\GC34\DATA\121218CAL\1212000014.D	12/12/2018 21:19	12/13/2018 10:31	12/13/2018 13:41
17	285653	J:\GC34\DATA\121218CAL\1212000015.D	12/12/2018 21:55	12/13/2018 10:46	12/13/2018 13:41
18	285655	J:\GC34\DATA\121218CAL\1212000016.D	12/12/2018 22:31	12/13/2018 10:47	12/13/2018 13:41
19	285661	J:\GC34\DATA\121218CAL\1212000019.D	12/13/2018 00:19	12/13/2018 11:03	12/13/2018 15:51
20	285663	J:\GC34\DATA\121218CAL\1212000020.D	12/13/2018 00:55	12/13/2018 15:46	12/13/2018 15:51
21	285665	J:\GC34\DATA\121218CAL\1212000021.D	12/13/2018 01:31	12/13/2018 11:49	12/13/2018 13:41
22	285667	J:\GC34\DATA\121218CAL\1212000022.D	12/13/2018 02:07	12/13/2018 11:53	12/13/2018 13:41
23	285669	J:\GC34\DATA\121218CAL\1212000023.D	12/13/2018 02:43	12/13/2018 11:57	12/13/2018 13:42
24	285671	J:\GC34\DATA\121218CAL\1212000024.D	12/13/2018 03:19	12/13/2018 12:01	12/13/2018 13:42
25	285685	J:\GC34\DATA\121218CAL\1212000026.D	12/13/2018 04:30	12/13/2018 13:28	12/13/2018 13:44
26	285673	J:\GC34\DATA\121218CAL\1212000027.D	12/13/2018 05:06	12/13/2018 13:29	12/13/2018 13:43
27	285675	J:\GC34\DATA\121218CAL\1212000028.D	12/13/2018 05:42	12/13/2018 13:30	12/13/2018 13:43
28	285677	J:\GC34\DATA\121218CAL\1212000029.D	12/13/2018 06:18	12/13/2018 13:31	12/13/2018 13:43
29	285679	J:\GC34\DATA\121218CAL\1212000030.D	12/13/2018 06:53	12/13/2018 13:31	12/13/2018 13:44
30	285681	J:\GC34\DATA\121218CAL\1212000031.D	12/13/2018 07:29	12/13/2018 13:32	12/13/2018 13:44
31	285683	J:\GC34\DATA\121218CAL\1212000032.D	12/13/2018 08:05	12/13/2018 13:33	12/13/2018 13:44

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Tetrachloro-m-xylene	1	1.064	2	0.995	3	0.938	4	0.928	5	0.911	6	1.013	0.975	6.1
alpha-BHC	1	1.133	2	1.160	3	1.074	4	1.097	5	1.142	6	1.042	1.108	4.1

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Hexachlorobenzene	1	1.723	2	1.638	3	1.664	4	1.576	5	1.506	6	1.667	1.629	4.7
beta-BHC	1	0.826	2	0.587	3	0.562	4	0.581	5	0.567	6	0.613	0.623	16.3
gamma-BHC (Lindane)	1	1.048	2	1.033	3	1.017	4	1.045	5	1.073	6	1.039	1.043	1.8
delta-BHC	1	1.264	2	1.248	3	1.158	4	1.199	5	1.198	6	1.253	1.220	3.4
Heptachlor	1	0.923	2	0.938	3	1.044	4	1.056	5	1.080	6	1.037	1.013	6.5
Aldrin	1	1.261	2	1.191	3	1.058	4	1.044	5	1.055	6	1.076	1.114	8.1
Isodrin	1	0.962	2	0.872	3	0.926	4	0.925	5	0.919	6	0.966	0.928	3.7
Heptachlor Epoxide	1	1.194	2	1.212	3	1.202	4	1.121	5	1.098	6	1.181	1.168	4.0

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
gamma-Chlordane	1	1.226	2	1.373	3	1.196	4	1.126	5	1.105	6	1.172	1.200	8.0
Endosulfan I	1	1.032	2	1.028	3	1.051	4	1.020	5	1.012	6	1.051	1.032	1.6
alpha-Chlordane	1	1.079	2	1.292	3	1.144	4	1.144	5	1.108	6	1.171	1.156	6.4
Dieldrin	1	1.097	2	1.118	3	1.137	4	1.084	5	1.065	6	1.174	1.112	3.5
4,4'-DDE	1	1.285	2	1.086	3	1.173	4	1.195	5	1.167	6	1.203	1.185	5.4
Endrin	1	0.944	2	1.002	3	1.086	4	1.092	5	1.079	6	1.147	1.058	6.9
Endosulfan II	1	1.193	2	0.977	3	1.034	4	1.038	5	1.024	6	1.089	1.059	7.0
4,4'-DDD	1	0.849	2	0.739	3	0.890	4	0.860	5	0.865	6	0.861	0.844	6.3

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Endrin Aldehyde	1	1.096	2	0.911	3	0.838	4	0.906	5	0.828	6	0.881	0.910	10.7
Endosulfan Sulfate	1	0.990	2	1.070	3	1.128	4	1.137	5	1.070	6	1.109	1.084	5.0
4,4'-DDT	1	0.968	2	0.993	3	1.036	4	1.059	5	1.031	6	1.029	1.020	3.2
Endrin Ketone	1	1.063	2	1.176	3	1.152	4	1.159	5	1.131	6	1.307	1.165	6.9
Methoxychlor	1	0.656	2	0.592	3	0.626	4	0.626	5	0.613	6	0.598	0.619	3.8
2,4'-DDE	7	0.711	8	1.086	9	1.009	10	0.916	11	0.918	12	0.975	0.936	13.6
2,4'-DDD	7	0.901	8	0.889	9	0.824	10	0.753	11	0.760	12	0.833	0.827	7.5
2,4'-DDT	7	0.812	8	1.039	9	1.048	10	0.981	11	0.940	12	1.020	0.973	9.1

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Endrin Aldehyde	1	1.096	2	0.911	3	0.838	4	0.906	5	0.828	6	0.881	0.910	10.7
Endosulfan Sulfate	1	0.990	2	1.070	3	1.128	4	1.137	5	1.070	6	1.109	1.084	5.0
4,4'-DDT	1	0.968	2	0.993	3	1.036	4	1.059	5	1.031	6	1.029	1.020	3.2
Endrin Ketone	1	1.063	2	1.176	3	1.152	4	1.159	5	1.131	6	1.307	1.165	6.9
Methoxychlor	1	0.656	2	0.592	3	0.626	4	0.626	5	0.613	6	0.598	0.619	3.8
2,4'-DDE	7	0.711	8	1.086	9	1.009	10	0.916	11	0.918	12	0.975	0.936	13.6
2,4'-DDD	7	0.901	8	0.889	9	0.824	10	0.753	11	0.760	12	0.833	0.827	7.5
2,4'-DDT	7	0.812	8	1.039	9	1.048	10	0.981	11	0.940	12	1.020	0.973	9.1

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Decachlorobiphenyl	1	1.170	2	1.336	3	1.331	4	1.284	5	1.231	6	1.251	1.267	5.0
Toxaphene {1}													0.004	14.2
	19	0.004	20	0.005	21	0.004	22	0.005	23	0.005	24	0.004		
Toxaphene {2}													0.011	38.7#
	19	0.002	20	0.013	21	0.012	22	0.014	23	0.012	24	0.012		
Toxaphene {3}													0.016	19.3
	19	0.010	20	0.015	21	0.015	22	0.019	23	0.018	24	0.016		
Toxaphene {4}													0.019	7.6
	19	0.016	20	0.020	21	0.018	22	0.020	23	0.020	24	0.019		
Toxaphene {5}													0.011	17.7
	19	0.009	20	0.008	21	0.011	22	0.012	23	0.012	24	0.012		
Toxaphene {6}													0.004	14.3
	19	0.004	20	0.003	21	0.004	22	0.005	23	0.005	24	0.004		
Chlordane {1}													0.043	5.9
	25	0.042	26	0.042	27	0.043	28	0.038	29	0.046	30	0.044		
	31	0.044												

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Chlordane {2}							0.058	6.6
	25 0.058	26 0.058	27 0.058	28 0.049	29 0.060	30 0.059		
	31 0.060							
Chlordane {3}							0.044	7.5
	25 0.049	26 0.044	27 0.046	28 0.039	29 0.046	30 0.043		
	31 0.042							
Chlordane {4}							0.126	10.4
	25 0.120	26 0.140	27 0.141	28 0.104	29 0.132	30 0.119		
	31 0.125							
Chlordane {5}							0.118	10.0
	25 0.133	26 0.134	27 0.123	28 0.109	29 0.112	30 0.107		
	31 0.108							
Chlordane {6}							0.080	6.9
	25 0.086	26 0.087	27 0.079	28 0.071	29 0.081	30 0.077		
	31 0.078							
Chlorpyrifos							0.749	3.9
	13 0.776	14 0.733	15 0.734	16 0.793	17 0.717	18 0.740		
Oxychlordane							1.235	6.0
	13 1.368	14 1.252	15 1.165	16 1.246	17 1.177	18 1.199		
cis-Nonachlor							1.452	6.9
	13 1.617	14 1.319	15 1.399	16 1.492	17 1.429	18 1.457		

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
trans-Nonachlor													1.352	4.2
	13	1.356	14	1.443	15	1.294	16	1.392	17	1.298	18	1.332		
Mirex													0.823	5.2
	13	0.768	14	0.890	15	0.800	16	0.852	17	0.814	18	0.813		
Hexachloroethane													2.214	8.1
	13	2.424	14	2.267	15	1.972	16	2.359	17	2.030	18	2.232		
Hexachlorobutadiene													1.764	3.3
	13	1.705	14	1.748	15	1.756	16	1.860	17	1.716	18	1.801		
Perthane													0.090	12.5
	13	0.109	14	0.096	15	0.087	16	0.084	17	0.081	18	0.080		

 # RSD Not Applicable. Compound being quantitated from curve. Included in Average RF summary for Average %RSD calculation.

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	Quadratic

FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
285265	J:\GC34\DATA\112618\1126000008.D	11/26/2018 16:05	11/27/2018 09:18	12/13/2018 13:39
285267	J:\GC34\DATA\112618\1126000009.D	11/26/2018 16:41	11/27/2018 09:21	12/13/2018 13:39
285271	J:\GC34\DATA\112618\1126000011.D	11/26/2018 17:52	11/27/2018 09:32	12/13/2018 13:39
285273	J:\GC34\DATA\112618\1126000012.D	11/26/2018 18:28	11/27/2018 09:35	12/13/2018 13:40
285275	J:\GC34\DATA\112618\1126000013.D	11/26/2018 19:04	11/27/2018 09:38	12/13/2018 13:40
285277	J:\GC34\DATA\112718CAL\1127000006.D	11/27/2018 13:21	11/27/2018 14:08	12/13/2018 13:40
285633	J:\GC34\DATA\121218CAL\1212000004.D	12/12/2018 15:18	12/13/2018 10:15	12/13/2018 13:40
285635	J:\GC34\DATA\121218CAL\1212000005.D	12/12/2018 15:54	12/13/2018 10:16	12/13/2018 13:40
285637	J:\GC34\DATA\121218CAL\1212000006.D	12/12/2018 16:31	12/13/2018 10:16	12/13/2018 13:40
285639	J:\GC34\DATA\121218CAL\1212000007.D	12/12/2018 17:06	12/13/2018 10:17	12/13/2018 13:40
285641	J:\GC34\DATA\121218CAL\1212000008.D	12/12/2018 17:42	12/13/2018 10:18	12/13/2018 13:40
285643	J:\GC34\DATA\121218CAL\1212000009.D	12/12/2018 18:19	12/13/2018 10:18	12/13/2018 13:40
285645	J:\GC34\DATA\121218CAL\1212000011.D	12/12/2018 19:31	12/13/2018 10:27	12/13/2018 13:40
285647	J:\GC34\DATA\121218CAL\1212000012.D	12/12/2018 20:07	12/13/2018 10:29	12/13/2018 13:41
285649	J:\GC34\DATA\121218CAL\1212000013.D	12/12/2018 20:43	12/13/2018 10:30	12/13/2018 13:41
285651	J:\GC34\DATA\121218CAL\1212000014.D	12/12/2018 21:19	12/13/2018 10:31	12/13/2018 13:41
285653	J:\GC34\DATA\121218CAL\1212000015.D	12/12/2018 21:55	12/13/2018 10:46	12/13/2018 13:41
285655	J:\GC34\DATA\121218CAL\1212000016.D	12/12/2018 22:31	12/13/2018 10:47	12/13/2018 13:41
285661	J:\GC34\DATA\121218CAL\1212000019.D	12/13/2018 00:19	12/13/2018 11:03	12/13/2018 15:51
285663	J:\GC34\DATA\121218CAL\1212000020.D	12/13/2018 00:55	12/13/2018 15:46	12/13/2018 15:51
285665	J:\GC34\DATA\121218CAL\1212000021.D	12/13/2018 01:31	12/13/2018 11:49	12/13/2018 13:41
285667	J:\GC34\DATA\121218CAL\1212000022.D	12/13/2018 02:07	12/13/2018 11:53	12/13/2018 13:41
285669	J:\GC34\DATA\121218CAL\1212000023.D	12/13/2018 02:43	12/13/2018 11:57	12/13/2018 13:42
285671	J:\GC34\DATA\121218CAL\1212000024.D	12/13/2018 03:19	12/13/2018 12:01	12/13/2018 13:42
285685	J:\GC34\DATA\121218CAL\1212000026.D	12/13/2018 04:30	12/13/2018 13:28	12/13/2018 13:44
285673	J:\GC34\DATA\121218CAL\1212000027.D	12/13/2018 05:06	12/13/2018 13:29	12/13/2018 13:43
285675	J:\GC34\DATA\121218CAL\1212000028.D	12/13/2018 05:42	12/13/2018 13:30	12/13/2018 13:43
285677	J:\GC34\DATA\121218CAL\1212000029.D	12/13/2018 06:18	12/13/2018 13:31	12/13/2018 13:43
285679	J:\GC34\DATA\121218CAL\1212000030.D	12/13/2018 06:53	12/13/2018 13:31	12/13/2018 13:44
285681	J:\GC34\DATA\121218CAL\1212000031.D	12/13/2018 07:29	12/13/2018 13:32	12/13/2018 13:44
285683	J:\GC34\DATA\121218CAL\1212000032.D	12/13/2018 08:05	12/13/2018 13:33	12/13/2018 13:44

Parameter Name	CoefX2	CoefX	Y-intercept	COD	Mean RF
Toxaphene {2}		0.014	-0.001	0.9990	0.011

Initial Calibration - Detailed Report

Calibration ID: CAL15914
Method ID: MJ1647
Instrument ID: GC34
Column Name: DB XLB

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	285265	J:\GC34\DATA\112618\1126000008.D	11/26/2018 16:05	11/27/2018 09:18	12/13/2018 13:39
2	285267	J:\GC34\DATA\112618\1126000009.D	11/26/2018 16:41	11/27/2018 09:21	12/13/2018 13:39
3	285271	J:\GC34\DATA\112618\1126000011.D	11/26/2018 17:52	11/27/2018 09:32	12/13/2018 13:39
4	285273	J:\GC34\DATA\112618\1126000012.D	11/26/2018 18:28	11/27/2018 09:35	12/13/2018 13:40
5	285275	J:\GC34\DATA\112618\1126000013.D	11/26/2018 19:04	11/27/2018 09:38	12/13/2018 13:40
6	285277	J:\GC34\DATA\112718CAL\1127000006.D	11/27/2018 13:21	11/27/2018 14:08	12/13/2018 13:40
7	285633	J:\GC34\DATA\121218CAL\1212000004.D	12/12/2018 15:18	12/13/2018 10:15	12/13/2018 13:40
8	285635	J:\GC34\DATA\121218CAL\1212000005.D	12/12/2018 15:54	12/13/2018 10:16	12/13/2018 13:40
9	285637	J:\GC34\DATA\121218CAL\1212000006.D	12/12/2018 16:31	12/13/2018 10:16	12/13/2018 13:40
10	285639	J:\GC34\DATA\121218CAL\1212000007.D	12/12/2018 17:06	12/13/2018 10:17	12/13/2018 13:40
11	285641	J:\GC34\DATA\121218CAL\1212000008.D	12/12/2018 17:42	12/13/2018 10:18	12/13/2018 13:40
12	285643	J:\GC34\DATA\121218CAL\1212000009.D	12/12/2018 18:19	12/13/2018 10:18	12/13/2018 13:40
13	285645	J:\GC34\DATA\121218CAL\1212000011.D	12/12/2018 19:31	12/13/2018 10:27	12/13/2018 13:40
14	285647	J:\GC34\DATA\121218CAL\1212000012.D	12/12/2018 20:07	12/13/2018 10:29	12/13/2018 13:41
15	285649	J:\GC34\DATA\121218CAL\1212000013.D	12/12/2018 20:43	12/13/2018 10:30	12/13/2018 13:41
16	285651	J:\GC34\DATA\121218CAL\1212000014.D	12/12/2018 21:19	12/13/2018 10:31	12/13/2018 13:41
17	285653	J:\GC34\DATA\121218CAL\1212000015.D	12/12/2018 21:55	12/13/2018 10:46	12/13/2018 13:41
18	285655	J:\GC34\DATA\121218CAL\1212000016.D	12/12/2018 22:31	12/13/2018 10:47	12/13/2018 13:41
19	285661	J:\GC34\DATA\121218CAL\1212000019.D	12/13/2018 00:19	12/13/2018 11:03	12/13/2018 15:51
20	285663	J:\GC34\DATA\121218CAL\1212000020.D	12/13/2018 00:55	12/13/2018 15:46	12/13/2018 15:51
21	285665	J:\GC34\DATA\121218CAL\1212000021.D	12/13/2018 01:31	12/13/2018 11:49	12/13/2018 13:41
22	285667	J:\GC34\DATA\121218CAL\1212000022.D	12/13/2018 02:07	12/13/2018 11:53	12/13/2018 13:41
23	285669	J:\GC34\DATA\121218CAL\1212000023.D	12/13/2018 02:43	12/13/2018 11:57	12/13/2018 13:42
24	285671	J:\GC34\DATA\121218CAL\1212000024.D	12/13/2018 03:19	12/13/2018 12:01	12/13/2018 13:42
25	285685	J:\GC34\DATA\121218CAL\1212000026.D	12/13/2018 04:30	12/13/2018 13:28	12/13/2018 13:44
26	285673	J:\GC34\DATA\121218CAL\1212000027.D	12/13/2018 05:06	12/13/2018 13:29	12/13/2018 13:43
27	285675	J:\GC34\DATA\121218CAL\1212000028.D	12/13/2018 05:42	12/13/2018 13:30	12/13/2018 13:43
28	285677	J:\GC34\DATA\121218CAL\1212000029.D	12/13/2018 06:18	12/13/2018 13:31	12/13/2018 13:43
29	285679	J:\GC34\DATA\121218CAL\1212000030.D	12/13/2018 06:53	12/13/2018 13:31	12/13/2018 13:44
30	285681	J:\GC34\DATA\121218CAL\1212000031.D	12/13/2018 07:29	12/13/2018 13:32	12/13/2018 13:44
31	285683	J:\GC34\DATA\121218CAL\1212000032.D	12/13/2018 08:05	12/13/2018 13:33	12/13/2018 13:44

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Tetrachloro-m-xylene	1	0.2	0.2183	9.2	2	0.5	0.5103	2.1	3	2	1.924	-3.8
	4	5	4.760	-4.8	5	10	9.348	-6.5	6	1	1.039	3.9

Initial Calibration - Detailed Report

Calibration ID: CAL15914
Method ID: MJ1647
Instrument ID: GC34
Column Name: DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
alpha-BHC	1	0.2	0.2045	2.2	2	0.5	0.5234	4.7	3	2	1.939	-3.1
	4	5	4.952	-1.0	5	10	10.31	3.1	6	1	0.9405	-6.0
Hexachlorobenzene	1	0.2	0.2115	5.7	2	0.5	0.5029	0.6	3	2	2.043	2.2
	4	5	4.838	-3.2	5	10	9.244	-7.6	6	1	1.023	2.3
beta-BHC	1	0.2	0.2653	**32.6**	2	0.5	0.4712	-5.8	3	2	1.806	-9.7
	4	5	4.668	-6.6	5	10	9.099	-9.0	6	1	0.9848	-1.5
gamma-BHC (Lindane)	1	0.2	0.2010	0.5	2	0.5	0.4955	-0.9	3	2	1.951	-2.4
	4	5	5.011	0.2	5	10	10.29	2.9	6	1	0.9968	-0.3

Initial Calibration - Detailed Report

Calibration ID: CAL15914
Method ID: MJ1647
Instrument ID: GC34
Column Name: DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
delta-BHC	1	0.2	0.2071	3.6	2	0.5	0.5115	2.3	3	2	1.898	-5.1
	4	5	4.915	-1.7	5	10	9.823	-1.8	6	1	1.027	2.7
Heptachlor	1	0.2	0.1822	-8.9	2	0.5	0.4631	-7.4	3	2	2.060	3.0
	4	5	5.213	4.3	5	10	10.66	6.6	6	1	1.024	2.4
Aldrin	1	0.2	0.2263	13.1	2	0.5	0.5346	6.9	3	2	1.899	-5.0
	4	5	4.684	-6.3	5	10	9.468	-5.3	6	1	0.9661	-3.4
Isodrin	1	0.2	0.2072	3.6	2	0.5	0.4697	-6.1	3	2	1.995	-0.2
	4	5	4.981	-0.4	5	10	9.896	-1.0	6	1	1.041	4.1

Initial Calibration - Detailed Report

Calibration ID: CAL15914
Method ID: MJ1647
Instrument ID: GC34
Column Name: DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Heptachlor Epoxide	1	0.2	0.2045	2.3	2	0.5	0.5188	3.8	3	2	2.057	2.9
	4	5	4.800	-4.0	5	10	9.397	-6.0	6	1	1.011	1.1
gamma-Chlordane	1	0.2	0.2044	2.2	2	0.5	0.5722	14.4	3	2	1.994	-0.3
	4	5	4.695	-6.1	5	10	9.207	-7.9	6	1	0.9771	-2.3
Endosulfan I	1	0.2	0.1999	0.0	2	0.5	0.4979	-0.4	3	2	2.036	1.8
	4	5	4.940	-1.2	5	10	9.803	-2.0	6	1	1.018	1.8
alpha-Chlordane	1	0.2	0.1867	-6.6	2	0.5	0.5587	11.7	3	2	1.979	-1.1
	4	5	4.948	-1.0	5	10	9.578	-4.2	6	1	1.012	1.2

Initial Calibration - Detailed Report

Calibration ID: CAL15914
Method ID: MJ1647
Instrument ID: GC34
Column Name: DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Dieldrin	1	0.2	0.1973	-1.4	2	0.5	0.5027	0.5	3	2	2.043	2.2
	4	5	4.871	-2.6	5	10	9.571	-4.3	6	1	1.055	5.5
4,4'-DDE	1	0.2	0.2168	8.4	2	0.5	0.4582	-8.4	3	2	1.980	-1.0
	4	5	5.044	0.9	5	10	9.852	-1.5	6	1	1.015	1.5
Endrin	1	0.2	0.1783	-10.8	2	0.5	0.4733	-5.3	3	2	2.053	2.7
	4	5	5.159	3.2	5	10	10.19	1.9	6	1	1.084	8.4
Endosulfan II	1	0.2	0.2252	12.6	2	0.5	0.4611	-7.8	3	2	1.952	-2.4
	4	5	4.899	-2.0	5	10	9.673	-3.3	6	1	1.029	2.9

Initial Calibration - Detailed Report

Calibration ID: CAL15914
Method ID: MJ1647
Instrument ID: GC34
Column Name: DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
4,4'-DDD	1	0.2	0.2012	0.6	2	0.5	0.4378	-12.4	3	2	2.109	5.5
	4	5	5.093	1.9	5	10	10.25	2.5	6	1	1.020	2.0
Endrin Aldehyde	1	0.2	0.2409	20.5	2	0.5	0.5004	0.1	3	2	1.841	-7.9
	4	5	4.977	-0.5	5	10	9.100	-9.0	6	1	0.9685	-3.2
Endosulfan Sulfate	1	0.2	0.1827	-8.7	2	0.5	0.4936	-1.3	3	2	2.081	4.1
	4	5	5.244	4.9	5	10	9.872	-1.3	6	1	1.023	2.3
4,4'-DDT	1	0.2	0.1898	-5.1	2	0.5	0.4872	-2.6	3	2	2.033	1.6
	4	5	5.195	3.9	5	10	10.12	1.2	6	1	1.009	0.9

Initial Calibration - Detailed Report

Calibration ID: CAL15914
Method ID: MJ1647
Instrument ID: GC34
Column Name: DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Endrin Ketone	1	0.2	0.1825	-8.7	2	0.5	0.5048	1.0	3	2	1.979	-1.0
	4	5	4.974	-0.5	5	10	9.707	-2.9	6	1	1.123	12.3
Methoxychlor	1	0.2	0.2122	6.1	2	0.5	0.4785	-4.3	3	2	2.024	1.2
	4	5	5.064	1.3	5	10	9.909	-0.9	6	1	0.9665	-3.3
2,4'-DDE												
	7	0.2	0.1519	-24.1	8	0.5	0.5802	16.0	9	1	1.079	7.9
	10	2	1.957	-2.1	11	5	4.906	-1.9	12	10	10.42	4.2
2,4'-DDD												
	7	0.2	0.2181	9.0	8	0.5	0.5375	7.5	9	1	0.9965	-0.3
	10	2	1.822	-8.9	11	5	4.595	-8.1	12	10	10.08	0.8

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
2,4'-DDT												
	7	0.2	0.1668	-16.6	8	0.5	0.5339	6.8	9	1	1.077	7.7
	10	2	2.016	0.8	11	5	4.830	-3.4	12	10	10.48	4.8
Decachlorobiphenyl	1	0.2	0.1846	-7.7	2	0.5	0.5272	5.4	3	2	2.101	5.0
	4	5	5.066	1.3	5	10	9.715	-2.8	6	1	0.9875	-1.2
Toxaphene {1}												
	19	10	8.226	-17.7	20	20	24.44	22.2	21	50	45.34	-9.3
	22	100	107.6	7.6	23	250	259.0	3.6	24	500	468.2	-6.4
Toxaphene {2}												
	19	10	5.721	**-42.8**	20	20	23.05	15.2	21	50	47.11	-5.8
	22	100	107.5	7.5	23	250	245.7	-1.7	24	500	501.0	0.2

Initial Calibration - Detailed Report

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Toxaphene {3}												
	19	10	6.601	**-34.0**	20	20	19.27	-3.6	21	50	48.72	-2.6
	22	100	120.9	20.9	23	250	288.2	15.3	24	500	520.2	4.0
Toxaphene {4}												
	19	10	8.723	-12.8	20	20	20.65	3.3	21	50	47.24	-5.5
	22	100	106.6	6.6	23	250	265.9	6.4	24	500	510.3	2.1
Toxaphene {5}												
	19	10	8.307	-16.9	20	20	14.58	-27.1	21	50	52.03	4.1
	22	100	114.3	14.3	23	250	281.6	12.6	24	500	565.3	13.1
Toxaphene {6}												
	19	10	9.173	-8.3	20	20	15.44	-22.8	21	50	49.05	-1.9
	22	100	116.1	16.1	23	250	281.2	12.5	24	500	522.2	4.4

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {1}												
	25	2	1.969	-1.6	26	5	4.926	-1.5	27	10	10.06	0.6
	28	20	17.81	-10.9	29	50	54.23	8.5	30	100	102.5	2.5
	31	200	204.9	2.4								
Chlordane {2}												
	25	2	2.018	0.9	26	5	5.066	1.3	27	10	10.11	1.1
	28	20	17.10	-14.5	29	50	52.38	4.8	30	100	102.9	2.9
	31	200	207.1	3.6								
Chlordane {3}												
	25	2	2.234	11.7	26	5	4.983	-0.3	27	10	10.32	3.2
	28	20	17.67	-11.7	29	50	52.42	4.8	30	100	97.49	-2.5
	31	200	189.6	-5.2								
Chlordane {4}												
	25	2	1.898	-5.1	26	5	5.567	11.3	27	10	11.20	12.0
	28	20	16.54	-17.3	29	50	52.56	5.1	30	100	94.74	-5.3
	31	200	198.5	-0.8								

Initial Calibration - Detailed Report

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {5}												
	25	2	2.254	12.7	26	5	5.667	13.3	27	10	10.45	4.5
	28	20	18.51	-7.5	29	50	47.63	-4.7	30	100	90.26	-9.7
	31	200	182.9	-8.5								
Chlordane {6}												
	25	2	2.146	7.3	26	5	5.461	9.2	27	10	9.915	-0.9
	28	20	17.71	-11.4	29	50	50.78	1.6	30	100	97.07	-2.9
	31	200	194.2	-2.9								
Chlorpyrifos												
	13	0.2	0.2073	3.7	14	0.5	0.4893	-2.1	15	1	0.9803	-2.0
	16	2	2.118	5.9	17	5	4.789	-4.2	18	10	9.879	-1.2
Oxychlordane												
	13	0.2	0.2216	10.8	14	0.5	0.5072	1.4	15	1	0.9438	-5.6
	16	2	2.019	1.0	17	5	4.767	-4.7	18	10	9.712	-2.9

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
cis-Nonachlor												
	13	0.2	0.2227	11.3	14	0.5	0.4542	-9.2	15	1	0.9632	-3.7
	16	2	2.055	2.7	17	5	4.921	-1.6	18	10	10.03	0.3
trans-Nonachlor												
	13	0.2	0.2005	0.3	14	0.5	0.5334	6.7	15	1	0.9570	-4.3
	16	2	2.058	2.9	17	5	4.799	-4.0	18	10	9.847	-1.5
Mirex												
	13	0.2	0.1867	-6.7	14	0.5	0.5410	8.2	15	1	0.9722	-2.8
	16	2	2.071	3.5	17	5	4.946	-1.1	18	10	9.877	-1.2
Hexachloroethane												
	13	0.2	0.2190	9.5	14	0.5	0.5121	2.4	15	1	0.8906	-10.9
	16	2	2.131	6.5	17	5	4.584	-8.3	18	10	10.08	0.8

Initial Calibration - Detailed Report

Calibration ID: CAL15914
Method ID: MJ1647
Instrument ID: GC34
Column Name: DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Hexachlorobutadiene												
	13	0.2	0.1933	-3.4	14	0.5	0.4953	-0.9	15	1	0.9953	-0.5
	16	2	2.109	5.4	17	5	4.863	-2.7	18	10	10.21	2.1
Perthane												
	13	1	1.221	22.1	14	2.5	2.670	6.8	15	5	4.867	-2.7
	16	10	9.335	-6.7	17	25	22.73	-9.1	18	50	44.75	-10.5

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	285266	J:\GC34\DATA\112618\1126000008.D\1126000008c.d	11/26/2018 16:05	11/27/2018 09:18	12/13/2018 13:39
2	285268	J:\GC34\DATA\112618\1126000009.D\1126000009c.d	11/26/2018 16:41	11/27/2018 09:21	12/13/2018 13:39
3	285272	J:\GC34\DATA\112618\1126000011.D\1126000011c.d	11/26/2018 17:52	11/27/2018 09:32	12/13/2018 13:40
4	285274	J:\GC34\DATA\112618\1126000012.D\1126000012c.d	11/26/2018 18:28	11/27/2018 09:35	12/13/2018 13:40
5	285276	J:\GC34\DATA\112618\1126000013.D\1126000013c.d	11/26/2018 19:04	11/27/2018 09:38	12/13/2018 13:40
6	285278	J:\GC34\DATA\112718CAL\1127000006.D\1127000006c.d	11/27/2018 13:21	11/27/2018 14:08	12/13/2018 13:40
7	285634	J:\GC34\DATA\121218CAL\1212000004.D\1212000004c.d	12/12/2018 15:18	12/13/2018 10:15	12/13/2018 13:40
8	285636	J:\GC34\DATA\121218CAL\1212000005.D\1212000005c.d	12/12/2018 15:54	12/13/2018 10:16	12/13/2018 13:40
9	285638	J:\GC34\DATA\121218CAL\1212000006.D\1212000006c.d	12/12/2018 16:31	12/13/2018 10:16	12/13/2018 13:40
10	285640	J:\GC34\DATA\121218CAL\1212000007.D\1212000007c.d	12/12/2018 17:06	12/13/2018 10:17	12/13/2018 13:40
11	285642	J:\GC34\DATA\121218CAL\1212000008.D\1212000008c.d	12/12/2018 17:42	12/13/2018 10:18	12/13/2018 13:40
12	285644	J:\GC34\DATA\121218CAL\1212000009.D\1212000009c.d	12/12/2018 18:19	12/13/2018 10:18	12/13/2018 13:40
13	285646	J:\GC34\DATA\121218CAL\1212000011.D\1212000011c.d	12/12/2018 19:31	12/13/2018 10:27	12/13/2018 13:40
14	285648	J:\GC34\DATA\121218CAL\1212000012.D\1212000012c.d	12/12/2018 20:07	12/13/2018 10:29	12/13/2018 13:41
15	285650	J:\GC34\DATA\121218CAL\1212000013.D\1212000013c.d	12/12/2018 20:43	12/13/2018 10:30	12/13/2018 13:41
16	285652	J:\GC34\DATA\121218CAL\1212000014.D\1212000014c.d	12/12/2018 21:19	12/13/2018 10:31	12/13/2018 13:41
17	285654	J:\GC34\DATA\121218CAL\1212000015.D\1212000015c.d	12/12/2018 21:55	12/13/2018 10:46	12/13/2018 13:41
18	285656	J:\GC34\DATA\121218CAL\1212000016.D\1212000016c.d	12/12/2018 22:31	12/13/2018 10:47	12/13/2018 13:41
19	285662	J:\GC34\DATA\121218CAL\1212000019.D\1212000019c.d	12/13/2018 00:19	12/13/2018 11:03	12/13/2018 15:51
20	285664	J:\GC34\DATA\121218CAL\1212000020.D\1212000020c.d	12/13/2018 00:55	12/13/2018 15:46	12/13/2018 15:51
21	285666	J:\GC34\DATA\121218CAL\1212000021.D\1212000021c.d	12/13/2018 01:31	12/13/2018 11:49	12/13/2018 13:41
22	285668	J:\GC34\DATA\121218CAL\1212000022.D\1212000022c.d	12/13/2018 02:07	12/13/2018 11:53	12/13/2018 13:42
23	285670	J:\GC34\DATA\121218CAL\1212000023.D\1212000023c.d	12/13/2018 02:43	12/13/2018 11:57	12/13/2018 13:42
24	285672	J:\GC34\DATA\121218CAL\1212000024.D\1212000024c.d	12/13/2018 03:19	12/13/2018 12:01	12/13/2018 13:42
25	285686	J:\GC34\DATA\121218CAL\1212000026.D\1212000026c.d	12/13/2018 04:30	12/13/2018 13:28	12/13/2018 13:45
26	285674	J:\GC34\DATA\121218CAL\1212000027.D\1212000027c.d	12/13/2018 05:06	12/13/2018 13:29	12/13/2018 13:43
27	285676	J:\GC34\DATA\121218CAL\1212000028.D\1212000028c.d	12/13/2018 05:42	12/13/2018 13:30	12/13/2018 13:43
28	285678	J:\GC34\DATA\121218CAL\1212000029.D\1212000029c.d	12/13/2018 06:18	12/13/2018 13:31	12/13/2018 13:44
29	285680	J:\GC34\DATA\121218CAL\1212000030.D\1212000030c.d	12/13/2018 06:53	12/13/2018 13:31	12/13/2018 13:44
30	285682	J:\GC34\DATA\121218CAL\1212000031.D\1212000031c.d	12/13/2018 07:29	12/13/2018 13:32	12/13/2018 13:44
31	285684	J:\GC34\DATA\121218CAL\1212000032.D\1212000032c.d	12/13/2018 08:05	12/13/2018 13:33	12/13/2018 13:44

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Tetrachloro-m-xylene			1	1.452	2	1.353	3	1.241	4	1.138	5	1.039	1.263	12.2
	6	1.355												
alpha-BHC			1	1.663	2	1.619	3	1.560	4	1.443	5	1.381	1.555	7.6
	6	1.664												

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Hexachlorobenzene	1	2.170	2	2.044	3	1.804	4	1.640	5	1.453	6	2.074	1.864	15.0
beta-BHC	1	0.921	2	0.829	3	0.815	4	0.773	5	0.708	6	0.908	0.826	9.8
gamma-BHC (Lindane)	1	1.642	2	1.542	3	1.488	4	1.422	5	1.327	6	1.657	1.513	8.4
delta-BHC	1	1.622	2	1.615	3	1.562	4	1.490	5	1.390	6	1.706	1.564	7.1
Heptachlor	1	1.574	2	1.676	3	1.663	4	1.545	5	1.412	6	1.833	1.617	8.8
Aldrin	1	1.599	2	1.560	3	1.504	4	1.406	5	1.303	6	1.579	1.492	7.7
Isodrin	1	1.313	2	1.301	3	1.318	4	1.252	5	1.154	6	1.434	1.295	7.1
Heptachlor Epoxide	1	1.617	2	1.625	3	1.562	4	1.461	5	1.342	6	1.696	1.550	8.3

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
gamma-Chlordane			1	1.694	2	1.679	3	1.627	4	1.551	5	1.363	1.624	9.7
	6	1.830												
Endosulfan I			1	1.633	2	1.501	3	1.461	4	1.373	5	1.257	1.476	10.0
	6	1.634												
alpha-Chlordane			1	1.566	2	1.603	3	1.595	4	1.487	5	1.359	1.555	7.9
	6	1.721												
Dieldrin			1	1.675	2	1.564	3	1.552	4	1.473	5	1.360	1.550	7.9
	6	1.678												
4,4'-DDE			1	1.595	2	1.508	3	1.511	4	1.445	5	1.333	1.506	7.3
	6	1.643												
Endrin			1	1.659	2	1.502	3	1.543	4	1.458	5	1.352	1.545	9.3
	6	1.756												
Endosulfan II			1	1.554	2	1.552	3	1.500	4	1.453	5	1.320	1.507	7.6
	6	1.661												
4,4'-DDD			1	1.202	2	1.249	3	1.256	4	1.214	5	1.130	1.233	5.7
	6	1.344												

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Endrin Aldehyde			1	1.205	2	1.200	3	1.254	4	1.198	5	1.091	1.218	7.1
	6	1.358												
Endosulfan Sulfate			1	1.708	2	1.631	3	1.589	4	1.550	5	1.384	1.601	8.0
	6	1.746												
4,4'-DDT			1	1.331	2	1.443	3	1.447	4	1.378	5	1.271	1.392	5.8
	6	1.485												
Endrin Ketone			1	1.920	2	1.913	3	1.729	4	1.589	5	1.480	1.752	10.6
	6	1.883												
Methoxychlor			1	0.868	2	0.984	3	0.859	4	0.841	5	0.763	0.874	8.6
	6	0.927												
2,4'-DDE			7	1.260	8	1.452	9	1.416	10	1.226	11	1.169	1.287	9.1
	12	1.202												
2,4'-DDD			7	1.166	8	1.381	9	1.320	10	1.175	11	1.098	1.214	9.1
	12	1.141												
2,4'-DDT			7	1.259	8	1.666	9	1.603	10	1.412	11	1.335	1.442	11.0
	12	1.374												

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Decachlorobiphenyl			1	1.841	2	1.664	3	1.599	4	1.524	5	1.395	1.628	9.8
	6	1.744												
Toxaphene {1}													0.007	13.7
			19	0.008	20	0.006	21	0.007	22	0.007	23	0.007		
	24	0.006												
Toxaphene {2}													0.011	26.3#
			19	0.016	20	0.012	21	0.010	22	0.010	23	0.010		
	24	0.007												
Toxaphene {3}													0.033	12.3
			19	0.029	20	0.036	21	0.035	22	0.038	23	0.034		
	24	0.027												
Toxaphene {4}													0.023	15.7
			19	0.028	20	0.023	21	0.024	22	0.024	23	0.022		
	24	0.017												
Toxaphene {5}													0.019	10.6
			19	0.018	20	0.018	21	0.019	22	0.022	23	0.019		
	24	0.016												
Toxaphene {6}													0.030	12.7
			19	0.034	20	0.034	21	0.030	22	0.029	23	0.027		
	24	0.025												
Chlordane {1}	25	0.071	26	0.074	27	0.070	28	0.060	29	0.065	30	0.058	0.064	12.8
	31	0.051												

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Chlordane {2}	25 0.093	26 0.098	27 0.095	28 0.078	29 0.089	30 0.079	0.086	11.9
	31 0.070							
Chlordane {3}	25 0.061	26 0.049	27 0.048	28 0.039	29 0.044	30 0.041	0.046	17.5
	31 0.038							
Chlordane {4}	25 0.205	26 0.219	27 0.194	28 0.160	29 0.173	30 0.154	0.178	16.4
	31 0.140							
Chlordane {5}	25 0.128	26 0.131	27 0.122	28 0.106	29 0.114	30 0.101	0.113	14.1
	31 0.087							
Chlordane {6}	25 0.182	26 0.192	27 0.178	28 0.150	29 0.161	30 0.142	0.161	15.2
	31 0.124							
Chlorpyrifos							1.185	13.4
		13 1.373	14 1.302	15 1.208	16 1.222	17 1.062		
	18 0.941							
Oxychlordane							1.727	13.1
		13 2.017	14 1.893	15 1.767	16 1.742	17 1.547		
	18 1.394							
cis-Nonachlor							2.097	10.4
		13 2.333	14 2.271	15 2.150	16 2.142	17 1.938		
	18 1.749							

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
trans-Nonachlor							1.907	11.5
		13 2.151	14 2.073	15 1.960	16 1.960	17 1.740		
	18 1.558							
Mirex							1.683	13.6
		13 2.000	14 1.839	15 1.713	16 1.678	17 1.513		
	18 1.354							
Hexachloroethane							2.351	10.9
		13 2.717	14 2.511	15 2.412	16 2.334	17 2.048		
	18 2.086							
Hexachlorobutadiene							1.851	13.7
		13 2.182	14 2.041	15 1.915	16 1.850	17 1.578		
	18 1.542							
Perthane							0.065	10.6
		13 0.076	14 0.069	15 0.067	16 0.062	17 0.062		
	18 0.056							

 # RSD Not Applicable. Compound being quantitated from curve. Included in Average RF summary for Average %RSD calculation.

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	Quadratic

FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
285686	J:\GC34\DATA\121218CAL\1212000026.D\1212000026c.d	12/13/2018 04:30	12/13/2018 13:28	12/13/2018 13:45
285674	J:\GC34\DATA\121218CAL\1212000027.D\1212000027c.d	12/13/2018 05:06	12/13/2018 13:29	12/13/2018 13:43
285676	J:\GC34\DATA\121218CAL\1212000028.D\1212000028c.d	12/13/2018 05:42	12/13/2018 13:30	12/13/2018 13:43
285678	J:\GC34\DATA\121218CAL\1212000029.D\1212000029c.d	12/13/2018 06:18	12/13/2018 13:31	12/13/2018 13:44
285680	J:\GC34\DATA\121218CAL\1212000030.D\1212000030c.d	12/13/2018 06:53	12/13/2018 13:31	12/13/2018 13:44
285682	J:\GC34\DATA\121218CAL\1212000031.D\1212000031c.d	12/13/2018 07:29	12/13/2018 13:32	12/13/2018 13:44
285684	J:\GC34\DATA\121218CAL\1212000032.D\1212000032c.d	12/13/2018 08:05	12/13/2018 13:33	12/13/2018 13:44
285266	J:\GC34\DATA\112618\1126000008.D\1126000008c.d	11/26/2018 16:05	11/27/2018 09:18	12/13/2018 13:39
285268	J:\GC34\DATA\112618\1126000009.D\1126000009c.d	11/26/2018 16:41	11/27/2018 09:21	12/13/2018 13:39
285272	J:\GC34\DATA\112618\1126000011.D\1126000011c.d	11/26/2018 17:52	11/27/2018 09:32	12/13/2018 13:40
285274	J:\GC34\DATA\112618\1126000012.D\1126000012c.d	11/26/2018 18:28	11/27/2018 09:35	12/13/2018 13:40
285276	J:\GC34\DATA\112618\1126000013.D\1126000013c.d	11/26/2018 19:04	11/27/2018 09:38	12/13/2018 13:40
285278	J:\GC34\DATA\112718CAL\1127000006.D\1127000006c.d	11/27/2018 13:21	11/27/2018 14:08	12/13/2018 13:40
285634	J:\GC34\DATA\121218CAL\1212000004.D\1212000004c.d	12/12/2018 15:18	12/13/2018 10:15	12/13/2018 13:40
285636	J:\GC34\DATA\121218CAL\1212000005.D\1212000005c.d	12/12/2018 15:54	12/13/2018 10:16	12/13/2018 13:40
285638	J:\GC34\DATA\121218CAL\1212000006.D\1212000006c.d	12/12/2018 16:31	12/13/2018 10:16	12/13/2018 13:40
285640	J:\GC34\DATA\121218CAL\1212000007.D\1212000007c.d	12/12/2018 17:06	12/13/2018 10:17	12/13/2018 13:40
285642	J:\GC34\DATA\121218CAL\1212000008.D\1212000008c.d	12/12/2018 17:42	12/13/2018 10:18	12/13/2018 13:40
285644	J:\GC34\DATA\121218CAL\1212000009.D\1212000009c.d	12/12/2018 18:19	12/13/2018 10:18	12/13/2018 13:40
285646	J:\GC34\DATA\121218CAL\1212000011.D\1212000011c.d	12/12/2018 19:31	12/13/2018 10:27	12/13/2018 13:40
285648	J:\GC34\DATA\121218CAL\1212000012.D\1212000012c.d	12/12/2018 20:07	12/13/2018 10:29	12/13/2018 13:41
285650	J:\GC34\DATA\121218CAL\1212000013.D\1212000013c.d	12/12/2018 20:43	12/13/2018 10:30	12/13/2018 13:41
285652	J:\GC34\DATA\121218CAL\1212000014.D\1212000014c.d	12/12/2018 21:19	12/13/2018 10:31	12/13/2018 13:41
285654	J:\GC34\DATA\121218CAL\1212000015.D\1212000015c.d	12/12/2018 21:55	12/13/2018 10:46	12/13/2018 13:41
285656	J:\GC34\DATA\121218CAL\1212000016.D\1212000016c.d	12/12/2018 22:31	12/13/2018 10:47	12/13/2018 13:41
285662	J:\GC34\DATA\121218CAL\1212000019.D\1212000019c.d	12/13/2018 00:19	12/13/2018 11:03	12/13/2018 15:51
285664	J:\GC34\DATA\121218CAL\1212000020.D\1212000020c.d	12/13/2018 00:55	12/13/2018 15:46	12/13/2018 15:51
285666	J:\GC34\DATA\121218CAL\1212000021.D\1212000021c.d	12/13/2018 01:31	12/13/2018 11:49	12/13/2018 13:41

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	Quadratic

285668	J:\GC34\DATA\121218CAL\1212000022.D\1212000022c.d	12/13/2018	02:07	12/13/2018	11:53	12/13/2018 13:42
285670	J:\GC34\DATA\121218CAL\1212000023.D\1212000023c.d	12/13/2018	02:43	12/13/2018	11:57	12/13/2018 13:42
285672	J:\GC34\DATA\121218CAL\1212000024.D\1212000024c.d	12/13/2018	03:19	12/13/2018	12:01	12/13/2018 13:42

Parameter Name	CoefX2	CoefX	Y-intercept	COD	Mean RF
Toxaphene {2}	-0.001	0.011	0.000	0.9991	0.011

Initial Calibration - Detailed Report

Calibration ID: CAL15914
Method ID: MJ1647
Instrument ID: GC34
Column Name: DB-35MS

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	285266	J:\GC34\DATA\112618\1126000008.D\1126000008c.d	11/26/2018 16:05	11/27/2018 09:18	12/13/2018 13:39
2	285268	J:\GC34\DATA\112618\1126000009.D\1126000009c.d	11/26/2018 16:41	11/27/2018 09:21	12/13/2018 13:39
3	285272	J:\GC34\DATA\112618\1126000011.D\1126000011c.d	11/26/2018 17:52	11/27/2018 09:32	12/13/2018 13:40
4	285274	J:\GC34\DATA\112618\1126000012.D\1126000012c.d	11/26/2018 18:28	11/27/2018 09:35	12/13/2018 13:40
5	285276	J:\GC34\DATA\112618\1126000013.D\1126000013c.d	11/26/2018 19:04	11/27/2018 09:38	12/13/2018 13:40
6	285278	J:\GC34\DATA\112718CAL\1127000006.D\1127000006c.d	11/27/2018 13:21	11/27/2018 14:08	12/13/2018 13:40
7	285634	J:\GC34\DATA\121218CAL\1212000004.D\1212000004c.d	12/12/2018 15:18	12/13/2018 10:15	12/13/2018 13:40
8	285636	J:\GC34\DATA\121218CAL\1212000005.D\1212000005c.d	12/12/2018 15:54	12/13/2018 10:16	12/13/2018 13:40
9	285638	J:\GC34\DATA\121218CAL\1212000006.D\1212000006c.d	12/12/2018 16:31	12/13/2018 10:16	12/13/2018 13:40
10	285640	J:\GC34\DATA\121218CAL\1212000007.D\1212000007c.d	12/12/2018 17:06	12/13/2018 10:17	12/13/2018 13:40
11	285642	J:\GC34\DATA\121218CAL\1212000008.D\1212000008c.d	12/12/2018 17:42	12/13/2018 10:18	12/13/2018 13:40
12	285644	J:\GC34\DATA\121218CAL\1212000009.D\1212000009c.d	12/12/2018 18:19	12/13/2018 10:18	12/13/2018 13:40
13	285646	J:\GC34\DATA\121218CAL\1212000011.D\1212000011c.d	12/12/2018 19:31	12/13/2018 10:27	12/13/2018 13:40
14	285648	J:\GC34\DATA\121218CAL\1212000012.D\1212000012c.d	12/12/2018 20:07	12/13/2018 10:29	12/13/2018 13:41
15	285650	J:\GC34\DATA\121218CAL\1212000013.D\1212000013c.d	12/12/2018 20:43	12/13/2018 10:30	12/13/2018 13:41
16	285652	J:\GC34\DATA\121218CAL\1212000014.D\1212000014c.d	12/12/2018 21:19	12/13/2018 10:31	12/13/2018 13:41
17	285654	J:\GC34\DATA\121218CAL\1212000015.D\1212000015c.d	12/12/2018 21:55	12/13/2018 10:46	12/13/2018 13:41
18	285656	J:\GC34\DATA\121218CAL\1212000016.D\1212000016c.d	12/12/2018 22:31	12/13/2018 10:47	12/13/2018 13:41
19	285662	J:\GC34\DATA\121218CAL\1212000019.D\1212000019c.d	12/13/2018 00:19	12/13/2018 11:03	12/13/2018 15:51
20	285664	J:\GC34\DATA\121218CAL\1212000020.D\1212000020c.d	12/13/2018 00:55	12/13/2018 15:46	12/13/2018 15:51
21	285666	J:\GC34\DATA\121218CAL\1212000021.D\1212000021c.d	12/13/2018 01:31	12/13/2018 11:49	12/13/2018 13:41
22	285668	J:\GC34\DATA\121218CAL\1212000022.D\1212000022c.d	12/13/2018 02:07	12/13/2018 11:53	12/13/2018 13:42
23	285670	J:\GC34\DATA\121218CAL\1212000023.D\1212000023c.d	12/13/2018 02:43	12/13/2018 11:57	12/13/2018 13:42
24	285672	J:\GC34\DATA\121218CAL\1212000024.D\1212000024c.d	12/13/2018 03:19	12/13/2018 12:01	12/13/2018 13:42
25	285686	J:\GC34\DATA\121218CAL\1212000026.D\1212000026c.d	12/13/2018 04:30	12/13/2018 13:28	12/13/2018 13:45
26	285674	J:\GC34\DATA\121218CAL\1212000027.D\1212000027c.d	12/13/2018 05:06	12/13/2018 13:29	12/13/2018 13:43
27	285676	J:\GC34\DATA\121218CAL\1212000028.D\1212000028c.d	12/13/2018 05:42	12/13/2018 13:30	12/13/2018 13:43
28	285678	J:\GC34\DATA\121218CAL\1212000029.D\1212000029c.d	12/13/2018 06:18	12/13/2018 13:31	12/13/2018 13:44
29	285680	J:\GC34\DATA\121218CAL\1212000030.D\1212000030c.d	12/13/2018 06:53	12/13/2018 13:31	12/13/2018 13:44
30	285682	J:\GC34\DATA\121218CAL\1212000031.D\1212000031c.d	12/13/2018 07:29	12/13/2018 13:32	12/13/2018 13:44
31	285684	J:\GC34\DATA\121218CAL\1212000032.D\1212000032c.d	12/13/2018 08:05	12/13/2018 13:33	12/13/2018 13:44

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Tetrachloro-m-xylene												
					1	0.2	0.2300	15.0	2	0.5	0.5357	7.1
	3	2	1.965	-1.8	4	5	4.505	-9.9	5	10	8.226	-17.7
	6	1	1.073	7.3								

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
alpha-BHC												
					1	0.2	0.2139	6.9	2	0.5	0.5205	4.1
	3	2	2.007	0.4	4	5	4.641	-7.2	5	10	8.880	-11.2
	6	1	1.070	7.0								
Hexachlorobenzene												
					1	0.2	0.2328	16.4	2	0.5	0.5482	9.6
	3	2	1.936	-3.2	4	5	4.399	-12.0	5	10	7.796	-22.0
	6	1	1.112	11.2								
beta-BHC												
					1	0.2	0.2231	11.6	2	0.5	0.5018	0.4
	3	2	1.973	-1.3	4	5	4.679	-6.4	5	10	8.578	-14.2
	6	1	1.100	10.0								
gamma-BHC (Lindane)												
					1	0.2	0.2170	8.5	2	0.5	0.5096	1.9
	3	2	1.967	-1.6	4	5	4.698	-6.0	5	10	8.773	-12.3
	6	1	1.095	9.5								

Initial Calibration - Detailed Report

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
delta-BHC												
					1	0.2	0.2073	3.7	2	0.5	0.5162	3.2
	3	2	1.998	-0.1	4	5	4.764	-4.7	5	10	8.889	-11.1
	6	1	1.090	9.0								
Heptachlor												
					1	0.2	0.1947	-2.6	2	0.5	0.5181	3.6
	3	2	2.056	2.8	4	5	4.776	-4.5	5	10	8.735	-12.7
	6	1	1.133	13.3								
Aldrin												
					1	0.2	0.2144	7.2	2	0.5	0.5228	4.6
	3	2	2.017	0.8	4	5	4.713	-5.7	5	10	8.734	-12.7
	6	1	1.058	5.8								
Isodrin												
					1	0.2	0.2028	1.4	2	0.5	0.5021	0.4
	3	2	2.035	1.8	4	5	4.834	-3.3	5	10	8.907	-10.9
	6	1	1.107	10.7								

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Heptachlor Epoxide												
					1	0.2	0.2086	4.3	2	0.5	0.5241	4.8
	3	2	2.015	0.7	4	5	4.711	-5.8	5	10	8.654	-13.5
	6	1	1.094	9.4								
gamma-Chlordane												
					1	0.2	0.2086	4.3	2	0.5	0.5170	3.4
	3	2	2.004	0.2	4	5	4.775	-4.5	5	10	8.392	-16.1
	6	1	1.127	12.7								
Endosulfan I												
					1	0.2	0.2212	10.6	2	0.5	0.5082	1.6
	3	2	1.979	-1.1	4	5	4.649	-7.0	5	10	8.514	-14.9
	6	1	1.107	10.7								
alpha-Chlordane												
					1	0.2	0.2014	0.7	2	0.5	0.5154	3.1
	3	2	2.051	2.5	4	5	4.780	-4.4	5	10	8.740	-12.6
	6	1	1.107	10.7								

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Dieldrin												
					1	0.2	0.2161	8.0	2	0.5	0.5043	0.9
	3	2	2.003	0.1	4	5	4.749	-5.0	5	10	8.772	-12.3
	6	1	1.083	8.3								
4,4'-DDE												
					1	0.2	0.2119	5.9	2	0.5	0.5006	0.1
	3	2	2.007	0.3	4	5	4.798	-4.0	5	10	8.853	-11.5
	6	1	1.091	9.1								
Endrin												
					1	0.2	0.2147	7.4	2	0.5	0.4860	-2.8
	3	2	1.998	-0.1	4	5	4.719	-5.6	5	10	8.752	-12.5
	6	1	1.137	13.7								
Endosulfan II												
					1	0.2	0.2063	3.1	2	0.5	0.5151	3.0
	3	2	1.991	-0.5	4	5	4.822	-3.6	5	10	8.762	-12.4
	6	1	1.103	10.3								

Initial Calibration - Detailed Report

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
4,4'-DDD												
					1	0.2	0.1950	-2.5	2	0.5	0.5068	1.4
	3	2	2.038	1.9	4	5	4.923	-1.5	5	10	9.171	-8.3
	6	1	1.091	9.1								
Endrin Aldehyde												
					1	0.2	0.1979	-1.1	2	0.5	0.4927	-1.5
	3	2	2.060	3.0	4	5	4.922	-1.6	5	10	8.962	-10.4
	6	1	1.115	11.5								
Endosulfan Sulfate												
					1	0.2	0.2133	6.6	2	0.5	0.5091	1.8
	3	2	1.985	-0.7	4	5	4.841	-3.2	5	10	8.645	-13.6
	6	1	1.090	9.0								
4,4'-DDT												
					1	0.2	0.1912	-4.4	2	0.5	0.5181	3.6
	3	2	2.078	3.9	4	5	4.947	-1.1	5	10	9.126	-8.7
	6	1	1.067	6.7								

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
4,4'-DDD												
					1	0.2	0.1950	-2.5	2	0.5	0.5068	1.4
	3	2	2.038	1.9	4	5	4.923	-1.5	5	10	9.171	-8.3
	6	1	1.091	9.1								
Endrin Aldehyde												
					1	0.2	0.1979	-1.1	2	0.5	0.4927	-1.5
	3	2	2.060	3.0	4	5	4.922	-1.6	5	10	8.962	-10.4
	6	1	1.115	11.5								
Endosulfan Sulfate												
					1	0.2	0.2133	6.6	2	0.5	0.5091	1.8
	3	2	1.985	-0.7	4	5	4.841	-3.2	5	10	8.645	-13.6
	6	1	1.090	9.0								
4,4'-DDT												
					1	0.2	0.1912	-4.4	2	0.5	0.5181	3.6
	3	2	2.078	3.9	4	5	4.947	-1.1	5	10	9.126	-8.7
	6	1	1.067	6.7								

Initial Calibration - Detailed Report

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Endrin Ketone												
					1	0.2	0.2191	9.6	2	0.5	0.5458	9.2
	3	2	1.974	-1.3	4	5	4.535	-9.3	5	10	8.446	-15.5
	6	1	1.075	7.5								
Methoxychlor												
					1	0.2	0.1987	-0.6	2	0.5	0.5632	12.6
	3	2	1.967	-1.6	4	5	4.811	-3.8	5	10	8.735	-12.6
	6	1	1.061	6.1								
2,4'-DDE												
					7	0.2	0.1958	-2.1	8	0.5	0.5638	12.8
	9	1	1.100	10.0	10	2	1.904	-4.8	11	5	4.541	-9.2
	12	10	9.337	-6.6								
2,4'-DDD												
					7	0.2	0.1922	-3.9	8	0.5	0.5690	13.8
	9	1	1.087	8.7	10	2	1.937	-3.2	11	5	4.524	-9.5
	12	10	9.405	-5.9								

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
2,4'-DDT												
					7	0.2	0.1747	-12.6	8	0.5	0.5778	15.6
	9	1	1.112	11.2	10	2	1.959	-2.1	11	5	4.631	-7.4
	12	10	9.532	-4.7								
Decachlorobiphenyl												
					1	0.2	0.2262	13.1	2	0.5	0.5112	2.2
	3	2	1.965	-1.8	4	5	4.680	-6.4	5	10	8.569	-14.3
	6	1	1.071	7.1								
Toxaphene {1}												
					19	10	11.84	18.4	20	20	17.89	-10.6
	21	50	52.41	4.8	22	100	107.0	7.0	23	250	251.6	0.7
	24	500	398.4	-20.3								
Toxaphene {2}												
					19	10	13.72	**37.2**	20	20	21.56	7.8
	21	50	44.76	-10.5	22	100	96.98	-3.0	23	250	254.5	1.8
	24	500	498.1	-0.4								

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Toxaphene {3}												
					19	10	8.774	-12.3	20	20	21.93	9.7
	21	50	52.73	5.5	22	100	113.1	13.1	23	250	254.4	1.8
	24	500	411.5	-17.7								
Toxaphene {4}												
					19	10	12.31	23.1	20	20	19.79	-1.1
	21	50	52.02	4.0	22	100	104.4	4.4	23	250	237.5	-5.0
	24	500	372.8	-25.4								
Toxaphene {5}												
					19	10	9.549	-4.5	20	20	19.28	-3.6
	21	50	50.78	1.6	22	100	117.6	17.6	23	250	258.3	3.3
	24	500	427.9	-14.4								
Toxaphene {6}												
					19	10	11.47	14.7	20	20	22.80	14.0
	21	50	49.80	-0.4	22	100	98.74	-1.3	23	250	224.5	-10.2
	24	500	415.6	-16.9								

Calibration ID: CAL15914
Method ID: MJ1647
Instrument ID: GC34
Column Name: DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {1}	25	2	2.207	10.3	26	5	5.757	15.1	27	10	10.97	9.7
	28	20	18.62	-6.9	29	50	50.58	1.2	30	100	91.12	-8.9
	31	200	158.9	-20.6								
Chlordane {2}	25	2	2.161	8.1	26	5	5.687	13.7	27	10	11.01	10.1
	28	20	18.22	-8.9	29	50	51.61	3.2	30	100	92.42	-7.6
	31	200	162.6	-18.7								
Chlordane {3}	25	2	2.681	**34.0**	26	5	5.312	6.2	27	10	10.47	4.7
	28	20	17.14	-14.3	29	50	48.27	-3.5	30	100	90.15	-9.8
	31	200	165.3	-17.4								
Chlordane {4}	25	2	2.309	15.5	26	5	6.153	23.1	27	10	10.92	9.2
	28	20	18.02	-9.9	29	50	48.59	-2.8	30	100	86.46	-13.5
	31	200	157.1	-21.5								

Initial Calibration - Detailed Report

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {5}	25	2	2.278	13.9	26	5	5.825	16.5	27	10	10.79	7.9
	28	20	18.75	-6.2	29	50	50.46	0.9	30	100	89.95	-10.0
	31	200	154.1	-22.9								
Chlordane {6}	25	2	2.260	13.0	26	5	5.956	19.1	27	10	11.02	10.2
	28	20	18.58	-7.1	29	50	49.98	0.0	30	100	88.18	-11.8
	31	200	153.2	-23.4								
Chlorpyrifos												
					13	0.2	0.2318	15.9	14	0.5	0.5495	9.9
	15	1	1.020	2.0	16	2	2.064	3.2	17	5	4.480	-10.4
	18	10	7.941	-20.6								
Oxychlordane												
					13	0.2	0.2336	16.8	14	0.5	0.5482	9.6
	15	1	1.023	2.3	16	2	2.018	0.9	17	5	4.479	-10.4
	18	10	8.075	-19.3								

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
cis-Nonachlor												
					13	0.2	0.2224	11.2	14	0.5	0.5415	8.3
	15	1	1.025	2.5	16	2	2.043	2.2	17	5	4.620	-7.6
	18	10	8.339	-16.6								
trans-Nonachlor												
					13	0.2	0.2255	12.8	14	0.5	0.5436	8.7
	15	1	1.028	2.8	16	2	2.055	2.8	17	5	4.562	-8.8
	18	10	8.169	-18.3								
Mirex												
					13	0.2	0.2377	18.8	14	0.5	0.5465	9.3
	15	1	1.018	1.8	16	2	1.994	-0.3	17	5	4.496	-10.1
	18	10	8.046	-19.5								
Hexachloroethane												
					13	0.2	0.2311	15.6	14	0.5	0.5338	6.8
	15	1	1.026	2.6	16	2	1.985	-0.7	17	5	4.356	-12.9
	18	10	8.871	-11.3								

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Hexachlorobutadiene												
					13	0.2	0.2357	17.8	14	0.5	0.5512	10.2
	15	1	1.035	3.5	16	2	1.999	-0.1	17	5	4.262	-14.8
	18	10	8.329	-16.7								
Perthane												
					13	1	1.164	16.4	14	2.5	2.646	5.8
	15	5	5.101	2.0	16	10	9.426	-5.7	17	25	23.92	-4.3
	18	50	42.89	-14.2								

Second Source Calibration Verification Summary

CalibrationID: CAL15914

Method ID: MJ1647

DataFile Location: J:\GC34\DATA\112718CAL\1127000007.D

Units: ug/L

Column: DB XLB

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
alpha-BHC	285279	AverageRF	20	1.108	1.078	-2.7	2.00	1.9	
Hexachlorobenzene	285279	AverageRF	20	1.629	1.674	2.8	2.00	2.1	
beta-BHC	285279	AverageRF	20	0.623	0.652	4.7	2.00	2.1	
gamma-BHC (Lindane)	285279	AverageRF	20	1.043	1.096	5.1	2.00	2.1	
delta-BHC	285279	AverageRF	20	1.220	1.298	6.4	2.00	2.1	
Heptachlor	285279	AverageRF	20	1.013	1.088	7.4	2.00	2.1	
Aldrin	285279	AverageRF	20	1.114	1.117	0.2	2.00	2.0	
Isodrin	285279	AverageRF	20	0.928	1.105	19.1	2.00	2.4	
Heptachlor Epoxide	285279	AverageRF	20	1.168	1.373	17.6	2.00	2.4	
gamma-Chlordane	285279	AverageRF	20	1.200	1.482	23.6 *	2.00	2.5	
Endosulfan I	285279	AverageRF	20	1.032	1.119	8.4	2.00	2.2	
alpha-Chlordane	285279	AverageRF	20	1.156	1.211	4.8	2.00	2.1	
Dieldrin	285279	AverageRF	20	1.112	1.121	0.8	2.00	2.0	
4,4'-DDE	285279	AverageRF	20	1.185	1.280	8.1	2.00	2.2	
Endrin	285279	AverageRF	20	1.058	1.176	11.1	2.00	2.2	
Endosulfan II	285279	AverageRF	20	1.059	1.132	6.9	2.00	2.1	
4,4'-DDD	285279	AverageRF	20	0.844	0.929	10.1	2.00	2.2	
Endrin Aldehyde	285279	AverageRF	20	0.910	0.711	-21.9 *	2.00	1.6	
Endosulfan Sulfate	285279	AverageRF	20	1.084	1.147	5.8	2.00	2.1	
4,4'-DDT	285279	AverageRF	20	1.020	1.081	6.1	2.00	2.1	
Endrin Ketone	285279	AverageRF	20	1.165	1.182	1.5	2.00	2.0	
Methoxychlor	285279	AverageRF	20	0.619	0.665	7.6	2.00	2.2	
2,4'-DDE	285702	AverageRF	20	0.936	1.099	17.4	2.00	2.3	
2,4'-DDD	285702	AverageRF	20	0.827	0.892	7.9	2.00	2.2	
2,4'-DDT	285702	AverageRF	20	0.973	1.096	12.6	2.00	2.3	
Toxaphene	285689	NA	20				200.00	235.4	17.7
Toxaphene {1}	285689	AverageRF	100	0.004	0.006	26.5	200.00	253.0	
Toxaphene {2}	285689	Quadratic	100				200.00	240.3	20.1
Toxaphene {3}	285689	AverageRF	100	0.016	0.019	21.1	200.00	242.3	
Toxaphene {4}	285689	AverageRF	100	0.019	0.020	5.1	200.00	210.2	
Toxaphene {5}	285689	AverageRF	100	0.011	0.012	15.7	200.00	231.4	
Toxaphene {6}	285689	AverageRF	100	0.004	0.005	17.5	200.00	235.1	
Chlordane	285687	NA	20				50.00	45.9	-8.1
Chlordane {1}	285687	AverageRF	100	0.043	0.034	-21.6	50.00	39.2	
Chlordane {2}	285687	AverageRF	100	0.058	0.041	-29.1	50.00	35.4	
Chlordane {3}	285687	AverageRF	100	0.044	0.054	21.5	50.00	60.7	
Chlordane {4}	285687	AverageRF	100	0.126	0.114	-9.2	50.00	45.4	
Chlordane {5}	285687	AverageRF	100	0.118	0.100	-15.2	50.00	42.4	
Chlordane {6}	285687	AverageRF	100	0.080	0.084	4.9	50.00	52.5	
Chlorpyrifos	285657	AverageRF	20	0.749	0.749	0.1	2.00	2.0	
Oxychlordane	285657	AverageRF	20	1.235	1.065	-13.7	2.00	1.7	
cis-Nonachlor	285657	AverageRF	20	1.452	1.351	-7.0	2.00	1.9	
trans-Nonachlor	285657	AverageRF	20	1.352	1.313	-2.9	2.00	1.9	
Mirex	285657	AverageRF	20	0.823	0.773	-6.1	2.00	1.9	
Hexachloroethane	285657	AverageRF	20	2.214	1.891	-14.6	2.00	1.7	
Hexachlorobutadiene	285657	AverageRF	20	1.764	1.655	-6.2	2.00	1.9	
Perthane	285659	AverageRF	20	0.090	0.099	11.1	25.00	27.8	

2 compound out of 47 failed max individual %D criteria.

Second Source Calibration Verification Summary

CalibrationID: CAL15914

Method ID: MJ1647

DataFile Location: J:\GC34\DATA\121218CAL\1212000018.D

Units: ug/L

Column: DB XLB

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift

2 compound out of 47 failed max individual %D criteria.

Second Source Calibration Verification Summary

CalibrationID: CAL15914

Method ID: MJ1647

DataFile Location: J:\GC34\DATA\112718CAL\1127000007.D\1127000007C.D

Units: ug/L

Column: DB-35MS

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
alpha-BHC	285280	AverageRF	20	1.555	1.635	5.2	2.00	2.1	
Hexachlorobenzene	285280	AverageRF	20	1.864	1.945	4.3	2.00	2.1	
beta-BHC	285280	AverageRF	20	0.826	0.921	11.6	2.00	2.2	
gamma-BHC (Lindane)	285280	AverageRF	20	1.513	1.652	9.2	2.00	2.2	
delta-BHC	285280	AverageRF	20	1.564	1.697	8.5	2.00	2.2	
Heptachlor	285280	AverageRF	20	1.617	1.809	11.8	2.00	2.2	
Aldrin	285280	AverageRF	20	1.492	1.651	10.7	2.00	2.2	
Isodrin	285280	AverageRF	20	1.295	1.534	18.4	2.00	2.4	
Heptachlor Epoxide	285280	AverageRF	20	1.550	1.615	4.2	2.00	2.1	
gamma-Chlordane	285280	AverageRF	20	1.624	1.754	8.0	2.00	2.2	
Endosulfan I	285280	AverageRF	20	1.476	1.633	10.6	2.00	2.2	
alpha-Chlordane	285280	AverageRF	20	1.555	1.726	10.9	2.00	2.2	
Dieldrin	285280	AverageRF	20	1.550	1.744	12.5	2.00	2.3	
4,4'-DDE	285280	AverageRF	20	1.506	1.630	8.2	2.00	2.2	
Endrin	285280	AverageRF	20	1.545	1.645	6.4	2.00	2.1	
Endosulfan II	285280	AverageRF	20	1.507	1.663	10.4	2.00	2.2	
4,4'-DDD	285280	AverageRF	20	1.233	1.368	11.0	2.00	2.2	
Endrin Aldehyde	285280	AverageRF	20	1.218	1.451	19.2	2.00	2.4	
Endosulfan Sulfate	285280	AverageRF	20	1.601	1.721	7.5	2.00	2.1	
4,4'-DDT	285280	AverageRF	20	1.392	1.554	11.6	2.00	2.2	
Endrin Ketone	285280	AverageRF	20	1.752	1.746	-0.4	2.00	2.0	
Methoxychlor	285280	AverageRF	20	0.874	0.939	7.5	2.00	2.2	
2,4'-DDE	285703	AverageRF	20	1.287	1.471	14.3	2.00	2.3	
2,4'-DDD	285703	AverageRF	20	1.214	1.407	15.9	2.00	2.3	
2,4'-DDT	285703	AverageRF	20	1.442	1.654	14.8	2.00	2.3	
Toxaphene	285690	NA	20				200.00	206.6	3.3
Toxaphene {1}	285690	AverageRF	100	0.007	0.008	17.3	200.00	234.6	
Toxaphene {2}	285690	Quadratic	100				200.00	214.1	7.0
Toxaphene {3}	285690	AverageRF	100	0.033	0.033	-0.6	200.00	198.8	
Toxaphene {4}	285690	AverageRF	100	0.023	0.023	0.5	200.00	201.1	
Toxaphene {5}	285690	AverageRF	100	0.019	0.020	7.9	200.00	215.9	
Toxaphene {6}	285690	AverageRF	100	0.030	0.026	-12.4	200.00	175.1	
Chlordane	285688	NA	20				50.00	42.7	-14.6
Chlordane {1}	285688	AverageRF	100	0.064	0.047	-26.4	50.00	36.8	
Chlordane {2}	285688	AverageRF	100	0.086	0.059	-31.5	50.00	34.3	
Chlordane {3}	285688	AverageRF	100	0.046	0.045	-2.2	50.00	48.9	
Chlordane {4}	285688	AverageRF	100	0.178	0.151	-15.2	50.00	42.4	
Chlordane {5}	285688	AverageRF	100	0.113	0.114	0.6	50.00	50.3	
Chlordane {6}	285688	AverageRF	100	0.161	0.141	-12.7	50.00	43.6	
Chlorpyrifos	285658	AverageRF	20	1.185	1.111	-6.2	2.00	1.9	
Oxychlordane	285658	AverageRF	20	1.727	1.499	-13.2	2.00	1.7	
cis-Nonachlor	285658	AverageRF	20	2.097	1.878	-10.4	2.00	1.8	
trans-Nonachlor	285658	AverageRF	20	1.907	1.816	-4.8	2.00	1.9	
Mirex	285658	AverageRF	20	1.683	1.479	-12.1	2.00	1.8	
Hexachloroethane	285658	AverageRF	20	2.351	2.127	-9.5	2.00	1.8	
Hexachlorobutadiene	285658	AverageRF	20	1.851	1.692	-8.6	2.00	1.8	
Perthane	285660	AverageRF	20	0.065	0.073	12.4	25.00	28.1	

Second Source Calibration Verification Summary

CalibrationID: CAL15914

Method ID: MJ1647

DataFile Location: J:\GC34\DATA\121218CAL\1212000018.D\1212000018C.D

Units: ug/L

Column: DB-35MS

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift

Quantitation Report (QT Reviewed)

1st mc 12/13/18
2nd TP 12/14/18

Data File : J:\GC34\DATA\121218CAL\1212000033.D Vial: 32
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 08:41:25 Operator: MCHAPPELLE
Sample : CHLOR ICV 50PPB GCPS8-50B Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 14:07:12 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Thu Dec 13 13:35:49 2018
QLast Update : Thu Dec 13 13:35:49 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
36)	1-Bromo-2...	4.507	4.047	138.2E6	137.4E6	100.000	100.000
	System Monitoring Compounds						
	Target Compounds						
37)	Chlordane	10.237	7.950	2315388	3245030	39.187	36.798
38)	Chlordane...	11.047	8.447	2818666	4045239	35.429	34.269
39)	Chlordane...	12.527	11.577	3715144	3069870	60.731	48.890
40)	Chlordane...	16.303	12.420	7905448	10354803	45.393	42.392
41)	Chlordane...	16.553	12.560	6920208	7800570	42.393	50.317
42)	Chlordane...	16.893	12.863	5789810	9682197	52.468	43.636
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

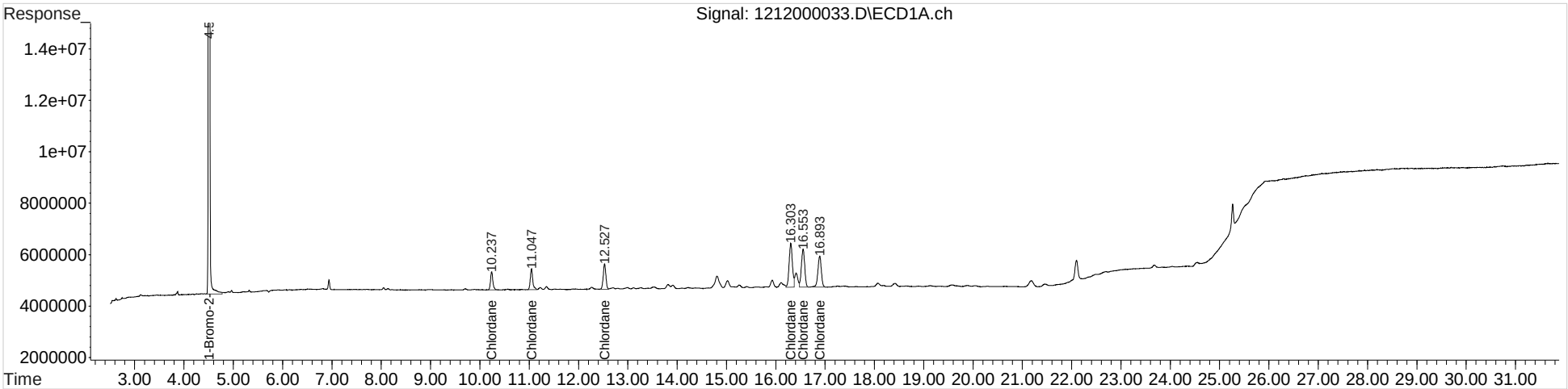
1st MC 12/13/18
2nd TP 12/14/18

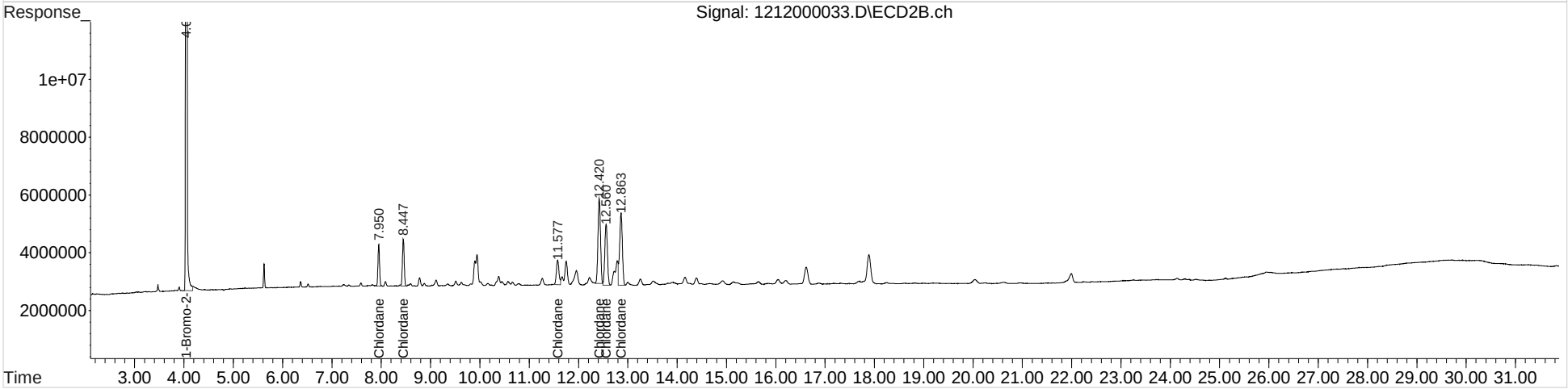
Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\121218CAL\1212000033.D Vial: 32
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 08:41:25 Operator: MCHAPPELLE
Sample : CHLOR ICV 50PPB GCPS8-50B Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 14:07:12 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Thu Dec 13 13:35:49 2018
QLast Update : Thu Dec 13 13:35:49 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





1st mc 12/14/18

Data File : J:\GC34\DATA\121318ICV\1213000002.D Vial: 89
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 14:54:36 Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 15:36:24 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Thu Dec 13 13:35:49 2018
QLast Update : Thu Dec 13 13:36:11 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	4.513	4.053	135.4E6	139.0E6	100.000	100.000	
	System Monitoring Compounds							
	Target Compounds							
16)	4,4'-DDE	0.000	14.123	0	113825	N.D.	0.054	#
17)	Endrin	19.687	16.113	9093055	13320323	6.347	6.203	
19)	4,4'-DDD	0.000	17.460	0	11518	N.D. d	0.007	
20)	Endrin Al...	0.000	19.417	0	91106	N.D. d	0.054	
22)	4,4'-DDT	23.040	19.180	17008670	24055872	12.321	12.432	
23)	Endrin Ke...	25.267	23.890	2478520	580469	1.572m	0.238	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

coeluting interference at the same RT as E. Ketone on the front. Back column is passing.

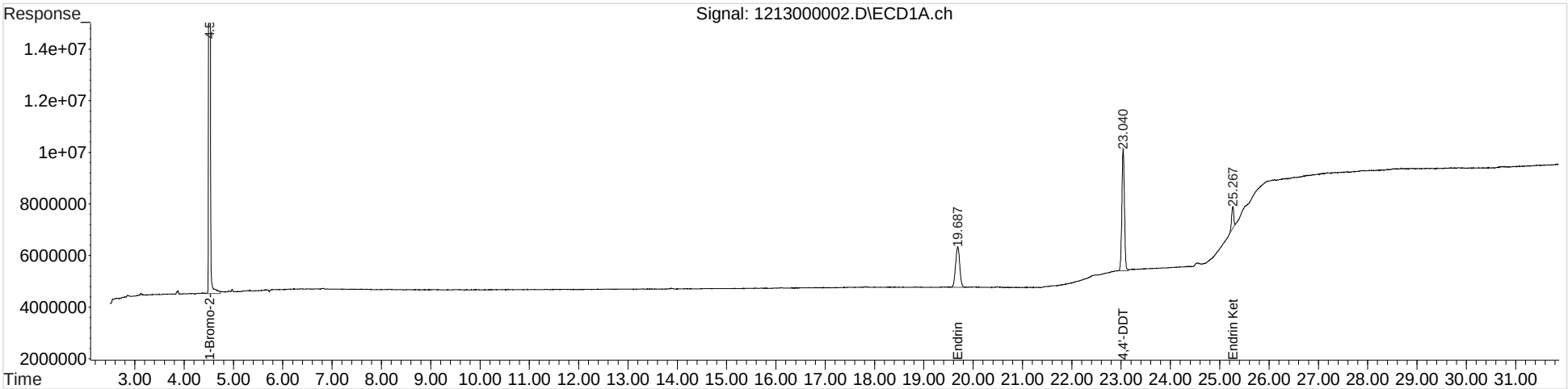
Endrin is not breaking down.

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\121318ICV\1213000002.D Vial: 89
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 14:54:36 Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 15:36:24 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Thu Dec 13 13:35:49 2018
QLast Update : Thu Dec 13 13:36:11 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

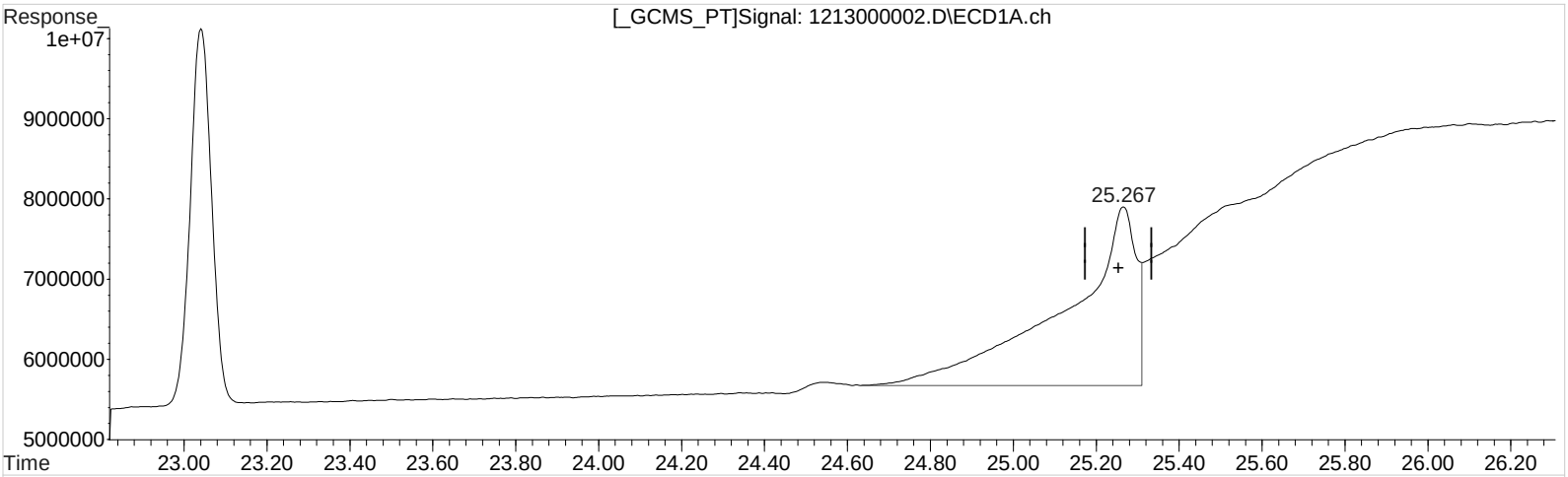


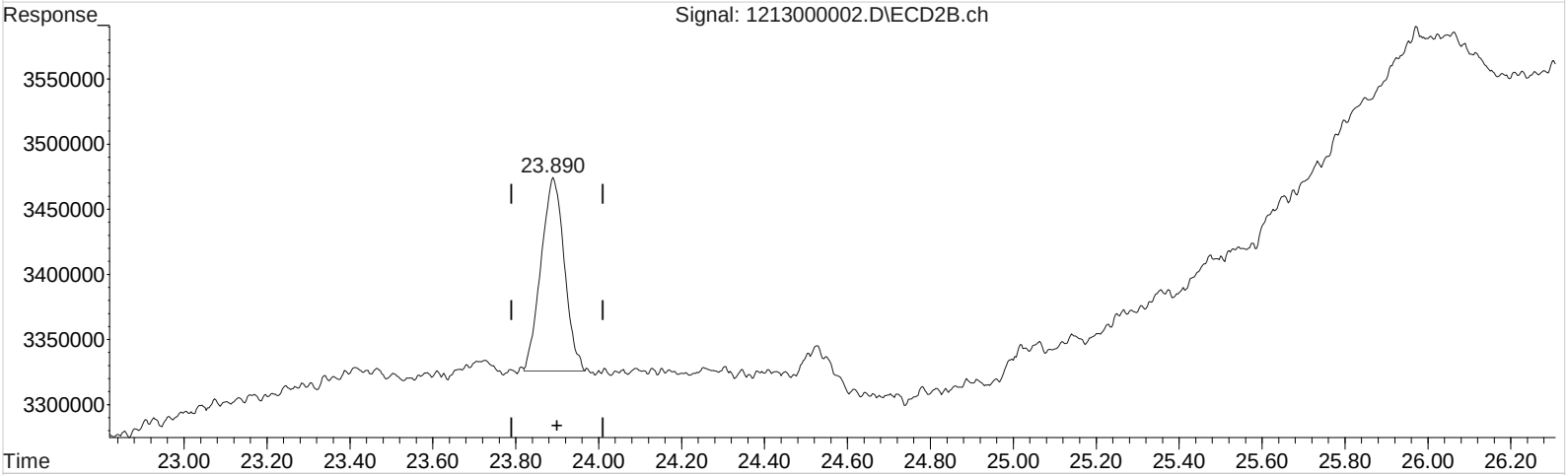
1st mc 12/14/18

Data File : J:\GC34\DATA\121318ICV\1213000002.D Vial: 89
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 14:54:36 Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 15:35:33 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Thu Dec 13 13:35:49 2018
QLast Update : Thu Dec 13 13:36:11 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(23) Endrin Ketone

25.267min 17.073 ug/L

response 26923332

Manual Integration:

Before

12/13/18

(23) Endrin Ketone #2

23.890min 0.238 ug/L

response 580469

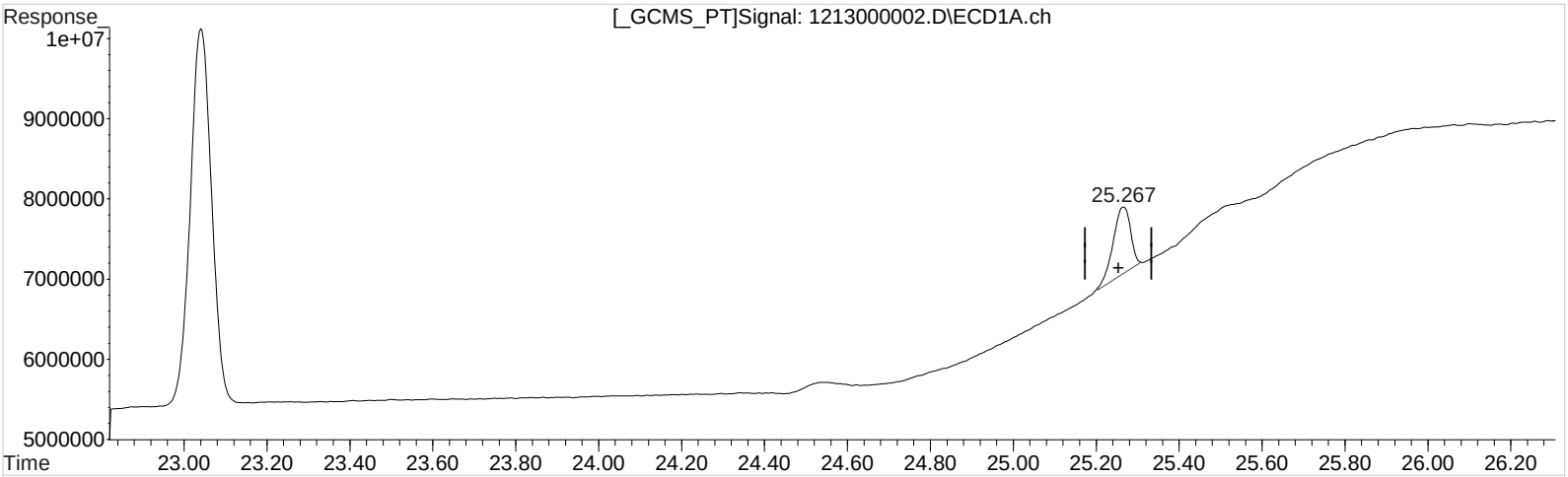
(+) = Expected Retention Time

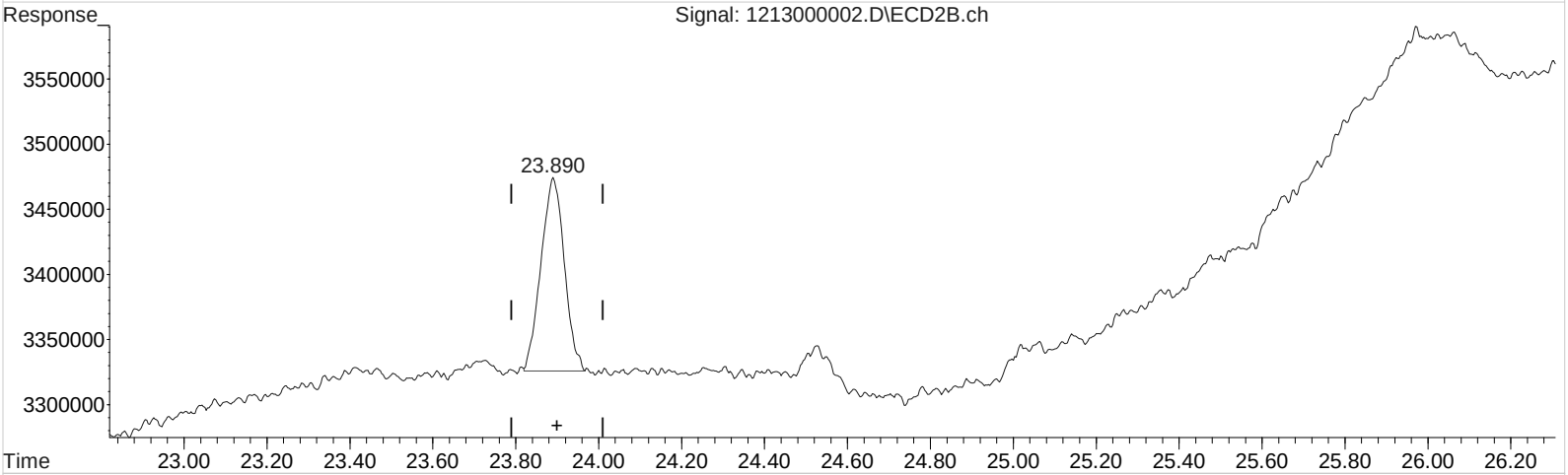
1st mc 12/14/18

Data File : J:\GC34\DATA\121318ICV\1213000002.D Vial: 89
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 14:54:36 Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 15:35:33 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Thu Dec 13 13:35:49 2018
QLast Update : Thu Dec 13 13:36:11 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(23) Endrin Ketone

25.267min 1.572 ug/L m

response 2478520

Manual Integration:

After

Baseline/Shoulder

12/13/18

(23) Endrin Ketone #2

23.890min 0.238 ug/L

response 580469

(+) = Expected Retention Time

1st mc 12/14/18

Data File : J:\GC34\DATA\121318ICV\1213000003.D Vial: 88
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 15:30:29 Operator: MCHAPPELLE
Sample : IB Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 16:03:56 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Thu Dec 13 15:47:11 2018
QLast Update : Thu Dec 13 15:47:47 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	4.510	4.050	122.9E6	126.5E6	100.000	100.000
29)	1-Bromo-2...	4.510	4.050	122.9E6	126.5E6	100.000	100.000
36)	1-Bromo-2...	4.510	4.050	122.9E6	126.5E6	100.000	100.000
43)	1-Bromo-2...	4.510	4.050	122.9E6	126.5E6	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	0.000	5.610f	0	9073	N.D.	0.006 #
28) s	Decachlor...	30.080	27.443f	46760	9417	0.030	0.005 #
	Target Compounds						
3)	alpha-BHC	0.000	6.730f	0	14315	N.D.	0.007 #
4)	Hexachlor...	0.000	6.427f	0	9264	N.D.	0.004 #
7)	delta-BHC	0.000	9.013	0	9042	N.D.	0.005 #
8)	Heptachlor	0.000	8.387f	0	27686	N.D.	0.014 #
12)	gamma-Chl...	0.000	12.417	0	8339	N.D.	0.004 #
17)	Endrin	0.000	16.053f	0	8965	N.D.	0.005 #
19)	4,4'-DDD	0.000	17.437	0	11934	N.D.	0.008 #
20)	Endrin Al...	0.000	19.390	0	8740	N.D. d	0.006
21)	Endosulfa...	0.000	20.950f	0	9997	N.D.	0.005 #
22)	4,4'-DDT	23.097	19.107f	35635	8032	0.028	0.005 #
23)	Endrin Ke...	25.267	0.000	2196710	0	1.535m	N.D. #
24)	Methoxychlor	0.000	23.570f	0	11397	N.D.	0.010 #
48)	Mirex	26.510	0.000	47166	0	0.047	N.D. #
49)	HCE	0.000	2.493f	0	15810	N.D.	0.005 #
50)	HCBD	3.447f	2.907	29474	13586	0.014	0.006 #
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

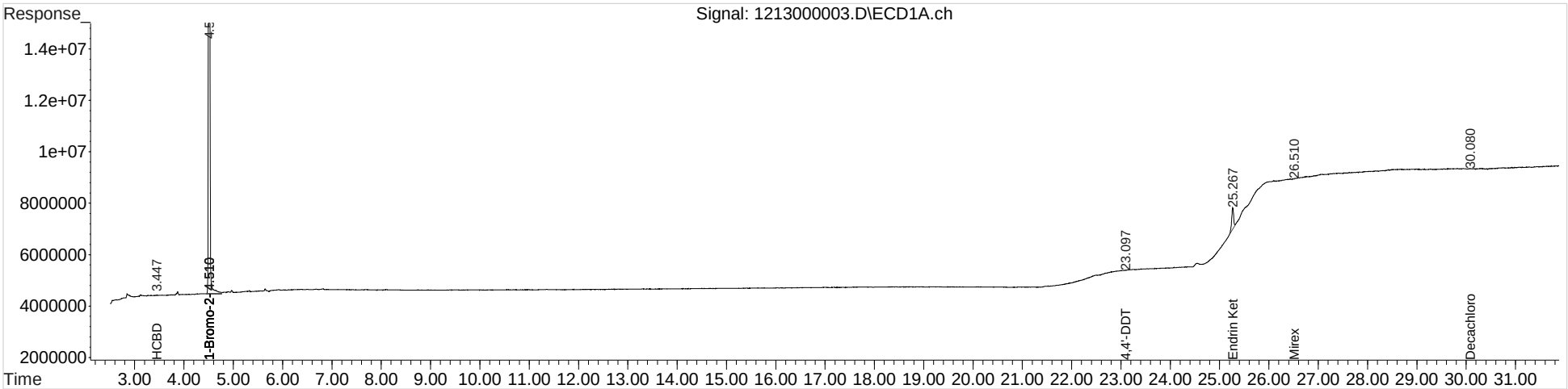
OK

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\121318ICV\1213000003.D Vial: 88
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 15:30:29 Operator: MCHAPPELLE
Sample : IB Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 16:03:56 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Thu Dec 13 15:47:11 2018
QLast Update : Thu Dec 13 15:47:47 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

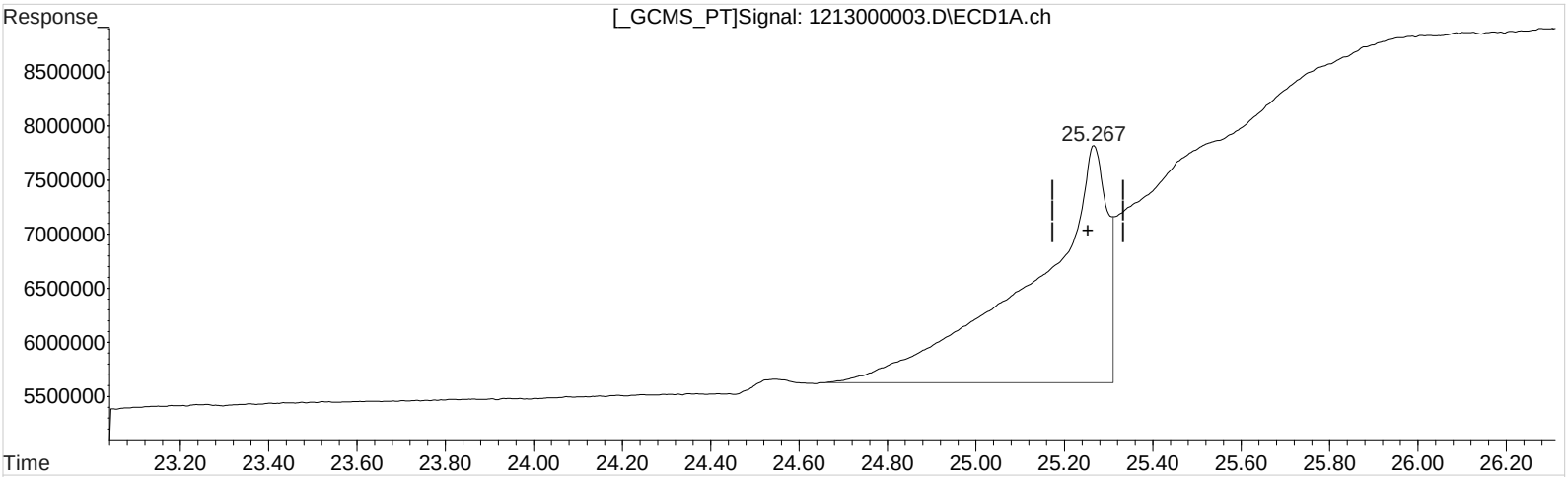


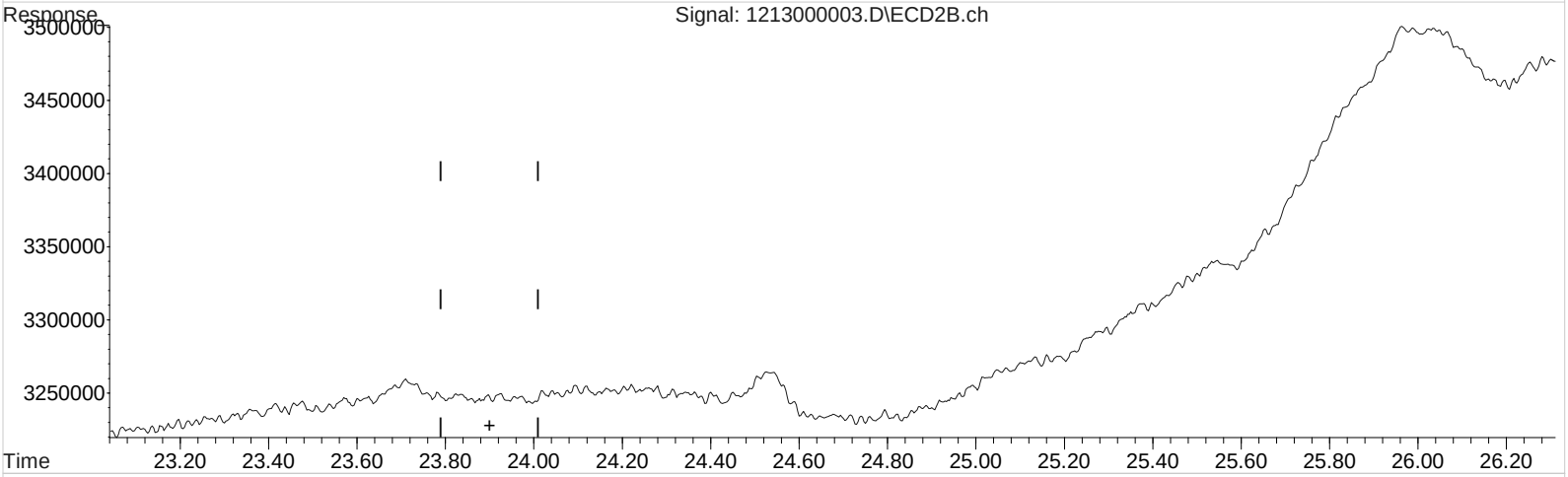
1st MC 12/14/18

Data File : J:\GC34\DATA\121318ICV\1213000003.D Vial: 88
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 15:30:29 Operator: MCHAPPELLE
Sample : IB Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 16:02:54 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Thu Dec 13 15:47:11 2018
QLast Update : Thu Dec 13 15:47:47 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(23) Endrin Ketone

25.267min 18.315 ug/L

response 26217346

Manual Integration:

Before

12/13/18

(23) Endrin Ketone #2

0.000min 0.000 ug/L

response 0

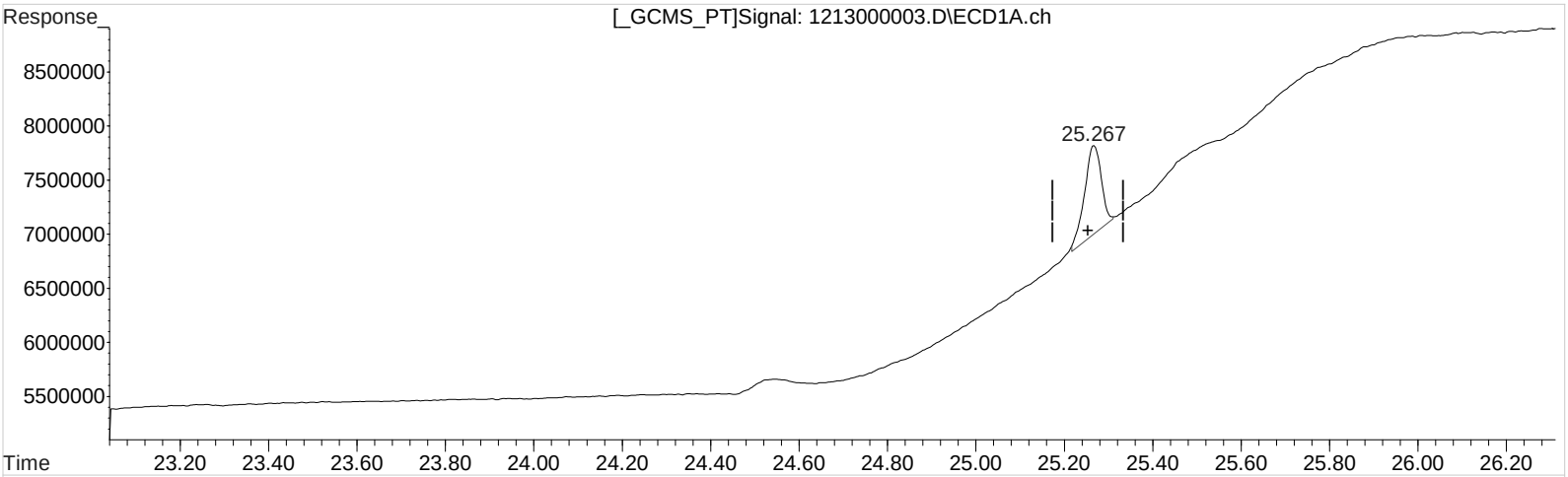
(+) = Expected Retention Time

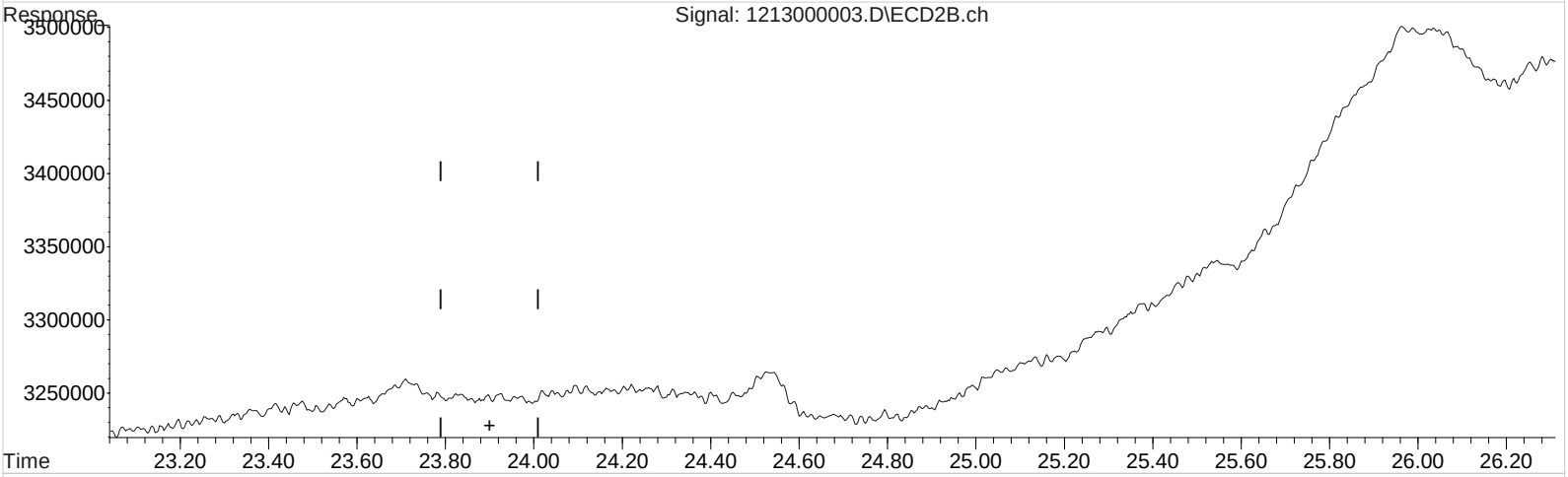
1st mc 12/14/18

Data File : J:\GC34\DATA\121318ICV\1213000003.D Vial: 88
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 15:30:29 Operator: MCHAPPELLE
Sample : IB Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 16:02:54 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Thu Dec 13 15:47:11 2018
QLast Update : Thu Dec 13 15:47:47 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(23) Endrin Ketone

25.267min 1.535 ug/L m

response 2196710

Manual Integration:

After

Baseline/Shoulder

12/13/18

(23) Endrin Ketone #2

0.000min 0.000 ug/L

response 0

(+) = Expected Retention Time

1st mc 12/14/18

Data File : J:\GC34\DATA\121318ICV\1213000005.D Vial: 87
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 16:45:01 Operator: MCHAPPELLE
Sample : 24 ICV 2PPB GCPS8-50C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 17:18:21 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15914 MJ1647 xp11-26Thu Dec 13 15:47:11 2018
QLast Update : Thu Dec 13 15:47:11 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	4.553	4.090	133.7E6	136.5E6	100.000	100.000
	System Monitoring Compounds						
	Target Compounds						
25)	2,4'-DDE	15.643	12.593	2938354	4016647	2.349	2.285
26)	2,4'-DDD	18.397	15.173	2384970	3840704	2.158	2.318
27)	2,4'-DDT	20.510	16.703	2931766	4517144	2.253	2.295
	SemiQuant Compounds - Not Calibrated on this Instrument						

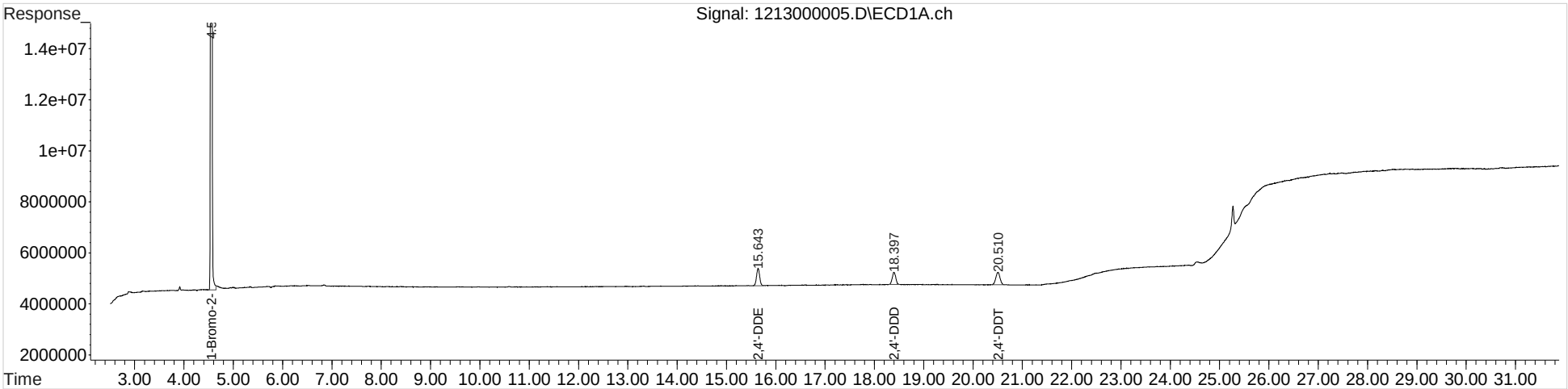
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\121318ICV\1213000005.D Vial: 87
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 16:45:01 Operator: MCHAPPELLE
Sample : 24 ICV 2PPB GCPS8-50C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 17:18:21 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15914 MJ1647 xp11-26Thu Dec 13 15:47:11 2018
QLast Update : Thu Dec 13 15:47:11 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Preparation Information

Group ID:	KWG1806260	**Prep Method:**	EPA 3511	**Prep Date:**	12/03/18 16:15
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.
K1811381-004	SL0153	8081B Pest OC TCLP	SOIL	100ml	5ml
K1811381-005	SL0146	8081B Pest OC TCLP	SOIL	100ml	5ml
K1811438-001	SL0547	8081B Pest OC TCLP	SOIL	100ml	5ml
K1811438-002	SL0554	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806260-1	Matrix Spike	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806260-2	Duplicate Matrix Spike	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806260-3	Matrix Spike	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806260-4	Duplicate Matrix Spike	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806260-5	Lab Control Sample	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806260-6	Lab Control Sample	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806260-7	Method Blank	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806260-8	Method Blank	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806260-9	Method Blank	8081B Pest OC TCLP	SOIL	100ml	5ml

Lab Code	Parent Lab Code	Comments
KWG1806260-1	K1811381-004	
KWG1806260-2	K1811381-004	
KWG1806260-3	K1811381-004	
KWG1806260-4	K1811381-004	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1811381-004	1705206					
K1811381-005	1705207					
K1811438-001	1705208					
K1811438-002	1705209					
KWG1806260-1	1705210					
KWG1806260-2	1705211					
KWG1806260-3	1705212					
KWG1806260-4	1705213					
KWG1806260-5	1705214					
KWG1806260-6	1705215					
KWG1806260-7	1705216					
KWG1806260-8	1705217					
KWG1806260-9	1705218					

Comments: 81, T/C PrepRun: 327553

Started By: TAndrews Assisted By: Training

Completed By: TAndrews Assisted By: Yes (No)

Reviewed By: Date: 12/7/18 Storage: Friday A1-10 B13 Yes (No)

Chain of Custody

Relinquished By: Date: 12.6.18 Extracts Examined

Received By: Date: 1223 Yes No

Preparation Information

Group ID:	KWG1806260	**Prep Method:**	EPA 3511	**Prep Date:**	12/03/18 00:00
Department:	Semivoa GC				

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. mL	pH	Int. Vol.	Final Vol. mL	Surr. Added µL	Spike Added µL
① 1	K1811381-004	SL0153	.14	/	8081B Pest OC TCLP	SOIL	100	~~6~~ 5	/	5	50	—
① 2	K1811381-005	SL0146	.14	/	8081B Pest OC TCLP	SOIL	100	~~7~~ 6		5		—
3	K1811438-001	SL0547	.16	/	8081B Pest OC TCLP	SOIL	100	5		5		—
① 4	K1811438-002	SL0554	.08	/	8081B Pest OC TCLP	SOIL	100	~~7~~ 6		5		—
5	KWG1806260-1 K1811381-4	Matrix Spike S1	.14	/	8081B Pest OC TCLP	SOIL	100	6		5		50
6	KWG1806260-2	Duplicate Matrix Spike	.14	/	8081B Pest OC TCLP	SOIL	100	6		5		50
7	KWG1806260-3	Matrix Spike T/C	.14	/	8081B Pest OC TCLP	SOIL	100	6		5		50/50
8	KWG1806260-4	Duplicate Matrix Spike	.14	/	8081B Pest OC TCLP	SOIL	100	6		5		50/50
9	KWG1806260-5	Lab Control Sample S1		—	8081B Pest OC TCLP	SOIL	100	5		5		50
10	KWG1806260-6	Lab Control Sample T/C		—	8081B Pest OC TCLP	SOIL	100	5		5		50/50
11	KWG1806260-7	Method Blank LB S01 1		—	8081B Pest OC TCLP	SOIL	100	5		5		—
12	KWG1806260-8	Method Blank LB S01 2		—	8081B Pest OC TCLP	SOIL	100	5		5		—
13	KWG1806260-9	Method Blank		—	8081B Pest OC TCLP	SOIL	100	5	/	5		—

① initially wrote wrong PH Levels, actual levels are written in top right of Boxes 12.3.18

Prep Run: 327553

Comments: Sample 6260-8 had an initial PH of 3, used NaOH to neutralize 12.3.18 TA
Sample 1381-5 is murky with sediment 12.3.18 TA

Surrogate ID: PCB 7526 0.5ppm xp 05.08.19 50µL SI

Spike ID: GCP5-496 0.5ppm xp 12.29.18 50µL SI / GCP58-48L 20ppm xp 5.19.19 50µL SI / GCP58-43B 10ppm xp 2.16.19 50µL SI

Witness: BLG

Started By: TAndrews Assisted By:

Completed By: TAndrews Assisted By:

Pest/PCB/PAH by 3511

Service Request # K1811381/1438 **Work Group # Pest:** KWG18U6260
PCB: ——
PAH: ——

Solvent Lot # 195734

Extraction Start (time/date/initial): ~~16:00~~ 12.3.18 [initials] 16:15 ①X

Extraction Stop (time/date/initial): 16:36 12.3.18 [initials]

NaCL Lot# 17H295208
Sulfate Lot # ——

Carbon Clean-up (Ext-Car)(time/date/initial): —— Carbon Lot # ——
Hexane Lot # ——

Florisil Clean-up (Ext-Flor)(time/date/initial): —— Florisil Lot # ——
Hexane Lot # ——

Sulfuric Acid Clean-up (3665) (time/date/initial): —— Acid Lot # ——

Other Clean-up: —— ☐ all samples ☐ some samples: ——

Pipette (2 mL) Lot # —— Pipette (1 mL) Lot # 20717645

Pest Vial: Yellow Vial Storage: Friday A1-10 B1-3
PCB Vial: —— Vial Storage: ——
PAH Vial: —— Vial Storage: ——

Archived Extract Storage: ——

Additional Comments: ① Bottle came a little loose on shaker table, re-secured and reset 12.3.18 [initials]

- ☑ Hold times met (if no, reason: ____)
- ☑ Prep date, time, method, department, product code correct in stealth
- ☑ Spike information and Q.C. correct (insufficient volume or mass recorded if no Q.C.)
- ☑ Weights/Volumes and units correct on raw and final bench sheets
- ☑ Sample IDs have been checked - bottle numbers appended if required
- ☑ Names present for: started by, completed by, relinquished by, and witnessed by. Training circled.
- ☑ Extract storage recorded
- ☑ Additional prep sheet completely filled out (NA or line out blanks)
- ☑ All clean-ups have been noted on additional prep sheet
- ☑ Signed service request with Form V, if applicable, has been attached

TCLP Extraction Worksheet

Service Request Number(s): K181 1346, 1381, 1438

If Autofluff sample is used please place an X in this box ☐ Prep Run# : 327052

Method : TCLP 1311 ☒ SPLP 1312 ☐ Wet Ext. ☐ MEP ☐

Note: 1 Blank needed per every 20 extracts.

Sample Number	Teflon Extraction Vessel #	Sample Description (Solid, Liquid, Multiphasic)	Partical Size < 1cm ?	Solution Determination Weight (g)	Initial pH	Aliquot of 1N HCl (mL)	Final pH	Solution To Be Used	Extraction Weight (g)	Extraction Solution Volume (mL)	Post-Extraction pH
K181346-1	19	S	Y	5.093	8.32	3.5	2.26		100.42	2000	6.14
2	14			5.194	8.68		2.01		100.18		5.14
~~K181138~~ ~~2~~ K181438-1	9			5.176	9.46		5.34	2	100.55		4.93
~~3~~ 2	1			5.055	9.64		4.11	1	100.08		6.10
K181381 - 4 CCL 11/26	8			5.064	9.37		1.87		100.03		5.22
5	13			5.122	10.04		3.05		100.38		6.20
MB	18								—		—
MB	32							2	—		—
				CCL 11/27							

pH Meter Calibrated at pH4 & pH7 Today? ☒ 11/26/18 11/27/18 pH Meter I.D. KpH-08 Balance I.D. 48, 52 Date Balance Checked: 11/2/18, 11/26/18

Extraction Solution Prep date: 11/26/18, 11/6/18 Tumbler # 4 Thermometer# 664244 Hot Plate Temp °C(50°C): 50

Today's Solution pH: 4.95, 2.87 11/26/18 Extraction Solution I.D. MET-DG-26-D MET-DG-73-I Filter Lot # 162105 HCl I.D. REI-48-A

Extraction Started Time: 15:49 Date: 11/26/18 Disposable Extraction Vessel Lot #: —

Extraction Finished Time: 8:14 Date: 11/27/18

Tumbler Rotational Speed (28 - 32 rpm): 29.7

Room Temperature at the Beginning of Extraction (Temp. Range 21° C - 25°C): 21.75

Analyst: [signature] Date: 11/26/18 Reviewer: [signature] Date: 11/27/18

r:\tcp\misc\digforms\TCLP Extraction Benchsheet 10-10-171

Sequence Table (Front Injector):

Line	Location	SampleName	Method Name	Data File
1	Vial 100	MAINT BLANK	2UL10T1	
2	Vial 100	MAINT BLANK	2UL10T1	
3	Vial 100	MAINT BLANK	2UL10T1	
4	Vial 86	PEM GCPS8-49H	2UL10T1	
5	Vial 87	81 2PPB GCPS8-50D MAINT - ok	2UL10T1	
6	Vial 87	81 2PPB GCPS8-50D - o/c	2UL10T1	
7	Vial 4	24 2PPB GCPS8-47C	2UL10T1	
8	Vial 95	TOX 100PPB GCPS8-47B	2UL10T1	
9	Vial 97	IB	2UL10T1	
10	Vial 44	KWG1806274-MB	2UL10T1	
11	Vial 45	KWG1806274-LCS 81/24	2UL10T1	
12	Vial 46	KWG1806274-DLCS 81/24	2UL10T1	
13	Vial 47	KWG1806274-LCS TOX	2UL10T1	
14	Vial 48	KWG1806274-DLCS TOX	2UL10T1	
15	Vial 49	K1811691-002	2UL10T1	
16	Vial 50	K1811691-003	2UL10T1	
17	Vial 51	K1811691-004	2UL10T1	
18	Vial 52	K1811691-006	2UL10T1	
19	Vial 53	K1811691-007@5X MATRIX	2UL10T1	
20	Vial 54	K1811691-008	2UL10T1	
21	Vial 97	CARRYOVER BLANK Hepta↑	2UL10T1	
22	Vial 86	PEM GCPS8-49H	2UL10T1	
23	Vial 87	81 2PPB GCPS8-50D - delta↑, OK	2UL10T1	
24	Vial 88	TOX 100PPB GCPS8-47B	2UL10T1	
25	Vial 89	CHLOR 20PPB GCPS8-50F	2UL10T1	
26	Vial 90	IB	2UL10T1	
27	Vial 55	KWG1806518-MB	2UL10T1	
28	Vial 56	KWG1806518-LCS 81	2UL10T1	
29	Vial 57	KWG1806518-LCS T/C	2UL10T1	
30	Vial 58	K1811983-002	2UL10T1	
31	Vial 59	K1811983-002MS 81	2UL10T1	
32	Vial 60	K1811983-002DMS 81	2UL10T1	
33	Vial 61	K1811983-002MS T/C	2UL10T1	
34	Vial 62	K1811983-002DMS T/C	2UL10T1	
35	Vial 86	PEM GCPS8-49H	2UL10T1	
36	Vial 87	81 2PPB GCPS8-50D ok, few↑	2UL10T1	
37	Vial 88	TOX 100PPB GCPS8-47B	2UL10T1	
38	Vial 89	CHLOR 20PPB GCPS8-50F	2UL10T1	
39	Vial 90	IB	2UL10T1	
40	Vial 63	KWG1806260-7 LB1	2UL10T1	
41	Vial 64	KWG1806260-8 LB2	2UL10T1	
42	Vial 65	KWG1806260-9 MB	2UL10T1	
43	Vial 66	KWG1806260-LCS 81	2UL10T1	
44	Vial 67	KWG1806260-LCS T/C	2UL10T1	
45	Vial 68	K1811381-004	2UL10T1	
46	Vial 69	K1811381-004MS 81	2UL10T1	
47	Vial 70	K1811381-004DMS 81	2UL10T1	
48	Vial 71	K1811381-004MS T/C	2UL10T1	
49	Vial 72	K1811381-004DMS T/C	2UL10T1	
50	Vial 73	K1811381-005	2UL10T1	
51	Vial 74	K1811438-001	2UL10T1	
52	Vial 75	K1811438-002	2UL10T1	
53	Vial 86	PEM GCPS8-49H	2UL10T1	
54	Vial 87	81 2PPB GCPS8-50D Depta↑,↑	2UL10T1	
55	Vial 3	MISC 2PPB GCPS8-47M	2UL10T1	

CR: 15914
RUN: 620022

56	Vial 4	24 2PPB GCPS8-47C	2UL10T1
57	Vial 90	IB	2UL10T1
58	Vial 8	K1811049-001	2UL10T1
59	Vial 9	K1811049-001DUP	2UL10T1
60	Vial 10	K1811049-002	2UL10T1
61	Vial 11	K1811049-003	2UL10T1
62	Vial 12	K1811049-004	2UL10T1
63	Vial 13	K1811137-001	2UL10T1
64	Vial 14	K1811137-002	2UL10T1
65	Vial 15	K1811049-001MS 81M	2UL10T1
66	Vial 16	K1811049-001DMS 81M	2UL10T1
67	Vial 17	K1811049-001MS 24	2UL10T1
68	Vial 18	K1811049-001DMS 24	2UL10T1
69	Vial 19	KWG1806173-LCS6	2UL10T1
70	Vial 20	KWG1806173-LCS7	2UL10T1
71	Vial 21	KWG1806173-MB	2UL10T1
72	Vial 22	KWG1806173-SRM	2UL10T1

Sequence: C:\GC54\SEQUENCE\121210CAL.S

Cal: 15914

Sequence Table (Front Injector):

Line	Location	SampleName	Method Name	Data File
1	Vial 100	PRIMER	2UL10T1	
2	Vial 1	PEM GCPS8-49H	2UL10T1	
3	Vial 2	IB	2UL10T1	
4	Vial 3	24 .2PPB GCPS8-49K @10X	2UL10T1	
5	Vial 4	24 .5PPB GCPS8-49K @4X	2UL10T1	
6	Vial 5	24 1.0PPB GCPS8-49K @2X	2UL10T1	
7	Vial 6	24 2PPB GCPS8-49K	2UL10T1	
8	Vial 7	24 5PPB GCPS8-47D @4X	2UL10T1	
9	Vial 8	24 10PPB GCPS8-47D @2X	2UL10T1	
10	Vial 9	24 ICV 2PPB GCPS8-50A NR	2UL10T1-Re-run 11	
11	Vial 10	M/P .2/1PPB GCPS8-45G @5X	2UL10T1	
12	Vial 11	M/P .5/2.5PPB GCPS8-45D	2UL10T1	
13	Vial 12	M/P 1/5PPB GCPS8-45G	2UL10T1	
14	Vial 13	M/P 2/10PPB GCPS8-47M	2UL10T1	
15	Vial 14	M/P 5/25PPB GCPS8-45B	2UL10T1	
16	Vial 15	M/P 10/50PPB GCPS8-45C	2UL10T1	
17	Vial 16	MISC ICV 2PPB GCPS8-45I	2UL10T1	
18	Vial 17	PERTH ICV 25PPB GCPS8-45F	2UL10T1	
19	Vial 18	TOX 10PPB GCPS8-48F	2UL10T1	
20	Vial 19	TOX 20PPB GCPS8-48H	2UL10T1	
21	Vial 20	TOX 50PPB GCPS8-48G	2UL10T1	
22	Vial 21	TOX 100PPB GCPS8-47B	2UL10T1	
23	Vial 22	TOX 250PPB GCPS8-48J @2X	2UL10T1	
24	Vial 23	TOX 500PPB GCPS8-48J	2UL10T1	
25	Vial 24	TOX ICV 200 PPB GCPS8-48E	2UL10T1	
26	Vial 25	CHLOR 2PPB GCPS8-48D @10X	2UL10T1	
27	Vial 26	CHLOR 5PPB GCPS8-48D @4X	2UL10T1	
28	Vial 27	CHLOR 10PPB GCPS8-48D @2X	2UL10T1	
29	Vial 28	CHLOR 20PPB GCPS8-48D	2UL10T1	
30	Vial 29	CHLOR 50PPB CPS8-46J @4X	2UL10T1	
31	Vial 30	CHLOR 100PPB GCPS8-46J @2X	2UL10T1	
32	Vial 31	CHLOR 200PPB GCPS8-46J	2UL10T1	
33	Vial 32	CHLOR ICV 50PPB GCPS8-50B	2UL10T1	

Sequence Table (Front Injector):

Line	Location	SampleName	Method Name	Data File
1	Vial 90	PRIMER	2UL10T1	
2	Vial 89	PEM GCPS8-49H	2UL10T1	
3	Vial 88	IB	2UL10T1	
4	Vial 87	24 ICV 2PPB GCPS8-50C	2UL10T1 -NR 2,4 DDE ↑↑	
5	Vial 87	24 ICV 2PPB GCPS8-50C	2UL10T1	

Initial Calibration - Summary Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB XLB

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
Tetrachloro-m-xylene	SURR	AverageRF		0.975	20	6.1			NA	
alpha-BHC	MS	AverageRF		1.108	20	4.1			OK	
Hexachlorobenzene	MS	AverageRF		1.629	20	4.7			OK	
beta-BHC	MS	AverageRF		0.623	20	16.3			OK	
gamma-BHC (Lindane)	MS	AverageRF		1.043	20	1.8			OK	
delta-BHC	MS	AverageRF		1.220	20	3.4			OK	
Heptachlor	MS	AverageRF		1.013	20	6.5			OK	
Aldrin	MS	AverageRF		1.114	20	8.1			OK	
Isodrin	MS	AverageRF		0.928	20	3.7			OK	
Heptachlor Epoxide	MS	AverageRF		1.168	20	4.0			OK	
gamma-Chlordane	MS	AverageRF		1.200	20	8.0			OK	
Endosulfan I	MS	AverageRF		1.032	20	1.6			OK	
alpha-Chlordane	MS	AverageRF		1.156	20	6.4			OK	
Dieldrin	MS	AverageRF		1.112	20	3.5			OK	
4,4'-DDE	MS	AverageRF		1.185	20	5.4			OK	
Endrin	MS	AverageRF		1.058	20	6.9			OK	
Endosulfan II	MS	AverageRF		1.059	20	7.0			OK	
4,4'-DDD	MS	AverageRF		0.844	20	6.3			OK	
Endrin Aldehyde	MS	AverageRF		0.910	20	10.7			OK	
Endosulfan Sulfate	MS	AverageRF		1.084	20	5.0			OK	
4,4'-DDT	MS	AverageRF		1.020	20	3.2			OK	
Endrin Ketone	MS	AverageRF		1.165	20	6.9			OK	
Methoxychlor	MS	AverageRF		0.619	20	3.8			OK	
2,4'-DDE	MS	AverageRF		0.936	20	13.6			OK	
2,4'-DDD	MS	AverageRF		0.827	20	7.5			OK	
2,4'-DDT	MS	AverageRF		0.973	20	9.1			OK	
Decachlorobiphenyl	SURR	AverageRF		1.267	20	5.0			NA	
Toxaphene {1}	MULTI	AverageRF		0.004	20	14.2			OK	
Toxaphene {2}	MULTI	Quadratic		0.011			0.990	0.9990	OK	4.83
Toxaphene {3}	MULTI	AverageRF		0.016	20	19.3			OK	
Toxaphene {4}	MULTI	AverageRF		0.019	20	7.6			OK	
Toxaphene {5}	MULTI	AverageRF		0.011	20	17.7			OK	
Toxaphene {6}	MULTI	AverageRF		0.004	20	14.3			OK	
Chlordane {1}	MULTI	AverageRF		0.043	20	5.9			OK	
Chlordane {2}	MULTI	AverageRF		0.058	20	6.6			OK	
Chlordane {3}	MULTI	AverageRF		0.044	20	7.5			OK	
Chlordane {4}	MULTI	AverageRF		0.126	20	10.4			OK	
Chlordane {5}	MULTI	AverageRF		0.118	20	10.0			OK	
Chlordane {6}	MULTI	AverageRF		0.080	20	6.9			OK	
Chlorpyrifos	MS	AverageRF		0.749	20	3.9			OK	
Oxychlordane	MS	AverageRF		1.235	20	6.0			OK	
cis-Nonachlor	MS	AverageRF		1.452	20	6.9			OK	
trans-Nonachlor	MS	AverageRF		1.352	20	4.2			OK	
Mirex	MS	AverageRF		0.823	20	5.2			OK	
Hexachloroethane	MS	AverageRF		2.214	20	8.1			OK	
Hexachlorobutadiene	MS	AverageRF		1.764	20	3.3			OK	
Perthane	MS	AverageRF		0.090	20	12.5			OK	

Initial Calibration - Summary Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
Tetrachloro-m-xylene	SURR	AverageRF		1.263	20	12.2			NA	
alpha-BHC	MS	AverageRF		1.555	20	7.6			OK	
Hexachlorobenzene	MS	AverageRF		1.864	20	15.0			OK	
beta-BHC	MS	AverageRF		0.826	20	9.8			OK	
gamma-BHC (Lindane)	MS	AverageRF		1.513	20	8.4			OK	
delta-BHC	MS	AverageRF		1.564	20	7.1			OK	
Heptachlor	MS	AverageRF		1.617	20	8.8			OK	
Aldrin	MS	AverageRF		1.492	20	7.7			OK	
Isodrin	MS	AverageRF		1.295	20	7.1			OK	
Heptachlor Epoxide	MS	AverageRF		1.550	20	8.3			OK	
gamma-Chlordane	MS	AverageRF		1.624	20	9.7			OK	
Endosulfan I	MS	AverageRF		1.476	20	10.0			OK	
alpha-Chlordane	MS	AverageRF		1.555	20	7.9			OK	
Dieldrin	MS	AverageRF		1.550	20	7.9			OK	
4,4'-DDE	MS	AverageRF		1.506	20	7.3			OK	
Endrin	MS	AverageRF		1.545	20	9.3			OK	
Endosulfan II	MS	AverageRF		1.507	20	7.6			OK	
4,4'-DDD	MS	AverageRF		1.233	20	5.7			OK	
Endrin Aldehyde	MS	AverageRF		1.218	20	7.1			OK	
Endosulfan Sulfate	MS	AverageRF		1.601	20	8.0			OK	
4,4'-DDT	MS	AverageRF		1.392	20	5.8			OK	
Endrin Ketone	MS	AverageRF		1.752	20	10.6			OK	
Methoxychlor	MS	AverageRF		0.874	20	8.6			OK	
2,4'-DDE	MS	AverageRF		1.287	20	9.1			OK	
2,4'-DDD	MS	AverageRF		1.214	20	9.1			OK	
2,4'-DDT	MS	AverageRF		1.442	20	11.0			OK	
Decachlorobiphenyl	SURR	AverageRF		1.628	20	9.8			NA	
Toxaphene {1}	MULTI	AverageRF		0.007	20	13.7			OK	
Toxaphene {2}	MULTI	Quadratic		0.011			0.990	0.9991	OK	6.68
Toxaphene {3}	MULTI	AverageRF		0.033	20	12.3			OK	
Toxaphene {4}	MULTI	AverageRF		0.023	20	15.7			OK	
Toxaphene {5}	MULTI	AverageRF		0.019	20	10.6			OK	
Toxaphene {6}	MULTI	AverageRF		0.030	20	12.7			OK	
Chlordane {1}	MULTI	AverageRF		0.064	20	12.8			OK	
Chlordane {2}	MULTI	AverageRF		0.086	20	11.9			OK	
Chlordane {3}	MULTI	AverageRF		0.046	20	17.5			OK	
Chlordane {4}	MULTI	AverageRF		0.178	20	16.4			OK	
Chlordane {5}	MULTI	AverageRF		0.113	20	14.1			OK	
Chlordane {6}	MULTI	AverageRF		0.161	20	15.2			OK	
Chlorpyrifos	MS	AverageRF		1.185	20	13.4			OK	
Oxychlordane	MS	AverageRF		1.727	20	13.1			OK	
cis-Nonachlor	MS	AverageRF		2.097	20	10.4			OK	
trans-Nonachlor	MS	AverageRF		1.907	20	11.5			OK	
Mirex	MS	AverageRF		1.683	20	13.6			OK	
Hexachloroethane	MS	AverageRF		2.351	20	10.9			OK	
Hexachlorobutadiene	MS	AverageRF		1.851	20	13.7			OK	
Perthane	MS	AverageRF		0.065	20	10.6			OK	

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	285265	J:\GC34\DATA\112618\1126000008.D	11/26/2018 16:05	11/27/2018 09:18	12/13/2018 13:39
2	285267	J:\GC34\DATA\112618\1126000009.D	11/26/2018 16:41	11/27/2018 09:21	12/13/2018 13:39
3	285271	J:\GC34\DATA\112618\1126000011.D	11/26/2018 17:52	11/27/2018 09:32	12/13/2018 13:39
4	285273	J:\GC34\DATA\112618\1126000012.D	11/26/2018 18:28	11/27/2018 09:35	12/13/2018 13:40
5	285275	J:\GC34\DATA\112618\1126000013.D	11/26/2018 19:04	11/27/2018 09:38	12/13/2018 13:40
6	285277	J:\GC34\DATA\112718CAL\1127000006.D	11/27/2018 13:21	11/27/2018 14:08	12/13/2018 13:40
7	285633	J:\GC34\DATA\121218CAL\1212000004.D	12/12/2018 15:18	12/13/2018 10:15	12/13/2018 13:40
8	285635	J:\GC34\DATA\121218CAL\1212000005.D	12/12/2018 15:54	12/13/2018 10:16	12/13/2018 13:40
9	285637	J:\GC34\DATA\121218CAL\1212000006.D	12/12/2018 16:31	12/13/2018 10:16	12/13/2018 13:40
10	285639	J:\GC34\DATA\121218CAL\1212000007.D	12/12/2018 17:06	12/13/2018 10:17	12/13/2018 13:40
11	285641	J:\GC34\DATA\121218CAL\1212000008.D	12/12/2018 17:42	12/13/2018 10:18	12/13/2018 13:40
12	285643	J:\GC34\DATA\121218CAL\1212000009.D	12/12/2018 18:19	12/13/2018 10:18	12/13/2018 13:40
13	285645	J:\GC34\DATA\121218CAL\1212000011.D	12/12/2018 19:31	12/13/2018 10:27	12/13/2018 13:40
14	285647	J:\GC34\DATA\121218CAL\1212000012.D	12/12/2018 20:07	12/13/2018 10:29	12/13/2018 13:41
15	285649	J:\GC34\DATA\121218CAL\1212000013.D	12/12/2018 20:43	12/13/2018 10:30	12/13/2018 13:41
16	285651	J:\GC34\DATA\121218CAL\1212000014.D	12/12/2018 21:19	12/13/2018 10:31	12/13/2018 13:41
17	285653	J:\GC34\DATA\121218CAL\1212000015.D	12/12/2018 21:55	12/13/2018 10:46	12/13/2018 13:41
18	285655	J:\GC34\DATA\121218CAL\1212000016.D	12/12/2018 22:31	12/13/2018 10:47	12/13/2018 13:41
19	285661	J:\GC34\DATA\121218CAL\1212000019.D	12/13/2018 00:19	12/13/2018 11:03	12/13/2018 15:51
20	285663	J:\GC34\DATA\121218CAL\1212000020.D	12/13/2018 00:55	12/13/2018 15:46	12/13/2018 15:51
21	285665	J:\GC34\DATA\121218CAL\1212000021.D	12/13/2018 01:31	12/13/2018 11:49	12/13/2018 13:41
22	285667	J:\GC34\DATA\121218CAL\1212000022.D	12/13/2018 02:07	12/13/2018 11:53	12/13/2018 13:41
23	285669	J:\GC34\DATA\121218CAL\1212000023.D	12/13/2018 02:43	12/13/2018 11:57	12/13/2018 13:42
24	285671	J:\GC34\DATA\121218CAL\1212000024.D	12/13/2018 03:19	12/13/2018 12:01	12/13/2018 13:42
25	285685	J:\GC34\DATA\121218CAL\1212000026.D	12/13/2018 04:30	12/13/2018 13:28	12/13/2018 13:44
26	285673	J:\GC34\DATA\121218CAL\1212000027.D	12/13/2018 05:06	12/13/2018 13:29	12/13/2018 13:43
27	285675	J:\GC34\DATA\121218CAL\1212000028.D	12/13/2018 05:42	12/13/2018 13:30	12/13/2018 13:43
28	285677	J:\GC34\DATA\121218CAL\1212000029.D	12/13/2018 06:18	12/13/2018 13:31	12/13/2018 13:43
29	285679	J:\GC34\DATA\121218CAL\1212000030.D	12/13/2018 06:53	12/13/2018 13:31	12/13/2018 13:44
30	285681	J:\GC34\DATA\121218CAL\1212000031.D	12/13/2018 07:29	12/13/2018 13:32	12/13/2018 13:44
31	285683	J:\GC34\DATA\121218CAL\1212000032.D	12/13/2018 08:05	12/13/2018 13:33	12/13/2018 13:44

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Tetrachloro-m-xylene	1	1.064	2	0.995	3	0.938	4	0.928	5	0.911	6	1.013	0.975	6.1
alpha-BHC	1	1.133	2	1.160	3	1.074	4	1.097	5	1.142	6	1.042	1.108	4.1

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Hexachlorobenzene	1	1.723	2	1.638	3	1.664	4	1.576	5	1.506	6	1.667	1.629	4.7
beta-BHC	1	0.826	2	0.587	3	0.562	4	0.581	5	0.567	6	0.613	0.623	16.3
gamma-BHC (Lindane)	1	1.048	2	1.033	3	1.017	4	1.045	5	1.073	6	1.039	1.043	1.8
delta-BHC	1	1.264	2	1.248	3	1.158	4	1.199	5	1.198	6	1.253	1.220	3.4
Heptachlor	1	0.923	2	0.938	3	1.044	4	1.056	5	1.080	6	1.037	1.013	6.5
Aldrin	1	1.261	2	1.191	3	1.058	4	1.044	5	1.055	6	1.076	1.114	8.1
Isodrin	1	0.962	2	0.872	3	0.926	4	0.925	5	0.919	6	0.966	0.928	3.7
Heptachlor Epoxide	1	1.194	2	1.212	3	1.202	4	1.121	5	1.098	6	1.181	1.168	4.0

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
gamma-Chlordane	1	1.226	2	1.373	3	1.196	4	1.126	5	1.105	6	1.172	1.200	8.0
Endosulfan I	1	1.032	2	1.028	3	1.051	4	1.020	5	1.012	6	1.051	1.032	1.6
alpha-Chlordane	1	1.079	2	1.292	3	1.144	4	1.144	5	1.108	6	1.171	1.156	6.4
Dieldrin	1	1.097	2	1.118	3	1.137	4	1.084	5	1.065	6	1.174	1.112	3.5
4,4'-DDE	1	1.285	2	1.086	3	1.173	4	1.195	5	1.167	6	1.203	1.185	5.4
Endrin	1	0.944	2	1.002	3	1.086	4	1.092	5	1.079	6	1.147	1.058	6.9
Endosulfan II	1	1.193	2	0.977	3	1.034	4	1.038	5	1.024	6	1.089	1.059	7.0
4,4'-DDD	1	0.849	2	0.739	3	0.890	4	0.860	5	0.865	6	0.861	0.844	6.3

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Endrin Aldehyde	1	1.096	2	0.911	3	0.838	4	0.906	5	0.828	6	0.881	0.910	10.7
Endosulfan Sulfate	1	0.990	2	1.070	3	1.128	4	1.137	5	1.070	6	1.109	1.084	5.0
4,4'-DDT	1	0.968	2	0.993	3	1.036	4	1.059	5	1.031	6	1.029	1.020	3.2
Endrin Ketone	1	1.063	2	1.176	3	1.152	4	1.159	5	1.131	6	1.307	1.165	6.9
Methoxychlor	1	0.656	2	0.592	3	0.626	4	0.626	5	0.613	6	0.598	0.619	3.8
2,4'-DDE	7	0.711	8	1.086	9	1.009	10	0.916	11	0.918	12	0.975	0.936	13.6
2,4'-DDD	7	0.901	8	0.889	9	0.824	10	0.753	11	0.760	12	0.833	0.827	7.5
2,4'-DDT	7	0.812	8	1.039	9	1.048	10	0.981	11	0.940	12	1.020	0.973	9.1

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Endrin Aldehyde	1	1.096	2	0.911	3	0.838	4	0.906	5	0.828	6	0.881	0.910	10.7
Endosulfan Sulfate	1	0.990	2	1.070	3	1.128	4	1.137	5	1.070	6	1.109	1.084	5.0
4,4'-DDT	1	0.968	2	0.993	3	1.036	4	1.059	5	1.031	6	1.029	1.020	3.2
Endrin Ketone	1	1.063	2	1.176	3	1.152	4	1.159	5	1.131	6	1.307	1.165	6.9
Methoxychlor	1	0.656	2	0.592	3	0.626	4	0.626	5	0.613	6	0.598	0.619	3.8
2,4'-DDE	7	0.711	8	1.086	9	1.009	10	0.916	11	0.918	12	0.975	0.936	13.6
2,4'-DDD	7	0.901	8	0.889	9	0.824	10	0.753	11	0.760	12	0.833	0.827	7.5
2,4'-DDT	7	0.812	8	1.039	9	1.048	10	0.981	11	0.940	12	1.020	0.973	9.1

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Decachlorobiphenyl	1	1.170	2	1.336	3	1.331	4	1.284	5	1.231	6	1.251	1.267	5.0
Toxaphene {1}													0.004	14.2
	19	0.004	20	0.005	21	0.004	22	0.005	23	0.005	24	0.004		
Toxaphene {2}													0.011	38.7#
	19	0.002	20	0.013	21	0.012	22	0.014	23	0.012	24	0.012		
Toxaphene {3}													0.016	19.3
	19	0.010	20	0.015	21	0.015	22	0.019	23	0.018	24	0.016		
Toxaphene {4}													0.019	7.6
	19	0.016	20	0.020	21	0.018	22	0.020	23	0.020	24	0.019		
Toxaphene {5}													0.011	17.7
	19	0.009	20	0.008	21	0.011	22	0.012	23	0.012	24	0.012		
Toxaphene {6}													0.004	14.3
	19	0.004	20	0.003	21	0.004	22	0.005	23	0.005	24	0.004		
Chlordane {1}													0.043	5.9
	25	0.042	26	0.042	27	0.043	28	0.038	29	0.046	30	0.044		
	31	0.044												

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Chlordane {2}							0.058	6.6
	25 0.058	26 0.058	27 0.058	28 0.049	29 0.060	30 0.059		
	31 0.060							
Chlordane {3}							0.044	7.5
	25 0.049	26 0.044	27 0.046	28 0.039	29 0.046	30 0.043		
	31 0.042							
Chlordane {4}							0.126	10.4
	25 0.120	26 0.140	27 0.141	28 0.104	29 0.132	30 0.119		
	31 0.125							
Chlordane {5}							0.118	10.0
	25 0.133	26 0.134	27 0.123	28 0.109	29 0.112	30 0.107		
	31 0.108							
Chlordane {6}							0.080	6.9
	25 0.086	26 0.087	27 0.079	28 0.071	29 0.081	30 0.077		
	31 0.078							
Chlorpyrifos							0.749	3.9
	13 0.776	14 0.733	15 0.734	16 0.793	17 0.717	18 0.740		
Oxychlordane							1.235	6.0
	13 1.368	14 1.252	15 1.165	16 1.246	17 1.177	18 1.199		
cis-Nonachlor							1.452	6.9
	13 1.617	14 1.319	15 1.399	16 1.492	17 1.429	18 1.457		

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
trans-Nonachlor													1.352	4.2
	13	1.356	14	1.443	15	1.294	16	1.392	17	1.298	18	1.332		
Mirex													0.823	5.2
	13	0.768	14	0.890	15	0.800	16	0.852	17	0.814	18	0.813		
Hexachloroethane													2.214	8.1
	13	2.424	14	2.267	15	1.972	16	2.359	17	2.030	18	2.232		
Hexachlorobutadiene													1.764	3.3
	13	1.705	14	1.748	15	1.756	16	1.860	17	1.716	18	1.801		
Perthane													0.090	12.5
	13	0.109	14	0.096	15	0.087	16	0.084	17	0.081	18	0.080		

 # RSD Not Applicable. Compound being quantitated from curve. Included in Average RF summary for Average %RSD calculation.

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	Quadratic

FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
285265	J:\GC34\DATA\112618\1126000008.D	11/26/2018 16:05	11/27/2018 09:18	12/13/2018 13:39
285267	J:\GC34\DATA\112618\1126000009.D	11/26/2018 16:41	11/27/2018 09:21	12/13/2018 13:39
285271	J:\GC34\DATA\112618\1126000011.D	11/26/2018 17:52	11/27/2018 09:32	12/13/2018 13:39
285273	J:\GC34\DATA\112618\1126000012.D	11/26/2018 18:28	11/27/2018 09:35	12/13/2018 13:40
285275	J:\GC34\DATA\112618\1126000013.D	11/26/2018 19:04	11/27/2018 09:38	12/13/2018 13:40
285277	J:\GC34\DATA\112718CAL\1127000006.D	11/27/2018 13:21	11/27/2018 14:08	12/13/2018 13:40
285633	J:\GC34\DATA\121218CAL\1212000004.D	12/12/2018 15:18	12/13/2018 10:15	12/13/2018 13:40
285635	J:\GC34\DATA\121218CAL\1212000005.D	12/12/2018 15:54	12/13/2018 10:16	12/13/2018 13:40
285637	J:\GC34\DATA\121218CAL\1212000006.D	12/12/2018 16:31	12/13/2018 10:16	12/13/2018 13:40
285639	J:\GC34\DATA\121218CAL\1212000007.D	12/12/2018 17:06	12/13/2018 10:17	12/13/2018 13:40
285641	J:\GC34\DATA\121218CAL\1212000008.D	12/12/2018 17:42	12/13/2018 10:18	12/13/2018 13:40
285643	J:\GC34\DATA\121218CAL\1212000009.D	12/12/2018 18:19	12/13/2018 10:18	12/13/2018 13:40
285645	J:\GC34\DATA\121218CAL\1212000011.D	12/12/2018 19:31	12/13/2018 10:27	12/13/2018 13:40
285647	J:\GC34\DATA\121218CAL\1212000012.D	12/12/2018 20:07	12/13/2018 10:29	12/13/2018 13:41
285649	J:\GC34\DATA\121218CAL\1212000013.D	12/12/2018 20:43	12/13/2018 10:30	12/13/2018 13:41
285651	J:\GC34\DATA\121218CAL\1212000014.D	12/12/2018 21:19	12/13/2018 10:31	12/13/2018 13:41
285653	J:\GC34\DATA\121218CAL\1212000015.D	12/12/2018 21:55	12/13/2018 10:46	12/13/2018 13:41
285655	J:\GC34\DATA\121218CAL\1212000016.D	12/12/2018 22:31	12/13/2018 10:47	12/13/2018 13:41
285661	J:\GC34\DATA\121218CAL\1212000019.D	12/13/2018 00:19	12/13/2018 11:03	12/13/2018 15:51
285663	J:\GC34\DATA\121218CAL\1212000020.D	12/13/2018 00:55	12/13/2018 15:46	12/13/2018 15:51
285665	J:\GC34\DATA\121218CAL\1212000021.D	12/13/2018 01:31	12/13/2018 11:49	12/13/2018 13:41
285667	J:\GC34\DATA\121218CAL\1212000022.D	12/13/2018 02:07	12/13/2018 11:53	12/13/2018 13:41
285669	J:\GC34\DATA\121218CAL\1212000023.D	12/13/2018 02:43	12/13/2018 11:57	12/13/2018 13:42
285671	J:\GC34\DATA\121218CAL\1212000024.D	12/13/2018 03:19	12/13/2018 12:01	12/13/2018 13:42
285685	J:\GC34\DATA\121218CAL\1212000026.D	12/13/2018 04:30	12/13/2018 13:28	12/13/2018 13:44
285673	J:\GC34\DATA\121218CAL\1212000027.D	12/13/2018 05:06	12/13/2018 13:29	12/13/2018 13:43
285675	J:\GC34\DATA\121218CAL\1212000028.D	12/13/2018 05:42	12/13/2018 13:30	12/13/2018 13:43
285677	J:\GC34\DATA\121218CAL\1212000029.D	12/13/2018 06:18	12/13/2018 13:31	12/13/2018 13:43
285679	J:\GC34\DATA\121218CAL\1212000030.D	12/13/2018 06:53	12/13/2018 13:31	12/13/2018 13:44
285681	J:\GC34\DATA\121218CAL\1212000031.D	12/13/2018 07:29	12/13/2018 13:32	12/13/2018 13:44
285683	J:\GC34\DATA\121218CAL\1212000032.D	12/13/2018 08:05	12/13/2018 13:33	12/13/2018 13:44

Parameter Name	CoefX2	CoefX	Y-intercept	COD	Mean RF
Toxaphene {2}		0.014	-0.001	0.9990	0.011

Initial Calibration - Detailed Report

Calibration ID: CAL15914
Method ID: MJ1647
Instrument ID: GC34
Column Name: DB XLB

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	285265	J:\GC34\DATA\112618\1126000008.D	11/26/2018 16:05	11/27/2018 09:18	12/13/2018 13:39
2	285267	J:\GC34\DATA\112618\1126000009.D	11/26/2018 16:41	11/27/2018 09:21	12/13/2018 13:39
3	285271	J:\GC34\DATA\112618\1126000011.D	11/26/2018 17:52	11/27/2018 09:32	12/13/2018 13:39
4	285273	J:\GC34\DATA\112618\1126000012.D	11/26/2018 18:28	11/27/2018 09:35	12/13/2018 13:40
5	285275	J:\GC34\DATA\112618\1126000013.D	11/26/2018 19:04	11/27/2018 09:38	12/13/2018 13:40
6	285277	J:\GC34\DATA\112718CAL\1127000006.D	11/27/2018 13:21	11/27/2018 14:08	12/13/2018 13:40
7	285633	J:\GC34\DATA\121218CAL\1212000004.D	12/12/2018 15:18	12/13/2018 10:15	12/13/2018 13:40
8	285635	J:\GC34\DATA\121218CAL\1212000005.D	12/12/2018 15:54	12/13/2018 10:16	12/13/2018 13:40
9	285637	J:\GC34\DATA\121218CAL\1212000006.D	12/12/2018 16:31	12/13/2018 10:16	12/13/2018 13:40
10	285639	J:\GC34\DATA\121218CAL\1212000007.D	12/12/2018 17:06	12/13/2018 10:17	12/13/2018 13:40
11	285641	J:\GC34\DATA\121218CAL\1212000008.D	12/12/2018 17:42	12/13/2018 10:18	12/13/2018 13:40
12	285643	J:\GC34\DATA\121218CAL\1212000009.D	12/12/2018 18:19	12/13/2018 10:18	12/13/2018 13:40
13	285645	J:\GC34\DATA\121218CAL\1212000011.D	12/12/2018 19:31	12/13/2018 10:27	12/13/2018 13:40
14	285647	J:\GC34\DATA\121218CAL\1212000012.D	12/12/2018 20:07	12/13/2018 10:29	12/13/2018 13:41
15	285649	J:\GC34\DATA\121218CAL\1212000013.D	12/12/2018 20:43	12/13/2018 10:30	12/13/2018 13:41
16	285651	J:\GC34\DATA\121218CAL\1212000014.D	12/12/2018 21:19	12/13/2018 10:31	12/13/2018 13:41
17	285653	J:\GC34\DATA\121218CAL\1212000015.D	12/12/2018 21:55	12/13/2018 10:46	12/13/2018 13:41
18	285655	J:\GC34\DATA\121218CAL\1212000016.D	12/12/2018 22:31	12/13/2018 10:47	12/13/2018 13:41
19	285661	J:\GC34\DATA\121218CAL\1212000019.D	12/13/2018 00:19	12/13/2018 11:03	12/13/2018 15:51
20	285663	J:\GC34\DATA\121218CAL\1212000020.D	12/13/2018 00:55	12/13/2018 15:46	12/13/2018 15:51
21	285665	J:\GC34\DATA\121218CAL\1212000021.D	12/13/2018 01:31	12/13/2018 11:49	12/13/2018 13:41
22	285667	J:\GC34\DATA\121218CAL\1212000022.D	12/13/2018 02:07	12/13/2018 11:53	12/13/2018 13:41
23	285669	J:\GC34\DATA\121218CAL\1212000023.D	12/13/2018 02:43	12/13/2018 11:57	12/13/2018 13:42
24	285671	J:\GC34\DATA\121218CAL\1212000024.D	12/13/2018 03:19	12/13/2018 12:01	12/13/2018 13:42
25	285685	J:\GC34\DATA\121218CAL\1212000026.D	12/13/2018 04:30	12/13/2018 13:28	12/13/2018 13:44
26	285673	J:\GC34\DATA\121218CAL\1212000027.D	12/13/2018 05:06	12/13/2018 13:29	12/13/2018 13:43
27	285675	J:\GC34\DATA\121218CAL\1212000028.D	12/13/2018 05:42	12/13/2018 13:30	12/13/2018 13:43
28	285677	J:\GC34\DATA\121218CAL\1212000029.D	12/13/2018 06:18	12/13/2018 13:31	12/13/2018 13:43
29	285679	J:\GC34\DATA\121218CAL\1212000030.D	12/13/2018 06:53	12/13/2018 13:31	12/13/2018 13:44
30	285681	J:\GC34\DATA\121218CAL\1212000031.D	12/13/2018 07:29	12/13/2018 13:32	12/13/2018 13:44
31	285683	J:\GC34\DATA\121218CAL\1212000032.D	12/13/2018 08:05	12/13/2018 13:33	12/13/2018 13:44

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Tetrachloro-m-xylene	1	0.2	0.2183	9.2	2	0.5	0.5103	2.1	3	2	1.924	-3.8
	4	5	4.760	-4.8	5	10	9.348	-6.5	6	1	1.039	3.9

Initial Calibration - Detailed Report

Calibration ID: CAL15914
Method ID: MJ1647
Instrument ID: GC34
Column Name: DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
alpha-BHC	1	0.2	0.2045	2.2	2	0.5	0.5234	4.7	3	2	1.939	-3.1
	4	5	4.952	-1.0	5	10	10.31	3.1	6	1	0.9405	-6.0
Hexachlorobenzene	1	0.2	0.2115	5.7	2	0.5	0.5029	0.6	3	2	2.043	2.2
	4	5	4.838	-3.2	5	10	9.244	-7.6	6	1	1.023	2.3
beta-BHC	1	0.2	0.2653	**32.6**	2	0.5	0.4712	-5.8	3	2	1.806	-9.7
	4	5	4.668	-6.6	5	10	9.099	-9.0	6	1	0.9848	-1.5
gamma-BHC (Lindane)	1	0.2	0.2010	0.5	2	0.5	0.4955	-0.9	3	2	1.951	-2.4
	4	5	5.011	0.2	5	10	10.29	2.9	6	1	0.9968	-0.3

Initial Calibration - Detailed Report

Calibration ID: CAL15914
Method ID: MJ1647
Instrument ID: GC34
Column Name: DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
delta-BHC	1	0.2	0.2071	3.6	2	0.5	0.5115	2.3	3	2	1.898	-5.1
	4	5	4.915	-1.7	5	10	9.823	-1.8	6	1	1.027	2.7
Heptachlor	1	0.2	0.1822	-8.9	2	0.5	0.4631	-7.4	3	2	2.060	3.0
	4	5	5.213	4.3	5	10	10.66	6.6	6	1	1.024	2.4
Aldrin	1	0.2	0.2263	13.1	2	0.5	0.5346	6.9	3	2	1.899	-5.0
	4	5	4.684	-6.3	5	10	9.468	-5.3	6	1	0.9661	-3.4
Isodrin	1	0.2	0.2072	3.6	2	0.5	0.4697	-6.1	3	2	1.995	-0.2
	4	5	4.981	-0.4	5	10	9.896	-1.0	6	1	1.041	4.1

Initial Calibration - Detailed Report

Calibration ID: CAL15914
Method ID: MJ1647
Instrument ID: GC34
Column Name: DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Heptachlor Epoxide	1	0.2	0.2045	2.3	2	0.5	0.5188	3.8	3	2	2.057	2.9
	4	5	4.800	-4.0	5	10	9.397	-6.0	6	1	1.011	1.1
gamma-Chlordane	1	0.2	0.2044	2.2	2	0.5	0.5722	14.4	3	2	1.994	-0.3
	4	5	4.695	-6.1	5	10	9.207	-7.9	6	1	0.9771	-2.3
Endosulfan I	1	0.2	0.1999	0.0	2	0.5	0.4979	-0.4	3	2	2.036	1.8
	4	5	4.940	-1.2	5	10	9.803	-2.0	6	1	1.018	1.8
alpha-Chlordane	1	0.2	0.1867	-6.6	2	0.5	0.5587	11.7	3	2	1.979	-1.1
	4	5	4.948	-1.0	5	10	9.578	-4.2	6	1	1.012	1.2

Initial Calibration - Detailed Report

Calibration ID: CAL15914
Method ID: MJ1647
Instrument ID: GC34
Column Name: DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Dieldrin	1	0.2	0.1973	-1.4	2	0.5	0.5027	0.5	3	2	2.043	2.2
	4	5	4.871	-2.6	5	10	9.571	-4.3	6	1	1.055	5.5
4,4'-DDE	1	0.2	0.2168	8.4	2	0.5	0.4582	-8.4	3	2	1.980	-1.0
	4	5	5.044	0.9	5	10	9.852	-1.5	6	1	1.015	1.5
Endrin	1	0.2	0.1783	-10.8	2	0.5	0.4733	-5.3	3	2	2.053	2.7
	4	5	5.159	3.2	5	10	10.19	1.9	6	1	1.084	8.4
Endosulfan II	1	0.2	0.2252	12.6	2	0.5	0.4611	-7.8	3	2	1.952	-2.4
	4	5	4.899	-2.0	5	10	9.673	-3.3	6	1	1.029	2.9

Initial Calibration - Detailed Report

Calibration ID: CAL15914
Method ID: MJ1647
Instrument ID: GC34
Column Name: DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
4,4'-DDD	1	0.2	0.2012	0.6	2	0.5	0.4378	-12.4	3	2	2.109	5.5
	4	5	5.093	1.9	5	10	10.25	2.5	6	1	1.020	2.0
Endrin Aldehyde	1	0.2	0.2409	20.5	2	0.5	0.5004	0.1	3	2	1.841	-7.9
	4	5	4.977	-0.5	5	10	9.100	-9.0	6	1	0.9685	-3.2
Endosulfan Sulfate	1	0.2	0.1827	-8.7	2	0.5	0.4936	-1.3	3	2	2.081	4.1
	4	5	5.244	4.9	5	10	9.872	-1.3	6	1	1.023	2.3
4,4'-DDT	1	0.2	0.1898	-5.1	2	0.5	0.4872	-2.6	3	2	2.033	1.6
	4	5	5.195	3.9	5	10	10.12	1.2	6	1	1.009	0.9

Initial Calibration - Detailed Report

Calibration ID: CAL15914
Method ID: MJ1647
Instrument ID: GC34
Column Name: DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Endrin Ketone	1	0.2	0.1825	-8.7	2	0.5	0.5048	1.0	3	2	1.979	-1.0
	4	5	4.974	-0.5	5	10	9.707	-2.9	6	1	1.123	12.3
Methoxychlor	1	0.2	0.2122	6.1	2	0.5	0.4785	-4.3	3	2	2.024	1.2
	4	5	5.064	1.3	5	10	9.909	-0.9	6	1	0.9665	-3.3
2,4'-DDE												
	7	0.2	0.1519	-24.1	8	0.5	0.5802	16.0	9	1	1.079	7.9
	10	2	1.957	-2.1	11	5	4.906	-1.9	12	10	10.42	4.2
2,4'-DDD												
	7	0.2	0.2181	9.0	8	0.5	0.5375	7.5	9	1	0.9965	-0.3
	10	2	1.822	-8.9	11	5	4.595	-8.1	12	10	10.08	0.8

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
2,4'-DDT												
	7	0.2	0.1668	-16.6	8	0.5	0.5339	6.8	9	1	1.077	7.7
	10	2	2.016	0.8	11	5	4.830	-3.4	12	10	10.48	4.8
Decachlorobiphenyl	1	0.2	0.1846	-7.7	2	0.5	0.5272	5.4	3	2	2.101	5.0
	4	5	5.066	1.3	5	10	9.715	-2.8	6	1	0.9875	-1.2
Toxaphene {1}												
	19	10	8.226	-17.7	20	20	24.44	22.2	21	50	45.34	-9.3
	22	100	107.6	7.6	23	250	259.0	3.6	24	500	468.2	-6.4
Toxaphene {2}												
	19	10	5.721	**-42.8**	20	20	23.05	15.2	21	50	47.11	-5.8
	22	100	107.5	7.5	23	250	245.7	-1.7	24	500	501.0	0.2

Initial Calibration - Detailed Report

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Toxaphene {3}												
	19	10	6.601	**-34.0**	20	20	19.27	-3.6	21	50	48.72	-2.6
	22	100	120.9	20.9	23	250	288.2	15.3	24	500	520.2	4.0
Toxaphene {4}												
	19	10	8.723	-12.8	20	20	20.65	3.3	21	50	47.24	-5.5
	22	100	106.6	6.6	23	250	265.9	6.4	24	500	510.3	2.1
Toxaphene {5}												
	19	10	8.307	-16.9	20	20	14.58	-27.1	21	50	52.03	4.1
	22	100	114.3	14.3	23	250	281.6	12.6	24	500	565.3	13.1
Toxaphene {6}												
	19	10	9.173	-8.3	20	20	15.44	-22.8	21	50	49.05	-1.9
	22	100	116.1	16.1	23	250	281.2	12.5	24	500	522.2	4.4

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {1}												
	25	2	1.969	-1.6	26	5	4.926	-1.5	27	10	10.06	0.6
	28	20	17.81	-10.9	29	50	54.23	8.5	30	100	102.5	2.5
	31	200	204.9	2.4								
Chlordane {2}												
	25	2	2.018	0.9	26	5	5.066	1.3	27	10	10.11	1.1
	28	20	17.10	-14.5	29	50	52.38	4.8	30	100	102.9	2.9
	31	200	207.1	3.6								
Chlordane {3}												
	25	2	2.234	11.7	26	5	4.983	-0.3	27	10	10.32	3.2
	28	20	17.67	-11.7	29	50	52.42	4.8	30	100	97.49	-2.5
	31	200	189.6	-5.2								
Chlordane {4}												
	25	2	1.898	-5.1	26	5	5.567	11.3	27	10	11.20	12.0
	28	20	16.54	-17.3	29	50	52.56	5.1	30	100	94.74	-5.3
	31	200	198.5	-0.8								

Initial Calibration - Detailed Report

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {5}												
	25	2	2.254	12.7	26	5	5.667	13.3	27	10	10.45	4.5
	28	20	18.51	-7.5	29	50	47.63	-4.7	30	100	90.26	-9.7
	31	200	182.9	-8.5								
Chlordane {6}												
	25	2	2.146	7.3	26	5	5.461	9.2	27	10	9.915	-0.9
	28	20	17.71	-11.4	29	50	50.78	1.6	30	100	97.07	-2.9
	31	200	194.2	-2.9								
Chlorpyrifos												
	13	0.2	0.2073	3.7	14	0.5	0.4893	-2.1	15	1	0.9803	-2.0
	16	2	2.118	5.9	17	5	4.789	-4.2	18	10	9.879	-1.2
Oxychlordane												
	13	0.2	0.2216	10.8	14	0.5	0.5072	1.4	15	1	0.9438	-5.6
	16	2	2.019	1.0	17	5	4.767	-4.7	18	10	9.712	-2.9

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
cis-Nonachlor												
	13	0.2	0.2227	11.3	14	0.5	0.4542	-9.2	15	1	0.9632	-3.7
	16	2	2.055	2.7	17	5	4.921	-1.6	18	10	10.03	0.3
trans-Nonachlor												
	13	0.2	0.2005	0.3	14	0.5	0.5334	6.7	15	1	0.9570	-4.3
	16	2	2.058	2.9	17	5	4.799	-4.0	18	10	9.847	-1.5
Mirex												
	13	0.2	0.1867	-6.7	14	0.5	0.5410	8.2	15	1	0.9722	-2.8
	16	2	2.071	3.5	17	5	4.946	-1.1	18	10	9.877	-1.2
Hexachloroethane												
	13	0.2	0.2190	9.5	14	0.5	0.5121	2.4	15	1	0.8906	-10.9
	16	2	2.131	6.5	17	5	4.584	-8.3	18	10	10.08	0.8

Initial Calibration - Detailed Report

Calibration ID: CAL15914
Method ID: MJ1647
Instrument ID: GC34
Column Name: DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Hexachlorobutadiene												
	13	0.2	0.1933	-3.4	14	0.5	0.4953	-0.9	15	1	0.9953	-0.5
	16	2	2.109	5.4	17	5	4.863	-2.7	18	10	10.21	2.1
Perthane												
	13	1	1.221	22.1	14	2.5	2.670	6.8	15	5	4.867	-2.7
	16	10	9.335	-6.7	17	25	22.73	-9.1	18	50	44.75	-10.5

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	285266	J:\GC34\DATA\112618\1126000008.D\1126000008c.d	11/26/2018 16:05	11/27/2018 09:18	12/13/2018 13:39
2	285268	J:\GC34\DATA\112618\1126000009.D\1126000009c.d	11/26/2018 16:41	11/27/2018 09:21	12/13/2018 13:39
3	285272	J:\GC34\DATA\112618\1126000011.D\1126000011c.d	11/26/2018 17:52	11/27/2018 09:32	12/13/2018 13:40
4	285274	J:\GC34\DATA\112618\1126000012.D\1126000012c.d	11/26/2018 18:28	11/27/2018 09:35	12/13/2018 13:40
5	285276	J:\GC34\DATA\112618\1126000013.D\1126000013c.d	11/26/2018 19:04	11/27/2018 09:38	12/13/2018 13:40
6	285278	J:\GC34\DATA\112718CAL\1127000006.D\1127000006c.d	11/27/2018 13:21	11/27/2018 14:08	12/13/2018 13:40
7	285634	J:\GC34\DATA\121218CAL\1212000004.D\1212000004c.d	12/12/2018 15:18	12/13/2018 10:15	12/13/2018 13:40
8	285636	J:\GC34\DATA\121218CAL\1212000005.D\1212000005c.d	12/12/2018 15:54	12/13/2018 10:16	12/13/2018 13:40
9	285638	J:\GC34\DATA\121218CAL\1212000006.D\1212000006c.d	12/12/2018 16:31	12/13/2018 10:16	12/13/2018 13:40
10	285640	J:\GC34\DATA\121218CAL\1212000007.D\1212000007c.d	12/12/2018 17:06	12/13/2018 10:17	12/13/2018 13:40
11	285642	J:\GC34\DATA\121218CAL\1212000008.D\1212000008c.d	12/12/2018 17:42	12/13/2018 10:18	12/13/2018 13:40
12	285644	J:\GC34\DATA\121218CAL\1212000009.D\1212000009c.d	12/12/2018 18:19	12/13/2018 10:18	12/13/2018 13:40
13	285646	J:\GC34\DATA\121218CAL\1212000011.D\1212000011c.d	12/12/2018 19:31	12/13/2018 10:27	12/13/2018 13:40
14	285648	J:\GC34\DATA\121218CAL\1212000012.D\1212000012c.d	12/12/2018 20:07	12/13/2018 10:29	12/13/2018 13:41
15	285650	J:\GC34\DATA\121218CAL\1212000013.D\1212000013c.d	12/12/2018 20:43	12/13/2018 10:30	12/13/2018 13:41
16	285652	J:\GC34\DATA\121218CAL\1212000014.D\1212000014c.d	12/12/2018 21:19	12/13/2018 10:31	12/13/2018 13:41
17	285654	J:\GC34\DATA\121218CAL\1212000015.D\1212000015c.d	12/12/2018 21:55	12/13/2018 10:46	12/13/2018 13:41
18	285656	J:\GC34\DATA\121218CAL\1212000016.D\1212000016c.d	12/12/2018 22:31	12/13/2018 10:47	12/13/2018 13:41
19	285662	J:\GC34\DATA\121218CAL\1212000019.D\1212000019c.d	12/13/2018 00:19	12/13/2018 11:03	12/13/2018 15:51
20	285664	J:\GC34\DATA\121218CAL\1212000020.D\1212000020c.d	12/13/2018 00:55	12/13/2018 15:46	12/13/2018 15:51
21	285666	J:\GC34\DATA\121218CAL\1212000021.D\1212000021c.d	12/13/2018 01:31	12/13/2018 11:49	12/13/2018 13:41
22	285668	J:\GC34\DATA\121218CAL\1212000022.D\1212000022c.d	12/13/2018 02:07	12/13/2018 11:53	12/13/2018 13:42
23	285670	J:\GC34\DATA\121218CAL\1212000023.D\1212000023c.d	12/13/2018 02:43	12/13/2018 11:57	12/13/2018 13:42
24	285672	J:\GC34\DATA\121218CAL\1212000024.D\1212000024c.d	12/13/2018 03:19	12/13/2018 12:01	12/13/2018 13:42
25	285686	J:\GC34\DATA\121218CAL\1212000026.D\1212000026c.d	12/13/2018 04:30	12/13/2018 13:28	12/13/2018 13:45
26	285674	J:\GC34\DATA\121218CAL\1212000027.D\1212000027c.d	12/13/2018 05:06	12/13/2018 13:29	12/13/2018 13:43
27	285676	J:\GC34\DATA\121218CAL\1212000028.D\1212000028c.d	12/13/2018 05:42	12/13/2018 13:30	12/13/2018 13:43
28	285678	J:\GC34\DATA\121218CAL\1212000029.D\1212000029c.d	12/13/2018 06:18	12/13/2018 13:31	12/13/2018 13:44
29	285680	J:\GC34\DATA\121218CAL\1212000030.D\1212000030c.d	12/13/2018 06:53	12/13/2018 13:31	12/13/2018 13:44
30	285682	J:\GC34\DATA\121218CAL\1212000031.D\1212000031c.d	12/13/2018 07:29	12/13/2018 13:32	12/13/2018 13:44
31	285684	J:\GC34\DATA\121218CAL\1212000032.D\1212000032c.d	12/13/2018 08:05	12/13/2018 13:33	12/13/2018 13:44

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Tetrachloro-m-xylene			1	1.452	2	1.353	3	1.241	4	1.138	5	1.039	1.263	12.2
	6	1.355												
alpha-BHC			1	1.663	2	1.619	3	1.560	4	1.443	5	1.381	1.555	7.6
	6	1.664												

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Hexachlorobenzene	1	2.170	2	2.044	3	1.804	4	1.640	5	1.453	6	2.074	1.864	15.0
beta-BHC	1	0.921	2	0.829	3	0.815	4	0.773	5	0.708	6	0.908	0.826	9.8
gamma-BHC (Lindane)	1	1.642	2	1.542	3	1.488	4	1.422	5	1.327	6	1.657	1.513	8.4
delta-BHC	1	1.622	2	1.615	3	1.562	4	1.490	5	1.390	6	1.706	1.564	7.1
Heptachlor	1	1.574	2	1.676	3	1.663	4	1.545	5	1.412	6	1.833	1.617	8.8
Aldrin	1	1.599	2	1.560	3	1.504	4	1.406	5	1.303	6	1.579	1.492	7.7
Isodrin	1	1.313	2	1.301	3	1.318	4	1.252	5	1.154	6	1.434	1.295	7.1
Heptachlor Epoxide	1	1.617	2	1.625	3	1.562	4	1.461	5	1.342	6	1.696	1.550	8.3

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
gamma-Chlordane			1	1.694	2	1.679	3	1.627	4	1.551	5	1.363	1.624	9.7
	6	1.830												
Endosulfan I			1	1.633	2	1.501	3	1.461	4	1.373	5	1.257	1.476	10.0
	6	1.634												
alpha-Chlordane			1	1.566	2	1.603	3	1.595	4	1.487	5	1.359	1.555	7.9
	6	1.721												
Dieldrin			1	1.675	2	1.564	3	1.552	4	1.473	5	1.360	1.550	7.9
	6	1.678												
4,4'-DDE			1	1.595	2	1.508	3	1.511	4	1.445	5	1.333	1.506	7.3
	6	1.643												
Endrin			1	1.659	2	1.502	3	1.543	4	1.458	5	1.352	1.545	9.3
	6	1.756												
Endosulfan II			1	1.554	2	1.552	3	1.500	4	1.453	5	1.320	1.507	7.6
	6	1.661												
4,4'-DDD			1	1.202	2	1.249	3	1.256	4	1.214	5	1.130	1.233	5.7
	6	1.344												

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Endrin Aldehyde													1.218	7.1
	1	1.205	2	1.200	3	1.254	4	1.198	5	1.091	6	1.358		
Endosulfan Sulfate													1.601	8.0
	1	1.708	2	1.631	3	1.589	4	1.550	5	1.384	6	1.746		
4,4'-DDT													1.392	5.8
	1	1.331	2	1.443	3	1.447	4	1.378	5	1.271	6	1.485		
Endrin Ketone													1.752	10.6
	1	1.920	2	1.913	3	1.729	4	1.589	5	1.480	6	1.883		
Methoxychlor													0.874	8.6
	1	0.868	2	0.984	3	0.859	4	0.841	5	0.763	6	0.927		
2,4'-DDE													1.287	9.1
	7	1.260	8	1.452	9	1.416	10	1.226	11	1.169	12	1.202		
2,4'-DDD													1.214	9.1
	7	1.166	8	1.381	9	1.320	10	1.175	11	1.098	12	1.141		
2,4'-DDT													1.442	11.0
	7	1.259	8	1.666	9	1.603	10	1.412	11	1.335	12	1.374		

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Decachlorobiphenyl			1	1.841	2	1.664	3	1.599	4	1.524	5	1.395	1.628	9.8
	6	1.744												
Toxaphene {1}													0.007	13.7
			19	0.008	20	0.006	21	0.007	22	0.007	23	0.007		
	24	0.006												
Toxaphene {2}													0.011	26.3#
			19	0.016	20	0.012	21	0.010	22	0.010	23	0.010		
	24	0.007												
Toxaphene {3}													0.033	12.3
			19	0.029	20	0.036	21	0.035	22	0.038	23	0.034		
	24	0.027												
Toxaphene {4}													0.023	15.7
			19	0.028	20	0.023	21	0.024	22	0.024	23	0.022		
	24	0.017												
Toxaphene {5}													0.019	10.6
			19	0.018	20	0.018	21	0.019	22	0.022	23	0.019		
	24	0.016												
Toxaphene {6}													0.030	12.7
			19	0.034	20	0.034	21	0.030	22	0.029	23	0.027		
	24	0.025												
Chlordane {1}	25	0.071	26	0.074	27	0.070	28	0.060	29	0.065	30	0.058	0.064	12.8
	31	0.051												

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Chlordane {2}	25 0.093	26 0.098	27 0.095	28 0.078	29 0.089	30 0.079	0.086	11.9
	31 0.070							
Chlordane {3}	25 0.061	26 0.049	27 0.048	28 0.039	29 0.044	30 0.041	0.046	17.5
	31 0.038							
Chlordane {4}	25 0.205	26 0.219	27 0.194	28 0.160	29 0.173	30 0.154	0.178	16.4
	31 0.140							
Chlordane {5}	25 0.128	26 0.131	27 0.122	28 0.106	29 0.114	30 0.101	0.113	14.1
	31 0.087							
Chlordane {6}	25 0.182	26 0.192	27 0.178	28 0.150	29 0.161	30 0.142	0.161	15.2
	31 0.124							
Chlorpyrifos							1.185	13.4
		13 1.373	14 1.302	15 1.208	16 1.222	17 1.062		
	18 0.941							
Oxychlordane							1.727	13.1
		13 2.017	14 1.893	15 1.767	16 1.742	17 1.547		
	18 1.394							
cis-Nonachlor							2.097	10.4
		13 2.333	14 2.271	15 2.150	16 2.142	17 1.938		
	18 1.749							

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
trans-Nonachlor							1.907	11.5
		13 2.151	14 2.073	15 1.960	16 1.960	17 1.740		
	18 1.558							
Mirex							1.683	13.6
		13 2.000	14 1.839	15 1.713	16 1.678	17 1.513		
	18 1.354							
Hexachloroethane							2.351	10.9
		13 2.717	14 2.511	15 2.412	16 2.334	17 2.048		
	18 2.086							
Hexachlorobutadiene							1.851	13.7
		13 2.182	14 2.041	15 1.915	16 1.850	17 1.578		
	18 1.542							
Perthane							0.065	10.6
		13 0.076	14 0.069	15 0.067	16 0.062	17 0.062		
	18 0.056							

 # RSD Not Applicable. Compound being quantitated from curve. Included in Average RF summary for Average %RSD calculation.

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	Quadratic

FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
285686	J:\GC34\DATA\121218CAL\1212000026.D\1212000026c.d	12/13/2018 04:30	12/13/2018 13:28	12/13/2018 13:45
285674	J:\GC34\DATA\121218CAL\1212000027.D\1212000027c.d	12/13/2018 05:06	12/13/2018 13:29	12/13/2018 13:43
285676	J:\GC34\DATA\121218CAL\1212000028.D\1212000028c.d	12/13/2018 05:42	12/13/2018 13:30	12/13/2018 13:43
285678	J:\GC34\DATA\121218CAL\1212000029.D\1212000029c.d	12/13/2018 06:18	12/13/2018 13:31	12/13/2018 13:44
285680	J:\GC34\DATA\121218CAL\1212000030.D\1212000030c.d	12/13/2018 06:53	12/13/2018 13:31	12/13/2018 13:44
285682	J:\GC34\DATA\121218CAL\1212000031.D\1212000031c.d	12/13/2018 07:29	12/13/2018 13:32	12/13/2018 13:44
285684	J:\GC34\DATA\121218CAL\1212000032.D\1212000032c.d	12/13/2018 08:05	12/13/2018 13:33	12/13/2018 13:44
285266	J:\GC34\DATA\112618\1126000008.D\1126000008c.d	11/26/2018 16:05	11/27/2018 09:18	12/13/2018 13:39
285268	J:\GC34\DATA\112618\1126000009.D\1126000009c.d	11/26/2018 16:41	11/27/2018 09:21	12/13/2018 13:39
285272	J:\GC34\DATA\112618\1126000011.D\1126000011c.d	11/26/2018 17:52	11/27/2018 09:32	12/13/2018 13:40
285274	J:\GC34\DATA\112618\1126000012.D\1126000012c.d	11/26/2018 18:28	11/27/2018 09:35	12/13/2018 13:40
285276	J:\GC34\DATA\112618\1126000013.D\1126000013c.d	11/26/2018 19:04	11/27/2018 09:38	12/13/2018 13:40
285278	J:\GC34\DATA\112718CAL\1127000006.D\1127000006c.d	11/27/2018 13:21	11/27/2018 14:08	12/13/2018 13:40
285634	J:\GC34\DATA\121218CAL\1212000004.D\1212000004c.d	12/12/2018 15:18	12/13/2018 10:15	12/13/2018 13:40
285636	J:\GC34\DATA\121218CAL\1212000005.D\1212000005c.d	12/12/2018 15:54	12/13/2018 10:16	12/13/2018 13:40
285638	J:\GC34\DATA\121218CAL\1212000006.D\1212000006c.d	12/12/2018 16:31	12/13/2018 10:16	12/13/2018 13:40
285640	J:\GC34\DATA\121218CAL\1212000007.D\1212000007c.d	12/12/2018 17:06	12/13/2018 10:17	12/13/2018 13:40
285642	J:\GC34\DATA\121218CAL\1212000008.D\1212000008c.d	12/12/2018 17:42	12/13/2018 10:18	12/13/2018 13:40
285644	J:\GC34\DATA\121218CAL\1212000009.D\1212000009c.d	12/12/2018 18:19	12/13/2018 10:18	12/13/2018 13:40
285646	J:\GC34\DATA\121218CAL\1212000011.D\1212000011c.d	12/12/2018 19:31	12/13/2018 10:27	12/13/2018 13:40
285648	J:\GC34\DATA\121218CAL\1212000012.D\1212000012c.d	12/12/2018 20:07	12/13/2018 10:29	12/13/2018 13:41
285650	J:\GC34\DATA\121218CAL\1212000013.D\1212000013c.d	12/12/2018 20:43	12/13/2018 10:30	12/13/2018 13:41
285652	J:\GC34\DATA\121218CAL\1212000014.D\1212000014c.d	12/12/2018 21:19	12/13/2018 10:31	12/13/2018 13:41
285654	J:\GC34\DATA\121218CAL\1212000015.D\1212000015c.d	12/12/2018 21:55	12/13/2018 10:46	12/13/2018 13:41
285656	J:\GC34\DATA\121218CAL\1212000016.D\1212000016c.d	12/12/2018 22:31	12/13/2018 10:47	12/13/2018 13:41
285662	J:\GC34\DATA\121218CAL\1212000019.D\1212000019c.d	12/13/2018 00:19	12/13/2018 11:03	12/13/2018 15:51
285664	J:\GC34\DATA\121218CAL\1212000020.D\1212000020c.d	12/13/2018 00:55	12/13/2018 15:46	12/13/2018 15:51
285666	J:\GC34\DATA\121218CAL\1212000021.D\1212000021c.d	12/13/2018 01:31	12/13/2018 11:49	12/13/2018 13:41

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	Quadratic

285668	J:\GC34\DATA\121218CAL\1212000022.D\1212000022c.d	12/13/2018	02:07	12/13/2018	11:53	12/13/2018 13:42
285670	J:\GC34\DATA\121218CAL\1212000023.D\1212000023c.d	12/13/2018	02:43	12/13/2018	11:57	12/13/2018 13:42
285672	J:\GC34\DATA\121218CAL\1212000024.D\1212000024c.d	12/13/2018	03:19	12/13/2018	12:01	12/13/2018 13:42

Parameter Name	CoefX2	CoefX	Y-intercept	COD	Mean RF
Toxaphene {2}	-0.001	0.011	0.000	0.9991	0.011

Initial Calibration - Detailed Report

Calibration ID: CAL15914
Method ID: MJ1647
Instrument ID: GC34
Column Name: DB-35MS

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	285266	J:\GC34\DATA\112618\1126000008.D\1126000008c.d	11/26/2018 16:05	11/27/2018 09:18	12/13/2018 13:39
2	285268	J:\GC34\DATA\112618\1126000009.D\1126000009c.d	11/26/2018 16:41	11/27/2018 09:21	12/13/2018 13:39
3	285272	J:\GC34\DATA\112618\1126000011.D\1126000011c.d	11/26/2018 17:52	11/27/2018 09:32	12/13/2018 13:40
4	285274	J:\GC34\DATA\112618\1126000012.D\1126000012c.d	11/26/2018 18:28	11/27/2018 09:35	12/13/2018 13:40
5	285276	J:\GC34\DATA\112618\1126000013.D\1126000013c.d	11/26/2018 19:04	11/27/2018 09:38	12/13/2018 13:40
6	285278	J:\GC34\DATA\112718CAL\1127000006.D\1127000006c.d	11/27/2018 13:21	11/27/2018 14:08	12/13/2018 13:40
7	285634	J:\GC34\DATA\121218CAL\1212000004.D\1212000004c.d	12/12/2018 15:18	12/13/2018 10:15	12/13/2018 13:40
8	285636	J:\GC34\DATA\121218CAL\1212000005.D\1212000005c.d	12/12/2018 15:54	12/13/2018 10:16	12/13/2018 13:40
9	285638	J:\GC34\DATA\121218CAL\1212000006.D\1212000006c.d	12/12/2018 16:31	12/13/2018 10:16	12/13/2018 13:40
10	285640	J:\GC34\DATA\121218CAL\1212000007.D\1212000007c.d	12/12/2018 17:06	12/13/2018 10:17	12/13/2018 13:40
11	285642	J:\GC34\DATA\121218CAL\1212000008.D\1212000008c.d	12/12/2018 17:42	12/13/2018 10:18	12/13/2018 13:40
12	285644	J:\GC34\DATA\121218CAL\1212000009.D\1212000009c.d	12/12/2018 18:19	12/13/2018 10:18	12/13/2018 13:40
13	285646	J:\GC34\DATA\121218CAL\1212000011.D\1212000011c.d	12/12/2018 19:31	12/13/2018 10:27	12/13/2018 13:40
14	285648	J:\GC34\DATA\121218CAL\1212000012.D\1212000012c.d	12/12/2018 20:07	12/13/2018 10:29	12/13/2018 13:41
15	285650	J:\GC34\DATA\121218CAL\1212000013.D\1212000013c.d	12/12/2018 20:43	12/13/2018 10:30	12/13/2018 13:41
16	285652	J:\GC34\DATA\121218CAL\1212000014.D\1212000014c.d	12/12/2018 21:19	12/13/2018 10:31	12/13/2018 13:41
17	285654	J:\GC34\DATA\121218CAL\1212000015.D\1212000015c.d	12/12/2018 21:55	12/13/2018 10:46	12/13/2018 13:41
18	285656	J:\GC34\DATA\121218CAL\1212000016.D\1212000016c.d	12/12/2018 22:31	12/13/2018 10:47	12/13/2018 13:41
19	285662	J:\GC34\DATA\121218CAL\1212000019.D\1212000019c.d	12/13/2018 00:19	12/13/2018 11:03	12/13/2018 15:51
20	285664	J:\GC34\DATA\121218CAL\1212000020.D\1212000020c.d	12/13/2018 00:55	12/13/2018 15:46	12/13/2018 15:51
21	285666	J:\GC34\DATA\121218CAL\1212000021.D\1212000021c.d	12/13/2018 01:31	12/13/2018 11:49	12/13/2018 13:41
22	285668	J:\GC34\DATA\121218CAL\1212000022.D\1212000022c.d	12/13/2018 02:07	12/13/2018 11:53	12/13/2018 13:42
23	285670	J:\GC34\DATA\121218CAL\1212000023.D\1212000023c.d	12/13/2018 02:43	12/13/2018 11:57	12/13/2018 13:42
24	285672	J:\GC34\DATA\121218CAL\1212000024.D\1212000024c.d	12/13/2018 03:19	12/13/2018 12:01	12/13/2018 13:42
25	285686	J:\GC34\DATA\121218CAL\1212000026.D\1212000026c.d	12/13/2018 04:30	12/13/2018 13:28	12/13/2018 13:45
26	285674	J:\GC34\DATA\121218CAL\1212000027.D\1212000027c.d	12/13/2018 05:06	12/13/2018 13:29	12/13/2018 13:43
27	285676	J:\GC34\DATA\121218CAL\1212000028.D\1212000028c.d	12/13/2018 05:42	12/13/2018 13:30	12/13/2018 13:43
28	285678	J:\GC34\DATA\121218CAL\1212000029.D\1212000029c.d	12/13/2018 06:18	12/13/2018 13:31	12/13/2018 13:44
29	285680	J:\GC34\DATA\121218CAL\1212000030.D\1212000030c.d	12/13/2018 06:53	12/13/2018 13:31	12/13/2018 13:44
30	285682	J:\GC34\DATA\121218CAL\1212000031.D\1212000031c.d	12/13/2018 07:29	12/13/2018 13:32	12/13/2018 13:44
31	285684	J:\GC34\DATA\121218CAL\1212000032.D\1212000032c.d	12/13/2018 08:05	12/13/2018 13:33	12/13/2018 13:44

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Tetrachloro-m-xylene												
					1	0.2	0.2300	15.0	2	0.5	0.5357	7.1
	3	2	1.965	-1.8	4	5	4.505	-9.9	5	10	8.226	-17.7
	6	1	1.073	7.3								

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
alpha-BHC												
					1	0.2	0.2139	6.9	2	0.5	0.5205	4.1
	3	2	2.007	0.4	4	5	4.641	-7.2	5	10	8.880	-11.2
	6	1	1.070	7.0								
Hexachlorobenzene												
					1	0.2	0.2328	16.4	2	0.5	0.5482	9.6
	3	2	1.936	-3.2	4	5	4.399	-12.0	5	10	7.796	-22.0
	6	1	1.112	11.2								
beta-BHC												
					1	0.2	0.2231	11.6	2	0.5	0.5018	0.4
	3	2	1.973	-1.3	4	5	4.679	-6.4	5	10	8.578	-14.2
	6	1	1.100	10.0								
gamma-BHC (Lindane)												
					1	0.2	0.2170	8.5	2	0.5	0.5096	1.9
	3	2	1.967	-1.6	4	5	4.698	-6.0	5	10	8.773	-12.3
	6	1	1.095	9.5								

Initial Calibration - Detailed Report

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
delta-BHC												
					1	0.2	0.2073	3.7	2	0.5	0.5162	3.2
	3	2	1.998	-0.1	4	5	4.764	-4.7	5	10	8.889	-11.1
	6	1	1.090	9.0								
Heptachlor												
					1	0.2	0.1947	-2.6	2	0.5	0.5181	3.6
	3	2	2.056	2.8	4	5	4.776	-4.5	5	10	8.735	-12.7
	6	1	1.133	13.3								
Aldrin												
					1	0.2	0.2144	7.2	2	0.5	0.5228	4.6
	3	2	2.017	0.8	4	5	4.713	-5.7	5	10	8.734	-12.7
	6	1	1.058	5.8								
Isodrin												
					1	0.2	0.2028	1.4	2	0.5	0.5021	0.4
	3	2	2.035	1.8	4	5	4.834	-3.3	5	10	8.907	-10.9
	6	1	1.107	10.7								

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Heptachlor Epoxide												
					1	0.2	0.2086	4.3	2	0.5	0.5241	4.8
	3	2	2.015	0.7	4	5	4.711	-5.8	5	10	8.654	-13.5
	6	1	1.094	9.4								
gamma-Chlordane												
					1	0.2	0.2086	4.3	2	0.5	0.5170	3.4
	3	2	2.004	0.2	4	5	4.775	-4.5	5	10	8.392	-16.1
	6	1	1.127	12.7								
Endosulfan I												
					1	0.2	0.2212	10.6	2	0.5	0.5082	1.6
	3	2	1.979	-1.1	4	5	4.649	-7.0	5	10	8.514	-14.9
	6	1	1.107	10.7								
alpha-Chlordane												
					1	0.2	0.2014	0.7	2	0.5	0.5154	3.1
	3	2	2.051	2.5	4	5	4.780	-4.4	5	10	8.740	-12.6
	6	1	1.107	10.7								

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Dieldrin												
					1	0.2	0.2161	8.0	2	0.5	0.5043	0.9
	3	2	2.003	0.1	4	5	4.749	-5.0	5	10	8.772	-12.3
	6	1	1.083	8.3								
4,4'-DDE												
					1	0.2	0.2119	5.9	2	0.5	0.5006	0.1
	3	2	2.007	0.3	4	5	4.798	-4.0	5	10	8.853	-11.5
	6	1	1.091	9.1								
Endrin												
					1	0.2	0.2147	7.4	2	0.5	0.4860	-2.8
	3	2	1.998	-0.1	4	5	4.719	-5.6	5	10	8.752	-12.5
	6	1	1.137	13.7								
Endosulfan II												
					1	0.2	0.2063	3.1	2	0.5	0.5151	3.0
	3	2	1.991	-0.5	4	5	4.822	-3.6	5	10	8.762	-12.4
	6	1	1.103	10.3								

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
4,4'-DDD												
					1	0.2	0.1950	-2.5	2	0.5	0.5068	1.4
	3	2	2.038	1.9	4	5	4.923	-1.5	5	10	9.171	-8.3
	6	1	1.091	9.1								
Endrin Aldehyde												
					1	0.2	0.1979	-1.1	2	0.5	0.4927	-1.5
	3	2	2.060	3.0	4	5	4.922	-1.6	5	10	8.962	-10.4
	6	1	1.115	11.5								
Endosulfan Sulfate												
					1	0.2	0.2133	6.6	2	0.5	0.5091	1.8
	3	2	1.985	-0.7	4	5	4.841	-3.2	5	10	8.645	-13.6
	6	1	1.090	9.0								
4,4'-DDT												
					1	0.2	0.1912	-4.4	2	0.5	0.5181	3.6
	3	2	2.078	3.9	4	5	4.947	-1.1	5	10	9.126	-8.7
	6	1	1.067	6.7								

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
4,4'-DDD												
					1	0.2	0.1950	-2.5	2	0.5	0.5068	1.4
	3	2	2.038	1.9	4	5	4.923	-1.5	5	10	9.171	-8.3
	6	1	1.091	9.1								
Endrin Aldehyde												
					1	0.2	0.1979	-1.1	2	0.5	0.4927	-1.5
	3	2	2.060	3.0	4	5	4.922	-1.6	5	10	8.962	-10.4
	6	1	1.115	11.5								
Endosulfan Sulfate												
					1	0.2	0.2133	6.6	2	0.5	0.5091	1.8
	3	2	1.985	-0.7	4	5	4.841	-3.2	5	10	8.645	-13.6
	6	1	1.090	9.0								
4,4'-DDT												
					1	0.2	0.1912	-4.4	2	0.5	0.5181	3.6
	3	2	2.078	3.9	4	5	4.947	-1.1	5	10	9.126	-8.7
	6	1	1.067	6.7								

Initial Calibration - Detailed Report

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Endrin Ketone												
					1	0.2	0.2191	9.6	2	0.5	0.5458	9.2
	3	2	1.974	-1.3	4	5	4.535	-9.3	5	10	8.446	-15.5
	6	1	1.075	7.5								
Methoxychlor												
					1	0.2	0.1987	-0.6	2	0.5	0.5632	12.6
	3	2	1.967	-1.6	4	5	4.811	-3.8	5	10	8.735	-12.6
	6	1	1.061	6.1								
2,4'-DDE												
					7	0.2	0.1958	-2.1	8	0.5	0.5638	12.8
	9	1	1.100	10.0	10	2	1.904	-4.8	11	5	4.541	-9.2
	12	10	9.337	-6.6								
2,4'-DDD												
					7	0.2	0.1922	-3.9	8	0.5	0.5690	13.8
	9	1	1.087	8.7	10	2	1.937	-3.2	11	5	4.524	-9.5
	12	10	9.405	-5.9								

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
2,4'-DDT												
					7	0.2	0.1747	-12.6	8	0.5	0.5778	15.6
	9	1	1.112	11.2	10	2	1.959	-2.1	11	5	4.631	-7.4
	12	10	9.532	-4.7								
Decachlorobiphenyl												
					1	0.2	0.2262	13.1	2	0.5	0.5112	2.2
	3	2	1.965	-1.8	4	5	4.680	-6.4	5	10	8.569	-14.3
	6	1	1.071	7.1								
Toxaphene {1}												
					19	10	11.84	18.4	20	20	17.89	-10.6
	21	50	52.41	4.8	22	100	107.0	7.0	23	250	251.6	0.7
	24	500	398.4	-20.3								
Toxaphene {2}												
					19	10	13.72	**37.2**	20	20	21.56	7.8
	21	50	44.76	-10.5	22	100	96.98	-3.0	23	250	254.5	1.8
	24	500	498.1	-0.4								

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Toxaphene {3}												
					19	10	8.774	-12.3	20	20	21.93	9.7
	21	50	52.73	5.5	22	100	113.1	13.1	23	250	254.4	1.8
	24	500	411.5	-17.7								
Toxaphene {4}												
					19	10	12.31	23.1	20	20	19.79	-1.1
	21	50	52.02	4.0	22	100	104.4	4.4	23	250	237.5	-5.0
	24	500	372.8	-25.4								
Toxaphene {5}												
					19	10	9.549	-4.5	20	20	19.28	-3.6
	21	50	50.78	1.6	22	100	117.6	17.6	23	250	258.3	3.3
	24	500	427.9	-14.4								
Toxaphene {6}												
					19	10	11.47	14.7	20	20	22.80	14.0
	21	50	49.80	-0.4	22	100	98.74	-1.3	23	250	224.5	-10.2
	24	500	415.6	-16.9								

Initial Calibration - Detailed Report

Calibration ID: CAL15914
Method ID: MJ1647
Instrument ID: GC34
Column Name: DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {1}	25	2	2.207	10.3	26	5	5.757	15.1	27	10	10.97	9.7
	28	20	18.62	-6.9	29	50	50.58	1.2	30	100	91.12	-8.9
	31	200	158.9	-20.6								
Chlordane {2}	25	2	2.161	8.1	26	5	5.687	13.7	27	10	11.01	10.1
	28	20	18.22	-8.9	29	50	51.61	3.2	30	100	92.42	-7.6
	31	200	162.6	-18.7								
Chlordane {3}	25	2	2.681	**34.0**	26	5	5.312	6.2	27	10	10.47	4.7
	28	20	17.14	-14.3	29	50	48.27	-3.5	30	100	90.15	-9.8
	31	200	165.3	-17.4								
Chlordane {4}	25	2	2.309	15.5	26	5	6.153	23.1	27	10	10.92	9.2
	28	20	18.02	-9.9	29	50	48.59	-2.8	30	100	86.46	-13.5
	31	200	157.1	-21.5								

Initial Calibration - Detailed Report

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {5}	25	2	2.278	13.9	26	5	5.825	16.5	27	10	10.79	7.9
	28	20	18.75	-6.2	29	50	50.46	0.9	30	100	89.95	-10.0
	31	200	154.1	-22.9								
Chlordane {6}	25	2	2.260	13.0	26	5	5.956	19.1	27	10	11.02	10.2
	28	20	18.58	-7.1	29	50	49.98	0.0	30	100	88.18	-11.8
	31	200	153.2	-23.4								
Chlorpyrifos					13	0.2	0.2318	15.9	14	0.5	0.5495	9.9
	15	1	1.020	2.0	16	2	2.064	3.2	17	5	4.480	-10.4
	18	10	7.941	-20.6								
Oxychlordane					13	0.2	0.2336	16.8	14	0.5	0.5482	9.6
	15	1	1.023	2.3	16	2	2.018	0.9	17	5	4.479	-10.4
	18	10	8.075	-19.3								

Calibration ID: CAL15914 **Instrument ID:** GC34
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
cis-Nonachlor												
					13	0.2	0.2224	11.2	14	0.5	0.5415	8.3
	15	1	1.025	2.5	16	2	2.043	2.2	17	5	4.620	-7.6
	18	10	8.339	-16.6								
trans-Nonachlor												
					13	0.2	0.2255	12.8	14	0.5	0.5436	8.7
	15	1	1.028	2.8	16	2	2.055	2.8	17	5	4.562	-8.8
	18	10	8.169	-18.3								
Mirex												
					13	0.2	0.2377	18.8	14	0.5	0.5465	9.3
	15	1	1.018	1.8	16	2	1.994	-0.3	17	5	4.496	-10.1
	18	10	8.046	-19.5								
Hexachloroethane												
					13	0.2	0.2311	15.6	14	0.5	0.5338	6.8
	15	1	1.026	2.6	16	2	1.985	-0.7	17	5	4.356	-12.9
	18	10	8.871	-11.3								

Initial Calibration - Detailed Report

Calibration ID:	CAL15914	**Instrument ID:**	GC34
Method ID:	MJ1647	**Column Name:**	DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Hexachlorobutadiene												
					13	0.2	0.2357	17.8	14	0.5	0.5512	10.2
	15	1	1.035	3.5	16	2	1.999	-0.1	17	5	4.262	-14.8
	18	10	8.329	-16.7								
Perthane												
					13	1	1.164	16.4	14	2.5	2.646	5.8
	15	5	5.101	2.0	16	10	9.426	-5.7	17	25	23.92	-4.3
	18	50	42.89	-14.2								

Second Source Calibration Verification Summary

CalibrationID: CAL15914

Method ID: MJ1647

DataFile Location: J:\GC34\DATA\112718CAL\1127000007.D

Units: ug/L

Column: DB XLB

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
alpha-BHC	285279	AverageRF	20	1.108	1.078	-2.7	2.00	1.9	
Hexachlorobenzene	285279	AverageRF	20	1.629	1.674	2.8	2.00	2.1	
beta-BHC	285279	AverageRF	20	0.623	0.652	4.7	2.00	2.1	
gamma-BHC (Lindane)	285279	AverageRF	20	1.043	1.096	5.1	2.00	2.1	
delta-BHC	285279	AverageRF	20	1.220	1.298	6.4	2.00	2.1	
Heptachlor	285279	AverageRF	20	1.013	1.088	7.4	2.00	2.1	
Aldrin	285279	AverageRF	20	1.114	1.117	0.2	2.00	2.0	
Isodrin	285279	AverageRF	20	0.928	1.105	19.1	2.00	2.4	
Heptachlor Epoxide	285279	AverageRF	20	1.168	1.373	17.6	2.00	2.4	
gamma-Chlordane	285279	AverageRF	20	1.200	1.482	23.6 *	2.00	2.5	
Endosulfan I	285279	AverageRF	20	1.032	1.119	8.4	2.00	2.2	
alpha-Chlordane	285279	AverageRF	20	1.156	1.211	4.8	2.00	2.1	
Dieldrin	285279	AverageRF	20	1.112	1.121	0.8	2.00	2.0	
4,4'-DDE	285279	AverageRF	20	1.185	1.280	8.1	2.00	2.2	
Endrin	285279	AverageRF	20	1.058	1.176	11.1	2.00	2.2	
Endosulfan II	285279	AverageRF	20	1.059	1.132	6.9	2.00	2.1	
4,4'-DDD	285279	AverageRF	20	0.844	0.929	10.1	2.00	2.2	
Endrin Aldehyde	285279	AverageRF	20	0.910	0.711	-21.9 *	2.00	1.6	
Endosulfan Sulfate	285279	AverageRF	20	1.084	1.147	5.8	2.00	2.1	
4,4'-DDT	285279	AverageRF	20	1.020	1.081	6.1	2.00	2.1	
Endrin Ketone	285279	AverageRF	20	1.165	1.182	1.5	2.00	2.0	
Methoxychlor	285279	AverageRF	20	0.619	0.665	7.6	2.00	2.2	
2,4'-DDE	285702	AverageRF	20	0.936	1.099	17.4	2.00	2.3	
2,4'-DDD	285702	AverageRF	20	0.827	0.892	7.9	2.00	2.2	
2,4'-DDT	285702	AverageRF	20	0.973	1.096	12.6	2.00	2.3	
Toxaphene	285689	NA	20				200.00	235.4	17.7
Toxaphene {1}	285689	AverageRF	100	0.004	0.006	26.5	200.00	253.0	
Toxaphene {2}	285689	Quadratic	100				200.00	240.3	20.1
Toxaphene {3}	285689	AverageRF	100	0.016	0.019	21.1	200.00	242.3	
Toxaphene {4}	285689	AverageRF	100	0.019	0.020	5.1	200.00	210.2	
Toxaphene {5}	285689	AverageRF	100	0.011	0.012	15.7	200.00	231.4	
Toxaphene {6}	285689	AverageRF	100	0.004	0.005	17.5	200.00	235.1	
Chlordane	285687	NA	20				50.00	45.9	-8.1
Chlordane {1}	285687	AverageRF	100	0.043	0.034	-21.6	50.00	39.2	
Chlordane {2}	285687	AverageRF	100	0.058	0.041	-29.1	50.00	35.4	
Chlordane {3}	285687	AverageRF	100	0.044	0.054	21.5	50.00	60.7	
Chlordane {4}	285687	AverageRF	100	0.126	0.114	-9.2	50.00	45.4	
Chlordane {5}	285687	AverageRF	100	0.118	0.100	-15.2	50.00	42.4	
Chlordane {6}	285687	AverageRF	100	0.080	0.084	4.9	50.00	52.5	
Chlorpyrifos	285657	AverageRF	20	0.749	0.749	0.1	2.00	2.0	
Oxychlordane	285657	AverageRF	20	1.235	1.065	-13.7	2.00	1.7	
cis-Nonachlor	285657	AverageRF	20	1.452	1.351	-7.0	2.00	1.9	
trans-Nonachlor	285657	AverageRF	20	1.352	1.313	-2.9	2.00	1.9	
Mirex	285657	AverageRF	20	0.823	0.773	-6.1	2.00	1.9	
Hexachloroethane	285657	AverageRF	20	2.214	1.891	-14.6	2.00	1.7	
Hexachlorobutadiene	285657	AverageRF	20	1.764	1.655	-6.2	2.00	1.9	
Perthane	285659	AverageRF	20	0.090	0.099	11.1	25.00	27.8	

2 compound out of 47 failed max individual %D criteria.

Second Source Calibration Verification Summary

CalibrationID: CAL15914

Method ID: MJ1647

DataFile Location: J:\GC34\DATA\121218CAL\1212000018.D

Units: ug/L

Column: DB XLB

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift

2 compound out of 47 failed max individual %D criteria.

Second Source Calibration Verification Summary

CalibrationID: CAL15914

Method ID: MJ1647

DataFile Location: J:\GC34\DATA\112718CAL\1127000007.D\1127000007C.D

Units: ug/L

Column: DB-35MS

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
alpha-BHC	285280	AverageRF	20	1.555	1.635	5.2	2.00	2.1	
Hexachlorobenzene	285280	AverageRF	20	1.864	1.945	4.3	2.00	2.1	
beta-BHC	285280	AverageRF	20	0.826	0.921	11.6	2.00	2.2	
gamma-BHC (Lindane)	285280	AverageRF	20	1.513	1.652	9.2	2.00	2.2	
delta-BHC	285280	AverageRF	20	1.564	1.697	8.5	2.00	2.2	
Heptachlor	285280	AverageRF	20	1.617	1.809	11.8	2.00	2.2	
Aldrin	285280	AverageRF	20	1.492	1.651	10.7	2.00	2.2	
Isodrin	285280	AverageRF	20	1.295	1.534	18.4	2.00	2.4	
Heptachlor Epoxide	285280	AverageRF	20	1.550	1.615	4.2	2.00	2.1	
gamma-Chlordane	285280	AverageRF	20	1.624	1.754	8.0	2.00	2.2	
Endosulfan I	285280	AverageRF	20	1.476	1.633	10.6	2.00	2.2	
alpha-Chlordane	285280	AverageRF	20	1.555	1.726	10.9	2.00	2.2	
Dieldrin	285280	AverageRF	20	1.550	1.744	12.5	2.00	2.3	
4,4'-DDE	285280	AverageRF	20	1.506	1.630	8.2	2.00	2.2	
Endrin	285280	AverageRF	20	1.545	1.645	6.4	2.00	2.1	
Endosulfan II	285280	AverageRF	20	1.507	1.663	10.4	2.00	2.2	
4,4'-DDD	285280	AverageRF	20	1.233	1.368	11.0	2.00	2.2	
Endrin Aldehyde	285280	AverageRF	20	1.218	1.451	19.2	2.00	2.4	
Endosulfan Sulfate	285280	AverageRF	20	1.601	1.721	7.5	2.00	2.1	
4,4'-DDT	285280	AverageRF	20	1.392	1.554	11.6	2.00	2.2	
Endrin Ketone	285280	AverageRF	20	1.752	1.746	-0.4	2.00	2.0	
Methoxychlor	285280	AverageRF	20	0.874	0.939	7.5	2.00	2.2	
2,4'-DDE	285703	AverageRF	20	1.287	1.471	14.3	2.00	2.3	
2,4'-DDD	285703	AverageRF	20	1.214	1.407	15.9	2.00	2.3	
2,4'-DDT	285703	AverageRF	20	1.442	1.654	14.8	2.00	2.3	
Toxaphene	285690	NA	20				200.00	206.6	3.3
Toxaphene {1}	285690	AverageRF	100	0.007	0.008	17.3	200.00	234.6	
Toxaphene {2}	285690	Quadratic	100				200.00	214.1	7.0
Toxaphene {3}	285690	AverageRF	100	0.033	0.033	-0.6	200.00	198.8	
Toxaphene {4}	285690	AverageRF	100	0.023	0.023	0.5	200.00	201.1	
Toxaphene {5}	285690	AverageRF	100	0.019	0.020	7.9	200.00	215.9	
Toxaphene {6}	285690	AverageRF	100	0.030	0.026	-12.4	200.00	175.1	
Chlordane	285688	NA	20				50.00	42.7	-14.6
Chlordane {1}	285688	AverageRF	100	0.064	0.047	-26.4	50.00	36.8	
Chlordane {2}	285688	AverageRF	100	0.086	0.059	-31.5	50.00	34.3	
Chlordane {3}	285688	AverageRF	100	0.046	0.045	-2.2	50.00	48.9	
Chlordane {4}	285688	AverageRF	100	0.178	0.151	-15.2	50.00	42.4	
Chlordane {5}	285688	AverageRF	100	0.113	0.114	0.6	50.00	50.3	
Chlordane {6}	285688	AverageRF	100	0.161	0.141	-12.7	50.00	43.6	
Chlorpyrifos	285658	AverageRF	20	1.185	1.111	-6.2	2.00	1.9	
Oxychlordane	285658	AverageRF	20	1.727	1.499	-13.2	2.00	1.7	
cis-Nonachlor	285658	AverageRF	20	2.097	1.878	-10.4	2.00	1.8	
trans-Nonachlor	285658	AverageRF	20	1.907	1.816	-4.8	2.00	1.9	
Mirex	285658	AverageRF	20	1.683	1.479	-12.1	2.00	1.8	
Hexachloroethane	285658	AverageRF	20	2.351	2.127	-9.5	2.00	1.8	
Hexachlorobutadiene	285658	AverageRF	20	1.851	1.692	-8.6	2.00	1.8	
Perthane	285660	AverageRF	20	0.065	0.073	12.4	25.00	28.1	

Second Source Calibration Verification Summary

CalibrationID: CAL15914

Method ID: MJ1647

DataFile Location: J:\GC34\DATA\121218CAL\1212000018.D\1212000018C.D

Units: ug/L

Column: DB-35MS

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift

Quantitation Report (QT Reviewed)

1st mc 12/13/18
2nd TP 12/14/18

Data File : J:\GC34\DATA\121218CAL\1212000033.D Vial: 32
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 08:41:25 Operator: MCHAPPELLE
Sample : CHLOR ICV 50PPB GCPS8-50B Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 14:07:12 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Thu Dec 13 13:35:49 2018
QLast Update : Thu Dec 13 13:35:49 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
36)	1-Bromo-2...	4.507	4.047	138.2E6	137.4E6	100.000	100.000
	System Monitoring Compounds						
	Target Compounds						
37)	Chlordane	10.237	7.950	2315388	3245030	39.187	36.798
38)	Chlordane...	11.047	8.447	2818666	4045239	35.429	34.269
39)	Chlordane...	12.527	11.577	3715144	3069870	60.731	48.890
40)	Chlordane...	16.303	12.420	7905448	10354803	45.393	42.392
41)	Chlordane...	16.553	12.560	6920208	7800570	42.393	50.317
42)	Chlordane...	16.893	12.863	5789810	9682197	52.468	43.636
	SemiQuant Compounds - Not Calibrated on this Instrument						

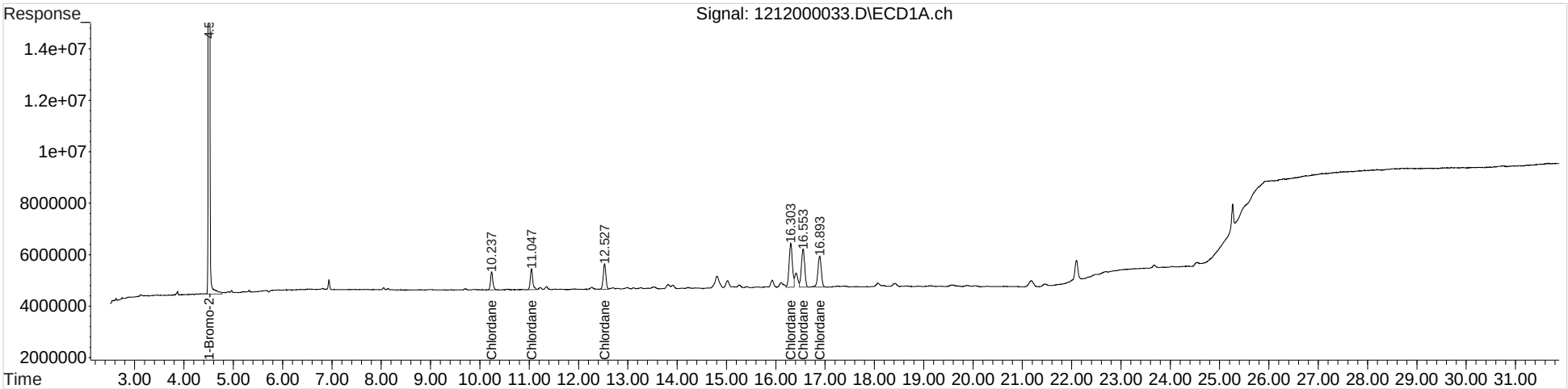
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\121218CAL\1212000033.D Vial: 32
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 08:41:25 Operator: MCHAPPELLE
Sample : CHLOR ICV 50PPB GCPS8-50B Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 14:07:12 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Thu Dec 13 13:35:49 2018
QLast Update : Thu Dec 13 13:35:49 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



1st mc 12/14/18

Data File : J:\GC34\DATA\121318ICV\1213000002.D Vial: 89
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 14:54:36 Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 15:36:24 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Thu Dec 13 13:35:49 2018
QLast Update : Thu Dec 13 13:36:11 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	4.513	4.053	135.4E6	139.0E6	100.000	100.000	
	System Monitoring Compounds							
	Target Compounds							
16)	4,4'-DDE	0.000	14.123	0	113825	N.D.	0.054	#
17)	Endrin	19.687	16.113	9093055	13320323	6.347	6.203	
19)	4,4'-DDD	0.000	17.460	0	11518	N.D. d	0.007	
20)	Endrin Al...	0.000	19.417	0	91106	N.D. d	0.054	
22)	4,4'-DDT	23.040	19.180	17008670	24055872	12.321	12.432	
23)	Endrin Ke...	25.267	23.890	2478520	580469	1.572m	0.238	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

coeluting interference at the same RT as E. Ketone on the front. Back column is passing.

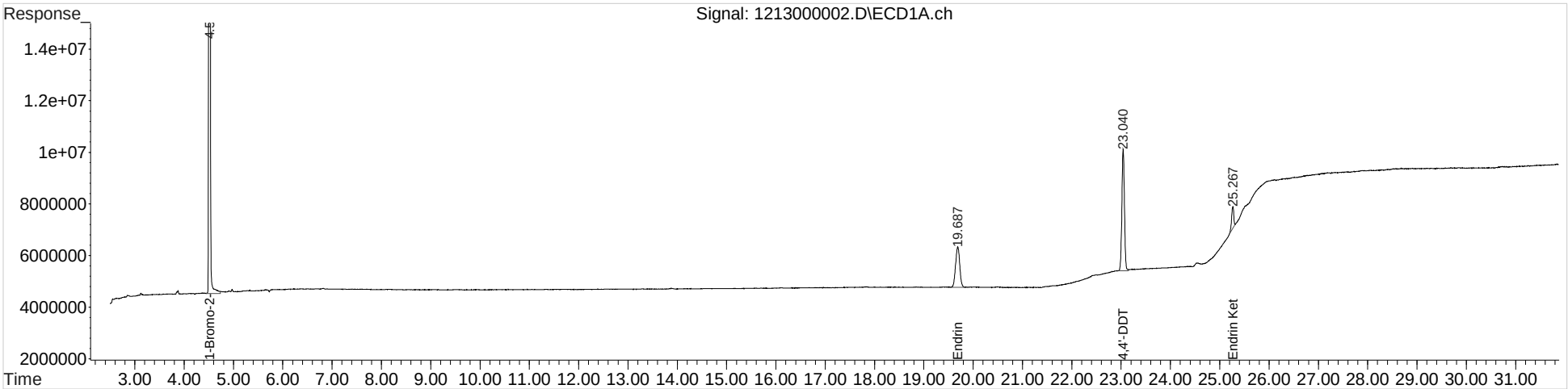
Endrin is not breaking down.

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\121318ICV\1213000002.D Vial: 89
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 14:54:36 Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 15:36:24 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Thu Dec 13 13:35:49 2018
QLast Update : Thu Dec 13 13:36:11 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

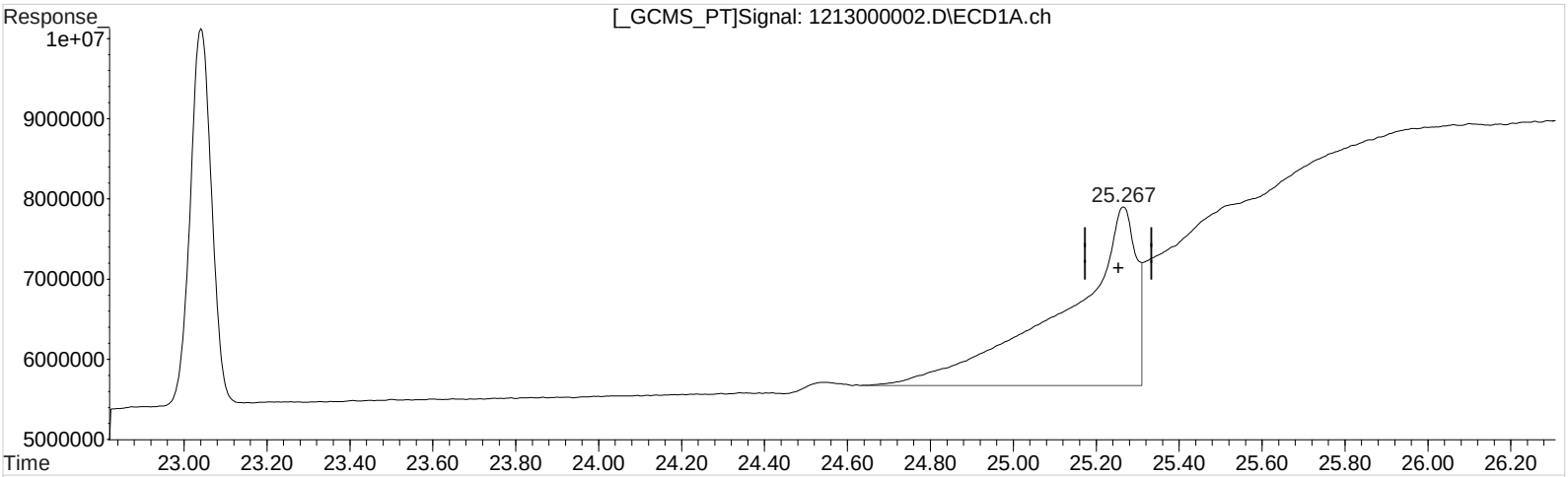


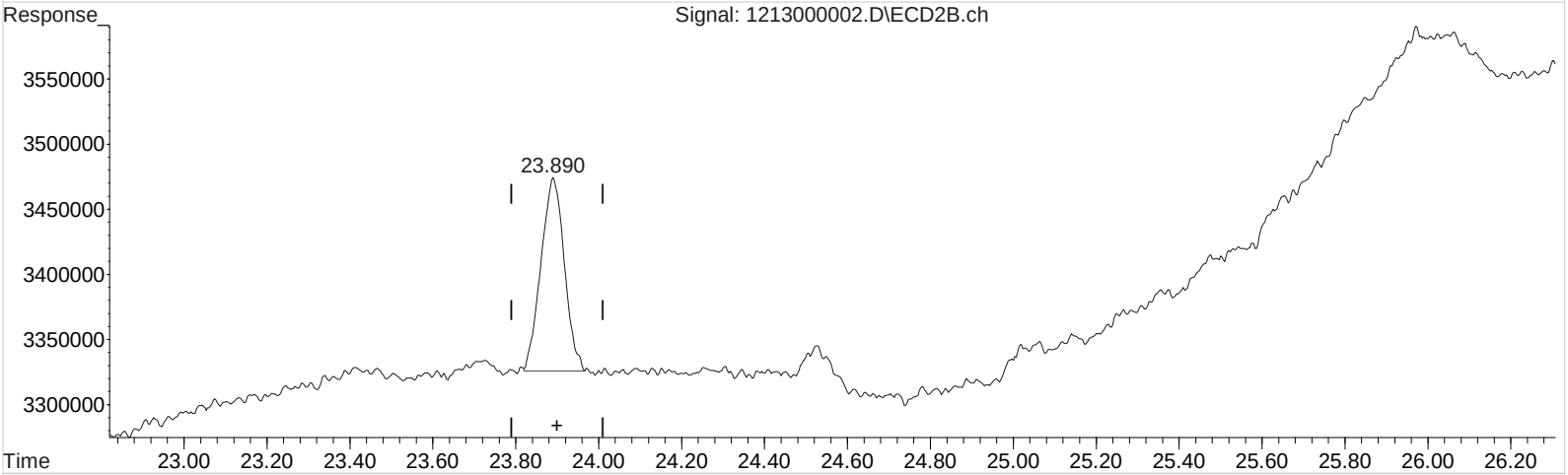
1st mc 12/14/18

Data File : J:\GC34\DATA\121318ICV\1213000002.D Vial: 89
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 14:54:36 Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 15:35:33 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Thu Dec 13 13:35:49 2018
QLast Update : Thu Dec 13 13:36:11 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(23) Endrin Ketone

25.267min 17.073 ug/L

response 26923332

Manual Integration:

Before

12/13/18

(23) Endrin Ketone #2

23.890min 0.238 ug/L

response 580469

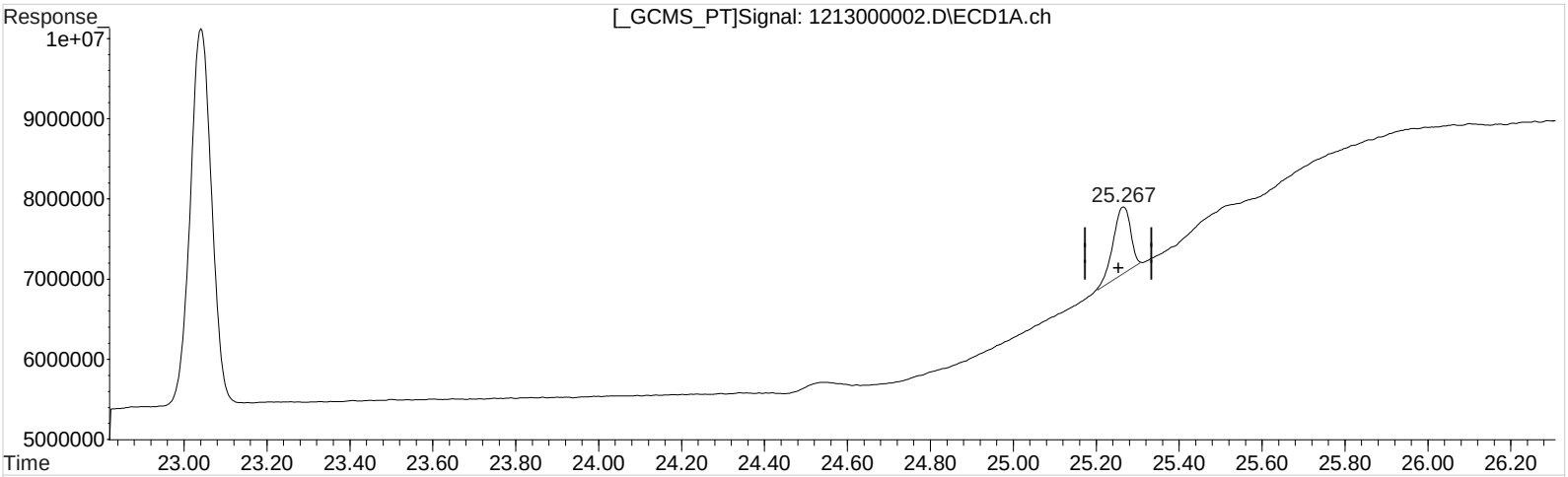
(+) = Expected Retention Time

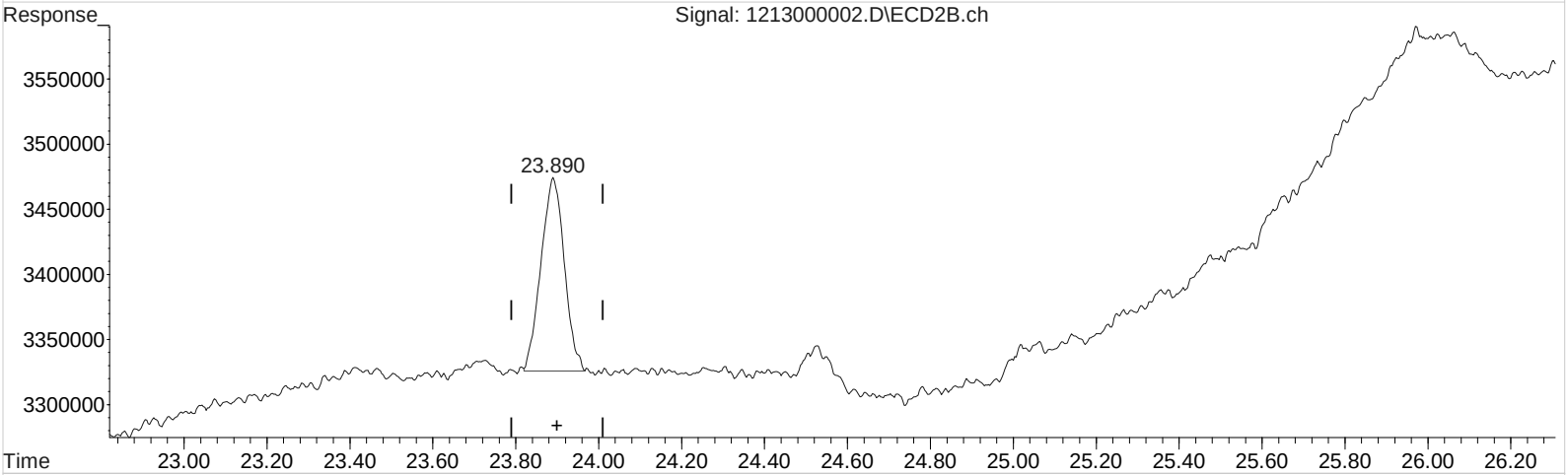
1st mc 12/14/18

Data File : J:\GC34\DATA\121318ICV\1213000002.D Vial: 89
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 14:54:36 Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 15:35:33 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Thu Dec 13 13:35:49 2018
QLast Update : Thu Dec 13 13:36:11 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(23) Endrin Ketone

25.267min 1.572 ug/L m

response 2478520

Manual Integration:

After

Baseline/Shoulder

12/13/18

(23) Endrin Ketone #2

23.890min 0.238 ug/L

response 580469

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st mc 12/14/18

Data File : J:\GC34\DATA\121318ICV\1213000003.D Vial: 88
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 15:30:29 Operator: MCHAPPELLE
Sample : IB Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 16:03:56 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Thu Dec 13 15:47:11 2018
QLast Update : Thu Dec 13 15:47:47 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	4.510	4.050	122.9E6	126.5E6	100.000	100.000
29)	1-Bromo-2...	4.510	4.050	122.9E6	126.5E6	100.000	100.000
36)	1-Bromo-2...	4.510	4.050	122.9E6	126.5E6	100.000	100.000
43)	1-Bromo-2...	4.510	4.050	122.9E6	126.5E6	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	0.000	5.610f	0	9073	N.D.	0.006 #
28) s	Decachlor...	30.080	27.443f	46760	9417	0.030	0.005 #
	Target Compounds						
3)	alpha-BHC	0.000	6.730f	0	14315	N.D.	0.007 #
4)	Hexachlor...	0.000	6.427f	0	9264	N.D.	0.004 #
7)	delta-BHC	0.000	9.013	0	9042	N.D.	0.005 #
8)	Heptachlor	0.000	8.387f	0	27686	N.D.	0.014 #
12)	gamma-Chl...	0.000	12.417	0	8339	N.D.	0.004 #
17)	Endrin	0.000	16.053f	0	8965	N.D.	0.005 #
19)	4,4'-DDD	0.000	17.437	0	11934	N.D.	0.008 #
20)	Endrin Al...	0.000	19.390	0	8740	N.D. d	0.006
21)	Endosulfa...	0.000	20.950f	0	9997	N.D.	0.005 #
22)	4,4'-DDT	23.097	19.107f	35635	8032	0.028	0.005 #
23)	Endrin Ke...	25.267	0.000	2196710	0	1.535m	N.D. #
24)	Methoxychlor	0.000	23.570f	0	11397	N.D.	0.010 #
48)	Mirex	26.510	0.000	47166	0	0.047	N.D. #
49)	HCE	0.000	2.493f	0	15810	N.D.	0.005 #
50)	HCBD	3.447f	2.907	29474	13586	0.014	0.006 #
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

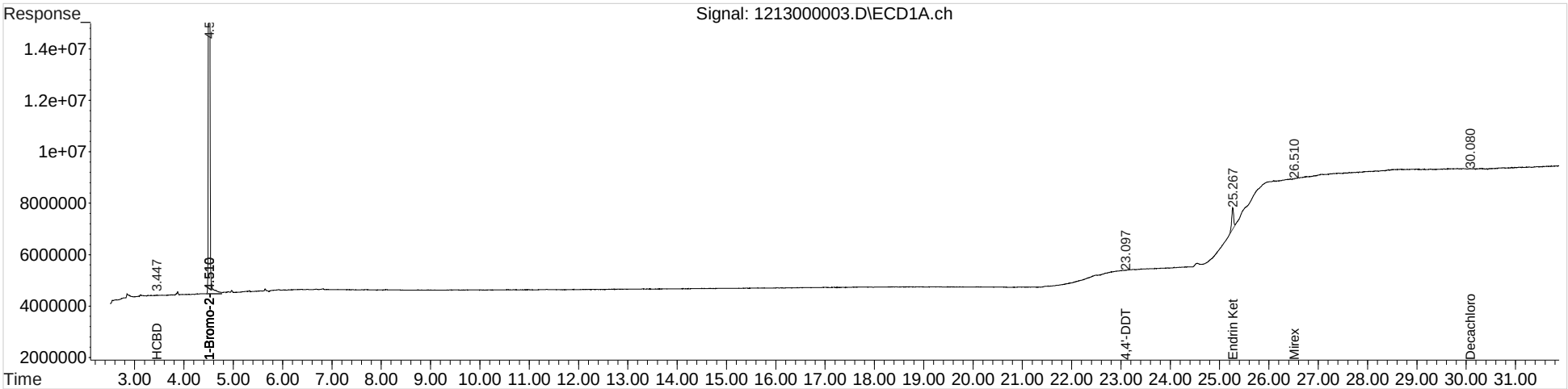
OK

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\121318ICV\1213000003.D Vial: 88
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 15:30:29 Operator: MCHAPPELLE
Sample : IB Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 16:03:56 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Thu Dec 13 15:47:11 2018
QLast Update : Thu Dec 13 15:47:47 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

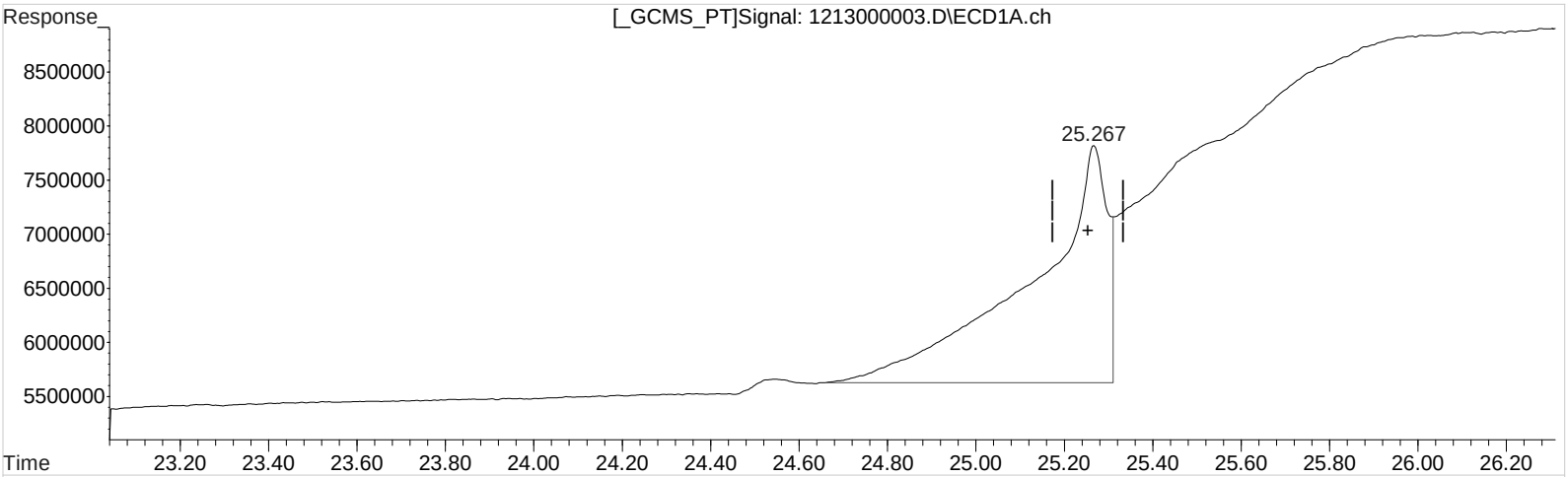


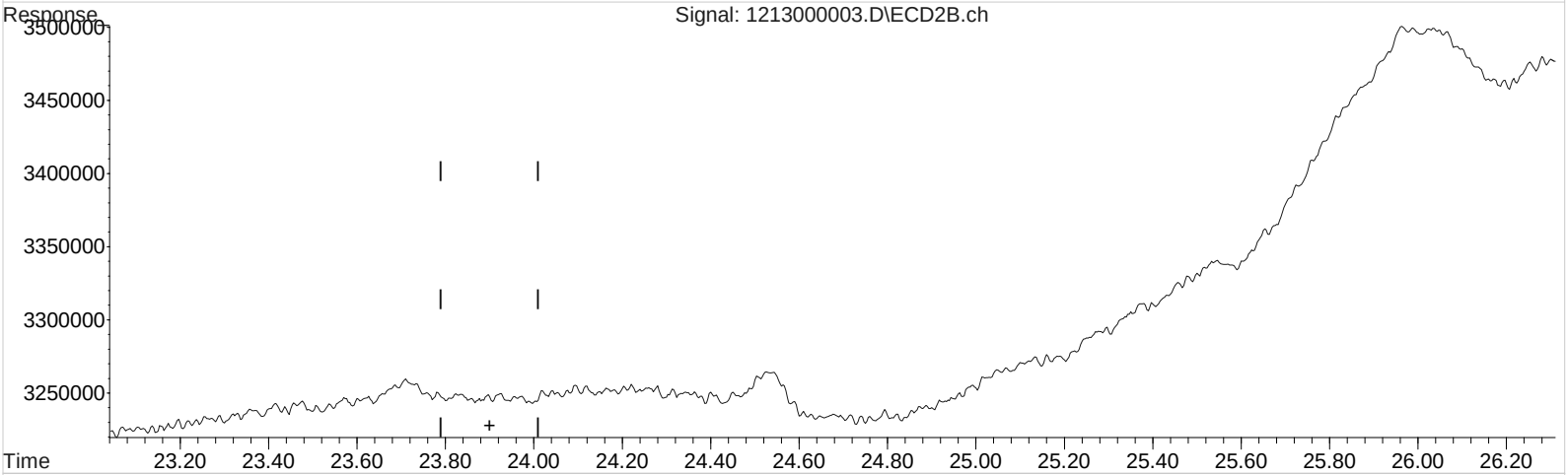
1st mc 12/14/18

Data File : J:\GC34\DATA\121318ICV\1213000003.D Vial: 88
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 15:30:29 Operator: MCHAPPELLE
Sample : IB Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 16:02:54 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Thu Dec 13 15:47:11 2018
QLast Update : Thu Dec 13 15:47:47 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(23) Endrin Ketone

25.267min 18.315 ug/L

response 26217346

Manual Integration:

Before

12/13/18

(23) Endrin Ketone #2

0.000min 0.000 ug/L

response 0

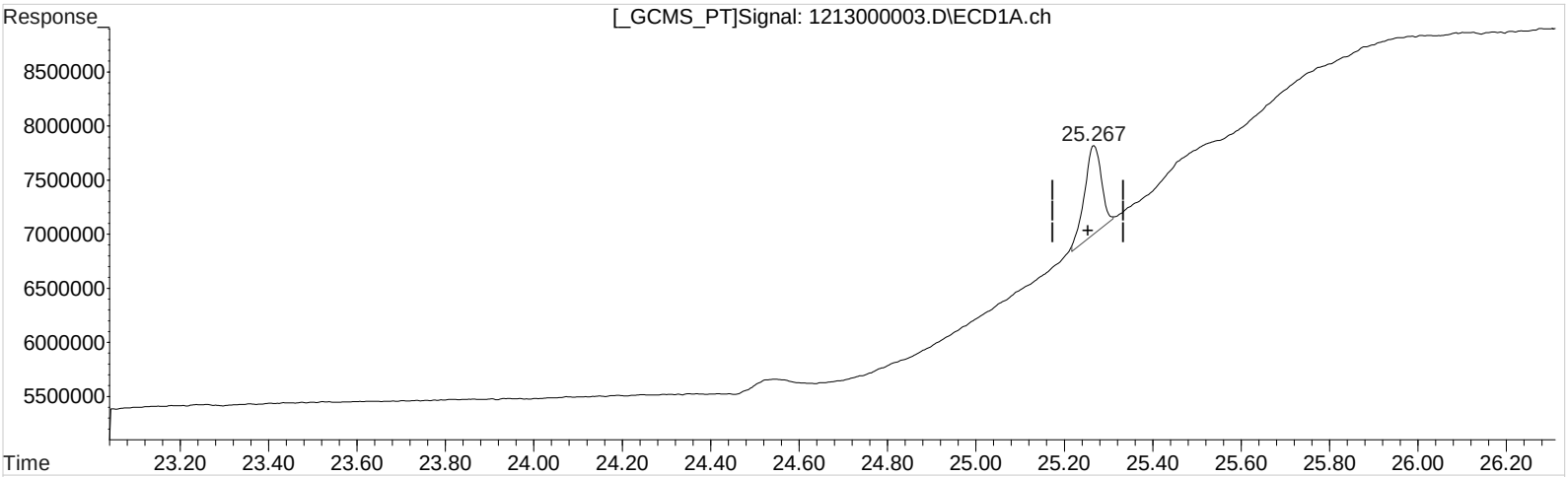
(+) = Expected Retention Time

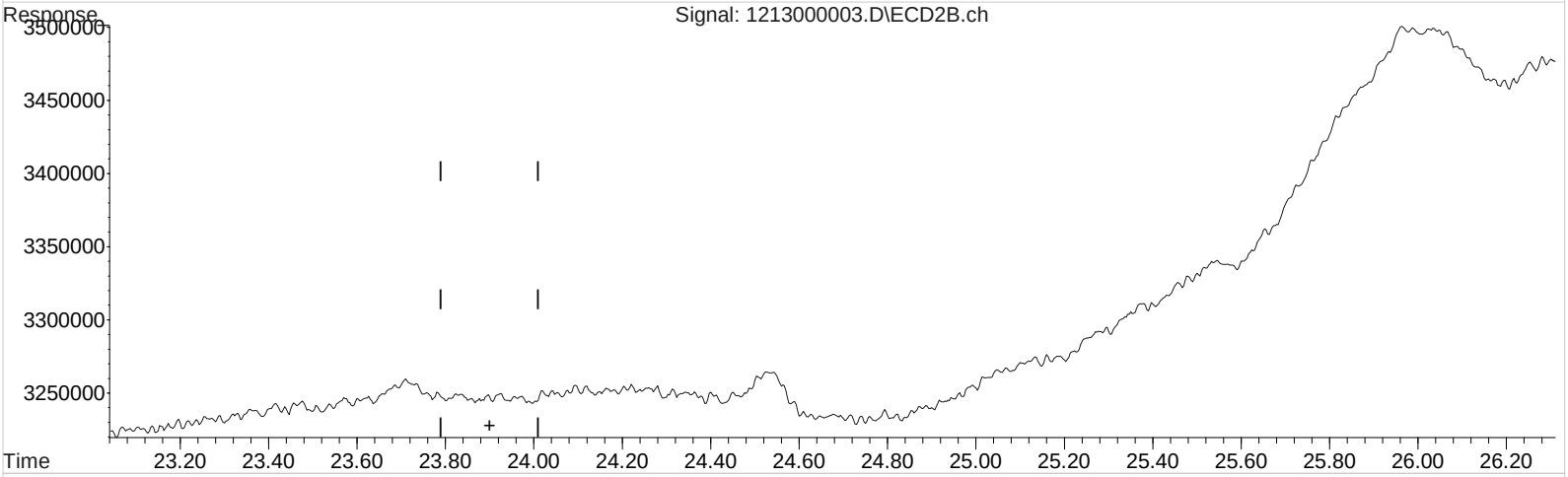
1st mc 12/14/18

Data File : J:\GC34\DATA\121318ICV\1213000003.D Vial: 88
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 15:30:29 Operator: MCHAPPELLE
Sample : IB Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 16:02:54 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15890 MJ1647 xp11191Thu Dec 13 15:47:11 2018
QLast Update : Thu Dec 13 15:47:47 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(23) Endrin Ketone

25.267min 1.535 ug/L m

response 2196710

Manual Integration:

After

Baseline/Shoulder

12/13/18

(23) Endrin Ketone #2

0.000min 0.000 ug/L

response 0

(+) = Expected Retention Time

1st mc 12/14/18

Data File : J:\GC34\DATA\121318ICV\1213000005.D Vial: 87
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 16:45:01 Operator: MCHAPPELLE
Sample : 24 ICV 2PPB GCPS8-50C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 17:18:21 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15914 MJ1647 xp11-26Thu Dec 13 15:47:11 2018
QLast Update : Thu Dec 13 15:47:11 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	4.553	4.090	133.7E6	136.5E6	100.000	100.000
	System Monitoring Compounds						
	Target Compounds						
25)	2,4'-DDE	15.643	12.593	2938354	4016647	2.349	2.285
26)	2,4'-DDD	18.397	15.173	2384970	3840704	2.158	2.318
27)	2,4'-DDT	20.510	16.703	2931766	4517144	2.253	2.295
	SemiQuant Compounds - Not Calibrated on this Instrument						

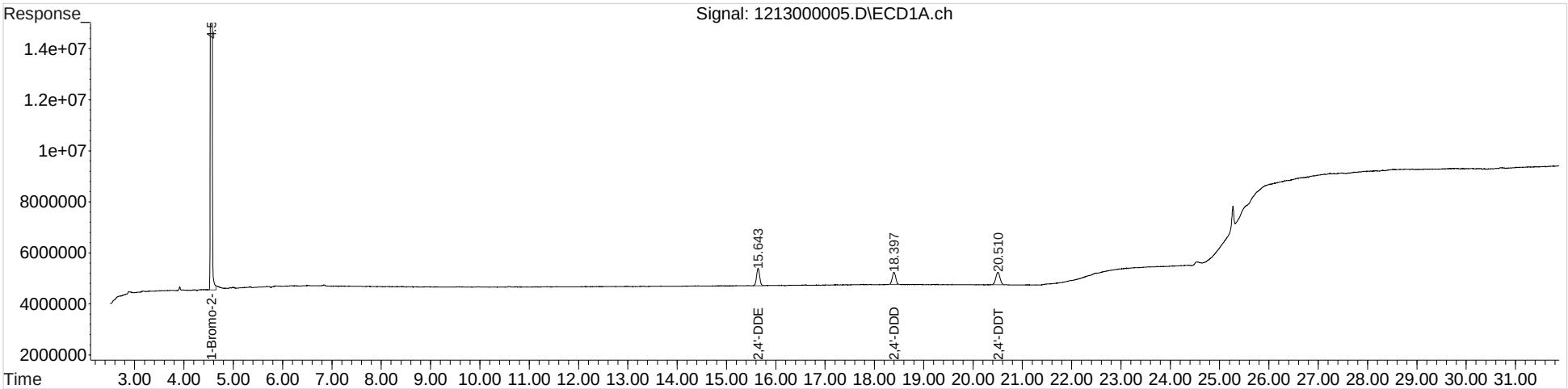
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC34\DATA\121318ICV\1213000005.D Vial: 87
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 13-Dec-2018, 16:45:01 Operator: MCHAPPELLE
Sample : 24 ICV 2PPB GCPS8-50C Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 17:18:21 2018
Quant Results File: GC34-121218.RES

Quant Method : J:\GC34\METHODS\GC34-121218.M
Quant Title : Organochlorine Pesticides CAL15914 MJ1647 xp11-26Thu Dec 13 15:47:11 2018
QLast Update : Thu Dec 13 15:47:11 2018
Response via : Initial Calibration
DataAcq Meth:2UL10T1.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Preparation Information

Group ID:	KWG1806260	**Prep Method:**	EPA 3511	**Prep Date:**	12/03/18 16:15
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.
K1811381-004	SL0153	8081B Pest OC TCLP	SOIL	100ml	5ml
K1811381-005	SL0146	8081B Pest OC TCLP	SOIL	100ml	5ml
K1811438-001	SL0547	8081B Pest OC TCLP	SOIL	100ml	5ml
K1811438-002	SL0554	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806260-1	Matrix Spike	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806260-2	Duplicate Matrix Spike	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806260-3	Matrix Spike	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806260-4	Duplicate Matrix Spike	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806260-5	Lab Control Sample	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806260-6	Lab Control Sample	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806260-7	Method Blank	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806260-8	Method Blank	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806260-9	Method Blank	8081B Pest OC TCLP	SOIL	100ml	5ml

Lab Code	Parent Lab Code	Comments
KWG1806260-1	K1811381-004	
KWG1806260-2	K1811381-004	
KWG1806260-3	K1811381-004	
KWG1806260-4	K1811381-004	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1811381-004	1705206					
K1811381-005	1705207					
K1811438-001	1705208					
K1811438-002	1705209					
KWG1806260-1	1705210					
KWG1806260-2	1705211					
KWG1806260-3	1705212					
KWG1806260-4	1705213					
KWG1806260-5	1705214					
KWG1806260-6	1705215					
KWG1806260-7	1705216					
KWG1806260-8	1705217					
KWG1806260-9	1705218					

Comments: 81, T/C PrepRun: 327553

Started By: TAndrews Assisted By: —

Completed By: TAndrews Assisted By: —

Training: Yes No / Yes No

Reviewed By: [signature] Date: 12/7/18 Storage: Friday A1-10 B1-3

Chain of Custody

Relinquished By: [signature] Date: 12.6.18

Received By: [signature] Date: 12/23/18

Extracts Examined: Yes No

Preparation Information

Group ID:	KWG1806260	**Prep Method:**	EPA 3511	**Prep Date:**	12/03/18 00:00
Department:	Semivoa GC				

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. mL	pH	Int. Vol.	Final Vol. mL	Surr. Added µL	Spike Added µL
① 1	K1811381-004	SL0153	.14	/	8081B Pest OC TCLP	SOIL	100	~~6~~ 5	/	5	50	—
① 2	K1811381-005	SL0146	.14	/	8081B Pest OC TCLP	SOIL	100	~~X~~ 6		5		—
3	K1811438-001	SL0547	.16	/	8081B Pest OC TCLP	SOIL	100	5		5		—
① 4	K1811438-002	SL0554	.08	/	8081B Pest OC TCLP	SOIL	100	~~7~~ 6		5		—
5	KWG1806260-1 K1811381-4	Matrix Spike S1	.14	/	8081B Pest OC TCLP	SOIL	100	6		5		50
6	KWG1806260-2	Duplicate Matrix Spike	.14	/	8081B Pest OC TCLP	SOIL	100	6		5		50
7	KWG1806260-3	Matrix Spike T/C	.14	/	8081B Pest OC TCLP	SOIL	100	6		5		50/50
8	KWG1806260-4	Duplicate Matrix Spike	.14	/	8081B Pest OC TCLP	SOIL	100	6		5		50/50
9	KWG1806260-5	Lab Control Sample S1		—	8081B Pest OC TCLP	SOIL	100	5		5		50
10	KWG1806260-6	Lab Control Sample T/C		—	8081B Pest OC TCLP	SOIL	100	5		5		50/50
11	KWG1806260-7	Method Blank LB S01 1		—	8081B Pest OC TCLP	SOIL	100	5		5		—
12	KWG1806260-8	Method Blank LB S01 2		—	8081B Pest OC TCLP	SOIL	100	5		5		—
13	KWG1806260-9	Method Blank		—	8081B Pest OC TCLP	SOIL	100	5	/	5		—

① initially wrote wrong PH Levels, actual levels are written in top right of Boxes 12.3.18

Prep Run: 327553

Comments: Sample 6260-8 had an initial PH of 3, used NaOH to neutralize 12.3.18 TA
Sample 1381-5 is murky with sediment 12.3.18 TA

Surrogate ID: PCB 7526 0.5ppm xp 05.08.19 50µL SI

Spike ID: GCPS496 0.5ppm xp 12.29.18 50µL SI / GCPS8-48L 20ppm xp 5.19.19 50µL SI / GCPS8-43B 10ppm xp 2.16.19 50µL SI

Witness: BLG

Started By: TAndrews Assisted By:

Completed By: TAndrews Assisted By:

Pest/PCB/PAH by 3511

Service Request # K1811381/1438 **Work Group # Pest:** KWG18U6260
PCB: ——
PAH: ——

Solvent Lot # 195734

Extraction Start (time/date/initial): ~~16:00~~ 12.3.18 [initials] 16:15 ①X

Extraction Stop (time/date/initial): 16:36 12.3.18 [initials]

NaCL Lot# 17H295208
Sulfate Lot # ——

Carbon Clean-up (Ext-Car)(time/date/initial): —— Carbon Lot # ——
Hexane Lot # ——

Florisil Clean-up (Ext-Flor)(time/date/initial): —— Florisil Lot # ——
Hexane Lot # ——

Sulfuric Acid Clean-up (3665) (time/date/initial): —— Acid Lot # ——

Other Clean-up: —— ☐ all samples ☐ some samples: ——

Pipette (2 mL) Lot # —— Pipette (1 mL) Lot # 20717645

Pest Vial: Yellow Vial Storage: Friday A1-10 B1-3
PCB Vial: —— Vial Storage: ——
PAH Vial: —— Vial Storage: ——

Archived Extract Storage: ——

Additional Comments: ① Bottle came a little loose on shaker table, re-secured and reset 12.3.18 [initials]

- ☑ Hold times met (if no, reason: ____)
- ☑ Prep date, time, method, department, product code correct in stealth
- ☑ Spike information and Q.C. correct (insufficient volume or mass recorded if no Q.C.)
- ☑ Weights/Volumes and units correct on raw and final bench sheets
- ☑ Sample IDs have been checked - bottle numbers appended if required
- ☑ Names present for: started by, completed by, relinquished by, and witnessed by. Training circled.
- ☑ Extract storage recorded
- ☑ Additional prep sheet completely filled out (NA or line out blanks)
- ☑ All clean-ups have been noted on additional prep sheet
- ☑ Signed service request with Form V, if applicable, has been attached

TCLP Extraction Worksheet

Service Request Number(s): K181 1346, 1381, 1438

If Autofluff sample is used please place an X in this box ☐ Prep Run# : 327052

Method : TCLP 1311 ☒ SPLP 1312 ☐ Wet Ext. ☐ MEP ☐

Note: 1 Blank needed per every 20 extracts.

Sample Number	Teflon Extraction Vessel #	Sample Description (Solid, Liquid, Multiphasic)	Partical Size < 1cm ?	Solution Determination Weight (g)	Initial pH	Aliquot of 1N HCl (mL)	Final pH	Solution To Be Used	Extraction Weight (g)	Extraction Solution Volume (mL)	Post-Extraction pH
K181346-1	19	S	Y	5.093	8.32	3.5	2.26		100.42	2000	6.14
2	14			5.194	8.68		2.01		100.18		5.14
~~K181381-2~~ K181438-1	9			5.176	9.46		5.34	2	100.55		4.93
~~3~~ 2	1			5.055	9.64		4.11	1	100.08		6.10
K181381 - 4 CCL 11/26	8			5.064	9.37		1.87		100.03		5.22
5	13			5.122	10.04		3.05		100.38		6.20
MB	18								—		—
MB	32							2	—		—

CCL 11/27

pH Meter Calibrated at pH4 & pH7 Today? ☒ 11/26/18 11/27/18 pH Meter I.D. KpH-08 Balance I.D. 48, 52 Date Balance Checked: 11/26/18, 11/26/18

Extraction Solution Prep date: 11/26/18, 11/6/18 Tumbler # 4 Thermometer# 664244 Hot Plate Temp °C(50°C): 50

Today's Solution pH: 4.95, 2.87 11/26/18 Extraction Solution I.D. MET-DG-26-D Filter Lot # 162105 HCl I.D. REI-48-A

Extraction Started Time: 15:49 Date: 11/26/18 MET-DG-73-I Disposable Extraction Vessel Lot #: —

Extraction Finished Time: 8:14 Date: 11/27/18

Tumbler Rotational Speed (28 - 32 rpm): 29.7

Room Temperature at the Beginning of Extraction (Temp. Range 21° C - 25°C): 21.75

Analyst: [signature] Date: 11/26/18 Reviewer: [signature] Date: 11/27/18

r:\tcp\misc\digforms\TCLP Extraction Benchsheet 10-10-171

Chlorinated Herbicides by GC

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 327384 **Prep WorkFlow:** OrgHerbLP **Status:** Prepped
Team: Semivoa GC/CWILLIAMS **Prep Method:** Method **Prep Date/Time:** 11/30/18 08:47 AM
Number of Copies to make: 2

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	K1811381-004	SL0153	.14	8151A/HERB_TCLP		Soil	10.00mL	20.00mL	
2	K1811381-005	SL0146	.14	8151A/HERB_TCLP		Soil	10.00mL	20.00mL	fuel smell
3	K1811438-001	SL0547	.16	8151A/HERB_TCLP		Soil	10.00mL	20.00mL	
4	K1811438-002	SL0554	.08	8151A/HERB_TCLP		Soil	10.00mL	20.00mL	
5	KQ1817502-01	K1811381-005 MS	.14	8151A/HERB_TCLP		Solid	10.00mL	20.00mL	
6	KQ1817502-02	K1811381-005 DMS	.14	8151A/HERB_TCLP		Solid	10.00mL	20.00mL	
7	KQ1817502-03	LCS		8151A/HERB_TCLP		Solid	10.00mL	20.00mL	
8	KQ1817502-04	MB		8151A/HERB_TCLP		Solid	10.00mL	20.00mL	
9	KQ1817502-05	MB		8151A/HERB_TCLP		Solid	10.00mL	20.00mL	
10	KQ1817502-06	MB		8151A/HERB_TCLP		Solid	10.00mL	20.00mL	

Spiking Solutions

Name: 8151A 5ppm Herbicide surrogate Inventory ID 191563 Logbook Ref: Penta01-92M Expires On: 03/27/2019

K1811381-004 500.00µL K1811381-005 500.00µL K1811438-001 500.00µL K1811438-002 500.00µL KQ1817502-01 500.00µL KQ1817502-02 500.00µL
KQ1817502-03 500.00µL KQ1817502-04 500.00µL KQ1817502-05 500.00µL KQ1817502-06 500.00µL

Name: 8151A 5-500ppm Herbicides matrix spike Inventory ID 194025 Logbook Ref: penta01-93B Expires On: 02/09/2019

KQ1817502-01 500.00µL KQ1817502-02 500.00µL KQ1817502-03 500.00µL

Preparation Steps

Step:	Extraction	Step:	Final Volume
Started:	11/30/18 08:47	Started:	11/30/18 08:47
Finished:	12/3/18 16:56	Finished:	12/3/18 16:56
By:	WVANDERHOFF	By:	WVANDERHOFF
Comments		Comments	

Comments: gryffindor B 1-10

Reviewed By: _____ Date: _____

Preparation Information Benchsheet

Prep Run#: 327384
Team: Semivoa GC/CWILLIAMS

Prep WorkFlow: OrgHerbLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/30/18 08:47 AM

Chain of Custody

Relinquished By:		Date:	12-3-18	Extracts Examined
Received By:		Date:		Yes No

1st UA 12/12/18
2nd TP 12/12/18

Validation Report

Data File: J:\gc24\data\121018\12100040.D\
Lab ID: K1811438-001
RunType: N/A
Matrix: Soil

Date Acquired: 12/11/18 10:19:00
Batch ID: 618249
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Printed: 12/12/18 14:43
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Secondary Review: _____

1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100040.D\	**Instrument:**	K-GC-24
Acqu Date:	12/11/18 10:19:00	**Vial:**	11
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1811438-001	**Raw Units:**	ppb

Bottle ID:	K1811438-001.16	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/15/18	**Receive Date:**	11/21/18

Analysis Lot:	618249	**Prep Lot:**	327384	**Report Group:**	K1811438
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	11/30/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	7.97	9.56 -0.01	1561241	1466860	95.328	100.379	76	80	76	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.32 +0.02	11.07 +0.08	3355	46209	0.186	2.864	0.55U	8.5U	150 U	Y
2,4,5-TP (Silvex), TCLP	10.23 -0.01	12.28 +0.07	4691	22221	0.067	0.354	0.20U	1.1U	30 U	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	67.10

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100040.D Vial: 16
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Dec 2018 10:19 am Operator: MRICHARDS
Sample : K1811438-001 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:40:28 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	7.966	9.560	1561241	1466860	95.328	100.379	
	Target Compounds							
1) m	Dalapon	3.066f	3.663	1866002	100727	90.459	6.451	#
3) m	Dicamba	8.203	9.733	10887	10701	0.217	0.237	
4) m	MCPP	8.290	9.883	10587	3511	50428.539	86831.452	#
5) m	MCPA	8.540	10.177	4573	7732	50252.290	83579.747	#
6) m	Dichloroprop	8.943	10.647	15095	3492	901.545	1362.908	#
7) m	2,4-D	9.316	11.067f	3355	46209	0.186	2.864	#
8) m	2,4,5-TP ...	10.233	12.280f	4691	22221	0.067	0.354	#
9) m	2,4,5-T	10.683	12.623	3488	4216	0.057	0.078	#
10) m	2,4-DB	11.236	13.327	18819	6965	2.424	1542.706	#
11) m	Dinoseb	11.643	13.510	22279	21494	0.480	0.521	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

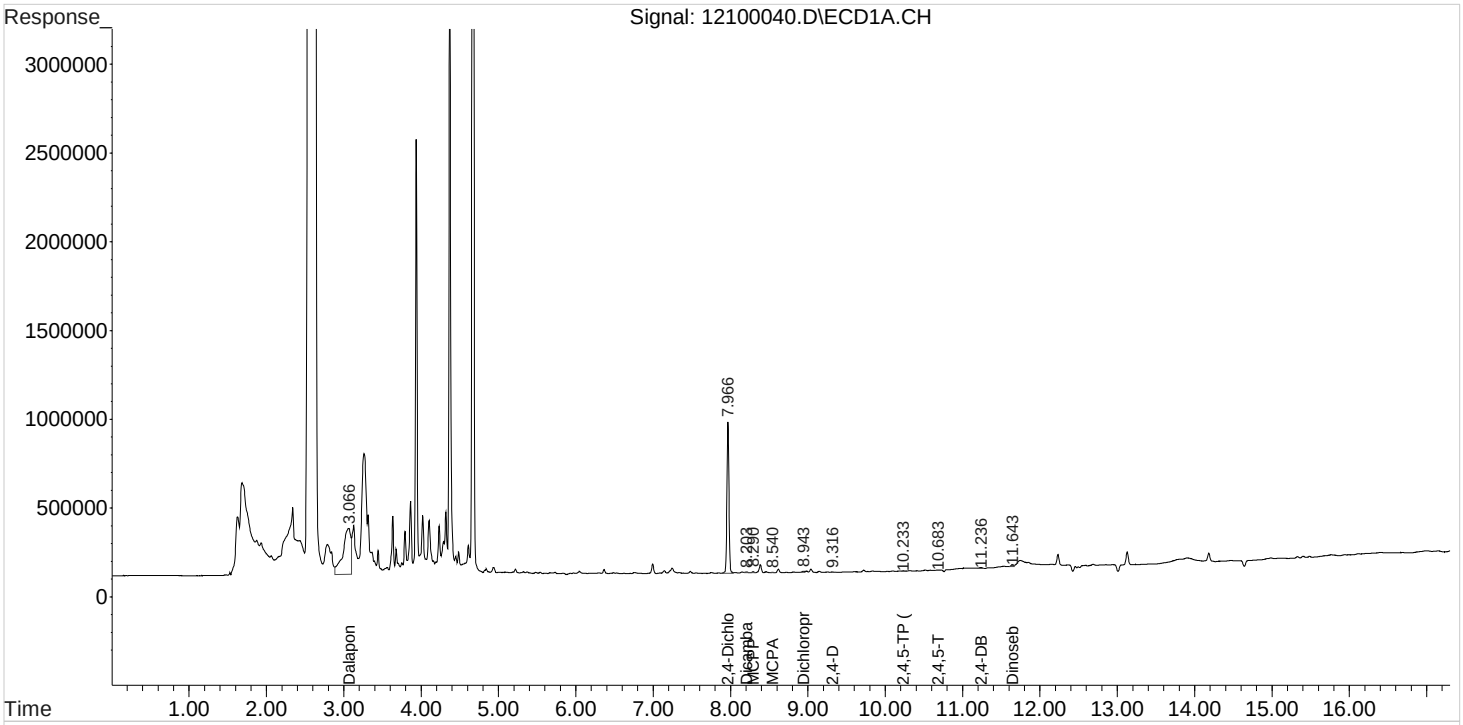
Quantitation Report (QT Reviewed)

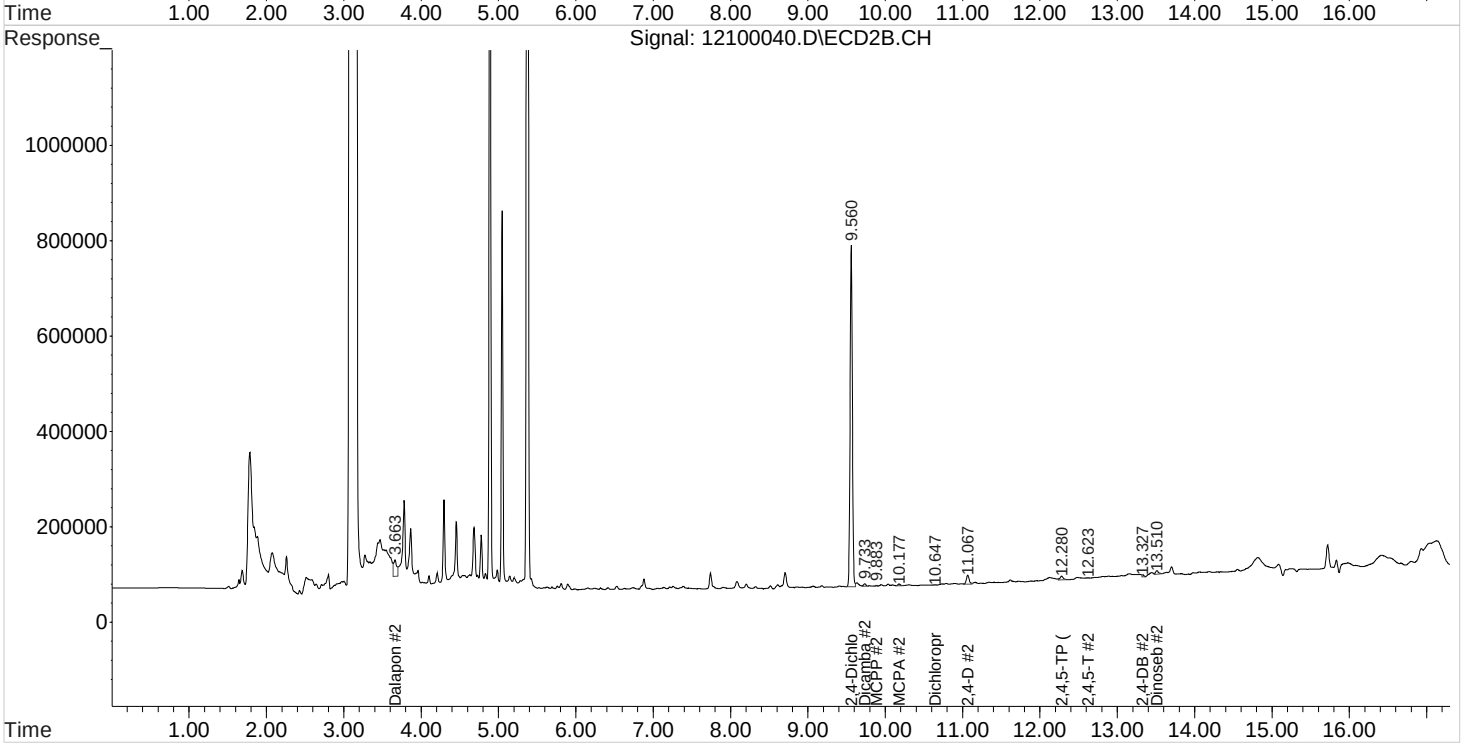
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100040.D Vial: 16
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Dec 2018 10:19 am Operator: MRICHARDS
Sample : K1811438-001 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:40:28 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Validation Report

1st UA 12/12/18
2nd TP 12/12/18

Data File: J:\gc24\data\121018\12100024.D\
Lab ID: K1811438-002
RunType: N/A
Matrix: Soil

Date Acquired: 12/10/18 21:10:00
Batch ID: 618249
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100024.D\	**Instrument:**	K-GC-24
Acqu Date:	12/10/18 21:10:00	**Vial:**	16
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1811438-002	**Raw Units:**	ppb

Bottle ID:	K1811438-002.08	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/16/18	**Receive Date:**	11/21/18

Analysis Lot:	618249	**Prep Lot:**	327384	**Report Group:**	K1811438
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	11/30/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	7.97 -0.01	9.58	1523873	1483226	93.047	101.499	74	81	74	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.35 +0.05	10.99 -0.01	2499	2837	0.138	0.176	0.39U	0.50U	140 U	Y
2,4,5-TP (Silvex), TCLP	10.24 -0.01	12.23 +0.02	4528	4863	0.064	0.078	0.18U	0.22U	29 U	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	70.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100024.D Vial: 17
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 9:10 pm Operator: MRICHARDS
Sample : K1811438-002 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:31:34 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	7.975	9.575	1523873	1483226	93.047	101.499	
	Target Compounds							
1) m	Dalapon	3.088	3.675	1272755	24021	61.700	1.538	#
3) m	Dicamba	8.215	9.748	12954	11356	0.259	0.251	
4) m	MCPP	8.298	9.902	11145	3146	50424.567	86838.086	#
5) m	MCPA	8.548	10.192	10813	8656	50215.372	83568.716	#
6) m	Dichloroprop	8.955	10.585f	21369	3101	901.150	1362.937	#
7) m	2,4-D	9.355	10.992	2499	2837	0.138	0.176	#
8) m	2,4,5-TP ...	10.245	12.228	4528	4863	0.064	0.078	
9) m	2,4,5-T	10.728	12.605	13982	3095	0.230	0.057	#
10) m	2,4-DB	11.245	13.292	6772	3507	0.872	1543.140	#
11) m	Dinoseb	11.678	13.525	5092	10603	0.110	0.257	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

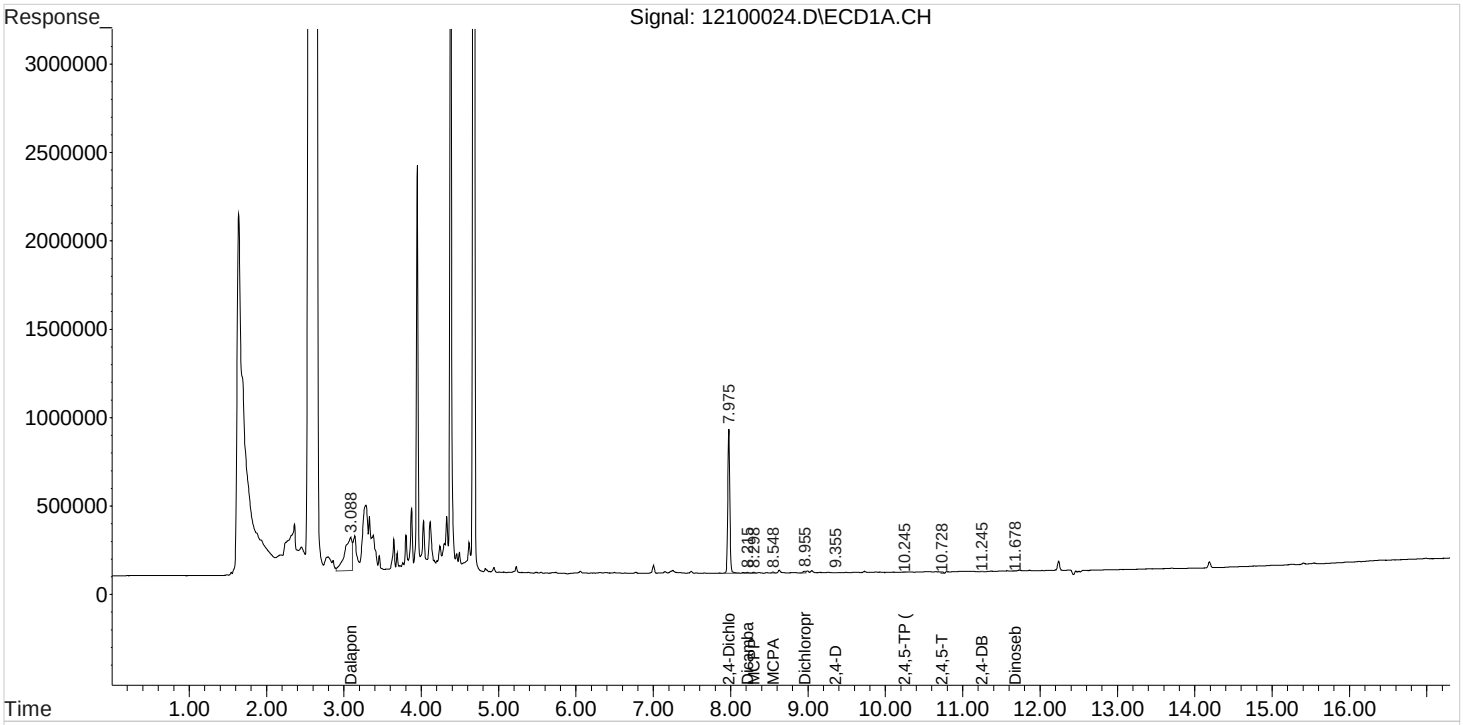
Quantitation Report (QT Reviewed)

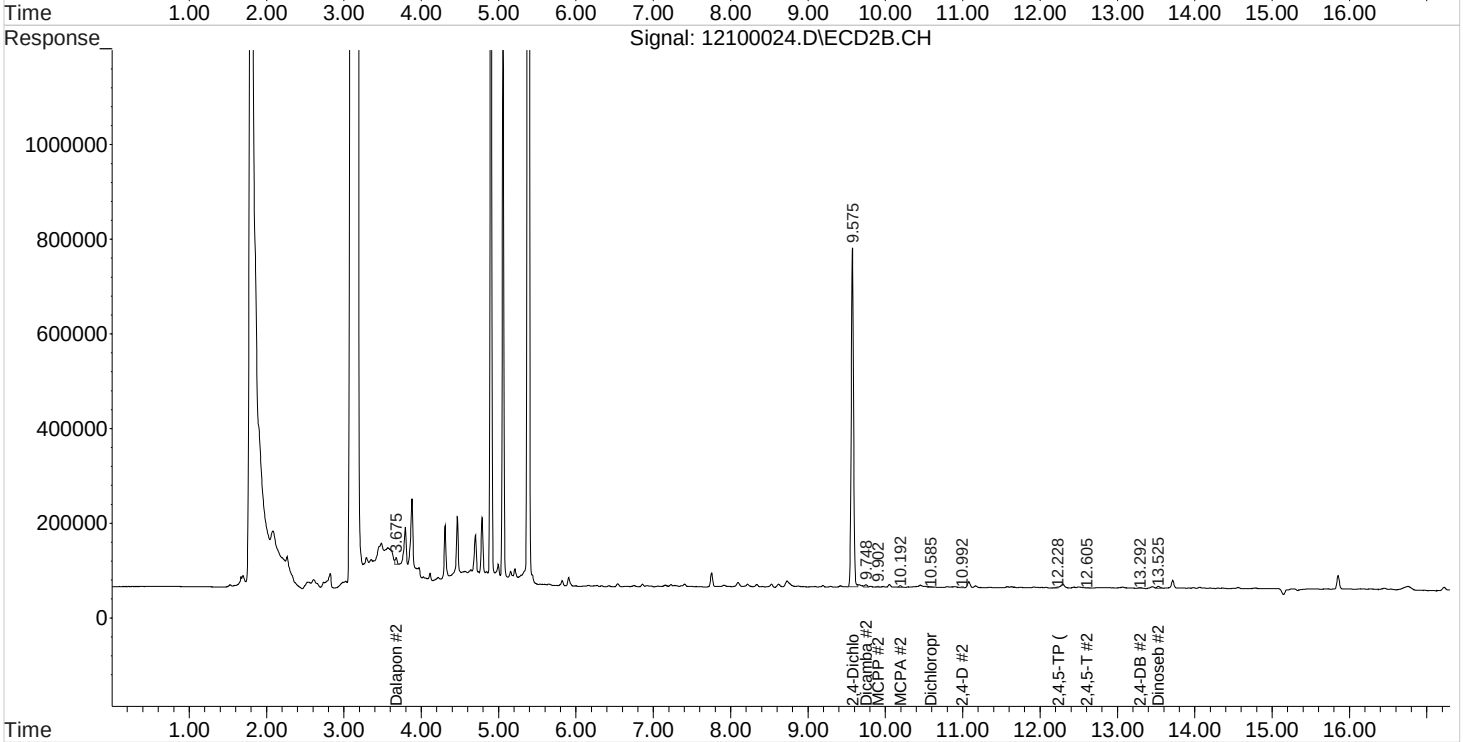
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100024.D Vial: 17
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 9:10 pm Operator: MRICHARDS
Sample : K1811438-002 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:31:34 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st UA 12/12/18
2nd TP 12/12/18

Validation Report

Data File: J:\gc24\data\121018\12100016.D\
Lab ID: KQ1817502-04
RunType: MB
Matrix: Soil

Date Acquired: 12/10/18 17:59:00
Batch ID: 618249
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100016.D\	**Instrument:**	K-GC-24
Acqu Date:	12/10/18 17:59:00	**Vial:**	24
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1817502-04	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/13/18	**Receive Date:**	11/21/18

Analysis Lot:	618249	**Prep Lot:**	327384	**Report Group:**	KQ1817502
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	11/30/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	7.97 -0.01	9.57 -0.01	1567643	1468086	95.719	100.463	77	80	77	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.32 +0.02	11.07 +0.07	4064	55214	0.225	3.423	0.45U	6.8U	100 U	Y
2,4,5-TP (Silvex), TCLP	10.24 -0.01	12.29 +0.08	7046	36067	0.100	0.575	0.20U	1.2U	20 U	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100016.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 5:59 pm Operator: MRICHARDS
Sample : KQ1817502-004MB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:29:00 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	7.972	9.569	1567643	1468086	95.719	100.463	
	Target Compounds							
1) m	Dalapon	3.072f	3.665	1439908	16480	69.803	1.055	#
3) m	Dicamba	8.212	9.705	14139	3110	0.282	0.069	#
4) m	MCPP	8.295	9.892	7280	4417	50452.070	86814.982	#
5) m	MCPA	8.539	10.185	10517	9010	50217.125	83564.489	#
6) m	Dichloroprop	8.949	0.000	35087	0	0.107	N.D.	#
7) m	2,4-D	9.315	11.072f	4064	55214	0.225	3.423	#
8) m	2,4,5-TP ...	10.239	12.285f	7046	36067	0.100	0.575	#
9) m	2,4,5-T	10.729	12.595f	23235	2253	0.383	0.042	#
10) m	2,4-DB	11.235	13.292	14631	2017	1.885	1543.327	#
11) m	Dinoseb	11.635	13.515	15847	15206	0.342	0.368	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

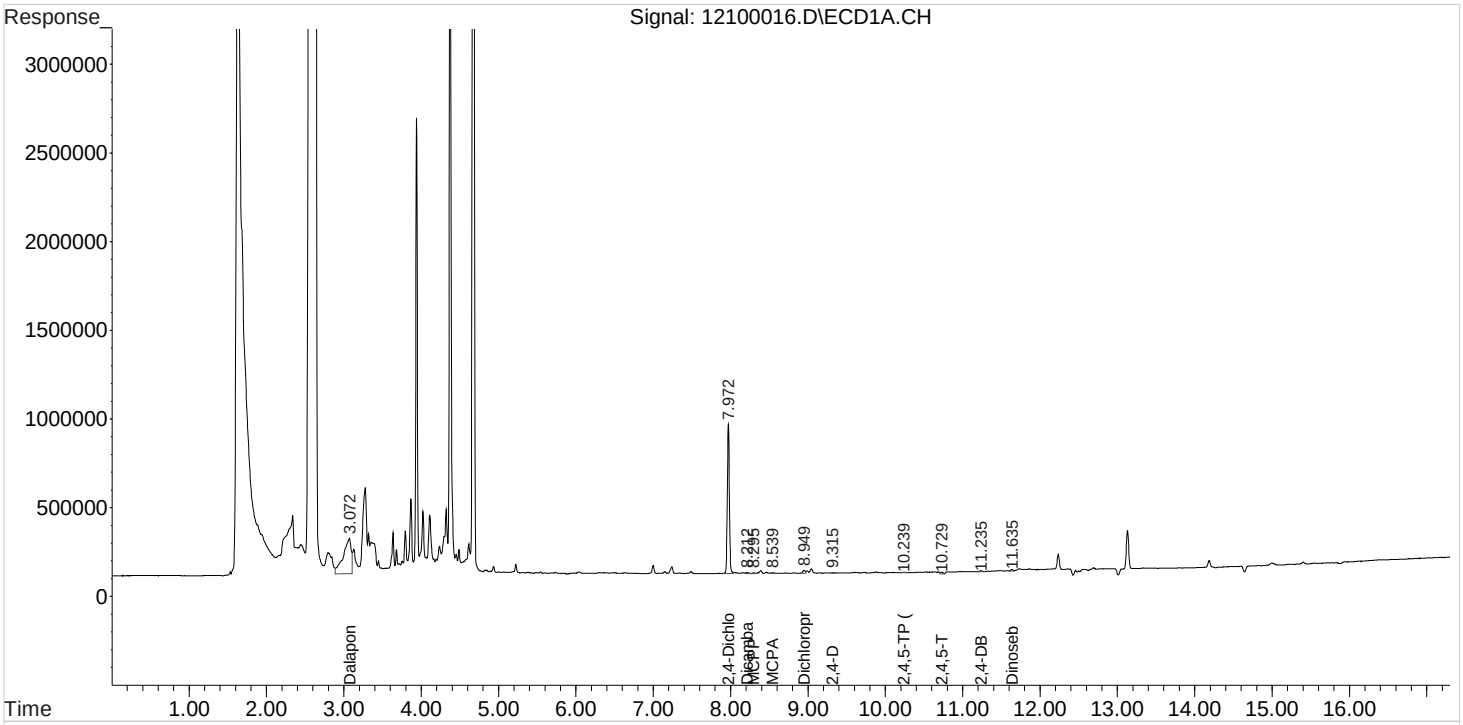
Quantitation Report (QT Reviewed)

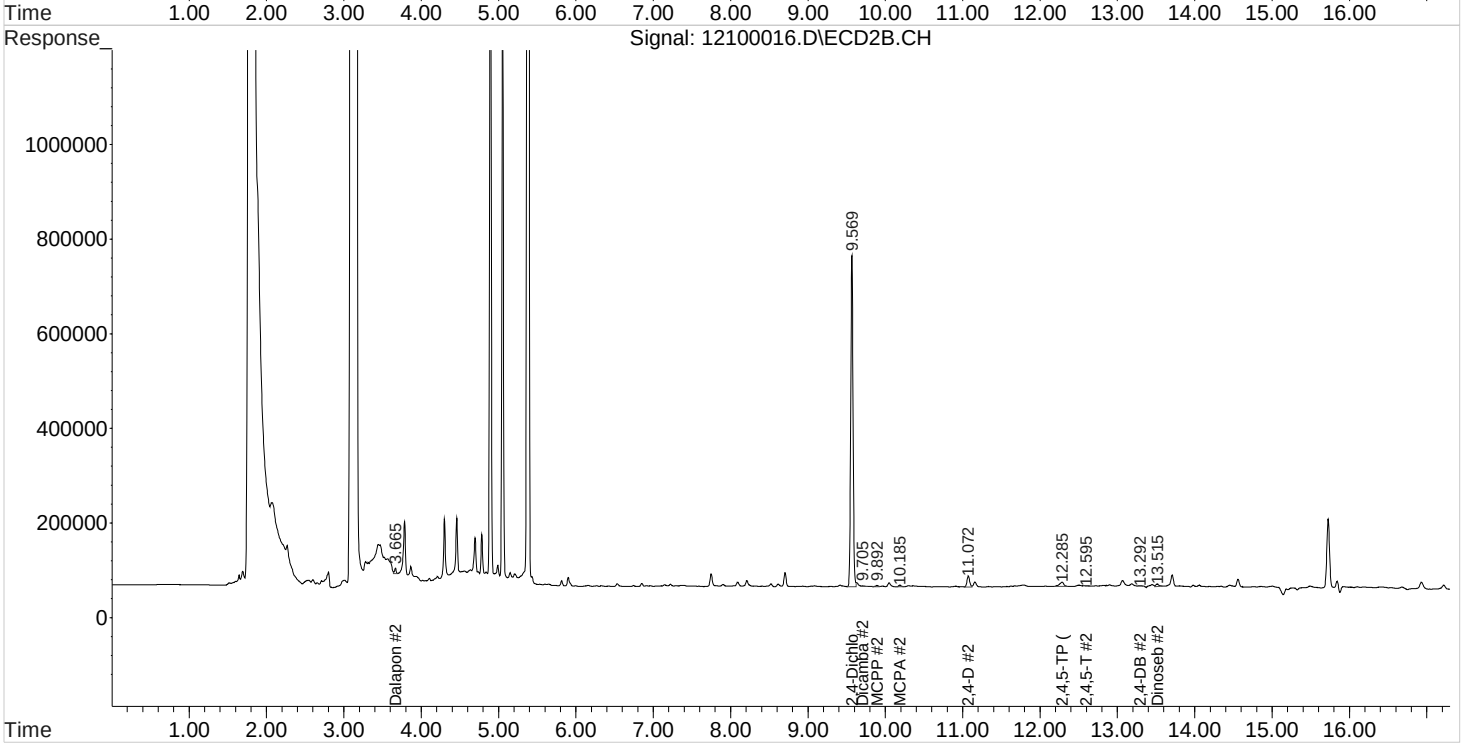
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100016.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 5:59 pm Operator: MRICHARDS
Sample : KQ1817502-004MB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:29:00 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st UA 12/12/18
2nd TP 12/12/18

Validation Report

Data File: J:\gc24\data\121018\12100017.D\
Lab ID: KQ1817502-05
RunType: MB
Matrix: Soil

Date Acquired: 12/10/18 18:22:00
Batch ID: 618249
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100017.D\	**Instrument:**	K-GC-24
Acqu Date:	12/10/18 18:22:00	**Vial:**	25
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1817502-05	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/13/18	**Receive Date:**	11/21/18

Analysis Lot:	618249	**Prep Lot:**	327384	**Report Group:**	KQ1817502
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	11/30/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	7.98	9.58	1621020	1545542	98.978	105.764	79	85	79	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.33 +0.03	11.08 +0.08	2696	56107	0.149	3.478	0.30U	7.0U	100 U	Y
2,4,5-TP (Silvex), TCLP	10.25	12.29 +0.08	6054	38847	0.086	0.619	0.17U	1.2U	20 U	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100017.D Vial: 10
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 6:22 pm Operator: MRICHARDS
Sample : KQ1817502-005MB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:29:19 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	7.978	9.575	1621020	1545542	98.978	105.764	
	Target Compounds							
1) m	Dalapon	3.125f	3.665	130065	29676	6.305	1.900	#
3) m	Dicamba	8.218	9.639f	11418	12761	0.228	0.283	
4) m	MCPP	8.302	9.902	4403	4619	50472.523	86811.309	#
5) m	MCPA	8.552	10.195	5126	8049	50249.021	83575.963	#
6) m	Dichloroprop	8.958	0.000	38513	0	0.323	N.D.	#
7) m	2,4-D	9.325	11.082f	2696	56107	0.149	3.478	#
8) m	2,4,5-TP ...	10.245	12.292f	6054	38847	0.086	0.619	#
9) m	2,4,5-T	10.732	12.735f	15310	2679	0.252	0.049	#
10) m	2,4-DB	11.248	0.000	10728	0	1.382	N.D.	#
11) m	Dinoseb	11.642	13.522	15133	14035	0.326	0.340	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

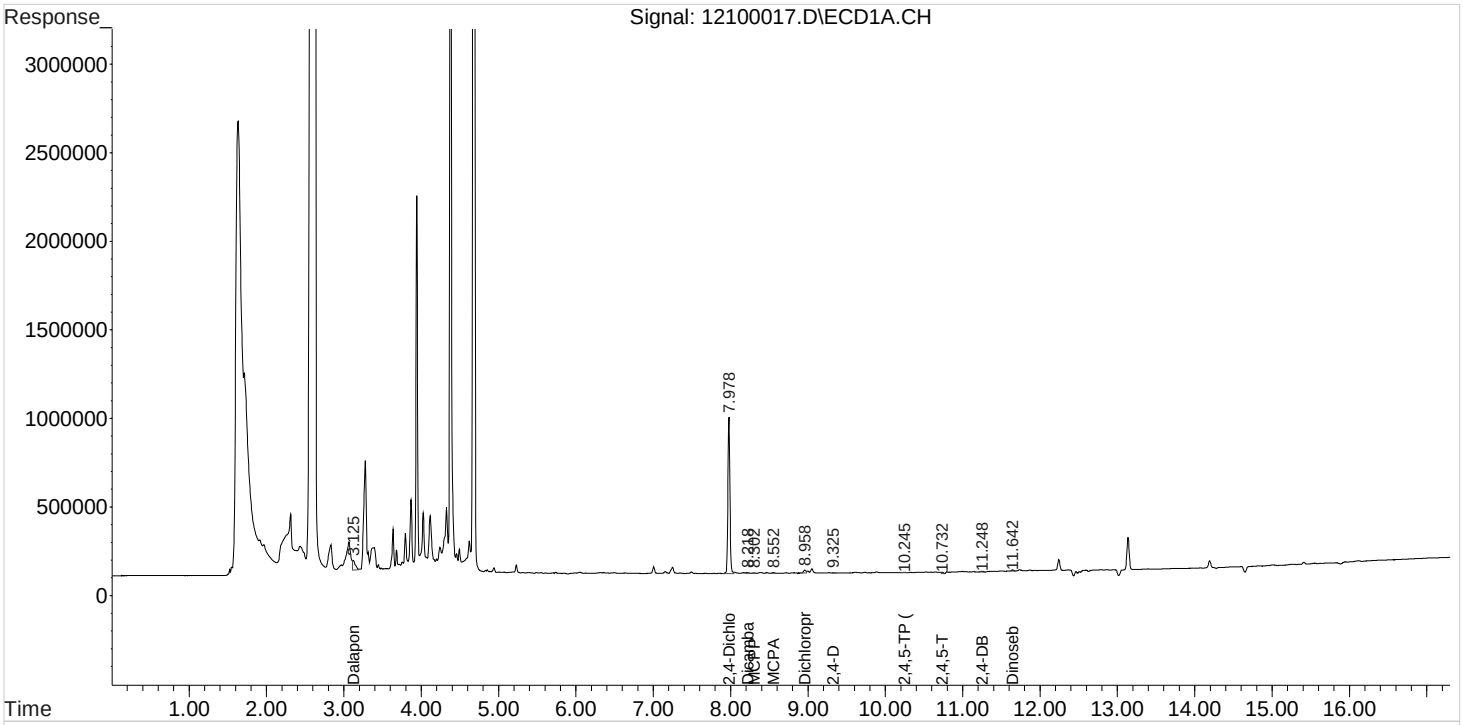
Quantitation Report (QT Reviewed)

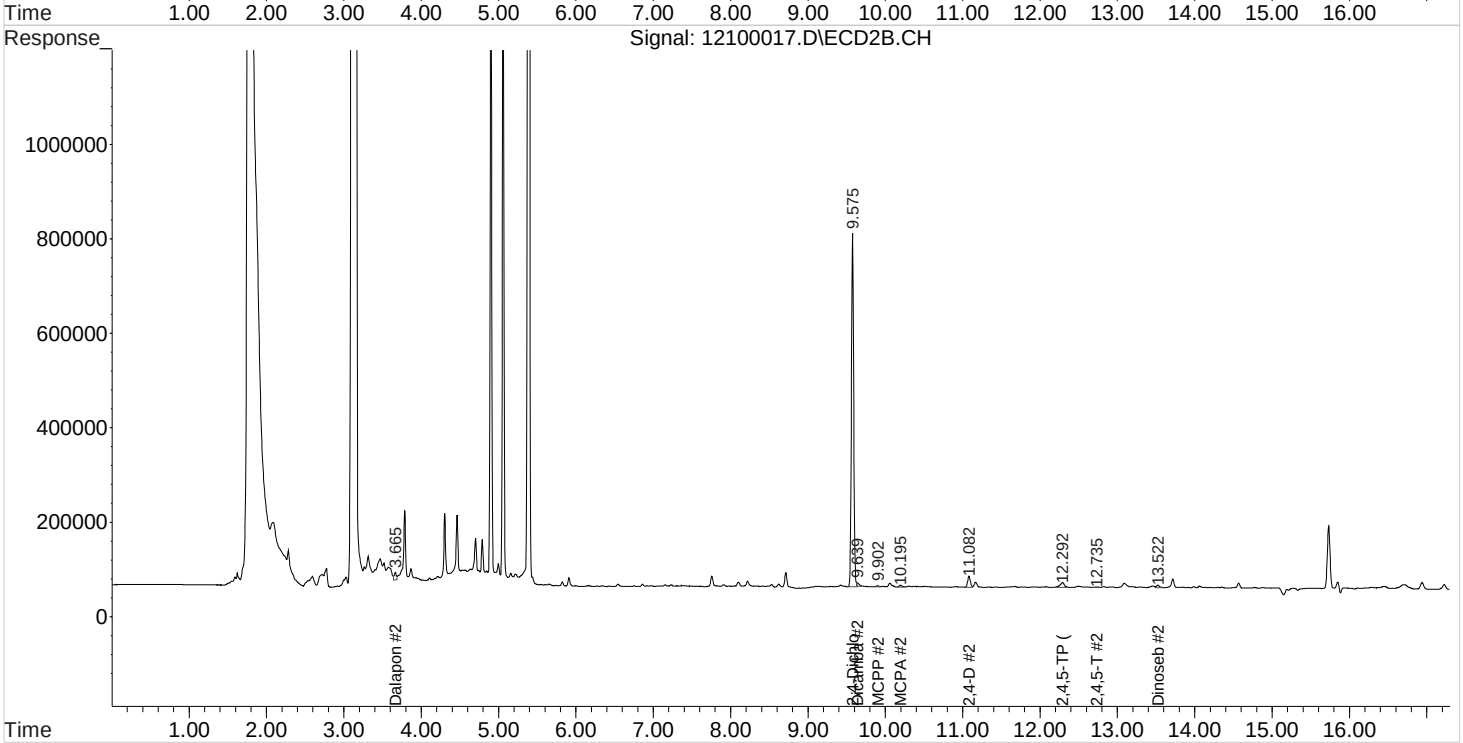
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100017.D Vial: 10
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 6:22 pm Operator: MRICHARDS
Sample : KQ1817502-005MB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:29:19 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st UA 12/12/18
2nd TP 12/12/18

Validation Report

Data File: J:\gc24\data\121018\12100018.D\
Lab ID: KQ1817502-06
RunType: MB
Matrix: Soil

Date Acquired: 12/10/18 18:47:00
Batch ID: 618249
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100018.D\	**Instrument:**	K-GC-24
Acqu Date:	12/10/18 18:47:00	**Vial:**	26
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1817502-06	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/13/18	**Receive Date:**	11/21/18

Analysis Lot:	618249	**Prep Lot:**	327384	**Report Group:**	KQ1817502
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	11/30/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	7.98	9.58	1566753	1454582	95.665	99.539	77	80	77	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.32 +0.02	11.08 +0.08	3422	20750	0.190	1.286	0.38U	2.6U	100 U	Y
2,4,5-TP (Silvex), TCLP	10.25	12.29 +0.08	6064	51613	0.086	0.823	0.17U	1.6U	20 U	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100018.D Vial: 11
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 6:47 pm Operator: MRICHARDS
Sample : KQ1817502-006MB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:29:29 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	7.978	9.575	1566753	1454582	95.665	99.539	
	Target Compounds							
1) m	Dalapon	3.065f	3.662	567373	14715	27.505	0.942	#
3) m	Dicamba	8.222	9.638f	9962	23767	0.199	0.526	#
4) m	MCPP	8.302	9.902	4885	3429	50469.098	86832.942	#
5) m	MCPA	8.548	10.192	5122	67274	50249.045	171.937	#
6) m	Dichloroprop	8.955	0.000	33450	0	0.004	N.D.	#
7) m	2,4-D	9.325	11.082f	3422	20750	0.190	1.286	#
8) m	2,4,5-TP ...	10.252	12.292f	6064	51613	0.086	0.823	#
9) m	2,4,5-T	10.692	12.735f	1618	2103	0.027	0.039	#
10) m	2,4-DB	11.252	13.378f	7688	4758	0.990	1542.983	#
11) m	Dinoseb	11.645	13.522	19901	17828	0.429	0.432	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

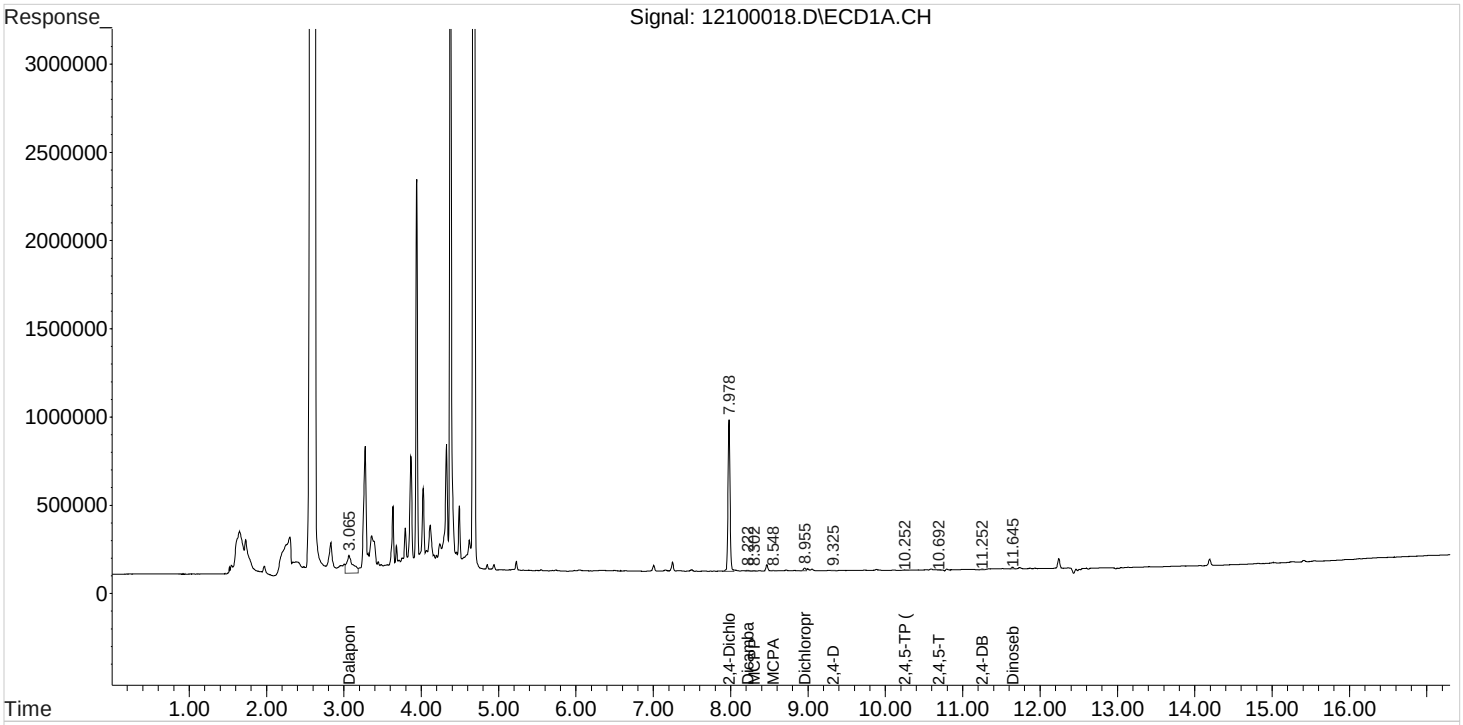
Quantitation Report (QT Reviewed)

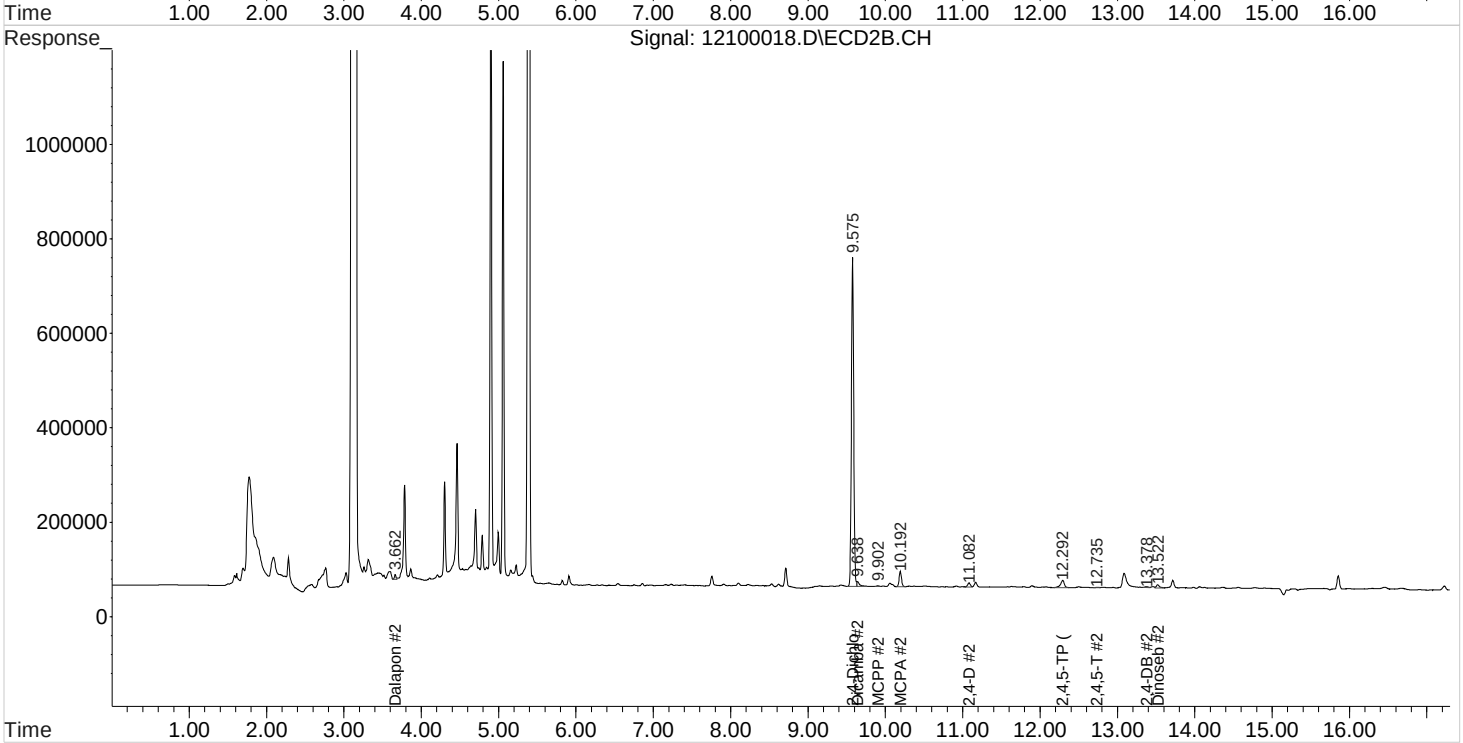
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100018.D Vial: 11
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 6:47 pm Operator: MRICHARDS
Sample : KQ1817502-006MB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:29:29 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st UA 12/12/18
2nd TP 12/12/18

Validation Report

Data File: J:\gc24\data\121018\12100041.D\
Lab ID: KQ1817502-03
RunType: LCS
Matrix: Soil

Date Acquired: 12/11/18 10:44:00
Batch ID: 618249
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100041.D\	**Instrument:**	K-GC-24
Acqu Date:	12/11/18 10:44:00	**Vial:**	23
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1817502-03	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/13/18	**Receive Date:**	11/21/18

Analysis Lot:	618249	**Prep Lot:**	327384	**Report Group:**	KQ1817502
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	11/30/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	7.97	9.57	1746166	1600971	106.620	109.557	85	88	85	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.30	10.99	1960266	1799871	108.586	111.570	217	223	**217**	Y
2,4,5-TP (Silvex), TCLP	10.24	12.20 -0.01	7957068	7419662	113.326	118.268	227	237	**227**	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100041.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Dec 2018 10:44 am Operator: MRICHARDS
Sample : KQ1817502-003LCS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 16:50:25 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	7.972	9.569	1746166	1600971	106.620	109.557
	Target Compounds						
1) m	Dalapon	3.052f	3.615f	2441963	1949973	118.380m	124.878m
3) m	Dicamba	8.198	9.709	5709785	5555236	114.059	122.986
4) m	MCPP	8.282	9.895	1409543	612517	12687.997	12548.104
5) m	MCPA	8.545	10.175	1656191	926190	12004.546	12415.535
6) m	Dichloroprop	8.945	10.652	1704177	1526232	121.890	121.765
7) m	2,4-D	9.298	10.989	1960266	1799871	108.586	111.570
8) m	2,4,5-TP ...	10.242	12.199	7957068	7419662	113.326	118.268
9) m	2,4,5-T	10.682	12.629	7167980	6471683	118.147	119.466
10) m	2,4-DB	11.262	13.309	995708	894637	128.266m	119.972
11) m	Dinoseb	11.662	13.479	2254642	1850372	48.612	44.827

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

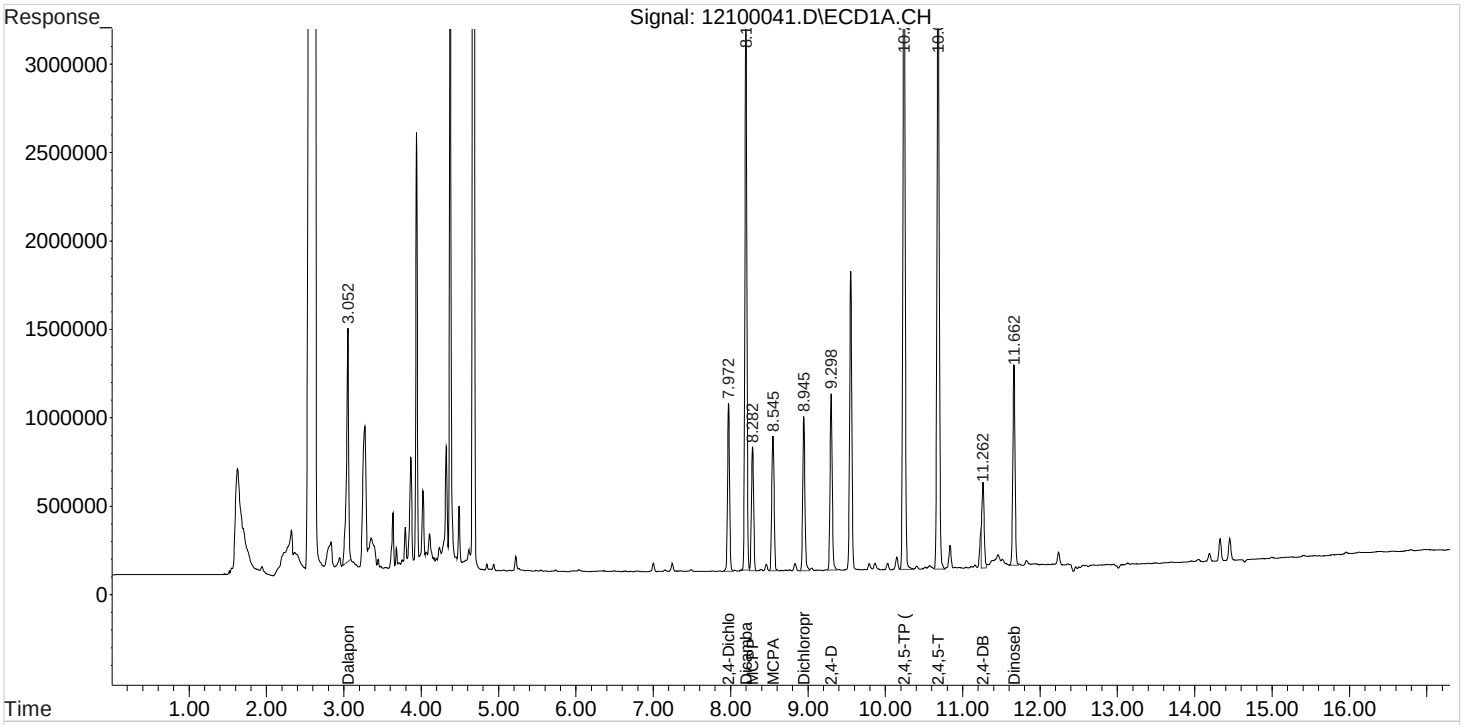
Quantitation Report (QT Reviewed)

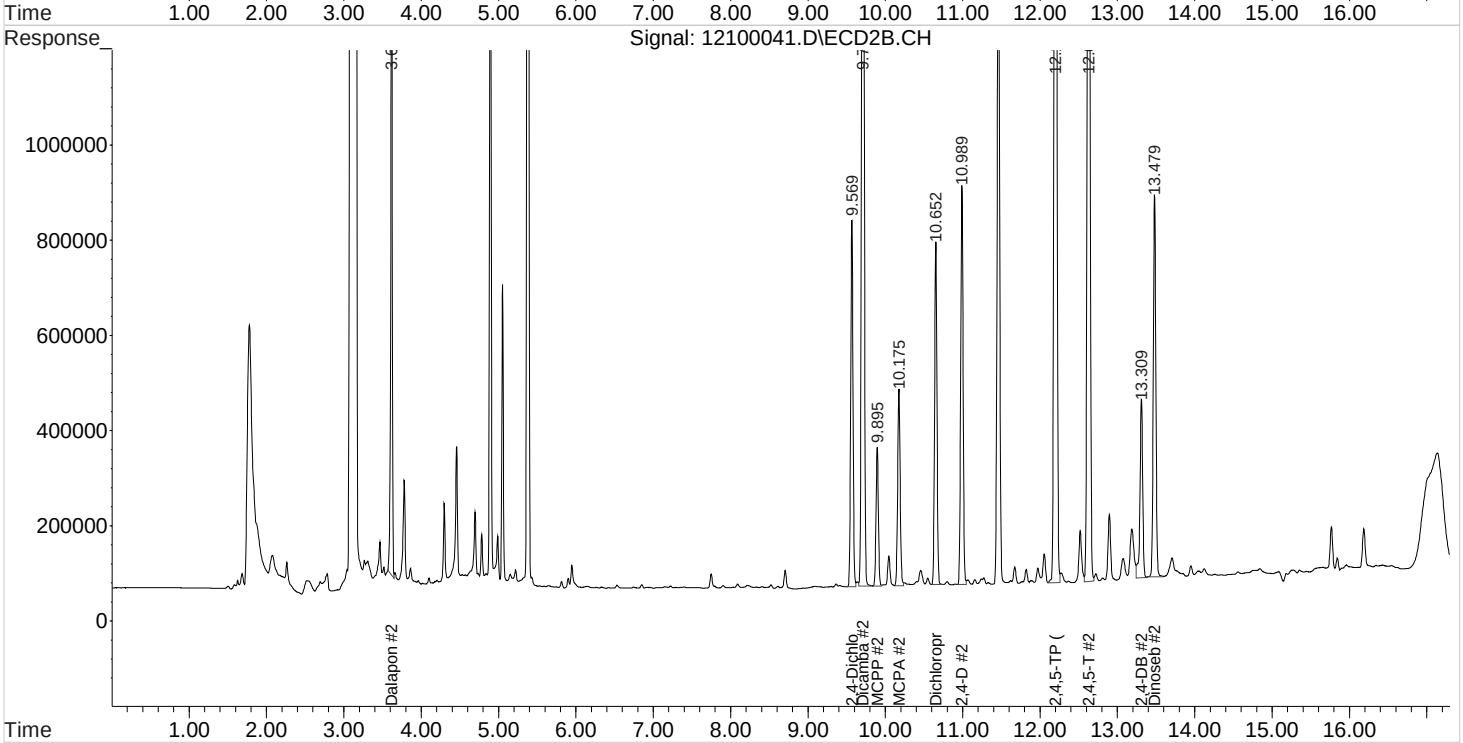
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100041.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Dec 2018 10:44 am Operator: MRICHARDS
Sample : KQ1817502-003LCS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 16:50:25 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm



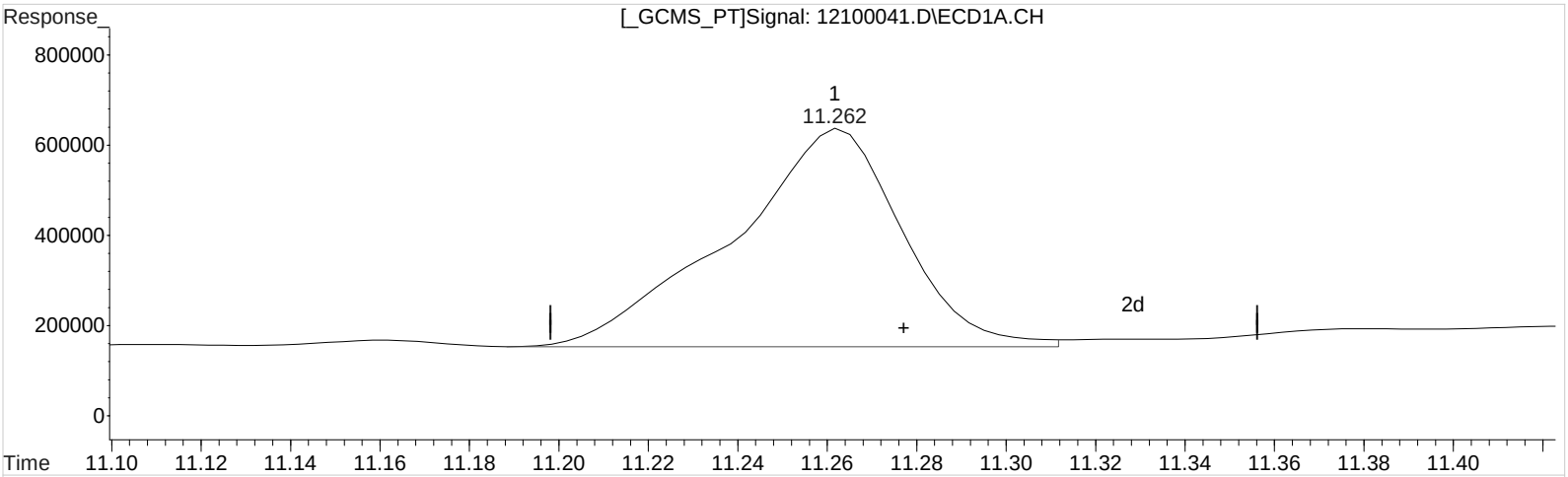


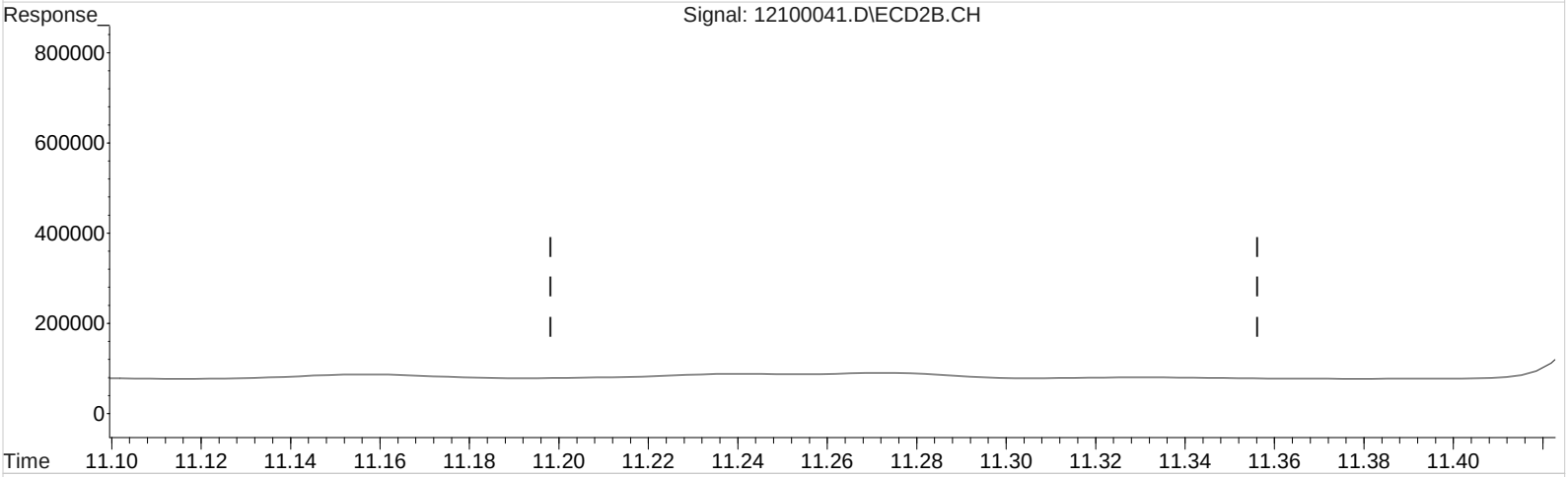
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100041.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Dec 2018 10:44 am Operator: MRICHARDS
Sample : KQ1817502-003LCS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 12:38:07 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





QEdit

(10) 2,4-DB (m)

11.262min 164.810 ppb

response 1279394

Manual Integration:

Before

12/11/18

(10) 2,4-DB #2 (m)

13.309min 119.972 ppb

response 894637

(+) = Expected Retention Time

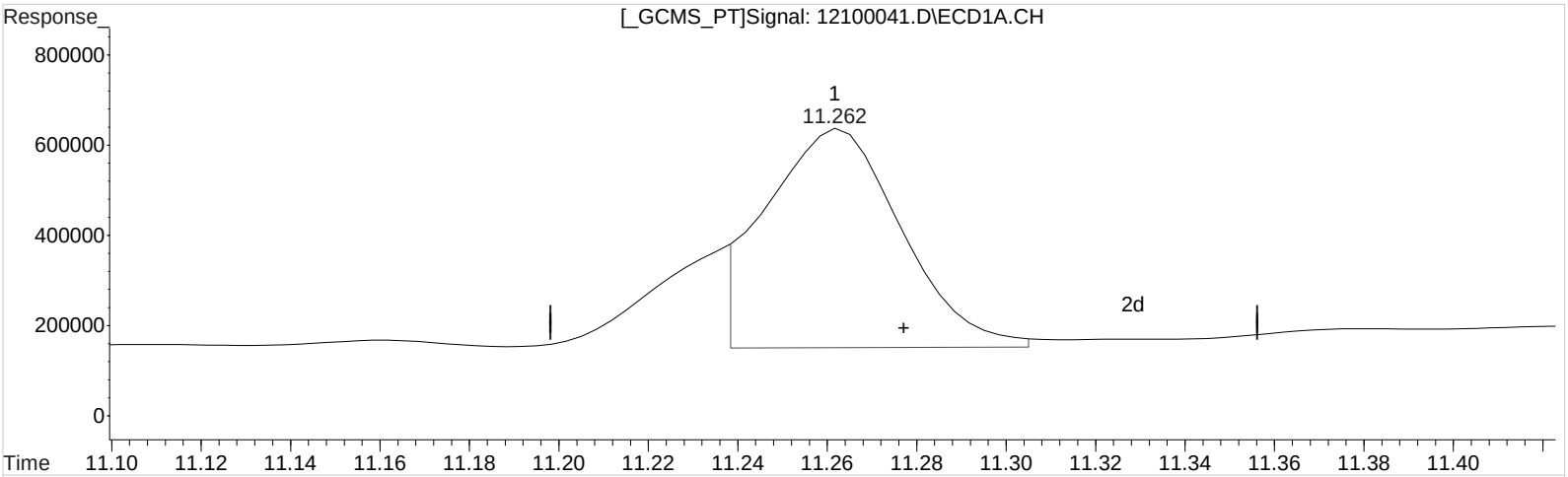
Quantitation Report (Qedit)

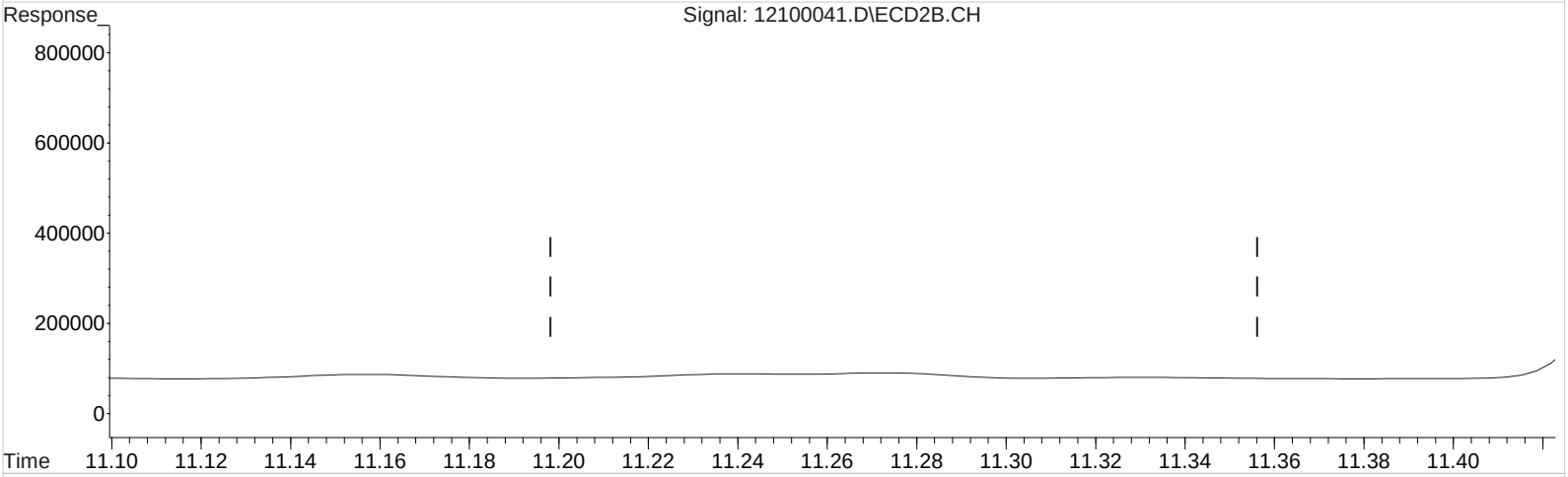
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100041.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Dec 2018 10:44 am Operator: MRICHARDS
Sample : KQ1817502-003LCS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 12:38:07 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





QEdit

(10) 2,4-DB (m)

11.262min 128.266 ppb m

response 995708

Manual Integration:

After

Baseline/Shoulder

12/11/18

(10) 2,4-DB #2 (m)

13.309min 119.972 ppb

response 894637

(+) = Expected Retention Time

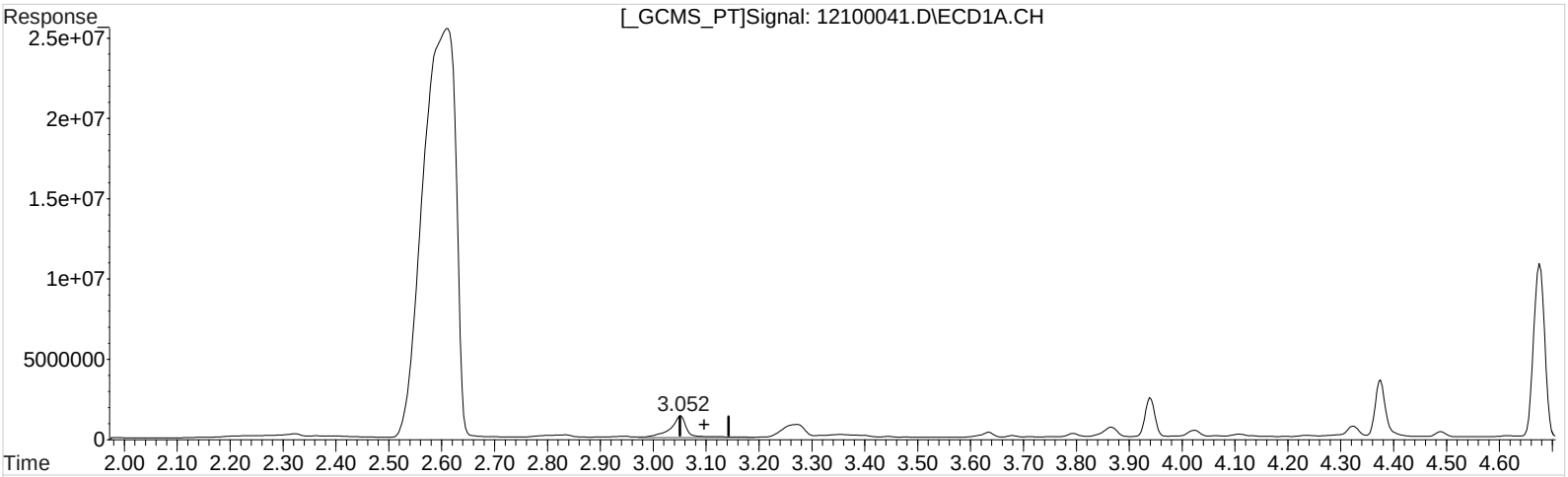
Quantitation Report (Qedit)

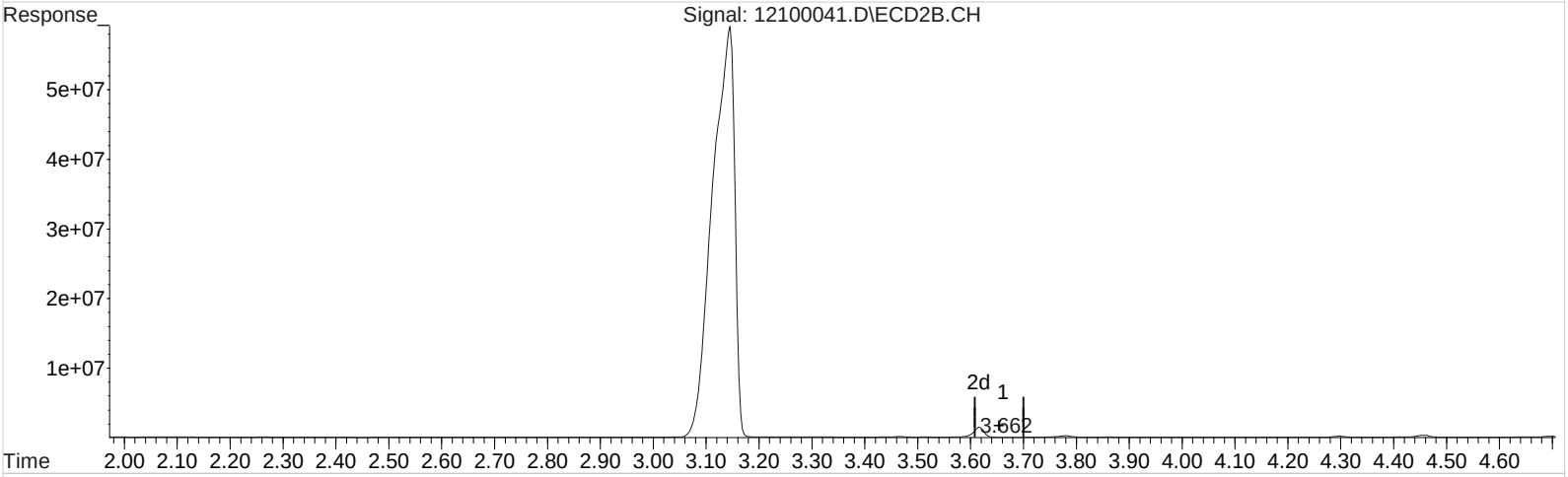
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100041.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Dec 2018 10:44 am Operator: MRICHARDS
Sample : KQ1817502-003LCS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 12:38:07 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





QEdit

(1) Dalapon (m)

3.052min 153.221 ppb

response 3160678

(1) Dalapon #2 (m)

3.662min 2.349 ppb

response 36685

Manual Integration:

Before

12/11/18

(+) = Expected Retention Time

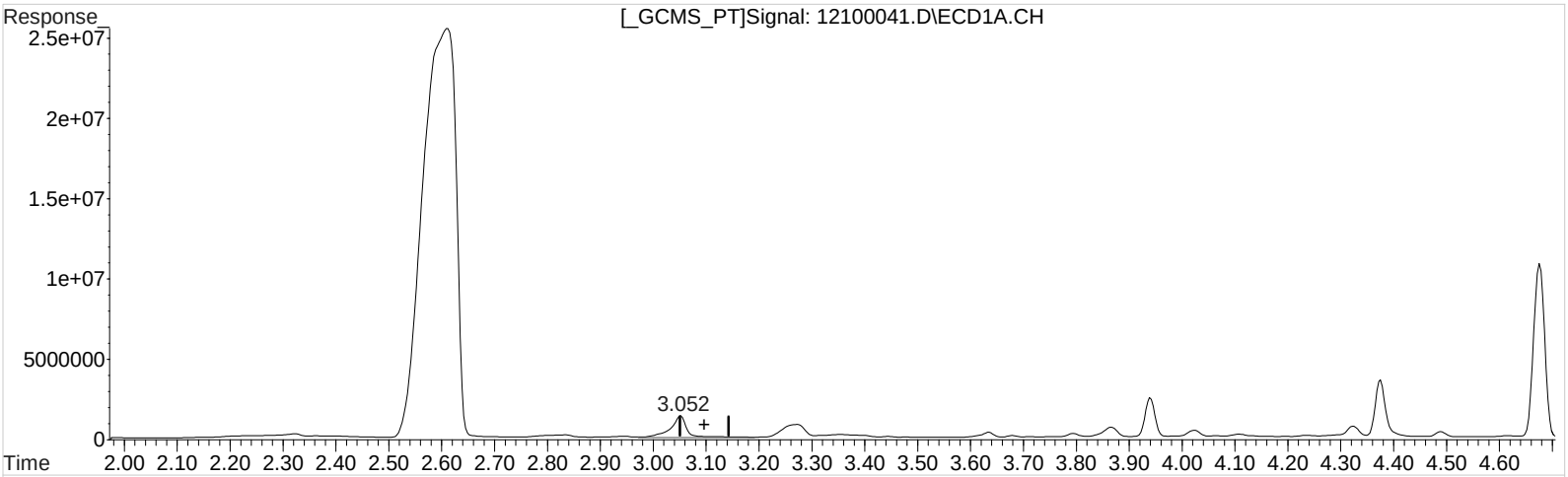
Quantitation Report (Qedit)

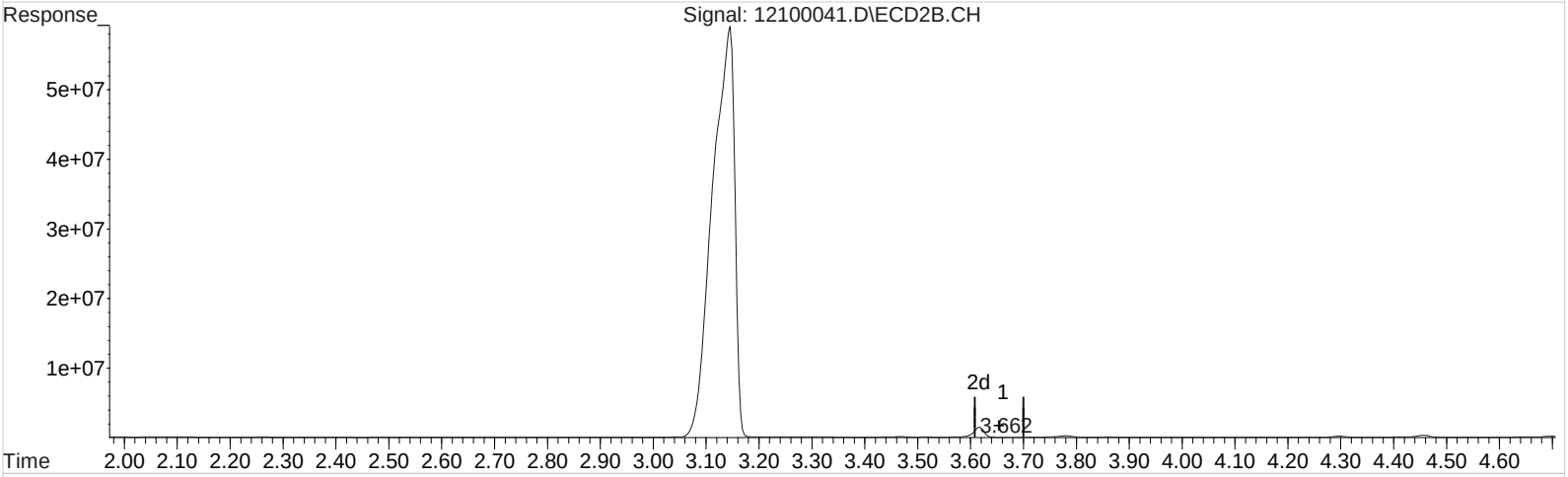
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100041.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Dec 2018 10:44 am Operator: MRICHARDS
Sample : KQ1817502-003LCS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 12:38:07 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





QEdit

(1) Dalapon (m)

3.052min 153.221 ppb

response 3160678

(1) Dalapon #2 (m)

3.662min 2.349 ppb

response 36685

Manual Integration:

Before

12/11/18

(+) = Expected Retention Time

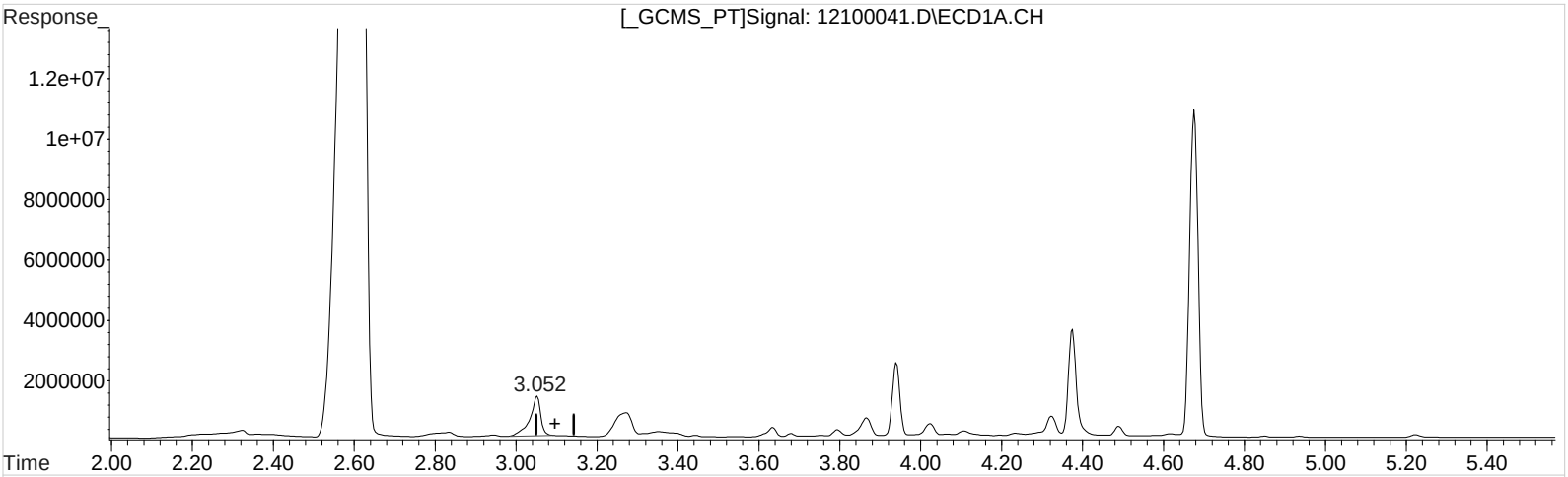
Quantitation Report (Qedit)

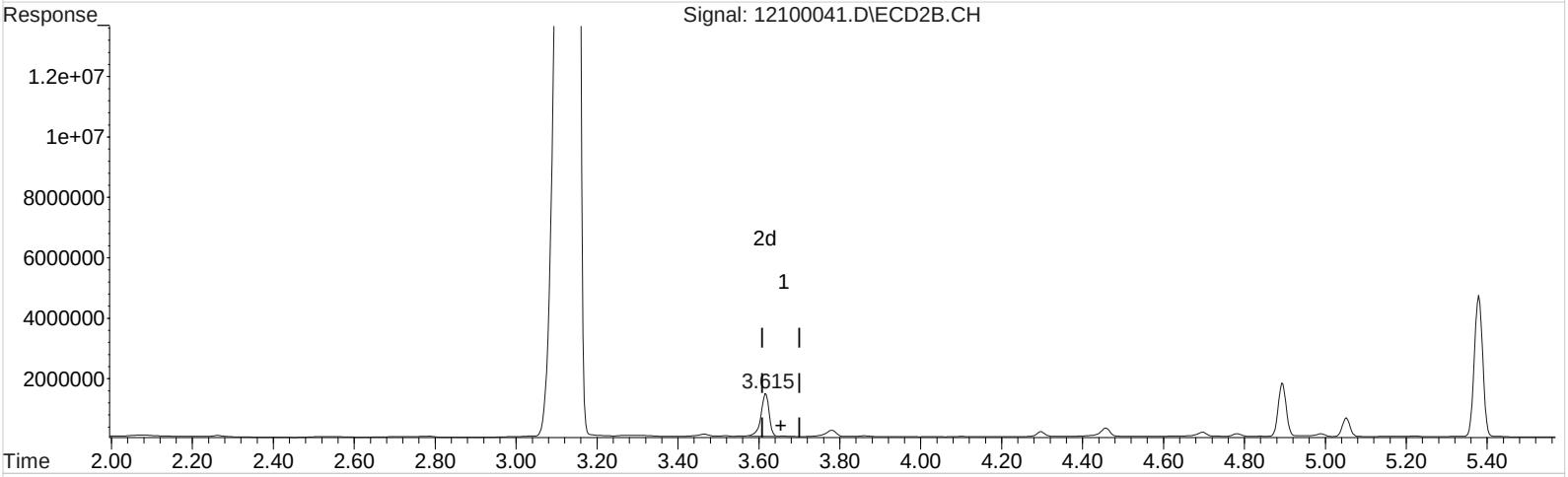
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100041.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Dec 2018 10:44 am Operator: MRICHARDS
Sample : KQ1817502-003LCS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 12:38:07 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





QEdit

(1) Dalapon (m)

3.052min 118.380 ppb m

response 2441963

(1) Dalapon #2 (m)

3.615min 124.878 ppb m

response 1949973

Manual Integration:

After

Missed Peak

12/11/18

(+) = Expected Retention Time

1st UA 12/12/18
2nd TP 12/12/18

Validation Report

Data File: J:\gc24\data\121018\12100004.D\
Lab ID: KQ1818013-02
RunType: CCB
Matrix: Soil

Date Acquired: 12/10/18 11:49:00
Batch ID: 618249
Analysis Method: 8151A/HERB

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Above Highest ICAL Level		X
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level - RTX-CLP2	Dichlorprop	902.389		188.73	quaderr
	MCPA	50264.384		18692.82	quaderr
	MCPP	50492.449		18772.96	quaderr

Primary Review: _____

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Secondary Review: _____

1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100004.D\	**Instrument:**	K-GC-24
Acqu Date:	12/10/18 11:49:00	**Vial:**	3
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1818013-02	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB	**Collect Date:**	11/13/18	**Receive Date:**	11/21/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18726

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
2,4-Dichlorophenylacetic Acid	7.98	9.56 -0.02	1711	2720	0.104	0.186				26 - 127	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4,5-T	10.75 +0.06	0.00	1361	0	0.022	0.000	0.037U	0U	4.0 U	Y
2,4,5-TP (Silvex)	0.00	0.00	0	0	0.000	0.000	0U	0U	2.4 U	Y
2,4-D	0.00	11.07 +0.07	0	4893	0.000	0.303	0U	0.51U	7.7 U	Y
2,4-DB	11.32 +0.05	0.00	1465	0	0.189	0.000	0.32U	0U	5.4 U	Y
Dalapon	3.07 -0.02	0.00	1509	0	0.073	0.000	0.12U	0U	5.5 U	Y
Dicamba	0.00	0.00	0	0	0.000	0.000	0U	0U	4.3 U	Y
Dichlorprop	9.03 +0.08	0.00	1676	0	902.389	0.000	1500E	0U	3.4 U	Y
Dinoseb	11.62 -0.05	0.00	1110	0	0.024	0.000	0.040U	0U	2.7 U	Y
MCPA	8.56 +0.01	0.00	2527	0	50264.384	0.000	84000E	0U	320 U	Y
MCPP	8.36 +0.07	0.00	1598	0	50492.449	0.000	84000E	0U	460 U	Y

Prep Amount:	30.00 g	**Dilution:**	1
Prep Final Amount:	50.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100004.D\	**Instrument:**	K-GC-24
Acqu Date:	12/10/18 11:49:00	**Vial:**	4
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1818013-02	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/13/18	**Receive Date:**	11/21/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	7.98	9.56 -0.02	1711	2720	0.104	0.186				17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	0.00	11.07 +0.07	0	4893	0.000	0.303	0U	0.61U	100 U	Y
2,4,5-TP (Silvex), TCLP	0.00	0.00	0	0	0.000	0.000	0U	0U	20 U	Y

Prep Amount:	30.00 g	**Dilution:**	1
Prep Final Amount:	50.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100004.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 11:49 am Operator: MRICHARDS
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 17:46:01 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	7.982	9.562	1711	2720	0.104	0.186	#
	Target Compounds							
1) m	Dalapon	3.072f	0.000	1509	0	0.073	N.D.	#
3) m	Dicamba	0.000	0.000	0	0	N.D.	N.D.	
4) m	MCPP	8.355f	0.000	1598	0	50492.449	N.D.	#
5) m	MCPA	8.555	0.000	2527	0	50264.384	N.D.	#
6) m	Dichloroprop	9.032f	0.000	1676	0	902.389	N.D.	#
7) m	2,4-D	0.000	11.065f	0	4893	N.D.	0.303	#
8) m	2,4,5-TP ...	0.000	0.000	0	0	N.D.	N.D.	
9) m	2,4,5-T	10.748f	0.000	1361	0	0.022	N.D.	#
10) m	2,4-DB	11.315	0.000	1465	0	0.189	N.D.	#
11) m	Dinoseb	11.622	0.000	1110	0	0.024	N.D.	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

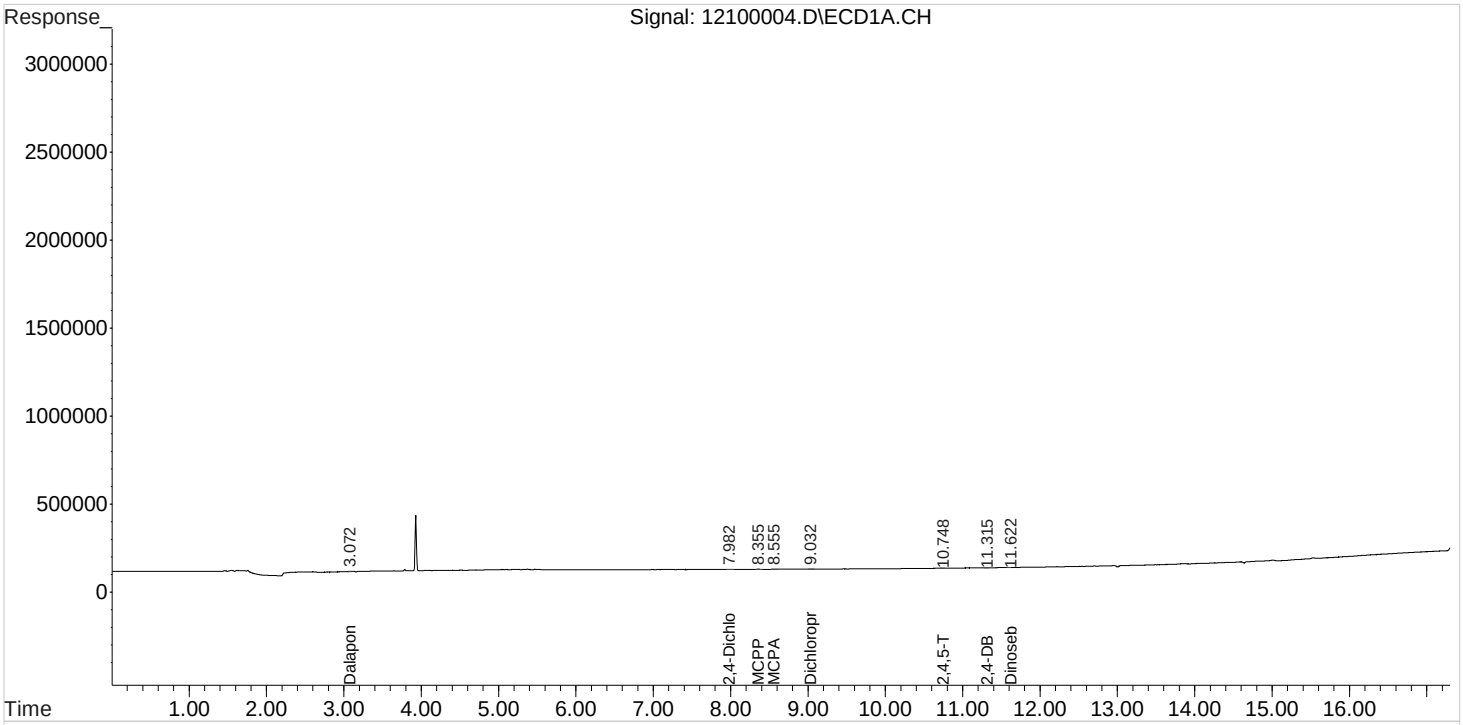
Quantitation Report (QT Reviewed)

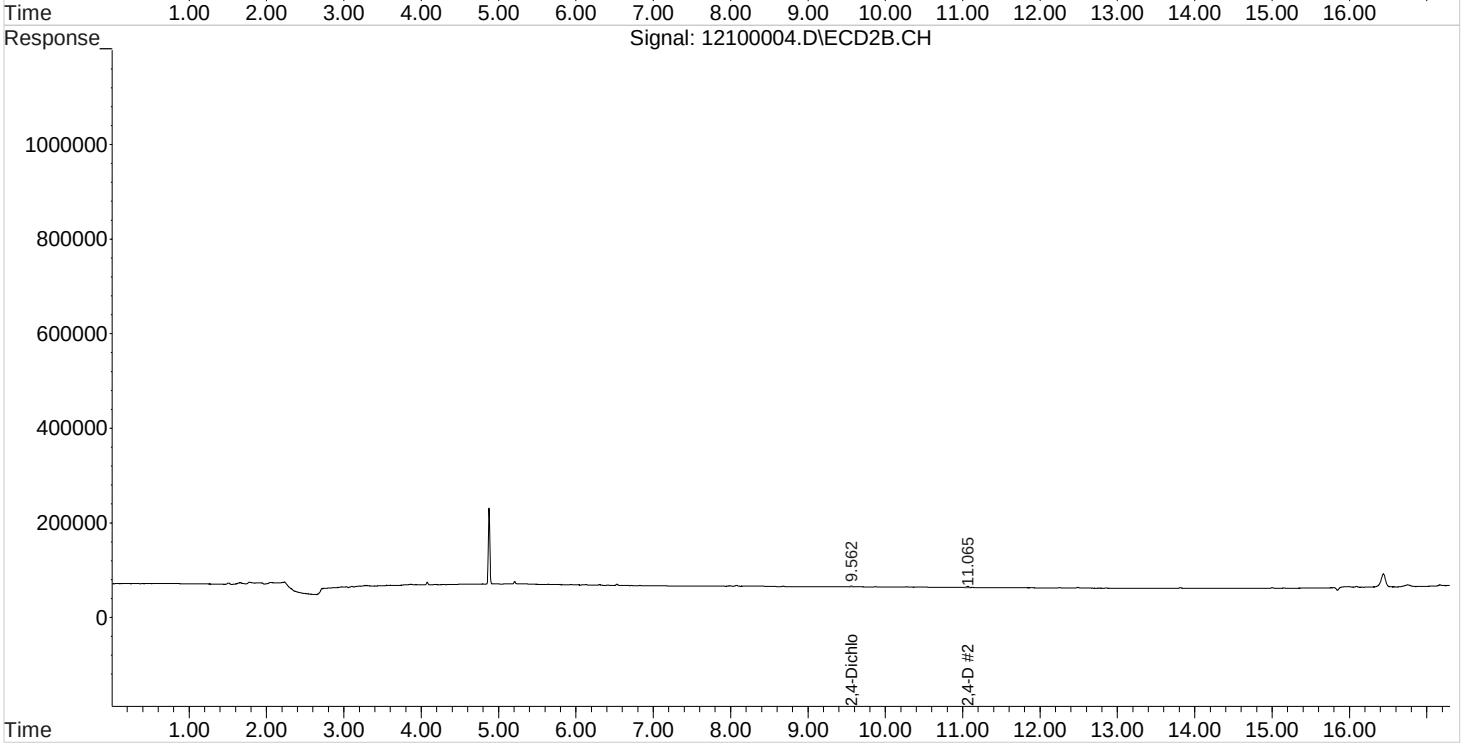
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100004.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 11:49 am Operator: MRICHARDS
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 17:46:01 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st UA 12/12/18
2nd TP 12/12/18

Validation Report

Data File: J:\gc24\data\121018\12100010.D\
Lab ID: KQ1818013-04
RunType: CCB
Matrix: Soil

Date Acquired: 12/10/18 14:11:00
Batch ID: 618249
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100010.D\	**Instrument:**	K-GC-24
Acqu Date:	12/10/18 14:11:00	**Vial:**	44
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1818013-04	**Raw Units:**	ppb

Bottle ID:		**Tier:**	I	**Matrix:**	Soil
Prod Code:	HERB	**Collect Date:**		**Receive Date:**	11/1/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18726

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
2,4-Dichlorophenylacetic Acid	8.00 +0.02	9.59 +0.01	1924	5010	0.117	0.343				26 - 127	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc		Rpt?
2,4,5-T	10.69	0.00	1628	0	0.027	0.000	0.045U	0U	4.0 U		Y
2,4,5-TP (Silvex)	10.26 +0.01	12.22 +0.01	1110	3400	0.016	0.054	0.027U	0.090U	2.4 U		Y
2,4-D	9.28 -0.03	11.10 +0.09	2409	8879	0.133	0.550	0.22U	0.92U	7.7 U		Y
2,4-DB	0.00	0.00	0	0	0.000	0.000	0U	0U	5.4 U		Y
Dalapon	3.11 +0.02	0.00	3236	0	0.157	0.000	0.26U	0U	5.5 U		Y
Dicamba	8.22 +0.02	9.72	1964	3008	0.039	0.067	0.065U	0.11U	4.3 U		Y
Dichlorprop	0.00	0.00	0	0	0.000	0.000	0U	0U	3.4 U		Y
Dinoseb	0.00	0.00	0	0	0.000	0.000	0U	0U	2.7 U		Y
MCPA	8.58 +0.02	0.00	2664	0	50263.574	0.000	84000E	0U	320 U		Y
MCPP	8.22 -0.02	9.91	1964	2538	50489.850	86849.133	84000E	140000E	**84000** E	P	Y

Prep Amount:	30.00 g	**Dilution:**	1
Prep Final Amount:	50.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100010.D\	**Instrument:**	K-GC-24
Acqu Date:	12/10/18 14:11:00	**Vial:**	45
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1818013-04	**Raw Units:**	ppb

Bottle ID:		**Tier:**	I	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**		**Receive Date:**	11/1/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	8.00 +0.02	9.59 +0.01	1924	5010	0.117	0.343				17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.28 -0.03	11.10 +0.09	2409	8879	0.133	0.550	0.27U	1.1U	100 U	Y
2,4,5-TP (Silvex), TCLP	10.26 +0.01	12.22 +0.01	1110	3400	0.016	0.054	0.032U	0.11U	20 U	Y

Prep Amount:	30.00 g	**Dilution:**	1
Prep Final Amount:	50.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100010.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:11 pm Operator: MRICHARDS
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 12:58:23 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.003	9.593	1924	5010	0.117	0.343 #
	Target Compounds						
1) m	Dalapon	3.106	0.000	3236	0	0.157	N.D. #
3) m	Dicamba	8.216	9.716	1964	3008	0.039	0.067 #
4) m	MCPP	0.000	0.000	0	0	N.D. d	N.D. d
5) m	MCPA	0.000	0.000	0	0	N.D. d	N.D.
6) m	Dichloroprop	0.000	0.000	0	0	N.D.	N.D.
7) m	2,4-D	9.283	11.096f	2409	8879	0.133	0.550 #
8) m	2,4,5-TP ...	10.256	12.223	1110	3400	0.016	0.054 #
9) m	2,4,5-T	10.693	0.000	1628	0	0.027	N.D. #
10) m	2,4-DB	0.000	0.000	0	0	N.D.	N.D.
11) m	Dinoseb	0.000	0.000	0	0	N.D.	N.D.

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

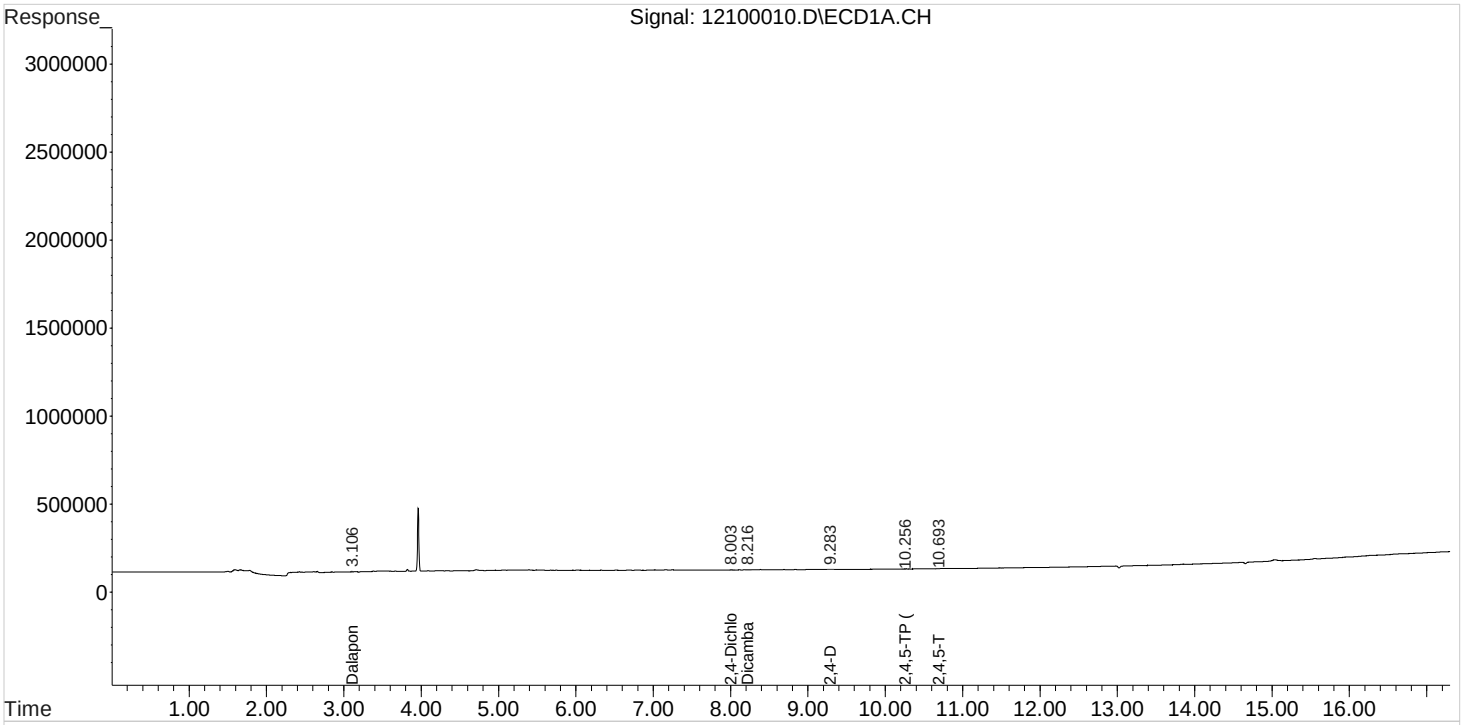
Quantitation Report (QT Reviewed)

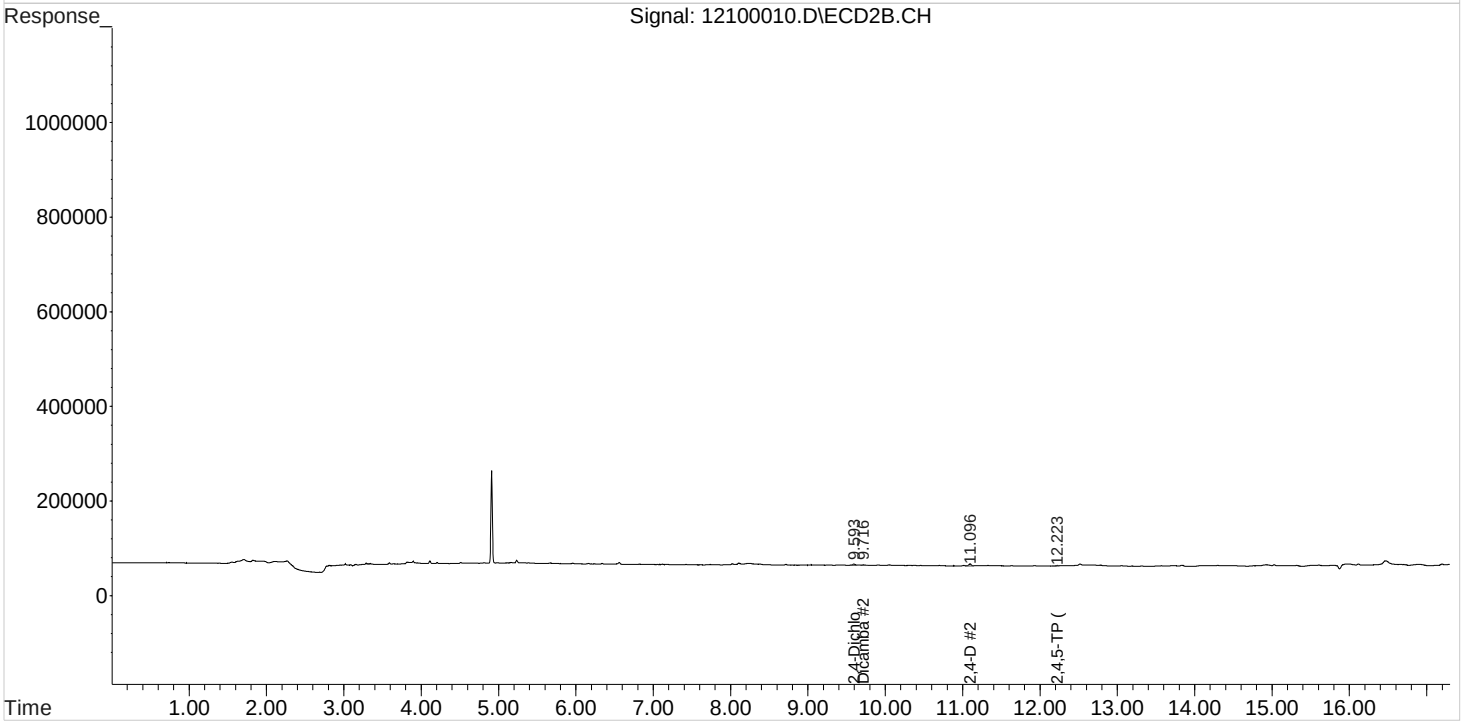
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100010.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:11 pm Operator: MRICHARDS
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 12:58:23 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st UA 12/12/18
2nd TP 12/12/18

Validation Report

Data File: J:\gc24\data\121018\12100013.D\
Lab ID: KQ1818013-06
RunType: CCB
Matrix: Soil

Date Acquired: 12/10/18 15:30:00
Batch ID: 618249
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100013.D\	**Instrument:**	K-GC-24
Acqu Date:	12/10/18 15:30:00	**Vial:**	49
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1818013-06	**Raw Units:**	ppb

Bottle ID:		**Tier:**	I	**Matrix:**	Soil
Prod Code:	HERB	**Collect Date:**		**Receive Date:**	11/1/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18726

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
2,4-Dichlorophenylacetic Acid	8.00 +0.02	9.59 +0.01	2142	6626	0.131	0.453				26 - 127	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc		Rpt?
2,4,5-T	10.69	0.00	1910	0	0.031	0.000	0.052U	0U	4.0 U		Y
2,4,5-TP (Silvex)	10.20 -0.05	12.22 +0.01	1474	3475	0.021	0.055	0.035U	0.092U	2.4 U		Y
2,4-D	9.28 -0.02	11.09 +0.09	2515	9735	0.139	0.603	0.23U	1.0U	7.7 U		Y
2,4-DB	0.00	0.00	0	0	0.000	0.000	0U	0U	5.4 U		Y
Dalapon	3.10 +0.01	0.00	2532	0	0.123	0.000	0.21U	0U	5.5 U		Y
Dicamba	8.21 +0.01	0.00	2458	0	0.049	0.000	0.082U	0U	4.3 U		Y
Dichlorprop	0.00	0.00	0	0	0.000	0.000	0U	0U	3.4 U		Y
Dinoseb	0.00	0.00	0	0	0.000	0.000	0U	0U	2.7 U		Y
MCPA	0.00	0.00	0	0	0.000	0.000	0U	0U	320 U		Y
MCPP	8.37 +0.08	9.91 +0.01	4715	2187	50470.306	86855.510	84000E	140000E	**84000** E	P	Y

Prep Amount:	30.00 g	**Dilution:**	1
Prep Final Amount:	50.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100013.D\	**Instrument:**	K-GC-24
Acqu Date:	12/10/18 15:30:00	**Vial:**	50
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1818013-06	**Raw Units:**	ppb

Bottle ID:		**Tier:**	I	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**		**Receive Date:**	11/1/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	8.00 +0.02	9.59 +0.01	2142	6626	0.131	0.453				17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.28 -0.02	11.09 +0.09	2515	9735	0.139	0.603	0.28U	1.2U	100 U	Y
2,4,5-TP (Silvex), TCLP	10.20 -0.05	12.22 +0.01	1474	3475	0.021	0.055	0.042U	0.11U	20 U	Y

Prep Amount:	30.00 g	**Dilution:**	1
Prep Final Amount:	50.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100013.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:30 pm Operator: MRICHARDS
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 13:01:28 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.003	9.590	2142	6626	0.131	0.453 #
	Target Compounds						
1) m	Dalapon	3.103	0.000	2532	0	0.123	N.D. #
3) m	Dicamba	8.210	0.000	2458	0	0.049	N.D. #
4) m	MCPP	0.000	0.000	0	0	N.D. d	N.D. d
5) m	MCPA	0.000	0.000	0	0	N.D.	N.D.
6) m	Dichloroprop	0.000	0.000	0	0	N.D.	N.D.
7) m	2,4-D	9.277	11.093f	2515	9735	0.139	0.603 #
8) m	2,4,5-TP ...	10.197f	12.223	1474	3475	0.021	0.055 #
9) m	2,4,5-T	10.693	0.000	1910	0	0.031	N.D. #
10) m	2,4-DB	0.000	0.000	0	0	N.D.	N.D.
11) m	Dinoseb	0.000	0.000	0	0	N.D.	N.D.

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

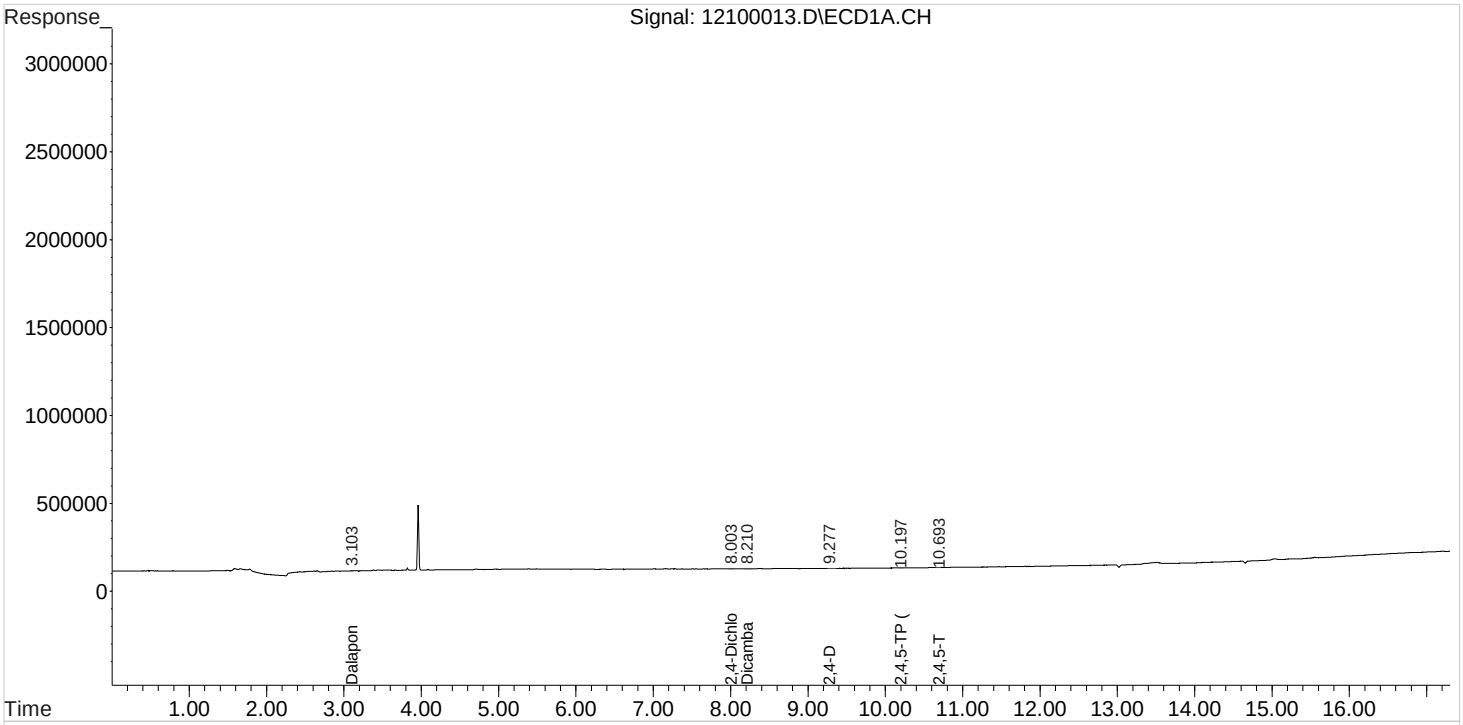
Quantitation Report (QT Reviewed)

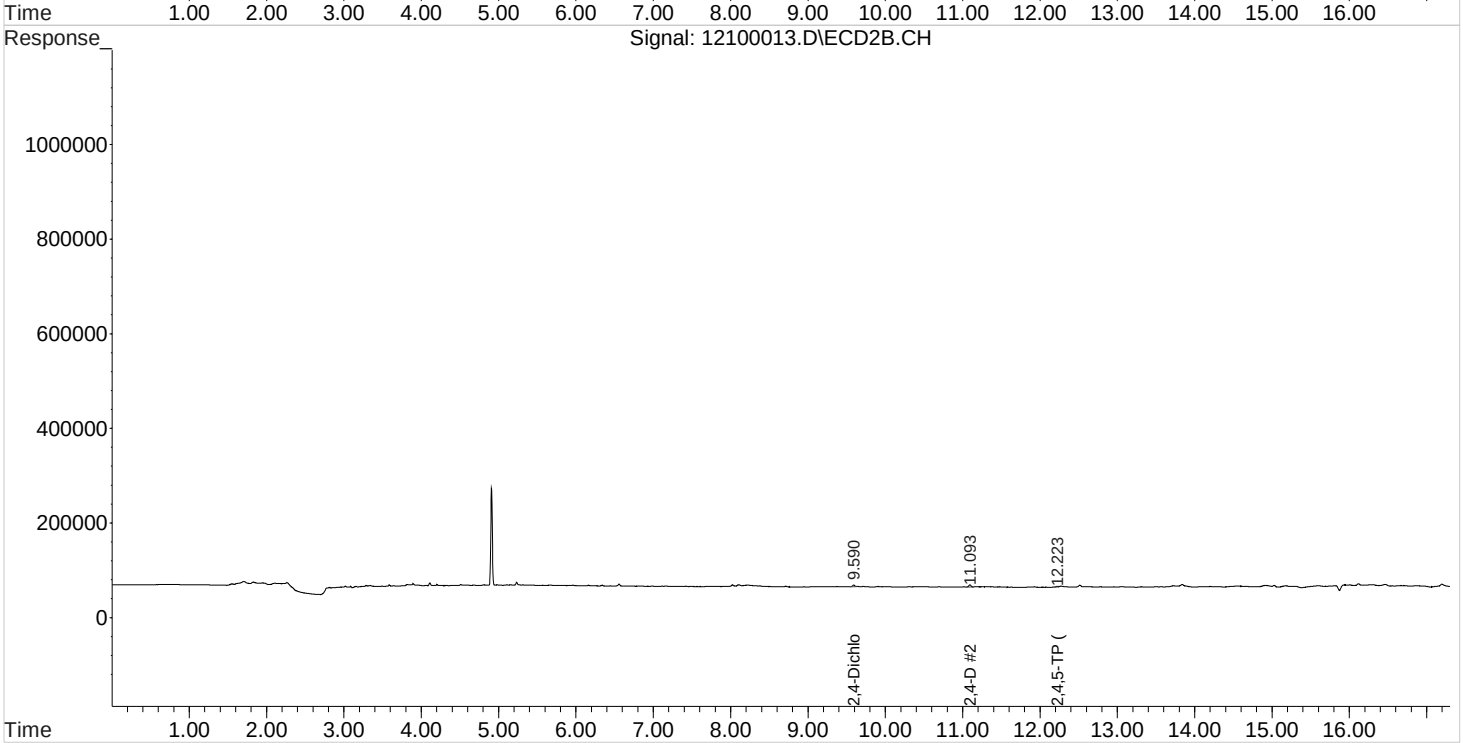
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100013.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:30 pm Operator: MRICHARDS
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 13:01:28 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st UA 12/12/18
2nd TP 12/12/18

Validation Report

Data File: J:\gc24\data\121018\12100026.D\
Lab ID: KQ1818013-14
RunType: CCB
Matrix: Water

Date Acquired: 12/10/18 21:57:00
Batch ID: 618249
Analysis Method: 8151A/HERB

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Above Highest ICAL Level		X
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level - RTX-CLP2	Dichlorprop	902.430		188.73	
	MCPA	50254.064		18692.82	
	MCPP	50488.600		18772.96	
Above Highest ICAL Level - ZB-XLB-HT	2,4-DB	1543.223		189.34	
	MCPA	83644.337		18692.82	
	MCPP	86832.688		18772.96	

Primary Review: _____

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Secondary Review: _____

1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100026.D\	**Instrument:**	K-GC-24
Acqu Date:	12/10/18 21:57:00	**Vial:**	37
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1818013-14	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Water
Prod Code:	HERB	**Collect Date:**	12/1/18	**Receive Date:**	12/3/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18726

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
2,4-Dichlorophenylacetic Acid	7.99 +0.02	9.59 +0.02	3249	9296	0.198	0.636				17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc		Rpt?
2,4,5-T	10.69 +0.01	12.64 +0.01	13485	8421	0.222	0.155	0.0044U	0.0031U	0.033 U		Y
2,4,5-TP (Silvex)	10.25 +0.01	12.21	6921	11713	0.099	0.187	0.0020U	0.0037U	0.045 U		Y
2,4-D	9.31 +0.01	11.01 +0.01	2196	4016	0.122	0.249	0.0024U	0.0050U	0.036 U		Y
2,4-DB	11.28 +0.02	13.31 -0.01	1141	2841	0.147	1543.223	0.0029U	31E	0.10 U		Y
Dalapon	3.10 +0.01	0.00	2377	0	0.115	0.000	0.0023U	0U	0.28 U		Y
Dicamba	8.20	9.72	4985	6492	0.100	0.144	0.0020U	0.0029U	0.025 U		Y
Dichlorprop	8.95	0.00	1015	0	902.430	0.000	18E	0U	0.030 U		Y
Dinoseb	11.67 +0.01	13.49	4266	4473	0.092	0.108	0.0018U	0.0022U	0.015 U		Y
MCPA	8.56 +0.01	10.19 +0.01	4273	2317	50254.064	83644.337	1000E	1700E	**1000** E	P	Y
MCPP	8.29 +0.01	9.90	2140	3443	50488.600	86832.688	1000E	1700E	**1000** E	P	Y

Prep Amount:	1000 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100026.D\	**Instrument:**	K-GC-24
Acqu Date:	12/10/18 21:57:00	**Vial:**	18
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1818013-08	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/16/18	**Receive Date:**	11/21/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	7.99 +0.02	9.59 +0.02	3249	9296	0.198	0.636				17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.31 +0.01	11.01 +0.01	2196	4016	0.122	0.249	0.24U	0.50U	100 U	Y
2,4,5-TP (Silvex), TCLP	10.25 +0.01	12.21	6921	11713	0.099	0.187	0.20U	0.37U	20 U	Y

Prep Amount:	30.00 g	**Dilution:**	1
Prep Final Amount:	50.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100026.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 9:57 pm Operator: MRICHARDS
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 12:28:25 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
2)	s	2,4-Dichl...	7.989	9.586	3249	9296	0.198	0.636	#
		Target Compounds							
1)	m	Dalapon	3.099	0.000	2377	0	0.115	N.D.	#
3)	m	Dicamba	8.202	9.716	4985	6492	0.100	0.144	#
4)	m	MCPP	0.000	0.000	0	0	N.D. d	N.D. d	
5)	m	MCPA	0.000	0.000	0	0	N.D. d	N.D. d	
6)	m	Dichloroprop	8.949	0.000	1015	0	902.430	N.D.	#
7)	m	2,4-D	9.312	11.006	2196	4016	0.122	0.249	#
8)	m	2,4,5-TP ...	10.246	12.212	6921	11713	0.099	0.187	#
9)	m	2,4,5-T	10.692	12.639	13485	8421	0.222	0.155	#
10)	m	2,4-DB	11.279	13.309	1141	2841	0.147	1543.223	#
11)	m	Dinoseb	11.666	13.486	4266	4473	0.092	0.108	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

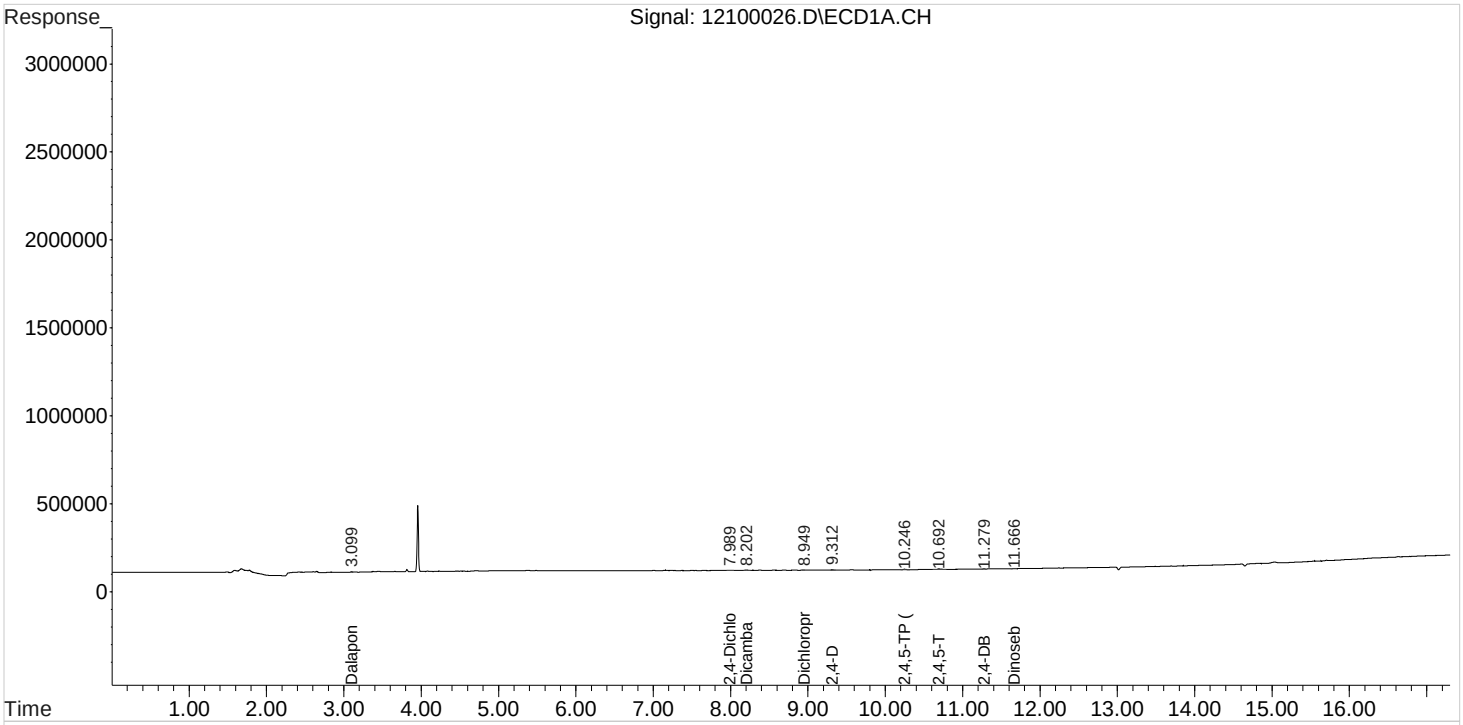
Quantitation Report (QT Reviewed)

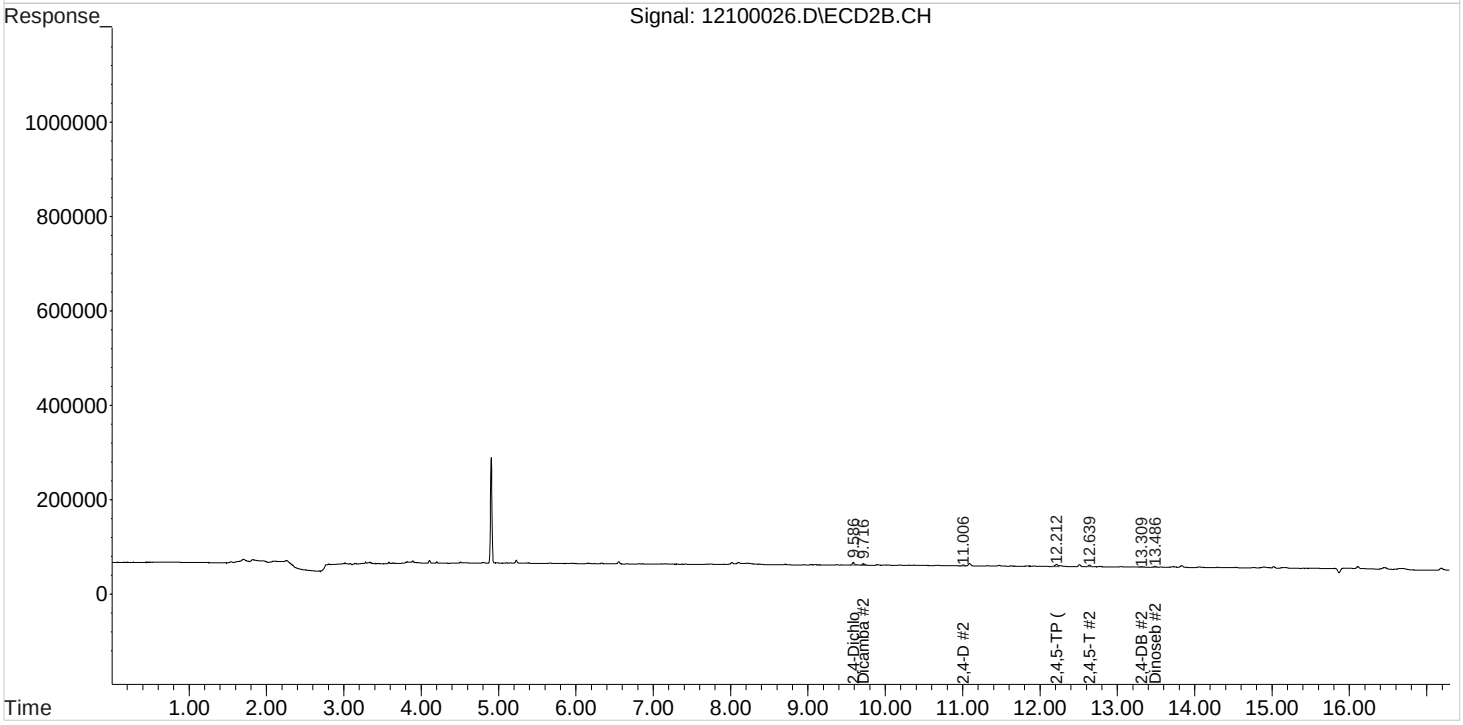
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100026.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 9:57 pm Operator: MRICHARDS
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 12:28:25 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st UA 12/12/18
2nd TP 12/12/18

Validation Report

Data File: J:\gc24\data\121018\12100037.D\
Lab ID: KQ1818013-10
RunType: CCB
Matrix: Water

Date Acquired: 12/11/18 02:19:00
Batch ID: 618249
Analysis Method: 8151A/HERB

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Above Highest ICAL Level		X
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level - RTX-CLP2	Dichlorprop	902.400		188.73	quaderr

Primary Review: _____

Secondary Review: _____

1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100037.D\	**Instrument:**	K-GC-24
Acqu Date:	12/11/18 02:19:00	**Vial:**	35
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1818013-10	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Water
Prod Code:	HERB	**Collect Date:**	12/1/18	**Receive Date:**	12/3/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18726

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
2,4-Dichlorophenylacetic Acid	7.98 +0.01	9.58 +0.01	1168	10311	0.071	0.706				17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4,5-T	10.69 +0.01	12.64 +0.01	11219	9884	0.185	0.182	0.0037U	0.0036U	0.033 U	Y
2,4,5-TP (Silvex)	10.24	12.21	15625	12436	0.223	0.198	0.0045U	0.0040U	0.045 U	Y
2,4-D	9.31 +0.01	11.00 +0.01	5807	4099	0.322	0.254	0.0064U	0.0051U	0.036 U	Y
2,4-DB	11.35 +0.09	13.39 +0.07	3561	20773	0.459	0.721	0.0092U	0.014U	0.10 U	Y
Dalapon	3.10 +0.01	0.00	2852	0	0.138	0.000	0.0028U	0U	0.28 U	Y
Dicamba	8.20	9.71	5561	4251	0.111	0.094	0.0022U	0.0019U	0.025 U	Y
Dichlorprop	8.94 -0.01	0.00	1494	0	902.400	0.000	18E	0U	0.030 U	Y
Dinoseb	11.67 +0.01	13.48	8158	7952	0.176	0.193	0.0035U	0.0039U	0.015 U	Y
MCPA	0.00	0.00	0	0	0.000	0.000	0U	0U	8.7 U	Y
MCPP	0.00	0.00	0	0	0.000	0.000	0U	0U	14 U	Y

Prep Amount:	1000 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100037.D\	**Instrument:**	K-GC-24
Acqu Date:	12/11/18 02:19:00	**Vial:**	9
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1818013-16	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/15/18	**Receive Date:**	11/21/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	7.98 +0.01	9.58 +0.01	1168	10311	0.071	0.706				17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.31 +0.01	11.00 +0.01	5807	4099	0.322	0.254	0.64U	0.51U	100 U	Y
2,4,5-TP (Silvex), TCLP	10.24	12.21	15625	12436	0.223	0.198	0.45U	0.40U	20 U	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100037.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Dec 2018 2:19 am Operator: MRICHARDS
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 12:27:30 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	7.982	9.582	1168	10311	0.071	0.706	#
	Target Compounds							
1) m	Dalapon	3.098	0.000	2852	0	0.138	N.D.	#
3) m	Dicamba	8.202	9.712	5561	4251	0.111	0.094	
4) m	MCPP	0.000	0.000	0	0	N.D. d	N.D. d	
5) m	MCPA	0.000	0.000	0	0	N.D. d	N.D. d	
6) m	Dichloroprop	8.942	0.000	1494	0	902.400	N.D.	#
7) m	2,4-D	9.305	11.002	5807	4099	0.322	0.254	
8) m	2,4,5-TP ...	10.242	12.209	15625	12436	0.223	0.198	
9) m	2,4,5-T	10.688	12.639	11219	9884	0.185	0.182	
10) m	2,4-DB	11.352f	13.385f	3561	20773	0.459	0.721	#
11) m	Dinoseb	11.665	13.482	8158	7952	0.176	0.193	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

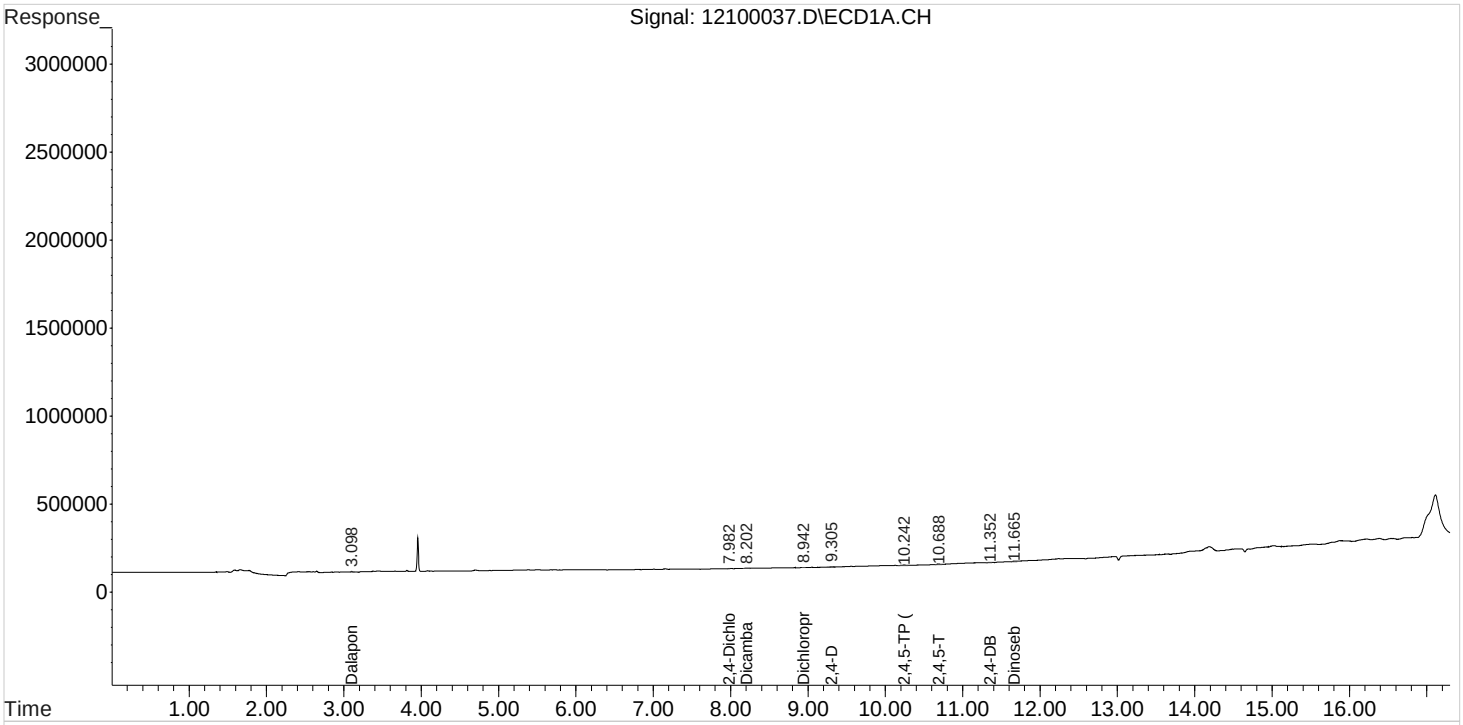
Quantitation Report (QT Reviewed)

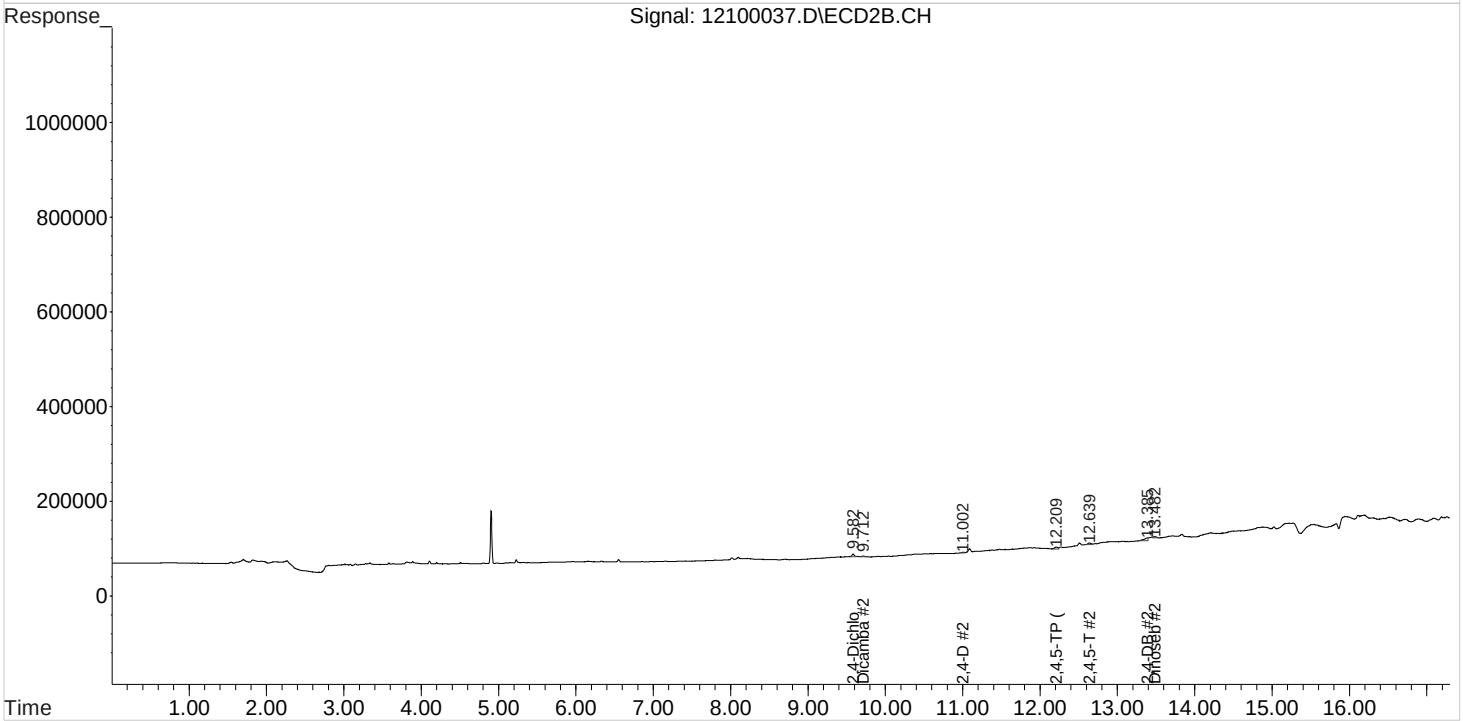
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100037.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Dec 2018 2:19 am Operator: MRICHARDS
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 12:27:30 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st UA 12/12/18
2nd TP 12/12/18

Validation Report

Data File: J:\gc24\data\121018\12100043.D\
Lab ID: KQ1818013-12
RunType: CCB
Matrix: Water

Date Acquired: 12/11/18 11:32:00
Batch ID: 618249
Analysis Method: 8151A/HERB

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Surrogates	X	
Above Highest ICAL Level		X
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level - RTX-CLP2	MCPP	50481.689		18772.96	quaderr

Primary Review: _____

Secondary Review: _____

1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100043.D\	**Instrument:**	K-GC-24
Acqu Date:	12/11/18 11:32:00	**Vial:**	28
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1818013-12	**Raw Units:**	ppb

Bottle ID:		**Tier:**	II	**Matrix:**	Water
Prod Code:	HERB	**Collect Date:**	11/27/18	**Receive Date:**	11/27/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18726

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
2,4-Dichlorophenylacetic Acid	7.99 +0.01	9.59 +0.01	3550	9837	0.217	0.673				17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4,5-T	10.69	12.64	13038	10529	0.215	0.194	0.0043U	0.0039U	0.033 U	Y
2,4,5-TP (Silvex)	10.25	12.21	8489	11724	0.121	0.187	0.0024U	0.0037U	0.045 U	Y
2,4-D	9.31	11.00	4291	4095	0.238	0.254	0.0048U	0.0051U	0.036 U	Y
2,4-DB	11.28 +0.01	13.33 +0.01	4293	15315	0.553	0.034	0.011U	0.00068U	0.10 U	Y
Dalapon	3.10 +0.01	0.00	1395	0	0.068	0.000	0.0014U	0U	0.28 U	Y
Dicamba	8.21 +0.01	9.72	9187	5463	0.184	0.121	0.0037U	0.0024U	0.025 U	Y
Dichlorprop	0.00	0.00	0	0	0.000	0.000	0U	0U	0.030 U	Y
Dinoseb	11.67	13.49	5908	10399	0.127	0.252	0.0025U	0.0050U	0.015 U	Y
MCPA	0.00	0.00	0	0	0.000	0.000	0U	0U	8.7 U	Y
MCPP	8.29	0.00	3113	0	50481.689	0.000	1000E	0U	14 U	Y

Prep Amount:	1000 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100043.D\	**Instrument:**	K-GC-24
Acqu Date:	12/11/18 11:32:00	**Vial:**	13
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1818013-18	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/15/18	**Receive Date:**	11/21/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	7.99 +0.01	9.59 +0.01	3550	9837	0.217	0.673				17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.31	11.00	4291	4095	0.238	0.254	0.48U	0.51U	100 U	Y
2,4,5-TP (Silvex), TCLP	10.25	12.21	8489	11724	0.121	0.187	0.24U	0.37U	20 U	Y

Prep Amount:	30.00 g	**Dilution:**	1
Prep Final Amount:	50.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100043.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Dec 2018 11:32 am Operator: MRICHARDS
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 15:04:20 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	7.992	9.586	3550	9837	0.217	0.673	#
	Target Compounds							
1) m	Dalapon	3.102	0.000	1395	0	0.068	N.D.	#
3) m	Dicamba	8.205	9.719	9187	5463	0.184	0.121	#
4) m	MCPP	8.289	0.000	3113	0	50481.689	N.D.	d#
5) m	MCPA	0.000	0.000	0	0	N.D. d	N.D.	d
6) m	Dichloroprop	0.000	0.000	0	0	N.D. d	N.D.	d
7) m	2,4-D	9.312	11.002	4291	4095	0.238	0.254	
8) m	2,4,5-TP ...	10.249	12.209	8489	11724	0.121	0.187	#
9) m	2,4,5-T	10.692	12.639	13038	10529	0.215	0.194	
10) m	2,4-DB	11.275	13.329	4293	15315	0.553	0.034	#
11) m	Dinoseb	11.669	13.489	5908	10399	0.127	0.252	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

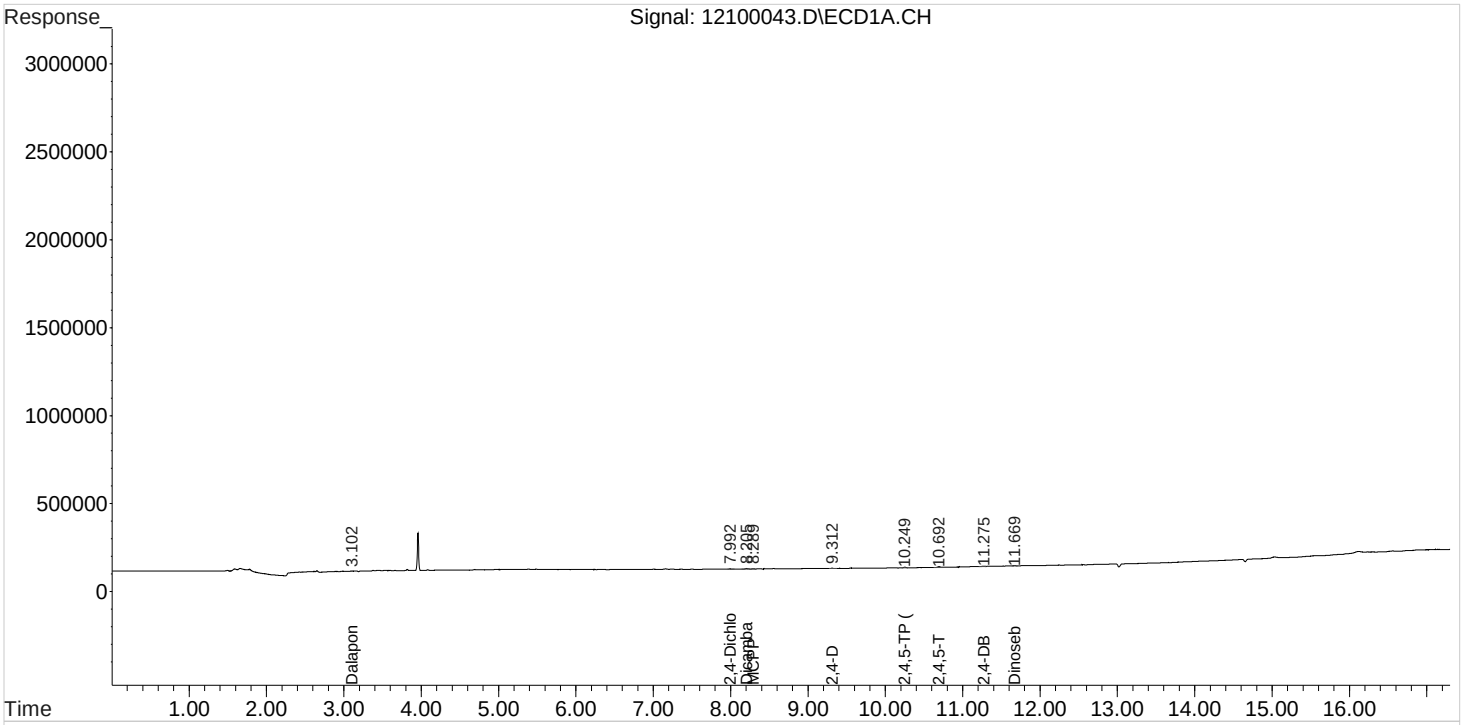
Quantitation Report (QT Reviewed)

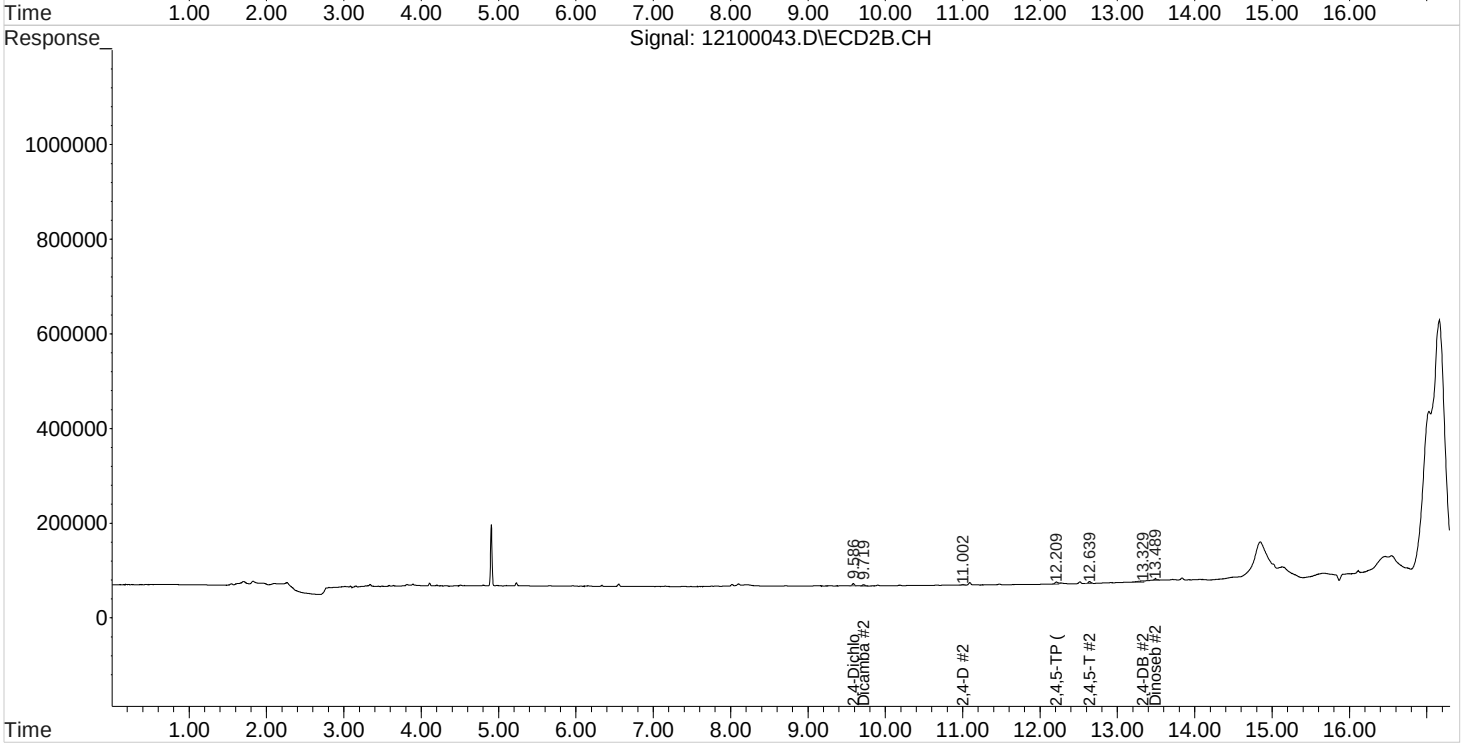
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100043.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Dec 2018 11:32 am Operator: MRICHARDS
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 15:04:20 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st UA 12/12/18
2nd TP 12/12/18

Validation Report

Data File: J:\gc24\data\121018\12100009.D\
Lab ID: KQ1818013-03
RunType: CCV
Matrix: Soil

Date Acquired: 12/10/18 13:48:00
Batch ID: 618249
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100009.D\	**Instrument:**	K-GC-24
Acqu Date:	12/10/18 13:48:00	**Vial:**	42
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1818013-03	**Raw Units:**	ppb

Bottle ID:		**Tier:**	I	**Matrix:**	Soil
Prod Code:	HERB	**Collect Date:**		**Receive Date:**	11/1/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18726

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
2,4-Dichlorophenylacetic Acid	7.98	9.58	1480005	1345340	90.368	92.063			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
2,4,5-T	10.69	12.64	5875503	5216637	96.843	96.298	96.8	96.3	Y
2,4,5-TP (Silvex)	10.25	12.21	6819360	6263960	97.123	99.846	97.1	99.8	Y
2,4-D	9.31	11.01	1689421	1528134	93.583	94.726	93.6	94.7	Y
2,4-DB	11.27	13.32	815631	748539	105.069	98.560	105	98.6	Y
Dalapon	3.09	3.65	1886292	1442313	91.442	92.367	91.4	92.4	Y
Dicamba	8.21	9.72	4675933	4394509	93.407	97.289	93.4	97.3	Y
Dichlorprop	8.95	10.67	1413022	1293929	97.604	100.963	97.6	101	Y
Dinoseb	11.67	13.50	4455903	3884644	96.072	94.110	96.1	94.1	Y
MCPA	8.56	10.19	1474191	757783	9970.556	9642.113	9970	9640	Y
MCPP	8.29	9.91	1209274	495495	9973.531	9654.762	9970	9650	Y

Prep Amount:	30.00 g	**Dilution:**	1
Prep Final Amount:	50.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100009.D\	**Instrument:**	K-GC-24
Acqu Date:	12/10/18 13:48:00	**Vial:**	43
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1818013-03	**Raw Units:**	ppb

Bottle ID:		**Tier:**	I	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**		**Receive Date:**	11/1/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
DCAA	7.98	9.58	1480005	1345340	90.368	92.063			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
2,4-D, TCLP	9.31	11.01	1689421	1528134	93.583	94.726	93.6	94.7	Y
2,4,5-TP (Silvex), TCLP	10.25	12.21	6819360	6263960	97.123	99.846	97.1	99.8	Y

Prep Amount:	30.00 g	**Dilution:**	1
Prep Final Amount:	50.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100009.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 1:48 pm Operator: MRICHARDS
Sample : PENTA01-94F Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 14:31:44 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	7.983	9.583	1480005	1345340	90.368	92.063
	Target Compounds						
1) m	Dalapon	3.093	3.653	1886292	1442313	91.442	92.367
3) m	Dicamba	8.206	9.723	4675933	4394509	93.407	97.289
4) m	MCPP	8.289	9.909	1209274	495495	9973.531	9654.762
5) m	MCPA	8.556	10.189	1474191	757783	9970.556	9642.113
6) m	Dichloroprop	8.953	10.666	1413022	1293929	97.604	100.963
7) m	2,4-D	9.306	11.006	1689421	1528134	93.583	94.726
8) m	2,4,5-TP ...	10.249	12.213	6819360	6263960	97.123	99.846
9) m	2,4,5-T	10.693	12.643	5875503	5216637	96.843	96.298
10) m	2,4-DB	11.273	13.323	815631	748539	105.069	98.560
11) m	Dinoseb	11.673	13.496	4455903	3884644	96.072	94.110

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

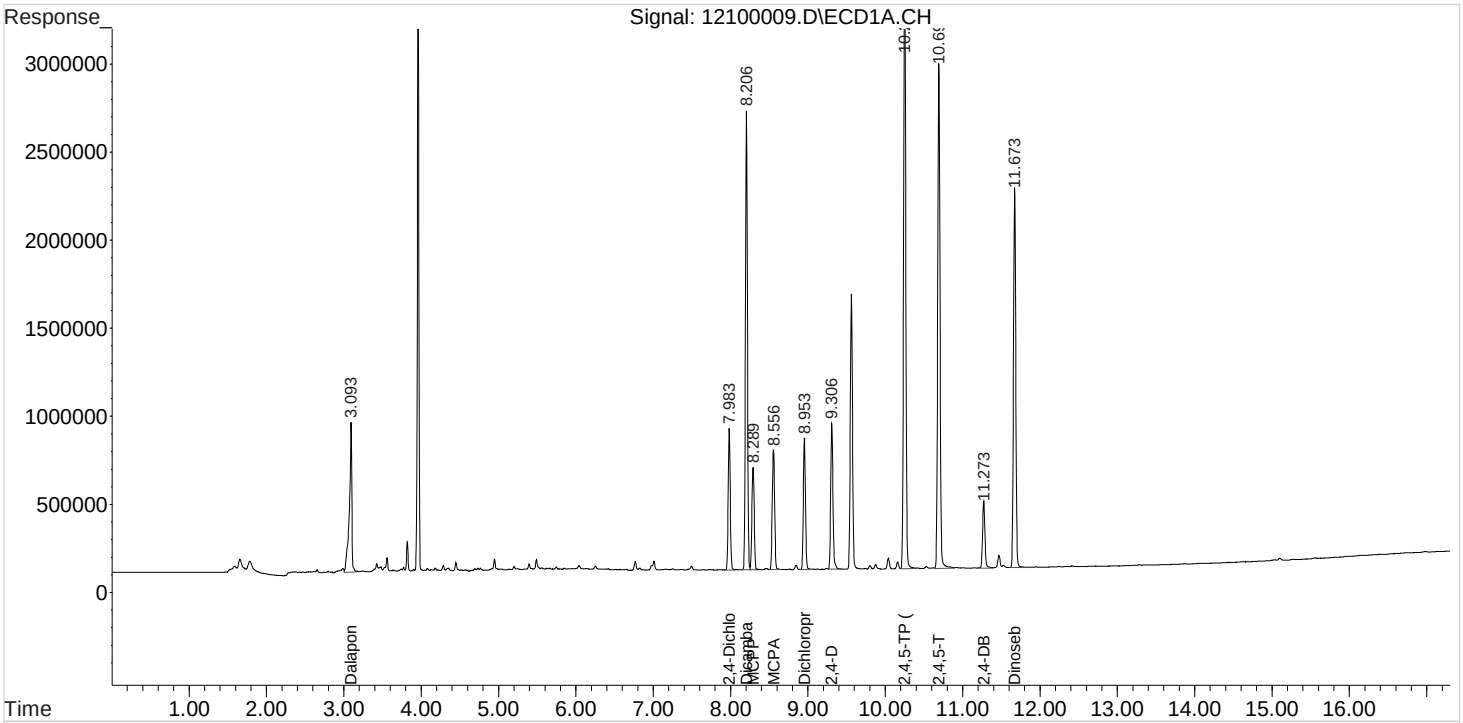
Quantitation Report (QT Reviewed)

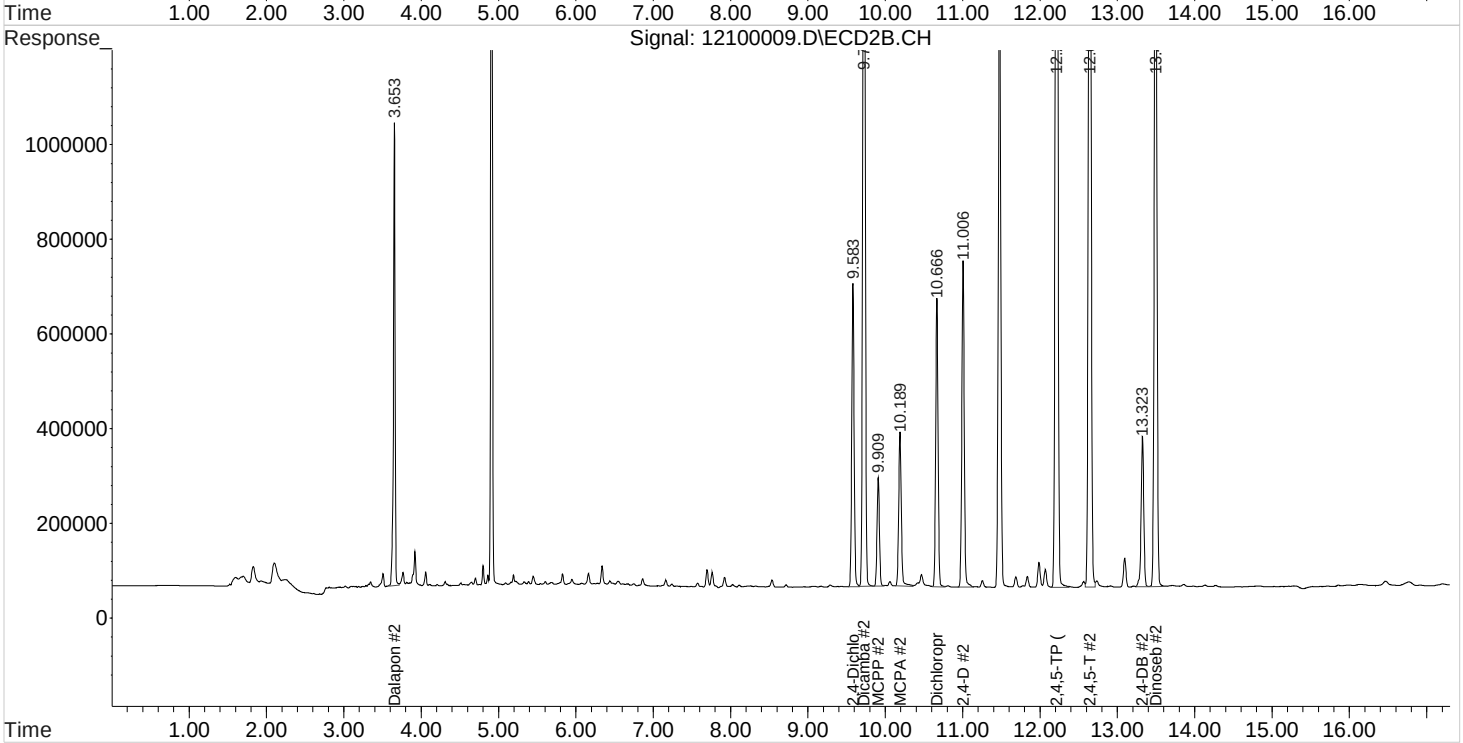
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100009.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 1:48 pm Operator: MRICHARDS
Sample : PENTA01-94F Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 14:31:44 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st UA 12/12/18
2nd TP 12/12/18

Validation Report

Data File: J:\gc24\data\121018\12100012.D\
Lab ID: KQ1818013-05
RunType: CCV
Matrix: Soil

Date Acquired: 12/10/18 15:06:00
Batch ID: 618249
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100012.D\	**Instrument:**	K-GC-24
Acqu Date:	12/10/18 15:06:00	**Vial:**	47
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1818013-05	**Raw Units:**	ppb

Bottle ID:		**Tier:**	I	**Matrix:**	Soil
Prod Code:	HERB	**Collect Date:**		**Receive Date:**	11/1/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18726

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
2,4-Dichlorophenylacetic Acid	7.98	9.58	1505834	1329498	91.945	90.979			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
2,4,5-T	10.69	12.64	5993428	5238204	98.787	96.696	98.8	96.7	Y
2,4,5-TP (Silvex)	10.25	12.21	6988437	6231127	99.531	99.323	99.5	99.3	Y
2,4-D	9.30	11.00	1730241	1501517	95.844	93.076	95.8	93.1	Y
2,4-DB	11.27	13.32	811603	754062	104.550	99.357	105	99.4	Y
Dalapon	3.09	3.65	1905312	1456078	92.364	93.248	92.4	93.2	Y
Dicamba	8.20	9.72	4812670	4342643	96.139	96.141	96.1	96.1	Y
Dichlorprop	8.95	10.66	1449091	1279125	100.521	99.662	101	99.7	Y
Dinoseb	11.67	13.49	4545637	3903622	98.007	94.570	98.0	94.6	Y
MCPA	8.55	10.19	1501431	734670	10256.583	9280.090	10300	9280	Y
MCPP	8.29	9.90	1219012	481344	10093.923	9321.632	10100	9320	Y

Prep Amount:	30.00 g	**Dilution:**	1
Prep Final Amount:	50.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100012.D\	**Instrument:**	K-GC-24
Acqu Date:	12/10/18 15:06:00	**Vial:**	48
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1818013-05	**Raw Units:**	ppb

Bottle ID:		**Tier:**	I	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**		**Receive Date:**	11/1/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
DCAA	7.98	9.58	1505834	1329498	91.945	90.979			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
2,4-D, TCLP	9.30	11.00	1730241	1501517	95.844	93.076	95.8	93.1	Y
2,4,5-TP (Silvex), TCLP	10.25	12.21	6988437	6231127	99.531	99.323	99.5	99.3	Y

Prep Amount:	30.00 g	**Dilution:**	1
Prep Final Amount:	50.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100012.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:06 pm Operator: MRICHARDS
Sample : PENTA01-94F Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 17:42:23 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	7.977	9.577	1505834	1329498	91.945	90.979
	Target Compounds						
1) m	Dalapon	3.090	3.650	1905312	1456078	92.364	93.248
3) m	Dicamba	8.200	9.720	4812670	4342643	96.139	96.141
4) m	MCPP	8.287	9.904	1219012	481344	10093.923	9321.632
5) m	MCPA	8.550	10.187	1501431	734670	10256.583	9280.090
6) m	Dichloroprop	8.950	10.664	1449091	1279125	100.521	99.662
7) m	2,4-D	9.304	11.000	1730241	1501517	95.844	93.076
8) m	2,4,5-TP ...	10.247	12.210	6988437	6231127	99.531	99.323
9) m	2,4,5-T	10.690	12.640	5993428	5238204	98.787	96.696
10) m	2,4-DB	11.267	13.320	811603	754062	104.550	99.357
11) m	Dinoseb	11.667	13.490	4545637	3903622	98.007	94.570

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

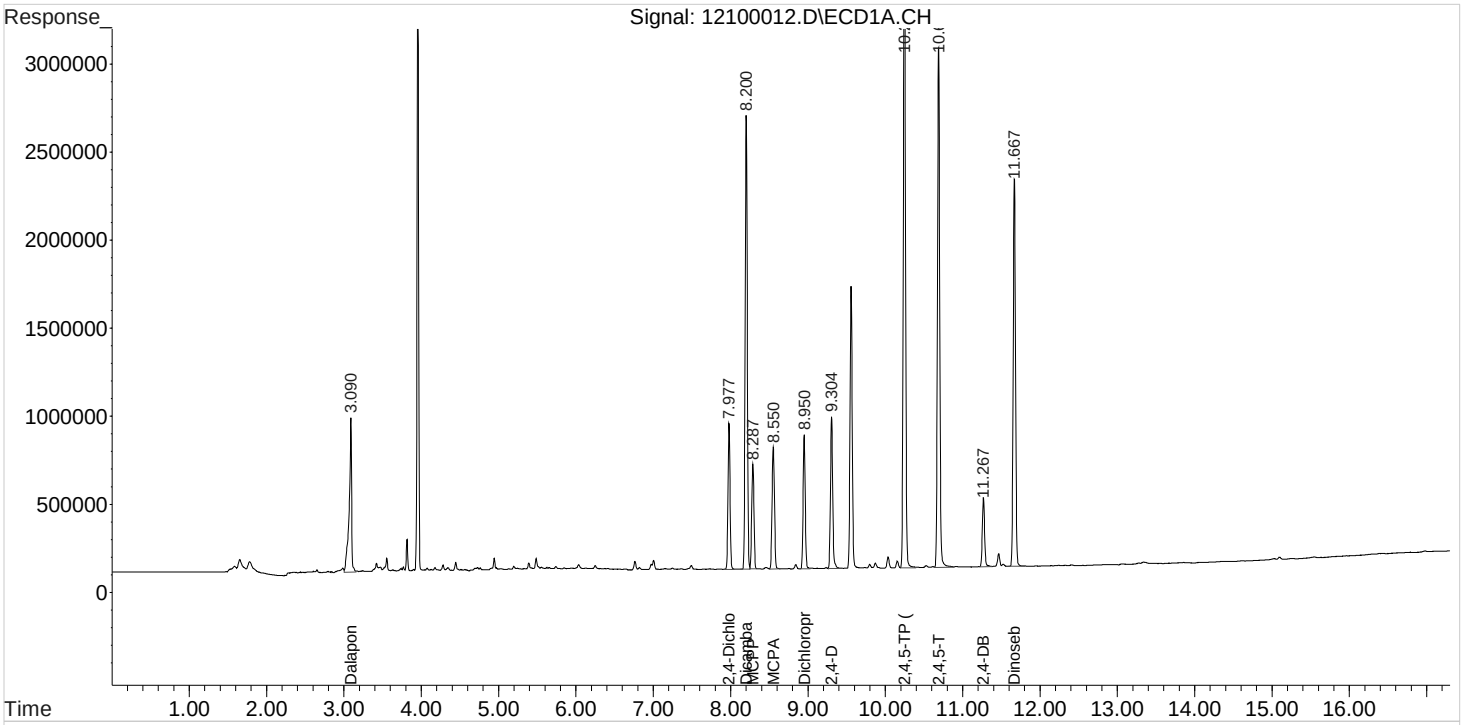
Quantitation Report (QT Reviewed)

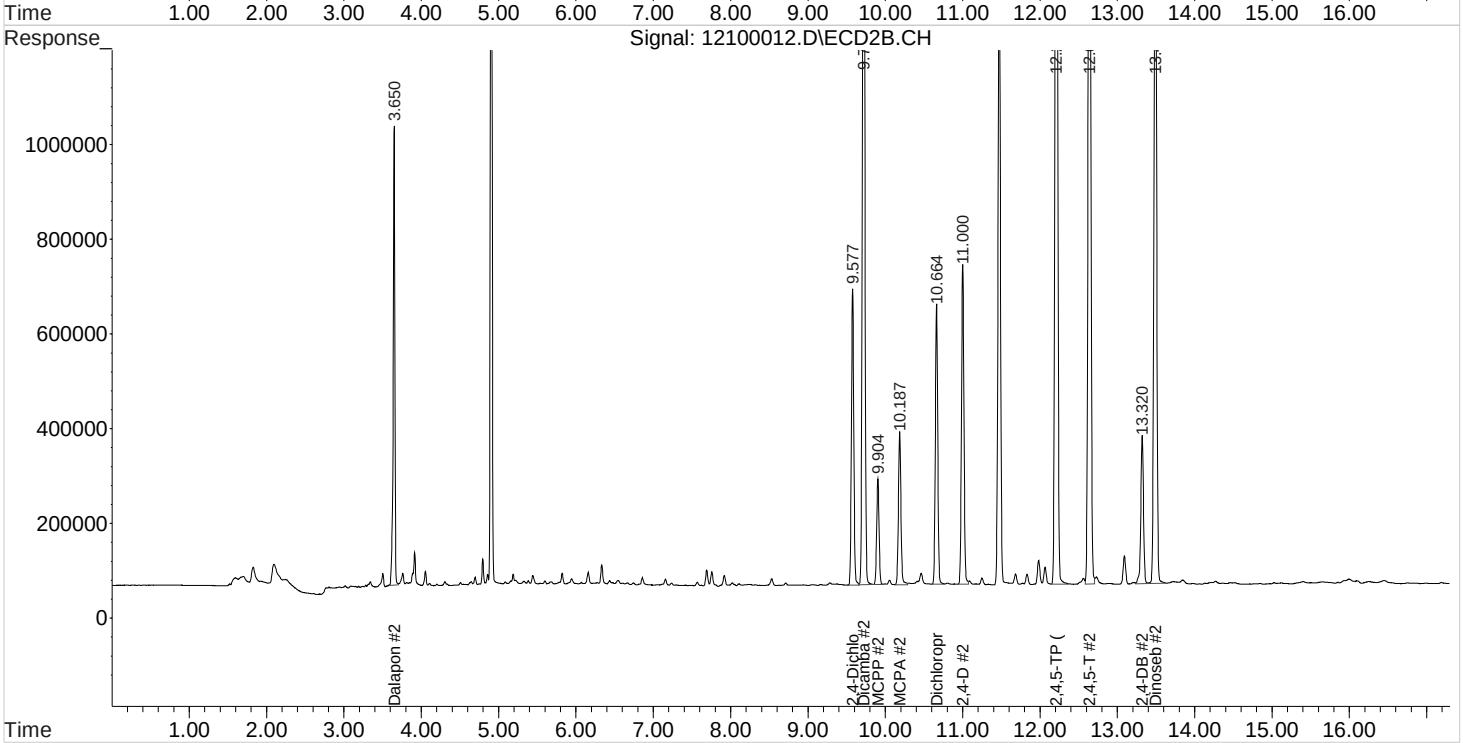
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100012.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:06 pm Operator: MRICHARDS
Sample : PENTA01-94F Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 17:42:23 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st UA 12/12/18
2nd TP 12/12/18

Validation Report

Data File: J:\gc24\data\121018\12100025.D\
Lab ID: KQ1818013-13
RunType: CCV
Matrix: Water

Date Acquired: 12/10/18 21:34:00
Batch ID: 618249
Analysis Method: 8151A/HERB

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100025.D\	**Instrument:**	K-GC-24
Acqu Date:	12/10/18 21:34:00	**Vial:**	36
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1818013-13	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Water
Prod Code:	HERB	**Collect Date:**	12/1/18	**Receive Date:**	12/3/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18726

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
2,4-Dichlorophenylacetic Acid	7.97	9.57	1420175	1303229	86.715	89.182			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
2,4,5-T	10.68	12.63	5741614	5254828	94.637	97.003	94.6	97.0	Y
2,4,5-TP (Silvex)	10.24	12.21	6633888	6190138	94.481	98.670	94.5	98.7	Y
2,4-D	9.30	11.00	1645433	1502929	91.147	93.164	91.1	93.2	Y
2,4-DB	11.26	13.32	798335	766502	102.841	101.156	103	101	Y
Dalapon	3.09	3.65	1742070	1433842	84.451	91.824	84.5	91.8	Y
Dicamba	8.20	9.72	4509417	4237462	90.081	93.812	90.1	93.8	Y
Dichlorprop	8.95	10.66	1365321	1259201	93.783	97.917	93.8	97.9	Y
Dinoseb	11.66	13.49	4337873	3869214	93.528	93.736	93.5	93.7	Y
MCPA	8.55	10.18	1412780	723814	9345.423	9111.447	9350	9110	Y
MCPP	8.28	9.90	1153153	478930	9297.922	9265.130	9300	9270	Y

Prep Amount:	1000 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100025.D\	**Instrument:**	K-GC-24
Acqu Date:	12/10/18 21:34:00	**Vial:**	20
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1818013-07	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/16/18	**Receive Date:**	11/21/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
DCAA	7.97	9.57	1420175	1303229	86.715	89.182			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
2,4-D, TCLP	9.30	11.00	1645433	1502929	91.147	93.164	91.1	93.2	Y
2,4,5-TP (Silvex), TCLP	10.24	12.21	6633888	6190138	94.481	98.670	94.5	98.7	Y

Prep Amount:	30.00 g	**Dilution:**	1
Prep Final Amount:	50.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100025.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 9:34 pm Operator: MRICHARDS
Sample : PENTA01-94F Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 09:44:57 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	7.974	9.574	1420175	1303229	86.715	89.182
	Target Compounds						
1) m	Dalapon	3.088	3.648	1742070	1433842	84.451	91.824
3) m	Dicamba	8.198	9.718	4509417	4237462	90.081	93.812
4) m	MCPP	8.284	9.901	1153153	478930	9297.922	9265.130
5) m	MCPA	8.548	10.181	1412780	723814	9345.423	9111.447
6) m	Dichloroprop	8.948	10.658	1365321	1259201	93.783	97.917
7) m	2,4-D	9.301	10.998	1645433	1502929	91.147	93.164
8) m	2,4,5-TP ...	10.241	12.208	6633888	6190138	94.481	98.670
9) m	2,4,5-T	10.684	12.634	5741614	5254828	94.637	97.003
10) m	2,4-DB	11.264	13.318	798335	766502	102.841	101.156
11) m	Dinoseb	11.664	13.488	4337873	3869214	93.528	93.736

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

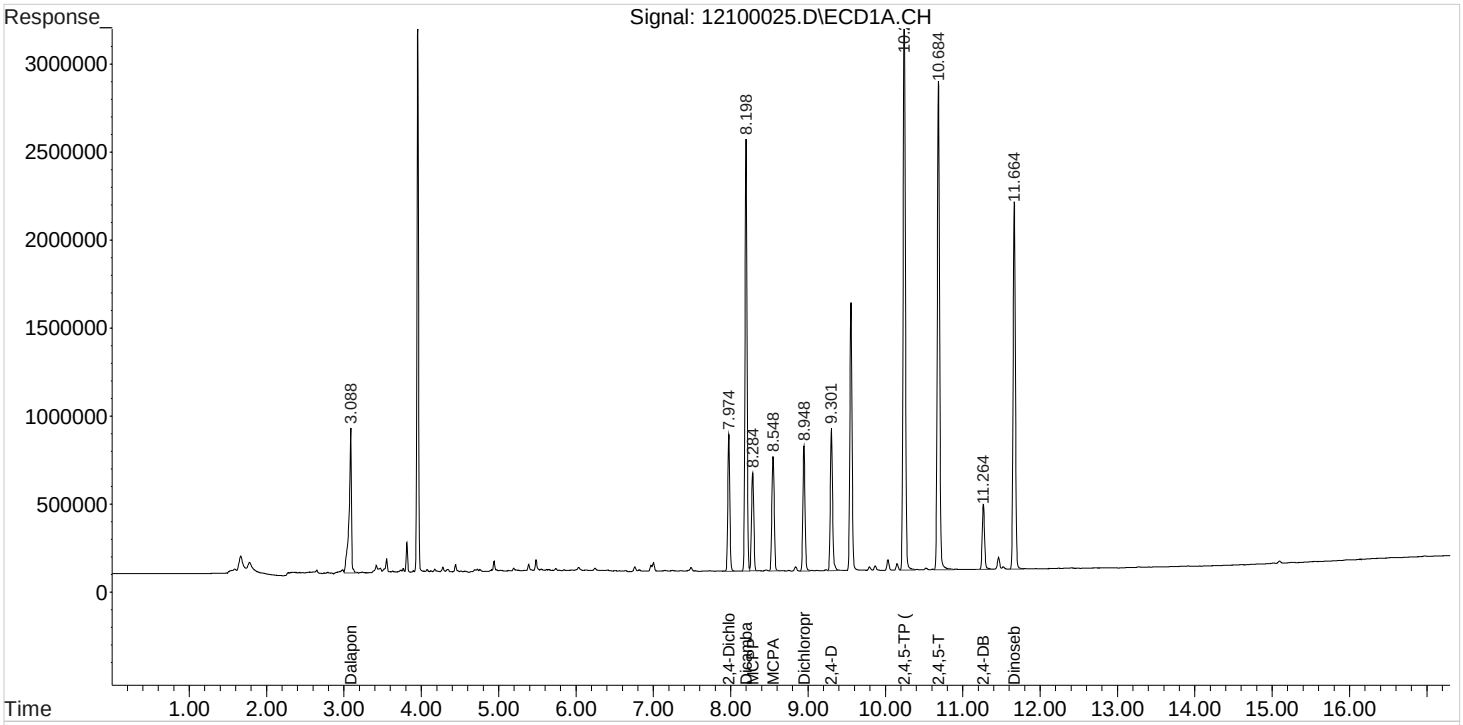
Quantitation Report (QT Reviewed)

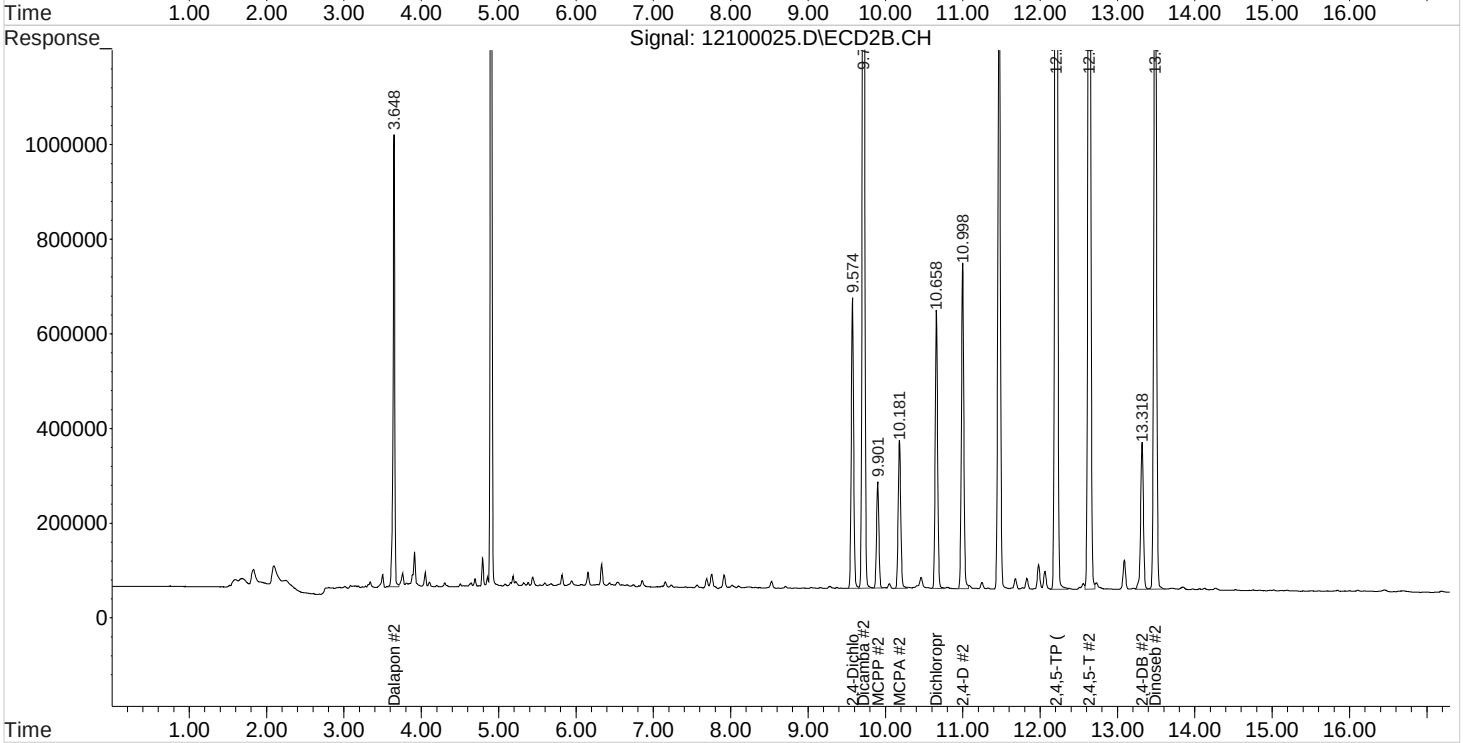
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100025.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 9:34 pm Operator: MRICHARDS
Sample : PENTA01-94F Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 09:44:57 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st UA 12/12/18
2nd TP 12/12/18

Validation Report

Data File: J:\gc24\data\121018\12100036.D\
Lab ID: KQ1818013-09
RunType: CCV
Matrix: Water

Date Acquired: 12/11/18 01:56:00
Batch ID: 618249
Analysis Method: 8151A/HERB

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100036.D\	**Instrument:**	K-GC-24
Acqu Date:	12/11/18 01:56:00	**Vial:**	34
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1818013-09	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Water
Prod Code:	HERB	**Collect Date:**	12/1/18	**Receive Date:**	12/3/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18726

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
2,4-Dichlorophenylacetic Acid	7.97	9.57	1507988	1323754	92.077	90.586			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
2,4,5-T	10.68	12.63	5860838	5351350	96.602	98.785	96.6	98.8	Y
2,4,5-TP (Silvex)	10.24	12.21	6879177	6343828	97.975	101.119	98.0	101	Y
2,4-D	9.30	10.99	1708392	1500284	94.634	93.000	94.6	93.0	Y
2,4-DB	11.26	13.32	750941	705050	96.735	92.317	96.7	92.3	Y
Dalapon	3.09	3.65	1859653	1472593	90.151	94.306	90.2	94.3	Y
Dicamba	8.20	9.71	4807845	4413761	96.042	97.716	96.0	97.7	Y
Dichlorprop	8.95	10.66	1441708	1244395	99.922	96.623	99.9	96.6	Y
Dinoseb	11.66	13.48	4345874	3838214	93.700	92.985	93.7	93.0	Y
MCPA	8.55	10.18	1475134	714450	9980.364	8966.683	9980	8970	Y
MCPP	8.28	9.90	1183623	453131	9660.990	8667.060	9660	8670	Y

Prep Amount:	1000 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100036.D\	**Instrument:**	K-GC-24
Acqu Date:	12/11/18 01:56:00	**Vial:**	7
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1818013-15	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/15/18	**Receive Date:**	11/21/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
DCAA	7.97	9.57	1507988	1323754	92.077	90.586			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
2,4-D, TCLP	9.30	10.99	1708392	1500284	94.634	93.000	94.6	93.0	Y
2,4,5-TP (Silvex), TCLP	10.24	12.21	6879177	6343828	97.975	101.119	98.0	101	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100036.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Dec 2018 1:56 am Operator: MRICHARDS
Sample : PENTA01-94F Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 09:45:21 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	7.974	9.574	1507988	1323754	92.077	90.586
	Target Compounds						
1) m	Dalapon	3.087	3.647	1859653	1472593	90.151	94.306
3) m	Dicamba	8.197	9.714	4807845	4413761	96.042	97.716
4) m	MCPP	8.284	9.901	1183623	453131	9660.990	8667.060
5) m	MCPA	8.547	10.181	1475134	714450	9980.364	8966.683
6) m	Dichloroprop	8.947	10.657	1441708	1244395	99.922	96.623
7) m	2,4-D	9.300	10.994	1708392	1500284	94.634	93.000
8) m	2,4,5-TP ...	10.244	12.207	6879177	6343828	97.975	101.119
9) m	2,4,5-T	10.684	12.634	5860838	5351350	96.602	98.785
10) m	2,4-DB	11.264	13.317	750941	705050	96.735	92.317
11) m	Dinoseb	11.664	13.484	4345874	3838214	93.700	92.985

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

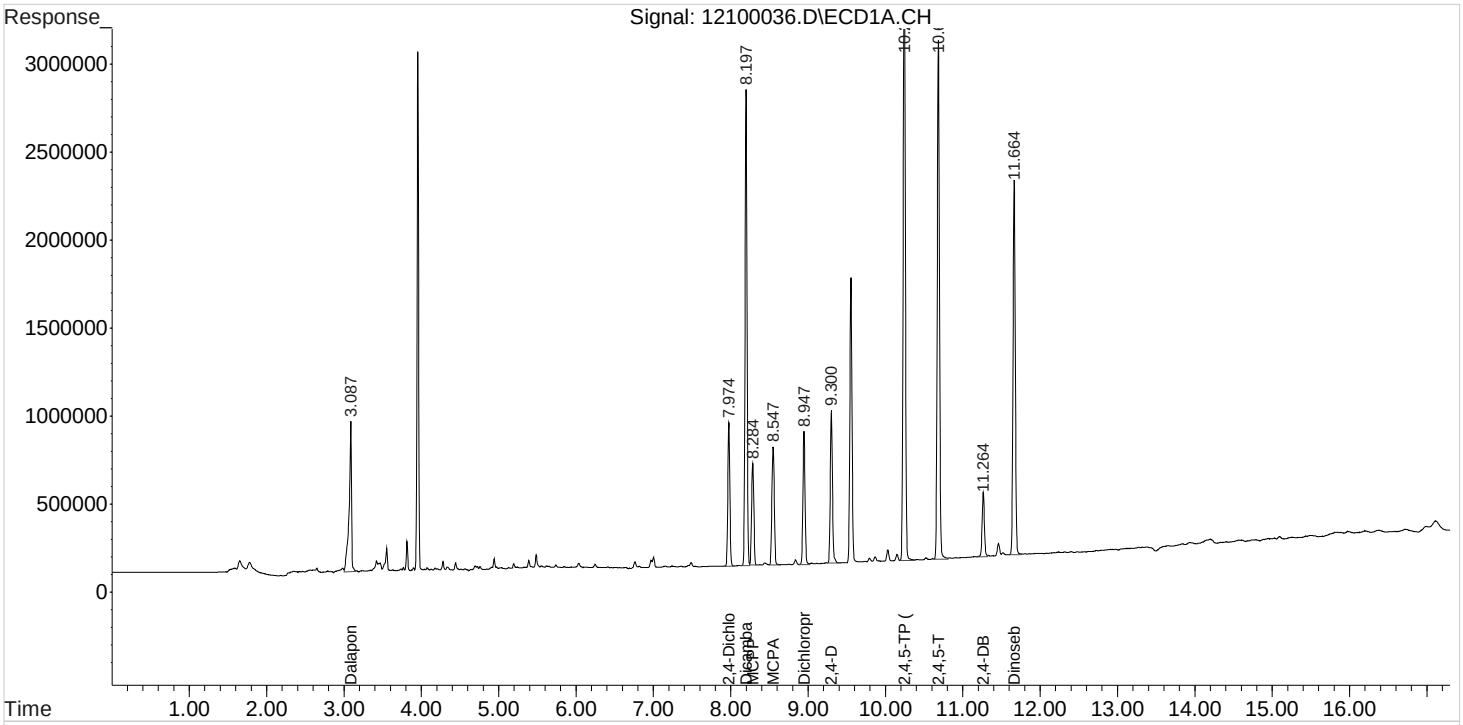
Quantitation Report (QT Reviewed)

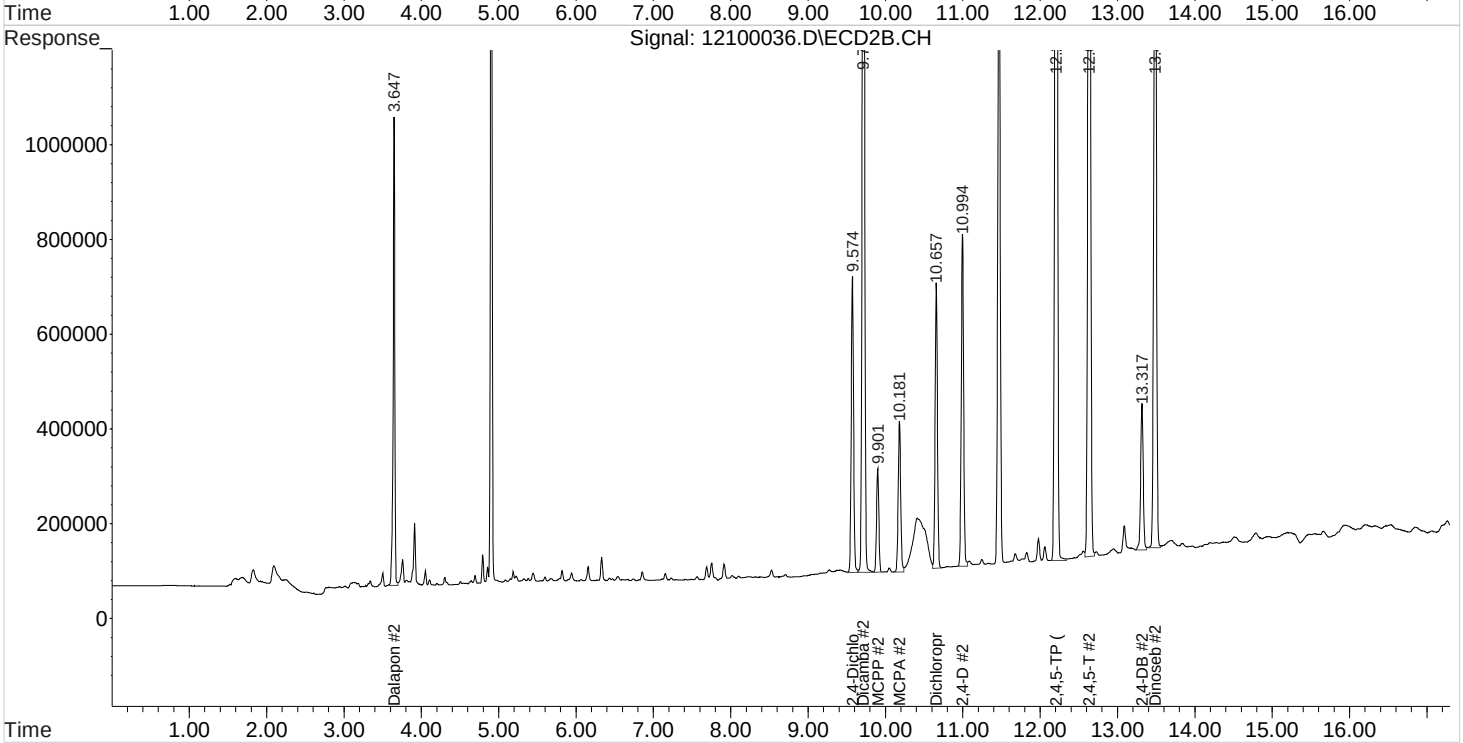
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100036.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Dec 2018 1:56 am Operator: MRICHARDS
Sample : PENTA01-94F Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 09:45:21 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st UA 12/12/18
2nd TP 12/12/18

Validation Report

Data File: J:\gc24\data\121018\12100042.D\
Lab ID: KQ1818013-11
RunType: CCV
Matrix: Water

Date Acquired: 12/11/18 11:08:00
Batch ID: 618249
Analysis Method: 8151A/HERB

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100042.D\	**Instrument:**	K-GC-24
Acqu Date:	12/11/18 11:08:00	**Vial:**	29
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1818013-11	**Raw Units:**	ppb

Bottle ID:		**Tier:**	II	**Matrix:**	Water
Prod Code:	HERB	**Collect Date:**	11/27/18	**Receive Date:**	11/27/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18726

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
2,4-Dichlorophenylacetic Acid	7.98	9.58	1594535	1417046	97.361	96.970			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
2,4,5-T	10.69	12.64	6307001	5563742	103.956	102.706	104	103	Y
2,4,5-TP (Silvex)	10.25	12.21	7391862	6664575	105.277	106.232	105	106	Y
2,4-D	9.31	11.00	1822829	1607710	100.973	99.659	101	99.7	Y
2,4-DB	11.27	13.32	885296	794748	114.043	105.258	114	105	Y
Dalapon	3.09	3.65	1880185	1467117	91.146	93.955	91.1	94.0	Y
Dicamba	8.20	9.72	5079749	4651647	101.474	102.982	101	103	Y
Dichlorprop	8.95	10.66	1527680	1362508	106.963	107.025	107	107	Y
Dinoseb	11.67	13.49	4749032	4052630	102.392	98.179	102	98.2	Y
MCPA	8.55	10.18	1518993	770088	10444.058	9836.536	10400	9840	Y
MCPP	8.29	9.90	1238612	510043	10339.279	10000.724	10300	10000	Y

Prep Amount:	1000 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st UA 12/12/18
2nd TP 12/12/18

Quantitation Report

Data File:	J:\gc24\data\121018\12100042.D\	**Instrument:**	K-GC-24
Acqu Date:	12/11/18 11:08:00	**Vial:**	14
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1818013-17	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/15/18	**Receive Date:**	11/21/18

Analysis Lot:	618249	**Prep Lot:**		**Report Group:**	KQ1818013
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
DCAA	7.98	9.58	1594535	1417046	97.361	96.970			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
2,4-D, TCLP	9.31	11.00	1822829	1607710	100.973	99.659	101	99.7	Y
2,4,5-TP (Silvex), TCLP	10.25	12.21	7391862	6664575	105.277	106.232	105	106	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100042.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Dec 2018 11:08 am Operator: MRICHARDS
Sample : PENTA01-94F Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 12:38:33 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	7.979	9.576	1594535	1417046	97.361	96.970
	Target Compounds						
1) m	Dalapon	3.089	3.649	1880185	1467117	91.146	93.955
3) m	Dicamba	8.203	9.719	5079749	4651647	101.474	102.982
4) m	MCPP	8.289	9.903	1238612	510043	10339.279	10000.724
5) m	MCPA	8.553	10.183	1518993	770088	10444.058	9836.536
6) m	Dichloroprop	8.949	10.659	1527680	1362508	106.963	107.025
7) m	2,4-D	9.306	10.999	1822829	1607710	100.973	99.659
8) m	2,4,5-TP ...	10.246	12.209	7391862	6664575	105.277	106.232
9) m	2,4,5-T	10.689	12.636	6307001	5563742	103.956	102.706
10) m	2,4-DB	11.269	13.319	885296	794748	114.043	105.258
11) m	Dinoseb	11.669	13.489	4749032	4052630	102.392	98.179

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

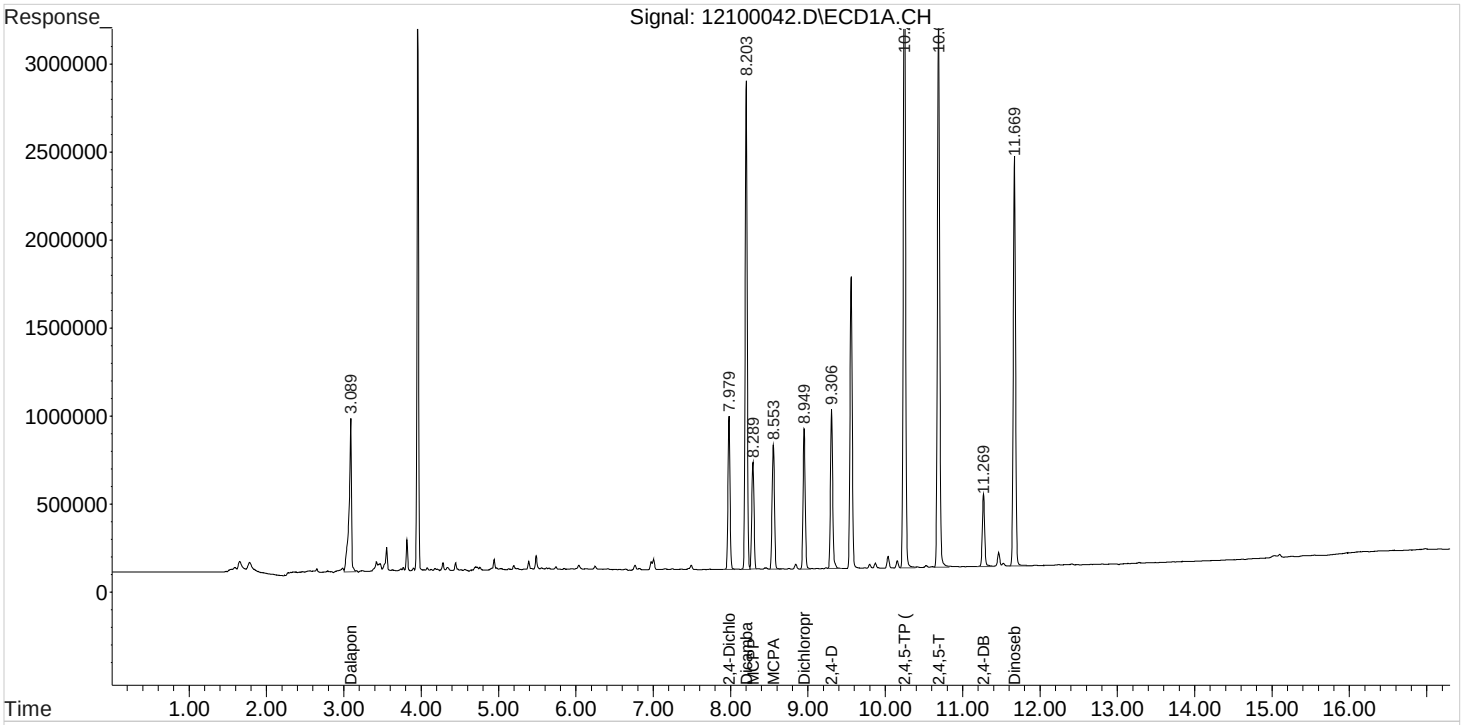
Quantitation Report (QT Reviewed)

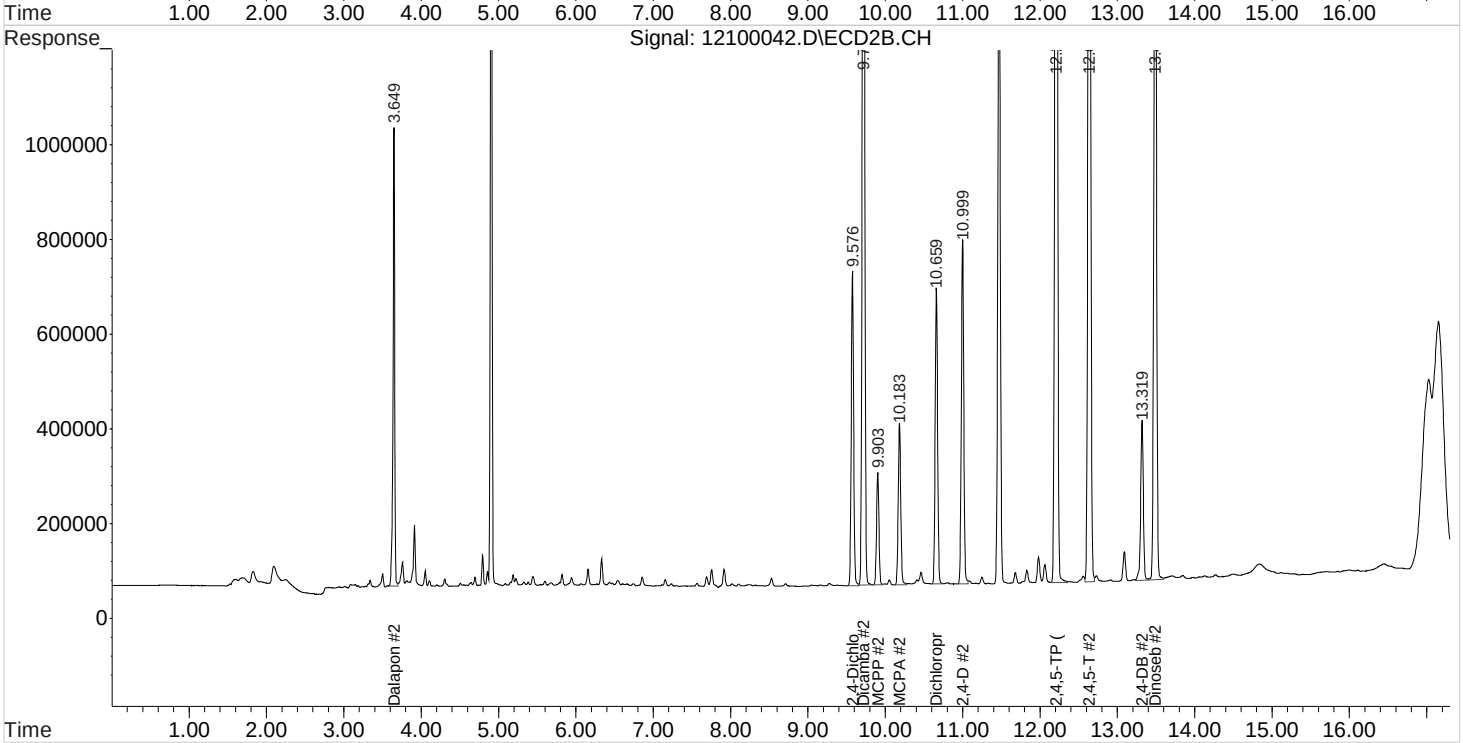
1st UA 12/12/18
2nd TP 12/12/18

Data File : J:\gc24\data\121018\12100042.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Dec 2018 11:08 am Operator: MRICHARDS
Sample : PENTA01-94F Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 12:38:33 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 100	PRIMER	8151A-17	1	Sample		
2	Vial 100	PRIMER	8151A-17	1	Sample		
3	Vial 1	IB	8151A-17	1	Sample		
4	Vial 2	HERB ICAL 10	8151A-17	1	Sample		
5	Vial 3	HERB ICAL 25	8151A-17	1	Sample		
6	Vial 4	HERB ICAL 75	8151A-17	1	Sample	rerun 110118	
7	Vial 5	HERB ICAL 100	8151A-17	1	Sample		
8	Vial 6	HERB ICAL 125	8151A-17	1	Sample		
9	Vial 7	HERB ICAL 150	8151A-17	1	Sample		
10	Vial 8	HERB ICAL 175	8151A-17	1	Sample		
11	Vial 9	HERB ICAL 200	8151A-17	1	Sample		
12	Vial 10	HERB ICV 100	8151A-17	1	Sample		
13	Vial 1	IB	8151A-17	1	Sample		
14	none	STANBY	STANDBY	1	Sample		

110118-8151.m

KC1800499

MR 110118

Sequence Table (Back Injector):

No entries - empty table!

Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 100	PRIMER	8151A-17	1	Sample		
2	Vial 1	IB	8151A-17	1	Sample		
3	Vial 4	HERB ICAL 75	8151A-17	1	Sample		
4	Vial 10	HERB ICV 100	8151A-17	1	Sample		
5	Vial 1	IB	8151A-17	1	Sample		
6	Vial 2	PENTA01-93O	8151A-17	1	Sample		
7	Vial 1	IB	8151A-17	1	Sample		
8	Vial 16	KQ1815094-05 LCS	8151A-17	1	Sample		
9	Vial 17	KQ1815094-10 MB	8151A-17	1	Sample		
10	Vial 18	KQ1815094-09 MB	8151A-17	1	Sample		
11	Vial 19	KQ1815094-08 MB	8151A-17	1	Sample		
12	Vial 20	K1809357-009	8151A-17	1	Sample		
13	Vial 21	K1809357-009 MS	8151A-17	1	Sample		
14	Vial 22	K1809357-009 DMS	8151A-17	1	Sample		
15	Vial 23	K1809357-010	8151A-17	1	Sample		
16	Vial 24	K1809357-011	8151A-17	1	Sample		
17	Vial 25	K1809357-012	8151A-17	1	Sample		
18	Vial 26	K1809357-013	8151A-17	1	Sample		
19	Vial 27	K1809357-014	8151A-17	1	Sample		
20	Vial 28	K1809357-015	8151A-17	1	Sample		
21	Vial 29	K1809357-016	8151A-17	1	Sample		
22	Vial 2	PENTA01-93O	8151A-17	1	Sample		
23	Vial 1	IB	8151A-17	1	Sample		
24	Vial 30	K1809387-006	8151A-17	1	Sample		
25	Vial 31	K1809387-006 MS	8151A-17	1	Sample		
26	Vial 32	K1809387-006 DMS	8151A-17	1	Sample		
27	Vial 33	K1809387-007	8151A-17	1	Sample		
28	Vial 34	K1809387-008	8151A-17	1	Sample		
29	Vial 35	K1809387-009	8151A-17	1	Sample		
30	Vial 36	KWG1805111-1 LCS	8151A-17	1	Sample		
31	Vial 37	KWG1805111-2 DLC	8151A-17	1	Sample		
32	Vial 38	KWG1805111-3 MB	8151A-17	1	Sample		
33	Vial 39	K1809809-001 5X	8151A-17	1	Sample		
34	Vial 40	K1809810-001 5X	8151A-17	1	Sample		
35	Vial 2	PENTA01-93O	8151A-17	1	Sample		
36	Vial 1	IB	8151A-17	1	Sample		
37	none	STANBY	STANDBY	1	Sample		

110118_857.m

KC1800499

MR 110118

Sequence Table (Back Injector):

No entries - empty table!

Initial Calibration - Detailed Report

Calibration ID: KC1800499 **Instrument ID:** K-GC-24
Column Name: RTX-CLP2

#	Lab Code	Sample Name	File Location	Aquisition Date
01	KC1800499-01	HERB ICAL 10	J:\gc24\data\103118\10310103.D	10/31/2018 16:27
02	KC1800499-02	HERB ICAL 25	J:\gc24\data\103118\10310104.D	10/31/2018 16:51
03	KC1800499-03	HERB ICAL 100	J:\gc24\data\103118\10310106.D	10/31/2018 17:40
04	KC1800499-04	HERB ICAL 125	J:\gc24\data\103118\10310107.D	10/31/2018 18:05
05	KC1800499-05	HERB ICAL 150	J:\gc24\data\103118\10310108.D	10/31/2018 18:29
06	KC1800499-06	HERB ICAL 175	J:\gc24\data\103118\10310109.D	10/31/2018 18:54
07	KC1800499-07	HERB ICAL 200	J:\gc24\data\103118\10310110.D	10/31/2018 19:18
08	KC1800499-08	HERB ICAL 75	J:\gc24\data\110118\11010003.D	11/01/2018 10:58

Analyte **Curve Fit** **Weighting**

2,4,5-T

Average RF **RSD = 5.838** **Average RF = 6.067E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.480	6.704E4	02	23.700	6.353E4	03	94.800	6.106E4	04	118.490	6.007E4
05	142.190	5.728E4	06	165.890	5.723E4	07	189.590	5.705E4	08	71.100	6.209E4

2,4,5-TP

Average RF **RSD = 8.655** **Average RF = 7.021E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.510	8.153E4	02	23.760	7.593E4	03	95.100	6.98E4	04	118.820	6.871E4
05	142.580	6.525E4	06	166.340	6.468E4	07	190.100	6.407E4	08	71.300	7.174E4

2,4-D

Average RF **RSD = 11.86** **Average RF = 1.805E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.400	2.227E4	02	23.510	1.997E4	03	94.000	1.781E4	04	117.540	1.735E4
05	141.050	1.651E4	06	164.560	1.627E4	07	188.060	1.594E4	08	70.500	1.83E4

2,4-DB

Average RF **RSD = 5.551** **Average RF = 7.763E3**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.470	8.423E3	02	23.670	8.155E3	03	94.700	7.878E3	04	118.330	7.63E3
05	142.000	7.277E3	06	165.670	7.335E3	07	189.340	7.346E3	08	71.000	8.057E3

Dalapon

Average RF **RSD = 13.72** **Average RF = 2.063E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.110	2.67E4	02	22.770	2.272E4	03	91.100	1.972E4	04	113.830	1.957E4
05	136.600	1.877E4	06	159.360	1.884E4	07	182.130	1.813E4	08	68.300	2.057E4

Dicamba

Average RF **RSD = 12.02** **Average RF = 5.006E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.400	6.204E4	02	23.510	5.573E4	03	94.000	4.889E4	04	117.540	4.813E4
05	141.050	4.593E4	06	164.560	4.523E4	07	188.060	4.436E4	08	70.500	5.018E4

Dichlorprop

Quadratic **1/X** **COD = 0.9996** **Y= -17.61 X² + 1.585E4 X + 3.339E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.440	1.905E4	02	23.590	1.704E4	03	94.400	1.456E4	04	117.960	1.415E4
05	141.550	1.34E4	06	165.140	1.309E4	07	188.730	1.282E4	08	70.800	1.51E4

Dinoseb

Average RF **RSD = 6.42** **Average RF = 4.638E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.450	5.178E4	02	23.620	4.891E4	03	94.500	4.633E4	04	118.100	4.575E4
05	141.720	4.359E4	06	165.340	4.37E4	07	188.960	4.33E4	08	70.900	4.768E4

Initial Calibration - Detailed Report

Calibration ID: KC1800499 **Instrument ID:** K-GC-24
Column Name: RTX-CLP2

MCPA Quadratic Equal COD = 0.9979 Y= -0.003293 X² + 161.9 X + 1.878E5

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	934.770	318.7	02	2336.600	249.6	03	9346.000	151.4	04	11683.010	138.5
05	14019.610	126.8	06	16356.210	119.3	07	18692.820	111.4	08	7010.000	169.5

MCPP Quadratic Equal COD = 0.9980 Y= -0.00274 X² + 135.9 X + 1.267E5

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	938.770	237.1	02	2346.620	193.7	03	9386.000	124.6	04	11733.100	113.4
05	14079.720	104.6	06	16426.340	97.81	07	18772.960	92.39	08	7040.000	138

2,4-Dichlorophenylacetic Acid Average RF RSD = 14.45 Average RF = 1.638E4

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.020	2.092E4	02	22.550	1.879E4	03	90.200	1.594E4	04	112.730	1.556E4
05	135.280	1.47E4	06	157.830	1.446E4	07	180.370	1.405E4	08	67.600	1.66E4

Analyte

2,4,5-T

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.480	10.5	10.5	02	23.700	24.8	4.7	03	94.800	95.4	0.6
04	118.490	117	-1.0	05	142.190	134	-5.6	06	165.890	156	-5.7
07	189.590	178	-6.0	08	71.100	72.8	2.3				

2,4,5-TP

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.510	11.0	16.1	02	23.760	25.7	8.1	03	95.100	94.5	-0.6
04	118.820	116	-2.1	05	142.580	132	-7.1	06	166.340	153	-7.9
07	190.100	173	-8.8	08	71.300	72.9	2.2				

2,4-D

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.400	11.6	23.3	02	23.510	26.0	10.6	03	94.000	92.8	-1.3
04	117.540	113	-3.9	05	141.050	129	-8.5	06	164.560	148	-9.9
07	188.060	166	-11.7	08	70.500	71.5	1.4				

2,4-DB

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.470	10.3	8.5	02	23.670	24.9	5.1	03	94.700	96.1	1.5
04	118.330	116	-1.7	05	142.000	133	-6.3	06	165.670	157	-5.5
07	189.340	179	-5.4	08	71.000	73.7	3.8				

Dalapon

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.110	11.8	29.4	02	22.770	25.1	10.2	03	91.100	87.1	-4.4
04	113.830	108	-5.1	05	136.600	124	-9.0	06	159.360	146	-8.7
07	182.130	160	-12.1	08	68.300	68.1	-0.3				

Dicamba

Initial Calibration - Detailed Report

Calibration ID: KC1800499 **Instrument ID:** K-GC-24
Column Name: RTX-CLP2

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.400	11.6	23.9	02	23.510	26.2	11.3	03	94.000	91.8	-2.3
04	117.540	113	-3.8	05	141.050	129	-8.3	06	164.560	149	-9.7
07	188.060	167	-11.4	08	70.500	70.7	0.2				

Dichlorprop

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.440	9.34	-1.1	02	23.590	23.9	1.2	03	94.400	94.5	0.1
04	117.960	119	0.8	05	141.550	139	-1.8	06	165.140	164	-0.6
07	188.730	191	1.2	08	70.800	70.9	0.2				

Dinoseb

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.450	10.5	11.6	02	23.620	24.9	5.5	03	94.500	94.4	-0.1
04	118.100	116	-1.4	05	141.720	133	-6.0	06	165.340	156	-5.8
07	188.960	176	-6.6	08	70.900	72.9	2.8				

MCPA

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	934.770	690	-26.2	02	2336.600	2580	10.3	03	9346.000	9360	0.2
04	11683.010	11600	-1.1	05	14019.610	13600	-3.3	06	16356.210	16300	-0.4
07	18692.820	19200	2.9	08	7010.000	7250	3.5				

MCPP

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	938.770	716	-23.7	02	2346.620	2540	8.4	03	9386.000	9490	1.1
04	11733.100	11600	-1.5	05	14079.720	13700	-2.9	06	16426.340	16200	-1.6
07	18772.960	19500	3.9	08	7040.000	7290	3.5				

2,4-Dichlorophenylacetic Acid

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.020	11.5	27.7	02	22.550	25.9	14.7	03	90.200	87.8	-2.7
04	112.730	107	-5.0	05	135.280	121	-10.3	06	157.830	139	-11.7
07	180.370	155	-14.2	08	67.600	68.5	1.4				

Calibration ID: KC1800499 **Instrument ID:** K-GC-24
Column Name: ZB-XLB-HT

Initial Calibration - Detailed Report

Calibration ID: KC1800499 **Instrument ID:** K-GC-24
Column Name: ZB-XLB-HT

#	Lab Code	Sample Name	File Location	Aquisition Date
01	KC1800499-01	HERB ICAL 10	J:\gc24\data\103118\10310103.D\10310103c.d	10/31/2018 16:27
02	KC1800499-02	HERB ICAL 25	J:\gc24\data\103118\10310104.D\10310104c.d	10/31/2018 16:51
03	KC1800499-03	HERB ICAL 100	J:\gc24\data\103118\10310106.D\10310106c.d	10/31/2018 17:40
04	KC1800499-04	HERB ICAL 125	J:\gc24\data\103118\10310107.D\10310107c.d	10/31/2018 18:05
05	KC1800499-05	HERB ICAL 150	J:\gc24\data\103118\10310108.D\10310108c.d	10/31/2018 18:29
06	KC1800499-06	HERB ICAL 175	J:\gc24\data\103118\10310109.D\10310109c.d	10/31/2018 18:54
07	KC1800499-07	HERB ICAL 200	J:\gc24\data\103118\10310110.D\10310110c.d	10/31/2018 19:18
08	KC1800499-08	HERB ICAL 75	J:\gc24\data\110118\11010003.D\11010003c.d	11/01/2018 10:58

Analyte **Curve Fit** **Weighting**

2,4,5-T

Average RF **RSD = 3.96** **Average RF = 5.417E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.480	5.868E4	02	23.700	5.477E4	03	94.800	5.349E4	04	118.490	5.356E4
05	142.190	5.198E4	06	165.890	5.384E4	07	189.590	5.196E4	08	71.100	5.51E4

2,4,5-TP

Average RF **RSD = 5.485** **Average RF = 6.274E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.510	7.003E4	02	23.760	6.444E4	03	95.100	6.156E4	04	118.820	6.158E4
05	142.580	6E4	06	166.340	6.189E4	07	190.100	5.884E4	08	71.300	6.354E4

2,4-D

Average RF **RSD = 12.87** **Average RF = 1.613E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.400	2.057E4	02	23.510	1.77E4	03	94.000	1.539E4	04	117.540	1.519E4
05	141.050	1.477E4	06	164.560	1.514E4	07	188.060	1.419E4	08	70.500	1.61E4

2,4-DB

Quadratic **1/X** **COD = 0.9986** **Y= -5.157 X² + 7.95E3 X + 1.505E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.470	9.446E3	02	23.670	8.431E3	03	94.700	7.581E3	04	118.330	7.445E3
05	142.000	7.094E3	06	165.670	7.268E3	07	189.340	7.107E3	08	71.000	8.031E3

Dalapon

Average RF **RSD = 10.16** **Average RF = 1.562E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.110	1.913E4	02	22.770	1.665E4	03	91.100	1.531E4	04	113.830	1.513E4
05	136.600	1.459E4	06	159.360	1.47E4	07	182.130	1.43E4	08	68.300	1.511E4

Dicamba

Average RF **RSD = 7.464** **Average RF = 4.517E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.400	5.255E4	02	23.510	4.703E4	03	94.000	4.402E4	04	117.540	4.396E4
05	141.050	4.277E4	06	164.560	4.401E4	07	188.060	4.174E4	08	70.500	4.528E4

Dichlorprop

Quadratic **1/X** **COD = 0.9986** **Y= -9.821 X² + 1.335E4 X + 4.572E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.440	1.798E4	02	23.590	1.519E4	03	94.400	1.272E4	04	117.960	1.253E4
05	141.550	1.215E4	06	165.140	1.234E4	07	188.730	1.161E4	08	70.800	1.348E4

Dinoseb

Average RF **RSD = 8.778** **Average RF = 4.128E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.450	4.908E4	02	23.620	4.343E4	03	94.500	3.981E4	04	118.100	3.973E4
05	141.720	3.845E4	06	165.340	3.971E4	07	188.960	3.798E4	08	70.900	4.203E4

Initial Calibration - Detailed Report

Calibration ID: KC1800499 **Instrument ID:** K-GC-24
Column Name: ZB-XLB-HT

MCPA Quadratic 1/X **COD = 0.9985** **Y= -0.0009958 X² + 82.69 X + 5.309E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	934.770	136.1	02	2336.600	105.8	03	9346.000	76.97	04	11683.010	75.03
05	14019.610	71.63	06	16356.210	71.18	07	18692.820	66.66	08	7010.000	85.32

MCPP Quadratic 1/X **COD = 0.9986** **Y= -0.0006303 X² + 54.44 X + 2.865E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	938.770	83.14	02	2346.620	66.25	03	9386.000	50.17	04	11733.100	48.99
05	14079.720	47	06	16426.340	46.63	07	18772.960	44.13	08	7040.000	55.92

2,4-Dichlorophenylacetic Acid **Average RF** **RSD = 16.25** **Average RF = 1.461E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.020	1.961E4	02	22.550	1.67E4	03	90.200	1.383E4	04	112.730	1.356E4
05	135.280	1.31E4	06	157.830	1.335E4	07	180.370	1.251E4	08	67.600	1.425E4

Analyte

2,4,5-T

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.480	10.3	8.3	02	23.700	24.0	1.1	03	94.800	93.6	-1.3
04	118.490	117	-1.1	05	142.190	136	-4.0	06	165.890	165	-0.6
07	189.590	182	-4.1	08	71.100	72.3	1.7				

2,4,5-TP

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.510	10.6	11.6	02	23.760	24.4	2.7	03	95.100	93.3	-1.9
04	118.820	117	-1.8	05	142.580	136	-4.4	06	166.340	164	-1.3
07	190.100	178	-6.2	08	71.300	72.2	1.3				

2,4-D

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.400	12.0	27.5	02	23.510	25.8	9.7	03	94.000	89.7	-4.6
04	117.540	111	-5.8	05	141.050	129	-8.4	06	164.560	154	-6.2
07	188.060	165	-12.0	08	70.500	70.4	-0.2				

2,4-DB

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.470	9.42	-0.6	02	23.670	23.6	-0.4	03	94.700	94.2	-0.6
04	118.330	118	-0.3	05	142.000	137	-3.5	06	165.670	168	1.3
07	189.340	191	0.9	08	71.000	73.3	3.3				

Dalapon

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.110	11.2	22.5	02	22.770	24.3	6.6	03	91.100	89.3	-1.9
04	113.830	110	-3.1	05	136.600	128	-6.6	06	159.360	150	-5.8
07	182.130	167	-8.4	08	68.300	66.1	-3.2				

Dicamba

Initial Calibration - Detailed Report

Calibration ID: KC1800499 **Instrument ID:** K-GC-24
Column Name: ZB-XLB-HT

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.400	10.9	16.3	02	23.510	24.5	4.1	03	94.000	91.6	-2.5
04	117.540	114	-2.7	05	141.050	134	-5.3	06	164.560	160	-2.6
07	188.060	174	-7.6	08	70.500	70.7	0.2				

Dichlorprop

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.440	9.35	-0.9	02	23.590	23.8	1.0	03	94.400	92.9	-1.6
04	117.960	117	-0.5	05	141.550	140	-1.3	06	165.140	171	3.3
07	188.730	186	-1.4	08	70.800	71.8	1.4				

Dinoseb

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.450	11.2	18.9	02	23.620	24.9	5.2	03	94.500	91.2	-3.5
04	118.100	114	-3.7	05	141.720	132	-6.8	06	165.340	159	-3.8
07	188.960	174	-8.0	08	70.900	72.2	1.8				

MCPA

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	934.770	906	-3.0	02	2336.600	2420	3.4	03	9346.000	9040	-3.3
04	11683.010	11600	-1.0	05	14019.610	13800	-1.6	06	16356.210	16900	3.1
07	18692.820	18600	-0.6	08	7010.000	7220	3.0				

MCPP

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	938.770	917	-2.3	02	2346.620	2400	2.1	03	9386.000	9080	-3.3
04	11733.100	11600	-1.3	05	14079.720	13800	-1.6	06	16426.340	16800	2.4
07	18772.960	18800	-0.0	08	7040.000	7330	4.1				

2,4-Dichlorophenylacetic Acid

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.020	12.1	**34.2**	02	22.550	25.8	14.3	03	90.200	85.4	-5.4
04	112.730	105	-7.2	05	135.280	121	-10.4	06	157.830	144	-8.7
07	180.370	154	-14.4	08	67.600	65.9	-2.5				

Initial Calibration Verification Summary Report

Calibration ID:	KC1800499	**Instrument ID:**	K-GC-24
Datafile ID:	J:\gc24\data\110118\11010004.D	**Column Name:**	ZB-XLB-HT

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
2,4,5-T	KC1800499-09	T	Average RF	94.80	106.808	ppb	12.7	<= 20
2,4,5-TP	KC1800499-09	T	Average RF	95.10	101.702	ppb	6.9	<= 20
2,4-D	KC1800499-09	T	Average RF	94	90.774	ppb	-3.4	<= 20
2,4-DB	KC1800499-09	T	Quadratic	94.70	106.747	ppb	12.7	<= 20
Dalapon	KC1800499-09	T	Average RF	91.10	86.542	ppb	-5.0	<= 20
Dicamba	KC1800499-09	T	Average RF	94	107.183	ppb	14.0	<= 20
Dichlorprop	KC1800499-09	T	Quadratic	94.40	97.189	ppb	3.0	<= 20
Dinoseb	KC1800499-09	T	Average RF	94.50	104.567	ppb	10.7	<= 20
MCPA	KC1800499-09	T	Quadratic	9346	10218.223	ppb	9.3	<= 20
MCPP	KC1800499-09	T	Quadratic	9386	10102.451	ppb	7.6	<= 20

Calibration ID:	KC1800499	**Instrument ID:**	K-GC-24
Datafile ID:	J:\gc24\data\110118\11010004.D	**Column Name:**	RTX-CLP2

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
2,4,5-T	KC1800499-09	T	Average RF	94.80	107.130	ppb	13.0	<= 20
2,4,5-TP	KC1800499-09	T	Average RF	95.10	102.425	ppb	7.7	<= 20
2,4-D	KC1800499-09	T	Average RF	94	93.979	ppb	0.0	<= 20
2,4-DB	KC1800499-09	T	Average RF	94.70	107.553	ppb	13.6	<= 20
Dalapon	KC1800499-09	T	Average RF	91.10	87.784	ppb	-3.6	<= 20
Dicamba	KC1800499-09	T	Average RF	94	105.876	ppb	12.6	<= 20
Dichlorprop	KC1800499-09	T	Quadratic	94.40	100.377	ppb	6.3	<= 20
Dinoseb	KC1800499-09	T	Average RF	94.50	107.080	ppb	13.3	<= 20
MCPA	KC1800499-09	T	Quadratic	9346	10533.294	ppb	12.7	<= 20
MCPP	KC1800499-09	T	Quadratic	9386	10574.863	ppb	12.7	<= 20

Method Path : J:\gc24\Methods\
Method File : 110118_8151.M
Title : 103118_8151.m MJ215 CAL_KC1800
Last Update : Thu Nov 01 14:26:19 2018
Response Via : Initial Calibration

Calibration Files
1 =10310103.D 2 =10310104.D =
4 =11010003.D 5 =10310106.D 6 =10310107.D

		Compound	1	2	4	5	6	Avg		%RSD
1)	m	Dalapon	2.670	2.272	2.057	1.972	1.957	1.877	2.063 E4	13.72
2)	s	2,4-Dichlorop...	2.092	1.879	1.660	1.594	1.556	1.470	1.638 E4	14.45
3)	m	Dicamba	6.204	5.573	5.018	4.889	4.813	4.593	5.006 E4	12.02
4)	m	MCPP	2.371	1.937	1.380	1.246	1.134	1.046	1.377 E2	37.36
5)	m	MCPA	3.187	2.496	1.695	1.514	1.385	1.268	1.731 E2	42.32
6)	m	Dichloroprop	1.905	1.704	1.510	1.456	1.415	1.340	1.490 E4	14.44
7)	m	2,4-D	2.227	1.997	1.830	1.781	1.735	1.651	1.805 E4	11.86
8)	m	2,4,5-TP (Sil...	8.153	7.593	7.174	6.980	6.871	6.525	7.021 E4	8.66
9)	m	2,4,5-T	6.704	6.353	6.209	6.106	6.007	5.728	6.067 E4	5.84
10)	m	2,4-DB	8.423	8.155	8.057	7.878	7.630	7.277	7.763 E3	5.55
11)	m	Dinoseb	5.178	4.891	4.768	4.633	4.575	4.359	4.638 E4	6.42

Signal #2 Calibration Files
1 =10310103.D 2 =10310104.D =
4 =11010003.D 5 =10310106.D 6 =10310107.D

		Compound	1	2	4	5	6	Avg		%RSD
1)	m	Dalapon	1.913	1.665	1.511	1.531	1.513	1.459	1.562 E4	10.16
2)	s	2,4-Dichlorop...	1.961	1.670	1.425	1.383	1.356	1.310	1.461 E4	16.25
3)	m	Dicamba	5.255	4.703	4.528	4.402	4.396	4.277	4.517 E4	7.46
4)	m	MCPP	8.314	6.625	5.592	5.017	4.899	4.700	5.528 E1	23.98
5)	m	MCPA	1.361	1.058	0.853	0.770	0.750	0.716	0.861 E2	27.43
6)	m	Dichloroprop	1.798	1.519	1.348	1.272	1.253	1.215	1.350 E4	15.65
7)	m	2,4-D	2.057	1.770	1.610	1.539	1.519	1.477	1.613 E4	12.87
8)	m	2,4,5-TP (Sil...	7.003	6.444	6.354	6.156	6.158	6.000	6.274 E4	5.48
9)	m	2,4,5-T	5.868	5.477	5.510	5.349	5.356	5.198	5.417 E4	3.96
10)	m	2,4-DB	9.446	8.431	8.031	7.581	7.445	7.094	7.800 E3	10.39
11)	m	Dinoseb	4.908	4.343	4.203	3.981	3.973	3.845	4.128 E4	8.78

(#) = Out of Range ### Number of calibration levels exceeded format ###

110118_8151.M Thu Nov 01 16:48:15 2018

DATA ANALYSIS PARAMETERS

Method Name: J:\gc24\Methods\110118_8151.M

Percent Report Settings

Sort By: Signal

Output Destination
    Screen: No
    Printer: Yes
    File: No

Integration Events: Meth Default

Generate Report During Run Method: No

Signal Correlation Window: 0.020

Quantitative Report Settings

Report Type: Summary

Output Destination
    Screen: No
    Printer: Yes
    File: No

Generate Report During Run Method: No

103118_8151.m MJ215 CAL_KC1800
Calibration Last Updated: Thu Nov 01 12:15:57 2018

Reference Window: 2.00 Minutes
Non-Reference Window: 1.00 Minutes
Correlation Window: 0.10 minutes
Default Multiplier: 1.00
Default Sample Concentration: 0.00

Compound Information

---

1) Dalapon ( )
Ret. Time 3.125 min., Extract & Integrate from 3.079 to 3.171 min.

Lvl	ID	Conc (ppb)	Response
1		9.110	243208
2		22.770	517439
4		68.300	1405063
5		91.100	1796749
6		113.830	2227595
7		136.600	2563650
8		159.360	3002153
9		182.130	3302689

Curve Fit: Avg. RF

MC 11/0/18

2) 2,4-Dichlorophenylacetic Acid ( )
Ret. Time 8.068 min., Extract & Integrate from 8.018 to 8.118 min.

Lvl	ID	Conc (ppb)	Response
1		9.020	188657
2		22.550	423626
4		67.600	1122191
5		90.200	1438016
6		112.730	1754616
7		135.280	1988242
8		157.830	2282290
9		180.370	2534816

Curve Fit: Avg. RF

---

3) Dicamba ( )
Ret. Time 8.295 min., Extract & Integrate from 8.208 to 8.382 min.

Lvl	ID	Conc (ppb)	Response
1		9.400	583152
2		23.510	1310164
4		70.500	3537442
5		94.000	4595258
6		117.540	5657580
7		141.050	6477940
8		164.560	7442697
9		188.060	8342861

Curve Fit: Avg. RF

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4) MCPP ( )
Ret. Time 8.378 min., Extract & Integrate from 8.291 to 8.465 min.

Lvl	ID	Conc (ppb)	Response
1		938.770	222600
2		2346.620	454576
4		7040.000	971205
5		9386.000	1169510
6		11733.100	1330592
7		14079.720	1472079
8		16426.340	1606646
9		18772.960	1734448

Curve Fit: Quadratic

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5) MCPA ( )
Ret. Time 8.645 min., Extract & Integrate from 8.566 to 8.724 min.

Lvl	ID	Conc (ppb)	Response
1		934.770	297920
2		2336.600	583152
4		7010.000	1188470
5		9346.000	1414607
6		11683.010	1618337
7		14019.610	1777241
8		16356.210	1950677
9		18692.820	2082776

Curve Fit: Quadratic

---

6) Dichloroprop ( )
Ret. Time 9.045 min., Extract & Integrate from 8.958 to 9.132 min.

Lvl	ID	Conc (ppb)	Response
1		9.440	179862
2		23.590	401964

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5	94.400	1374560
6	117.960	1669282
7	141.550	1897289
8	165.140	2161436
9	188.730	2418837

Curve Fit: Quadratic

---

7) 2,4-D ( )

Ret. Time 9.401 min., Extract & Integrate from 9.314 to 9.488 min.

Lvl	ID	Conc (ppb)	Response
1		9.400	209292
2		23.510	469594
4		70.500	1290227
5		94.000	1674507
6		117.540	2039313
7		141.050	2329231
8		164.560	2676975
9		188.060	2996827

Curve Fit: Avg. RF

---

8) 2,4,5-TP (Silvex) ( )

Ret. Time 10.348 min., Extract & Integrate from 10.252 to 10.444 min.

Lvl	ID	Conc (ppb)	Response
1		9.510	775306
2		23.760	1804204
4		71.300	5115098
5		95.100	6638265
6		118.820	8164589
7		142.580	9302756
8		166.340	10758488
9		190.100	12179428

Curve Fit: Avg. RF

---

9) 2,4,5-T ( )

Ret. Time 10.791 min., Extract & Integrate from 10.687 to 10.895 min.

Lvl	ID	Conc (ppb)	Response
1		9.480	635566
2		23.700	1505750
4		71.100	4414904
5		94.800	5788640
6		118.490	7118206
7		142.190	8144428
8		165.890	9493402
9		189.590	10815821

Curve Fit: Avg. RF

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10) 2,4-DB ( )

Ret. Time 11.375 min., Extract & Integrate from 11.296 to 11.454 min.

Lvl	ID	Conc (ppb)	Response
1		9.470	79769
2		23.670	193029
4		71.000	572053
5		94.700	746077
6		118.330	902899
7		142.000	1033326
8		165.670	1215232
9		189.340	1390960

MC 11/01/18

Curve Fit: Avg. RF

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11) Dinoseb ( )

Ret. Time 11.775 min., Extract & Integrate from 11.679 to 11.871 min.

Lvl	ID	Conc (ppb)	Response
1		9.450	489284
2		23.620	1155340
4		70.900	3380533
5		94.500	4378544
6		118.100	5402663
7		141.720	6177639
8		165.340	7225706
9		188.960	8182446

Curve Fit: Avg. RF

---

12) Signal #2 ( )

Ret. Time 0.010 min., Extract & Integrate from 0.010 to 0.010 min.

Lvl	ID	Conc (ppb)	Response
1		not used for this compound	
2		not used for this compound	
4		not used for this compound	
5		not used for this compound	
6		not used for this compound	
7		not used for this compound	
8		not used for this compound	
9		not used for this compound	

Curve Fit: Avg. RF

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13) Dalapon #2 ( )

Ret. Time 3.688 min., Extract & Integrate from 3.642 to 3.734 min.

Lvl	ID	Conc (ppb)	Response
1		9.110	174264
2		22.770	379093
4		68.300	1031995
5		91.100	1395182
6		113.830	1721893
7		136.600	1992531
8		159.360	2342946
9		182.130	2604929

Curve Fit: Avg. RF

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14) 2,4-Dichlorophenylacetic Acid #2 ( )

Ret. Time 9.668 min., Extract & Integrate from 9.618 to 9.718 min.

Lvl	ID	Conc (ppb)	Response
1		9.020	178774
2		22.550	376584
4		67.600	963579
5		90.200	1247394
6		112.730	1528689
7		135.280	1771518
8		157.830	2106532
9		180.370	2256686

Curve Fit: Avg. RF

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15) Dicamba #2 ( )

Ret. Time 9.815 min., Extract & Integrate from 9.711 to 9.919 min.

mc 11018

Lvl	ID	Conc (ppb)	Response
1		9.400	493932
2		23.510	1105755
4		70.500	3192250
5		94.000	4137891
6		117.540	5167059
7		141.050	6032568
8		164.560	7242313
9		188.060	7849089

Curve Fit: Avg. RF

---

16) MCPP #2 ( )
Ret. Time 9.998 min., Extract & Integrate from 9.894 to 10.102 min.

Lvl	ID	Conc (ppb)	Response
1		938.770	78051
2		2346.620	155456
4		7040.000	393680
5		9386.000	470912
6		11733.100	574776
7		14079.720	661711
8		16426.340	765936
9		18772.960	828494

Curve Fit: Quadratic

---

17) MCPA #2 ( )
Ret. Time 10.278 min., Extract & Integrate from 10.182 to 10.374 min.

Lvl	ID	Conc (ppb)	Response
1		934.770	127221
2		2336.600	247098
4		7010.000	598127
5		9346.000	719342
6		11683.010	876556
7		14019.610	1004166
8		16356.210	1164155
9		18692.820	1246094

Curve Fit: Quadratic

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18) Dichloroprop #2 ( )
Ret. Time 10.758 min., Extract & Integrate from 10.654 to 10.862 min.

Lvl	ID	Conc (ppb)	Response
1		9.440	169748
2		23.590	358436
4		70.800	954161
5		94.400	1201183
6		117.960	1478426
7		141.550	1719582
8		165.140	2037389
9		188.730	2191423

Curve Fit: Quadratic

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19) 2,4-D #2 ( )
Ret. Time 11.095 min., Extract & Integrate from 10.999 to 11.191 min.

Lvl	ID	Conc (ppb)	Response
1		9.400	193385
2		23.510	416033
4		70.500	1135185
5		94.000	1446639
6		117.540	1785618
7		141.050	2084010

MC 110118

8	164.500	2490657
9	188.060	2669247

Curve Fit: Avg. RF

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20) 2,4,5-TP (Silvex) #2 ( )
Ret. Time 12.311 min., Extract & Integrate from 12.215 to 12.407 min.

Lvl	ID	Conc (ppb)	Response
1		9.510	666006
2		23.760	1531153
4		71.300	4530516
5		95.100	5854506
6		118.820	7316402
7		142.580	8554591
8		166.340	10295087
9		190.100	11186238

Curve Fit: Avg. RF

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21) 2,4,5-T #2 ( )
Ret. Time 12.741 min., Extract & Integrate from 12.645 to 12.837 min.

Lvl	ID	Conc (ppb)	Response
1		9.480	556284
2		23.700	1298153
4		71.100	3917429
5		94.800	5070725
6		118.490	6346223
7		142.190	7391196
8		165.890	8931115
9		189.590	9850168

Curve Fit: Avg. RF

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22) 2,4-DB #2 ( )
Ret. Time 13.425 min., Extract & Integrate from 13.329 to 13.521 min.

Lvl	ID	Conc (ppb)	Response
1		9.470	89451
2		23.670	199559
4		71.000	570168
5		94.700	717945
6		118.330	881015
7		142.000	1007405
8		165.670	1204065
9		189.340	1345562

Curve Fit: Quadratic

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23) Dinoseb #2 ( )
Ret. Time 13.595 min., Extract & Integrate from 13.481 to 13.709 min.

Lvl	ID	Conc (ppb)	Response
1		9.450	463780
2		23.620	1025824
4		70.900	2980049
5		94.500	3762512
6		118.100	4692269
7		141.720	5449526
8		165.340	6564903
9		188.960	7176429

Curve Fit: Avg. RF

MK 110118

END OF DATA ANALYSIS PARAMETERS

Thu Nov 01 13:04:37 2018

Quantitation Report (QT Reviewed)

1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\110118\11010002.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01 Nov 2018 10:34 am Operator: MRICHARDS
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:16:45 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	8.074	9.627f	156682	59251	9.567	4.047	#
	Target Compounds							
1) m	Dalapon	3.150f	3.707	36940	2201	1.791	0.141	#
3) m	Dicamba	8.370f	0.000	512733	0	10.242	N.D.	#
4) m	MCPP	8.370	0.000	512733	0	3025.698	N.D.	#
5) m	MCPA	8.607	0.000	174073	0	49229.836	N.D.	#
6) m	Dichloroprop	8.987f	0.000	99187	0	4.169	N.D.	#
7) m	2,4-D	0.000	11.170f	0	9307	N.D.	0.577	#
8) m	2,4,5-TP ...	10.337	12.300	1930	3023	0.027	0.048	#
9) m	2,4,5-T	10.784	12.734	1553	2076	0.026	0.038	#
10) m	2,4-DB	11.354	0.000	6270	0	0.808	N.D.	#
11) m	Dinoseb	0.000	0.000	0	0	N.D.	N.D.	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

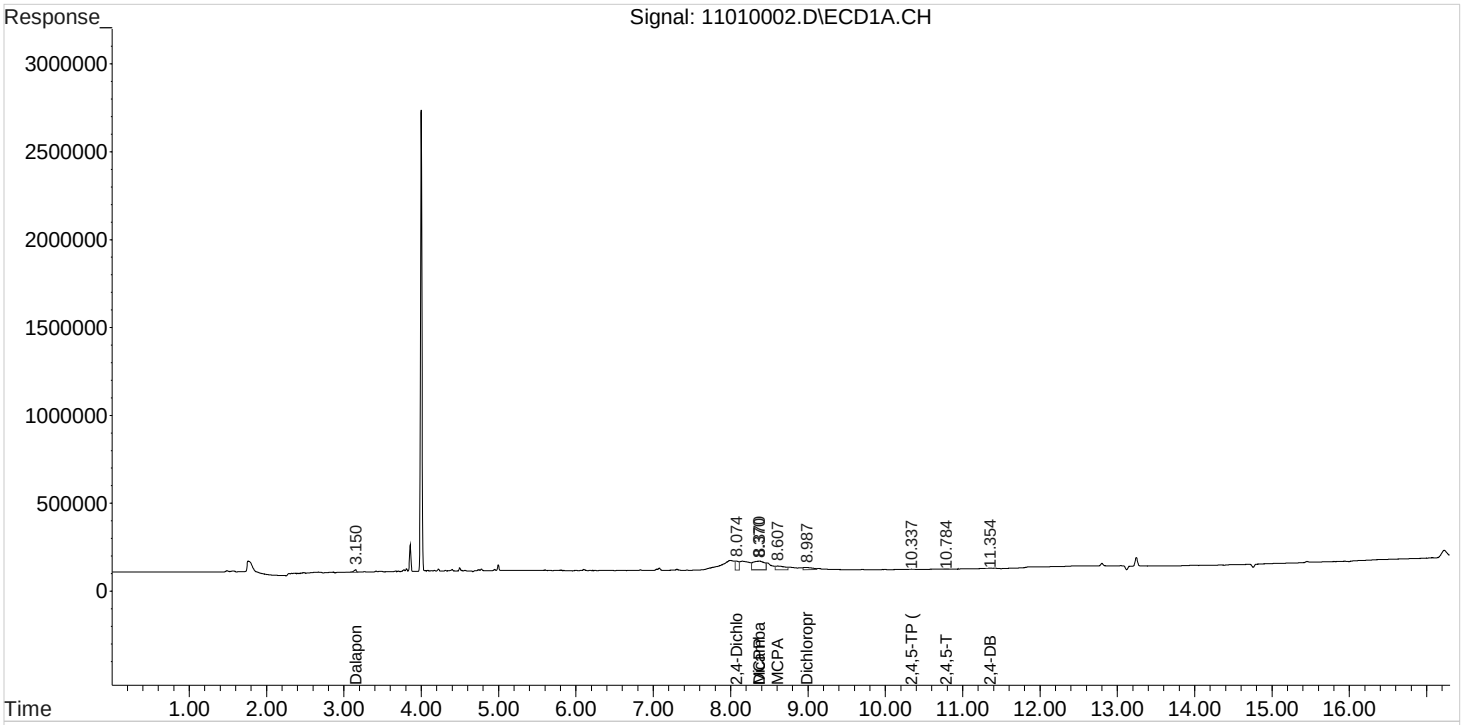
Quantitation Report (QT Reviewed)

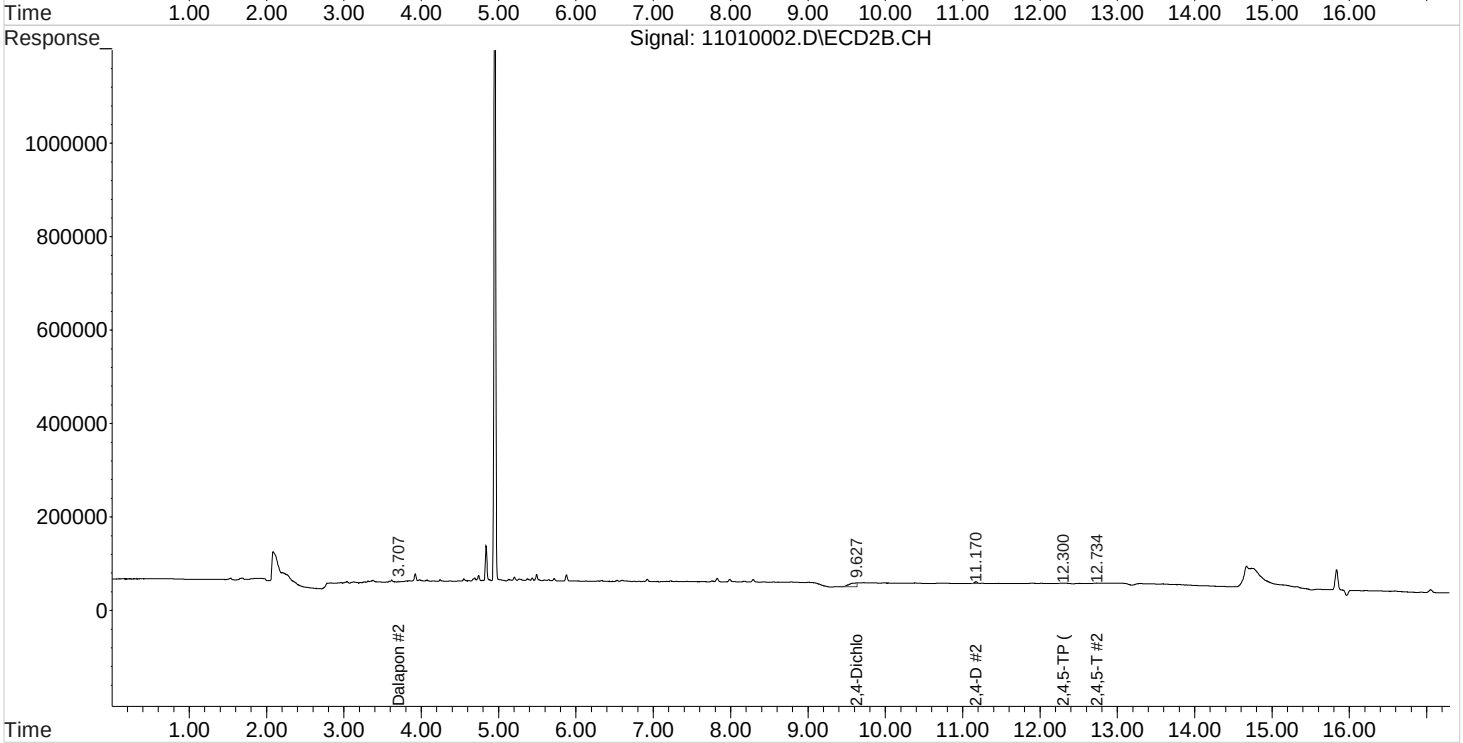
1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\110118\11010002.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01 Nov 2018 10:34 am Operator: MRICHARDS
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:16:45 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Quantitation Report (QT Reviewed)

1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\110118\11010003.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01 Nov 2018 10:58 am Operator: MRICHARDS
Sample : HERB ICAL 75 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:15:54 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:52 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	8.068	9.668	1122191	963579	56.531	52.770	
	Target Compounds							
1) m	Dalapon	3.124	3.688	1405063	1031995	56.860	57.689	
3) m	Dicamba	8.291	9.811	3537442	3192250	60.076	64.115	
4) m	MCPP	8.378	9.994	971205	393680	NoCal	NoCal	
5) m	MCPA	8.641	10.278	1188470	598127	NoCal	NoCal	
6) m	Dichloroprop	9.044	10.754	1069104	954161	NoCal	NoCal	
7) m	2,4-D	9.401	11.094	1290227	1135185	61.091	59.327	
8) m	2,4,5-TP ...	10.348	12.308	5115098	4530516	64.970	67.381	
9) m	2,4,5-T	10.791	12.738	4414904	3917429	67.622	69.057	
10) m	2,4-DB	11.371	13.424	572053	570168	69.012	NoCal	#
11) m	Dinoseb	11.774	13.591	3380533	2980049	67.148	64.428	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

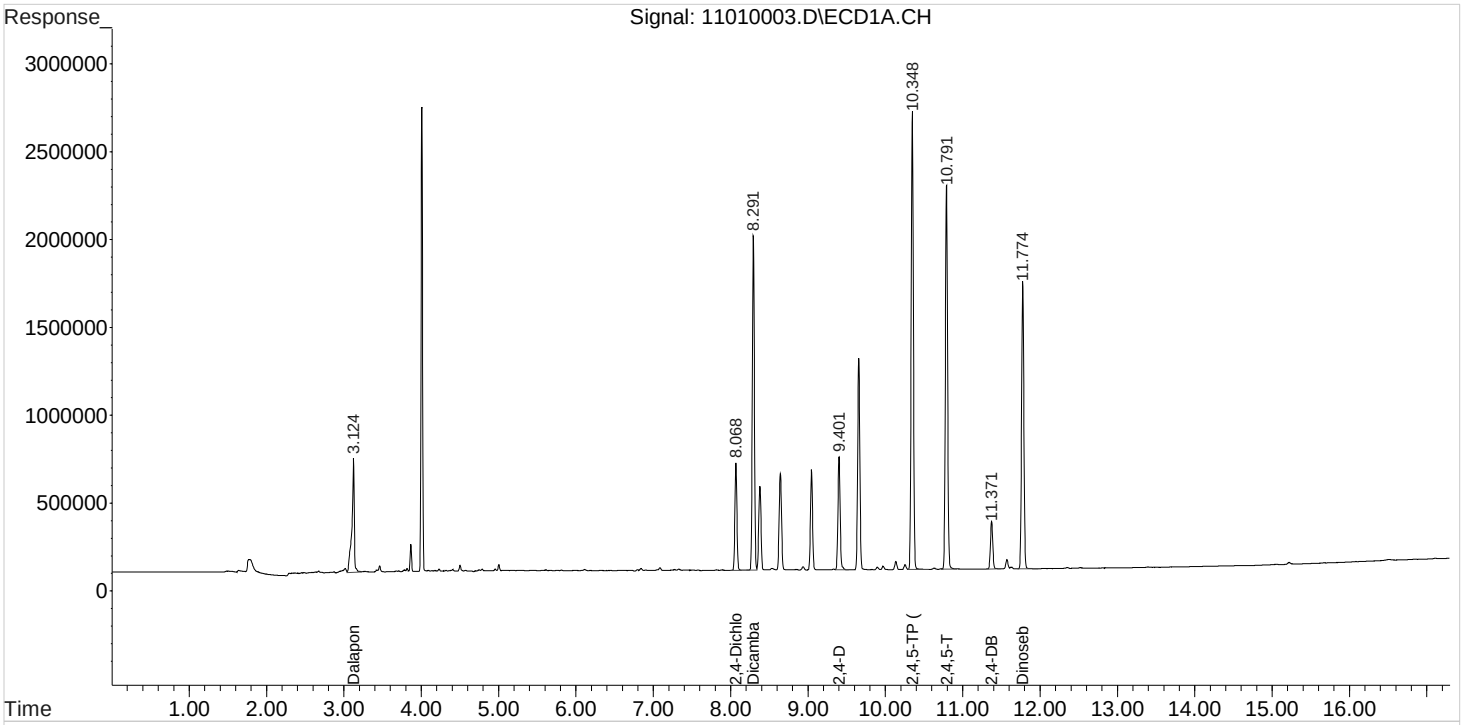
Quantitation Report (QT Reviewed)

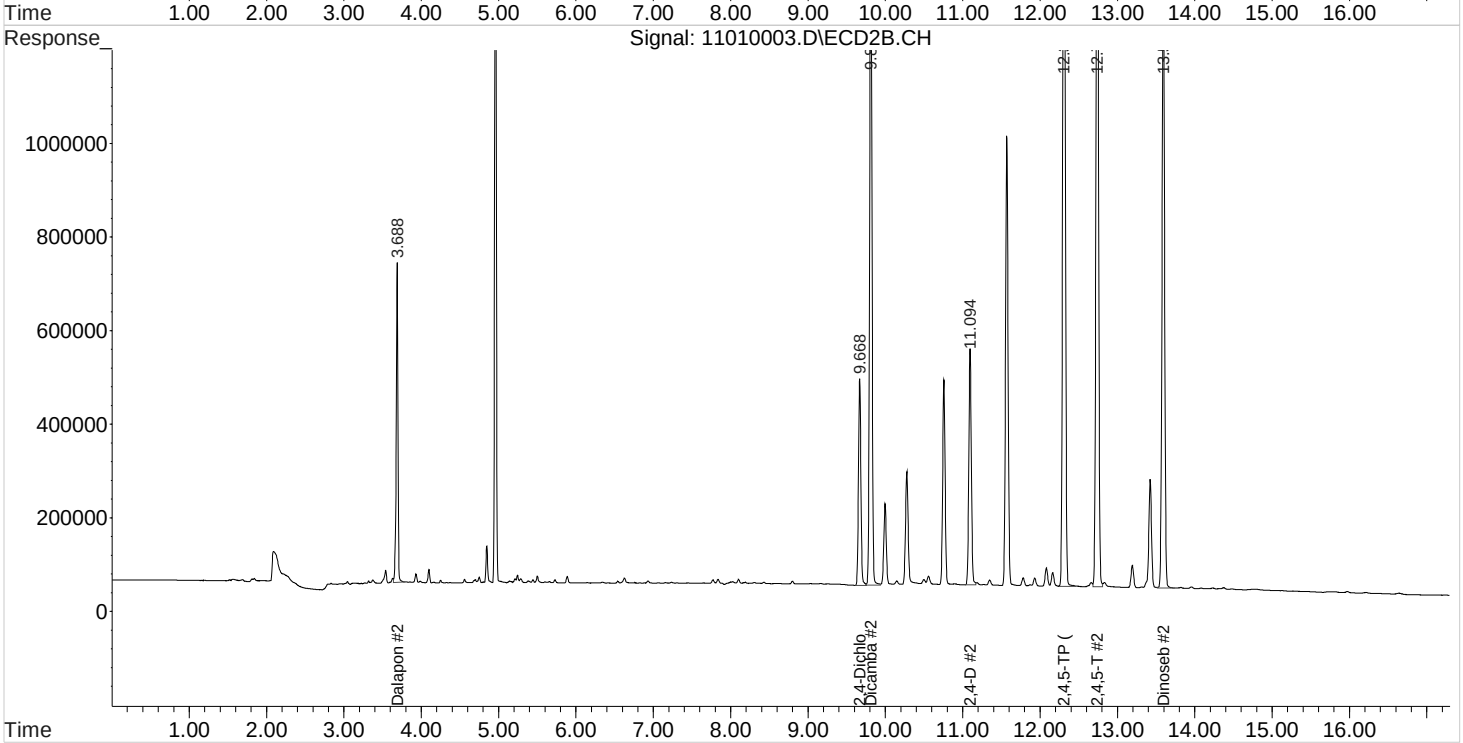
1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\110118\11010003.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01 Nov 2018 10:58 am Operator: MRICHARDS
Sample : HERB ICAL 75 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:15:54 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:52 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Quantitation Report (QT Reviewed)

1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\110118\11010004.D Vial: 10
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01 Nov 2018 11:23 am Operator: MRICHARDS
Sample : HERB ICV 100 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:16:48 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.089	9.679	6034	18050	0.368	1.233 #
	Target Compounds						
1) m	Dalapon	3.126	3.689	1810837	1351358	87.784	86.542
3) m	Dicamba	8.296	9.813	5300120	4841389	105.876	107.183
4) m	MCPP	8.379	9.996	1257121	514292	10574.863	10102.451
5) m	MCPA	8.646	10.276	1527271	794026	10533.294	10218.223
6) m	Dichloroprop	9.046	10.756	1447308	1250874	100.377	97.189
7) m	2,4-D	9.403	11.096	1696569	1464372	93.979	90.774
8) m	2,4,5-TP ...	10.346	12.309	7191667	6380400	102.425	101.702
9) m	2,4,5-T	10.789	12.739	6499616	5785960	107.130	106.808
10) m	2,4-DB	11.373	13.423	834918	804960	107.553	106.747
11) m	Dinoseb	11.776	13.593	4966428	4316295	107.080	104.567

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

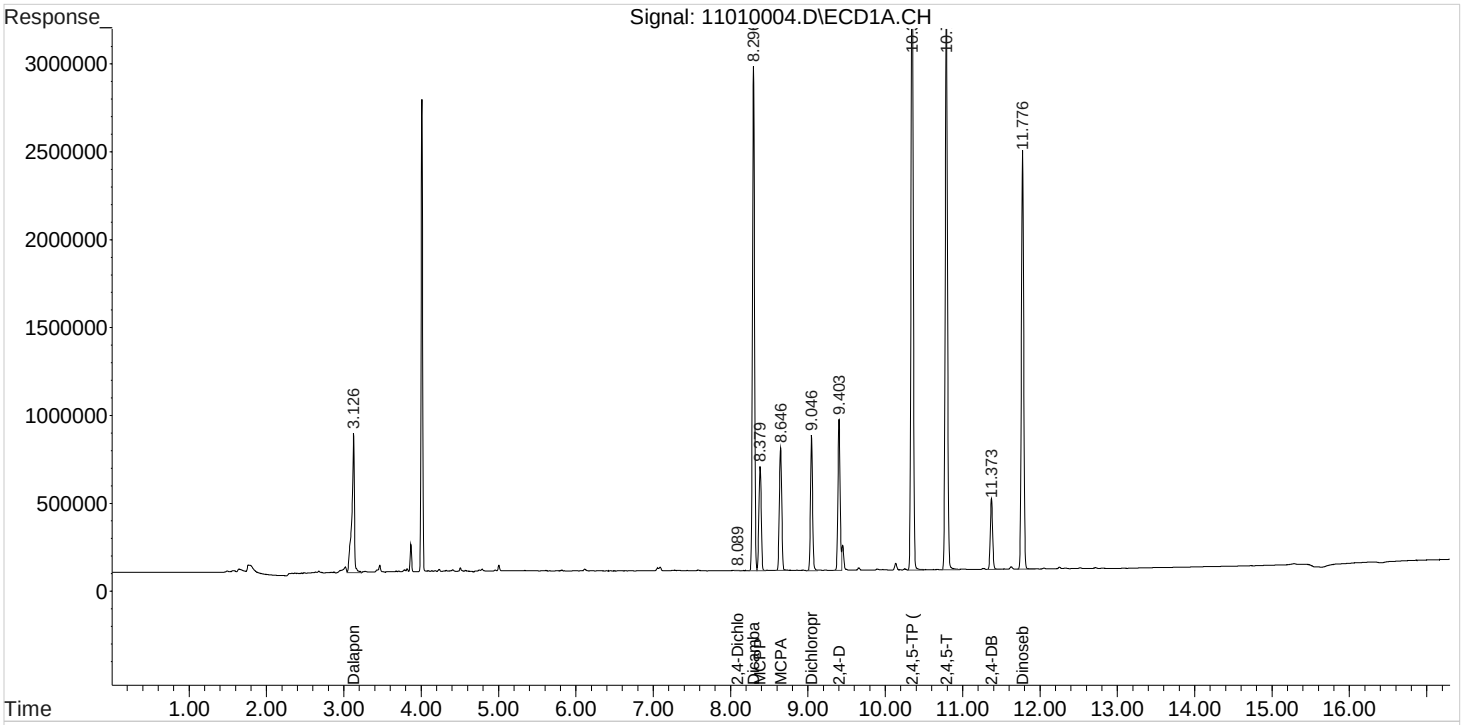
Quantitation Report (QT Reviewed)

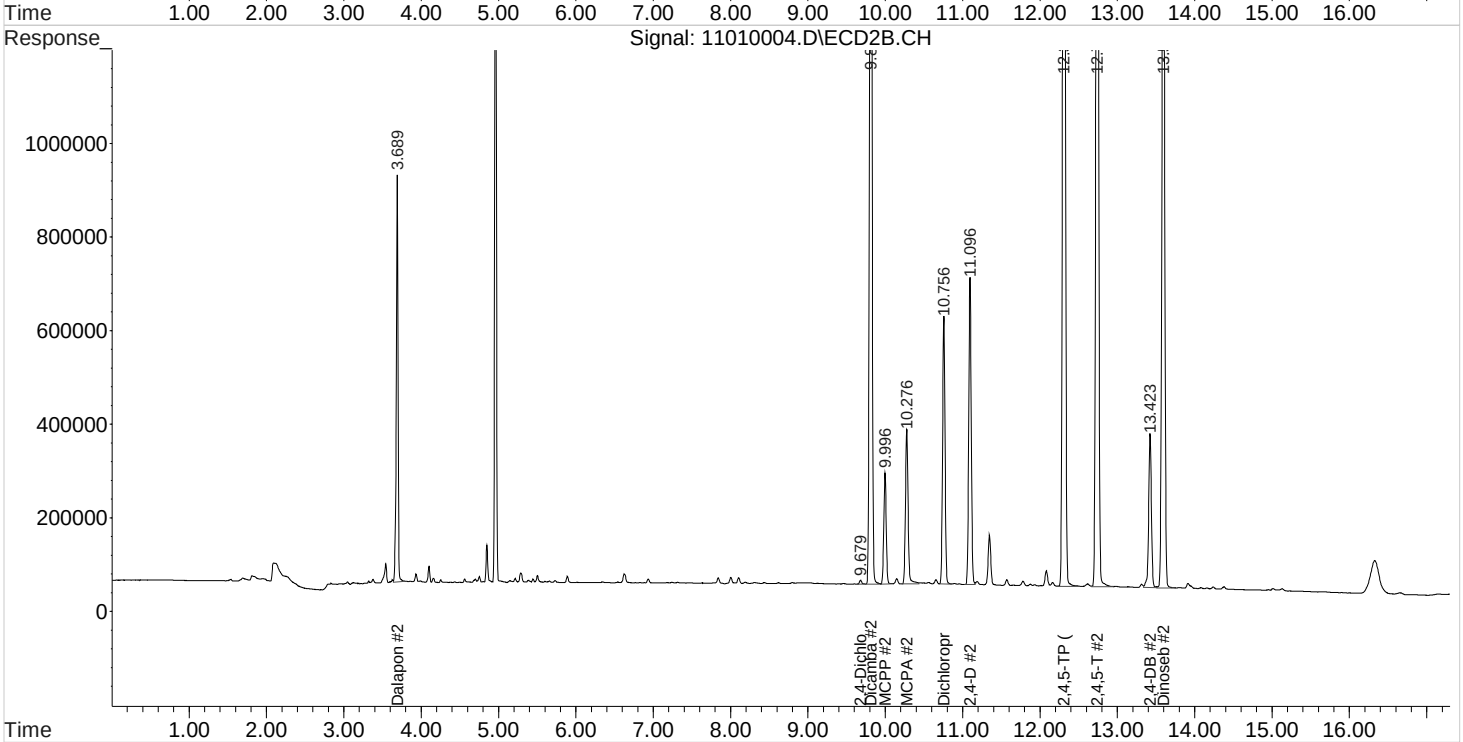
1st 11/01/18
2nd 11/08/18

Data File : J:\gc24\data\110118\11010004.D Vial: 10
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01 Nov 2018 11:23 am Operator: MRICHARDS
Sample : HERB ICV 100 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:16:48 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Quantitation Report (QT Reviewed)

1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\103118\10310103.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 4:27 pm Operator: MRICHARDS
Sample : HERB ICAL 10 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 14:22:26 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	8.069	9.669	188657	176865	11.519	12.081m	
	Target Compounds							
1) m	Dalapon	3.129	3.692	243208	174264	11.790	11.160	
3) m	Dicamba	8.292	9.812	583152	493932	11.649	10.935	
4) m	MCPP	8.379	9.995	222600	78051	716.058	917.252	#
5) m	MCPA	8.642	10.275	297920	127221	689.775	906.464	#
6) m	Dichloroprop	9.046	10.756	179862	169748	9.336	9.351	
7) m	2,4-D	9.402	11.095	209292	193385	11.593	11.988	
8) m	2,4,5-TP ...	10.349	12.309	775306	666006	11.042	10.616	
9) m	2,4,5-T	10.789	12.739	635566	556284	10.476	10.269	
10) m	2,4-DB	11.372	13.426	79769	89451	10.276	9.416	
11) m	Dinoseb	11.775	13.592	489284	463780	10.549	11.236	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

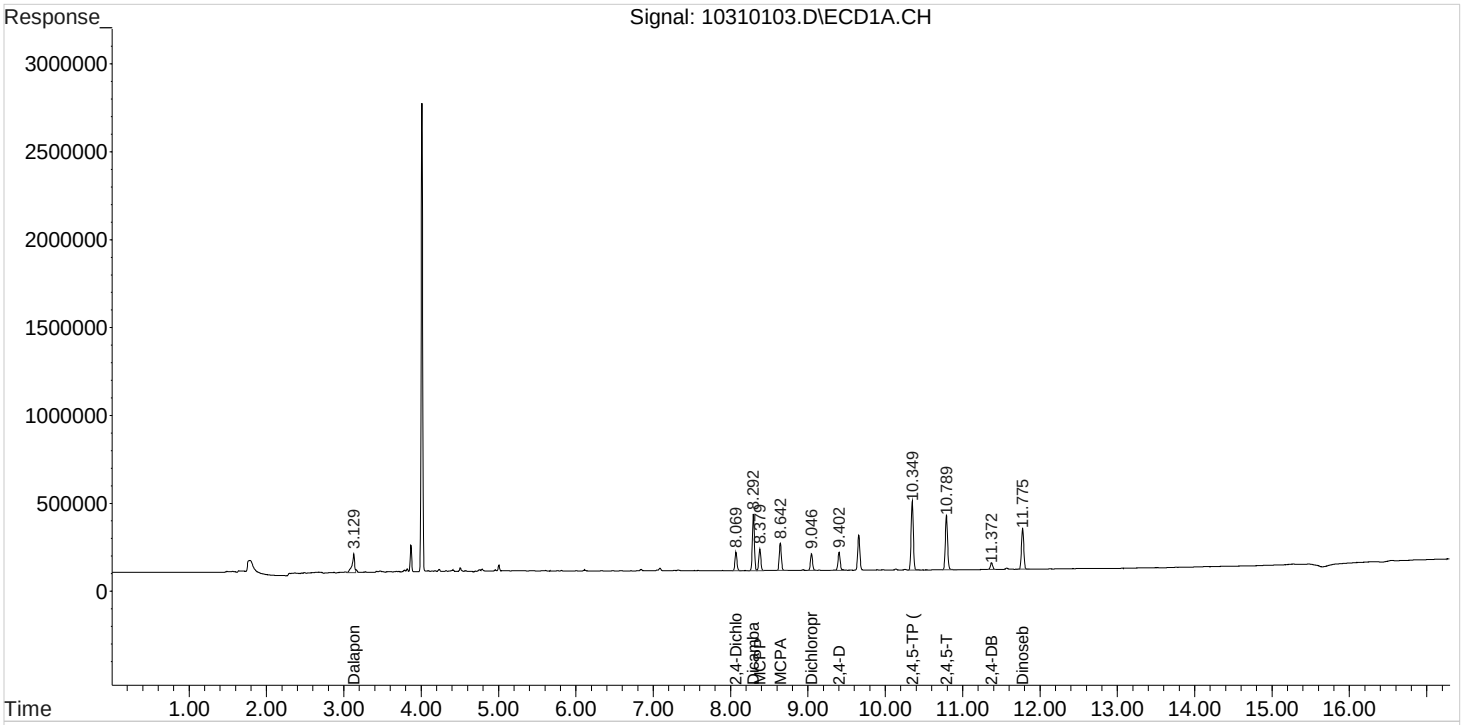
Quantitation Report (QT Reviewed)

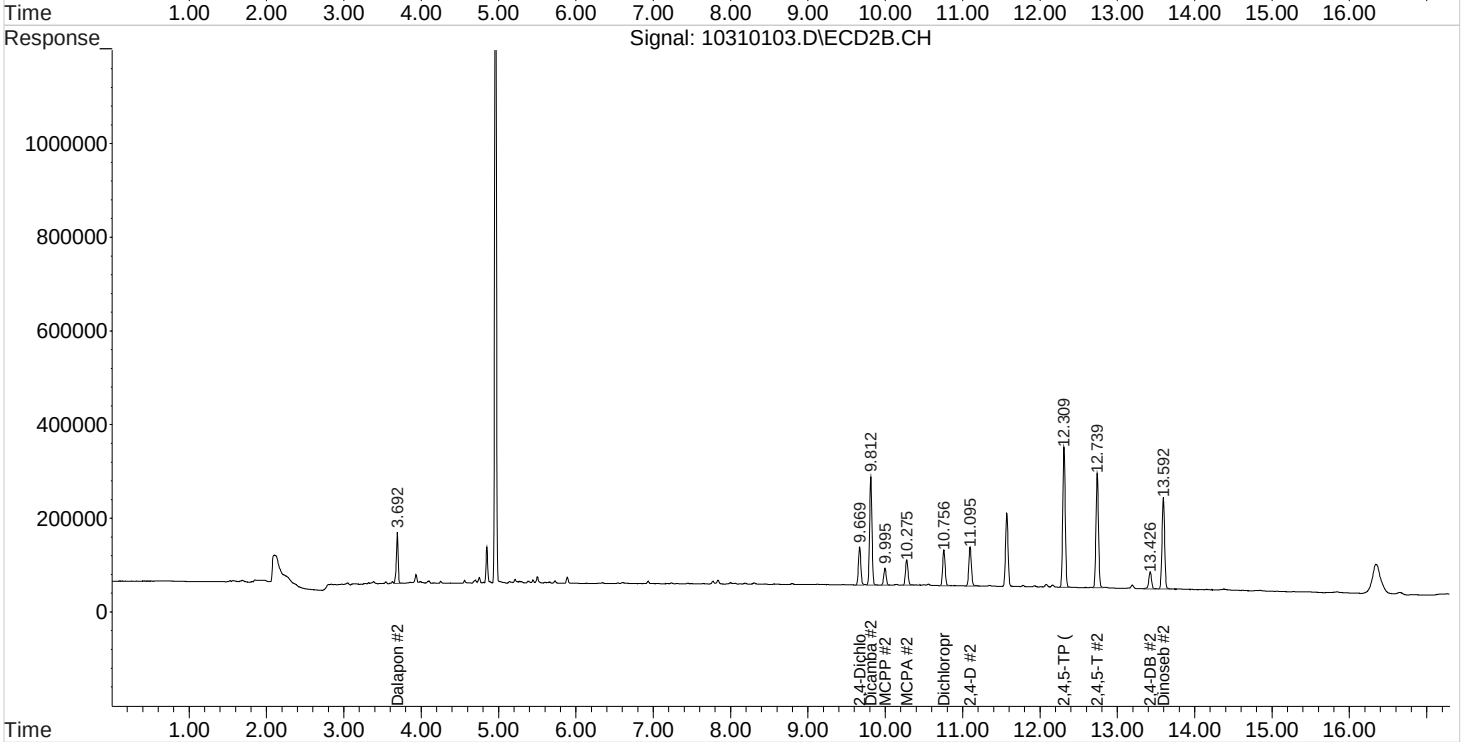
1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\103118\10310103.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 4:27 pm Operator: MRICHARDS
Sample : HERB ICAL 10 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 14:22:26 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





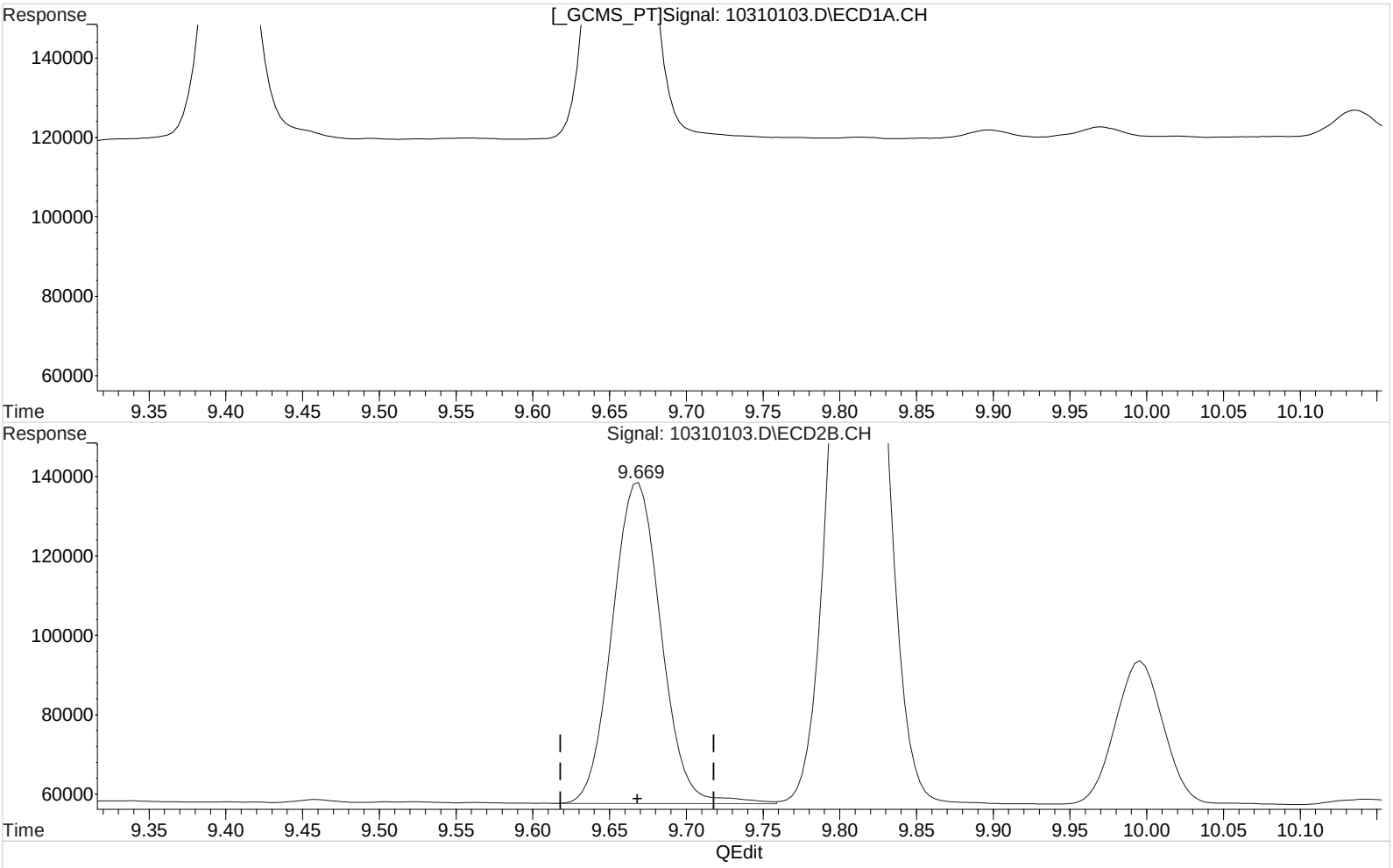
Quantitation Report (Qedit)

1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\103118\10310103.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 4:27 pm Operator: MRICHARDS
Sample : HERB ICAL 10 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:27 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm



QEdit

(2) 2,4-Dichlorophenylacetic Acid (s)

8.069min 11.519 ppb

response 188657

Manual Integration:

Before

11/01/18

(2) 2,4-Dichlorophenylacetic Acid #2 (s)

9.669min 12.212 ppb

response 178774

(+) = Expected Retention Time

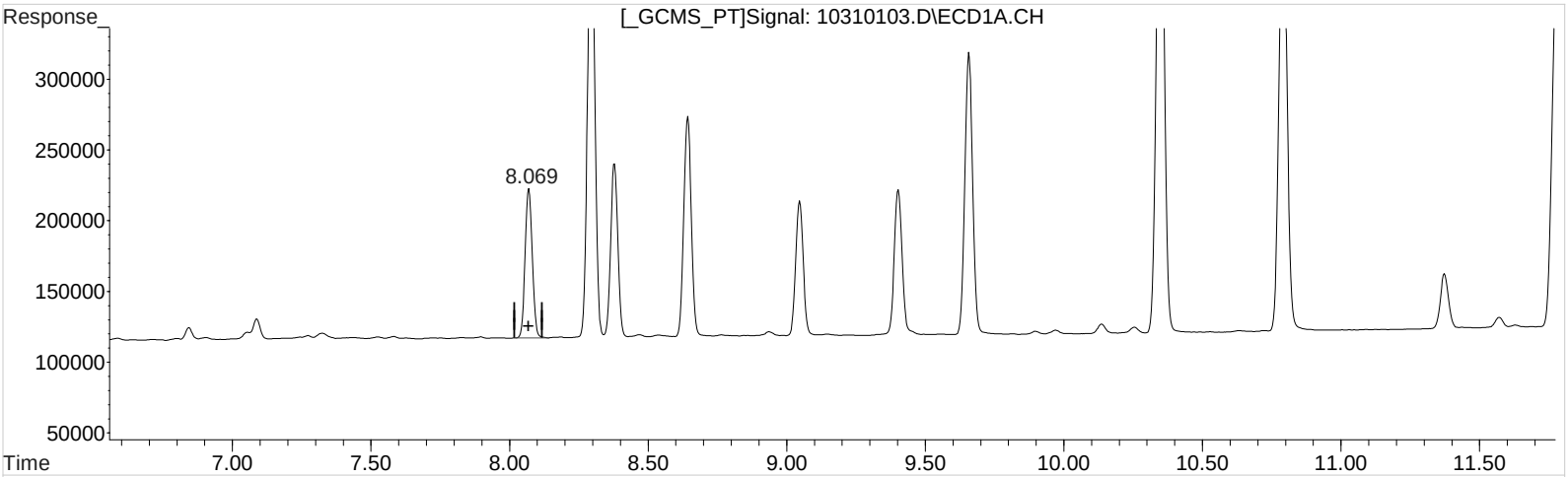
Quantitation Report (Qedit)

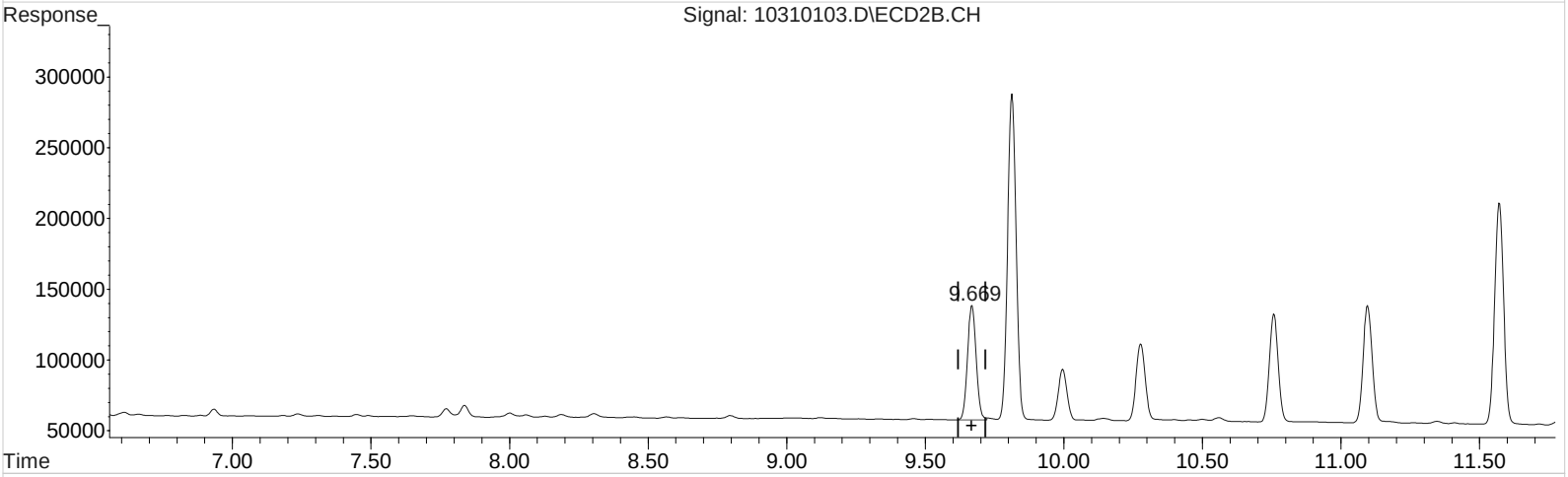
1st 11/06/18
2nd 11/08/18

Data File : J:\gc24\data\103118\10310103.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 4:27 pm Operator: MRICHARDS
Sample : HERB ICAL 10 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 13:03:42 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





QEdit

(2) 2,4-Dichlorophenylacetic Acid (s)

8.069min 11.519 ppb

response 188657

Manual Integration:

After

Baseline/Shoulder

11/01/18

(2) 2,4-Dichlorophenylacetic Acid #2 (s)

9.669min 12.081 ppb m

response 176865

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\103118\10310104.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 4:51 pm Operator: MRICHARDS
Sample : HERB ICAL 25 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:30 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.069	9.669	423626	376584	25.866	25.724
	Target Compounds						
1) m	Dalapon	3.125	3.689	517439	379093	25.084	24.277
3) m	Dicamba	8.292	9.812	1310164	1105755	26.172	24.480
4) m	MCPP	8.379	9.995	454576	155456	2543.512	2395.821
5) m	MCPA	8.642	10.275	583152	247098	2577.601	2416.672
6) m	Dichloroprop	9.045	10.759	401964	358436	23.882	23.834
7) m	2,4-D	9.402	11.095	469594	416033	26.013	25.789
8) m	2,4,5-TP ...	10.349	12.309	1804204	1531153	25.696	24.406
9) m	2,4,5-T	10.792	12.739	1505750	1298153	24.819	23.964
10) m	2,4-DB	11.372	13.422	193029	199559	24.866	23.569
11) m	Dinoseb	11.775	13.592	1155340	1025824	24.910	24.852

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

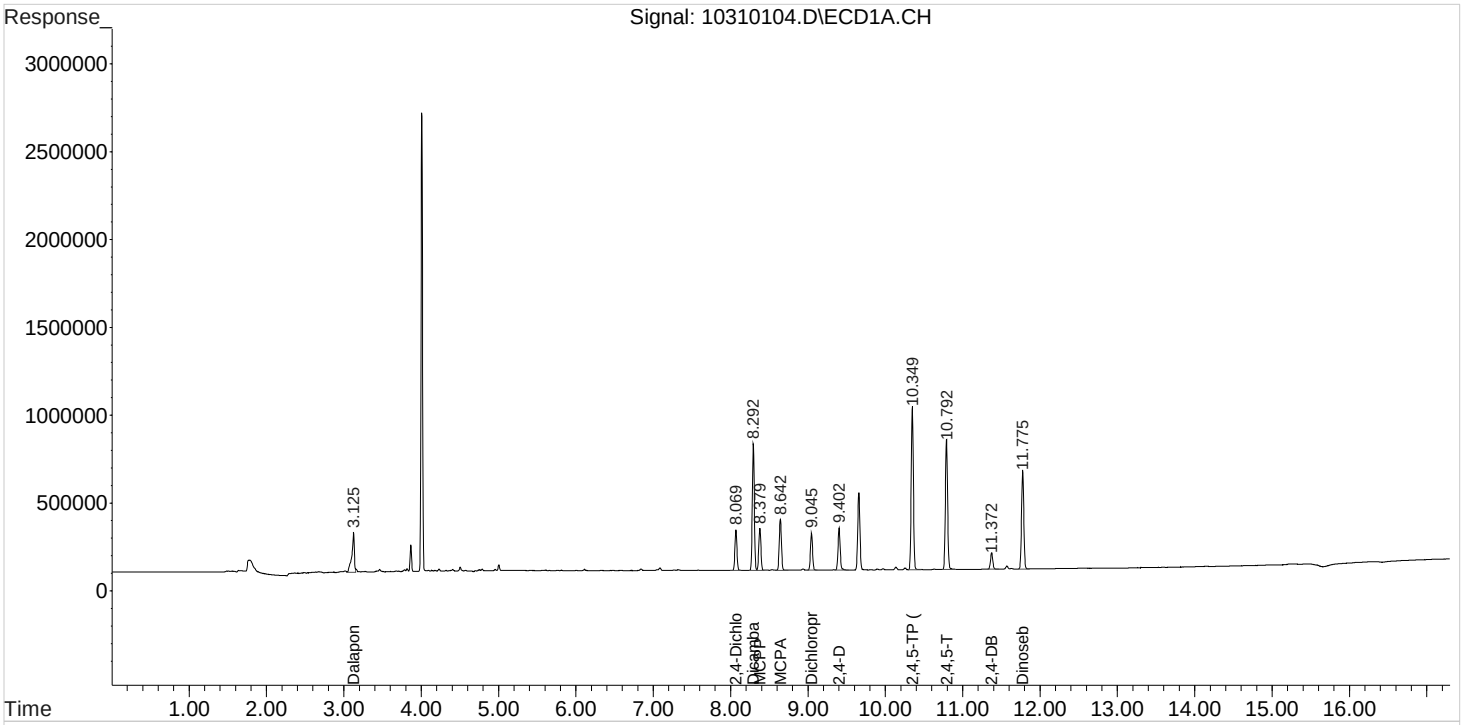
Quantitation Report (QT Reviewed)

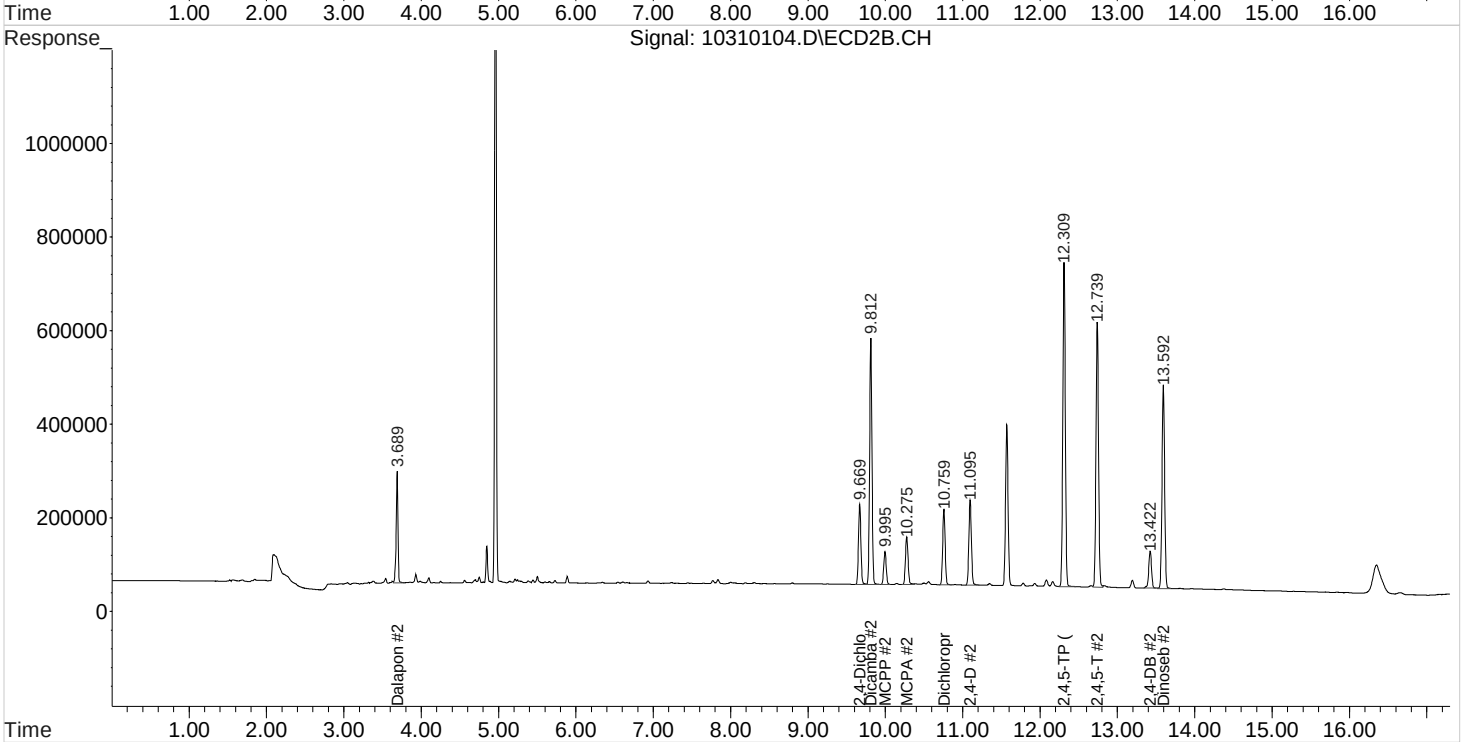
1st 11/01/18
2nd 11/08/18

Data File : J:\gc24\data\103118\10310104.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 4:51 pm Operator: MRICHARDS
Sample : HERB ICAL 25 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:30 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Quantitation Report (QT Reviewed)

1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\103118\10310106.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 5:40 pm Operator: MRICHARDS
Sample : HERB ICAL 100 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:33 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.068	9.668	1438016	1247394	87.804	85.207
	Target Compounds						
1) m	Dalapon	3.125	3.688	1796749	1395182	87.102	89.348
3) m	Dicamba	8.295	9.815	4595258	4137891	91.795	91.608
4) m	MCPP	8.378	9.998	1169510	470912	9491.754	9078.134
5) m	MCPA	8.645	10.278	1414607	719342	9363.650	9042.231
6) m	Dichloroprop	9.045	10.758	1374560	1201183	94.520	92.863
7) m	2,4-D	9.401	11.095	1674507	1446639	92.757	89.674
8) m	2,4,5-TP ...	10.348	12.311	6638265	5854506	94.544	93.320
9) m	2,4,5-T	10.791	12.741	5788640	5070725	95.412	93.605
10) m	2,4-DB	11.375	13.425	746077	717945	96.109	94.163
11) m	Dinoseb	11.775	13.595	4378544	3762512	94.404	91.151

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

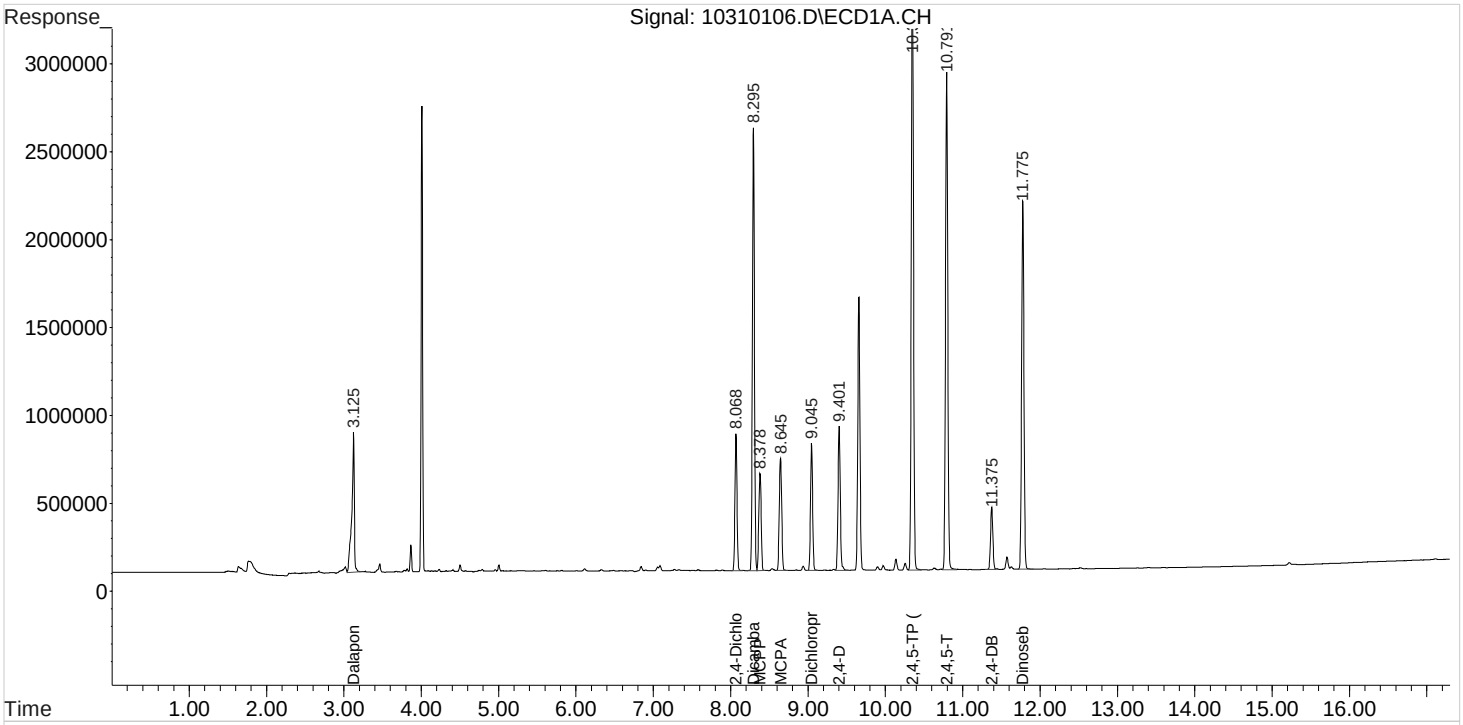
Quantitation Report (QT Reviewed)

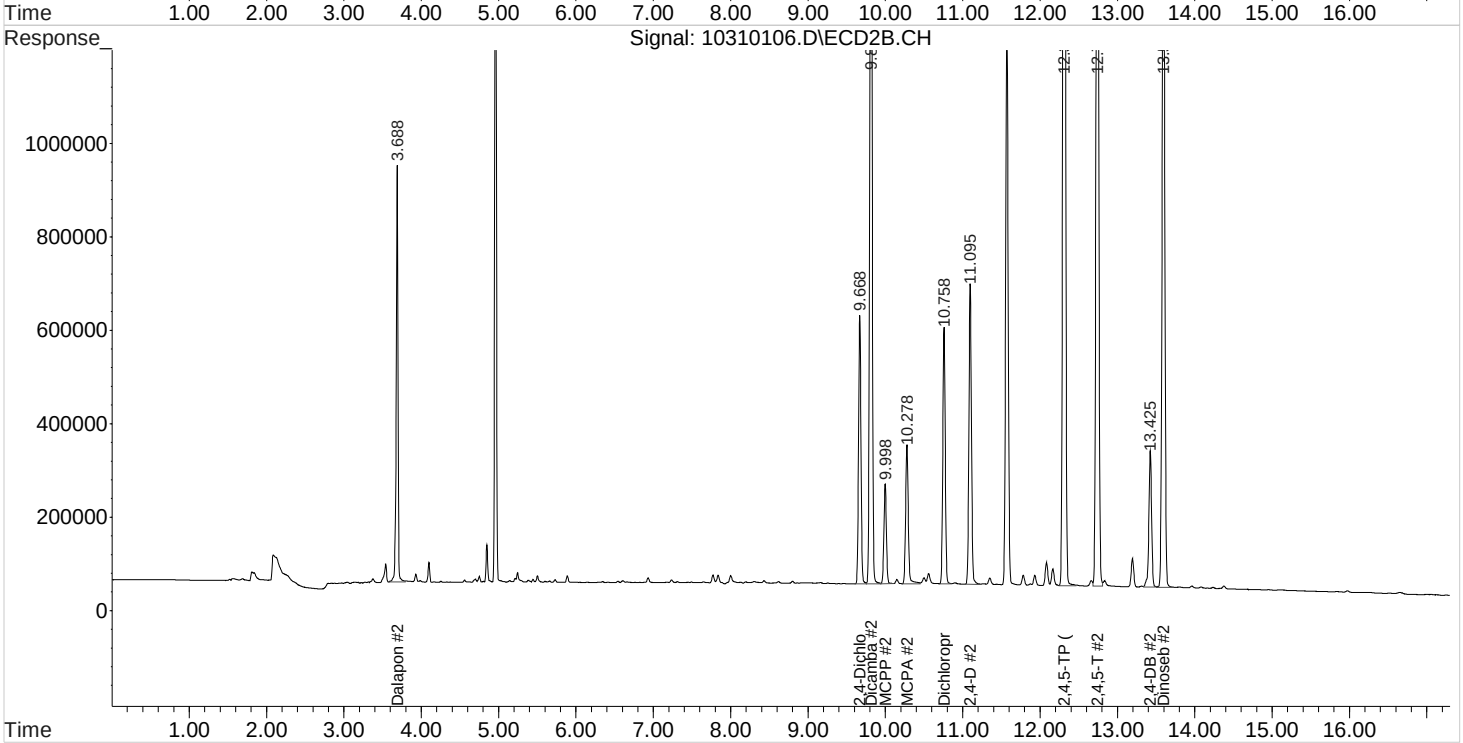
1st 11/01/18
2nd 11/08/18

Data File : J:\gc24\data\103118\10310106.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 5:40 pm Operator: MRICHARDS
Sample : HERB ICAL 100 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:33 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Quantitation Report (QT Reviewed)

1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\103118\10310107.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 6:05 pm Operator: MRICHARDS
Sample : HERB ICAL 125 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:35 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.069	9.669	1754616	1528689	107.135	104.421
	Target Compounds						
1) m	Dalapon	3.126	3.689	2227595	1721893	107.988	110.271
3) m	Dicamba	8.296	9.813	5657580	5167059	113.017	114.393
4) m	MCPP	8.379	9.996	1330592	574776	11551.282	11586.011
5) m	MCPA	8.646	10.279	1618337	876556	11555.295	11571.426
6) m	Dichloroprop	9.046	10.759	1669282	1478426	118.885	117.421
7) m	2,4-D	9.403	11.096	2039313	1785618	112.965	110.687
8) m	2,4,5-TP ...	10.349	12.309	8164589	7316402	116.282	116.622
9) m	2,4,5-T	10.793	12.739	7118206	6346223	117.326	117.150
10) m	2,4-DB	11.373	13.423	902899	881015	116.311	117.946
11) m	Dinoseb	11.776	13.593	5402663	4692269	116.485	113.675

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

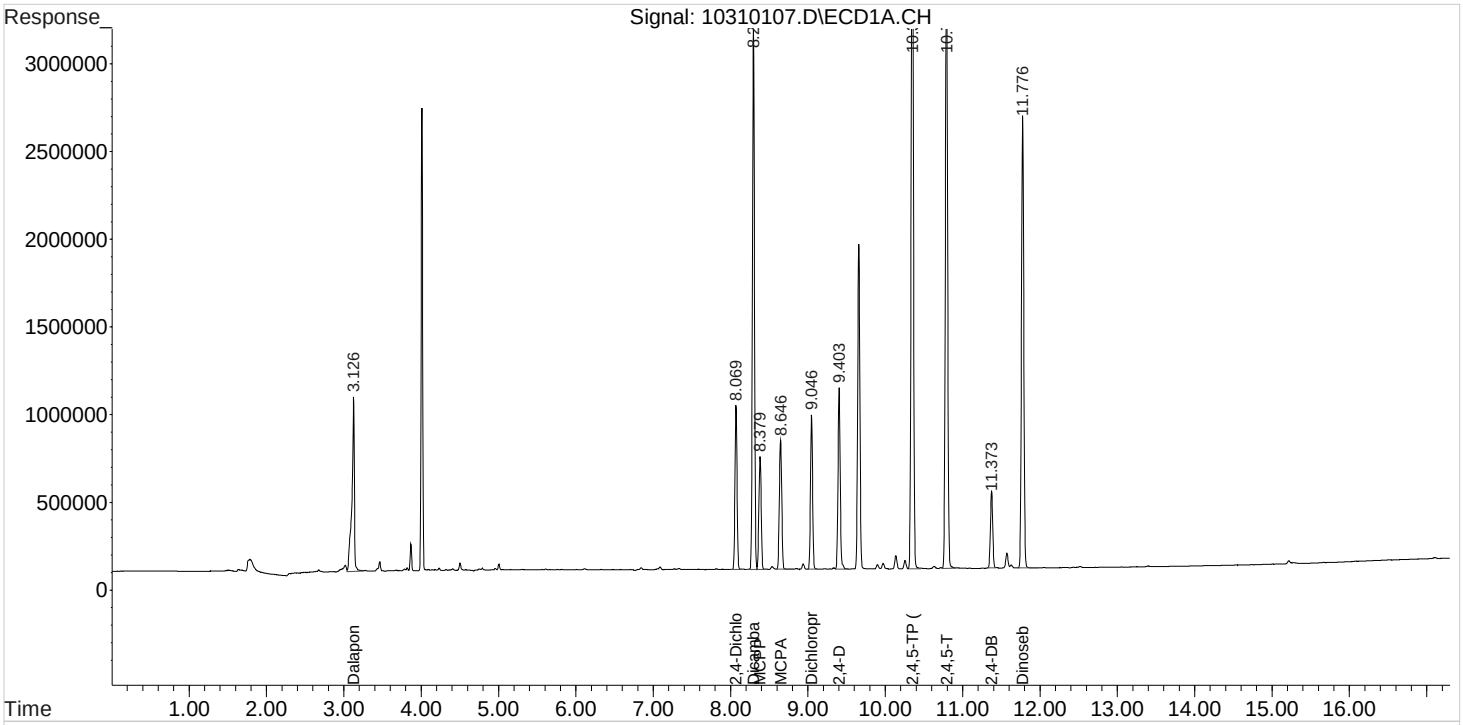
Quantitation Report (QT Reviewed)

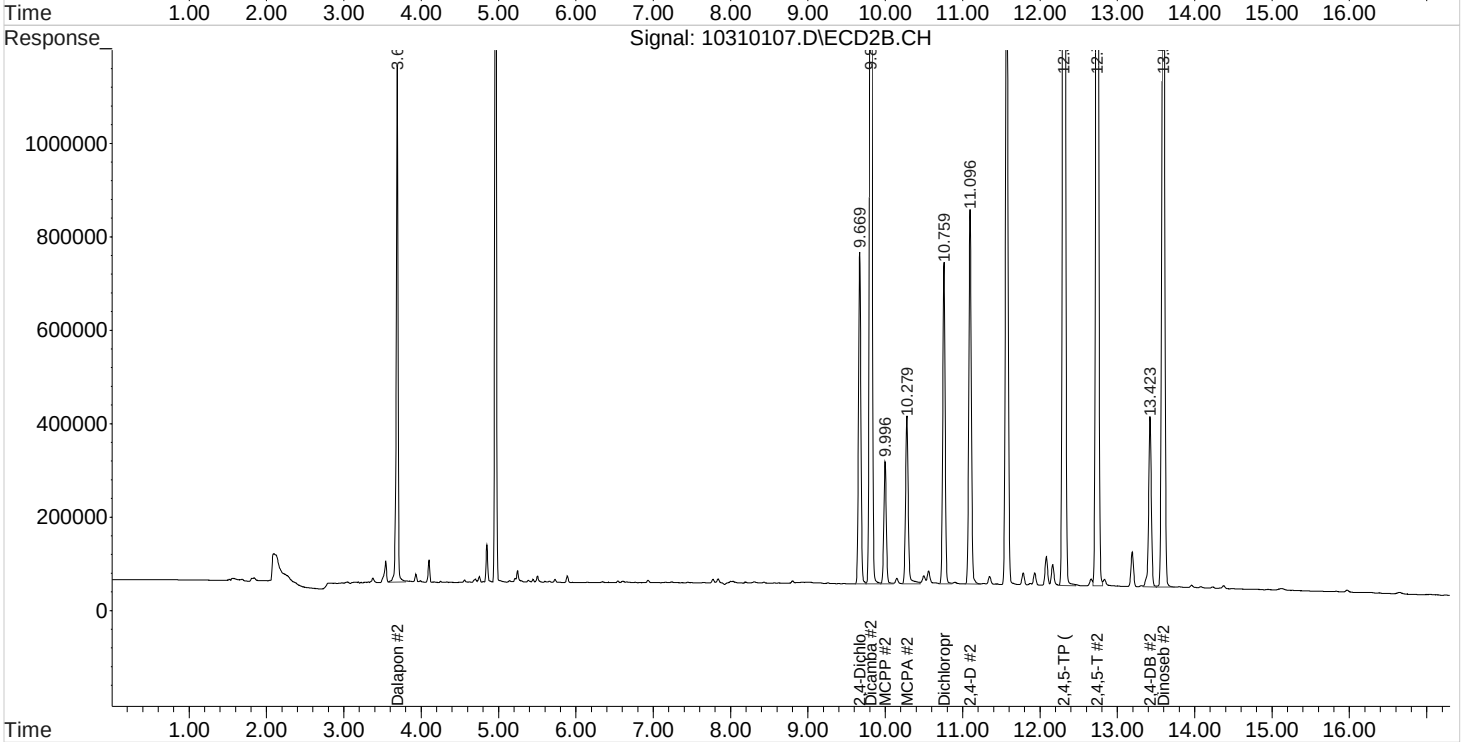
1st 11/01/18
2nd 11/08/18

Data File : J:\gc24\data\103118\10310107.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 6:05 pm Operator: MRICHARDS
Sample : HERB ICAL 125 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:35 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Quantitation Report (QT Reviewed)

1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\103118\10310108.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 6:29 pm Operator: MRICHARDS
Sample : HERB ICAL 150 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:39 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.071	9.667	1988242	1771518	121.401	121.008
	Target Compounds						
1) m	Dalapon	3.127	3.691	2563650	1992531	124.279	127.603
3) m	Dicamba	8.297	9.814	6477940	6032568	129.404	133.554
4) m	MCPP	8.381	9.997	1472079	661711	13670.515	13849.485
5) m	MCPA	8.647	10.277	1777241	1004166	13563.537	13793.501
6) m	Dichloroprop	9.047	10.757	1897289	1719582	139.041	139.689
7) m	2,4-D	9.401	11.094	2329231	2084010	129.025	129.184
8) m	2,4,5-TP ...	10.351	12.311	9302756	8554591	132.492	136.359
9) m	2,4,5-T	10.791	12.737	8144428	7391196	134.241	136.440
10) m	2,4-DB	11.374	13.421	1033326	1007405	133.112	136.993
11) m	Dinoseb	11.774	13.594	6177639	5449526	133.194	132.021

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

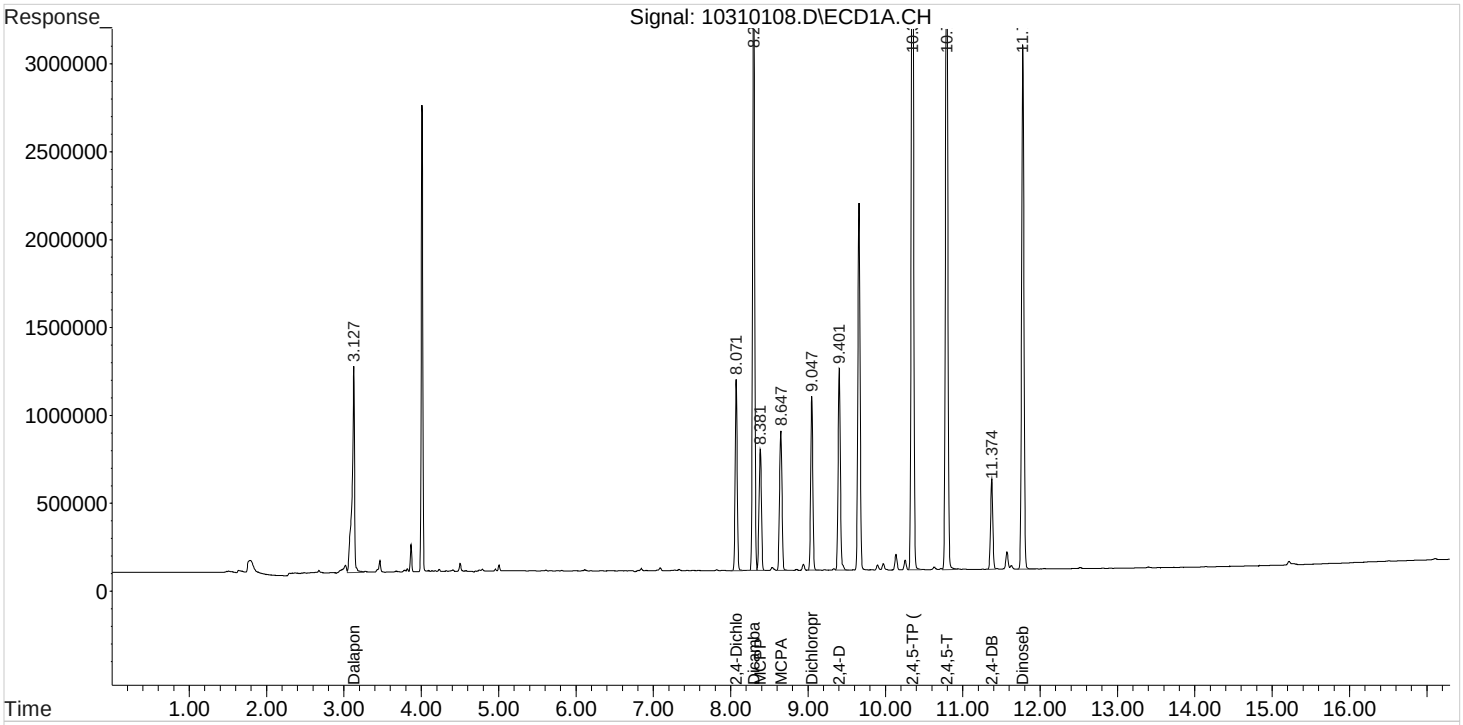
Quantitation Report (QT Reviewed)

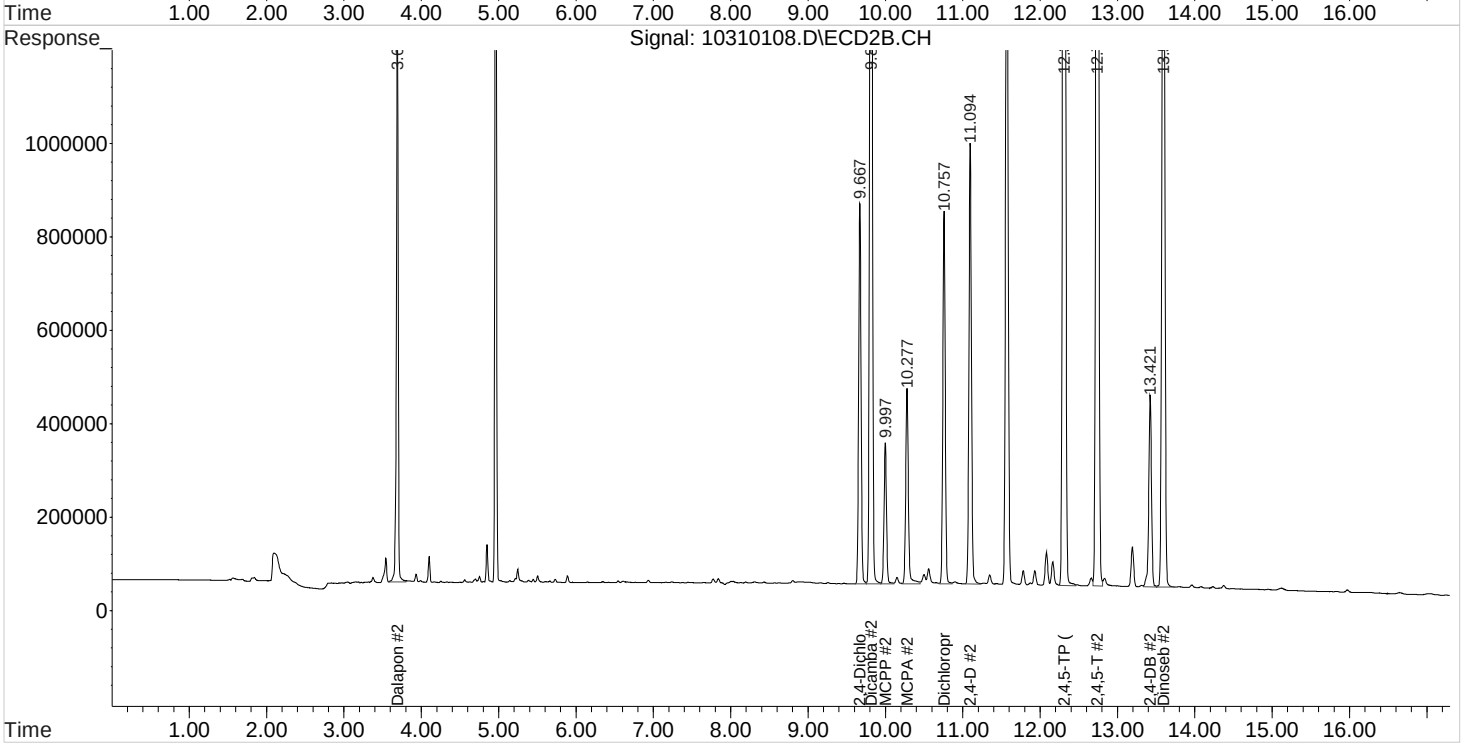
1st 11/01/18
2nd 11/08/18

Data File : J:\gc24\data\103118\10310108.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 6:29 pm Operator: MRICHARDS
Sample : HERB ICAL 150 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:39 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Quantitation Report (QT Reviewed)

1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\103118\10310109.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 6:54 pm Operator: MRICHARDS
Sample : HERB ICAL 175 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:42 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.069	9.669	2282290	2106532	139.355	143.892
	Target Compounds						
1) m	Dalapon	3.129	3.692	3002153	2342946	145.536	150.044
3) m	Dicamba	8.295	9.812	7442697	7242313	148.676	160.336
4) m	MCPP	8.382	9.999	1606646	765936	16155.721	16818.003
5) m	MCPA	8.645	10.279	1950677	1164155	16293.957	16860.704
6) m	Dichloroprop	9.049	10.759	2161436	2037389	164.163	170.521
7) m	2,4-D	9.402	11.095	2676975	2490857	148.288	154.403
8) m	2,4,5-TP ...	10.349	12.309	10758488	10295087	153.225	164.102
9) m	2,4,5-T	10.792	12.739	9493402	8931115	156.476	164.867
10) m	2,4-DB	11.372	13.422	1215232	1204065	156.545	167.825
11) m	Dinoseb	11.775	13.592	7225706	6564903	155.791	159.042

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

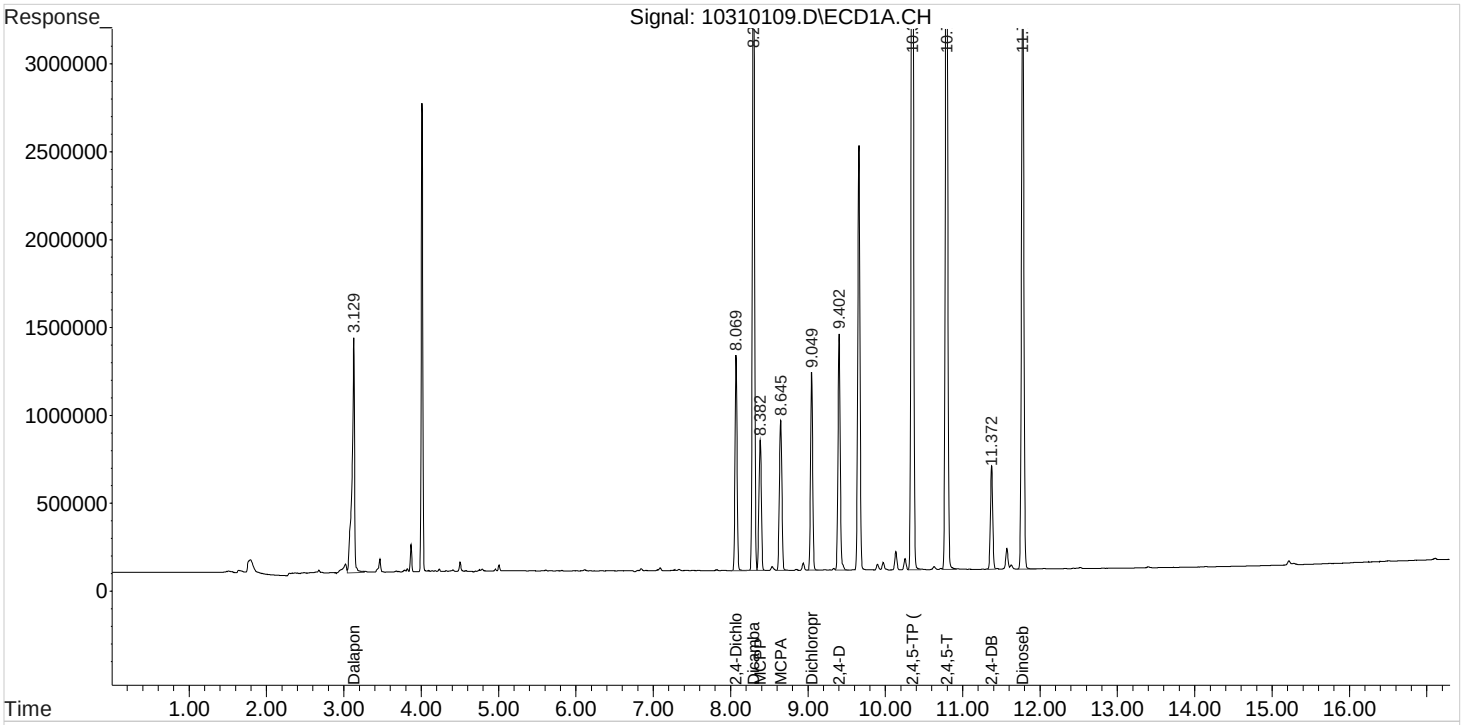
Quantitation Report (QT Reviewed)

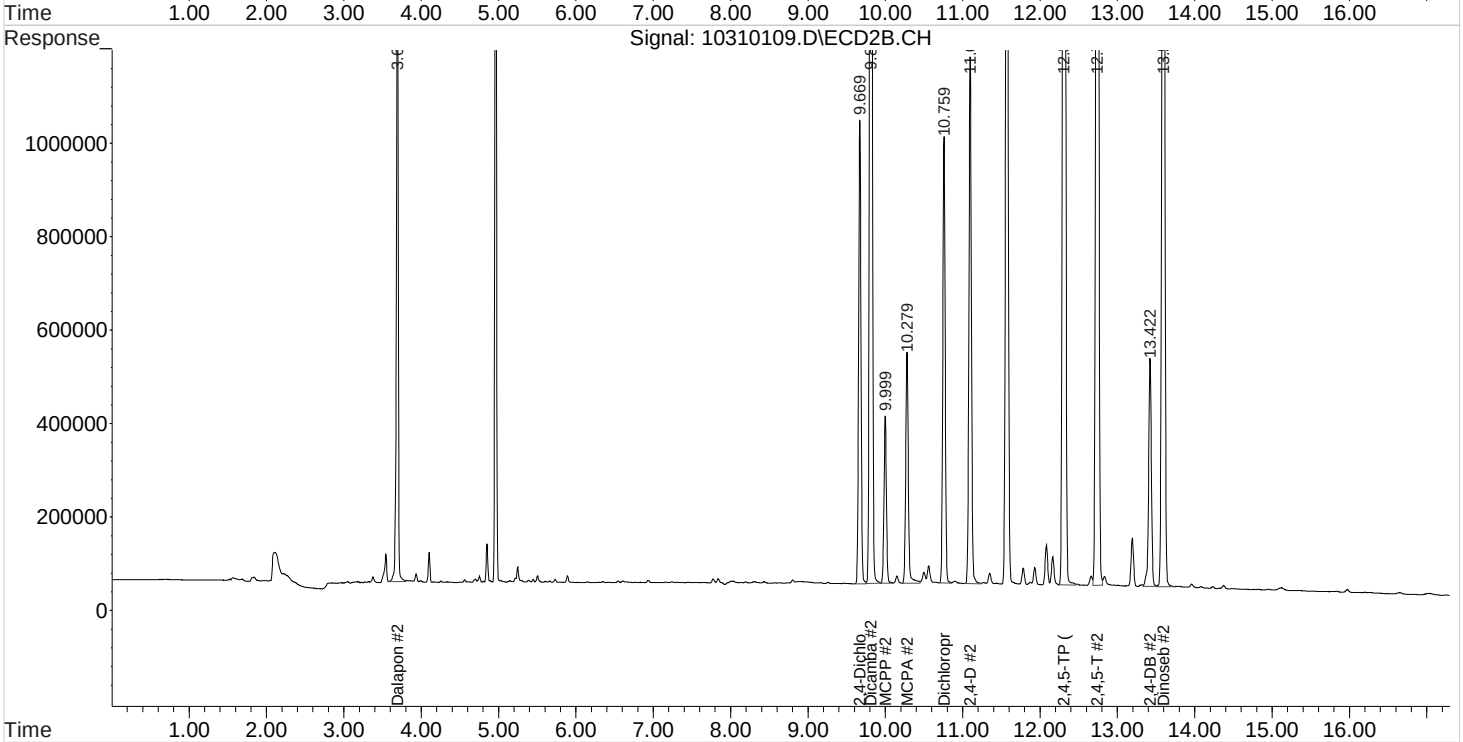
1st 11/01/18
2nd 11/08/18

Data File : J:\gc24\data\103118\10310109.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 6:54 pm Operator: MRICHARDS
Sample : HERB ICAL 175 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:42 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Quantitation Report (QT Reviewed)

1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\103118\10310110.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 7:18 pm Operator: MRICHARDS
Sample : HERB ICAL 200 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:44 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.070	9.666	2534816	2256686	154.774	154.149
	Target Compounds						
1) m	Dalapon	3.127	3.690	3302689	2604929	160.105	166.822
3) m	Dicamba	8.293	9.810	8342861	7849089	166.658	173.770
4) m	MCPP	8.380	9.996	1734448	828494	19504.682	18772.502
5) m	MCPA	8.646	10.280	2082776	1246094	19241.181	18589.927
6) m	Dichloroprop	9.047	10.757	2418837	2191423	190.974	186.156
7) m	2,4-D	9.400	11.093	2996827	2669247	166.005	165.461
8) m	2,4,5-TP ...	10.347	12.310	12179428	11186238	173.462	178.307
9) m	2,4,5-T	10.790	12.736	10815821	9850168	178.273	181.833
10) m	2,4-DB	11.373	13.420	1390960	1345562	179.182	191.022
11) m	Dinoseb	11.773	13.593	8182446	7176429	176.419	173.857

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

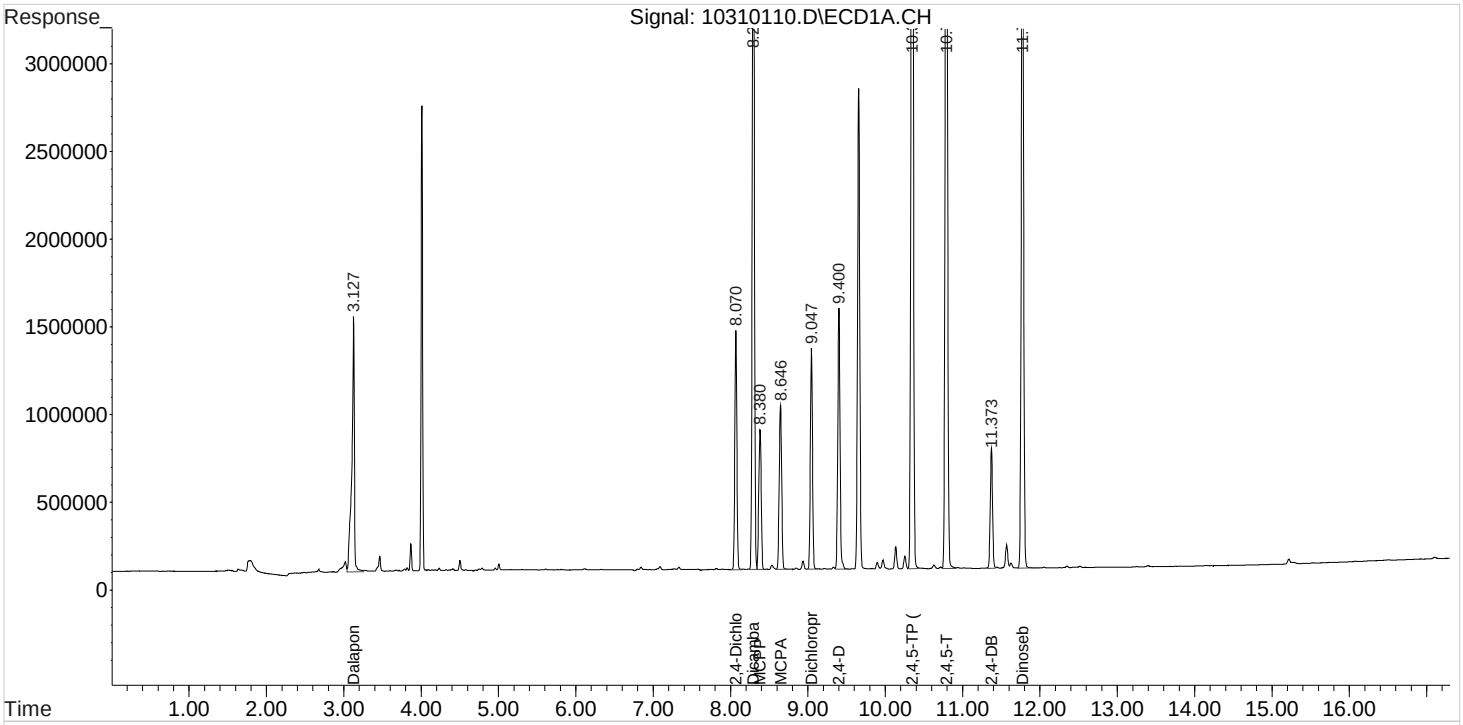
Quantitation Report (QT Reviewed)

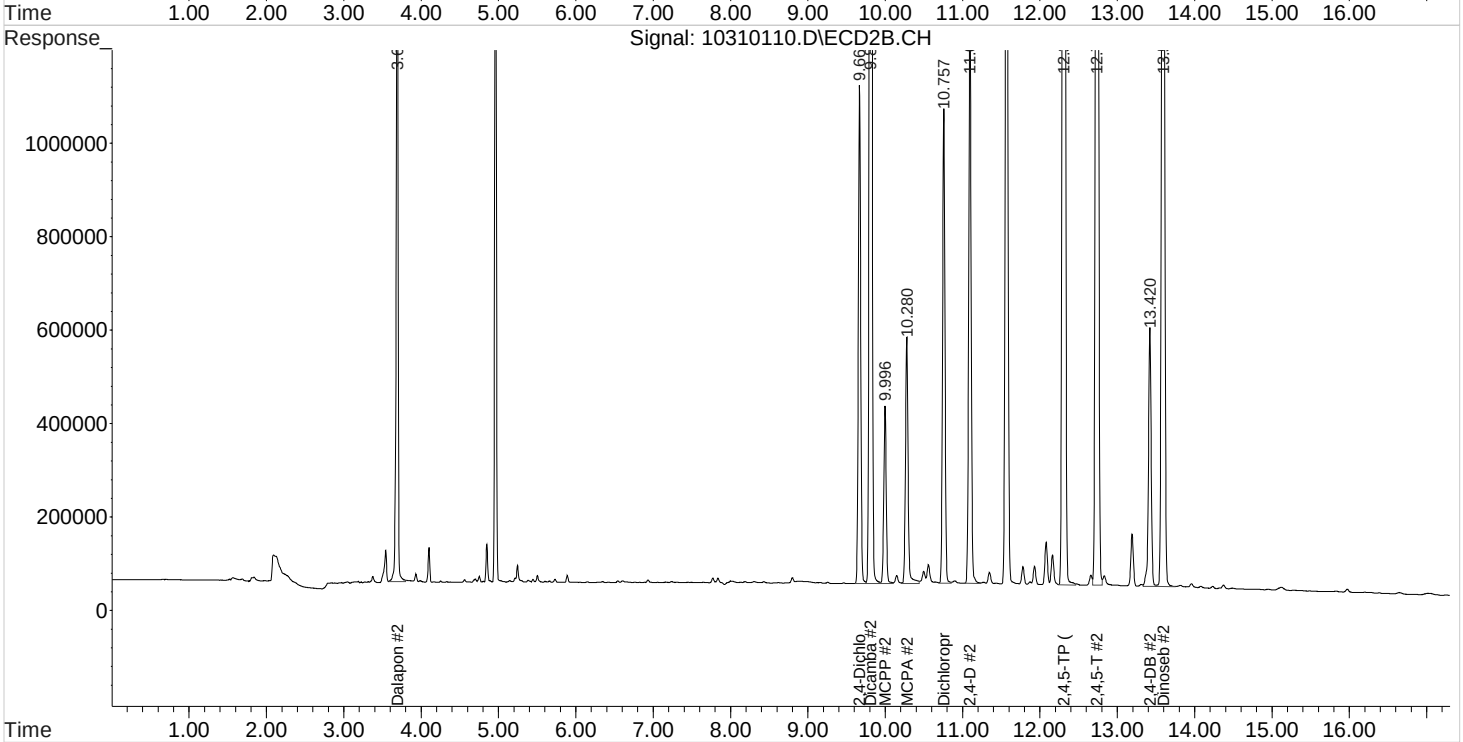
1st 11/01/18
2nd 11/08/18

Data File : J:\gc24\data\103118\10310110.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 7:18 pm Operator: MRICHARDS
Sample : HERB ICAL 200 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:44 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Sel	Run	Location	Method	Datafile	SeqTable	Calib:RF:RT	Sample Name
No	1	Vial 100	8151A-17	12100001	F:01:01		PRIMER
No	2	Vial 100	8151A-17	12100002	F:02:01		PRIMER
No	3	Vial 2	8151A-17	12100003	F:03:01		PENTA01-94F
No	4	Vial 1	8151A-17	12100004	F:04:01		IB
No	5	Vial 3	8151A-17	12100005	F:05:01		K1810644-023
No	6	Vial 4	8151A-17	12100006	F:06:01		KQ1817503-001LCS
No	7	Vial 5	8151A-17	12100007	F:07:01		KQ1817503-02DLCS
No	8	Vial 6	8151A-17	12100008	F:08:01		KQ1817503-03MB
No	9	Vial 2	8151A-17	12100009	F:09:01		PENTA01-94F
No	10	Vial 1	8151A-17	12100010	F:10:01		IB
No	11	Vial 7	8151A-17	12100011	F:11:01		K1810644-023 2X
No	12	Vial 2	8151A-17	12100012	F:12:01		PENTA01-94F
No	13	Vial 1	8151A-17	12100013	F:13:01		IB
No	14	none	STANDBY	12100014	F:14:01		STANBY
No	15	Vial 8	8151A-17	12100015	F:15:01		KQ1817502-003LCSRR
No	16	Vial 9	8151A-17	12100016	F:16:01		KQ1817502-004MB
No	17	Vial 10	8151A-17	12100017	F:17:01		KQ1817502-005MB
No	18	Vial 11	8151A-17	12100018	F:18:01		KQ1817502-006MB
No	19	Vial 12	8151A-17	12100019	F:19:01		K1811381-004
No	20	Vial 13	8151A-17	12100020	F:20:01		K1811381-005
No	21	Vial 14	8151A-17	12100021	F:21:01		KQ1817502-001MS
No	22	Vial 15	8151A-17	12100022	F:22:01		KQ1817502-002DMS
No	23	Vial 16	8151A-17	12100023	F:23:01		K1811438-001RR
No	24	Vial 17	8151A-17	12100024	F:24:01		K1811438-002
No	25	Vial 2	8151A-17	12100025	F:25:01		PENTA01-94F
No	26	Vial 1	8151A-17	12100026	F:26:01	*	IB
No	27	Vial 18	8151A-17	12100027	F:27:01		KQ1817665-003MB
No	28	Vial 19	8151A-17	12100028	F:28:01		KQ1817665-002DLC
No	29	Vial 20	8151A-17	12100029	F:29:01		KQ1817665-001LCS
No	30	Vial 21	8151A-17	12100030	F:30:01		K1811749-001
No	31	Vial 22	8151A-17	12100031	F:31:01		K1811747-001
No	32	Vial 23	8151A-17	12100032	F:32:01		K1811745-001
No	33	Vial 24	8151A-17	12100033	F:33:01		K1811491-001
No	34	Vial 25	8151A-17	12100034	F:34:01		K1811488-002
No	35	Vial 26	8151A-17	12100035	F:35:01		K1811488-001
No	36	Vial 2	8151A-17	12100036	F:36:01		PENTA01-94F
No	37	Vial 1	8151A-17	12100037	F:37:01		IB
No	38	none	8151A-17	12100038	F:38:01		STANBY
No	39	Vial 1	8151A-17	12100039	F:39:01		ISO-PRIMER
No	40	Vial 16	8151A-17	12100040	F:40:01		K1811438-001
No	41	Vial 8	8151A-17	12100041	F:41:01		KQ1817502-003LCS
No	42	Vial 2	8151A-17	12100042	F:42:01		PENTA01-94F
No	43	Vial 1	8151A-17	12100043	F:43:01	*	IB
No	44	none	8151A-17	12100044	F:44:01		STANBY

Run #1: 618249
ICAL: KC1300499
Run #2: 618253

Sel	Run	Location	Method	Datafile	SeqTable	Calib:RF:RT	Sample Name
No	1	Vial 100	8151A-17	12100001	F:01:01		PRIMER
No	2	Vial 100	8151A-17	12100002	F:02:01		PRIMER
No	3	Vial 2	8151A-17	12100003	F:03:01		PENTA01-94F
No	4	Vial 1	8151A-17	12100004	F:04:01		IB
No	5	Vial 3	8151A-17	12100005	F:05:01		K1810644-023
No	6	Vial 4	8151A-17	12100006	F:06:01		KQ1817503-001LCS
No	7	Vial 5	8151A-17	12100007	F:07:01		KQ1817503-02DLCS
No	8	Vial 6	8151A-17	12100008	F:08:01		KQ1817503-03MB
No	9	Vial 2	8151A-17	12100009	F:09:01		PENTA01-94F
No	10	Vial 1	8151A-17	12100010	F:10:01		IB
No	11	Vial 7	8151A-17	12100011	F:11:01		K1810644-023 2X
No	12	Vial 2	8151A-17	12100012	F:12:01		PENTA01-94F
No	13	Vial 1	8151A-17	12100013	F:13:01		IB
No	14	none	STANDBY	12100014	F:14:01		STANBY
No	15	Vial 8	8151A-17	12100015	F:15:01		KQ1817502-003LCS
No	16	Vial 9	8151A-17	12100016	F:16:01		KQ1817502-004MB
No	17	Vial 10	8151A-17	12100017	F:17:01		KQ1817502-005MB
No	18	Vial 11	8151A-17	12100018	F:18:01		KQ1817502-006MB
No	19	Vial 12	8151A-17	12100019	F:19:01		K1811381-004
No	20	Vial 13	8151A-17	12100020	F:20:01		K1811381-005
No	21	Vial 14	8151A-17	12100021	F:21:01		KQ1817502-001MS
No	22	Vial 15	8151A-17	12100022	F:22:01		KQ1817502-002DMS
No	23	Vial 16	8151A-17	12100023	F:23:01		K1811438-001
No	24	Vial 17	8151A-17	12100024	F:24:01		K1811438-002 2
No	25	Vial 2	8151A-17	12100025	F:25:01		PENTA01-94F
No	26	Vial 1	8151A-17	12100026	F:26:01		IB
No	27	Vial 18	8151A-17	12100027	F:27:01		KQ1817665-003MB
No	28	Vial 19	8151A-17	12100028	F:28:01		KQ1817665-002DLC
No	29	Vial 20	8151A-17	12100029	F:29:01		KQ1817665-001LCS
No	30	Vial 21	8151A-17	12100030	F:30:01		K1811749-001
No	31	Vial 22	8151A-17	12100031	F:31:01		K1811747-001
No	32	Vial 23	8151A-17	12100032	F:32:01		K1811745-001
No	33	Vial 24	8151A-17	12100033	F:33:01		K1811491-001
No	34	Vial 25	8151A-17	12100034	F:34:01		K1811488-002
No	35	Vial 26	8151A-17	12100035	F:35:01		K1811488-001
No	36	Vial 2	8151A-17	12100036	F:36:01		PENTA01-94F
No	37	Vial 1	8151A-17	12100037	F:37:01		IB
No	38	none	8151A-17	12100038	F:38:01		STANBY

Volatile Organic Compounds

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

1st LM 12/07/18
2nd 12/08/18

Exception Report

Data File: J:\MS27\DATA\112718\1127F023.D
Lab ID: K1811438-001
RunType: SMPL
Matrix: SOIL

Date Acquired: 11/27/2018 19:46
Date Quantitated: 12/03/2018 15:07
Batch ID: KWG1806328
Analysis Method: 8260C
ListJoinID: LJ1012

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail	
Tune Window	NA	NA	NA	x		
Analytical Holding Time	NA	NA	NA	x		
Preparation Holding Time	NA	NA	NA	x		
Pre-Preparation Holding Time	NA	NA	NA	x		
ICAL Pass/Fail	NA	NA	NA	x		
ICAL Analyte Recovery	NA	NA	NA	x		
Initial Calibration Minimum RF	NA	NA	NA	x		
Initial Calibration SPCC/CCC	NA	NA	NA	x		
Second Source ICAL Verification	NA	NA	NA	x		
Calibration Verification Pass/Fail	NA	NA	NA	x		
Continuing Calibration Recovery	NA	NA	NA	x		
Continuing Calibration Minimum RF	NA	NA	NA	x		
Continuing Calibration SPCC/CCC	NA	NA	NA	x		
Method Blank	NA	NA	NA	x		
MB Surrogate Recovery	NA	NA	NA	x		
Lab Control Spike	NA	NA	NA	x		
Internal Standards	NA	NA	NA	x		
Surrogates	NA	NA	NA		x	narr
Analyte Co-elution	NA	NA	NA	x		
Retention Time	NA	NA	NA	x		
Relative Retention Time	NA	NA	NA	x		
Below Lowest ICAL Level	NA	NA	NA	x		
Std MRL Unsupported by ICAL	NA	NA	NA	x		
Above Highest ICAL Level	NA	NA	NA	x		
Enviroquant/Stealth Calibration Check	NA	NA	NA	x		
Overdiluted Analysis	NA	NA	NA	x		

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Dibromofluoromethane	126	73	122	narr

Primary Review: _____

Secondary Review: _____

1st LM 12/07/18
2nd 12/08/18

Quantitation Report

Data File:	J:\MS27\DATA\112718\1127F023.D			**Instrument:**	MS27
Acqu Date:	11/27/2018 19:46	**Quant Date:**	12/03/2018 15:07	**Vial:**	20
Run Type:	SMPL	**ListJoinID:**	LJ1012	**Dilution:**	1.0
Lab ID:	K1811438-001			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8260C VOC TCLP	**Collect Date:**	11/15/2018	**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806328	**Prep Lot:**	KWG1806352	**Report Group:**	K1811438
Analysis Method:	8260C	**Prep Method:**	EPA 5035A/5030B	**Pre-Prep Meth:**	EPA 1311
Prep Ref:	1705837	**Prep Date:**	11/27/2018	**Pre-Prep Date:**	11/26/2018

Quant Method:	J:\MS27\METHODS\110818MS27_8	**Calibration ID:**	CAL15885
Title:	Volatile Organic Compounds	**Report List ID:**	LJ1012
Tune Ref:	J:\MS27\DATA\112718\1127F004.D	**Method ID:**	MJ181
MB Ref:	J:\MS27\DATA\112718\1127F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.52	0.01	96	497971	10.00	OK
2	Chlorobenzene-d5	9.68	0.00	82	202014	10.00	OK
3	1,4-Dichlorobenzene-d4	12.01	0.00	152	178147	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	Dibromofluoromethane	5.78	0.00	0.00	113	162540	12.64	126	73-122	* narr
1	Toluene-d8	8.20	0.00	0.00	98	442799	10.27	103	65-144	OK
2	4-Bromofluorobenzene	10.87	0.00	0.00	95	149192	8.96	90	68-117	OK

Target Compounds

Final Conc. Units: mg/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Vinyl Chloride				62	0		0.030	U	
1	1,1-Dichloroethene				96	0**d**		0.032	U	
1	2-Butanone (MEK)				72	0**d**		0.76	U	
1	Chloroform				83	0		0.029	U	
1	Carbon Tetrachloride				117	0		0.039	U	
1	Benzene				78	0**d**		0.025	U	
1	1,2-Dichloroethane (EDC)				62	0**d**		0.032	U	
1	Trichloroethene (TCE)				95	0		0.040	U	
2	Tetrachloroethene (PCE)				164	0		0.040	U	
2	Chlorobenzene				112	0		0.044	U	
3	1,4-Dichlorobenzene				146	0		0.048	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\112718\1127F023.D			**Instrument:**	MS27
Acqu Date:	11/27/2018 19:46	**Quant Date:**	12/03/2018 15:07	**Vial:**	20
Run Type:	SMPL	**ListJoinID:**	LJ1012	**Dilution:**	1.0
Lab ID:	K1811438-001			**Soln Conc. Units:**	PPB

Prep Amount:	125 uL	**Dilution:**	1.0
Prep Final Vol:	50 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st LM 12/07/18
2nd 12/08/18

Data File : J:\MS27\DATA\112718\1127F023.D Vial: 20
Acq On : 27 Nov 2018 7:46 pm Operator: LM
Sample : 400X K11438-001 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 03 14:53:11 2018 Quant Results File: 110818MS27_8260.RES

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.52	96	497971	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	202014	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	178147	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.78	113	162540	12.64	PPB	0.00
Spiked Amount 10.000			Recovery =	126.40%		
46) 1,2-Dichloroethane-d4	6.20	65	147035	11.42	PPB	0.00
Spiked Amount 10.000			Recovery =	114.20%		
61) Toluene-d8	8.20	98	442799	10.27	PPB	0.00
Spiked Amount 10.000			Recovery =	102.70%		
83) 4-Bromofluorobenzene	10.87	95	149192	8.96	PPB	0.00
Spiked Amount 10.000			Recovery =	89.60%		
Target Compounds						Qvalue
3) Chloromethane	1.32	50	1858	0.10	PPB	87
13) Acetone	2.75	43	20702	10.29	PPB	99
18) Methyl Acetate	3.13	43	4776	0.74	PPB	87
20) Methylene Chloride	3.25	84	2520	0.17	PPB	93

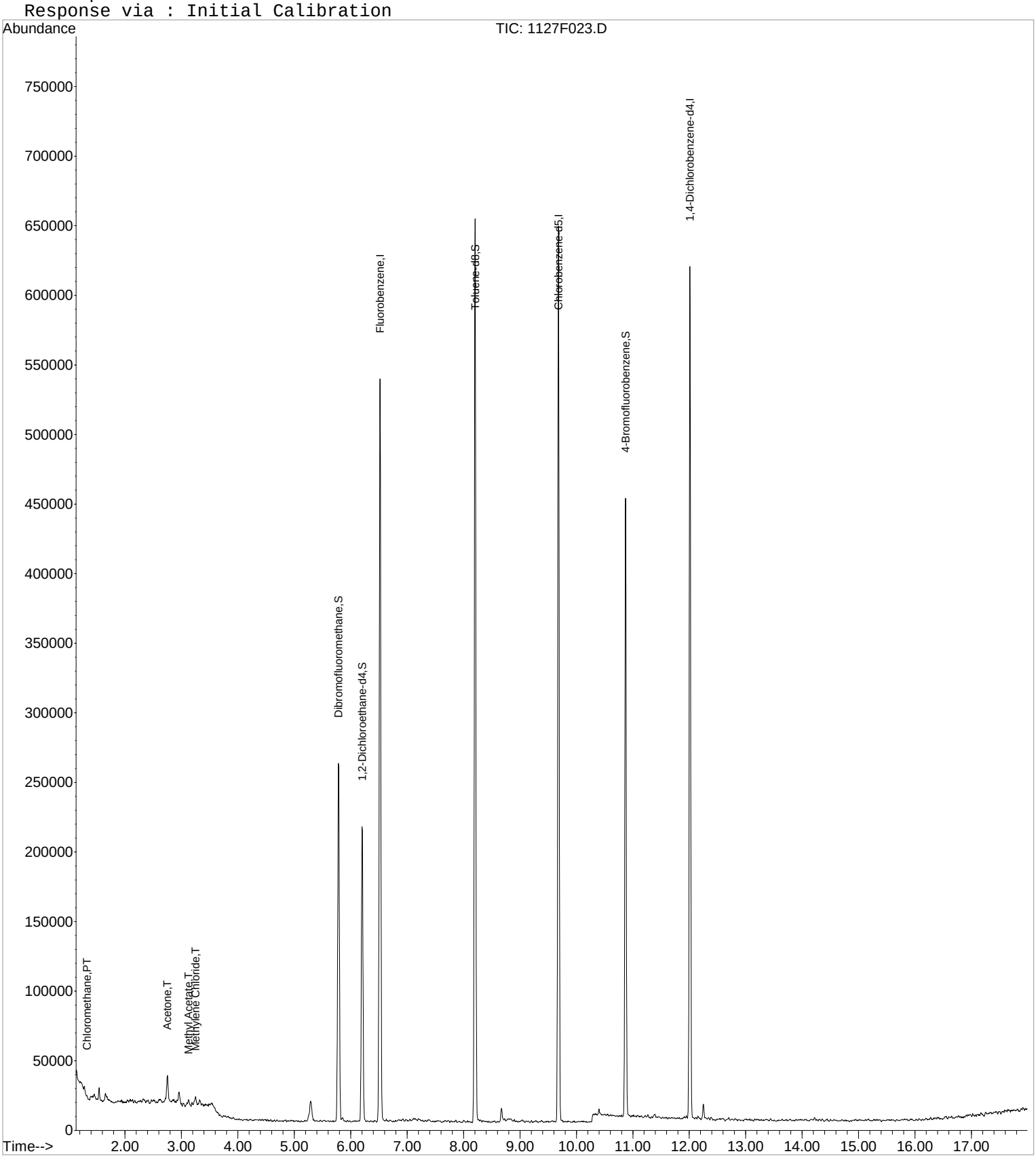
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

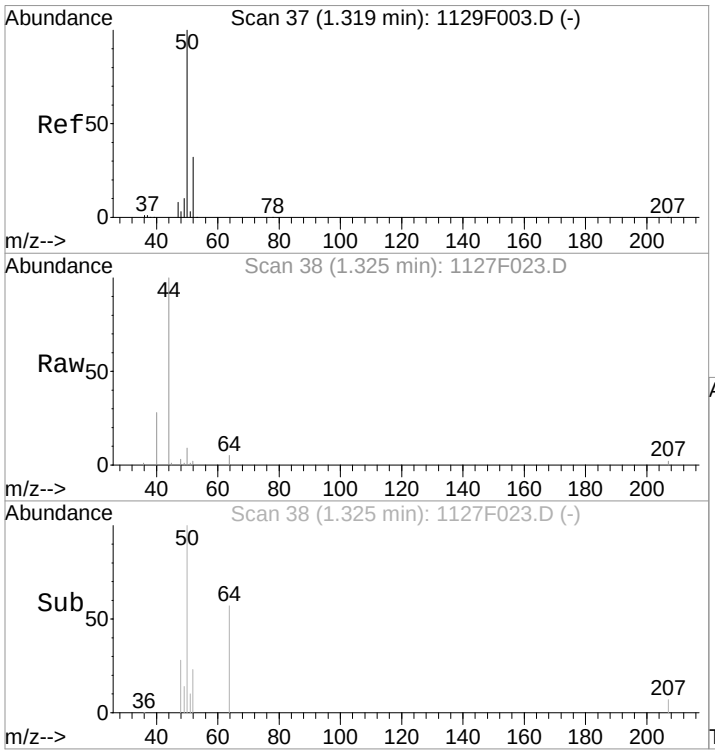
1st LM 12/07/18
2nd 12/08/18

Data File : J:\MS27\DATA\112718\1127F023.D Vial: 20
Acq On : 27 Nov 2018 7:46 pm Operator: LM
Sample : 400X K11438-001 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 3 15:07 2018 Quant Results File: 110818MS27_8260.RES

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration



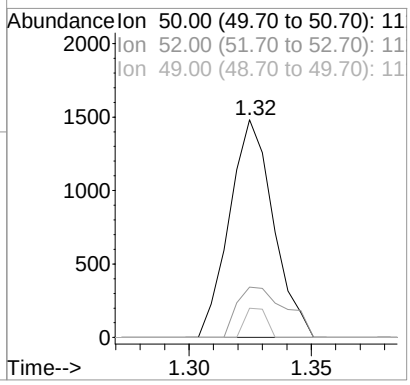
1st LM 12/07/18
2nd 12/08/18

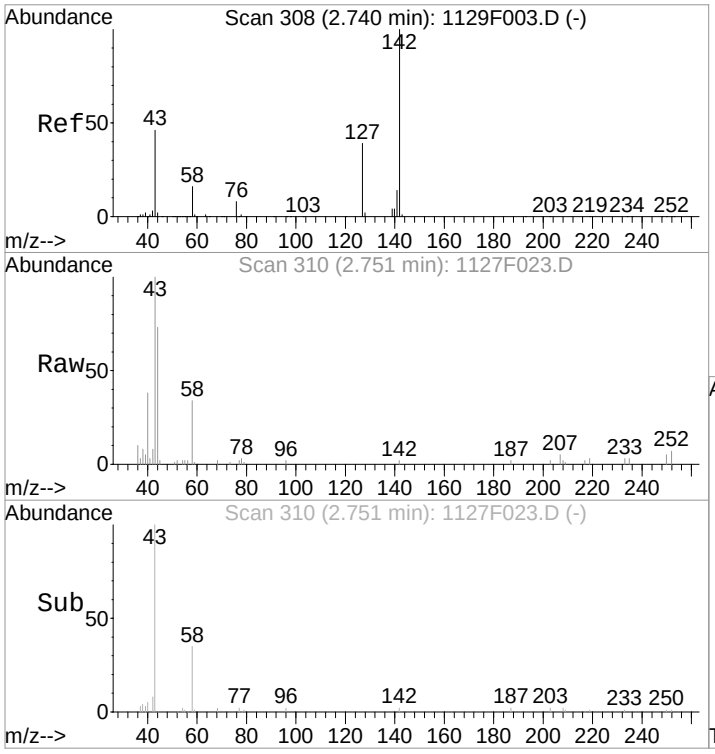


#3
Chloromethane
Concen: 0.10 PPB
RT: 1.32 min Scan# 38
Delta R.T. 0.00 min
Lab File: 1127F023.D
Acq: 27 Nov 2018 7:46 pm

Tgt Ion: 50 Resp: 1858

Ion	Ratio	Lower	Upper
50	100		
52	23.1	0.9	60.9
49	13.5	0.0	40.1

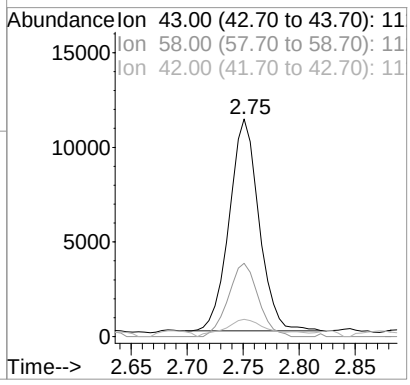




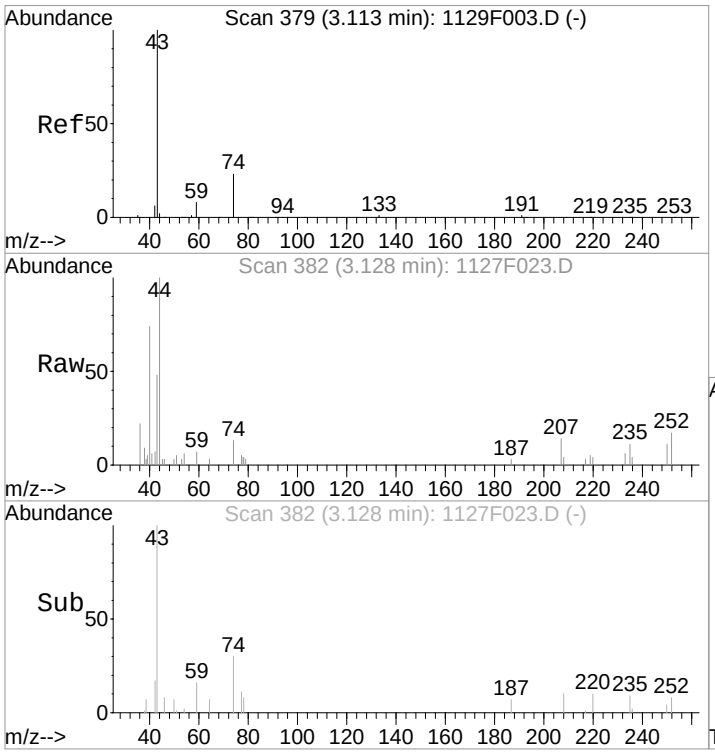
#13
Acetone
Concen: 10.29 PPB
RT: 2.75 min Scan# 310
Delta R.T. 0.00 min
Lab File: 1127F023.D
Acq: 27 Nov 2018 7:46 pm

Tgt Ion: 43 Resp: 20702

Ion	Ratio	Lower	Upper
43	100		
58	34.6	5.0	65.0
42	6.0	0.0	37.3



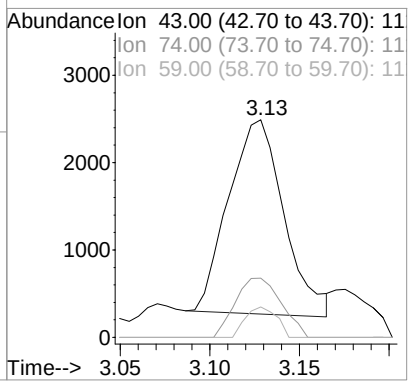
1st LM 12/07/18
2nd 12/08/18

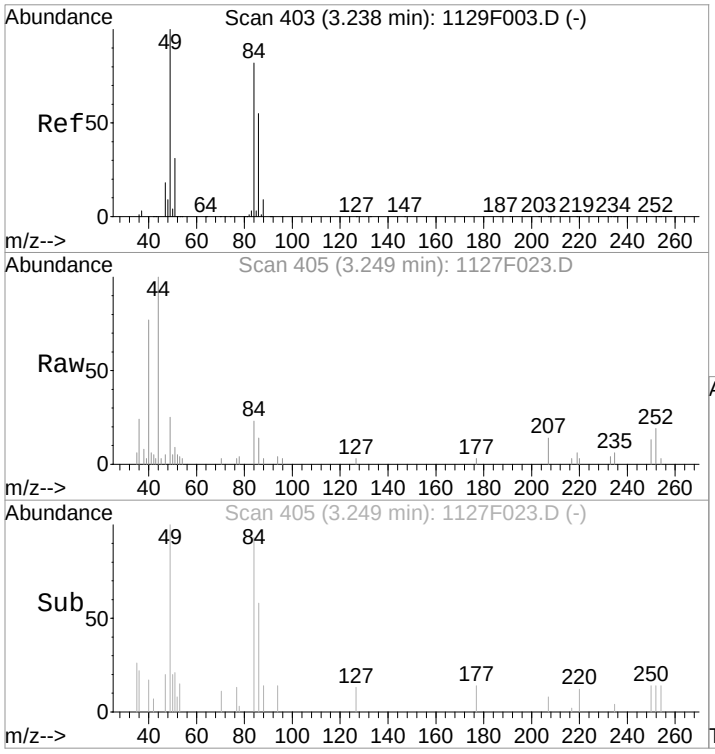


#18
Methyl Acetate
Concen: 0.74 PPB
RT: 3.13 min Scan# 382
Delta R.T. 0.01 min
Lab File: 1127F023.D
Acq: 27 Nov 2018 7:46 pm

Tgt Ion: 43 Resp: 4776

Ion	Ratio	Lower	Upper
43	100		
74	31.0	0.0	56.0
59	16.0	0.0	38.0

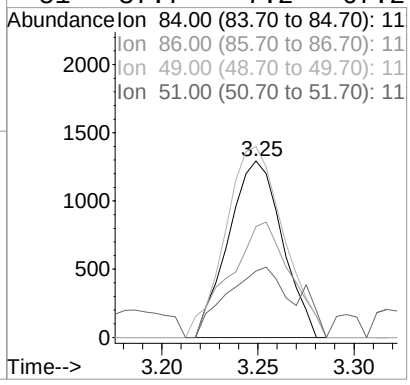




#20
Methylene Chloride
Concen: 0.17 PPB
RT: 3.25 min Scan# 405
Delta R.T. -0.00 min
Lab File: 1127F023.D
Acq: 27 Nov 2018 7:46 pm

Tgt Ion: 84 Resp: 2520

Ion	Ratio	Lower	Upper
84	100		
86	62.8	36.4	96.4
49	108.0	90.5	150.5
51	37.7	7.2	67.2



1st LM 12/07/18
2nd 12/08/18

Exception Report

Data File: J:\MS27\DATA\112718\1127F024.D
Lab ID: K1811438-002
RunType: SMPL
Matrix: SOIL

Date Acquired: 11/27/2018 20:08
Date Quantitated: 12/03/2018 15:11
Batch ID: KWG1806328
Analysis Method: 8260C
ListJoinID: LJ1012

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail	
Tune Window	NA	NA	NA	x		
Analytical Holding Time	NA	NA	NA	x		
Preparation Holding Time	NA	NA	NA	x		
Pre-Preparation Holding Time	NA	NA	NA	x		
ICAL Pass/Fail	NA	NA	NA	x		
ICAL Analyte Recovery	NA	NA	NA	x		
Initial Calibration Minimum RF	NA	NA	NA	x		
Initial Calibration SPCC/CCC	NA	NA	NA	x		
Second Source ICAL Verification	NA	NA	NA	x		
Calibration Verification Pass/Fail	NA	NA	NA	x		
Continuing Calibration Recovery	NA	NA	NA	x		
Continuing Calibration Minimum RF	NA	NA	NA	x		
Continuing Calibration SPCC/CCC	NA	NA	NA	x		
Method Blank	NA	NA	NA	x		
MB Surrogate Recovery	NA	NA	NA	x		
Lab Control Spike	NA	NA	NA	x		
Internal Standards	NA	NA	NA	x		
Surrogates	NA	NA	NA		x	narr
Analyte Co-elution	NA	NA	NA	x		
Retention Time	NA	NA	NA	x		
Relative Retention Time	NA	NA	NA	x		
Below Lowest ICAL Level	NA	NA	NA	x		
Std MRL Unsupported by ICAL	NA	NA	NA	x		
Above Highest ICAL Level	NA	NA	NA	x		
Enviroquant/Stealth Calibration Check	NA	NA	NA	x		
Overdiluted Analysis	NA	NA	NA	x		

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Dibromofluoromethane	125	73	122	narr

Primary Review: _____

Secondary Review: _____

1st LM 12/07/18
2nd 12/08/18

Quantitation Report

Data File:	J:\MS27\DATA\112718\1127F024.D			**Instrument:**	MS27
Acqu Date:	11/27/2018 20:08	**Quant Date:**	12/03/2018 15:11	**Vial:**	21
Run Type:	SMPL	**ListJoinID:**	LJ1012	**Dilution:**	1.0
Lab ID:	K1811438-002			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8260C VOC TCLP	**Collect Date:**	11/16/2018	**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806328	**Prep Lot:**	KWG1806352	**Report Group:**	K1811438
Analysis Method:	8260C	**Prep Method:**	EPA 5035A/5030B	**Pre-Prep Meth:**	EPA 1311
Prep Ref:	1705834	**Prep Date:**	11/27/2018	**Pre-Prep Date:**	11/26/2018

Quant Method:	J:\MS27\METHODS\110818MS27_8	**Calibration ID:**	CAL15885
Title:	Volatile Organic Compounds	**Report List ID:**	LJ1012
Tune Ref:	J:\MS27\DATA\112718\1127F004.D	**Method ID:**	MJ181
MB Ref:	J:\MS27\DATA\112718\1127F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.52	0.01	96	507823	10.00	OK
2	Chlorobenzene-d5	9.68	0.00	82	209769	10.00	OK
3	1,4-Dichlorobenzene-d4	12.01	0.00	152	184631	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	Dibromofluoromethane	5.78	0.00	0.00	113	164189	12.52	125	73-122	* narr
1	Toluene-d8	8.20	0.00	0.00	98	455145	10.35	104	65-144	OK
2	4-Bromofluorobenzene	10.87	0.00	0.00	95	152291	8.81	88	68-117	OK

Target Compounds

Final Conc. Units: mg/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Vinyl Chloride				62	0		0.030	U	
1	1,1-Dichloroethene				96	0		0.032	U	
1	2-Butanone (MEK)				72	0**d**		0.76	U	
1	Chloroform				83	0		0.029	U	
1	Carbon Tetrachloride				117	0		0.039	U	
1	Benzene				78	0**d**		0.025	U	
1	1,2-Dichloroethane (EDC)				62	0**d**		0.032	U	
1	Trichloroethene (TCE)				95	0		0.040	U	
2	Tetrachloroethene (PCE)				164	0		0.040	U	
2	Chlorobenzene				112	0		0.044	U	
3	1,4-Dichlorobenzene				146	0		0.048	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\112718\1127F024.D			**Instrument:**	MS27
Acqu Date:	11/27/2018 20:08	**Quant Date:**	12/03/2018 15:11	**Vial:**	21
Run Type:	SMPL	**ListJoinID:**	LJ1012	**Dilution:**	1.0
Lab ID:	K1811438-002			**Soln Conc. Units:**	PPB

Prep Amount:	125 uL	**Dilution:**	1.0
Prep Final Vol:	50 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st LM 12/07/18
2nd 12/08/18

Data File : J:\MS27\DATA\112718\1127F024.D Vial: 21
Acq On : 27 Nov 2018 8:08 pm Operator: LM
Sample : 400X K11438-002 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 03 14:58:40 2018 Quant Results File: 110818MS27_8260.RES

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.52	96	507823	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	209769	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	184631	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.78	113	164189	12.52	PPB	0.00
Spiked Amount 10.000			Recovery =	125.20%		
46) 1,2-Dichloroethane-d4	6.20	65	154270	11.75	PPB	0.00
Spiked Amount 10.000			Recovery =	117.50%		
61) Toluene-d8	8.20	98	455145	10.35	PPB	0.00
Spiked Amount 10.000			Recovery =	103.50%		
83) 4-Bromofluorobenzene	10.87	95	152291	8.81	PPB	0.00
Spiked Amount 10.000			Recovery =	88.10%		
Target Compounds						Qvalue
13) Acetone	2.76	43	16086	7.84	PPB	94
18) Methyl Acetate	3.12	43	5496	0.83	PPB	96

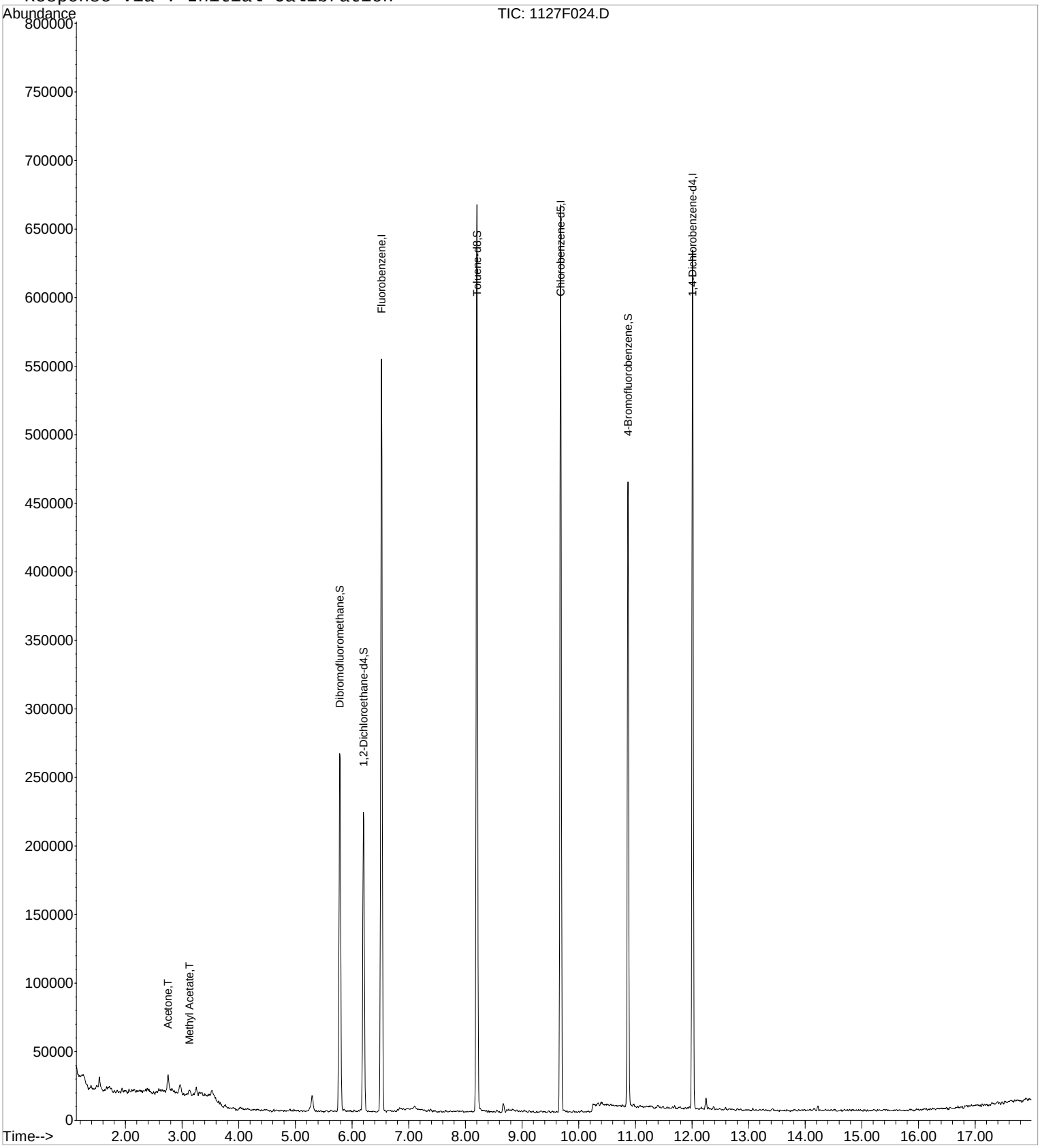
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

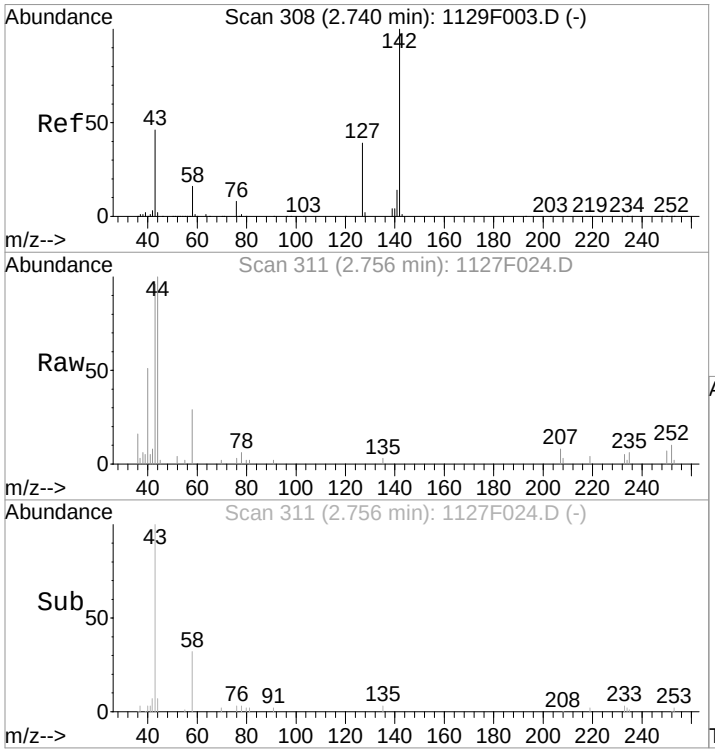
1st LM 12/07/18
2nd 12/08/18

Data File : J:\MS27\DATA\112718\1127F024.D Vial: 21
Acq On : 27 Nov 2018 8:08 pm Operator: LM
Sample : 400X K11438-002 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 3 15:11 2018 Quant Results File: 110818MS27_8260.RES

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration



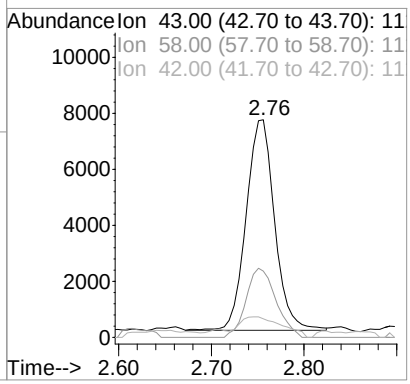
1st LM 12/07/18
2nd 12/08/18

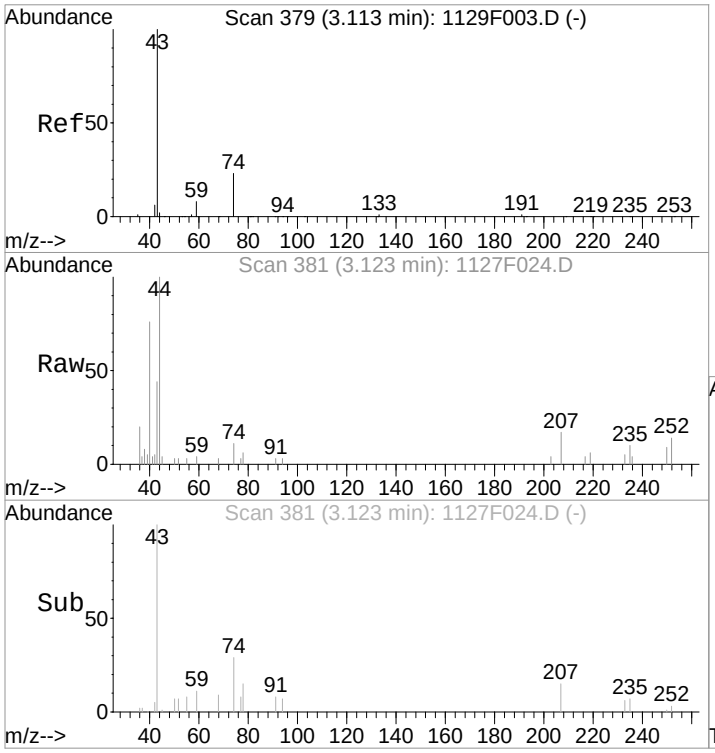


#13
Acetone
Concen: 7.84 PPB
RT: 2.76 min Scan# 311
Delta R.T. 0.01 min
Lab File: 1127F024.D
Acq: 27 Nov 2018 8:08 pm

Tgt Ion: 43 Resp: 16086

Ion	Ratio	Lower	Upper
43	100		
58	31.5	5.0	65.0
42	6.1	0.0	37.3

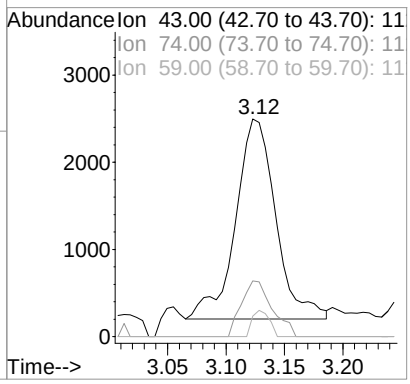




#18
Methyl Acetate
Concen: 0.83 PPB
RT: 3.12 min Scan# 381
Delta R.T. 0.00 min
Lab File: 1127F024.D
Acq: 27 Nov 2018 8:08 pm

Tgt Ion: 43 Resp: 5496

Ion	Ratio	Lower	Upper
43	100		
74	27.8	0.0	56.0
59	10.3	0.0	38.0



1st LM 12/07/18
2nd 12/08/18

Exception Report

Data File: J:\MS27\DATA\112718\1127F015.D
Lab ID: KWG1806352-2
RunType: MB
Matrix: SOIL

Date Acquired: 11/27/2018 16:50
Date Quantitated: 12/03/2018 14:33
Batch ID: KWG1806328
Analysis Method: 8260C
MethodJoinID: MJ181

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA		x
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	Isobutyl Alcohol	0.0035	0.01	NA	NT
	1,4-Dioxane	0.0011	0.01	NA	
Second Source ICAL Verification	Isobutyl Alcohol	38.5	NA	30	
	1,4-Dioxane	3291.1	NA	30	
Continuing Calibration Recovery	Vinyl Acetate	-21.2	NA	20	
	Chloroprene	-39.3	NA	20	
	2-Chloroethyl Vinyl Ether	-32.5	NA	20	
Continuing Calibration Minimum RF	Isobutyl Alcohol	0.0040	0.01	NA	
	1,4-Dioxane	0.0016	0.01	NA	
Surrogates	Dibromofluoromethane	123	73	122	narr
Std MRL Unsupported by ICAL	Acetonitrile	8.0	5.2	NA	NT
	n-Hexane	0.040	0.036	NA	
	Ethyl Acetate	0.40	0.23	NA	

Primary Review: _____

Secondary Review: _____

1st LM 12/07/18
2nd 12/08/18

Quantitation Report

Data File:	J:\MS27\DATA\112718\1127F015.D			**Instrument:**	MS27
Acqu Date:	11/27/2018 16:50	**Quant Date:**	12/03/2018 14:33	**Vial:**	12
Run Type:	MB	**MethodJoinID:**	MJ181	**Dilution:**	1.0
Lab ID:	KWG1806352-2			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8260C VOC TCLP	**Collect Date:**		**Receive Date:**	12/06/2018

Analysis Lot:	KWG1806328	**Prep Lot:**	KWG1806352	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5035A/5030B	**Pre-Prep Meth:**	EPA 1311
Prep Ref:	1705839	**Prep Date:**	11/27/2018	**Pre-Prep Date:**	11/26/2018

Quant Method:	J:\MS27\METHODS\110818MS27_8	**Calibration ID:**	CAL15885
Title:			
Tune Ref:	J:\MS27\DATA\112718\1127F004.D	**Method ID:**	MJ181
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.52	0.01	96	544058	10.00	OK
2	Chlorobenzene-d5	9.68	0.00	82	221961	10.00	OK
3	1,4-Dichlorobenzene-d4	12.01	0.00	152	199000	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.78	0.00	0.00	113	173355	12.34	123	73-122	*	
1	1,2-Dichloroethane-d4	6.20	0.00	0.00	65	158316	11.25	113	59-127	OK	
1	Toluene-d8	8.20	0.00	0.00	98	484065	10.28	103	65-144	OK	
2	4-Bromofluorobenzene	10.87	0.00	0.00	95	166412	9.10	91	68-117	OK	

Target Compounds

Final Conc. Units: mg/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane				85	0		0.052	U	
1	Chloromethane				50	0**d**		0.028	U	
1	Vinyl Chloride				62	0		0.030	U	
1	Bromomethane				96	0**d**		0.064	U	
1	Chloroethane				64	0		0.064	U	
1	Dichlorofluoromethane (CFC 21)				67	0		0.026	U	
1	Trichlorofluoromethane				101	0		0.048	U	
1	Ethyl Ether				59	0		0.030	U	
1	Acrolein				56	0**d**		0.48	U	
1	Trichlorotrifluoroethane				151	0		0.052	U	
1	1,1-Dichloroethene				96	0**d**		0.032	U	
1	Acetone	2.75	0.01	0.00	43	22961	10.44	4.18	J	
1	Iodomethane				142	0		0.048	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\112718\1127F015.D			**Instrument:**	MS27
Acqu Date:	11/27/2018 16:50	**Quant Date:**	12/03/2018 14:33	**Vial:**	12
Run Type:	MB	**MethodJoinID:**	MJ181	**Dilution:**	1.0
Lab ID:	KWG1806352-2			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: mg/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Carbon Disulfide				76	0**d**		0.028	U	
1	3-Chloro-1-propene				76	0**d**		0.038	U	
1	Acetonitrile				40	0**d**		5.2	U	
1	Methylene Chloride				84	0**d**		0.040	U	
1	Acrylonitrile				53	0**d**		0.22	U	
1	Methyl tert-Butyl Ether				73	0		0.044	U	
1	trans-1,2-Dichloroethene				96	0**d**		0.029	U	
1	n-Hexane				57	0		0.036	U	
1	1,1-Dichloroethane				63	0		0.031	U	
1	Vinyl Acetate				86	0		0.18	U	
1	Chloroprene				53	0		1.5	U	
1	2,2-Dichloropropane				77	0		0.026	U	
1	cis-1,2-Dichloroethene				96	0		0.027	U	
1	2-Butanone (MEK)				72	0**d**		0.76	U	
1	Ethyl Acetate				61	0**d**		0.23	U	
1	Propionitrile				54	0		0.44	U	
1	Methacrylonitrile				67	0		0.14	U	
1	Bromochloromethane				128	0		0.064	U	
1	Tetrahydrofuran				71	0		0.038	U	
1	Chloroform				83	0		0.029	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.030	U	
1	Carbon Tetrachloride				117	0		0.039	U	
1	1,1-Dichloropropene				75	0		0.036	U	
1	Isobutyl Alcohol				42	0		2.8	U	
1	Benzene				78	0**d**		0.025	U	
1	1,2-Dichloroethane (EDC)				62	0**d**		0.032	U	
1	Trichloroethene (TCE)				95	0		0.040	U	
1	1,2-Dichloropropane				63	0		0.038	U	
1	Dibromomethane				93	0		0.060	U	
1	Methyl Methacrylate				69	0		0.052	U	
1	1,4-Dioxane				88	0		5.6	U	
1	Bromodichloromethane				83	0		0.037	U	
1	2-Nitropropane				41	0**d**		0.39	U	
1	2-Chloroethyl Vinyl Ether				63	0		0.064	U	
1	cis-1,3-Dichloropropene				75	0		0.072	U	
1	4-Methyl-2-pentanone (MIBK)				58	0**d**		1.1	U	
1	Toluene				92	0		0.022	U	
2	trans-1,3-Dichloropropene				75	0		0.028	U	
2	Ethyl Methacrylate				69	0**d**		0.060	U	
2	1,1,2-Trichloroethane				83	0		0.056	U	
2	Tetrachloroethene (PCE)				164	0		0.040	U	
2	2-Hexanone				57	0		1.1	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st LM 12/07/18

2nd 12/08/18

Data File:	J:\MS27\DATA\112718\1127F015.D			**Instrument:**	MS27
Acqu Date:	11/27/2018 16:50	**Quant Date:**	12/03/2018 14:33	**Vial:**	12
Run Type:	MB	**MethodJoinID:**	MJ181	**Dilution:**	1.0
Lab ID:	KWG1806352-2			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: mg/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	1,3-Dichloropropane				76	0		0.056	U	
2	Dibromochloromethane				129	0		0.056	U	
2	1,2-Dibromoethane (EDB)				107	0		0.040	U	
2	1-Chlorohexane				91	0**d**		0.024	U	
2	Chlorobenzene				112	0		0.044	U	
2	Ethylbenzene				106	0		0.020	U	
2	1,1,1,2-Tetrachloroethane				131	0		0.044	U	
2	m,p-Xylenes				106	0		0.044	U	
2	o-Xylene				106	0		0.030	U	
2	Styrene				103	0		0.036	U	
2	Bromoform				173	0		0.064	U	
2	Isopropylbenzene				105	0		0.021	U	
2	cis-1,4-Dichloro-2-butene				89	0		0.56	U	
3	1,1,2,2-Tetrachloroethane				83	0		0.064	U	
3	trans-1,4-Dichloro-2-butene				53	0		0.14	U	
3	Bromobenzene				156	0		0.048	U	
3	n-Propylbenzene				91	0		0.022	U	
3	1,2,3-Trichloropropane				110	0		0.080	U	
3	2-Chlorotoluene				91	0		0.040	U	
3	1,3,5-Trimethylbenzene				105	0		0.036	U	
3	4-Chlorotoluene				91	0		0.052	U	
3	tert-Butylbenzene				119	0		0.024	U	
3	1,2,4-Trimethylbenzene				105	0		0.028	U	
3	sec-Butylbenzene				105	0		0.025	U	
3	4-Isopropyltoluene				119	0		0.024	U	
3	1,3-Dichlorobenzene				146	0		0.040	U	
3	1,4-Dichlorobenzene				146	0		0.048	U	
3	n-Butylbenzene				91	0**d**		0.022	U	
3	1,2-Dichlorobenzene				146	0		0.048	U	
3	1,2-Dibromo-3-chloropropane				155	0		0.088	U	
3	1,3,5-Trichlorobenzene				180	0**d**		0.040	U	
3	1,2,4-Trichlorobenzene				180	0		0.039	U	
3	Hexachlorobutadiene				225	0		0.044	U	
3	Naphthalene				128	0**d**		0.036	U	
3	1,2,3-Trichlorobenzene				180	0		0.044	U	

Prep Amount:	125 uL	**Dilution:**	1.0
Prep Final Vol:	50 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st LM 12/07/18
2nd 12/08/18

Data File : J:\MS27\DATA\112718\1127F015.D Vial: 12
Acq On : 27 Nov 2018 4:50 pm Operator: LM
Sample : 400X K11381/1438 MB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 03 14:23:44 2018 Quant Results File: 110818MS27_8260.RES

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.52	96	544058	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	221961	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	199000	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.78	113	173355	12.34	PPB	0.00
Spiked Amount 10.000			Recovery =	123.40%		
46) 1,2-Dichloroethane-d4	6.20	65	158316	11.25	PPB	0.00
Spiked Amount 10.000			Recovery =	112.50%		
61) Toluene-d8	8.20	98	484065	10.28	PPB	0.00
Spiked Amount 10.000			Recovery =	102.80%		
83) 4-Bromofluorobenzene	10.87	95	166412	9.10	PPB	0.00
Spiked Amount 10.000			Recovery =	91.00%		
Target Compounds						Qvalue
13) Acetone	2.75	43	22961	10.44	PPB	97
16) 2-Propanol (Isopropyl Alco	2.97	45	11556	31.81	PPB	54
18) Methyl Acetate	3.12	43	4427	0.63	PPB	92

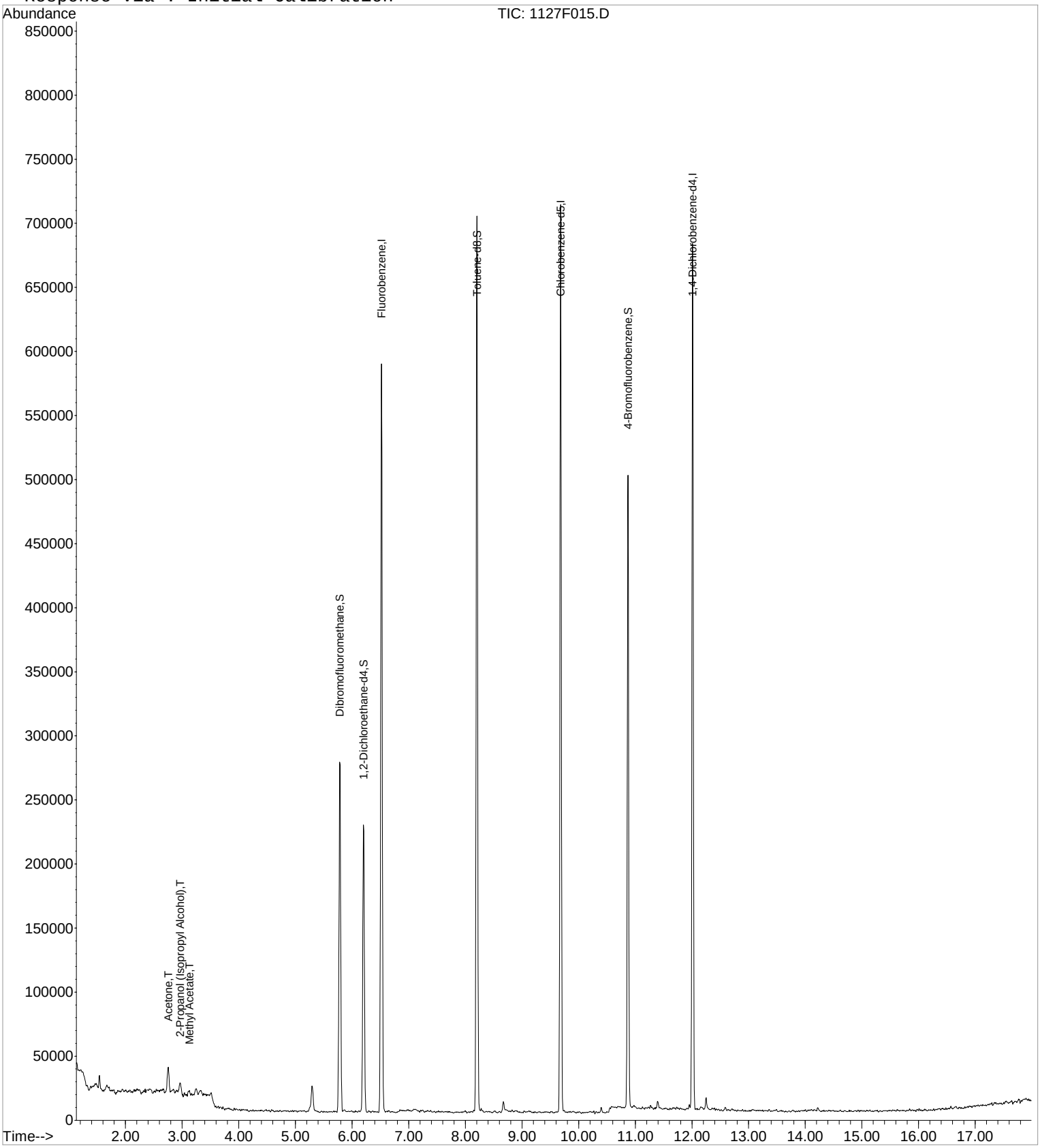
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

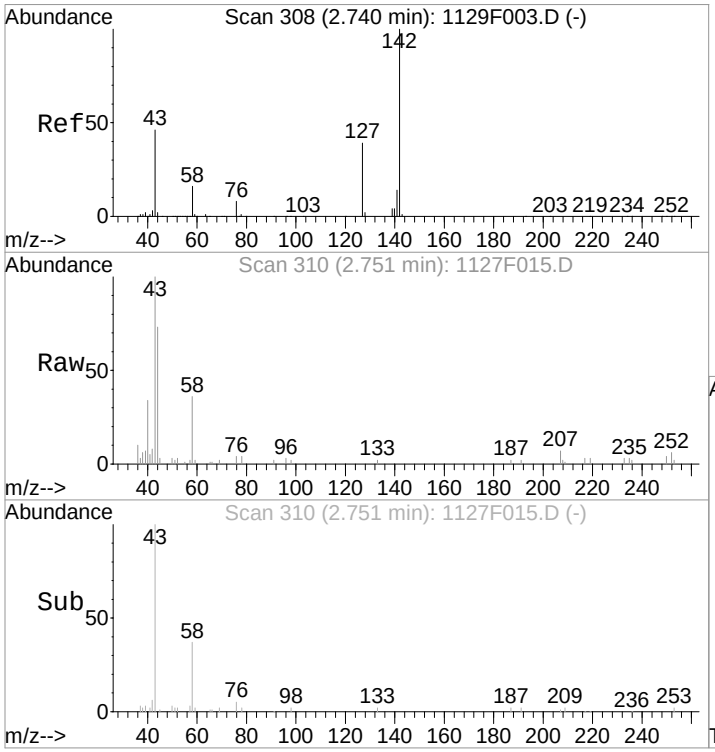
1st LM 12/07/18
2nd 12/08/18

Data File : J:\MS27\DATA\112718\1127F015.D Vial: 12
Acq On : 27 Nov 2018 4:50 pm Operator: LM
Sample : 400X K11381/1438 MB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 3 14:33 2018 Quant Results File: 110818MS27_8260.RES

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration



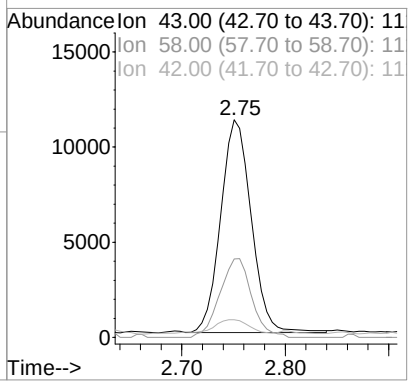
1st LM 12/07/18
2nd 12/08/18

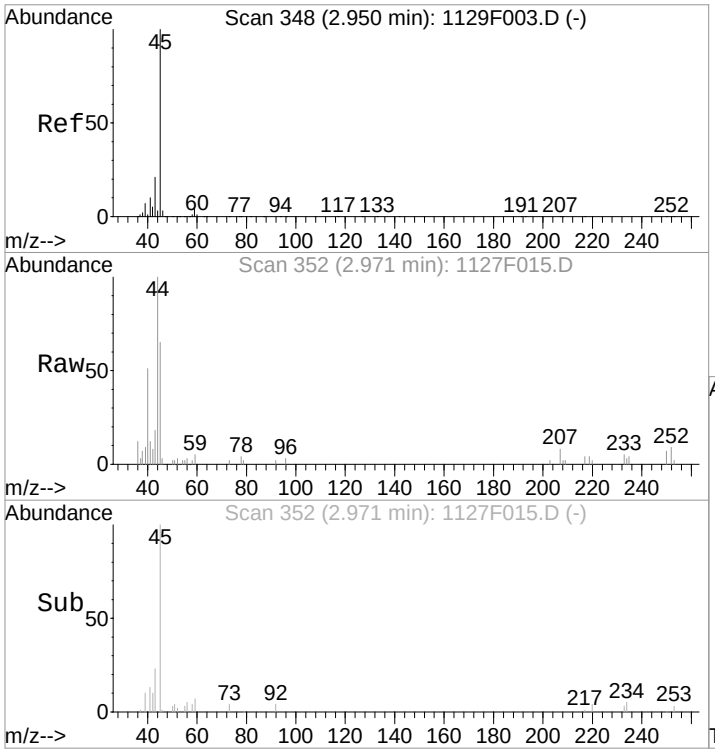


#13
Acetone
Concen: 10.44 PPB
RT: 2.75 min Scan# 310
Delta R.T. 0.00 min
Lab File: 1127F015.D
Acq: 27 Nov 2018 4:50 pm

Tgt Ion: 43 Resp: 22961

Ion	Ratio	Lower	Upper
43	100		
58	36.8	5.0	65.0
42	6.4	0.0	37.3

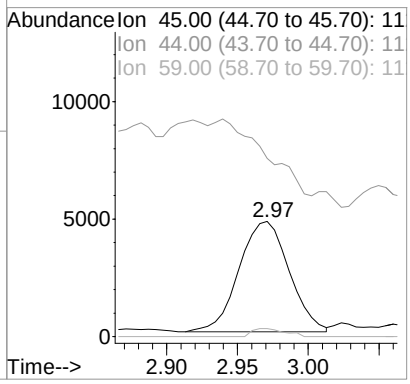




#16
2-Propanol (Isopropyl Alcohol)
Concen: 31.81 PPB
RT: 2.97 min Scan# 352
Delta R.T. 0.01 min
Lab File: 1127F015.D
Acq: 27 Nov 2018 4:50 pm

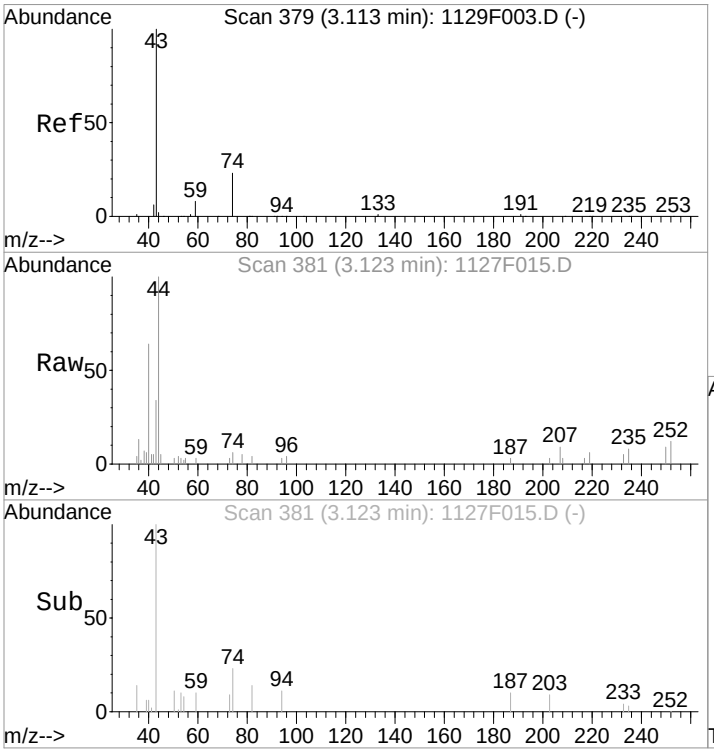
Tgt Ion: 45 Resp: 11556

Ion	Ratio	Lower	Upper
45	100		
44	30.0	0.0	35.4
59	7.4	0.0	34.1



1st LM 12/07/18

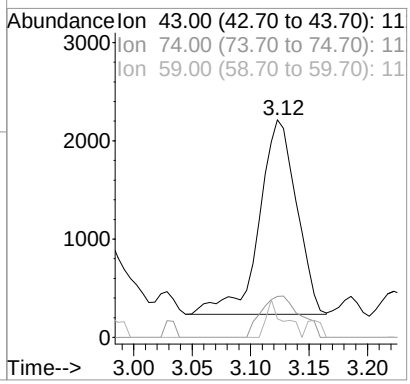
2nd 12/08/18



#18
Methyl Acetate
Concen: 0.63 PPB
RT: 3.12 min Scan# 381
Delta R.T. 0.00 min
Lab File: 1127F015.D
Acq: 27 Nov 2018 4:50 pm

Tgt Ion: 43 Resp: 4427

Ion	Ratio	Lower	Upper
43	100		
74	21.1	0.0	56.0
59	9.6	0.0	38.0



1st LM 12/07/18
2nd 12/08/18

Exception Report

Data File: J:\MS27\DATA\112718\1127F006.D
Lab ID: KWG1806329-3
RunType: LCS
Matrix: WATER

Date Acquired: 11/27/2018 11:33
Date Quantitated: 12/03/2018 13:38
Batch ID: KWG1806328
Analysis Method: 8260C
MethodJoinID: MJ119

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA		x
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	2-Propanol	0.0067	0.01	NA	NT
	Isobutyl Alcohol	0.0035	0.01	NA	
	1,4-Dioxane	0.0011	0.01	NA	
Second Source ICAL Verification	Isobutyl Alcohol	38.5	NA	30	
	1,4-Dioxane	3291.1	NA	30	
Continuing Calibration Recovery	Dichlorodifluoromethane	31.0	NA	20	CCVOK
	tert-Butyl Alcohol	28.8	NA	20	NT
	Vinyl Acetate	-21.2	NA	20	
	Chloroprene	-39.3	NA	20	
	1,4-Dioxane	43.5	NA	20	
	2-Chloroethyl Vinyl Ether	-32.5	NA	20	
	Styrene	23.3	NA	20	CCVOK
Continuing Calibration Minimum RF	2-Propanol	0.0084	0.01	NA	NT

Primary Review: _____

Secondary Review: _____

1st LM 12/07/18
2nd 12/08/18

Exception Report

Data File: J:\MS27\DATA\112718\1127F006.D
Lab ID: KWG1806329-3
RunType: LCS
Matrix: WATER

Date Acquired: 11/27/2018 11:33
Date Quantitated: 12/03/2018 13:38
Batch ID: KWG1806328
Analysis Method: 8260C
MethodJoinID: MJ119

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	Isobutyl Alcohol	0.0040	0.01	NA	NT
	1,4-Dioxane	0.0016	0.01	NA	NT

Primary Review: _____

Secondary Review: _____

1st LM 12/07/18
2nd 12/08/18

Quantitation Report

Data File:	J:\MS27\DATA\112718\1127F006.D			**Instrument:**	MS27
Acqu Date:	11/27/2018 11:33	**Quant Date:**	12/03/2018 13:38	**Vial:**	4
Run Type:	LCS	**MethodJoinID:**	MJ119	**Dilution:**	1.0
Lab ID:	KWG1806329-3			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	12/06/2018

Analysis Lot:	KWG1806328	**Prep Lot:**	KWG1806329	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1705750	**Prep Date:**	11/27/2018		

Quant Method:	J:\MS27\METHODS\110818MS27_8	**Calibration ID:**	CAL15885
Title:			
Tune Ref:	J:\MS27\DATA\112718\1127F004.D	**Method ID:**	MJ119
MB Ref:	J:\MS27\DATA\112718\1127F012.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.51	0.00	96	661818	10.00	OK
2	Chlorobenzene-d5	9.68	0.00	82	269787	10.00	OK
3	1,4-Dichlorobenzene-d4	12.01	0.00	152	279580	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.78	0.00	0.00	113	180875	10.58	106	73-122	OK	
1	1,2-Dichloroethane-d4	6.20	0.00	0.00	65	167718	9.80	98	59-127	OK	
1	Toluene-d8	8.20	0.00	0.00	98	629696	10.99	110	65-144	OK	
2	4-Bromofluorobenzene	10.87	0.00	0.00	95	236394	10.64	106	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.16		0.00	85	171404	9.46	9.46		
1	Chloromethane	1.32		0.00	50	211705	8.42	8.42		
1	Vinyl Chloride	1.41		0.00	62	198465	9.47	9.47		
1	Bromomethane	1.70	-0.01	0.00	96	111706	7.59	7.59		
1	Chloroethane	1.80		0.00	64	123396	9.42	9.42		
1	Dichlorofluoromethane (CFC 21)	2.02		0.00	67	225642	7.36	7.36		
1	Trichlorofluoromethane	2.01		0.00	101	214225	7.95	7.95		
1	Ethyl Ether	2.33		0.00	59	128864	12.39	12.4		
1	Acrolein	2.55		0.00	56	196921	83.53	83.5		
1	Trichlorotrifluoroethane	2.53		0.00	151	133685	10.92	10.9		
1	1,1-Dichloroethene	2.56		0.00	96	145005	8.78	8.78		
1	Acetone	2.74		0.00	43	91817	34.32	34.3		
1	Iodomethane	2.74		0.00	142	784349	32.27	32.3		

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D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\112718\1127F006.D			**Instrument:**	MS27
Acqu Date:	11/27/2018 11:33	**Quant Date:**	12/03/2018 13:38	**Vial:**	4
Run Type:	LCS	**MethodJoinID:**	MJ119	**Dilution:**	1.0
Lab ID:	KWG1806329-3			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Carbon Disulfide	2.76		0.00	76	964028	20.38	20.4		
1	2-Propanol	2.95		0.00	45	2718	6.15	17	U	
1	3-Chloro-1-propene	3.03		0.00	76	237668	25.00	25.0		
1	Methyl Acetate	3.11		0.00	43	91058	10.57	10.6		
1	Acetonitrile	3.19		0.00	40	221856	332.60	333		
1	Methylene Chloride	3.24		0.00	84	200678	10.00	10.0		
1	tert-Butyl Alcohol	3.51		0.00	59	95266	96.22	96.2		
1	Acrylonitrile	3.74		0.00	53	190637	43.60	43.6		
1	Methyl tert-Butyl Ether	3.54		0.00	73	449796	11.32	11.3		
1	trans-1,2-Dichloroethene	3.54		0.00	96	179593	9.25	9.25		
1	n-Hexane	3.83		0.00	57	371144	18.01	18.0		
1	Diisopropyl Ether	4.32		0.00	45	923956	16.71	16.7		
1	1,1-Dichloroethane	4.27		0.00	63	336637	10.10	10.1		
1	Vinyl Acetate	4.40		0.00	86	120823	43.05	43.1		
1	Chloroprene	4.34		0.00	53	482441	24.15	24.2		
1	tert-Butyl Ethyl Ether	4.85		0.00	59	824211	19.12	19.1		
1	2,2-Dichloropropane	5.07	0.01	0.00	77	213380	9.57	9.57		
1	cis-1,2-Dichloroethene	5.13		0.00	96	202410	9.72	9.72		
1	2-Butanone (MEK)	5.24		0.00	72	40344	34.32	34.3		
1	Ethyl Acetate	5.28		0.00	61	47739	31.52	31.5		
1	Propionitrile	5.42		0.00	54	49444	31.50	31.5		
1	Methacrylonitrile	5.55		0.00	67	152656	31.64	31.6		
1	Bromochloromethane	5.45		0.00	128	111310	10.57	10.6		
1	Tetrahydrofuran	5.28	-0.19	-0.03	71	1600	1.44	1.44	J	
1	Chloroform	5.57		0.00	83	348268	10.30	10.3		
1	Cyclohexane	5.63		0.00	56	126771	4.37	4.37		
1	1,1,1-Trichloroethane (TCA)	5.69		0.00	97	248010	9.84	9.84		
1	Carbon Tetrachloride	5.83		0.00	117	223670	9.95	9.95		
1	1,1-Dichloropropene	5.90		0.00	75	209770	9.52	9.52		
1	Isobutyl Alcohol	6.26		0.00	42	110754	472.02	472		
1	Benzene	6.14		0.00	78	739602	10.38	10.4		
1	1,2-Dichloroethane (EDC)	6.28		0.00	62	231746	10.73	10.7		
1	tert-Amyl Methyl Ether	6.29		0.00	55	256154	19.43	19.4		
1	Trichloroethene (TCE)	6.90		0.00	95	192711	10.39	10.4		
1	Methylcyclohexane	7.00		0.00	83	90657	3.90	3.90		
1	1,2-Dichloropropane	7.21		0.00	63	199568	10.21	10.2		
1	Dibromomethane	7.34		0.00	93	114815	10.57	10.6		
1	Methyl Methacrylate	7.36		0.00	69	237260	31.67	31.7		
1	1,4-Dioxane	7.36		0.00	88	31748	440.78	441		
1	Bromodichloromethane	7.52		0.00	83	275579	10.99	11.0		
1	2-Nitropropane	7.86		0.00	41	75326	29.37	29.4		
1	2-Chloroethyl Vinyl Ether	7.88		0.00	63	53728	7.55	7.55		

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Data File:	J:\MS27\DATA\112718\1127F006.D			**Instrument:**	MS27
Acqu Date:	11/27/2018 11:33	**Quant Date:**	12/03/2018 13:38	**Vial:**	4
Run Type:	LCS	**MethodJoinID:**	MJ119	**Dilution:**	1.0
Lab ID:	KWG1806329-3			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	cis-1,3-Dichloropropene	7.99		0.00	75	293425	10.91	10.9		
1	4-Methyl-2-pentanone (MIBK)	8.18		0.00	58	112234	29.59	29.6		
1	Toluene	8.27		0.00	92	444413	10.72	10.7		
2	n-Octane	8.33		0.00	85	914	0.1100	0.16	U	
2	trans-1,3-Dichloropropene	8.60		0.00	75	244723	10.50	10.5		
2	Ethyl Methacrylate				69	0**d**		0.15	U	
2	1,1,2-Trichloroethane	8.78		0.00	83	148551	11.11	11.1		
2	Tetrachloroethene (PCE)	8.78		0.00	164	161760	10.03	10.0		
2	2-Hexanone	9.03		0.00	57	34086	29.07	29.1		
2	1,3-Dichloropropane	8.95		0.00	76	272780	10.43	10.4		
2	Dibromochloromethane	9.13		0.00	129	208659	10.76	10.8		
2	1,2-Dibromoethane (EDB)	9.24		0.00	107	156094	10.80	10.8		
2	1-Chlorohexane	9.68		0.00	91	191180	9.76	9.76		
2	Chlorobenzene	9.71	0.01	0.00	112	571410	10.90	10.9		
2	Ethylbenzene	9.79		0.00	106	256494	10.69	10.7		
2	1,1,1,2-Tetrachloroethane	9.81		0.00	131	209157	10.85	10.9		
2	m,p-Xylenes	9.92		0.00	106	647345	19.66	19.7		
2	o-Xylene	10.31		0.00	106	296667	10.73	10.7		
2	Styrene	10.34		0.00	103	315698	12.94	12.9		
2	Bromoform	10.55		0.00	173	130262	10.77	10.8		
2	Isopropylbenzene	10.67		0.00	105	726473	10.17	10.2		
2	cis-1,4-Dichloro-2-butene	10.84		0.00	89	69998	38.08	38.1		
3	1,1,2,2-Tetrachloroethane	11.07		0.00	83	179612	9.27	9.27		
3	trans-1,4-Dichloro-2-butene	11.13		0.00	53	131161	28.50	28.5		
3	Bromobenzene	11.00		0.00	156	254183	10.46	10.5		
3	n-Propylbenzene	11.08		0.00	91	934376	9.93	9.93		
3	1,2,3-Trichloropropane	11.11		0.00	110	50823	9.58	9.58		
3	2-Chlorotoluene	11.18		0.00	91	605568	10.59	10.6		
3	1,3,5-Trimethylbenzene	11.27		0.00	105	669211	10.05	10.1		
3	4-Chlorotoluene	11.30		0.00	91	728876	11.84	11.8		
3	tert-Butylbenzene	11.57		0.00	119	530913	9.58	9.58		
3	1,2,4-Trimethylbenzene	11.64		0.00	105	703406	9.49	9.49		
3	sec-Butylbenzene	11.80		0.00	105	806882	9.01	9.01		
3	4-Isopropyltoluene	11.95		0.00	119	697127	9.24	9.24		
3	1,3-Dichlorobenzene	11.93		0.00	146	488524	10.59	10.6		
3	1,4-Dichlorobenzene	12.03		0.00	146	496841	10.65	10.7		
3	n-Butylbenzene	12.36		0.00	91	620304	10.22	10.2		
3	1,2-Dichlorobenzene	12.40		0.00	146	459863	10.57	10.6		
3	1,2-Dibromo-3-chloropropane	13.22		0.00	155	25589	10.06	10.1		
3	1,3,5-Trichlorobenzene	13.36		0.00	180	347825	10.97	11.0		
3	1,2,4-Trichlorobenzene	14.00		0.00	180	294571	10.00	10.0		
3	Hexachlorobutadiene	14.12		0.00	225	143204	9.59	9.59		

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Data File:	J:\MS27\DATA\112718\1127F006.D			**Instrument:**	MS27
Acqu Date:	11/27/2018 11:33	**Quant Date:**	12/03/2018 13:38	**Vial:**	4
Run Type:	LCS	**MethodJoinID:**	MJ119	**Dilution:**	1.0
Lab ID:	KWG1806329-3			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Naphthalene	14.25		0.00	128	437851	9.93	9.93		
3	1,2,3-Trichlorobenzene	14.50		0.00	180	273450	10.16	10.2		
	Benzyl Chloride				0	0		1.0	U	NR
	Isopropyl Acetate				0	0		20	U	NR
	Cyclohexanone				0	0		1.0	U	NR
	2-Ethoxyethanol				0	0		1.0	U	NR
	Bis(2-chloroethyl) Ether				0	0		20	U	NR
	beta-Pinene				0	0		1.0	U	NR
	1,1,2-Trifluoroethane				0	0		1.0	U	NR
	2,2,4-Trimethylpentane				0	0		1.0	U	NR
	Bis(chloromethyl) Ether				0	0		1.0	U	NR
	Amyl Acetate				0	0		20	U	NR
	Bromoethane				0	0		1.0	U	NR
	Pentachloroethane				0	0		5.0	U	NR
	1,1-Dichloropropane				0	0		1.0	U	NR
	alpha-Pinene				0	0		1.0	U	NR
	1,1,1,2-Tetrafluoroethane				0	0		1.0	U	NR
	Nitrobenzene				0	0		20	U	NR

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

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c: check for co-elution

Quantitation Report (QT Reviewed)

1st LM 12/07/18
2nd 12/08/18

Data File : J:\MS27\DATA\112718\1127F006.D Vial: 4
Acq On : 27 Nov 2018 11:33 am Operator: LM
Sample : LCS Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 03 13:09:36 2018 Quant Results File: 110818MS27_8260.RES

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.51	96	661818	10.00	PPB		0.00
63) Chlorobenzene-d5	9.68	82	269787	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	279580	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	5.78	113	180875	10.58	PPB		0.00
Spiked Amount 10.000			Recovery =	105.80%			
46) 1,2-Dichloroethane-d4	6.20	65	167718	9.80	PPB		0.00
Spiked Amount 10.000			Recovery =	98.00%			
61) Toluene-d8	8.20	98	629696	10.99	PPB		0.00
Spiked Amount 10.000			Recovery =	109.90%			
83) 4-Bromofluorobenzene	10.87	95	236394	10.64	PPB		0.00
Spiked Amount 10.000			Recovery =	106.40%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.16	85	171404	9.46	PPB		97
3) Chloromethane	1.32	50	211705	8.42	PPB		97
4) Vinyl Chloride	1.41	62	198465	9.47	PPB		97
5) Bromomethane	1.70	96	111706	7.59	PPB		96
6) Chloroethane	1.80	64	123396	9.42	PPB		98
7) Dichlorofluoromethane	2.02	67	225642	7.36	PPB		98
8) Trichlorofluoromethane	2.01	101	214225	7.95	PPB		96
9) Ethyl Ether	2.33	59	128864	12.39	PPB		96
10) Acrolein	2.55	56	196921	83.53	PPB		99
11) Trichlorotrifluoroethane	2.53	151	133685	10.92	PPB		98
12) 1,1-Dichloroethene	2.56	96	145005	8.78	PPB		97
13) Acetone	2.74	43	91817	34.32	PPB		99
14) Iodomethane	2.74	142	784349	32.27	PPB		98
15) Carbon Disulfide	2.76	76	964028	20.38	PPB		100
16) 2-Propanol (Isopropyl Alco	2.95	45	2718	6.15	PPB	#	1
17) 3-Chloro-1-propene	3.03	76	237668	25.00	PPB		98
18) Methyl Acetate	3.11	43	91058	10.57	PPB		99
19) Acetonitrile	3.19	40	221856	332.60	PPB		100
20) Methylene Chloride	3.24	84	200678	10.00	PPB		97
21) tert-Butyl Alcohol	3.51	59	95266	96.22	PPB		75
22) Acrylonitrile	3.74	53	190637	43.60	PPB		95
23) Methyl tert-Butyl Ether	3.54	73	449796	11.32	PPB		97
24) trans-1,2-Dichloroethene	3.54	96	179593	9.25	PPB		98
25) Hexane	3.83	57	371144	18.01	PPB		97
26) Diisopropyl Ether	4.32	45	923956	16.71	PPB		99
27) 1,1-Dichloroethane	4.27	63	336637	10.10	PPB		98
28) Vinyl Acetate	4.40	86	120823	43.05	PPB		95
29) Chloroprene	4.34	53	482441	24.15	PPB		97
30) tert-Butyl Ethyl Ether	4.85	59	824211	19.12	PPB		97
31) 2,2-Dichloropropane	5.07	77	213380	9.57	PPB		97
32) cis-1,2-Dichloroethene	5.13	96	202410	9.72	PPB		96
33) 2-Butanone	5.24	72	40344	34.32	PPB		96
34) Ethyl Acetate	5.28	61	47739	31.52	PPB		99
35) Propionitrile	5.42	54	49444	31.50	PPB		98
36) Methacrylonitrile	5.55	67	152656	31.64	PPB		99
37) Bromochloromethane	5.45	128	111310	10.57	PPB		98
38) Tetrahydrofuran	5.28	71	1600	1.44	PPB	#	1
39) Chloroform	5.57	83	348268	10.30	PPB		98
40) Cyclohexane	5.63	56	126771	4.37	PPB		97
41) 1,1,1-Trichloroethane	5.69	97	248010	9.84	PPB		96
43) Carbon Tetrachloride	5.83	117	223670	9.95	PPB		100
44) 1,1-Dichloropropene	5.90	75	209770	9.52	PPB		99
45) Isobutyl Alcohol	6.26	42	110754	472.02	PPB		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st LM 12/07/18
2nd 12/08/18

Data File : J:\MS27\DATA\112718\1127F006.D Vial: 4
Acq On : 27 Nov 2018 11:33 am Operator: LM
Sample : LCS Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 03 13:09:36 2018 Quant Results File: 110818MS27_8260.RES

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
47)	Benzene	6.14	78	739602	10.38	PPB		99
48)	1,2-Dichloroethane	6.28	62	231746	10.73	PPB		98
49)	tert-Amyl Methyl Ether	6.29	55	256154	19.43	PPB		98
50)	Trichloroethene	6.90	95	192711	10.39	PPB		99
51)	Methylcyclohexane	7.00	83	90657	3.90	PPB		97
52)	1,2-Dichloropropane	7.21	63	199568	10.21	PPB		96
53)	Dibromomethane	7.34	93	114815	10.57	PPB		98
54)	Methyl methacrylate	7.36	69	237260	31.67	PPB		94
55)	1,4-Dioxane	7.36	88	31748	440.78	PPB		97
56)	Bromodichloromethane	7.52	83	275579	10.99	PPB		99
57)	2-Nitropropane	7.86	41	75326	29.37	PPB		96
58)	2-Chloroethyl Vinyl Ether	7.88	63	53728	7.55	PPB		97
59)	cis-1,3-Dichloropropene	7.99	75	293425	10.91	PPB		98
60)	4-Methyl-2-pentanone (MIBK	8.18	58	112234	29.59	PPB	#	85
62)	Toluene	8.27	92	444413	10.72	PPB		98
64)	n-Octane	8.33	85	914	0.11	PPB		84
65)	trans-1,3-Dichloropropene	8.60	75	244723	10.50	PPB		99
67)	1,1,2-Trichloroethane	8.78	83	148551	11.11	PPB		93
68)	Tetrachloroethene	8.78	164	161760	10.03	PPB		99
69)	2-Hexanone	9.03	57	34086	29.07	PPB		96
70)	1,3-Dichloropropane	8.95	76	272780	10.43	PPB		99
71)	Dibromochloromethane	9.13	129	208659	10.76	PPB		99
72)	1,2-Dibromoethane (EDB)	9.24	107	156094	10.80	PPB		97
73)	1-Chlorohexane	9.68	91	191180	9.76	PPB		97
74)	Chlorobenzene	9.71	112	571410	10.90	PPB		98
75)	Ethylbenzene	9.79	106	256494	10.69	PPB		98
76)	1,1,1,2-Tetrachloroethane	9.81	131	209157	10.85	PPB		99
77)	m,p-Xylenes	9.92	106	647345	19.66	PPB		99
78)	o-Xylene	10.31	106	296667	10.73	PPB		95
79)	Styrene	10.34	103	315698	12.94	PPB		96
80)	Bromoform	10.55	173	130262	10.77	PPB		99
81)	Isopropylbenzene	10.67	105	726473	10.17	PPB		100
82)	cis-1,4-Dichloro-2-butene	10.84	89	69998	38.08	PPB		99
85)	1,1,2,2-Tetrachloroethane	11.07	83	179612	9.27	PPB		94
86)	trans-1,4-Dichloro-2-buten	11.13	53	131161	28.50	PPB		83
87)	Bromobenzene	11.00	156	254183	10.46	PPB		98
88)	n-Propylbenzene	11.08	91	934376	9.93	PPB		100
89)	1,2,3-Trichloropropane	11.11	110	50823	9.58	PPB		96
90)	2-Chlorotoluene	11.18	91	605568	10.59	PPB		98
91)	1,3,5-Trimethylbenzene	11.27	105	669211	10.05	PPB		98
92)	4-Chlorotoluene	11.30	91	728876	11.84	PPB		100
93)	tert-Butylbenzene	11.57	119	530913	9.58	PPB		97
94)	1,2,4-Trimethylbenzene	11.64	105	703406	9.49	PPB		99
95)	sec-Butylbenzene	11.80	105	806882	9.01	PPB		99
96)	p-Isopropyltoluene	11.95	119	697127	9.24	PPB		98
97)	1,3-Dichlorobenzene	11.93	146	488524	10.59	PPB		98
98)	1,4-Dichlorobenzene	12.03	146	496841	10.65	PPB		100
99)	n-Butylbenzene	12.36	91	620304	10.22	PPB		98
100)	1,2-Dichlorobenzene	12.40	146	459863	10.57	PPB		100
101)	1,2-Dibromo-3-chloropropan	13.22	155	25589	10.06	PPB		93
102)	1,3,5-Trichlorobenzene	13.36	180	347825	10.97	PPB		99
103)	1,2,4-Trichlorobenzene	14.00	180	294571	10.00	PPB		99
104)	Hexachlorobutadiene	14.12	225	143204	9.59	PPB		97
105)	Naphthalene	14.25	128	437851	9.93	PPB		100
106)	1,2,3-Trichlorobenzene	14.50	180	273450	10.16	PPB		98

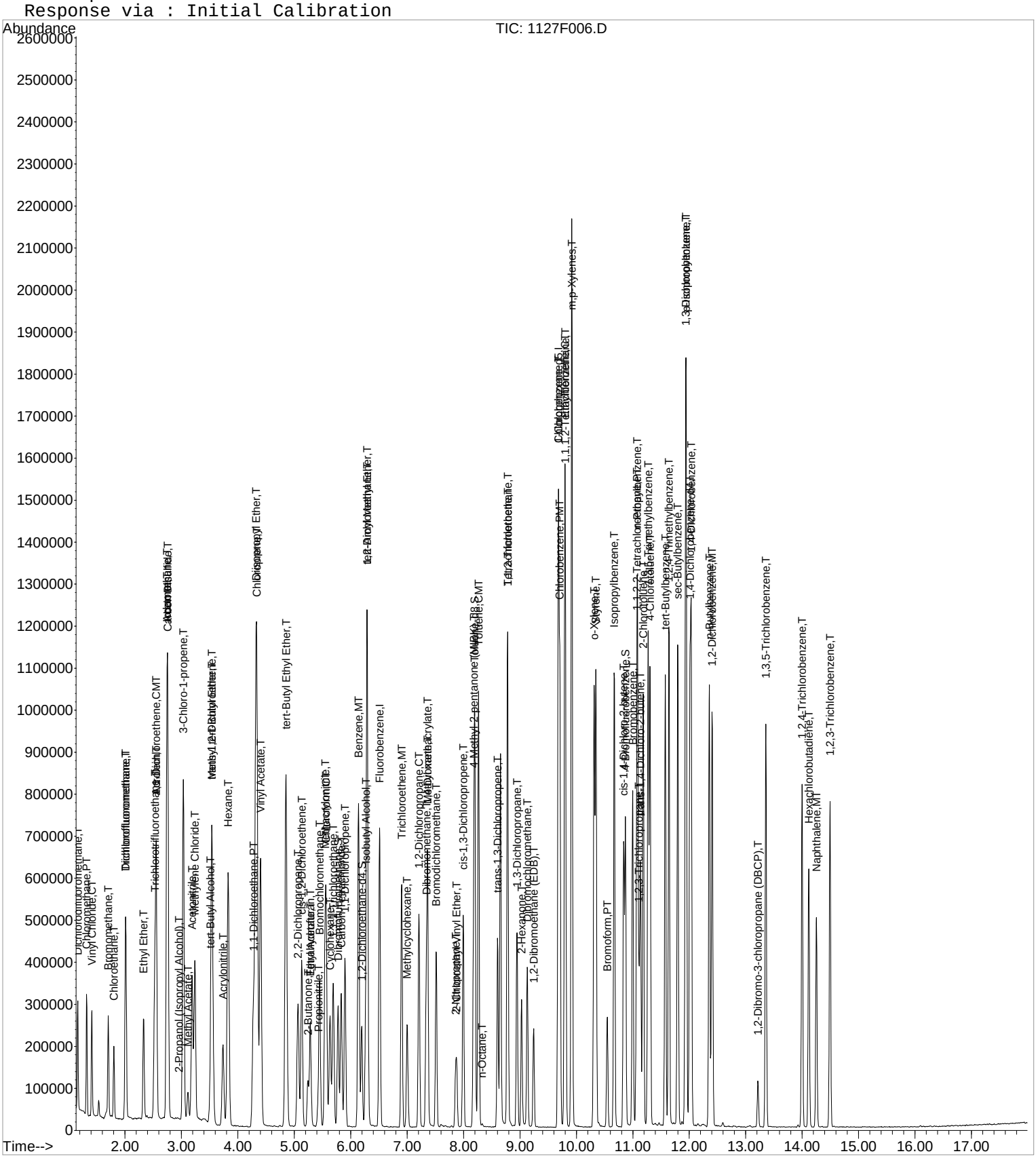
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\112718\1127F006.D Vial: 4
Acq On : 27 Nov 2018 11:33 am Operator: LM
Sample : LCS Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 3 13:38 2018 Quant Results File: 110818MS27_8260.RES

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration

12/07/18 12/08/18 1st LM 2nd



1st LM 12/07/18
2nd 12/08/18

Exception Report

Data File: J:\MS27\DATA\112718\1127F004.D
Lab ID: KWG1806328-1
RunType: BFB
Matrix: WATER

Date Acquired: 11/27/2018 10:38
Date Quantitated:
Batch ID: KWG1806328
Analysis Method: BFB
ListJoinID: LJ774

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st LM 12/07/18
2nd 12/08/18

Quantitation Report

Data File:	J:\MS27\DATA\112718\1127F004.D			**Instrument:**	MS27
Acqu Date:	11/27/2018 10:38	**Quant Date:**		**Vial:**	4
Run Type:	BFB	**ListJoinID:**	LJ774	**Dilution:**	1.0
Lab ID:	KWG1806328-1			**Soln Conc. Units:**	

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260B	**Collect Date:**		**Receive Date:**	12/06/2018

Analysis Lot:	KWG1806328	**Prep Lot:**		**Report Group:**	
Analysis Method:	BFB	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS27\METHODS\110818MS27_8	**Calibration ID:**	CAL15885
Title:	GC/MS Tuning Evaluation	**Report List ID:**	LJ774
Tune Ref:		**Method ID:**	MJ159
MB Ref:		**Quant based on Report List**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	16.4	13638	Pass
75	95	30	60	46.1	38213	Pass
95	95	100	100	100.0	82930	Pass
96	95	5	9	7.0	5791	Pass
173	174	0	2	1.7	1264	Pass
174	95	50	120	89.7	74421	Pass
175	174	5	9	8.6	6415	Pass
176	174	95	101	99.2	73792	Pass
177	176	5	9	6.9	5116	Pass

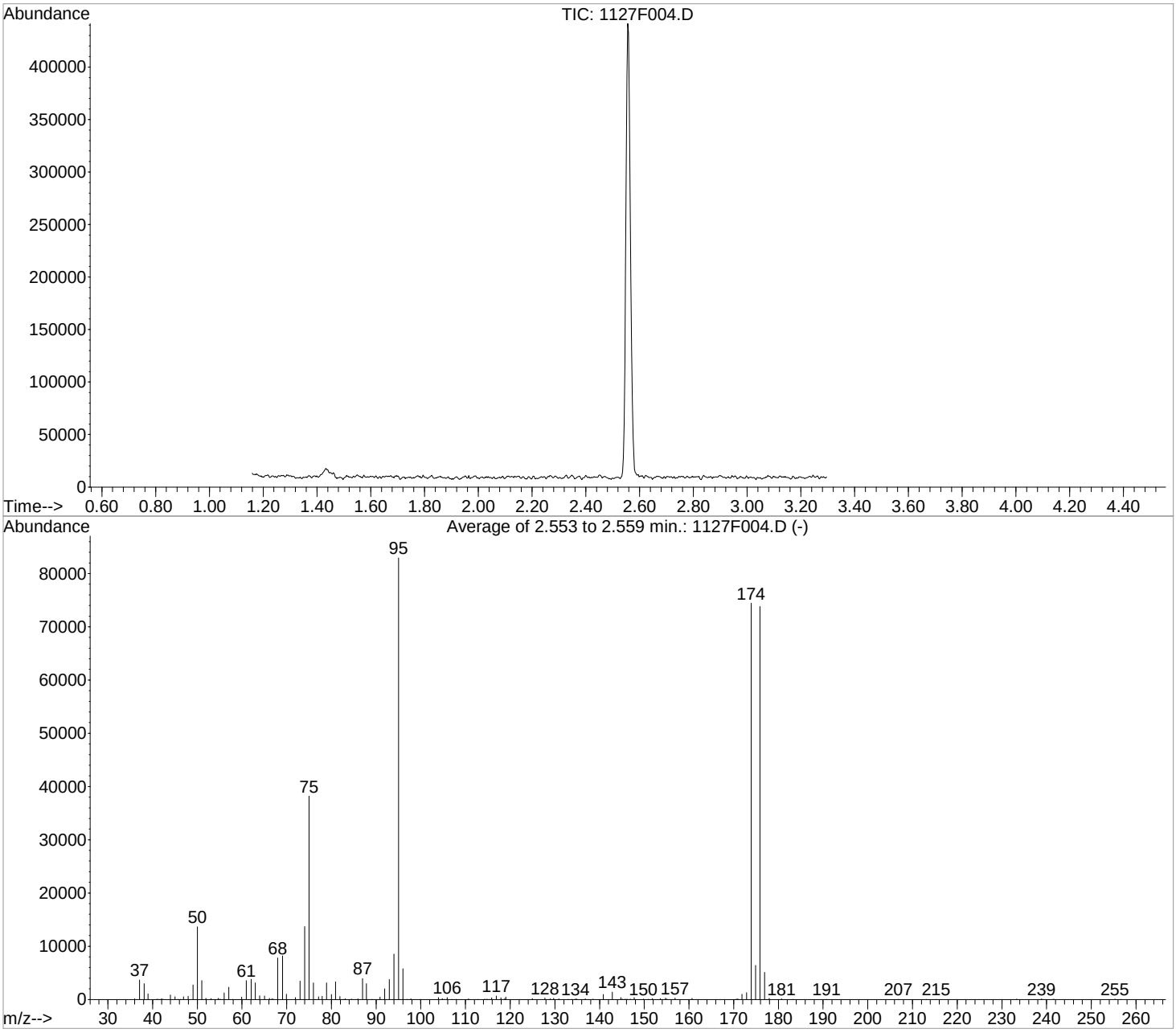
U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st LM 12/07/18
2nd 12/08/18

Data File : J:\MS27\DATA\112718\1127F004.D Vial: 4
Acq On : 27 Nov 2018 10:38 am Operator: LM
Sample : BFB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B



AutoFind: Scans 501, 502, 503; Background Corrected with Scan 489

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.4	13638	PASS
75	95	30	60	46.1	38213	PASS
95	95	100	100	100.0	82930	PASS
96	95	5	9	7.0	5791	PASS
173	174	0.00	2	1.7	1264	PASS
174	95	50	120	89.7	74421	PASS
175	174	5	9	8.6	6415	PASS
176	174	95	101	99.2	73792	PASS
177	176	5	9	6.9	5116	PASS

1st LM 12/07/18
2nd 12/08/18

Exception Report

Data File: J:\MS27\DATA\112718\1127F005.D
Lab ID: KWG1806328-2
RunType: CCV
Matrix: WATER

Date Acquired: 11/27/2018 10:58
Date Quantitated: 11/27/2018 11:16
Batch ID: KWG1806328
Analysis Method: 8260C
MethodJoinID: MJ119

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	2-Propanol	0.0067	0.01	NA	NT
	Isobutyl Alcohol	0.0035	0.01	NA	
	1,4-Dioxane	0.0011	0.01	NA	
Second Source ICAL Verification	Isobutyl Alcohol	38.5	NA	30	
	1,4-Dioxane	3291.1	NA	30	
Enviroquant/Stealth Calibration Check	2-Propanol	Calc	S-0.00	I-626.07	
	Methyl Acetate	Calc	S-0.00	I-9.88	
	tert-Butyl Alcohol	Calc	S-0.00	I-64.38	
	Diisopropyl Ether	Calc	S-0.00	I-9.18	
	tert-Butyl Ethyl Ether	Calc	S-0.00	I-9.9	
	Cyclohexane	Calc	S-0.00	I-10.55	
	tert-Amyl Methyl Ether	Calc	S-0.00	I-10.57	
	Methylcyclohexane	Calc	S-0.00	I-10.63	
	n-Octane	Calc	S-0.00	I-11.71	

Primary Review: _____

Secondary Review: _____

1st LM 12/07/18
2nd 12/08/18

Quantitation Report

Data File:	J:\MS27\DATA\112718\1127F005.D			**Instrument:**	MS27
Acqu Date:	11/27/2018 10:58	**Quant Date:**	11/27/2018 11:16	**Vial:**	3
Run Type:	CCV	**MethodJoinID:**	MJ119	**Dilution:**	1.0
Lab ID:	KWG1806328-2			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260B	**Collect Date:**		**Receive Date:**	12/06/2018

Analysis Lot:	KWG1806328	**Prep Lot:**		**Report Group:**	
Analysis Method:	8260C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS27\METHODS\110818MS27_8	**Calibration ID:**	CAL15885
Title:			
Tune Ref:	J:\MS27\DATA\112718\1127F004.D	**Method ID:**	MJ119
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.51	-0.01	96	675814	10.00	OK
2	Chlorobenzene-d5	9.68	0.00	82	276059	10.00	OK
3	1,4-Dichlorobenzene-d4	12.01	0.00	152	276591	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.78			113	187674	10.75		73-122	NA	
1	1,2-Dichloroethane-d4	6.20			65	165779	9.48		59-127	NA	
1	Toluene-d8	8.20			98	689962	11.79		65-144	NA	
2	4-Bromofluorobenzene	10.87			95	252473	11.10		68-117	NA	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.16			85	242444	13.10			
1	Chloromethane	1.32			50	248417	9.68			
1	Vinyl Chloride	1.41			62	256487	11.98			
1	Bromomethane	1.71			96	154012	10.38			
1	Chloroethane	1.80			64	140211	10.48			
1	Dichlorofluoromethane (CFC 21)	2.02			67	307986	9.83			
1	Trichlorofluoromethane	2.01			101	307429	11.18			
1	Ethyl Ether	2.33			59	101386	9.55			
1	Acrolein	2.55			56	425507	176.74			
1	Trichlorotrifluoroethane	2.53			151	134463	10.76			
1	1,1-Dichloroethene	2.56			96	174109	10.32			
1	Acetone	2.74			43	539128	197.37			
1	Iodomethane	2.74			142	1192372	48.04			

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N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\112718\1127F005.D			**Instrument:**	MS27
Acqu Date:	11/27/2018 10:58	**Quant Date:**	11/27/2018 11:16	**Vial:**	3
Run Type:	CCV	**MethodJoinID:**	MJ119	**Dilution:**	1.0
Lab ID:	KWG1806328-2			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Carbon Disulfide	2.76			76	446967	9.25			
1	2-Propanol	2.95			45	282555	626.07			
1	3-Chloro-1-propene	3.03			76	94268	9.71			
1	Methyl Acetate	3.11			43	86877	9.88			
1	Acetonitrile	3.19			40	278627	409.05			
1	Methylene Chloride	3.24			84	203290	9.92			
1	tert-Butyl Alcohol	3.51			59	65093	64.38			
1	Acrylonitrile	3.74			53	172352	38.60			
1	Methyl tert-Butyl Ether	3.54			73	795736	19.62			
1	trans-1,2-Dichloroethene	3.54			96	198444	10.01			
1	n-Hexane	3.83			57	200937	9.55			
1	Diisopropyl Ether	4.32			45	518163	9.18			
1	1,1-Dichloroethane	4.27			63	355589	10.44			
1	Vinyl Acetate	4.40			86	45186	15.77			
1	Chloroprene	4.34			53	494977	24.27			
1	tert-Butyl Ethyl Ether	4.85			59	435549	9.90			
1	2,2-Dichloropropane	5.06			77	245414	10.77			
1	cis-1,2-Dichloroethene	5.13			96	212693	10.00			
1	2-Butanone (MEK)	5.24			72	233168	194.25			
1	Ethyl Acetate	5.28			61	32257	20.86			
1	Propionitrile	5.42			54	64812	40.44			
1	Methacrylonitrile	5.55			67	202722	41.15			
1	Bromochloromethane	5.45			128	109513	10.19			
1	Tetrahydrofuran	5.47			71	10251	9.05			
1	Chloroform	5.57			83	361113	10.46			
1	Cyclohexane	5.63			56	312710	10.55			
1	1,1,1-Trichloroethane (TCA)	5.69			97	282413	10.97			
1	Carbon Tetrachloride	5.83			117	256575	11.18			
1	1,1-Dichloropropene	5.90			75	243382	10.82			
1	Isobutyl Alcohol	6.26			42	108512	452.89			
1	Benzene	6.14			78	781732	10.75			
1	1,2-Dichloroethane (EDC)	6.28			62	229229	10.39			
1	tert-Amyl Methyl Ether	6.29			55	142321	10.57			
1	Trichloroethene (TCE)	6.90			95	212476	11.22			
1	Methylcyclohexane	7.00			83	252037	10.63			
1	1,2-Dichloropropane	7.21			63	210025	10.53			
1	Dibromomethane	7.34			93	115529	10.42			
1	Methyl Methacrylate	7.36			69	72090	9.42			
1	1,4-Dioxane	7.36			88	42207	573.85			
1	Bromodichloromethane	7.52			83	273262	10.67			
1	2-Nitropropane	7.86			41	120902	46.16			
1	2-Chloroethyl Vinyl Ether	7.88			63	48997	6.75			

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D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\112718\1127F005.D			**Instrument:**	MS27
Acqu Date:	11/27/2018 10:58	**Quant Date:**	11/27/2018 11:16	**Vial:**	3
Run Type:	CCV	**MethodJoinID:**	MJ119	**Dilution:**	1.0
Lab ID:	KWG1806328-2			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	cis-1,3-Dichloropropene	7.99			75	283318	10.31			
1	4-Methyl-2-pentanone (MIBK)	8.18			58	753636	177.49			
1	Toluene	8.27			92	495105	11.70			
2	n-Octane	8.33			85	104136	11.71			
2	trans-1,3-Dichloropropene	8.60			75	239407	10.03			
2	Ethyl Methacrylate	8.65			69	145655	9.73			
2	1,1,2-Trichloroethane	8.78			83	140802	10.29			
2	Tetrachloroethene (PCE)	8.78			164	180046	10.91			
2	2-Hexanone	9.03			57	226478	169.48			
2	1,3-Dichloropropane	8.95			76	261648	9.78			
2	Dibromochloromethane	9.13			129	205240	10.34			
2	1,2-Dibromoethane (EDB)	9.24			107	156246	10.56			
2	1-Chlorohexane	9.68			91	201615	10.06			
2	Chlorobenzene	9.70			112	572747	10.68			
2	Ethylbenzene	9.79			106	275537	11.22			
2	1,1,1,2-Tetrachloroethane	9.81			131	205412	10.42			
2	m,p-Xylenes	9.92			106	679259	20.16			
2	o-Xylene	10.31			106	305015	10.79			
2	Styrene	10.34			103	307798	12.33			
2	Bromoform	10.55			173	126986	10.26			
2	Isopropylbenzene	10.67			105	778066	10.65			
2	cis-1,4-Dichloro-2-butene	10.84			89	80117	42.60			
3	1,1,2,2-Tetrachloroethane	11.07			83	170642	8.90			
3	trans-1,4-Dichloro-2-butene	11.13			53	47282	10.39			
3	Bromobenzene	11.00			156	251880	10.48			
3	n-Propylbenzene	11.08			91	1019476	10.96			
3	1,2,3-Trichloropropane	11.11			110	49387	9.41			
3	2-Chlorotoluene	11.18			91	618440	10.93			
3	1,3,5-Trimethylbenzene	11.27			105	710579	10.78			
3	4-Chlorotoluene	11.30			91	732609	12.03			
3	tert-Butylbenzene	11.57			119	565432	10.32			
3	1,2,4-Trimethylbenzene	11.64			105	699861	9.54			
3	sec-Butylbenzene	11.80			105	865025	9.74			
3	4-Isopropyltoluene	11.95			119	714276	9.56			
3	1,3-Dichlorobenzene	11.93			146	480395	10.53			
3	1,4-Dichlorobenzene	12.03			146	483138	10.47			
3	n-Butylbenzene	12.36			91	648017	10.79			
3	1,2-Dichlorobenzene	12.40			146	447046	10.39			
3	1,2-Dibromo-3-chloropropane	13.22			155	24595	9.78			
3	1,3,5-Trichlorobenzene	13.36			180	325399	10.38			
3	1,2,4-Trichlorobenzene	14.00			180	275217	9.45			
3	Hexachlorobutadiene	14.12			225	151751	10.27			

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B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\112718\1127F005.D			**Instrument:**	MS27
Acqu Date:	11/27/2018 10:58	**Quant Date:**	11/27/2018 11:16	**Vial:**	3
Run Type:	CCV	**MethodJoinID:**	MJ119	**Dilution:**	1.0
Lab ID:	KWG1806328-2			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Naphthalene	14.25			128	387740	8.94			
3	1,2,3-Trichlorobenzene	14.50			180	252101	9.46			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st LM 12/07/18
2nd 12/08/18

Quantitation Report

Data File:	J:\MS27\DATA\112718\1127F005.D			**Instrument:**	MS27
Acqu Date:	11/27/2018 10:58	**Quant Date:**	11/27/2018 11:16	**Vial:**	3
Run Type:	CCV	**MethodJoinID:**	MJ181	**Dilution:**	1.0
Lab ID:	KWG1806328-2			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260B	**Collect Date:**		**Receive Date:**	12/06/2018

Analysis Lot:	KWG1806328	**Prep Lot:**		**Report Group:**	
Analysis Method:	8260C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS27\METHODS\110818MS27_8	**Calibration ID:**	CAL15885
Title:			
Tune Ref:	J:\MS27\DATA\112718\1127F004.D	**Method ID:**	MJ181
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.51	-0.01	96	675814	10.00	OK
2	Chlorobenzene-d5	9.68	0.00	82	276059	10.00	OK
3	1,4-Dichlorobenzene-d4	12.01	0.00	152	276591	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.78			113	187674	10.75		73-122	NA	
1	1,2-Dichloroethane-d4	6.20			65	165779	9.48		59-127	NA	
1	Toluene-d8	8.20			98	689962	11.79		65-144	NA	
2	4-Bromofluorobenzene	10.87			95	252473	11.10		68-117	NA	

Target Compounds

Final Conc. Units: mg/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.16			85	242444	13.10			
1	Chloromethane	1.32			50	248417	9.68			
1	Vinyl Chloride	1.41			62	256487	11.98			
1	Bromomethane	1.71			96	154012	10.38			
1	Chloroethane	1.80			64	140211	10.48			
1	Dichlorofluoromethane (CFC 21)	2.02			67	307986	9.83			
1	Trichlorofluoromethane	2.01			101	307429	11.18			
1	Ethyl Ether	2.33			59	101386	9.55			
1	Acrolein	2.55			56	425507	176.74			
1	Trichlorotrifluoroethane	2.53			151	134463	10.76			
1	1,1-Dichloroethene	2.56			96	174109	10.32			
1	Acetone	2.74			43	539128	197.37			
1	Iodomethane	2.74			142	1192372	48.04			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st LM 12/07/18

2nd 12/08/18

Data File:	J:\MS27\DATA\112718\1127F005.D			**Instrument:**	MS27
Acqu Date:	11/27/2018 10:58	**Quant Date:**	11/27/2018 11:16	**Vial:**	3
Run Type:	CCV	**MethodJoinID:**	MJ181	**Dilution:**	1.0
Lab ID:	KWG1806328-2			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: mg/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Carbon Disulfide	2.76			76	446967	9.25			
1	3-Chloro-1-propene	3.03			76	94268	9.71			
1	Acetonitrile	3.19			40	278627	409.05			
1	Methylene Chloride	3.24			84	203290	9.92			
1	Acrylonitrile	3.74			53	172352	38.60			
1	Methyl tert-Butyl Ether	3.54			73	795736	19.62			
1	trans-1,2-Dichloroethene	3.54			96	198444	10.01			
1	n-Hexane	3.83			57	200937	9.55			
1	1,1-Dichloroethane	4.27			63	355589	10.44			
1	Vinyl Acetate	4.40			86	45186	15.77			
1	Chloroprene	4.34			53	494977	24.27			
1	2,2-Dichloropropane	5.06			77	245414	10.77			
1	cis-1,2-Dichloroethene	5.13			96	212693	10.00			
1	2-Butanone (MEK)	5.24			72	233168	194.25			
1	Ethyl Acetate	5.28			61	32257	20.86			
1	Propionitrile	5.42			54	64812	40.44			
1	Methacrylonitrile	5.55			67	202722	41.15			
1	Bromochloromethane	5.45			128	109513	10.19			
1	Tetrahydrofuran	5.47			71	10251	9.05			
1	Chloroform	5.57			83	361113	10.46			
1	1,1,1-Trichloroethane (TCA)	5.69			97	282413	10.97			
1	Carbon Tetrachloride	5.83			117	256575	11.18			
1	1,1-Dichloropropene	5.90			75	243382	10.82			
1	Isobutyl Alcohol	6.26			42	108512	452.89			
1	Benzene	6.14			78	781732	10.75			
1	1,2-Dichloroethane (EDC)	6.28			62	229229	10.39			
1	Trichloroethene (TCE)	6.90			95	212476	11.22			
1	1,2-Dichloropropane	7.21			63	210025	10.53			
1	Dibromomethane	7.34			93	115529	10.42			
1	Methyl Methacrylate	7.36			69	72090	9.42			
1	1,4-Dioxane	7.36			88	42207	573.85			
1	Bromodichloromethane	7.52			83	273262	10.67			
1	2-Nitropropane	7.86			41	120902	46.16			
1	2-Chloroethyl Vinyl Ether	7.88			63	48997	6.75			
1	cis-1,3-Dichloropropene	7.99			75	283318	10.31			
1	4-Methyl-2-pentanone (MIBK)	8.18			58	753636	177.49			
1	Toluene	8.27			92	495105	11.70			
2	trans-1,3-Dichloropropene	8.60			75	239407	10.03			
2	Ethyl Methacrylate	8.65			69	145655	9.73			
2	1,1,2-Trichloroethane	8.78			83	140802	10.29			
2	Tetrachloroethene (PCE)	8.78			164	180046	10.91			
2	2-Hexanone	9.03			57	226478	169.48			

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N: Presumptive evidence of compound

D: Result from dilution
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d: Compound manually deleted
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*: Result fails acceptance criteria
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?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\112718\1127F005.D			**Instrument:**	MS27
Acqu Date:	11/27/2018 10:58	**Quant Date:**	11/27/2018 11:16	**Vial:**	3
Run Type:	CCV	**MethodJoinID:**	MJ181	**Dilution:**	1.0
Lab ID:	KWG1806328-2			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: mg/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	1,3-Dichloropropane	8.95			76	261648	9.78			
2	Dibromochloromethane	9.13			129	205240	10.34			
2	1,2-Dibromoethane (EDB)	9.24			107	156246	10.56			
2	1-Chlorohexane	9.68			91	201615	10.06			
2	Chlorobenzene	9.70			112	572747	10.68			
2	Ethylbenzene	9.79			106	275537	11.22			
2	1,1,1,2-Tetrachloroethane	9.81			131	205412	10.42			
2	m,p-Xylenes	9.92			106	679259	20.16			
2	o-Xylene	10.31			106	305015	10.79			
2	Styrene	10.34			103	307798	12.33			
2	Bromoform	10.55			173	126986	10.26			
2	Isopropylbenzene	10.67			105	778066	10.65			
2	cis-1,4-Dichloro-2-butene	10.84			89	80117	42.60			
3	1,1,2,2-Tetrachloroethane	11.07			83	170642	8.90			
3	trans-1,4-Dichloro-2-butene	11.13			53	47282	10.39			
3	Bromobenzene	11.00			156	251880	10.48			
3	n-Propylbenzene	11.08			91	1019476	10.96			
3	1,2,3-Trichloropropane	11.11			110	49387	9.41			
3	2-Chlorotoluene	11.18			91	618440	10.93			
3	1,3,5-Trimethylbenzene	11.27			105	710579	10.78			
3	4-Chlorotoluene	11.30			91	732609	12.03			
3	tert-Butylbenzene	11.57			119	565432	10.32			
3	1,2,4-Trimethylbenzene	11.64			105	699861	9.54			
3	sec-Butylbenzene	11.80			105	865025	9.74			
3	4-Isopropyltoluene	11.95			119	714276	9.56			
3	1,3-Dichlorobenzene	11.93			146	480395	10.53			
3	1,4-Dichlorobenzene	12.03			146	483138	10.47			
3	n-Butylbenzene	12.36			91	648017	10.79			
3	1,2-Dichlorobenzene	12.40			146	447046	10.39			
3	1,2-Dibromo-3-chloropropane	13.22			155	24595	9.78			
3	1,3,5-Trichlorobenzene	13.36			180	325399	10.38			
3	1,2,4-Trichlorobenzene	14.00			180	275217	9.45			
3	Hexachlorobutadiene	14.12			225	151751	10.27			
3	Naphthalene	14.25			128	387740	8.94			
3	1,2,3-Trichlorobenzene	14.50			180	252101	9.46			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
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D: Result from dilution
m: Manual integration performed
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*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st LM 12/07/18
2nd 12/08/18

Data File : J:\MS27\DATA\112718\1127F005.D Vial: 3
Acq On : 27 Nov 2018 10:58 am Operator: LM
Sample : CCV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 27 11:16:43 2018 Quant Results File: 110818MS27_8260.RES

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.51	96	675814	10.00	PPB		0.00
63) Chlorobenzene-d5	9.68	82	276059	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	276591	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	5.78	113	187674	10.75	PPB		0.00
Spiked Amount 10.000			Recovery =	107.50%			
46) 1,2-Dichloroethane-d4	6.20	65	165779	9.48	PPB		-0.01
Spiked Amount 10.000			Recovery =	94.80%			
61) Toluene-d8	8.20	98	689962	11.79	PPB		0.00
Spiked Amount 10.000			Recovery =	117.90%			
83) 4-Bromofluorobenzene	10.87	95	252473	11.10	PPB		0.00
Spiked Amount 10.000			Recovery =	111.00%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.16	85	242444	13.10	PPB		98
3) Chloromethane	1.32	50	248417	9.68	PPB		96
4) Vinyl Chloride	1.41	62	256487	11.98	PPB		98
5) Bromomethane	1.71	96	154012	10.38	PPB		99
6) Chloroethane	1.80	64	140211	10.48	PPB		96
7) Dichlorofluoromethane	2.02	67	307986	9.83	PPB		98
8) Trichlorofluoromethane	2.01	101	307429	11.18	PPB		97
9) Ethyl Ether	2.33	59	101386	9.55	PPB		93
10) Acrolein	2.55	56	425507	176.74	PPB		100
11) Trichlorotrifluoroethane	2.53	151	134463	10.76	PPB		96
12) 1,1-Dichloroethene	2.56	96	174109	10.32	PPB		95
13) Acetone	2.74	43	539128	197.37	PPB		98
14) Iodomethane	2.74	142	1192372	48.04	PPB		99
15) Carbon Disulfide	2.76	76	446967	9.25	PPB		98
16) 2-Propanol (Isopropyl Alco	2.95	45	282555	626.07	PPB		99
17) 3-Chloro-1-propene	3.03	76	94268	9.71	PPB		97
18) Methyl Acetate	3.11	43	86877	9.88	PPB		96
19) Acetonitrile	3.19	40	278627	409.05	PPB		99
20) Methylene Chloride	3.24	84	203290	9.92	PPB		98
21) tert-Butyl Alcohol	3.51	59	65093	64.38	PPB	#	46
22) Acrylonitrile	3.74	53	172352	38.60	PPB		97
23) Methyl tert-Butyl Ether	3.54	73	795736	19.62	PPB		99
24) trans-1,2-Dichloroethene	3.54	96	198444	10.01	PPB		96
25) Hexane	3.83	57	200937	9.55	PPB		95
26) Diisopropyl Ether	4.32	45	518163	9.18	PPB		97
27) 1,1-Dichloroethane	4.27	63	355589	10.44	PPB		98
28) Vinyl Acetate	4.40	86	45186	15.77	PPB		99
29) Chloroprene	4.34	53	494977	24.27	PPB		97
30) tert-Butyl Ethyl Ether	4.85	59	435549	9.90	PPB		98
31) 2,2-Dichloropropane	5.06	77	245414	10.77	PPB		99
32) cis-1,2-Dichloroethene	5.13	96	212693	10.00	PPB		97
33) 2-Butanone	5.24	72	233168	194.25	PPB		95
34) Ethyl Acetate	5.28	61	32257	20.86	PPB		95
35) Propionitrile	5.42	54	64812	40.44	PPB		95
36) Methacrylonitrile	5.55	67	202722	41.15	PPB		97
37) Bromochloromethane	5.45	128	109513	10.19	PPB		97
38) Tetrahydrofuran	5.47	71	10251	9.05	PPB	#	76
39) Chloroform	5.57	83	361113	10.46	PPB		99
40) Cyclohexane	5.63	56	312710	10.55	PPB		98
41) 1,1,1-Trichloroethane	5.69	97	282413	10.97	PPB		98
43) Carbon Tetrachloride	5.83	117	256575	11.18	PPB		96
44) 1,1-Dichloropropene	5.90	75	243382	10.82	PPB		99
45) Isobutyl Alcohol	6.26	42	108512	452.89	PPB		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st LM 12/07/18
2nd 12/08/18

Data File : J:\MS27\DATA\112718\1127F005.D Vial: 3
Acq On : 27 Nov 2018 10:58 am Operator: LM
Sample : CCV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 27 11:16:43 2018 Quant Results File: 110818MS27_8260.RES

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
47)	Benzene	6.14	78	781732	10.75	PPB	99
48)	1,2-Dichloroethane	6.28	62	229229	10.39	PPB	98
49)	tert-Amyl Methyl Ether	6.29	55	142321	10.57	PPB	96
50)	Trichloroethene	6.90	95	212476	11.22	PPB	98
51)	Methylcyclohexane	7.00	83	252037	10.63	PPB	98
52)	1,2-Dichloropropane	7.21	63	210025	10.53	PPB	98
53)	Dibromomethane	7.34	93	115529	10.42	PPB	98
54)	Methyl methacrylate	7.36	69	72090	9.42	PPB	98
55)	1,4-Dioxane	7.36	88	42207	573.85	PPB	99
56)	Bromodichloromethane	7.52	83	273262	10.67	PPB	98
57)	2-Nitropropane	7.86	41	120902	46.16	PPB	98
58)	2-Chloroethyl Vinyl Ether	7.88	63	48997	6.75	PPB	97
59)	cis-1,3-Dichloropropene	7.99	75	283318	10.31	PPB	99
60)	4-Methyl-2-pentanone (MIBK	8.18	58	753636	177.49	PPB	97
62)	Toluene	8.27	92	495105	11.70	PPB	99
64)	n-Octane	8.33	85	104136	11.71	PPB	95
65)	trans-1,3-Dichloropropene	8.60	75	239407	10.03	PPB	97
66)	Ethyl methacrylate	8.65	69	145655	9.73	PPB	97
67)	1,1,2-Trichloroethane	8.78	83	140802	10.29	PPB	97
68)	Tetrachloroethene	8.78	164	180046	10.91	PPB	98
69)	2-Hexanone	9.03	57	226478	169.48	PPB	99
70)	1,3-Dichloropropane	8.95	76	261648	9.78	PPB	98
71)	Dibromochloromethane	9.13	129	205240	10.34	PPB	100
72)	1,2-Dibromoethane (EDB)	9.24	107	156246	10.56	PPB	97
73)	1-Chlorohexane	9.68	91	201615	10.06	PPB	98
74)	Chlorobenzene	9.70	112	572747	10.68	PPB	99
75)	Ethylbenzene	9.79	106	275537	11.22	PPB	98
76)	1,1,1,2-Tetrachloroethane	9.81	131	205412	10.42	PPB	98
77)	m,p-Xylenes	9.92	106	679259	20.16	PPB	98
78)	o-Xylene	10.31	106	305015	10.79	PPB	98
79)	Styrene	10.34	103	307798	12.33	PPB	97
80)	Bromoform	10.55	173	126986	10.26	PPB	97
81)	Isopropylbenzene	10.67	105	778066	10.65	PPB	99
82)	cis-1,4-Dichloro-2-butene	10.84	89	80117	42.60	PPB	96
85)	1,1,2,2-Tetrachloroethane	11.07	83	170642	8.90	PPB	97
86)	trans-1,4-Dichloro-2-buten	11.13	53	47282	10.39	PPB	84
87)	Bromobenzene	11.00	156	251880	10.48	PPB	98
88)	n-Propylbenzene	11.08	91	1019476	10.96	PPB	99
89)	1,2,3-Trichloropropane	11.11	110	49387	9.41	PPB	98
90)	2-Chlorotoluene	11.18	91	618440	10.93	PPB	99
91)	1,3,5-Trimethylbenzene	11.27	105	710579	10.78	PPB	98
92)	4-Chlorotoluene	11.30	91	732609	12.03	PPB	99
93)	tert-Butylbenzene	11.57	119	565432	10.32	PPB	98
94)	1,2,4-Trimethylbenzene	11.64	105	699861	9.54	PPB	99
95)	sec-Butylbenzene	11.80	105	865025	9.74	PPB	99
96)	p-Isopropyltoluene	11.95	119	714276	9.56	PPB	98
97)	1,3-Dichlorobenzene	11.93	146	480395	10.53	PPB	100
98)	1,4-Dichlorobenzene	12.03	146	483138	10.47	PPB	99
99)	n-Butylbenzene	12.36	91	648017	10.79	PPB	97
100)	1,2-Dichlorobenzene	12.40	146	447046	10.39	PPB	98
101)	1,2-Dibromo-3-chloropropan	13.22	155	24595	9.78	PPB	93
102)	1,3,5-Trichlorobenzene	13.36	180	325399	10.38	PPB	99
103)	1,2,4-Trichlorobenzene	14.00	180	275217	9.45	PPB	99
104)	Hexachlorobutadiene	14.12	225	151751	10.27	PPB	98
105)	Naphthalene	14.25	128	387740	8.94	PPB	99
106)	1,2,3-Trichlorobenzene	14.50	180	252101	9.46	PPB	100

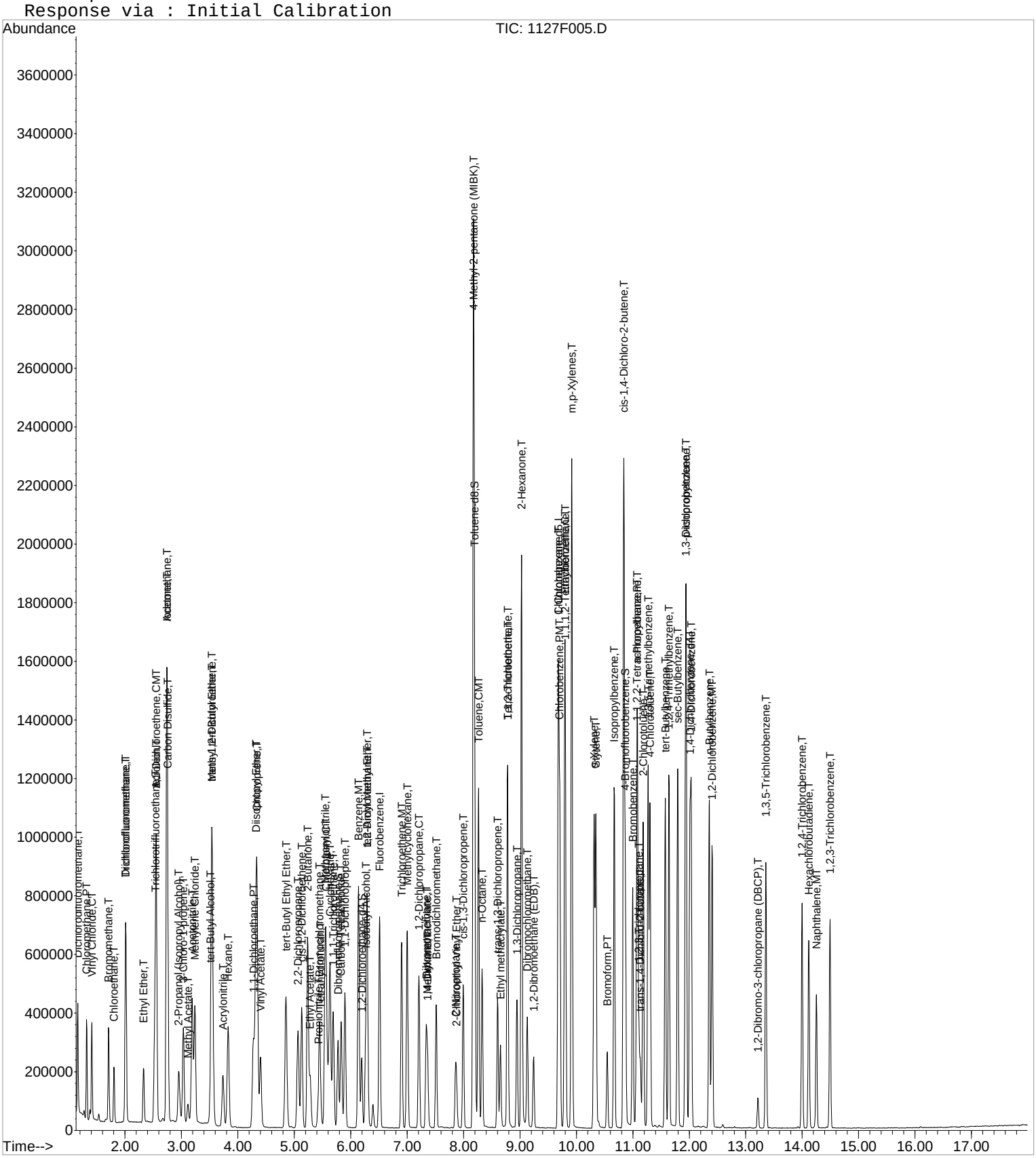
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\112718\1127F005.D Vial: 3
Acq On : 27 Nov 2018 10:58 am Operator: LM
Sample : CCV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 27 11:16 2018 Quant Results File: 110818MS27_8260.RES

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration

12/07/18
12/08/18
1st LM
2nd



Date: 11-8-18

By: LM

ALS Environmental
Injection Log
MS27 - Agilent 5975C

Tune File: BFB

New Tune: YES

IS/~~SS~~ Std. ID: 90v04-746 xP 12-7-18 EELM 11-878

CCV Std ID: —

MS/DMS/LCS/ICV Std ID:

BFB Std. ID: 90v04-764 xP 12-5-18

ICAL Date: new cal-15885

Second RV: 11/26/18

LIMS ID:

	Sample Name	File Name	Method	Dilution	pH<2	Comments
1	BFB	1108F003	BFB	1µL DI		
2	IB	4	8260M			
3	ICAL 0.1 PPB	5		see prep sheet		
4	0.2	6				
5	0.5	7				
6	1.0	8				
7	2.0	9				
8	5.0	10				
9	10	11				
10	20	12				
11	40	13				
12	60	14				
13	80	15				
14	IB	16				
15	IB	17				
16	8260 ICV	18				NR
17	8260 ICV	19				
18	CLP ICV	20				
19	CLP ICV	21				NR
20						
21						
22						
23						
24						
25						
26						
27						

R:\VOA\Injection Logs\INJLOG_MS27_Rev1

INTIAL CALIBRATION CURVE

Date 11-8-18 Analysis: 8260

Prepared By CM Instrument: MS27

Matrix: Water

Stock Solution #1 90V04-76B (xP 11-15-18) Analytes: Surrogate Init. Concentration: 100ppm

Stock Solution #2 90V04-75B (xP 11-15-18) Analytes: Low 8260 Init. Concentration: 5/10/20/100/200ppm

Stock Solution #3 90V04-75A (xP 11-13-18) Analytes: 8260 Init. Concentration: 50/100/200/1000/2000ppm

Stock Solution #4 90V04-75E (xP 12-8-18) Analytes: Low Ketones Init. Concentration: 200ppm

Stock Solution #5 90V04-75D (xP 01-08-19) Analytes: Ketones Init. Concentration: 2000ppm

Aliquot of Stock Solution #1 (µL)	Final Conc. of #1 (µg/L)	Aliquot of Stock Solution #2 (µL)	Final Conc. of #2 (µg/L)	Aliquot of Stock Solution #3 (µL)	Final Conc. of #3 (µg/L)	Aliquot of Stock Solution #4 (µL)	Final Conc. of #4 (µg/L)	Aliquot of Stock Solution #5 (µL)	Final Conc. of #5 (µg/L)	Final Volume (mL)
		1	0.1			1	4			50
		2	0.2			2	8			50
		5.0	0.5			5	20			50
2.0	4	10	1			10	40			50
3.0	6			2.0	2			2	80	50
4.0	8			5.0	5			2.5	100	50
5.0	10			10	10			5.0	200	50
6	12			20	20			10	400	50
7	14			40	40			20	800	50
8	16			60	60			40	1600	50
10	20			80	80			50	2000	50

8260 ICV: 10uL of 50/250ppm Accustd ICV (90V04-76G xP 11-15-18) + 50uL of 100ppm Acrolein (90V04-74C xP 11-14-18) +

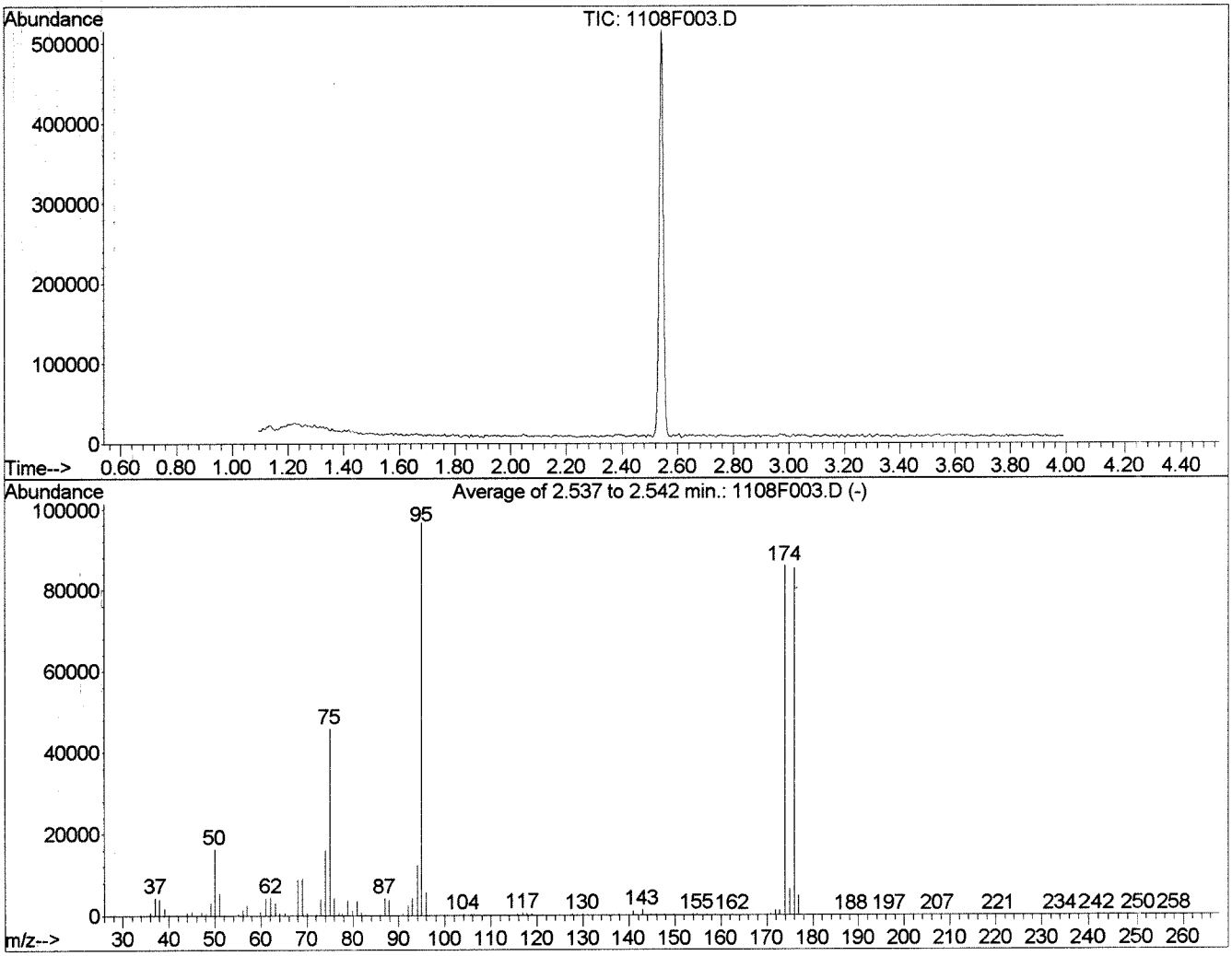
5uL of 100ppm Dichlorofluoromethane (90V04-73G xP 11-14-18) + 5uL of 200ppm n-Octane/TBF/Tetrahydrafuran (90V04-77B xP 12-8-18)

5uL of 100ppm Oxygenates (90V04A-74B xP 11-14-18) + 7.5uL of Appendix ICV mix(90V04A-74A xP 11-14-18) + 25uL of 1000ppm 2-Propanol(90V04A-76I xP 1-8-19)

5uL of 100ppm CLP (90V04A-77C xP 11-15-18)

+ SS

Data File : J:\MS27\DATA\110818\1108F003.D Vial: 1
Acq On : 8 Nov 2018 11:26 am Operator: LM
Sample : BFB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B



AutoFind: Scans 519, 520, 521; Background Corrected with Scan 508

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.8	16294	PASS
75	95	30	60	47.4	45882	PASS
95	95	100	100	100.0	96701	PASS
96	95	5	9	5.9	5728	PASS
173	174	0.00	2	1.4	1225	PASS
174	95	50	120	88.9	85981	PASS
175	174	5	9	7.5	6429	PASS
176	174	95	101	99.2	85285	PASS
177	176	5	9	5.7	4901	PASS

J:\MS27\DATA\110818\1108F003.D 110818MS27_8260.M Sat Nov 17 14:45:37 20

LM 11-17-18

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F004.D Vial: 2
Acq On : 8 Nov 2018 11:48 am Operator: LM
Sample : IB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 14:46:10 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:20:51 2018 LM 11-17-18
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

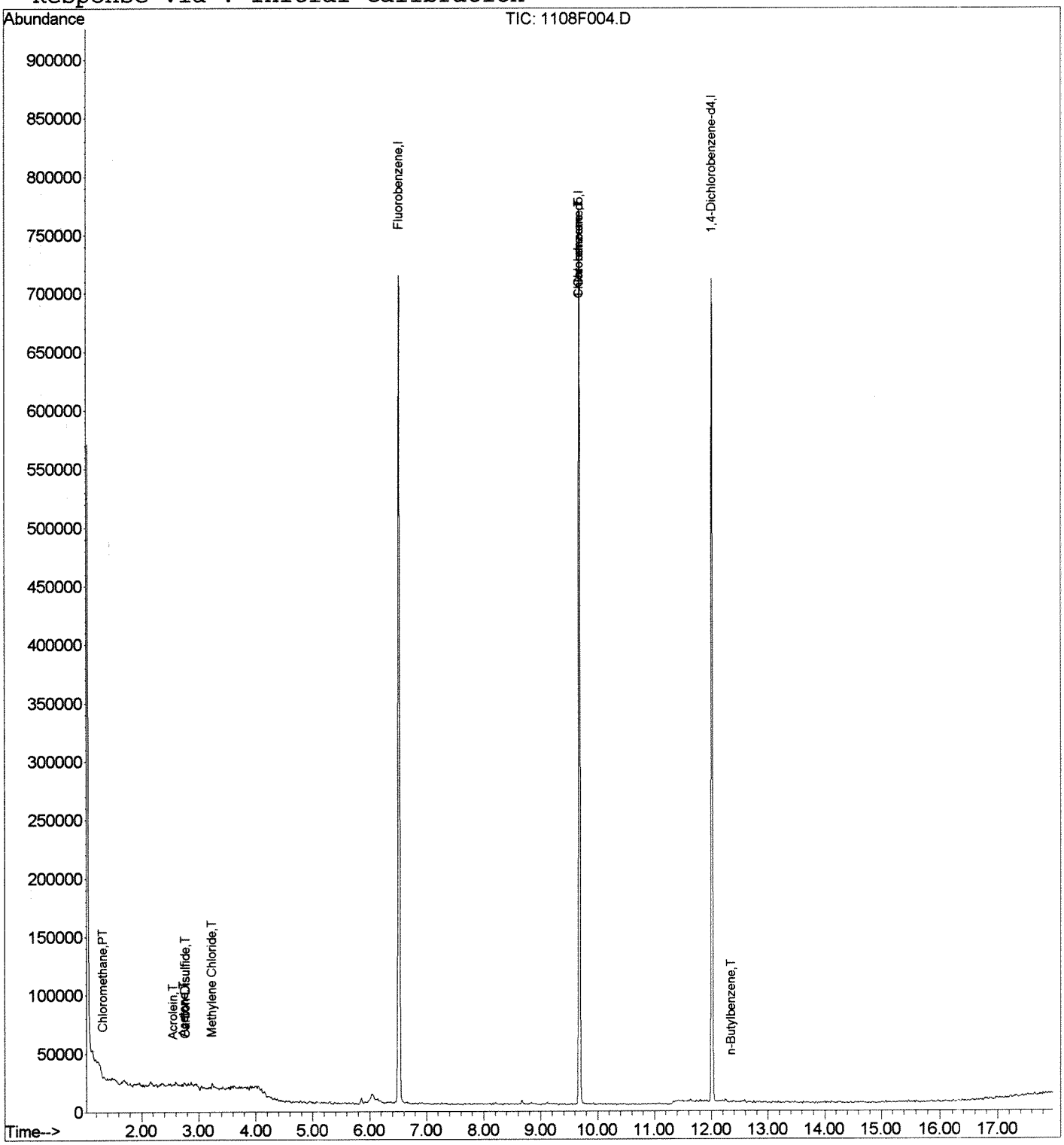
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.51	96	655110	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	246322	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	202983	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	0.00	113	0	0.00	PPB	
Spiked Amount 10.000			Recovery =	0.00%		
46) 1,2-Dichloroethane-d4	0.00	65	0	0.00	PPB	
Spiked Amount 10.000			Recovery =	0.00%		
61) Toluene-d8	0.00	98	0	0.00	PPB	
Spiked Amount 10.000			Recovery =	0.00%		
83) 4-Bromofluorobenzene	0.00	95	0	0.00	PPB	
Spiked Amount 10.000			Recovery =	0.00%		
Target Compounds						Qvalue
3) Chloromethane	1.32	50	608	0.02	PPB	71
5) Bromomethane	1.84	96	716	Below Cal	#	1
10) Acrolein	2.55	56	617	0.26	PPB #	54
13) Acetone	2.75	43	1534	0.58	PPB	65
15) Carbon Disulfide	2.77	76	1549	0.03	PPB	90
20) Methylene Chloride	3.24	84	1846	0.09	PPB #	65
73) 1-Chlorohexane	9.68	91	1404	0.08	PPB	65
99) n-Butylbenzene	12.36	91	660	0.01	PPB	74

11/26/18

(#) = qualifier out of range (m) = manual integration
1108F004.D 110818MS27_8260.M Sat Nov 17 14:48:49 2018 Page 1

Data File : J:\MS27\DATA\110818\1108F004.D Vial: 2
Acq On : 8 Nov 2018 11:48 am Operator: LM
Sample : IB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 14:48 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:20:51 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F005.D Vial: 2
Acq On : 8 Nov 2018 12:27 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:27 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018 LM 11-17-18
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.51	96	630237	10.00	PPB		0.00
63) Chlorobenzene-d5	9.68	82	237100	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	196898	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	0.00	113	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
46) 1,2-Dichloroethane-d4	0.00	65	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
61) Toluene-d8	0.00	98	0d	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
83) 4-Bromofluorobenzene	10.87	95	1031	0.05	PPB		0.00
Spiked Amount 10.000			Recovery =	0.50%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.17	85	920	0.05	PPB		84
3) Chloromethane	1.32	50	2832	0.12	PPB		81
4) Vinyl Chloride	1.41	62	1539	0.07	PPB		91
5) Bromomethane	1.71	96	2210	0.15	PPB		81
6) Chloroethane	1.81	64	1161	0.09	PPB		51
7) Dichlorofluoromethane	2.02	67	2690	0.09	PPB		63
8) Trichlorofluoromethane	2.01	101	1641	0.06	PPB		85
9) Ethyl Ether	2.33	59	1047	0.11	PPB		95
10) Acrolein	2.55	56	4857	2.22	PPB		94
11) Trichlorotrifluoroethane	2.54	151	931	0.08	PPB	#	65
12) 1,1-Dichloroethene	2.56	96	1728m	0.11	PPB		
13) Acetone	2.74	43	11476m	4.67	PPB		
14) Iodomethane	2.75	142	6346	0.25	PPB		85
15) Carbon Disulfide	2.77	76	4219	0.09	PPB		82
16) 2-Propanol (Isopropyl Alco	2.94	45	2459	6.39	PPB	#	1
17) 3-Chloro-1-propene	3.04	76	996	0.11	PPB	#	65
19) Acetonitrile	3.19	40	2032	3.32	PPB		88
20) Methylene Chloride	3.24	84	3293	0.18	PPB		85
22) Acrylonitrile	3.74	53	1744m	0.43	PPB		
23) Methyl tert-Butyl Ether	3.55	73	8014	0.22	PPB		92
24) trans-1,2-Dichloroethene	3.55	96	2158	0.12	PPB	#	77
25) Hexane	3.84	57	1880	0.09	PPB		79
26) Diisopropyl Ether	4.32	45	5819	0.11	PPB		92
27) 1,1-Dichloroethane	4.27	63	3556	0.11	PPB		82
29) Chloroprene	4.35	53	5880	0.29	PPB		94
30) tert-Butyl Ethyl Ether	4.86	59	4128	0.10	PPB		89
31) 2,2-Dichloropropane	5.06	77	1498	0.07	PPB		88

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F005.D Vial: 2
Acq On : 8 Nov 2018 12:27 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:27 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
32)	cis-1,2-Dichloroethene	5.14	96	2592	0.14	PPB	#	70
33)	2-Butanone	5.24	72	4646	4.20	PPB	#	61
35)	Propionitrile	5.42	54	672	0.48	PPB		68
36)	Methacrylonitrile	5.56	67	1622	0.35	PPB	#	76
37)	Bromochloromethane	5.46	128	1116	0.11	PPB	#	73
39)	Chloroform	5.57	83	3472	0.11	PPB		95
41)	1,1,1-Trichloroethane	5.70	97	1863	0.07	PPB		93
43)	Carbon Tetrachloride	5.84	117	1628	0.07	PPB		84
44)	1,1-Dichloropropene	5.90	75	1691	0.08	PPB		96
45)	Isobutyl Alcohol	6.29	42	715	3.37	PPB		85
47)	Benzene	6.14	78	6972	0.10	PPB		94
48)	1,2-Dichloroethane	6.29	62	1904	0.09	PPB		81
49)	tert-Amyl Methyl Ether	6.30	55	1420	0.11	PPB	#	64
50)	Trichloroethene	6.90	95	1435	0.08	PPB		86
51)	Methylcyclohexane	7.00	83	1239	0.05	PPB		85
52)	1,2-Dichloropropane	7.21	63	1961	0.10	PPB		79
53)	Dibromomethane	7.34	93	966	0.09	PPB		94
54)	Methyl methacrylate	7.37	69	685	0.10	PPB		86
56)	Bromodichloromethane	7.52	83	2208	0.09	PPB		71
57)	2-Nitropropane	7.86	41	1470	0.62	PPB		85
59)	cis-1,3-Dichloropropene	7.99	75	2744	0.11	PPB		88
60)	4-Methyl-2-pentanone (MIBK	8.18	58	10081	2.63	PPB		86
62)	Toluene	8.27	92	2962	0.07	PPB		83
65)	trans-1,3-Dichloropropene	8.61	75	2300	0.11	PPB		85
66)	Ethyl methacrylate	8.65	69	1211	0.09	PPB		89
67)	1,1,2-Trichloroethane	8.79	83	1035	0.09	PPB		78
68)	Tetrachloroethene	8.78	164	1233	0.08	PPB	#	79
69)	2-Hexanone	9.03	57	2774	2.60	PPB	#	85
70)	1,3-Dichloropropane	8.95	76	2359	0.11	PPB		86
71)	Dibromochloromethane	9.13	129	1610	0.10	PPB		72
72)	1,2-Dibromoethane (EDB)	9.24	107	1023	0.08	PPB		95
73)	1-Chlorohexane	9.68	91	1948	0.12	PPB	#	66
74)	Chlorobenzene	9.71	112	4500	0.10	PPB		95
75)	Ethylbenzene	9.80	106	1649	0.07	PPB	#	81
76)	1,1,1,2-Tetrachloroethane	9.81	131	1721	0.10	PPB		82
77)	m,p-Xylenes	9.92	106	3418	0.12	PPB		99
78)	o-Xylene	10.31	106	1714	0.07	PPB		94
79)	Styrene	10.34	103	1517	0.07	PPB	#	75
80)	Bromoform	10.55	173	945	0.09	PPB		91
81)	Isopropylbenzene	10.67	105	3908	0.06	PPB		80
82)	cis-1,4-Dichloro-2-butene	10.84	89	509	0.30	PPB	#	74

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F005.D Vial: 2
Acq On : 8 Nov 2018 12:27 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:27 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

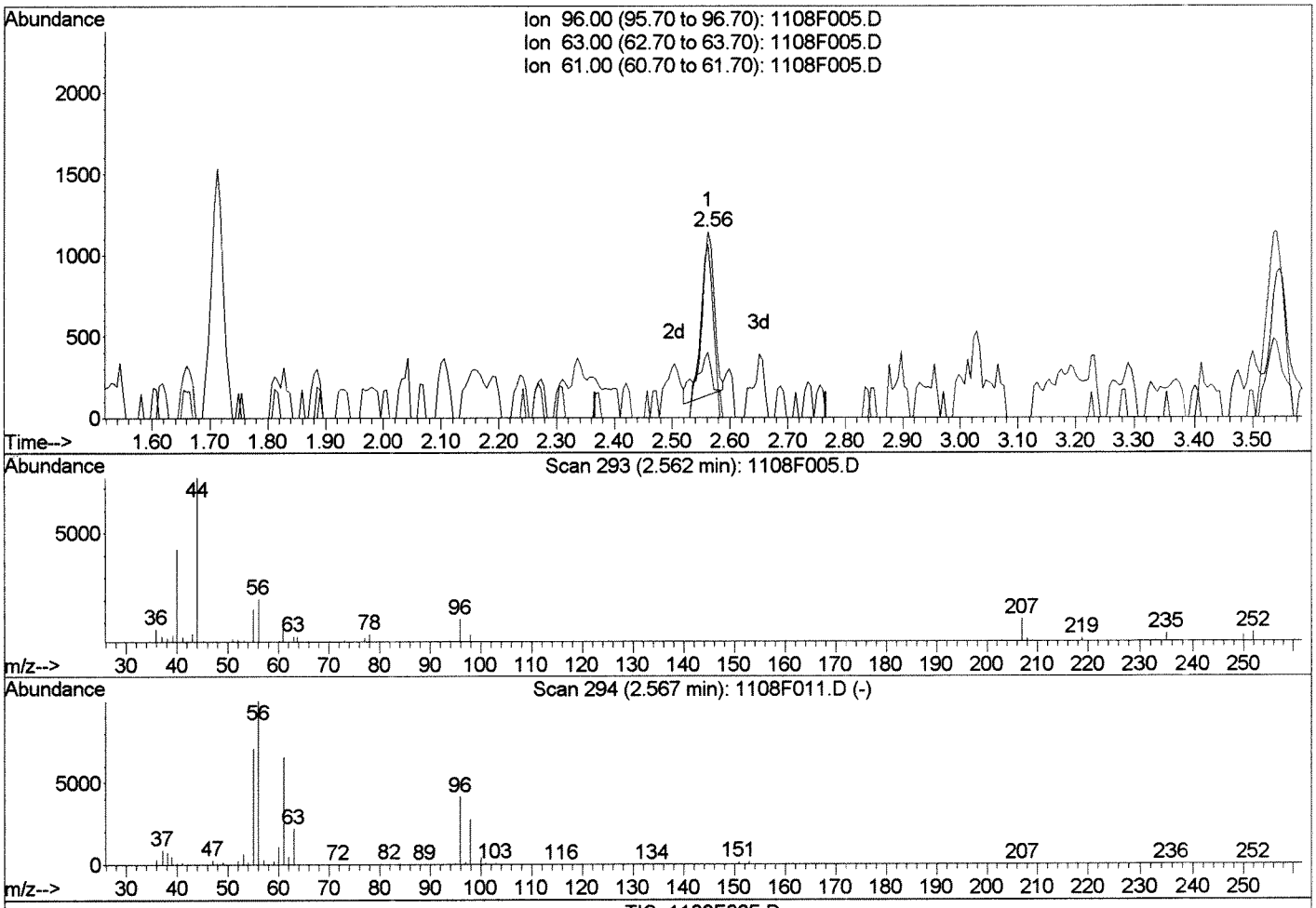
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
85)	1,1,2,2-Tetrachloroethane	11.07	83	1705	0.13	PPB		74
87)	Bromobenzene	11.00	156	1415	0.08	PPB	#	68
88)	n-Propylbenzene	11.08	91	4995	0.07	PPB		91
90)	2-Chlorotoluene	11.18	91	3312	0.08	PPB		97
91)	1,3,5-Trimethylbenzene	11.27	105	3398	0.07	PPB		95
92)	4-Chlorotoluene	11.30	91	3964	0.08	PPB		93
93)	tert-Butylbenzene	11.57	119	2580	0.06	PPB		88
94)	1,2,4-Trimethylbenzene	11.64	105	3239	0.07	PPB		91
95)	sec-Butylbenzene	11.79	105	3220	0.05	PPB		85
96)	p-Isopropyltoluene	11.95	119	2955	0.06	PPB		92
97)	1,3-Dichlorobenzene	11.94	146	3173	0.10	PPB		93
98)	1,4-Dichlorobenzene	11.94	146	3173	0.10	PPB		93
99)	n-Butylbenzene	12.36	91	3555	0.08	PPB		91
100)	1,2-Dichlorobenzene	12.41	146	3085	0.10	PPB		91
102)	1,3,5-Trichlorobenzene	13.36	180	2202	0.10	PPB		87
103)	1,2,4-Trichlorobenzene	14.00	180	2411	0.12	PPB		97
104)	Hexachlorobutadiene	14.13	225	1161	0.11	PPB		80
105)	Naphthalene	14.25	128	2645	0.09	PPB		82
106)	1,2,3-Trichlorobenzene	14.49	180	1921	0.11	PPB	#	71

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F005.D Vial: 2
Acq On : 8 Nov 2018 12:27 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F005.D

(12) 1,1-Dichloroethene (CMT)

2.56min 0.10PPB

response 1563

Ion	Exp%	Act%
96.00	100	100
63.00	53.20	40.92
61.00	159.30	109.23#
0.00	0.00	0.00

Manual Integration:

Before

LM

11/09/18

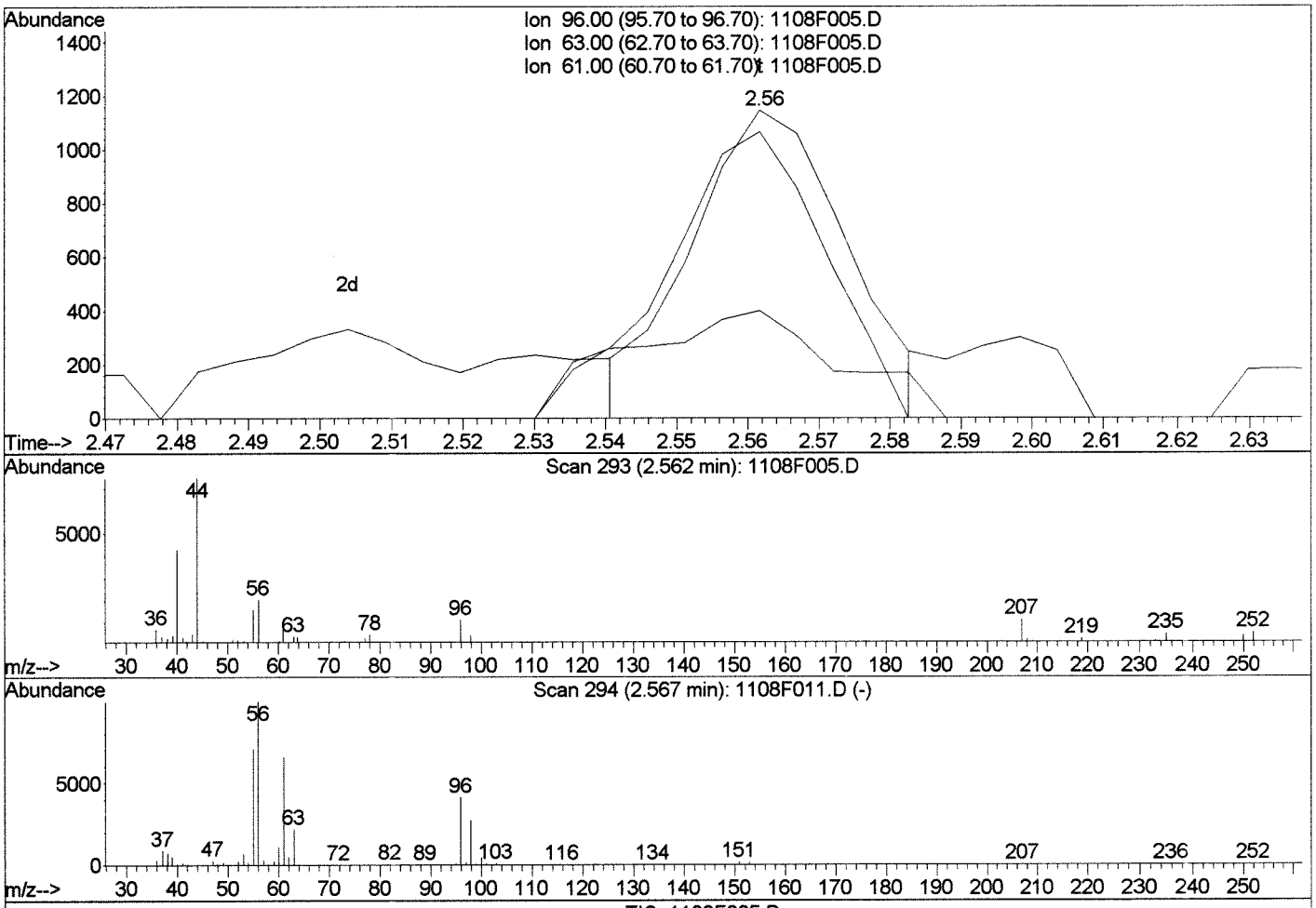
11/26/18

1108F005.D 110818MS27_8260.M Fri Nov 09 08:41:07 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F005.D Vial: 2
Acq On : 8 Nov 2018 12:27 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:41 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F005.D

(12) 1,1-Dichloroethene (CMT)

2.56min 0.11PPB m

response 1728

Ion	Exp%	Act%
96.00	100	100
63.00	53.20	34.85
61.00	159.30	93.01#
0.00	0.00	0.00

Manual Integration:

After LM

Baseline correction

11/09/18

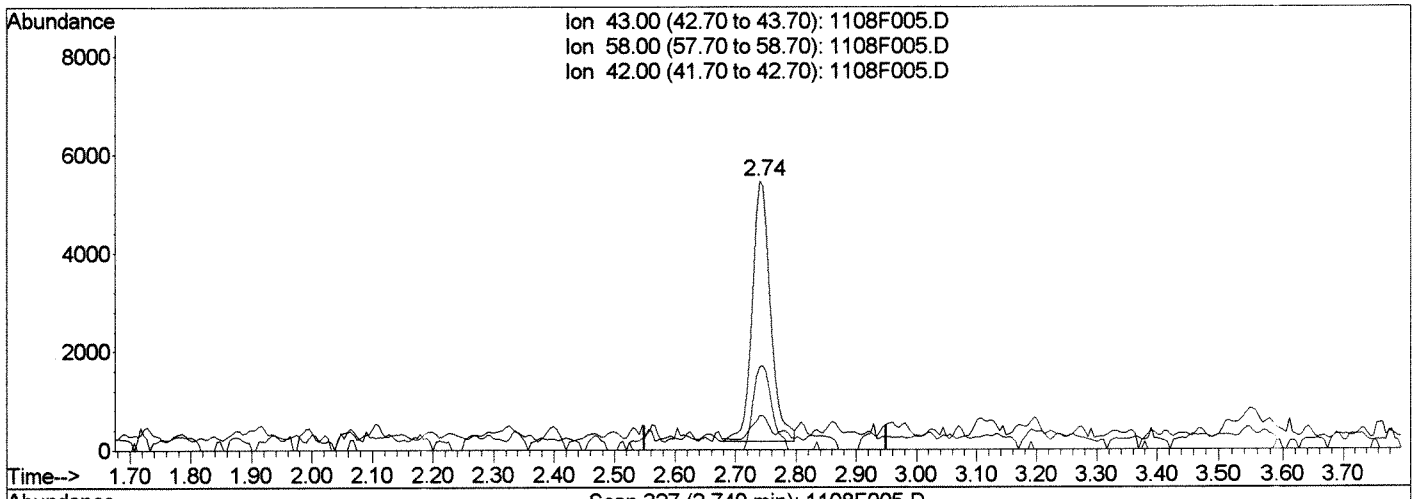
11/26/18

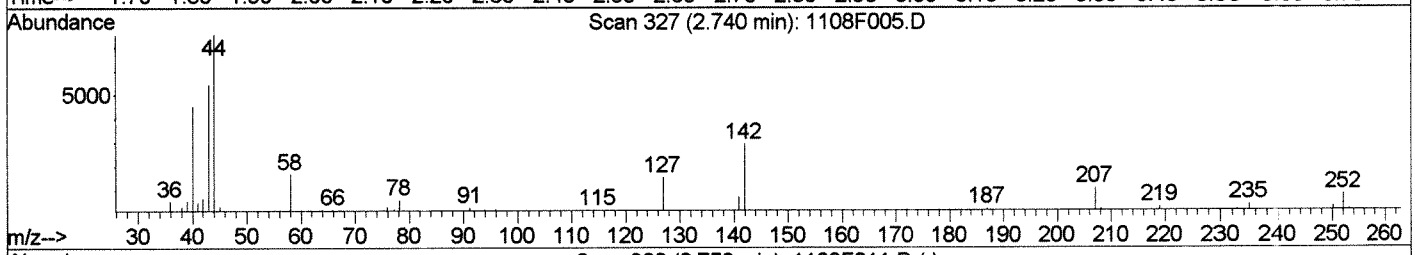
1108F005.D 110818MS27_8260.M Fri Nov 09 08:41:21 2018

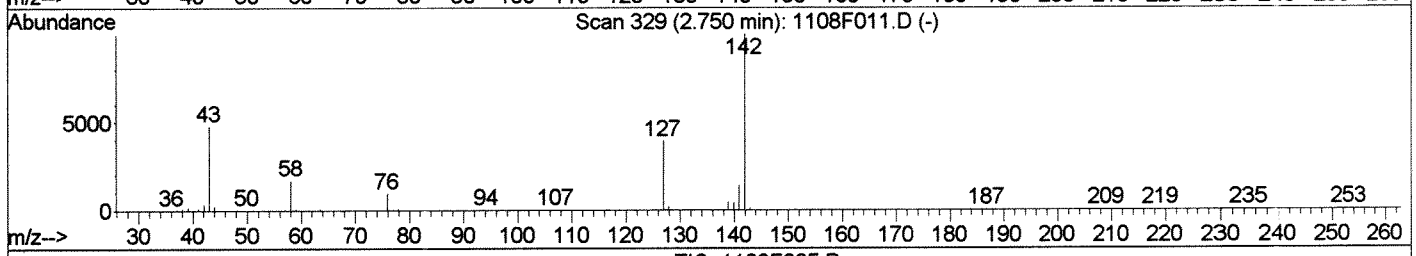
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F005.D Vial: 2
Acq On : 8 Nov 2018 12:27 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:41 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F005.D

(13) Acetone (T)

2.74min 4.57PPB

response 11239

Ion	Exp%	Act%
43.00	100	100
58.00	35.00	31.78
42.00	7.30	8.71
0.00	0.00	0.00

Manual Integration:

Before

LM

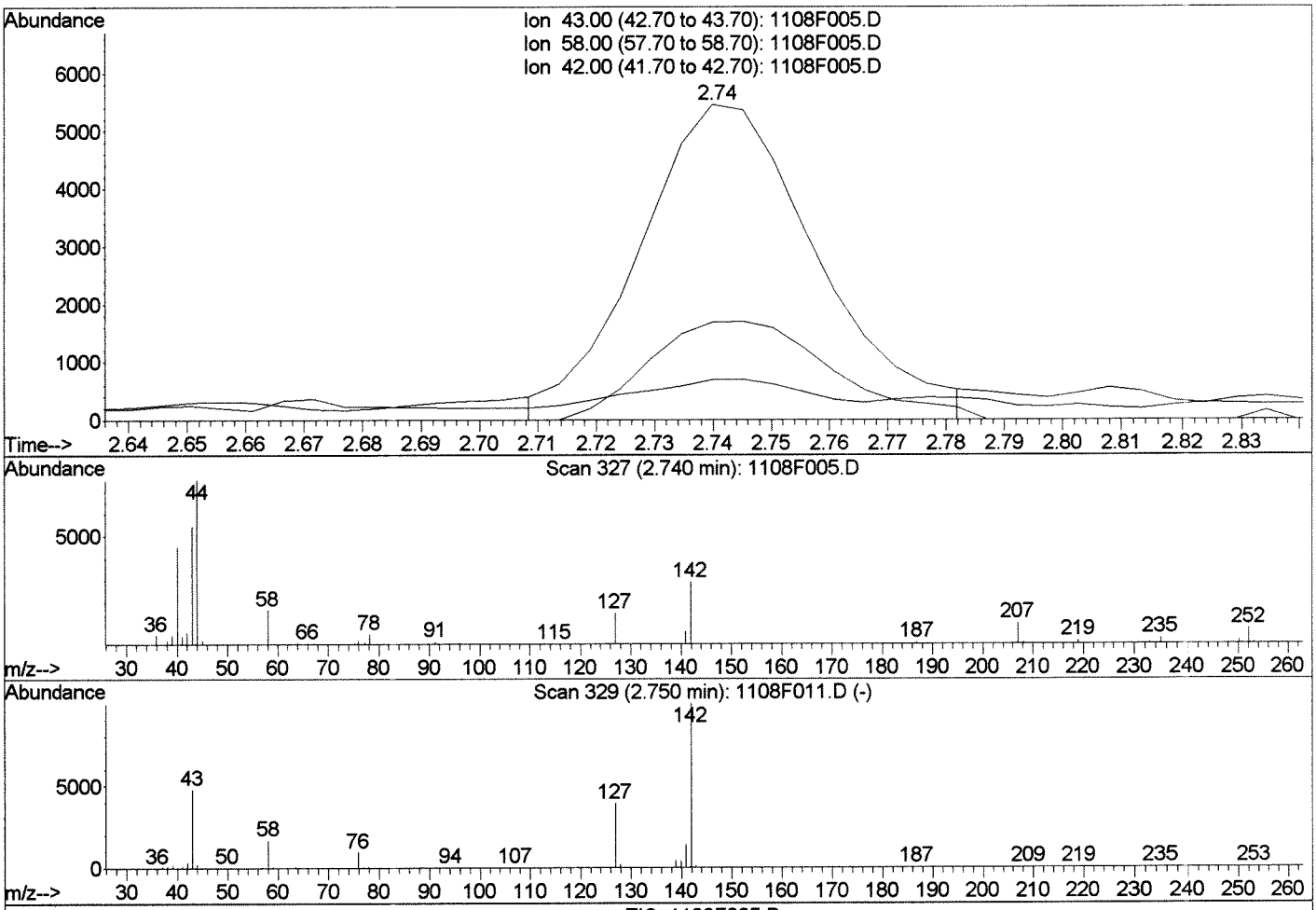
11/09/18 11/26/18

1108F005.D 110818MS27_8260.M Fri Nov 09 08:41:30 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F005.D Vial: 2
Acq On : 8 Nov 2018 12:27 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:42 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F005.D

(13) Acetone (T)

2.74min 4.67PPB m

response 11476

Ion	Exp%	Act%
43.00	100	100
58.00	35.00	30.80
42.00	7.30	12.61
0.00	0.00	0.00

Manual Integration:

After LM

Baseline correction

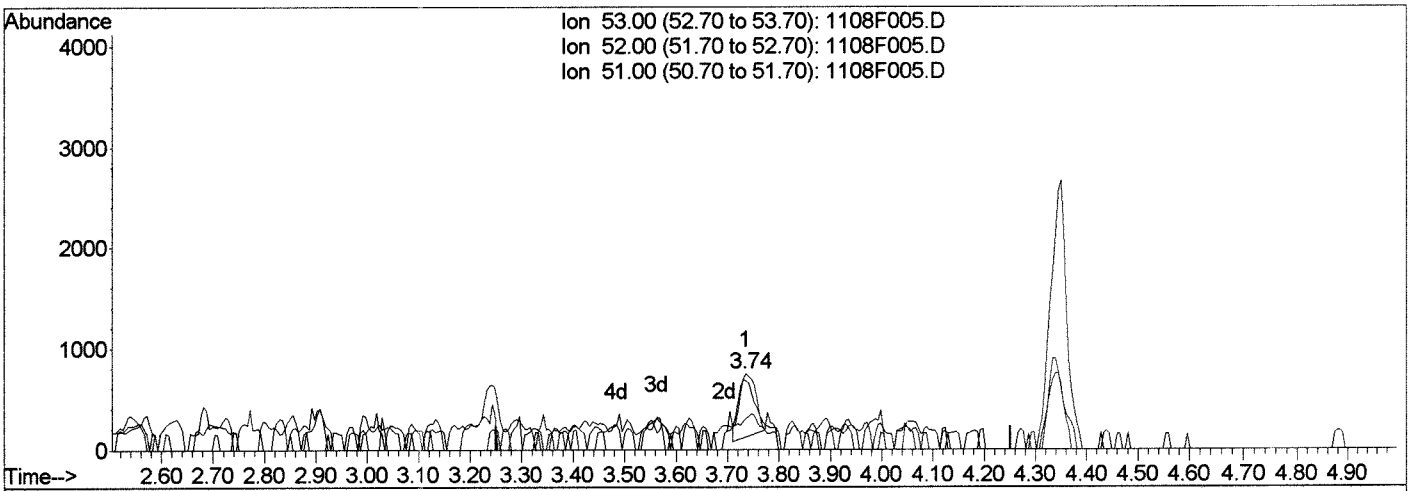
11/09/18

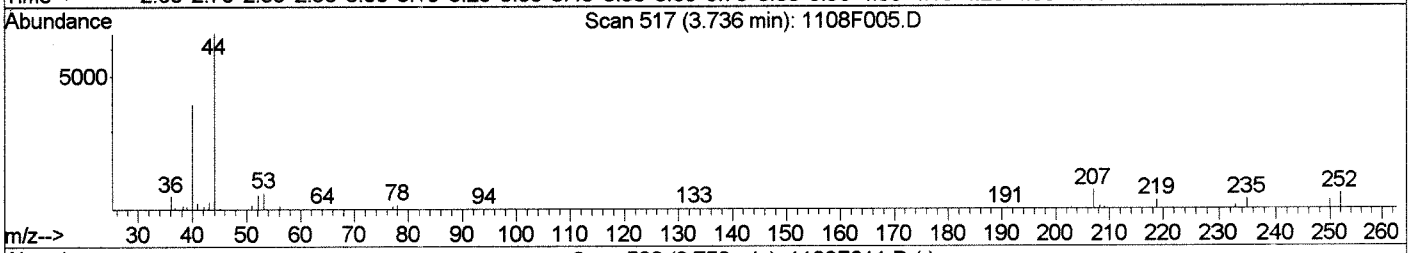
1108F005.D 110818MS27_8260.M Fri Nov 09 08:42:15 2018

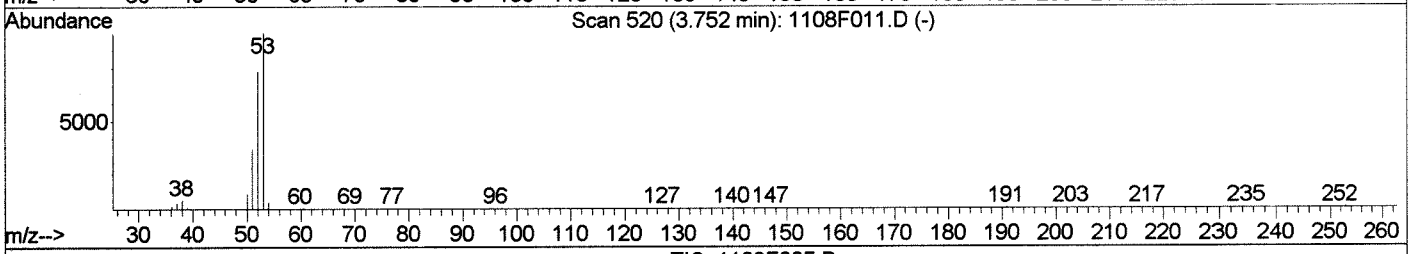
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F005.D Vial: 2
Acq On : 8 Nov 2018 12:27 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:42 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F005.D

(22) Acrylonitrile (T)

3.74min 0.34PPB

response 1376

Ion	Exp%	Act%
53.00	100	100
52.00	78.30	81.47
51.00	33.90	20.86
0.00	0.00	0.00

Manual Integration:

Before LM 11/26/18

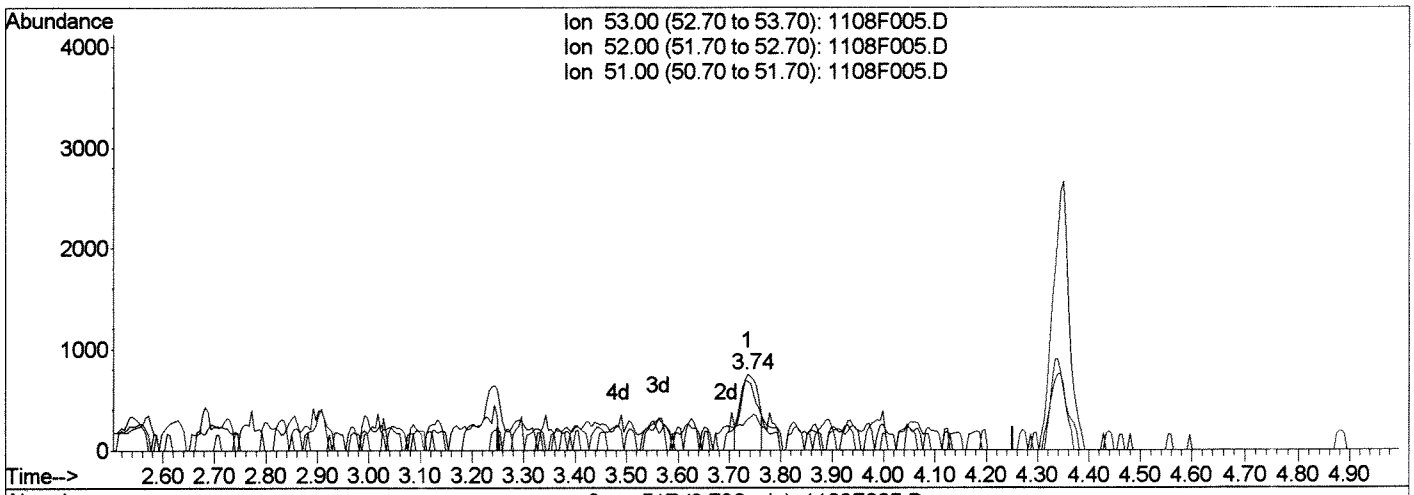
11/09/18

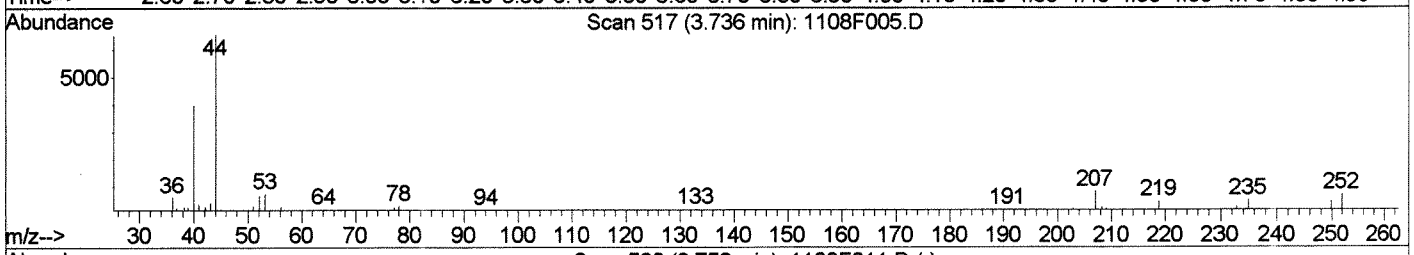
1108F005.D 110818MS27_8260.M Fri Nov 09 08:43:07 2018

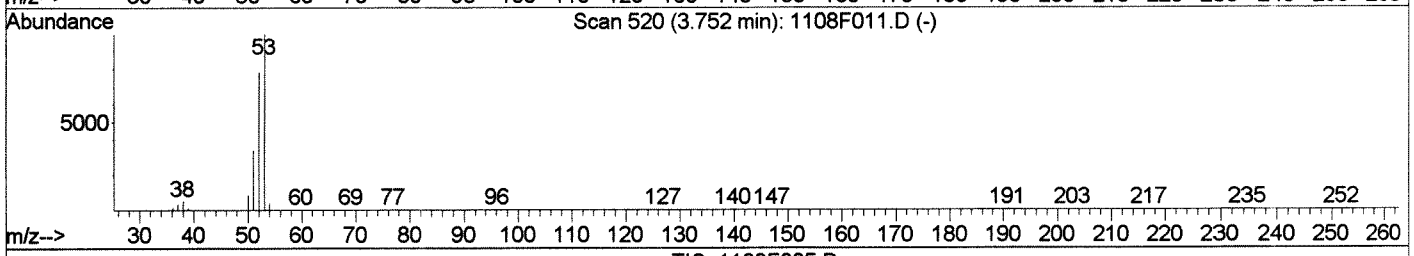
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F005.D Vial: 2
Acq On : 8 Nov 2018 12:27 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:43 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F005.D

(22) Acrylonitrile (T)

3.74min 0.43PPB m

response 1744

Ion	Exp%	Act%
53.00	100	100
52.00	78.30	89.83
51.00	33.90	40.96
0.00	0.00	0.00

Manual Integration:

After LM

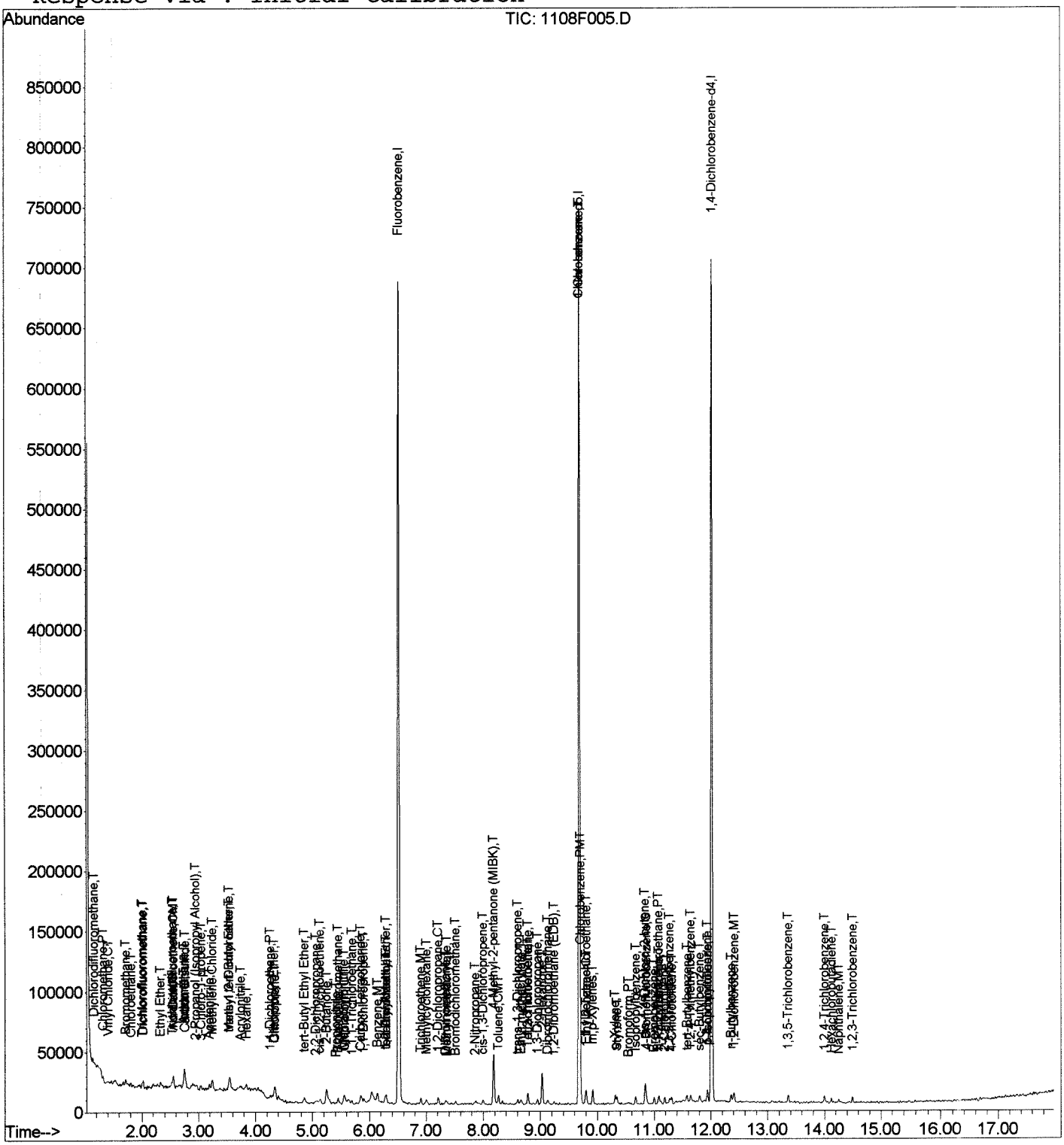
Baseline correction

11/09/18

1108F005.D 110818MS27_8260.M Fri Nov 09 08:43:16 2018

Data File : J:\MS27\DATA\110818\1108F005.D Vial: 2
Acq On : 8 Nov 2018 12:27 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:45 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F006.D Vial: 3
Acq On : 8 Nov 2018 12:49 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:27 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

LM 11-17-18

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.52	96	619241	10.00	PPB		0.00
63) Chlorobenzene-d5	9.68	82	237038	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	197255	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	0.00	113	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
46) 1,2-Dichloroethane-d4	0.00	65	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
61) Toluene-d8	0.00	98	0d	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
83) 4-Bromofluorobenzene	0.00	95	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.17	85	2996	0.16	PPB		93
3) Chloromethane	1.32	50	5609	0.24	PPB		91
4) Vinyl Chloride	1.41	62	3946	0.19	PPB		95
5) Bromomethane	1.71	96	3967	0.27	PPB		90
6) Chloroethane	1.81	64	3153m	0.26	PPB		
7) Dichlorofluoromethane	2.02	67	5843	0.20	PPB		96
8) Trichlorofluoromethane	2.02	101	4130	0.15	PPB		74
9) Ethyl Ether	2.34	59	2147	0.24	PPB		79
10) Acrolein	2.56	56	9570	4.44	PPB		93
11) Trichlorotrifluoroethane	2.52	151	2229	0.18	PPB	#	65
12) 1,1-Dichloroethene	2.57	96	3062	0.20	PPB		86
13) Acetone	2.75	43	22269	9.22	PPB		99
14) Iodomethane	2.75	142	15602	0.62	PPB		99
15) Carbon Disulfide	2.77	76	8897	0.20	PPB		97
16) 2-Propanol (Isopropyl Alco	2.95	45	3978	10.52	PPB	#	1
17) 3-Chloro-1-propene	3.05	76	1758	0.20	PPB		88
18) Methyl Acetate	3.12	43	1768	0.24	PPB		79
19) Acetonitrile	3.20	40	7263	12.09	PPB		87
20) Methylene Chloride	3.25	84	5343	0.30	PPB		93
21) tert-Butyl Alcohol	3.52	59	512	0.61	PPB	#	39
22) Acrylonitrile	3.75	53	4217	1.06	PPB		84
23) Methyl tert-Butyl Ether	3.56	73	15372	0.43	PPB		93
24) trans-1,2-Dichloroethene	3.55	96	4579	0.27	PPB		85
25) Hexane	3.85	57	3680	0.18	PPB		88
26) Diisopropyl Ether	4.33	45	11063	0.22	PPB		98
27) 1,1-Dichloroethane	4.29	63	6170	0.20	PPB		91
28) Vinyl Acetate	4.42	86	972	0.36	PPB	#	29

(#) = qualifier out of range (m) = manual integration

11/12/18

Data File : J:\MS27\DATA\110818\1108F006.D Vial: 3
Acq On : 8 Nov 2018 12:49 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:27 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
29)	Chloroprene	4.35	53	13475	0.68	PPB		93
30)	tert-Butyl Ethyl Ether	4.86	59	7791	0.19	PPB		88
31)	2,2-Dichloropropane	5.08	77	4452	0.20	PPB		98
32)	cis-1,2-Dichloroethene	5.14	96	4148	0.22	PPB		88
33)	2-Butanone	5.25	72	8549	7.86	PPB		92
34)	Ethyl Acetate	5.14	61	4900	3.45	PPB	#	23
35)	Propionitrile	5.43	54	1271	0.92	PPB		68
36)	Methacrylonitrile	5.56	67	3646	0.80	PPB		82
37)	Bromochloromethane	5.46	128	1868	0.19	PPB		90
39)	Chloroform	5.58	83	6740	0.22	PPB		99
40)	Cyclohexane	5.63	56	4253	0.15	PPB		91
41)	1,1,1-Trichloroethane	5.70	97	3918	0.15	PPB		94
43)	Carbon Tetrachloride	5.84	117	3471	0.16	PPB		88
44)	1,1-Dichloropropene	5.91	75	4044	0.19	PPB		89
45)	Isobutyl Alcohol	6.27	42	2255	10.80	PPB	#	60
47)	Benzene	6.15	78	12859	0.19	PPB		97
48)	1,2-Dichloroethane	6.29	62	4122	0.20	PPB		91
49)	tert-Amyl Methyl Ether	6.31	55	2309	0.19	PPB		94
50)	Trichloroethene	6.91	95	3455	0.19	PPB		93
51)	Methylcyclohexane	7.00	83	3142	0.14	PPB		90
52)	1,2-Dichloropropane	7.22	63	3741	0.20	PPB		89
53)	Dibromomethane	7.34	93	2126	0.21	PPB		92
54)	Methyl methacrylate	7.37	69	1327	0.20	PPB		84
56)	Bromodichloromethane	7.52	83	5034	0.21	PPB		92
57)	2-Nitropropane	7.87	41	2670	1.16	PPB		94
58)	2-Chloroethyl Vinyl Ether	7.88	63	1229	0.19	PPB		77
59)	cis-1,3-Dichloropropene	8.00	75	4886	0.19	PPB		94
60)	4-Methyl-2-pentanone (MIBK	8.18	58	22217	5.90	PPB		91
62)	Toluene	8.27	92	6425	0.15	PPB		98
64)	n-Octane	8.33	85	671	0.08	PPB	#	47
65)	trans-1,3-Dichloropropene	8.61	75	3830	0.19	PPB		91
66)	Ethyl methacrylate	8.66	69	2162	0.17	PPB		84
67)	1,1,2-Trichloroethane	8.79	83	2307	0.20	PPB		86
68)	Tetrachloroethene	8.79	164	2960	0.20	PPB		78
69)	2-Hexanone	9.03	57	6701	6.28	PPB	#	84
70)	1,3-Dichloropropane	8.95	76	5238	0.24	PPB		94
71)	Dibromochloromethane	9.13	129	3482	0.21	PPB		85
72)	1,2-Dibromoethane (EDB)	9.25	107	2592	0.20	PPB		88
73)	1-Chlorohexane	9.69	91	3408	0.21	PPB		87
74)	Chlorobenzene	9.71	112	8301	0.18	PPB		87
75)	Ethylbenzene	9.80	106	3425	0.15	PPB	#	84

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F006.D Vial: 3
Acq On : 8 Nov 2018 12:49 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:27 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

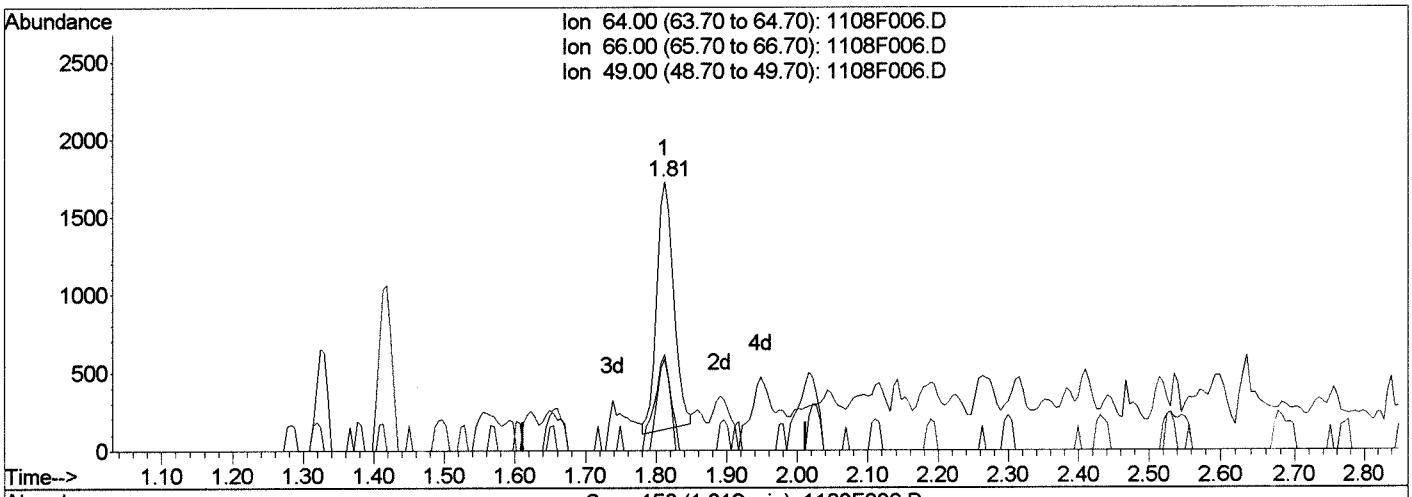
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
76)	1,1,1,2-Tetrachloroethane	9.81	131	3086	0.18	PPB		90
77)	m,p-Xylenes	9.92	106	7539	0.27	PPB		98
78)	o-Xylene	10.32	106	3638	0.14	PPB	#	60
79)	Styrene	10.35	103	4315	0.19	PPB		90
80)	Bromoform	10.55	173	2187	0.20	PPB		88
81)	Isopropylbenzene	10.67	105	8209	0.12	PPB		92
82)	cis-1,4-Dichloro-2-butene	10.84	89	1086	0.65	PPB	#	75
85)	1,1,2,2-Tetrachloroethane	11.07	83	3087	0.24	PPB		95
86)	trans-1,4-Dichloro-2-buten	11.14	53	817	0.27	PPB		77
87)	Bromobenzene	11.00	156	3449	0.20	PPB		96
88)	n-Propylbenzene	11.08	91	11215	0.16	PPB		91
89)	1,2,3-Trichloropropane	11.11	110	743	0.21	PPB	#	76
90)	2-Chlorotoluene	11.19	91	7073	0.17	PPB		89
91)	1,3,5-Trimethylbenzene	11.27	105	6620	0.13	PPB		98
92)	4-Chlorotoluene	11.31	91	7923	0.17	PPB		96
93)	tert-Butylbenzene	11.57	119	6042	0.15	PPB		96
94)	1,2,4-Trimethylbenzene	11.64	105	5782	0.12	PPB		93
95)	sec-Butylbenzene	11.80	105	7120	0.12	PPB		95
96)	p-Isopropyltoluene	11.95	119	6475	0.13	PPB		95
97)	1,3-Dichlorobenzene	11.94	146	6329	0.19	PPB		94
98)	1,4-Dichlorobenzene	12.04	146	6353	0.19	PPB		90
99)	n-Butylbenzene	12.36	91	7494	0.17	PPB		92
100)	1,2-Dichlorobenzene	12.41	146	6426	0.21	PPB		93
102)	1,3,5-Trichlorobenzene	13.36	180	4452	0.20	PPB		83
103)	1,2,4-Trichlorobenzene	14.00	180	4348	0.22	PPB		96
104)	Hexachlorobutadiene	14.12	225	1950	0.19	PPB		90
105)	Naphthalene	14.25	128	5426	0.18	PPB		97
106)	1,2,3-Trichlorobenzene	14.49	180	3853	0.21	PPB		91

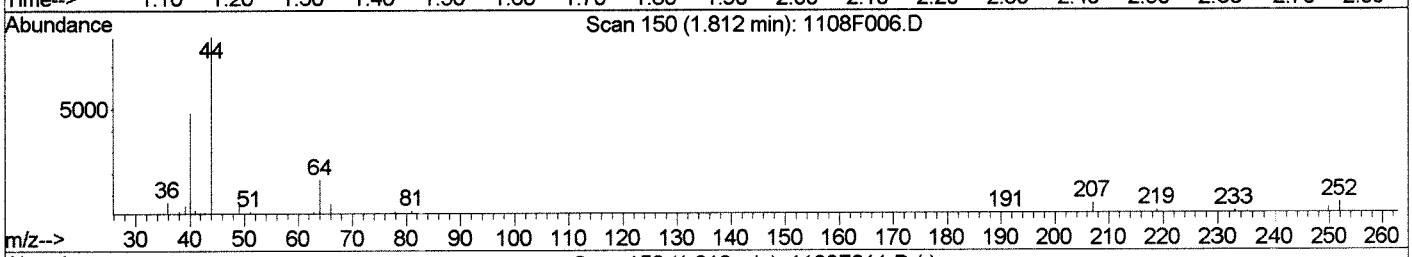
(#) = qualifier out of range (m) = manual integration

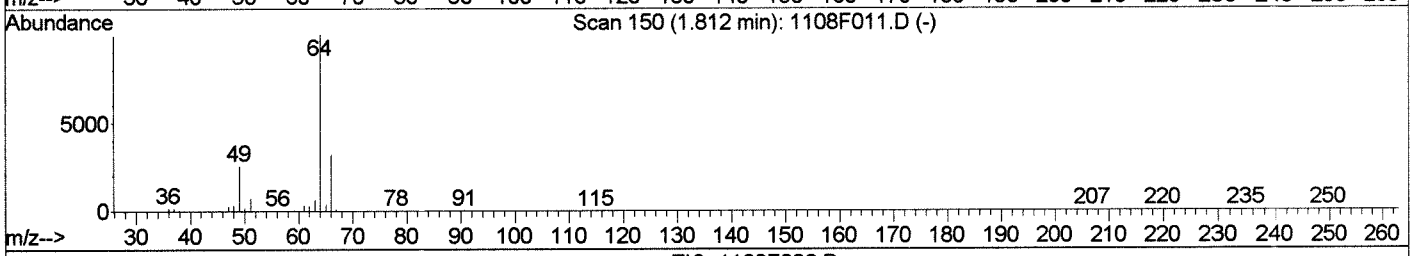
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F006.D Vial: 3
Acq On : 8 Nov 2018 12:49 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F006.D

(6) Chloroethane (T)

1.81min 0.22PPB

response 2657

Ion	Exp%	Act%
64.00	100	100
66.00	32.30	39.32
49.00	25.60	37.46
0.00	0.00	0.00

Manual Integration:

Before LM

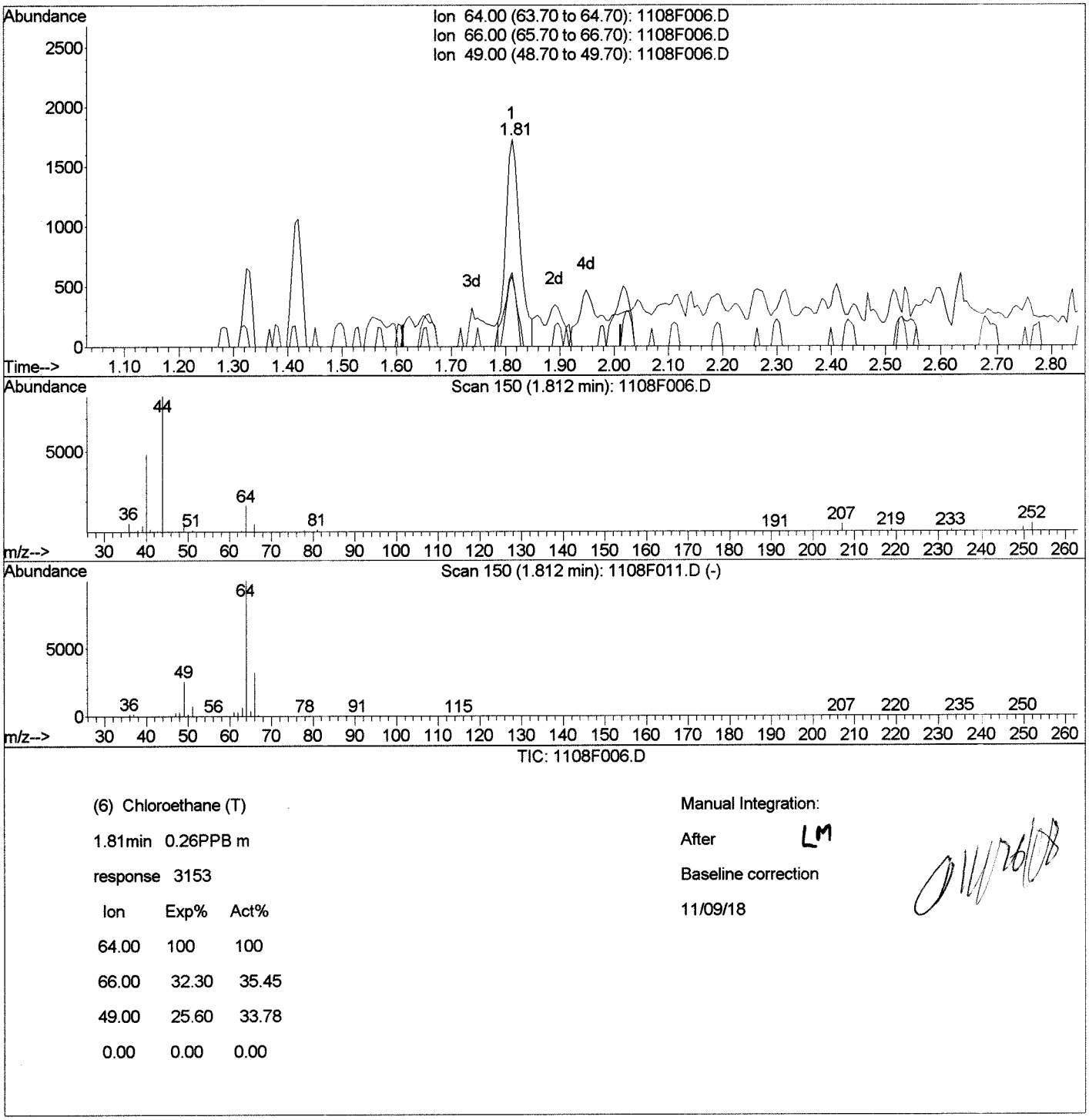
11/09/18

1108F006.D 110818MS27_8260.M Fri Nov 09 08:49:10 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F006.D Vial: 3
Acq On : 8 Nov 2018 12:49 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:49 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



(6) Chloroethane (T)

1.81min 0.26PPB m

response 3153

Ion	Exp%	Act%
64.00	100	100
66.00	32.30	35.45
49.00	25.60	33.78
0.00	0.00	0.00

Manual Integration:

After LM

Baseline correction

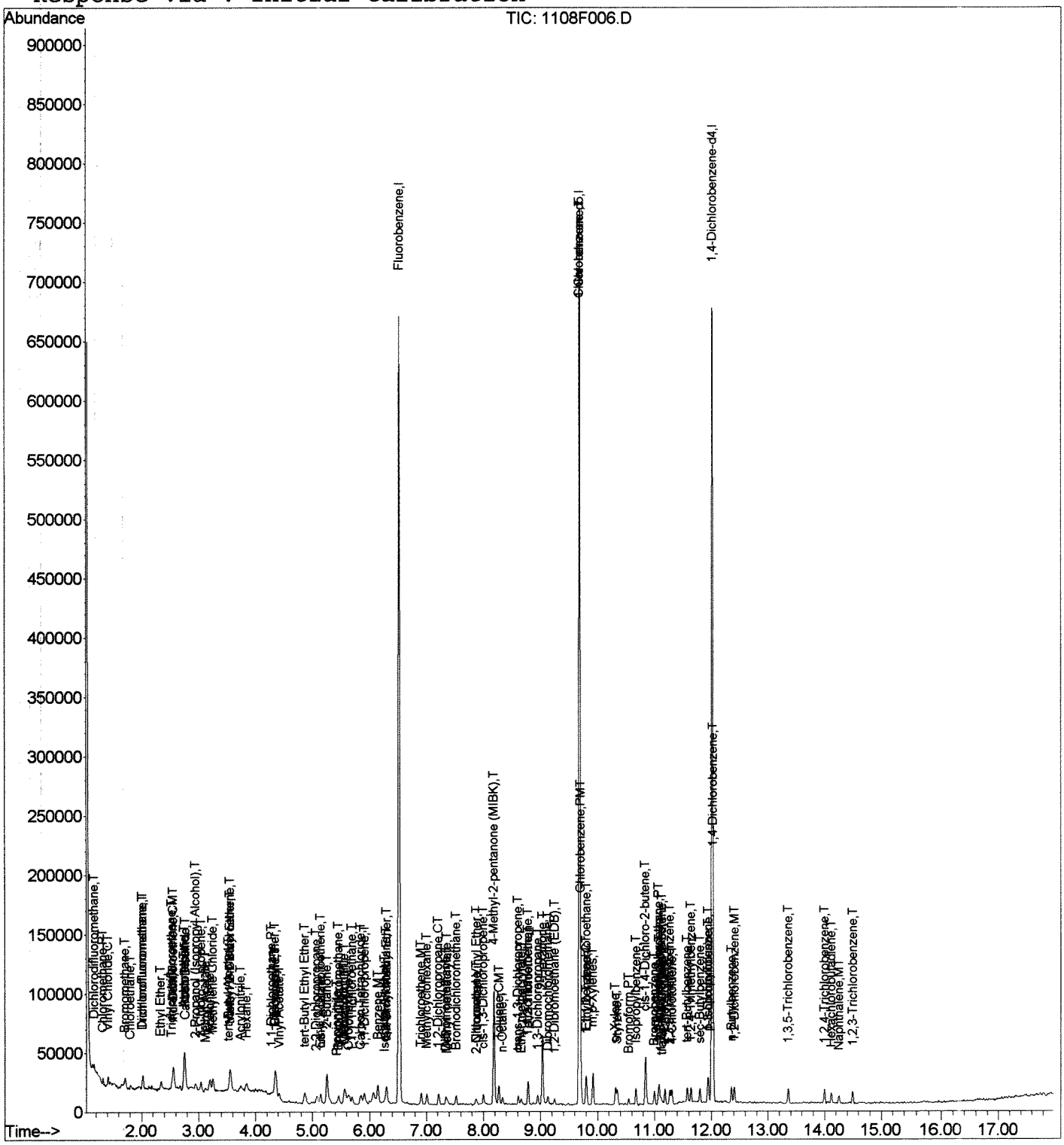
11/09/18

11/26/18

1108F006.D 110818MS27_8260.M Fri Nov 09 08:49:23 2018

Data File : J:\MS27\DATA\110818\1108F006.D Vial: 3
Acq On : 8 Nov 2018 12:49 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:54 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F007.D Vial: 4
Acq On : 8 Nov 2018 1:11 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:28 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration LM 11-17-18
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.52	96	613375	10.00	PPB		0.00
63) Chlorobenzene-d5	9.68	82	234845	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	201865	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	0.00	113	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
46) 1,2-Dichloroethane-d4	0.00	65	0d	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
61) Toluene-d8	0.00	98	0d	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
83) 4-Bromofluorobenzene	0.00	95	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.17	85	7283	0.40	PPB		95
3) Chloromethane	1.32	50	12789	0.56	PPB		97
4) Vinyl Chloride	1.41	62	9301	0.44	PPB		98
5) Bromomethane	1.72	96	9202	0.64	PPB		92
6) Chloroethane	1.81	64	6235	0.52	PPB		97
7) Dichlorofluoromethane	2.03	67	14941	0.51	PPB		92
8) Trichlorofluoromethane	2.02	101	11819	0.44	PPB		97
9) Ethyl Ether	2.34	59	5396	0.60	PPB		95
10) Acrolein	2.56	56	22532	10.56	PPB		100
11) Trichlorotrifluoroethane	2.54	151	5026	0.42	PPB		98
12) 1,1-Dichloroethene	2.57	96	8078	0.53	PPB		87
13) Acetone	2.75	43	51951	21.72	PPB		99
14) Iodomethane	2.75	142	40074	1.62	PPB		98
15) Carbon Disulfide	2.77	76	21091	0.47	PPB		94
16) 2-Propanol (Isopropyl Alco	2.97	45	12021m	32.09	PPB		
17) 3-Chloro-1-propene	3.05	76	4616	0.53	PPB		90
18) Methyl Acetate	3.13	43	4588	0.62	PPB		99
19) Acetonitrile	3.20	40	14557	24.46	PPB		98
20) Methylene Chloride	3.25	84	11023	0.62	PPB		93
21) tert-Butyl Alcohol	3.53	59	2999	3.61	PPB	#	40
22) Acrylonitrile	3.75	53	7144	1.81	PPB		93
23) Methyl tert-Butyl Ether	3.56	73	38891	1.09	PPB		98
24) trans-1,2-Dichloroethene	3.55	96	8708	0.51	PPB		95
25) Hexane	3.85	57	8774	0.44	PPB		84
26) Diisopropyl Ether	4.33	45	26038	0.52	PPB		96
27) 1,1-Dichloroethane	4.29	63	16080	0.52	PPB		97
28) Vinyl Acetate	4.42	86	2520	0.95	PPB	#	81

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F007.D Vial: 4
Acq On : 8 Nov 2018 1:11 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:28 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
29)	Chloroprene	4.35	53	34083	1.73	PPB		97
30)	tert-Butyl Ethyl Ether	4.87	59	19840	0.50	PPB		88
31)	2,2-Dichloropropane	5.08	77	10153	0.47	PPB		96
32)	cis-1,2-Dichloroethene	5.14	96	8894	0.48	PPB		97
33)	2-Butanone	5.25	72	20759	19.27	PPB	#	83
34)	Ethyl Acetate	5.29	61	1411	1.00	PPB		83
35)	Propionitrile	5.43	54	3034	2.21	PPB		90
36)	Methacrylonitrile	5.56	67	8716	1.94	PPB		82
37)	Bromochloromethane	5.46	128	5113	0.53	PPB		89
38)	Tetrahydrofuran	5.48	71	341m	0.31	PPB		
39)	Chloroform	5.58	83	15135	0.49	PPB		98
40)	Cyclohexane	5.64	56	11490	0.40	PPB		99
41)	1,1,1-Trichloroethane	5.70	97	12553	0.50	PPB		93
43)	Carbon Tetrachloride	5.84	117	9614	0.43	PPB		94
44)	1,1-Dichloropropene	5.91	75	9215	0.43	PPB		98
45)	Isobutyl Alcohol	6.27	42	4439	21.47	PPB	#	76
47)	Benzene	6.15	78	32083	0.48	PPB		95
48)	1,2-Dichloroethane	6.29	62	9840	0.48	PPB		87
49)	tert-Amyl Methyl Ether	6.31	55	6087	0.50	PPB		88
50)	Trichloroethene	6.91	95	8229	0.46	PPB		95
51)	Methylcyclohexane	7.01	83	8244	0.38	PPB		90
52)	1,2-Dichloropropane	7.22	63	8928	0.48	PPB		93
53)	Dibromomethane	7.34	93	5491	0.54	PPB		95
54)	Methyl methacrylate	7.37	69	3377	0.50	PPB		95
55)	1,4-Dioxane	7.38	88	1325	20.17	PPB	#	63
56)	Bromodichloromethane	7.52	83	12049	0.51	PPB		99
57)	2-Nitropropane	7.86	41	6236	2.72	PPB		98
58)	2-Chloroethyl Vinyl Ether	7.88	63	2511	0.38	PPB		93
59)	cis-1,3-Dichloropropene	8.00	75	11055	0.44	PPB		97
60)	4-Methyl-2-pentanone (MIBK	8.18	58	60600	16.24	PPB		95
62)	Toluene	8.27	92	16603	0.40	PPB		97
64)	n-Octane	8.33	85	2527	0.30	PPB		96
65)	trans-1,3-Dichloropropene	8.61	75	9706	0.48	PPB		90
66)	Ethyl methacrylate	8.66	69	5737	0.45	PPB		95
67)	1,1,2-Trichloroethane	8.79	83	6324	0.54	PPB		92
68)	Tetrachloroethene	8.79	164	6424	0.44	PPB		95
69)	2-Hexanone	9.03	57	17279	16.34	PPB		99
70)	1,3-Dichloropropane	8.95	76	12468	0.57	PPB		94
71)	Dibromochloromethane	9.13	129	8092	0.48	PPB		96
72)	1,2-Dibromoethane (EDB)	9.25	107	6907	0.54	PPB		95
73)	1-Chlorohexane	9.69	91	7495	0.46	PPB		82

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F007.D Vial: 4
Acq On : 8 Nov 2018 1:11 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:28 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

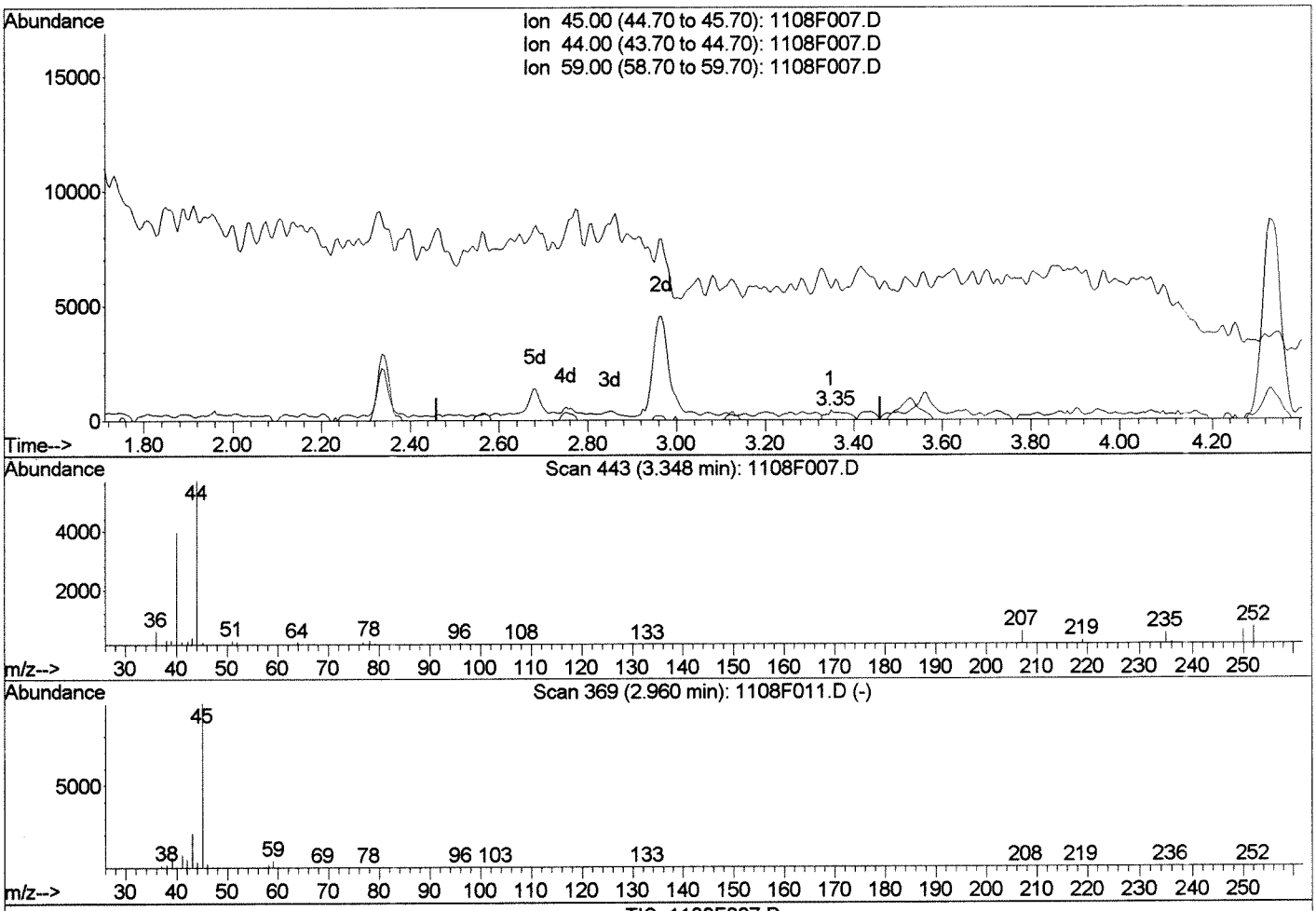
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
74)	Chlorobenzene	9.71	112	23170	0.50	PPB		97
75)	Ethylbenzene	9.80	106	9289	0.41	PPB		96
76)	1,1,1,2-Tetrachloroethane	9.81	131	9213	0.55	PPB		99
77)	m,p-Xylenes	9.92	106	21071	0.75	PPB		98
78)	o-Xylene	10.32	106	10387	0.40	PPB		97
79)	Styrene	10.35	103	9721	0.44	PPB		95
80)	Bromoform	10.55	173	5793	0.54	PPB		95
81)	Isopropylbenzene	10.67	105	23441	0.36	PPB		98
82)	cis-1,4-Dichloro-2-butene	10.84	89	3061	1.85	PPB	#	80
85)	1,1,2,2-Tetrachloroethane	11.07	83	7603	0.57	PPB		97
86)	trans-1,4-Dichloro-2-buten	11.14	53	1591	0.52	PPB		81
87)	Bromobenzene	11.00	156	8612	0.48	PPB		87
88)	n-Propylbenzene	11.08	91	30505	0.42	PPB		94
89)	1,2,3-Trichloropropane	11.11	110	2225	0.61	PPB	#	74
90)	2-Chlorotoluene	11.19	91	17717	0.41	PPB		86
91)	1,3,5-Trimethylbenzene	11.27	105	18997	0.38	PPB		100
92)	4-Chlorotoluene	11.31	91	18481m	0.39	PPB		
93)	tert-Butylbenzene	11.57	119	15810	0.38	PPB		89
94)	1,2,4-Trimethylbenzene	11.64	105	16573	0.33	PPB		94
95)	sec-Butylbenzene	11.80	105	21528	0.35	PPB		94
96)	p-Isopropyltoluene	11.95	119	17660	0.35	PPB		99
97)	1,3-Dichlorobenzene	11.94	146	17102	0.51	PPB		97
98)	1,4-Dichlorobenzene	12.04	146	17552	0.52	PPB		99
99)	n-Butylbenzene	12.36	91	17663	0.39	PPB		99
100)	1,2-Dichlorobenzene	12.41	146	15385	0.49	PPB		94
101)	1,2-Dibromo-3-chloropropan	13.22	155	671	0.37	PPB	#	82
102)	1,3,5-Trichlorobenzene	13.36	180	11629	0.52	PPB		93
103)	1,2,4-Trichlorobenzene	14.00	180	10130	0.51	PPB		94
104)	Hexachlorobutadiene	14.12	225	5869	0.56	PPB		94
105)	Naphthalene	14.25	128	14695	0.48	PPB		94
106)	1,2,3-Trichlorobenzene	14.49	180	9322	0.50	PPB		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F007.D Vial: 4
Acq On : 8 Nov 2018 1:11 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F007.D

(16) 2-Propanol (Isopropyl Alcohol) (T)

3.35min 3.21PPB

response 1201

Ion	Exp%	Act%
45.00	100	100
44.00	5.40	0.00
59.00	4.10	0.00
0.00	0.00	0.00

Manual Integration:

Before

LM

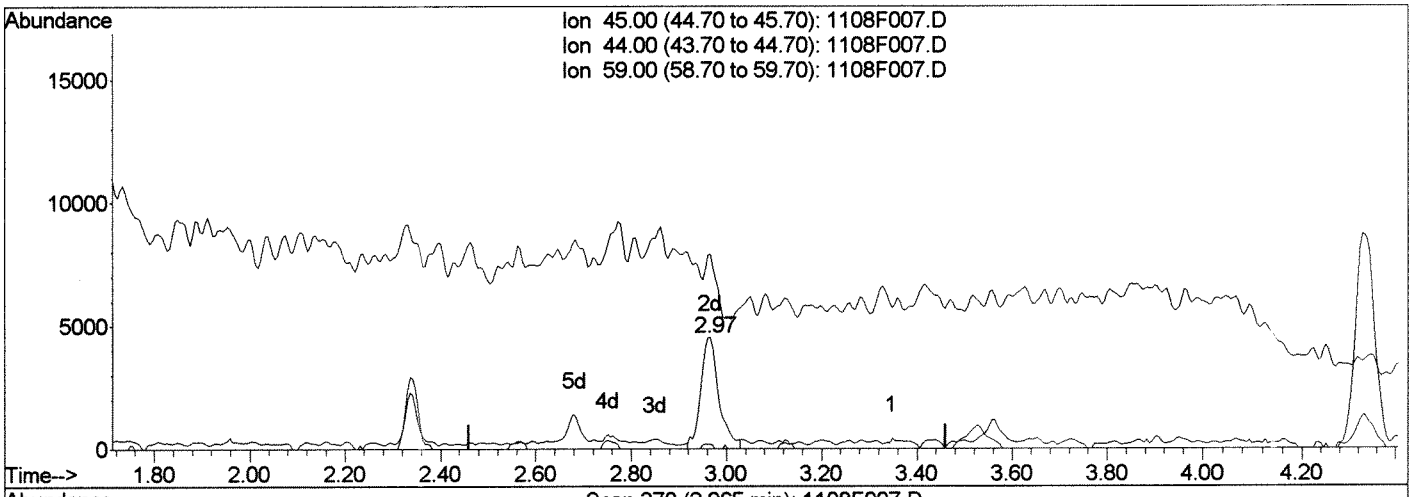
11/09/18

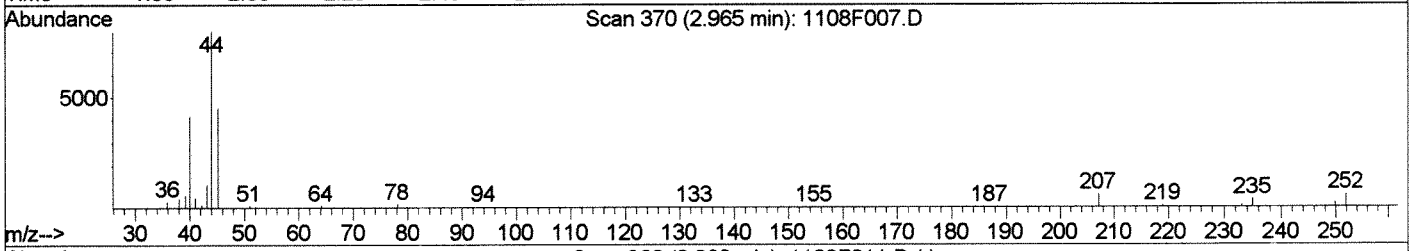
1108F007.D 110818MS27_8260.M Fri Nov 09 08:56:48 2018

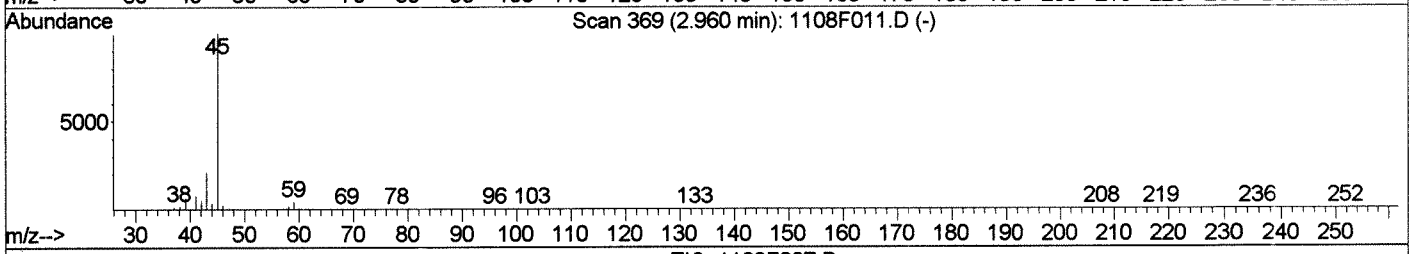
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F007.D Vial: 4
Acq On : 8 Nov 2018 1:11 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:56 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F007.D

(16) 2-Propanol (Isopropyl Alcohol) (T)

2.97min 32.09PPB m

response 12021

Ion	Exp%	Act%
45.00	100	100
44.00	5.40	174.47#
59.00	4.10	3.82
0.00	0.00	0.00

Manual Integration:

After

WRT LM

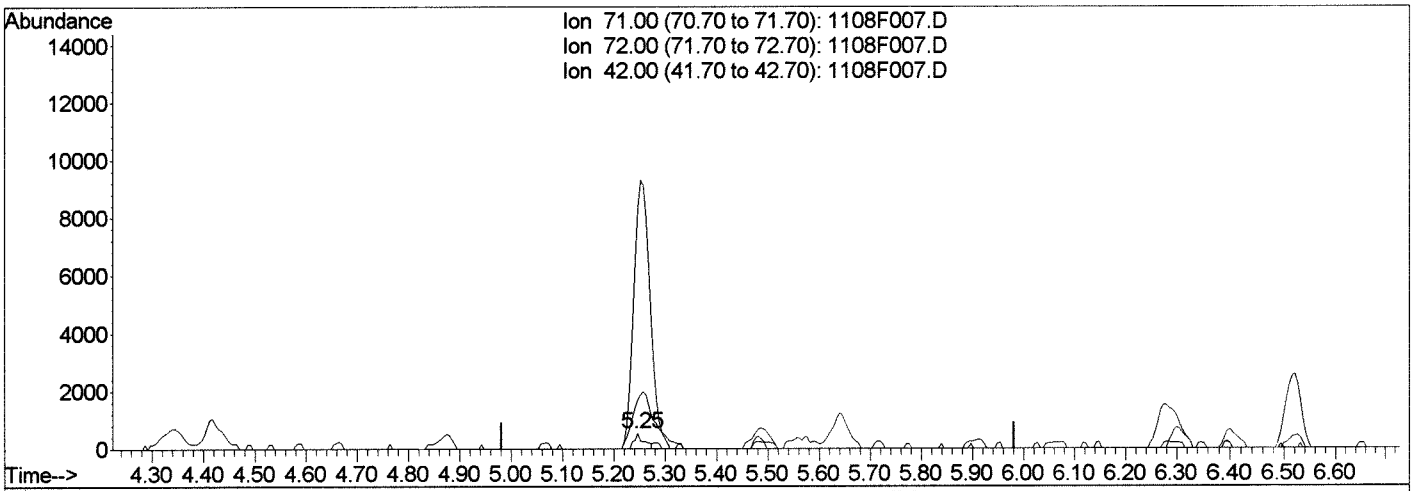
11/09/18

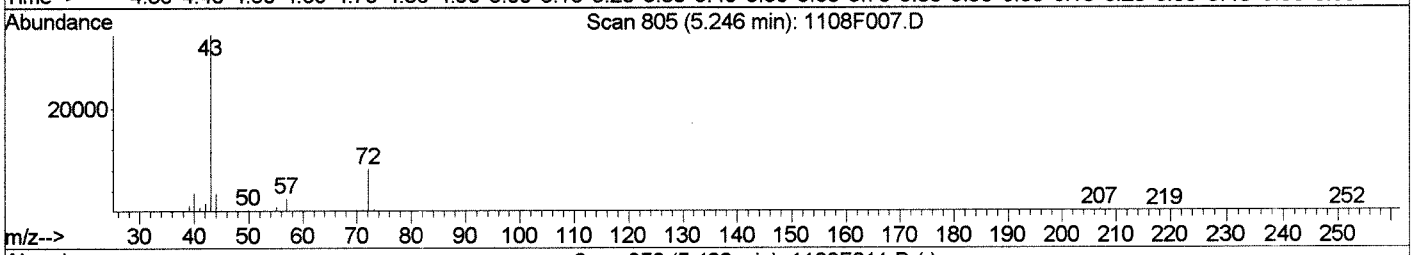
1108F007.D 110818MS27_8260.M Fri Nov 09 08:56:58 2018

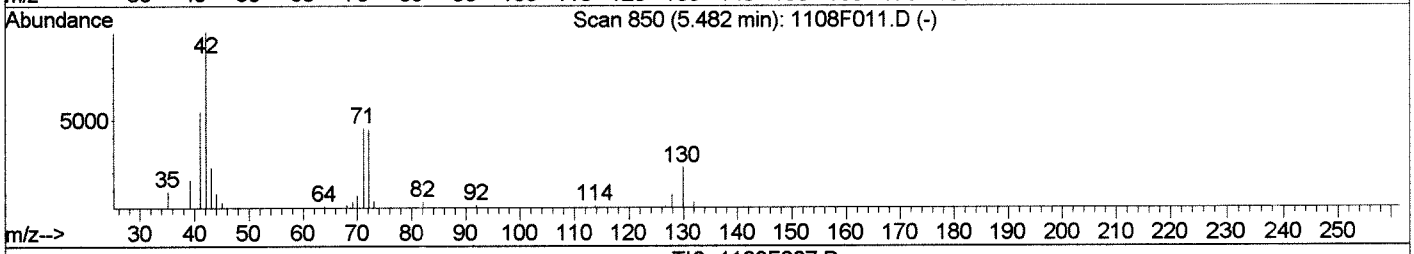
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F007.D Vial: 4
Acq On : 8 Nov 2018 1:11 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:56 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F007.D

(38) Tetrahydrofuran (T)

5.25min 0.64PPB

response 690

Ion	Exp%	Act%
71.00	100	100
72.00	98.60	1378.11#
42.00	221.30	237.85
0.00	0.00	0.00

Manual Integration:

Before

LM

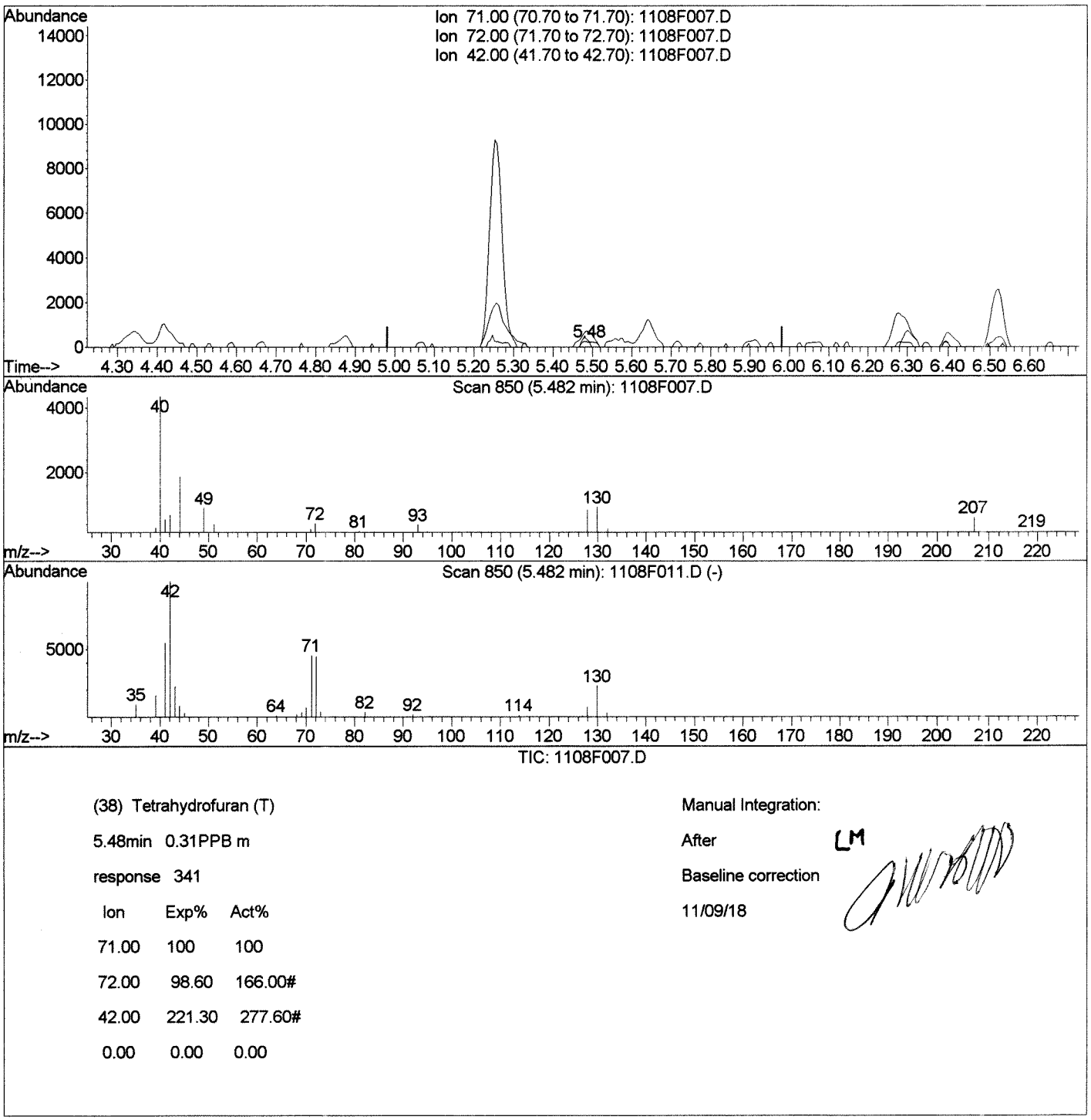
11/09/18

1108F007.D 110818MS27_8260.M Fri Nov 09 08:58:11 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F007.D Vial: 4
Acq On : 8 Nov 2018 1:11 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:58 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F007.D

(38) Tetrahydrofuran (T)

5.48min 0.31PPB m

response 341

Ion	Exp%	Act%
71.00	100	100
72.00	98.60	166.00#
42.00	221.30	277.60#
0.00	0.00	0.00

Manual Integration:

After LM

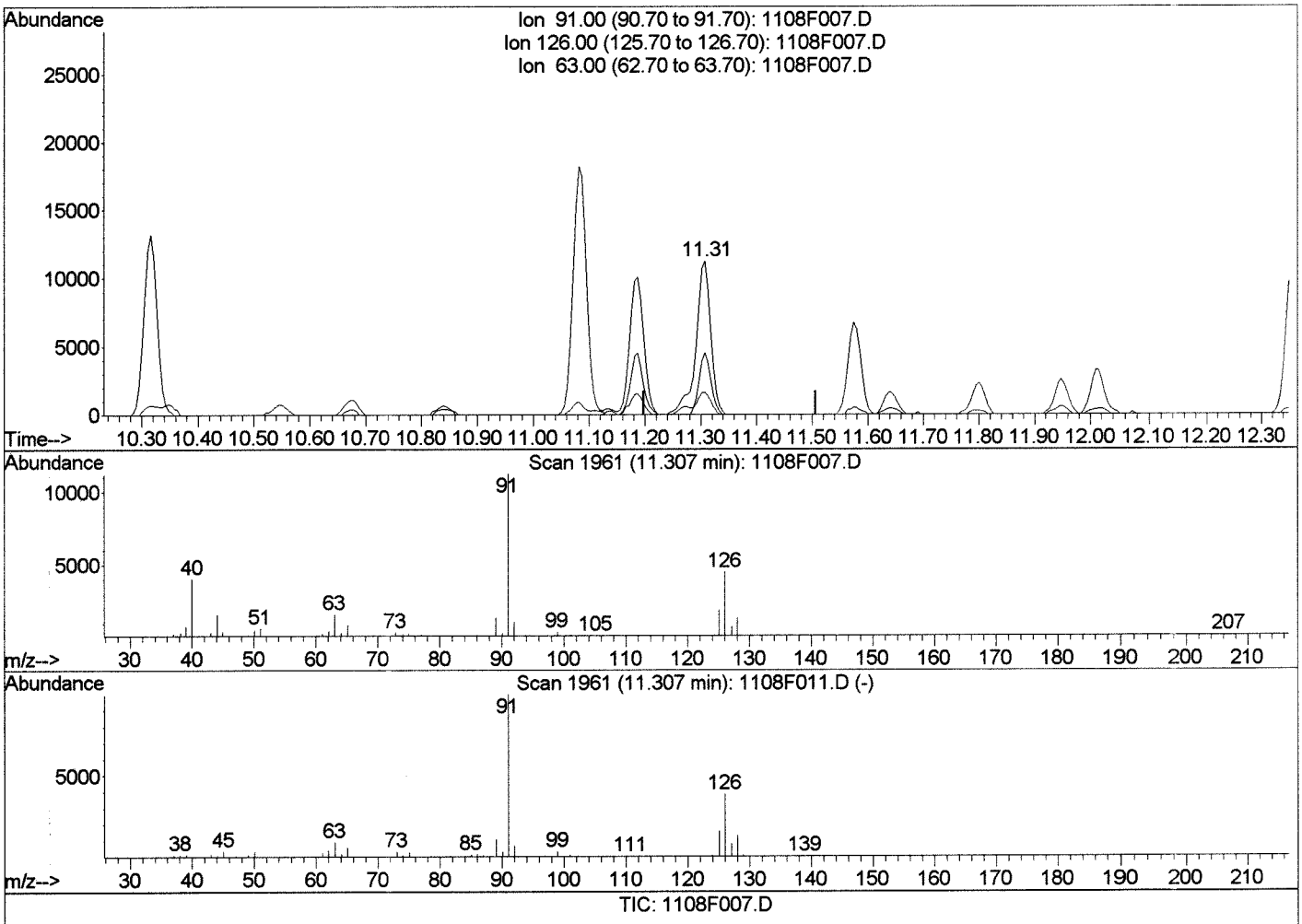
Baseline correction

11/09/18

1108F007.D 110818MS27_8260.M Fri Nov 09 08:58:31 2018

Data File : J:\MS27\DATA\110818\1108F007.D Vial: 4
Acq On : 8 Nov 2018 1:11 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:00 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F007.D

(92) 4-Chlorotoluene (T)

11.31min 0.43PPB

response 20702

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	40.07
63.00	11.20	14.39
0.00	0.00	0.00

Manual Integration:

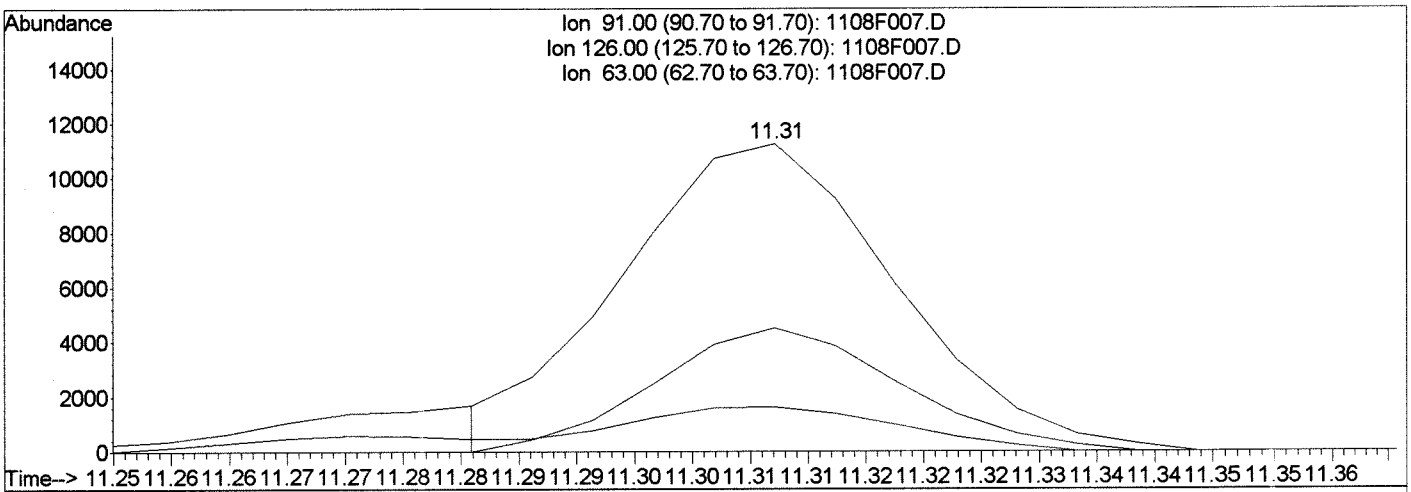
Before LM

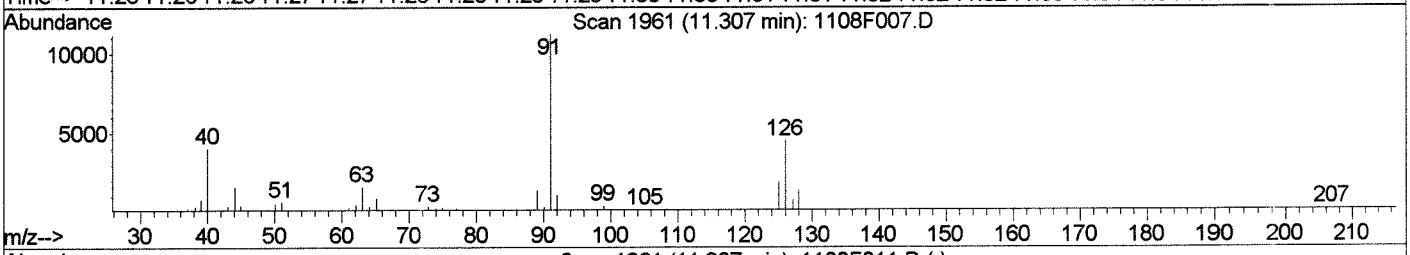
11/09/18

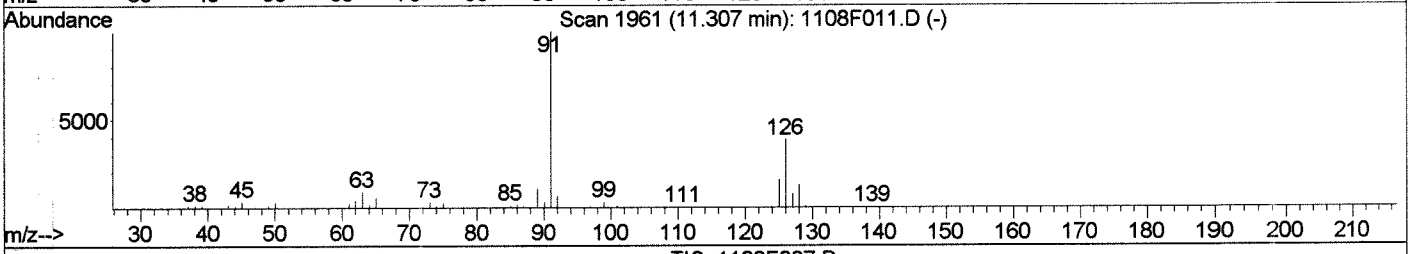
1108F007.D 110818MS27_8260.M Fri Nov 09 09:01:06 2018

Data File : J:\MS27\DATA\110818\1108F007.D Vial: 4
Acq On : 8 Nov 2018 1:11 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:01 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F007.D

(92) 4-Chlorotoluene (T)

11.31min 0.39PPB m

response 18481

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	40.07
63.00	11.20	14.39
0.00	0.00	0.00

Manual Integration:

After LM

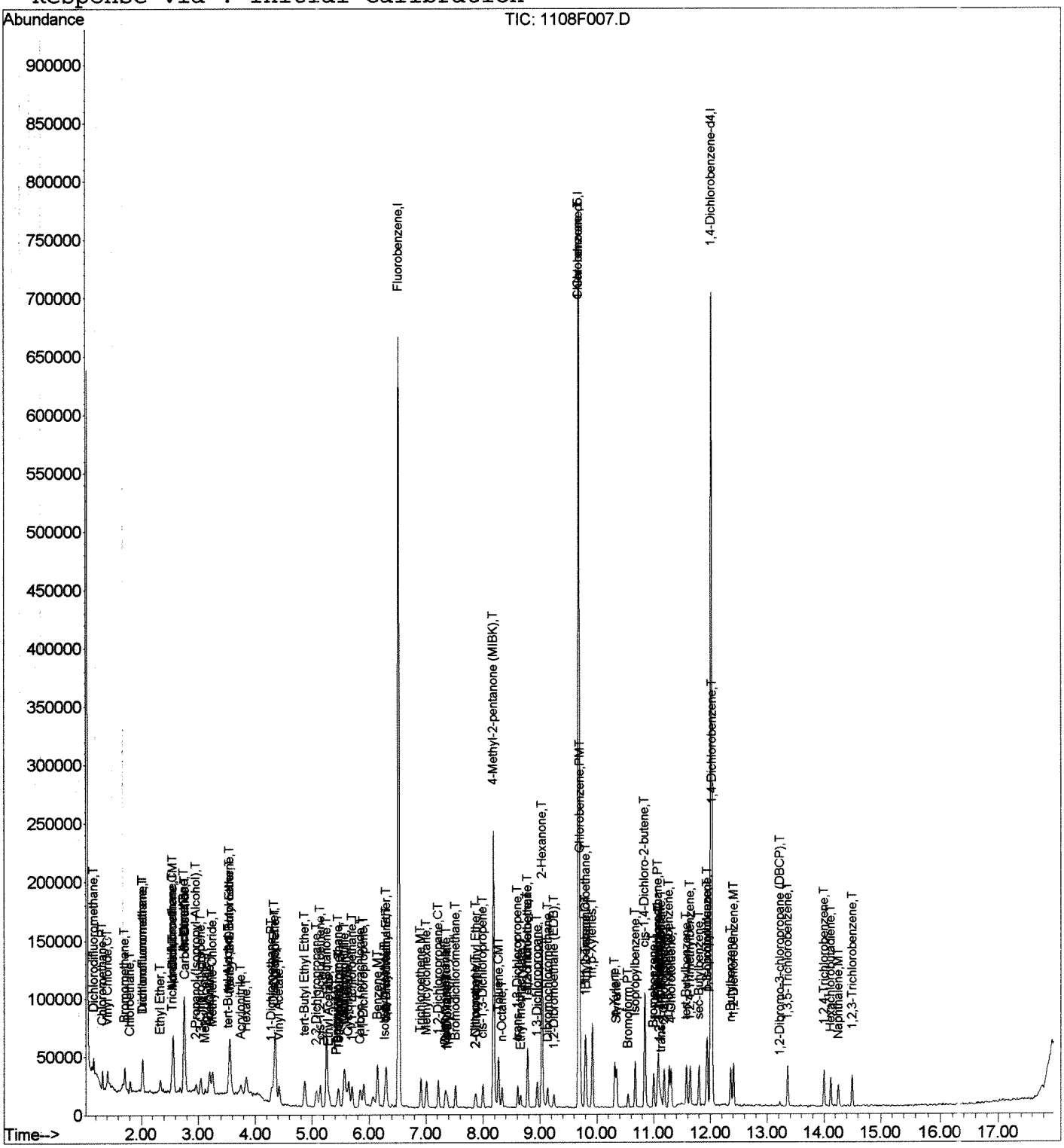
Shoulder

11/09/18

1108F007.D 110818MS27_8260.M Fri Nov 09 09:01:17 2018

Data File : J:\MS27\DATA\110818\1108F007.D Vial: 4
Acq On : 8 Nov 2018 1:11 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:01 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Data File : J:\MS27\DATA\110818\1108F008.D Vial: 5
Acq On : 8 Nov 2018 1:33 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:30 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration LM 11-17-18
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.52	96	616736	10.00	PPB		0.00
63) Chlorobenzene-d5	9.68	82	246301	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	221953	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	5.79	113	68403	4.20	PPB		0.00
Spiked Amount 10.000			Recovery =	42.00%			
46) 1,2-Dichloroethane-d4	6.21	65	69071	4.29	PPB		0.00
Spiked Amount 10.000			Recovery =	42.90%			
61) Toluene-d8	8.20	98	183932	3.14	PPB		0.00
Spiked Amount 10.000			Recovery =	31.40%			
83) 4-Bromofluorobenzene	10.87	95	72877	3.37	PPB		0.00
Spiked Amount 10.000			Recovery =	33.70%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.17	85	16120	0.88	PPB		97
3) Chloromethane	1.32	50	24410	1.06	PPB		93
4) Vinyl Chloride	1.41	62	19545	0.93	PPB		94
5) Bromomethane	1.72	96	17480	1.21	PPB		95
6) Chloroethane	1.81	64	12672	1.05	PPB		97
7) Dichlorofluoromethane	2.03	67	30325	1.04	PPB		97
8) Trichlorofluoromethane	2.02	101	24177	0.89	PPB		88
9) Ethyl Ether	2.34	59	10161	1.12	PPB		99
10) Acrolein	2.56	56	46287	21.57	PPB		97
11) Trichlorotrifluoroethane	2.54	151	12245	1.01	PPB		95
12) 1,1-Dichloroethene	2.57	96	15450	1.00	PPB		95
13) Acetone	2.75	43	100625	41.84	PPB		99
14) Iodomethane	2.76	142	85071	3.41	PPB		98
15) Carbon Disulfide	2.77	76	47126	1.04	PPB		96
16) 2-Propanol (Isopropyl Alco	2.97	45	21522	57.14	PPB		65
17) 3-Chloro-1-propene	3.04	76	8976	1.03	PPB		96
18) Methyl Acetate	3.12	43	9314	1.25	PPB		95
19) Acetonitrile	3.20	40	25180	42.09	PPB		96
20) Methylene Chloride	3.25	84	21505	1.20	PPB		92
21) tert-Butyl Alcohol	3.53	59	4679	5.60	PPB	#	1
22) Acrylonitrile	3.75	53	16829	4.24	PPB		95
23) Methyl tert-Butyl Ether	3.56	73	75636	2.10	PPB		99
24) trans-1,2-Dichloroethene	3.55	96	18056	1.05	PPB		95
25) Hexane	3.85	57	19862	0.99	PPB		96
26) Diisopropyl Ether	4.33	45	52716	1.05	PPB		99
27) 1,1-Dichloroethane	4.29	63	30442	0.98	PPB		99
28) Vinyl Acetate	4.42	86	5209	1.95	PPB	#	87

(#) = qualifier out of range (m) = manual integration JW 11/26/18
1108F008.D 110818MS27_8260.M Fri Nov 09 09:23:28 2018 Page 1

Data File : J:\MS27\DATA\110818\1108F008.D Vial: 5
Acq On : 8 Nov 2018 1:33 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:30 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
29)	Chloroprene	4.35	53	75512	3.81	PPB		98
30)	tert-Butyl Ethyl Ether	4.87	59	38114	0.95	PPB		89
31)	2,2-Dichloropropane	5.08	77	21029	0.96	PPB		92
32)	cis-1,2-Dichloroethene	5.15	96	19916	1.07	PPB		87
33)	2-Butanone	5.25	72	43633	40.28	PPB		96
34)	Ethyl Acetate	5.30	61	2208	1.56	PPB	#	43
35)	Propionitrile	5.43	54	6358	4.60	PPB		97
36)	Methacrylonitrile	5.56	67	18003	3.98	PPB		94
37)	Bromochloromethane	5.46	128	10595	1.10	PPB		92
38)	Tetrahydrofuran	5.49	71	1136	1.04	PPB		96
39)	Chloroform	5.58	83	33685	1.09	PPB		98
40)	Cyclohexane	5.64	56	25109	0.87	PPB		92
41)	1,1,1-Trichloroethane	5.70	97	23939	0.95	PPB		97
43)	Carbon Tetrachloride	5.84	117	22420	1.01	PPB		96
44)	1,1-Dichloropropene	5.91	75	19235	0.88	PPB		92
45)	Isobutyl Alcohol	6.28	42	8700	41.84	PPB		93
47)	Benzene	6.15	78	66469	0.99	PPB		96
48)	1,2-Dichloroethane	6.29	62	21621	1.05	PPB		97
49)	tert-Amyl Methyl Ether	6.30	55	12573	1.02	PPB		89
50)	Trichloroethene	6.91	95	18927	1.06	PPB		90
51)	Methylcyclohexane	7.01	83	18905	0.86	PPB		95
52)	1,2-Dichloropropane	7.22	63	17316	0.93	PPB		94
53)	Dibromomethane	7.34	93	10322	1.00	PPB		94
54)	Methyl methacrylate	7.37	69	6960	1.03	PPB		90
55)	1,4-Dioxane	7.38	88	2354	35.65	PPB		90
56)	Bromodichloromethane	7.52	83	24940	1.05	PPB		95
57)	2-Nitropropane	7.86	41	10357	4.50	PPB		88
58)	2-Chloroethyl Vinyl Ether	7.89	63	6435	0.98	PPB		90
59)	cis-1,3-Dichloropropene	8.00	75	23961	0.96	PPB		98
60)	4-Methyl-2-pentanone (MIBK	8.18	58	125753	33.51	PPB		95
62)	Toluene	8.27	92	38544	0.92	PPB		100
64)	n-Octane	8.33	85	6140	0.70	PPB		91
65)	trans-1,3-Dichloropropene	8.61	75	20351	0.97	PPB		95
66)	Ethyl methacrylate	8.66	69	12237	0.92	PPB		95
67)	1,1,2-Trichloroethane	8.78	83	12627	1.04	PPB		98
68)	Tetrachloroethene	8.78	164	14830	0.98	PPB		95
69)	2-Hexanone	9.03	57	36266	32.71	PPB		95
70)	1,3-Dichloropropane	8.95	76	23495	1.02	PPB		95
71)	Dibromochloromethane	9.14	129	18431	1.05	PPB		97
72)	1,2-Dibromoethane (EDB)	9.25	107	13127	0.99	PPB		95
73)	1-Chlorohexane	9.69	91	16239	0.94	PPB		92

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F008.D Vial: 5
Acq On : 8 Nov 2018 1:33 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:30 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

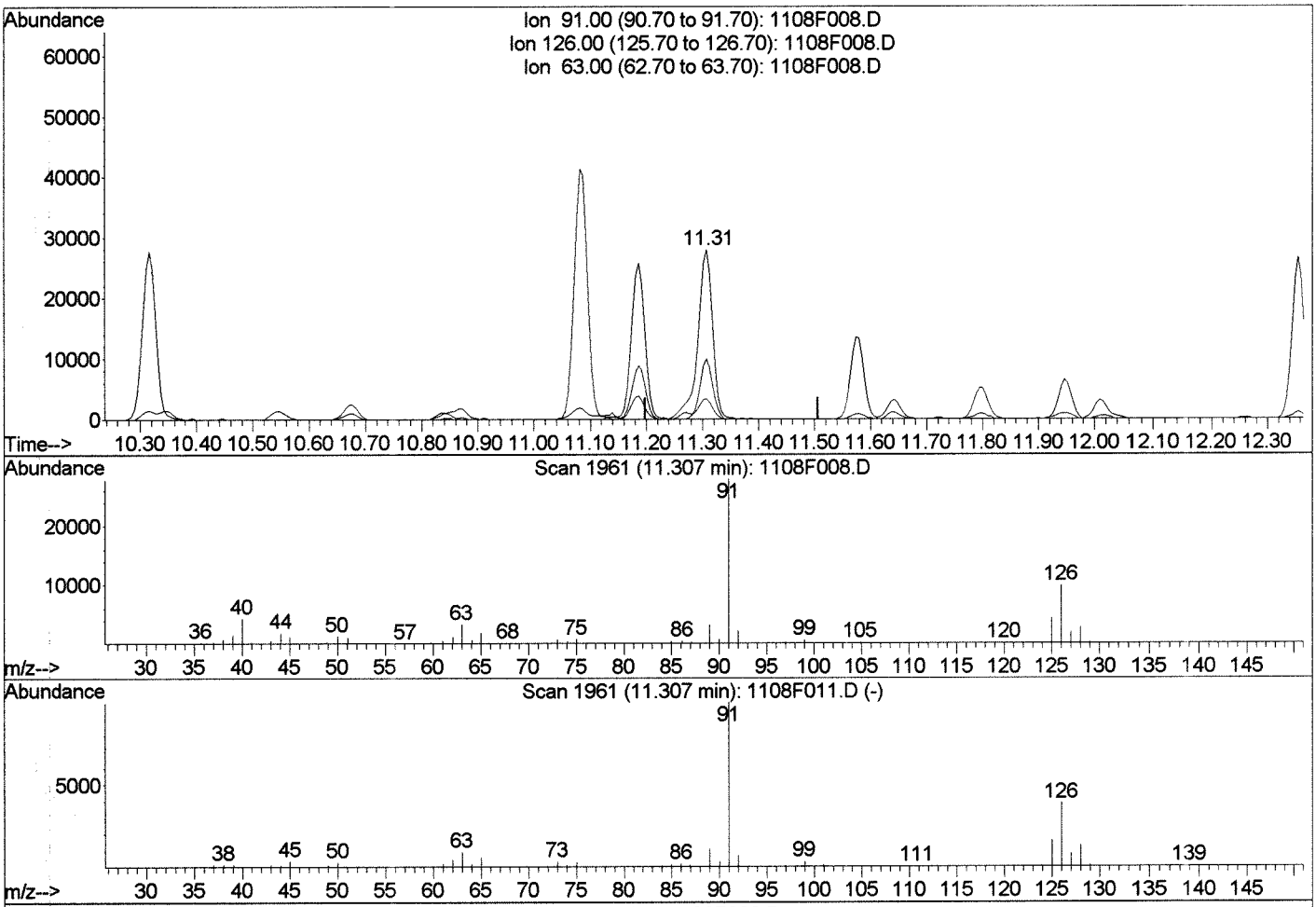
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	9.71	112	47759	0.98	PPB	99
75)	Ethylbenzene	9.80	106	18764	0.79	PPB	85
76)	1,1,1,2-Tetrachloroethane	9.81	131	18630	1.06	PPB	97
77)	m,p-Xylenes	9.92	106	44738	1.52	PPB	97
78)	o-Xylene	10.32	106	21509	0.79	PPB	95
79)	Styrene	10.35	103	18512	0.80	PPB	90
80)	Bromoform	10.55	173	11347	1.01	PPB	97
81)	Isopropylbenzene	10.67	105	54081	0.79	PPB	97
82)	cis-1,4-Dichloro-2-butene	10.84	89	5705	3.29	PPB	90
85)	1,1,2,2-Tetrachloroethane	11.07	83	14652	1.00	PPB	92
86)	trans-1,4-Dichloro-2-buten	11.13	53	3562	1.05	PPB	85
87)	Bromobenzene	11.00	156	19942	1.01	PPB	96
88)	n-Propylbenzene	11.08	91	67865	0.85	PPB	96
89)	1,2,3-Trichloropropane	11.11	110	4407	1.09	PPB	90
90)	2-Chlorotoluene	11.19	91	43169	0.90	PPB	98
91)	1,3,5-Trimethylbenzene	11.27	105	41415	0.74	PPB	100
92)	4-Chlorotoluene	11.31	91	46285m	0.88	PPB	
93)	tert-Butylbenzene	11.58	119	35953	0.80	PPB	97
94)	1,2,4-Trimethylbenzene	11.64	105	42314	0.77	PPB	95
95)	sec-Butylbenzene	11.79	105	50692	0.75	PPB	99
96)	p-Isopropyltoluene	11.95	119	41995	0.75	PPB	95
97)	1,3-Dichlorobenzene	11.94	146	35501	0.96	PPB	96
98)	1,4-Dichlorobenzene	12.04	146	37317	1.01	PPB	91
99)	n-Butylbenzene	12.36	91	41995	0.83	PPB	97
100)	1,2-Dichlorobenzene	12.41	146	34048	0.98	PPB	98
101)	1,2-Dibromo-3-chloropropan	13.22	155	2148	1.06	PPB	94
102)	1,3,5-Trichlorobenzene	13.36	180	24867	1.01	PPB	95
103)	1,2,4-Trichlorobenzene	14.00	180	21920	0.99	PPB	98
104)	Hexachlorobutadiene	14.12	225	12167	1.05	PPB	93
105)	Naphthalene	14.25	128	32385	0.97	PPB	97
106)	1,2,3-Trichlorobenzene	14.49	180	20984	1.03	PPB	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F008.D Vial: 5
Acq On : 8 Nov 2018 1:33 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F008.D

(92) 4-Chlorotoluene (T)

11.31min 0.97PPB

response 51203

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.44
63.00	11.20	12.00
0.00	0.00	0.00

Manual Integration:

Before LM

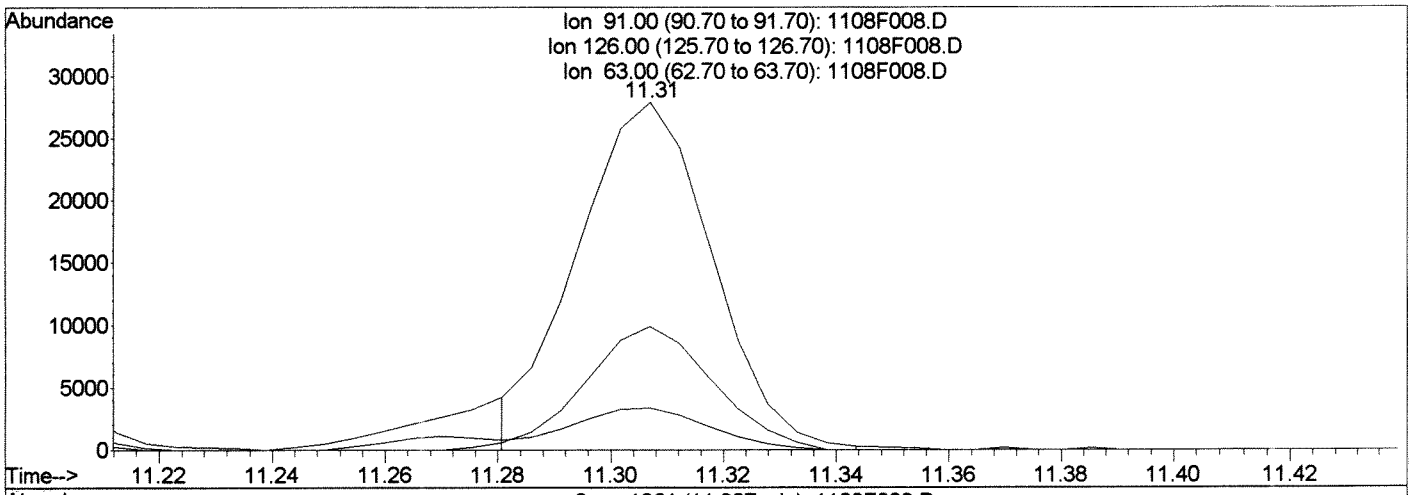
11/09/18

1108F008.D 110818MS27_8260.M Fri Nov 09 09:04:25 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F008.D Vial: 5
Acq On : 8 Nov 2018 1:33 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:04 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F008.D

(92) 4-Chlorotoluene (T)

11.31min 0.88PPB m

response 46285

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.44
63.00	11.20	12.00
0.00	0.00	0.00

Manual Integration:

After LM

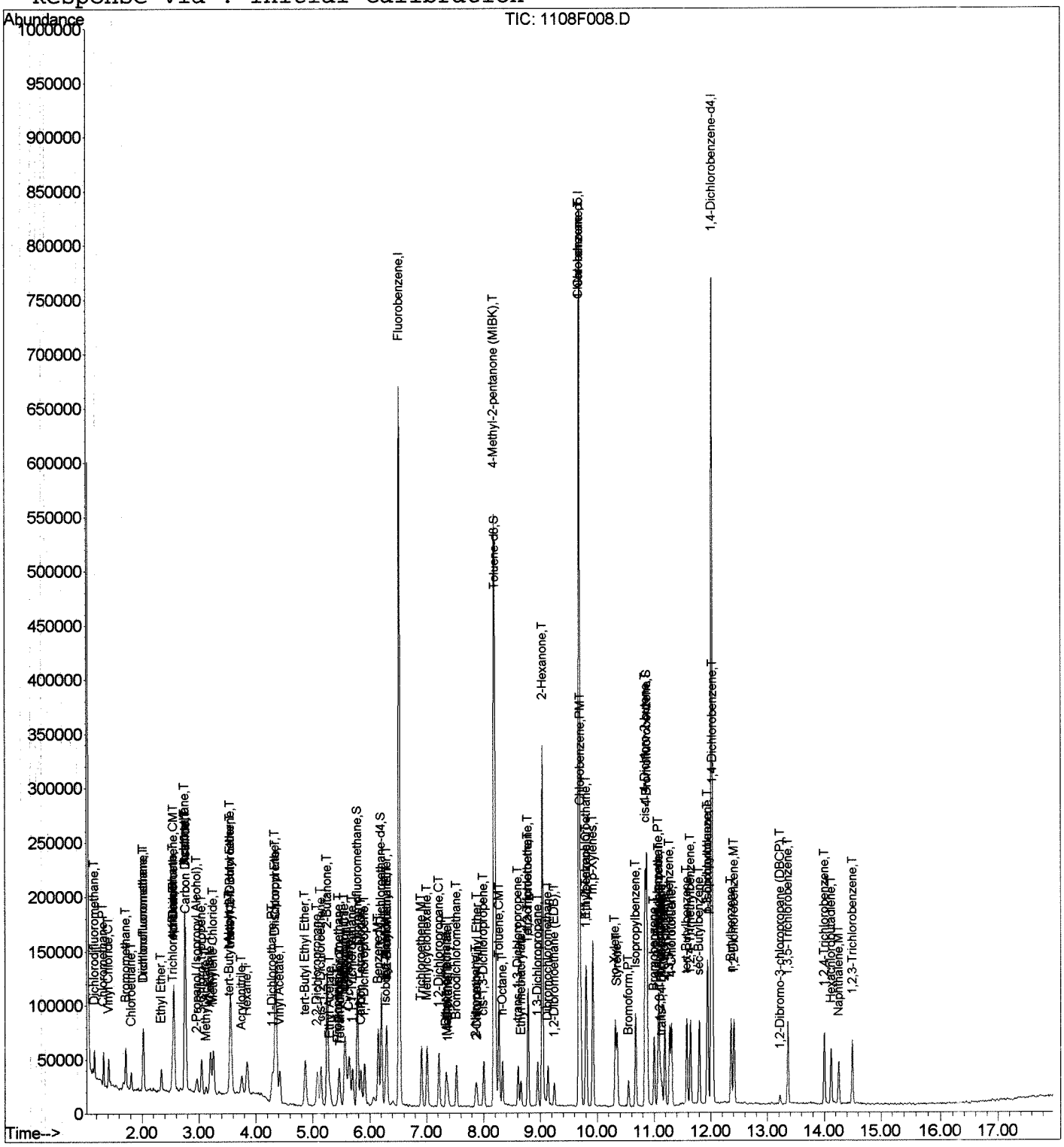
Shoulder

11/09/18

1108F008.D 110818MS27_8260.M Fri Nov 09 09:06:59 2018

Data File : J:\MS27\DATA\110818\1108F008.D Vial: 5
Acq On : 8 Nov 2018 1:33 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:04 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F009.D Vial: 6
Acq On : 8 Nov 2018 1:55 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:31 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018 LM 11-17-18
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.52	96	636244	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	254739	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	233469	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.79	113	101024	6.02	PPB	0.00
Spiked Amount 10.000			Recovery =	60.20%		
46) 1,2-Dichloroethane-d4	6.21	65	105540	6.35	PPB	0.00
Spiked Amount 10.000			Recovery =	63.50%		
61) Toluene-d8	8.20	98	346837	5.74	PPB	0.00
Spiked Amount 10.000			Recovery =	57.40%		
83) 4-Bromofluorobenzene	10.87	95	124178	5.55	PPB	0.00
Spiked Amount 10.000			Recovery =	55.50%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.17	85	39069	2.07	PPB	100
3) Chloromethane	1.32	50	50802	2.15	PPB	96
4) Vinyl Chloride	1.41	62	43973	2.02	PPB	95
5) Bromomethane	1.72	96	36509	2.44	PPB	99
6) Chloroethane	1.81	64	25474	2.05	PPB	98
7) Dichlorofluoromethane	2.03	67	62584	2.07	PPB	97
8) Trichlorofluoromethane	2.02	101	57983	2.08	PPB	97
9) Ethyl Ether	2.34	59	19640	2.10	PPB	94
10) Acrolein	2.56	56	95556	43.17	PPB	98
11) Trichlorotrifluoroethane	2.54	151	26074	2.09	PPB	96
12) 1,1-Dichloroethene	2.57	96	32470	2.05	PPB	98
13) Acetone	2.76	43	203061	81.85	PPB	99
14) Iodomethane	2.76	142	194364	7.56	PPB	99
15) Carbon Disulfide	2.77	76	98283	2.11	PPB	99
16) 2-Propanol (Isopropyl Alco	2.97	45	41677	107.26	PPB	82
17) 3-Chloro-1-propene	3.05	76	17765	1.97	PPB	96
18) Methyl Acetate	3.13	43	17265	2.24	PPB	95
19) Acetonitrile	3.21	40	57370	92.95	PPB	97
20) Methylene Chloride	3.25	84	39738	2.15	PPB	98
21) tert-Butyl Alcohol	3.53	59	9344m	10.85	PPB	
22) Acrylonitrile	3.75	53	36370	8.88	PPB	96
23) Methyl tert-Butyl Ether	3.56	73	156650	4.22	PPB	99
24) trans-1,2-Dichloroethene	3.55	96	39995	2.25	PPB	92
25) Hexane	3.85	57	43810	2.13	PPB	95
26) Diisopropyl Ether	4.33	45	104971	2.03	PPB	97
27) 1,1-Dichloroethane	4.29	63	68251	2.12	PPB	99
28) Vinyl Acetate	4.42	86	10667	3.86	PPB	94

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F009.D Vial: 6
Acq On : 8 Nov 2018 1:55 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:31 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
29)	Chloroprene	4.35	53	160596	7.85	PPB		99
30)	tert-Butyl Ethyl Ether	4.87	59	81969	1.98	PPB		99
31)	2,2-Dichloropropane	5.08	77	47420	2.10	PPB		96
32)	cis-1,2-Dichloroethene	5.15	96	40360	2.10	PPB		93
33)	2-Butanone	5.25	72	90736	81.19	PPB		97
34)	Ethyl Acetate	5.30	61	6270	4.29	PPB		88
35)	Propionitrile	5.43	54	12426	8.72	PPB		93
36)	Methacrylonitrile	5.56	67	36783	7.89	PPB		99
37)	Bromochloromethane	5.46	128	22325	2.25	PPB		88
38)	Tetrahydrofuran	5.49	71	1993	1.77	PPB	#	85
39)	Chloroform	5.58	83	67493	2.12	PPB		97
40)	Cyclohexane	5.64	56	55615	1.87	PPB		94
41)	1,1,1-Trichloroethane	5.70	97	51086	1.96	PPB		94
43)	Carbon Tetrachloride	5.84	117	47193	2.06	PPB		98
44)	1,1-Dichloropropene	5.91	75	43546	1.94	PPB		98
45)	Isobutyl Alcohol	6.28	42	17524	81.70	PPB		87
47)	Benzene	6.15	78	139376	2.00	PPB		100
48)	1,2-Dichloroethane	6.29	62	43510	2.05	PPB		97
49)	tert-Amyl Methyl Ether	6.30	55	26117	2.06	PPB		88
50)	Trichloroethene	6.91	95	37595	2.04	PPB		98
51)	Methylcyclohexane	7.01	83	43443	1.91	PPB		99
52)	1,2-Dichloropropane	7.22	63	38916	2.02	PPB		97
53)	Dibromomethane	7.34	93	20917	1.97	PPB		97
54)	Methyl methacrylate	7.37	69	13586	1.94	PPB		95
55)	1,4-Dioxane	7.39	88	4804	70.51	PPB		97
56)	Bromodichloromethane	7.52	83	48715	1.99	PPB		99
57)	2-Nitropropane	7.87	41	23152	9.75	PPB		94
58)	2-Chloroethyl Vinyl Ether	7.88	63	12153	1.79	PPB		91
59)	cis-1,3-Dichloropropene	8.00	75	50446	1.96	PPB		96
60)	4-Methyl-2-pentanone (MIBK	8.18	58	274269	70.85	PPB		96
62)	Toluene	8.27	92	86133	1.98	PPB		99
64)	n-Octane	8.33	85	16971	1.88	PPB		93
65)	trans-1,3-Dichloropropene	8.61	75	44148	2.02	PPB		98
66)	Ethyl methacrylate	8.66	69	26202	1.91	PPB		98
67)	1,1,2-Trichloroethane	8.79	83	26400	2.10	PPB		98
68)	Tetrachloroethene	8.79	164	30960	1.97	PPB		96
69)	2-Hexanone	9.03	57	80831	70.48	PPB		91
70)	1,3-Dichloropropane	8.95	76	48428	2.03	PPB		97
71)	Dibromochloromethane	9.13	129	37653	2.08	PPB		96
72)	1,2-Dibromoethane (EDB)	9.25	107	28674	2.08	PPB		98
73)	1-Chlorohexane	9.69	91	35211	1.98	PPB		99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F009.D Vial: 6
Acq On : 8 Nov 2018 1:55 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:31 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

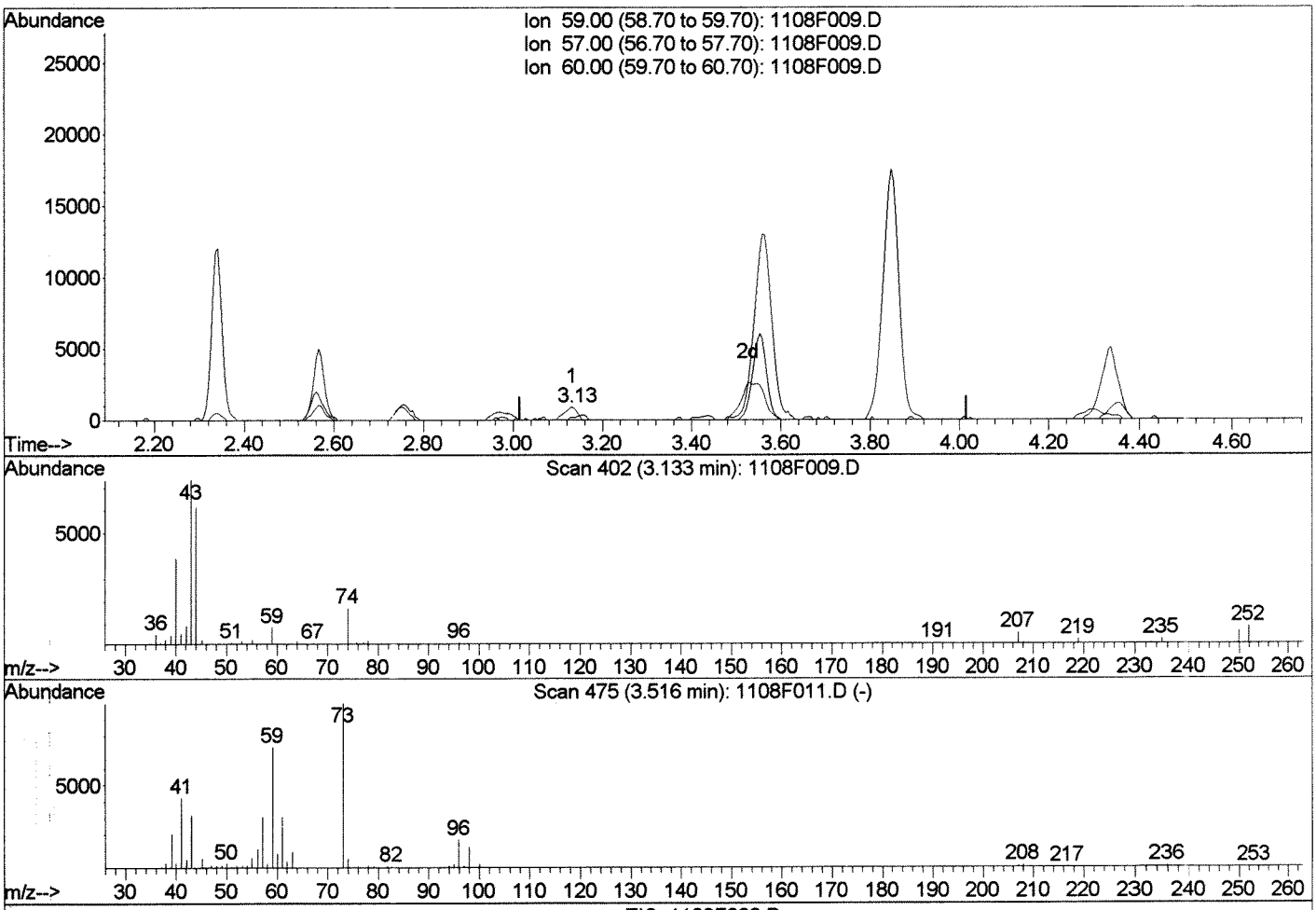
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	9.71	112	102999	2.05	PPB	95
75)	Ethylbenzene	9.80	106	46008	1.87	PPB	97
76)	1,1,1,2-Tetrachloroethane	9.81	131	36928	2.04	PPB	95
77)	m,p-Xylenes	9.92	106	104518	3.44	PPB	98
78)	o-Xylene	10.32	106	48866	1.74	PPB	97
79)	Styrene	10.35	103	47921	2.00	PPB	97
80)	Bromoform	10.55	173	22538	1.95	PPB	92
81)	Isopropylbenzene	10.67	105	121315	1.71	PPB	97
82)	cis-1,4-Dichloro-2-butene	10.84	89	13098	7.30	PPB	92
85)	1,1,2,2-Tetrachloroethane	11.07	83	31744	2.05	PPB	94
86)	trans-1,4-Dichloro-2-buten	11.13	53	8106	2.28	PPB	89
87)	Bromobenzene	11.00	156	42576	2.04	PPB	99
88)	n-Propylbenzene	11.08	91	157149	1.88	PPB	97
89)	1,2,3-Trichloropropane	11.11	110	9800	2.31	PPB	95
90)	2-Chlorotoluene	11.19	91	100125	1.98	PPB	99
91)	1,3,5-Trimethylbenzene	11.27	105	105806	1.81	PPB	99
92)	4-Chlorotoluene	11.31	91	103243m	1.87	PPB	
93)	tert-Butylbenzene	11.57	119	87853	1.85	PPB	97
94)	1,2,4-Trimethylbenzene	11.64	105	99477	1.72	PPB	98
95)	sec-Butylbenzene	11.80	105	128805	1.80	PPB	98
96)	p-Isopropyltoluene	11.95	119	101507	1.73	PPB	96
97)	1,3-Dichlorobenzene	11.94	146	80409	2.07	PPB	98
98)	1,4-Dichlorobenzene	12.04	146	82266	2.11	PPB	97
99)	n-Butylbenzene	12.36	91	100220	1.89	PPB	97
100)	1,2-Dichlorobenzene	12.41	146	73665	2.01	PPB	99
101)	1,2-Dibromo-3-chloropropan	13.22	155	4605	2.17	PPB	88
102)	1,3,5-Trichlorobenzene	13.36	180	53740	2.08	PPB	98
103)	1,2,4-Trichlorobenzene	14.00	180	45441	1.96	PPB	95
104)	Hexachlorobutadiene	14.12	225	24713	2.02	PPB	97
105)	Naphthalene	14.25	128	65985	1.88	PPB	98
106)	1,2,3-Trichlorobenzene	14.49	180	41771	1.94	PPB	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F009.D Vial: 6
Acq On : 8 Nov 2018 1:55 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F009.D

(21) tert-Butyl Alcohol (T)

3.13min 2.01PPB

response 1733

Ion	Exp%	Act%
59.00	100	100
57.00	41.90	17.03
60.00	11.50	0.00
0.00	0.00	0.00

Manual Integration:

Before LM

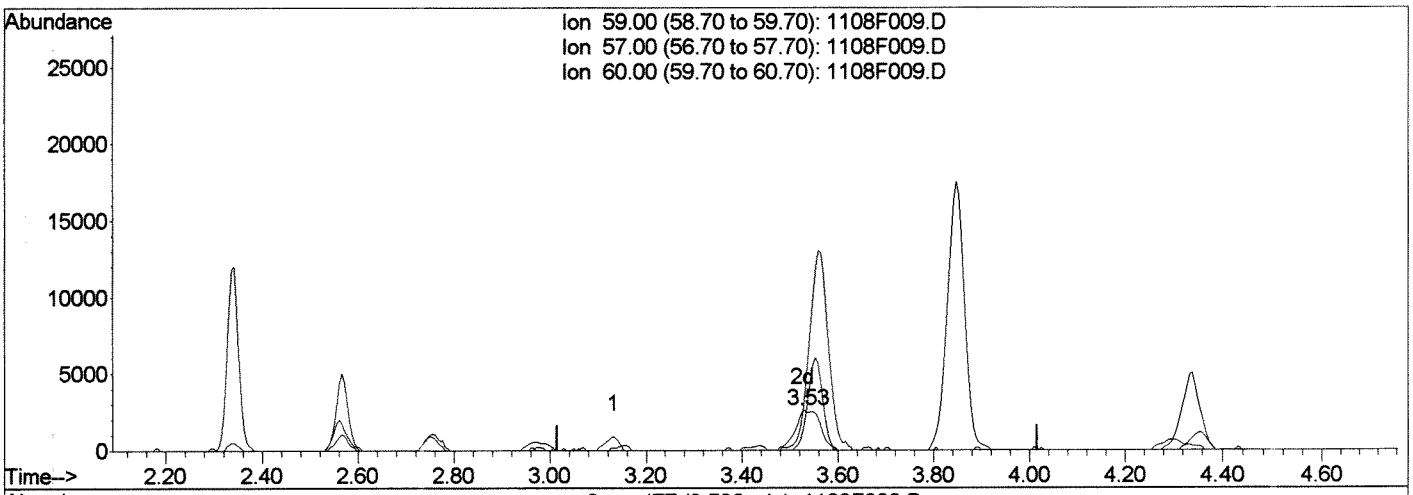
11/09/18

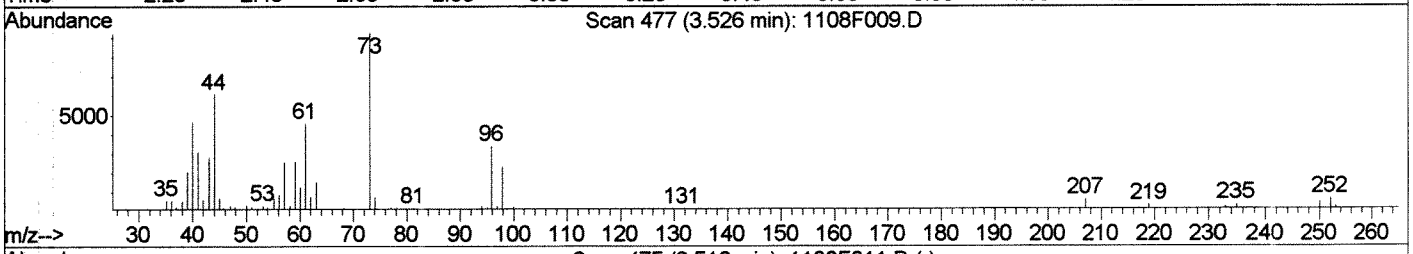
1108F009.D 110818MS27_8260.M Fri Nov 09 09:07:59 2018

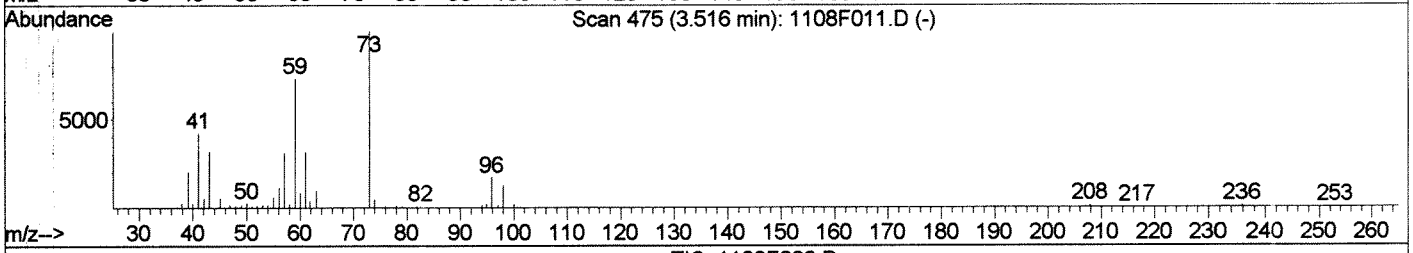
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F009.D Vial: 6
Acq On : 8 Nov 2018 1:55 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:08 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F009.D

(21) tert-Butyl Alcohol (T)

3.53min 10.85PPB m

response 9344

Ion	Exp%	Act%
59.00	100	100
57.00	41.90	98.73#
60.00	11.50	49.06#
0.00	0.00	0.00

Manual Integration:

After LM

Baseline correction

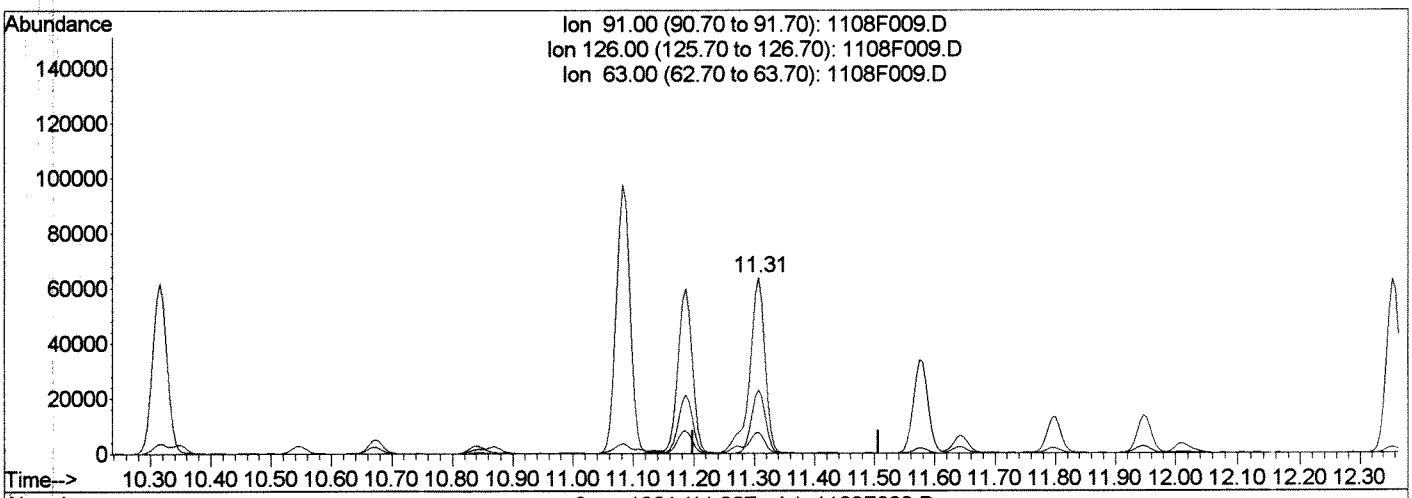
11/09/18

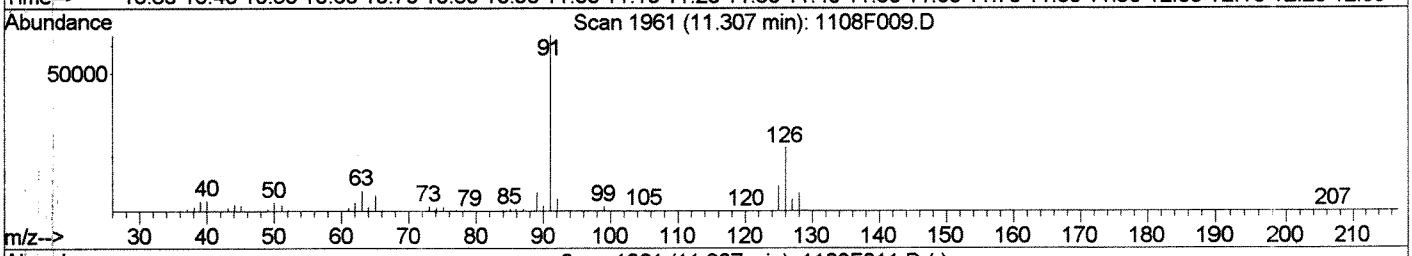
1108F009.D 110818MS27_8260.M Fri Nov 09 09:08:07 2018

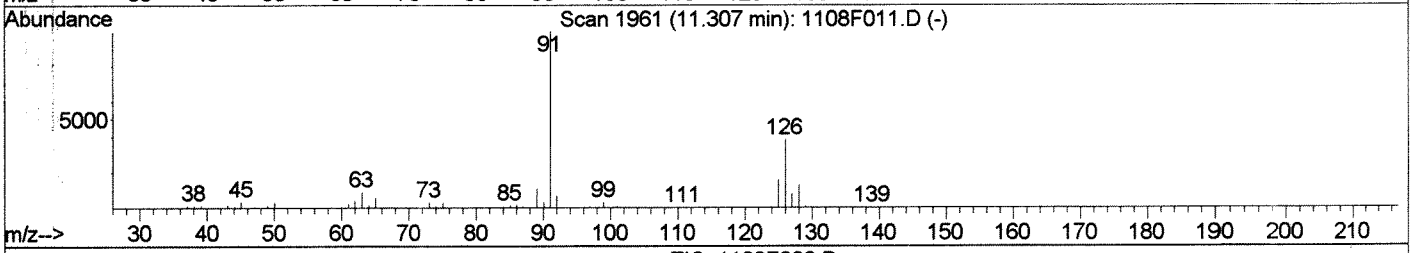
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F009.D Vial: 6
Acq On : 8 Nov 2018 1:55 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:08 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F009.D

(92) 4-Chlorotoluene (T)

11.31min 2.07PPB

response 114489

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.98
63.00	11.20	11.86
0.00	0.00	0.00

Manual Integration:

Before LM

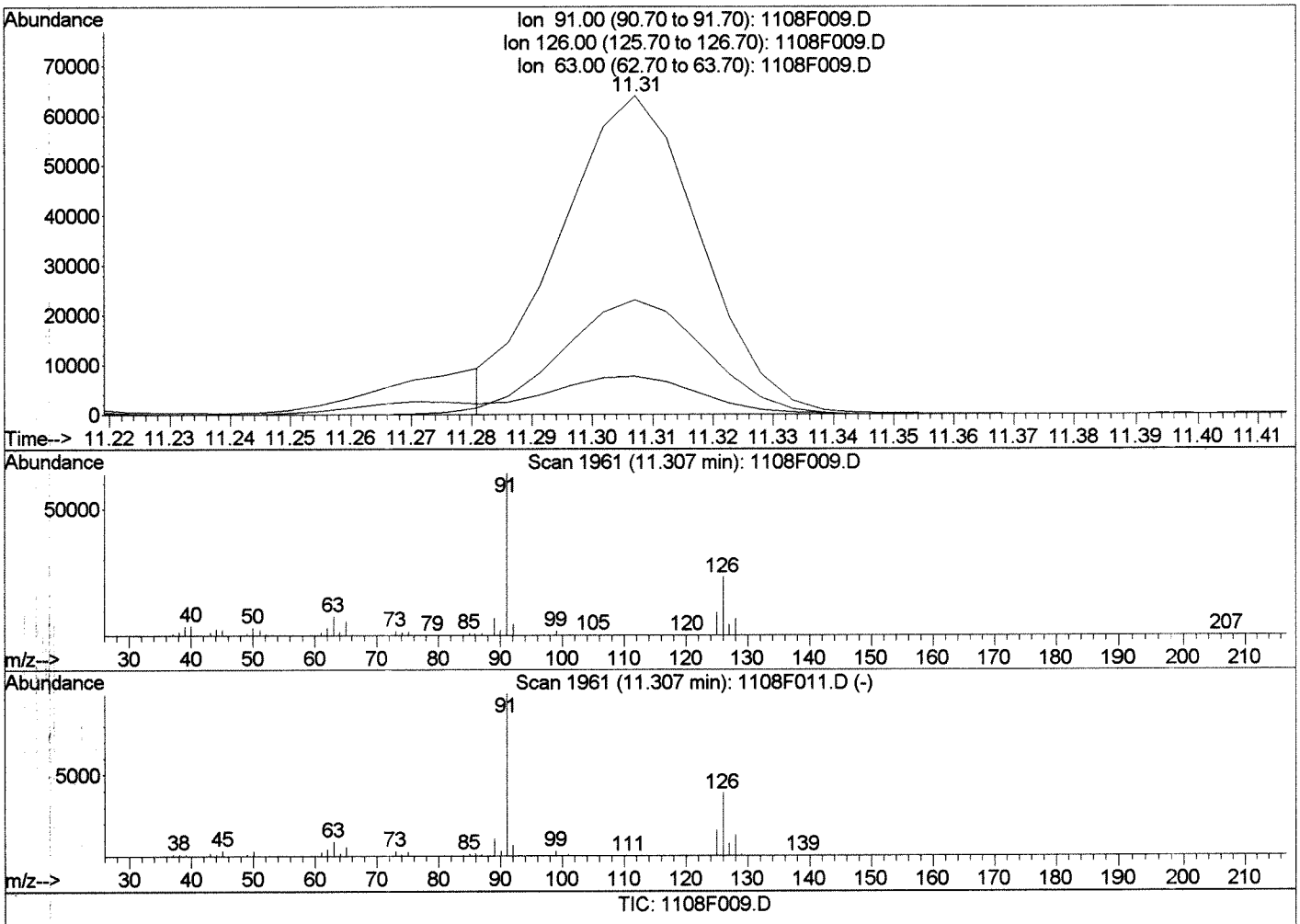
11/09/18

1108F009.D 110818MS27_8260.M Fri Nov 09 09:09:31 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F009.D Vial: 6
Acq On : 8 Nov 2018 1:55 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:09 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F009.D

(92) 4-Chlorotoluene (T)

11.31min 1.87PPB m

response 103243

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.98
63.00	11.20	11.86
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

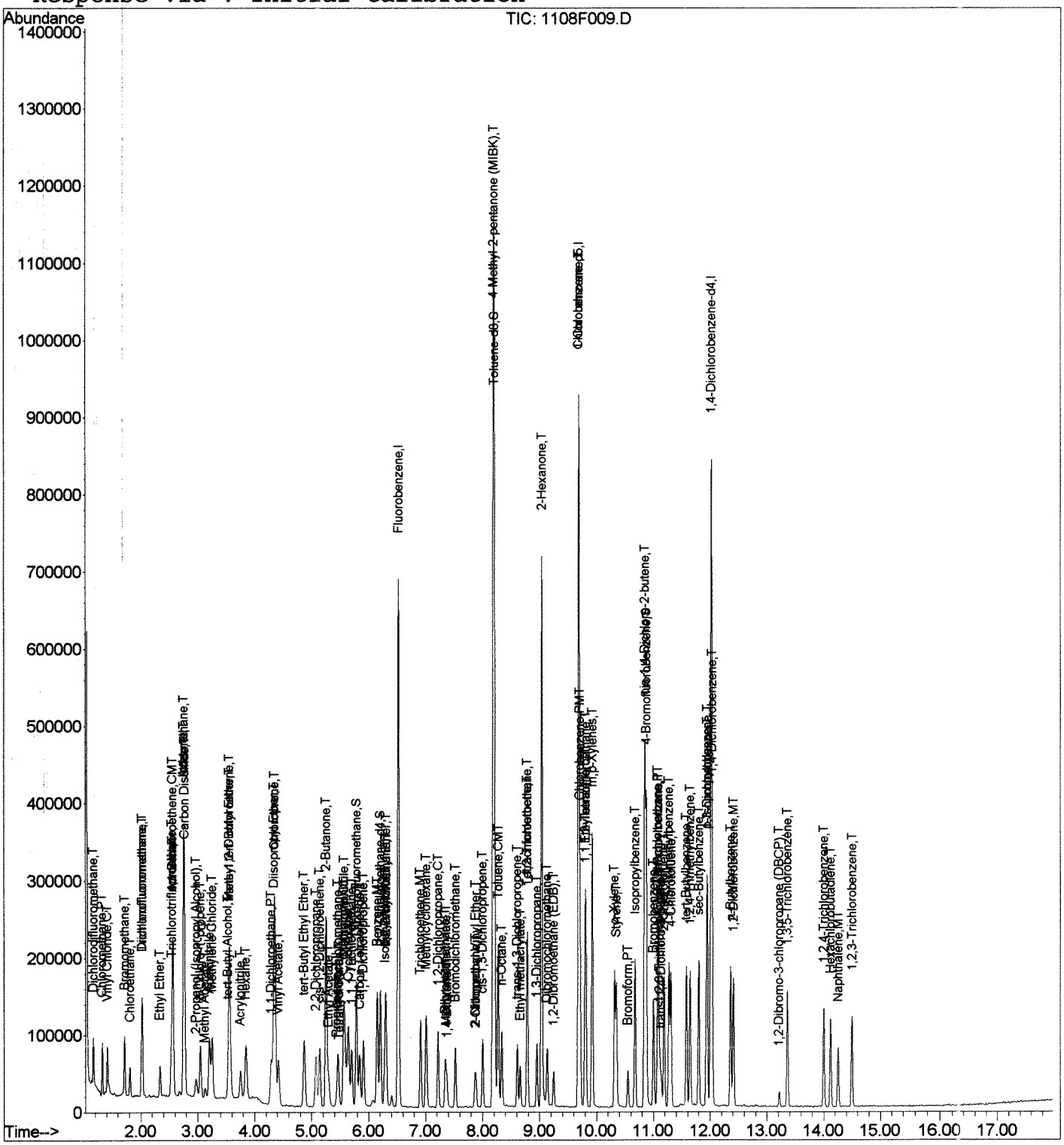
11/09/18

1108F009.D 110818MS27_8260.M Fri Nov 09 09:09:44 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F009.D Vial: 6
Acq On : 8 Nov 2018 1:55 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:09 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F010.D Vial: 7
Acq On : 8 Nov 2018 2:17 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:31 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration LM 11-17-18
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.52	96	649748	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	255886	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	251172	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.79	113	139520	8.14	PPB	0.00
Spiked Amount 10.000			Recovery =	81.40%		
46) 1,2-Dichloroethane-d4	6.21	65	141490	8.34	PPB	0.00
Spiked Amount 10.000			Recovery =	83.40%		
61) Toluene-d8	8.20	98	462952	7.50	PPB	0.00
Spiked Amount 10.000			Recovery =	75.00%		
83) 4-Bromofluorobenzene	10.87	95	177744	7.91	PPB	0.00
Spiked Amount 10.000			Recovery =	79.10%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.17	85	107509	5.57	PPB	99
3) Chloromethane	1.32	50	131648	5.45	PPB	97
4) Vinyl Chloride	1.41	62	116875	5.25	PPB	98
5) Bromomethane	1.72	96	84926	5.56	PPB	99
6) Chloroethane	1.81	64	68289	5.38	PPB	99
7) Dichlorofluoromethane	2.03	67	163075	5.29	PPB	99
8) Trichlorofluoromethane	2.02	101	155567	5.46	PPB	96
9) Ethyl Ether	2.34	59	52577	5.50	PPB	93
10) Acrolein	2.56	56	239576	105.98	PPB	99
11) Trichlorotrifluoroethane	2.54	151	67064	5.25	PPB	98
12) 1,1-Dichloroethene	2.57	96	88528	5.46	PPB	96
13) Acetone	2.75	43	258322	101.95	PPB	98
14) Iodomethane	2.75	142	523459	19.94	PPB	98
15) Carbon Disulfide	2.77	76	253334	5.32	PPB	99
16) 2-Propanol (Isopropyl Alco	2.95	45	103931	261.92	PPB	97
17) 3-Chloro-1-propene	3.05	76	51108	5.56	PPB	91
18) Methyl Acetate	3.12	43	41897	5.32	PPB	95
19) Acetonitrile	3.20	40	131318	208.34	PPB	95
20) Methylene Chloride	3.25	84	101403	5.36	PPB	94
21) tert-Butyl Alcohol	3.51	59	24399	27.74	PPB	70
22) Acrylonitrile	3.75	53	88714	21.21	PPB	97
23) Methyl tert-Butyl Ether	3.56	73	398363	10.50	PPB	99
24) trans-1,2-Dichloroethene	3.55	96	98306	5.43	PPB	94
25) Hexane	3.85	57	118398	5.63	PPB	98
26) Diisopropyl Ether	4.33	45	265346	5.04	PPB	99
27) 1,1-Dichloroethane	4.29	63	171941	5.24	PPB	100
28) Vinyl Acetate	4.42	86	27852	9.87	PPB #	84

(#) = qualifier out of range (m) = manual integration 11/26/18

Data File : J:\MS27\DATA\110818\1108F010.D Vial: 7
Acq On : 8 Nov 2018 2:17 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:31 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroprene	4.35	53	434882	20.81	PPB	98
30)	tert-Butyl Ethyl Ether	4.87	59	209632	4.96	PPB	98
31)	2,2-Dichloropropane	5.08	77	119481	5.19	PPB	98
32)	cis-1,2-Dichloroethene	5.14	96	101025	5.16	PPB	99
33)	2-Butanone	5.25	72	108953	95.46	PPB	96
34)	Ethyl Acetate	5.30	61	15817	10.61	PPB	96
35)	Propionitrile	5.43	54	30306	20.83	PPB	98
36)	Methacrylonitrile	5.56	67	93717	19.69	PPB	96
37)	Bromochloromethane	5.46	128	51874	5.11	PPB	94
38)	Tetrahydrofuran	5.48	71	5426	4.72	PPB	89
39)	Chloroform	5.58	83	174336	5.37	PPB	96
40)	Cyclohexane	5.64	56	154957	5.10	PPB	96
41)	1,1,1-Trichloroethane	5.70	97	140146	5.28	PPB	97
43)	Carbon Tetrachloride	5.84	117	127971	5.46	PPB	97
44)	1,1-Dichloropropene	5.91	75	119249	5.21	PPB	98
45)	Isobutyl Alcohol	6.27	42	43180	197.12	PPB	96
47)	Benzene	6.15	78	367574	5.17	PPB	98
48)	1,2-Dichloroethane	6.29	62	112338	5.18	PPB	99
49)	tert-Amyl Methyl Ether	6.30	55	67305	5.21	PPB	93
50)	Trichloroethene	6.91	95	98690	5.24	PPB	97
51)	Methylcyclohexane	7.01	83	114439	4.92	PPB	97
52)	1,2-Dichloropropane	7.22	63	99936	5.07	PPB	98
53)	Dibromomethane	7.34	93	55365	5.11	PPB	97
54)	Methyl methacrylate	7.37	69	34658	4.86	PPB	96
55)	1,4-Dioxane	7.37	88	12931	185.86	PPB	91
56)	Bromodichloromethane	7.52	83	125074	5.02	PPB	99
57)	2-Nitropropane	7.86	41	62161	25.63	PPB	96
58)	2-Chloroethyl Vinyl Ether	7.88	63	31754	4.58	PPB	97
59)	cis-1,3-Dichloropropene	8.00	75	125912	4.78	PPB	99
60)	4-Methyl-2-pentanone (MIBK	8.18	58	350930	88.76	PPB	96
62)	Toluene	8.27	92	228266	5.15	PPB	99
64)	n-Octane	8.33	85	42523	4.70	PPB	90
65)	trans-1,3-Dichloropropene	8.61	75	109618	5.01	PPB	97
66)	Ethyl methacrylate	8.66	69	66894	4.86	PPB	95
67)	1,1,2-Trichloroethane	8.79	83	66333	5.24	PPB	96
68)	Tetrachloroethene	8.79	164	85618	5.43	PPB	99
69)	2-Hexanone	9.03	57	103295	89.67	PPB	93
70)	1,3-Dichloropropane	8.95	76	124920	5.21	PPB	99
71)	Dibromochloromethane	9.14	129	96134	5.28	PPB	99
72)	1,2-Dibromoethane (EDB)	9.25	107	72426	5.24	PPB	95
73)	1-Chlorohexane	9.69	91	94094	5.26	PPB	97

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F010.D Vial: 7
Acq On : 8 Nov 2018 2:17 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:31 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

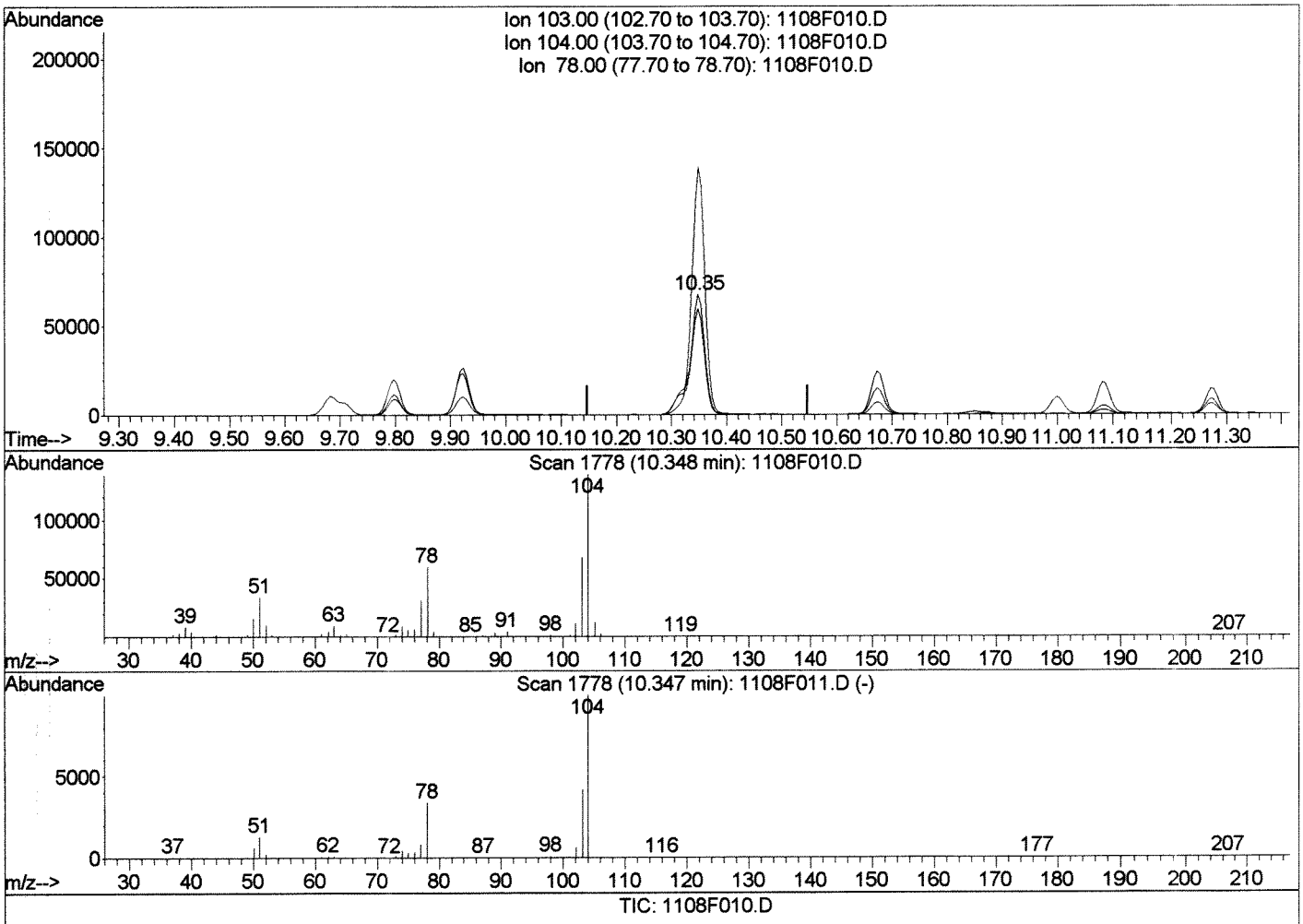
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	9.71	112	259547	5.15	PPB	100
75)	Ethylbenzene	9.80	106	125102	5.07	PPB	97
76)	1,1,1,2-Tetrachloroethane	9.81	131	92259	5.07	PPB	96
77)	m,p-Xylenes	9.92	106	298305	9.78	PPB	98
78)	o-Xylene	10.32	106	136597	4.85	PPB	96
79)	Styrene	10.35	103	118179m	4.91	PPB	
80)	Bromoform	10.55	173	58004	4.99	PPB	98
81)	Isopropylbenzene	10.67	105	357323	5.02	PPB	100
82)	cis-1,4-Dichloro-2-butene	10.84	89	36153	20.05	PPB	91
85)	1,1,2,2-Tetrachloroethane	11.07	83	83330	5.00	PPB	99
86)	trans-1,4-Dichloro-2-buten	11.13	53	19911	5.20	PPB	91
87)	Bromobenzene	11.00	156	111416	4.97	PPB	96
88)	n-Propylbenzene	11.08	91	458656	5.09	PPB	99
89)	1,2,3-Trichloropropane	11.11	110	23359	5.12	PPB	93
90)	2-Chlorotoluene	11.19	91	273114	5.03	PPB	98
91)	1,3,5-Trimethylbenzene	11.27	105	297030	4.72	PPB	96
92)	4-Chlorotoluene	11.31	91	294442m	4.95	PPB	
93)	tert-Butylbenzene	11.57	119	253288	4.95	PPB	97
94)	1,2,4-Trimethylbenzene	11.64	105	303022	4.86	PPB	99
95)	sec-Butylbenzene	11.80	105	379464	4.93	PPB	99
96)	p-Isopropyltoluene	11.95	119	300870	4.76	PPB	99
97)	1,3-Dichlorobenzene	11.94	146	213993	5.12	PPB	98
98)	1,4-Dichlorobenzene	12.04	146	213614	5.08	PPB	97
99)	n-Butylbenzene	12.36	91	282413	4.95	PPB	99
100)	1,2-Dichlorobenzene	12.41	146	198966	5.06	PPB	98
101)	1,2-Dibromo-3-chloropropan	13.22	155	11694	5.12	PPB	98
102)	1,3,5-Trichlorobenzene	13.36	180	140567	5.06	PPB	98
103)	1,2,4-Trichlorobenzene	14.00	180	124589	5.00	PPB	100
104)	Hexachlorobutadiene	14.12	225	67758	5.16	PPB	97
105)	Naphthalene	14.25	128	184256	4.87	PPB	100
106)	1,2,3-Trichlorobenzene	14.49	180	113182	4.89	PPB	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F010.D Vial: 7
Acq On : 8 Nov 2018 2:17 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F010.D

(79) Styrene (T)

10.35min 5.42PPB

response 130648

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	205.64
78.00	85.00	87.99
0.00	0.00	0.00

Manual Integration:

Before

LM

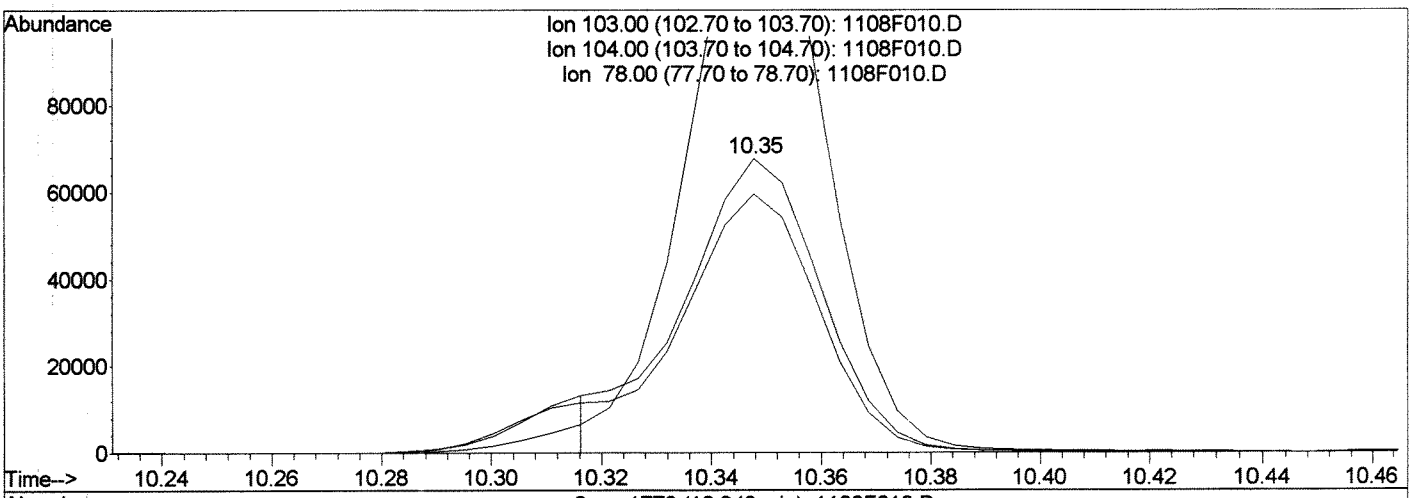
11/09/18

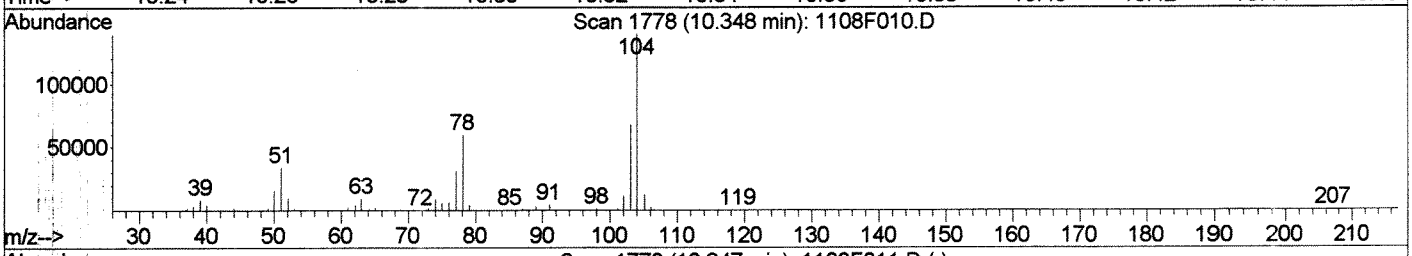
1108F010.D 110818MS27_8260.M Fri Nov 09 09:11:34 2018

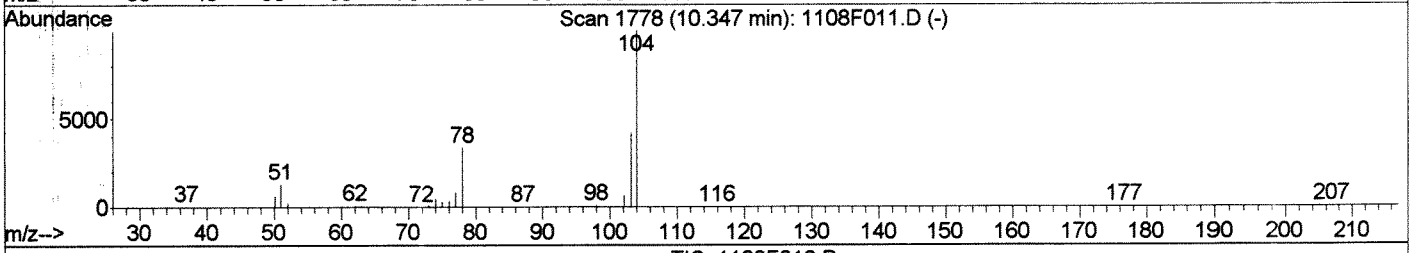
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F010.D Vial: 7
Acq On : 8 Nov 2018 2:17 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:11 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F010.D

(79) Styrene (T)

10.35min 4.91PPB m

response 118179

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	205.64
78.00	85.00	87.99
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

11/09/18

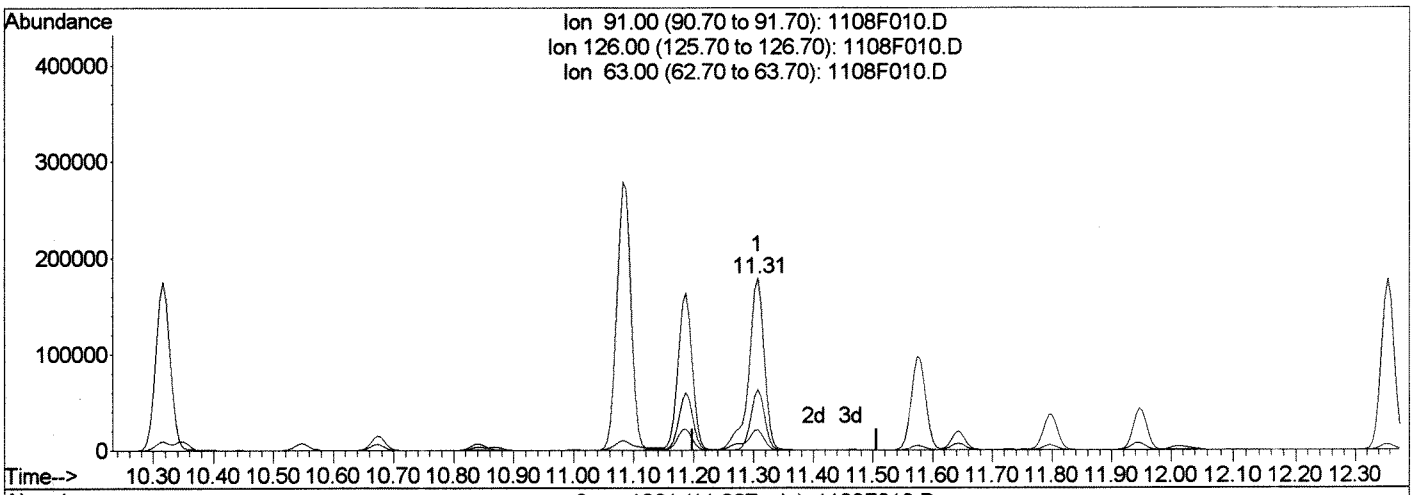
11/16/18

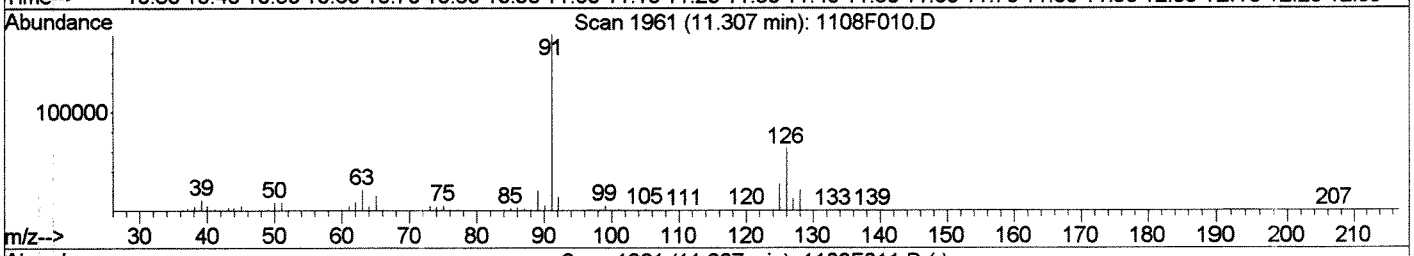
1108F010.D 110818MS27_8260.M Fri Nov 09 09:11:48 2018

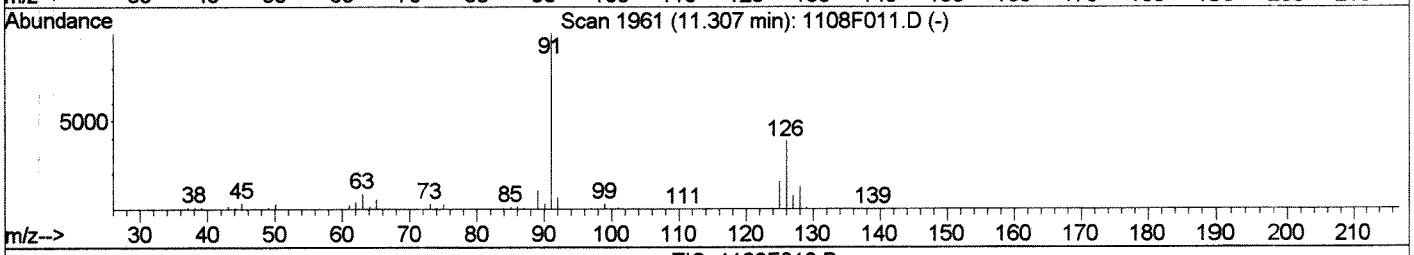
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F010.D Vial: 7
Acq On : 8 Nov 2018 2:17 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:11 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F010.D

(92) 4-Chlorotoluene (T)

11.31min 5.51PPB

response 327608

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.19
63.00	11.20	11.76
0.00	0.00	0.00

Manual Integration:

Before

LM

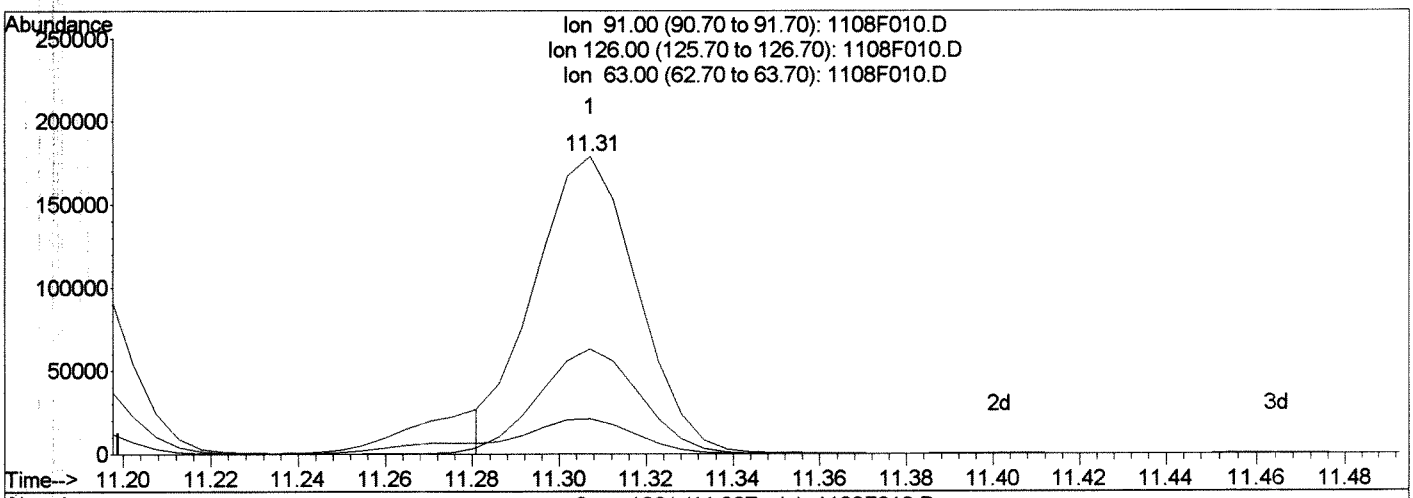
11/09/18

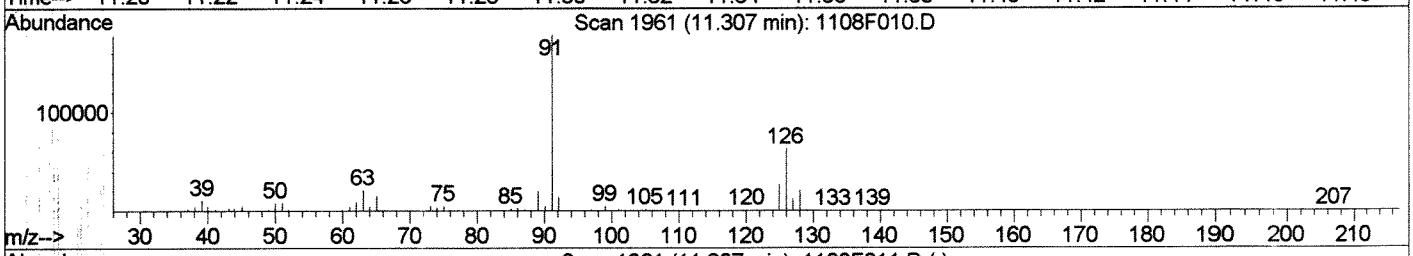
1108F010.D 110818MS27_8260.M Fri Nov 09 09:12:07 2018

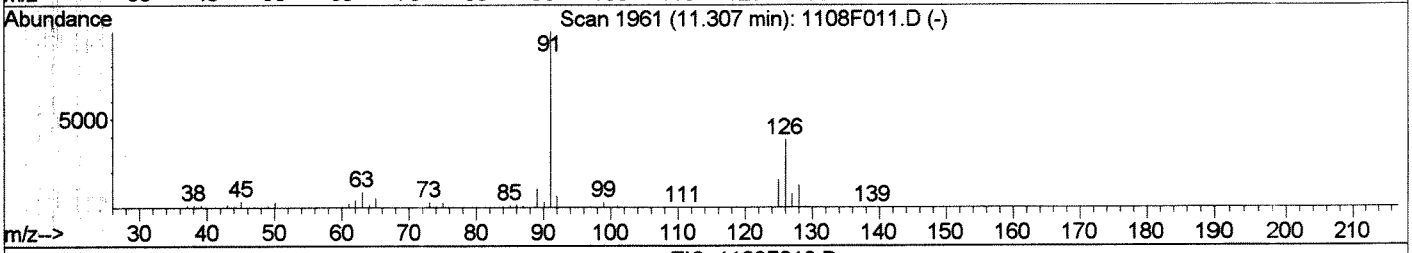
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F010.D Vial: 7
Acq On : 8 Nov 2018 2:17 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:12 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F010.D

(92) 4-Chlorotoluene (T)

11.31min 4.95PPB m

response 294442

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.19
63.00	11.20	11.76
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

11/09/18

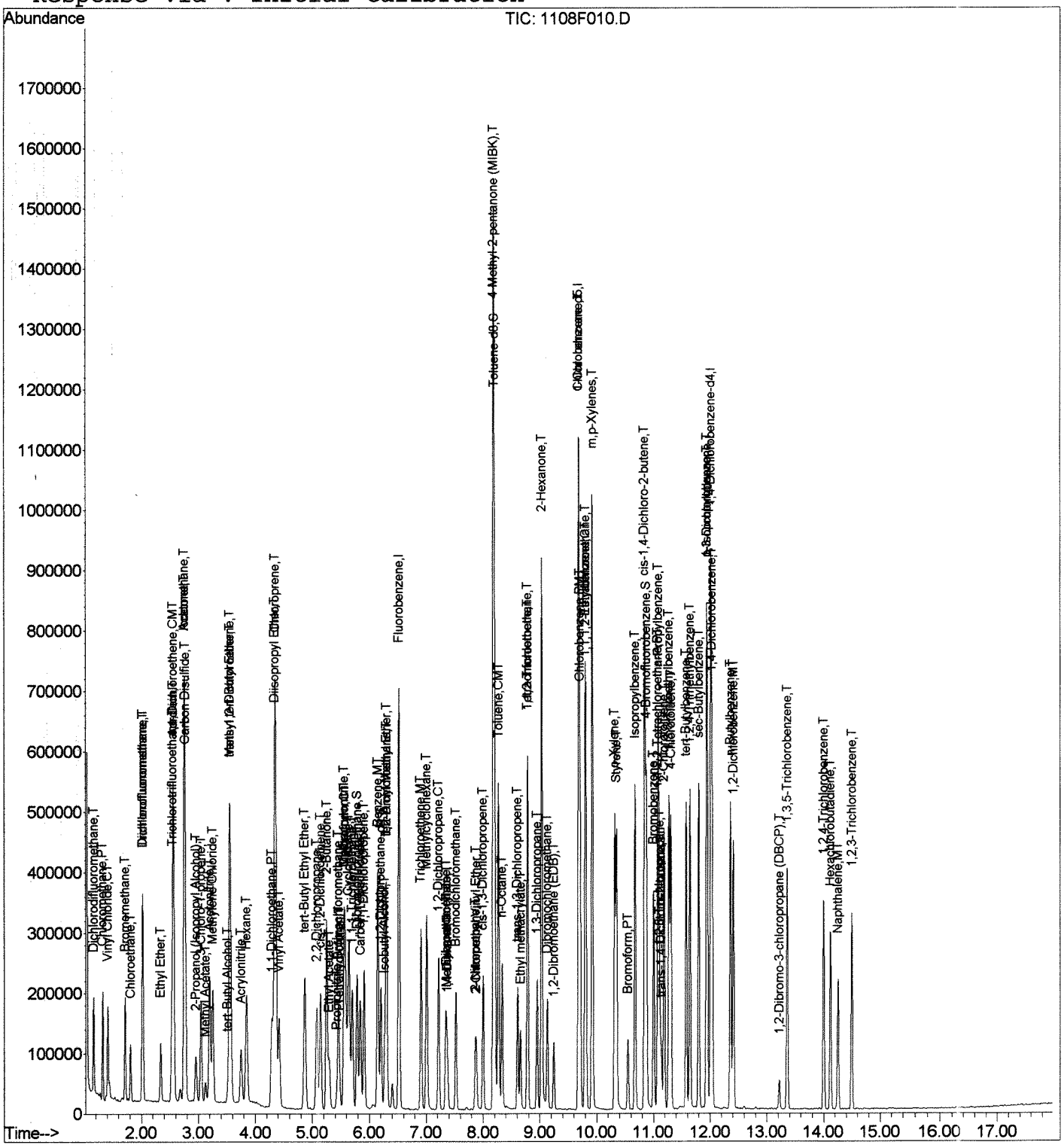
9 11/20/18

1108F010.D 110818MS27_8260.M Fri Nov 09 09:12:17 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F010.D Vial: 7
Acq On : 8 Nov 2018 2:17 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:12 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:33 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

LM 11-17-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.52	96	667944	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	267768	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	262009	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.79	113	176209	10.00	PPB	0.00
Spiked Amount 10.000			Recovery =	100.00%		
46) 1,2-Dichloroethane-d4	6.21	65	174362	10.00	PPB	0.00
Spiked Amount 10.000			Recovery =	100.00%		
61) Toluene-d8	8.20	98	634841	10.00	PPB	0.00
Spiked Amount 10.000			Recovery =	100.00%		
83) 4-Bromofluorobenzene	10.87	95	235050	10.00	PPB	0.00
Spiked Amount 10.000			Recovery =	100.00%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.17	85	198251	10.00	PPB	100
3) Chloromethane	1.32	50	248346	10.00	PPB	100
4) Vinyl Chloride	1.41	62	228648	10.00	PPB	100
5) Bromomethane	1.72	96	157073	10.00	PPB	100
6) Chloroethane	1.81	64	130450	10.00	PPB	100
7) Dichlorofluoromethane	2.03	67	317022	10.00	PPB	100
8) Trichlorofluoromethane	2.02	101	292895	10.00	PPB	100
9) Ethyl Ether	2.34	59	98258	10.00	PPB	100
10) Acrolein	2.56	56	464769	200.00	PPB	100
11) Trichlorotrifluoroethane	2.54	151	131272	10.00	PPB	100
12) 1,1-Dichloroethene	2.57	96	166656	10.00	PPB	100
13) Acetone	2.75	43	520929	200.00	PPB	100
14) Iodomethane	2.76	142	1079309	40.00	PPB	100
15) Carbon Disulfide	2.77	76	489080	10.00	PPB	100
16) 2-Propanol (Isopropyl Alco	2.96	45	203962	500.00	PPB	100
17) 3-Chloro-1-propene	3.05	76	94547	10.00	PPB	100
18) Methyl Acetate	3.12	43	80947	10.00	PPB	100
19) Acetonitrile	3.20	40	259188	400.00	PPB	100
20) Methylene Chloride	3.25	84	194320	10.00	PPB	100
21) tert-Butyl Alcohol	3.52	59	45280	50.08	PPB	100
22) Acrylonitrile	3.75	53	172008	40.00	PPB	100
23) Methyl tert-Butyl Ether	3.56	73	779969	20.00	PPB	100
24) trans-1,2-Dichloroethene	3.55	96	186264	10.00	PPB	100
25) Hexane	3.85	57	216231	10.00	PPB	100
26) Diisopropyl Ether	4.33	45	541546	10.00	PPB	100
27) 1,1-Dichloroethane	4.29	63	337479	10.00	PPB	100
28) Vinyl Acetate	4.42	86	58058	20.02	PPB	99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:33 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroprene	4.35	53	859452	40.00	PPB	100
30)	tert-Butyl Ethyl Ether	4.87	59	434525	10.00	PPB	100
31)	2,2-Dichloropropane	5.08	77	236782	10.00	PPB	100
32)	cis-1,2-Dichloroethene	5.14	96	201447	10.00	PPB	100
33)	2-Butanone	5.25	72	234657	200.00	PPB	100
34)	Ethyl Acetate	5.30	61	30659	20.00	PPB	100
35)	Propionitrile	5.43	54	59821	40.00	PPB	100
36)	Methacrylonitrile	5.56	67	195736	40.00	PPB	100
37)	Bromochloromethane	5.46	128	104391	10.00	PPB	100
38)	Tetrahydrofuran	5.48	71	11823	10.00	PPB	100
39)	Chloroform	5.58	83	333961	10.00	PPB	100
40)	Cyclohexane	5.64	56	312442	10.00	PPB	100
41)	1,1,1-Trichloroethane	5.70	97	273014	10.00	PPB	100
43)	Carbon Tetrachloride	5.84	117	240969	10.00	PPB	100
44)	1,1-Dichloropropene	5.91	75	235517	10.00	PPB	100
45)	Isobutyl Alcohol	6.27	42	90076	400.00	PPB	100
47)	Benzene	6.15	78	730710	10.00	PPB	100
48)	1,2-Dichloroethane	6.29	62	222899	10.00	PPB	100
49)	tert-Amyl Methyl Ether	6.30	55	132884	10.00	PPB	100
50)	Trichloroethene	6.91	95	193431	10.00	PPB	100
51)	Methylcyclohexane	7.01	83	238959	10.00	PPB	100
52)	1,2-Dichloropropane	7.22	63	202547	10.00	PPB	100
53)	Dibromomethane	7.34	93	111465	10.00	PPB	100
54)	Methyl methacrylate	7.37	69	73384	10.00	PPB	100
55)	1,4-Dioxane	7.37	88	28609	400.00	PPB	100
56)	Bromodichloromethane	7.52	83	256374	10.00	PPB	100
57)	2-Nitropropane	7.86	41	124656	50.00	PPB	100
58)	2-Chloroethyl Vinyl Ether	7.88	63	71294	10.00	PPB	100
59)	cis-1,3-Dichloropropene	8.00	75	270689	10.00	PPB	100
60)	4-Methyl-2-pentanone (MIBK	8.18	58	812847	200.00	PPB	100
62)	Toluene	8.27	92	455947	10.00	PPB	100
64)	n-Octane	8.33	85	94695	10.00	PPB	100
65)	trans-1,3-Dichloropropene	8.61	75	229178	10.00	PPB	100
66)	Ethyl methacrylate	8.66	69	144013	10.00	PPB	100
67)	1,1,2-Trichloroethane	8.79	83	132403	10.00	PPB	100
68)	Tetrachloroethene	8.79	164	164902	10.00	PPB	100
69)	2-Hexanone	9.03	57	241089	200.00	PPB	100
70)	1,3-Dichloropropane	8.95	76	250826	10.00	PPB	100
71)	Dibromochloromethane	9.13	129	190556	10.00	PPB	100
72)	1,2-Dibromoethane (EDB)	9.25	107	144722	10.00	PPB	100
73)	1-Chlorohexane	9.69	91	187110	10.00	PPB	100

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:33 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

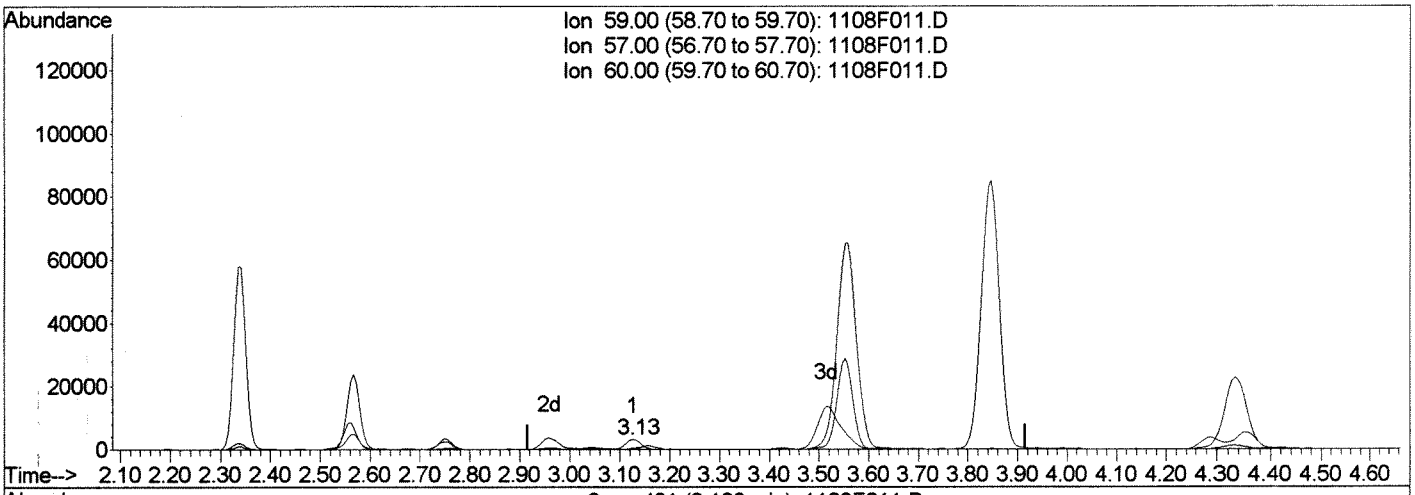
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	9.71	112	527262	10.00	PPB	100
75)	Ethylbenzene	9.80	106	258146	10.00	PPB	100
76)	1,1,1,2-Tetrachloroethane	9.81	131	190594	10.00	PPB	100
77)	m,p-Xylenes	9.92	106	638558	20.00	PPB	100
78)	o-Xylene	10.32	106	294576	10.00	PPB	100
79)	Styrene	10.35	103	252056m	10.00	PPB	
80)	Bromoform	10.55	173	121546	10.00	PPB	100
81)	Isopropylbenzene	10.67	105	744139	10.00	PPB	100
82)	cis-1,4-Dichloro-2-butene	10.84	89	75481	40.00	PPB	100
85)	1,1,2,2-Tetrachloroethane	11.07	83	173724	10.00	PPB	100
86)	trans-1,4-Dichloro-2-buten	11.13	53	39979	10.00	PPB	100
87)	Bromobenzene	11.00	156	234004	10.00	PPB	100
88)	n-Propylbenzene	11.08	91	940099	10.00	PPB	100
89)	1,2,3-Trichloropropane	11.11	110	47590	10.00	PPB	100
90)	2-Chlorotoluene	11.19	91	566439	10.00	PPB	100
91)	1,3,5-Trimethylbenzene	11.27	105	656241	10.00	PPB	100
92)	4-Chlorotoluene	11.31	91	620722m	10.00	PPB	
93)	tert-Butylbenzene	11.58	119	533499	10.00	PPB	100
94)	1,2,4-Trimethylbenzene	11.64	105	650007	10.00	PPB	100
95)	sec-Butylbenzene	11.80	105	802760	10.00	PPB	100
96)	p-Isopropyltoluene	11.95	119	659451	10.00	PPB	100
97)	1,3-Dichlorobenzene	11.94	146	435743	10.00	PPB	100
98)	1,4-Dichlorobenzene	12.04	146	438229	10.00	PPB	100
99)	n-Butylbenzene	12.36	91	594938	10.00	PPB	100
100)	1,2-Dichlorobenzene	12.41	146	410313	10.00	PPB	100
101)	1,2-Dibromo-3-chloropropan	13.22	155	23835	10.00	PPB	100
102)	1,3,5-Trichlorobenzene	13.36	180	289767	10.00	PPB	100
103)	1,2,4-Trichlorobenzene	14.00	180	260146	10.00	PPB	100
104)	Hexachlorobutadiene	14.12	225	137037	10.00	PPB	100
105)	Naphthalene	14.25	128	394463	10.00	PPB	100
106)	1,2,3-Trichlorobenzene	14.49	180	241419	10.00	PPB	100

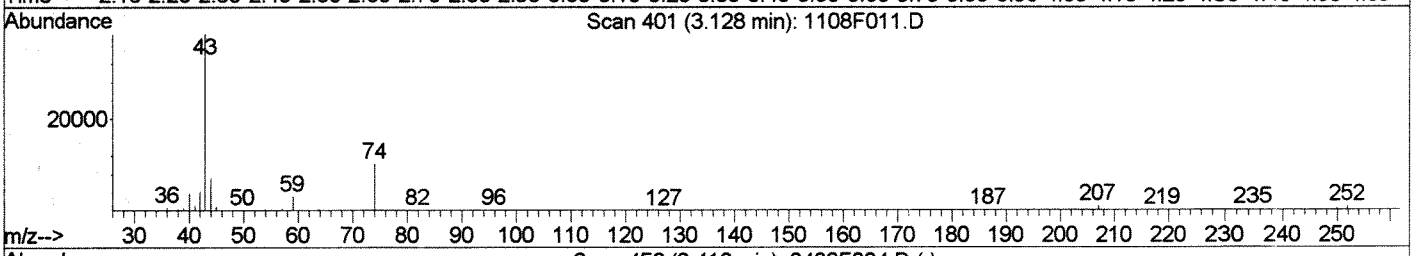
(#) = qualifier out of range (m) = manual integration

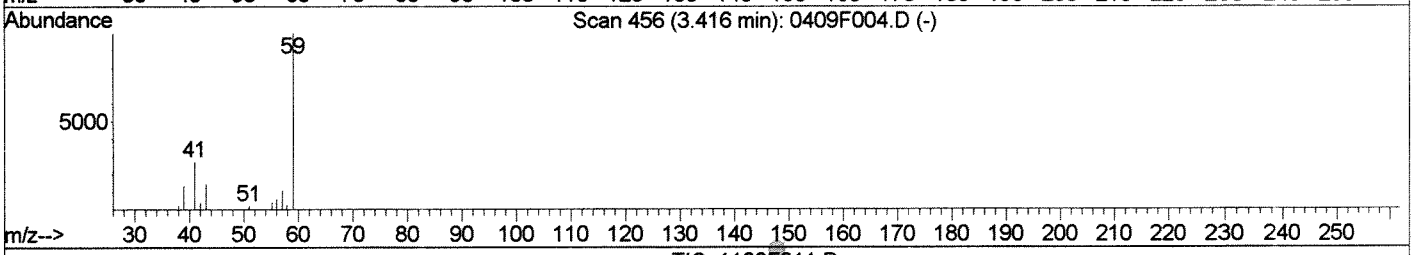
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:36 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:35:44 2018
Response via : Multiple Level Calibration







TIC: 1108F011.D

(21) tert-Butyl Alcohol (T)

3.13min 9.94PPB

response 6678

Ion	Exp%	Act%
59.00	100	100
57.00	9.10	7.92
60.00	4.20	6.88
0.00	0.00	0.00

Manual Integration:

Before LM

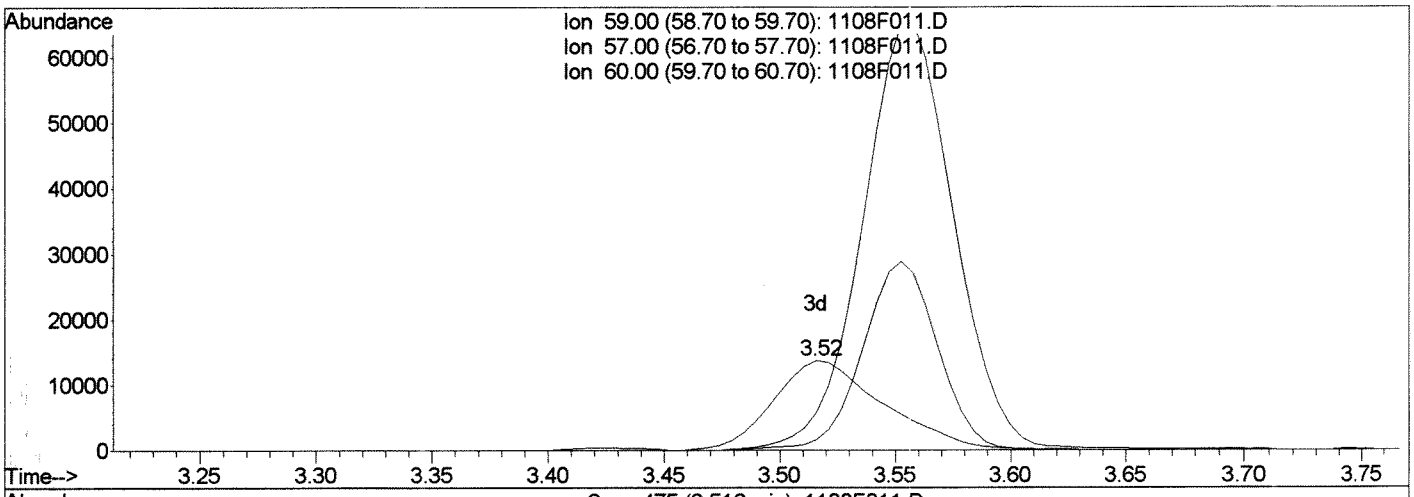
11/08/18

1108F011.D 110818MS27_8260.M Thu Nov 08 17:39:15 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:40 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:35:44 2018
Response via : Multiple Level Calibration



TIC: 1108F011.D

(21) tert-Butyl Alcohol (T)

3.52min 67.27PPB m

response 45208

Ion	Exp%	Act%
59.00	100	100
57.00	9.10	41.86#
60.00	4.20	11.50
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

11/08/18

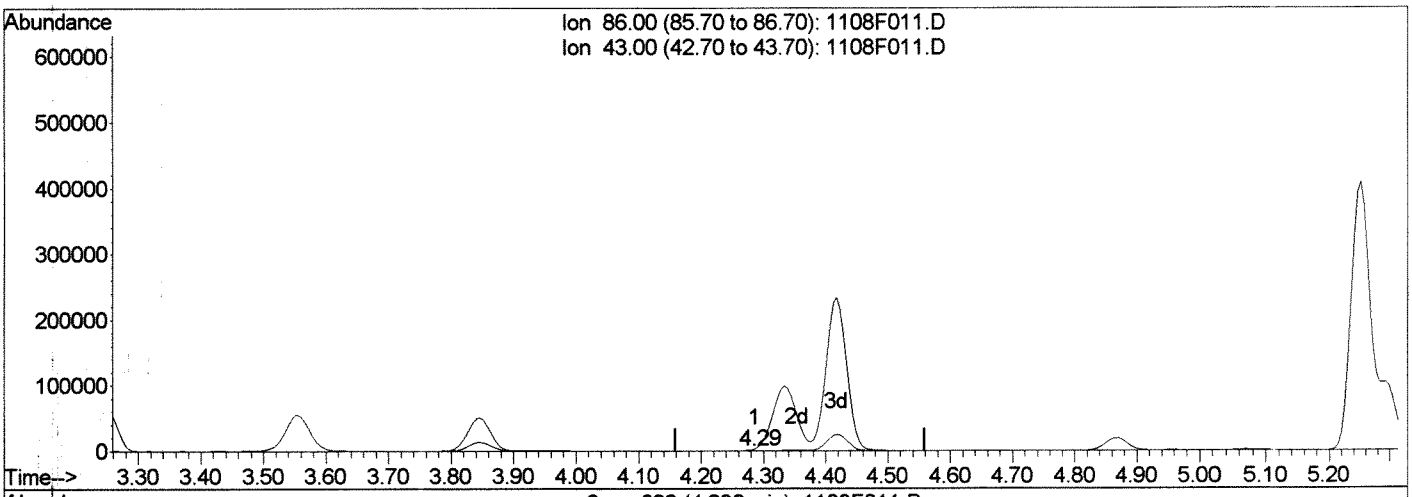
LM

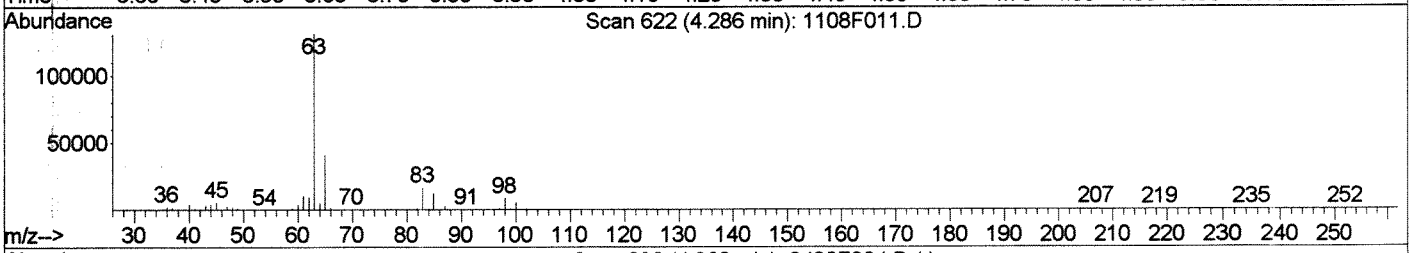
1108F011.D 110818MS27_8260.M Thu Nov 08 17:40:10 2018

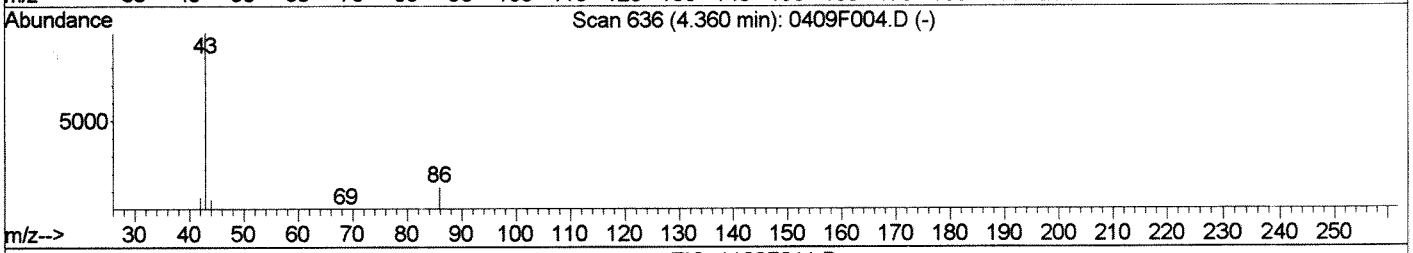
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:40 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:35:44 2018
Response via : Multiple Level Calibration







TIC: 1108F011.D

(28) Vinyl Acetate (T)

4.29min 0.21PPB

response 534

Ion	Exp%	Act%
86.00	100	100
43.00	1283.50	1254.15
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

LM

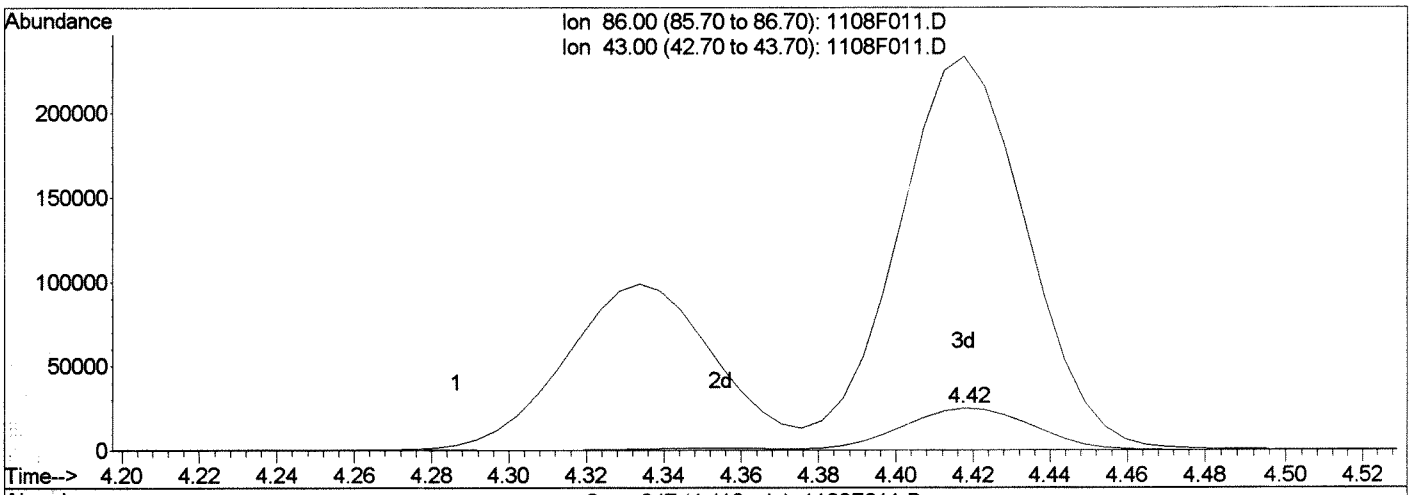
11/08/18

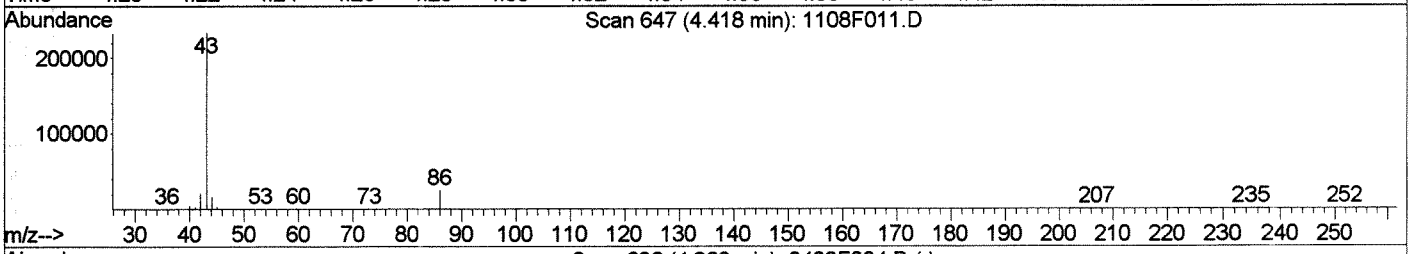
1108F011.D 110818MS27_8260.M Thu Nov 08 17:41:01 2018

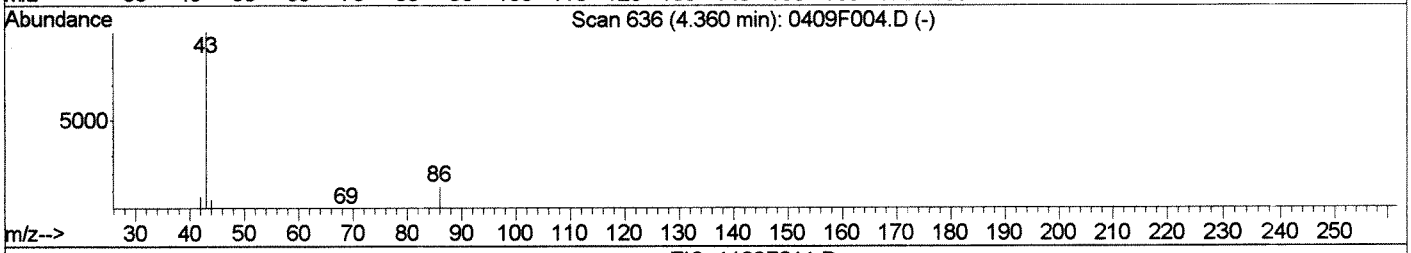
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:41 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:35:44 2018
Response via : Multiple Level Calibration







TIC: 1108F011.D

(28) Vinyl Acetate (T)

4.42min 22.88PPB m

response 58008

Ion	Exp%	Act%
86.00	100	100
43.00	1283.50	942.29#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

WRT

11/08/18

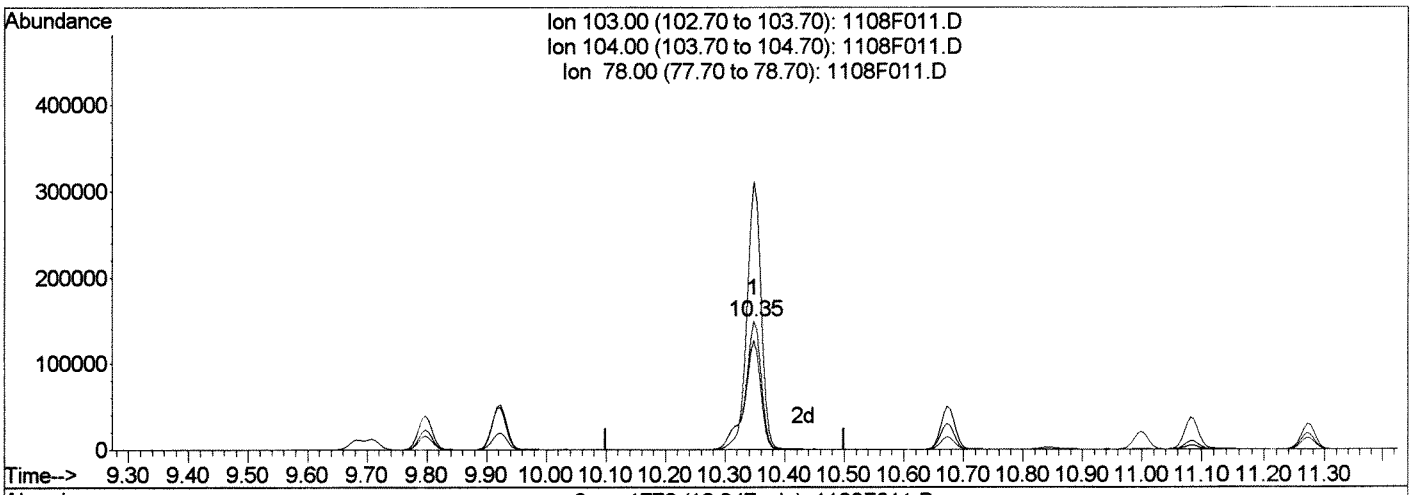
LM

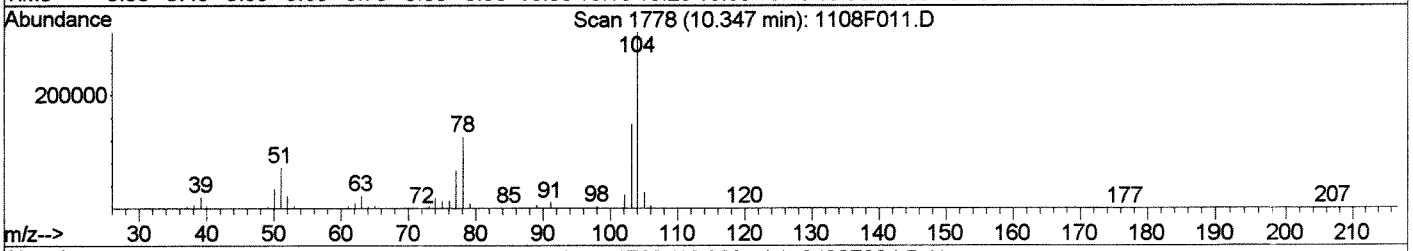
1108F011.D 110818MS27_8260.M Thu Nov 08 17:41:34 2018

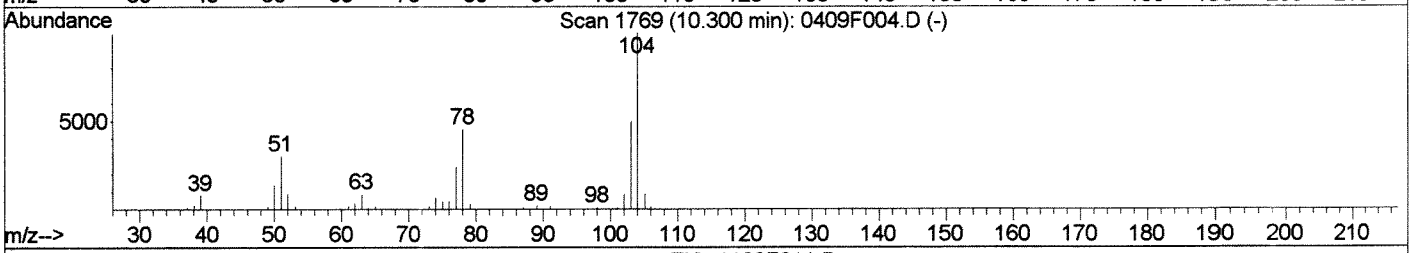
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:41 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:35:44 2018
Response via : Multiple Level Calibration







TIC: 1108F011.D

(79) Styrene (T)

10.35min 13.36PPB

response 286806

Ion	Exp%	Act%
103.00	100	100
104.00	203.70	208.84
78.00	97.40	84.86
0.00	0.00	0.00

Manual Integration:

Before

LM

11/08/18

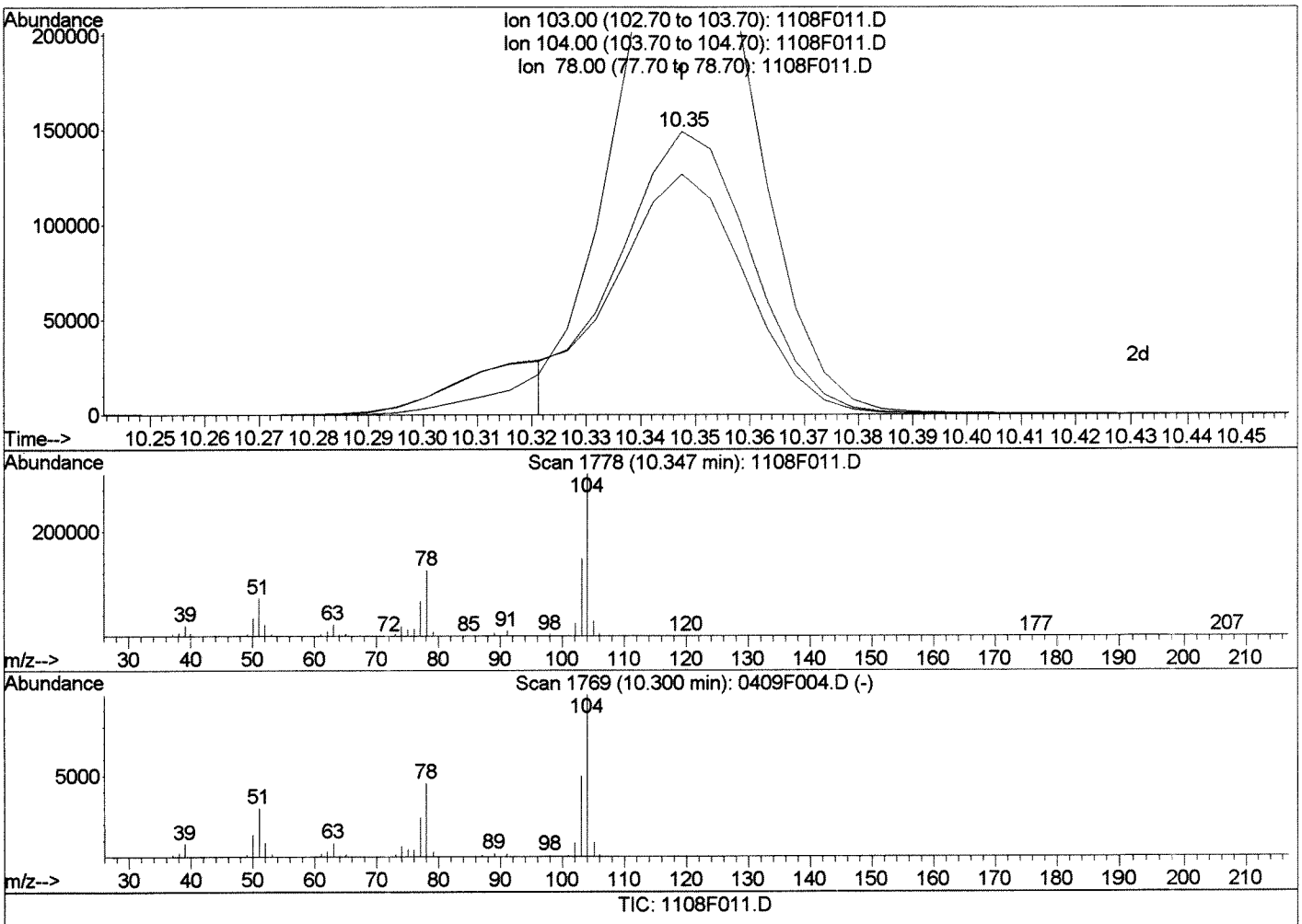
11/26/18

1108F011.D 110818MS27_8260.M Thu Nov 08 17:45:54 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:46 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:35:44 2018
Response via : Multiple Level Calibration



TIC: 1108F011.D

(79) Styrene (T)

10.35min 11.74PPB m

response 252056

Ion	Exp%	Act%
103.00	100	100
104.00	203.70	208.84
78.00	97.40	84.97
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

11/08/18

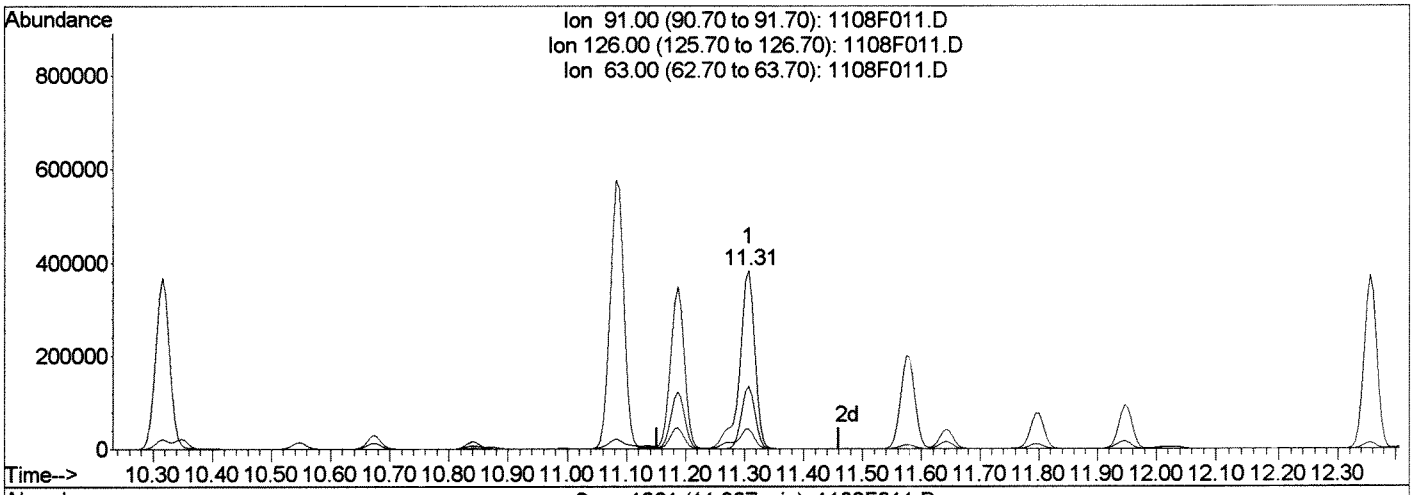
11/26/18

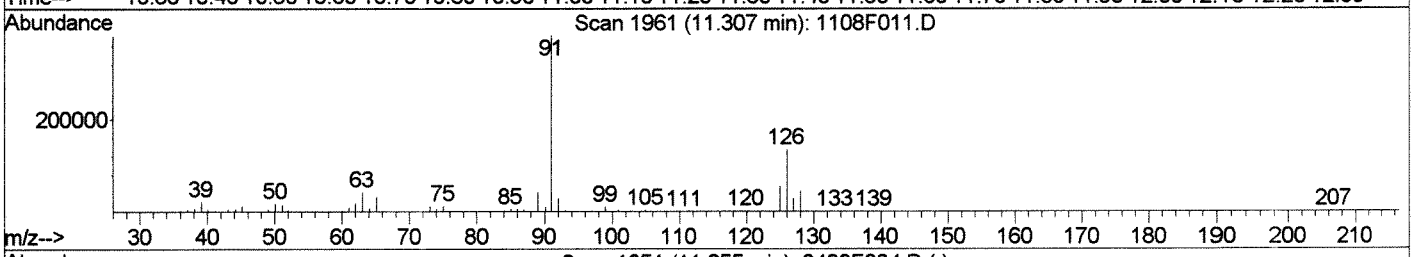
1108F011.D 110818MS27_8260.M Thu Nov 08 17:46:12 2018

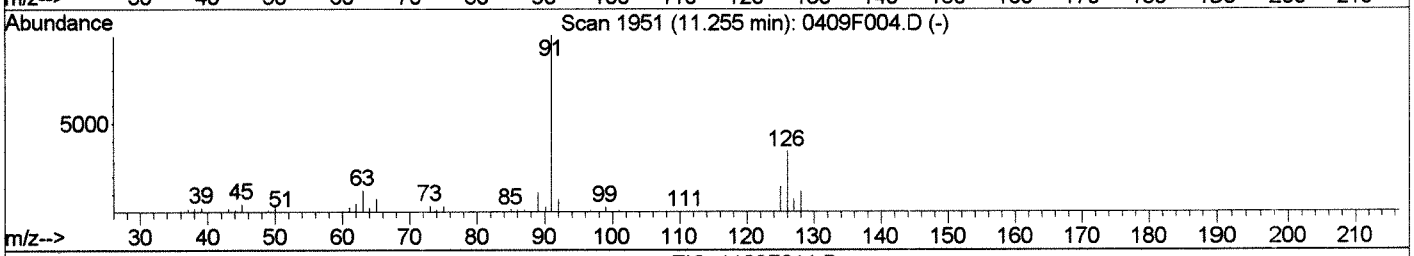
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:46 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:35:44 2018
Response via : Multiple Level Calibration







TIC: 1108F011.D

(92) 4-Chlorotoluene (T)

11.31min 10.48PPB

response 689582

Ion	Exp%	Act%
91.00	100	100
126.00	34.70	35.07
63.00	10.10	11.18
0.00	0.00	0.00

Manual Integration:

Before

LM

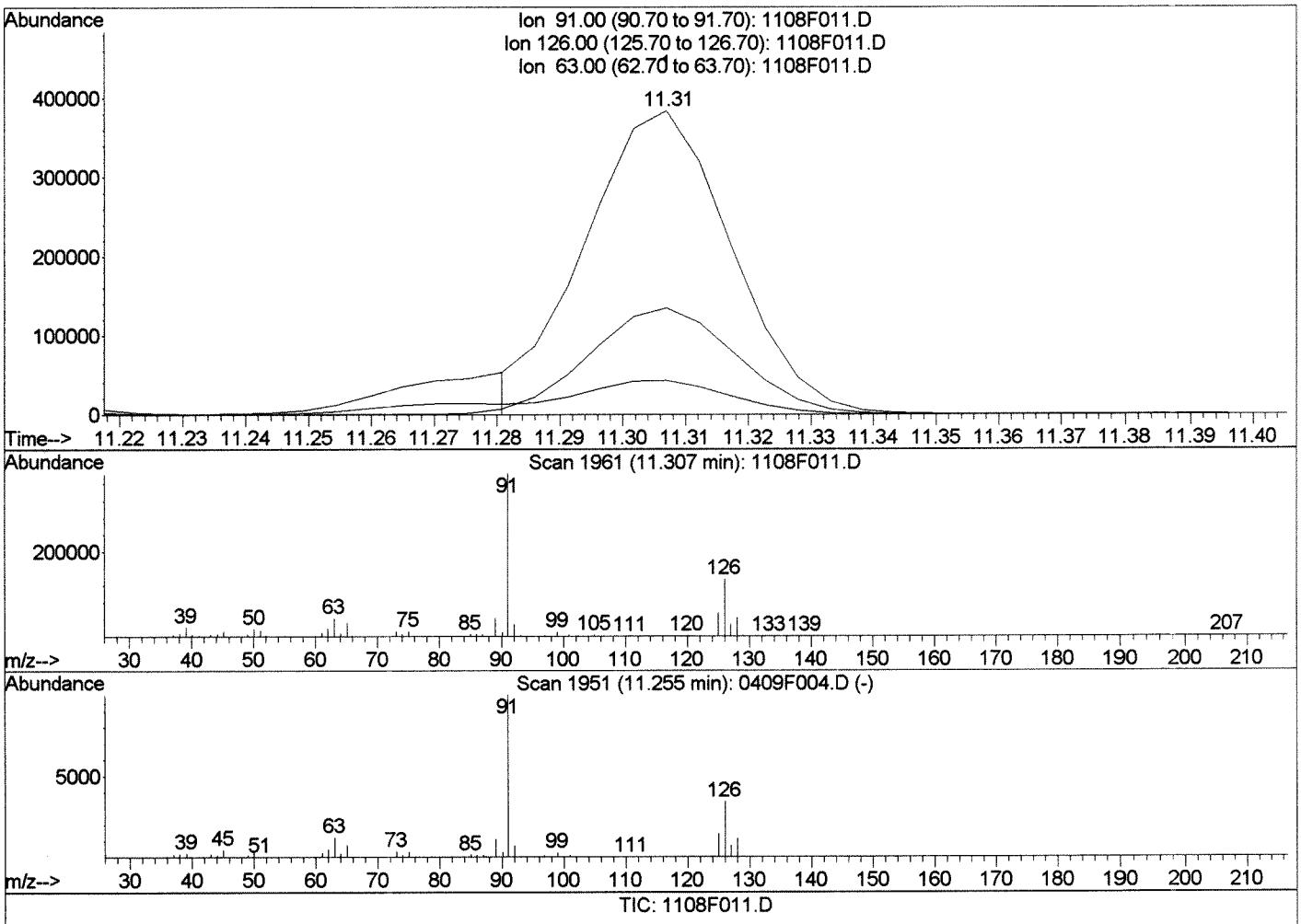
11/08/18

1108F011.D 110818MS27_8260.M Thu Nov 08 17:46:48 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:46 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:35:44 2018
Response via : Multiple Level Calibration



(92) 4-Chlorotoluene (T)

11.31min 9.43PPB m

response 620722

Ion	Exp%	Act%
91.00	100	100
126.00	34.70	35.04
63.00	10.10	11.17
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

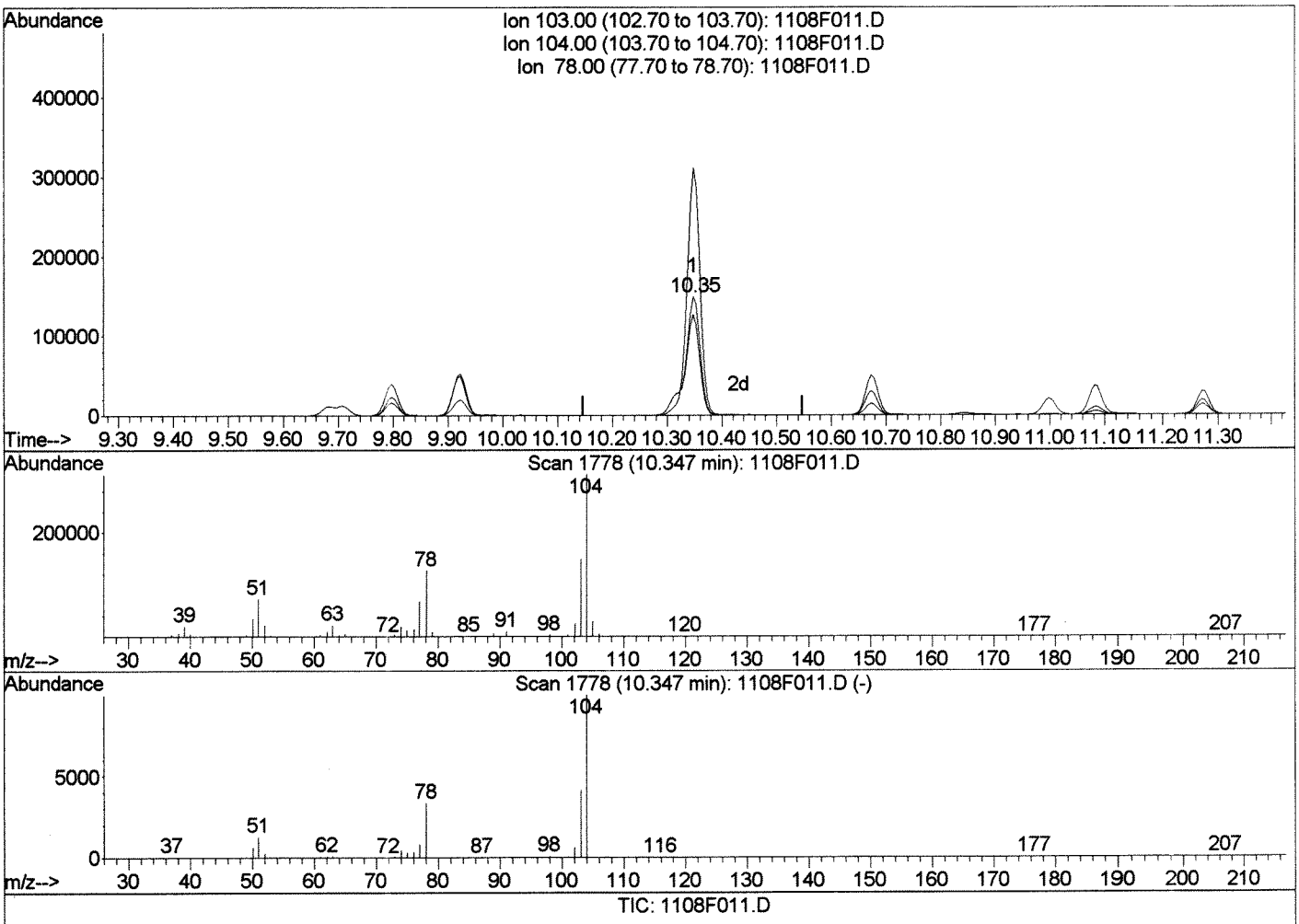
11/08/18

1108F011.D 110818MS27_8260.M Thu Nov 08 17:47:00 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



(79) Styrene (T)

10.35min 11.38PPB

response 286806

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	208.84
78.00	85.00	84.86
0.00	0.00	0.00

Manual Integration:

Before

LM

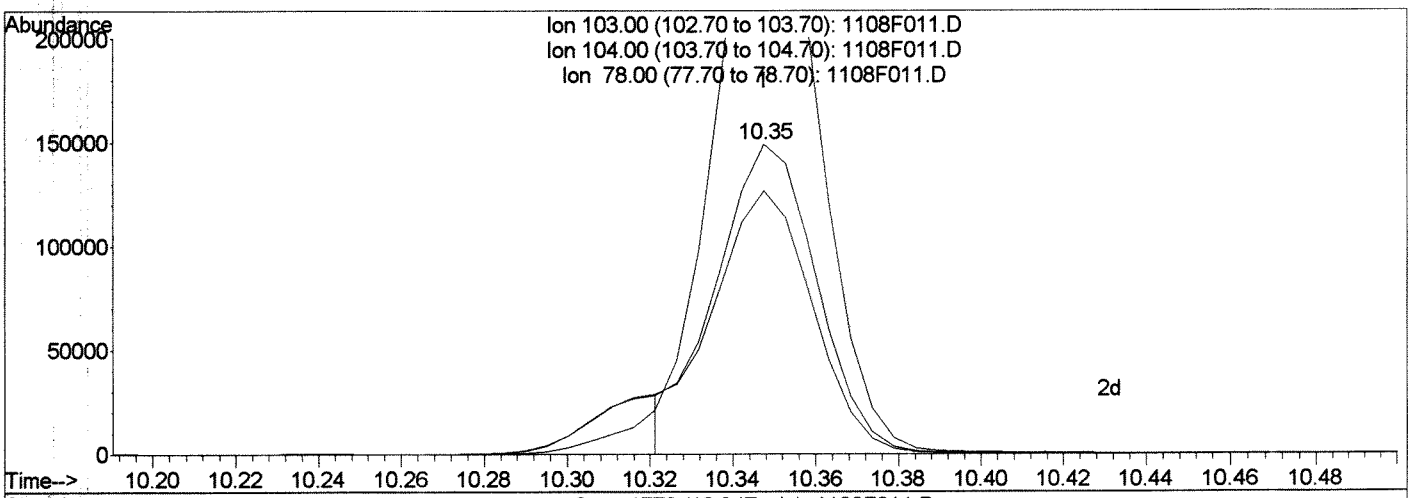
11/09/18

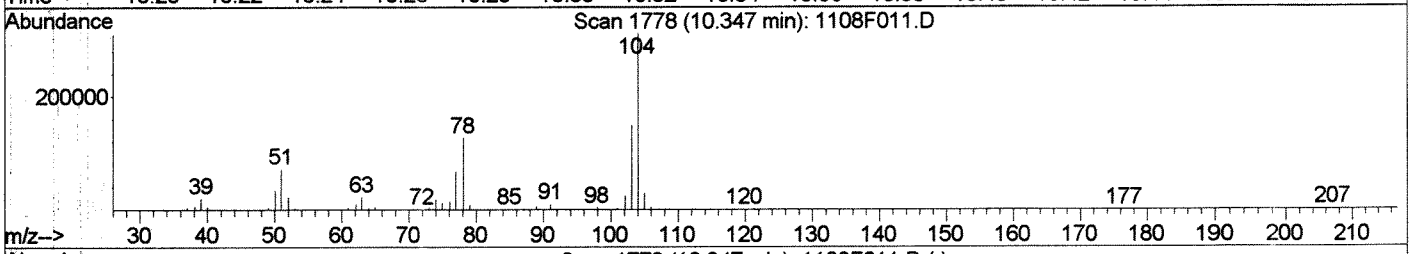
1108F011.D 110818MS27_8260.M Fri Nov 09 09:14:03 2018

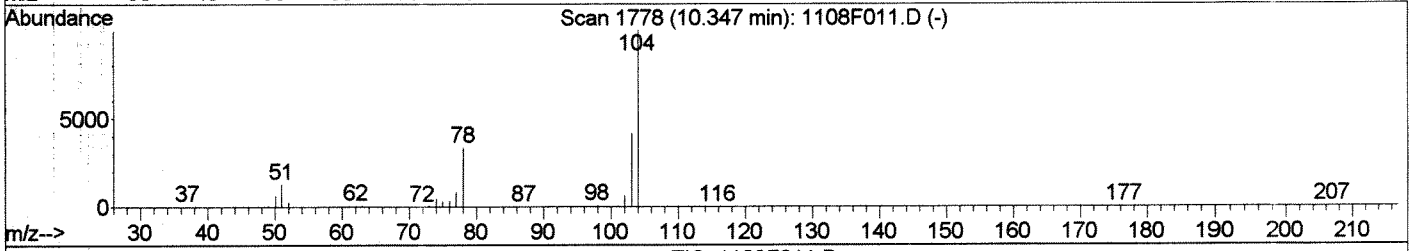
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:14 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F011.D

(79) Styrene (T)

10.35min 10.00PPB m

response 252056

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	208.84
78.00	85.00	84.97
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

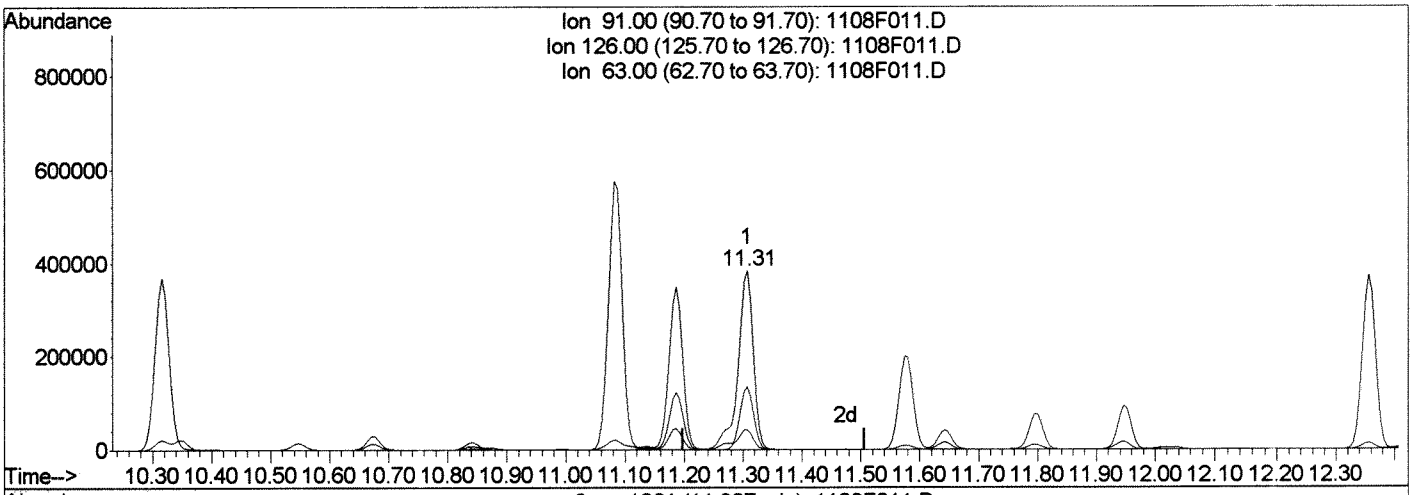
11/09/18

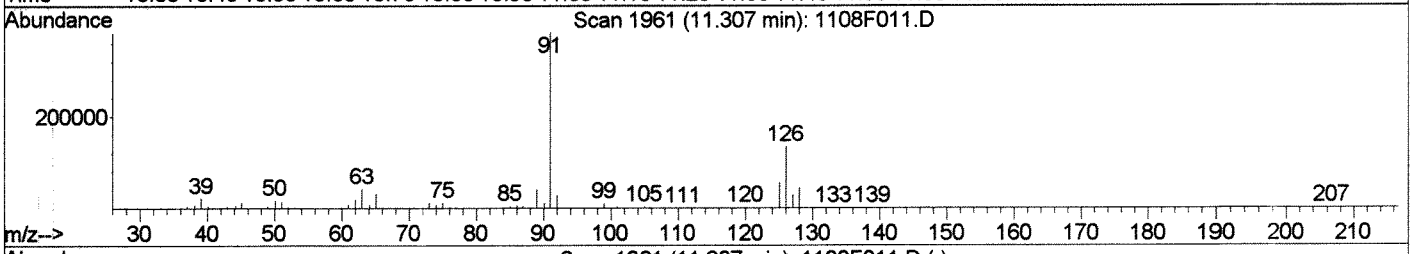
1108F011.D 110818MS27_8260.M Fri Nov 09 09:14:15 2018

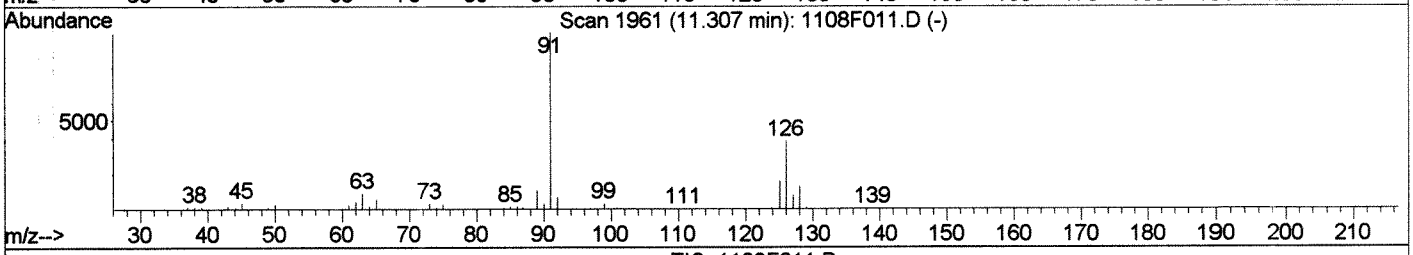
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:14 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F011.D

(92) 4-Chlorotoluene (T)

11.31min 11.11PPB

response 689582

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.07
63.00	11.20	11.18
0.00	0.00	0.00

Manual Integration:

Before LM

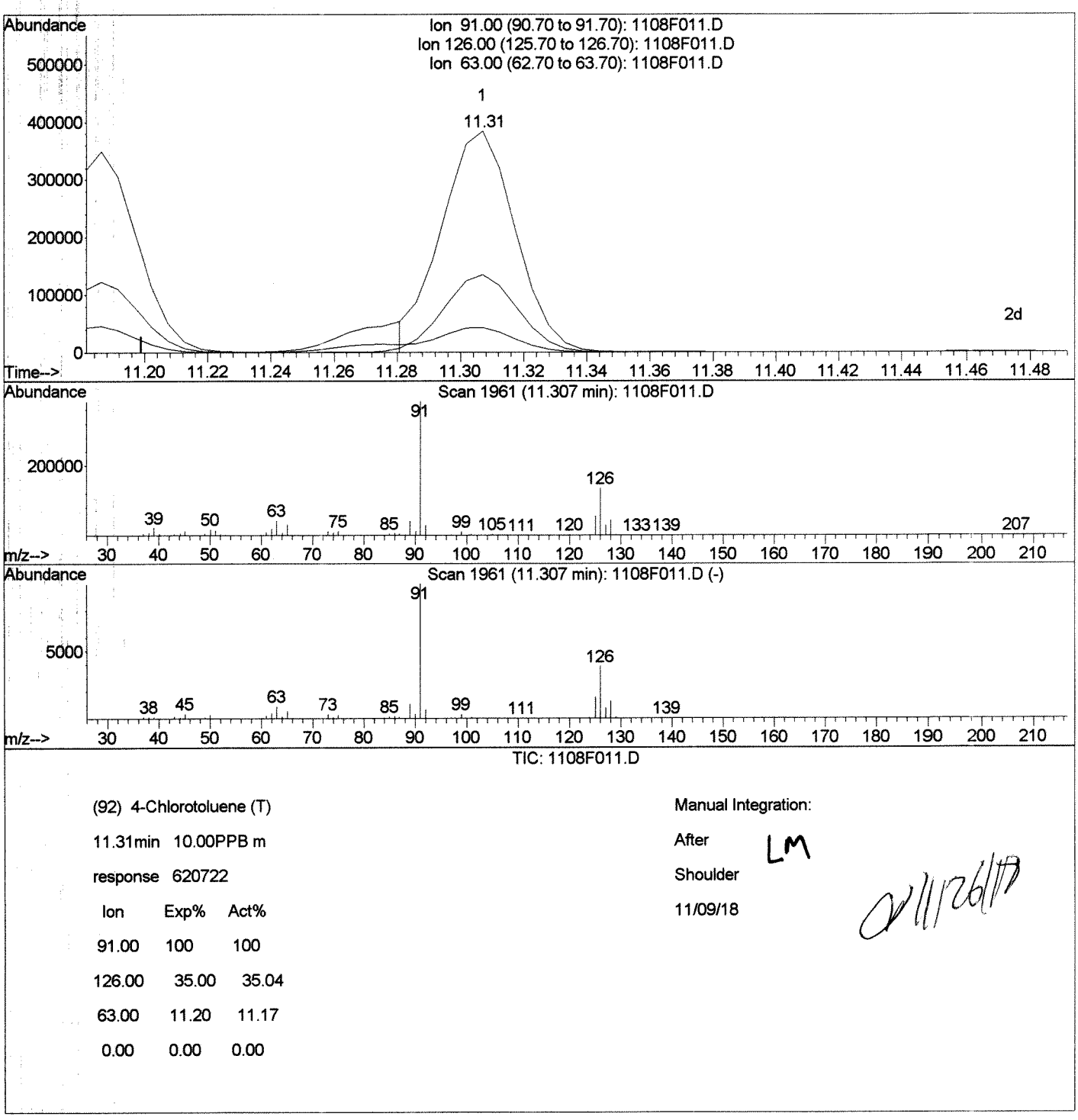
11/09/18

1108F011.D 110818MS27_8260.M Fri Nov 09 09:14:32 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:14 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F011.D

(92) 4-Chlorotoluene (T)

11.31min 10.00PPB m

response 620722

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.04
63.00	11.20	11.17
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

11/09/18

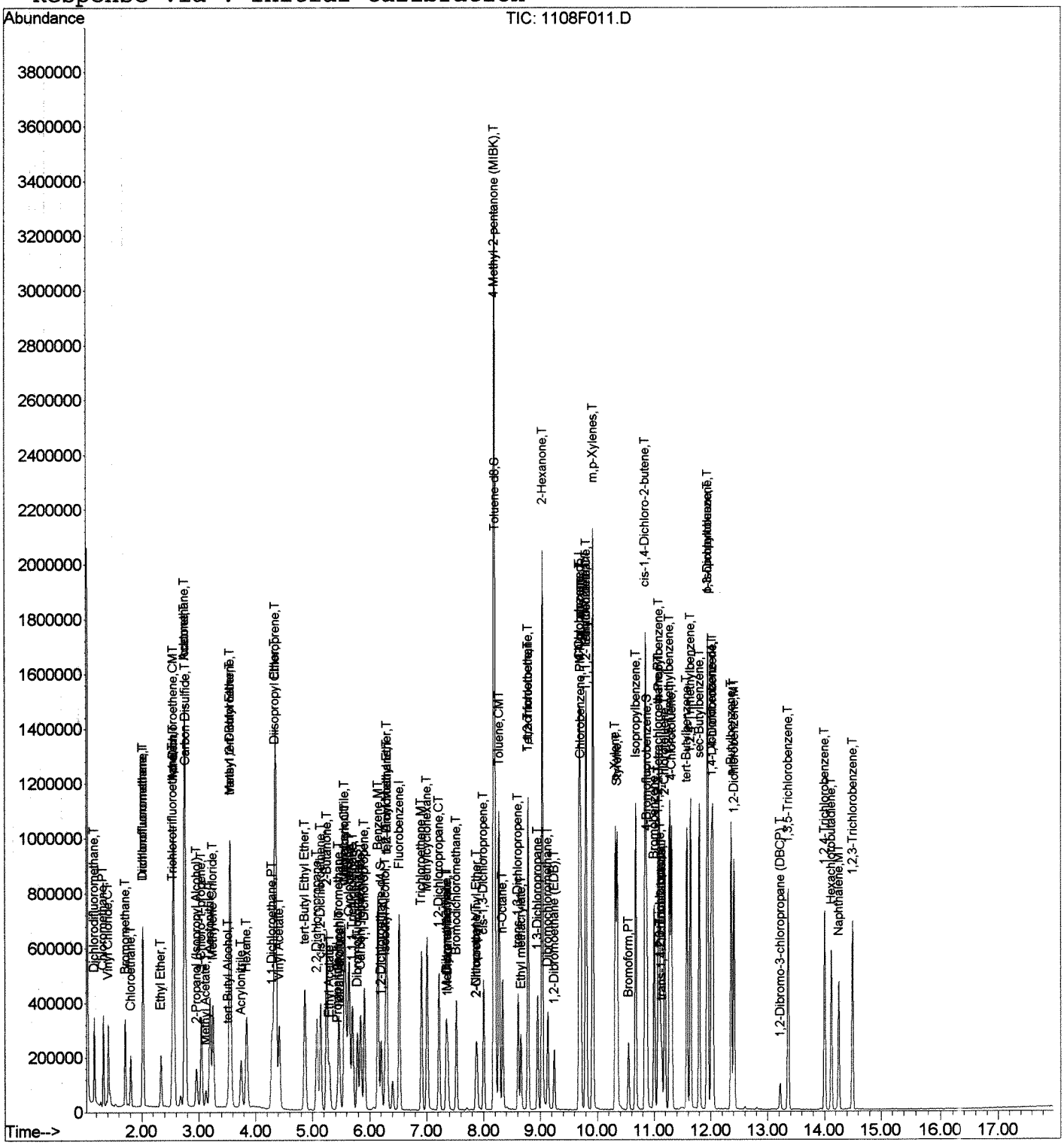
11/26/18

1108F011.D 110818MS27_8260.M Fri Nov 09 09:14:44 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:14 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F012.D Vial: 9
Acq On : 8 Nov 2018 3:01 pm Operator: LM
Sample : ICAL 20 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:34 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

LM 11-17-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.52	96	692870	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	276396	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	270925	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.79	113	206749	11.31	PPB	0.00
Spiked Amount 10.000			Recovery =	113.10%		
46) 1,2-Dichloroethane-d4	6.21	65	204848	11.33	PPB	0.00
Spiked Amount 10.000			Recovery =	113.30%		
61) Toluene-d8	8.20	98	714583	10.85	PPB	0.00
Spiked Amount 10.000			Recovery =	108.50%		
83) 4-Bromofluorobenzene	10.87	95	281211	11.59	PPB	0.00
Spiked Amount 10.000			Recovery =	115.90%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.17	85	344231	16.74	PPB	97
3) Chloromethane	1.32	50	441520	17.14	PPB	98
4) Vinyl Chloride	1.41	62	402203	16.96	PPB	96
5) Bromomethane	1.71	96	283319	17.39	PPB	98
6) Chloroethane	1.81	64	241040	17.81	PPB	98
7) Dichlorofluoromethane	2.03	67	572641	17.41	PPB	99
8) Trichlorofluoromethane	2.02	101	504451	16.60	PPB	100
9) Ethyl Ether	2.34	59	199605	19.58	PPB	97
10) Acrolein	2.56	56	927312	384.69	PPB	100
11) Trichlorotrifluoroethane	2.54	151	235387	17.29	PPB	98
12) 1,1-Dichloroethene	2.57	96	299399	17.32	PPB	97
13) Acetone	2.75	43	1066851	394.86	PPB	98
14) Iodomethane	2.76	142	2097884	74.95	PPB	100
15) Carbon Disulfide	2.77	76	882292	17.39	PPB	100
16) 2-Propanol (Isopropyl Alco	2.95	45	430120	1016.48	PPB	98
17) 3-Chloro-1-propene	3.05	76	181313	18.49	PPB	97
18) Methyl Acetate	3.12	43	165647	19.73	PPB	97
19) Acetonitrile	3.20	40	521295	775.56	PPB	100
20) Methylene Chloride	3.25	84	387278	19.21	PPB	97
21) tert-Butyl Alcohol	3.52	59	94258	100.50	PPB	94
22) Acrylonitrile	3.75	53	339869	76.19	PPB	95
23) Methyl tert-Butyl Ether	3.55	73	1572877	38.88	PPB	99
24) trans-1,2-Dichloroethene	3.55	96	345339	17.87	PPB	95
25) Hexane	3.85	57	387843	17.29	PPB	99
26) Diisopropyl Ether	4.33	45	1078698	19.20	PPB	98
27) 1,1-Dichloroethane	4.29	63	626382	17.89	PPB	98
28) Vinyl Acetate	4.42	86	115588	38.42	PPB	98

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F012.D Vial: 9
Acq On : 8 Nov 2018 3:01 pm Operator: LM
Sample : ICAL 20 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:34 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroprene	4.35	53	1590155	71.35	PPB	98
30)	tert-Butyl Ethyl Ether	4.86	59	884634	19.63	PPB	99
31)	2,2-Dichloropropane	5.08	77	435182	17.72	PPB	99
32)	cis-1,2-Dichloroethene	5.15	96	389458	18.64	PPB	99
33)	2-Butanone	5.25	72	495465	407.10	PPB	99
34)	Ethyl Acetate	5.29	61	63810	40.13	PPB	99
35)	Propionitrile	5.43	54	123103	79.35	PPB	97
36)	Methacrylonitrile	5.56	67	407285	80.24	PPB	98
37)	Bromochloromethane	5.46	128	204743	18.91	PPB	96
38)	Tetrahydrofuran	5.48	71	23231	18.94	PPB	96
39)	Chloroform	5.58	83	656674	18.96	PPB	99
40)	Cyclohexane	5.64	56	597458	18.43	PPB	98
41)	1,1,1-Trichloroethane	5.70	97	495808	17.51	PPB	97
43)	Carbon Tetrachloride	5.84	117	440689	17.63	PPB	100
44)	1,1-Dichloropropene	5.91	75	443064	18.14	PPB	100
45)	Isobutyl Alcohol	6.27	42	188933	808.81	PPB	96
47)	Benzene	6.15	78	1400257	18.47	PPB	99
48)	1,2-Dichloroethane	6.29	62	447156	19.34	PPB	99
49)	tert-Amyl Methyl Ether	6.30	55	273792	19.86	PPB	92
50)	Trichloroethene	6.91	95	365454	18.21	PPB	96
51)	Methylcyclohexane	7.01	83	459678	18.54	PPB	99
52)	1,2-Dichloropropane	7.22	63	385358	18.34	PPB	98
53)	Dibromomethane	7.34	93	219191	18.96	PPB	97
54)	Methyl methacrylate	7.37	69	155910	20.48	PPB	96
55)	1,4-Dioxane	7.37	88	58038	782.27	PPB	97
56)	Bromodichloromethane	7.52	83	501076	18.84	PPB	99
57)	2-Nitropropane	7.86	41	247766	95.80	PPB	96
58)	2-Chloroethyl Vinyl Ether	7.88	63	153461	20.75	PPB	97
59)	cis-1,3-Dichloropropene	8.00	75	557972	19.87	PPB	100
60)	4-Methyl-2-pentanone (MIBK	8.18	58	1738391	412.34	PPB	96
62)	Toluene	8.27	92	882034	18.65	PPB	99
64)	n-Octane	8.33	85	189403	19.38	PPB	97
65)	trans-1,3-Dichloropropene	8.61	75	455606	19.26	PPB	98
66)	Ethyl methacrylate	8.66	69	310538	20.89	PPB	99
67)	1,1,2-Trichloroethane	8.79	83	268795	19.67	PPB	96
68)	Tetrachloroethene	8.79	164	302964	17.80	PPB	99
69)	2-Hexanone	9.03	57	528981	425.13	PPB	95
70)	1,3-Dichloropropane	8.95	76	504491	19.49	PPB	98
71)	Dibromochloromethane	9.13	129	396011	20.13	PPB	99
72)	1,2-Dibromoethane (EDB)	9.25	107	291519	19.51	PPB	97
73)	1-Chlorohexane	9.69	91	358158	18.54	PPB	97

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F012.D Vial: 9
Acq On : 8 Nov 2018 3:01 pm Operator: LM
Sample : ICAL 20 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:34 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

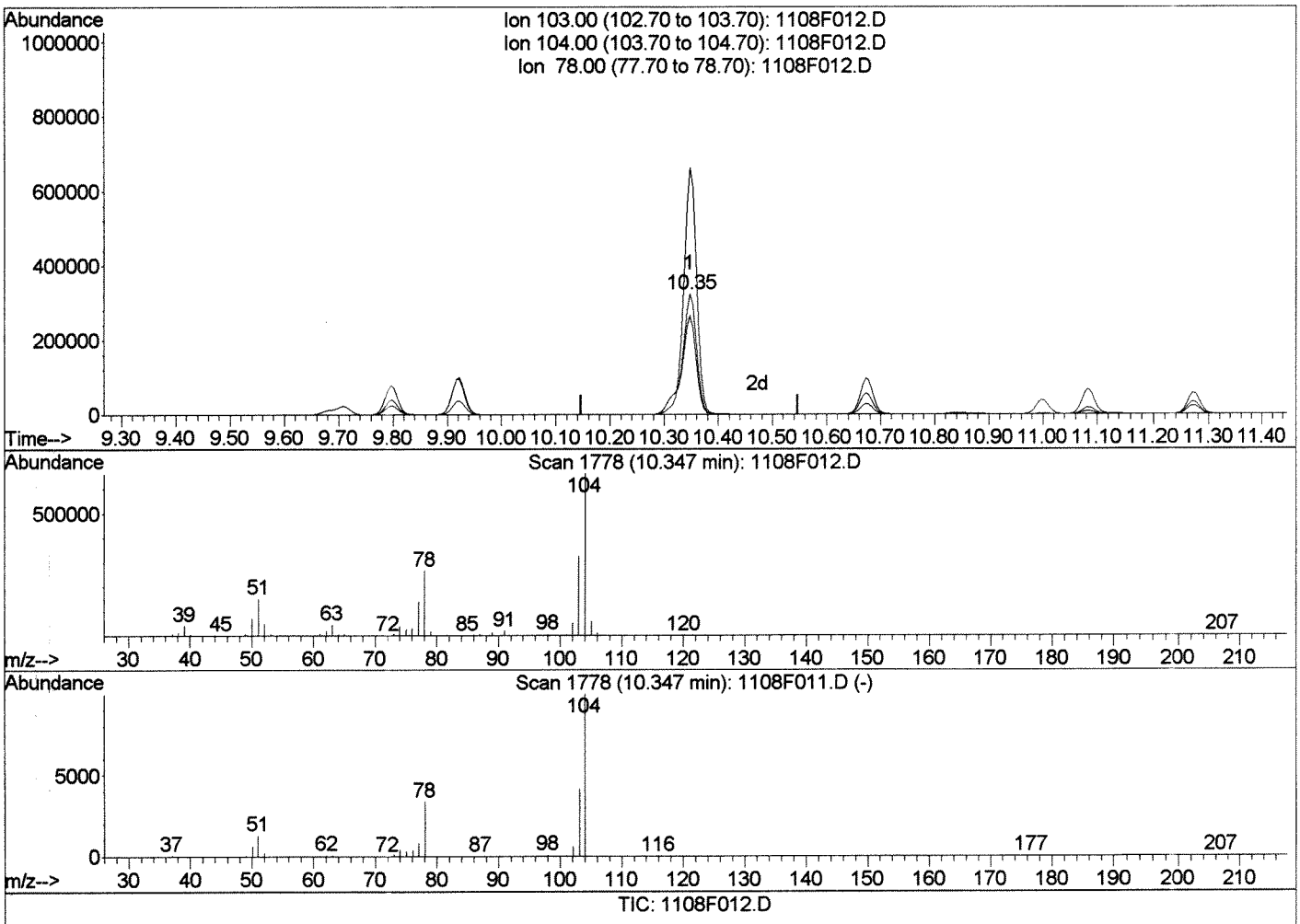
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	9.71	112	1044447	19.19	PPB	98
75)	Ethylbenzene	9.80	106	508958	19.10	PPB	99
76)	1,1,1,2-Tetrachloroethane	9.81	131	377631	19.19	PPB	99
77)	m,p-Xylenes	9.92	106	1265348	38.39	PPB	99
78)	o-Xylene	10.32	106	592159	19.47	PPB	98
79)	Styrene	10.35	103	537567m	20.66	PPB	
80)	Bromoform	10.55	173	240416	19.16	PPB	98
81)	Isopropylbenzene	10.67	105	1467801	19.11	PPB	100
82)	cis-1,4-Dichloro-2-butene	10.84	89	162021	83.18	PPB	99
85)	1,1,2,2-Tetrachloroethane	11.07	83	341267	19.00	PPB	96
86)	trans-1,4-Dichloro-2-buten	11.13	53	85040	20.57	PPB	95
87)	Bromobenzene	11.00	156	462148	19.10	PPB	98
88)	n-Propylbenzene	11.08	91	1841295	18.94	PPB	100
89)	1,2,3-Trichloropropane	11.11	110	95753	19.46	PPB	98
90)	2-Chlorotoluene	11.19	91	1118056	19.09	PPB	99
91)	1,3,5-Trimethylbenzene	11.27	105	1298578	19.14	PPB	98
92)	4-Chlorotoluene	11.31	91	1208673m	18.83	PPB	
93)	tert-Butylbenzene	11.58	119	1047282	18.98	PPB	100
94)	1,2,4-Trimethylbenzene	11.64	105	1331391	19.81	PPB	100
95)	sec-Butylbenzene	11.80	105	1571412	18.93	PPB	99
96)	p-Isopropyltoluene	11.95	119	1322095	19.39	PPB	99
97)	1,3-Dichlorobenzene	11.94	146	866025	19.22	PPB	99
98)	1,4-Dichlorobenzene	12.04	146	872038	19.24	PPB	98
99)	n-Butylbenzene	12.36	91	1193786	19.41	PPB	99
100)	1,2-Dichlorobenzene	12.41	146	806730	19.01	PPB	99
101)	1,2-Dibromo-3-chloropropan	13.22	155	49337	20.02	PPB	94
102)	1,3,5-Trichlorobenzene	13.36	180	567013	18.92	PPB	98
103)	1,2,4-Trichlorobenzene	14.00	180	516072	19.18	PPB	97
104)	Hexachlorobutadiene	14.12	225	261345	18.44	PPB	99
105)	Naphthalene	14.25	128	869640	21.32	PPB	100
106)	1,2,3-Trichlorobenzene	14.49	180	492262	19.72	PPB	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F012.D Vial: 9
Acq On : 8 Nov 2018 3:01 pm Operator: LM
Sample : ICAL 20 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F012.D

(79) Styrene (T)

10.35min 23.31PPB

response 606563

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	204.76
78.00	85.00	81.90
0.00	0.00	0.00

Manual Integration:

Before LM

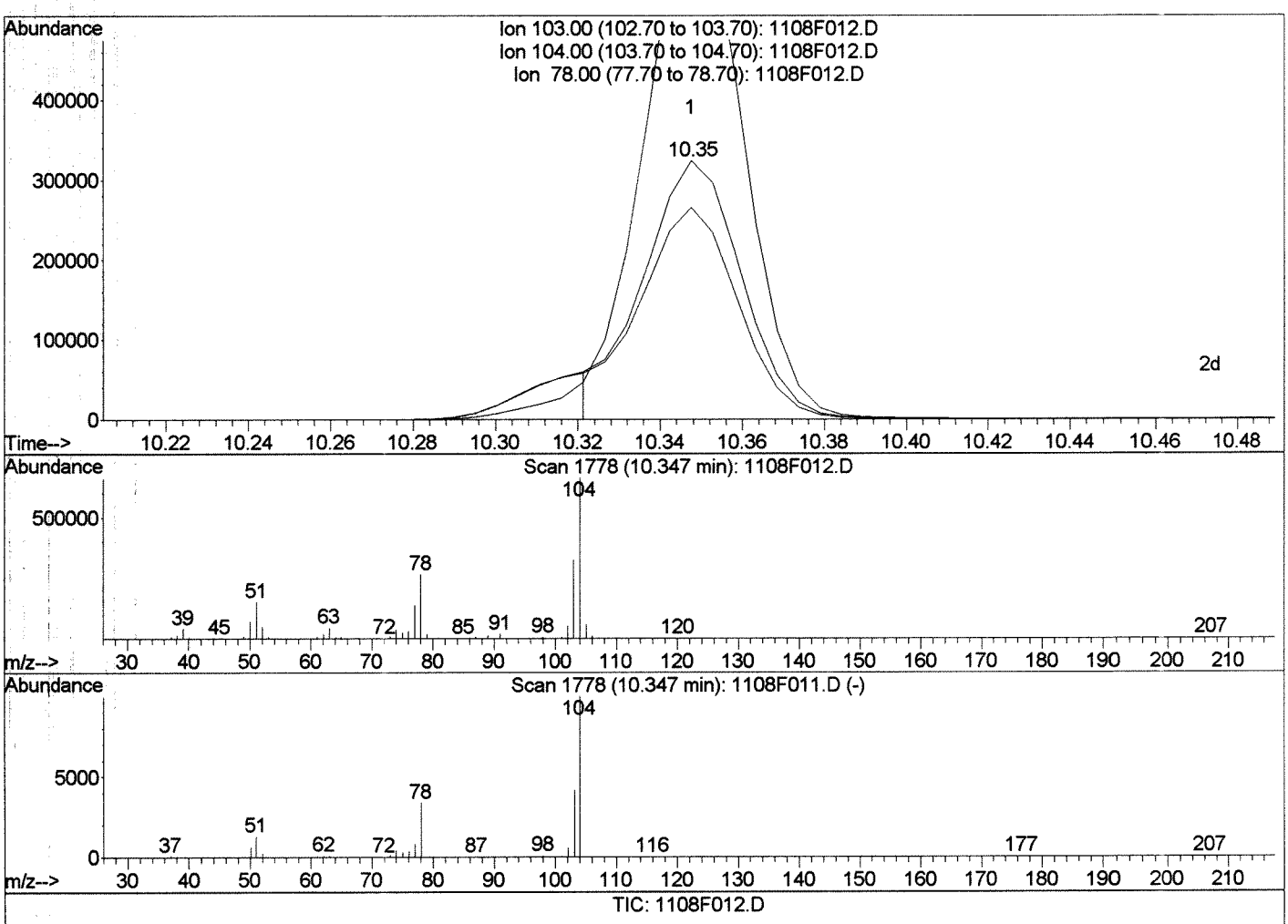
11/09/18 11/26/18

1108F012.D 110818MS27_8260.M Fri Nov 09 09:16:12 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F012.D Vial: 9
Acq On : 8 Nov 2018 3:01 pm Operator: LM
Sample : ICAL 20 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:16 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F012.D

(79) Styrene (T)

10.35min 20.66PPB m

response 537567

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	204.76
78.00	85.00	81.90
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

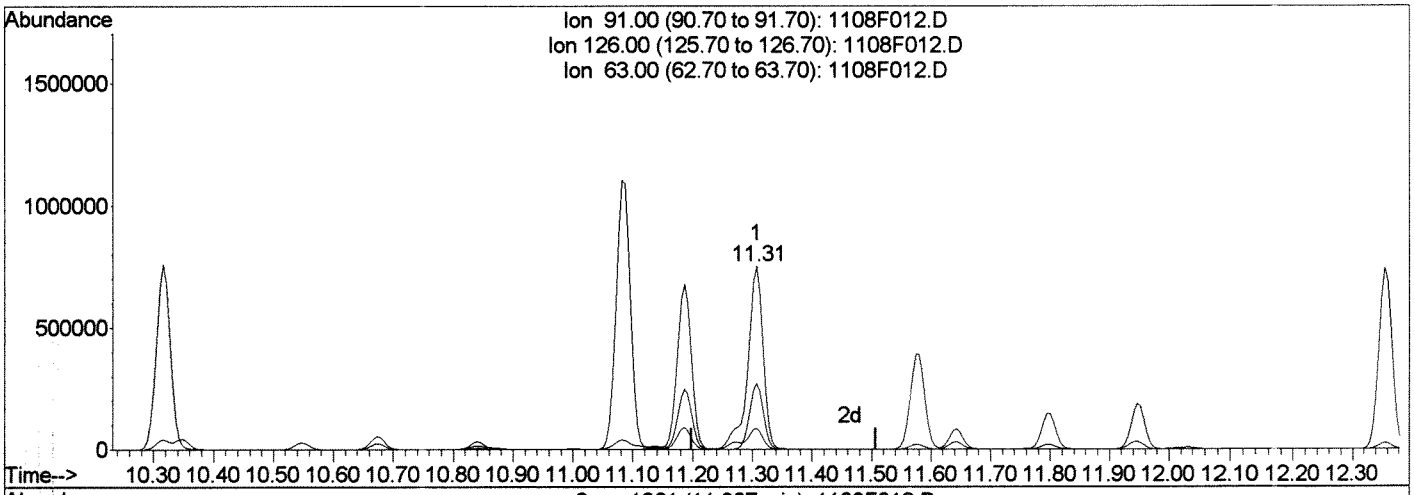
11/09/18

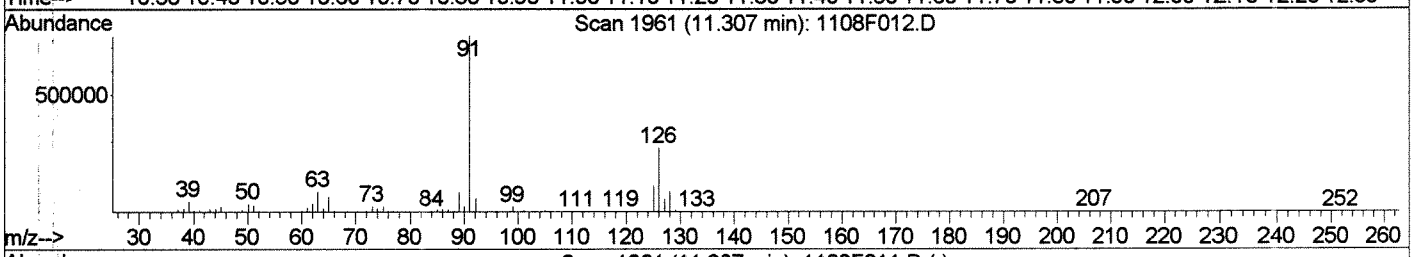
1108F012.D 110818MS27_8260.M Fri Nov 09 09:16:23 2018

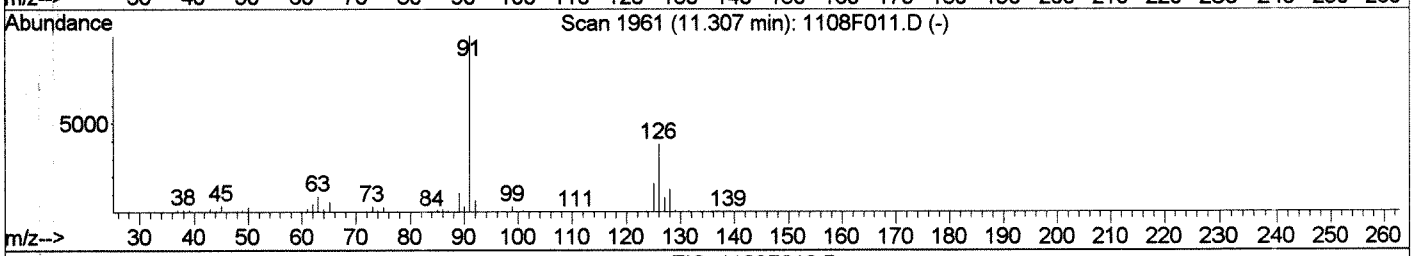
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F012.D Vial: 9
Acq On : 8 Nov 2018 3:01 pm Operator: LM
Sample : ICAL 20 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:16 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F012.D

(92) 4-Chlorotoluene (T)

11.31min 20.88PPB

response 1340260

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	36.07
63.00	11.20	11.47
0.00	0.00	0.00

Manual Integration:

Before LM

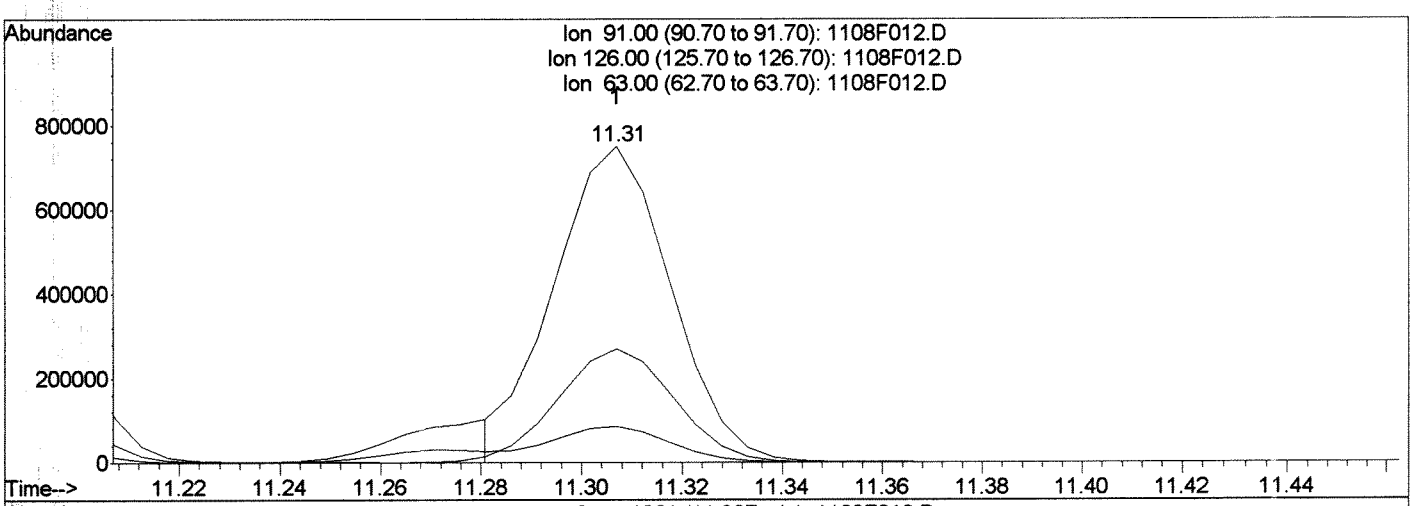
11/09/18

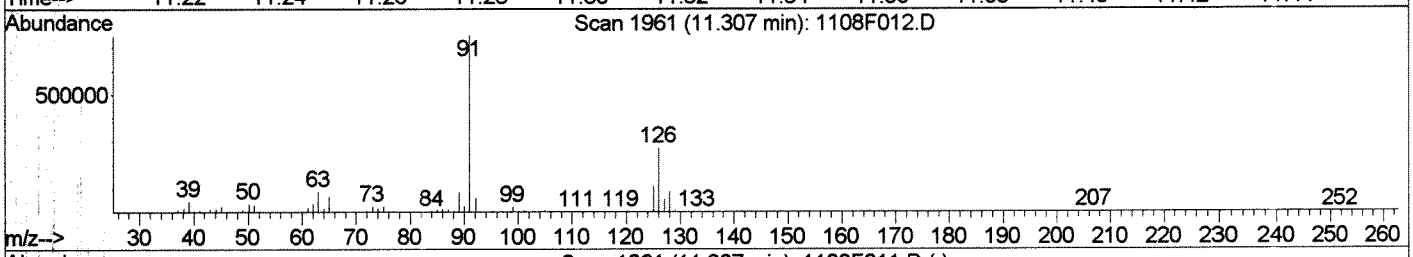
1108F012.D 110818MS27_8260.M Fri Nov 09 09:16:38 2018

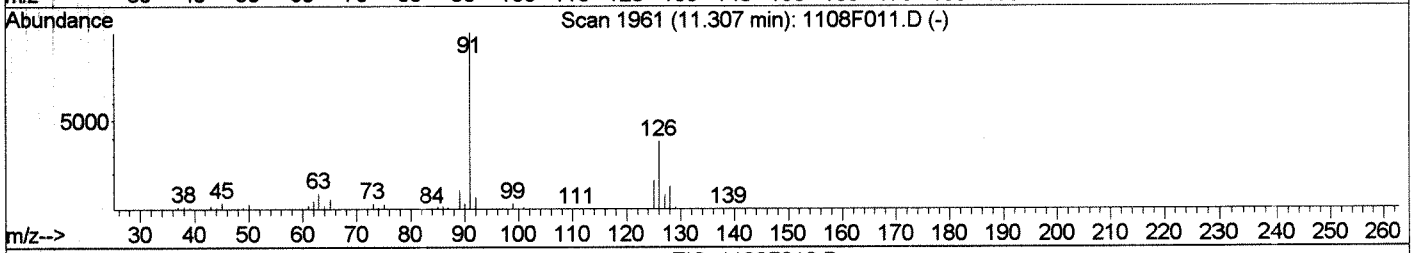
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F012.D Vial: 9
Acq On : 8 Nov 2018 3:01 pm Operator: LM
Sample : ICAL 20 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:16 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F012.D

(92) 4-Chlorotoluene (T)

11.31min 18.83PPB m

response 1208673

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	36.05
63.00	11.20	11.47
0.00	0.00	0.00

Manual Integration:

After

Shoulder

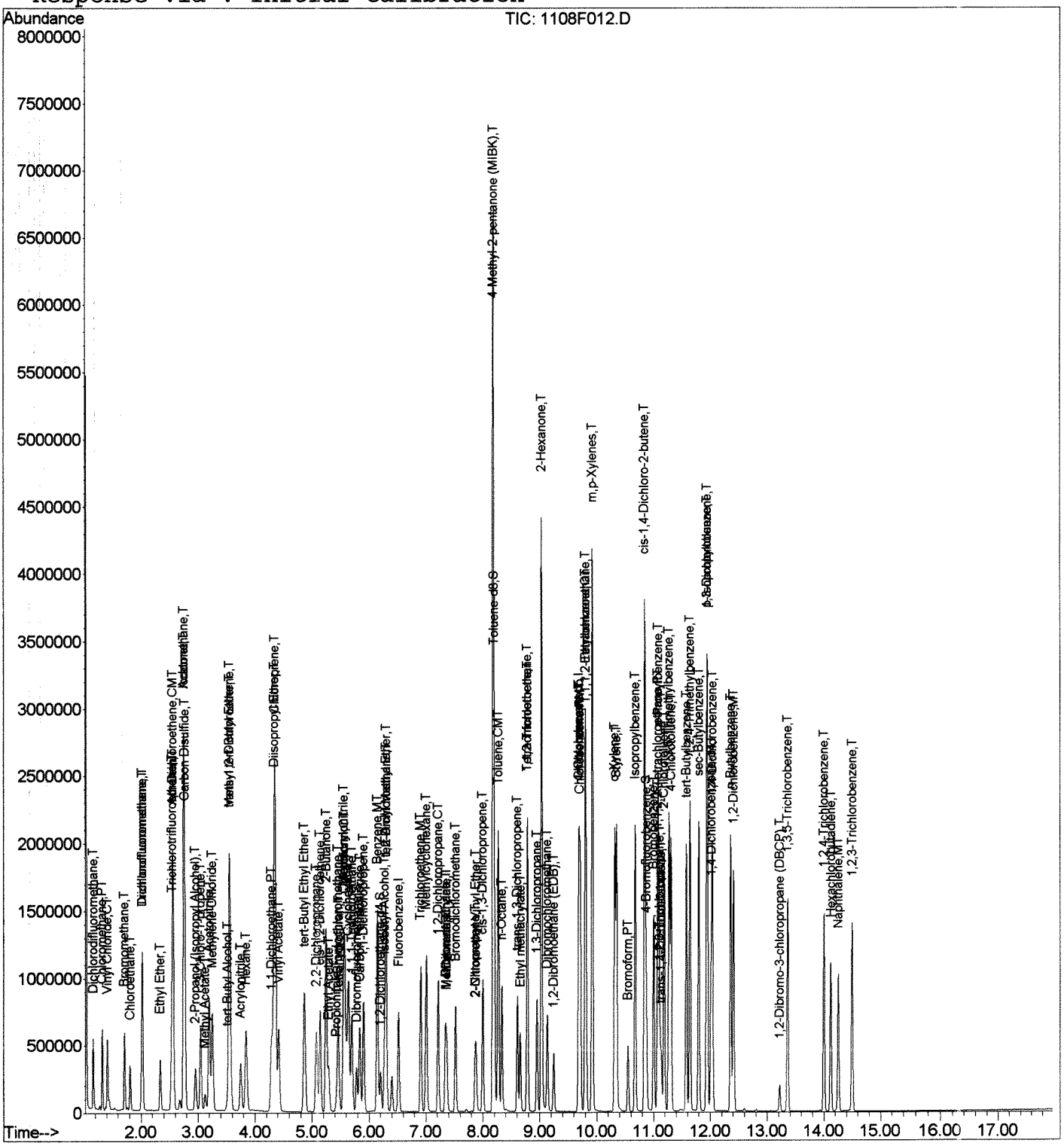
11/09/18

LM

1108F012.D 110818MS27_8260.M Fri Nov 09 09:16:51 2018

Data File : J:\MS27\DATA\110818\1108F012.D Vial: 9
Acq On : 8 Nov 2018 3:01 pm Operator: LM
Sample : ICAL 20 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:16 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F013.D Vial: 10
Acq On : 8 Nov 2018 3:22 pm Operator: LM
Sample : ICAL 40 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:34 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration LM 11-17-18
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.52	96	703638	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	279501	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	267163	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.79	113	243467	13.12	PPB	0.00
Spiked Amount 10.000			Recovery =	131.20%		
46) 1,2-Dichloroethane-d4	6.21	65	242020	13.18	PPB	0.00
Spiked Amount 10.000			Recovery =	131.80%		
61) Toluene-d8	8.20	98	827045	12.37	PPB	0.00
Spiked Amount 10.000			Recovery =	123.70%		
83) 4-Bromofluorobenzene	10.87	95	324782	13.24	PPB	0.00
Spiked Amount 10.000			Recovery =	132.40%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.17	85	735932	35.24	PPB	98
3) Chloromethane	1.32	50	905156	34.60	PPB	98
4) Vinyl Chloride	1.41	62	868220	36.05	PPB	97
5) Bromomethane	1.72	96	577856	34.92	PPB	98
6) Chloroethane	1.81	64	504198	36.69	PPB	98
7) Dichlorofluoromethane	2.03	67	1221971	36.59	PPB	99
8) Trichlorofluoromethane	2.02	101	1095540	35.51	PPB	98
9) Ethyl Ether	2.34	59	409155	39.53	PPB	97
10) Acrolein	2.56	56	1811723	740.07	PPB	99
11) Trichlorotrifluoroethane	2.54	151	504830	36.51	PPB	99
12) 1,1-Dichloroethene	2.57	96	642925	36.62	PPB	96
13) Acetone	2.76	43	2004207	730.44	PPB	99
14) Iodomethane	2.75	142	4502571	158.40	PPB	99
15) Carbon Disulfide	2.77	76	1889781	36.68	PPB	100
16) 2-Propanol (Isopropyl Alco	2.98	45	853501	1986.17	PPB	98
17) 3-Chloro-1-propene	3.04	76	382953	38.45	PPB	98
18) Methyl Acetate	3.12	43	325425	38.16	PPB	97
19) Acetonitrile	3.21	40	1007259	1475.63	PPB	100
20) Methylene Chloride	3.25	84	776118	37.91	PPB	99
21) tert-Butyl Alcohol	3.54	59	189353	198.80	PPB #	1
22) Acrylonitrile	3.75	53	658550	145.38	PPB	96
23) Methyl tert-Butyl Ether	3.55	73	3184827	77.52	PPB	100
24) trans-1,2-Dichloroethene	3.55	96	722789	36.84	PPB	98
25) Hexane	3.85	57	826338	36.28	PPB	99
26) Diisopropyl Ether	4.33	45	2278537	39.94	PPB	100
27) 1,1-Dichloroethane	4.29	63	1327874	37.35	PPB	100
28) Vinyl Acetate	4.42	86	243365	79.65	PPB	99

(#) = qualifier out of range (m) = manual integration
1108F013.D 110818MS27_8260.M Fri Nov 09 09:23:34 2018 Page 1

Data File : J:\MS27\DATA\110818\1108F013.D Vial: 10
Acq On : 8 Nov 2018 3:22 pm Operator: LM
Sample : ICAL 40 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:34 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
29)	Chloroprene	4.35	53	3500542	154.66	PPB		98
30)	tert-Butyl Ethyl Ether	4.86	59	1866304	40.77	PPB		98
31)	2,2-Dichloropropane	5.08	77	931323	37.34	PPB		98
32)	cis-1,2-Dichloroethene	5.14	96	826807	38.96	PPB		99
33)	2-Butanone	5.25	72	971535	786.04	PPB		99
34)	Ethyl Acetate	5.29	61	127348	78.86	PPB		99
35)	Propionitrile	5.43	54	233659	148.31	PPB		99
36)	Methacrylonitrile	5.56	67	835818	162.14	PPB		99
37)	Bromochloromethane	5.46	128	415868	37.82	PPB		96
38)	Tetrahydrofuran	5.48	71	47566	38.19	PPB		96
39)	Chloroform	5.58	83	1355288	38.52	PPB		98
40)	Cyclohexane	5.64	56	1302852	39.58	PPB		98
41)	1,1,1-Trichloroethane	5.70	97	1073557	37.33	PPB		98
43)	Carbon Tetrachloride	5.84	117	963885	37.97	PPB		99
44)	1,1-Dichloropropene	5.91	75	955449	38.51	PPB		99
45)	Isobutyl Alcohol	6.28	42	385989	1627.11	PPB		91
47)	Benzene	6.15	78	2973881	38.63	PPB		99
48)	1,2-Dichloroethane	6.29	62	887860	37.81	PPB		99
49)	tert-Amyl Methyl Ether	6.30	55	536930	38.36	PPB	#	80
50)	Trichloroethene	6.91	95	775187	38.04	PPB		99
51)	Methylcyclohexane	7.01	83	1060517	42.13	PPB		98
52)	1,2-Dichloropropane	7.22	63	809607	37.94	PPB		100
53)	Dibromomethane	7.34	93	441857	37.63	PPB		98
54)	Methyl methacrylate	7.37	69	331711	42.91	PPB		96
55)	1,4-Dioxane	7.38	88	135690	1800.93	PPB		91
56)	Bromodichloromethane	7.52	83	1030753	38.17	PPB		100
57)	2-Nitropropane	7.86	41	515636	196.33	PPB		96
58)	2-Chloroethyl Vinyl Ether	7.88	63	340568	45.35	PPB		97
59)	cis-1,3-Dichloropropene	8.00	75	1199801	42.08	PPB		98
60)	4-Methyl-2-pentanone (MIBK	8.18	58	3503232	818.24	PPB		96
62)	Toluene	8.27	92	1873569	39.01	PPB		99
64)	n-Octane	8.33	85	396591	40.12	PPB		97
65)	trans-1,3-Dichloropropene	8.61	75	973617	40.70	PPB		99
66)	Ethyl methacrylate	8.66	69	670842	44.63	PPB		98
67)	1,1,2-Trichloroethane	8.79	83	551043	39.87	PPB		95
68)	Tetrachloroethene	8.79	164	659981	38.34	PPB		98
69)	2-Hexanone	9.03	57	1073345	853.04	PPB		93
70)	1,3-Dichloropropane	8.95	76	1035633	39.56	PPB		98
71)	Dibromochloromethane	9.14	129	799576	40.20	PPB		99
72)	1,2-Dibromoethane (EDB)	9.25	107	592243	39.20	PPB		98
73)	1-Chlorohexane	9.69	91	830110	42.50	PPB		91

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F013.D Vial: 10
Acq On : 8 Nov 2018 3:22 pm Operator: LM
Sample : ICAL 40 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:34 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

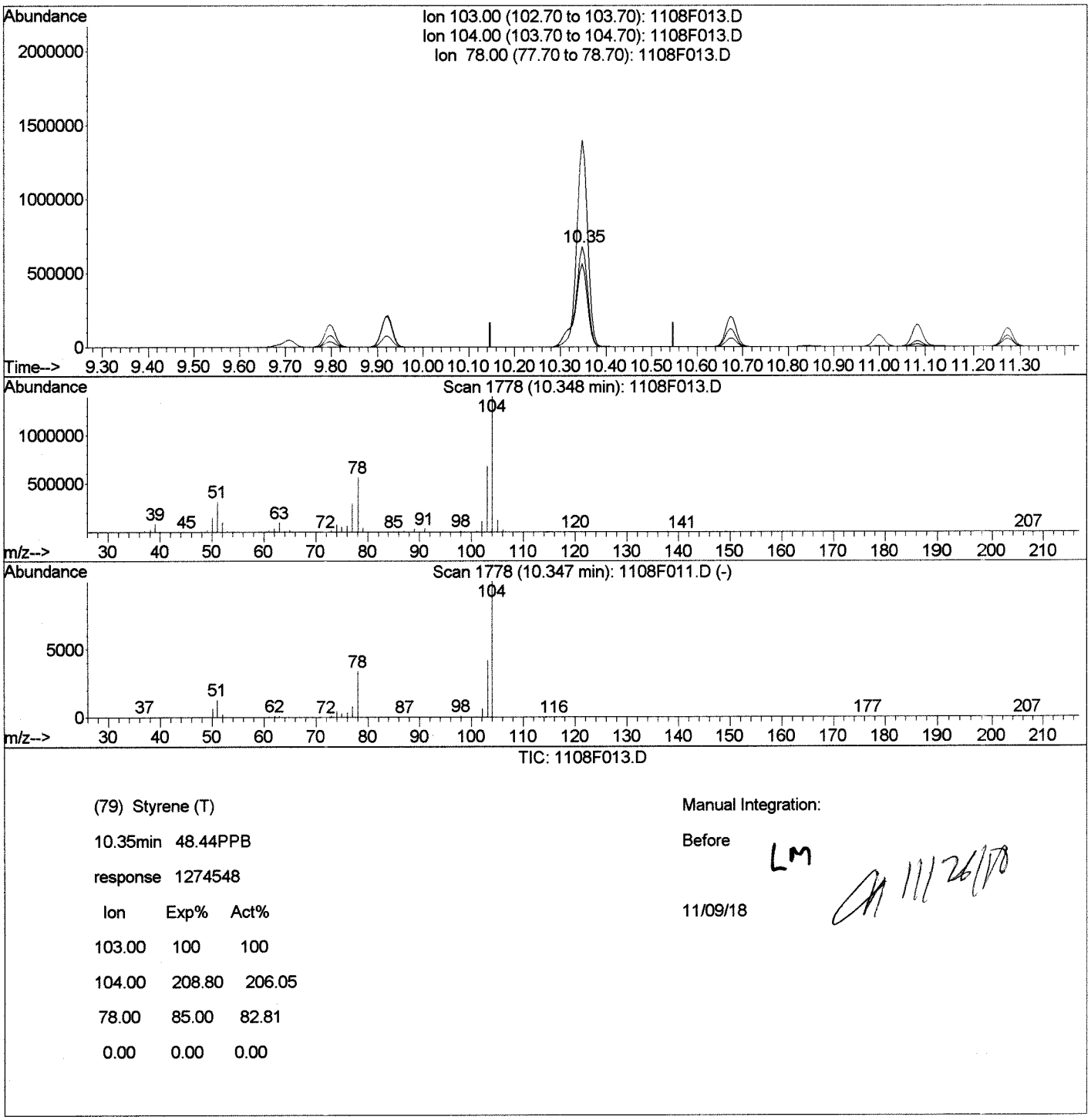
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	9.71	112	2200332	39.98	PPB	97
75)	Ethylbenzene	9.80	106	1113452	41.32	PPB	99
76)	1,1,1,2-Tetrachloroethane	9.81	131	780322	39.22	PPB	98
77)	m,p-Xylenes	9.92	106	2747382	82.44	PPB	99
78)	o-Xylene	10.32	106	1290589	41.97	PPB	100
79)	Styrene	10.35	103	1126667m	42.82	PPB	
80)	Bromoform	10.55	173	492907	38.85	PPB	98
81)	Isopropylbenzene	10.67	105	3259914	41.97	PPB	100
82)	cis-1,4-Dichloro-2-butene	10.84	89	344141	174.72	PPB	98
85)	1,1,2,2-Tetrachloroethane	11.07	83	680103	38.39	PPB	97
86)	trans-1,4-Dichloro-2-buten	11.13	53	166922	40.95	PPB	99
87)	Bromobenzene	11.00	156	929983	38.98	PPB	97
88)	n-Propylbenzene	11.08	91	3930081	41.00	PPB	99
89)	1,2,3-Trichloropropane	11.11	110	186028	38.34	PPB	98
90)	2-Chlorotoluene	11.19	91	2362028	40.90	PPB	99
91)	1,3,5-Trimethylbenzene	11.27	105	2807665	41.96	PPB	99
92)	4-Chlorotoluene	11.31	91	2487998m	39.31	PPB	
93)	tert-Butylbenzene	11.58	119	2298243	42.25	PPB	99
94)	1,2,4-Trimethylbenzene	11.64	105	2863729	43.21	PPB	99
95)	sec-Butylbenzene	11.80	105	3393323	41.46	PPB	98
96)	p-Isopropyltoluene	11.95	119	2891391	43.00	PPB	98
97)	1,3-Dichlorobenzene	11.94	146	1740616	39.18	PPB	100
98)	1,4-Dichlorobenzene	12.04	146	1739850	38.94	PPB	99
99)	n-Butylbenzene	12.36	91	2600922	42.87	PPB	99
100)	1,2-Dichlorobenzene	12.41	146	1626798	38.88	PPB	100
101)	1,2-Dibromo-3-chloropropan	13.22	155	96464	39.69	PPB	93
102)	1,3,5-Trichlorobenzene	13.36	180	1194754	40.44	PPB	99
103)	1,2,4-Trichlorobenzene	14.00	180	1122671	42.32	PPB	99
104)	Hexachlorobutadiene	14.12	225	544809	38.99	PPB	99
105)	Naphthalene	14.25	128	1982251	49.28	PPB	99
106)	1,2,3-Trichlorobenzene	14.49	180	1066089	43.31	PPB	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F013.D Vial: 10
Acq On : 8 Nov 2018 3:22 pm Operator: LM
Sample : ICAL 40 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F013.D

(79) Styrene (T)

10.35min 48.44PPB

response 1274548

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	206.05
78.00	85.00	82.81
0.00	0.00	0.00

Manual Integration:

Before LM 11/26/18

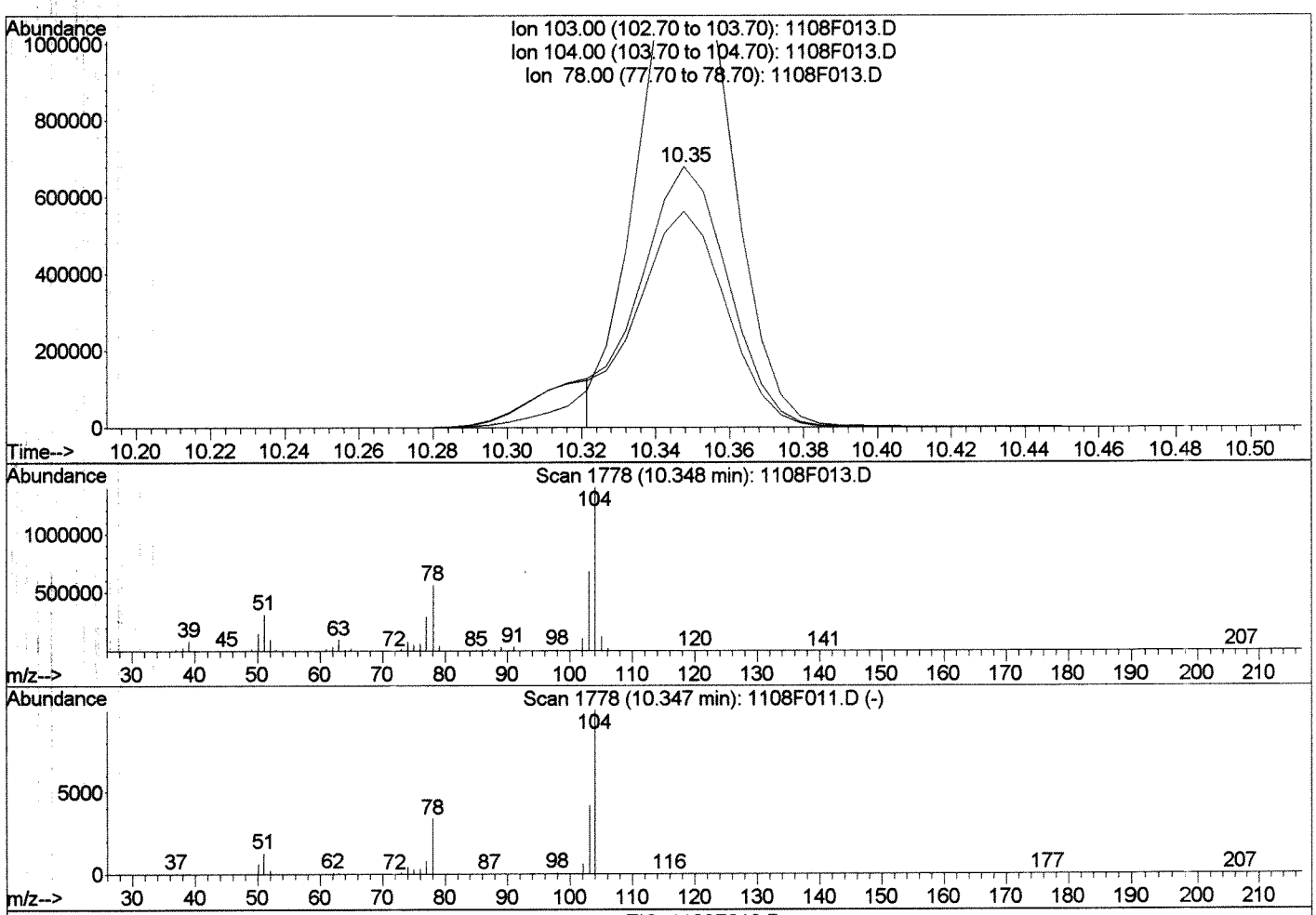
11/09/18

1108F013.D 110818MS27_8260.M Fri Nov 09 09:18:06 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F013.D Vial: 10
Acq On : 8 Nov 2018 3:22 pm Operator: LM
Sample : ICAL 40 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:18 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F013.D

(79) Styrene (T)

10.35min 42.82PPB m

response 1126667

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	206.05
78.00	85.00	82.85
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

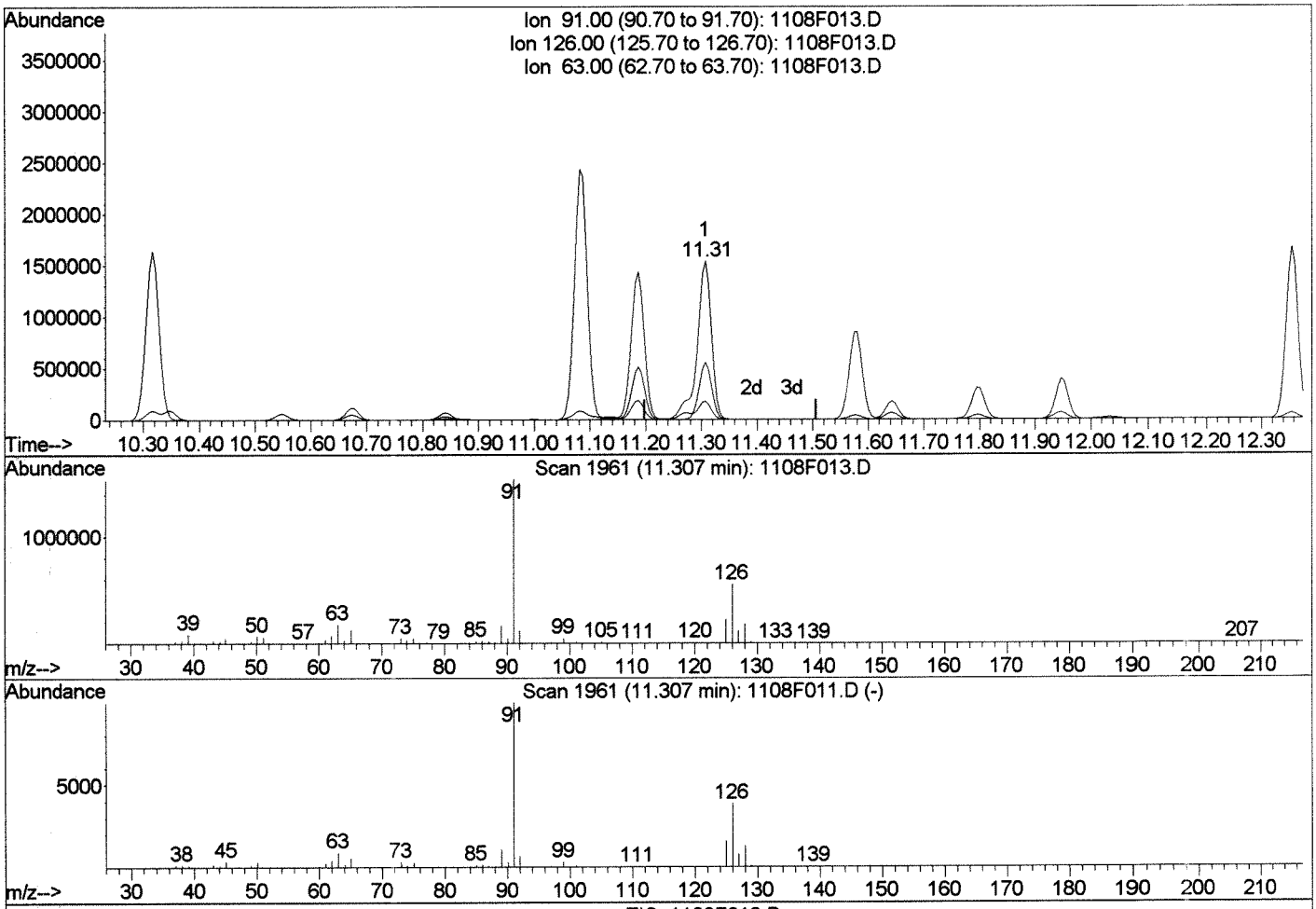
11/09/18 11/26/18

1108F013.D 110818MS27_8260.M Fri Nov 09 09:18:17 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F013.D Vial: 10
Acq On : 8 Nov 2018 3:22 pm Operator: LM
Sample : ICAL 40 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:18 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F013.D

(92) 4-Chlorotoluene (T)

11.31min 43.71PPB

response 2766792

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.94
63.00	11.20	11.38
0.00	0.00	0.00

Manual Integration:

Before LM

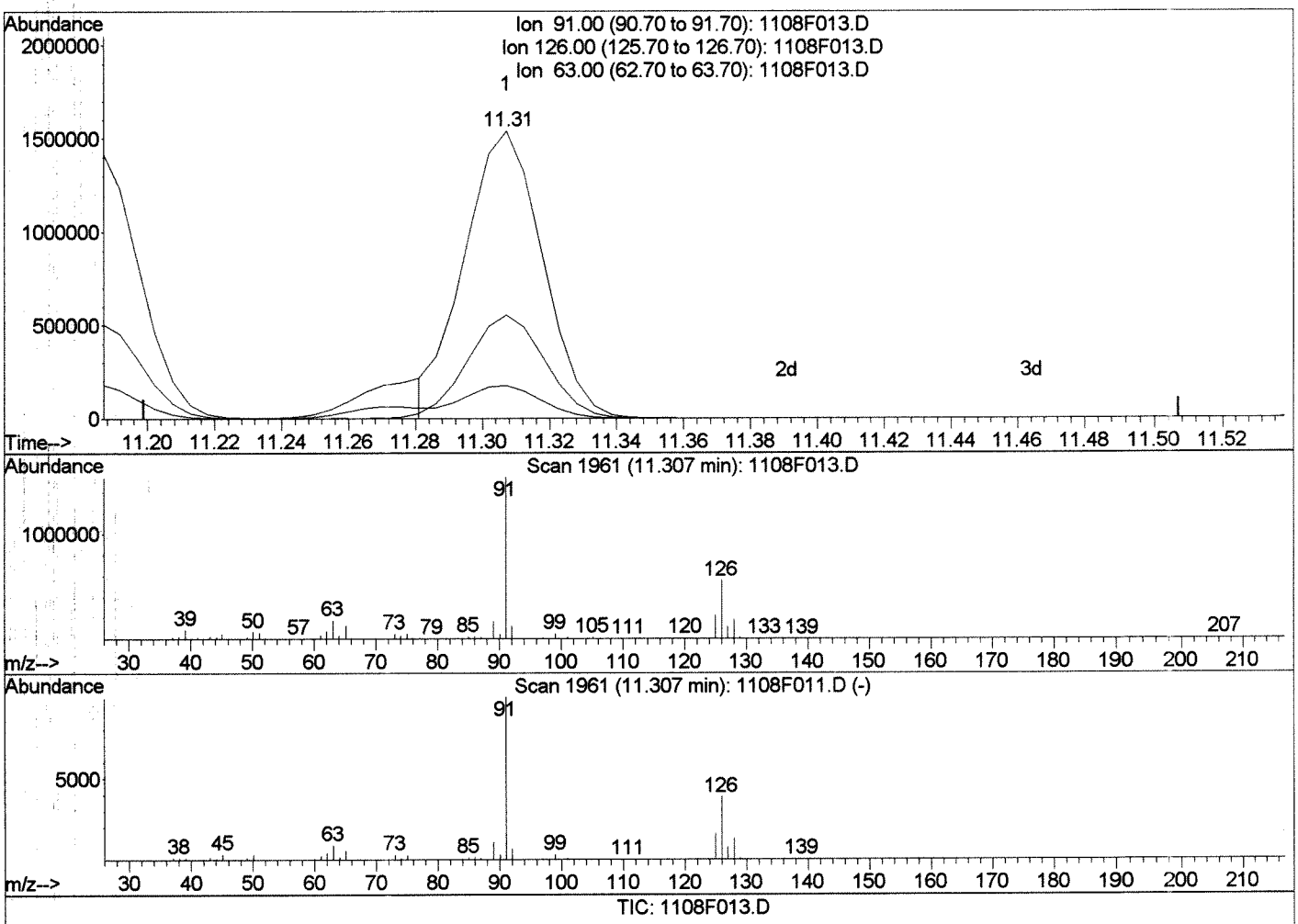
11/09/18

1108F013.D 110818MS27_8260.M Fri Nov 09 09:18:28 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F013.D Vial: 10
Acq On : 8 Nov 2018 3:22 pm Operator: LM
Sample : ICAL 40 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:18 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F013.D

(92) 4-Chlorotoluene (T)

11.31min 39.31PPB m

response 2487998

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.93
63.00	11.20	11.38
0.00	0.00	0.00

Manual Integration:

After LM

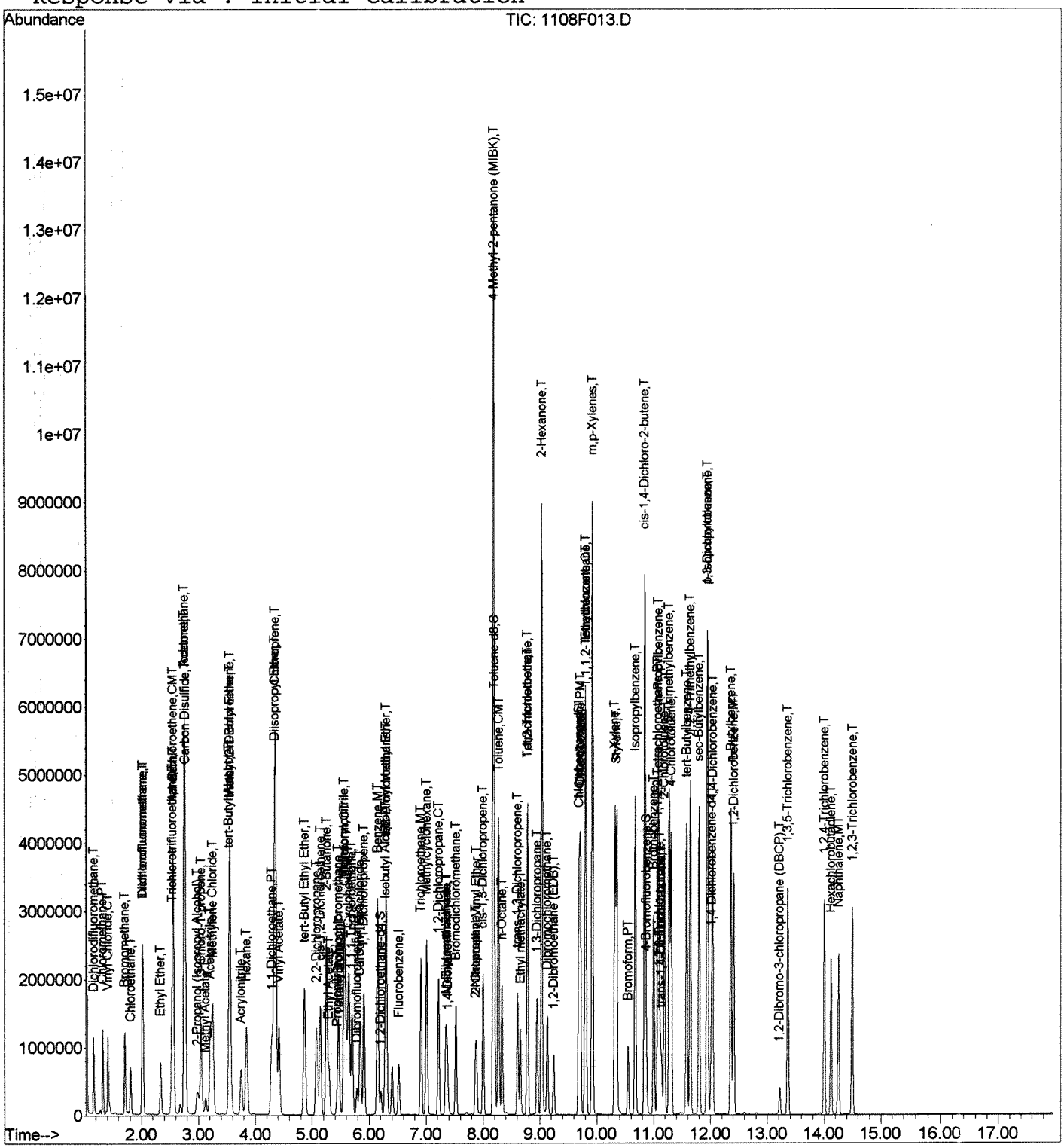
Shoulder

11/09/18

1108F013.D 110818MS27_8260.M Fri Nov 09 09:18:39 2018

Data File : J:\MS27\DATA\110818\1108F013.D Vial: 10
Acq On : 8 Nov 2018 3:22 pm Operator: LM
Sample : ICAL 40 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:18 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F014.D Vial: 11
Acq On : 8 Nov 2018 3:44 pm Operator: LM
Sample : ICAL 60 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:36 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

LM 11-12-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.52	96	705648	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	281074	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	256494	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.79	113	277384	14.90	PPB	0.00
Spiked Amount 10.000			Recovery =	149.00%		
46) 1,2-Dichloroethane-d4	6.21	65	273082	14.82	PPB	0.00
Spiked Amount 10.000			Recovery =	148.20%		
61) Toluene-d8	8.20	98	961967	14.34	PPB	0.00
Spiked Amount 10.000			Recovery =	143.40%		
83) 4-Bromofluorobenzene	10.87	95	366469	14.85	PPB	0.00
Spiked Amount 10.000			Recovery =	148.50%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.17	85	1186149	56.63	PPB	98
3) Chloromethane	1.32	50	1390844	53.01	PPB	97
4) Vinyl Chloride	1.41	62	1398552	57.90	PPB	96
5) Bromomethane	1.71	96	914156	55.09	PPB	97
6) Chloroethane	1.81	64	793166	57.55	PPB	99
7) Dichlorofluoromethane	2.03	67	1943605	58.03	PPB	100
8) Trichlorofluoromethane	2.01	101	1791453	57.90	PPB	99
9) Ethyl Ether	2.34	59	635100	61.18	PPB	96
10) Acrolein	2.56	56	2828926	1152.30	PPB	99
11) Trichlorotrifluoroethane	2.54	151	827906	59.70	PPB	98
12) 1,1-Dichloroethene	2.57	96	1045779	59.40	PPB	96
13) Acetone	2.75	43	4478498	1627.56	PPB	99
14) Iodomethane	2.75	142	7112768	249.52	PPB	100
15) Carbon Disulfide	2.77	76	3053800	59.10	PPB	99
16) 2-Propanol (Isopropyl Alco	2.96	45	1462126	3392.79	PPB	97
17) 3-Chloro-1-propene	3.04	76	602225	60.29	PPB	96
18) Methyl Acetate	3.12	43	507701	59.37	PPB	98
19) Acetonitrile	3.20	40	1672455	2443.16	PPB	96
20) Methylene Chloride	3.25	84	1181950	57.57	PPB	96
21) tert-Butyl Alcohol	3.52	59	327600	342.97	PPB	99
22) Acrylonitrile	3.75	53	1049401	231.00	PPB	95
23) Methyl tert-Butyl Ether	3.55	73	4882216	118.50	PPB	100
24) trans-1,2-Dichloroethene	3.55	96	1146394	58.26	PPB	97
25) Hexane	3.85	57	1328970	58.18	PPB	98
26) Diisopropyl Ether	4.33	45	3463373	60.54	PPB	99
27) 1,1-Dichloroethane	4.29	63	2061319	57.82	PPB	98
28) Vinyl Acetate	4.42	86	373551	121.91	PPB	98

(#) = qualifier out of range (m) = manual integration

11/28/18

Data File : J:\MS27\DATA\110818\1108F014.D Vial: 11
Acq On : 8 Nov 2018 3:44 pm Operator: LM
Sample : ICAL 60 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:36 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
29)	Chloroprene	4.35	53	5647490	248.80	PPB		98
30)	tert-Butyl Ethyl Ether	4.86	59	2899222	63.16	PPB		100
31)	2,2-Dichloropropane	5.08	77	1496700	59.83	PPB		98
32)	cis-1,2-Dichloroethene	5.14	96	1266888	59.53	PPB		99
33)	2-Butanone	5.25	72	2144069	1729.77	PPB		100
34)	Ethyl Acetate	5.29	61	200407	123.75	PPB		97
35)	Propionitrile	5.43	54	388056	245.61	PPB		98
36)	Methacrylonitrile	5.56	67	1315138	254.40	PPB		98
37)	Bromochloromethane	5.46	128	630795	57.20	PPB		97
38)	Tetrahydrofuran	5.48	71	80541	64.48	PPB		93
39)	Chloroform	5.58	83	2050248	58.11	PPB		99
40)	Cyclohexane	5.64	56	2105095	63.78	PPB		100
41)	1,1,1-Trichloroethane	5.70	97	1709660	59.28	PPB		99
43)	Carbon Tetrachloride	5.84	117	1568285	61.60	PPB		99
44)	1,1-Dichloropropene	5.91	75	1555775	62.53	PPB		99
45)	Isobutyl Alcohol	6.27	42	657311	2762.95	PPB		93
47)	Benzene	6.15	78	4645048	60.17	PPB		99
48)	1,2-Dichloroethane	6.29	62	1337726	56.81	PPB		100
49)	tert-Amyl Methyl Ether	6.30	55	815618	58.10	PPB	#	71
50)	Trichloroethene	6.91	95	1218230	59.61	PPB		98
51)	Methylcyclohexane	7.01	83	1746353	69.18	PPB		98
52)	1,2-Dichloropropane	7.22	63	1233551	57.65	PPB		98
53)	Dibromomethane	7.34	93	675661	57.38	PPB		97
54)	Methyl methacrylate	7.37	69	528958	68.23	PPB		97
55)	1,4-Dioxane	7.37	88	218309	2889.22	PPB		94
56)	Bromodichloromethane	7.52	83	1562878	57.70	PPB		100
57)	2-Nitropropane	7.86	41	827340	314.12	PPB		93
58)	2-Chloroethyl Vinyl Ether	7.88	63	539107	71.58	PPB		97
59)	cis-1,3-Dichloropropene	8.00	75	1856098	64.91	PPB		99
60)	4-Methyl-2-pentanone (MIBK	8.18	58	7365072	1715.34	PPB	#	75
62)	Toluene	8.27	92	2909784	60.41	PPB		99
64)	n-Octane	8.33	85	613629	61.73	PPB		99
65)	trans-1,3-Dichloropropene	8.61	75	1515458	63.00	PPB		99
66)	Ethyl methacrylate	8.66	69	1073236	71.00	PPB		98
67)	1,1,2-Trichloroethane	8.79	83	820964	59.07	PPB		97
68)	Tetrachloroethene	8.79	164	1059607	61.21	PPB		98
69)	2-Hexanone	9.03	57	2291175	1810.71	PPB		92
70)	1,3-Dichloropropane	8.95	76	1564749	59.43	PPB		99
71)	Dibromochloromethane	9.14	129	1209182	60.45	PPB		99
72)	1,2-Dibromoethane (EDB)	9.25	107	907388	59.73	PPB		97
73)	1-Chlorohexane	9.69	91	1373996	69.96	PPB		90

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F014.D Vial: 11
Acq On : 8 Nov 2018 3:44 pm Operator: LM
Sample : ICAL 60 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:36 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

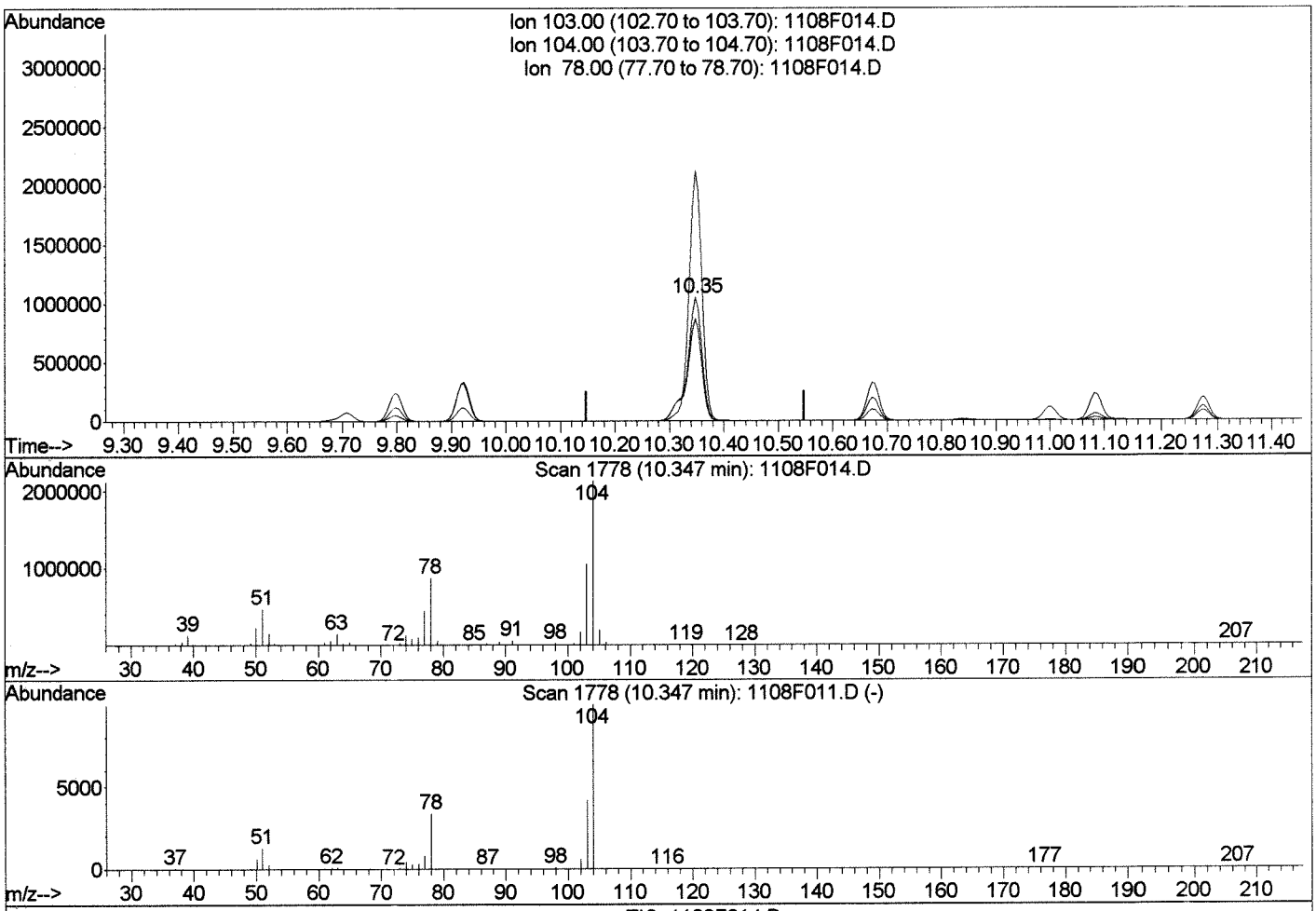
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	9.71	112	3350633	60.54	PPB	98
75)	Ethylbenzene	9.80	106	1746343	64.45	PPB	98
76)	1,1,1,2-Tetrachloroethane	9.81	131	1191441	59.55	PPB	99
77)	m,p-Xylenes	9.92	106	4265894	127.29	PPB	100
78)	o-Xylene	10.32	106	2012754	65.09	PPB	98
79)	Styrene	10.35	103	1731790m	65.45	PPB	
80)	Bromoform	10.55	173	757620	59.38	PPB	98
81)	Isopropylbenzene	10.67	105	5183098	66.35	PPB	100
82)	cis-1,4-Dichloro-2-butene	10.84	89	540438	272.84	PPB	98
85)	1,1,2,2-Tetrachloroethane	11.07	83	1015762	59.73	PPB	97
86)	trans-1,4-Dichloro-2-buten	11.14	53	252616	64.55	PPB	93
87)	Bromobenzene	11.00	156	1406173	61.38	PPB	99
88)	n-Propylbenzene	11.08	91	6161623	66.95	PPB	99
89)	1,2,3-Trichloropropane	11.11	110	286941	61.59	PPB	93
90)	2-Chlorotoluene	11.19	91	3586636	64.68	PPB	99
91)	1,3,5-Trimethylbenzene	11.28	105	4324791	67.32	PPB	98
92)	4-Chlorotoluene	11.31	91	3761550m	61.90	PPB	
93)	tert-Butylbenzene	11.58	119	3616896	69.25	PPB	100
94)	1,2,4-Trimethylbenzene	11.64	105	4382270	68.87	PPB	99
95)	sec-Butylbenzene	11.80	105	5317266	67.66	PPB	98
96)	p-Isopropyltoluene	11.95	119	4478780	69.38	PPB	98
97)	1,3-Dichlorobenzene	11.94	146	2594476	60.82	PPB	99
98)	1,4-Dichlorobenzene	12.04	146	2600603	60.62	PPB	99
99)	n-Butylbenzene	12.36	91	4062436	69.75	PPB	98
100)	1,2-Dichlorobenzene	12.41	146	2450354	61.00	PPB	99
101)	1,2-Dibromo-3-chloropropan	13.22	155	148197	63.51	PPB	94
102)	1,3,5-Trichlorobenzene	13.36	180	1853440	65.34	PPB	99
103)	1,2,4-Trichlorobenzene	14.00	180	1775663	69.72	PPB	100
104)	Hexachlorobutadiene	14.12	225	831925	62.01	PPB	98
105)	Naphthalene	14.25	128	3255800	84.31	PPB	100
106)	1,2,3-Trichlorobenzene	14.49	180	1668687	70.61	PPB	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F014.D Vial: 11
Acq On : 8 Nov 2018 3:44 pm Operator: LM
Sample : ICAL 60 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F014.D

(79) Styrene (T)

10.35min 73.85PPB

response 1954055

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	202.92
78.00	85.00	82.80
0.00	0.00	0.00

Manual Integration:

Before

LM

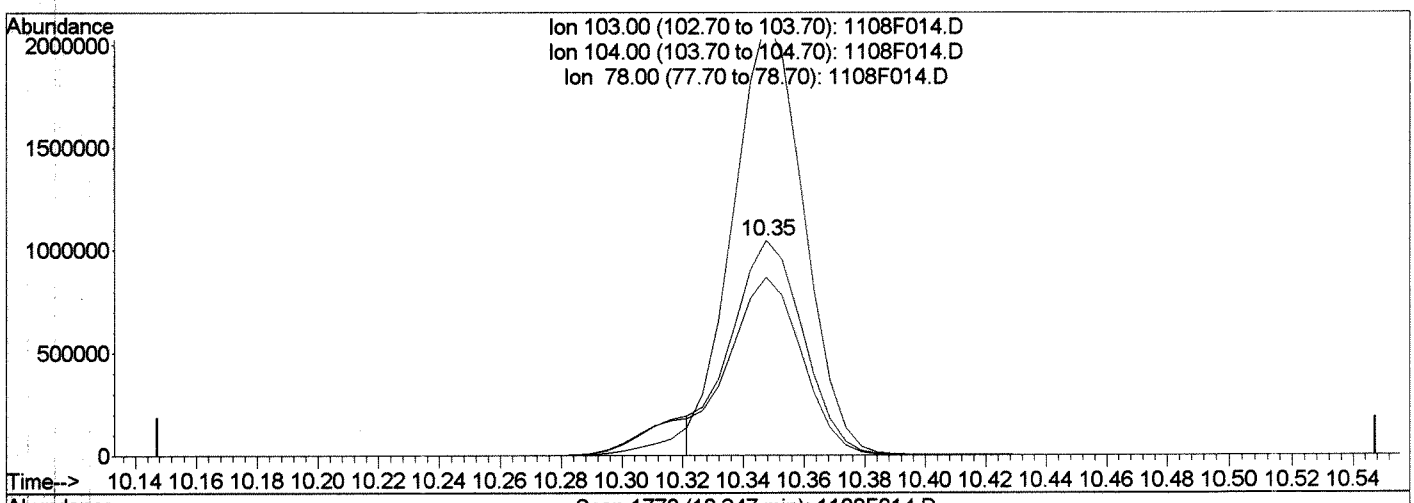
11/09/18

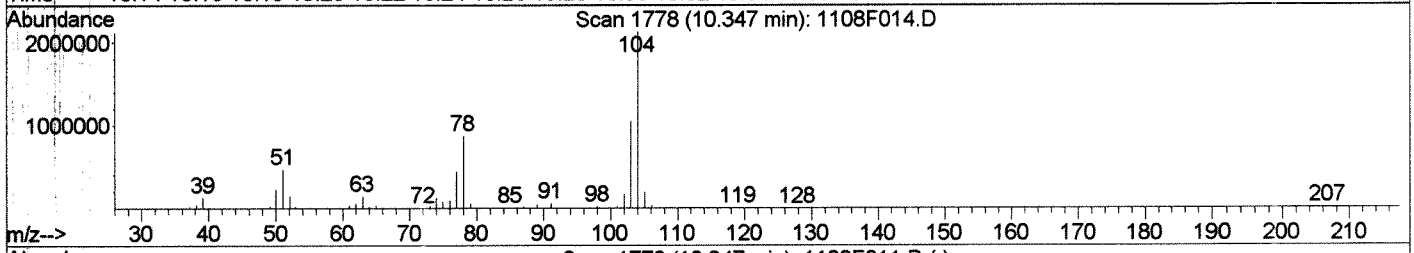
1108F014.D 110818MS27_8260.M Fri Nov 09 09:19:41 2018

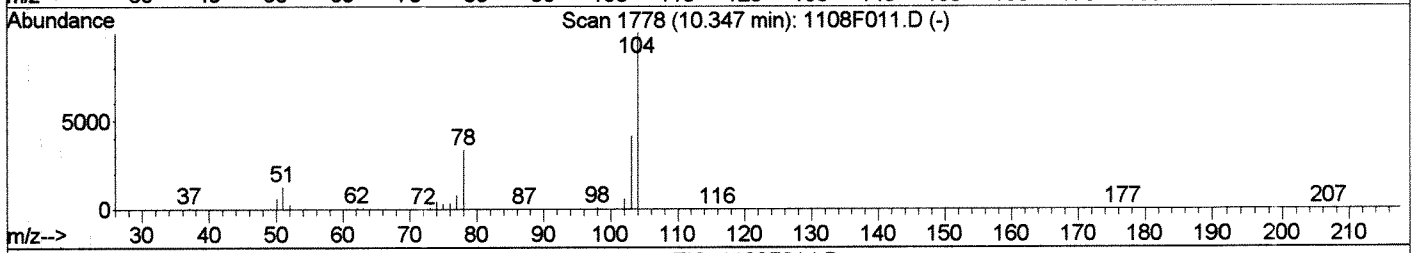
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F014.D Vial: 11
Acq On : 8 Nov 2018 3:44 pm Operator: LM
Sample : ICAL 60 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:19 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F014.D

(79) Styrene (T)

10.35min 65.45PPB m

response 1731790

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	202.92
78.00	85.00	82.82
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

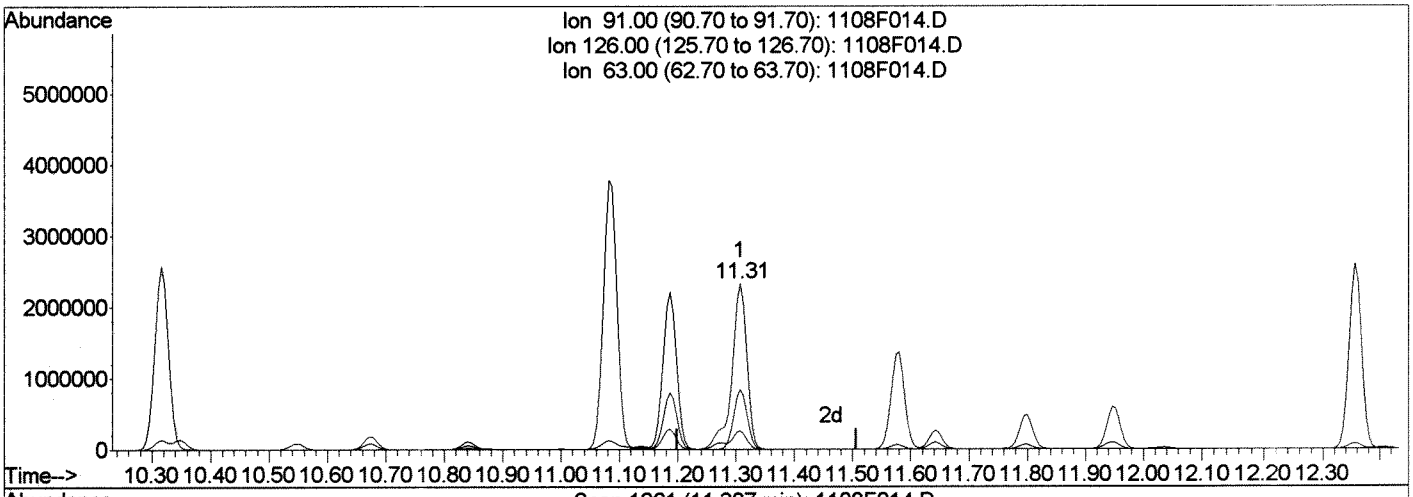
11/09/18

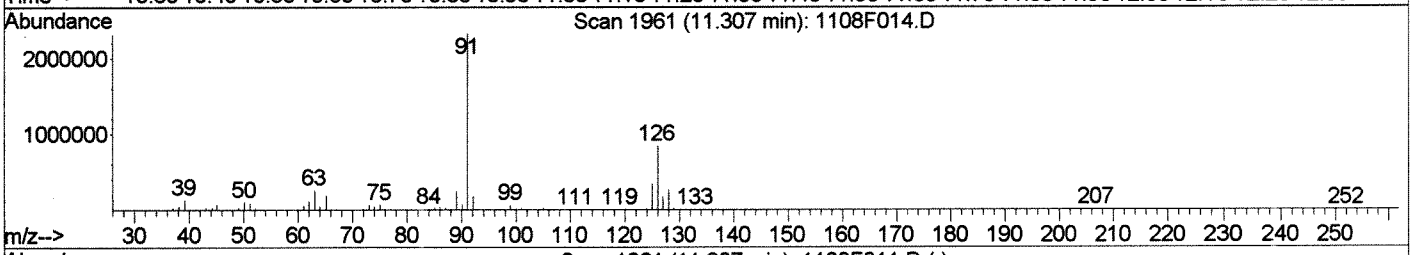
1108F014.D 110818MS27_8260.M Fri Nov 09 09:19:50 2018

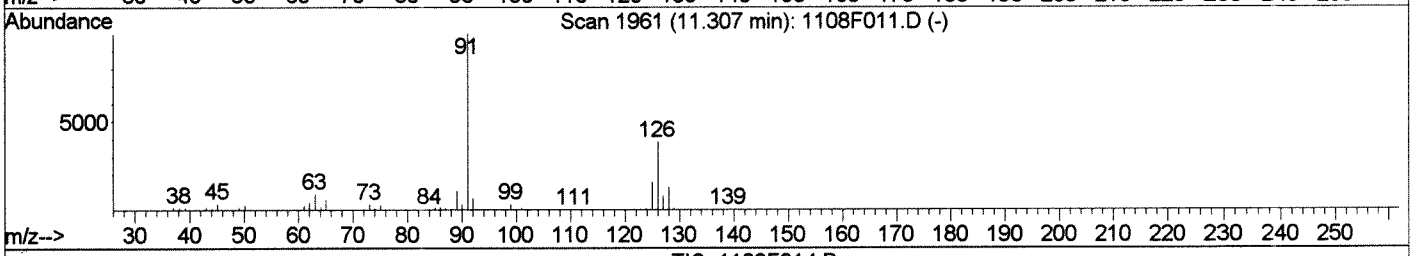
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F014.D Vial: 11
Acq On : 8 Nov 2018 3:44 pm Operator: LM
Sample : ICAL 60 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:19 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F014.D

(92) 4-Chlorotoluene (T)

11.31min 68.82PPB

response 4181622

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	36.12
63.00	11.20	11.18
0.00	0.00	0.00

Manual Integration:

Before

LM

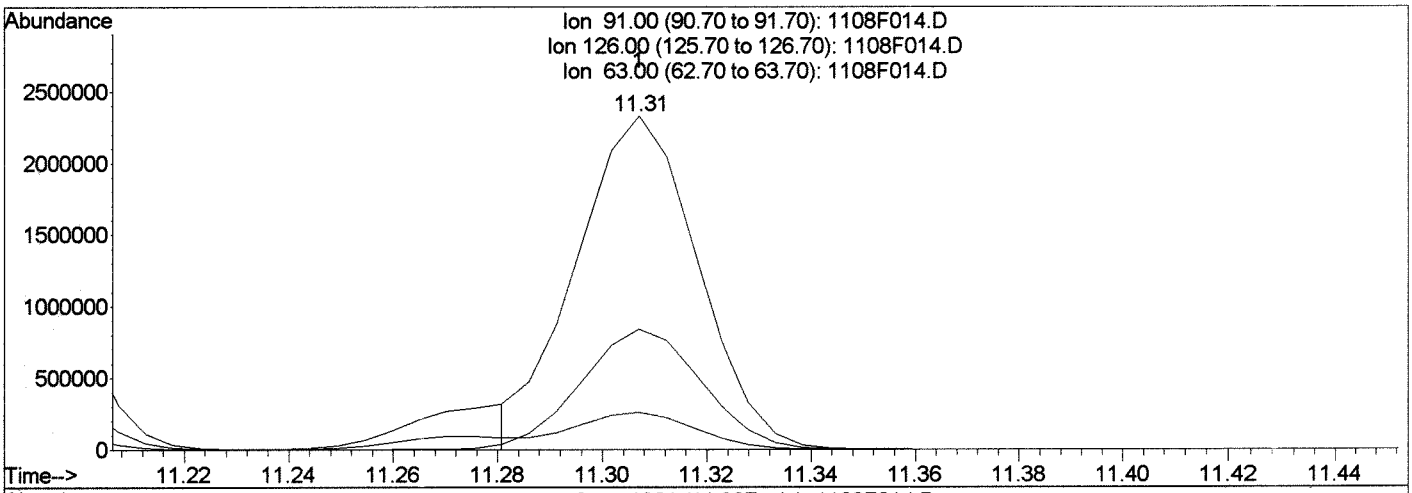
11/09/18

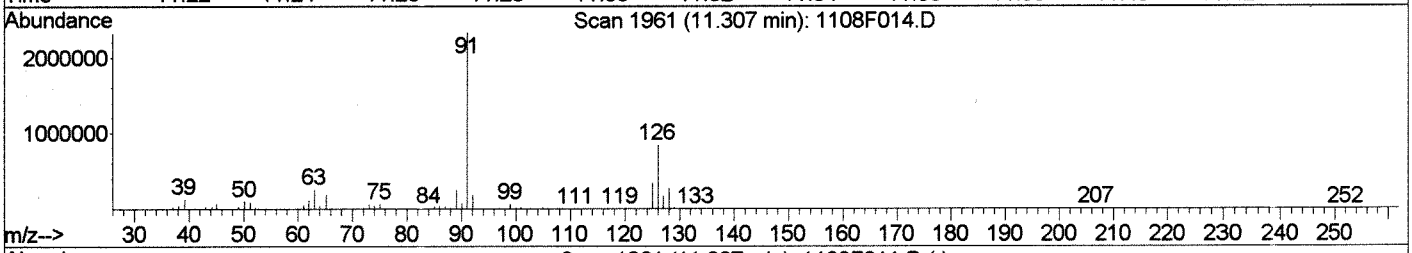
1108F014.D 110818MS27_8260.M Fri Nov 09 09:22:16 2018

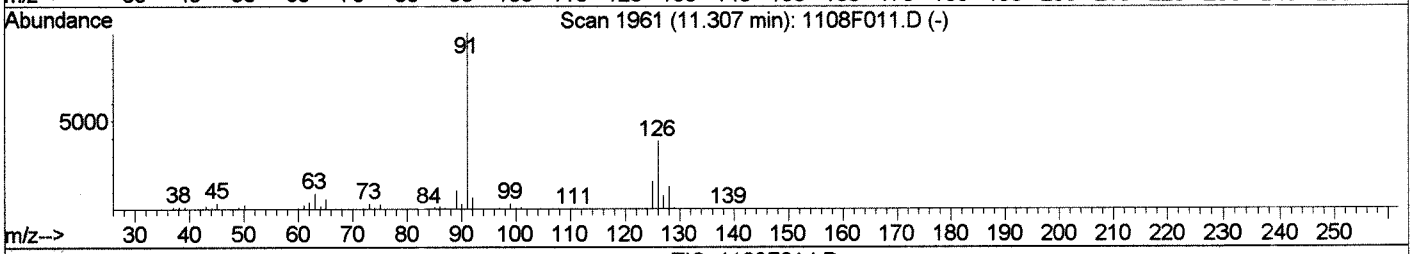
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F014.D Vial: 11
Acq On : 8 Nov 2018 3:44 pm Operator: LM
Sample : ICAL 60 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:22 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F014.D

(92) 4-Chlorotoluene (T)

11.31min 61.90PPB m

response 3761550

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	36.11
63.00	11.20	11.19
0.00	0.00	0.00

Manual Integration:

After

Shoulder

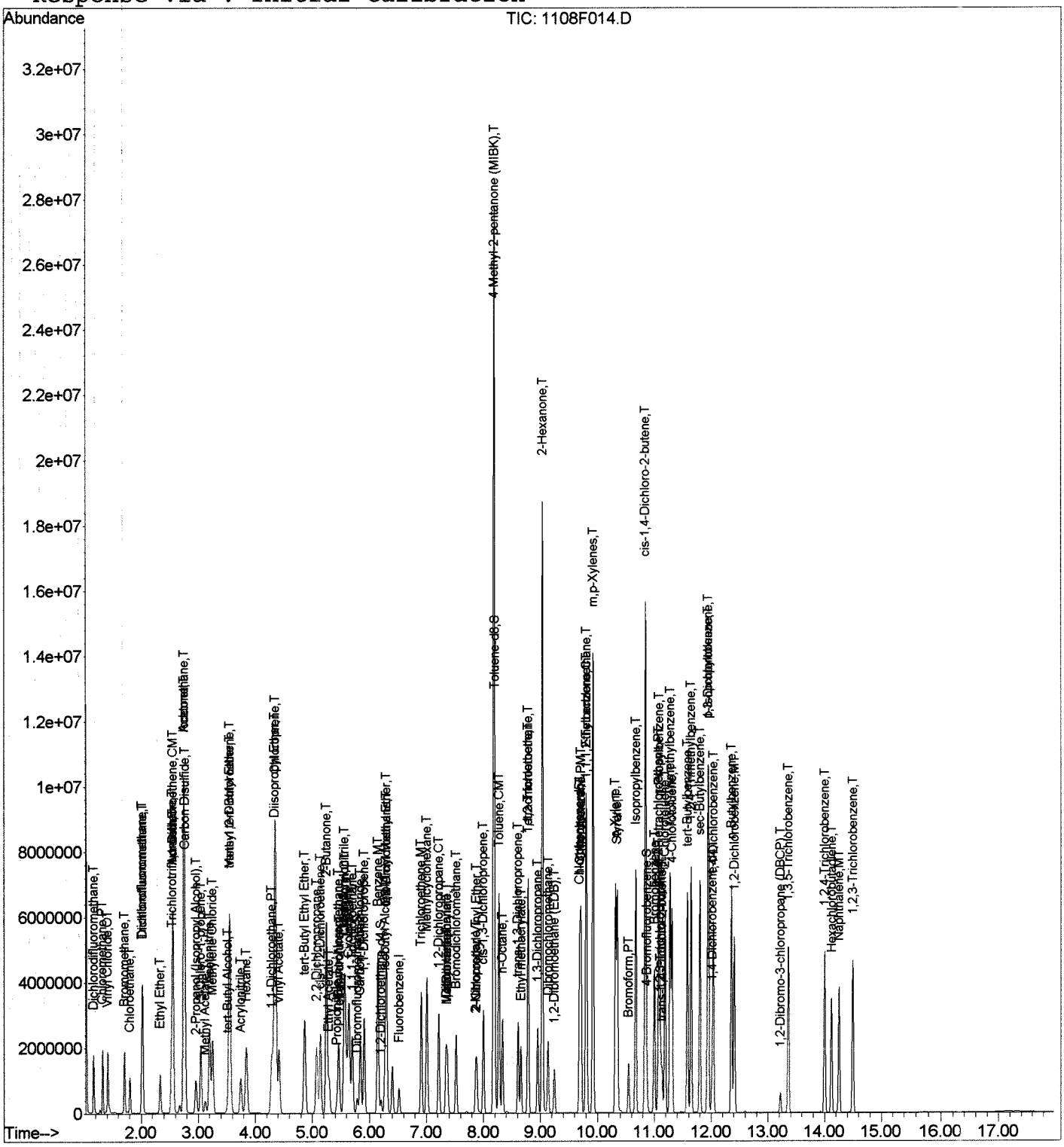
11/09/18

LM

1108F014.D 110818MS27_8260.M Fri Nov 09 09:22:25 2018

Data File : J:\MS27\DATA\110818\1108F014.D Vial: 11
Acq On : 8 Nov 2018 3:44 pm Operator: LM
Sample : ICAL 60 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:22 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Data File : J:\MS27\DATA\110818\1108F015.D Vial: 12
Acq On : 8 Nov 2018 4:06 pm Operator: LM
Sample : ICAL 80 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:38 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration LM 11-17-18
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.52	96	720205	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	287030	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	264572	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.79	113	360480	18.97	PPB	0.00
Spiked Amount 10.000			Recovery =	189.70%		
46) 1,2-Dichloroethane-d4	6.21	65	353575	18.81	PPB	0.00
Spiked Amount 10.000			Recovery =	188.10%		
61) Toluene-d8	8.20	98	1265395	18.49	PPB	0.00
Spiked Amount 10.000			Recovery =	184.90%		
83) 4-Bromofluorobenzene	10.87	95	459334	18.23	PPB	0.00
Spiked Amount 10.000			Recovery =	182.30%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.17	85	1568137	73.36	PPB	97
3) Chloromethane	1.32	50	1830675	68.37	PPB	97
4) Vinyl Chloride	1.41	62	1869453	75.83	PPB	97
5) Bromomethane	1.71	96	1235142	72.93	PPB	98
6) Chloroethane	1.81	64	1058187	75.23	PPB	99
7) Dichlorofluoromethane	2.03	67	2568960	75.15	PPB	99
8) Trichlorofluoromethane	2.01	101	2363045	74.82	PPB	99
9) Ethyl Ether	2.34	59	837821	79.08	PPB	97
10) Acrolein	2.56	56	3706307	1479.17	PPB	100
11) Trichlorotrifluoroethane	2.54	151	1107113	78.22	PPB	98
12) 1,1-Dichloroethene	2.57	96	1390618	77.39	PPB	96
13) Acetone	2.75	43	5556218	1978.40	PPB	99
14) Iodomethane	2.76	142	9565114	328.77	PPB	100
15) Carbon Disulfide	2.77	76	4088498	77.53	PPB	99
16) 2-Propanol (Isopropyl Alco	2.96	45	1779655	4046.14	PPB	97
17) 3-Chloro-1-propene	3.05	76	785435	77.05	PPB	99
18) Methyl Acetate	3.12	43	673753	77.19	PPB	98
19) Acetonitrile	3.20	40	2150944	3078.63	PPB	98
20) Methylene Chloride	3.25	84	1567662	74.82	PPB	98
21) tert-Butyl Alcohol	3.52	59	406523	416.99	PPB	97
22) Acrylonitrile	3.75	53	1384514	298.60	PPB	95
23) Methyl tert-Butyl Ether	3.55	73	6640326	157.92	PPB	99
24) trans-1,2-Dichloroethene	3.55	96	1537494	76.55	PPB	97
25) Hexane	3.85	57	1739361	74.60	PPB	99
26) Diisopropyl Ether	4.33	45	4687270	80.27	PPB	99
27) 1,1-Dichloroethane	4.29	63	2763579	75.95	PPB	99
28) Vinyl Acetate	4.42	86	509272	162.85	PPB #	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F015.D Vial: 12
Acq On : 8 Nov 2018 4:06 pm Operator: LM
Sample : ICAL 80 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:38 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
29)	Chloroprene	4.35	53	7547779	325.79	PPB		98
30)	tert-Butyl Ethyl Ether	4.86	59	3965058	84.63	PPB		99
31)	2,2-Dichloropropane	5.08	77	1986491	77.81	PPB		99
32)	cis-1,2-Dichloroethene	5.15	96	1719540	79.17	PPB		98
33)	2-Butanone	5.25	72	2706515	2139.39	PPB		97
34)	Ethyl Acetate	5.29	61	274284	165.94	PPB		97
35)	Propionitrile	5.43	54	508667	315.45	PPB		99
36)	Methacrylonitrile	5.56	67	1773735	336.17	PPB		98
37)	Bromochloromethane	5.46	128	851587	75.66	PPB		97
38)	Tetrahydrofuran	5.48	71	106568	83.60	PPB		95
39)	Chloroform	5.58	83	2758009	76.59	PPB		98
40)	Cyclohexane	5.64	56	2805905	83.29	PPB		100
41)	1,1,1-Trichloroethane	5.70	97	2286773	77.68	PPB		99
43)	Carbon Tetrachloride	5.84	117	2096307	80.68	PPB		99
44)	1,1-Dichloropropene	5.91	75	2111236	83.14	PPB		99
45)	Isobutyl Alcohol	6.27	42	832061	3426.81	PPB		93
47)	Benzene	6.15	78	6250102	79.33	PPB		99
48)	1,2-Dichloroethane	6.29	62	1773314	73.78	PPB		100
49)	tert-Amyl Methyl Ether	6.30	55	1062931	74.19	PPB	#	66
50)	Trichloroethene	6.91	95	1639775	78.62	PPB		98
51)	Methylcyclohexane	7.01	83	2366192	91.84	PPB		98
52)	1,2-Dichloropropane	7.22	63	1664904	76.23	PPB		99
53)	Dibromomethane	7.34	93	907517	75.51	PPB		98
54)	Methyl methacrylate	7.37	69	735354	92.93	PPB		96
55)	1,4-Dioxane	7.37	88	278768	3614.80	PPB		92
56)	Bromodichloromethane	7.52	83	2105168	76.15	PPB		99
57)	2-Nitropropane	7.87	41	1118662	416.14	PPB		89
58)	2-Chloroethyl Vinyl Ether	7.88	63	750558	97.64	PPB		98
59)	cis-1,3-Dichloropropene	8.00	75	2510456	86.01	PPB		98
60)	4-Methyl-2-pentanone (MIBK	8.18	58	9286753	2119.19	PPB	#	58
62)	Toluene	8.27	92	3931304	79.97	PPB		98
64)	n-Octane	8.33	85	814326	80.22	PPB		99
65)	trans-1,3-Dichloropropene	8.61	75	2073925	84.42	PPB		99
66)	Ethyl methacrylate	8.66	69	1462649	94.75	PPB		98
67)	1,1,2-Trichloroethane	8.78	83	1105500	77.89	PPB		95
68)	Tetrachloroethene	8.78	164	1423479	80.53	PPB		97
69)	2-Hexanone	9.03	57	2865496	2217.60	PPB	#	81
70)	1,3-Dichloropropane	8.95	76	2102066	78.18	PPB		99
71)	Dibromochloromethane	9.14	129	1622693	79.44	PPB		99
72)	1,2-Dibromoethane (EDB)	9.25	107	1218637	78.55	PPB		98
73)	1-Chlorohexane	9.69	91	1871767	93.32	PPB		90

(#) = qualifier out of range (m) = manual integration
1108F015.D 110818MS27_8260.M Fri Nov 09 09:23:37 2018 Page 2

Data File : J:\MS27\DATA\110818\1108F015.D Vial: 12
Acq On : 8 Nov 2018 4:06 pm Operator: LM
Sample : ICAL 80 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:38 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

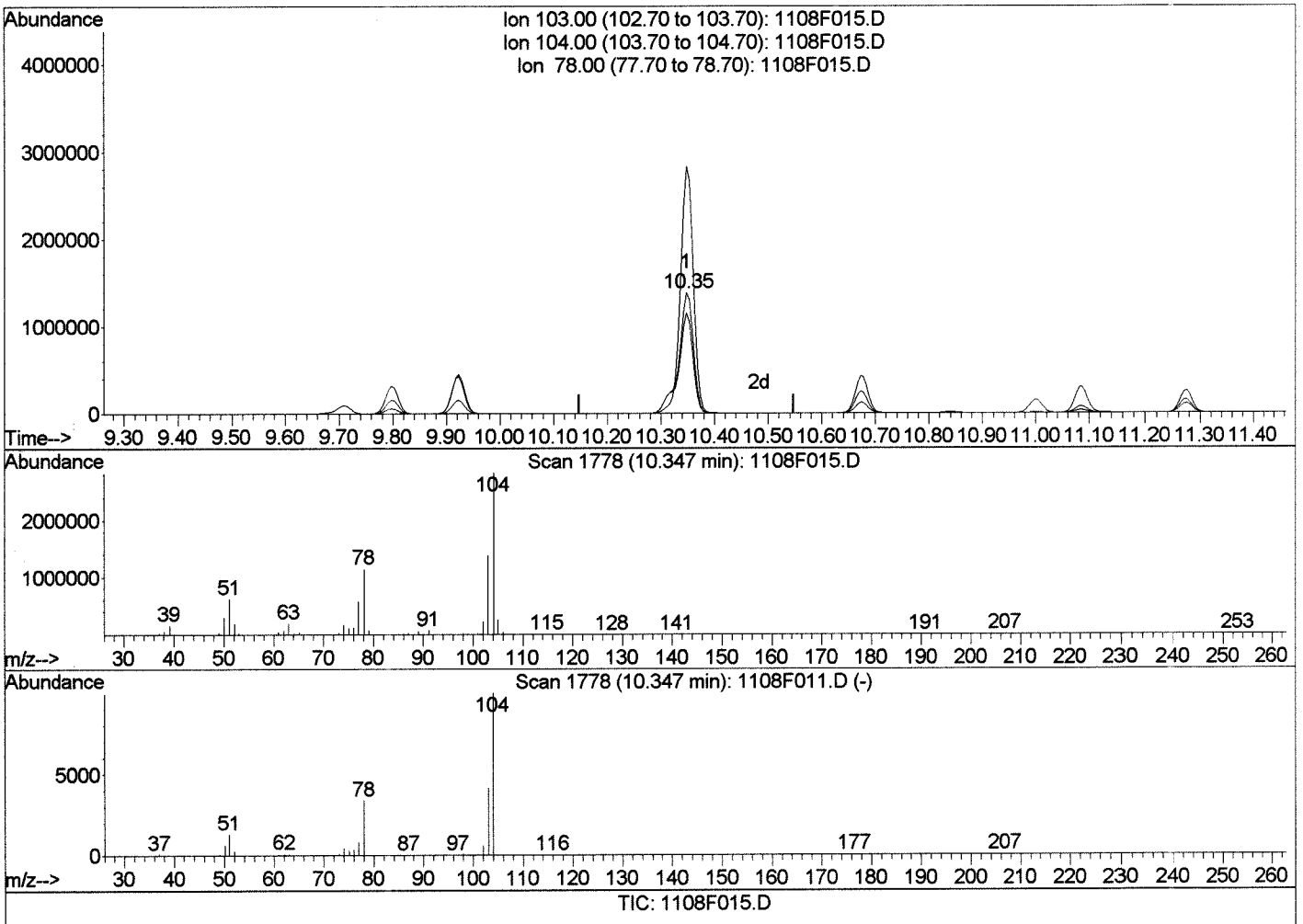
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	9.71	112	4472731	79.14	PPB	97
75)	Ethylbenzene	9.80	106	2339976	84.56	PPB	99
76)	1,1,1,2-Tetrachloroethane	9.81	131	1596462	78.14	PPB	98
77)	m,p-Xylenes	9.92	106	5722982	167.22	PPB	100
78)	o-Xylene	10.32	106	2692565	85.27	PPB	98
79)	Styrene	10.35	103	2313936m	85.64	PPB	
80)	Bromoform	10.55	173	1012464	77.71	PPB	98
81)	Isopropylbenzene	10.67	105	6958004	87.23	PPB	99
82)	cis-1,4-Dichloro-2-butene	10.84	89	731958	361.86	PPB	98
85)	1,1,2,2-Tetrachloroethane	11.07	83	1338987	76.33	PPB	97
86)	trans-1,4-Dichloro-2-buten	11.14	53	335695	83.15	PPB	94
87)	Bromobenzene	11.00	156	1871696	79.21	PPB	98
88)	n-Propylbenzene	11.09	91	8171156	86.08	PPB	98
89)	1,2,3-Trichloropropane	11.11	110	372362	77.49	PPB	98
90)	2-Chlorotoluene	11.19	91	4730356	82.70	PPB	99
91)	1,3,5-Trimethylbenzene	11.28	105	5767984	87.04	PPB	97
92)	4-Chlorotoluene	11.31	91	4999337m	79.76	PPB	
93)	tert-Butylbenzene	11.58	119	4826464	89.59	PPB	100
94)	1,2,4-Trimethylbenzene	11.64	105	5837241	88.93	PPB	99
95)	sec-Butylbenzene	11.80	105	7057343	87.06	PPB	98
96)	p-Isopropyltoluene	11.95	119	6002072	90.13	PPB	99
97)	1,3-Dichlorobenzene	11.94	146	3455951	78.54	PPB	100
98)	1,4-Dichlorobenzene	12.04	146	3497674	79.04	PPB	99
99)	n-Butylbenzene	12.36	91	5478256	91.19	PPB	98
100)	1,2-Dichlorobenzene	12.41	146	3238119	78.15	PPB	99
101)	1,2-Dibromo-3-chloropropan	13.22	155	201285	83.63	PPB	93
102)	1,3,5-Trichlorobenzene	13.36	180	2554369	87.30	PPB	99
103)	1,2,4-Trichlorobenzene	14.00	180	2440775	92.91	PPB	99
104)	Hexachlorobutadiene	14.12	225	1137820	82.23	PPB	98
105)	Naphthalene	14.25	128	4496026	112.87	PPB	99
106)	1,2,3-Trichlorobenzene	14.49	180	2255230	92.51	PPB	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F015.D Vial: 12
Acq On : 8 Nov 2018 4:06 pm Operator: LM
Sample : ICAL 80 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F015.D

(79) Styrene (T)

10.35min 96.58PPB

response 2609520

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	204.85
78.00	85.00	83.16
0.00	0.00	0.00

Manual Integration:

Before LM

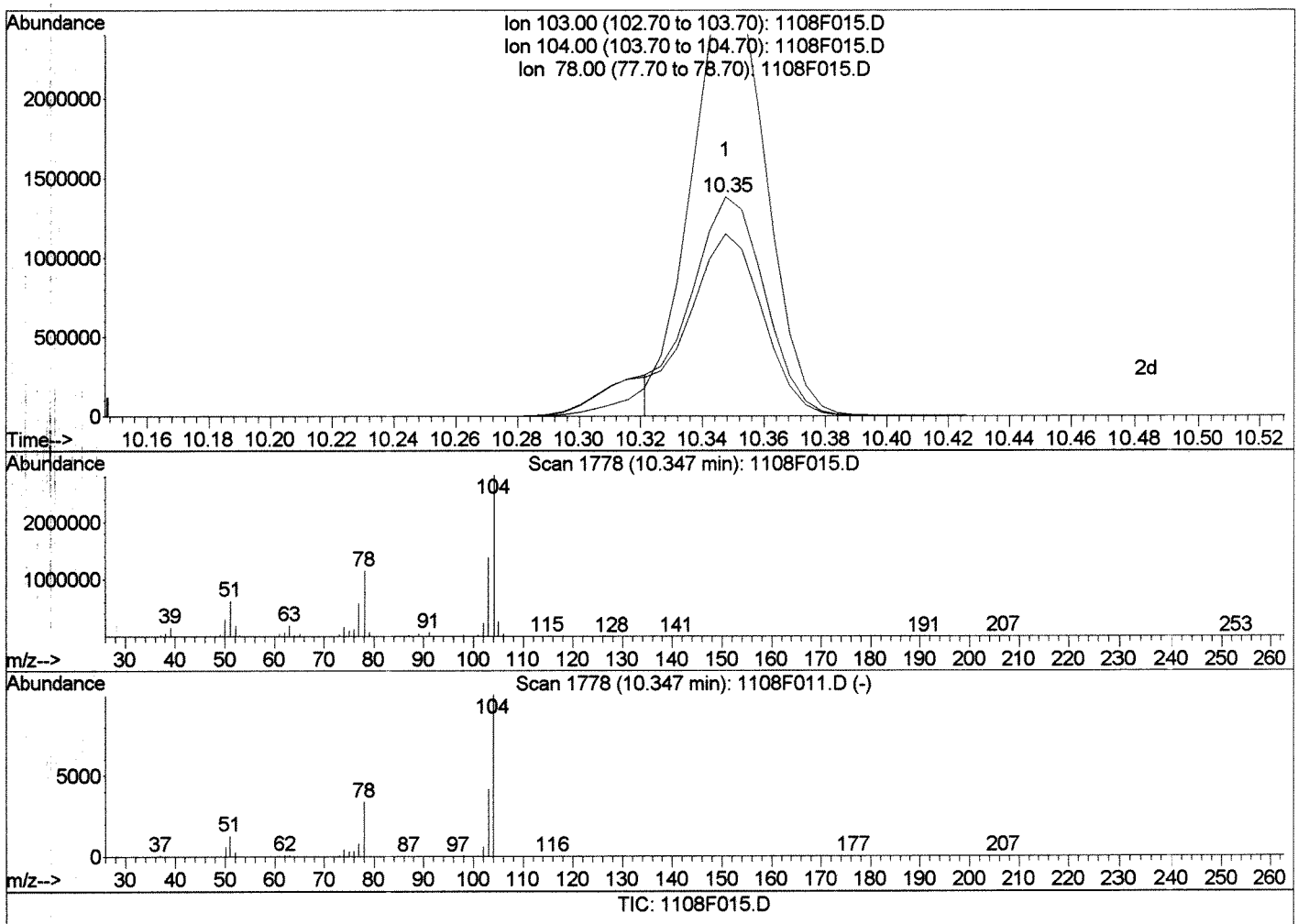
11/09/18

1108F015.D 110818MS27_8260.M Fri Nov 09 09:21:01 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F015.D Vial: 12
Acq On : 8 Nov 2018 4:06 pm Operator: LM
Sample : ICAL 80 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:21 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F015.D

(79) Styrene (T)

10.35min 85.64PPB m

response 2313936

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	204.85
78.00	85.00	83.18
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

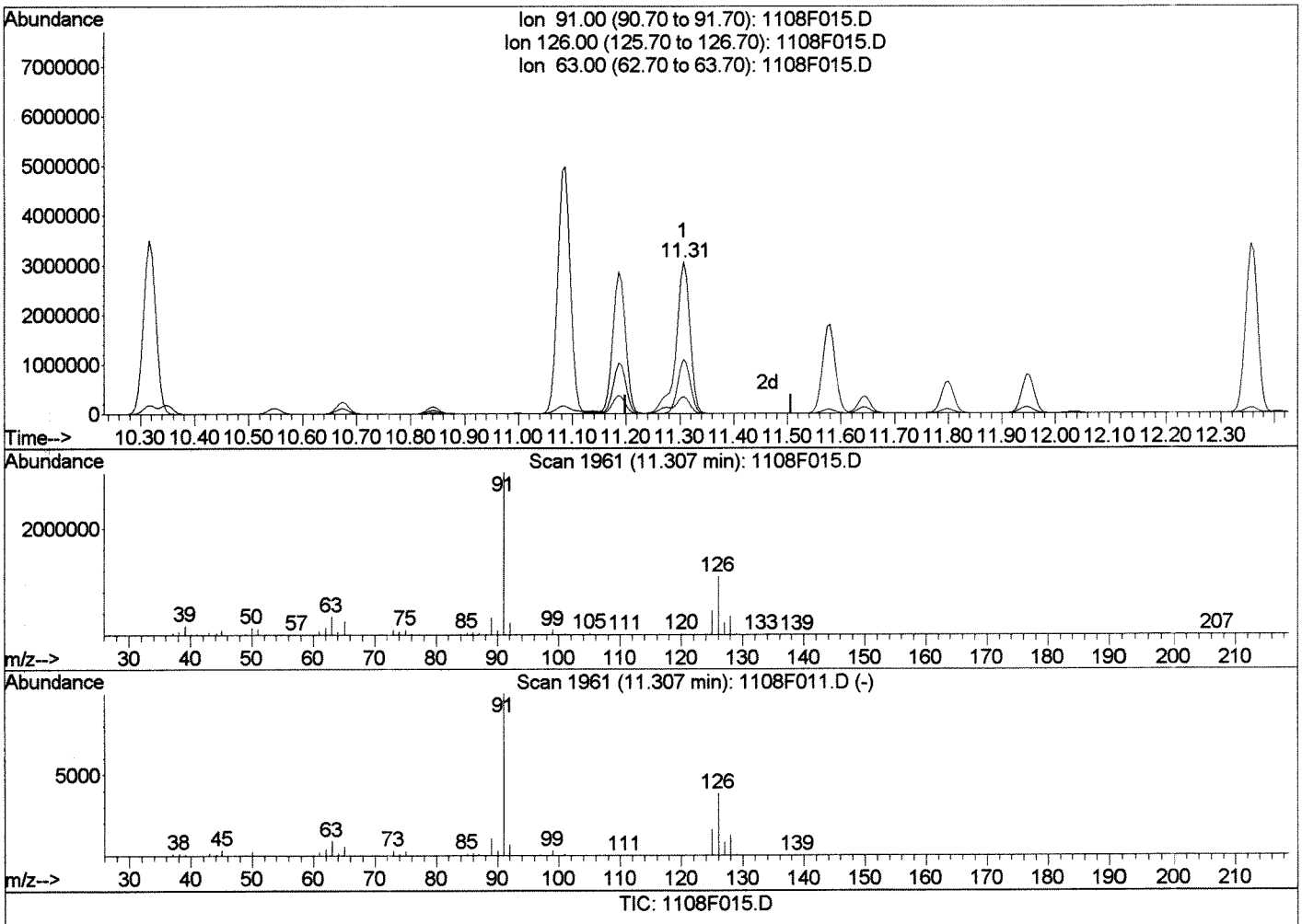
11/09/18

1108F015.D 110818MS27_8260.M Fri Nov 09 09:21:10 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F015.D Vial: 12
Acq On : 8 Nov 2018 4:06 pm Operator: LM
Sample : ICAL 80 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:21 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F015.D

(92) 4-Chlorotoluene (T)

11.31min 88.23PPB

response 5530158

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.73
63.00	11.20	11.21
0.00	0.00	0.00

Manual Integration:

Before

LM

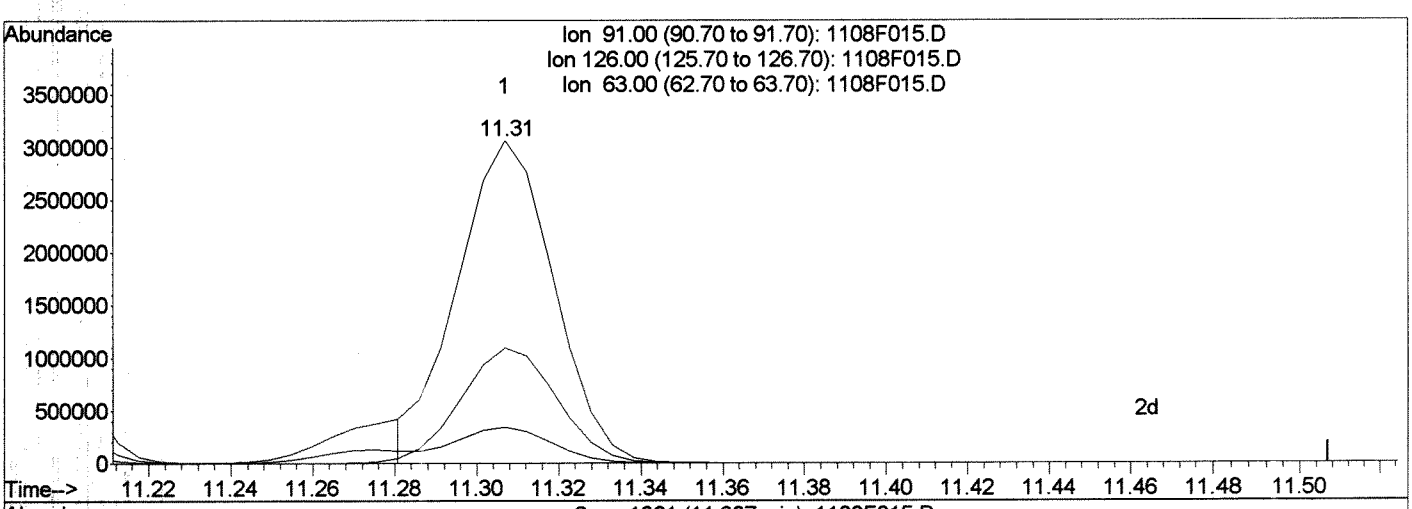
11/09/18

1108F015.D 110818MS27_8260.M Fri Nov 09 09:21:19 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F015.D Vial: 12
Acq On : 8 Nov 2018 4:06 pm Operator: LM
Sample : ICAL 80 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:21 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F015.D

(92) 4-Chlorotoluene (T)

11.31min 79.76PPB m

response 4999337

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.73
63.00	11.20	11.22
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

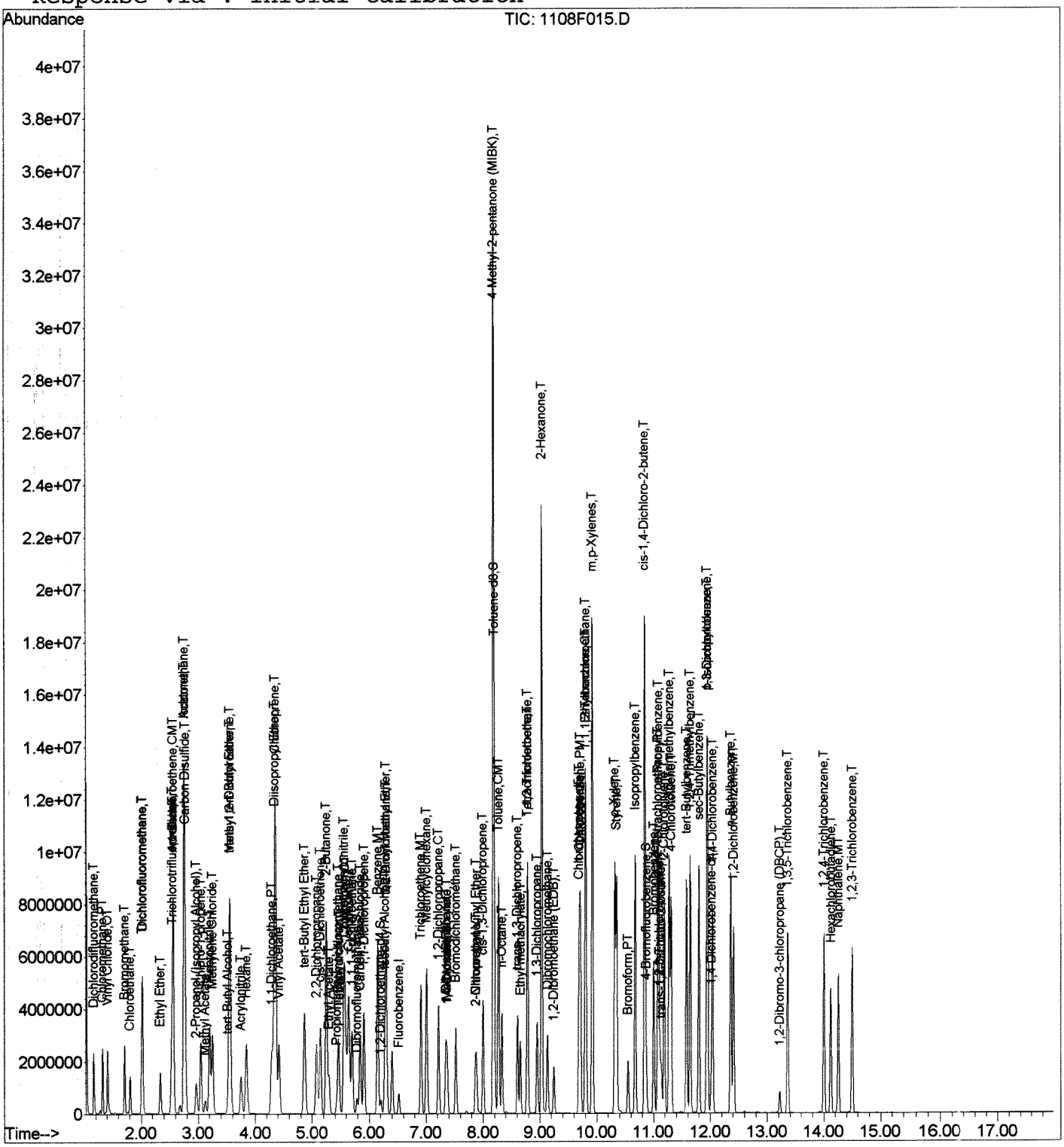
11/09/18

1108F015.D 110818MS27_8260.M Fri Nov 09 09:21:30 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F015.D Vial: 12
Acq On : 8 Nov 2018 4:06 pm Operator: LM
Sample : ICAL 80 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:21 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F019.D Vial: 16
Acq On : 8 Nov 2018 5:34 pm Operator: LM
Sample : 8260 ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 15:00:03 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

LM 11-17-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.52	96	688536	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	272709	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	266101	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.79	113	175683	9.88	PPB	0.00
Spiked Amount 10.000			Recovery =	98.80%		
46) 1,2-Dichloroethane-d4	6.21	65	177522	9.97	PPB	0.00
Spiked Amount 10.000			Recovery =	99.70%		
61) Toluene-d8	8.20	98	594790	9.98	PPB	0.00
Spiked Amount 10.000			Recovery =	99.80%		
83) 4-Bromofluorobenzene	10.87	95	223909	9.97	PPB	0.00
Spiked Amount 10.000			Recovery =	99.70%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.17	85	233634	12.39	PPB	98
3) Chloromethane	1.32	50	248021	9.48	PPB	97
4) Vinyl Chloride	1.41	62	235613	10.80	PPB	95
5) Bromomethane	1.71	96	153780	10.16	PPB	98
6) Chloroethane	1.81	64	134791	9.89	PPB	97
7) Dichlorofluoromethane	2.03	67	314531	9.86	PPB	99
8) Trichlorofluoromethane	2.01	101	264106	9.42	PPB	100
9) Ethyl Ether	2.34	59	118721	10.97	PPB	97
10) Acrolein	2.56	56	233086	95.03	PPB	100
11) Trichlorotrifluoroethane	2.54	151	149088	11.70	PPB	99
12) 1,1-Dichloroethene	2.57	96	168451	9.80	PPB	97
13) Acetone	2.75	43	136968	49.22	PPB	98
14) Iodomethane	2.75	142	749512	29.64	PPB	98
15) Carbon Disulfide	2.77	76	1040981	21.15	PPB	99
16) 2-Propanol (Isopropyl Alco	2.96	45	222026	482.86	PPB	100
17) 3-Chloro-1-propene	3.04	76	272216	27.53	PPB	96
19) Acetonitrile	3.20	40	207082	298.40	PPB	99
20) Methylene Chloride	3.25	84	193997	9.29	PPB	96
21) tert-Butyl Alcohol	3.52	59	88924	86.33	PPB	67
22) Acrylonitrile	3.75	53	183501	40.34	PPB	99
23) Methyl tert-Butyl Ether	3.56	73	417410	10.10	PPB	99
24) trans-1,2-Dichloroethene	3.55	96	184773	9.14	PPB	100
25) Hexane	3.85	57	611089	28.50	PPB	99
26) Diisopropyl Ether	4.33	45	1000928	17.40	PPB	99
27) 1,1-Dichloroethane	4.29	63	336386	9.70	PPB	97
28) Vinyl Acetate	4.42	86	150637	51.59	PPB	98
29) Chloroprene	4.35	53	671305	32.31	PPB	98

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F019.D Vial: 16
Acq On : 8 Nov 2018 5:34 pm Operator: LM
Sample : 8260 ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 15:00:03 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
30)	tert-Butyl Ethyl Ether	4.86	59	821512	18.32	PPB		98
31)	2,2-Dichloropropane	5.08	77	244927	10.55	PPB		99
32)	cis-1,2-Dichloroethene	5.14	96	197542	9.12	PPB		99
33)	2-Butanone	5.25	72	61366	50.18	PPB		96
34)	Ethyl Acetate	5.29	61	46639	29.60	PPB		94
35)	Propionitrile	5.43	54	47679	29.20	PPB		98
36)	Methacrylonitrile	5.56	67	151136	30.11	PPB		95
37)	Bromochloromethane	5.46	128	102624	9.37	PPB		96
38)	Tetrahydrofuran	5.48	71	23282	20.18	PPB		96
39)	Chloroform	5.58	83	330869	9.41	PPB		99
41)	1,1,1-Trichloroethane	5.70	97	268266	10.23	PPB		98
43)	Carbon Tetrachloride	5.84	117	253381	10.84	PPB		98
44)	1,1-Dichloropropene	5.91	75	242971	10.60	PPB		99
45)	Isobutyl Alcohol	6.28	42	101429	415.50	PPB	#	80
47)	Benzene	6.15	78	739528	9.98	PPB		99
48)	1,2-Dichloroethane	6.29	62	215628	9.60	PPB		99
49)	tert-Amyl Methyl Ether	6.30	55	243011	17.72	PPB		93
50)	Trichloroethene	6.91	95	196213	10.17	PPB		97
52)	1,2-Dichloropropane	7.22	63	190094	9.35	PPB		99
53)	Dibromomethane	7.34	93	104040	9.21	PPB		97
54)	Methyl methacrylate	7.37	69	232408	29.82	PPB		97
55)	1,4-Dioxane	7.37	88	25411	339.11	PPB		100
56)	Bromodichloromethane	7.52	83	248108	9.51	PPB		97
57)	2-Nitropropane	7.87	41	79597	29.83	PPB		91
58)	2-Chloroethyl Vinyl Ether	7.88	63	76521	10.34	PPB		95
59)	cis-1,3-Dichloropropene	8.00	75	272012	9.72	PPB		99
60)	4-Methyl-2-pentanone (MIBK	8.18	58	189551	46.13	PPB		93
62)	Toluene	8.27	92	446645	10.36	PPB		100
64)	n-Octane	8.33	85	153152	17.43	PPB		94
65)	trans-1,3-Dichloropropene	8.61	75	221966	9.42	PPB		99
66)	Ethyl methacrylate	8.66	69	466717	31.57	PPB		99
67)	1,1,2-Trichloroethane	8.79	83	130912	9.68	PPB		96
68)	Tetrachloroethene	8.79	164	170671	10.47	PPB		97
69)	2-Hexanone	9.03	57	55202	44.46	PPB		91
70)	1,3-Dichloropropane	8.95	76	248018	9.38	PPB		99
71)	Dibromochloromethane	9.13	129	184899	9.43	PPB		98
72)	1,2-Dibromoethane (EDB)	9.25	107	134888	9.23	PPB		99
73)	1-Chlorohexane	9.69	91	205507	10.38	PPB		97
74)	Chlorobenzene	9.71	112	529257	9.99	PPB		97
75)	Ethylbenzene	9.80	106	259278	10.69	PPB		99
76)	1,1,1,2-Tetrachloroethane	9.81	131	184317	9.46	PPB		98

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F019.D Vial: 16
Acq On : 8 Nov 2018 5:34 pm Operator: LM
Sample : 8260 ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 15:00:03 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

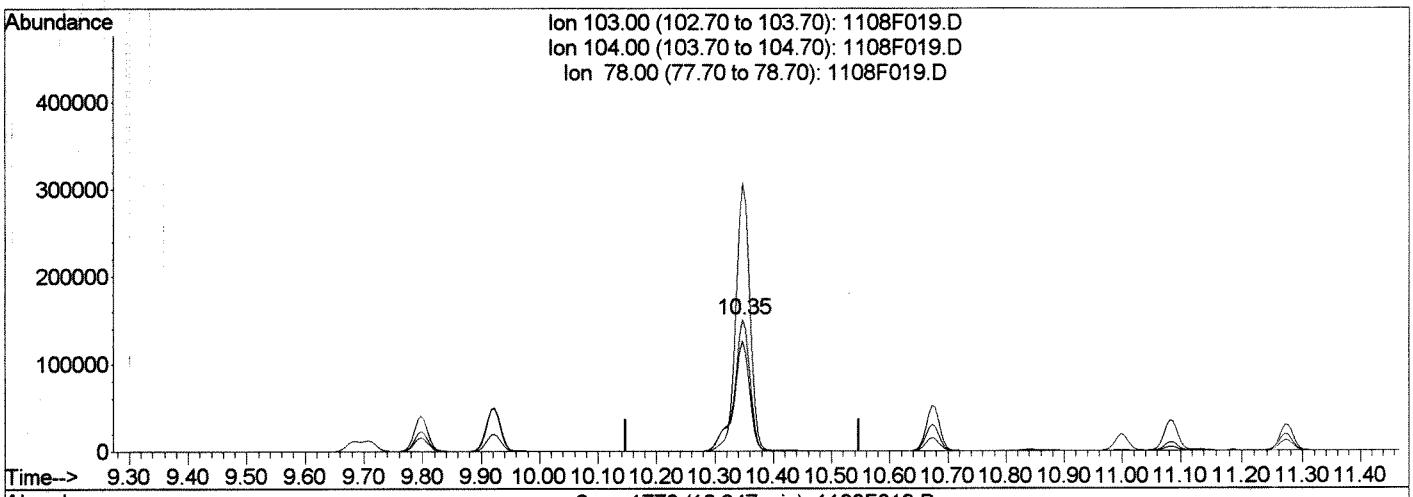
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
77)	m,p-Xylenes	9.92	106	633055	19.03	PPB	100
78)	o-Xylene	10.32	106	287121	10.28	PPB	96
79)	Styrene	10.35	103	253404m	10.27	PPB	
80)	Bromoform	10.55	173	111534	9.13	PPB	99
81)	Isopropylbenzene	10.67	105	751245	10.41	PPB	100
82)	cis-1,4-Dichloro-2-butene	10.84	89	61441	33.07	PPB	98
85)	1,1,2,2-Tetrachloroethane	11.07	83	166528	9.03	PPB	98
86)	trans-1,4-Dichloro-2-buten	11.14	53	119445	27.27	PPB	92
87)	Bromobenzene	11.00	156	222202	9.61	PPB	97
88)	n-Propylbenzene	11.08	91	928738	10.37	PPB	99
89)	1,2,3-Trichloropropane	11.11	110	46774	9.26	PPB	97
90)	2-Chlorotoluene	11.19	91	578046	10.62	PPB	99
91)	1,3,5-Trimethylbenzene	11.27	105	649793	10.25	PPB	99
92)	4-Chlorotoluene	11.31	91	609378m	10.40	PPB	
93)	tert-Butylbenzene	11.58	119	539829	10.24	PPB	99
94)	1,2,4-Trimethylbenzene	11.64	105	663263	9.40	PPB	100
95)	sec-Butylbenzene	11.80	105	814185	9.54	PPB	99
96)	p-Isopropyltoluene	11.95	119	689726	9.59	PPB	99
97)	1,3-Dichlorobenzene	11.94	146	429219	9.78	PPB	99
98)	1,4-Dichlorobenzene	12.04	146	438205	9.87	PPB	98
99)	n-Butylbenzene	12.36	91	611224	10.58	PPB	99
100)	1,2-Dichlorobenzene	12.41	146	394420	9.53	PPB	99
101)	1,2-Dibromo-3-chloropropan	13.22	155	22949	9.48	PPB	98
102)	1,3,5-Trichlorobenzene	13.36	180	310946	10.31	PPB	99
103)	1,2,4-Trichlorobenzene	14.00	180	263194	9.39	PPB	98
104)	Hexachlorobutadiene	14.12	225	133727	9.41	PPB	98
105)	Naphthalene	14.25	128	398249	9.51	PPB	100
106)	1,2,3-Trichlorobenzene	14.49	180	238200	9.29	PPB	97

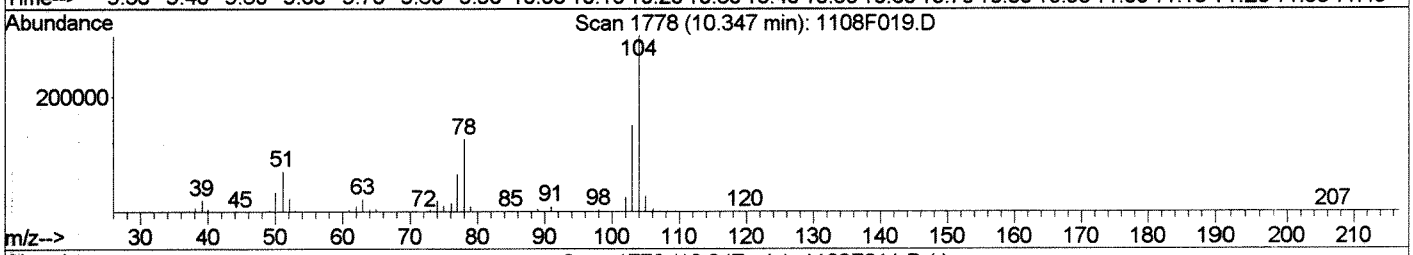
(#) = qualifier out of range (m) = manual integration

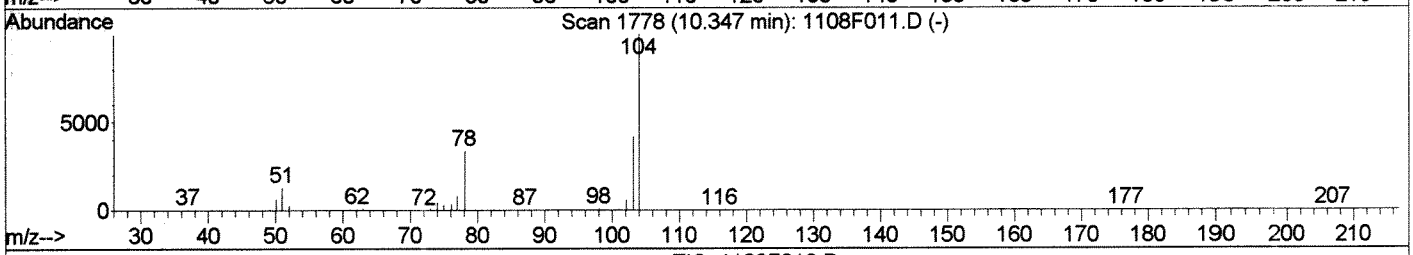
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F019.D Vial: 16
Acq On : 8 Nov 2018 5:34 pm Operator: LM
Sample : 8260 ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 15:00 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Multiple Level Calibration







TIC: 1108F019.D

(79) Styrene (T)

10.35min 11.70PPB

response 288639

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	204.03
78.00	85.00	83.40
0.00	0.00	0.00

Manual Integration:

Before

LM

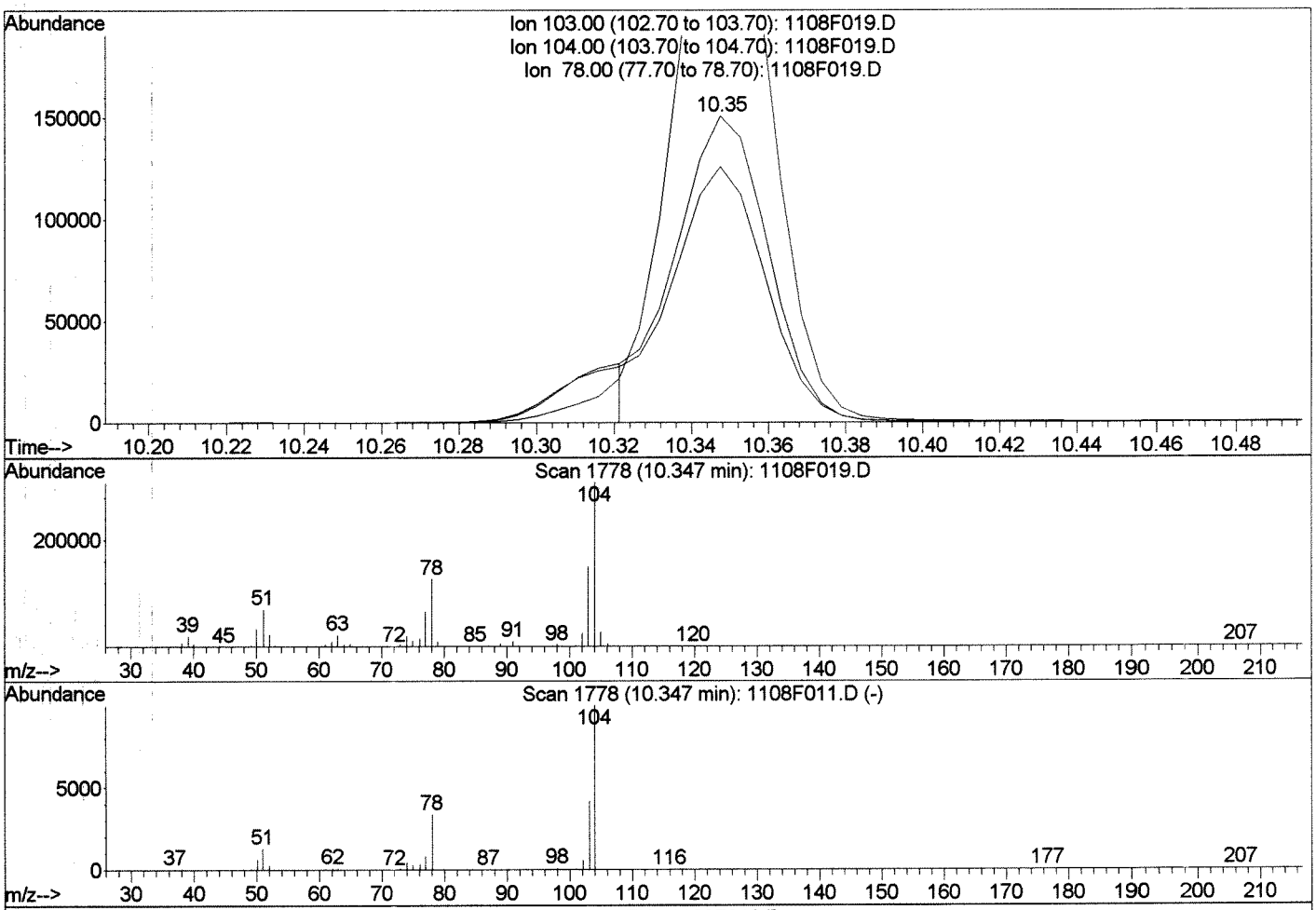
11/17/18

1108F019.D 110818MS27_8260.M Sat Nov 17 15:01:23 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F019.D Vial: 16
Acq On : 8 Nov 2018 5:34 pm Operator: LM
Sample : 8260 ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 15:01 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Multiple Level Calibration



TIC: 1108F019.D

(79) Styrene (T)

10.35min 10.27PPB m

response 253404

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	204.03
78.00	85.00	83.50
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

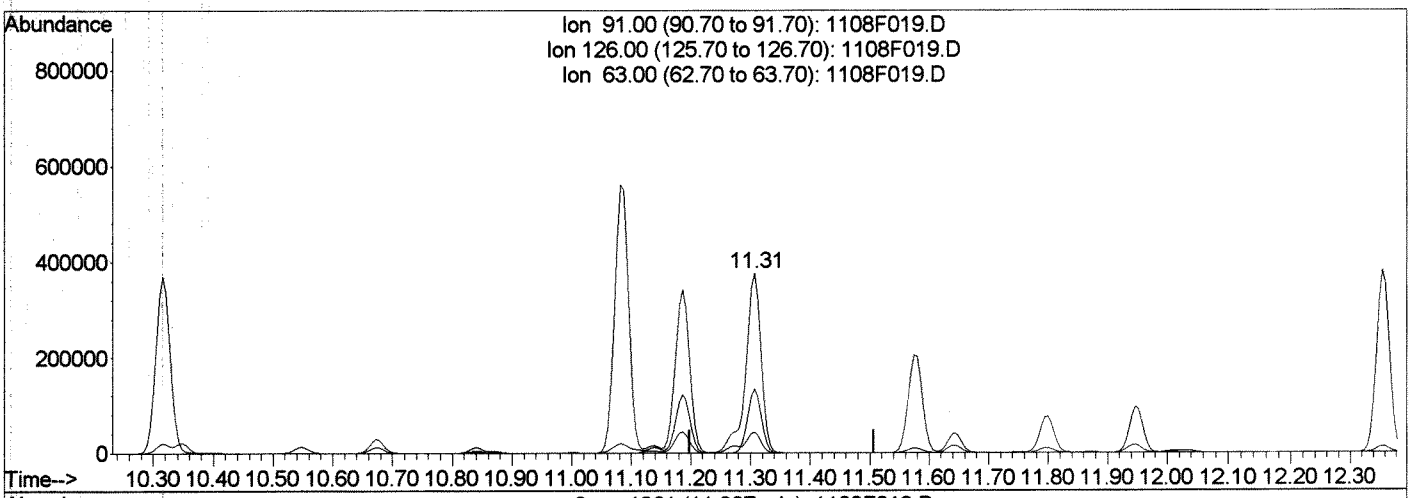
11/17/18

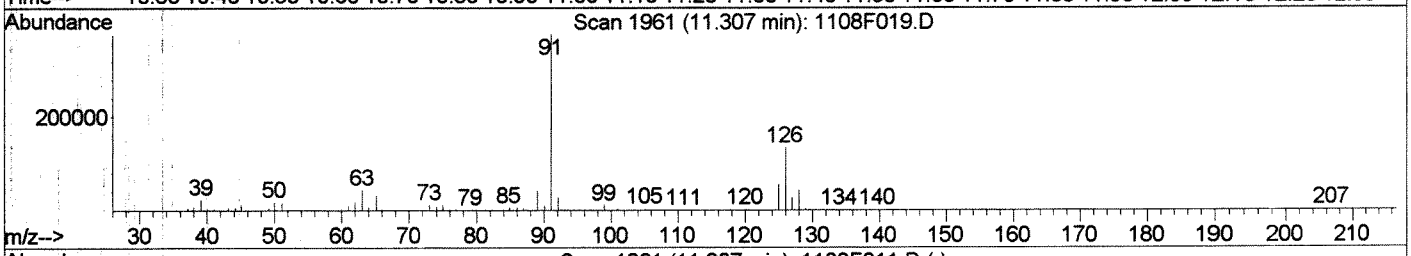
1108F019.D 110818MS27_8260.M Sat Nov 17 15:01:37 2018

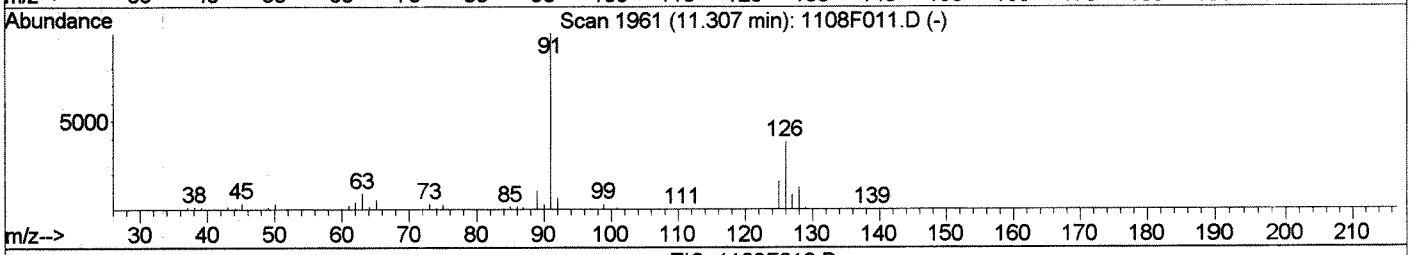
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F019.D Vial: 16
Acq On : 8 Nov 2018 5:34 pm Operator: LM
Sample : 8260 ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 15:01 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Multiple Level Calibration







TIC: 1108F019.D

(92) 4-Chlorotoluene (T)

11.31min 11.50PPB

response 674122

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.50
63.00	11.20	11.53
0.00	0.00	0.00

Manual Integration:

Before LM

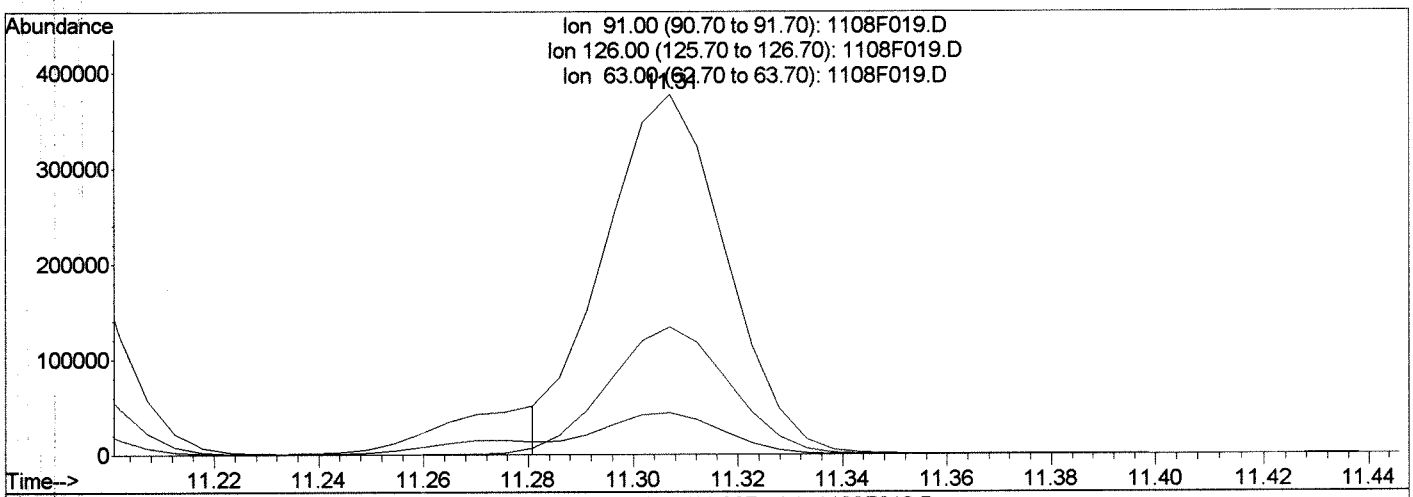
11/17/18

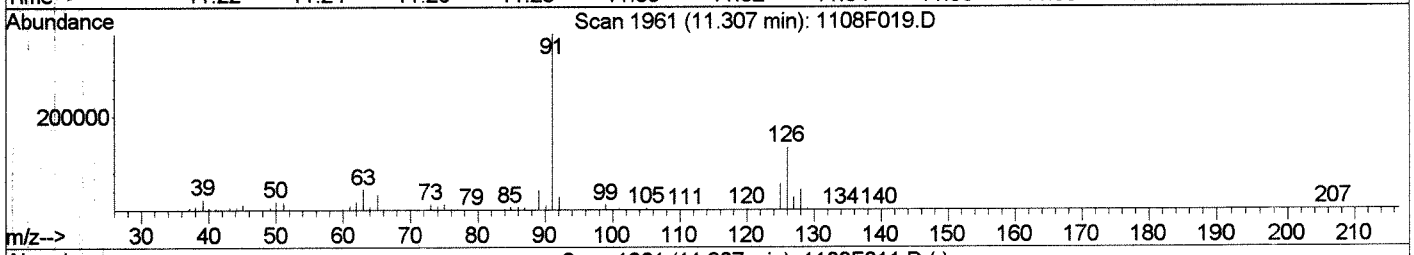
1108F019.D 110818MS27_8260.M Sat Nov 17 15:01:47 2018

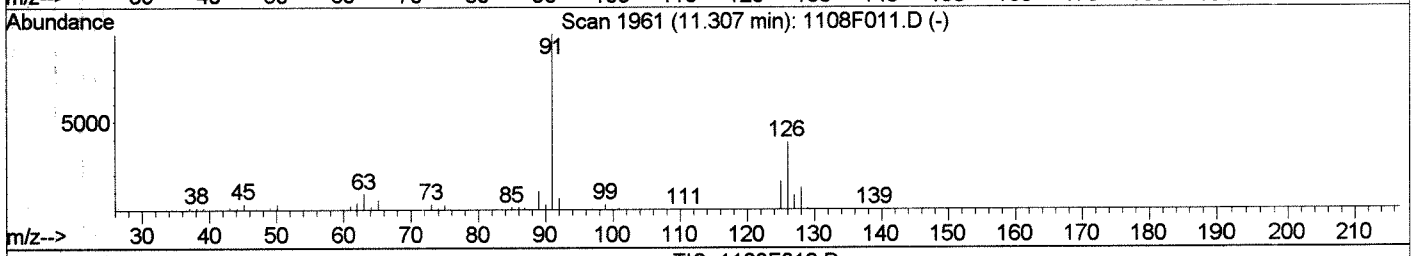
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F019.D Vial: 16
Acq On : 8 Nov 2018 5:34 pm Operator: LM
Sample : 8260 ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 15:01 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Multiple Level Calibration







TIC: 1108F019.D

(92) 4-Chlorotoluene (T)

11.31min 10.40PPB m

response 609378

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.46
63.00	11.20	11.52
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

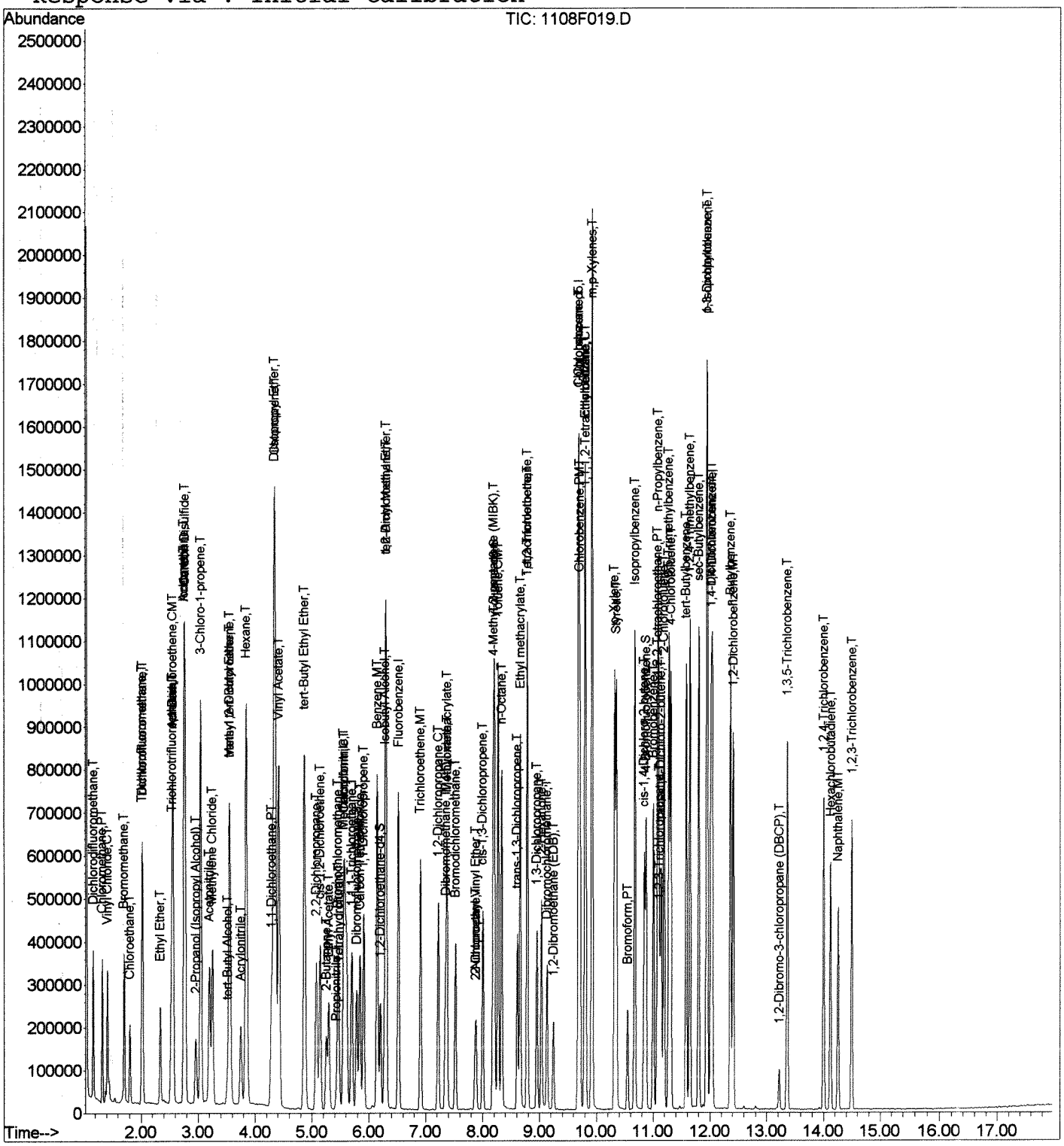
11/17/18 11/17/18

1108F019.D 110818MS27_8260.M Sat Nov 17 15:01:55 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F019.D Vial: 16
Acq On : 8 Nov 2018 5:34 pm Operator: LM
Sample : 8260 ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 15:01 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration



Data File : J:\MS27\DATA\110818\1108F020.D Vial: 17
Acq On : 8 Nov 2018 5:56 pm Operator: LM
Sample : CLP ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 15:00:05 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

LM 11-17-18

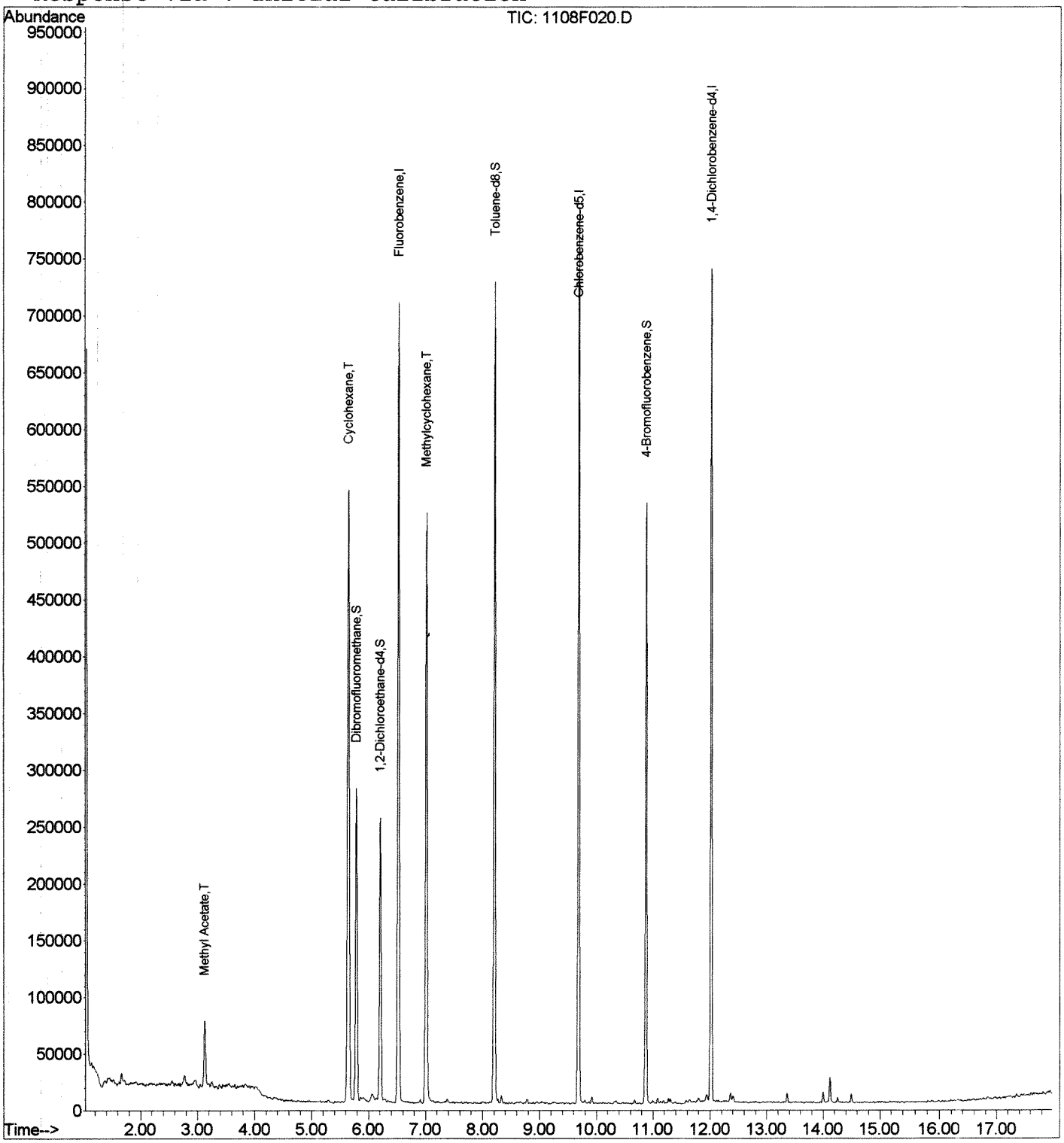
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.52	96	654814	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	246645	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	209474	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.79	113	173214	10.24	PPB	0.00
Spiked Amount 10.000			Recovery =	102.40%		
46) 1,2-Dichloroethane-d4	6.21	65	175877	10.38	PPB	0.00
Spiked Amount 10.000			Recovery =	103.80%		
61) Toluene-d8	8.20	98	500049	8.82	PPB	0.00
Spiked Amount 10.000			Recovery =	88.20%		
83) 4-Bromofluorobenzene	10.87	95	174722	8.60	PPB	0.00
Spiked Amount 10.000			Recovery =	86.00%		
Target Compounds						Qvalue
18) Methyl Acetate	3.12	43	83438	9.79	PPB	94
40) Cyclohexane	5.64	56	254830	8.87	PPB	97
51) Methylcyclohexane	7.01	83	194075	8.45	PPB	98

(#) = qualifier out of range (m) = manual integration
1108F020.D 110818MS27_8260.M Sat Nov 17 15:04:01 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F020.D Vial: 17
Acq On : 8 Nov 2018 5:56 pm Operator: LM
Sample : CLP ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 15:03 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration



Date: 11-27-18

ALS Environmental
Injection Log

Tune File: 13FB

By: LM

New Tune: NO

IS/SS Std. ID: 90V04-770 xP 12-9-18 MS27 - Agilent 5975C

TCLP: 616519
W: 616534

CCV Std ID: 90V04-91B xP 12-03-18 / -750 xP 12-08-18 / -91A -91B -91C -91D -91H

ICAL Date: 110818-15885

MS/DMS/LCS/ICV Std ID: 90V04-83A xP 11-28-18

Second RV: 12/8/18

BFB Std. ID: 90V04-76A xP 12-05-18

LIMS ID: KWG1806328 / 6329(W)

TCLP: B349 - 6350 / 6352

	Sample Name	File Name	Method	Dilution	pH<2	Comments
1	BFB	1127F004	BFB	1µL DI		
2	CCV	5	8260M	10/5µL->50mL		
3	LCS	6		10/50/5/5/5/7.5µL	->50 mL	
4	BLCS	7		↓		
5	400x lc 11086 LCS	8		125µL->50mL (400x) 10µL->50mL		
6	400x lc 11086-001 MS	9		125µL->50mL (400x) 10µL->50mL		
7	IB	10				
8	MRL	11		0.5/0.25µL->50mL		
9	MB	12				
10	400x lc 11086 MB	13		400x 125µL->50mL		
11	400x lc 11120 MB	14				
12	400x lc 11381/1438 MB	15				
13	400x lc 11086-001	16				
14	400x lc 11120-001	17				
15	↓ -002	18				
16	-003	19				
17	↓ -004	20				
18	400x lc 11381-004	21				
19	↓ -005	22				
20	400x lc 11438-001	23				
21	↓ -002	24		↓		
22	lc 11221-001	25				
23	-002	26				
24	↓ -003	27				
25	lc 11221-002 MS	28		8.8/4.4/4.4/4.4/4.4/6.6µL->4.4mL		
26	↓ DMS	↓ 29	↓	↓		
27						

Preparation Information

Group ID:	KWG1806329	**Prep Method:**	EPA 5030B	**Prep Date:**	11/27/18 00:00
Department:	VOA GCMS				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.
K1811221-001	LFMW-1	8260C VOC FP	WATER	10ml	10ml
K1811221-002	LFMW-2	8260C VOC FP	WATER	10ml	10ml
K1811221-003	LFMW-3	8260C VOC FP	WATER	10ml	10ml
KWG1806329-1	Matrix Spike	8260C VOC FP	WATER	10ml	10ml
KWG1806329-2	Duplicate Matrix Spike	8260C VOC FP	WATER	10ml	10ml
KWG1806329-3	Lab Control Sample	8260C VOC FP	WATER	10ml	10ml
KWG1806329-4	Method Blank	8260C VOC FP	WATER	10ml	10ml
KWG1806329-5	Duplicate Lab Control Sampl	8260C VOC FP	WATER	10ml	10ml

Lab Code	Parent Lab Code	Comments
KWG1806329-1	K1811221-002	
KWG1806329-2	K1811221-002	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1811221-001	1705746					
K1811221-002	1705747					
K1811221-003	1705745					
KWG1806329-1	1705748					
KWG1806329-2	1705749					
KWG1806329-3	1705750					
KWG1806329-4	1705751					
KWG1806329-5	1705840					

Comments:

Started By: LMuresan Assisted By: Training Yes No

Completed By: LMuresan Assisted By: Yes No

Reviewed By: Date: Storage:

Chain of Custody

Relinquished By: Date: Extracts Examined

Received By: Date: Yes No

Preparation Information

Group ID:	KWG1806349	**Prep Method:**	EPA 5035A/5030B	**Prep Date:**	11/27/18 00:00
Department:	VOA GCMS	**Pre-Prep Method:**	EPA 1311	**Pre-Prep Date:**	11/19/2018 - 11/20/2018

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1811086-001	Kiln Brick	8260C VOC TCLP	SOLID	125uL	50ml	
KWG1806349-1	Matrix Spike	8260C VOC TCLP	SOLID	125uL	50ml	
KWG1806349-2	Lab Control Sample	8260C VOC TCLP	SOLID	125uL	50ml	
KWG1806349-3	Method Blank	8260C VOC TCLP	SOLID	125uL	50ml	

Lab Code	Parent Lab Code	Comments
KWG1806349-1	K1811086-001	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1811086-001	1705819					
KWG1806349-1	1705820					
KWG1806349-2	1705821					
KWG1806349-3	1705822					

Comments:

Started By: LMuresan Assisted By: Training Yes No

Completed By: LMuresan Assisted By: Yes No

Reviewed By: Date: Storage:

Chain of Custody

Relinquished By: Date: Extracts Examined

Received By: Date: Yes No

Service Request #: K1811086 Date Extracted: 11/19/18

Analyst: Tim Jones

TCLP/ZHE

Unit #	Sample	I.D. ✓	Matrix	Particle Size Reduced?	Wt of Solids	Vol of Extract Fluid	pH of Extract Fluid	Tedlar Bag Used?	ZHE Unit Still Pressurized?	Filtrate Mixed with Extract?	pH of Filtrate ?
AS11	K1811086-1	.01 ✓	Soil		25.00g	500mL	4.90	No	Yes	—	6
AS14	M. Blank	✓	TCLP Fluid		—	500mL	4.90	No	Yes	—	5

11/19/18 EJ

Wt. to Charge ZHE = $\frac{n}{\%Solids}$ x 100 , n = desired wt. of solids (max 25 grams)

PERCENT SOLIDS

Sample	Total Wt of Sample For Filtering	Wt of Beaker Residue	Net Sample Wt	Initial Filter Wt (1)	Final Filter Wt (2)	Wt of Filtered Solids	% Solids

11/19/18 EJ

1) = Before Filtering Sample (2) = After Drying %Solids = $\frac{\text{Final Filer Wt} - \text{Initial Filter Wt}}{\text{Total Wt of Sample}}$ X 100

Extract Fluid Lot # TCLP-19D Rotation Speed: 30.2 RPM

Initial Temp: 75°F Constant Temp: Yes or N (23±2°C)

Date/Time/Initials Weighed: 11/16/18 11:26 EJ Balance ID: — Calibration Verified ☑

VOA Vial Lot# 8-059-001

Filter Lot #: 161012

Extract Started (Time/Date/Initial): 18:15 11/19/18 EJ

Stopped (Time/Date/Initial): 12:36 11/20/18 EJ

Extracts Stored: MISTY-10

Comments: Tumble 18 ± 2 hours

Prep Run# 326631

Reviewed By:

I:\Extractions\Active Benchsheets\ZHE\ZERO HEADSPACE EXTRACTION.doc

K1811086-001..01
TCLP ZHE: 25.00g EJ
Weighed: 11/16/2018 11:26:13 AM

Chart

TempSys: Temperature Assurance System

Equipment
ZHE RM

Area
108

Period
Past 12 hours

Reference Date:
11/19/2018

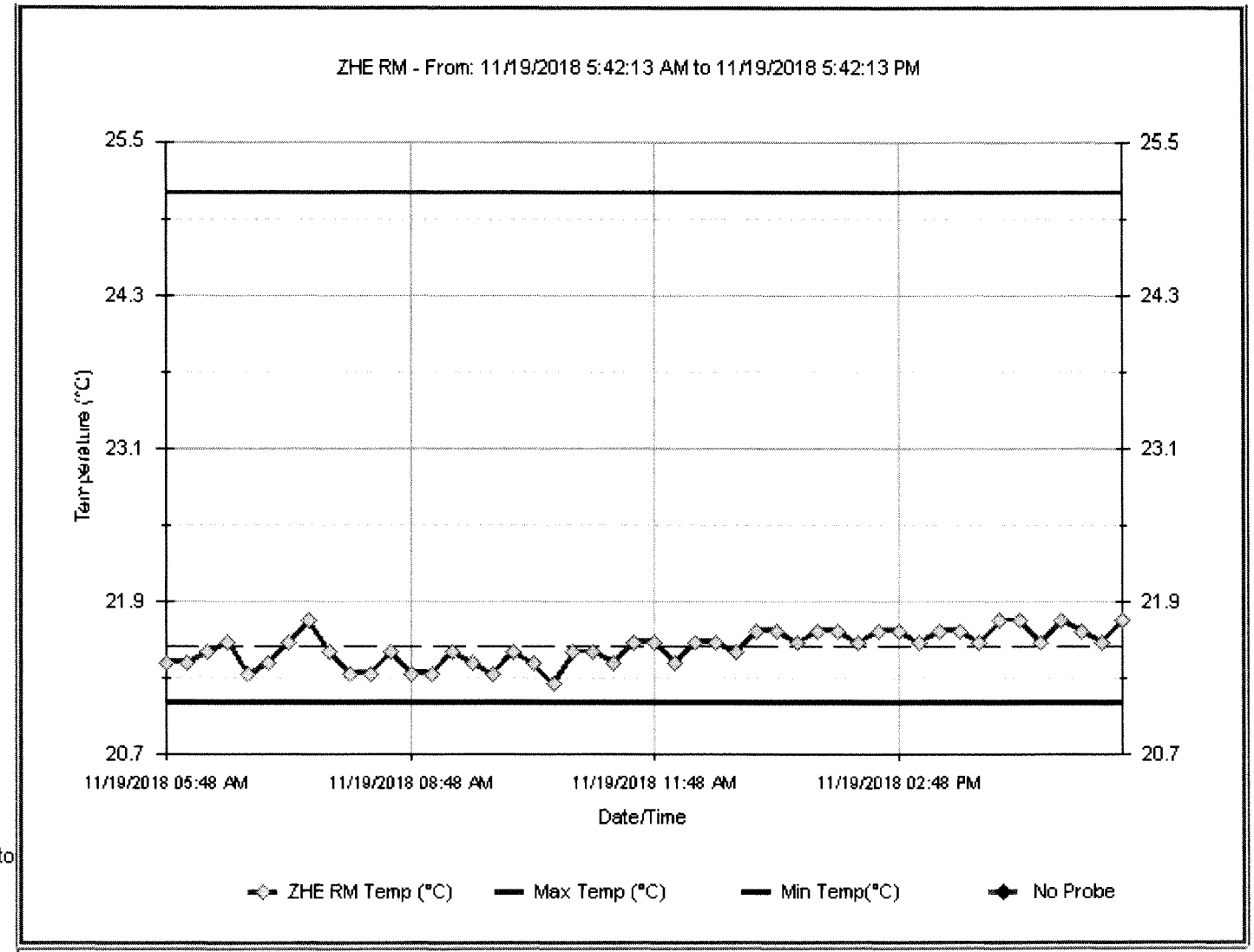
☑ Show data points

Print

Capture Snapshot

View Numeric Table

Click a legend to hide or show chart lines



Max. 11/19/2018 07:33 21.75 C , Min. 11/19/2018 10:33 21.25 C , Average: 21.54 C , MKT 21.54 ,

Chart

TempSys: Temperature Assurance System

Equipment
ZHE RM

Area
108

Period
Past 12 hours

Reference Date:
11/20/2018

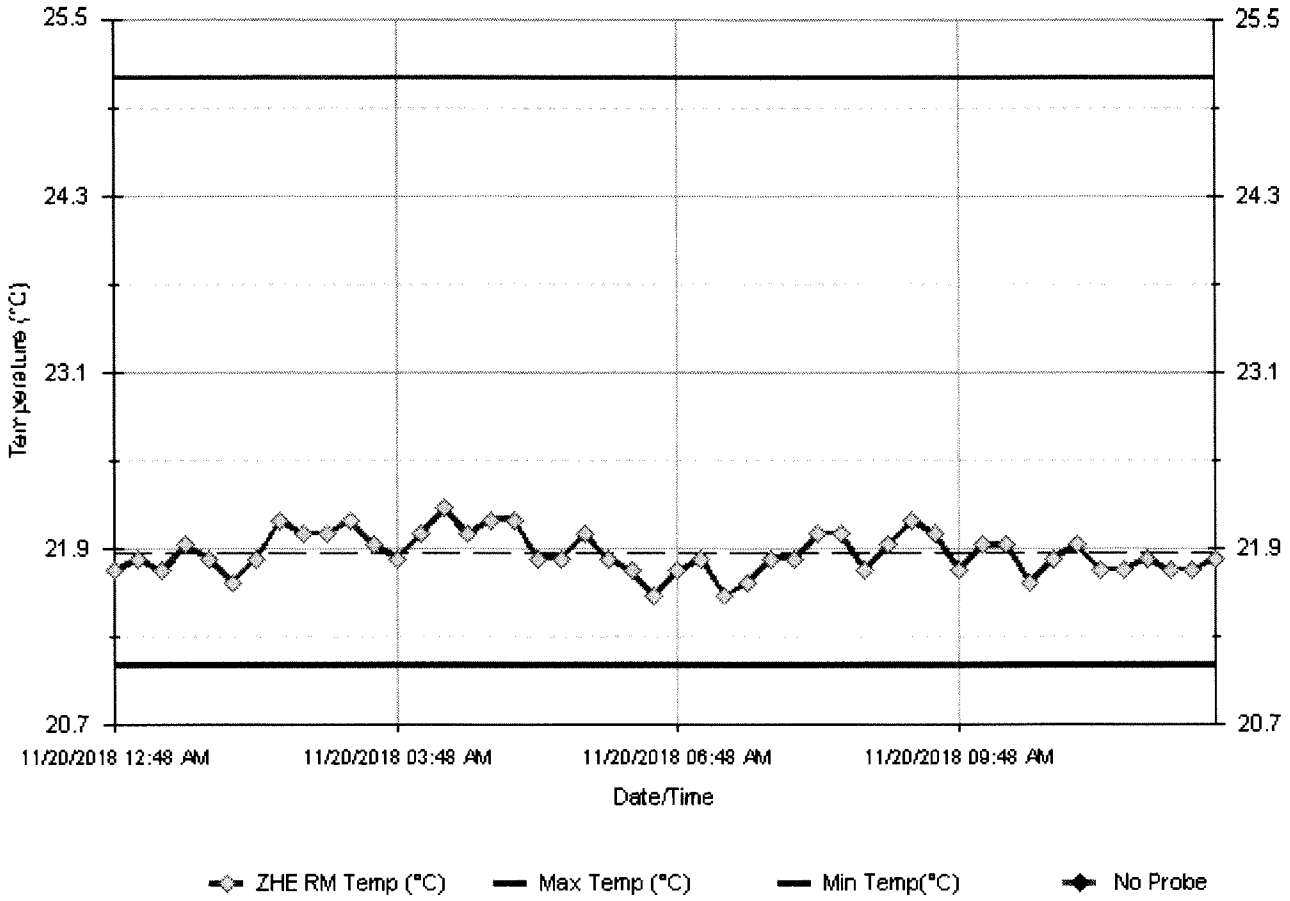
Show data points

Print

Capture Snapshot

View Numeric Table

Click a legend to hide or show chart lines



Max. 11/20/2018 04:18 22.18 C , Min. 11/20/2018 06:33 21.58 C , Average: 21.87 C , MKT 21.87 ,

Pre-Prep Information Benchsheet

Prep Run #: 326631 **Prep Method:** **Team:** **Container Lot No:** 100118-1TW **Prep Due Date:**

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1811086-001	.01	TCLP ZHE	25.00g		PrepComments:SCHAPPELLE K-Balance-52

Relinquished By:	Date/Time:	Received By:	Date/Time:
Sc	11/16/18 1128		

Preparation Information

Group ID:	KWG1806350	**Prep Method:**	EPA 5035A/5030B	**Prep Date:**	11/27/18 00:00
Department:	VOA GCMS	**Pre-Prep Method:**	EPA 1311	**Pre-Prep Date:**	11/15/2018 - 11/16/2018

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1811120-001	SL0084	8260C VOC TCLP	SOIL	125uL	50ml	
K1811120-002	SL0064	8260C VOC TCLP	SOIL	125uL	50ml	
K1811120-003	SL0065	8260C VOC TCLP	SOIL	125uL	50ml	
K1811120-004	SL0022	8260C VOC TCLP	SOIL	125uL	50ml	
KWG1806350-1	Lab Control Sample	8260C VOC TCLP	SOIL	125uL	50ml	
KWG1806350-2	Method Blank	8260C VOC TCLP	SOIL	125uL	50ml	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1811120-001	1705824					
K1811120-002	1705825					
K1811120-003	1705826					
K1811120-004	1705823					
KWG1806350-1	1705827					
KWG1806350-2	1705828					

Comments:

Started By: LMuresan Assisted By: _____ Training Yes No

Completed By: LMuresan Assisted By: _____ Yes No

Reviewed By: _____ Date: _____ Storage: _____

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Service Request #: K1811120 Date Extracted: 11/15/18

Analyst: Tim Jones

TCLP/ZHE

Unit #	Sample	I.D. ✓	Matrix	Particle Size Reduced?	Wt of Solids	Vol of Extract Fluid	pH of Extract Fluid	Tedlar Bag Used?	ZHE Unit Still Pressurized?	Filtrate Mixed with Extract?	pH of Filtrate ?
ALS5	K1811120-1	✓	Soil	No	25.08g	500mL	4.90	No	yes		5
ALS7	K1811120-2	✓	Soil	No	25.01g	500mL	4.90	No	yes		5
ALS8	K1811120-3	✓	Soil	No	24.98g	500mL	4.90	No	yes		5
ALS9	K1811120-4	✓	Soil	No	25.16g	500mL	4.90	No	yes		5
ALS13	M. Blank	—	TCLP Fluid	No	500mL	500mL	4.90	No	yes		5

11/15/18 EJ

Wt. to Charge ZHE = $\frac{n}{\%Solids}$ x 100 , n = desired wt. of solids (max 25 grams)

PERCENT SOLIDS

Sample	Total Wt of Sample For Filtering	Wt of Beaker Residue	Net Sample Wt	Initial Filter Wt (1)	Final Filter Wt (2)	Wt of Filtered Solids	% Solids

11/15/18 EJ

1) = Before Filtering Sample (2) = After Drying %Solids = $\frac{\text{Final Filer Wt} - \text{Initial Filter Wt}}{\text{Total Wt of Sample}}$ X 100

Extract Fluid Lot #TCLP-19D Rotation Speed: 29.9 RPM

Initial Temp: _____ Constant Temp: Yes or N (23±2°C)

Date/Time/Initials Weighed: 11/15/18 20:07 EJ Balance ID: Balance-46 Calibration Verified ☑

VOA Vial Lot# 8-039-001

Filter Lot #: 16012

Extract Started (Time/Date/Initial): 20:45 11/15/18 EJ

Stopped (Time/Date/Initial): 14:45 11/16/18 EJ

Extracts Stored: K-MISTY 10

Comments: Tumble 18 ± 2 hours

Reviewed By: _____

I:\Extractions\Active Benchsheets\ZHE\ZERO HEADSPACE EXTRACTION.doc

75 F

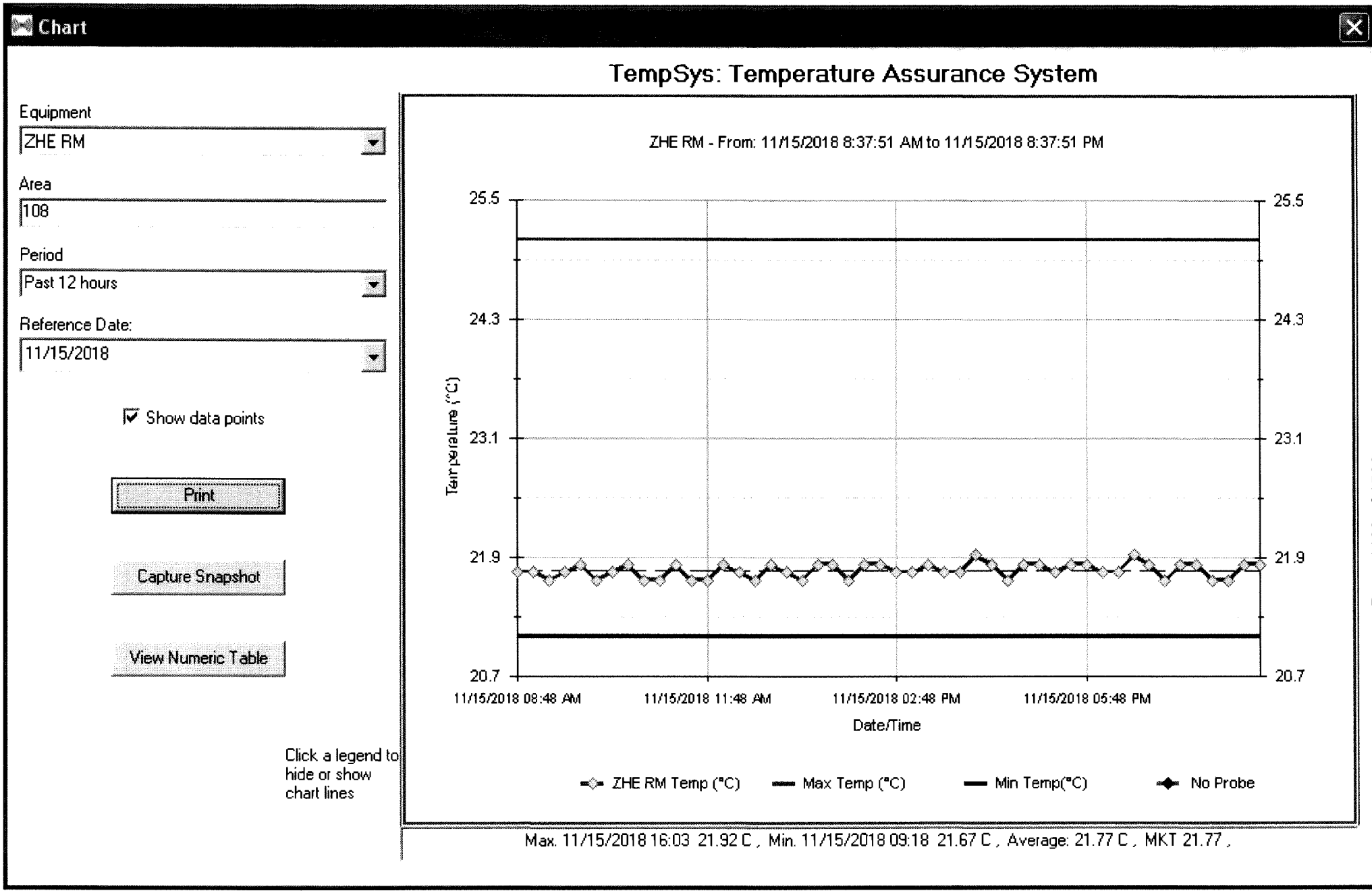


Chart
TempSys: Temperature Assurance System
Equipment
ZHE RM
Area
108
Period
Past 12 hours
Reference Date:
11/15/2018
Show data points
Print
Capture Snapshot
View Numeric Table
Click a legend to hide or show chart lines
ZHE RM - From: 11/15/2018 8:37:51 AM to 11/15/2018 8:37:51 PM
25.5
24.3
23.1
21.9
20.7
Temperature (°C)
11/15/2018 08:48 AM
11/15/2018 11:48 AM
11/15/2018 02:48 PM
11/15/2018 05:48 PM
Date/Time
ZHE RM Temp (°C)
Max Temp (°C)
Min Temp(°C)
No Probe
Max. 11/15/2018 16:03 21.92 C , Min. 11/15/2018 09:18 21.67 C , Average: 21.77 C , MKT 21.77 ,

Chart

TempSys: Temperature Assurance System

Equipment
ZHE RM

Area
108

Period
Past 12 hours

Reference Date:
11/16/2018

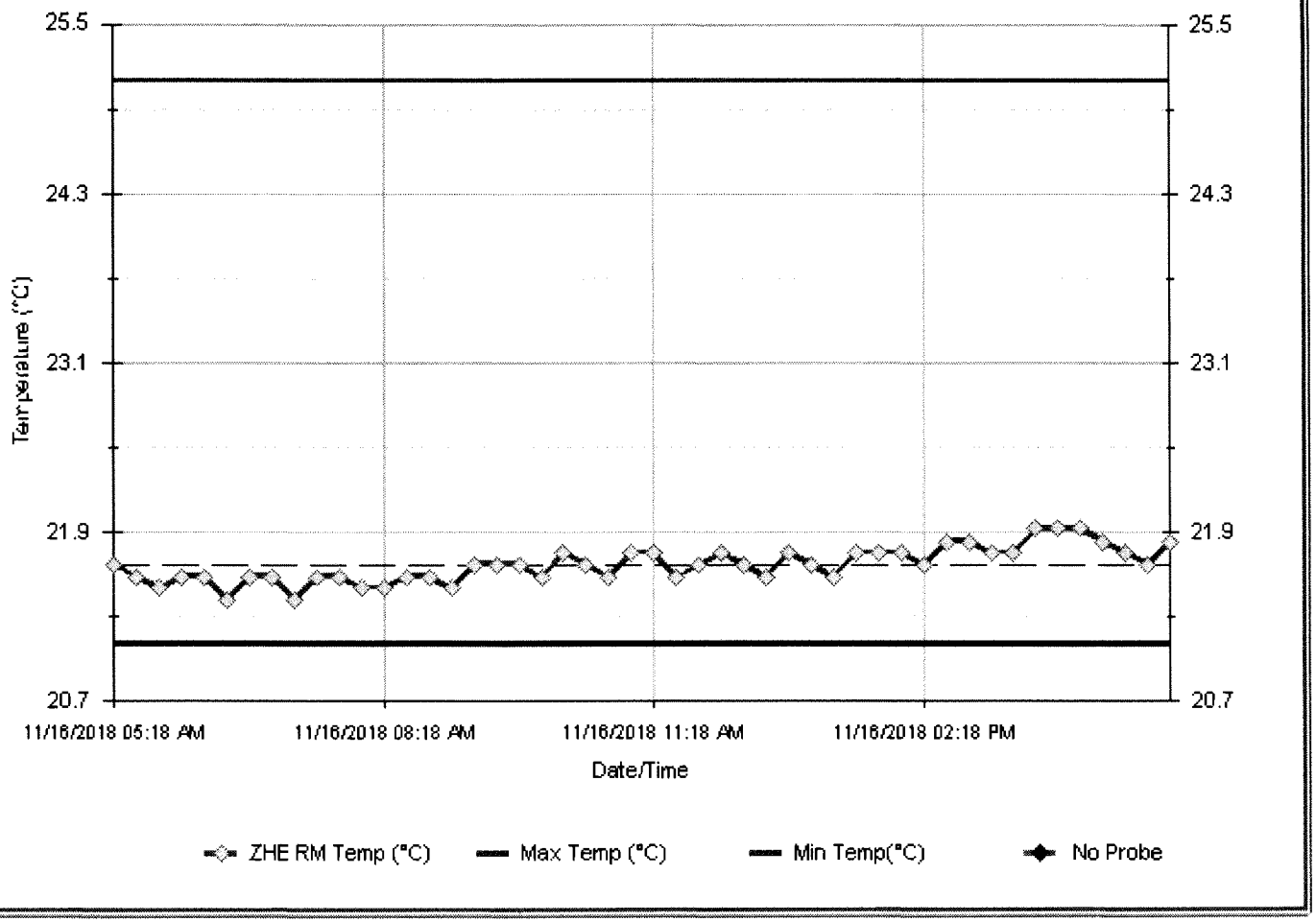
Show data points

Print

Capture Snapshot

View Numeric Table

Click a legend to hide or show chart lines



Max. 11/16/2018 15:33 21.92 C , Min. 11/16/2018 06:33 21.42 C , Average: 21.67 C , MKT 21.67 ,

Preparation Information

Group ID:	KWG1806352	**Prep Method:**	EPA 5035A/5030B	**Prep Date:**	11/27/18 00:00
Department:	VOA GCMS	**Pre-Prep Method:**	EPA 1311	**Pre-Prep Date:**	11/26/2018 - 11/27/2018

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1811381-004	SL0153	8260C VOC TCLP	SOIL	125uL	50ml	
K1811381-005	SL0146	8260C VOC TCLP	SOIL	125uL	50ml	
K1811438-001	SL0547	8260C VOC TCLP	SOIL	125uL	50ml	
K1811438-002	SL0554	8260C VOC TCLP	SOIL	125uL	50ml	
KWG1806352-1	Lab Control Sample	8260C VOC TCLP	SOIL	125uL	50ml	
KWG1806352-2	Method Blank	8260C VOC TCLP	SOIL	125uL	50ml	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1811381-004	1705835					
K1811381-005	1705836					
K1811438-001	1705837					
K1811438-002	1705834					
KWG1806352-1	1705838					
KWG1806352-2	1705839					

Comments:

Started By: LMuresan Assisted By: _____ Training Yes No

Completed By: LMuresan Assisted By: _____ Yes No

Reviewed By: _____ Date: _____ Storage: _____

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Service Request #: K1811381, 1438 Date Extracted: 11/26/18

Analyst: Tim Jones

TCLP/ZHE

Unit #	Sample	I.D. ✓	Matrix	Particle Size Reduced?	Wt of Solids	Vol of Extract Fluid	pH of Extract Fluid	Tedlar Bag Used?	ZHE Unit Still Pressurized?	Filtrate Mixed with Extract?	pH of Filtrate ?
ALS9	K1811381-4	.04✓	Soil	N	25.21g	500mL	4.90	N	yes	No	7
ALS10	K1811381-5	.05✓	Soil	N	25.12g	500mL	4.90	N	yes	No	7
ALS7	K1811438-1	.10✓	Soil	N	24.98g	500mL	4.90	N	yes	No	7
ALS8	K1811438-2	.02✓	Soil	N	24.97g	500mL	4.90	N	yes	No	7
ALS5	M.Blank	—	TCLP Fluid	N	—	500mL	4.90	N	yes	—	5

11/26/18 EJ

Wt. to Charge ZHE = $\frac{n}{\%Solids}$ x 100 , n = desired wt. of solids (max 25 grams)

PERCENT SOLIDS

Sample	Total Wt of Sample For Filtering	Wt of Beaker Residue	Net Sample Wt	Initial Filter Wt (1)	Final Filter Wt (2)	Wt of Filtered Solids	% Solids

11/26/18 EJ

(1) = Before Filtering Sample (2) = After Drying %Solids = $\frac{\text{Final Filer Wt} - \text{Initial Filter Wt}}{\text{Total Wt of Sample}}$ X 100

Extract Fluid Lot # TCLP-19D Rotation Speed: 29.4 rpm

Initial Temp: 75°F Constant Temp: Yes or N (23±2°C)

Date/Time/Initials Weighed: 11/26/18 13:35 EJ Balance ID: K-Bal 46 Calibration Verified ☑

VOA Vial Lot#

Filter Lot #: 16012

Extract Started (Time/Date/Initial): ~~14:27~~ 11/26/18 EJ 16:21 11/26/18 EJ

Topped (Time/Date/Initial): 12:03 11/27/18 EJ

Extracts Stored: MISTY-10

Comments: Tumble 18 ± 2 hours

prep run #327058

Reviewed By:

I:\Extractions\Active Benchsheets\ZHE\ZERO HEADSPACE EXTRACTION.doc

Chart

TempSys: Temperature Assurance System

Equipment
ZHE RM

Area
108

Period
Past 12 hours

Reference Date:
11/26/2018

☑ Show data points

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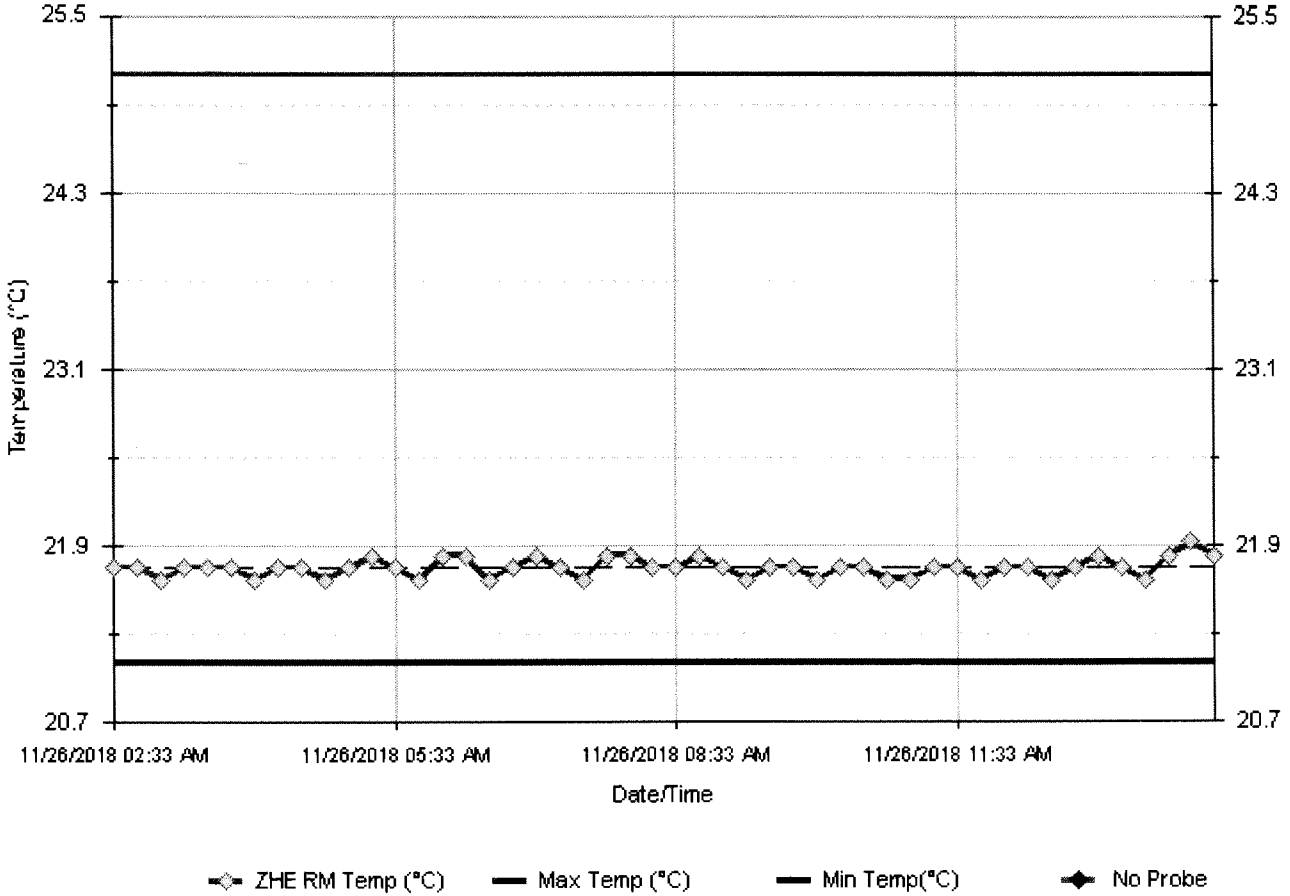


Max. 11/26/2018 14:03 21.92 C , Min. 11/26/2018 03:03 21.67 C , Average: 21.75 C , MKT 21.75 ,

Chart

TempSys: Temperature Assurance System

Equipment
ZHE RM

Area
108

Period
Past 12 hours

Reference Date:
11/27/2018

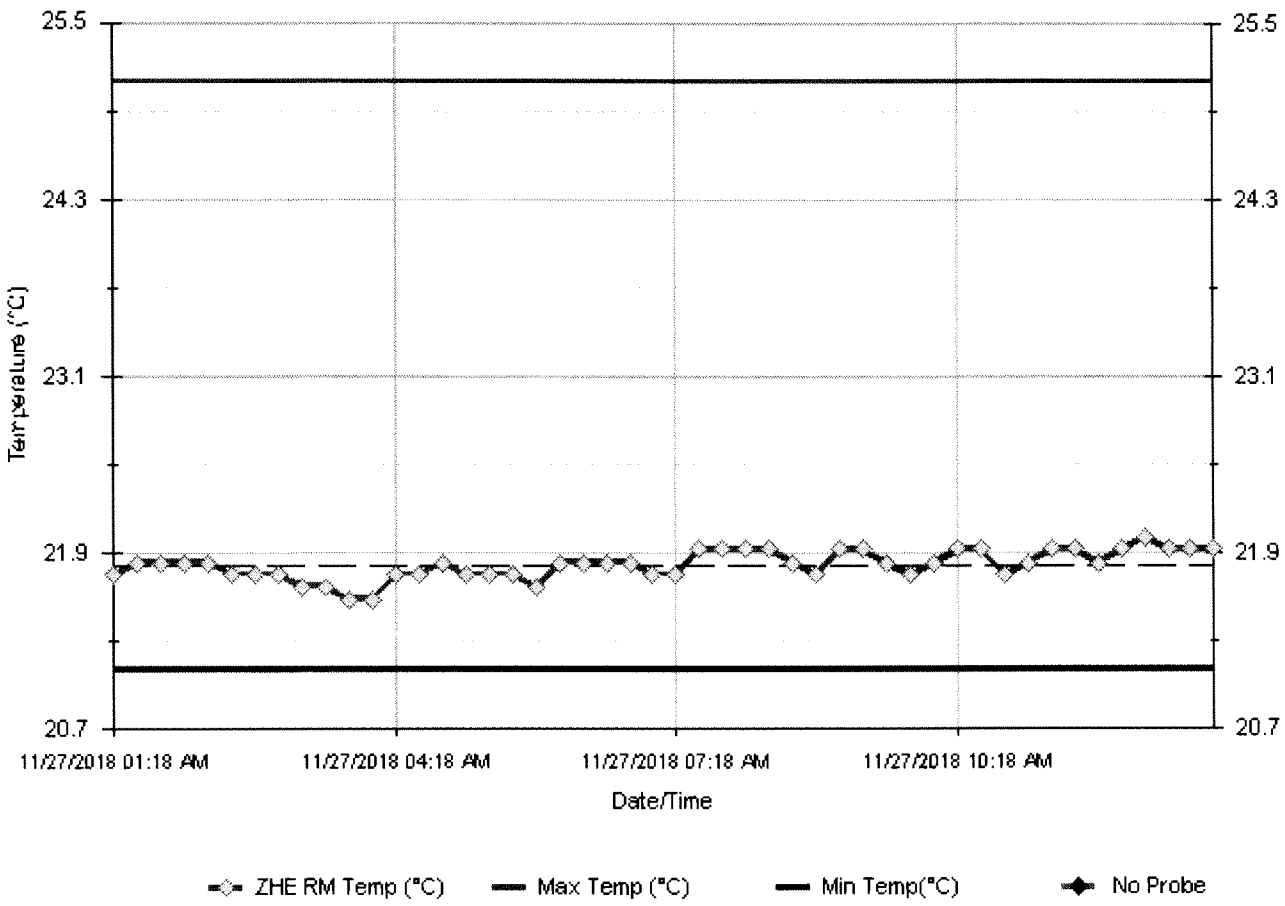
Show data points

Print

Capture Snapshot

View Numeric Table

Click a legend to hide or show chart lines



Max. 11/27/2018 12:18 22.00 C , Min. 11/27/2018 03:48 21.58 C , Average: 21.82 C , MKT 21.82 ,

Date: 11-8-18

By: LM

ALS Environmental
Injection Log
MS27 - Agilent 5975C

Tune File: BFB

New Tune: YES

IS/~~SS~~ Std. ID: 90v04-746 xP 12-7-18 EELM 11-878

CCV Std ID: —

MS/DMS/LCS/ICV Std ID: —

BFB Std. ID: 90v04-764 xP 12-5-18

ICAL Date: new cal-15885

Second RV: 11/26/18

LIMS ID: —

	Sample Name	File Name	Method	Dilution	pH<2	Comments
1	BFB	1108F003	BFB	1µL DI		
2	IB	4	8260M			
3	ICAL 0.1 PPB	5		see prep sheet		
4	0.2	6				
5	0.5	7				
6	1.0	8				
7	2.0	9				
8	5.0	10				
9	10	11				
10	20	12				
11	40	13				
12	60	14				
13	80	15				
14	IB	16				
15	IB	17				
16	8260 ICV	18				NR
17	8260 ICV	19				
18	CLP ICV	20				
19	CLP ICV	21				NR
20						
21						
22						
23						
24						
25						
26						
27						

R:\VOA\Injection Logs\INJLOG_MS27_Rev1

INTIAL CALIBRATION CURVE

Date 11-8-18 Analysis: 8260

Prepared By CM Instrument: MS27

Matrix: Water

Stock Solution #1 90V04-76B (xP 11-15-18) Analytes: Surrogate Init. Concentration: 100ppm

Stock Solution #2 90V04-75B (xP 11-15-18) Analytes: Low 8260 Init. Concentration: 5/10/20/100/200ppm

Stock Solution #3 90V04-75A (xP 11-13-18) Analytes: 8260 Init. Concentration: 50/100/200/1000/2000ppm

Stock Solution #4 90V04-75E (xP 12-8-18) Analytes: Low Ketones Init. Concentration: 200ppm

Stock Solution #5 90V04-75D (xP 01-08-19) Analytes: Ketones Init. Concentration: 2000ppm

Aliquot of Stock Solution #1 (µL)	Final Conc. of #1 (µg/L)	Aliquot of Stock Solution #2 (µL)	Final Conc. of #2 (µg/L)	Aliquot of Stock Solution #3 (µL)	Final Conc. of #3 (µg/L)	Aliquot of Stock Solution #4 (µL)	Final Conc. of #4 (µg/L)	Aliquot of Stock Solution #5 (µL)	Final Conc. of #5 (µg/L)	Final Volume (mL)
		1	0.1			1	4			50
		2	0.2			2	8			50
		5.0	0.5			5	20			50
2.0	4	10	1			10	40			50
3.0	6			2.0	2			2	80	50
4.0	8			5.0	5			2.5	100	50
5.0	10			10	10			5.0	200	50
6	12			20	20			10	400	50
7	14			40	40			20	800	50
8	16			60	60			40	1600	50
10	20			80	80			50	2000	50

8260 ICV: 10uL of 50/250ppm Accustd ICV (90V04-76G xP 11-15-18) + 50uL of 100ppm Acrolein (90V04-74C xP 11-14-18) +

5uL of 100ppm Dichlorofluoromethane (90V04-73G xP 11-14-18) + 5uL of 200ppm n-Octane/TBF/Tetrahydrafuran (90V04-77B xP 12-8-18)

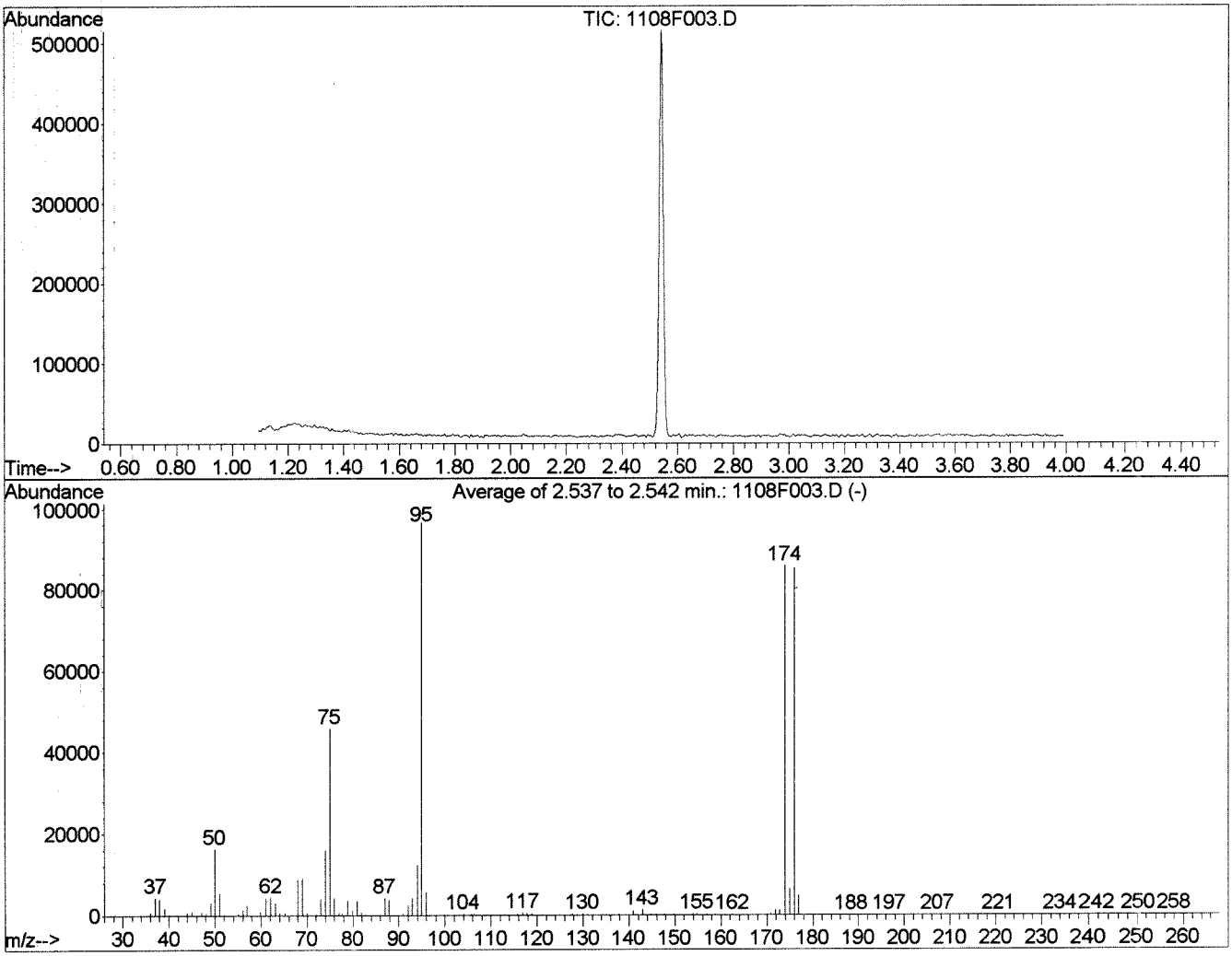
5uL of 100ppm Oxygenates (90V04A-74B xP 11-14-18) + 7.5uL of Appendix ICV mix(90V04A-74A xP 11-14-18) + 25uL of 1000ppm 2-Propanol(90V04A-76I xP 1-8-19)

5uL of 100ppm CLP (90V04A-77C xP 11-15-18)

+ SS

Data File : J:\MS27\DATA\110818\1108F003.D
Acq On : 8 Nov 2018 11:26 am
Sample : BFB
Misc :
MS Integration Params: rteint.p
Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B

Vial: 1
Operator: LM
Inst : MS27
Multiplr: 1.00



AutoFind: Scans 519, 520, 521; Background Corrected with Scan 508

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.8	16294	PASS
75	95	30	60	47.4	45882	PASS
95	95	100	100	100.0	96701	PASS
96	95	5	9	5.9	5728	PASS
173	174	0.00	2	1.4	1225	PASS
174	95	50	120	88.9	85981	PASS
175	174	5	9	7.5	6429	PASS
176	174	95	101	99.2	85285	PASS
177	176	5	9	5.7	4901	PASS

J:\MS27\DATA\110818\1108F003.D 110818MS27_8260.M Sat Nov 17 14:45:37 20

LM 11-17-18

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F004.D Vial: 2
Acq On : 8 Nov 2018 11:48 am Operator: LM
Sample : IB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 14:46:10 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:20:51 2018 LM 11-17-18
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.51	96	655110	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	246322	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	202983	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	0.00	113	0	0.00	PPB	
Spiked Amount 10.000			Recovery =	0.00%		
46) 1,2-Dichloroethane-d4	0.00	65	0	0.00	PPB	
Spiked Amount 10.000			Recovery =	0.00%		
61) Toluene-d8	0.00	98	0	0.00	PPB	
Spiked Amount 10.000			Recovery =	0.00%		
83) 4-Bromofluorobenzene	0.00	95	0	0.00	PPB	
Spiked Amount 10.000			Recovery =	0.00%		
Target Compounds						Qvalue
3) Chloromethane	1.32	50	608	0.02	PPB	71
5) Bromomethane	1.84	96	716	Below Cal	#	1
10) Acrolein	2.55	56	617	0.26	PPB #	54
13) Acetone	2.75	43	1534	0.58	PPB	65
15) Carbon Disulfide	2.77	76	1549	0.03	PPB	90
20) Methylene Chloride	3.24	84	1846	0.09	PPB #	65
73) 1-Chlorohexane	9.68	91	1404	0.08	PPB	65
99) n-Butylbenzene	12.36	91	660	0.01	PPB	74

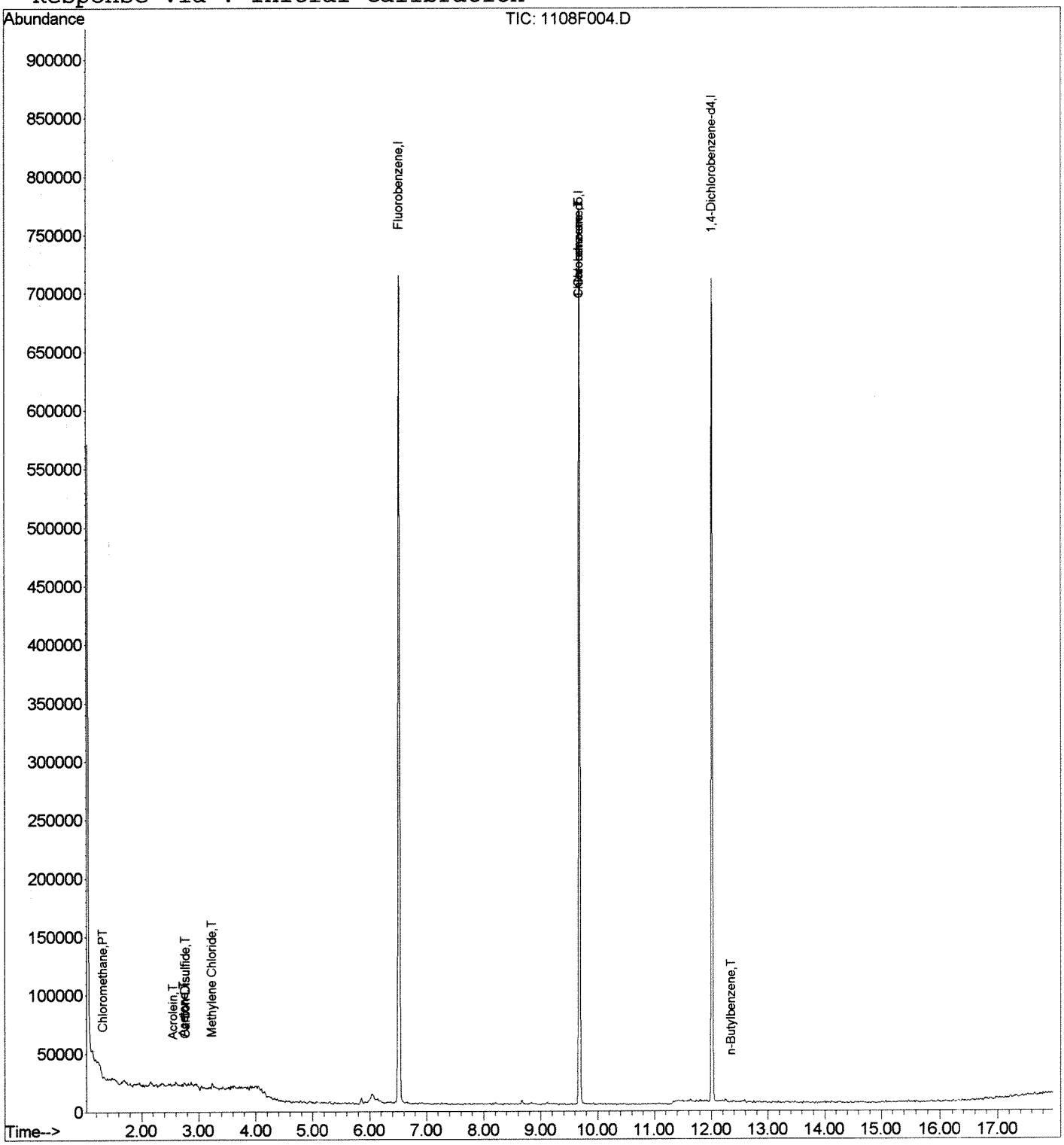
11/26/18

(#) = qualifier out of range (m) = manual integration
1108F004.D 110818MS27_8260.M Sat Nov 17 14:48:49 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F004.D Vial: 2
Acq On : 8 Nov 2018 11:48 am Operator: LM
Sample : IB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 14:48 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:20:51 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F005.D Vial: 2
Acq On : 8 Nov 2018 12:27 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:27 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

LM 11-17-18

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.51	96	630237	10.00	PPB		0.00
63) Chlorobenzene-d5	9.68	82	237100	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	196898	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	0.00	113	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
46) 1,2-Dichloroethane-d4	0.00	65	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
61) Toluene-d8	0.00	98	0d	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
83) 4-Bromofluorobenzene	10.87	95	1031	0.05	PPB		0.00
Spiked Amount 10.000			Recovery =	0.50%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.17	85	920	0.05	PPB		84
3) Chloromethane	1.32	50	2832	0.12	PPB		81
4) Vinyl Chloride	1.41	62	1539	0.07	PPB		91
5) Bromomethane	1.71	96	2210	0.15	PPB		81
6) Chloroethane	1.81	64	1161	0.09	PPB		51
7) Dichlorofluoromethane	2.02	67	2690	0.09	PPB		63
8) Trichlorofluoromethane	2.01	101	1641	0.06	PPB		85
9) Ethyl Ether	2.33	59	1047	0.11	PPB		95
10) Acrolein	2.55	56	4857	2.22	PPB		94
11) Trichlorotrifluoroethane	2.54	151	931	0.08	PPB	#	65
12) 1,1-Dichloroethene	2.56	96	1728m	0.11	PPB		
13) Acetone	2.74	43	11476m	4.67	PPB		
14) Iodomethane	2.75	142	6346	0.25	PPB		85
15) Carbon Disulfide	2.77	76	4219	0.09	PPB		82
16) 2-Propanol (Isopropyl Alco	2.94	45	2459	6.39	PPB	#	1
17) 3-Chloro-1-propene	3.04	76	996	0.11	PPB	#	65
19) Acetonitrile	3.19	40	2032	3.32	PPB		88
20) Methylene Chloride	3.24	84	3293	0.18	PPB		85
22) Acrylonitrile	3.74	53	1744m	0.43	PPB		
23) Methyl tert-Butyl Ether	3.55	73	8014	0.22	PPB		92
24) trans-1,2-Dichloroethene	3.55	96	2158	0.12	PPB	#	77
25) Hexane	3.84	57	1880	0.09	PPB		79
26) Diisopropyl Ether	4.32	45	5819	0.11	PPB		92
27) 1,1-Dichloroethane	4.27	63	3556	0.11	PPB		82
29) Chloroprene	4.35	53	5880	0.29	PPB		94
30) tert-Butyl Ethyl Ether	4.86	59	4128	0.10	PPB		89
31) 2,2-Dichloropropane	5.06	77	1498	0.07	PPB		88

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F005.D Vial: 2
Acq On : 8 Nov 2018 12:27 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:27 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
32)	cis-1,2-Dichloroethene	5.14	96	2592	0.14	PPB	#	70
33)	2-Butanone	5.24	72	4646	4.20	PPB	#	61
35)	Propionitrile	5.42	54	672	0.48	PPB		68
36)	Methacrylonitrile	5.56	67	1622	0.35	PPB	#	76
37)	Bromochloromethane	5.46	128	1116	0.11	PPB	#	73
39)	Chloroform	5.57	83	3472	0.11	PPB		95
41)	1,1,1-Trichloroethane	5.70	97	1863	0.07	PPB		93
43)	Carbon Tetrachloride	5.84	117	1628	0.07	PPB		84
44)	1,1-Dichloropropene	5.90	75	1691	0.08	PPB		96
45)	Isobutyl Alcohol	6.29	42	715	3.37	PPB		85
47)	Benzene	6.14	78	6972	0.10	PPB		94
48)	1,2-Dichloroethane	6.29	62	1904	0.09	PPB		81
49)	tert-Amyl Methyl Ether	6.30	55	1420	0.11	PPB	#	64
50)	Trichloroethene	6.90	95	1435	0.08	PPB		86
51)	Methylcyclohexane	7.00	83	1239	0.05	PPB		85
52)	1,2-Dichloropropane	7.21	63	1961	0.10	PPB		79
53)	Dibromomethane	7.34	93	966	0.09	PPB		94
54)	Methyl methacrylate	7.37	69	685	0.10	PPB		86
56)	Bromodichloromethane	7.52	83	2208	0.09	PPB		71
57)	2-Nitropropane	7.86	41	1470	0.62	PPB		85
59)	cis-1,3-Dichloropropene	7.99	75	2744	0.11	PPB		88
60)	4-Methyl-2-pentanone (MIBK	8.18	58	10081	2.63	PPB		86
62)	Toluene	8.27	92	2962	0.07	PPB		83
65)	trans-1,3-Dichloropropene	8.61	75	2300	0.11	PPB		85
66)	Ethyl methacrylate	8.65	69	1211	0.09	PPB		89
67)	1,1,2-Trichloroethane	8.79	83	1035	0.09	PPB		78
68)	Tetrachloroethene	8.78	164	1233	0.08	PPB	#	79
69)	2-Hexanone	9.03	57	2774	2.60	PPB	#	85
70)	1,3-Dichloropropane	8.95	76	2359	0.11	PPB		86
71)	Dibromochloromethane	9.13	129	1610	0.10	PPB		72
72)	1,2-Dibromoethane (EDB)	9.24	107	1023	0.08	PPB		95
73)	1-Chlorohexane	9.68	91	1948	0.12	PPB	#	66
74)	Chlorobenzene	9.71	112	4500	0.10	PPB		95
75)	Ethylbenzene	9.80	106	1649	0.07	PPB	#	81
76)	1,1,1,2-Tetrachloroethane	9.81	131	1721	0.10	PPB		82
77)	m,p-Xylenes	9.92	106	3418	0.12	PPB		99
78)	o-Xylene	10.31	106	1714	0.07	PPB		94
79)	Styrene	10.34	103	1517	0.07	PPB	#	75
80)	Bromoform	10.55	173	945	0.09	PPB		91
81)	Isopropylbenzene	10.67	105	3908	0.06	PPB		80
82)	cis-1,4-Dichloro-2-butene	10.84	89	509	0.30	PPB	#	74

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F005.D Vial: 2
Acq On : 8 Nov 2018 12:27 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:27 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

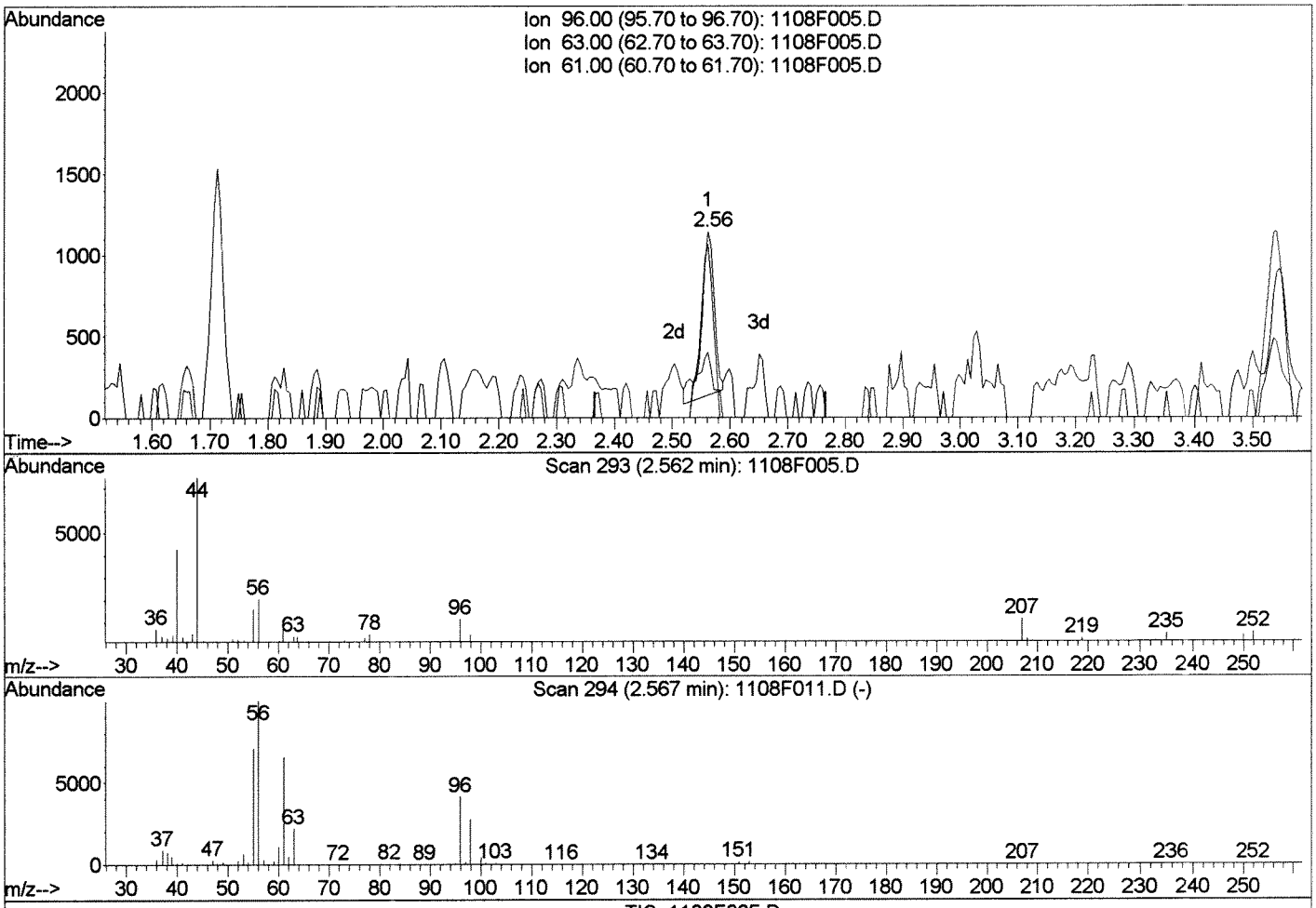
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
85)	1,1,2,2-Tetrachloroethane	11.07	83	1705	0.13	PPB		74
87)	Bromobenzene	11.00	156	1415	0.08	PPB	#	68
88)	n-Propylbenzene	11.08	91	4995	0.07	PPB		91
90)	2-Chlorotoluene	11.18	91	3312	0.08	PPB		97
91)	1,3,5-Trimethylbenzene	11.27	105	3398	0.07	PPB		95
92)	4-Chlorotoluene	11.30	91	3964	0.08	PPB		93
93)	tert-Butylbenzene	11.57	119	2580	0.06	PPB		88
94)	1,2,4-Trimethylbenzene	11.64	105	3239	0.07	PPB		91
95)	sec-Butylbenzene	11.79	105	3220	0.05	PPB		85
96)	p-Isopropyltoluene	11.95	119	2955	0.06	PPB		92
97)	1,3-Dichlorobenzene	11.94	146	3173	0.10	PPB		93
98)	1,4-Dichlorobenzene	11.94	146	3173	0.10	PPB		93
99)	n-Butylbenzene	12.36	91	3555	0.08	PPB		91
100)	1,2-Dichlorobenzene	12.41	146	3085	0.10	PPB		91
102)	1,3,5-Trichlorobenzene	13.36	180	2202	0.10	PPB		87
103)	1,2,4-Trichlorobenzene	14.00	180	2411	0.12	PPB		97
104)	Hexachlorobutadiene	14.13	225	1161	0.11	PPB		80
105)	Naphthalene	14.25	128	2645	0.09	PPB		82
106)	1,2,3-Trichlorobenzene	14.49	180	1921	0.11	PPB	#	71

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F005.D Vial: 2
Acq On : 8 Nov 2018 12:27 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F005.D

(12) 1,1-Dichloroethene (CMT)

2.56min 0.10PPB

response 1563

Ion	Exp%	Act%
96.00	100	100
63.00	53.20	40.92
61.00	159.30	109.23#
0.00	0.00	0.00

Manual Integration:

Before

LM

11/09/18

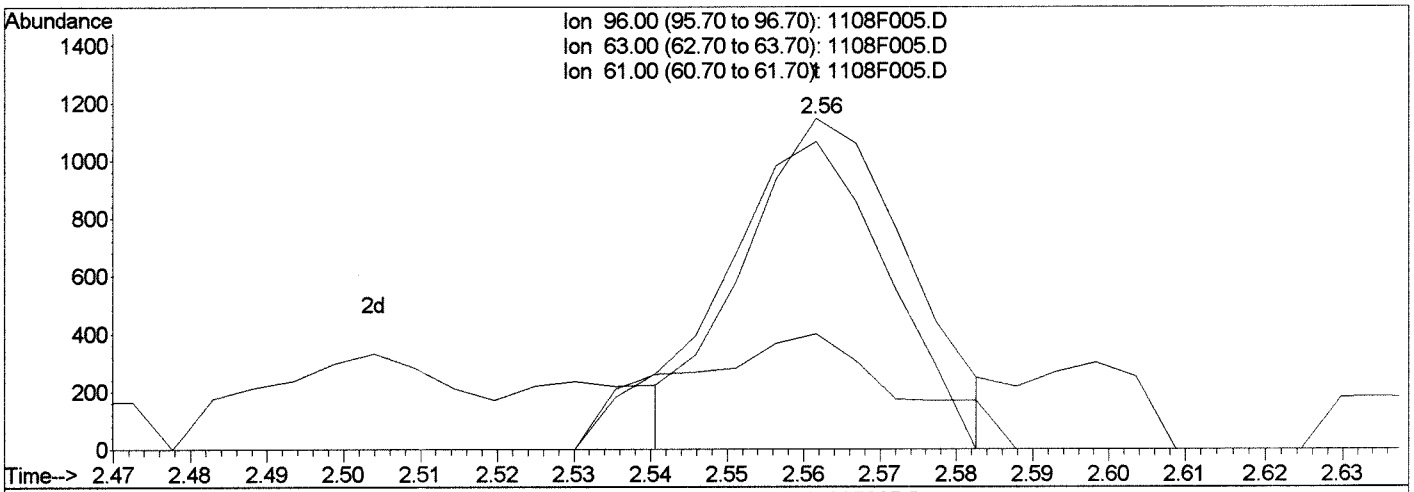
11/26/18

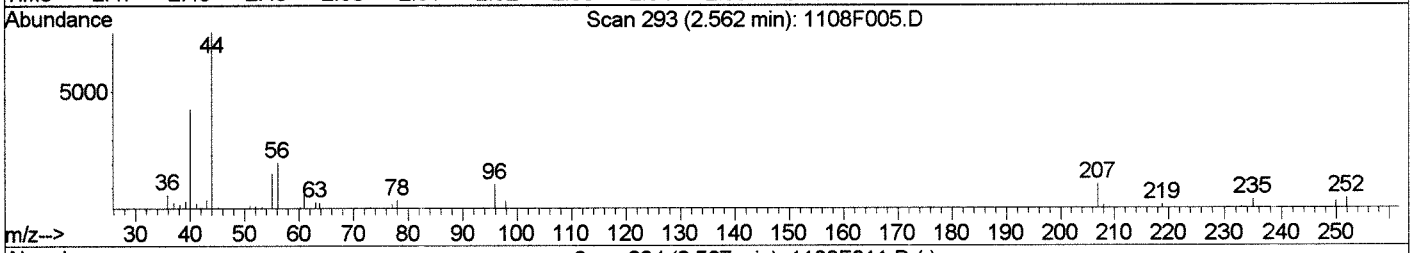
1108F005.D 110818MS27_8260.M Fri Nov 09 08:41:07 2018

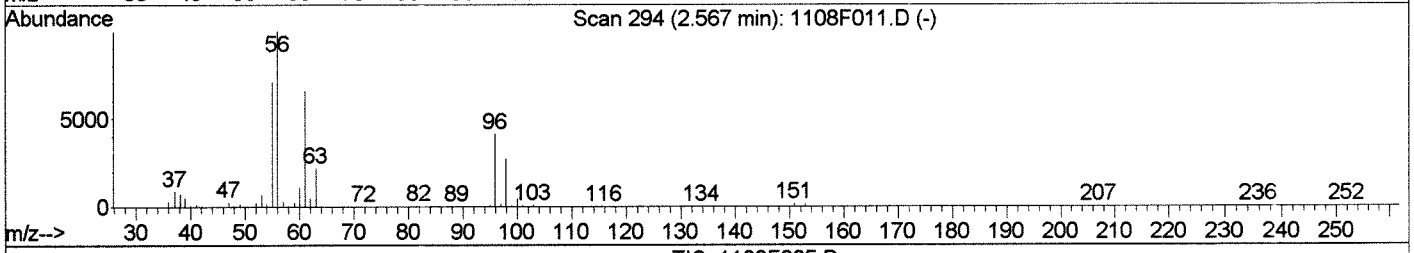
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F005.D Vial: 2
Acq On : 8 Nov 2018 12:27 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:41 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F005.D

(12) 1,1-Dichloroethene (CMT)

2.56min 0.11PPB m

response 1728

Ion	Exp%	Act%
96.00	100	100
63.00	53.20	34.85
61.00	159.30	93.01#
0.00	0.00	0.00

Manual Integration:

After LM

Baseline correction

11/09/18

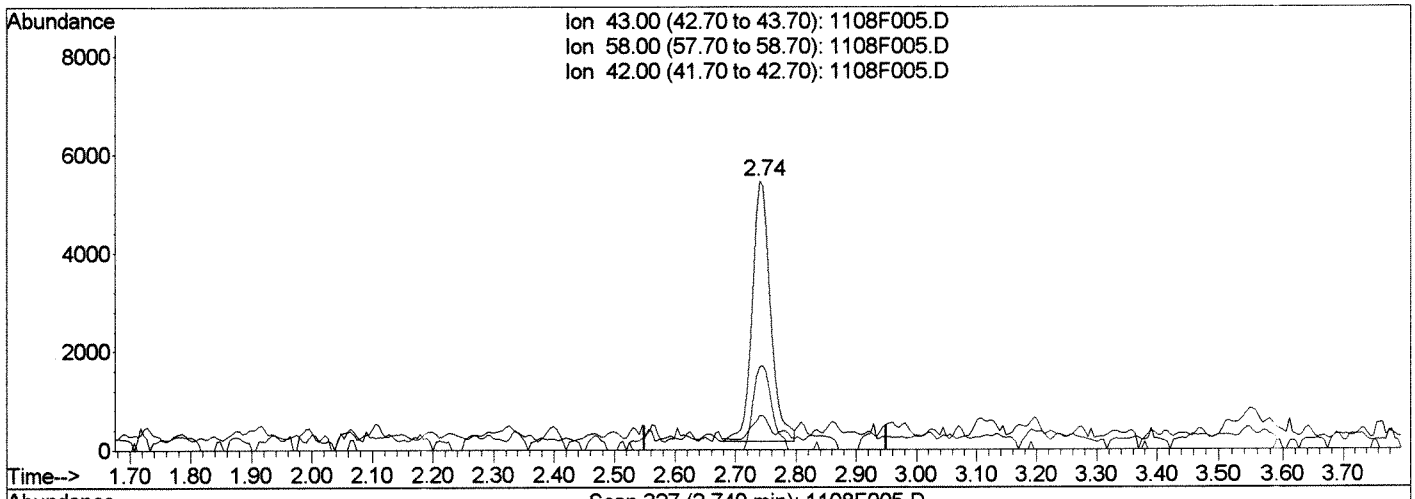
11/26/18

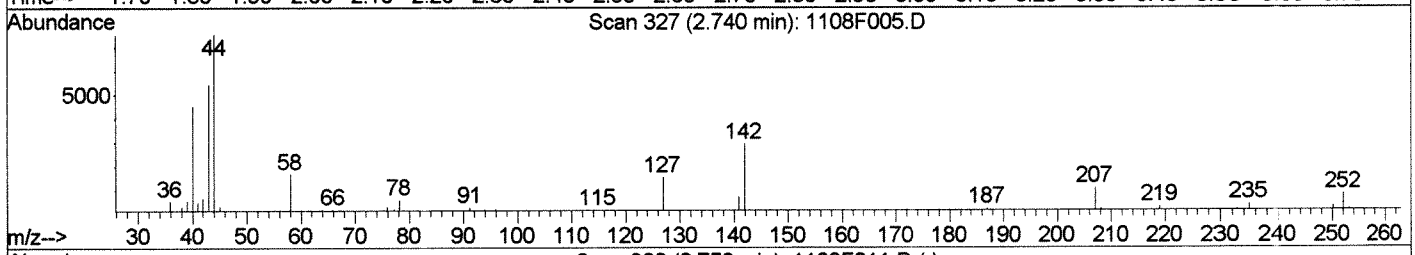
1108F005.D 110818MS27_8260.M Fri Nov 09 08:41:21 2018

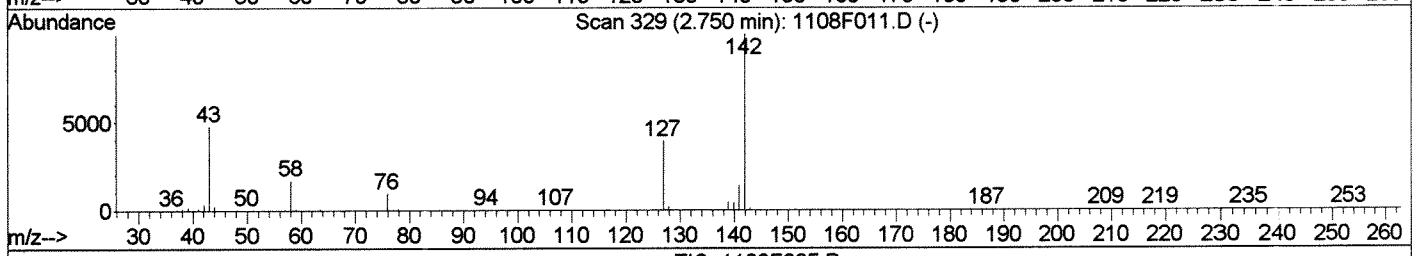
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F005.D Vial: 2
Acq On : 8 Nov 2018 12:27 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:41 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F005.D

(13) Acetone (T)

2.74min 4.57PPB

response 11239

Ion	Exp%	Act%
43.00	100	100
58.00	35.00	31.78
42.00	7.30	8.71
0.00	0.00	0.00

Manual Integration:

Before

LM

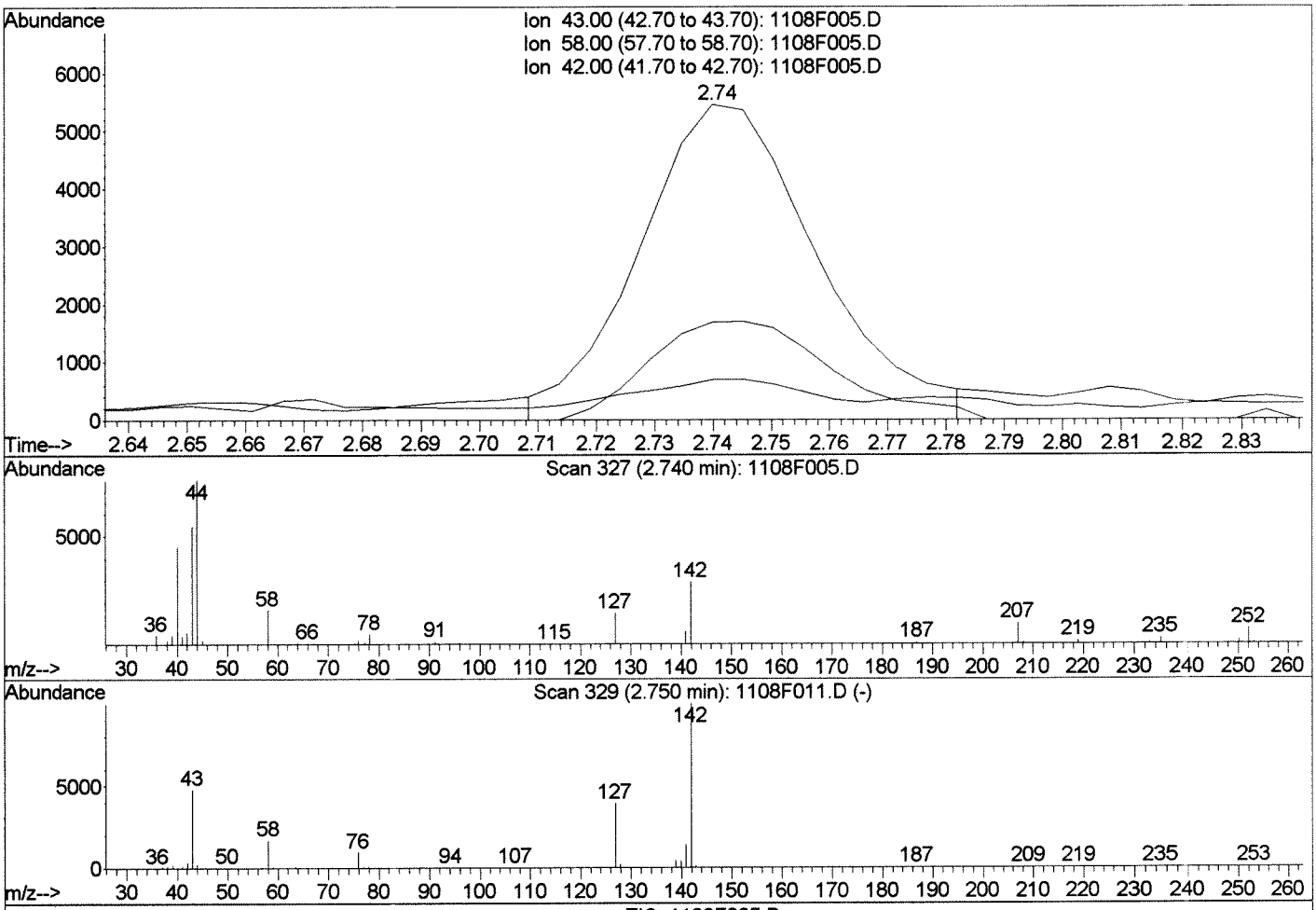
11/09/18 11/26/18

1108F005.D 110818MS27_8260.M Fri Nov 09 08:41:30 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F005.D Vial: 2
Acq On : 8 Nov 2018 12:27 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:42 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F005.D

(13) Acetone (T)

2.74min 4.67PPB m

response 11476

Ion	Exp%	Act%
43.00	100	100
58.00	35.00	30.80
42.00	7.30	12.61
0.00	0.00	0.00

Manual Integration:

After LM

Baseline correction

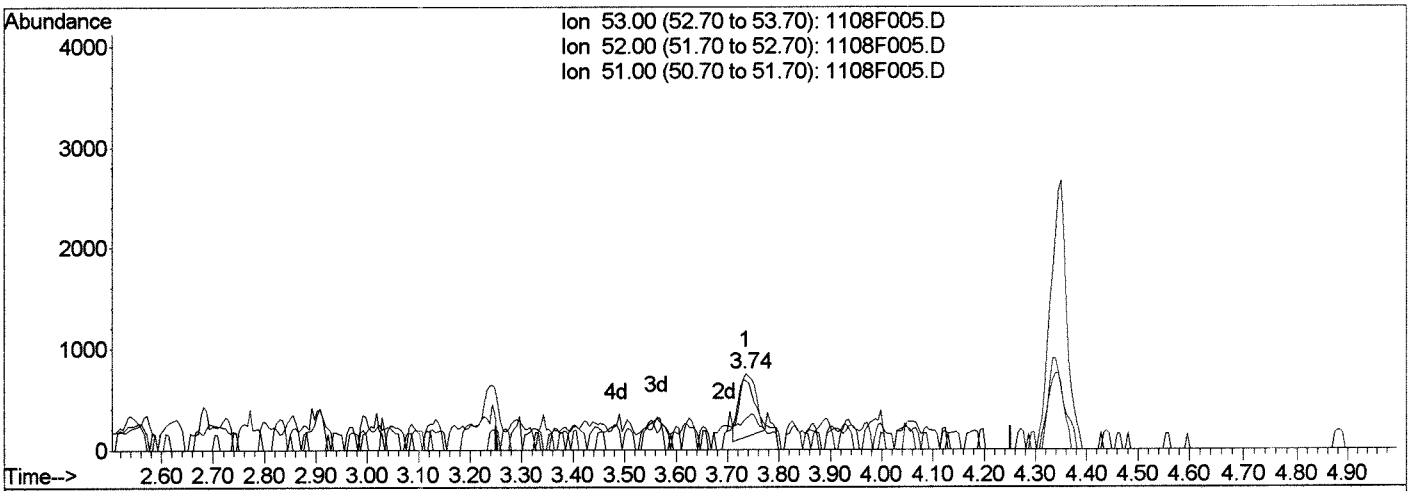
11/09/18

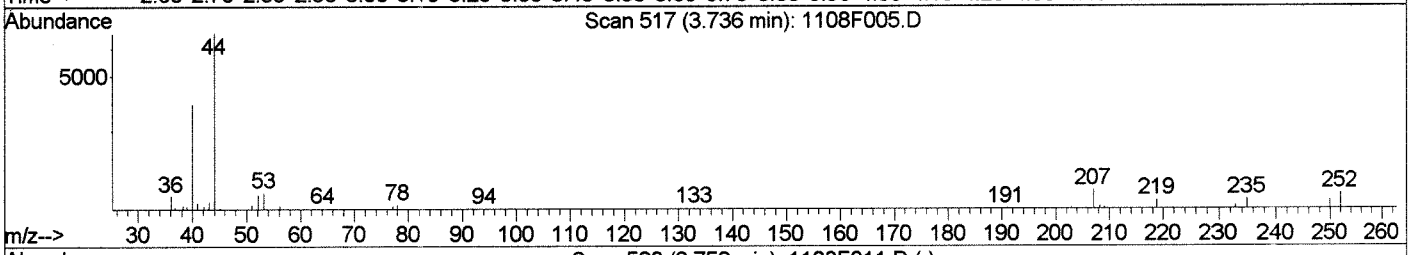
1108F005.D 110818MS27_8260.M Fri Nov 09 08:42:15 2018

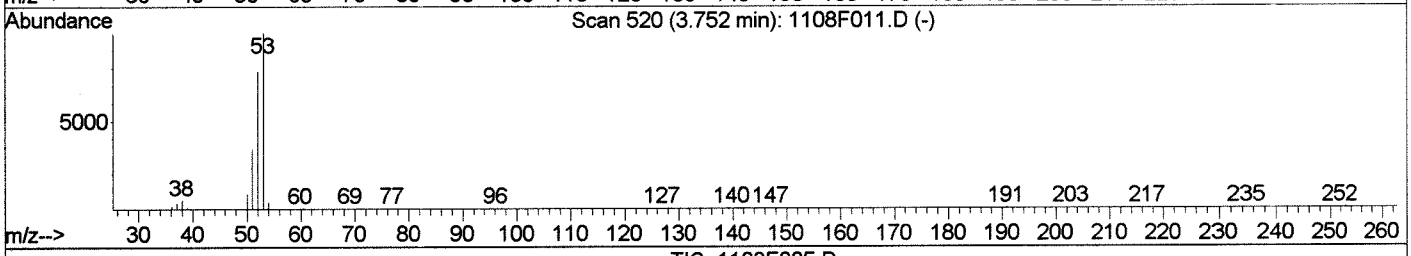
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F005.D Vial: 2
Acq On : 8 Nov 2018 12:27 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:42 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F005.D

(22) Acrylonitrile (T)

3.74min 0.34PPB

response 1376

Ion	Exp%	Act%
53.00	100	100
52.00	78.30	81.47
51.00	33.90	20.86
0.00	0.00	0.00

Manual Integration:

Before LM 11/26/18

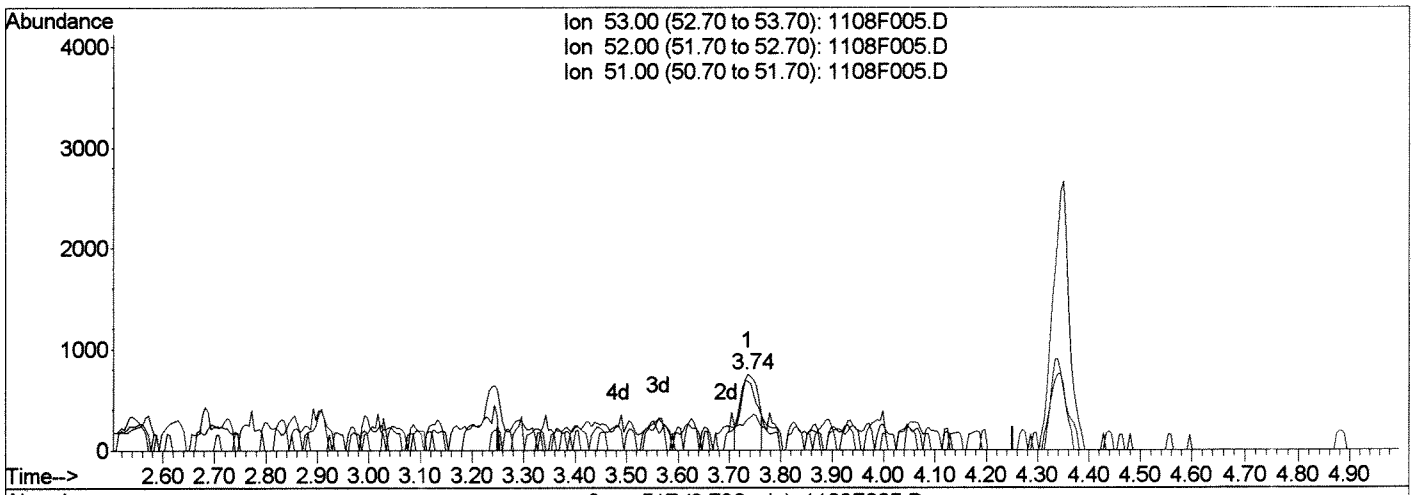
11/09/18

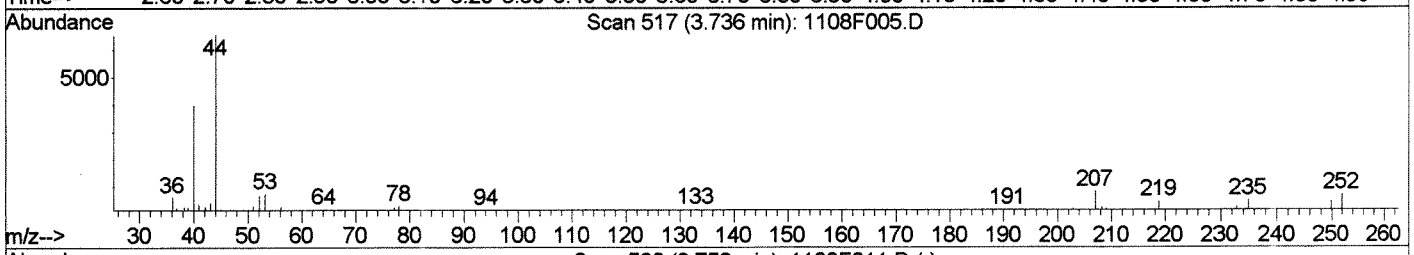
1108F005.D 110818MS27_8260.M Fri Nov 09 08:43:07 2018

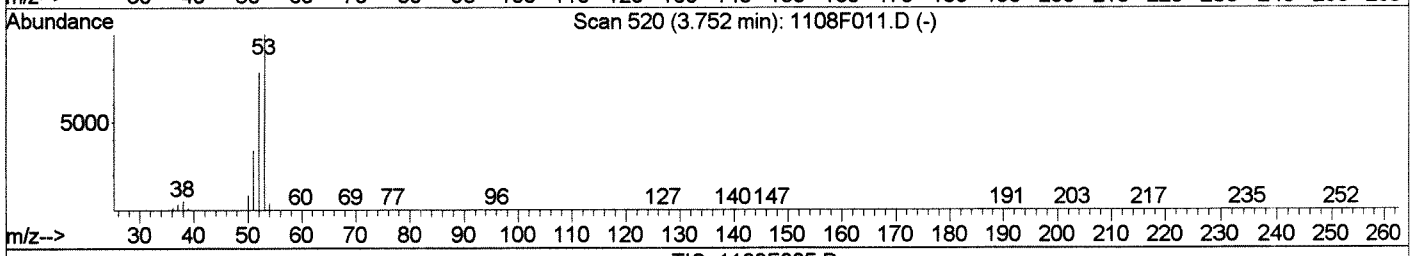
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F005.D Vial: 2
Acq On : 8 Nov 2018 12:27 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:43 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F005.D

(22) Acrylonitrile (T)

3.74min 0.43PPB m

response 1744

Ion	Exp%	Act%
53.00	100	100
52.00	78.30	89.83
51.00	33.90	40.96
0.00	0.00	0.00

Manual Integration:

After LM

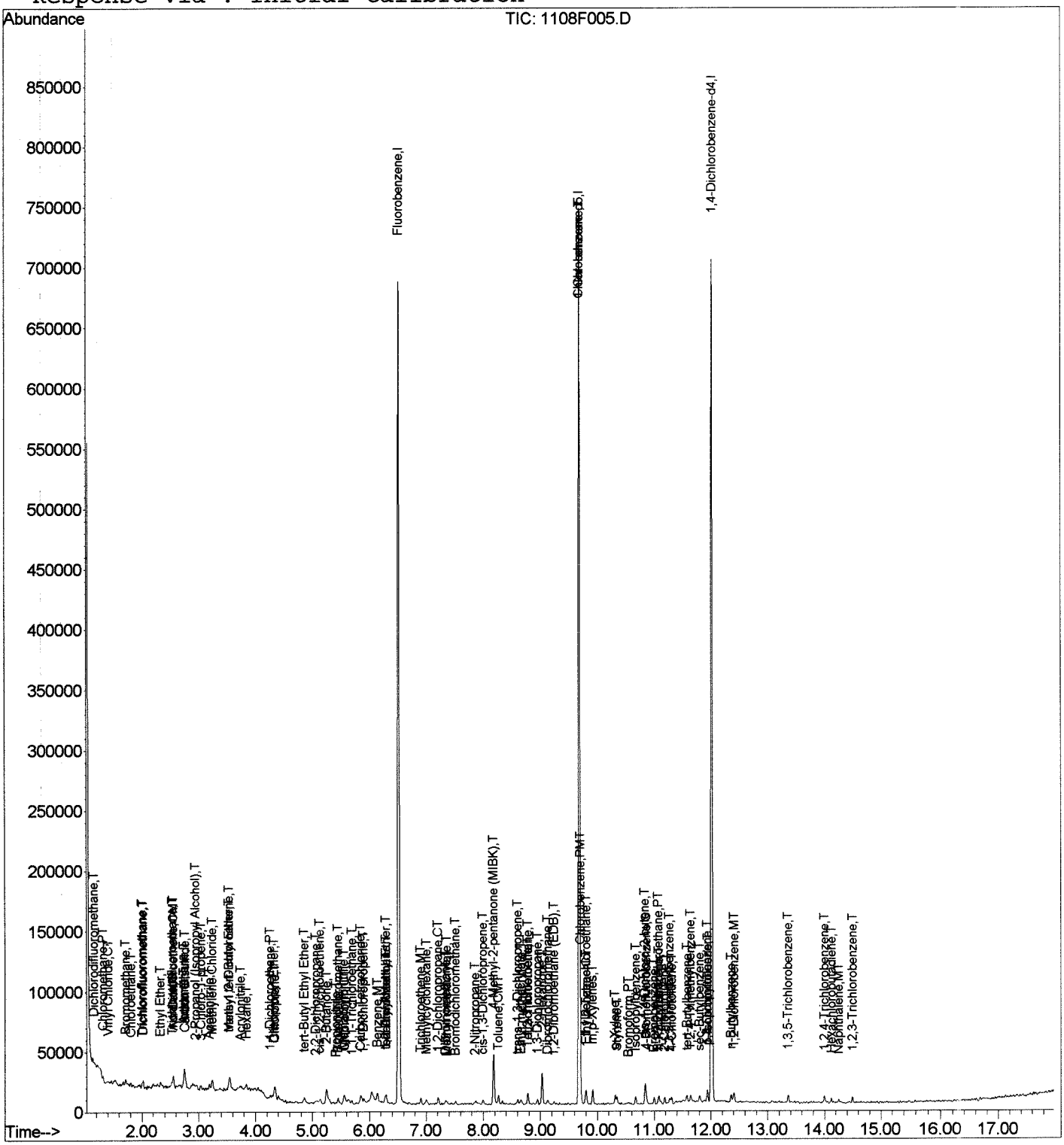
Baseline correction

11/09/18

1108F005.D 110818MS27_8260.M Fri Nov 09 08:43:16 2018

Data File : J:\MS27\DATA\110818\1108F005.D Vial: 2
Acq On : 8 Nov 2018 12:27 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:45 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F006.D Vial: 3
Acq On : 8 Nov 2018 12:49 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:27 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

LM 11-17-18

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.52	96	619241	10.00	PPB		0.00
63) Chlorobenzene-d5	9.68	82	237038	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	197255	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	0.00	113	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
46) 1,2-Dichloroethane-d4	0.00	65	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
61) Toluene-d8	0.00	98	0d	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
83) 4-Bromofluorobenzene	0.00	95	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.17	85	2996	0.16	PPB		93
3) Chloromethane	1.32	50	5609	0.24	PPB		91
4) Vinyl Chloride	1.41	62	3946	0.19	PPB		95
5) Bromomethane	1.71	96	3967	0.27	PPB		90
6) Chloroethane	1.81	64	3153m	0.26	PPB		
7) Dichlorofluoromethane	2.02	67	5843	0.20	PPB		96
8) Trichlorofluoromethane	2.02	101	4130	0.15	PPB		74
9) Ethyl Ether	2.34	59	2147	0.24	PPB		79
10) Acrolein	2.56	56	9570	4.44	PPB		93
11) Trichlorotrifluoroethane	2.52	151	2229	0.18	PPB	#	65
12) 1,1-Dichloroethene	2.57	96	3062	0.20	PPB		86
13) Acetone	2.75	43	22269	9.22	PPB		99
14) Iodomethane	2.75	142	15602	0.62	PPB		99
15) Carbon Disulfide	2.77	76	8897	0.20	PPB		97
16) 2-Propanol (Isopropyl Alco	2.95	45	3978	10.52	PPB	#	1
17) 3-Chloro-1-propene	3.05	76	1758	0.20	PPB		88
18) Methyl Acetate	3.12	43	1768	0.24	PPB		79
19) Acetonitrile	3.20	40	7263	12.09	PPB		87
20) Methylene Chloride	3.25	84	5343	0.30	PPB		93
21) tert-Butyl Alcohol	3.52	59	512	0.61	PPB	#	39
22) Acrylonitrile	3.75	53	4217	1.06	PPB		84
23) Methyl tert-Butyl Ether	3.56	73	15372	0.43	PPB		93
24) trans-1,2-Dichloroethene	3.55	96	4579	0.27	PPB		85
25) Hexane	3.85	57	3680	0.18	PPB		88
26) Diisopropyl Ether	4.33	45	11063	0.22	PPB		98
27) 1,1-Dichloroethane	4.29	63	6170	0.20	PPB		91
28) Vinyl Acetate	4.42	86	972	0.36	PPB	#	29

(#) = qualifier out of range (m) = manual integration

11/12/18

Data File : J:\MS27\DATA\110818\1108F006.D Vial: 3
Acq On : 8 Nov 2018 12:49 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:27 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
29)	Chloroprene	4.35	53	13475	0.68	PPB		93
30)	tert-Butyl Ethyl Ether	4.86	59	7791	0.19	PPB		88
31)	2,2-Dichloropropane	5.08	77	4452	0.20	PPB		98
32)	cis-1,2-Dichloroethene	5.14	96	4148	0.22	PPB		88
33)	2-Butanone	5.25	72	8549	7.86	PPB		92
34)	Ethyl Acetate	5.14	61	4900	3.45	PPB	#	23
35)	Propionitrile	5.43	54	1271	0.92	PPB		68
36)	Methacrylonitrile	5.56	67	3646	0.80	PPB		82
37)	Bromochloromethane	5.46	128	1868	0.19	PPB		90
39)	Chloroform	5.58	83	6740	0.22	PPB		99
40)	Cyclohexane	5.63	56	4253	0.15	PPB		91
41)	1,1,1-Trichloroethane	5.70	97	3918	0.15	PPB		94
43)	Carbon Tetrachloride	5.84	117	3471	0.16	PPB		88
44)	1,1-Dichloropropene	5.91	75	4044	0.19	PPB		89
45)	Isobutyl Alcohol	6.27	42	2255	10.80	PPB	#	60
47)	Benzene	6.15	78	12859	0.19	PPB		97
48)	1,2-Dichloroethane	6.29	62	4122	0.20	PPB		91
49)	tert-Amyl Methyl Ether	6.31	55	2309	0.19	PPB		94
50)	Trichloroethene	6.91	95	3455	0.19	PPB		93
51)	Methylcyclohexane	7.00	83	3142	0.14	PPB		90
52)	1,2-Dichloropropane	7.22	63	3741	0.20	PPB		89
53)	Dibromomethane	7.34	93	2126	0.21	PPB		92
54)	Methyl methacrylate	7.37	69	1327	0.20	PPB		84
56)	Bromodichloromethane	7.52	83	5034	0.21	PPB		92
57)	2-Nitropropane	7.87	41	2670	1.16	PPB		94
58)	2-Chloroethyl Vinyl Ether	7.88	63	1229	0.19	PPB		77
59)	cis-1,3-Dichloropropene	8.00	75	4886	0.19	PPB		94
60)	4-Methyl-2-pentanone (MIBK	8.18	58	22217	5.90	PPB		91
62)	Toluene	8.27	92	6425	0.15	PPB		98
64)	n-Octane	8.33	85	671	0.08	PPB	#	47
65)	trans-1,3-Dichloropropene	8.61	75	3830	0.19	PPB		91
66)	Ethyl methacrylate	8.66	69	2162	0.17	PPB		84
67)	1,1,2-Trichloroethane	8.79	83	2307	0.20	PPB		86
68)	Tetrachloroethene	8.79	164	2960	0.20	PPB		78
69)	2-Hexanone	9.03	57	6701	6.28	PPB	#	84
70)	1,3-Dichloropropane	8.95	76	5238	0.24	PPB		94
71)	Dibromochloromethane	9.13	129	3482	0.21	PPB		85
72)	1,2-Dibromoethane (EDB)	9.25	107	2592	0.20	PPB		88
73)	1-Chlorohexane	9.69	91	3408	0.21	PPB		87
74)	Chlorobenzene	9.71	112	8301	0.18	PPB		87
75)	Ethylbenzene	9.80	106	3425	0.15	PPB	#	84

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F006.D Vial: 3
Acq On : 8 Nov 2018 12:49 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:27 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

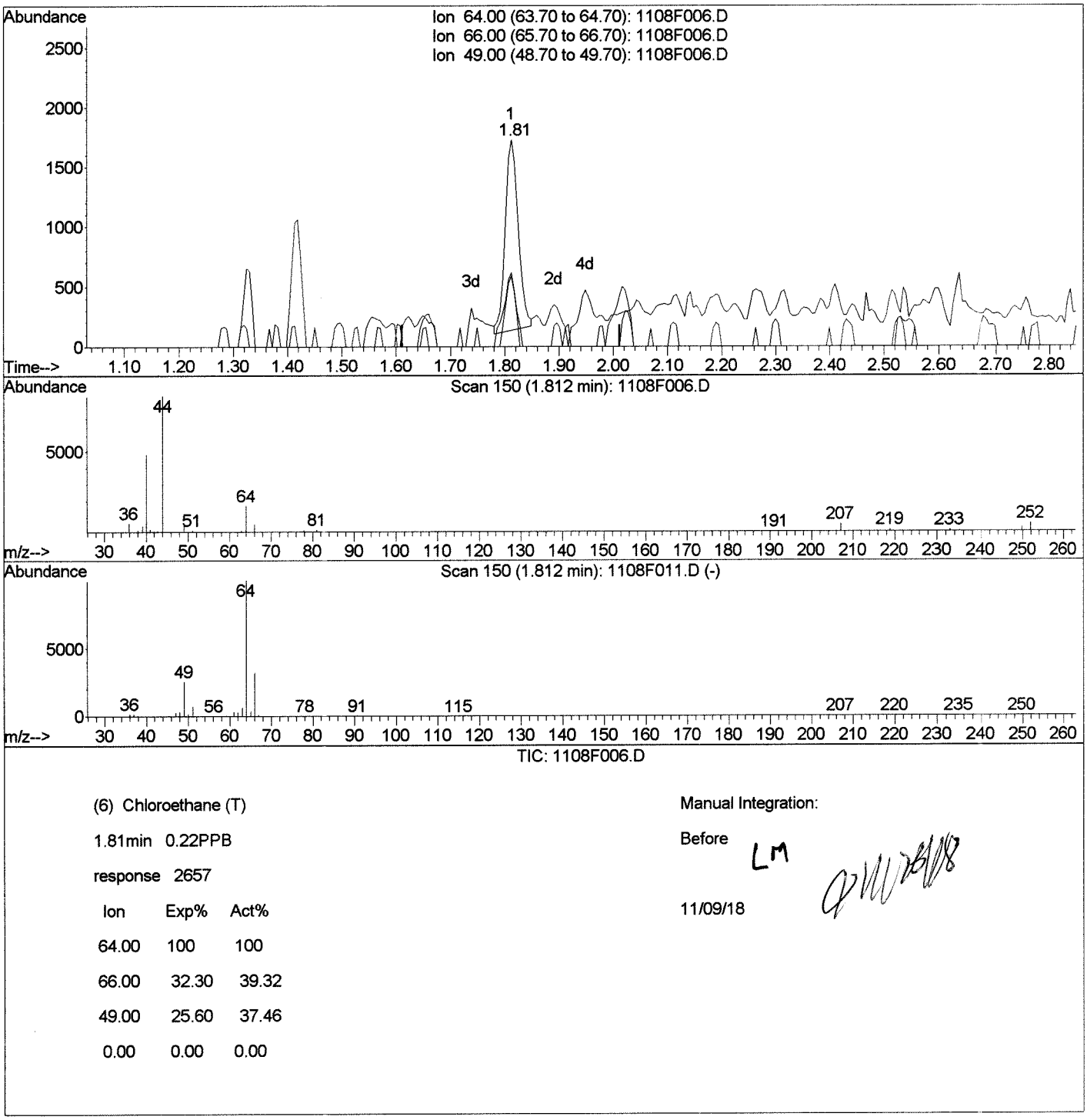
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
76)	1,1,1,2-Tetrachloroethane	9.81	131	3086	0.18	PPB		90
77)	m,p-Xylenes	9.92	106	7539	0.27	PPB		98
78)	o-Xylene	10.32	106	3638	0.14	PPB	#	60
79)	Styrene	10.35	103	4315	0.19	PPB		90
80)	Bromoform	10.55	173	2187	0.20	PPB		88
81)	Isopropylbenzene	10.67	105	8209	0.12	PPB		92
82)	cis-1,4-Dichloro-2-butene	10.84	89	1086	0.65	PPB	#	75
85)	1,1,2,2-Tetrachloroethane	11.07	83	3087	0.24	PPB		95
86)	trans-1,4-Dichloro-2-buten	11.14	53	817	0.27	PPB		77
87)	Bromobenzene	11.00	156	3449	0.20	PPB		96
88)	n-Propylbenzene	11.08	91	11215	0.16	PPB		91
89)	1,2,3-Trichloropropane	11.11	110	743	0.21	PPB	#	76
90)	2-Chlorotoluene	11.19	91	7073	0.17	PPB		89
91)	1,3,5-Trimethylbenzene	11.27	105	6620	0.13	PPB		98
92)	4-Chlorotoluene	11.31	91	7923	0.17	PPB		96
93)	tert-Butylbenzene	11.57	119	6042	0.15	PPB		96
94)	1,2,4-Trimethylbenzene	11.64	105	5782	0.12	PPB		93
95)	sec-Butylbenzene	11.80	105	7120	0.12	PPB		95
96)	p-Isopropyltoluene	11.95	119	6475	0.13	PPB		95
97)	1,3-Dichlorobenzene	11.94	146	6329	0.19	PPB		94
98)	1,4-Dichlorobenzene	12.04	146	6353	0.19	PPB		90
99)	n-Butylbenzene	12.36	91	7494	0.17	PPB		92
100)	1,2-Dichlorobenzene	12.41	146	6426	0.21	PPB		93
102)	1,3,5-Trichlorobenzene	13.36	180	4452	0.20	PPB		83
103)	1,2,4-Trichlorobenzene	14.00	180	4348	0.22	PPB		96
104)	Hexachlorobutadiene	14.12	225	1950	0.19	PPB		90
105)	Naphthalene	14.25	128	5426	0.18	PPB		97
106)	1,2,3-Trichlorobenzene	14.49	180	3853	0.21	PPB		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F006.D Vial: 3
Acq On : 8 Nov 2018 12:49 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F006.D

(6) Chloroethane (T)

1.81min 0.22PPB

response 2657

Ion	Exp%	Act%
64.00	100	100
66.00	32.30	39.32
49.00	25.60	37.46
0.00	0.00	0.00

Manual Integration:

Before LM

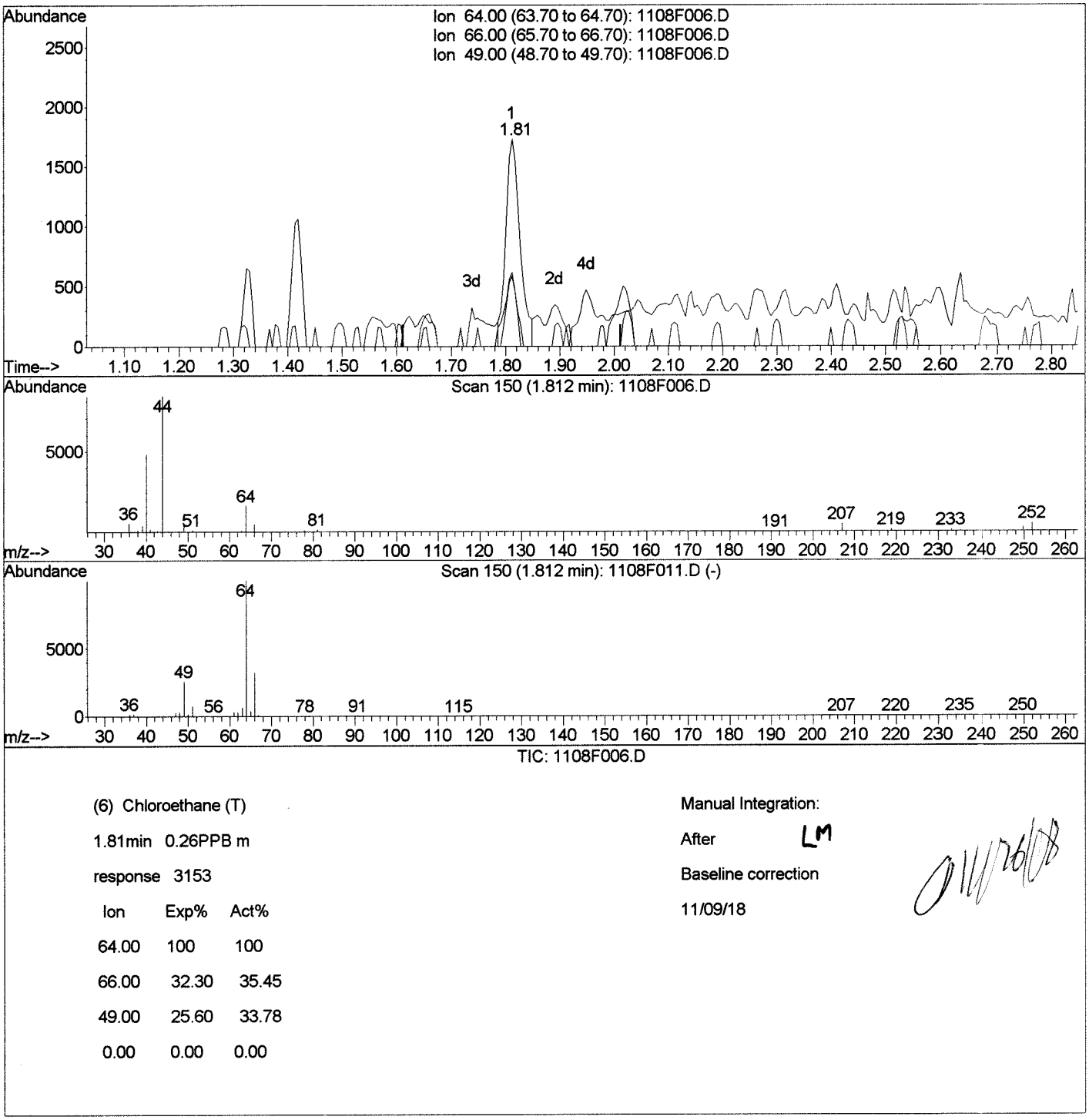
11/09/18

1108F006.D 110818MS27_8260.M Fri Nov 09 08:49:10 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F006.D Vial: 3
Acq On : 8 Nov 2018 12:49 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:49 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



(6) Chloroethane (T)

1.81min 0.26PPB m

response 3153

Ion	Exp%	Act%
64.00	100	100
66.00	32.30	35.45
49.00	25.60	33.78
0.00	0.00	0.00

Manual Integration:

After LM

Baseline correction

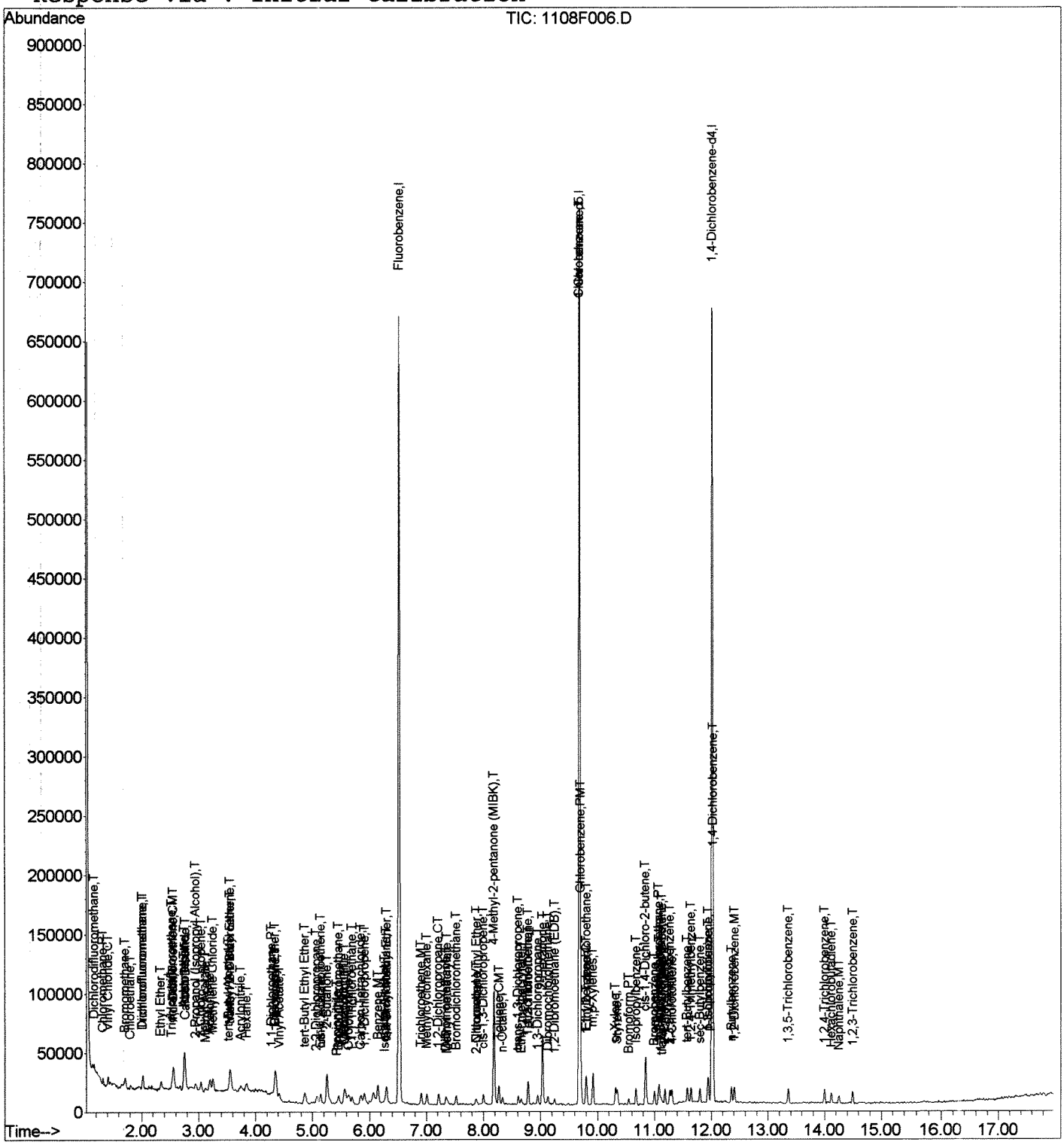
11/09/18

11/26/18

1108F006.D 110818MS27_8260.M Fri Nov 09 08:49:23 2018

Data File : J:\MS27\DATA\110818\1108F006.D Vial: 3
Acq On : 8 Nov 2018 12:49 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:54 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F007.D Vial: 4
Acq On : 8 Nov 2018 1:11 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:28 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration LM 11-17-18
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.52	96	613375	10.00	PPB		0.00
63) Chlorobenzene-d5	9.68	82	234845	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	201865	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	0.00	113	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
46) 1,2-Dichloroethane-d4	0.00	65	0d	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
61) Toluene-d8	0.00	98	0d	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
83) 4-Bromofluorobenzene	0.00	95	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.17	85	7283	0.40	PPB		95
3) Chloromethane	1.32	50	12789	0.56	PPB		97
4) Vinyl Chloride	1.41	62	9301	0.44	PPB		98
5) Bromomethane	1.72	96	9202	0.64	PPB		92
6) Chloroethane	1.81	64	6235	0.52	PPB		97
7) Dichlorofluoromethane	2.03	67	14941	0.51	PPB		92
8) Trichlorofluoromethane	2.02	101	11819	0.44	PPB		97
9) Ethyl Ether	2.34	59	5396	0.60	PPB		95
10) Acrolein	2.56	56	22532	10.56	PPB		100
11) Trichlorotrifluoroethane	2.54	151	5026	0.42	PPB		98
12) 1,1-Dichloroethene	2.57	96	8078	0.53	PPB		87
13) Acetone	2.75	43	51951	21.72	PPB		99
14) Iodomethane	2.75	142	40074	1.62	PPB		98
15) Carbon Disulfide	2.77	76	21091	0.47	PPB		94
16) 2-Propanol (Isopropyl Alco	2.97	45	12021m	32.09	PPB		
17) 3-Chloro-1-propene	3.05	76	4616	0.53	PPB		90
18) Methyl Acetate	3.13	43	4588	0.62	PPB		99
19) Acetonitrile	3.20	40	14557	24.46	PPB		98
20) Methylene Chloride	3.25	84	11023	0.62	PPB		93
21) tert-Butyl Alcohol	3.53	59	2999	3.61	PPB	#	40
22) Acrylonitrile	3.75	53	7144	1.81	PPB		93
23) Methyl tert-Butyl Ether	3.56	73	38891	1.09	PPB		98
24) trans-1,2-Dichloroethene	3.55	96	8708	0.51	PPB		95
25) Hexane	3.85	57	8774	0.44	PPB		84
26) Diisopropyl Ether	4.33	45	26038	0.52	PPB		96
27) 1,1-Dichloroethane	4.29	63	16080	0.52	PPB		97
28) Vinyl Acetate	4.42	86	2520	0.95	PPB	#	81

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F007.D Vial: 4
Acq On : 8 Nov 2018 1:11 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:28 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
29)	Chloroprene	4.35	53	34083	1.73	PPB		97
30)	tert-Butyl Ethyl Ether	4.87	59	19840	0.50	PPB		88
31)	2,2-Dichloropropane	5.08	77	10153	0.47	PPB		96
32)	cis-1,2-Dichloroethene	5.14	96	8894	0.48	PPB		97
33)	2-Butanone	5.25	72	20759	19.27	PPB	#	83
34)	Ethyl Acetate	5.29	61	1411	1.00	PPB		83
35)	Propionitrile	5.43	54	3034	2.21	PPB		90
36)	Methacrylonitrile	5.56	67	8716	1.94	PPB		82
37)	Bromochloromethane	5.46	128	5113	0.53	PPB		89
38)	Tetrahydrofuran	5.48	71	341m	0.31	PPB		
39)	Chloroform	5.58	83	15135	0.49	PPB		98
40)	Cyclohexane	5.64	56	11490	0.40	PPB		99
41)	1,1,1-Trichloroethane	5.70	97	12553	0.50	PPB		93
43)	Carbon Tetrachloride	5.84	117	9614	0.43	PPB		94
44)	1,1-Dichloropropene	5.91	75	9215	0.43	PPB		98
45)	Isobutyl Alcohol	6.27	42	4439	21.47	PPB	#	76
47)	Benzene	6.15	78	32083	0.48	PPB		95
48)	1,2-Dichloroethane	6.29	62	9840	0.48	PPB		87
49)	tert-Amyl Methyl Ether	6.31	55	6087	0.50	PPB		88
50)	Trichloroethene	6.91	95	8229	0.46	PPB		95
51)	Methylcyclohexane	7.01	83	8244	0.38	PPB		90
52)	1,2-Dichloropropane	7.22	63	8928	0.48	PPB		93
53)	Dibromomethane	7.34	93	5491	0.54	PPB		95
54)	Methyl methacrylate	7.37	69	3377	0.50	PPB		95
55)	1,4-Dioxane	7.38	88	1325	20.17	PPB	#	63
56)	Bromodichloromethane	7.52	83	12049	0.51	PPB		99
57)	2-Nitropropane	7.86	41	6236	2.72	PPB		98
58)	2-Chloroethyl Vinyl Ether	7.88	63	2511	0.38	PPB		93
59)	cis-1,3-Dichloropropene	8.00	75	11055	0.44	PPB		97
60)	4-Methyl-2-pentanone (MIBK	8.18	58	60600	16.24	PPB		95
62)	Toluene	8.27	92	16603	0.40	PPB		97
64)	n-Octane	8.33	85	2527	0.30	PPB		96
65)	trans-1,3-Dichloropropene	8.61	75	9706	0.48	PPB		90
66)	Ethyl methacrylate	8.66	69	5737	0.45	PPB		95
67)	1,1,2-Trichloroethane	8.79	83	6324	0.54	PPB		92
68)	Tetrachloroethene	8.79	164	6424	0.44	PPB		95
69)	2-Hexanone	9.03	57	17279	16.34	PPB		99
70)	1,3-Dichloropropane	8.95	76	12468	0.57	PPB		94
71)	Dibromochloromethane	9.13	129	8092	0.48	PPB		96
72)	1,2-Dibromoethane (EDB)	9.25	107	6907	0.54	PPB		95
73)	1-Chlorohexane	9.69	91	7495	0.46	PPB		82

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F007.D Vial: 4
Acq On : 8 Nov 2018 1:11 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:28 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

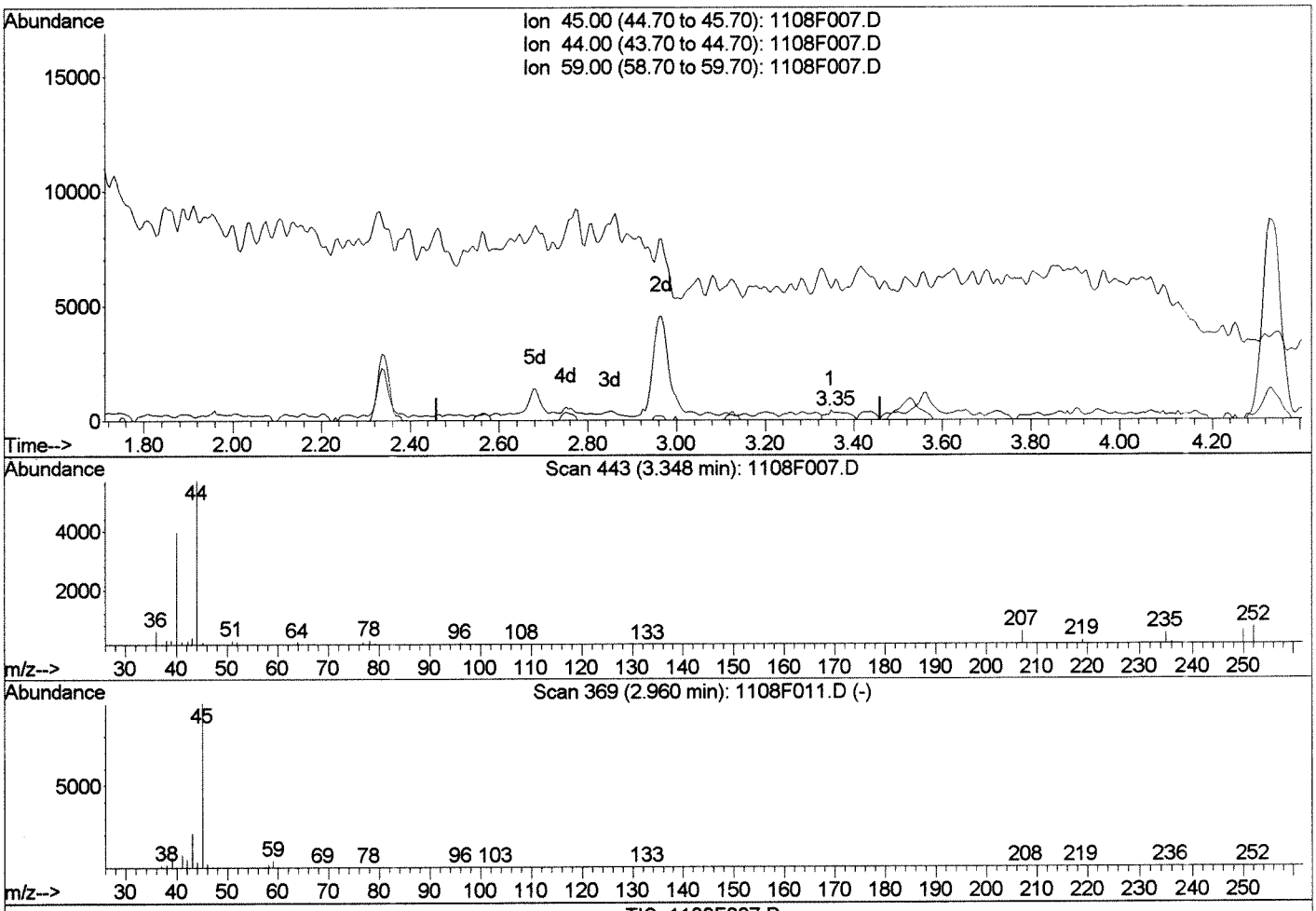
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
74)	Chlorobenzene	9.71	112	23170	0.50	PPB		97
75)	Ethylbenzene	9.80	106	9289	0.41	PPB		96
76)	1,1,1,2-Tetrachloroethane	9.81	131	9213	0.55	PPB		99
77)	m,p-Xylenes	9.92	106	21071	0.75	PPB		98
78)	o-Xylene	10.32	106	10387	0.40	PPB		97
79)	Styrene	10.35	103	9721	0.44	PPB		95
80)	Bromoform	10.55	173	5793	0.54	PPB		95
81)	Isopropylbenzene	10.67	105	23441	0.36	PPB		98
82)	cis-1,4-Dichloro-2-butene	10.84	89	3061	1.85	PPB	#	80
85)	1,1,2,2-Tetrachloroethane	11.07	83	7603	0.57	PPB		97
86)	trans-1,4-Dichloro-2-buten	11.14	53	1591	0.52	PPB		81
87)	Bromobenzene	11.00	156	8612	0.48	PPB		87
88)	n-Propylbenzene	11.08	91	30505	0.42	PPB		94
89)	1,2,3-Trichloropropane	11.11	110	2225	0.61	PPB	#	74
90)	2-Chlorotoluene	11.19	91	17717	0.41	PPB		86
91)	1,3,5-Trimethylbenzene	11.27	105	18997	0.38	PPB		100
92)	4-Chlorotoluene	11.31	91	18481m	0.39	PPB		
93)	tert-Butylbenzene	11.57	119	15810	0.38	PPB		89
94)	1,2,4-Trimethylbenzene	11.64	105	16573	0.33	PPB		94
95)	sec-Butylbenzene	11.80	105	21528	0.35	PPB		94
96)	p-Isopropyltoluene	11.95	119	17660	0.35	PPB		99
97)	1,3-Dichlorobenzene	11.94	146	17102	0.51	PPB		97
98)	1,4-Dichlorobenzene	12.04	146	17552	0.52	PPB		99
99)	n-Butylbenzene	12.36	91	17663	0.39	PPB		99
100)	1,2-Dichlorobenzene	12.41	146	15385	0.49	PPB		94
101)	1,2-Dibromo-3-chloropropan	13.22	155	671	0.37	PPB	#	82
102)	1,3,5-Trichlorobenzene	13.36	180	11629	0.52	PPB		93
103)	1,2,4-Trichlorobenzene	14.00	180	10130	0.51	PPB		94
104)	Hexachlorobutadiene	14.12	225	5869	0.56	PPB		94
105)	Naphthalene	14.25	128	14695	0.48	PPB		94
106)	1,2,3-Trichlorobenzene	14.49	180	9322	0.50	PPB		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F007.D Vial: 4
Acq On : 8 Nov 2018 1:11 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F007.D

(16) 2-Propanol (Isopropyl Alcohol) (T)

3.35min 3.21PPB

response 1201

Ion	Exp%	Act%
45.00	100	100
44.00	5.40	0.00
59.00	4.10	0.00
0.00	0.00	0.00

Manual Integration:

Before

LM

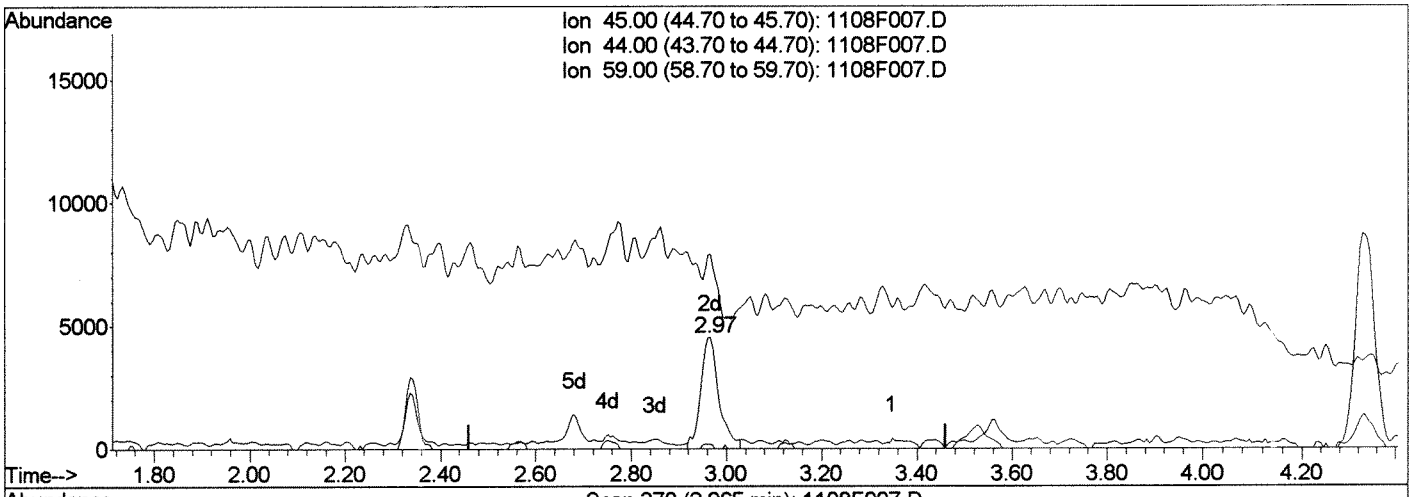
11/09/18

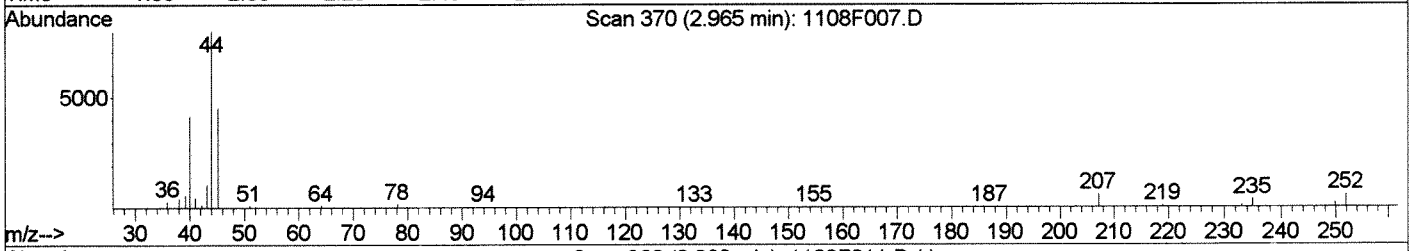
1108F007.D 110818MS27_8260.M Fri Nov 09 08:56:48 2018

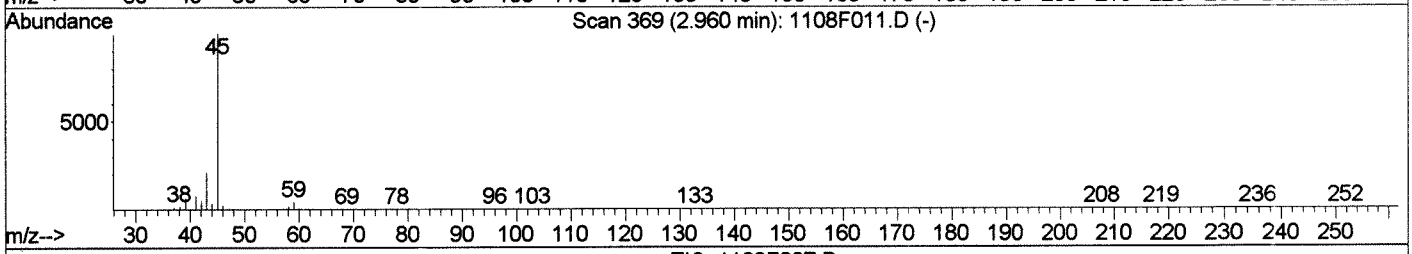
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F007.D Vial: 4
Acq On : 8 Nov 2018 1:11 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:56 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F007.D

(16) 2-Propanol (Isopropyl Alcohol) (T)

2.97min 32.09PPB m

response 12021

Ion	Exp%	Act%
45.00	100	100
44.00	5.40	174.47#
59.00	4.10	3.82
0.00	0.00	0.00

Manual Integration:

After LM

WRT

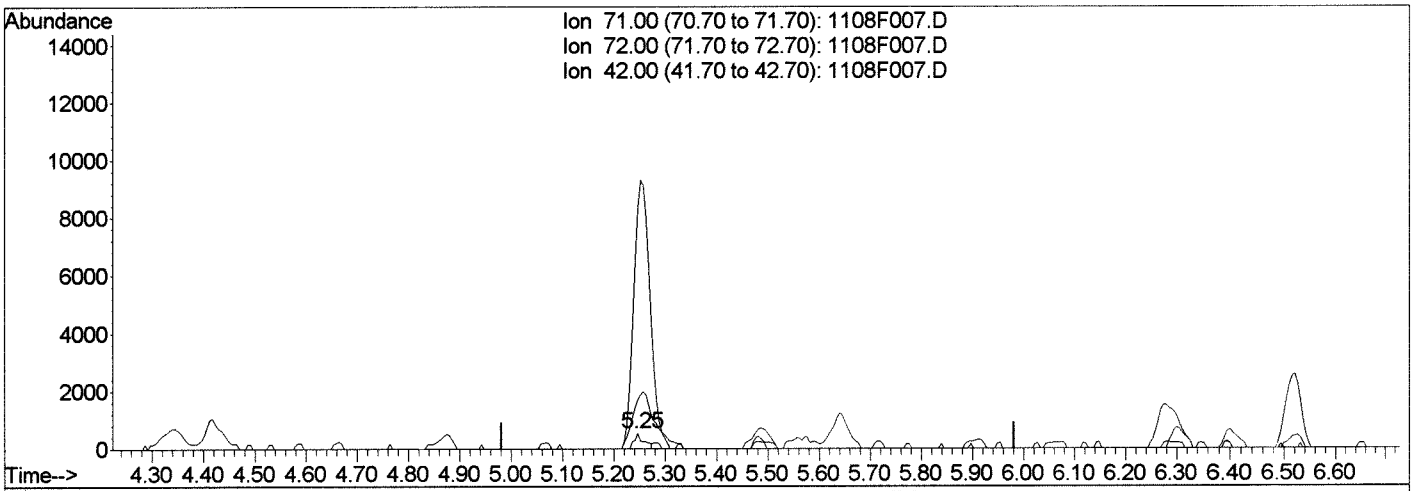
11/09/18

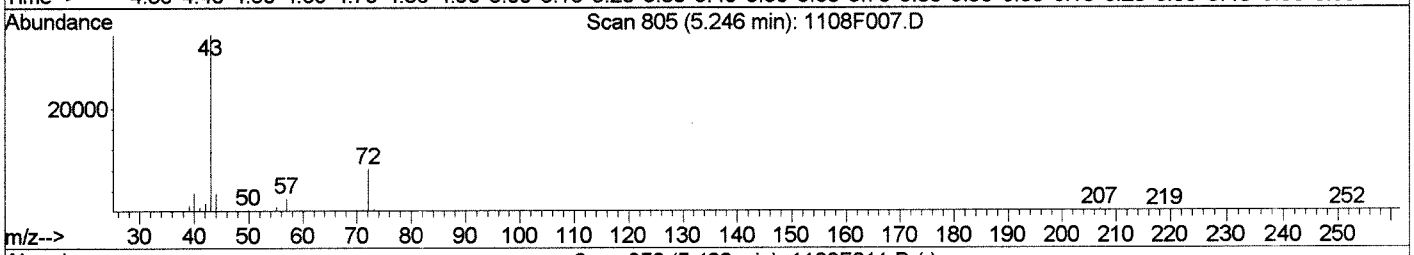
1108F007.D 110818MS27_8260.M Fri Nov 09 08:56:58 2018

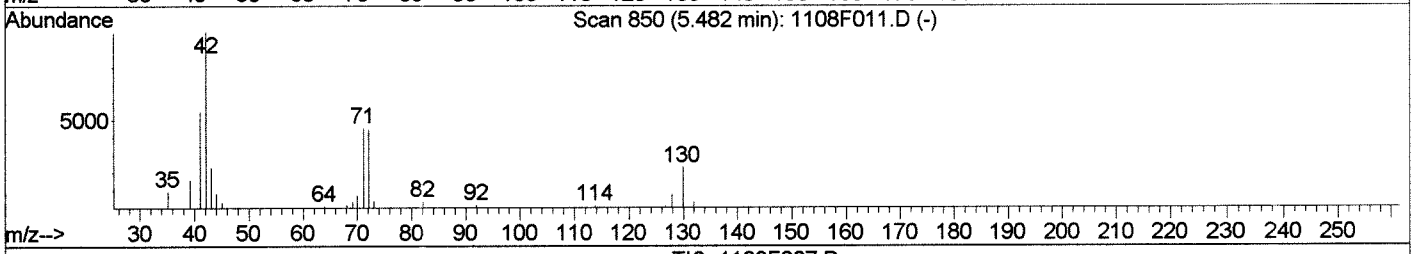
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F007.D Vial: 4
Acq On : 8 Nov 2018 1:11 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:56 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F007.D

(38) Tetrahydrofuran (T)

5.25min 0.64PPB

response 690

Ion	Exp%	Act%
71.00	100	100
72.00	98.60	1378.11#
42.00	221.30	237.85
0.00	0.00	0.00

Manual Integration:

Before

LM

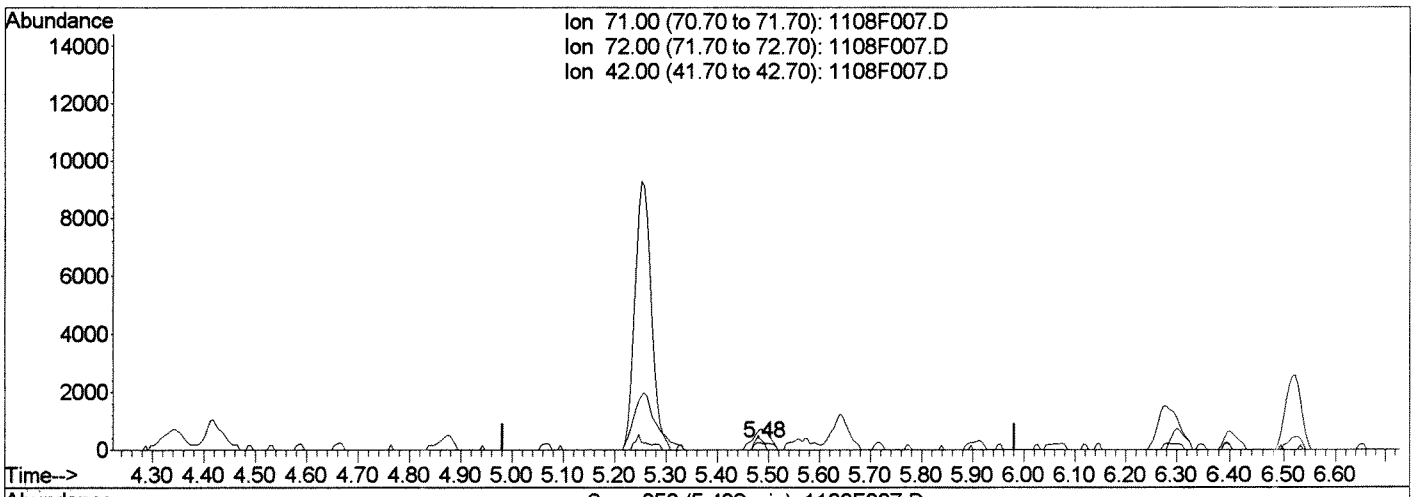
11/09/18

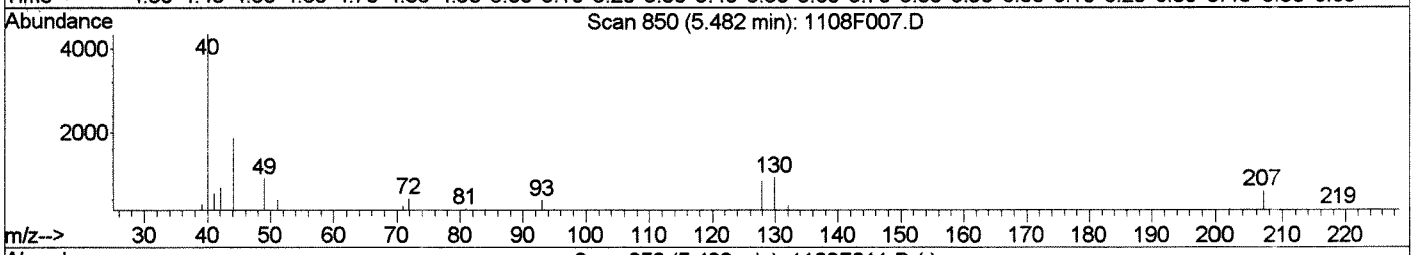
1108F007.D 110818MS27_8260.M Fri Nov 09 08:58:11 2018

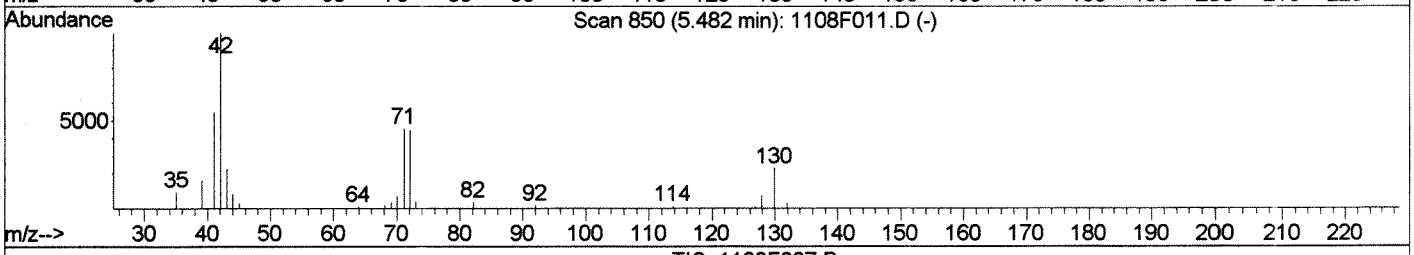
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F007.D Vial: 4
Acq On : 8 Nov 2018 1:11 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 8:58 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F007.D

(38) Tetrahydrofuran (T)

5.48min 0.31PPB m

response 341

Ion	Exp%	Act%
71.00	100	100
72.00	98.60	166.00#
42.00	221.30	277.60#
0.00	0.00	0.00

Manual Integration:

After LM

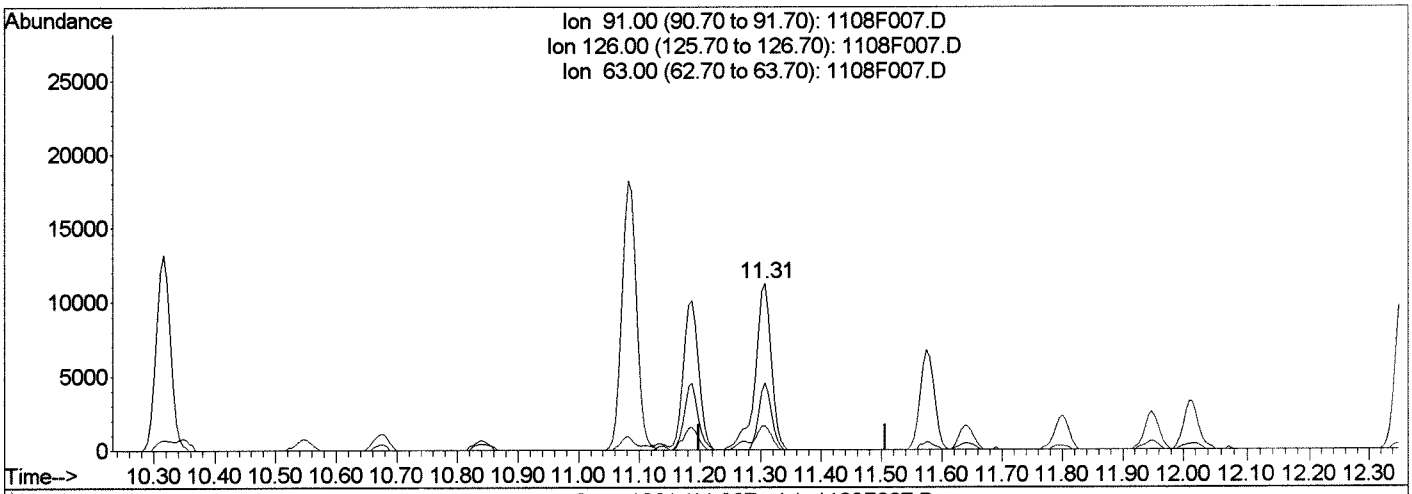
Baseline correction

11/09/18

1108F007.D 110818MS27_8260.M Fri Nov 09 08:58:31 2018

Data File : J:\MS27\DATA\110818\1108F007.D Vial: 4
Acq On : 8 Nov 2018 1:11 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:00 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F007.D

(92) 4-Chlorotoluene (T)

11.31min 0.43PPB

response 20702

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	40.07
63.00	11.20	14.39
0.00	0.00	0.00

Manual Integration:

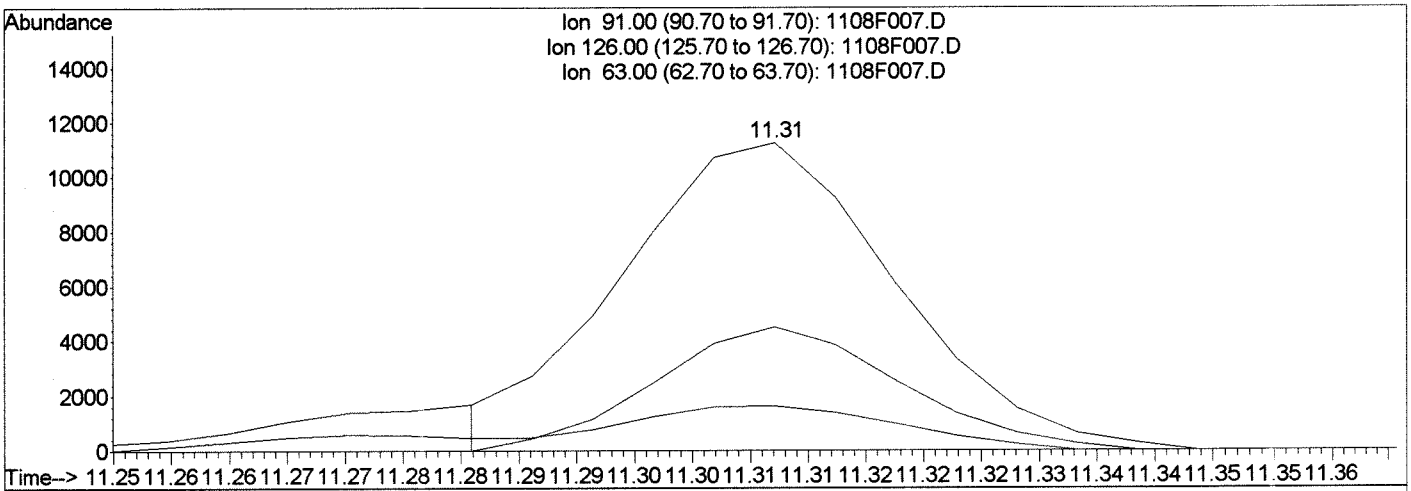
Before LM

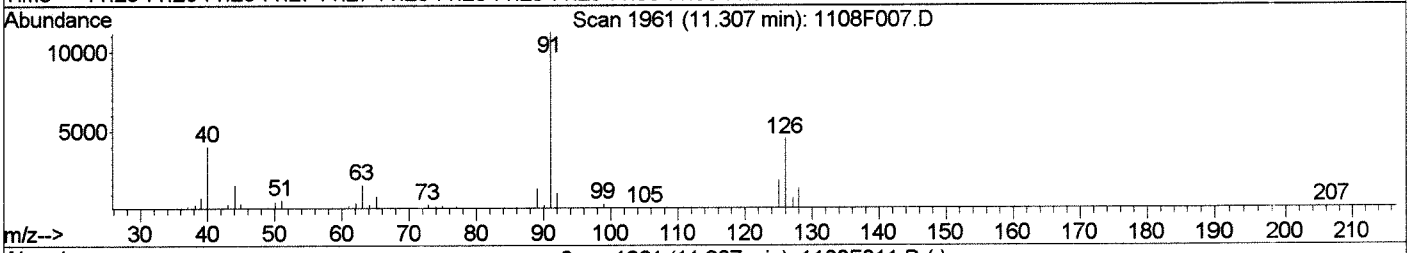
11/09/18

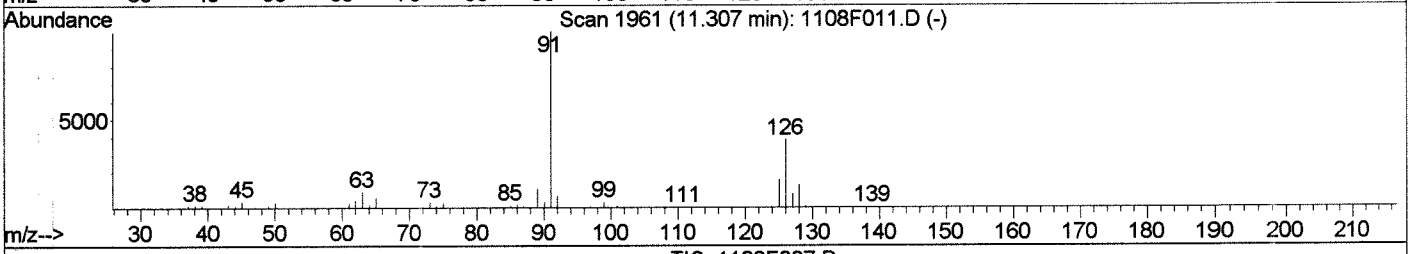
1108F007.D 110818MS27_8260.M Fri Nov 09 09:01:06 2018

Data File : J:\MS27\DATA\110818\1108F007.D Vial: 4
Acq On : 8 Nov 2018 1:11 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:01 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F007.D

(92) 4-Chlorotoluene (T)

11.31min 0.39PPB m

response 18481

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	40.07
63.00	11.20	14.39
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

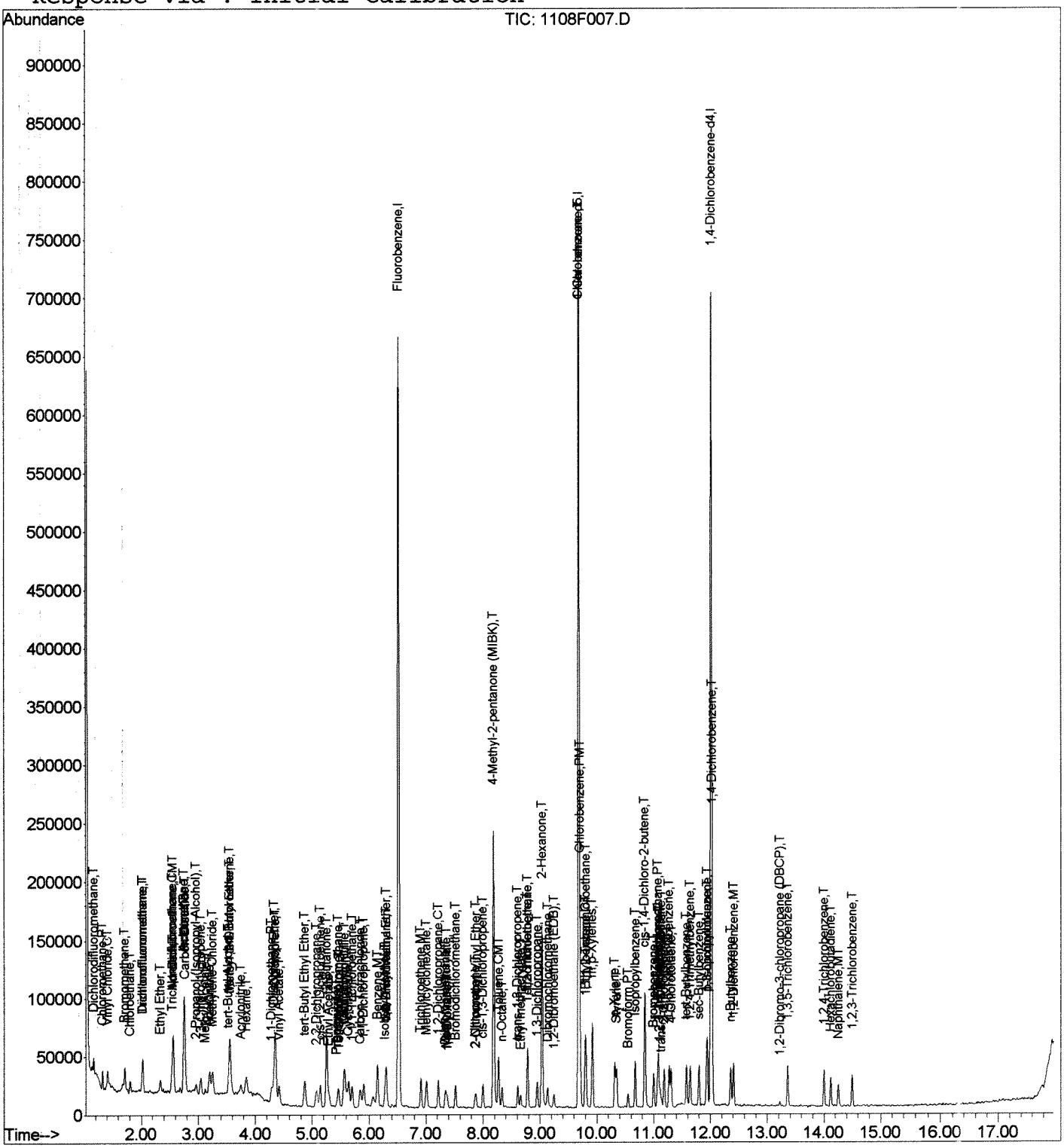
11/09/18

1108F007.D 110818MS27_8260.M Fri Nov 09 09:01:17 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F007.D Vial: 4
Acq On : 8 Nov 2018 1:11 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:01 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Data File : J:\MS27\DATA\110818\1108F008.D Vial: 5
Acq On : 8 Nov 2018 1:33 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:30 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration LM 11-17-18
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.52	96	616736	10.00	PPB		0.00
63) Chlorobenzene-d5	9.68	82	246301	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	221953	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	5.79	113	68403	4.20	PPB		0.00
Spiked Amount 10.000			Recovery =	42.00%			
46) 1,2-Dichloroethane-d4	6.21	65	69071	4.29	PPB		0.00
Spiked Amount 10.000			Recovery =	42.90%			
61) Toluene-d8	8.20	98	183932	3.14	PPB		0.00
Spiked Amount 10.000			Recovery =	31.40%			
83) 4-Bromofluorobenzene	10.87	95	72877	3.37	PPB		0.00
Spiked Amount 10.000			Recovery =	33.70%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.17	85	16120	0.88	PPB		97
3) Chloromethane	1.32	50	24410	1.06	PPB		93
4) Vinyl Chloride	1.41	62	19545	0.93	PPB		94
5) Bromomethane	1.72	96	17480	1.21	PPB		95
6) Chloroethane	1.81	64	12672	1.05	PPB		97
7) Dichlorofluoromethane	2.03	67	30325	1.04	PPB		97
8) Trichlorofluoromethane	2.02	101	24177	0.89	PPB		88
9) Ethyl Ether	2.34	59	10161	1.12	PPB		99
10) Acrolein	2.56	56	46287	21.57	PPB		97
11) Trichlorotrifluoroethane	2.54	151	12245	1.01	PPB		95
12) 1,1-Dichloroethene	2.57	96	15450	1.00	PPB		95
13) Acetone	2.75	43	100625	41.84	PPB		99
14) Iodomethane	2.76	142	85071	3.41	PPB		98
15) Carbon Disulfide	2.77	76	47126	1.04	PPB		96
16) 2-Propanol (Isopropyl Alco	2.97	45	21522	57.14	PPB		65
17) 3-Chloro-1-propene	3.04	76	8976	1.03	PPB		96
18) Methyl Acetate	3.12	43	9314	1.25	PPB		95
19) Acetonitrile	3.20	40	25180	42.09	PPB		96
20) Methylene Chloride	3.25	84	21505	1.20	PPB		92
21) tert-Butyl Alcohol	3.53	59	4679	5.60	PPB	#	1
22) Acrylonitrile	3.75	53	16829	4.24	PPB		95
23) Methyl tert-Butyl Ether	3.56	73	75636	2.10	PPB		99
24) trans-1,2-Dichloroethene	3.55	96	18056	1.05	PPB		95
25) Hexane	3.85	57	19862	0.99	PPB		96
26) Diisopropyl Ether	4.33	45	52716	1.05	PPB		99
27) 1,1-Dichloroethane	4.29	63	30442	0.98	PPB		99
28) Vinyl Acetate	4.42	86	5209	1.95	PPB	#	87

(#) = qualifier out of range (m) = manual integration JW 11/26/18
1108F008.D 110818MS27_8260.M Fri Nov 09 09:23:28 2018 Page 1

Data File : J:\MS27\DATA\110818\1108F008.D Vial: 5
Acq On : 8 Nov 2018 1:33 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:30 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
29)	Chloroprene	4.35	53	75512	3.81	PPB		98
30)	tert-Butyl Ethyl Ether	4.87	59	38114	0.95	PPB		89
31)	2,2-Dichloropropane	5.08	77	21029	0.96	PPB		92
32)	cis-1,2-Dichloroethene	5.15	96	19916	1.07	PPB		87
33)	2-Butanone	5.25	72	43633	40.28	PPB		96
34)	Ethyl Acetate	5.30	61	2208	1.56	PPB	#	43
35)	Propionitrile	5.43	54	6358	4.60	PPB		97
36)	Methacrylonitrile	5.56	67	18003	3.98	PPB		94
37)	Bromochloromethane	5.46	128	10595	1.10	PPB		92
38)	Tetrahydrofuran	5.49	71	1136	1.04	PPB		96
39)	Chloroform	5.58	83	33685	1.09	PPB		98
40)	Cyclohexane	5.64	56	25109	0.87	PPB		92
41)	1,1,1-Trichloroethane	5.70	97	23939	0.95	PPB		97
43)	Carbon Tetrachloride	5.84	117	22420	1.01	PPB		96
44)	1,1-Dichloropropene	5.91	75	19235	0.88	PPB		92
45)	Isobutyl Alcohol	6.28	42	8700	41.84	PPB		93
47)	Benzene	6.15	78	66469	0.99	PPB		96
48)	1,2-Dichloroethane	6.29	62	21621	1.05	PPB		97
49)	tert-Amyl Methyl Ether	6.30	55	12573	1.02	PPB		89
50)	Trichloroethene	6.91	95	18927	1.06	PPB		90
51)	Methylcyclohexane	7.01	83	18905	0.86	PPB		95
52)	1,2-Dichloropropane	7.22	63	17316	0.93	PPB		94
53)	Dibromomethane	7.34	93	10322	1.00	PPB		94
54)	Methyl methacrylate	7.37	69	6960	1.03	PPB		90
55)	1,4-Dioxane	7.38	88	2354	35.65	PPB		90
56)	Bromodichloromethane	7.52	83	24940	1.05	PPB		95
57)	2-Nitropropane	7.86	41	10357	4.50	PPB		88
58)	2-Chloroethyl Vinyl Ether	7.89	63	6435	0.98	PPB		90
59)	cis-1,3-Dichloropropene	8.00	75	23961	0.96	PPB		98
60)	4-Methyl-2-pentanone (MIBK	8.18	58	125753	33.51	PPB		95
62)	Toluene	8.27	92	38544	0.92	PPB		100
64)	n-Octane	8.33	85	6140	0.70	PPB		91
65)	trans-1,3-Dichloropropene	8.61	75	20351	0.97	PPB		95
66)	Ethyl methacrylate	8.66	69	12237	0.92	PPB		95
67)	1,1,2-Trichloroethane	8.78	83	12627	1.04	PPB		98
68)	Tetrachloroethene	8.78	164	14830	0.98	PPB		95
69)	2-Hexanone	9.03	57	36266	32.71	PPB		95
70)	1,3-Dichloropropane	8.95	76	23495	1.02	PPB		95
71)	Dibromochloromethane	9.14	129	18431	1.05	PPB		97
72)	1,2-Dibromoethane (EDB)	9.25	107	13127	0.99	PPB		95
73)	1-Chlorohexane	9.69	91	16239	0.94	PPB		92

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F008.D Vial: 5
Acq On : 8 Nov 2018 1:33 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:30 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

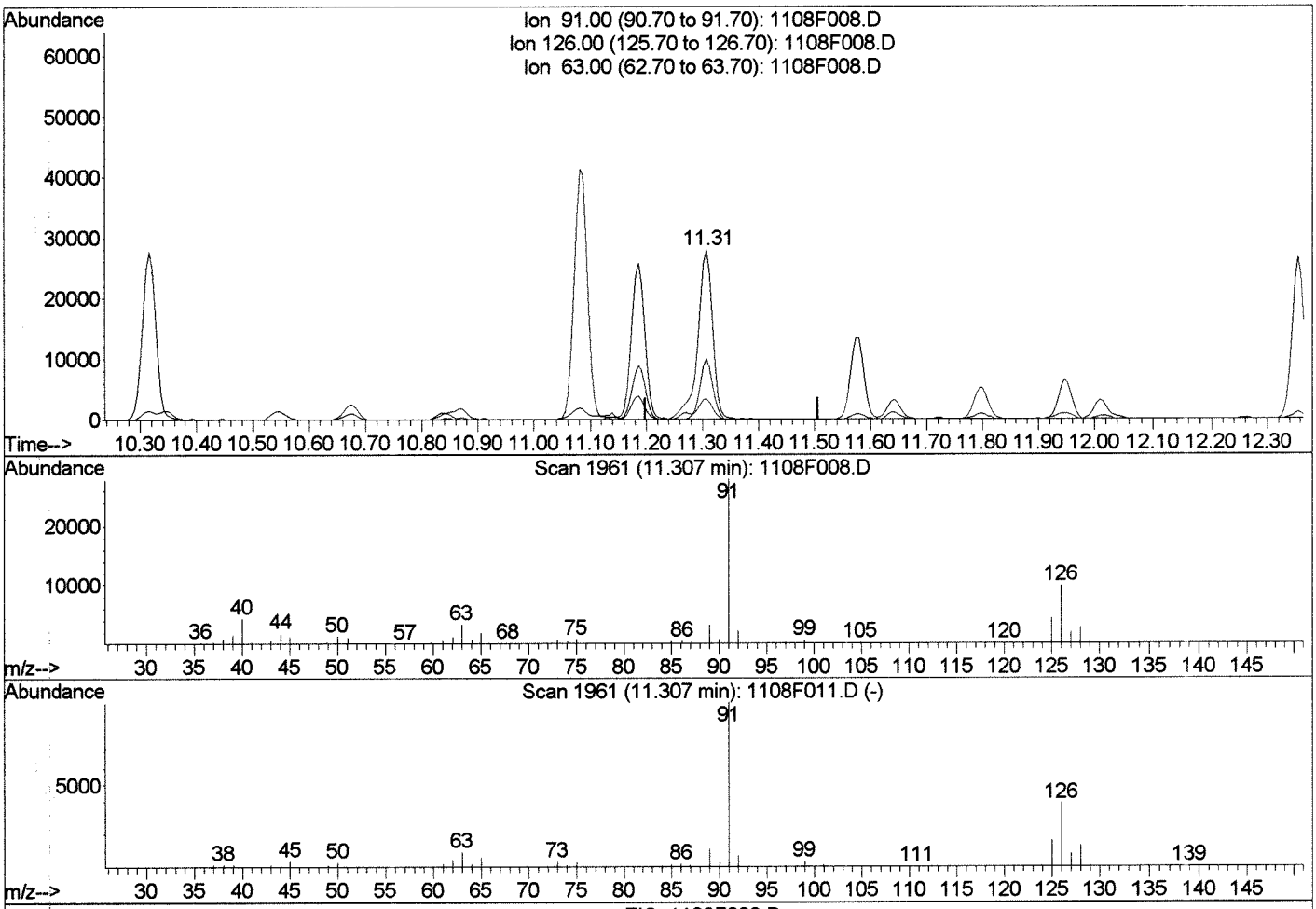
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	9.71	112	47759	0.98	PPB	99
75)	Ethylbenzene	9.80	106	18764	0.79	PPB	85
76)	1,1,1,2-Tetrachloroethane	9.81	131	18630	1.06	PPB	97
77)	m,p-Xylenes	9.92	106	44738	1.52	PPB	97
78)	o-Xylene	10.32	106	21509	0.79	PPB	95
79)	Styrene	10.35	103	18512	0.80	PPB	90
80)	Bromoform	10.55	173	11347	1.01	PPB	97
81)	Isopropylbenzene	10.67	105	54081	0.79	PPB	97
82)	cis-1,4-Dichloro-2-butene	10.84	89	5705	3.29	PPB	90
85)	1,1,2,2-Tetrachloroethane	11.07	83	14652	1.00	PPB	92
86)	trans-1,4-Dichloro-2-buten	11.13	53	3562	1.05	PPB	85
87)	Bromobenzene	11.00	156	19942	1.01	PPB	96
88)	n-Propylbenzene	11.08	91	67865	0.85	PPB	96
89)	1,2,3-Trichloropropane	11.11	110	4407	1.09	PPB	90
90)	2-Chlorotoluene	11.19	91	43169	0.90	PPB	98
91)	1,3,5-Trimethylbenzene	11.27	105	41415	0.74	PPB	100
92)	4-Chlorotoluene	11.31	91	46285m	0.88	PPB	
93)	tert-Butylbenzene	11.58	119	35953	0.80	PPB	97
94)	1,2,4-Trimethylbenzene	11.64	105	42314	0.77	PPB	95
95)	sec-Butylbenzene	11.79	105	50692	0.75	PPB	99
96)	p-Isopropyltoluene	11.95	119	41995	0.75	PPB	95
97)	1,3-Dichlorobenzene	11.94	146	35501	0.96	PPB	96
98)	1,4-Dichlorobenzene	12.04	146	37317	1.01	PPB	91
99)	n-Butylbenzene	12.36	91	41995	0.83	PPB	97
100)	1,2-Dichlorobenzene	12.41	146	34048	0.98	PPB	98
101)	1,2-Dibromo-3-chloropropan	13.22	155	2148	1.06	PPB	94
102)	1,3,5-Trichlorobenzene	13.36	180	24867	1.01	PPB	95
103)	1,2,4-Trichlorobenzene	14.00	180	21920	0.99	PPB	98
104)	Hexachlorobutadiene	14.12	225	12167	1.05	PPB	93
105)	Naphthalene	14.25	128	32385	0.97	PPB	97
106)	1,2,3-Trichlorobenzene	14.49	180	20984	1.03	PPB	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F008.D Vial: 5
Acq On : 8 Nov 2018 1:33 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F008.D

(92) 4-Chlorotoluene (T)

11.31min 0.97PPB

response 51203

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.44
63.00	11.20	12.00
0.00	0.00	0.00

Manual Integration:

Before LM

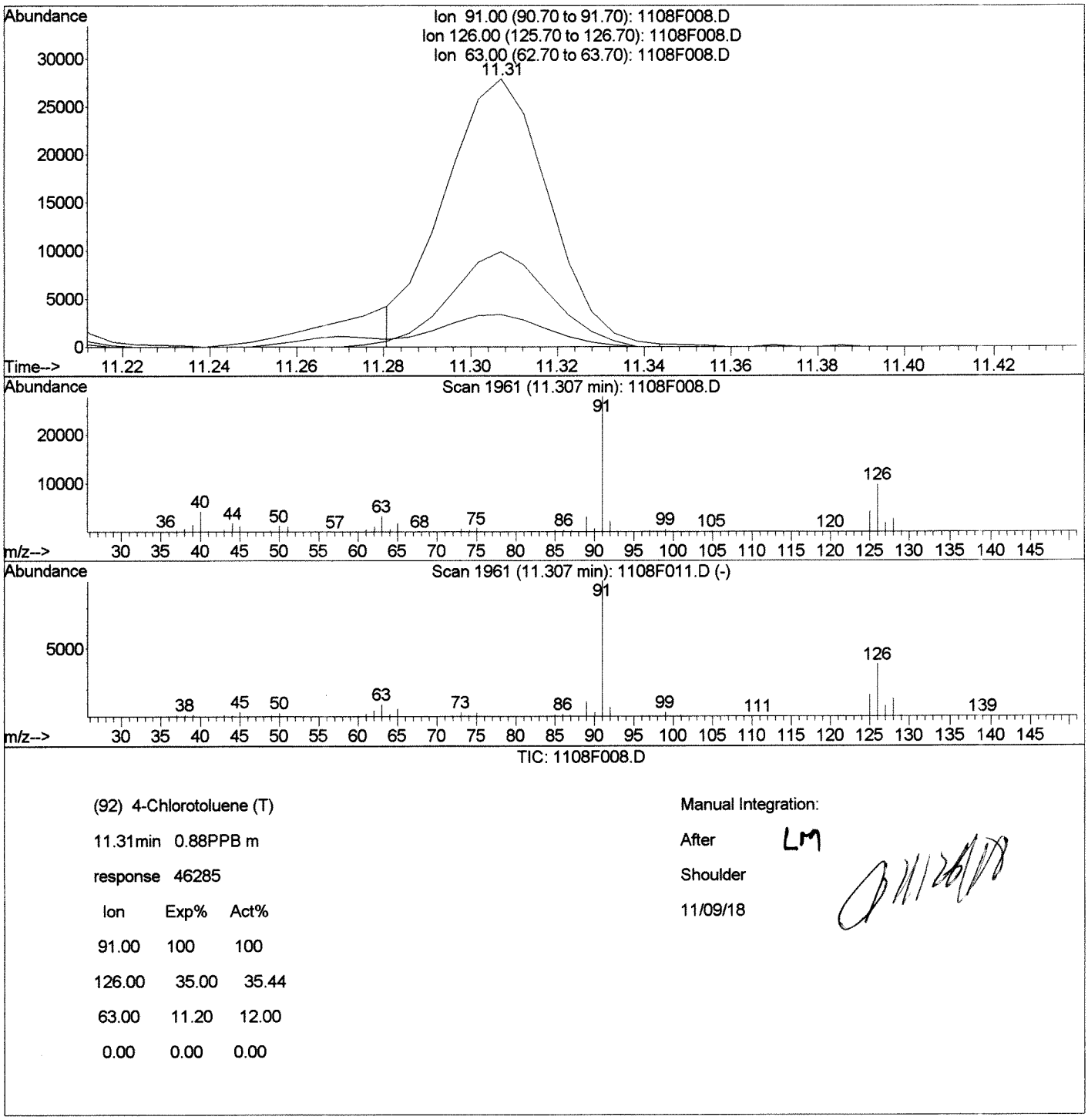
11/09/18

1108F008.D 110818MS27_8260.M Fri Nov 09 09:04:25 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F008.D Vial: 5
Acq On : 8 Nov 2018 1:33 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:04 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F008.D

(92) 4-Chlorotoluene (T)

11.31min 0.88PPB m

response 46285

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.44
63.00	11.20	12.00
0.00	0.00	0.00

Manual Integration:

After LM

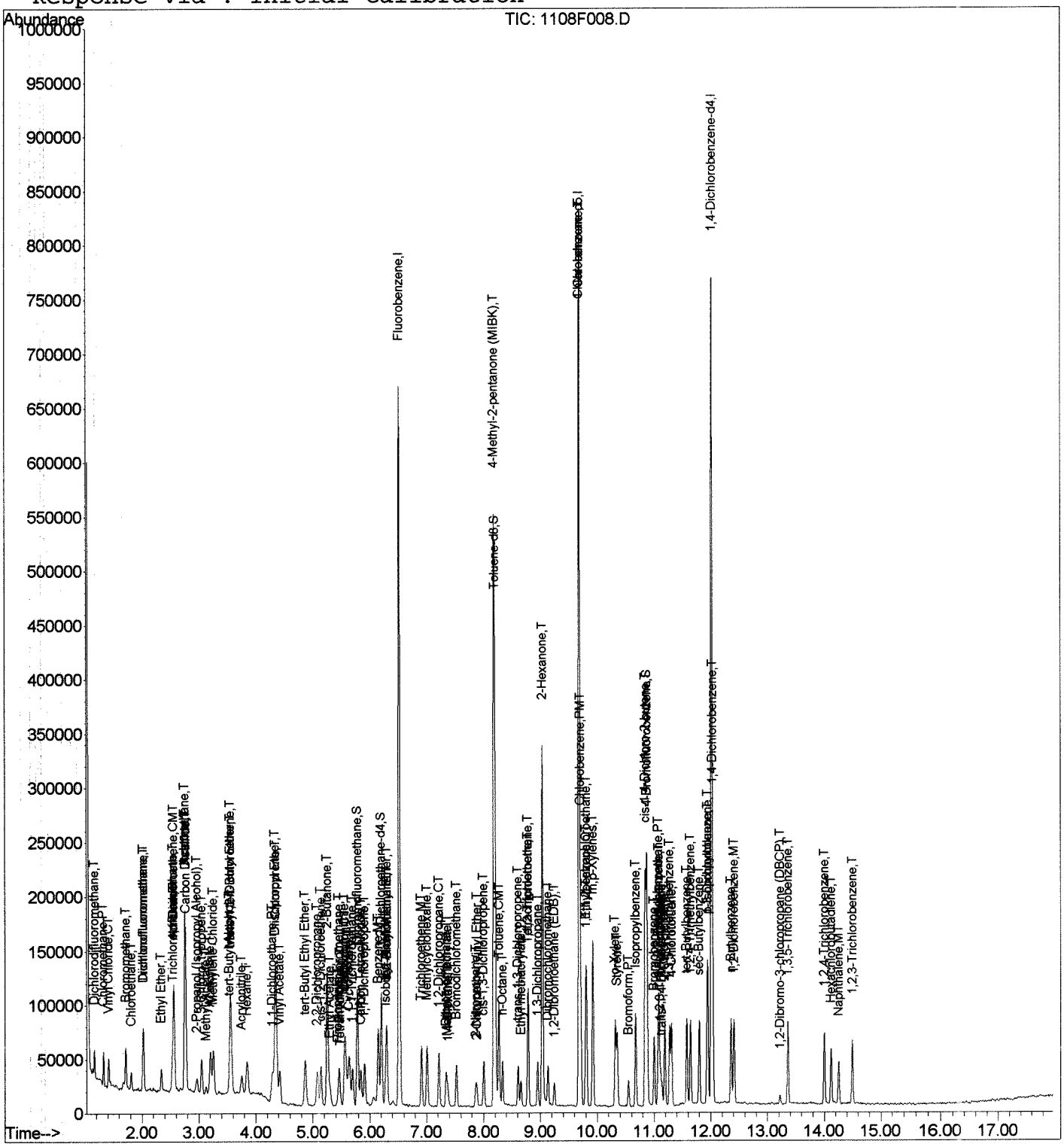
Shoulder

11/09/18

1108F008.D 110818MS27_8260.M Fri Nov 09 09:06:59 2018

Data File : J:\MS27\DATA\110818\1108F008.D Vial: 5
Acq On : 8 Nov 2018 1:33 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:04 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F009.D Vial: 6
Acq On : 8 Nov 2018 1:55 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:31 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018 LM 11-17-18
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.52	96	636244	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	254739	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	233469	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.79	113	101024	6.02	PPB	0.00
Spiked Amount 10.000			Recovery =	60.20%		
46) 1,2-Dichloroethane-d4	6.21	65	105540	6.35	PPB	0.00
Spiked Amount 10.000			Recovery =	63.50%		
61) Toluene-d8	8.20	98	346837	5.74	PPB	0.00
Spiked Amount 10.000			Recovery =	57.40%		
83) 4-Bromofluorobenzene	10.87	95	124178	5.55	PPB	0.00
Spiked Amount 10.000			Recovery =	55.50%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.17	85	39069	2.07	PPB	100
3) Chloromethane	1.32	50	50802	2.15	PPB	96
4) Vinyl Chloride	1.41	62	43973	2.02	PPB	95
5) Bromomethane	1.72	96	36509	2.44	PPB	99
6) Chloroethane	1.81	64	25474	2.05	PPB	98
7) Dichlorofluoromethane	2.03	67	62584	2.07	PPB	97
8) Trichlorofluoromethane	2.02	101	57983	2.08	PPB	97
9) Ethyl Ether	2.34	59	19640	2.10	PPB	94
10) Acrolein	2.56	56	95556	43.17	PPB	98
11) Trichlorotrifluoroethane	2.54	151	26074	2.09	PPB	96
12) 1,1-Dichloroethene	2.57	96	32470	2.05	PPB	98
13) Acetone	2.76	43	203061	81.85	PPB	99
14) Iodomethane	2.76	142	194364	7.56	PPB	99
15) Carbon Disulfide	2.77	76	98283	2.11	PPB	99
16) 2-Propanol (Isopropyl Alco	2.97	45	41677	107.26	PPB	82
17) 3-Chloro-1-propene	3.05	76	17765	1.97	PPB	96
18) Methyl Acetate	3.13	43	17265	2.24	PPB	95
19) Acetonitrile	3.21	40	57370	92.95	PPB	97
20) Methylene Chloride	3.25	84	39738	2.15	PPB	98
21) tert-Butyl Alcohol	3.53	59	9344m	10.85	PPB	
22) Acrylonitrile	3.75	53	36370	8.88	PPB	96
23) Methyl tert-Butyl Ether	3.56	73	156650	4.22	PPB	99
24) trans-1,2-Dichloroethene	3.55	96	39995	2.25	PPB	92
25) Hexane	3.85	57	43810	2.13	PPB	95
26) Diisopropyl Ether	4.33	45	104971	2.03	PPB	97
27) 1,1-Dichloroethane	4.29	63	68251	2.12	PPB	99
28) Vinyl Acetate	4.42	86	10667	3.86	PPB	94

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F009.D Vial: 6
Acq On : 8 Nov 2018 1:55 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:31 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
29)	Chloroprene	4.35	53	160596	7.85	PPB		99
30)	tert-Butyl Ethyl Ether	4.87	59	81969	1.98	PPB		99
31)	2,2-Dichloropropane	5.08	77	47420	2.10	PPB		96
32)	cis-1,2-Dichloroethene	5.15	96	40360	2.10	PPB		93
33)	2-Butanone	5.25	72	90736	81.19	PPB		97
34)	Ethyl Acetate	5.30	61	6270	4.29	PPB		88
35)	Propionitrile	5.43	54	12426	8.72	PPB		93
36)	Methacrylonitrile	5.56	67	36783	7.89	PPB		99
37)	Bromochloromethane	5.46	128	22325	2.25	PPB		88
38)	Tetrahydrofuran	5.49	71	1993	1.77	PPB	#	85
39)	Chloroform	5.58	83	67493	2.12	PPB		97
40)	Cyclohexane	5.64	56	55615	1.87	PPB		94
41)	1,1,1-Trichloroethane	5.70	97	51086	1.96	PPB		94
43)	Carbon Tetrachloride	5.84	117	47193	2.06	PPB		98
44)	1,1-Dichloropropene	5.91	75	43546	1.94	PPB		98
45)	Isobutyl Alcohol	6.28	42	17524	81.70	PPB		87
47)	Benzene	6.15	78	139376	2.00	PPB		100
48)	1,2-Dichloroethane	6.29	62	43510	2.05	PPB		97
49)	tert-Amyl Methyl Ether	6.30	55	26117	2.06	PPB		88
50)	Trichloroethene	6.91	95	37595	2.04	PPB		98
51)	Methylcyclohexane	7.01	83	43443	1.91	PPB		99
52)	1,2-Dichloropropane	7.22	63	38916	2.02	PPB		97
53)	Dibromomethane	7.34	93	20917	1.97	PPB		97
54)	Methyl methacrylate	7.37	69	13586	1.94	PPB		95
55)	1,4-Dioxane	7.39	88	4804	70.51	PPB		97
56)	Bromodichloromethane	7.52	83	48715	1.99	PPB		99
57)	2-Nitropropane	7.87	41	23152	9.75	PPB		94
58)	2-Chloroethyl Vinyl Ether	7.88	63	12153	1.79	PPB		91
59)	cis-1,3-Dichloropropene	8.00	75	50446	1.96	PPB		96
60)	4-Methyl-2-pentanone (MIBK	8.18	58	274269	70.85	PPB		96
62)	Toluene	8.27	92	86133	1.98	PPB		99
64)	n-Octane	8.33	85	16971	1.88	PPB		93
65)	trans-1,3-Dichloropropene	8.61	75	44148	2.02	PPB		98
66)	Ethyl methacrylate	8.66	69	26202	1.91	PPB		98
67)	1,1,2-Trichloroethane	8.79	83	26400	2.10	PPB		98
68)	Tetrachloroethene	8.79	164	30960	1.97	PPB		96
69)	2-Hexanone	9.03	57	80831	70.48	PPB		91
70)	1,3-Dichloropropane	8.95	76	48428	2.03	PPB		97
71)	Dibromochloromethane	9.13	129	37653	2.08	PPB		96
72)	1,2-Dibromoethane (EDB)	9.25	107	28674	2.08	PPB		98
73)	1-Chlorohexane	9.69	91	35211	1.98	PPB		99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F009.D Vial: 6
Acq On : 8 Nov 2018 1:55 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:31 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

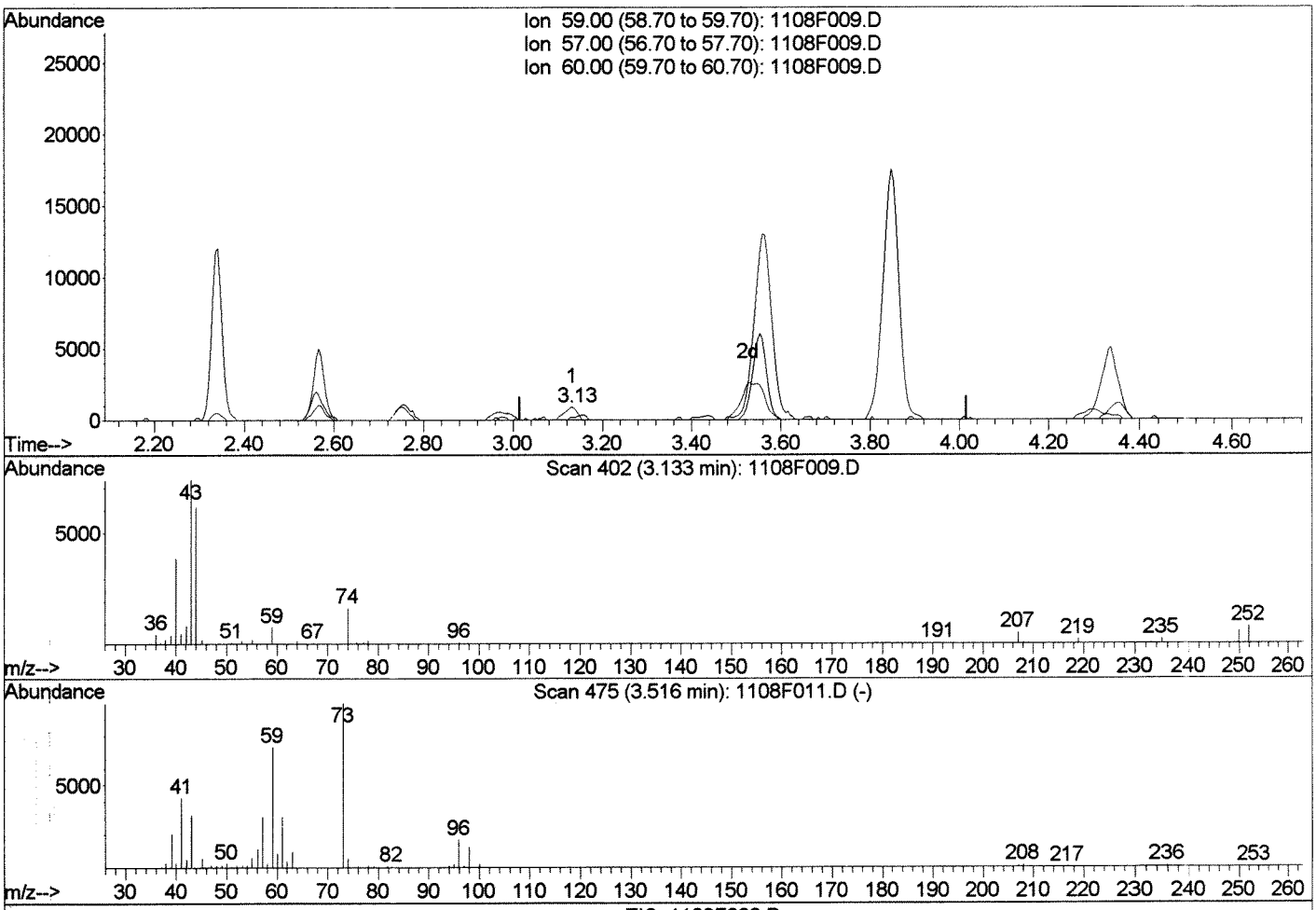
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	9.71	112	102999	2.05	PPB	95
75)	Ethylbenzene	9.80	106	46008	1.87	PPB	97
76)	1,1,1,2-Tetrachloroethane	9.81	131	36928	2.04	PPB	95
77)	m,p-Xylenes	9.92	106	104518	3.44	PPB	98
78)	o-Xylene	10.32	106	48866	1.74	PPB	97
79)	Styrene	10.35	103	47921	2.00	PPB	97
80)	Bromoform	10.55	173	22538	1.95	PPB	92
81)	Isopropylbenzene	10.67	105	121315	1.71	PPB	97
82)	cis-1,4-Dichloro-2-butene	10.84	89	13098	7.30	PPB	92
85)	1,1,2,2-Tetrachloroethane	11.07	83	31744	2.05	PPB	94
86)	trans-1,4-Dichloro-2-buten	11.13	53	8106	2.28	PPB	89
87)	Bromobenzene	11.00	156	42576	2.04	PPB	99
88)	n-Propylbenzene	11.08	91	157149	1.88	PPB	97
89)	1,2,3-Trichloropropane	11.11	110	9800	2.31	PPB	95
90)	2-Chlorotoluene	11.19	91	100125	1.98	PPB	99
91)	1,3,5-Trimethylbenzene	11.27	105	105806	1.81	PPB	99
92)	4-Chlorotoluene	11.31	91	103243m	1.87	PPB	
93)	tert-Butylbenzene	11.57	119	87853	1.85	PPB	97
94)	1,2,4-Trimethylbenzene	11.64	105	99477	1.72	PPB	98
95)	sec-Butylbenzene	11.80	105	128805	1.80	PPB	98
96)	p-Isopropyltoluene	11.95	119	101507	1.73	PPB	96
97)	1,3-Dichlorobenzene	11.94	146	80409	2.07	PPB	98
98)	1,4-Dichlorobenzene	12.04	146	82266	2.11	PPB	97
99)	n-Butylbenzene	12.36	91	100220	1.89	PPB	97
100)	1,2-Dichlorobenzene	12.41	146	73665	2.01	PPB	99
101)	1,2-Dibromo-3-chloropropan	13.22	155	4605	2.17	PPB	88
102)	1,3,5-Trichlorobenzene	13.36	180	53740	2.08	PPB	98
103)	1,2,4-Trichlorobenzene	14.00	180	45441	1.96	PPB	95
104)	Hexachlorobutadiene	14.12	225	24713	2.02	PPB	97
105)	Naphthalene	14.25	128	65985	1.88	PPB	98
106)	1,2,3-Trichlorobenzene	14.49	180	41771	1.94	PPB	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F009.D Vial: 6
Acq On : 8 Nov 2018 1:55 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F009.D

(21) tert-Butyl Alcohol (T)

3.13min 2.01PPB

response 1733

Ion	Exp%	Act%
59.00	100	100
57.00	41.90	17.03
60.00	11.50	0.00
0.00	0.00	0.00

Manual Integration:

Before LM

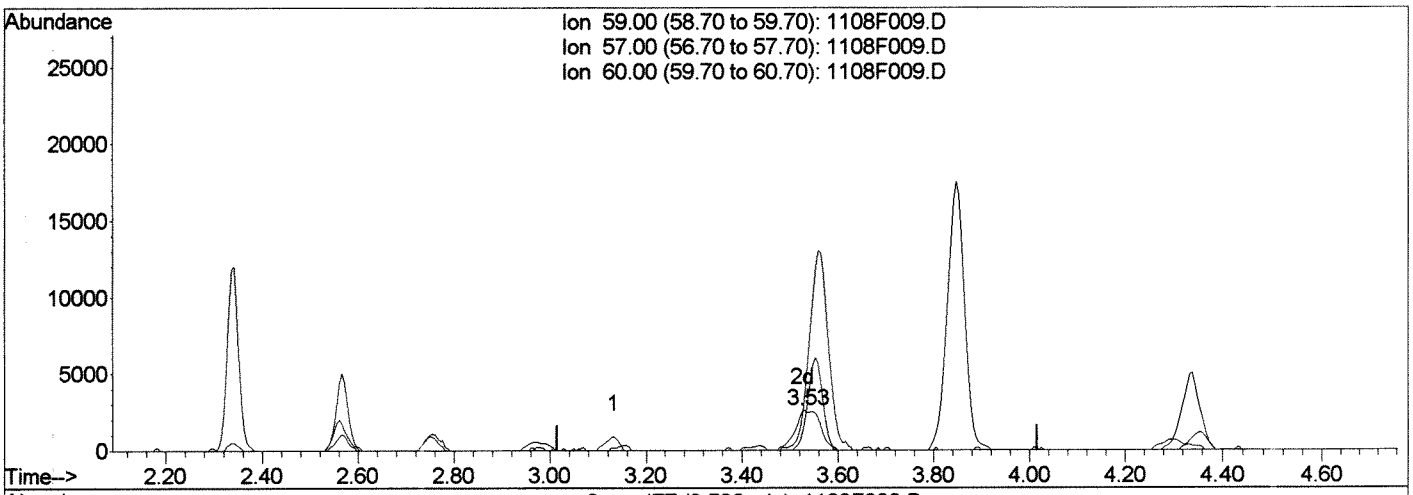
11/09/18

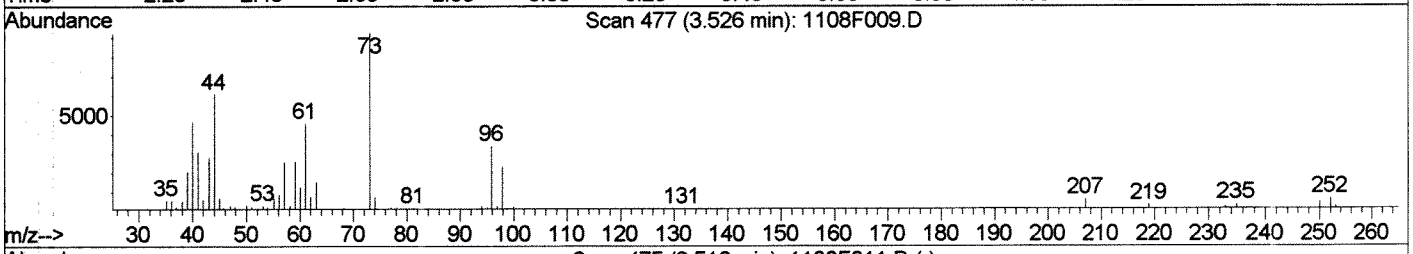
1108F009.D 110818MS27_8260.M Fri Nov 09 09:07:59 2018

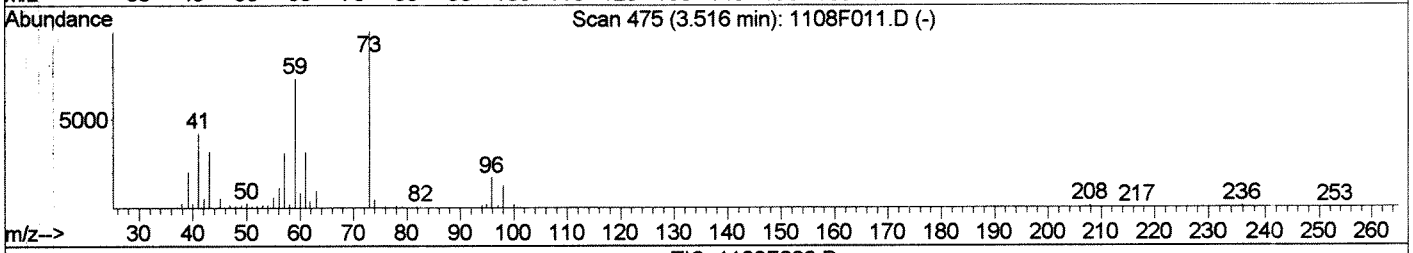
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F009.D Vial: 6
Acq On : 8 Nov 2018 1:55 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:08 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F009.D

(21) tert-Butyl Alcohol (T)

3.53min 10.85PPB m

response 9344

Ion	Exp%	Act%
59.00	100	100
57.00	41.90	98.73#
60.00	11.50	49.06#
0.00	0.00	0.00

Manual Integration:

After LM

Baseline correction

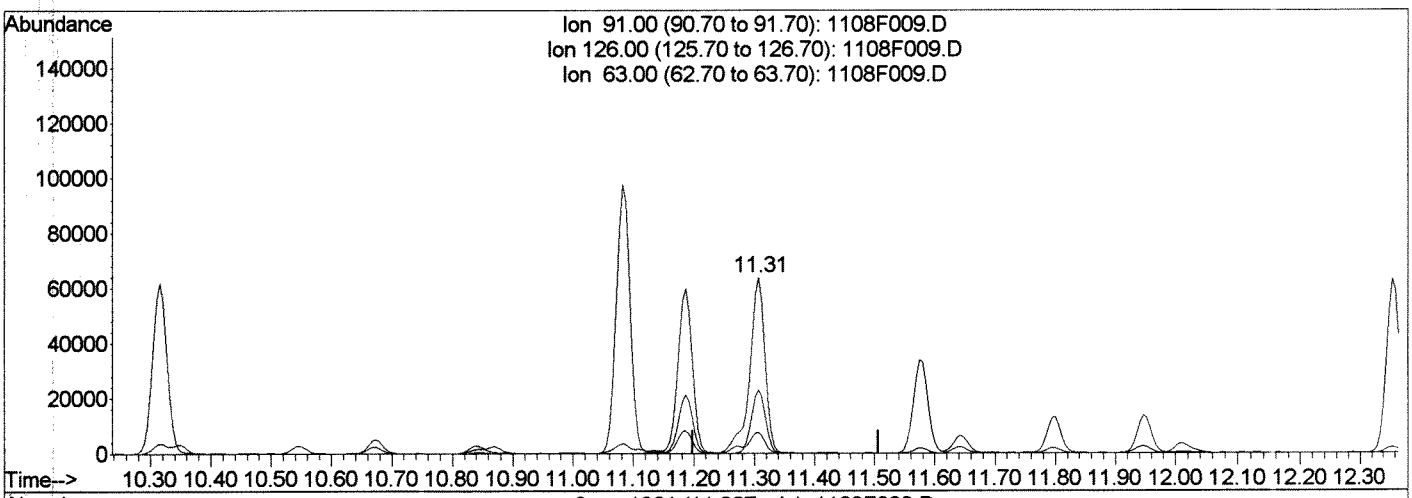
11/09/18

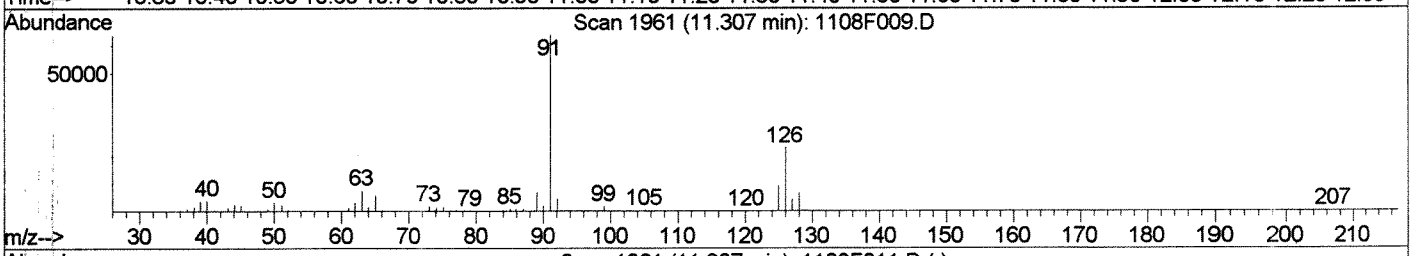
1108F009.D 110818MS27_8260.M Fri Nov 09 09:08:07 2018

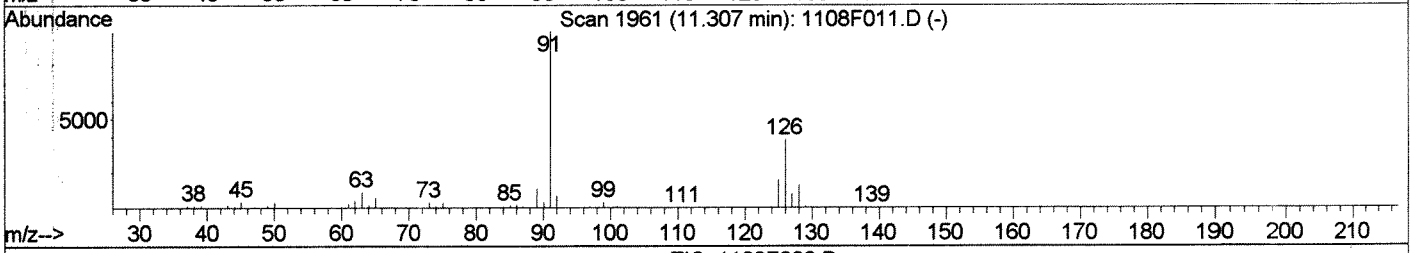
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F009.D Vial: 6
Acq On : 8 Nov 2018 1:55 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:08 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F009.D

(92) 4-Chlorotoluene (T)

11.31min 2.07PPB

response 114489

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.98
63.00	11.20	11.86
0.00	0.00	0.00

Manual Integration:

Before LM

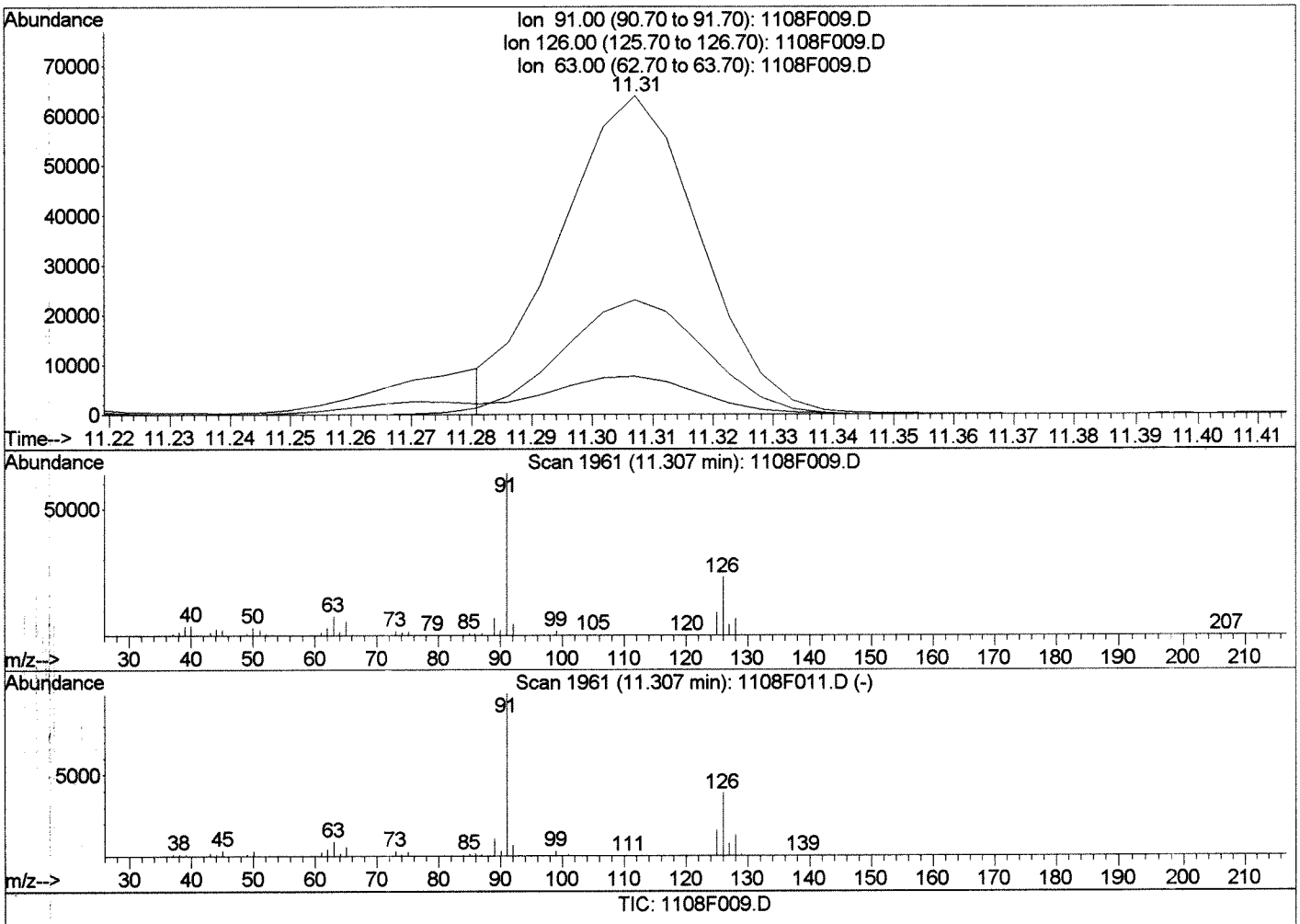
11/09/18

1108F009.D 110818MS27_8260.M Fri Nov 09 09:09:31 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F009.D Vial: 6
Acq On : 8 Nov 2018 1:55 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:09 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F009.D

(92) 4-Chlorotoluene (T)

11.31min 1.87PPB m

response 103243

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.98
63.00	11.20	11.86
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

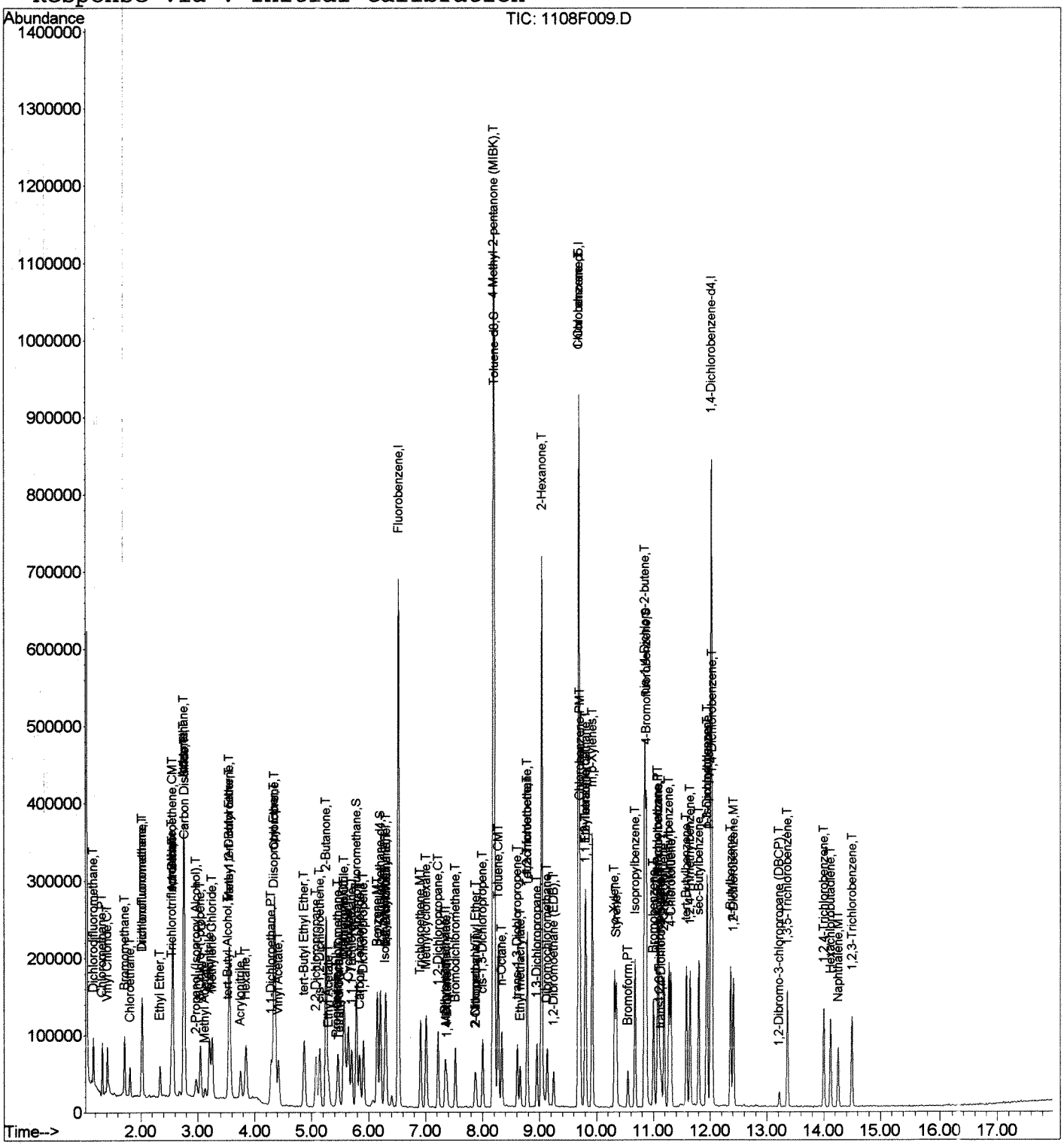
11/09/18

1108F009.D 110818MS27_8260.M Fri Nov 09 09:09:44 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F009.D Vial: 6
Acq On : 8 Nov 2018 1:55 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:09 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F010.D Vial: 7
Acq On : 8 Nov 2018 2:17 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:31 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration LM 11-17-18
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.52	96	649748	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	255886	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	251172	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.79	113	139520	8.14	PPB	0.00
Spiked Amount 10.000			Recovery =	81.40%		
46) 1,2-Dichloroethane-d4	6.21	65	141490	8.34	PPB	0.00
Spiked Amount 10.000			Recovery =	83.40%		
61) Toluene-d8	8.20	98	462952	7.50	PPB	0.00
Spiked Amount 10.000			Recovery =	75.00%		
83) 4-Bromofluorobenzene	10.87	95	177744	7.91	PPB	0.00
Spiked Amount 10.000			Recovery =	79.10%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.17	85	107509	5.57	PPB	99
3) Chloromethane	1.32	50	131648	5.45	PPB	97
4) Vinyl Chloride	1.41	62	116875	5.25	PPB	98
5) Bromomethane	1.72	96	84926	5.56	PPB	99
6) Chloroethane	1.81	64	68289	5.38	PPB	99
7) Dichlorofluoromethane	2.03	67	163075	5.29	PPB	99
8) Trichlorofluoromethane	2.02	101	155567	5.46	PPB	96
9) Ethyl Ether	2.34	59	52577	5.50	PPB	93
10) Acrolein	2.56	56	239576	105.98	PPB	99
11) Trichlorotrifluoroethane	2.54	151	67064	5.25	PPB	98
12) 1,1-Dichloroethene	2.57	96	88528	5.46	PPB	96
13) Acetone	2.75	43	258322	101.95	PPB	98
14) Iodomethane	2.75	142	523459	19.94	PPB	98
15) Carbon Disulfide	2.77	76	253334	5.32	PPB	99
16) 2-Propanol (Isopropyl Alco	2.95	45	103931	261.92	PPB	97
17) 3-Chloro-1-propene	3.05	76	51108	5.56	PPB	91
18) Methyl Acetate	3.12	43	41897	5.32	PPB	95
19) Acetonitrile	3.20	40	131318	208.34	PPB	95
20) Methylene Chloride	3.25	84	101403	5.36	PPB	94
21) tert-Butyl Alcohol	3.51	59	24399	27.74	PPB	70
22) Acrylonitrile	3.75	53	88714	21.21	PPB	97
23) Methyl tert-Butyl Ether	3.56	73	398363	10.50	PPB	99
24) trans-1,2-Dichloroethene	3.55	96	98306	5.43	PPB	94
25) Hexane	3.85	57	118398	5.63	PPB	98
26) Diisopropyl Ether	4.33	45	265346	5.04	PPB	99
27) 1,1-Dichloroethane	4.29	63	171941	5.24	PPB	100
28) Vinyl Acetate	4.42	86	27852	9.87	PPB #	84

(#) = qualifier out of range (m) = manual integration 11/26/18
1108F010.D 110818MS27_8260.M Fri Nov 09 09:23:31 2018 Page 1

Data File : J:\MS27\DATA\110818\1108F010.D Vial: 7
Acq On : 8 Nov 2018 2:17 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:31 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroprene	4.35	53	434882	20.81	PPB	98
30)	tert-Butyl Ethyl Ether	4.87	59	209632	4.96	PPB	98
31)	2,2-Dichloropropane	5.08	77	119481	5.19	PPB	98
32)	cis-1,2-Dichloroethene	5.14	96	101025	5.16	PPB	99
33)	2-Butanone	5.25	72	108953	95.46	PPB	96
34)	Ethyl Acetate	5.30	61	15817	10.61	PPB	96
35)	Propionitrile	5.43	54	30306	20.83	PPB	98
36)	Methacrylonitrile	5.56	67	93717	19.69	PPB	96
37)	Bromochloromethane	5.46	128	51874	5.11	PPB	94
38)	Tetrahydrofuran	5.48	71	5426	4.72	PPB	89
39)	Chloroform	5.58	83	174336	5.37	PPB	96
40)	Cyclohexane	5.64	56	154957	5.10	PPB	96
41)	1,1,1-Trichloroethane	5.70	97	140146	5.28	PPB	97
43)	Carbon Tetrachloride	5.84	117	127971	5.46	PPB	97
44)	1,1-Dichloropropene	5.91	75	119249	5.21	PPB	98
45)	Isobutyl Alcohol	6.27	42	43180	197.12	PPB	96
47)	Benzene	6.15	78	367574	5.17	PPB	98
48)	1,2-Dichloroethane	6.29	62	112338	5.18	PPB	99
49)	tert-Amyl Methyl Ether	6.30	55	67305	5.21	PPB	93
50)	Trichloroethene	6.91	95	98690	5.24	PPB	97
51)	Methylcyclohexane	7.01	83	114439	4.92	PPB	97
52)	1,2-Dichloropropane	7.22	63	99936	5.07	PPB	98
53)	Dibromomethane	7.34	93	55365	5.11	PPB	97
54)	Methyl methacrylate	7.37	69	34658	4.86	PPB	96
55)	1,4-Dioxane	7.37	88	12931	185.86	PPB	91
56)	Bromodichloromethane	7.52	83	125074	5.02	PPB	99
57)	2-Nitropropane	7.86	41	62161	25.63	PPB	96
58)	2-Chloroethyl Vinyl Ether	7.88	63	31754	4.58	PPB	97
59)	cis-1,3-Dichloropropene	8.00	75	125912	4.78	PPB	99
60)	4-Methyl-2-pentanone (MIBK	8.18	58	350930	88.76	PPB	96
62)	Toluene	8.27	92	228266	5.15	PPB	99
64)	n-Octane	8.33	85	42523	4.70	PPB	90
65)	trans-1,3-Dichloropropene	8.61	75	109618	5.01	PPB	97
66)	Ethyl methacrylate	8.66	69	66894	4.86	PPB	95
67)	1,1,2-Trichloroethane	8.79	83	66333	5.24	PPB	96
68)	Tetrachloroethene	8.79	164	85618	5.43	PPB	99
69)	2-Hexanone	9.03	57	103295	89.67	PPB	93
70)	1,3-Dichloropropane	8.95	76	124920	5.21	PPB	99
71)	Dibromochloromethane	9.14	129	96134	5.28	PPB	99
72)	1,2-Dibromoethane (EDB)	9.25	107	72426	5.24	PPB	95
73)	1-Chlorohexane	9.69	91	94094	5.26	PPB	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F010.D Vial: 7
Acq On : 8 Nov 2018 2:17 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:31 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

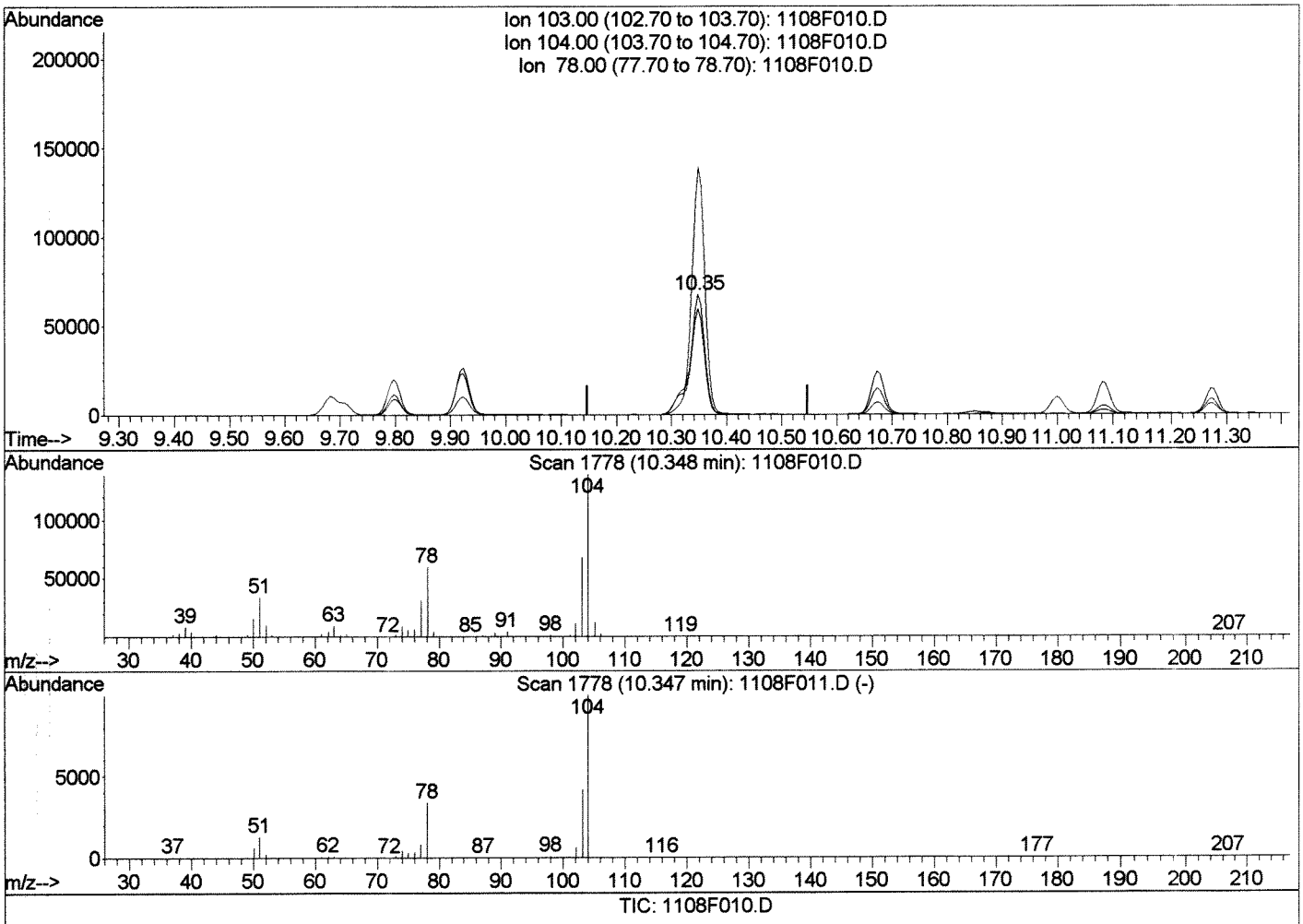
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	9.71	112	259547	5.15	PPB	100
75)	Ethylbenzene	9.80	106	125102	5.07	PPB	97
76)	1,1,1,2-Tetrachloroethane	9.81	131	92259	5.07	PPB	96
77)	m,p-Xylenes	9.92	106	298305	9.78	PPB	98
78)	o-Xylene	10.32	106	136597	4.85	PPB	96
79)	Styrene	10.35	103	118179m	4.91	PPB	
80)	Bromoform	10.55	173	58004	4.99	PPB	98
81)	Isopropylbenzene	10.67	105	357323	5.02	PPB	100
82)	cis-1,4-Dichloro-2-butene	10.84	89	36153	20.05	PPB	91
85)	1,1,2,2-Tetrachloroethane	11.07	83	83330	5.00	PPB	99
86)	trans-1,4-Dichloro-2-buten	11.13	53	19911	5.20	PPB	91
87)	Bromobenzene	11.00	156	111416	4.97	PPB	96
88)	n-Propylbenzene	11.08	91	458656	5.09	PPB	99
89)	1,2,3-Trichloropropane	11.11	110	23359	5.12	PPB	93
90)	2-Chlorotoluene	11.19	91	273114	5.03	PPB	98
91)	1,3,5-Trimethylbenzene	11.27	105	297030	4.72	PPB	96
92)	4-Chlorotoluene	11.31	91	294442m	4.95	PPB	
93)	tert-Butylbenzene	11.57	119	253288	4.95	PPB	97
94)	1,2,4-Trimethylbenzene	11.64	105	303022	4.86	PPB	99
95)	sec-Butylbenzene	11.80	105	379464	4.93	PPB	99
96)	p-Isopropyltoluene	11.95	119	300870	4.76	PPB	99
97)	1,3-Dichlorobenzene	11.94	146	213993	5.12	PPB	98
98)	1,4-Dichlorobenzene	12.04	146	213614	5.08	PPB	97
99)	n-Butylbenzene	12.36	91	282413	4.95	PPB	99
100)	1,2-Dichlorobenzene	12.41	146	198966	5.06	PPB	98
101)	1,2-Dibromo-3-chloropropan	13.22	155	11694	5.12	PPB	98
102)	1,3,5-Trichlorobenzene	13.36	180	140567	5.06	PPB	98
103)	1,2,4-Trichlorobenzene	14.00	180	124589	5.00	PPB	100
104)	Hexachlorobutadiene	14.12	225	67758	5.16	PPB	97
105)	Naphthalene	14.25	128	184256	4.87	PPB	100
106)	1,2,3-Trichlorobenzene	14.49	180	113182	4.89	PPB	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F010.D Vial: 7
Acq On : 8 Nov 2018 2:17 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F010.D

(79) Styrene (T)

10.35min 5.42PPB

response 130648

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	205.64
78.00	85.00	87.99
0.00	0.00	0.00

Manual Integration:

Before

LM

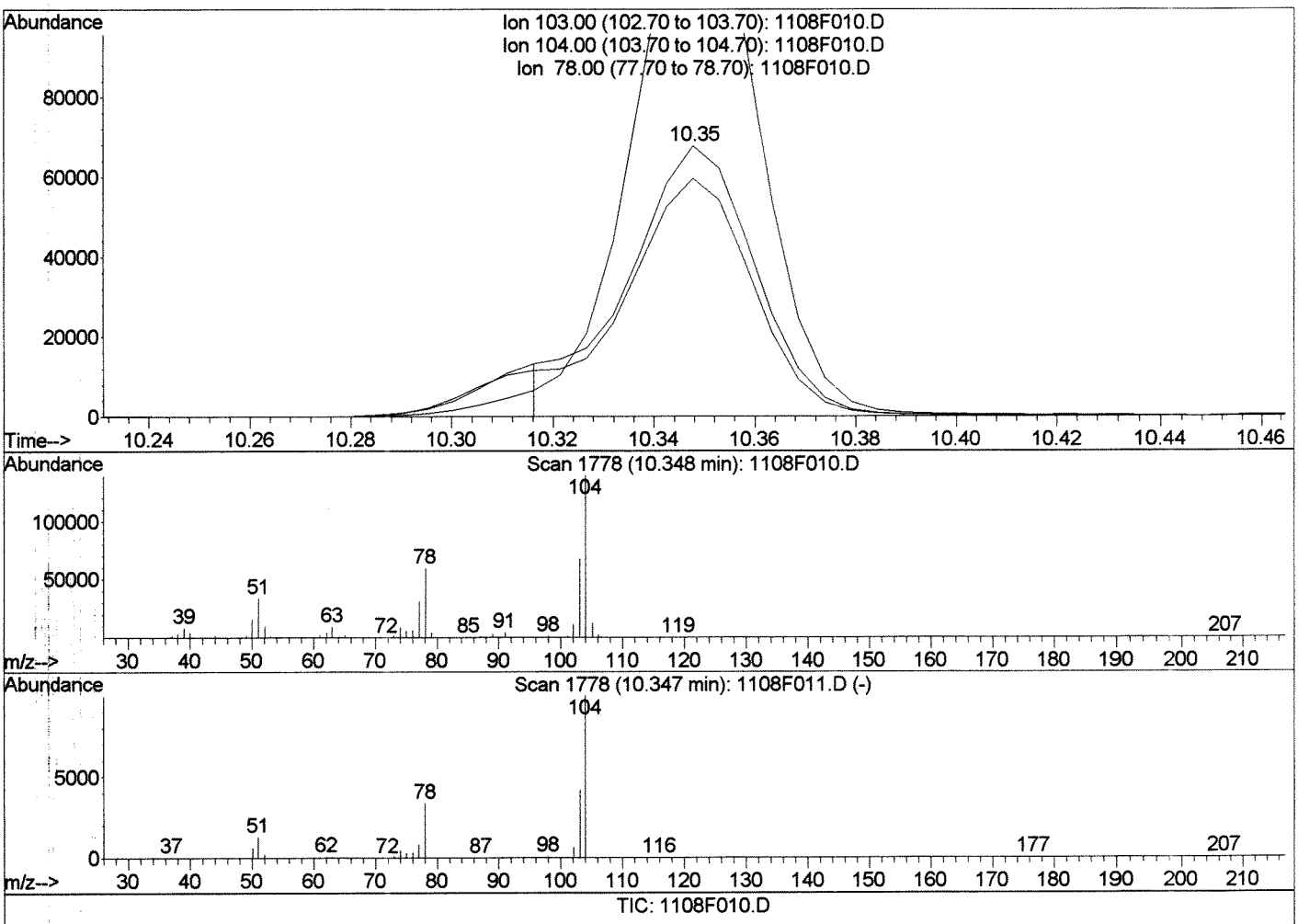
11/09/18

1108F010.D 110818MS27_8260.M Fri Nov 09 09:11:34 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F010.D Vial: 7
Acq On : 8 Nov 2018 2:17 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:11 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F010.D

(79) Styrene (T)

10.35min 4.91PPB m

response 118179

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	205.64
78.00	85.00	87.99
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

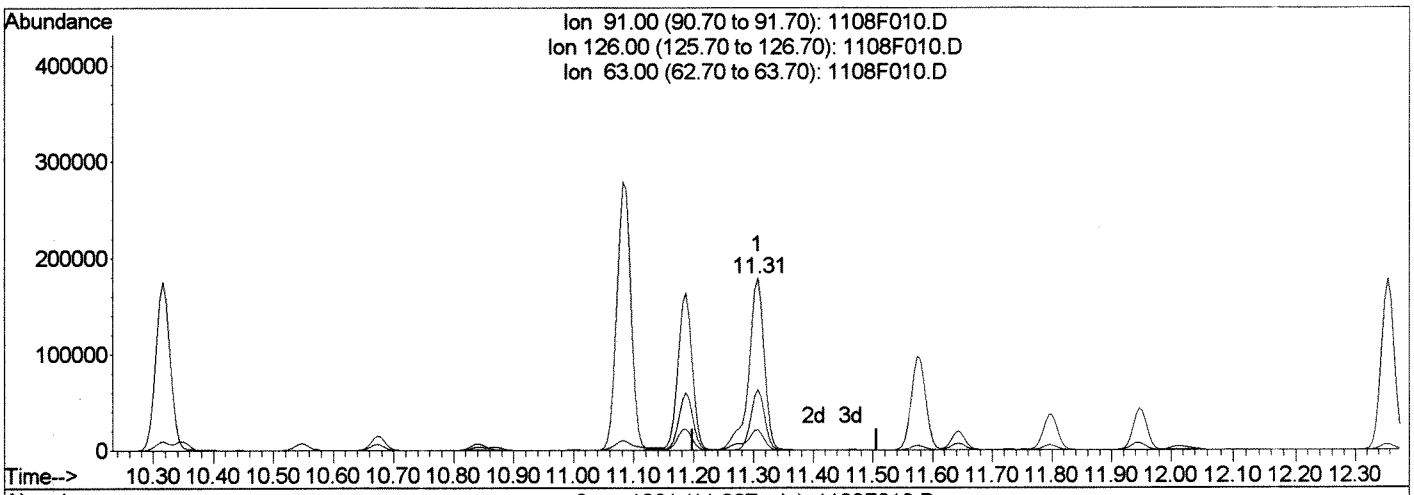
11/09/18

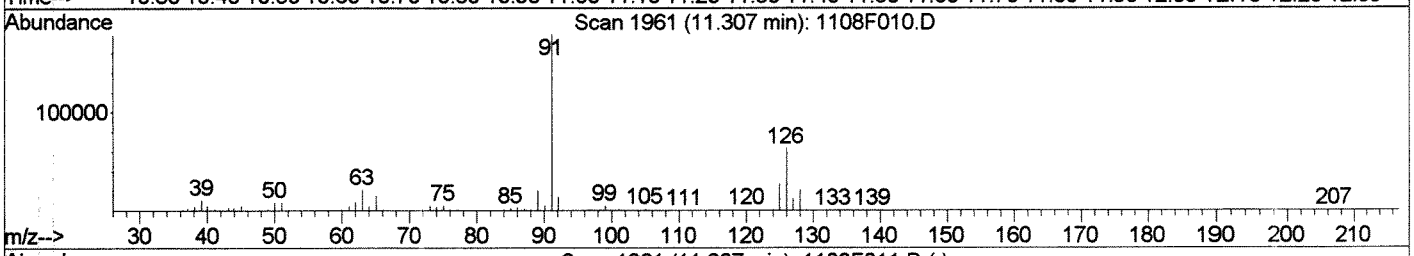
1108F010.D 110818MS27_8260.M Fri Nov 09 09:11:48 2018

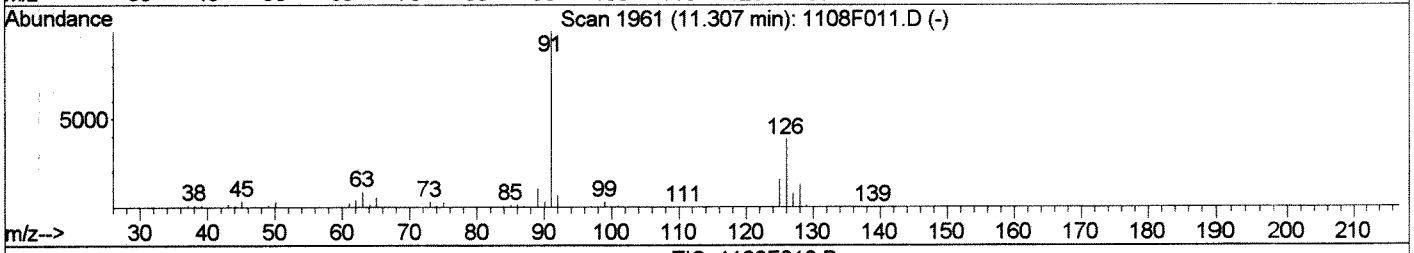
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F010.D Vial: 7
Acq On : 8 Nov 2018 2:17 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:11 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F010.D

(92) 4-Chlorotoluene (T)

11.31min 5.51PPB

response 327608

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.19
63.00	11.20	11.76
0.00	0.00	0.00

Manual Integration:

Before

LM

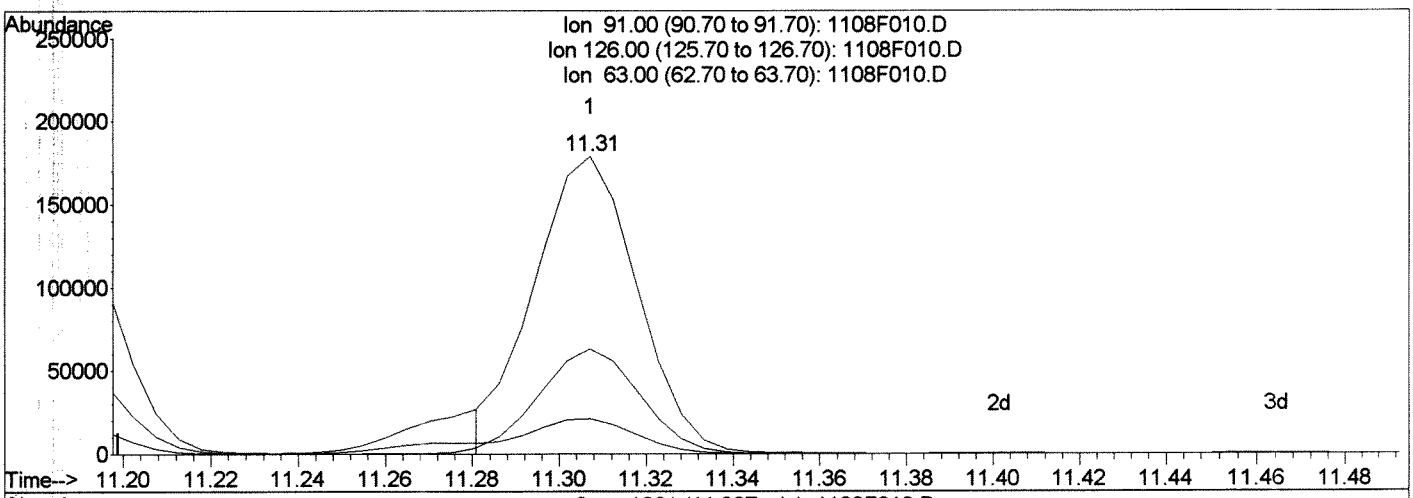
11/09/18

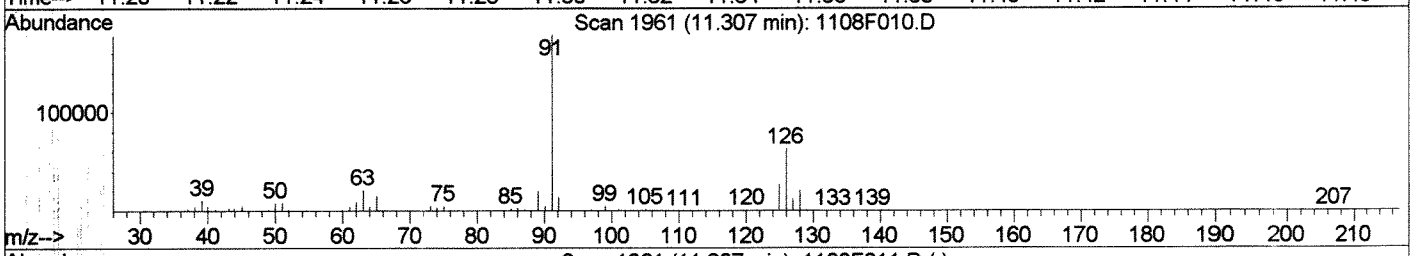
1108F010.D 110818MS27_8260.M Fri Nov 09 09:12:07 2018

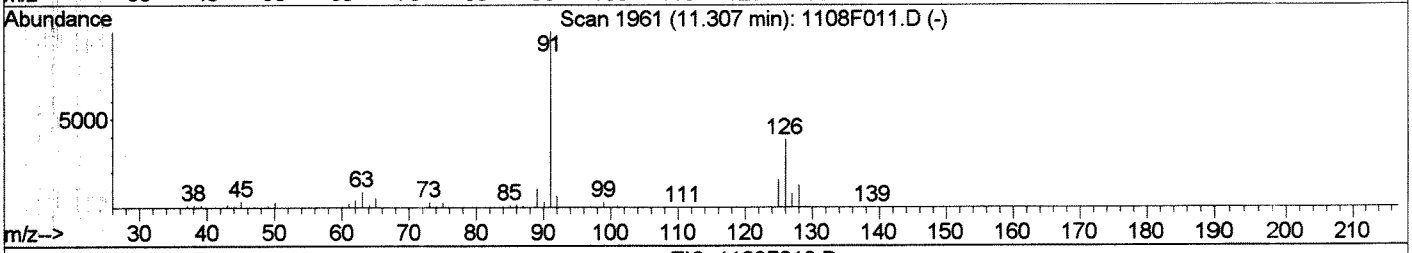
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F010.D Vial: 7
Acq On : 8 Nov 2018 2:17 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:12 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F010.D

(92) 4-Chlorotoluene (T)

11.31min 4.95PPB m

response 294442

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.19
63.00	11.20	11.76
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

11/09/18

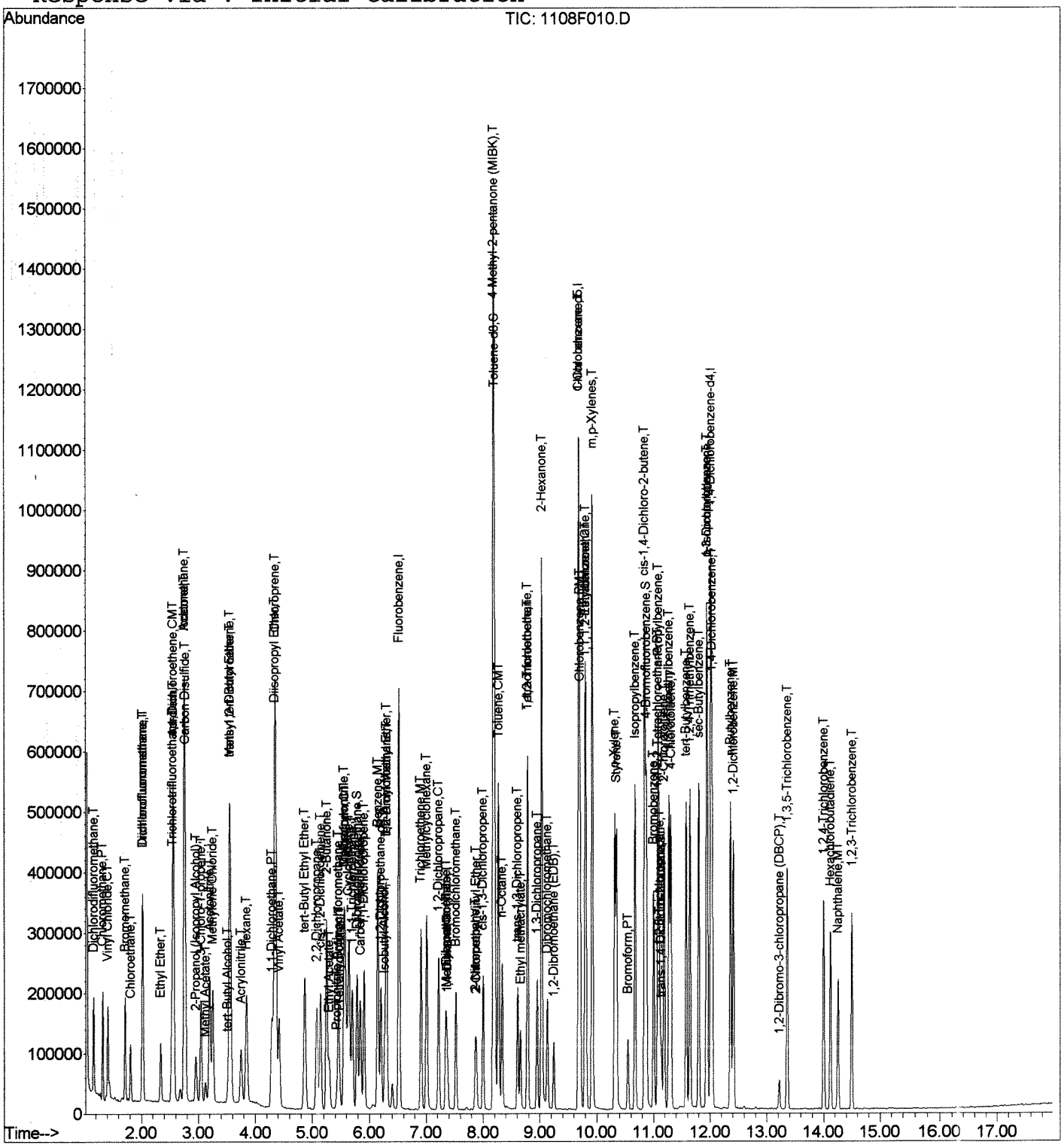
9 11/20/18

1108F010.D 110818MS27_8260.M Fri Nov 09 09:12:17 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F010.D Vial: 7
Acq On : 8 Nov 2018 2:17 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:12 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:33 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

LM 11-17-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.52	96	667944	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	267768	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	262009	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.79	113	176209	10.00	PPB	0.00
Spiked Amount 10.000			Recovery =	100.00%		
46) 1,2-Dichloroethane-d4	6.21	65	174362	10.00	PPB	0.00
Spiked Amount 10.000			Recovery =	100.00%		
61) Toluene-d8	8.20	98	634841	10.00	PPB	0.00
Spiked Amount 10.000			Recovery =	100.00%		
83) 4-Bromofluorobenzene	10.87	95	235050	10.00	PPB	0.00
Spiked Amount 10.000			Recovery =	100.00%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.17	85	198251	10.00	PPB	100
3) Chloromethane	1.32	50	248346	10.00	PPB	100
4) Vinyl Chloride	1.41	62	228648	10.00	PPB	100
5) Bromomethane	1.72	96	157073	10.00	PPB	100
6) Chloroethane	1.81	64	130450	10.00	PPB	100
7) Dichlorofluoromethane	2.03	67	317022	10.00	PPB	100
8) Trichlorofluoromethane	2.02	101	292895	10.00	PPB	100
9) Ethyl Ether	2.34	59	98258	10.00	PPB	100
10) Acrolein	2.56	56	464769	200.00	PPB	100
11) Trichlorotrifluoroethane	2.54	151	131272	10.00	PPB	100
12) 1,1-Dichloroethene	2.57	96	166656	10.00	PPB	100
13) Acetone	2.75	43	520929	200.00	PPB	100
14) Iodomethane	2.76	142	1079309	40.00	PPB	100
15) Carbon Disulfide	2.77	76	489080	10.00	PPB	100
16) 2-Propanol (Isopropyl Alco	2.96	45	203962	500.00	PPB	100
17) 3-Chloro-1-propene	3.05	76	94547	10.00	PPB	100
18) Methyl Acetate	3.12	43	80947	10.00	PPB	100
19) Acetonitrile	3.20	40	259188	400.00	PPB	100
20) Methylene Chloride	3.25	84	194320	10.00	PPB	100
21) tert-Butyl Alcohol	3.52	59	45280	50.08	PPB	100
22) Acrylonitrile	3.75	53	172008	40.00	PPB	100
23) Methyl tert-Butyl Ether	3.56	73	779969	20.00	PPB	100
24) trans-1,2-Dichloroethene	3.55	96	186264	10.00	PPB	100
25) Hexane	3.85	57	216231	10.00	PPB	100
26) Diisopropyl Ether	4.33	45	541546	10.00	PPB	100
27) 1,1-Dichloroethane	4.29	63	337479	10.00	PPB	100
28) Vinyl Acetate	4.42	86	58058	20.02	PPB	99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:33 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroprene	4.35	53	859452	40.00	PPB	100
30)	tert-Butyl Ethyl Ether	4.87	59	434525	10.00	PPB	100
31)	2,2-Dichloropropane	5.08	77	236782	10.00	PPB	100
32)	cis-1,2-Dichloroethene	5.14	96	201447	10.00	PPB	100
33)	2-Butanone	5.25	72	234657	200.00	PPB	100
34)	Ethyl Acetate	5.30	61	30659	20.00	PPB	100
35)	Propionitrile	5.43	54	59821	40.00	PPB	100
36)	Methacrylonitrile	5.56	67	195736	40.00	PPB	100
37)	Bromochloromethane	5.46	128	104391	10.00	PPB	100
38)	Tetrahydrofuran	5.48	71	11823	10.00	PPB	100
39)	Chloroform	5.58	83	333961	10.00	PPB	100
40)	Cyclohexane	5.64	56	312442	10.00	PPB	100
41)	1,1,1-Trichloroethane	5.70	97	273014	10.00	PPB	100
43)	Carbon Tetrachloride	5.84	117	240969	10.00	PPB	100
44)	1,1-Dichloropropene	5.91	75	235517	10.00	PPB	100
45)	Isobutyl Alcohol	6.27	42	90076	400.00	PPB	100
47)	Benzene	6.15	78	730710	10.00	PPB	100
48)	1,2-Dichloroethane	6.29	62	222899	10.00	PPB	100
49)	tert-Amyl Methyl Ether	6.30	55	132884	10.00	PPB	100
50)	Trichloroethene	6.91	95	193431	10.00	PPB	100
51)	Methylcyclohexane	7.01	83	238959	10.00	PPB	100
52)	1,2-Dichloropropane	7.22	63	202547	10.00	PPB	100
53)	Dibromomethane	7.34	93	111465	10.00	PPB	100
54)	Methyl methacrylate	7.37	69	73384	10.00	PPB	100
55)	1,4-Dioxane	7.37	88	28609	400.00	PPB	100
56)	Bromodichloromethane	7.52	83	256374	10.00	PPB	100
57)	2-Nitropropane	7.86	41	124656	50.00	PPB	100
58)	2-Chloroethyl Vinyl Ether	7.88	63	71294	10.00	PPB	100
59)	cis-1,3-Dichloropropene	8.00	75	270689	10.00	PPB	100
60)	4-Methyl-2-pentanone (MIBK	8.18	58	812847	200.00	PPB	100
62)	Toluene	8.27	92	455947	10.00	PPB	100
64)	n-Octane	8.33	85	94695	10.00	PPB	100
65)	trans-1,3-Dichloropropene	8.61	75	229178	10.00	PPB	100
66)	Ethyl methacrylate	8.66	69	144013	10.00	PPB	100
67)	1,1,2-Trichloroethane	8.79	83	132403	10.00	PPB	100
68)	Tetrachloroethene	8.79	164	164902	10.00	PPB	100
69)	2-Hexanone	9.03	57	241089	200.00	PPB	100
70)	1,3-Dichloropropane	8.95	76	250826	10.00	PPB	100
71)	Dibromochloromethane	9.13	129	190556	10.00	PPB	100
72)	1,2-Dibromoethane (EDB)	9.25	107	144722	10.00	PPB	100
73)	1-Chlorohexane	9.69	91	187110	10.00	PPB	100

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:33 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

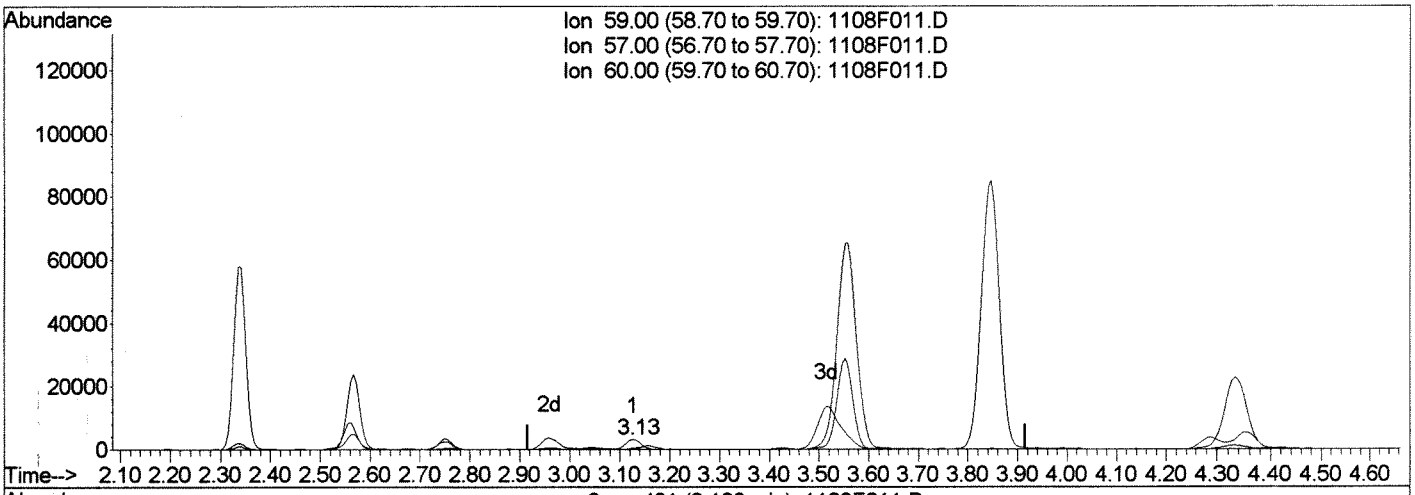
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	9.71	112	527262	10.00	PPB	100
75)	Ethylbenzene	9.80	106	258146	10.00	PPB	100
76)	1,1,1,2-Tetrachloroethane	9.81	131	190594	10.00	PPB	100
77)	m,p-Xylenes	9.92	106	638558	20.00	PPB	100
78)	o-Xylene	10.32	106	294576	10.00	PPB	100
79)	Styrene	10.35	103	252056m	10.00	PPB	
80)	Bromoform	10.55	173	121546	10.00	PPB	100
81)	Isopropylbenzene	10.67	105	744139	10.00	PPB	100
82)	cis-1,4-Dichloro-2-butene	10.84	89	75481	40.00	PPB	100
85)	1,1,2,2-Tetrachloroethane	11.07	83	173724	10.00	PPB	100
86)	trans-1,4-Dichloro-2-buten	11.13	53	39979	10.00	PPB	100
87)	Bromobenzene	11.00	156	234004	10.00	PPB	100
88)	n-Propylbenzene	11.08	91	940099	10.00	PPB	100
89)	1,2,3-Trichloropropane	11.11	110	47590	10.00	PPB	100
90)	2-Chlorotoluene	11.19	91	566439	10.00	PPB	100
91)	1,3,5-Trimethylbenzene	11.27	105	656241	10.00	PPB	100
92)	4-Chlorotoluene	11.31	91	620722m	10.00	PPB	
93)	tert-Butylbenzene	11.58	119	533499	10.00	PPB	100
94)	1,2,4-Trimethylbenzene	11.64	105	650007	10.00	PPB	100
95)	sec-Butylbenzene	11.80	105	802760	10.00	PPB	100
96)	p-Isopropyltoluene	11.95	119	659451	10.00	PPB	100
97)	1,3-Dichlorobenzene	11.94	146	435743	10.00	PPB	100
98)	1,4-Dichlorobenzene	12.04	146	438229	10.00	PPB	100
99)	n-Butylbenzene	12.36	91	594938	10.00	PPB	100
100)	1,2-Dichlorobenzene	12.41	146	410313	10.00	PPB	100
101)	1,2-Dibromo-3-chloropropan	13.22	155	23835	10.00	PPB	100
102)	1,3,5-Trichlorobenzene	13.36	180	289767	10.00	PPB	100
103)	1,2,4-Trichlorobenzene	14.00	180	260146	10.00	PPB	100
104)	Hexachlorobutadiene	14.12	225	137037	10.00	PPB	100
105)	Naphthalene	14.25	128	394463	10.00	PPB	100
106)	1,2,3-Trichlorobenzene	14.49	180	241419	10.00	PPB	100

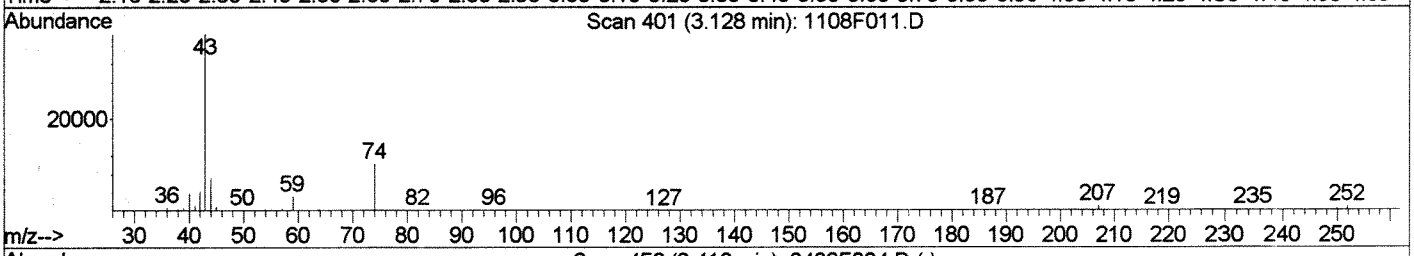
(#) = qualifier out of range (m) = manual integration

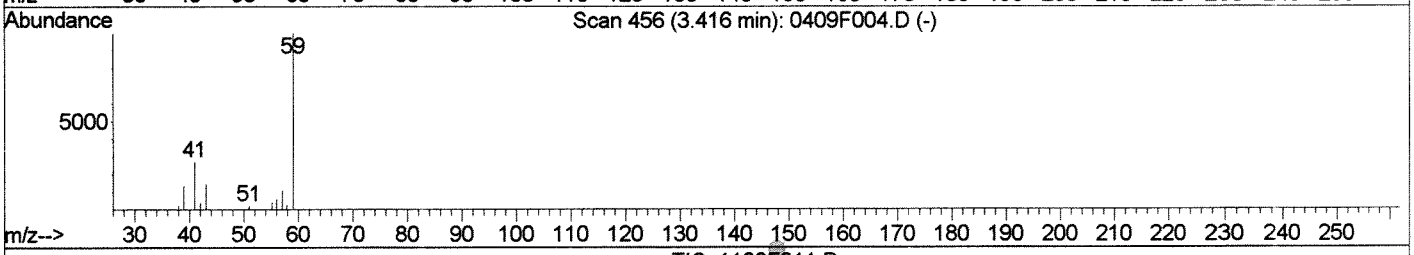
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:36 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:35:44 2018
Response via : Multiple Level Calibration







TIC: 1108F011.D

(21) tert-Butyl Alcohol (T)

3.13min 9.94PPB

response 6678

Ion	Exp%	Act%
59.00	100	100
57.00	9.10	7.92
60.00	4.20	6.88
0.00	0.00	0.00

Manual Integration:

Before LM

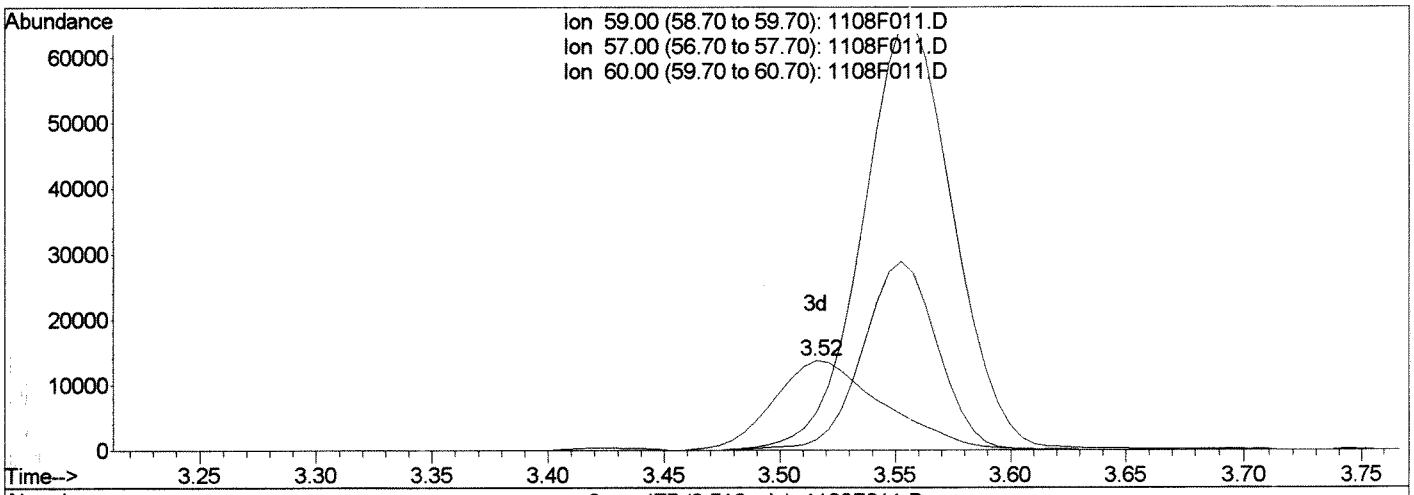
11/08/18

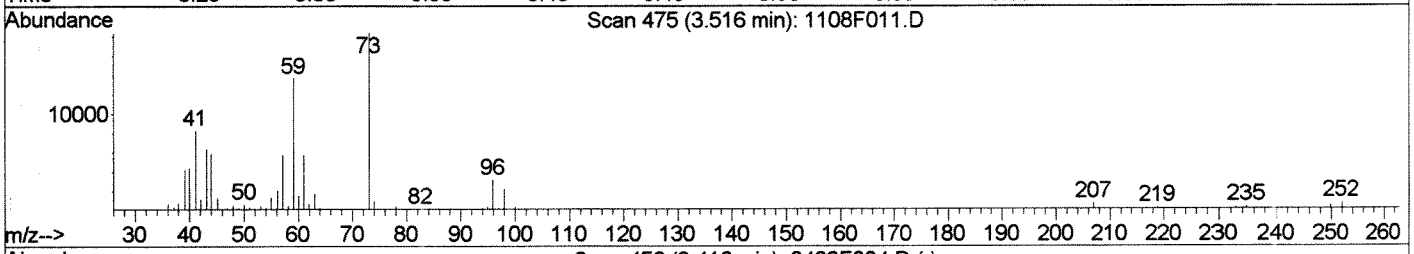
1108F011.D 110818MS27_8260.M Thu Nov 08 17:39:15 2018

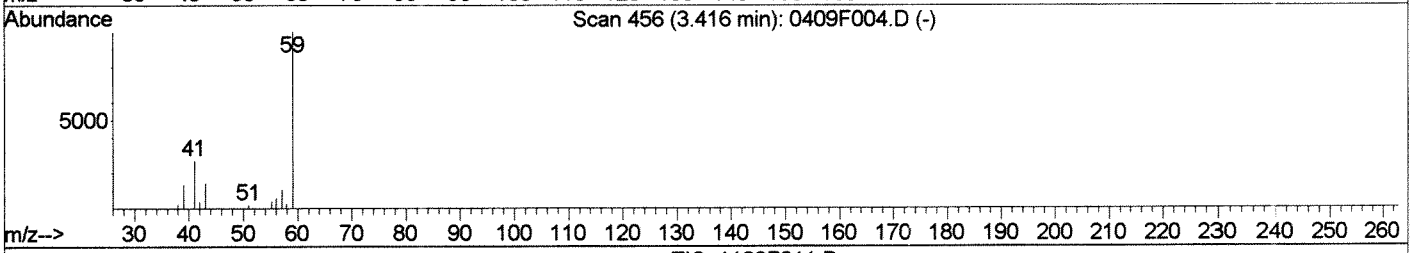
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:40 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:35:44 2018
Response via : Multiple Level Calibration







TIC: 1108F011.D

(21) tert-Butyl Alcohol (T)

3.52min 67.27PPB m

response 45208

Ion	Exp%	Act%
59.00	100	100
57.00	9.10	41.86#
60.00	4.20	11.50
0.00	0.00	0.00

Manual Integration:

After LM

Baseline correction

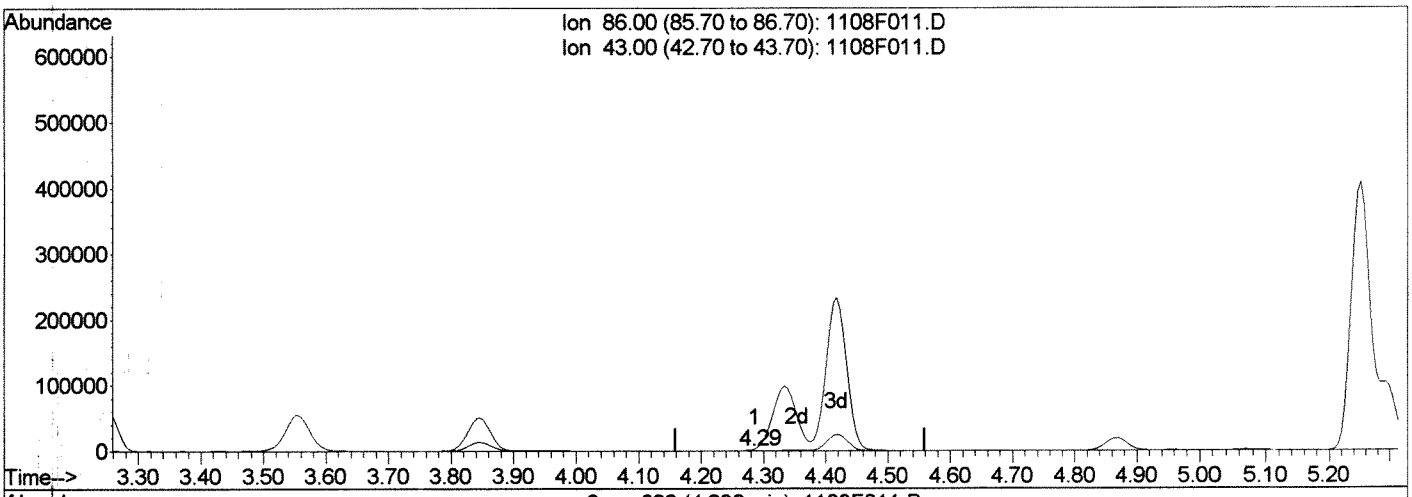
11/08/18

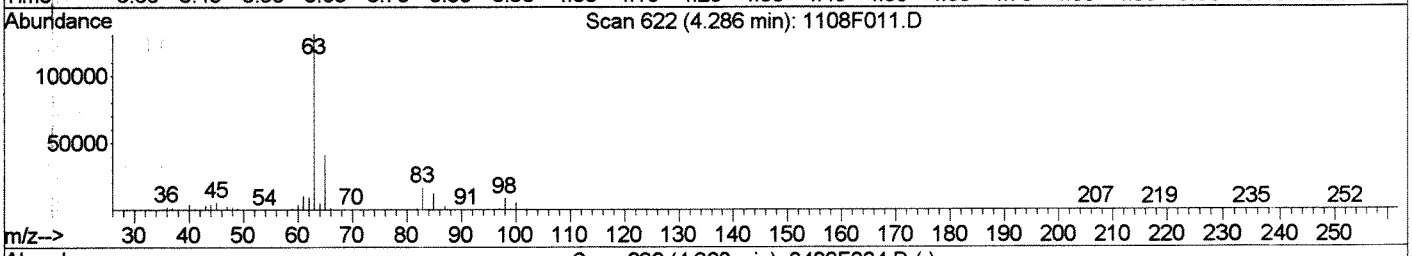
1108F011.D 110818MS27_8260.M Thu Nov 08 17:40:10 2018

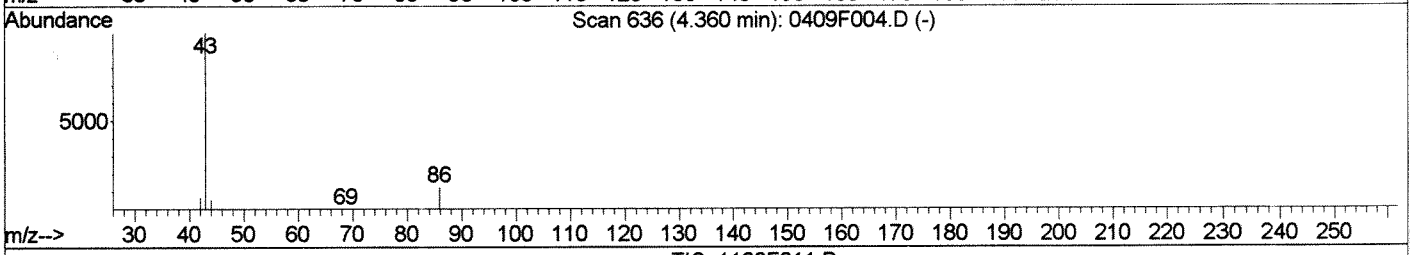
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:40 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:35:44 2018
Response via : Multiple Level Calibration







TIC: 1108F011.D

(28) Vinyl Acetate (T)

4.29min 0.21PPB

response 534

Ion	Exp%	Act%
86.00	100	100
43.00	1283.50	1254.15
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

LM

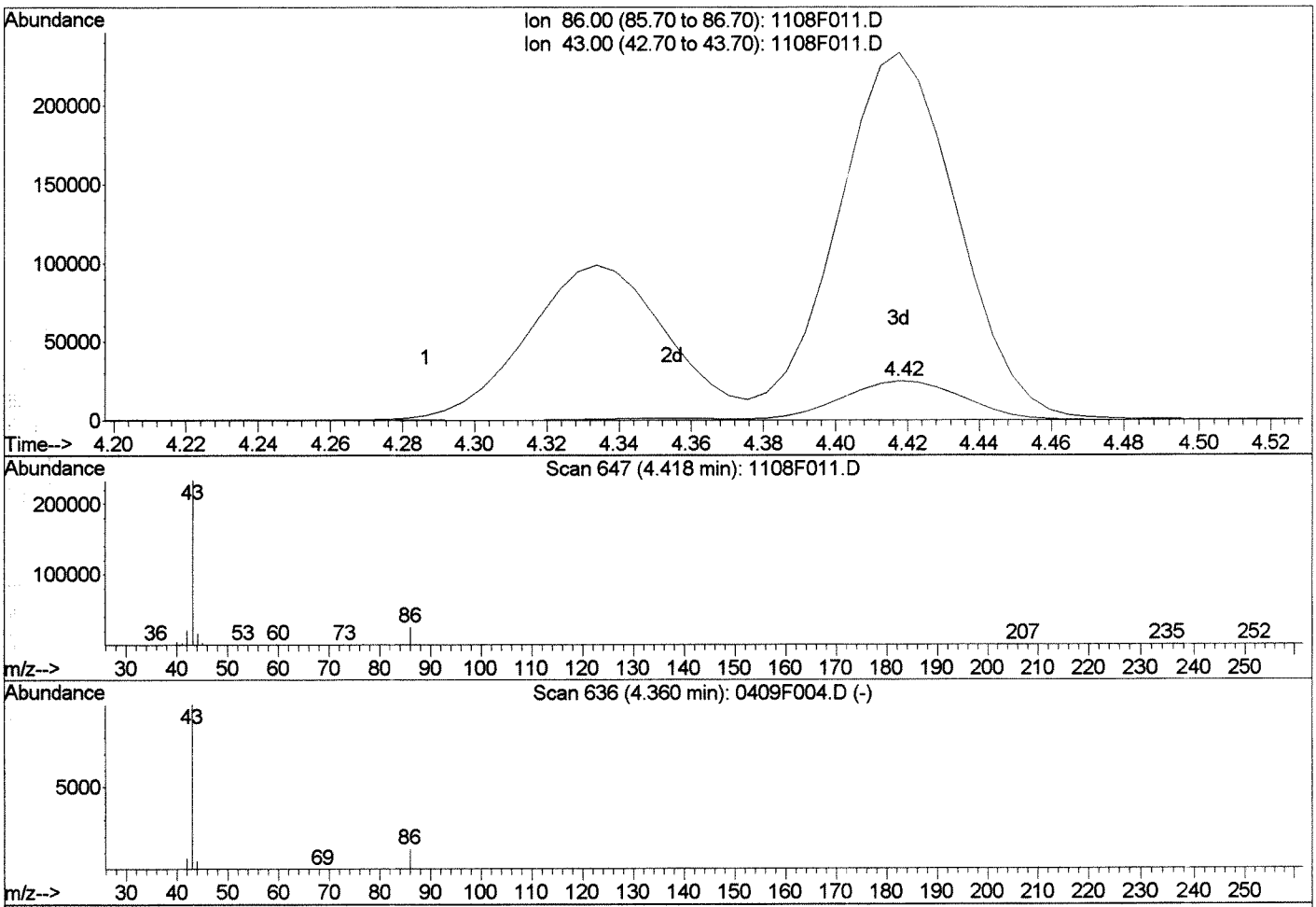
11/08/18

1108F011.D 110818MS27_8260.M Thu Nov 08 17:41:01 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:41 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:35:44 2018
Response via : Multiple Level Calibration



TIC: 1108F011.D

(28) Vinyl Acetate (T)

4.42min 22.88PPB m

response 58008

Ion	Exp%	Act%
86.00	100	100
43.00	1283.50	942.29#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

WRT

11/08/18

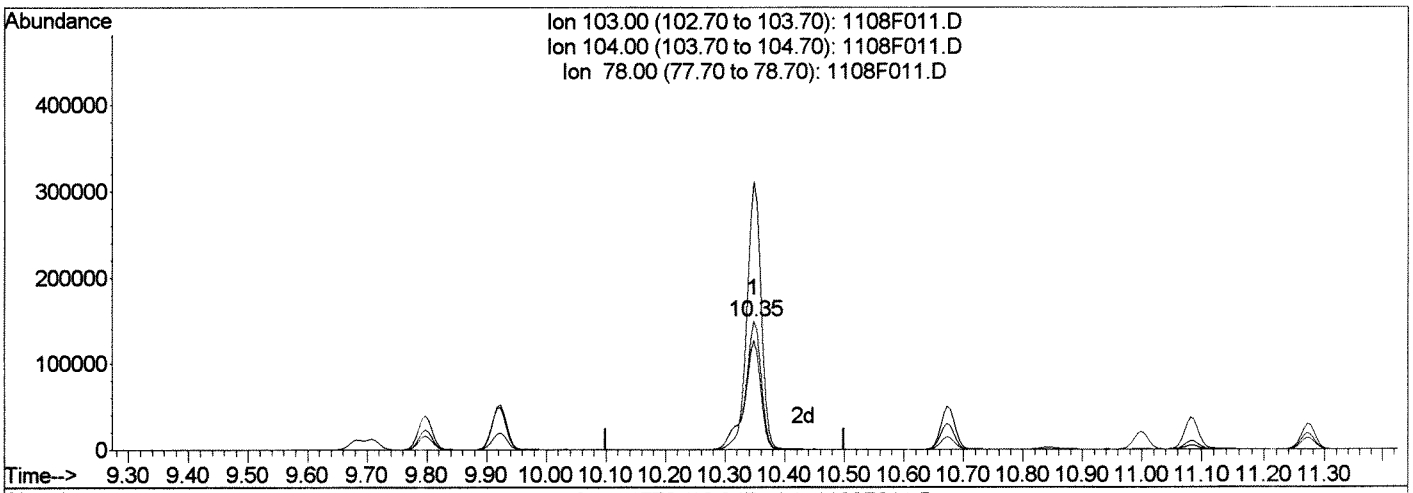
LM

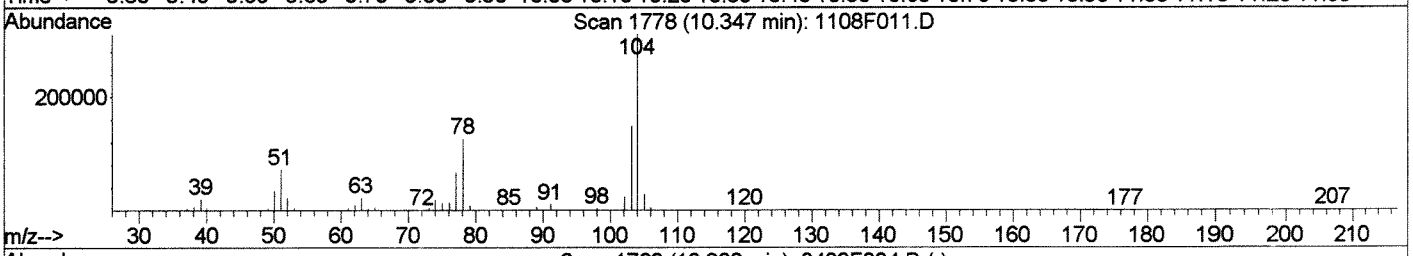
1108F011.D 110818MS27_8260.M Thu Nov 08 17:41:34 2018

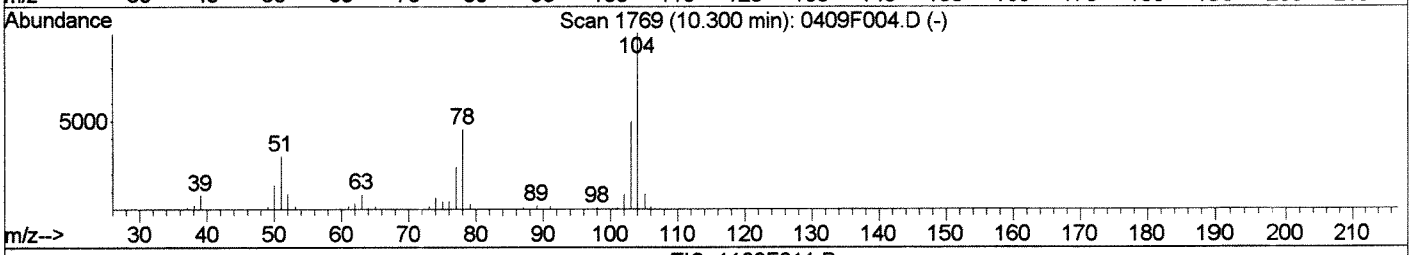
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:41 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:35:44 2018
Response via : Multiple Level Calibration







TIC: 1108F011.D

(79) Styrene (T)

10.35min 13.36PPB

response 286806

Ion	Exp%	Act%
103.00	100	100
104.00	203.70	208.84
78.00	97.40	84.86
0.00	0.00	0.00

Manual Integration:

Before

LM

11/08/18

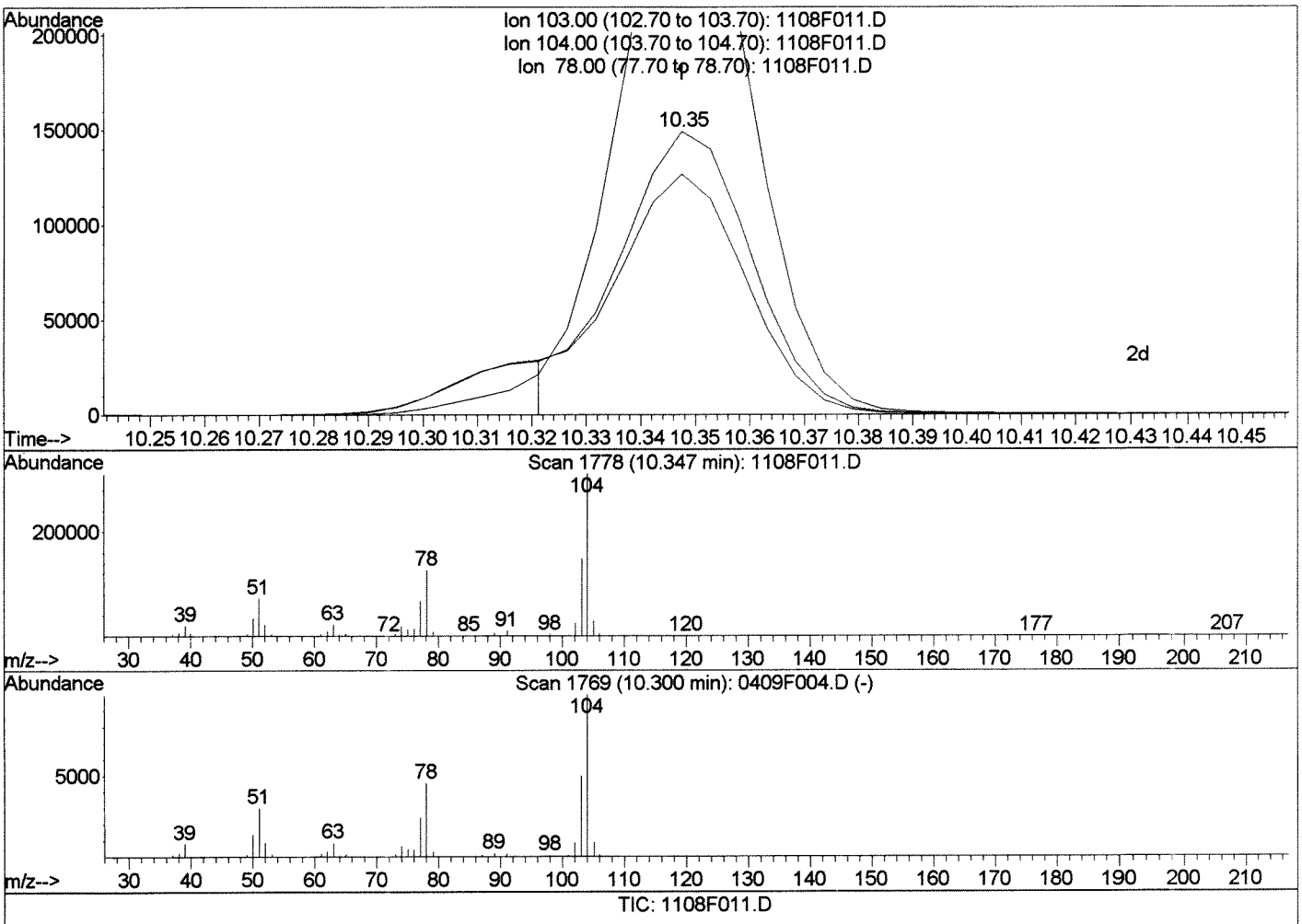
11/26/18

1108F011.D 110818MS27_8260.M Thu Nov 08 17:45:54 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:46 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:35:44 2018
Response via : Multiple Level Calibration



TIC: 1108F011.D

(79) Styrene (T)

10.35min 11.74PPB m

response 252056

Ion	Exp%	Act%
103.00	100	100
104.00	203.70	208.84
78.00	97.40	84.97
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

11/08/18

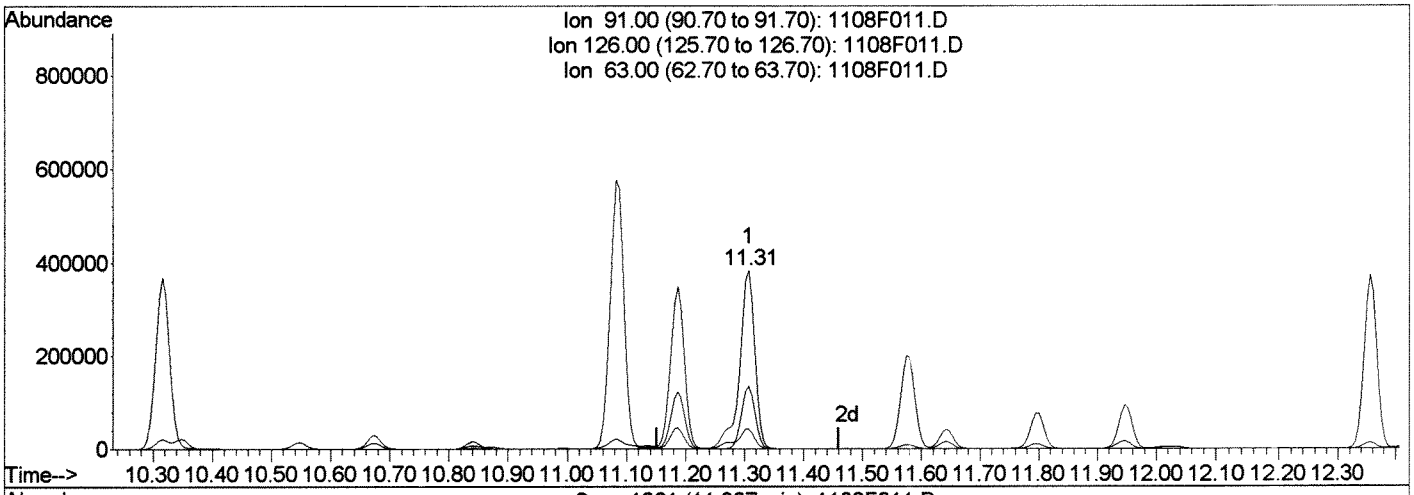
11/26/18

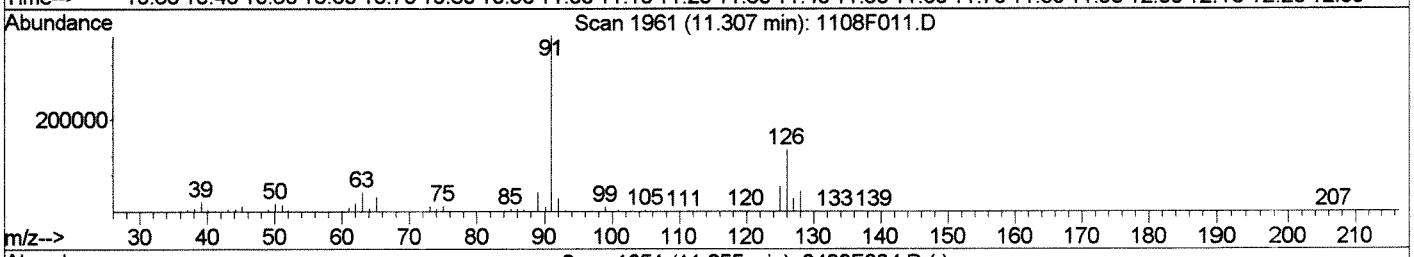
1108F011.D 110818MS27_8260.M Thu Nov 08 17:46:12 2018

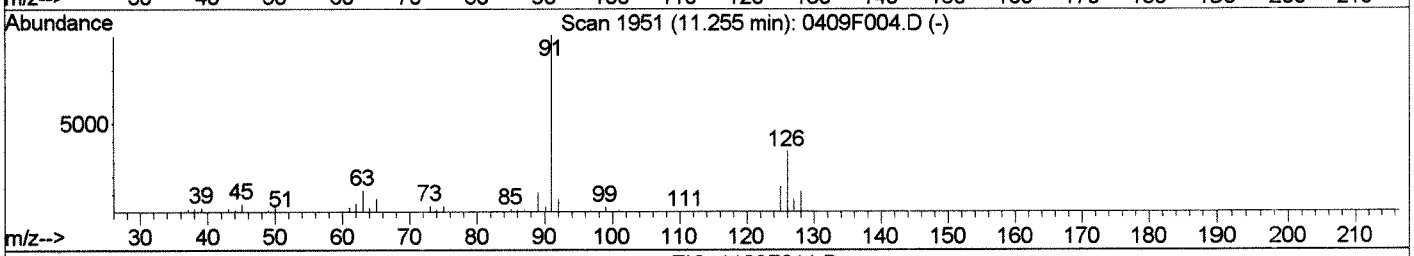
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:46 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:35:44 2018
Response via : Multiple Level Calibration







TIC: 1108F011.D

(92) 4-Chlorotoluene (T)

11.31min 10.48PPB

response 689582

Ion	Exp%	Act%
91.00	100	100
126.00	34.70	35.07
63.00	10.10	11.18
0.00	0.00	0.00

Manual Integration:

Before

LM

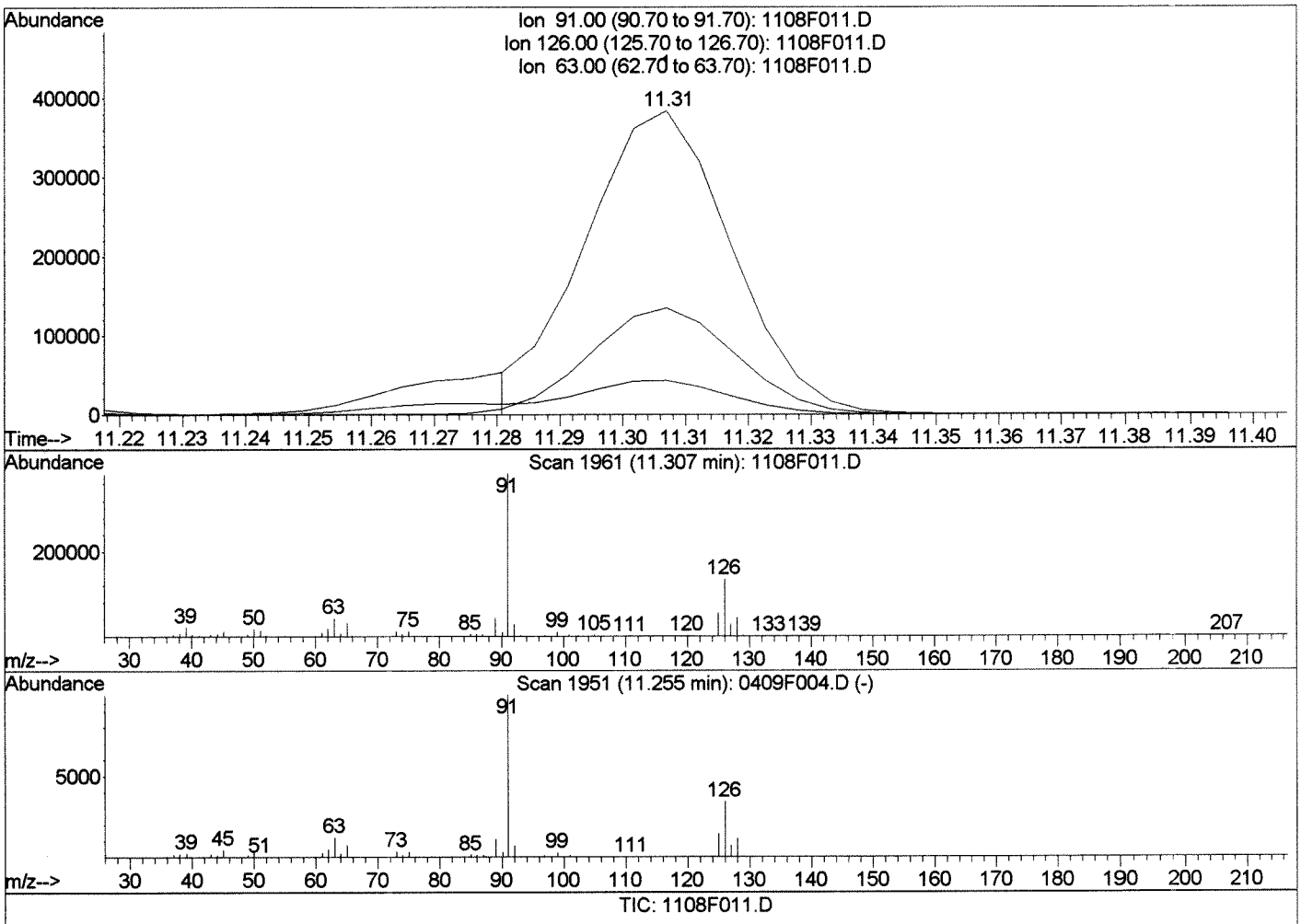
11/08/18

1108F011.D 110818MS27_8260.M Thu Nov 08 17:46:48 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:46 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:35:44 2018
Response via : Multiple Level Calibration



TIC: 1108F011.D

(92) 4-Chlorotoluene (T)

11.31min 9.43PPB m

response 620722

Ion	Exp%	Act%
91.00	100	100
126.00	34.70	35.04
63.00	10.10	11.17
0.00	0.00	0.00

Manual Integration:

After

Shoulder

11/08/18

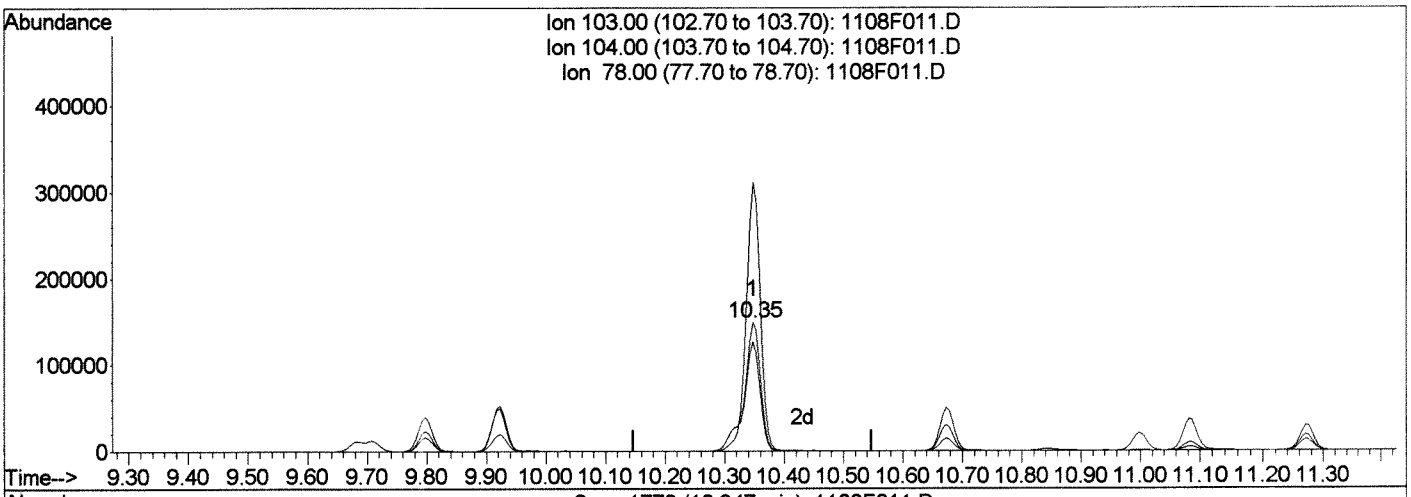
LM

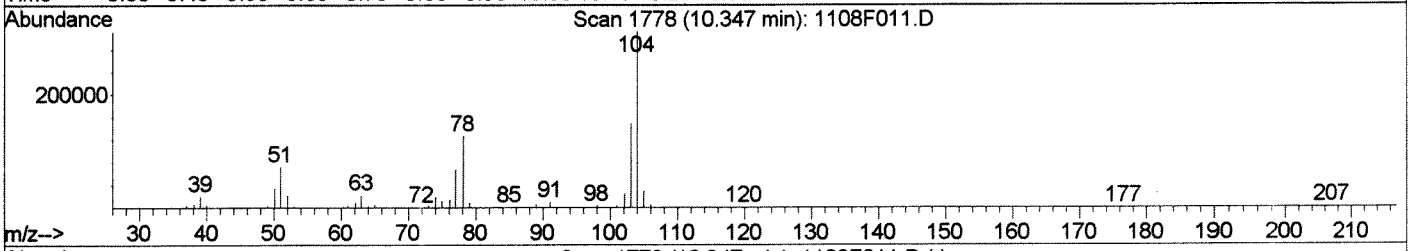
1108F011.D 110818MS27_8260.M Thu Nov 08 17:47:00 2018

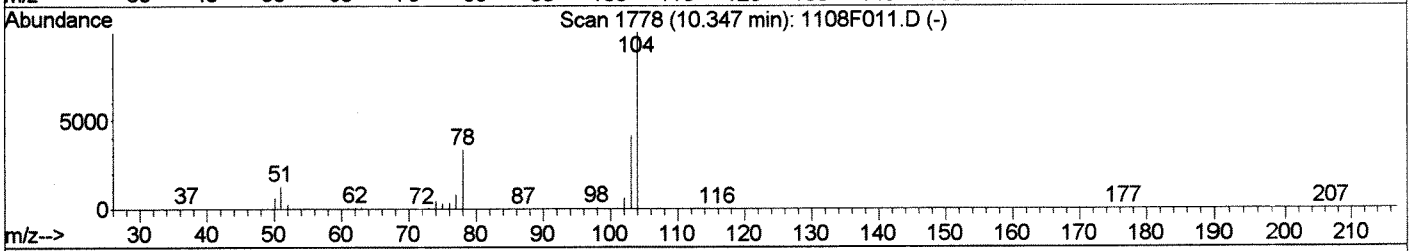
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F011.D

(79) Styrene (T)

10.35min 11.38PPB

response 286806

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	208.84
78.00	85.00	84.86
0.00	0.00	0.00

Manual Integration:

Before

LM

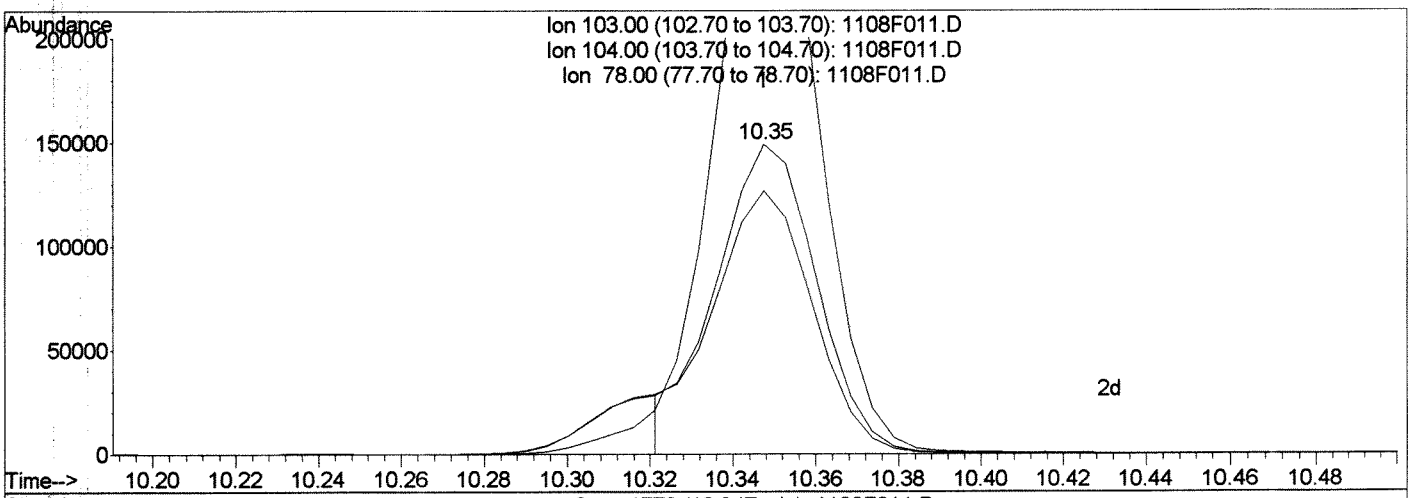
11/09/18

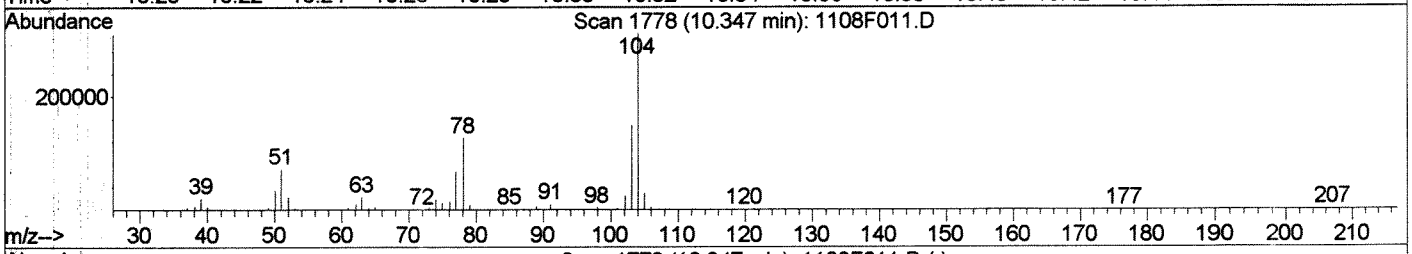
1108F011.D 110818MS27_8260.M Fri Nov 09 09:14:03 2018

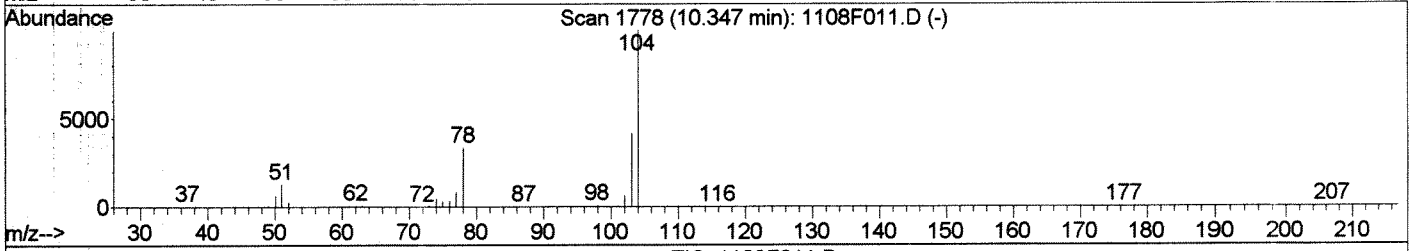
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:14 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F011.D

(79) Styrene (T)

10.35min 10.00PPB m

response 252056

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	208.84
78.00	85.00	84.97
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

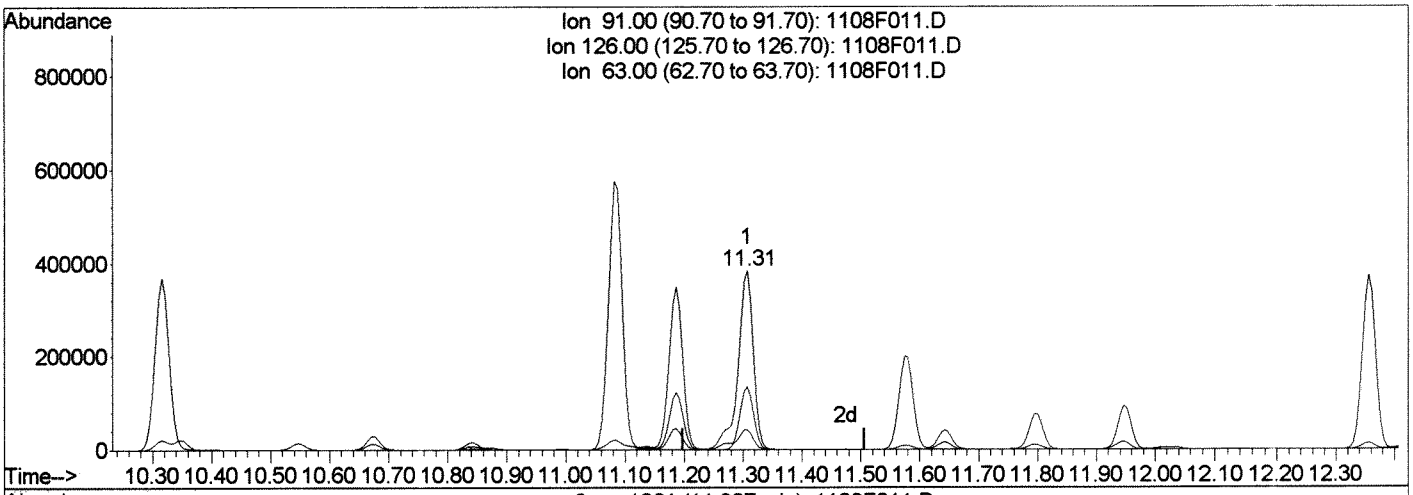
11/09/18

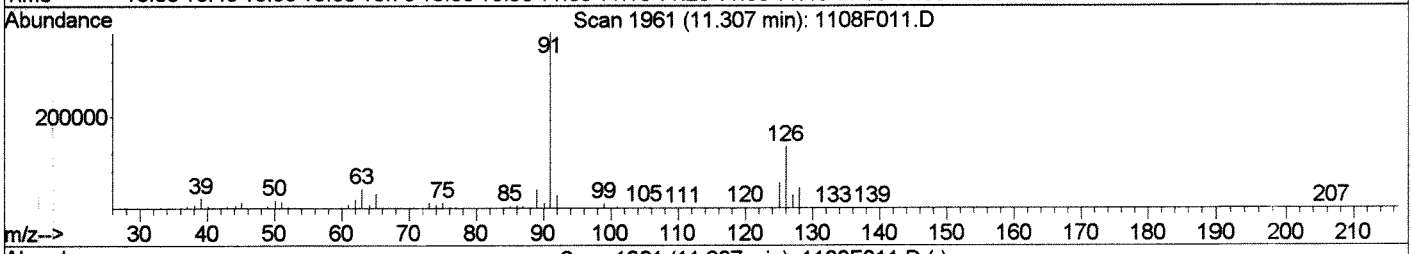
1108F011.D 110818MS27_8260.M Fri Nov 09 09:14:15 2018

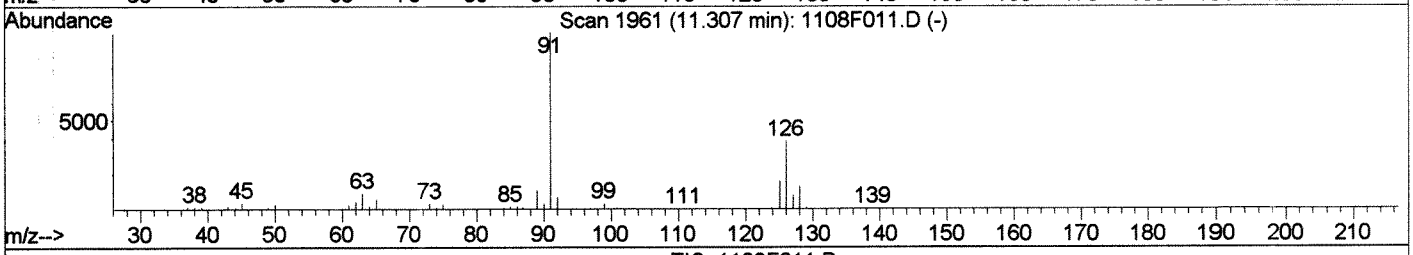
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:14 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F011.D

(92) 4-Chlorotoluene (T)

11.31min 11.11PPB

response 689582

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.07
63.00	11.20	11.18
0.00	0.00	0.00

Manual Integration:

Before LM

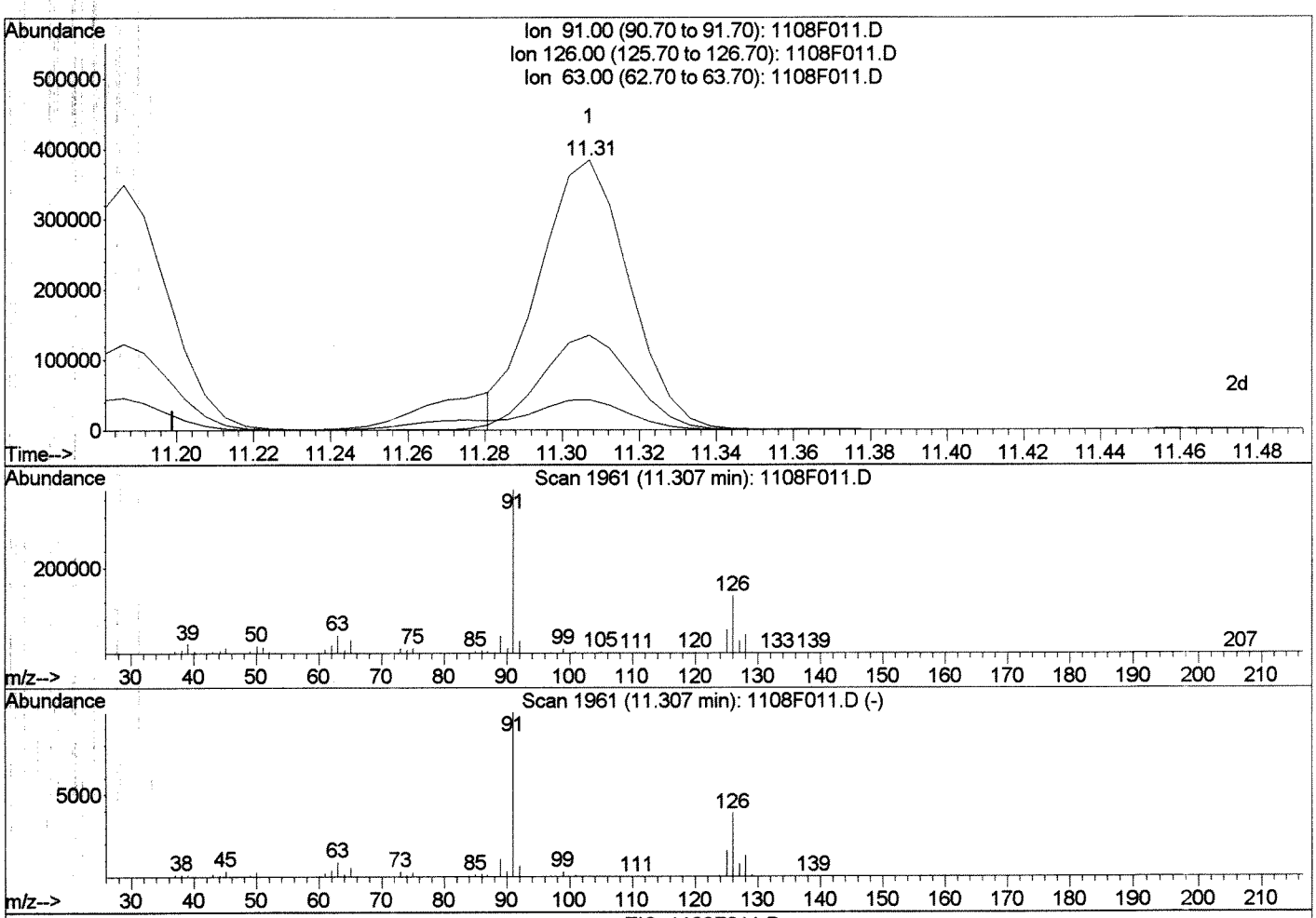
11/09/18

1108F011.D 110818MS27_8260.M Fri Nov 09 09:14:32 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:14 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F011.D

(92) 4-Chlorotoluene (T)

11.31min 10.00PPB m

response 620722

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.04
63.00	11.20	11.17
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

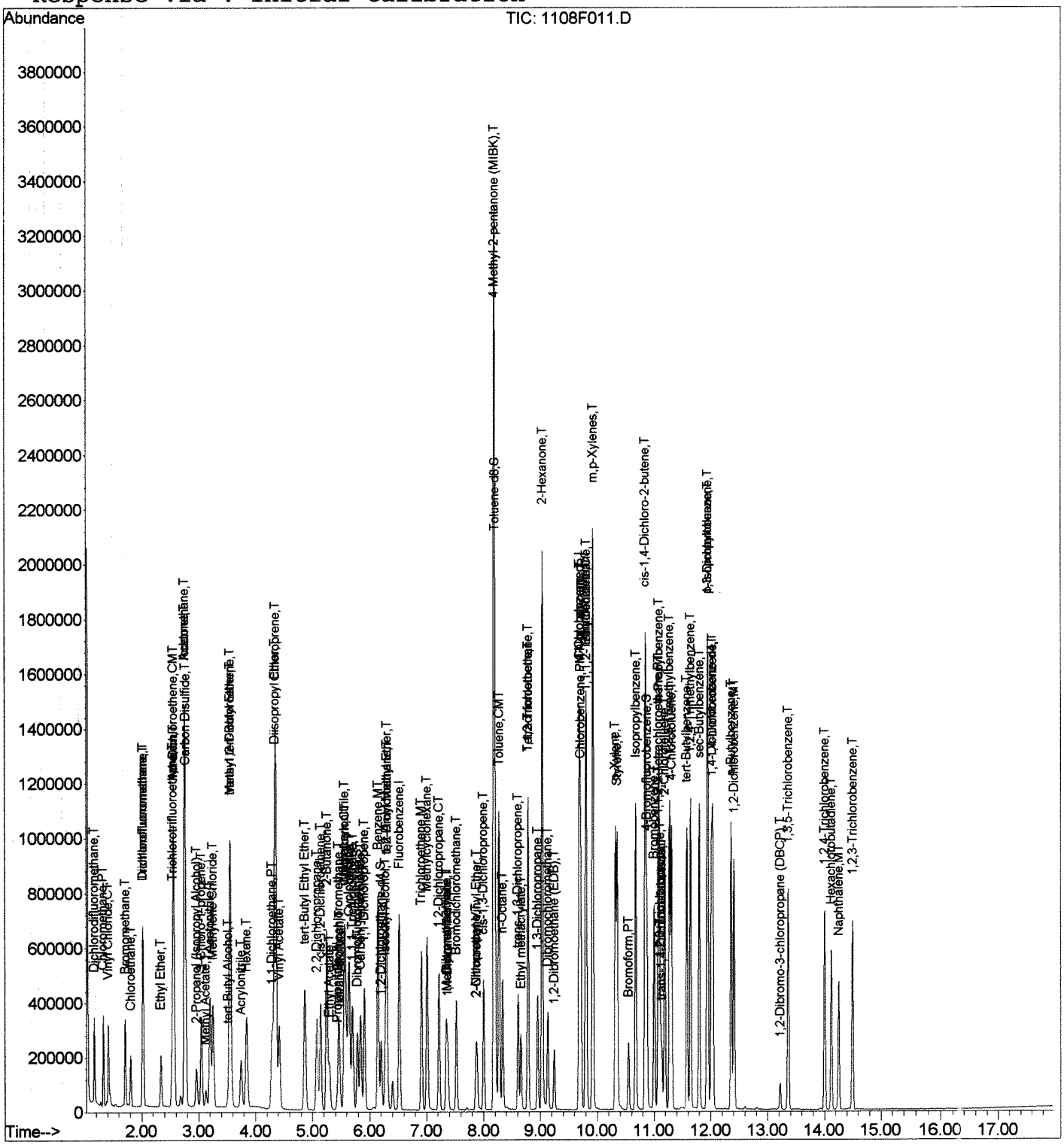
11/09/18

11/26/18

1108F011.D 110818MS27_8260.M Fri Nov 09 09:14:44 2018

Data File : J:\MS27\DATA\110818\1108F011.D Vial: 8
Acq On : 8 Nov 2018 2:39 pm Operator: LM
Sample : ICAL 10 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:14 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F012.D Vial: 9
Acq On : 8 Nov 2018 3:01 pm Operator: LM
Sample : ICAL 20 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:34 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

LM 11-17-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.52	96	692870	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	276396	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	270925	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.79	113	206749	11.31	PPB	0.00
Spiked Amount 10.000			Recovery =	113.10%		
46) 1,2-Dichloroethane-d4	6.21	65	204848	11.33	PPB	0.00
Spiked Amount 10.000			Recovery =	113.30%		
61) Toluene-d8	8.20	98	714583	10.85	PPB	0.00
Spiked Amount 10.000			Recovery =	108.50%		
83) 4-Bromofluorobenzene	10.87	95	281211	11.59	PPB	0.00
Spiked Amount 10.000			Recovery =	115.90%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.17	85	344231	16.74	PPB	97
3) Chloromethane	1.32	50	441520	17.14	PPB	98
4) Vinyl Chloride	1.41	62	402203	16.96	PPB	96
5) Bromomethane	1.71	96	283319	17.39	PPB	98
6) Chloroethane	1.81	64	241040	17.81	PPB	98
7) Dichlorofluoromethane	2.03	67	572641	17.41	PPB	99
8) Trichlorofluoromethane	2.02	101	504451	16.60	PPB	100
9) Ethyl Ether	2.34	59	199605	19.58	PPB	97
10) Acrolein	2.56	56	927312	384.69	PPB	100
11) Trichlorotrifluoroethane	2.54	151	235387	17.29	PPB	98
12) 1,1-Dichloroethene	2.57	96	299399	17.32	PPB	97
13) Acetone	2.75	43	1066851	394.86	PPB	98
14) Iodomethane	2.76	142	2097884	74.95	PPB	100
15) Carbon Disulfide	2.77	76	882292	17.39	PPB	100
16) 2-Propanol (Isopropyl Alco	2.95	45	430120	1016.48	PPB	98
17) 3-Chloro-1-propene	3.05	76	181313	18.49	PPB	97
18) Methyl Acetate	3.12	43	165647	19.73	PPB	97
19) Acetonitrile	3.20	40	521295	775.56	PPB	100
20) Methylene Chloride	3.25	84	387278	19.21	PPB	97
21) tert-Butyl Alcohol	3.52	59	94258	100.50	PPB	94
22) Acrylonitrile	3.75	53	339869	76.19	PPB	95
23) Methyl tert-Butyl Ether	3.55	73	1572877	38.88	PPB	99
24) trans-1,2-Dichloroethene	3.55	96	345339	17.87	PPB	95
25) Hexane	3.85	57	387843	17.29	PPB	99
26) Diisopropyl Ether	4.33	45	1078698	19.20	PPB	98
27) 1,1-Dichloroethane	4.29	63	626382	17.89	PPB	98
28) Vinyl Acetate	4.42	86	115588	38.42	PPB	98

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F012.D Vial: 9
Acq On : 8 Nov 2018 3:01 pm Operator: LM
Sample : ICAL 20 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:34 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroprene	4.35	53	1590155	71.35	PPB	98
30)	tert-Butyl Ethyl Ether	4.86	59	884634	19.63	PPB	99
31)	2,2-Dichloropropane	5.08	77	435182	17.72	PPB	99
32)	cis-1,2-Dichloroethene	5.15	96	389458	18.64	PPB	99
33)	2-Butanone	5.25	72	495465	407.10	PPB	99
34)	Ethyl Acetate	5.29	61	63810	40.13	PPB	99
35)	Propionitrile	5.43	54	123103	79.35	PPB	97
36)	Methacrylonitrile	5.56	67	407285	80.24	PPB	98
37)	Bromochloromethane	5.46	128	204743	18.91	PPB	96
38)	Tetrahydrofuran	5.48	71	23231	18.94	PPB	96
39)	Chloroform	5.58	83	656674	18.96	PPB	99
40)	Cyclohexane	5.64	56	597458	18.43	PPB	98
41)	1,1,1-Trichloroethane	5.70	97	495808	17.51	PPB	97
43)	Carbon Tetrachloride	5.84	117	440689	17.63	PPB	100
44)	1,1-Dichloropropene	5.91	75	443064	18.14	PPB	100
45)	Isobutyl Alcohol	6.27	42	188933	808.81	PPB	96
47)	Benzene	6.15	78	1400257	18.47	PPB	99
48)	1,2-Dichloroethane	6.29	62	447156	19.34	PPB	99
49)	tert-Amyl Methyl Ether	6.30	55	273792	19.86	PPB	92
50)	Trichloroethene	6.91	95	365454	18.21	PPB	96
51)	Methylcyclohexane	7.01	83	459678	18.54	PPB	99
52)	1,2-Dichloropropane	7.22	63	385358	18.34	PPB	98
53)	Dibromomethane	7.34	93	219191	18.96	PPB	97
54)	Methyl methacrylate	7.37	69	155910	20.48	PPB	96
55)	1,4-Dioxane	7.37	88	58038	782.27	PPB	97
56)	Bromodichloromethane	7.52	83	501076	18.84	PPB	99
57)	2-Nitropropane	7.86	41	247766	95.80	PPB	96
58)	2-Chloroethyl Vinyl Ether	7.88	63	153461	20.75	PPB	97
59)	cis-1,3-Dichloropropene	8.00	75	557972	19.87	PPB	100
60)	4-Methyl-2-pentanone (MIBK	8.18	58	1738391	412.34	PPB	96
62)	Toluene	8.27	92	882034	18.65	PPB	99
64)	n-Octane	8.33	85	189403	19.38	PPB	97
65)	trans-1,3-Dichloropropene	8.61	75	455606	19.26	PPB	98
66)	Ethyl methacrylate	8.66	69	310538	20.89	PPB	99
67)	1,1,2-Trichloroethane	8.79	83	268795	19.67	PPB	96
68)	Tetrachloroethene	8.79	164	302964	17.80	PPB	99
69)	2-Hexanone	9.03	57	528981	425.13	PPB	95
70)	1,3-Dichloropropane	8.95	76	504491	19.49	PPB	98
71)	Dibromochloromethane	9.13	129	396011	20.13	PPB	99
72)	1,2-Dibromoethane (EDB)	9.25	107	291519	19.51	PPB	97
73)	1-Chlorohexane	9.69	91	358158	18.54	PPB	97

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F012.D Vial: 9
Acq On : 8 Nov 2018 3:01 pm Operator: LM
Sample : ICAL 20 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:34 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

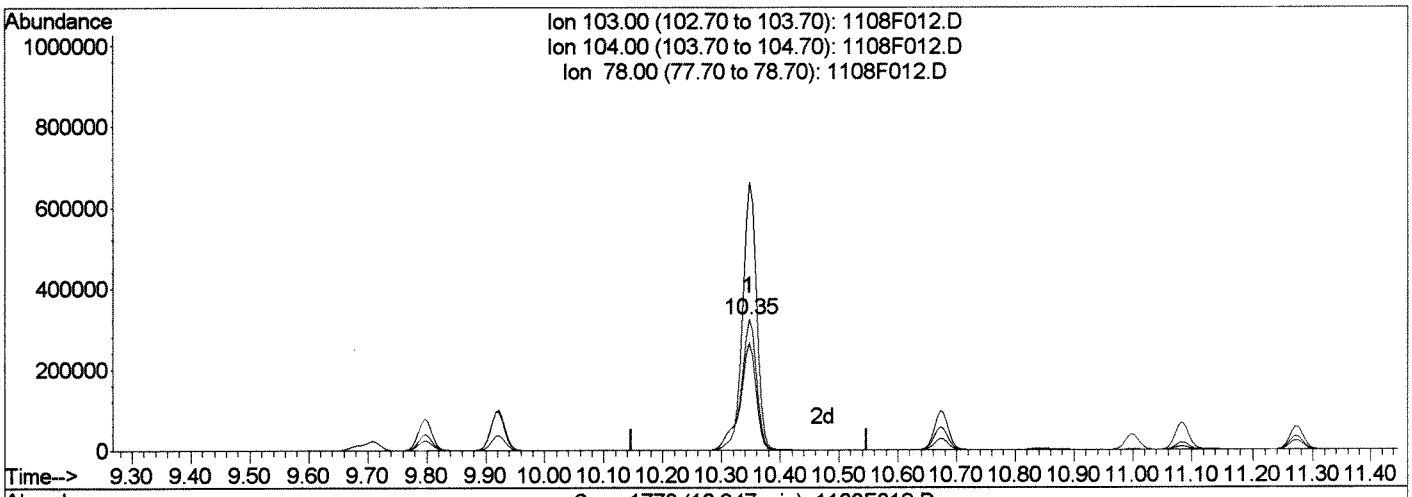
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	9.71	112	1044447	19.19	PPB	98
75)	Ethylbenzene	9.80	106	508958	19.10	PPB	99
76)	1,1,1,2-Tetrachloroethane	9.81	131	377631	19.19	PPB	99
77)	m,p-Xylenes	9.92	106	1265348	38.39	PPB	99
78)	o-Xylene	10.32	106	592159	19.47	PPB	98
79)	Styrene	10.35	103	537567m	20.66	PPB	
80)	Bromoform	10.55	173	240416	19.16	PPB	98
81)	Isopropylbenzene	10.67	105	1467801	19.11	PPB	100
82)	cis-1,4-Dichloro-2-butene	10.84	89	162021	83.18	PPB	99
85)	1,1,2,2-Tetrachloroethane	11.07	83	341267	19.00	PPB	96
86)	trans-1,4-Dichloro-2-buten	11.13	53	85040	20.57	PPB	95
87)	Bromobenzene	11.00	156	462148	19.10	PPB	98
88)	n-Propylbenzene	11.08	91	1841295	18.94	PPB	100
89)	1,2,3-Trichloropropane	11.11	110	95753	19.46	PPB	98
90)	2-Chlorotoluene	11.19	91	1118056	19.09	PPB	99
91)	1,3,5-Trimethylbenzene	11.27	105	1298578	19.14	PPB	98
92)	4-Chlorotoluene	11.31	91	1208673m	18.83	PPB	
93)	tert-Butylbenzene	11.58	119	1047282	18.98	PPB	100
94)	1,2,4-Trimethylbenzene	11.64	105	1331391	19.81	PPB	100
95)	sec-Butylbenzene	11.80	105	1571412	18.93	PPB	99
96)	p-Isopropyltoluene	11.95	119	1322095	19.39	PPB	99
97)	1,3-Dichlorobenzene	11.94	146	866025	19.22	PPB	99
98)	1,4-Dichlorobenzene	12.04	146	872038	19.24	PPB	98
99)	n-Butylbenzene	12.36	91	1193786	19.41	PPB	99
100)	1,2-Dichlorobenzene	12.41	146	806730	19.01	PPB	99
101)	1,2-Dibromo-3-chloropropan	13.22	155	49337	20.02	PPB	94
102)	1,3,5-Trichlorobenzene	13.36	180	567013	18.92	PPB	98
103)	1,2,4-Trichlorobenzene	14.00	180	516072	19.18	PPB	97
104)	Hexachlorobutadiene	14.12	225	261345	18.44	PPB	99
105)	Naphthalene	14.25	128	869640	21.32	PPB	100
106)	1,2,3-Trichlorobenzene	14.49	180	492262	19.72	PPB	99

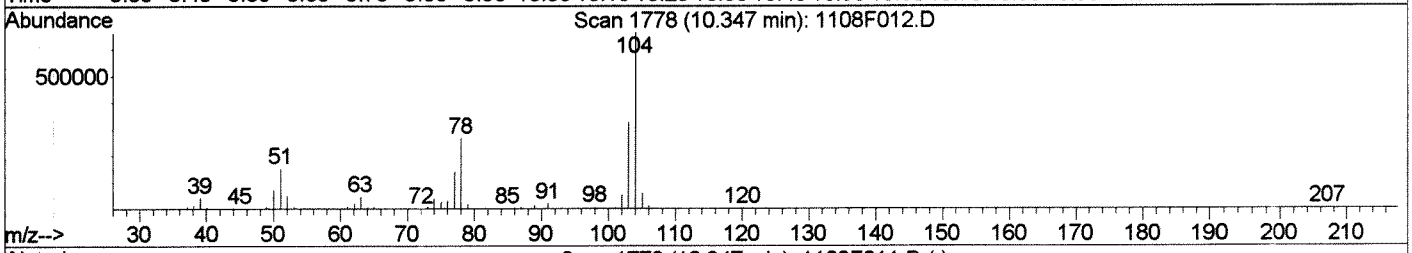
(#) = qualifier out of range (m) = manual integration

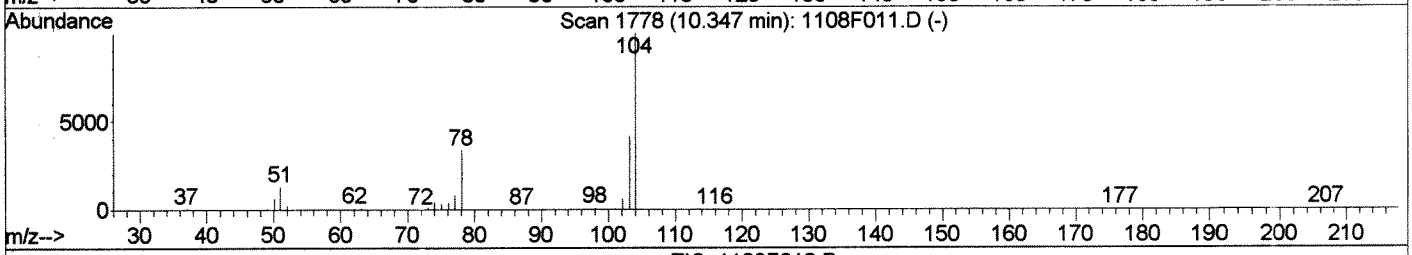
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F012.D Vial: 9
Acq On : 8 Nov 2018 3:01 pm Operator: LM
Sample : ICAL 20 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F012.D

(79) Styrene (T)

10.35min 23.31PPB

response 606563

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	204.76
78.00	85.00	81.90
0.00	0.00	0.00

Manual Integration:

Before

LM

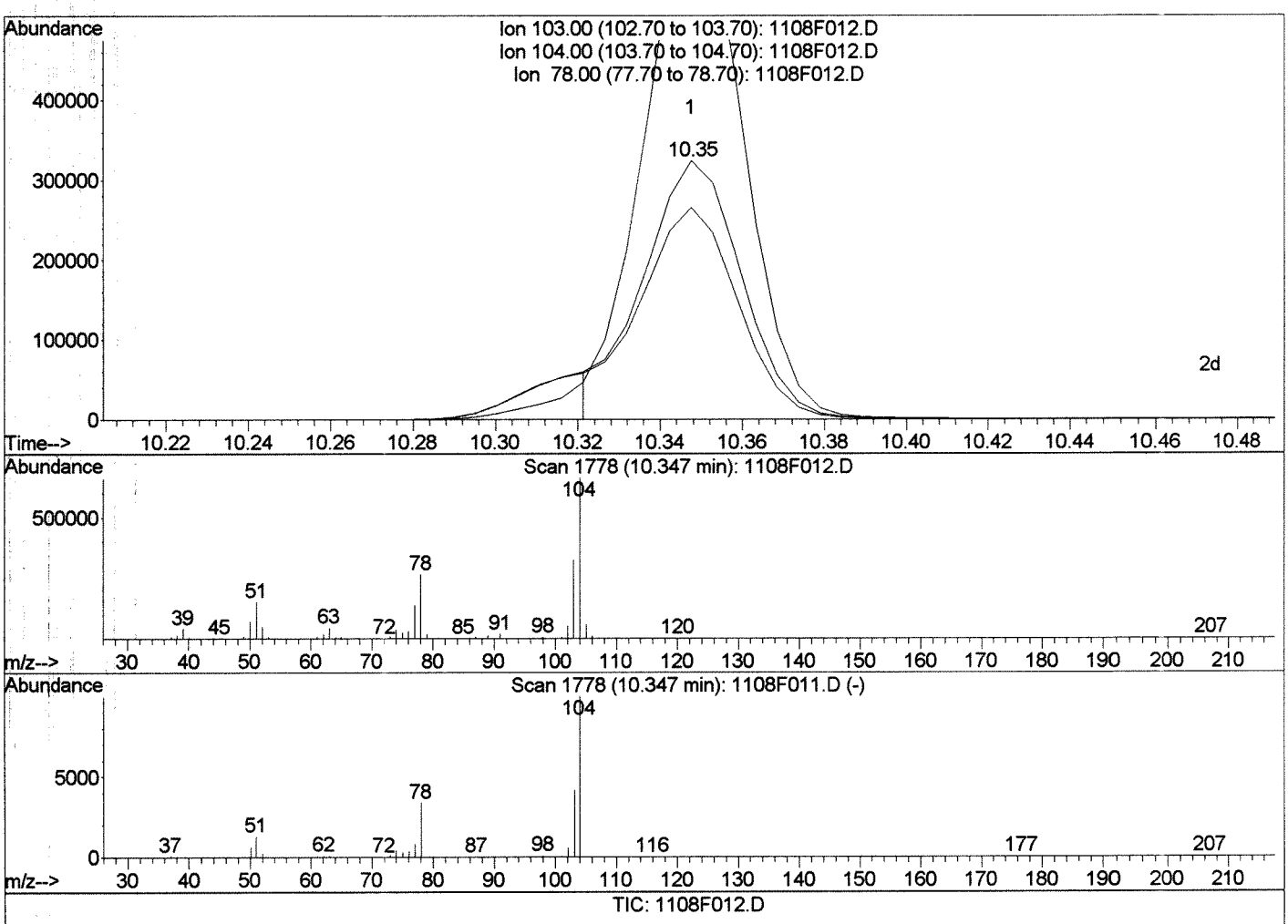
11/09/18

1108F012.D 110818MS27_8260.M Fri Nov 09 09:16:12 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F012.D Vial: 9
Acq On : 8 Nov 2018 3:01 pm Operator: LM
Sample : ICAL 20 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:16 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F012.D

(79) Styrene (T)

10.35min 20.66PPB m

response 537567

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	204.76
78.00	85.00	81.90
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

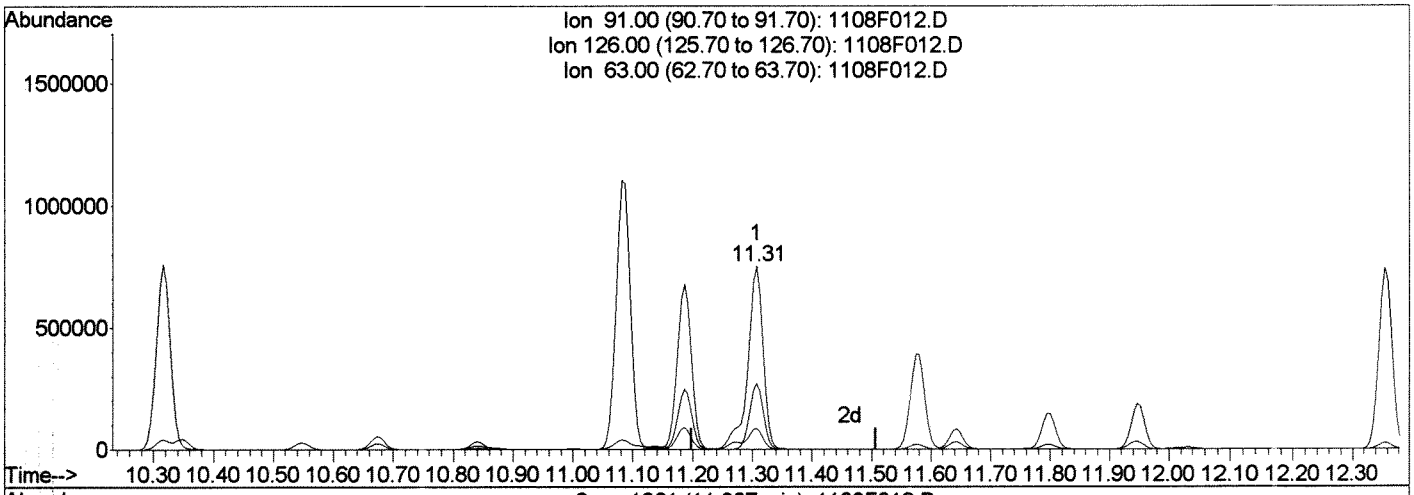
11/09/18

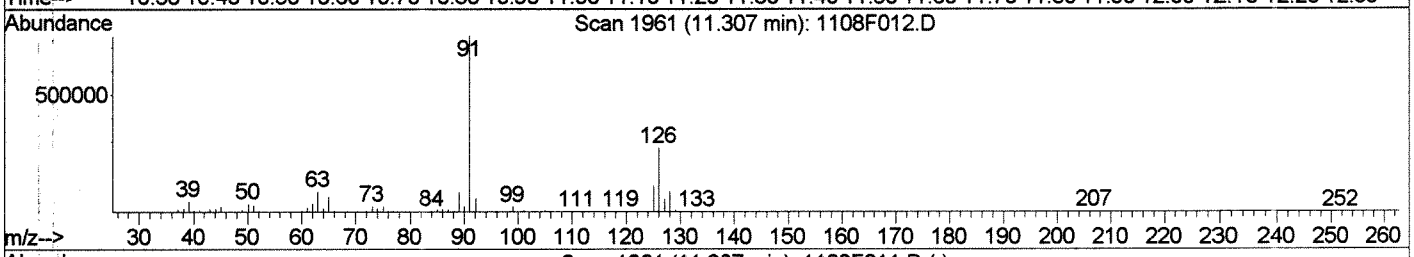
1108F012.D 110818MS27_8260.M Fri Nov 09 09:16:23 2018

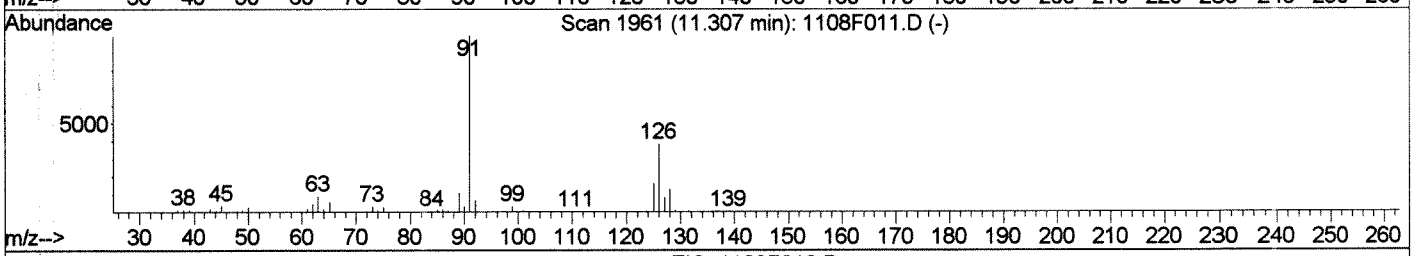
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F012.D Vial: 9
Acq On : 8 Nov 2018 3:01 pm Operator: LM
Sample : ICAL 20 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:16 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F012.D

(92) 4-Chlorotoluene (T)

11.31min 20.88PPB

response 1340260

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	36.07
63.00	11.20	11.47
0.00	0.00	0.00

Manual Integration:

Before LM

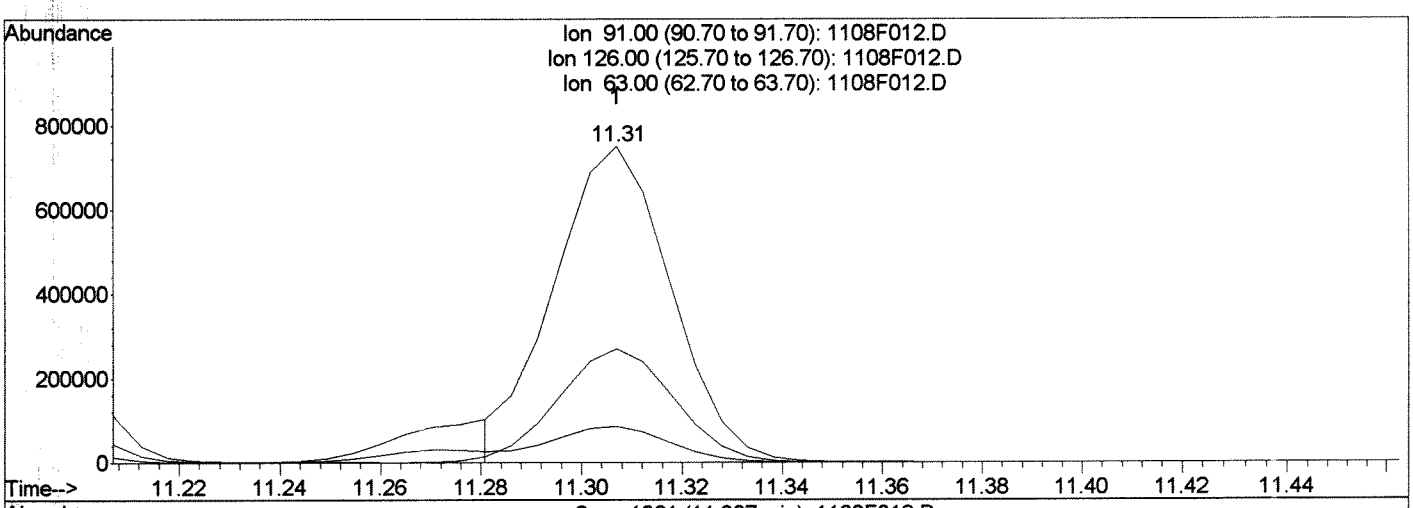
11/09/18

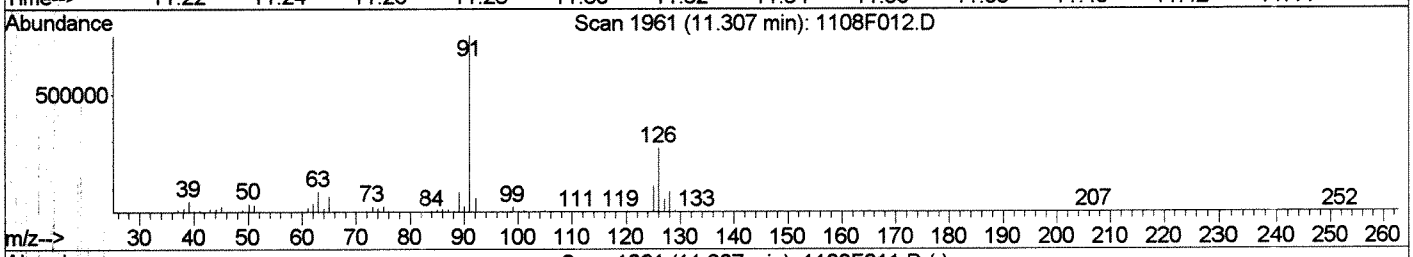
1108F012.D 110818MS27_8260.M Fri Nov 09 09:16:38 2018

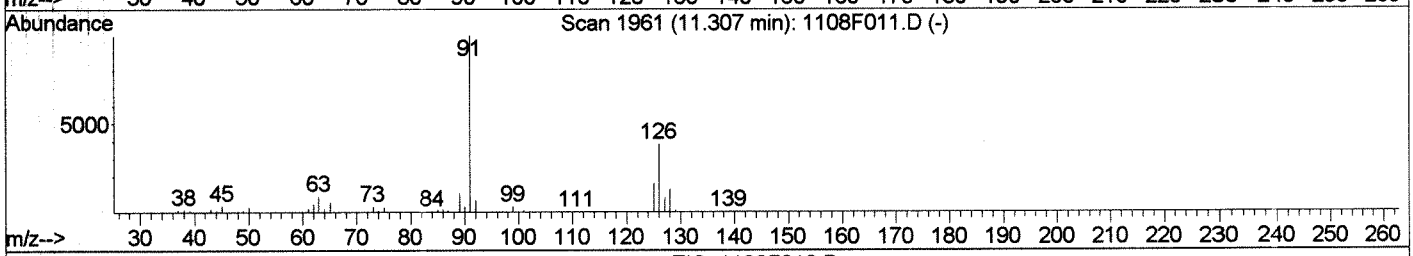
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F012.D Vial: 9
Acq On : 8 Nov 2018 3:01 pm Operator: LM
Sample : ICAL 20 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:16 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F012.D

(92) 4-Chlorotoluene (T)

11.31min 18.83PPB m

response 1208673

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	36.05
63.00	11.20	11.47
0.00	0.00	0.00

Manual Integration:

After LM

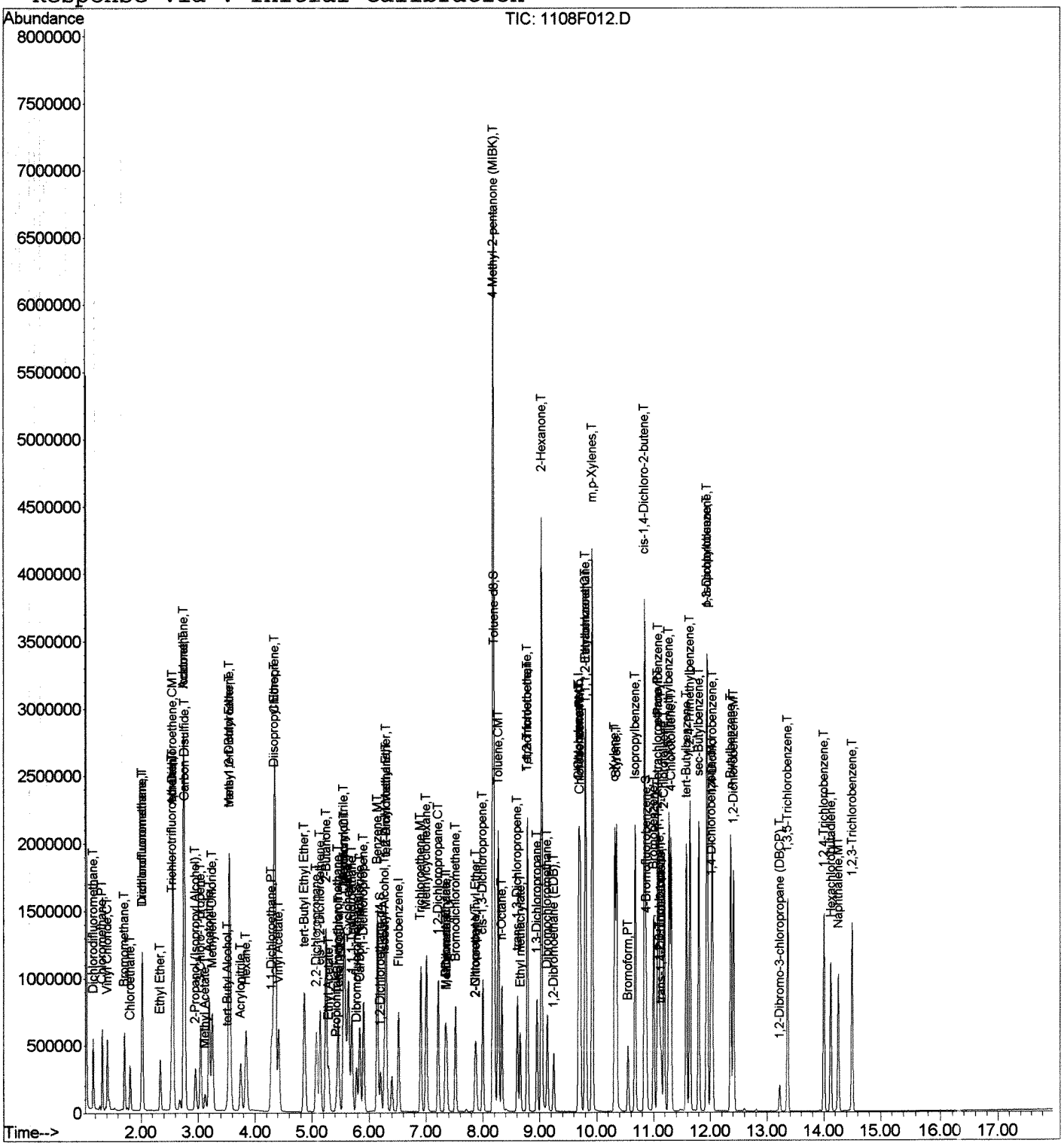
Shoulder

11/09/18

1108F012.D 110818MS27_8260.M Fri Nov 09 09:16:51 2018

Data File : J:\MS27\DATA\110818\1108F012.D Vial: 9
Acq On : 8 Nov 2018 3:01 pm Operator: LM
Sample : ICAL 20 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:16 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F013.D Vial: 10
Acq On : 8 Nov 2018 3:22 pm Operator: LM
Sample : ICAL 40 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:34 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration LM 11-17-18
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.52	96	703638	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	279501	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	267163	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.79	113	243467	13.12	PPB	0.00
Spiked Amount 10.000			Recovery =	131.20%		
46) 1,2-Dichloroethane-d4	6.21	65	242020	13.18	PPB	0.00
Spiked Amount 10.000			Recovery =	131.80%		
61) Toluene-d8	8.20	98	827045	12.37	PPB	0.00
Spiked Amount 10.000			Recovery =	123.70%		
83) 4-Bromofluorobenzene	10.87	95	324782	13.24	PPB	0.00
Spiked Amount 10.000			Recovery =	132.40%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.17	85	735932	35.24	PPB	98
3) Chloromethane	1.32	50	905156	34.60	PPB	98
4) Vinyl Chloride	1.41	62	868220	36.05	PPB	97
5) Bromomethane	1.72	96	577856	34.92	PPB	98
6) Chloroethane	1.81	64	504198	36.69	PPB	98
7) Dichlorofluoromethane	2.03	67	1221971	36.59	PPB	99
8) Trichlorofluoromethane	2.02	101	1095540	35.51	PPB	98
9) Ethyl Ether	2.34	59	409155	39.53	PPB	97
10) Acrolein	2.56	56	1811723	740.07	PPB	99
11) Trichlorotrifluoroethane	2.54	151	504830	36.51	PPB	99
12) 1,1-Dichloroethene	2.57	96	642925	36.62	PPB	96
13) Acetone	2.76	43	2004207	730.44	PPB	99
14) Iodomethane	2.75	142	4502571	158.40	PPB	99
15) Carbon Disulfide	2.77	76	1889781	36.68	PPB	100
16) 2-Propanol (Isopropyl Alco	2.98	45	853501	1986.17	PPB	98
17) 3-Chloro-1-propene	3.04	76	382953	38.45	PPB	98
18) Methyl Acetate	3.12	43	325425	38.16	PPB	97
19) Acetonitrile	3.21	40	1007259	1475.63	PPB	100
20) Methylene Chloride	3.25	84	776118	37.91	PPB	99
21) tert-Butyl Alcohol	3.54	59	189353	198.80	PPB #	1
22) Acrylonitrile	3.75	53	658550	145.38	PPB	96
23) Methyl tert-Butyl Ether	3.55	73	3184827	77.52	PPB	100
24) trans-1,2-Dichloroethene	3.55	96	722789	36.84	PPB	98
25) Hexane	3.85	57	826338	36.28	PPB	99
26) Diisopropyl Ether	4.33	45	2278537	39.94	PPB	100
27) 1,1-Dichloroethane	4.29	63	1327874	37.35	PPB	100
28) Vinyl Acetate	4.42	86	243365	79.65	PPB	99

(#) = qualifier out of range (m) = manual integration
1108F013.D 110818MS27_8260.M Fri Nov 09 09:23:34 2018 Page 1

Data File : J:\MS27\DATA\110818\1108F013.D Vial: 10
Acq On : 8 Nov 2018 3:22 pm Operator: LM
Sample : ICAL 40 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:34 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
29)	Chloroprene	4.35	53	3500542	154.66	PPB		98
30)	tert-Butyl Ethyl Ether	4.86	59	1866304	40.77	PPB		98
31)	2,2-Dichloropropane	5.08	77	931323	37.34	PPB		98
32)	cis-1,2-Dichloroethene	5.14	96	826807	38.96	PPB		99
33)	2-Butanone	5.25	72	971535	786.04	PPB		99
34)	Ethyl Acetate	5.29	61	127348	78.86	PPB		99
35)	Propionitrile	5.43	54	233659	148.31	PPB		99
36)	Methacrylonitrile	5.56	67	835818	162.14	PPB		99
37)	Bromochloromethane	5.46	128	415868	37.82	PPB		96
38)	Tetrahydrofuran	5.48	71	47566	38.19	PPB		96
39)	Chloroform	5.58	83	1355288	38.52	PPB		98
40)	Cyclohexane	5.64	56	1302852	39.58	PPB		98
41)	1,1,1-Trichloroethane	5.70	97	1073557	37.33	PPB		98
43)	Carbon Tetrachloride	5.84	117	963885	37.97	PPB		99
44)	1,1-Dichloropropene	5.91	75	955449	38.51	PPB		99
45)	Isobutyl Alcohol	6.28	42	385989	1627.11	PPB		91
47)	Benzene	6.15	78	2973881	38.63	PPB		99
48)	1,2-Dichloroethane	6.29	62	887860	37.81	PPB		99
49)	tert-Amyl Methyl Ether	6.30	55	536930	38.36	PPB	#	80
50)	Trichloroethene	6.91	95	775187	38.04	PPB		99
51)	Methylcyclohexane	7.01	83	1060517	42.13	PPB		98
52)	1,2-Dichloropropane	7.22	63	809607	37.94	PPB		100
53)	Dibromomethane	7.34	93	441857	37.63	PPB		98
54)	Methyl methacrylate	7.37	69	331711	42.91	PPB		96
55)	1,4-Dioxane	7.38	88	135690	1800.93	PPB		91
56)	Bromodichloromethane	7.52	83	1030753	38.17	PPB		100
57)	2-Nitropropane	7.86	41	515636	196.33	PPB		96
58)	2-Chloroethyl Vinyl Ether	7.88	63	340568	45.35	PPB		97
59)	cis-1,3-Dichloropropene	8.00	75	1199801	42.08	PPB		98
60)	4-Methyl-2-pentanone (MIBK	8.18	58	3503232	818.24	PPB		96
62)	Toluene	8.27	92	1873569	39.01	PPB		99
64)	n-Octane	8.33	85	396591	40.12	PPB		97
65)	trans-1,3-Dichloropropene	8.61	75	973617	40.70	PPB		99
66)	Ethyl methacrylate	8.66	69	670842	44.63	PPB		98
67)	1,1,2-Trichloroethane	8.79	83	551043	39.87	PPB		95
68)	Tetrachloroethene	8.79	164	659981	38.34	PPB		98
69)	2-Hexanone	9.03	57	1073345	853.04	PPB		93
70)	1,3-Dichloropropane	8.95	76	1035633	39.56	PPB		98
71)	Dibromochloromethane	9.14	129	799576	40.20	PPB		99
72)	1,2-Dibromoethane (EDB)	9.25	107	592243	39.20	PPB		98
73)	1-Chlorohexane	9.69	91	830110	42.50	PPB		91

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F013.D Vial: 10
Acq On : 8 Nov 2018 3:22 pm Operator: LM
Sample : ICAL 40 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:34 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

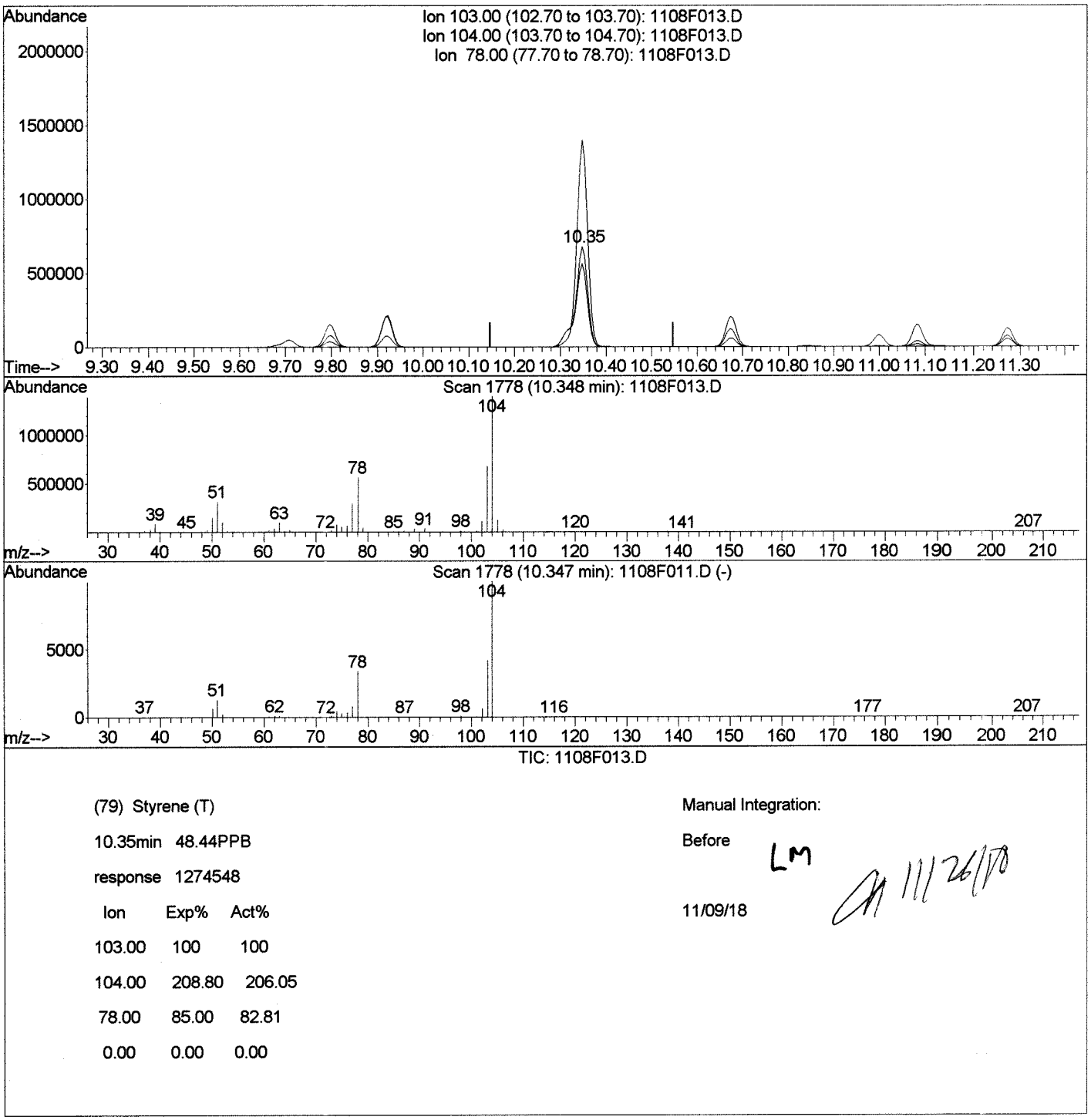
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	9.71	112	2200332	39.98	PPB	97
75)	Ethylbenzene	9.80	106	1113452	41.32	PPB	99
76)	1,1,1,2-Tetrachloroethane	9.81	131	780322	39.22	PPB	98
77)	m,p-Xylenes	9.92	106	2747382	82.44	PPB	99
78)	o-Xylene	10.32	106	1290589	41.97	PPB	100
79)	Styrene	10.35	103	1126667m	42.82	PPB	
80)	Bromoform	10.55	173	492907	38.85	PPB	98
81)	Isopropylbenzene	10.67	105	3259914	41.97	PPB	100
82)	cis-1,4-Dichloro-2-butene	10.84	89	344141	174.72	PPB	98
85)	1,1,2,2-Tetrachloroethane	11.07	83	680103	38.39	PPB	97
86)	trans-1,4-Dichloro-2-buten	11.13	53	166922	40.95	PPB	99
87)	Bromobenzene	11.00	156	929983	38.98	PPB	97
88)	n-Propylbenzene	11.08	91	3930081	41.00	PPB	99
89)	1,2,3-Trichloropropane	11.11	110	186028	38.34	PPB	98
90)	2-Chlorotoluene	11.19	91	2362028	40.90	PPB	99
91)	1,3,5-Trimethylbenzene	11.27	105	2807665	41.96	PPB	99
92)	4-Chlorotoluene	11.31	91	2487998m	39.31	PPB	
93)	tert-Butylbenzene	11.58	119	2298243	42.25	PPB	99
94)	1,2,4-Trimethylbenzene	11.64	105	2863729	43.21	PPB	99
95)	sec-Butylbenzene	11.80	105	3393323	41.46	PPB	98
96)	p-Isopropyltoluene	11.95	119	2891391	43.00	PPB	98
97)	1,3-Dichlorobenzene	11.94	146	1740616	39.18	PPB	100
98)	1,4-Dichlorobenzene	12.04	146	1739850	38.94	PPB	99
99)	n-Butylbenzene	12.36	91	2600922	42.87	PPB	99
100)	1,2-Dichlorobenzene	12.41	146	1626798	38.88	PPB	100
101)	1,2-Dibromo-3-chloropropan	13.22	155	96464	39.69	PPB	93
102)	1,3,5-Trichlorobenzene	13.36	180	1194754	40.44	PPB	99
103)	1,2,4-Trichlorobenzene	14.00	180	1122671	42.32	PPB	99
104)	Hexachlorobutadiene	14.12	225	544809	38.99	PPB	99
105)	Naphthalene	14.25	128	1982251	49.28	PPB	99
106)	1,2,3-Trichlorobenzene	14.49	180	1066089	43.31	PPB	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F013.D Vial: 10
Acq On : 8 Nov 2018 3:22 pm Operator: LM
Sample : ICAL 40 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F013.D

(79) Styrene (T)

10.35min 48.44PPB

response 1274548

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	206.05
78.00	85.00	82.81
0.00	0.00	0.00

Manual Integration:

Before LM 11/26/18

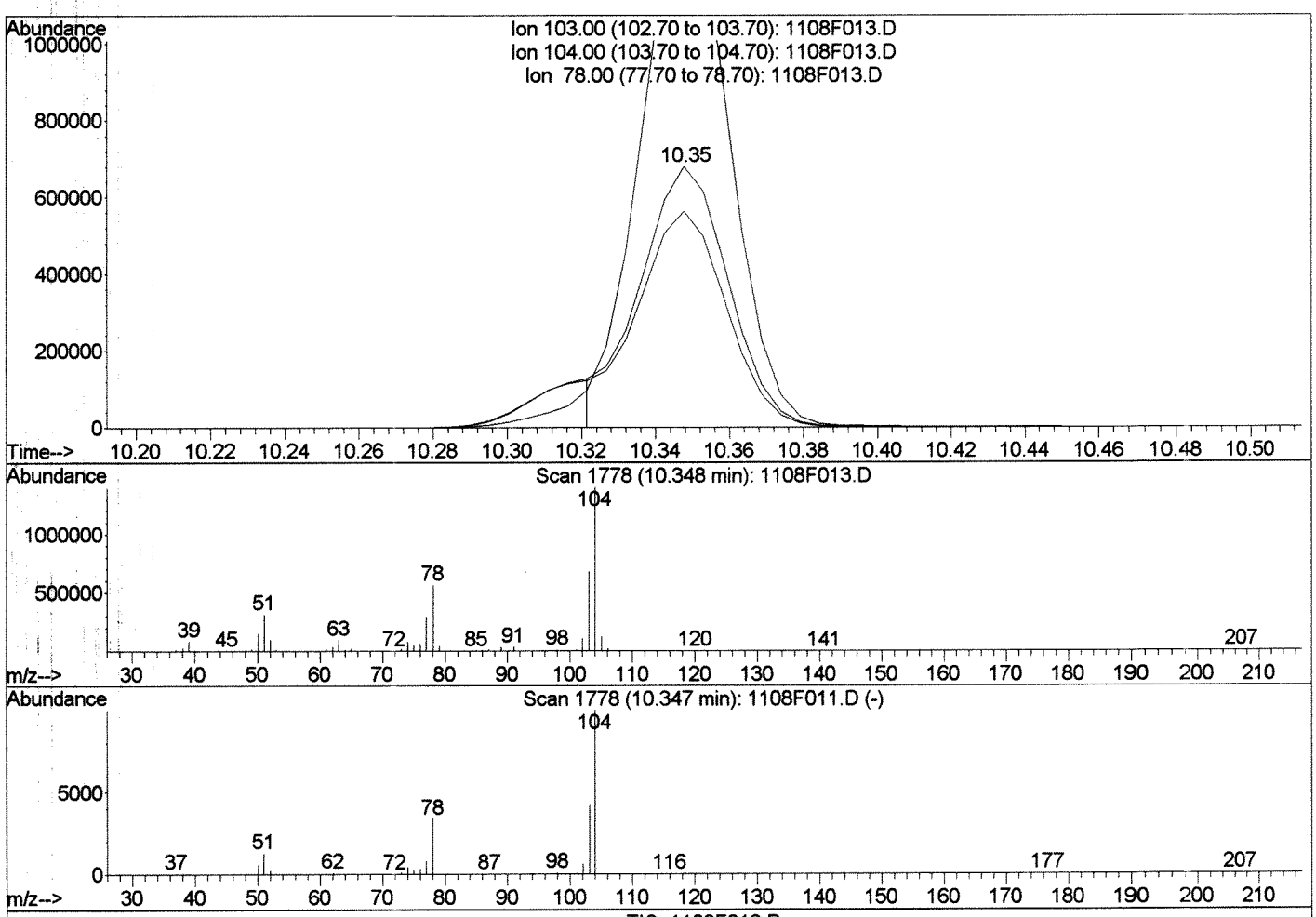
11/09/18

1108F013.D 110818MS27_8260.M Fri Nov 09 09:18:06 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F013.D Vial: 10
Acq On : 8 Nov 2018 3:22 pm Operator: LM
Sample : ICAL 40 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:18 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F013.D

(79) Styrene (T)

10.35min 42.82PPB m

response 1126667

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	206.05
78.00	85.00	82.85
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

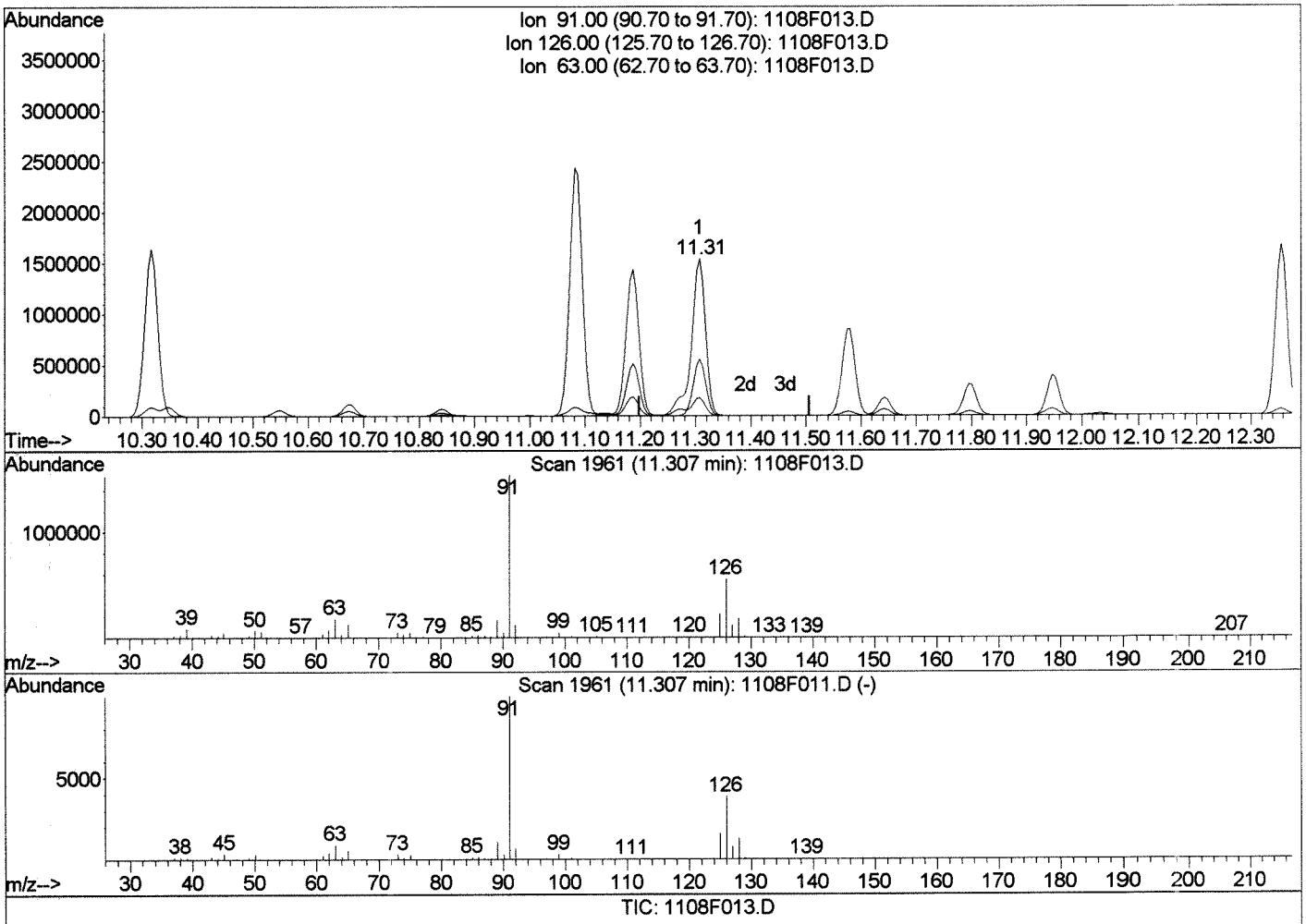
11/09/18

1108F013.D 110818MS27_8260.M Fri Nov 09 09:18:17 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F013.D Vial: 10
Acq On : 8 Nov 2018 3:22 pm Operator: LM
Sample : ICAL 40 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:18 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F013.D

(92) 4-Chlorotoluene (T)

11.31min 43.71PPB

response 2766792

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.94
63.00	11.20	11.38
0.00	0.00	0.00

Manual Integration:

Before LM

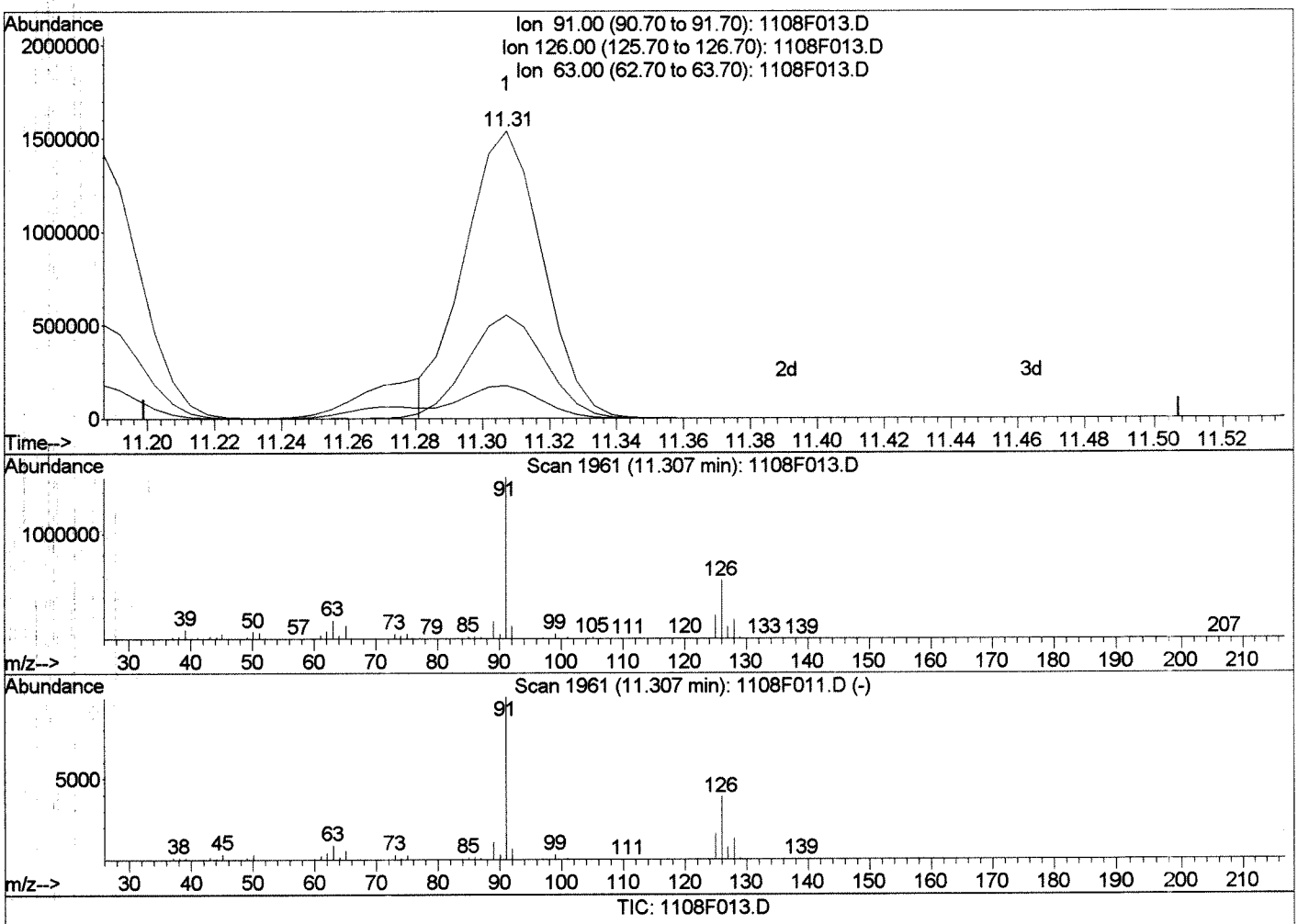
11/09/18

1108F013.D 110818MS27_8260.M Fri Nov 09 09:18:28 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F013.D Vial: 10
Acq On : 8 Nov 2018 3:22 pm Operator: LM
Sample : ICAL 40 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:18 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F013.D

(92) 4-Chlorotoluene (T)

11.31min 39.31PPB m

response 2487998

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.93
63.00	11.20	11.38
0.00	0.00	0.00

Manual Integration:

After LM

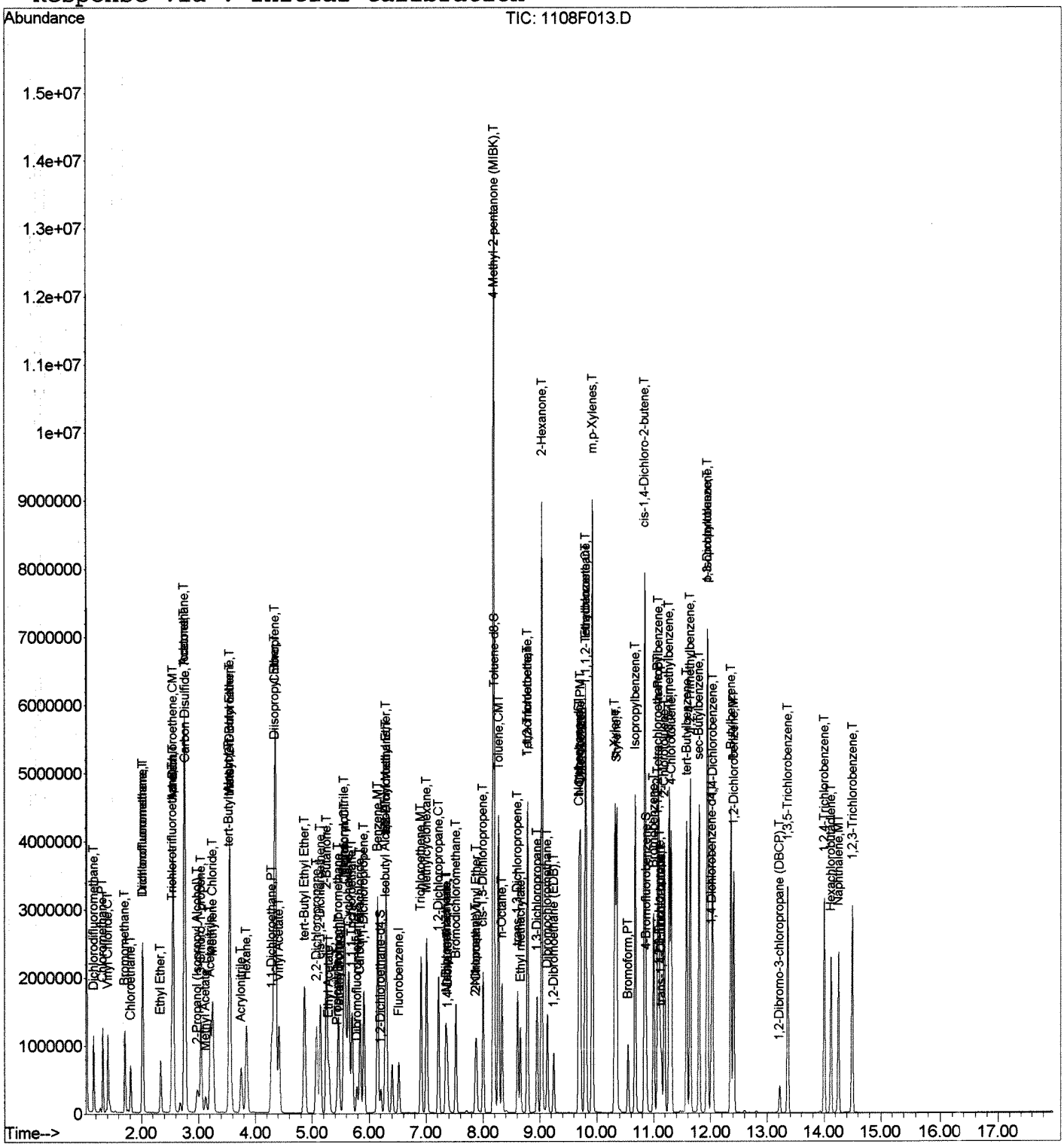
Shoulder

11/09/18

1108F013.D 110818MS27_8260.M Fri Nov 09 09:18:39 2018

Data File : J:\MS27\DATA\110818\1108F013.D Vial: 10
Acq On : 8 Nov 2018 3:22 pm Operator: LM
Sample : ICAL 40 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:18 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F014.D Vial: 11
Acq On : 8 Nov 2018 3:44 pm Operator: LM
Sample : ICAL 60 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:36 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

LM 11-12-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.52	96	705648	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	281074	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	256494	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.79	113	277384	14.90	PPB	0.00
Spiked Amount 10.000			Recovery =	149.00%		
46) 1,2-Dichloroethane-d4	6.21	65	273082	14.82	PPB	0.00
Spiked Amount 10.000			Recovery =	148.20%		
61) Toluene-d8	8.20	98	961967	14.34	PPB	0.00
Spiked Amount 10.000			Recovery =	143.40%		
83) 4-Bromofluorobenzene	10.87	95	366469	14.85	PPB	0.00
Spiked Amount 10.000			Recovery =	148.50%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.17	85	1186149	56.63	PPB	98
3) Chloromethane	1.32	50	1390844	53.01	PPB	97
4) Vinyl Chloride	1.41	62	1398552	57.90	PPB	96
5) Bromomethane	1.71	96	914156	55.09	PPB	97
6) Chloroethane	1.81	64	793166	57.55	PPB	99
7) Dichlorofluoromethane	2.03	67	1943605	58.03	PPB	100
8) Trichlorofluoromethane	2.01	101	1791453	57.90	PPB	99
9) Ethyl Ether	2.34	59	635100	61.18	PPB	96
10) Acrolein	2.56	56	2828926	1152.30	PPB	99
11) Trichlorotrifluoroethane	2.54	151	827906	59.70	PPB	98
12) 1,1-Dichloroethene	2.57	96	1045779	59.40	PPB	96
13) Acetone	2.75	43	4478498	1627.56	PPB	99
14) Iodomethane	2.75	142	7112768	249.52	PPB	100
15) Carbon Disulfide	2.77	76	3053800	59.10	PPB	99
16) 2-Propanol (Isopropyl Alco	2.96	45	1462126	3392.79	PPB	97
17) 3-Chloro-1-propene	3.04	76	602225	60.29	PPB	96
18) Methyl Acetate	3.12	43	507701	59.37	PPB	98
19) Acetonitrile	3.20	40	1672455	2443.16	PPB	96
20) Methylene Chloride	3.25	84	1181950	57.57	PPB	96
21) tert-Butyl Alcohol	3.52	59	327600	342.97	PPB	99
22) Acrylonitrile	3.75	53	1049401	231.00	PPB	95
23) Methyl tert-Butyl Ether	3.55	73	4882216	118.50	PPB	100
24) trans-1,2-Dichloroethene	3.55	96	1146394	58.26	PPB	97
25) Hexane	3.85	57	1328970	58.18	PPB	98
26) Diisopropyl Ether	4.33	45	3463373	60.54	PPB	99
27) 1,1-Dichloroethane	4.29	63	2061319	57.82	PPB	98
28) Vinyl Acetate	4.42	86	373551	121.91	PPB	98

(#) = qualifier out of range (m) = manual integration

11/28/18

Data File : J:\MS27\DATA\110818\1108F014.D Vial: 11
Acq On : 8 Nov 2018 3:44 pm Operator: LM
Sample : ICAL 60 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:36 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
29)	Chloroprene	4.35	53	5647490	248.80	PPB		98
30)	tert-Butyl Ethyl Ether	4.86	59	2899222	63.16	PPB		100
31)	2,2-Dichloropropane	5.08	77	1496700	59.83	PPB		98
32)	cis-1,2-Dichloroethene	5.14	96	1266888	59.53	PPB		99
33)	2-Butanone	5.25	72	2144069	1729.77	PPB		100
34)	Ethyl Acetate	5.29	61	200407	123.75	PPB		97
35)	Propionitrile	5.43	54	388056	245.61	PPB		98
36)	Methacrylonitrile	5.56	67	1315138	254.40	PPB		98
37)	Bromochloromethane	5.46	128	630795	57.20	PPB		97
38)	Tetrahydrofuran	5.48	71	80541	64.48	PPB		93
39)	Chloroform	5.58	83	2050248	58.11	PPB		99
40)	Cyclohexane	5.64	56	2105095	63.78	PPB		100
41)	1,1,1-Trichloroethane	5.70	97	1709660	59.28	PPB		99
43)	Carbon Tetrachloride	5.84	117	1568285	61.60	PPB		99
44)	1,1-Dichloropropene	5.91	75	1555775	62.53	PPB		99
45)	Isobutyl Alcohol	6.27	42	657311	2762.95	PPB		93
47)	Benzene	6.15	78	4645048	60.17	PPB		99
48)	1,2-Dichloroethane	6.29	62	1337726	56.81	PPB		100
49)	tert-Amyl Methyl Ether	6.30	55	815618	58.10	PPB	#	71
50)	Trichloroethene	6.91	95	1218230	59.61	PPB		98
51)	Methylcyclohexane	7.01	83	1746353	69.18	PPB		98
52)	1,2-Dichloropropane	7.22	63	1233551	57.65	PPB		98
53)	Dibromomethane	7.34	93	675661	57.38	PPB		97
54)	Methyl methacrylate	7.37	69	528958	68.23	PPB		97
55)	1,4-Dioxane	7.37	88	218309	2889.22	PPB		94
56)	Bromodichloromethane	7.52	83	1562878	57.70	PPB		100
57)	2-Nitropropane	7.86	41	827340	314.12	PPB		93
58)	2-Chloroethyl Vinyl Ether	7.88	63	539107	71.58	PPB		97
59)	cis-1,3-Dichloropropene	8.00	75	1856098	64.91	PPB		99
60)	4-Methyl-2-pentanone (MIBK	8.18	58	7365072	1715.34	PPB	#	75
62)	Toluene	8.27	92	2909784	60.41	PPB		99
64)	n-Octane	8.33	85	613629	61.73	PPB		99
65)	trans-1,3-Dichloropropene	8.61	75	1515458	63.00	PPB		99
66)	Ethyl methacrylate	8.66	69	1073236	71.00	PPB		98
67)	1,1,2-Trichloroethane	8.79	83	820964	59.07	PPB		97
68)	Tetrachloroethene	8.79	164	1059607	61.21	PPB		98
69)	2-Hexanone	9.03	57	2291175	1810.71	PPB		92
70)	1,3-Dichloropropane	8.95	76	1564749	59.43	PPB		99
71)	Dibromochloromethane	9.14	129	1209182	60.45	PPB		99
72)	1,2-Dibromoethane (EDB)	9.25	107	907388	59.73	PPB		97
73)	1-Chlorohexane	9.69	91	1373996	69.96	PPB		90

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F014.D Vial: 11
Acq On : 8 Nov 2018 3:44 pm Operator: LM
Sample : ICAL 60 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:36 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

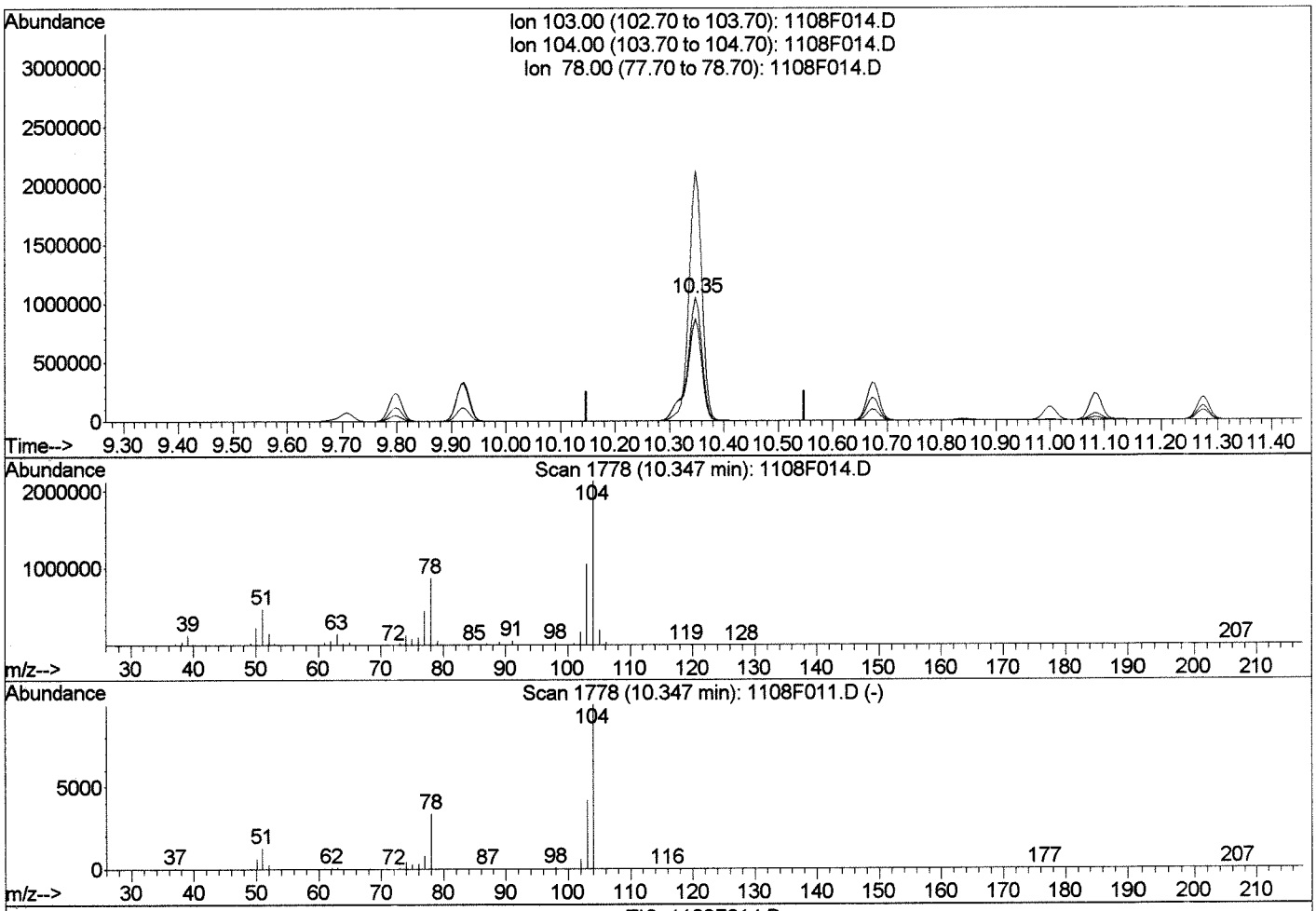
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	9.71	112	3350633	60.54	PPB	98
75)	Ethylbenzene	9.80	106	1746343	64.45	PPB	98
76)	1,1,1,2-Tetrachloroethane	9.81	131	1191441	59.55	PPB	99
77)	m,p-Xylenes	9.92	106	4265894	127.29	PPB	100
78)	o-Xylene	10.32	106	2012754	65.09	PPB	98
79)	Styrene	10.35	103	1731790m	65.45	PPB	
80)	Bromoform	10.55	173	757620	59.38	PPB	98
81)	Isopropylbenzene	10.67	105	5183098	66.35	PPB	100
82)	cis-1,4-Dichloro-2-butene	10.84	89	540438	272.84	PPB	98
85)	1,1,2,2-Tetrachloroethane	11.07	83	1015762	59.73	PPB	97
86)	trans-1,4-Dichloro-2-buten	11.14	53	252616	64.55	PPB	93
87)	Bromobenzene	11.00	156	1406173	61.38	PPB	99
88)	n-Propylbenzene	11.08	91	6161623	66.95	PPB	99
89)	1,2,3-Trichloropropane	11.11	110	286941	61.59	PPB	93
90)	2-Chlorotoluene	11.19	91	3586636	64.68	PPB	99
91)	1,3,5-Trimethylbenzene	11.28	105	4324791	67.32	PPB	98
92)	4-Chlorotoluene	11.31	91	3761550m	61.90	PPB	
93)	tert-Butylbenzene	11.58	119	3616896	69.25	PPB	100
94)	1,2,4-Trimethylbenzene	11.64	105	4382270	68.87	PPB	99
95)	sec-Butylbenzene	11.80	105	5317266	67.66	PPB	98
96)	p-Isopropyltoluene	11.95	119	4478780	69.38	PPB	98
97)	1,3-Dichlorobenzene	11.94	146	2594476	60.82	PPB	99
98)	1,4-Dichlorobenzene	12.04	146	2600603	60.62	PPB	99
99)	n-Butylbenzene	12.36	91	4062436	69.75	PPB	98
100)	1,2-Dichlorobenzene	12.41	146	2450354	61.00	PPB	99
101)	1,2-Dibromo-3-chloropropan	13.22	155	148197	63.51	PPB	94
102)	1,3,5-Trichlorobenzene	13.36	180	1853440	65.34	PPB	99
103)	1,2,4-Trichlorobenzene	14.00	180	1775663	69.72	PPB	100
104)	Hexachlorobutadiene	14.12	225	831925	62.01	PPB	98
105)	Naphthalene	14.25	128	3255800	84.31	PPB	100
106)	1,2,3-Trichlorobenzene	14.49	180	1668687	70.61	PPB	99

(#) = qualifier out of range (m) = manual integration
1108F014.D 110818MS27_8260.M Fri Nov 09 09:23:36 2018 Page 3

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F014.D Vial: 11
Acq On : 8 Nov 2018 3:44 pm Operator: LM
Sample : ICAL 60 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F014.D

(79) Styrene (T)

10.35min 73.85PPB

response 1954055

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	202.92
78.00	85.00	82.80
0.00	0.00	0.00

Manual Integration:

Before

LM

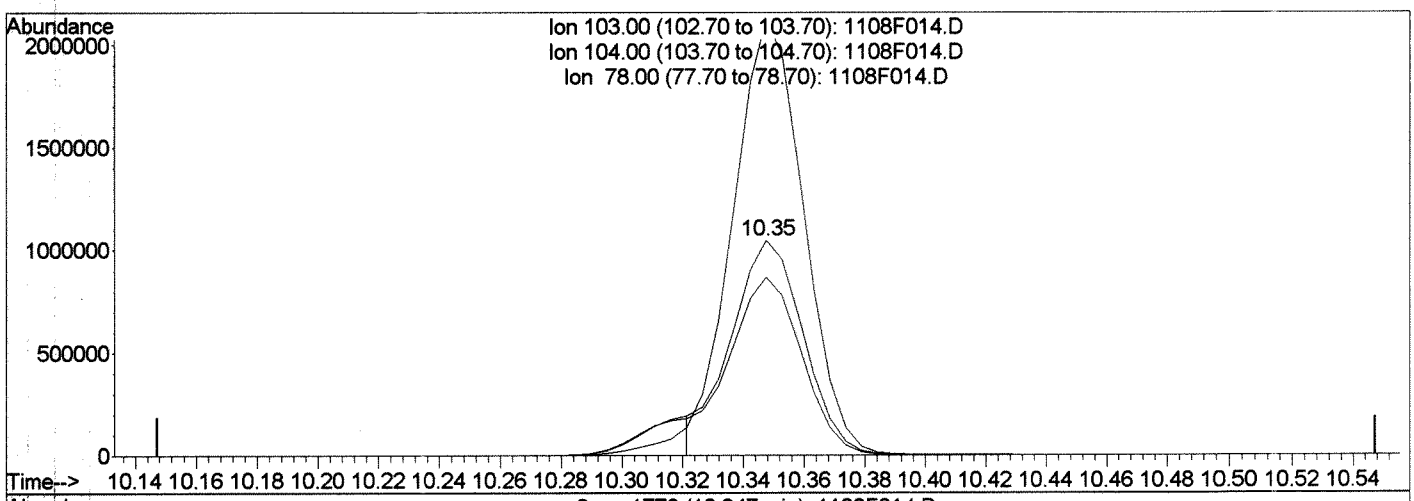
11/09/18

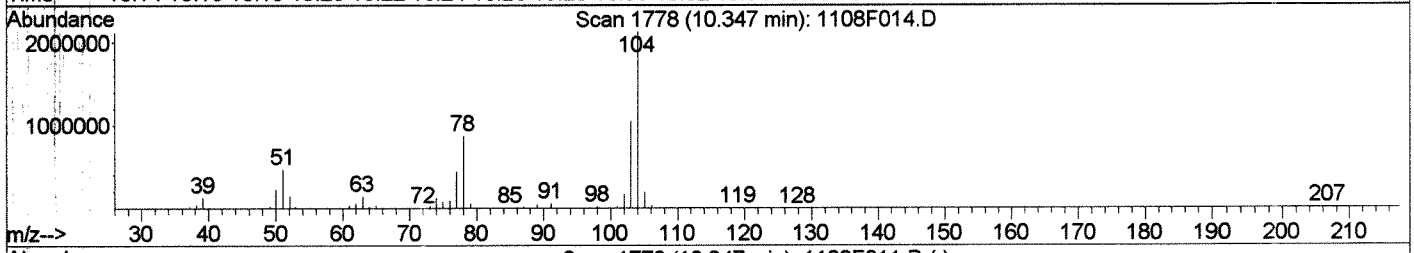
1108F014.D 110818MS27_8260.M Fri Nov 09 09:19:41 2018

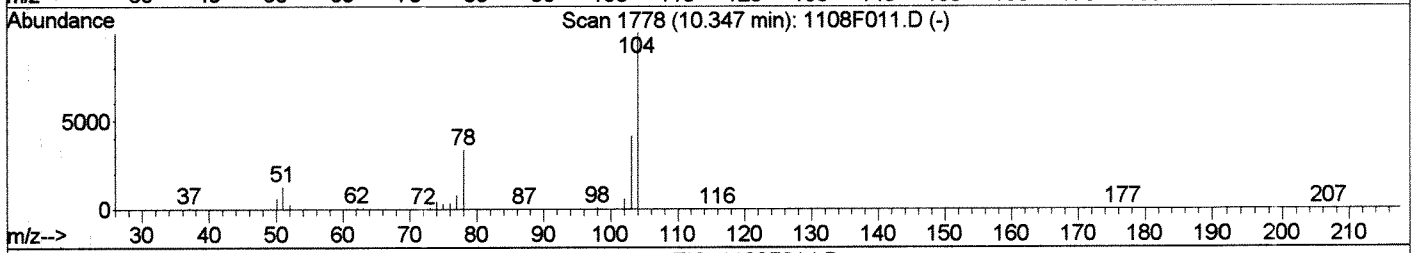
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F014.D Vial: 11
Acq On : 8 Nov 2018 3:44 pm Operator: LM
Sample : ICAL 60 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:19 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F014.D

(79) Styrene (T)

10.35min 65.45PPB m

response 1731790

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	202.92
78.00	85.00	82.82
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

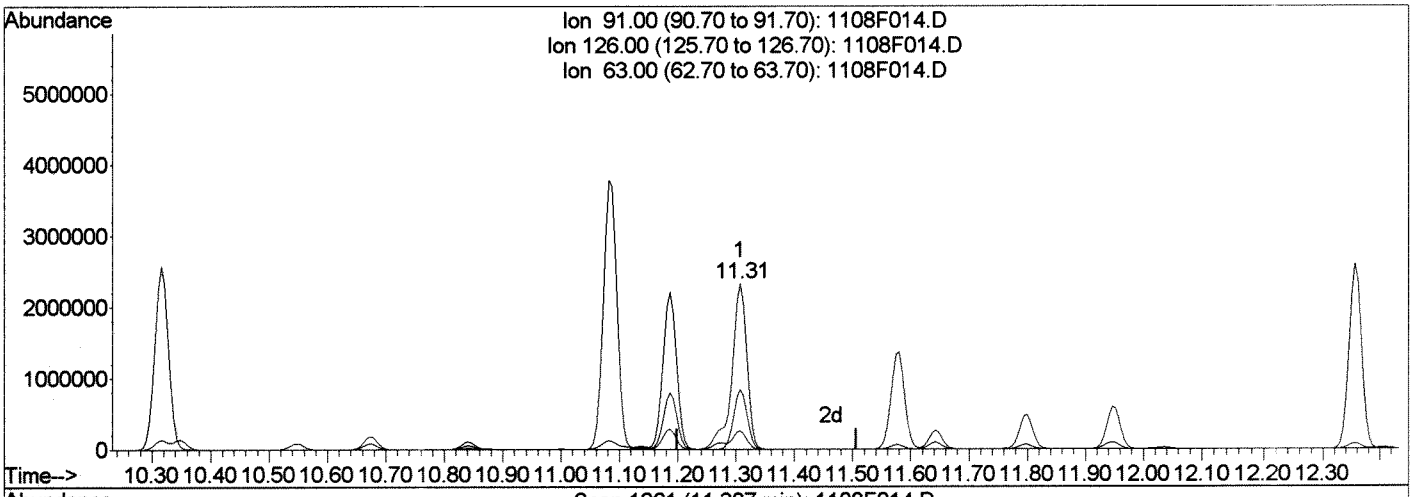
11/09/18

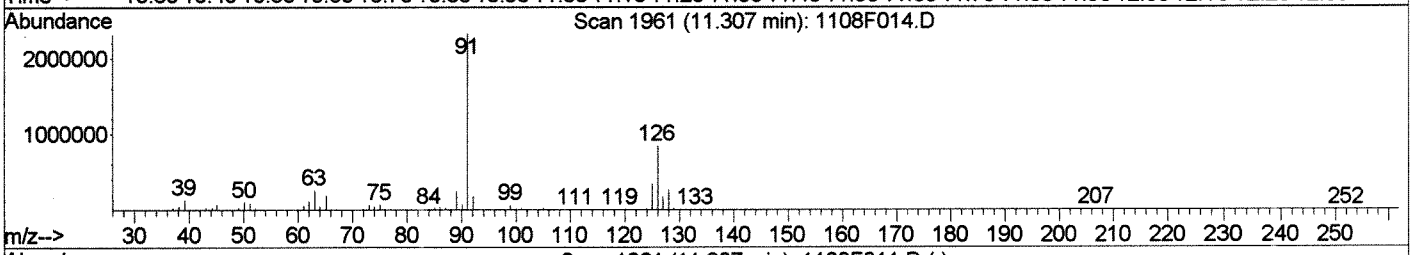
1108F014.D 110818MS27_8260.M Fri Nov 09 09:19:50 2018

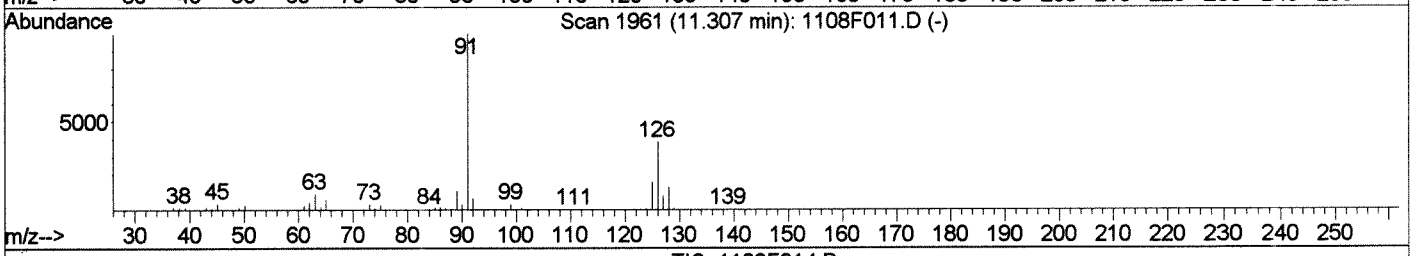
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F014.D Vial: 11
Acq On : 8 Nov 2018 3:44 pm Operator: LM
Sample : ICAL 60 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:19 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F014.D

(92) 4-Chlorotoluene (T)

11.31min 68.82PPB

response 4181622

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	36.12
63.00	11.20	11.18
0.00	0.00	0.00

Manual Integration:

Before LM

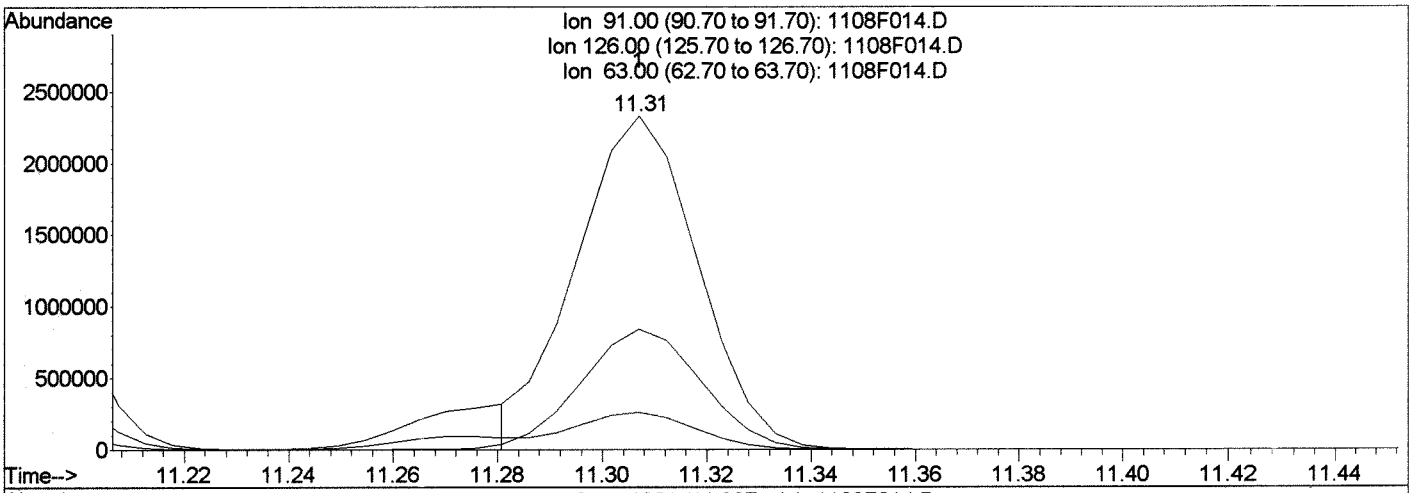
11/09/18

1108F014.D 110818MS27_8260.M Fri Nov 09 09:22:16 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F014.D Vial: 11
Acq On : 8 Nov 2018 3:44 pm Operator: LM
Sample : ICAL 60 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:22 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F014.D

(92) 4-Chlorotoluene (T)

11.31min 61.90PPB m

response 3761550

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	36.11
63.00	11.20	11.19
0.00	0.00	0.00

Manual Integration:

After

Shoulder

11/09/18

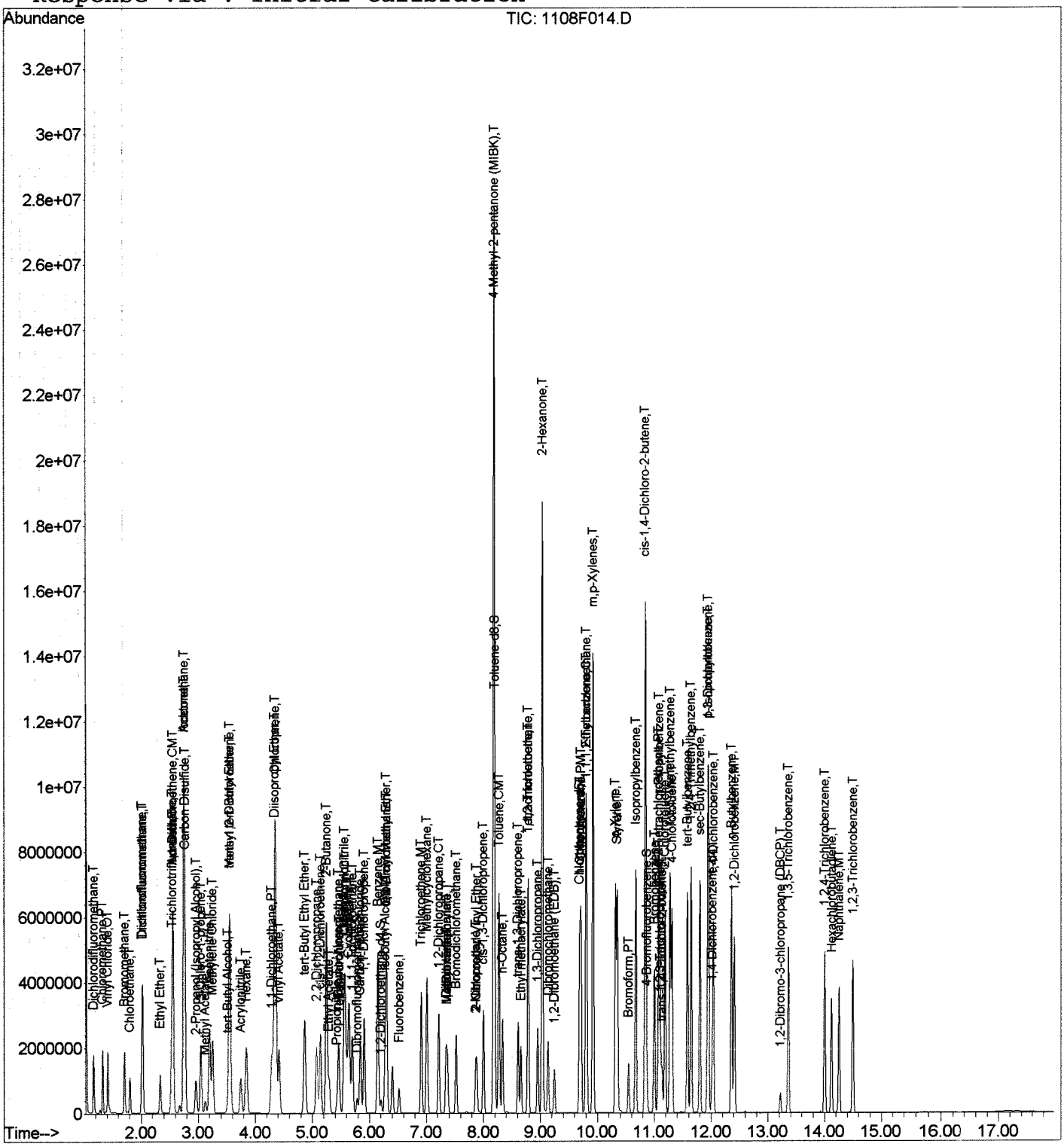
LM

1108F014.D 110818MS27_8260.M Fri Nov 09 09:22:25 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F014.D Vial: 11
Acq On : 8 Nov 2018 3:44 pm Operator: LM
Sample : ICAL 60 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:22 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Data File : J:\MS27\DATA\110818\1108F015.D Vial: 12
Acq On : 8 Nov 2018 4:06 pm Operator: LM
Sample : ICAL 80 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:38 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

LM 11-17-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.52	96	720205	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	287030	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	264572	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.79	113	360480	18.97	PPB	0.00
Spiked Amount 10.000			Recovery =	189.70%		
46) 1,2-Dichloroethane-d4	6.21	65	353575	18.81	PPB	0.00
Spiked Amount 10.000			Recovery =	188.10%		
61) Toluene-d8	8.20	98	1265395	18.49	PPB	0.00
Spiked Amount 10.000			Recovery =	184.90%		
83) 4-Bromofluorobenzene	10.87	95	459334	18.23	PPB	0.00
Spiked Amount 10.000			Recovery =	182.30%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.17	85	1568137	73.36	PPB	97
3) Chloromethane	1.32	50	1830675	68.37	PPB	97
4) Vinyl Chloride	1.41	62	1869453	75.83	PPB	97
5) Bromomethane	1.71	96	1235142	72.93	PPB	98
6) Chloroethane	1.81	64	1058187	75.23	PPB	99
7) Dichlorofluoromethane	2.03	67	2568960	75.15	PPB	99
8) Trichlorofluoromethane	2.01	101	2363045	74.82	PPB	99
9) Ethyl Ether	2.34	59	837821	79.08	PPB	97
10) Acrolein	2.56	56	3706307	1479.17	PPB	100
11) Trichlorotrifluoroethane	2.54	151	1107113	78.22	PPB	98
12) 1,1-Dichloroethene	2.57	96	1390618	77.39	PPB	96
13) Acetone	2.75	43	5556218	1978.40	PPB	99
14) Iodomethane	2.76	142	9565114	328.77	PPB	100
15) Carbon Disulfide	2.77	76	4088498	77.53	PPB	99
16) 2-Propanol (Isopropyl Alco	2.96	45	1779655	4046.14	PPB	97
17) 3-Chloro-1-propene	3.05	76	785435	77.05	PPB	99
18) Methyl Acetate	3.12	43	673753	77.19	PPB	98
19) Acetonitrile	3.20	40	2150944	3078.63	PPB	98
20) Methylene Chloride	3.25	84	1567662	74.82	PPB	98
21) tert-Butyl Alcohol	3.52	59	406523	416.99	PPB	97
22) Acrylonitrile	3.75	53	1384514	298.60	PPB	95
23) Methyl tert-Butyl Ether	3.55	73	6640326	157.92	PPB	99
24) trans-1,2-Dichloroethene	3.55	96	1537494	76.55	PPB	97
25) Hexane	3.85	57	1739361	74.60	PPB	99
26) Diisopropyl Ether	4.33	45	4687270	80.27	PPB	99
27) 1,1-Dichloroethane	4.29	63	2763579	75.95	PPB	99
28) Vinyl Acetate	4.42	86	509272	162.85	PPB #	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F015.D Vial: 12
Acq On : 8 Nov 2018 4:06 pm Operator: LM
Sample : ICAL 80 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:38 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
29)	Chloroprene	4.35	53	7547779	325.79	PPB		98
30)	tert-Butyl Ethyl Ether	4.86	59	3965058	84.63	PPB		99
31)	2,2-Dichloropropane	5.08	77	1986491	77.81	PPB		99
32)	cis-1,2-Dichloroethene	5.15	96	1719540	79.17	PPB		98
33)	2-Butanone	5.25	72	2706515	2139.39	PPB		97
34)	Ethyl Acetate	5.29	61	274284	165.94	PPB		97
35)	Propionitrile	5.43	54	508667	315.45	PPB		99
36)	Methacrylonitrile	5.56	67	1773735	336.17	PPB		98
37)	Bromochloromethane	5.46	128	851587	75.66	PPB		97
38)	Tetrahydrofuran	5.48	71	106568	83.60	PPB		95
39)	Chloroform	5.58	83	2758009	76.59	PPB		98
40)	Cyclohexane	5.64	56	2805905	83.29	PPB		100
41)	1,1,1-Trichloroethane	5.70	97	2286773	77.68	PPB		99
43)	Carbon Tetrachloride	5.84	117	2096307	80.68	PPB		99
44)	1,1-Dichloropropene	5.91	75	2111236	83.14	PPB		99
45)	Isobutyl Alcohol	6.27	42	832061	3426.81	PPB		93
47)	Benzene	6.15	78	6250102	79.33	PPB		99
48)	1,2-Dichloroethane	6.29	62	1773314	73.78	PPB		100
49)	tert-Amyl Methyl Ether	6.30	55	1062931	74.19	PPB	#	66
50)	Trichloroethene	6.91	95	1639775	78.62	PPB		98
51)	Methylcyclohexane	7.01	83	2366192	91.84	PPB		98
52)	1,2-Dichloropropane	7.22	63	1664904	76.23	PPB		99
53)	Dibromomethane	7.34	93	907517	75.51	PPB		98
54)	Methyl methacrylate	7.37	69	735354	92.93	PPB		96
55)	1,4-Dioxane	7.37	88	278768	3614.80	PPB		92
56)	Bromodichloromethane	7.52	83	2105168	76.15	PPB		99
57)	2-Nitropropane	7.87	41	1118662	416.14	PPB		89
58)	2-Chloroethyl Vinyl Ether	7.88	63	750558	97.64	PPB		98
59)	cis-1,3-Dichloropropene	8.00	75	2510456	86.01	PPB		98
60)	4-Methyl-2-pentanone (MIBK	8.18	58	9286753	2119.19	PPB	#	58
62)	Toluene	8.27	92	3931304	79.97	PPB		98
64)	n-Octane	8.33	85	814326	80.22	PPB		99
65)	trans-1,3-Dichloropropene	8.61	75	2073925	84.42	PPB		99
66)	Ethyl methacrylate	8.66	69	1462649	94.75	PPB		98
67)	1,1,2-Trichloroethane	8.78	83	1105500	77.89	PPB		95
68)	Tetrachloroethene	8.78	164	1423479	80.53	PPB		97
69)	2-Hexanone	9.03	57	2865496	2217.60	PPB	#	81
70)	1,3-Dichloropropane	8.95	76	2102066	78.18	PPB		99
71)	Dibromochloromethane	9.14	129	1622693	79.44	PPB		99
72)	1,2-Dibromoethane (EDB)	9.25	107	1218637	78.55	PPB		98
73)	1-Chlorohexane	9.69	91	1871767	93.32	PPB		90

(#) = qualifier out of range (m) = manual integration
1108F015.D 110818MS27_8260.M Fri Nov 09 09:23:37 2018 Page 2

Data File : J:\MS27\DATA\110818\1108F015.D Vial: 12
Acq On : 8 Nov 2018 4:06 pm Operator: LM
Sample : ICAL 80 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 08 17:50:38 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

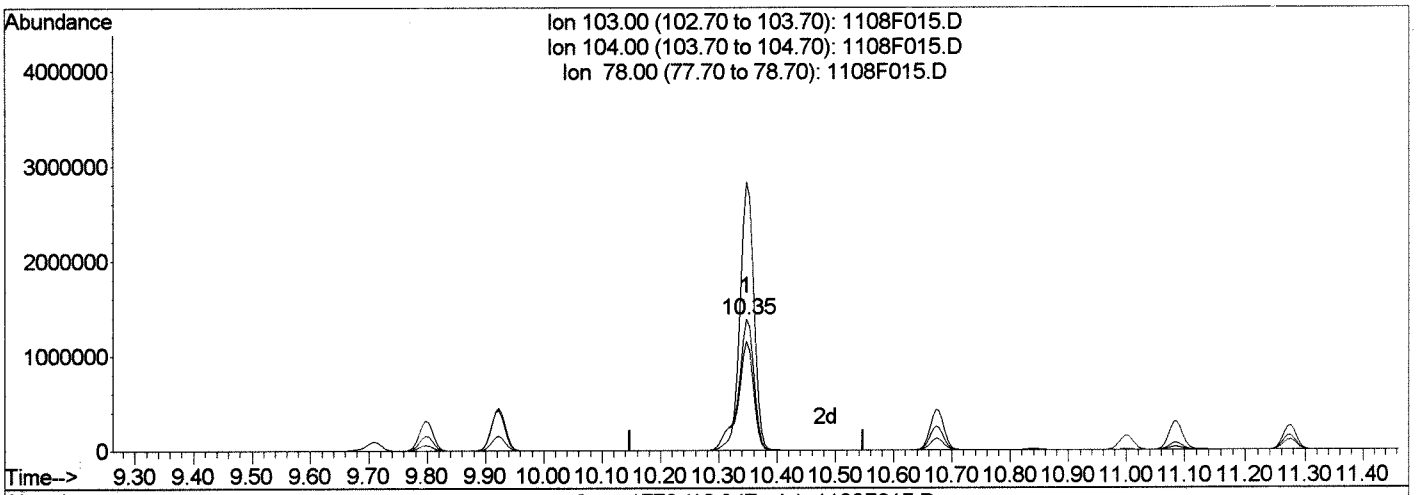
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	9.71	112	4472731	79.14	PPB	97
75)	Ethylbenzene	9.80	106	2339976	84.56	PPB	99
76)	1,1,1,2-Tetrachloroethane	9.81	131	1596462	78.14	PPB	98
77)	m,p-Xylenes	9.92	106	5722982	167.22	PPB	100
78)	o-Xylene	10.32	106	2692565	85.27	PPB	98
79)	Styrene	10.35	103	2313936m	85.64	PPB	
80)	Bromoform	10.55	173	1012464	77.71	PPB	98
81)	Isopropylbenzene	10.67	105	6958004	87.23	PPB	99
82)	cis-1,4-Dichloro-2-butene	10.84	89	731958	361.86	PPB	98
85)	1,1,2,2-Tetrachloroethane	11.07	83	1338987	76.33	PPB	97
86)	trans-1,4-Dichloro-2-buten	11.14	53	335695	83.15	PPB	94
87)	Bromobenzene	11.00	156	1871696	79.21	PPB	98
88)	n-Propylbenzene	11.09	91	8171156	86.08	PPB	98
89)	1,2,3-Trichloropropane	11.11	110	372362	77.49	PPB	98
90)	2-Chlorotoluene	11.19	91	4730356	82.70	PPB	99
91)	1,3,5-Trimethylbenzene	11.28	105	5767984	87.04	PPB	97
92)	4-Chlorotoluene	11.31	91	4999337m	79.76	PPB	
93)	tert-Butylbenzene	11.58	119	4826464	89.59	PPB	100
94)	1,2,4-Trimethylbenzene	11.64	105	5837241	88.93	PPB	99
95)	sec-Butylbenzene	11.80	105	7057343	87.06	PPB	98
96)	p-Isopropyltoluene	11.95	119	6002072	90.13	PPB	99
97)	1,3-Dichlorobenzene	11.94	146	3455951	78.54	PPB	100
98)	1,4-Dichlorobenzene	12.04	146	3497674	79.04	PPB	99
99)	n-Butylbenzene	12.36	91	5478256	91.19	PPB	98
100)	1,2-Dichlorobenzene	12.41	146	3238119	78.15	PPB	99
101)	1,2-Dibromo-3-chloropropan	13.22	155	201285	83.63	PPB	93
102)	1,3,5-Trichlorobenzene	13.36	180	2554369	87.30	PPB	99
103)	1,2,4-Trichlorobenzene	14.00	180	2440775	92.91	PPB	99
104)	Hexachlorobutadiene	14.12	225	1137820	82.23	PPB	98
105)	Naphthalene	14.25	128	4496026	112.87	PPB	99
106)	1,2,3-Trichlorobenzene	14.49	180	2255230	92.51	PPB	100

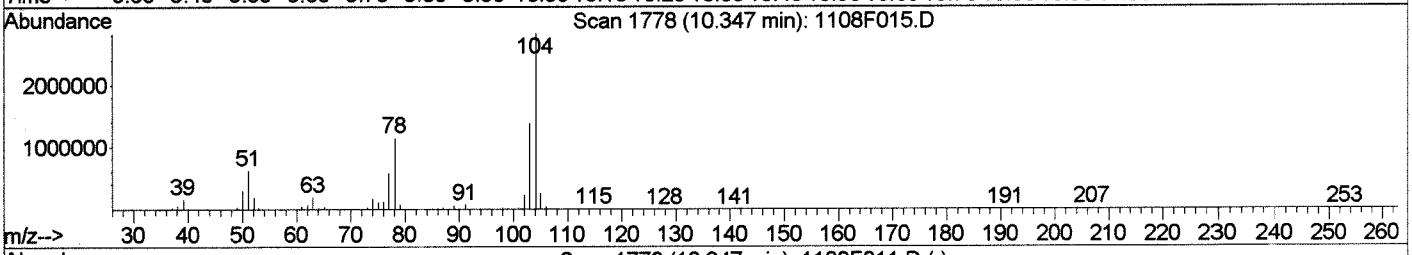
(#) = qualifier out of range (m) = manual integration

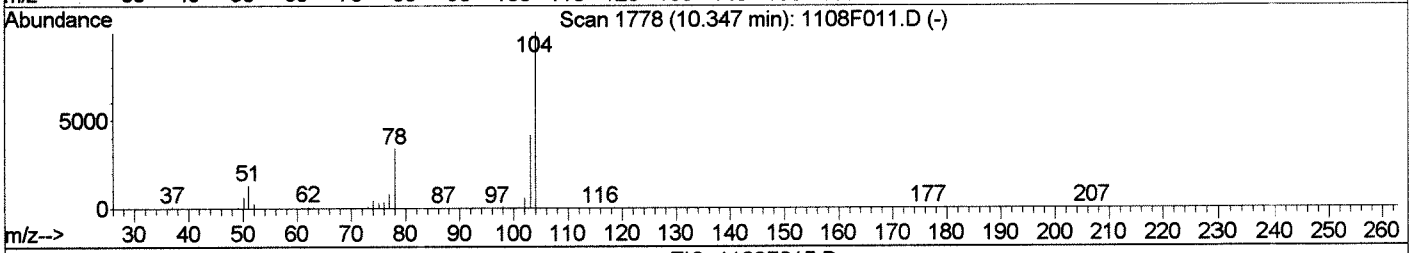
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F015.D Vial: 12
Acq On : 8 Nov 2018 4:06 pm Operator: LM
Sample : ICAL 80 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 8 17:50 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F015.D

(79) Styrene (T)

10.35min 96.58PPB

response 2609520

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	204.85
78.00	85.00	83.16
0.00	0.00	0.00

Manual Integration:

Before LM

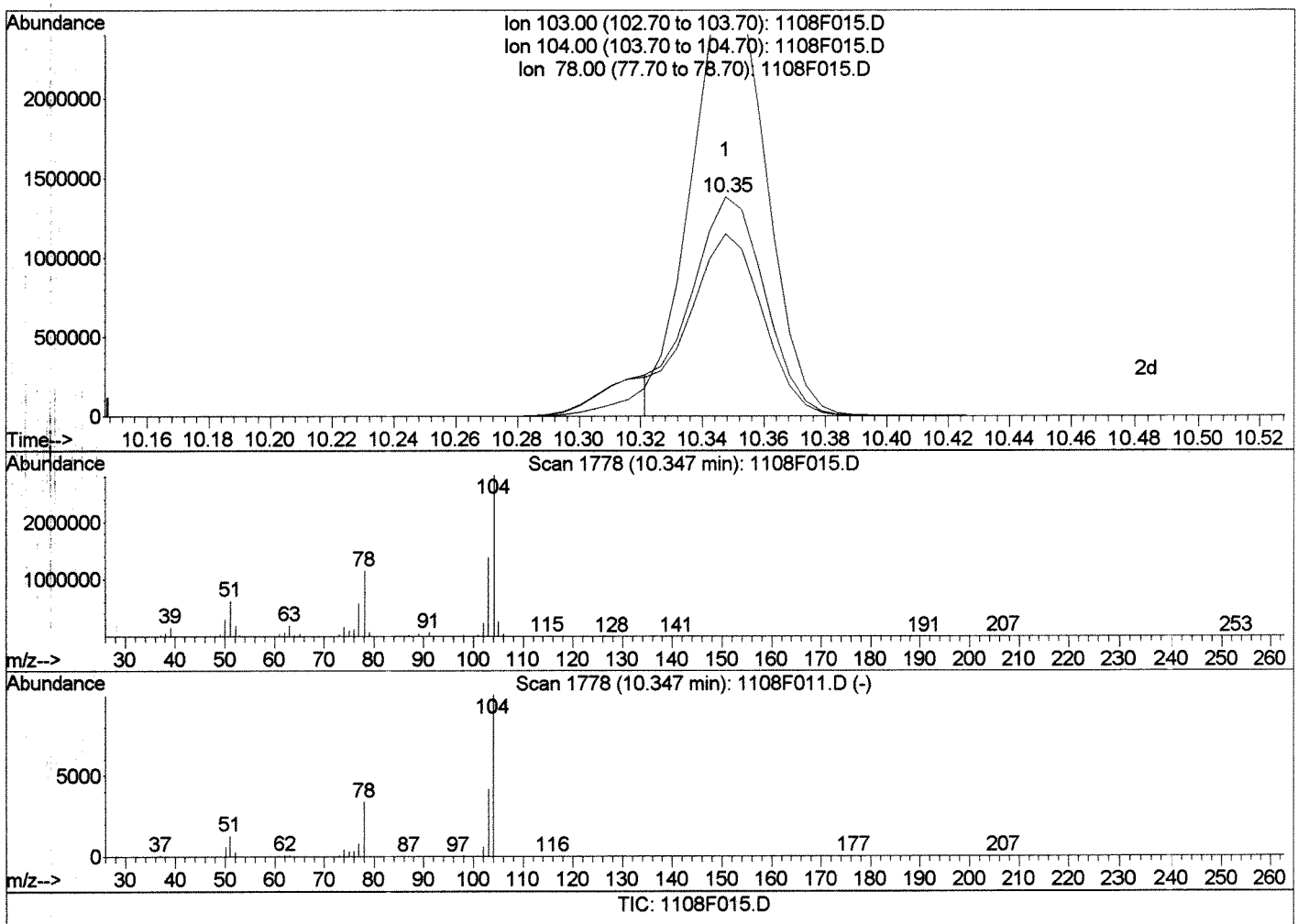
11/09/18

1108F015.D 110818MS27_8260.M Fri Nov 09 09:21:01 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F015.D Vial: 12
Acq On : 8 Nov 2018 4:06 pm Operator: LM
Sample : ICAL 80 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:21 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F015.D

(79) Styrene (T)

10.35min 85.64PPB m

response 2313936

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	204.85
78.00	85.00	83.18
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

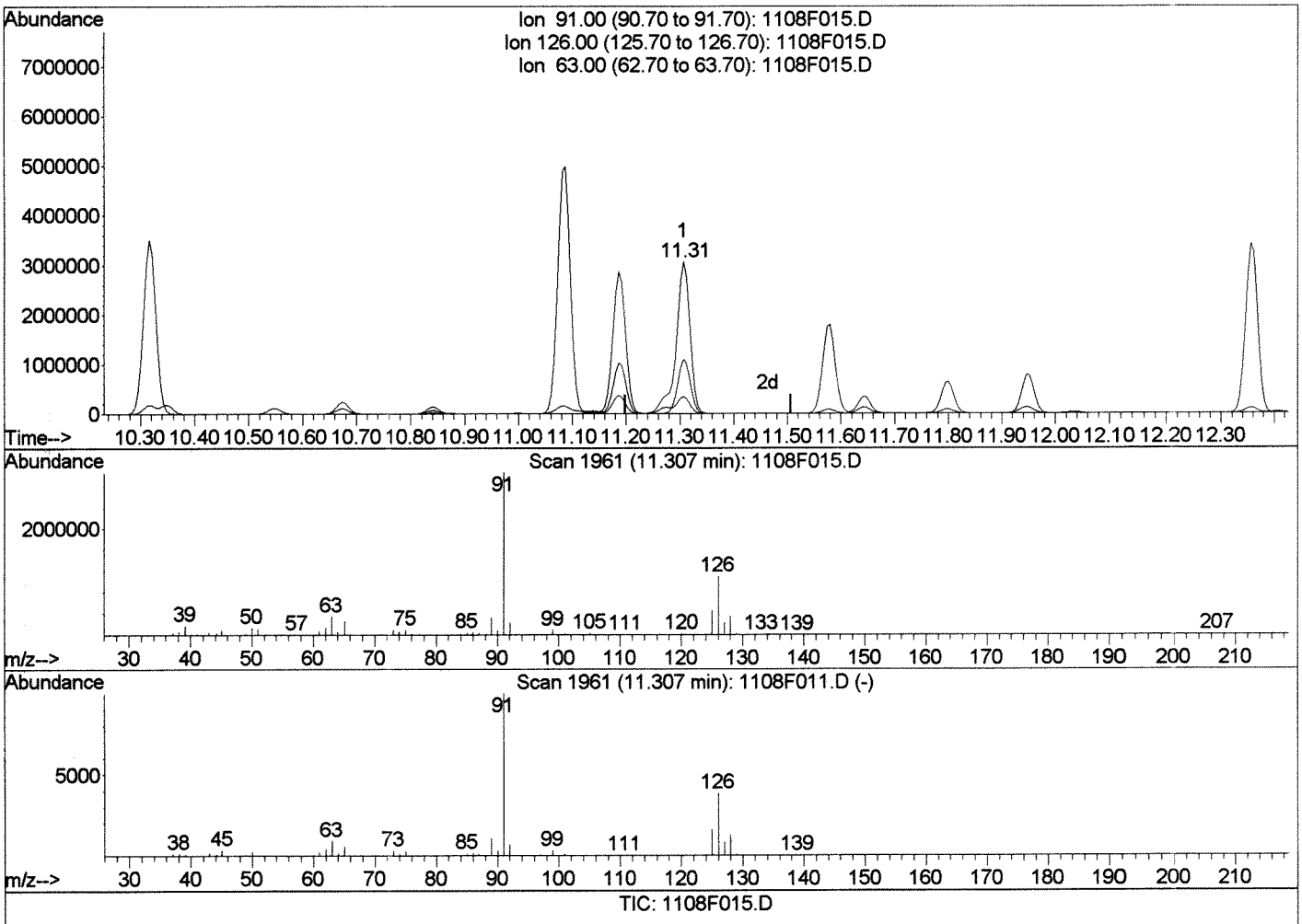
11/09/18

1108F015.D 110818MS27_8260.M Fri Nov 09 09:21:10 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F015.D Vial: 12
Acq On : 8 Nov 2018 4:06 pm Operator: LM
Sample : ICAL 80 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:21 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration



TIC: 1108F015.D

(92) 4-Chlorotoluene (T)

11.31min 88.23PPB

response 5530158

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.73
63.00	11.20	11.21
0.00	0.00	0.00

Manual Integration:

Before LM 11/26/18

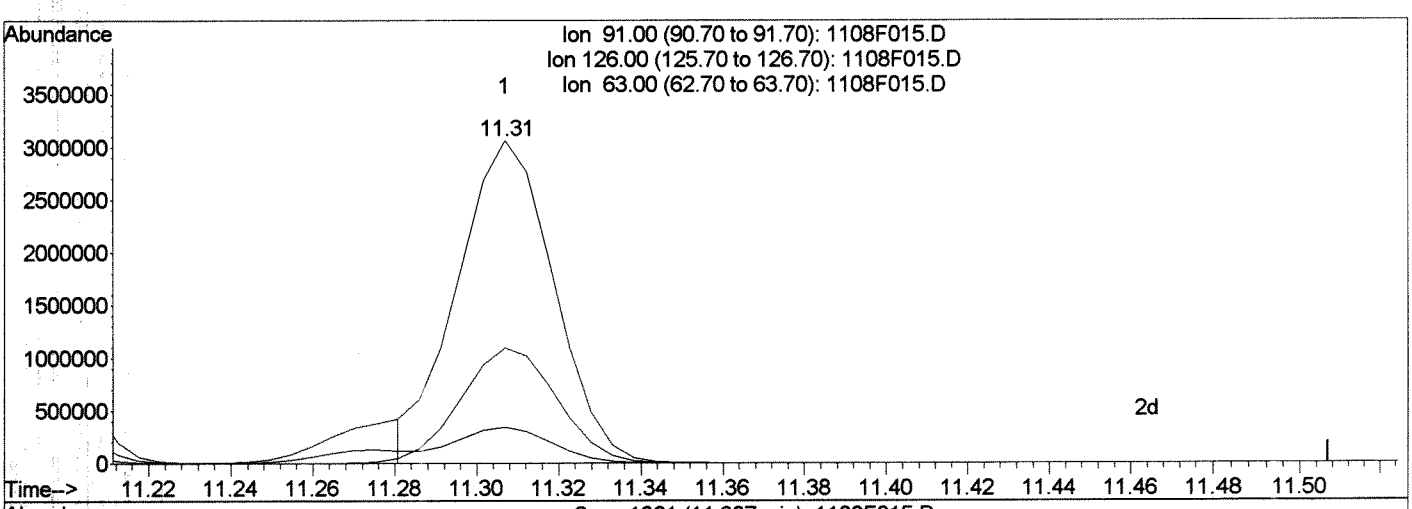
11/09/18

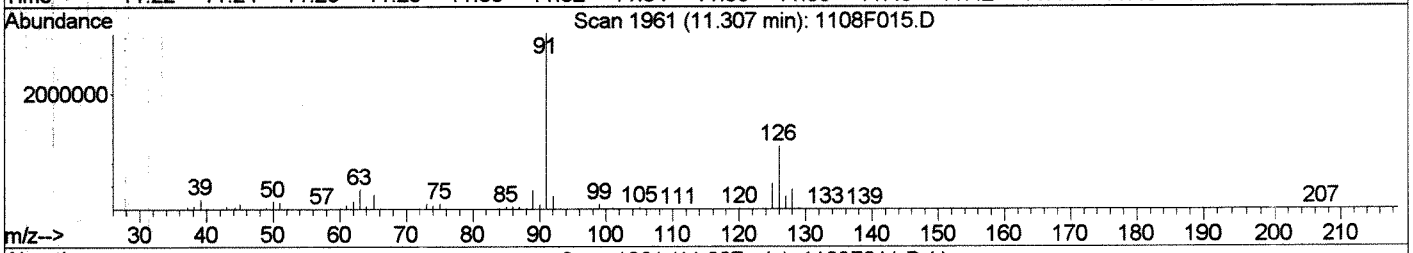
1108F015.D 110818MS27_8260.M Fri Nov 09 09:21:19 2018

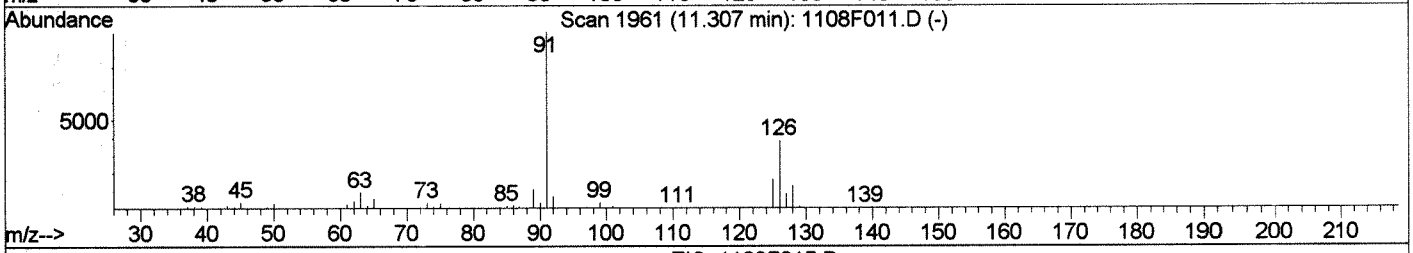
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F015.D Vial: 12
Acq On : 8 Nov 2018 4:06 pm Operator: LM
Sample : ICAL 80 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:21 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Multiple Level Calibration







TIC: 1108F015.D

(92) 4-Chlorotoluene (T)

11.31min 79.76PPB m

response 4999337

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.73
63.00	11.20	11.22
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

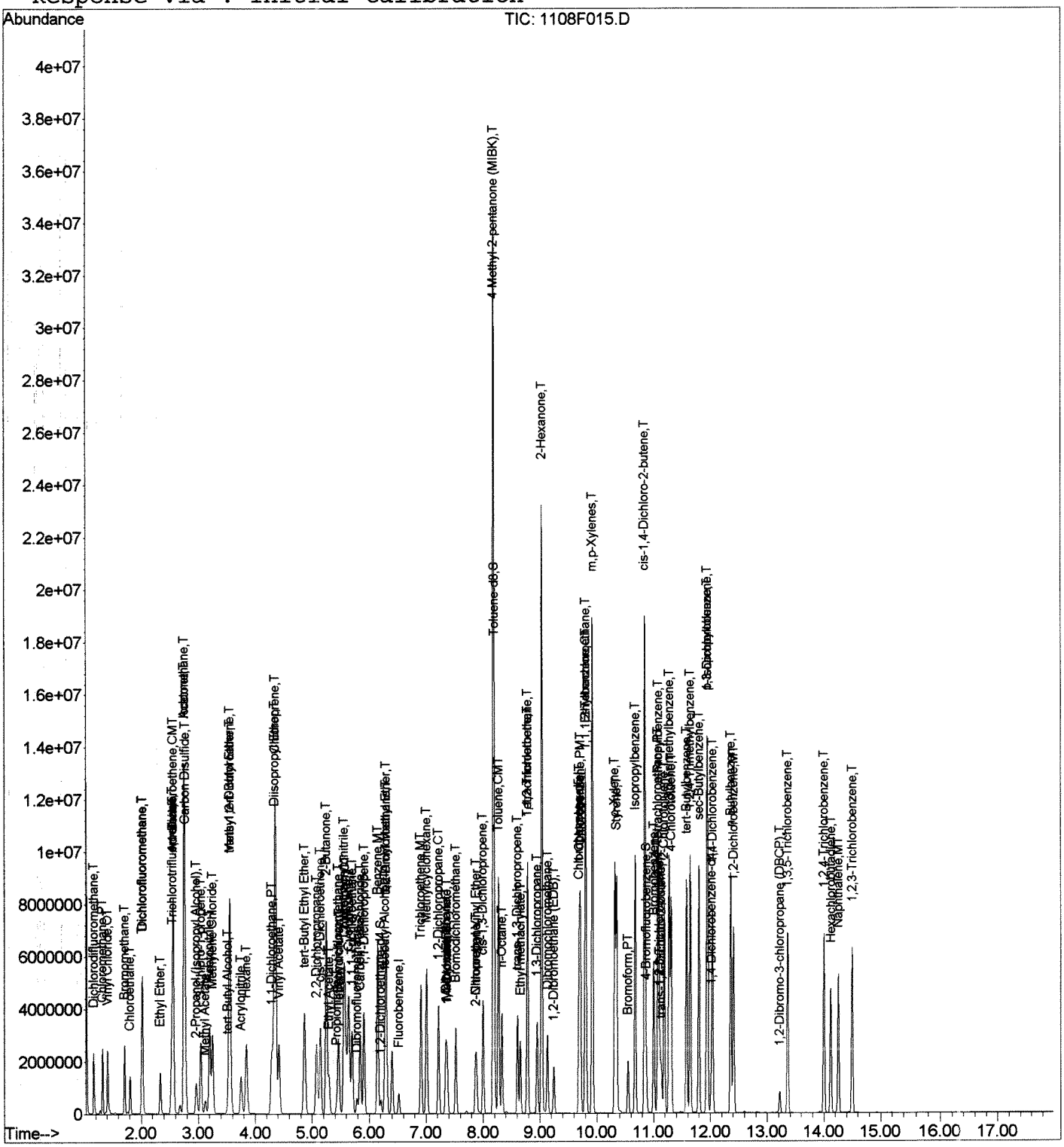
11/09/18

1108F015.D 110818MS27_8260.M Fri Nov 09 09:21:30 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F015.D Vial: 12
Acq On : 8 Nov 2018 4:06 pm Operator: LM
Sample : ICAL 80 PPB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 9:21 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Thu Nov 08 17:50:08 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F019.D Vial: 16
Acq On : 8 Nov 2018 5:34 pm Operator: LM
Sample : 8260 ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 15:00:03 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

LM 11-17-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.52	96	688536	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	272709	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	266101	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.79	113	175683	9.88	PPB	0.00
Spiked Amount 10.000			Recovery =	98.80%		
46) 1,2-Dichloroethane-d4	6.21	65	177522	9.97	PPB	0.00
Spiked Amount 10.000			Recovery =	99.70%		
61) Toluene-d8	8.20	98	594790	9.98	PPB	0.00
Spiked Amount 10.000			Recovery =	99.80%		
83) 4-Bromofluorobenzene	10.87	95	223909	9.97	PPB	0.00
Spiked Amount 10.000			Recovery =	99.70%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.17	85	233634	12.39	PPB	98
3) Chloromethane	1.32	50	248021	9.48	PPB	97
4) Vinyl Chloride	1.41	62	235613	10.80	PPB	95
5) Bromomethane	1.71	96	153780	10.16	PPB	98
6) Chloroethane	1.81	64	134791	9.89	PPB	97
7) Dichlorofluoromethane	2.03	67	314531	9.86	PPB	99
8) Trichlorofluoromethane	2.01	101	264106	9.42	PPB	100
9) Ethyl Ether	2.34	59	118721	10.97	PPB	97
10) Acrolein	2.56	56	233086	95.03	PPB	100
11) Trichlorotrifluoroethane	2.54	151	149088	11.70	PPB	99
12) 1,1-Dichloroethene	2.57	96	168451	9.80	PPB	97
13) Acetone	2.75	43	136968	49.22	PPB	98
14) Iodomethane	2.75	142	749512	29.64	PPB	98
15) Carbon Disulfide	2.77	76	1040981	21.15	PPB	99
16) 2-Propanol (Isopropyl Alco	2.96	45	222026	482.86	PPB	100
17) 3-Chloro-1-propene	3.04	76	272216	27.53	PPB	96
19) Acetonitrile	3.20	40	207082	298.40	PPB	99
20) Methylene Chloride	3.25	84	193997	9.29	PPB	96
21) tert-Butyl Alcohol	3.52	59	88924	86.33	PPB	67
22) Acrylonitrile	3.75	53	183501	40.34	PPB	99
23) Methyl tert-Butyl Ether	3.56	73	417410	10.10	PPB	99
24) trans-1,2-Dichloroethene	3.55	96	184773	9.14	PPB	100
25) Hexane	3.85	57	611089	28.50	PPB	99
26) Diisopropyl Ether	4.33	45	1000928	17.40	PPB	99
27) 1,1-Dichloroethane	4.29	63	336386	9.70	PPB	97
28) Vinyl Acetate	4.42	86	150637	51.59	PPB	98
29) Chloroprene	4.35	53	671305	32.31	PPB	98

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F019.D Vial: 16
Acq On : 8 Nov 2018 5:34 pm Operator: LM
Sample : 8260 ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 15:00:03 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
30)	tert-Butyl Ethyl Ether	4.86	59	821512	18.32	PPB		98
31)	2,2-Dichloropropane	5.08	77	244927	10.55	PPB		99
32)	cis-1,2-Dichloroethene	5.14	96	197542	9.12	PPB		99
33)	2-Butanone	5.25	72	61366	50.18	PPB		96
34)	Ethyl Acetate	5.29	61	46639	29.60	PPB		94
35)	Propionitrile	5.43	54	47679	29.20	PPB		98
36)	Methacrylonitrile	5.56	67	151136	30.11	PPB		95
37)	Bromochloromethane	5.46	128	102624	9.37	PPB		96
38)	Tetrahydrofuran	5.48	71	23282	20.18	PPB		96
39)	Chloroform	5.58	83	330869	9.41	PPB		99
41)	1,1,1-Trichloroethane	5.70	97	268266	10.23	PPB		98
43)	Carbon Tetrachloride	5.84	117	253381	10.84	PPB		98
44)	1,1-Dichloropropene	5.91	75	242971	10.60	PPB		99
45)	Isobutyl Alcohol	6.28	42	101429	415.50	PPB	#	80
47)	Benzene	6.15	78	739528	9.98	PPB		99
48)	1,2-Dichloroethane	6.29	62	215628	9.60	PPB		99
49)	tert-Amyl Methyl Ether	6.30	55	243011	17.72	PPB		93
50)	Trichloroethene	6.91	95	196213	10.17	PPB		97
52)	1,2-Dichloropropane	7.22	63	190094	9.35	PPB		99
53)	Dibromomethane	7.34	93	104040	9.21	PPB		97
54)	Methyl methacrylate	7.37	69	232408	29.82	PPB		97
55)	1,4-Dioxane	7.37	88	25411	339.11	PPB		100
56)	Bromodichloromethane	7.52	83	248108	9.51	PPB		97
57)	2-Nitropropane	7.87	41	79597	29.83	PPB		91
58)	2-Chloroethyl Vinyl Ether	7.88	63	76521	10.34	PPB		95
59)	cis-1,3-Dichloropropene	8.00	75	272012	9.72	PPB		99
60)	4-Methyl-2-pentanone (MIBK	8.18	58	189551	46.13	PPB		93
62)	Toluene	8.27	92	446645	10.36	PPB		100
64)	n-Octane	8.33	85	153152	17.43	PPB		94
65)	trans-1,3-Dichloropropene	8.61	75	221966	9.42	PPB		99
66)	Ethyl methacrylate	8.66	69	466717	31.57	PPB		99
67)	1,1,2-Trichloroethane	8.79	83	130912	9.68	PPB		96
68)	Tetrachloroethene	8.79	164	170671	10.47	PPB		97
69)	2-Hexanone	9.03	57	55202	44.46	PPB		91
70)	1,3-Dichloropropane	8.95	76	248018	9.38	PPB		99
71)	Dibromochloromethane	9.13	129	184899	9.43	PPB		98
72)	1,2-Dibromoethane (EDB)	9.25	107	134888	9.23	PPB		99
73)	1-Chlorohexane	9.69	91	205507	10.38	PPB		97
74)	Chlorobenzene	9.71	112	529257	9.99	PPB		97
75)	Ethylbenzene	9.80	106	259278	10.69	PPB		99
76)	1,1,1,2-Tetrachloroethane	9.81	131	184317	9.46	PPB		98

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\110818\1108F019.D Vial: 16
Acq On : 8 Nov 2018 5:34 pm Operator: LM
Sample : 8260 ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 15:00:03 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

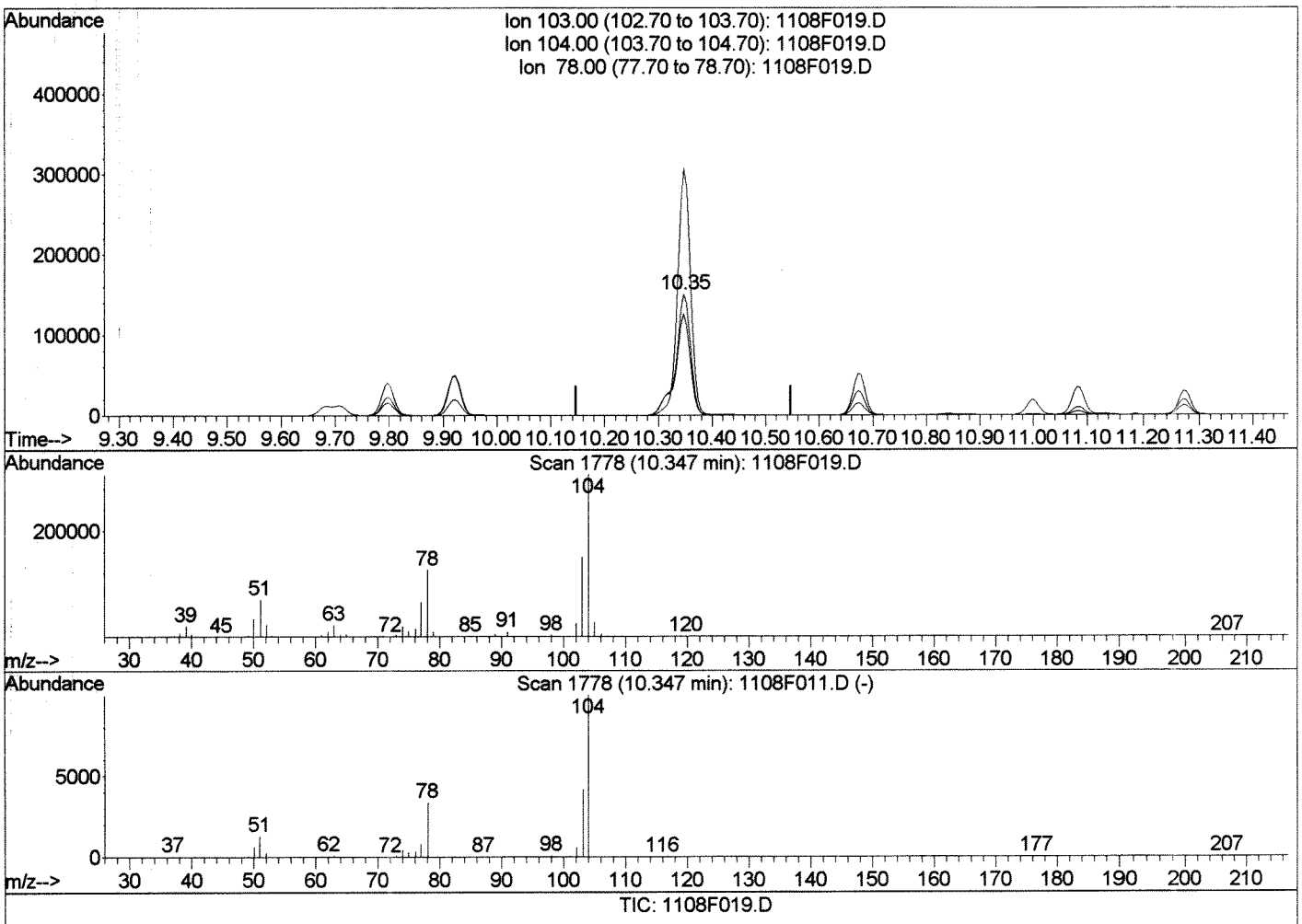
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
77)	m,p-Xylenes	9.92	106	633055	19.03	PPB	100
78)	o-Xylene	10.32	106	287121	10.28	PPB	96
79)	Styrene	10.35	103	253404m	10.27	PPB	
80)	Bromoform	10.55	173	111534	9.13	PPB	99
81)	Isopropylbenzene	10.67	105	751245	10.41	PPB	100
82)	cis-1,4-Dichloro-2-butene	10.84	89	61441	33.07	PPB	98
85)	1,1,2,2-Tetrachloroethane	11.07	83	166528	9.03	PPB	98
86)	trans-1,4-Dichloro-2-buten	11.14	53	119445	27.27	PPB	92
87)	Bromobenzene	11.00	156	222202	9.61	PPB	97
88)	n-Propylbenzene	11.08	91	928738	10.37	PPB	99
89)	1,2,3-Trichloropropane	11.11	110	46774	9.26	PPB	97
90)	2-Chlorotoluene	11.19	91	578046	10.62	PPB	99
91)	1,3,5-Trimethylbenzene	11.27	105	649793	10.25	PPB	99
92)	4-Chlorotoluene	11.31	91	609378m	10.40	PPB	
93)	tert-Butylbenzene	11.58	119	539829	10.24	PPB	99
94)	1,2,4-Trimethylbenzene	11.64	105	663263	9.40	PPB	100
95)	sec-Butylbenzene	11.80	105	814185	9.54	PPB	99
96)	p-Isopropyltoluene	11.95	119	689726	9.59	PPB	99
97)	1,3-Dichlorobenzene	11.94	146	429219	9.78	PPB	99
98)	1,4-Dichlorobenzene	12.04	146	438205	9.87	PPB	98
99)	n-Butylbenzene	12.36	91	611224	10.58	PPB	99
100)	1,2-Dichlorobenzene	12.41	146	394420	9.53	PPB	99
101)	1,2-Dibromo-3-chloropropan	13.22	155	22949	9.48	PPB	98
102)	1,3,5-Trichlorobenzene	13.36	180	310946	10.31	PPB	99
103)	1,2,4-Trichlorobenzene	14.00	180	263194	9.39	PPB	98
104)	Hexachlorobutadiene	14.12	225	133727	9.41	PPB	98
105)	Naphthalene	14.25	128	398249	9.51	PPB	100
106)	1,2,3-Trichlorobenzene	14.49	180	238200	9.29	PPB	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F019.D Vial: 16
Acq On : 8 Nov 2018 5:34 pm Operator: LM
Sample : 8260 ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 15:00 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Multiple Level Calibration



TIC: 1108F019.D

(79) Styrene (T)

10.35min 11.70PPB

response 288639

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	204.03
78.00	85.00	83.40
0.00	0.00	0.00

Manual Integration:

Before

LM

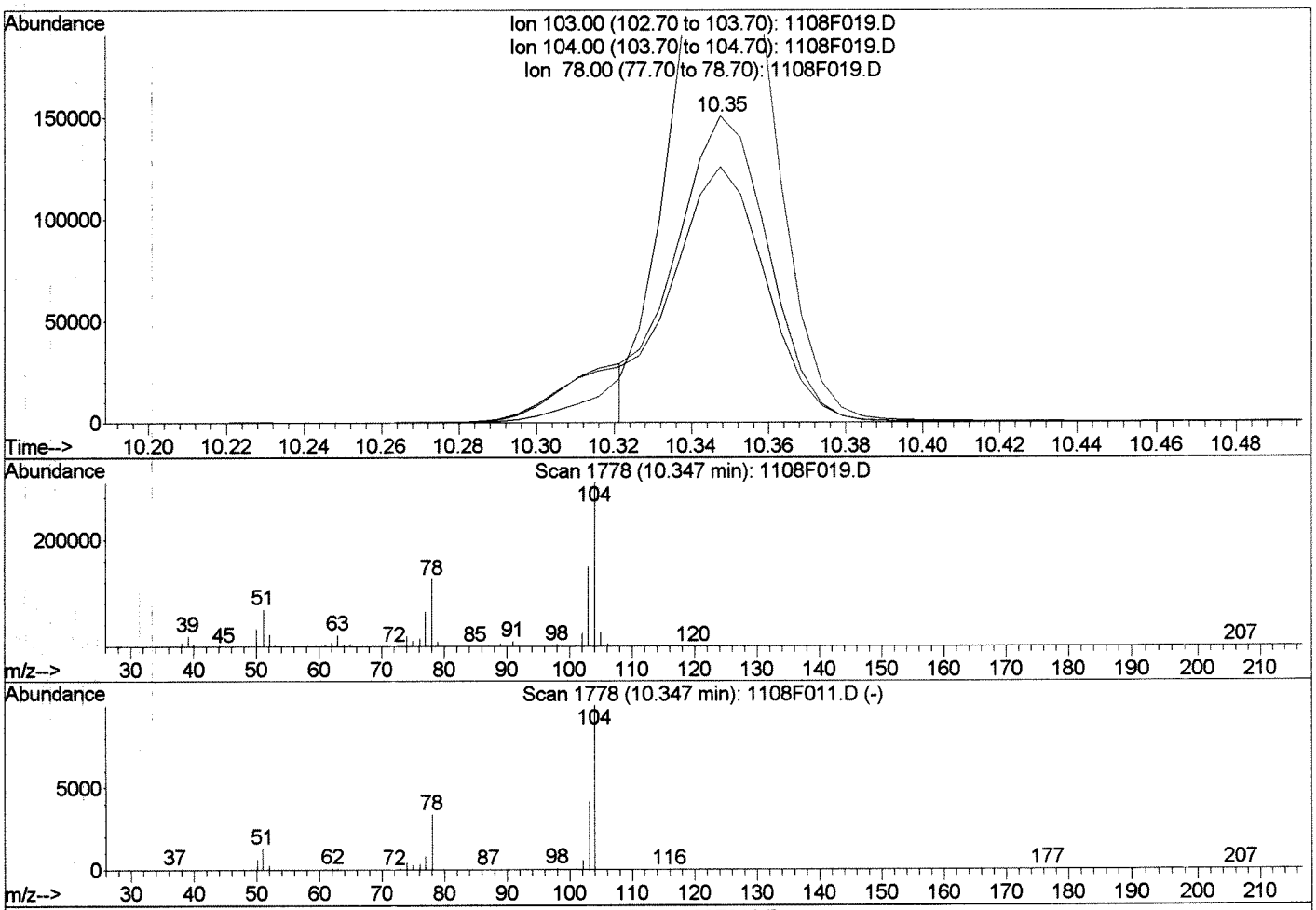
11/17/18

1108F019.D 110818MS27_8260.M Sat Nov 17 15:01:23 2018

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F019.D Vial: 16
Acq On : 8 Nov 2018 5:34 pm Operator: LM
Sample : 8260 ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 15:01 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Multiple Level Calibration



TIC: 1108F019.D

(79) Styrene (T)

10.35min 10.27PPB m

response 253404

Ion	Exp%	Act%
103.00	100	100
104.00	208.80	204.03
78.00	85.00	83.50
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

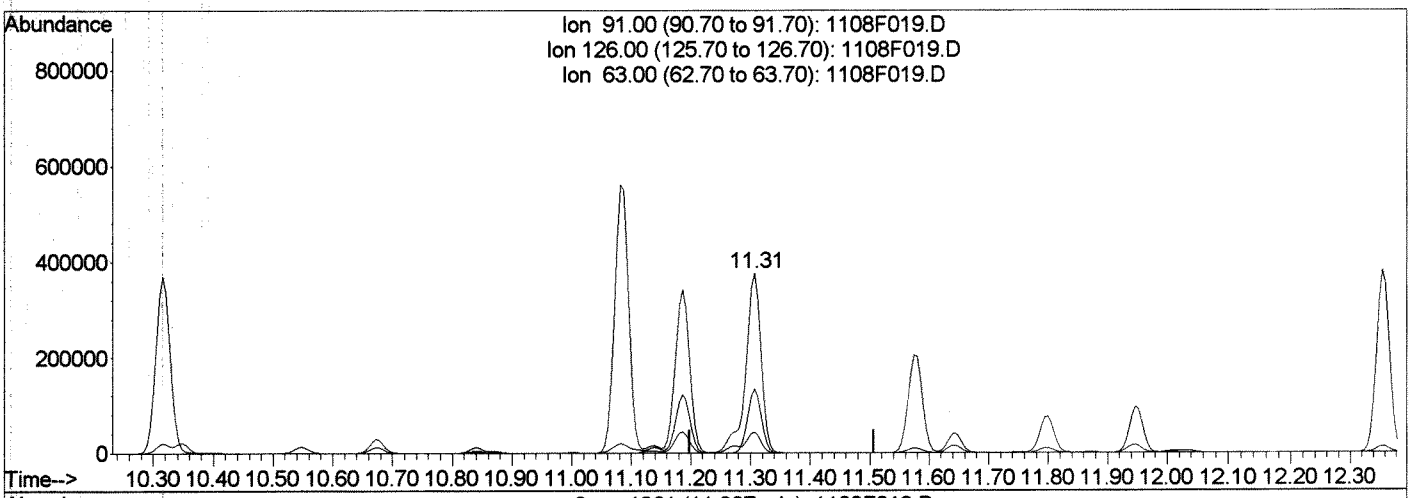
11/17/18

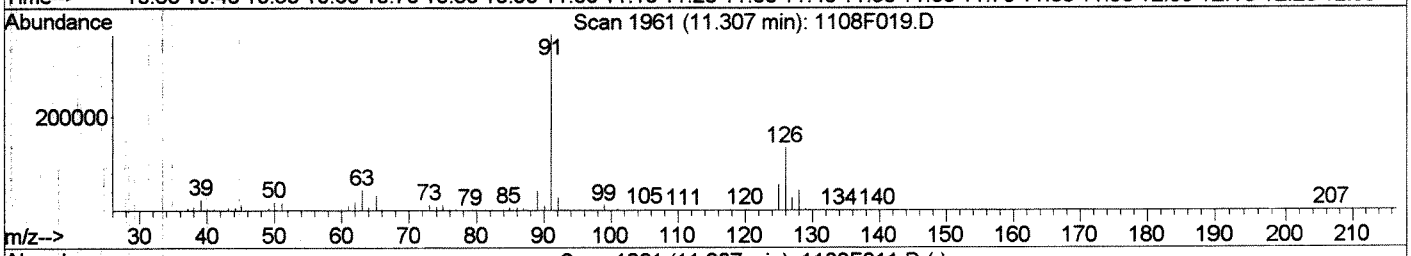
1108F019.D 110818MS27_8260.M Sat Nov 17 15:01:37 2018

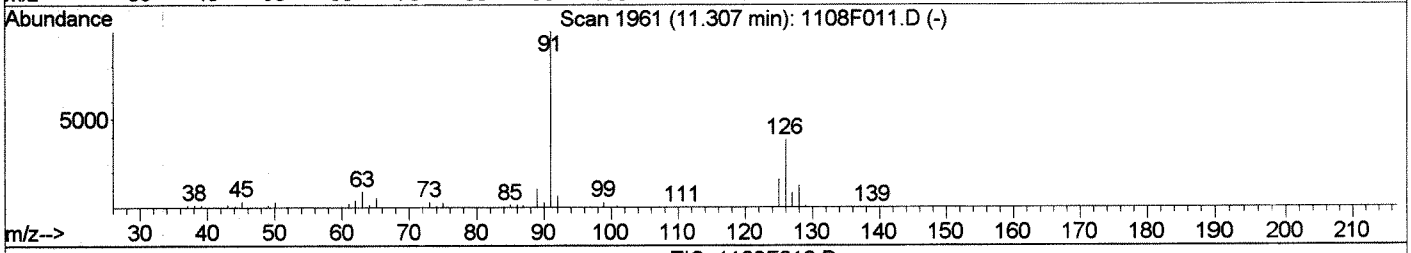
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F019.D Vial: 16
Acq On : 8 Nov 2018 5:34 pm Operator: LM
Sample : 8260 ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 15:01 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Multiple Level Calibration







TIC: 1108F019.D

(92) 4-Chlorotoluene (T)

11.31min 11.50PPB

response 674122

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.50
63.00	11.20	11.53
0.00	0.00	0.00

Manual Integration:

Before LM

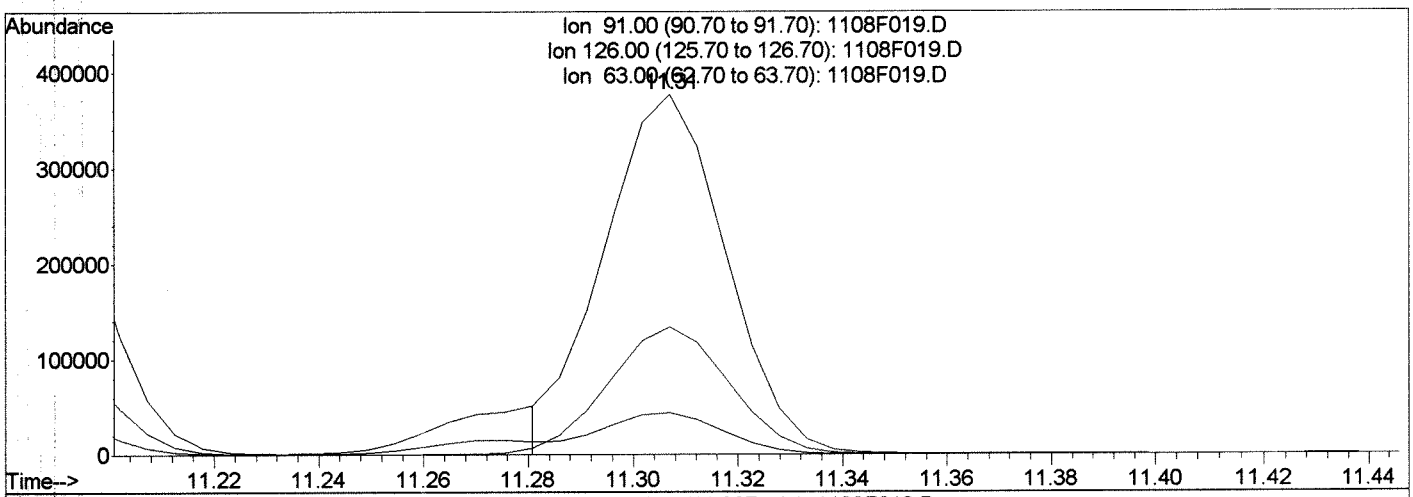
11/17/18

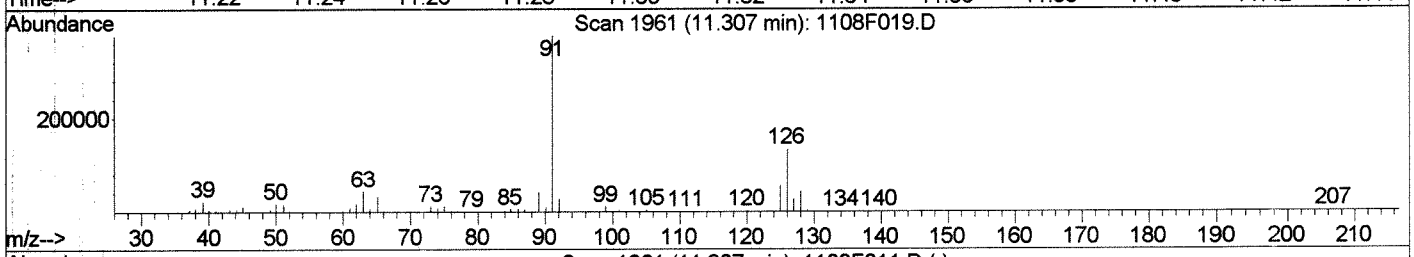
1108F019.D 110818MS27_8260.M Sat Nov 17 15:01:47 2018

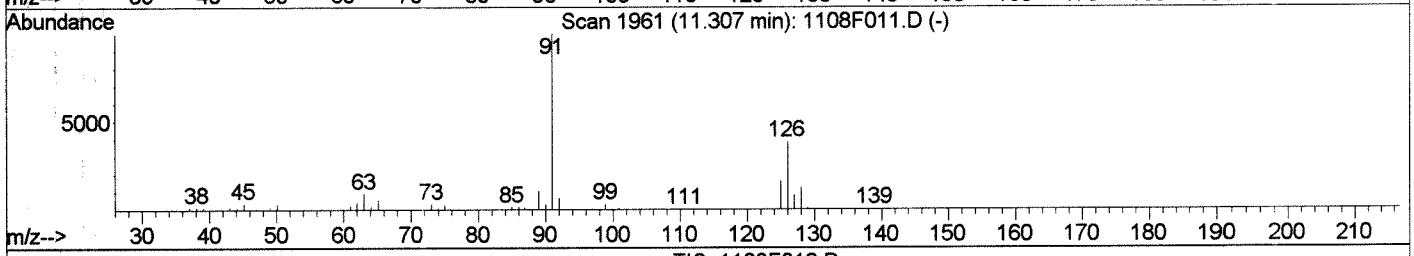
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\110818\1108F019.D Vial: 16
Acq On : 8 Nov 2018 5:34 pm Operator: LM
Sample : 8260 ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 15:01 2018 Quant Results File: temp.res

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Multiple Level Calibration







TIC: 1108F019.D

(92) 4-Chlorotoluene (T)

11.31min 10.40PPB m

response 609378

Ion	Exp%	Act%
91.00	100	100
126.00	35.00	35.46
63.00	11.20	11.52
0.00	0.00	0.00

Manual Integration:

After LM

Shoulder

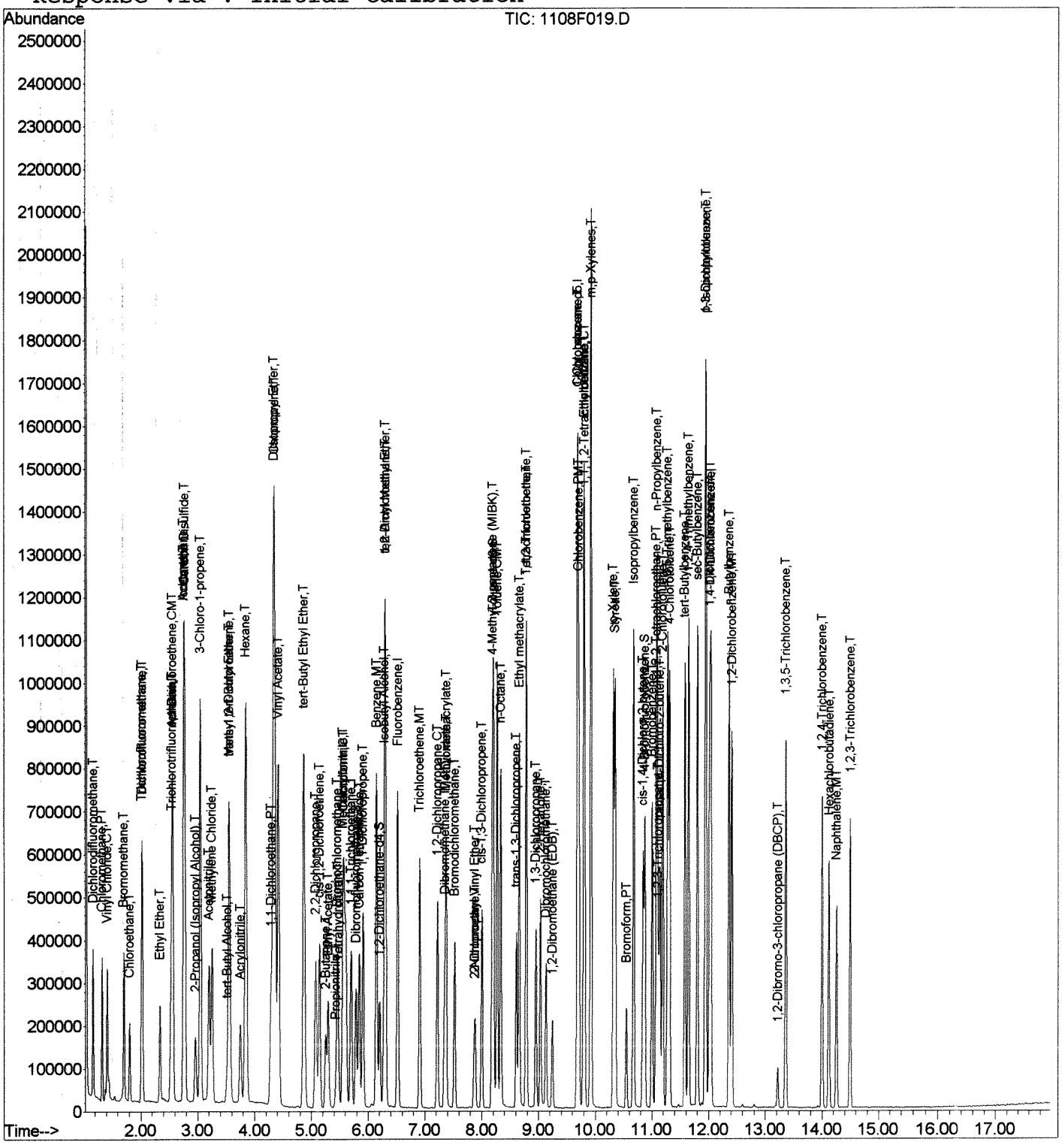
11/17/18 11/17/18

1108F019.D 110818MS27_8260.M Sat Nov 17 15:01:55 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F019.D Vial: 16
Acq On : 8 Nov 2018 5:34 pm Operator: LM
Sample : 8260 ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 15:01 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration



Data File : J:\MS27\DATA\110818\1108F020.D Vial: 17
Acq On : 8 Nov 2018 5:56 pm Operator: LM
Sample : CLP ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 15:00:05 2018 Quant Results File: 110818MS27_8260

Quant Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

LM 11-17-18

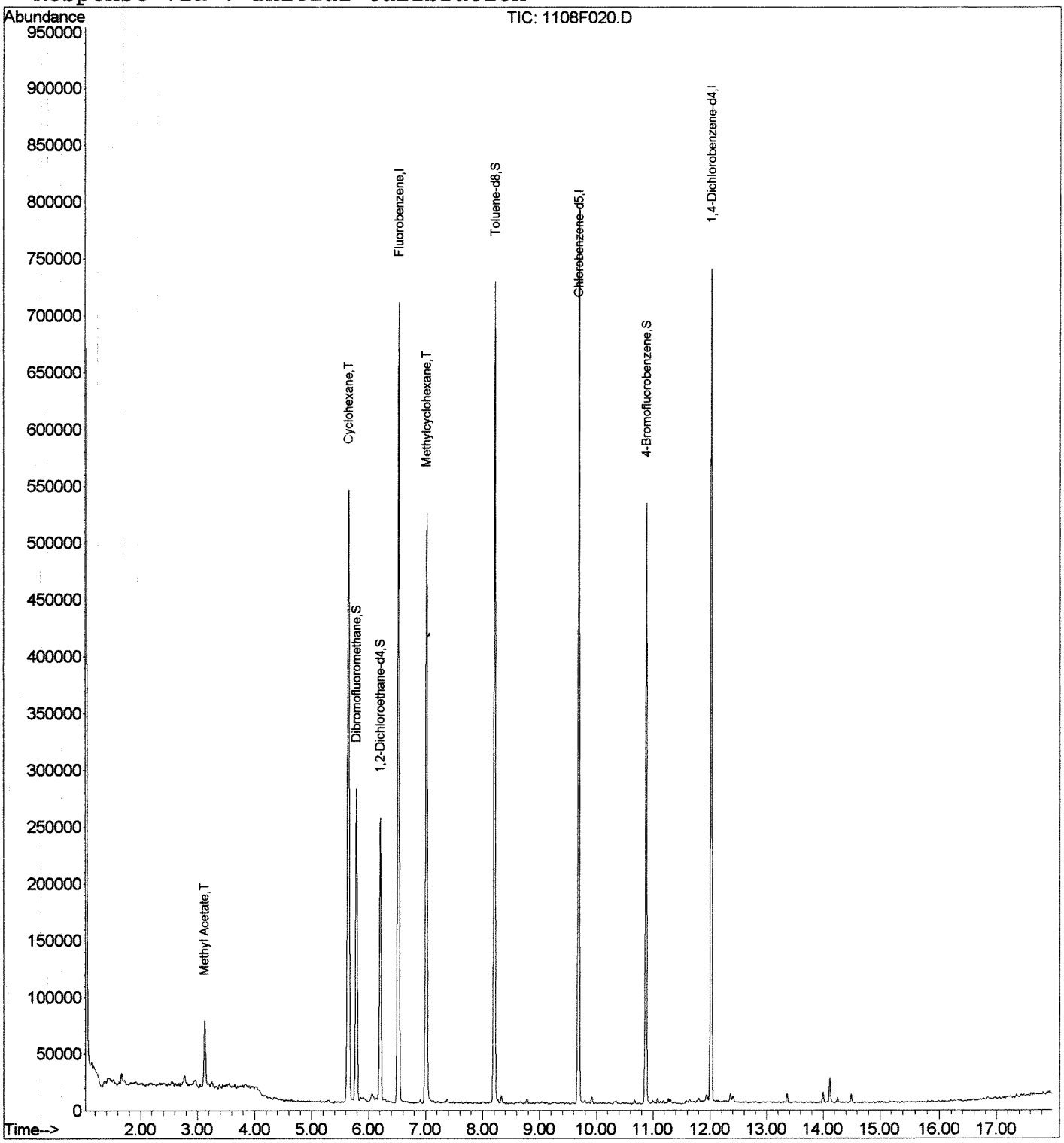
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.52	96	654814	10.00	PPB	0.00
63) Chlorobenzene-d5	9.68	82	246645	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.01	152	209474	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.79	113	173214	10.24	PPB	0.00
Spiked Amount 10.000			Recovery =	102.40%		
46) 1,2-Dichloroethane-d4	6.21	65	175877	10.38	PPB	0.00
Spiked Amount 10.000			Recovery =	103.80%		
61) Toluene-d8	8.20	98	500049	8.82	PPB	0.00
Spiked Amount 10.000			Recovery =	88.20%		
83) 4-Bromofluorobenzene	10.87	95	174722	8.60	PPB	0.00
Spiked Amount 10.000			Recovery =	86.00%		
Target Compounds						Qvalue
18) Methyl Acetate	3.12	43	83438	9.79	PPB	94
40) Cyclohexane	5.64	56	254830	8.87	PPB	97
51) Methylcyclohexane	7.01	83	194075	8.45	PPB	98

(#) = qualifier out of range (m) = manual integration
1108F020.D 110818MS27_8260.M Sat Nov 17 15:04:01 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\110818\1108F020.D Vial: 17
Acq On : 8 Nov 2018 5:56 pm Operator: LM
Sample : CLP ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 17 15:03 2018 Quant Results File: 110818MS27_8

Method : J:\MS27\METHODS\110818MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Nov 17 14:59:24 2018
Response via : Initial Calibration



Semi-Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 327252 **Prep WorkFlow:** OrgExtLP **Status:** Prepped
Team: Semivoa GCMS/TJONES **Prep Method:** EPA 3510C **Prep Date/Time:** 11/28/18 12:42 PM
Number of Copies to make: 3

	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	K1811346-001	Waianae Screening & Grits	.03	8270D/SVO TCLP		Sludge, Solid	100mL	1.00mL	NALGENE BLANK #18, Sample 1 Btl I9
2	KQ1817361-01	K1811346-001 DUP	.03	8270D/SVO TCLP		Solid	100mL	1.00mL	
3	KQ1817361-02	K1811346-001 MS	.03	8270D/SVO TCLP		Solid	100mL	1.00mL	
4	KQ1817361-03	K1811346-001 DMS	.03	8270D/SVO TCLP		Solid	100mL	1.00mL	
5	K1811346-002	Waianae Sludge	.03	8270D/SVO TCLP		Sludge, Solid	100mL	1.00mL	Btl 14
6	KQ1817361-04	K1811346-002 DUP	.03	8270D/SVO TCLP		Solid	100mL	1.00mL	
7	KQ1817361-05	K1811346-002 MS	.03	8270D/SVO TCLP		Solid	100mL	1.00mL	
8	KQ1817361-06	K1811346-002 DMS	.03	8270D/SVO TCLP		Solid	100mL	1.00mL	
9	K1811381-004	SL0153	.14	8270D/SVO TCLP		Soil	100mL	1.00mL	
10	K1811381-005	SL0146	.14	8270D/SVO TCLP		Soil	100mL	1.00mL	fuel smell
11	K1811438-001	SL0547	.16	8270D/SVO TCLP		Soil	100mL	1.00mL	
12	K1811438-002	SL0554	.08	8270D/SVO TCLP		Soil	100mL	1.00mL	
13	KQ1817361-07	LCS		8270D/SVO TCLP		Solid	100mL	1.00mL	
14	KQ1817361-08	MB		8270D/SVO TCLP		Solid	100mL	1.00mL	
15	KQ1817361-09	MB		8270D/SVO TCLP		Solid	100mL	1.00mL	
16	KQ1817361-10	MB		8270D/SVO TCLP		Solid	100mL	1.00mL	

Spiking Solutions

Name: 8270 ALL PURPOSE SURROGATE Inventory ID I89727 Logbook Ref: SVM59-50D Expires On: 03/04/2019

K1811346-001	1,000.00µL	K1811346-002	1,000.00µL	K1811381-004	1,000.00µL	K1811381-005	1,000.00µL	K1811438-001	1,000.00µL	K1811438-002	1,000.00µL
KQ1817361-01	1,000.00µL	KQ1817361-02	1,000.00µL	KQ1817361-03	1,000.00µL	KQ1817361-04	1,000.00µL	KQ1817361-05	1,000.00µL	KQ1817361-06	1,000.00µL
KQ1817361-07	1,000.00µL	KQ1817361-08	1,000.00µL	KQ1817361-09	1,000.00µL	KQ1817361-10	1,000.00µL				

Name: 8270 Matrix Spike Inventory ID 193362 Logbook Ref: SVM59-82H Expires On: 05/02/2019

KQ1817361-02	1,000.00µL	KQ1817361-03	1,000.00µL	KQ1817361-05	1,000.00µL	KQ1817361-06	1,000.00µL	KQ1817361-07	1,000.00µL

Preparation Steps

Step: Extraction
Started: 11/28/18 12:42
Finished: 12/4/18 16:33
By: TJONES
Comments

Step: Final Volume
Started: 12/4/18 16:35
Finished: 12/4/18 16:35
By: ~~TJONES~~ BG
Comments EE BG 12/5/18

Preparation Information Benchsheet

Prep Run#: 327252
Team: Semivoa GCMS/TJONES

Prep WorkFlow: OrgExtLP
Prep Method: EPA 3510C

Status: Prepped
Prep Date/Time: 11/28/18 12:42 PM

Comments: IS: SVM58.88 ~~6~~ F
a 12/19/18

Reviewed By: [signature] Date: 12/6/18

Chain of Custody

Relinquished By: BG	Date: 12/5/18	Extracts Examined	
Received By: [signature]	Date: 12/19/18	Yes	No

12/11

Preparation Information Benchsheet

ep Run#: 327252 **Prep WorkFlow:** OrgExtLP **Status:** Draft
am: Semivoa GCMS/TJONES **Prep Method:** EPA 3510C **Prep Date/Time:** 11/28/18 12:42 PM
Number of Copies to make: 3

	Lab Code	Client ID	B#	√	Method /Test	Matrix	Amt. Ext. (mL)	pH	Int. Vol	Final Vol	Surr Amt	Spike Amt
	~~K1811346-001~~ ①	Waianae Screening & Grits	.03		~~8270D / SVO TCLP~~	~~Sludge, Solid~~	100	7	N/A	1	1 mL	—
	KQ1817361-01	K1811346-001 DUP	.03		8270D / SVO TCLP	Solid	100	7		1		—
	KQ1817361-02	K1811346-001 MS	.03		8270D / SVO TCLP	Solid	100	7		1		1 mL
	KQ1817361-03	K1811346-001 DMS	.03		8270D / SVO TCLP	Solid	100	7		1		1 mL
	~~K1811346-002~~ ②	Waianae Sludge	.03		~~8270D / SVO TCLP~~	~~Sludge, Solid~~	100	~~7~~ 5		1		—
	~~KQ1817361-04~~ ②	K1811346-002 DUP	.03		~~8270D / SVO TCLP~~	~~Solid~~	100	5		1		—
	~~KQ1817361-05~~	~~K1811346-002 MS~~	.03		~~8270D / SVO TCLP~~	~~Solid~~	100	5		1		1 mL
	~~KQ1817361-06~~ ①	~~K1811346-002 DMS~~	.03		~~8270D / SVO TCLP~~	~~Solid~~	100	5		1		1 mL
	K1811381-004	SL0153	.14		8270D / SVO TCLP	Soil	100	6		1		—
0	K1811381-005	SL0146	.14		8270D / SVO TCLP	Soil	100	7		1		—
1	K1811438-001	SL0547	.16		8270D / SVO TCLP	Soil	100	5		1		—
2	K1811438-002	SL0554	.08		8270D / SVO TCLP	Soil	100	7		1		—
3	KQ1817361-07	LCS	—		8270D / SVO TCLP	Solid	100	5		1		1 mL
4	KQ1817361-08	MB Leachate-Sol. 1			8270D / SVO TCLP	Solid	100	4		1		—
5	KQ1817361-09	MB Leachate-Sol. 2			8270D / SVO TCLP	Solid	100	2		1		—
6	KQ1817361-10	MB	—		8270D / SVO TCLP	Solid	100	5		1		—

① Re-extract as per P.C. instructions because of extract losses during finishing. 12/6/18 cw

Comments: ★KD broke and about 100ml of ~~sample~~ BG 12/3/18 extract spilled and was lost BG 12/3/18
② Extract went dry after coming off NEvap when waiting to be vialed, collector rinsed with DCM and put back on NEvap to blow below 1m BG 12/4/18
Surrogate ID: SVM59-50D, 100/150ppm, exp. 3/4/19, 50ul, 4I epp. Spike ID: SVM59-82H, 100ppm, exp. 5/2/19, 50 ul, 4I epp.
Witnessed By: No witness
Analyst: Assisted By:

TCLP Extraction Worksheet

Service Request Number(s): K181 1346, 1381, 1438

If Autofluff sample is used please place an X in this box ☐

Method : TCLP 1311 ☒ SPLP 1312 ☐ Wet Ext. ☐ MEP ☐

Prep Run# : 327052

Note: 1 Blank needed per every 20 extracts.

Sample Number	Teflon Extraction Vessel #	Sample Description (Solid, Liquid, Multiphasic)	Partical Size < 1cm ?	Solution Determination Weight (g)	Initial pH	Aliquot of 1N HCl (mL)	Final pH	Solution To Be Used	Extraction Weight (g)	Extraction Solution Volume (mL)	Post-Extraction pH
K181346-1	19	S	Y	5.093	8.32	3.5	2.26	1	100.42	2000	6.14
2	14			5.194	8.68		2.01	2	100.18		5.14
~~K181381 2~~ K181438-1	9			5.176	9.46		5.34	2	100.55		4.93
~~3~~ 2	1			5.055	9.64		4.11	1	100.08		6.10
K181381 - 4 CCL 11/26	8			5.064	9.37		1.87		100.03		5.22
5	13			5.122	10.04		3.05		100.38		6.20
MB	18	L							—		—
MB	32							2	—		—

CCL 11/27

pH Meter Calibrated at pH4 & pH7 Today? ☒ 11/26/18 11/27/18 pH Meter I.D. KpH-08 Balance I.D. 48, 52 Date Balance Checked: 11/26/18, 11/26/18

Extraction Solution Prep date: 11/26/18, 11/6/18 Tumbler # 4 Thermometer# 664244 Hot Plate Temp °C(50°C): 50

Today's Solution pH: 4.95, 2.87 11/26/18 Extraction Solution I.D. MET-DG-26-D MET-DG-73-I Filter Lot # 162105 HCl I.D. REI-48-A

Extraction Started Time: 15:49 Date: 11/26/18 Disposable Extraction Vessel Lot #: —

Extraction Finished Time: 8:14 Date: 11/27/18

Tumbler Rotational Speed (28 - 32 rpm): 29.7

Room Temperature at the Beginning of Extraction (Temp. Range 21° C - 25°C): 21.75

Analyst: [signature] Date: 11/26/18 Reviewer: [signature] Date: 11/27/18

r:\tcp\misc\diagrams\TCLP Extraction Benchsheet 10-10-171

Additional Prep Information for 8270 TCLP by 3510C

Service Request: K11438 K11346, K11381 Workgroup: 327252

Pre-Prep Information:

DCM (GC²) Lot#: DU514 Glass Wool Lot#: 21317999

Sulfuric Acid Lot#: 7121159 NaOH Lot#: 052476

Sulfate Lot#: 201809059G

pH<2 (Time/Date/Initial): 03:55 / 11-29-18 /RRM

pH>11 (Time/Date/Initial): 05:50 / 11-29-18 /RRM

Batch Start (Time/Date/Initial): 02:50 / 11-29-18 /RRM

Batch Stop (Time/Date/Initial): 07:45 / 11-29-18 /RRM

S-Evap (Time/Date/Initial): 10:14 / 12-3-18 /SM S-Evap Therm. ID: DWB/46

Temp as measured: 74.0 °C Correction factor: 0.0 °C Adjusted temp: 74.0 °C

N-Evap (Time/Date/Initial): 0753 12/4/18 BG N-Evap Therm. ID: X-SUM-010

Temp as measured: 20 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Pipet Lot: 20717645

Extract Storage: —

Date Completed (Time/Date/Initial): 1445 12/4/18 BG/SM

Comments/Observations:

Bench Sheet Review Check List	
☑	Hold Times Met (if no, Reason:)
☐	Prep date, dept, method, product code correct in stealth
☐	Spike Information correct
☐	Weights/Volumes and units correct on raw and final bench sheets
☐	Sample IDs have been checked—Bottle numbers appended if required
☐	Names present for: Started by, Completed by, relinquished by, and witnessed by.
☐	Training has been circled
☐	Extract Storage recorded
☐	Additional Prep Sheet completely filled out (NA or line out Blanks)
☐	All clean-ups have been noted on additional prep sheet
☐	Signed service request with Form V, if applicable, has been attached

Preparation Information Benchsheet

Prep Run#: 328856
Team: Semivoa GCMS/TJONES
Number of Copies to make: 2

Prep WorkFlow: OrgExtLP
Prep Method: EPA 3510C

Status: Prepped
Prep Date/Time: 1/3/18 10:12 AM

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	K1811381-004RE	SL0153	.14	8270D/SVO TCLP		Soil	100mL	1.00mL	
2	KQ1818690-06	K1811381-004 MS	.14	8270D/SVO TCLP		Solid	100mL	1.00mL	
3	KQ1818690-07	K1811381-004 DMS	.14	8270D/SVO TCLP		Solid	100mL	1.00mL	
4	K1811381-005RE	SL0146	.02	8270D/SVO TCLP		Soil	100mL	1.00mL	fuel smell
5	K1811438-001RE	SL0547	.16	8270D/SVO TCLP		Soil	100mL	1.00mL	
6	K1811438-002RE	SL0554	.08	8270D/SVO TCLP		Soil	100mL	1.00mL	
7	KQ1818690-01	LCS		8270D/SVO TCLP		Solid	100mL	1.00mL	
8	KQ1818690-03	MB		8270D/SVO TCLP		Solid	100mL	1.00mL	
9	KQ1818690-04	MB		8270D/SVO TCLP		Solid	100mL	1.00mL	
10	KQ1818690-05	MB		8270D/SVO TCLP		Solid	100mL	1.00mL	

Spiking Solutions

Name: 8270 ALL PURPOSE SURROGATE Inventory ID 189727 Logbook Ref: SVM60-15D Expires On: 06/21/2019

K1811381-004 1,000.00µL K1811381-005 1,000.00µL K1811438-001 1,000.00µL K1811438-002 1,000.00µL KQ1818690-01 1,000.00µL KQ1818690-03 1,000.00µL
KQ1818690-04 1,000.00µL KQ1818690-05 1,000.00µL KQ1818690-06 1,000.00µL KQ1818690-07 1,000.00µL

Name: 8270 Matrix Spike Inventory ID 195768 Logbook Ref: SVM60-14B Expires On: 06/18/2019

KQ1818690-01 1,000.00µL KQ1818690-06 1,000.00µL KQ1818690-07 1,000.00µL

Preparation Steps

Step:	Extraction	Step:	Final Volume
Started:	12/26/18 10:12	Started:	1/7/19 16:14
Finished:	1/3/19 16:52	Finished:	1/7/19 16:14
By:	TJONES	By:	BGREER
Comments		Comments	

Comments: IS: SVM158-88N

Reviewed By: [signature] Date: 1/9/19

Preparation Information Benchsheet

Prep Run#: 328856
Team: Semivoa GCMS/TJONES

Prep WorkFlow: OrgExtLP
Prep Method: EPA 3510C

Status: Prepped
Prep Date/Time: 1/3/18 10:12 AM

Chain of Custody

Relinquished By: BG Date: 1/7/19

Received By: Christine R Coon Date: 9/10/19

Extracts Examined
Yes No

Preparation Information Benchsheet

Prep Run#: 328856
Team: Semivoa GCMS/TJONES
Number of Copies to make: 2

Prep WorkFlow: OrgExtLP
Prep Method: EPA 3510C

[redacted]

Status: Draft
Prep Date/Time: 12/26/18 10:12 AM

#	Lab Code	Client ID	B#	√	Method /Test	Matrix	Amt. Ext. (mL)	pH	Int. Vol	Final Vol mL	Surr Amt	Spike Amt
1	**K1811381-004RE**	SL0153	.14		8270D / SVO TCLP	Soil	100	5	N/A	1	1mL	—
2	**KQ1818690-06**	K1811381-004 MS	.14		8270D / SVO TCLP	Solid	100	5		1		1mL
3	**KQ1818690-07**	K1811381-004 DMS	.14		8270D / SVO TCLP	Solid	100	5		1		1
4	**K1811381-005RE**	SL0146	.02		8270D / SVO TCLP	Soil	100	7		1		—
5	**K1811438-001RE**	SL0547	.16		8270D / SVO TCLP	Soil	100	5		1		—
6	**K1811438-002RE**	SL0554	.08		8270D / SVO TCLP	Soil	100	7		1		—
7	**KQ1818690-01**	LCS	—		8270D / SVO TCLP	Solid	100	5		1		1mL
8	KQ1818690-03	MB Leachek-Sol.1		✓	8270D / SVO TCLP	Solid	100	5		1		—
9	KQ1818690-04	MB Leachek-Sol.2		✓	8270D / SVO TCLP	Solid	100	2		1		—
10	KQ1818690-05	MB		—	8270D / SVO TCLP	Solid	100	5	1	1	1	—

Comments: *Samples were re-made in Metals, to run test. 1/3/19 [signature]

Surrogate ID: SVM59-SOD, 100/150 ppm, exp. 3/4/19, 1mL, 4Fepp. Spike ID: SVM60-14B, 100 ppm, exp. 6/18/19, 1mL, 4Fepp.

Witnessed By:

Analyst: [signature]

Assisted By:

TCLP Extraction Worksheet

Service Request Number(s): K181 1381, 1438

If Autofluff sample is used please place an X in this box ☐ Prep Run# : _____

Method : TCLP 1311 ☒ SPLP 1312 ☐ Wet Ext. ☐ MEP ☐

Note: 1 Blank needed per every 20 extracts.

Sample Number	Teflon Extraction Vessel #	Sample Description (Solid, Liquid, Multiphasic)	Partical Size < 1cm ?	Solution Determination Weight (g)	Initial pH	Aliquot of 1N HCl (mL)	Final pH	Solution To Be Used	Extraction Weight (g)	Extraction Solution Volume (mL)	Post-Extraction pH
K181 1381-4	2	S	Y					1	100.59	2000	5.15
↓ 5	38							↓	100.47		6.11
K181 1438-1	10							2	100.26		5.29
↓ 2	35	↓	↓					1	100.45		5.96
MB	15	L	-					↓	-		-
MB	16	↓	-					2	-	↓	-

CCL 12/27

pH Meter Calibrated at pH4 & pH7 Today? ☒ 12/27/18 12/28/18 pH Meter I.D. K-pH-08 Balance I.D. 51 Date Balance Checked: 12/27/18

Extraction Solution Prep date: 11/28/18, 11/6/18 Tumbler # 4 Thermometer# - Hot Plate Temp °C(50°C): -

Today's Solution pH: 4.95, 2.87 12/27/18 Extraction Solution I.D. MET-DG-26-E MET-DG-73-I Filter Lot # 180145 HCl I.D. -

Extraction Started Time: 15:39 Date: 12/27/18 Disposable Extraction Vessel Lot #: -

Extraction Finished Time: 8:11 Date: 12/28/18

Tumbler Rotational Speed (28 - 32 rpm): 29.7

Solution Determination done on 11/26/18 - CCL

Room Temperature at the Beginning of Extraction (Temp. Range 21° C - 25°C): 21.75

Analyst: Cody [signature] Date: 12/27/18 Reviewer: [signature] Date: 12/28/18

r:\icp\misc\digforms\TCLP Extraction Benchsheet 10-10-171

Additional Prep Information for 8270 TCLP by 3510C

Service Request: K1811381, 1438 RE Workgroup: KQ1818690

Pre-Prep Information:

DCM (GC²) Lot#: DV077 Glass Wool Lot#: 21317999

Sulfuric Acid Lot#: 7121159 NaOH Lot#: 52476

Sulfate Lot#: 20180905 96

pH<2 (Time/Date/Initial): 14:08 1/3/19 EJ

pH>11 (Time/Date/Initial): 15:27 1/3/19 EJ

Batch Start (Time/Date/Initial): 14:10 1/3/19 EJ

Batch Stop (Time/Date/Initial): 16:54 1/3/19 EJ

S-Evap (Time/Date/Initial): 0908 1/7/19 BG S-Evap Therm. ID: OWB-46

Temp as measured: 74 °C Correction factor: 0.0 °C Adjusted temp: 74.0 °C

N-Evap (Time/Date/Initial): 1054 1/7/19 BG N-Evap Therm. ID: X-SVM-010

Temp as measured: 20 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Pipet Lot: 20717645

Extract Storage: —

Date Completed (Time/Date/Initial): 1402 1/7/19 BG

Comments/Observations:

Bench Sheet Review Check List	
☐	Hold Times Met (if no, Reason: RES of tumble past hold)
☑	Prep date, dept, method, product code correct in stealth
☑	Spike Information correct
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked—Bottle numbers appended if required
☑	Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑	Training has been circled
☑	Extract Storage recorded
☑	Additional Prep Sheet completely filled out (NA or line out Blanks)
☑	All clean-ups have been noted on additional prep sheet
☑	Signed service request with Form V, if applicable, has been attached

ORGANICS QUALITY TRACKING FORM

Work Order #: k11381 / k11438 Sample #: -004, -005 / -001, -002
Test: TCLP Date: 12/19/18

QUALITY DEFICIENCY

1. Holding time missed: Primary* ☐_____, Secondary* ☐_____, Client_____
   (# of days) (# of days)
   H.T. Missed because:_____
2. Surrogates out of acceptance ☐
3. Spikes out of acceptance ☐
4. MB or sample contamination ☐
5. Poor solvent exchange ☐
6. Mislabelled vial ☐
7. Suspected matrix interferences ☐
8. Incorrect solution added ☐
9. Other ☒: Explain parent sample for MS/MSD sent back for Rx: leaves insufficient QC for the batch

Analyst: CL Date: 12/19/18

RECOMMENDED CORRECTIVE ACTION

1. Reext. Samples listed above ☒
2. Resolvent exchange ☐
3. Do additional clean-up ☐
4. PC notified Yes ☒ No ☐ Intials: CL, Date: 12/19/18
5. Other ☐: Expain_____

Supervisor:_____ Date:_____

ACTION TAKEN

1. Corrective action followed ☑
2. Not enough sample ☐
3. Other ☐: Explain_____

Supervisor: [signature] Date: 1/9/19

OUTCOME (*Note: Primary=H.T. missed upon intial ext., Secondary=H.T. missed upon re-ext. only)

A) Matrix ☐
B) Poor Extraction Technique ☐
C) Incorrect LIMS Code ☐
D) Switched Vial Labels ☐
E) Unreadable Vial Labels ☐
F) Missing Vial ☐
G) Missing Label on Vial ☐
H) Contaminated Reagent ☐
I) Contaminated Surrogate ☐
J) Mis-spiked by Analyst ☐
K) Extract lost during Extraction ☐
L) Lost on GPC ☐
M) Instrument Problems ☐
N) Additional Clean-up Needed ☐
O) Holding time missed (Primary) ☐
P) Holding time missed upon reext. (Secondary) ☐

Report Footnoted with:_____

1st 01/10/19
2nd 01/14/19

Validation Report

Data File: J:\MS07\DATA\010719\0107F023.D\
Lab ID: K1811438-001
RunType: N/A
Matrix: Soil

Date Acquired: 1/8/19 05:48:00
Batch ID: 621348
Analysis Method: 8270D/SVO TCLP

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Lab Control Sample Recovery		X
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates		X
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Hexachlorobenzene, TCLP	22		20	OK, <MRL in samples
	2,4,6-Tribromophenol	50		20	assoc. trg cmpds ND in sample
Lab Control Sample Recovery	2,4,6-Tribromophenol	125	52	122	
Surrogates	2,4,6-Tribromophenol	124	52	122	

Primary Review: _____

Secondary Review: _____

1st 01/10/19
2nd 01/14/19

Quantitation Report

Data File:	J:\MS07\DATA\010719\0107F023.D\	**Instrument:**	K-MS-07
Acqu Date:	1/8/19 05:48:00	**Vial:**	9
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1811438-001	**Raw Units:**	ug/mL

Bottle ID:	K1811438-001.16	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	SVO TCLP	**Collect Date:**	11/15/18	**Receive Date:**	11/21/18

Analysis Lot:	621348	**Prep Lot:**	328856	**Report Group:**	K1811438
Analysis	8270D	**Prep Method:**	EPA 3510C		
		Prep Date:	1/3/18		

Title:	TCLP Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800550
		Report List ID:	18580

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
1,4-Dichlorobenzene-d4	9.42		35837	40.00	OK
Acenaphthene-d10	14.38		70839	40.00	OK
Chrysene-d12	21.27	-0.01	80419	40.00	OK
Naphthalene-d8	11.51	-0.01	126367	40.00	OK
Perylene-d12	24.51	-0.01	96608	40.00	OK
Phenanthrene-d10	16.79	-0.01	100780	40.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec		% Rec Criteria	Rpt?
2,4,6-Tribromophenol	15.68	-0.01	53813	185.61	124	*	52 - 122	Y
2-Fluorobiphenyl	13.31	-0.01	221883	83.90	84		44 - 114	Y
Nitrobenzene-d5	10.36		108250	88.05	88		45 - 122	Y
Phenol-d6	8.91	-0.01	128187	110.36	74		35 - 105	Y
p-Terphenyl-d14	19.43		199733	108.39	108		50 - 145	Y

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4,5-Trichlorophenol, TCLP	0.00		0	0.00	0	U	Y
2,4,6-Trichlorophenol, TCLP	0.00		0	0.00	0	U	Y
2,4-Dinitrotoluene, TCLP	0.00		0	0.00	0	U	Y
2-Methylphenol, TCLP	0.00		0	0.00	0	U	Y
4-Methylphenol, TCLP	0.00		0	0.00	0	U	Y
Hexachlorobenzene, TCLP	0.00		0	0.00	0	U	Y
Hexachlorobutadiene, TCLP	0.00		0	0.00	0	U	Y
Hexachloroethane, TCLP	0.00		0	0.00	0	U	Y
Nitrobenzene, TCLP	0.00		0	0.00	0	U	Y
Pentachlorophenol (PCP), TCLP	0.00		0	0.00	0	U	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st 01/10/19

2nd 01/14/19

Data File:	J:\MS07\DATA\010719\0107F023.D\	**Instrument:**	K-MS-07
Acqu Date:	1/8/19 05:48:00	**Vial:**	9
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1811438-001	**Raw Units:**	ug/mL

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Pyridine, TCLP	0.00		0	0.00	0	U	Y

Prep Amount:	100 mL	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	67.10

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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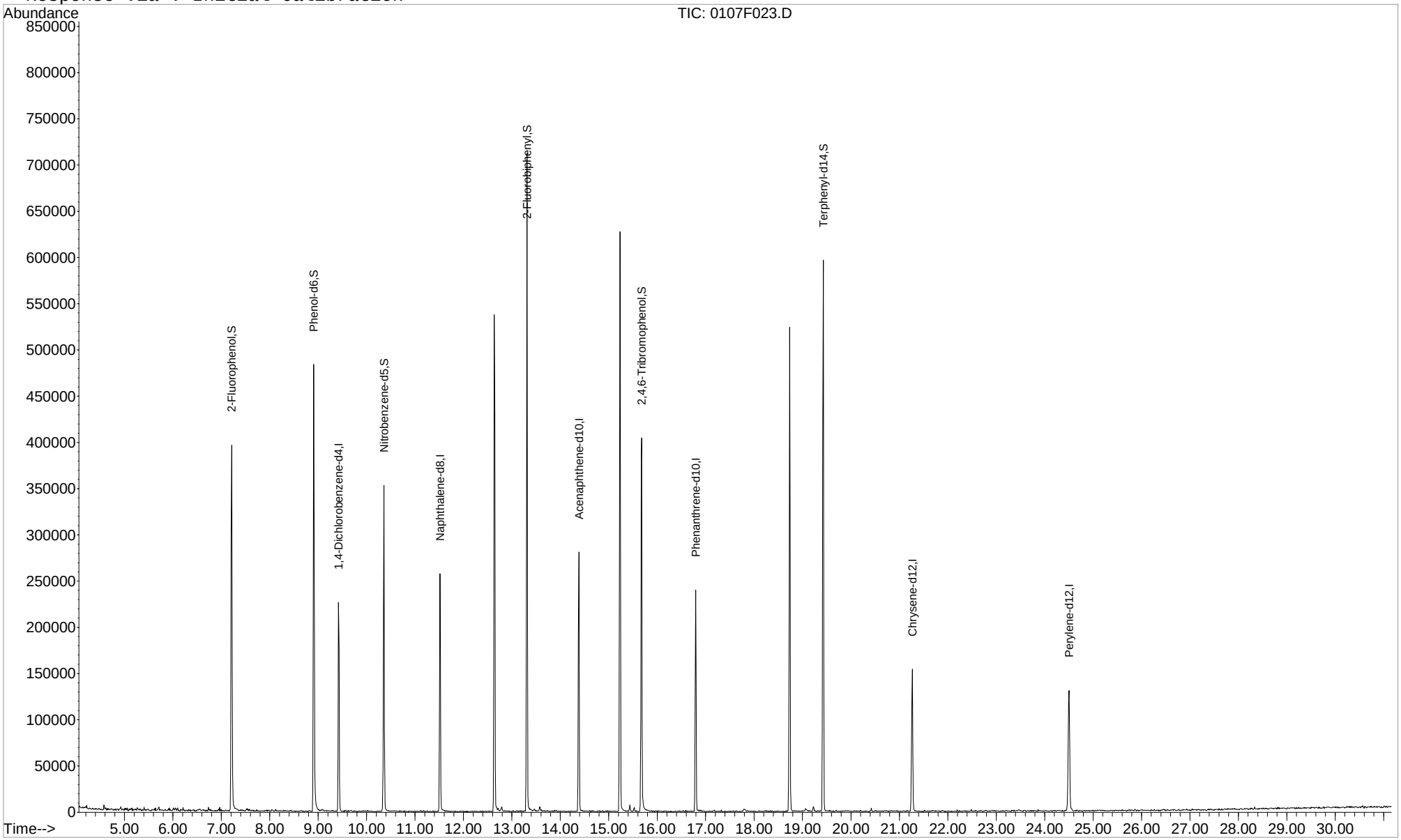
1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F023.D Vial: 21
Acq On : 8 Jan 2019 5:48 am Operator: CConover
Sample : K1811438-001 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:31 2019 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Jan 10 13:16:03 2019
Response via : Initial Calibration



Columbia Analytical Services Quantitation Report (QT Reviewed) 1st 01/10/19 2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F023.D Vial: 21
Acq On : 8 Jan 2019 5:48 am Operator: CConover
Sample : K1811438-001 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:16:39 2019 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Jan 10 13:16:03 2019
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	35837	40.00	ug/ml	0.00
22) Naphthalene-d8	11.51	136	126367	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.38	164	70839	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.79	188	100780	40.00	ug/ml	0.00
73) Chrysene-d12	21.27	240	80419	40.00	ug/ml	-0.02
83) Perylene-d12	24.51	264	96608	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.21	112	106942	114.49	ug/ml	0.02
Spiked Amount 150.000	Range 21 - 100		Recovery = 76.33%			
8) Phenol-d6	8.91	99	128187	110.36	ug/ml	0.04
Spiked Amount 150.000	Range 10 - 94		Recovery = 73.57%			
20) Nitrobenzene-d5	10.36	82	108250	88.05	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 88.05%			
40) 2-Fluorobiphenyl	13.31	172	221883	83.90	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 83.90%			
62) 2,4,6-Tribromophenol	15.68	330	53813	185.61	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 123.74%#			
76) Terphenyl-d14	19.43	244	199733	108.39	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 108.39%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration

1st 01/10/19
2nd 01/14/19

Validation Report

Data File: J:\MS07\DATA\010719\0107F024.D\
Lab ID: K1811438-002
RunType: N/A
Matrix: Soil

Date Acquired: 1/8/19 06:28:00
Batch ID: 621348
Analysis Method: 8270D/SVO TCLP

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Lab Control Sample Recovery		X
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Hexachlorobenzene, TCLP	22		20	OK, <MRL in samples
	2,4,6-Tribromophenol	50		20	assoc. trg cmpds ND in sample
Lab Control Sample Recovery	2,4,6-Tribromophenol	125	52	122	assoc. trg cmpds ND in sample

Primary Review: _____

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Secondary Review: _____

1st 01/10/19
2nd 01/14/19

Quantitation Report

Data File:	J:\MS07\DATA\010719\0107F024.D\	**Instrument:**	K-MS-07
Acqu Date:	1/8/19 06:28:00	**Vial:**	10
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1811438-002	**Raw Units:**	ug/mL

Bottle ID:	K1811438-002.08	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	SVO TCLP	**Collect Date:**	11/16/18	**Receive Date:**	11/21/18

Analysis Lot:	621348	**Prep Lot:**	328856	**Report Group:**	K1811438
Analysis	8270D	**Prep Method:**	EPA 3510C		
		Prep Date:	1/3/18		

Title:	TCLP Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800550
		Report List ID:	18580

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
1,4-Dichlorobenzene-d4	9.42		37604	40.00	OK
Acenaphthene-d10	14.38		74043	40.00	OK
Chrysene-d12	21.26	-0.02	82838	40.00	OK
Naphthalene-d8	11.52		129279	40.00	OK
Perylene-d12	24.50	-0.02	104806	40.00	OK
Phenanthrene-d10	16.80		109299	40.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
2,4,6-Tribromophenol	15.67	-0.02	55601	176.83	118	52 - 122	Y
2-Fluorobiphenyl	13.32		221085	79.98	80	44 - 114	Y
Nitrobenzene-d5	10.35	-0.01	110906	85.97	86	45 - 122	Y
Phenol-d6	8.91	-0.01	127395	104.52	70	35 - 105	Y
p-Terphenyl-d14	19.42	-0.01	206733	108.91	109	50 - 145	Y

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4,5-Trichlorophenol, TCLP	0.00		0	0.00	0	U	Y
2,4,6-Trichlorophenol, TCLP	0.00		0	0.00	0	U	Y
2,4-Dinitrotoluene, TCLP	0.00		0	0.00	0	U	Y
2-Methylphenol, TCLP	0.00		0	0.00	0	U	Y
4-Methylphenol, TCLP	0.00		0	0.00	0	U	Y
Hexachlorobenzene, TCLP	0.00		0	0.00	0	U	Y
Hexachlorobutadiene, TCLP	0.00		0	0.00	0	U	Y
Hexachloroethane, TCLP	0.00		0	0.00	0	U	Y
Nitrobenzene, TCLP	0.00		0	0.00	0	U	Y
Pentachlorophenol (PCP), TCLP	0.00		0	0.00	0	U	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st 01/10/19

2nd 01/14/19

Data File:	J:\MS07\DATA\010719\0107F024.D\	**Instrument:**	K-MS-07
Acqu Date:	1/8/19 06:28:00	**Vial:**	10
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1811438-002	**Raw Units:**	ug/mL

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Pyridine, TCLP	0.00		0	0.00	0	U	Y

Prep Amount:	100 mL	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	70.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

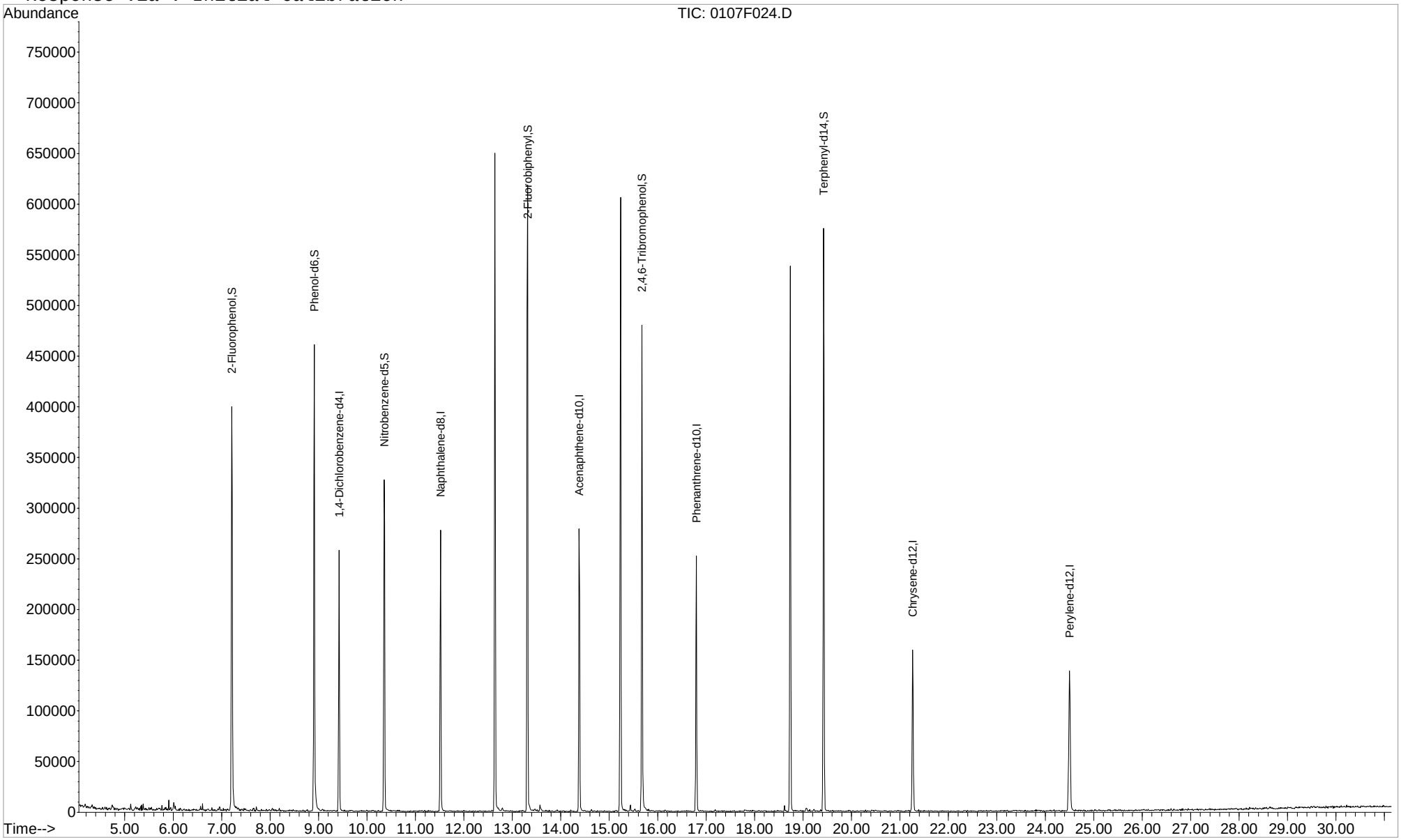
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F024.D Vial: 22
Acq On : 8 Jan 2019 6:28 am Operator: CConover
Sample : K1811438-002 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:39 2019 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Jan 10 13:16:03 2019
Response via : Initial Calibration



1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F024.D Vial: 22
Acq On : 8 Jan 2019 6:28 am Operator: CConover
Sample : K1811438-002 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:16:40 2019 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Jan 10 13:16:03 2019
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	37604	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	129279	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.38	164	74043	40.00	ug/ml	-0.01
61) Phenanthrene-d10	16.80	188	109299	40.00	ug/ml	0.00
73) Chrysene-d12	21.26	240	82838	40.00	ug/ml	-0.02
83) Perylene-d12	24.50	264	104806	40.00	ug/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	7.21	112	108710	110.92	ug/ml	0.02
Spiked Amount 150.000	Range 21 - 100		Recovery = 73.95%			
8) Phenol-d6	8.91	99	127395	104.52	ug/ml	0.05
Spiked Amount 150.000	Range 10 - 94		Recovery = 69.68%			
20) Nitrobenzene-d5	10.35	82	110906	85.97	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 85.97%			
40) 2-Fluorobiphenyl	13.32	172	221085	79.98	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 79.98%			
62) 2,4,6-Tribromophenol	15.67	330	55601	176.83	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 117.89%			
76) Terphenyl-d14	19.42	244	206733	108.91	ug/ml	-0.01
Spiked Amount 100.000	Range 33 - 141		Recovery = 108.91%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

1st 01/11/19
2nd 01/14/19

Validation Report

Data File: J:\MS07\DATA\011019\0110F006.D\
Lab ID: KQ1818690-03
RunType: MB
Matrix: Soil

Date Acquired: 1/10/19 20:23:00
Batch ID: 621711
Analysis Method: 8270D/SVO TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

1st 01/11/19
2nd 01/14/19

Quantitation Report

Data File:	J:\MS07\DATA\011019\0110F006.D\	**Instrument:**	K-MS-07
Acqu Date:	1/10/19 20:23:00	**Vial:**	4
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1818690-03	**Raw Units:**	ug/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	SVO TCLP	**Collect Date:**	11/16/18	**Receive Date:**	11/21/18

Analysis Lot:	621711	**Prep Lot:**	328856	**Report Group:**	KQ1818690
Analysis	8270D	**Prep Method:**	EPA 3510C		
		Prep Date:	1/3/18		

Title:	TCLP Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800550
		Report List ID:	18580

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
1,4-Dichlorobenzene-d4	9.42		35999	40.00	NA
Acenaphthene-d10	14.38		77154	40.00	NA
Chrysene-d12	21.26		91875	40.00	NA
Naphthalene-d8	11.52		129822	40.00	NA
Perylene-d12	24.50		112313	40.00	NA
Phenanthrene-d10	16.80		114883	40.00	NA

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
2,4,6-Tribromophenol	15.67		59575	180.26	120	52 - 122	Y
2-Fluorobiphenyl	13.31		232224	80.62	81	44 - 114	Y
Nitrobenzene-d5	10.35		111312	90.13	90	45 - 122	Y
Phenol-d6	8.91		127960	109.67	73	35 - 105	Y
p-Terphenyl-d14	19.42		217965	103.53	104	50 - 145	Y

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4,5-Trichlorophenol, TCLP	0.00		0	0.00	0	U	Y
2,4,6-Trichlorophenol, TCLP	0.00		0	0.00	0	U	Y
2,4-Dinitrotoluene, TCLP	0.00		0	0.00	0	U	Y
2-Methylphenol, TCLP	0.00		0	0.00	0	U	Y
4-Methylphenol, TCLP	0.00		0	0.00	0	U	Y
Hexachlorobenzene, TCLP	0.00		0	0.00	0	U	Y
Hexachlorobutadiene, TCLP	0.00		0	0.00	0	U	Y
Hexachloroethane, TCLP	0.00		0	0.00	0	U	Y
Nitrobenzene, TCLP	0.00		0	0.00	0	U	Y
Pentachlorophenol (PCP), TCLP	0.00		0	0.00	0	U	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st 01/11/19

2nd 01/14/19

Data File:	J:\MS07\DATA\011019\0110F006.D\	**Instrument:**	K-MS-07
Acqu Date:	1/10/19 20:23:00	**Vial:**	4
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1818690-03	**Raw Units:**	ug/mL

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Pyridine, TCLP	0.00		0	0.00	0	U	Y

Prep Amount:	100 mL	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

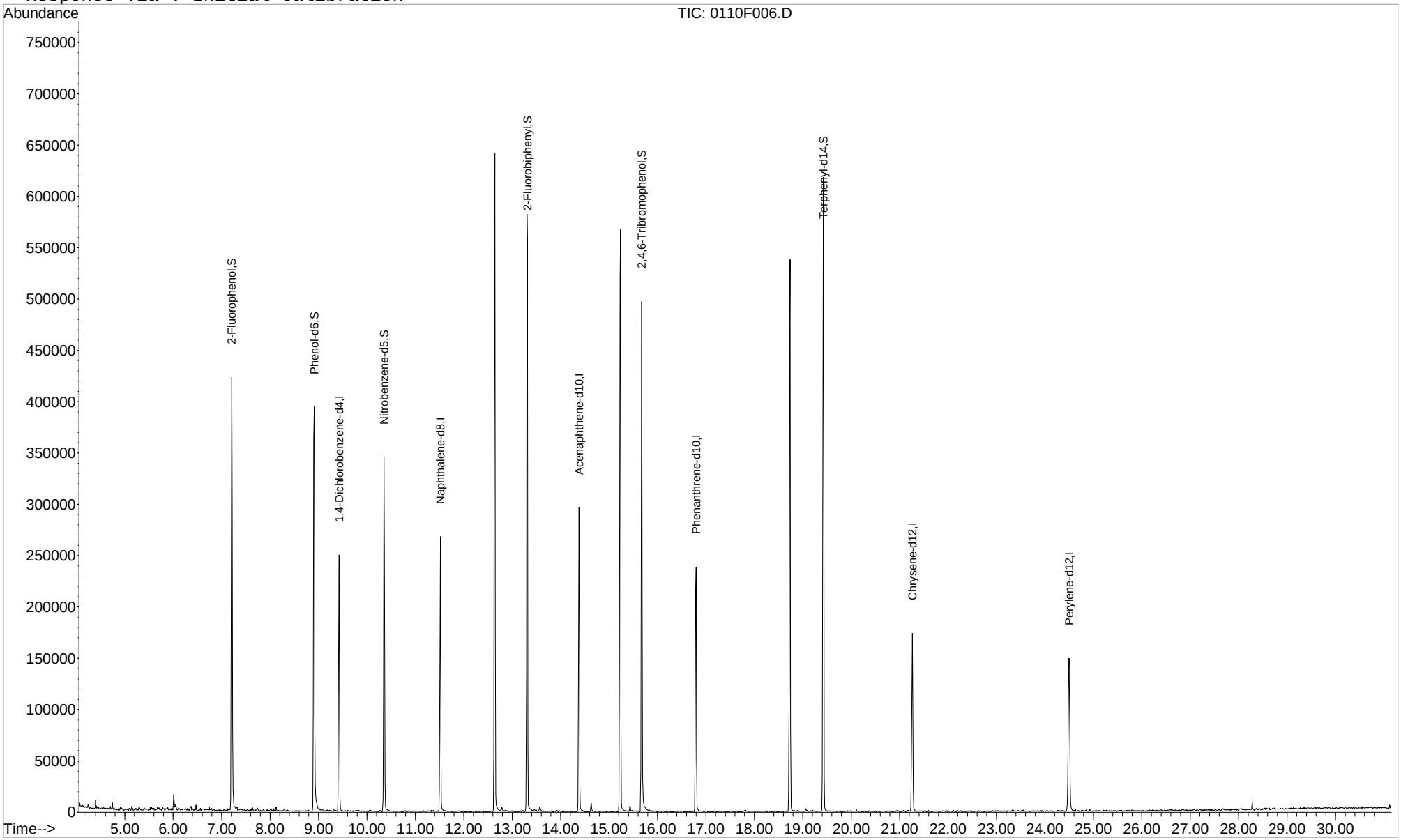
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 01/11/19
2nd 01/14/19

Data File : J:\MS07\DATA\011019\0110F006.D Vial: 6
Acq On : 10 Jan 2019 8:23 pm Operator: CConover
Sample : KQ1818690-03 | MB Inst : MS07
Misc : Leachate Blank Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 11 8:56 2019 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Jan 11 08:24:03 2019
Response via : Initial Calibration



Columbia Analytical Services Quantitation Report (QT Reviewed)

1st 01/11/19
2nd 01/14/19

Data File : J:\MS07\DATA\011019\0110F006.D Vial: 6
Acq On : 10 Jan 2019 8:23 pm Operator: CConover
Sample : KQ1818690-03 | MB Inst : MS07
Misc : Leachate Blank Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 11 08:24:52 2019 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Jan 11 08:24:03 2019
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	35999	40.00	ug/ml	-0.02
22) Naphthalene-d8	11.52	136	129822	40.00	ug/ml	-0.02
36) Acenaphthene-d10	14.38	164	77154	40.00	ug/ml	-0.02
61) Phenanthrene-d10	16.80	188	114883	40.00	ug/ml	0.00
73) Chrysene-d12	21.26	240	91875	40.00	ug/ml	-0.03
83) Perylene-d12	24.50	264	112313	40.00	ug/ml	-0.03
System Monitoring Compounds						
4) 2-Fluorophenol	7.21	112	113007	120.44	ug/ml	-0.03
Spiked Amount 150.000	Range 21 - 100		Recovery = 80.29%			
8) Phenol-d6	8.91	99	127960	109.67	ug/ml	-0.02
Spiked Amount 150.000	Range 10 - 94		Recovery = 73.11%			
20) Nitrobenzene-d5	10.35	82	111312	90.13	ug/ml	-0.02
Spiked Amount 100.000	Range 35 - 114		Recovery = 90.13%			
40) 2-Fluorobiphenyl	13.31	172	232224	80.62	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 80.62%			
62) 2,4,6-Tribromophenol	15.67	330	59575	180.26	ug/ml	-0.02
Spiked Amount 150.000	Range 10 - 123		Recovery = 120.17%			
76) Terphenyl-d14	19.42	244	217965	103.53	ug/ml	-0.02
Spiked Amount 100.000	Range 33 - 141		Recovery = 103.53%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

1st 01/10/19
2nd 01/14/19

Validation Report

Data File: J:\MS07\DATA\010719\0107F017.D\
Lab ID: KQ1818690-04
RunType: MB
Matrix: Soil

Date Acquired: 1/8/19 01:46:00
Batch ID: 621348
Analysis Method: 8270D/SVO TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	2,4,6-Tribromophenol	50		20	assoc. trg cmpds ND in sample
	Hexachlorobenzene, TCLP	22		20	OK, <MRL in samples

Primary Review: _____

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Secondary Review: _____

1st 01/10/19
2nd 01/14/19

Quantitation Report

Data File:	J:\MS07\DATA\010719\0107F017.D\	**Instrument:**	K-MS-07
Acqu Date:	1/8/19 01:46:00	**Vial:**	3
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1818690-04	**Raw Units:**	ug/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	SVO TCLP	**Collect Date:**	11/16/18	**Receive Date:**	11/21/18

Analysis Lot:	621348	**Prep Lot:**	328856	**Report Group:**	KQ1818690
Analysis	8270D	**Prep Method:**	EPA 3510C		
		Prep Date:	1/3/18		

Title:	TCLP Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800550
		Report List ID:	18580

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
1,4-Dichlorobenzene-d4	9.42		35502	40.00	OK
Acenaphthene-d10	14.38		70034	40.00	OK
Chrysene-d12	21.27	-0.01	84290	40.00	OK
Naphthalene-d8	11.51	-0.01	120120	40.00	OK
Perylene-d12	24.51	-0.01	99934	40.00	OK
Phenanthrene-d10	16.79	-0.01	106647	40.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
2,4,6-Tribromophenol	15.68	-0.01	47502	154.83	103	52 - 122	Y
2-Fluorobiphenyl	13.31	-0.01	179594	68.69	69	44 - 114	Y
Nitrobenzene-d5	10.35	-0.01	90181	74.04	74	45 - 122	Y
Phenol-d6	8.91	-0.01	103880	90.28	60	35 - 105	Y
p-Terphenyl-d14	19.43		189350	98.04	98	50 - 145	Y

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4,5-Trichlorophenol, TCLP	0.00		0	0.00	0	U	Y
2,4,6-Trichlorophenol, TCLP	0.00		0	0.00	0	U	Y
2,4-Dinitrotoluene, TCLP	0.00		0	0.00	0	U	Y
2-Methylphenol, TCLP	0.00		0	0.00	0	U	Y
4-Methylphenol, TCLP	0.00		0	0.00	0	U	Y
Hexachlorobenzene, TCLP	0.00		0	0.00	0	U	Y
Hexachlorobutadiene, TCLP	0.00		0	0.00	0	U	Y
Hexachloroethane, TCLP	0.00		0	0.00	0	U	Y
Nitrobenzene, TCLP	0.00		0	0.00	0	U	Y
Pentachlorophenol (PCP), TCLP	0.00		0	0.00	0	U	Y

1st 01/10/19

2nd 01/14/19

Data File:	J:\MS07\DATA\010719\0107F017.D\	**Instrument:**	K-MS-07
Acqu Date:	1/8/19 01:46:00	**Vial:**	3
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1818690-04	**Raw Units:**	ug/mL

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Pyridine, TCLP	0.00		0	0.00	0	U	Y

Prep Amount:	100 mL	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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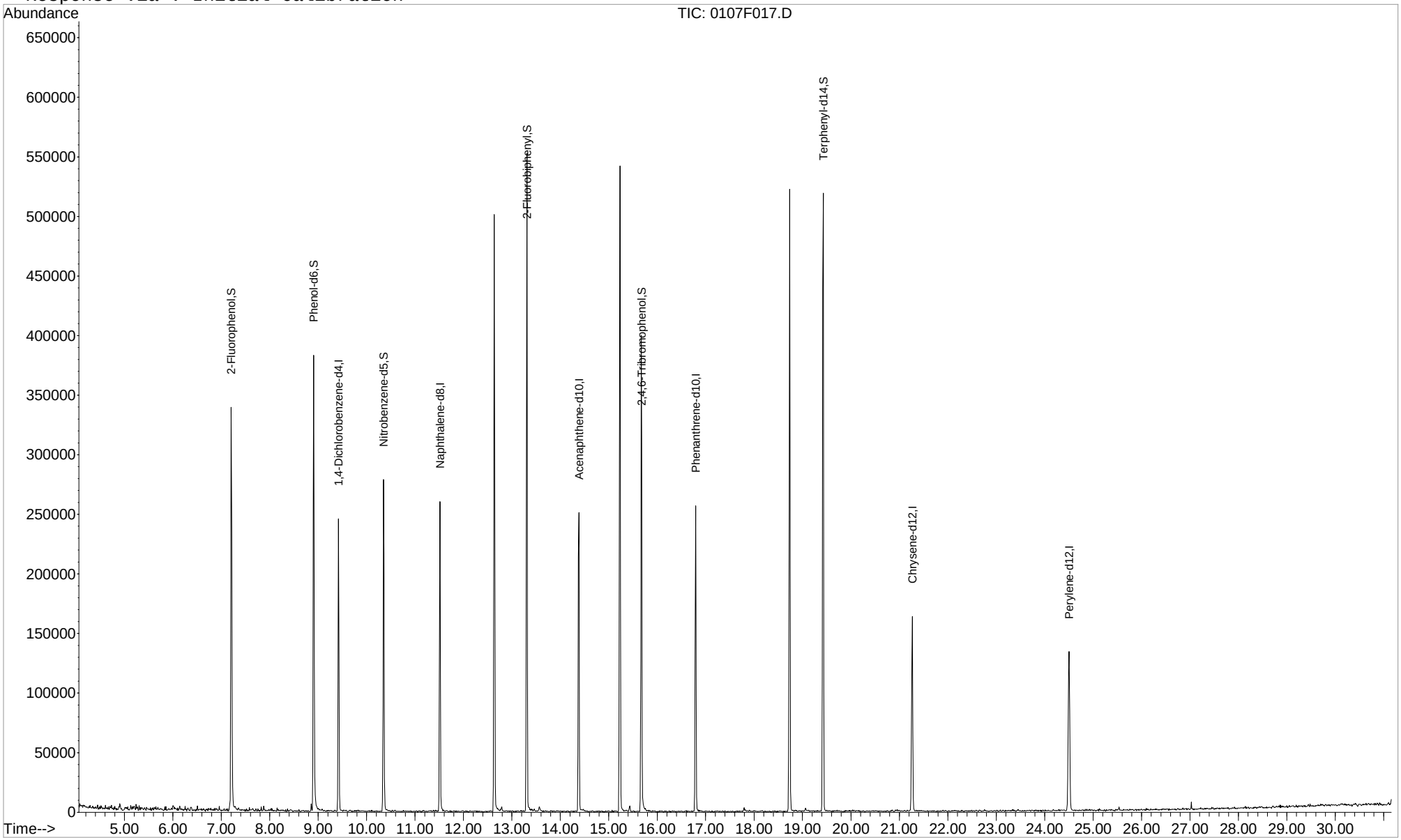
1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F017.D Vial: 15
Acq On : 8 Jan 2019 1:46 am Operator: CConover
Sample : KQ1818690-04 | MB Inst : MS07
Misc : Leachate Blank 2 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:19 2019 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Jan 10 13:16:03 2019
Response via : Initial Calibration



Columbia Analytical Services Quantitation Report (QT Reviewed) 1st 01/10/19 2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F017.D Vial: 15
Acq On : 8 Jan 2019 1:46 am Operator: CConover
Sample : KQ1818690-04 | MB Inst : MS07
Misc : Leachate Blank 2 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:16:33 2019 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Jan 10 13:16:03 2019
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	35502	40.00	ug/ml	0.00
22) Naphthalene-d8	11.51	136	120120	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.38	164	70034	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.79	188	106647	40.00	ug/ml	0.00
73) Chrysene-d12	21.27	240	84290	40.00	ug/ml	-0.02
83) Perylene-d12	24.51	264	99934	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.20	112	87444	94.50	ug/ml	0.01
Spiked Amount 150.000	Range 21 - 100		Recovery = 63.00%			
8) Phenol-d6	8.91	99	103880	90.28	ug/ml	0.05
Spiked Amount 150.000	Range 10 - 94		Recovery = 60.19%			
20) Nitrobenzene-d5	10.35	82	90181	74.04	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 74.04%			
40) 2-Fluorobiphenyl	13.31	172	179594	68.69	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 68.69%			
62) 2,4,6-Tribromophenol	15.68	330	47502	154.83	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 103.22%			
76) Terphenyl-d14	19.43	244	189350	98.04	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 98.04%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration

1st 01/11/19
2nd 01/14/19

Validation Report

Data File: J:\MS07\DATA\011019\0110F005.D\
Lab ID: KQ1818690-05
RunType: MB
Matrix: Soil

Date Acquired: 1/10/19 19:43:00
Batch ID: 621711
Analysis Method: 8270D/SVO TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

1st 01/11/19
2nd 01/14/19

Quantitation Report

Data File:	J:\MS07\DATA\011019\0110F005.D\	**Instrument:**	K-MS-07
Acqu Date:	1/10/19 19:43:00	**Vial:**	3
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1818690-05	**Raw Units:**	ug/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	SVO TCLP	**Collect Date:**	11/16/18	**Receive Date:**	11/21/18

Analysis Lot:	621711	**Prep Lot:**	328856	**Report Group:**	KQ1818690
Analysis	8270D	**Prep Method:**	EPA 3510C		
		Prep Date:	1/3/18		

Title:	TCLP Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800550
		Report List ID:	18580

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
1,4-Dichlorobenzene-d4	9.42		35280	40.00	NA
Acenaphthene-d10	14.38		71434	40.00	NA
Chrysene-d12	21.26		91944	40.00	NA
Naphthalene-d8	11.51		121064	40.00	NA
Perylene-d12	24.50		111804	40.00	NA
Phenanthrene-d10	16.79		117992	40.00	NA

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
2,4,6-Tribromophenol	15.68		53616	157.95	105	52 - 122	Y
2-Fluorobiphenyl	13.31		183390	68.77	69	44 - 114	Y
Nitrobenzene-d5	10.36		86439	71.42	71	45 - 122	Y
Phenol-d6	8.90		100018	87.47	58	35 - 105	Y
p-Terphenyl-d14	19.43		215041	102.07	102	50 - 145	Y

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4,5-Trichlorophenol, TCLP	0.00		0	0.00	0	U	Y
2,4,6-Trichlorophenol, TCLP	0.00		0	0.00	0	U	Y
2,4-Dinitrotoluene, TCLP	0.00		0	0.00	0	U	Y
2-Methylphenol, TCLP	0.00		0	0.00	0	U	Y
4-Methylphenol, TCLP	0.00		0	0.00	0	U	Y
Hexachlorobenzene, TCLP	0.00		0	0.00	0	U	Y
Hexachlorobutadiene, TCLP	0.00		0	0.00	0	U	Y
Hexachloroethane, TCLP	0.00		0	0.00	0	U	Y
Nitrobenzene, TCLP	0.00		0	0.00	0	U	Y
Pentachlorophenol (PCP), TCLP	0.00		0	0.00	0	U	Y

1st 01/11/19

2nd 01/14/19

Data File:	J:\MS07\DATA\011019\0110F005.D\	**Instrument:**	K-MS-07
Acqu Date:	1/10/19 19:43:00	**Vial:**	3
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1818690-05	**Raw Units:**	ug/mL

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Pyridine, TCLP	0.00		0	0.00	0	U	Y

Prep Amount:	100 mL	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

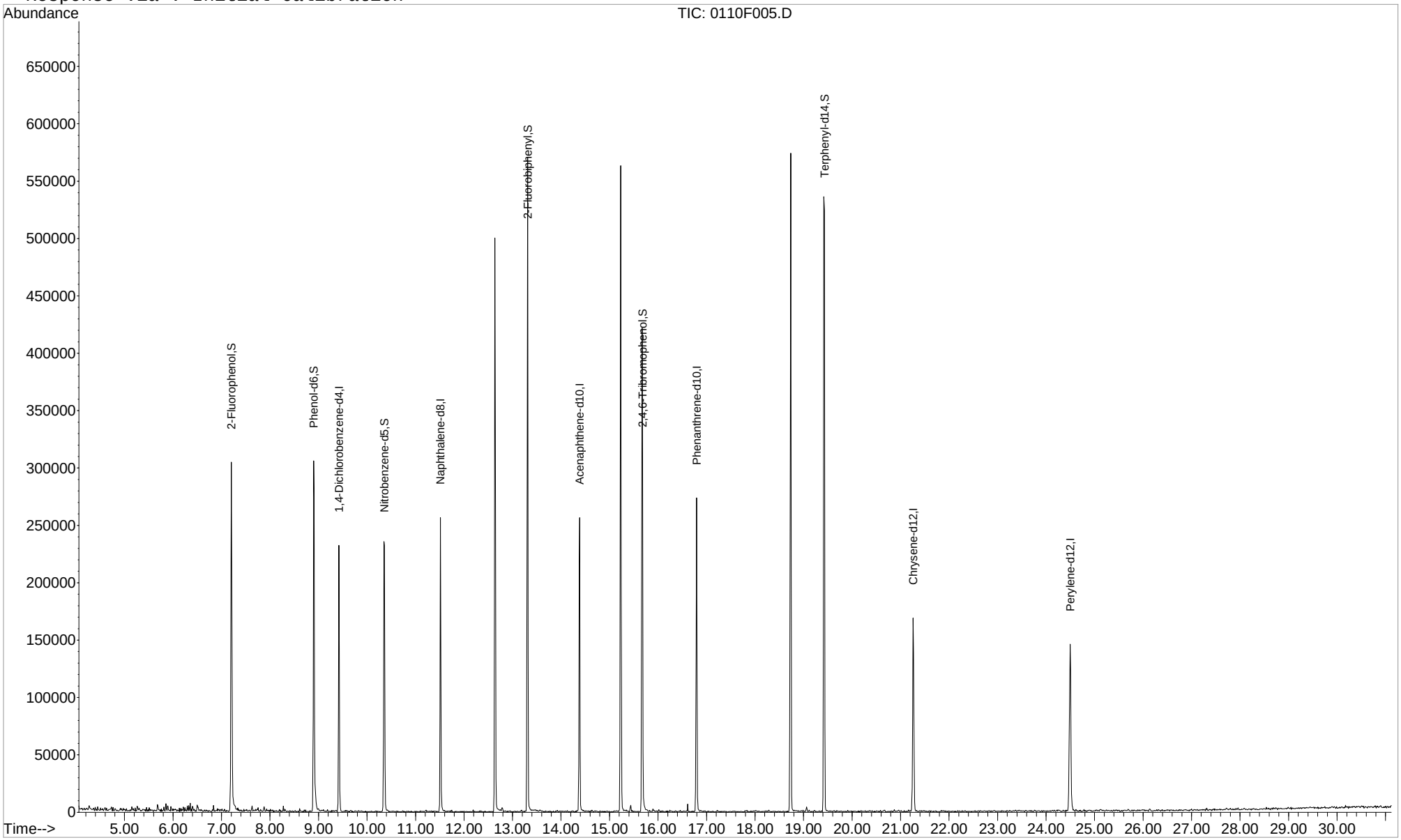
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 01/11/19
2nd 01/14/19

Data File : J:\MS07\DATA\011019\0110F005.D Vial: 5
Acq On : 10 Jan 2019 7:43 pm Operator: CConover
Sample : KQ1818690-05 | MB Inst : MS07
Misc : DI Blank Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 11 8:50 2019 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Jan 11 08:24:03 2019
Response via : Initial Calibration



Columbia Analytical Services Quantitation Report (QT Reviewed)

1st 01/11/19
2nd 01/14/19

Data File : J:\MS07\DATA\011019\0110F005.D Vial: 5
Acq On : 10 Jan 2019 7:43 pm Operator: CConover
Sample : KQ1818690-05 | MB Inst : MS07
Misc : DI Blank Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 11 08:24:51 2019 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Jan 11 08:24:03 2019
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	35280	40.00	ug/ml	-0.02
22) Naphthalene-d8	11.51	136	121064	40.00	ug/ml	-0.02
36) Acenaphthene-d10	14.38	164	71434	40.00	ug/ml	-0.01
61) Phenanthrene-d10	16.79	188	117992	40.00	ug/ml	-0.01
73) Chrysene-d12	21.26	240	91944	40.00	ug/ml	-0.03
83) Perylene-d12	24.50	264	111804	40.00	ug/ml	-0.03
System Monitoring Compounds						
4) 2-Fluorophenol	7.20	112	82912	90.17	ug/ml	-0.03
Spiked Amount 150.000	Range 21 - 100		Recovery = 60.11%			
8) Phenol-d6	8.90	99	100018	87.47	ug/ml	-0.03
Spiked Amount 150.000	Range 10 - 94		Recovery = 58.31%			
20) Nitrobenzene-d5	10.36	82	86439	71.42	ug/ml	-0.01
Spiked Amount 100.000	Range 35 - 114		Recovery = 71.42%			
40) 2-Fluorobiphenyl	13.31	172	183390	68.77	ug/ml	-0.01
Spiked Amount 100.000	Range 43 - 116		Recovery = 68.77%			
62) 2,4,6-Tribromophenol	15.68	330	53616	157.95	ug/ml	-0.01
Spiked Amount 150.000	Range 10 - 123		Recovery = 105.30%			
76) Terphenyl-d14	19.43	244	215041	102.07	ug/ml	-0.01
Spiked Amount 100.000	Range 33 - 141		Recovery = 102.07%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

1st 01/10/19
2nd 01/14/19

Validation Report

Data File: J:\MS07\DATA\010719\0107F018.D\
Lab ID: KQ1818690-01
RunType: LCS
Matrix: Soil

Date Acquired: 1/8/19 02:26:00
Batch ID: 621348
Analysis Method: 8270D/SVO TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Internal Standards	X	
Surrogates		X
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Hexachlorobenzene, TCLP	22		20	OK, <MRL in samples
	2,4,6-Tribromophenol	50		20	assoc. trg cmpds ND in sample
Surrogates	2,4,6-Tribromophenol	125	52	122	assoc. trg cmpds ND in sample

Primary Review: _____

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Secondary Review: _____

1st 01/10/19
2nd 01/14/19

Quantitation Report

Data File:	J:\MS07\DATA\010719\0107F018.D\	**Instrument:**	K-MS-07
Acqu Date:	1/8/19 02:26:00	**Vial:**	4
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1818690-01	**Raw Units:**	ug/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	SVO TCLP	**Collect Date:**	11/16/18	**Receive Date:**	11/21/18

Analysis Lot:	621348	**Prep Lot:**	328856	**Report Group:**	KQ1818690
Analysis	8270D	**Prep Method:**	EPA 3510C		
		Prep Date:	1/3/18		

Title:	TCLP Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800550
		Report List ID:	18580

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
1,4-Dichlorobenzene-d4	9.42		35533	40.00	OK
Acenaphthene-d10	14.38		76961	40.00	OK
Chrysene-d12	21.27	-0.01	99998	40.00	OK
Naphthalene-d8	11.52		128629	40.00	OK
Perylene-d12	24.51	-0.01	103996	40.00	OK
Phenanthrene-d10	16.80		110454	40.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec		% Rec Criteria	Rpt?
2,4,6-Tribromophenol	15.68	-0.01	59600	187.56	125	*	52 - 122	Y
2-Fluorobiphenyl	13.32		229273	79.80	80		44 - 114	Y
Nitrobenzene-d5	10.36		105309	86.39	86		45 - 122	Y
Phenol-d6	8.91	-0.01	118818	103.17	69		35 - 105	Y
p-Terphenyl-d14	19.42	-0.01	188445	82.24	82		50 - 145	Y

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4,5-Trichlorophenol, TCLP	13.24		67964	82.70	0.827		Y
2,4,6-Trichlorophenol, TCLP	13.17	-0.01	63417	78.48	0.785		Y
2,4-Dinitrotoluene, TCLP	14.76		61604	85.98	0.860		Y
2-Methylphenol, TCLP	9.92	-0.02	59961	74.72	0.747		Y
4-Methylphenol, TCLP	10.18	-0.02	86779	69.65	0.697		Y
Hexachlorobenzene, TCLP	16.15	-0.02	61277	91.41	0.914		Y
Hexachlorobutadiene, TCLP	11.76		62578	69.55	0.696		Y
Hexachloroethane, TCLP	10.24		40202	65.24	0.652		Y
Nitrobenzene, TCLP	10.39		92194	75.34	0.753		Y
Pentachlorophenol (PCP), TCLP	16.50	-0.01	30204	72.30	0.723		Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st 01/10/19

2nd 01/14/19

Data File:	J:\MS07\DATA\010719\0107F018.D\	**Instrument:**	K-MS-07
Acqu Date:	1/8/19 02:26:00	**Vial:**	4
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1818690-01	**Raw Units:**	ug/mL

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Pyridine, TCLP	4.38		81013	90.48	0.905		Y

Prep Amount:	100 mL	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

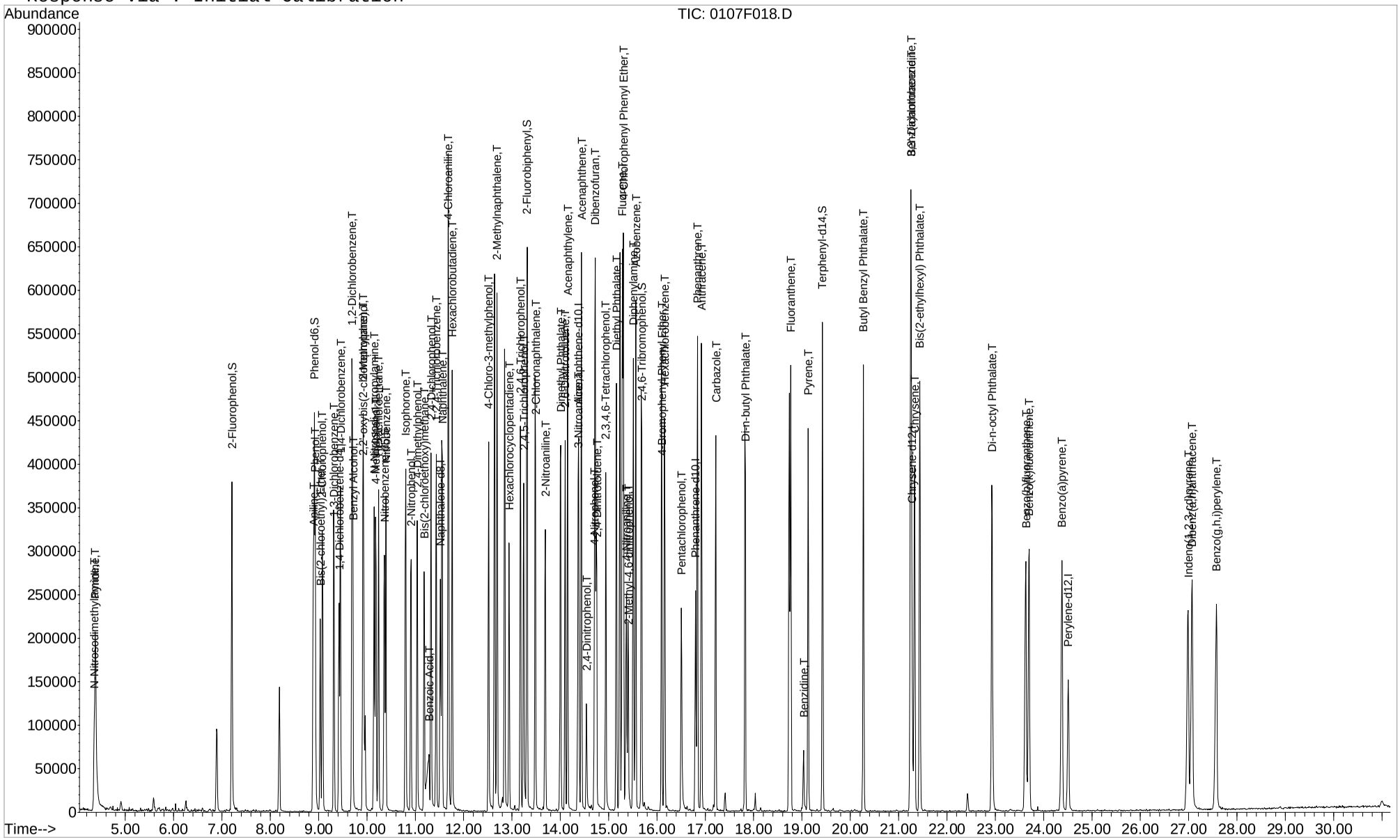
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Columbia Analytical Services Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\010719\0107F018.D Vial: 16
Acq On : 8 Jan 2019 2:26 am Operator: CConover
Sample : KQ1818690-01 | LCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:22 2019 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Jan 10 13:16:03 2019
Response via : Initial Calibration



1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F018.D Vial: 16
Acq On : 8 Jan 2019 2:26 am Operator: CConover
Sample : KQ1818690-01 | LCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:16:34 2019 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Jan 10 13:16:03 2019
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	35533	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	128629	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.38	164	76961	40.00	ug/ml	-0.01
61) Phenanthrene-d10	16.80	188	110454	40.00	ug/ml	0.00
73) Chrysene-d12	21.27	240	99998	40.00	ug/ml	-0.01
83) Perylene-d12	24.51	264	103996	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.21	112	98437	106.29	ug/ml	0.02
Spiked Amount 150.000	Range 21 - 100		Recovery = 70.86%			
8) Phenol-d6	8.91	99	118818	103.17	ug/ml	0.05
Spiked Amount 150.000	Range 10 - 94		Recovery = 68.78%			
20) Nitrobenzene-d5	10.36	82	105309	86.39	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 86.39%			
40) 2-Fluorobiphenyl	13.32	172	229273	79.80	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 79.80%			
62) 2,4,6-Tribromophenol	15.68	330	59600	187.56	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 125.04%#			
76) Terphenyl-d14	19.42	244	188445	82.24	ug/ml	-0.01
Spiked Amount 100.000	Range 33 - 141		Recovery = 82.24%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.36	42	92398	75.61	ug/ml	92
3) Pyridine	4.38	79	81013	90.48	ug/ml	100
6) Aniline	8.89	93	75739	49.78	ug/ml#	15
7) Bis(2-chloroethyl) Ether	9.04	93	62421	64.73	ug/ml	83
9) Phenol	8.93	94	81586	61.78	ug/ml#	70
10) 2-Chlorophenol	9.08	128	78032	70.02	ug/ml	96
11) 1,3-Dichlorobenzene	9.32	146	84508	62.21	ug/ml	98
12) 1,4-Dichlorobenzene	9.45	146	90345	64.63	ug/ml	97
13) 1,2-Dichlorobenzene	9.69	146	87383	65.19	ug/ml	98
14) Benzyl Alcohol	9.71	108	46664	67.74	ug/ml	96
15) 2,2'-oxybis(2-chloropropan	9.91	45	95682	65.01	ug/ml#	53
16) 2-Methylphenol	9.92	107	59961	74.72	ug/ml	83
17) Hexachloroethane	10.24	117	40202	65.24	ug/ml	99
18) N-Nitrosodi-n-propylamine	10.15	70	59307	75.22	ug/ml	98
19) 4-Methylphenol	10.18	107	86779	69.65	ug/ml	95
21) Nitrobenzene	10.39	77	92194	75.34	ug/ml	94
23) Isophorone	10.80	82	158849	81.13	ug/ml	99
24) 2-Nitrophenol	10.91	139	47513	75.41	ug/ml	87
25) 2,4-Dimethylphenol	11.04	122	50150	57.33	ug/ml	91
26) Bis(2-chloroethoxy)methane	11.18	93	84797	74.37	ug/ml	95
27) 2,4-Dichlorophenol	11.32	162	77612	74.81	ug/ml	96
28) Benzoic Acid	11.28	122	32849	68.56	ug/ml	93
29) 1,2,4-Trichlorobenzene	11.44	180	80238	66.88	ug/ml	99
30) Naphthalene	11.56	128	222148	67.23	ug/ml	99
32) 4-Chloroaniline	11.68	127	101276	68.45	ug/ml	87
33) Hexachlorobutadiene	11.76	225	62578	69.55	ug/ml	96
34) 4-Chloro-3-methylphenol	12.52	107	75943	86.96	ug/ml	99
35) 2-Methylnaphthalene	12.69	142	163527	72.39	ug/ml	100
37) Hexachlorocyclopentadiene	12.94	237	50433	56.17	ug/ml	99
38) 2,4,6-Trichlorophenol	13.17	196	63417	78.48	ug/ml	99
39) 2,4,5-Trichlorophenol	13.24	196	67964m	82.70	ug/ml	
41) 2-Chloronaphthalene	13.49	162	170533	69.39	ug/ml	96
42) 2-Nitroaniline	13.69	65	66543	83.48	ug/ml	94
43) Acenaphthylene	14.15	152	251943	77.81	ug/ml	99
44) Dimethyl Phthalate	14.01	163	219637	86.29	ug/ml	99
45) 2,6-Dinitrotoluene	14.10	165	48053	87.11	ug/ml	78

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\010719\0107F018.D Vial: 16
Acq On : 8 Jan 2019 2:26 am Operator: CConover
Sample : KQ1818690-01 | LCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:16:34 2019 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Jan 10 13:16:03 2019
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Acenaphthene	14.44	154	162978	75.60	ug/ml	97
47) 3-Nitroaniline	14.37	138	43045	77.06	ug/ml	87
48) 2,4-Dinitrophenol	14.54	184	15634	66.35	ug/ml	95
49) Dibenzofuran	14.72	168	253474	76.85	ug/ml	93
50) 4-Nitrophenol	14.70	109	34027	81.81	ug/ml#	77
51) 2,4-Dinitrotoluene	14.76	165	61604	85.98	ug/ml	97
52) 2,3,4,6-Tetrachlorophenol	14.94	232	52349	87.63	ug/ml	85
53) Fluorene	15.29	166	202351	81.65	ug/ml	98
54) 4-Chlorophenyl Phenyl Ethe	15.31	204	112929	85.15	ug/ml	94
55) Diethyl Phthalate	15.16	149	215312	91.27	ug/ml	100
56) 4-Nitroaniline	15.37	138	37155	70.40	ug/ml	86
57) 2-Methyl-4,6-dinitrophenol	15.41	198	32475	78.76	ug/ml	70
58) Diphenylamine	15.51	169	130415	86.63	ug/ml	99
59) Azobenzene	15.56	77	216233	76.24	ug/ml	98
63) 4-Bromophenyl Phenyl Ether	16.10	248	61311	86.56	ug/ml	90
64) Hexachlorobenzene	16.15	284	61277	91.41	ug/ml	96
66) Pentachlorophenol	16.50	266	30204	72.30	ug/ml	98
68) Phenanthrene	16.84	178	238294	77.38	ug/ml	99
69) Anthracene	16.92	178	243062	76.43	ug/ml	98
70) Carbazole	17.22	167	196273	64.31	ug/ml	98
71) Di-n-butyl Phthalate	17.83	149	276220	75.93	ug/ml	100
72) Fluoranthene	18.77	202	232000	71.53	ug/ml	100
74) Benzidine	19.04	184	27670	26.07	ug/ml	97
75) Pyrene	19.13	202	230231	72.63	ug/ml	99
77) Butyl Benzyl Phthalate	20.27	149	130200	79.42	ug/ml	94
79) 3,3'-Dichlorobenzidine	21.25	252	87101	71.52	ug/ml	99
80) Benz(a)anthracene	21.25	228	248975	80.81	ug/ml	100
81) Chrysene	21.33	228	226876	77.45	ug/ml	99
82) Bis(2-ethylhexyl) Phthalat	21.44	149	188870	84.11	ug/ml	100
84) Di-n-octyl Phthalate	22.93	149	304648	81.24	ug/ml	96
85) Benzo(b)fluoranthene	23.63	252	238303	76.58	ug/ml	98
86) Benzo(k)fluoranthene	23.70	252	227596	72.25	ug/ml	98
89) Benzo(a)pyrene	24.38	252	226041	79.14	ug/ml	98
90) Indeno(1,2,3-cd)pyrene	26.99	276	230151	78.91	ug/ml	95
91) Dibenz(a,h)anthracene	27.07	278	225468	77.92	ug/ml	96
92) Benzo(g,h,i)perylene	27.57	276	236941	80.33	ug/ml	95

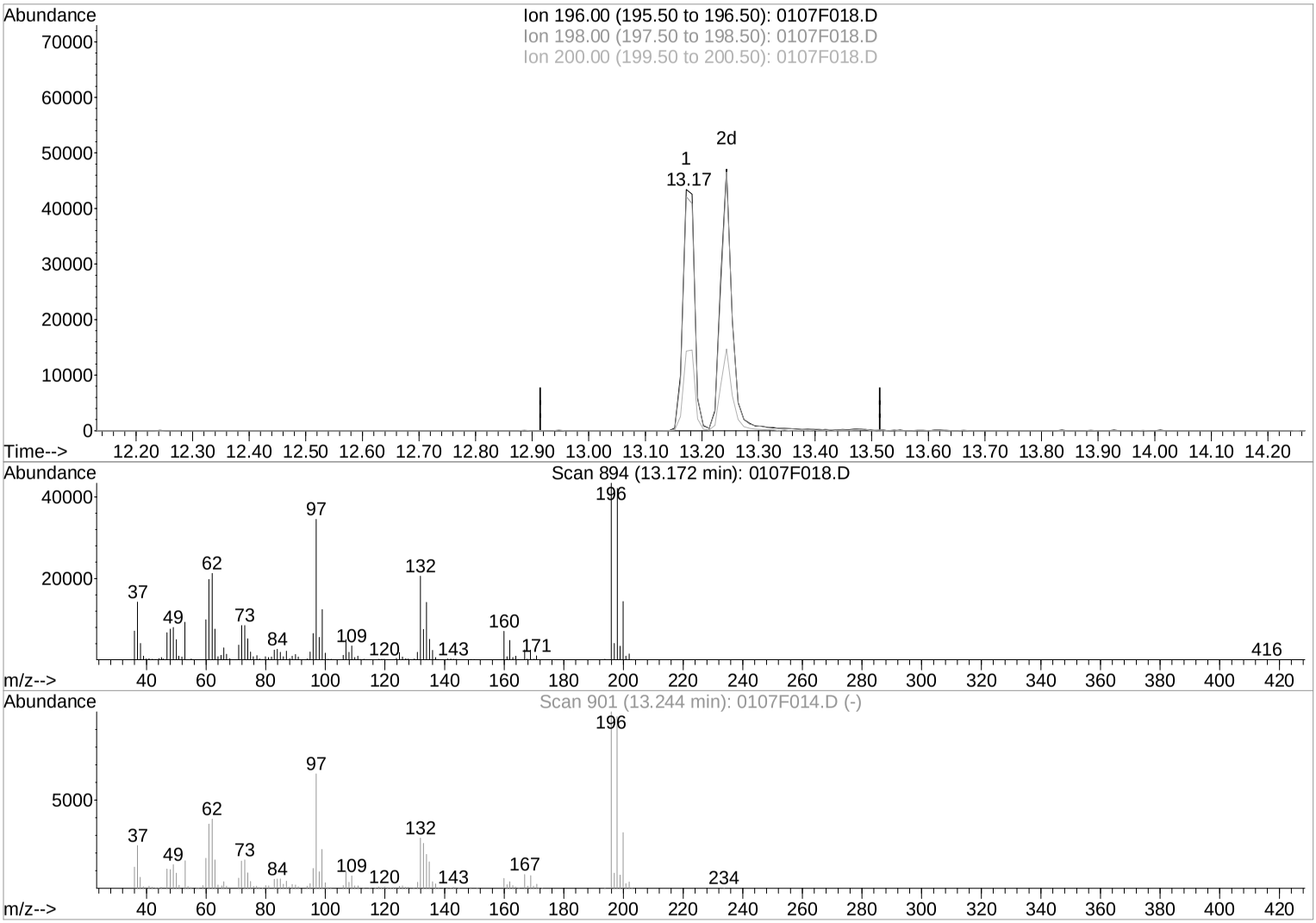
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F018.D Vial: 16
Acq On : 8 Jan 2019 2:26 am Operator: CConover
Sample : KQ1818690-01 | LCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:20 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Jan 10 13:16:03 2019
Response via : Multiple Level Calibration



TIC: 0107F018.D

(39) 2,4,5-Trichlorophenol (T)

13.17min 77.17ug/ml

response 63417

Ion	Exp%	Act%
196.00	100	100
198.00	98.10	97.06
200.00	33.10	33.05
0.00	0.00	0.00

Manual Integration:

Before

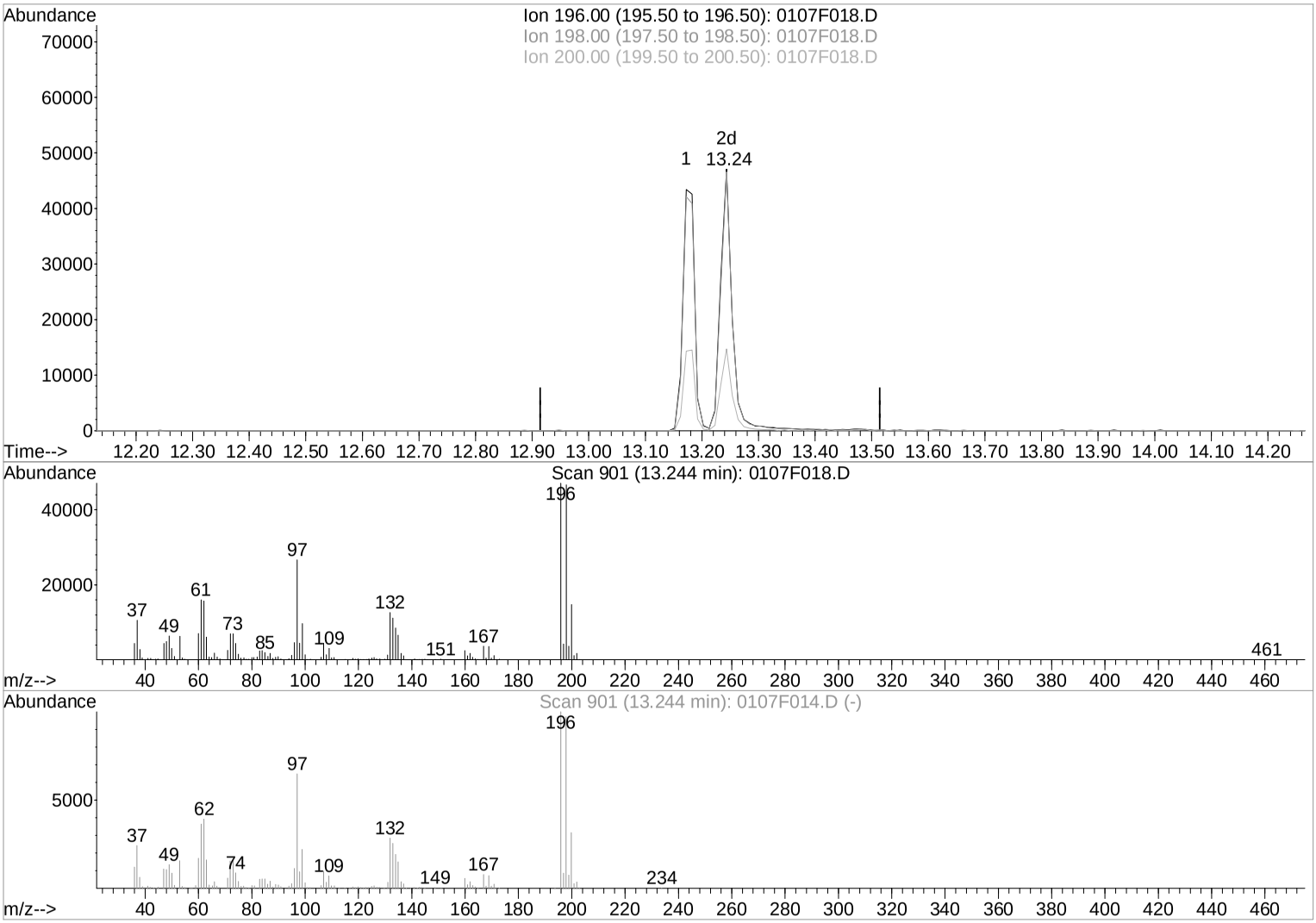
01/10/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F018.D Vial: 16
Acq On : 8 Jan 2019 2:26 am Operator: CConover
Sample : KQ1818690-01 | LCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:22 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Jan 10 13:16:03 2019
Response via : Multiple Level Calibration



TIC: 0107F018.D

(39) 2,4,5-Trichlorophenol (T)

13.24min 82.70ug/ml m

response 67964

Ion	Exp%	Act%
196.00	100	100
198.00	98.10	98.93
200.00	33.10	31.30
0.00	0.00	0.00

Manual Integration:

After

WP

01/10/19

1st CE 01/10/19
2nd CPW 01/14/19

Validation Report

Data File: J:\MS07\DATA\010719\0107F014.D\
Lab ID: KQ1900278-02
RunType: CCV
Matrix: Soil

Date Acquired: 1/7/19 23:45:00
Batch ID: 621348
Analysis Method: 8270D/SVO TCLP

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Internal Standards	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

1st 01/10/19
2nd 01/14/19

Quantitation Report

Data File:	J:\MS07\DATA\010719\0107F014.D\	**Instrument:**	K-MS-07
Acqu Date:	1/7/19 23:45:00	**Vial:**	2
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1900278-02	**Raw Units:**	ug/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	SVO TCLP	**Collect Date:**	11/13/18	**Receive Date:**	11/21/18

Analysis Lot:	621348	**Prep Lot:**		**Report Group:**	KQ1900278
Analysis	8270D	**Prep Method:**			
		Prep Date:			

Title:	TCLP Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800550
		Report List ID:	18580

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
1,4-Dichlorobenzene-d4	9.42		45827	40.00	OK
Acenaphthene-d10	14.38		98428	40.00	OK
Chrysene-d12	21.28		121991	40.00	OK
Naphthalene-d8	11.52		163058	40.00	OK
Perylene-d12	24.52		129370	40.00	OK
Phenanthrene-d10	16.80		125440	40.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
2,4,6-Tribromophenol	15.69		43211	119.74	Y
2-Fluorobiphenyl	13.32		282051	76.76	Y
Nitrobenzene-d5	10.36		135159	85.97	Y
Phenol-d6	8.92		116878	78.69	Y
p-Terphenyl-d14	19.43		225015	80.50	Y

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
2,4,5-Trichlorophenol, TCLP	13.24		85828	81.66	Y
2,4,6-Trichlorophenol, TCLP	13.18		82449	79.78	Y
2,4-Dinitrotoluene, TCLP	14.76		72081	78.66	Y
2-Methylphenol, TCLP	9.94		86683	83.76	Y
4-Methylphenol, TCLP	10.20		120958	75.27	Y
Hexachlorobenzene, TCLP	16.17		74280	97.57	Y
Hexachlorobutadiene, TCLP	11.76		97748	85.70	Y
Hexachloroethane, TCLP	10.24		65070	81.88	Y
Nitrobenzene, TCLP	10.39		129483	82.05	Y
Pentachlorophenol (PCP), TCLP	16.51		40824	83.26	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Printed: 1/10/19 13:44
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

1st 01/10/19

2nd 01/14/19

Data File:	J:\MS07\DATA\010719\0107F014.D\	**Instrument:**	K-MS-07
Acqu Date:	1/7/19 23:45:00	**Vial:**	2
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1900278-02	**Raw Units:**	ug/mL

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Pyridine, TCLP	4.38		81086	70.22	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

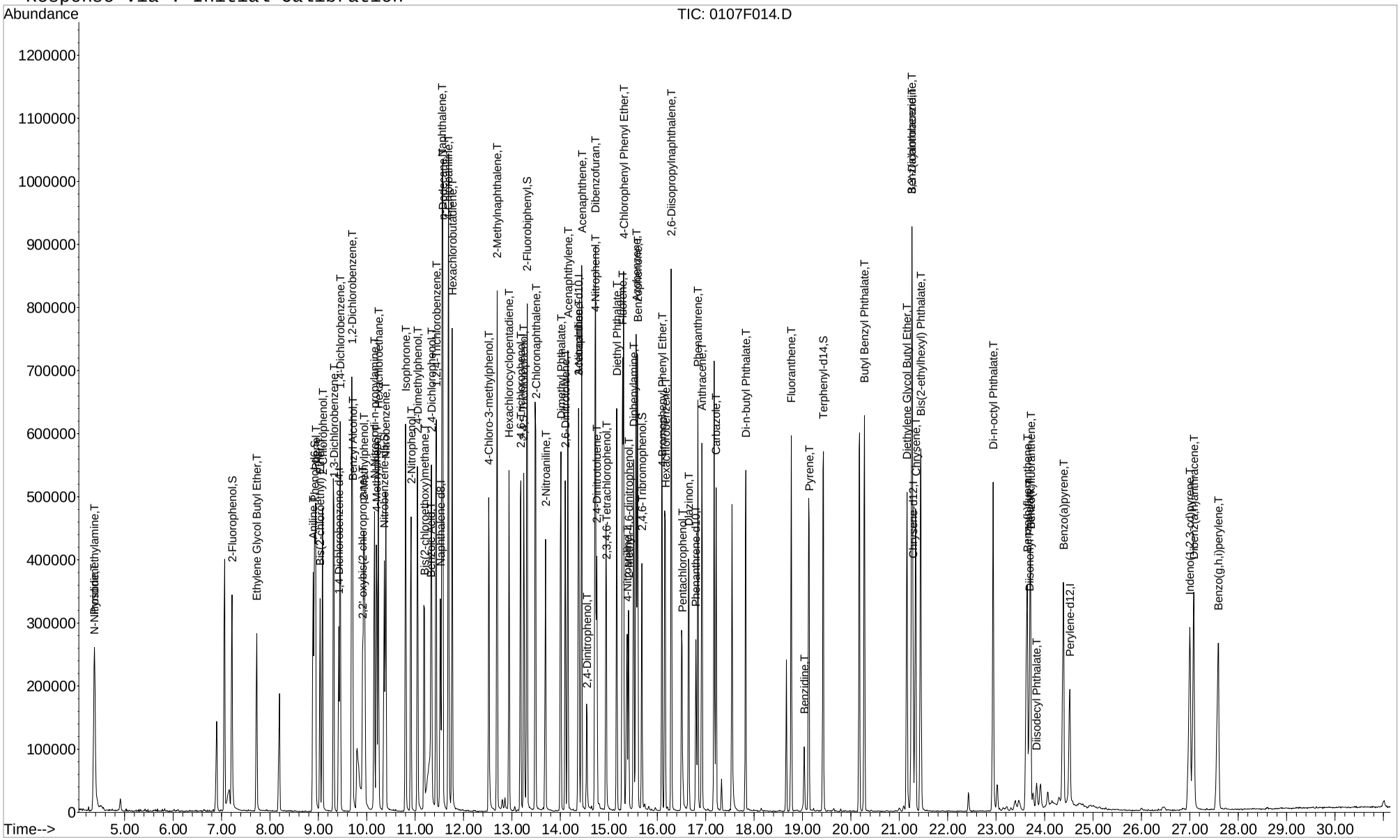
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS07\DATA\010719\0107F014.D Vial: 2
Acq On : 7 Jan 2019 11:45 pm Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:15 2019 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Jan 10 13:16:03 2019
Response via : Initial Calibration

01/10/19 01/14/19
1st 2nd



Data File : J:\MS07\DATA\010719\0107F014.D Vial: 2
Acq On : 7 Jan 2019 11:45 pm Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:08:04 2019 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	45827	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	163058	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.38	164	98428	40.00	ug/ml	-0.01
61) Phenanthrene-d10	16.80	188	125440	40.00	ug/ml	0.00
73) Chrysene-d12	21.28	240	121991	40.00	ug/ml	0.00
83) Perylene-d12	24.52	264	129370	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.22	112	93818	78.55	ug/ml	0.03
Spiked Amount 150.000	Range 21 - 100		Recovery = 52.37%			
8) Phenol-d6	8.92	99	116878	78.69	ug/ml	0.06
Spiked Amount 150.000	Range 10 - 94		Recovery = 52.46%			
20) Nitrobenzene-d5	10.36	82	135159	85.97	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 85.97%			
40) 2-Fluorobiphenyl	13.32	172	282051	76.76	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 76.76%			
62) 2,4,6-Tribromophenol	15.69	330	43211	119.74	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 79.83%			
76) Terphenyl-d14	19.43	244	225015	80.50	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 80.50%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.37	42	137228	87.07	ug/ml	94
3) Pyridine	4.38	79	81086	70.22	ug/ml	97
5) Ethylene Glycol Butyl Ethe	7.73	57	94115	70.07	ug/ml	95
6) Aniline	8.89	93	115163	58.69	ug/ml#	18
7) Bis(2-chloroethyl) Ether	9.04	93	92387	74.28	ug/ml	87
9) Phenol	8.94	94	115248m	67.66	ug/ml	
10) 2-Chlorophenol	9.09	128	111010	77.24	ug/ml	99
11) 1,3-Dichlorobenzene	9.32	146	134235	76.62	ug/ml	99
12) 1,4-Dichlorobenzene	9.45	146	142058	78.79	ug/ml	99
13) 1,2-Dichlorobenzene	9.69	146	132445	76.62	ug/ml	99
14) Benzyl Alcohol	9.71	108	63975	72.01	ug/ml	88
15) 2,2'-oxybis(2-chloropropan	9.91	45	137711	72.55	ug/ml	97
16) 2-Methylphenol	9.94	107	86683	83.76	ug/ml	87
17) Hexachloroethane	10.24	117	65070	81.88	ug/ml	99
18) N-Nitrosodi-n-propylamine	10.16	70	82550	81.18	ug/ml	98
19) 4-Methylphenol	10.20	107	120958	75.27	ug/ml	96
21) Nitrobenzene	10.39	77	129483	82.05	ug/ml	90
23) Isophorone	10.80	82	219925	88.61	ug/ml	98
24) 2-Nitrophenol	10.92	139	67791	84.87	ug/ml	84
25) 2,4-Dimethylphenol	11.05	122	87023	78.48	ug/ml	93
26) Bis(2-chloroethoxy)methane	11.19	93	114723	79.37	ug/ml	98
27) 2,4-Dichlorophenol	11.33	162	109485	83.25	ug/ml	96
28) Benzoic Acid	11.32	122	56853	87.97	ug/ml	88
29) 1,2,4-Trichlorobenzene	11.44	180	124058	81.57	ug/ml	97
30) Naphthalene	11.56	128	339740	81.10	ug/ml	99
31) n-Dodecane	11.57	57	148121	79.76	ug/ml	97
32) 4-Chloroaniline	11.69	127	142133	75.78	ug/ml	94
33) Hexachlorobutadiene	11.76	225	97748	85.70	ug/ml	98
34) 4-Chloro-3-methylphenol	12.52	107	100150	90.46	ug/ml	94
35) 2-Methylnaphthalene	12.69	142	231798	80.95	ug/ml	99
37) Hexachlorocyclopentadiene	12.94	237	86142	71.84	ug/ml	96
38) 2,4,6-Trichlorophenol	13.18	196	82449	79.78	ug/ml	97
39) 2,4,5-Trichlorophenol	13.24	196	85828m	81.66	ug/ml	
41) 2-Chloronaphthalene	13.49	162	230804	73.44	ug/ml	96
42) 2-Nitroaniline	13.69	65	81956	80.40	ug/ml	99
43) Acenaphthylene	14.15	152	334989	80.89	ug/ml	98

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\010719\0107F014.D Vial: 2
Acq On : 7 Jan 2019 11:45 pm Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:08:04 2019 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Initial Calibration
DataAcq Meth : 8270_1

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
44)	Dimethyl Phthalate	14.01	163	273803	84.11	ug/ml	98
45)	2,6-Dinitrotoluene	14.10	165	57830	81.97	ug/ml	82
46)	Acenaphthene	14.44	154	211847	76.84	ug/ml	98
47)	3-Nitroaniline	14.38	138	51749	72.44	ug/ml	93
48)	2,4-Dinitrophenol	14.55	184	24990	76.95	ug/ml	82
49)	Dibenzofuran	14.73	168	320533	75.99	ug/ml	88
50)	4-Nitrophenol	14.71	109	47346	89.01	ug/ml#	1
51)	2,4-Dinitrotoluene	14.76	165	72081	78.66	ug/ml	81
52)	2,3,4,6-Tetrachlorophenol	14.95	232	67409	88.23	ug/ml	93
53)	Fluorene	15.29	166	248451	78.39	ug/ml	98
54)	4-Chlorophenyl Phenyl Ethe	15.31	204	140206	82.66	ug/ml	95
55)	Diethyl Phthalate	15.16	149	256686	85.07	ug/ml	98
56)	4-Nitroaniline	15.38	138	46136	68.35	ug/ml	85
57)	2-Methyl-4,6-dinitrophenol	15.41	198	41570	78.82	ug/ml#	62
58)	Diphenylamine	15.51	169	158526	82.34	ug/ml	99
59)	Azobenzene	15.56	77	310095m	85.49	ug/ml	
60)	Benzophenone	15.59	105	207667	79.63	ug/ml	99
63)	4-Bromophenyl Phenyl Ether	16.10	248	75976	94.45	ug/ml	88
64)	Hexachlorobenzene	16.17	284	74280	97.57	ug/ml	75
65)	2,6-Diisopropylnaphthalene	16.29	197	225553	98.50	ug/ml	98
66)	Pentachlorophenol	16.51	266	40824	83.26	ug/ml	98
67)	Diazinon	16.65	137	41653	85.69	ug/ml	96
68)	Phenanthrene	16.84	178	280876	80.31	ug/ml	99
69)	Anthracene	16.92	178	283122	78.40	ug/ml	99
70)	Carbazole	17.22	167	245564	70.84	ug/ml	99
71)	Di-n-butyl Phthalate	17.83	149	325184	78.24	ug/ml	99
72)	Fluoranthene	18.77	202	289809	77.56	ug/ml	99
74)	Benzidine	19.04	184	42412	32.75	ug/ml	97
75)	Pyrene	19.14	202	299097	77.35	ug/ml	99
77)	Butyl Benzyl Phthalate	20.28	149	173798	86.90	ug/ml	96
78)	Diethylene Glycol Butyl Et	21.16	105	241931	89.06	ug/ml	96
79)	3,3'-Dichlorobenzidine	21.26	252	127181	85.61	ug/ml	100
80)	Benz(a)anthracene	21.26	228	307259	81.75	ug/ml	100
81)	Chrysene	21.33	228	279974	78.34	ug/ml	99
82)	Bis(2-ethylhexyl) Phthalat	21.45	149	238948	87.23	ug/ml	97
84)	Di-n-octyl Phthalate	22.94	149	382221	81.94	ug/ml	98
85)	Benzo(b)fluoranthene	23.64	252	314915	81.35	ug/ml	99
86)	Benzo(k)fluoranthene	23.71	252	297479	75.91	ug/ml	98
87)	Diisononyl Phthalate	23.69	293	18628m	96.07	ug/ml	
88)	Diisodecyl Phthalate	23.84	149	331119m	90.16	ug/ml	
89)	Benzo(a)pyrene	24.39	252	288678	81.25	ug/ml	98
90)	Indeno(1,2,3-cd)pyrene	27.00	276	294586	81.19	ug/ml	95
91)	Dibenz(a,h)anthracene	27.08	278	284605m	79.07	ug/ml	
92)	Benzo(g,h,i)perylene	27.60	276	294350	80.22	ug/ml	93

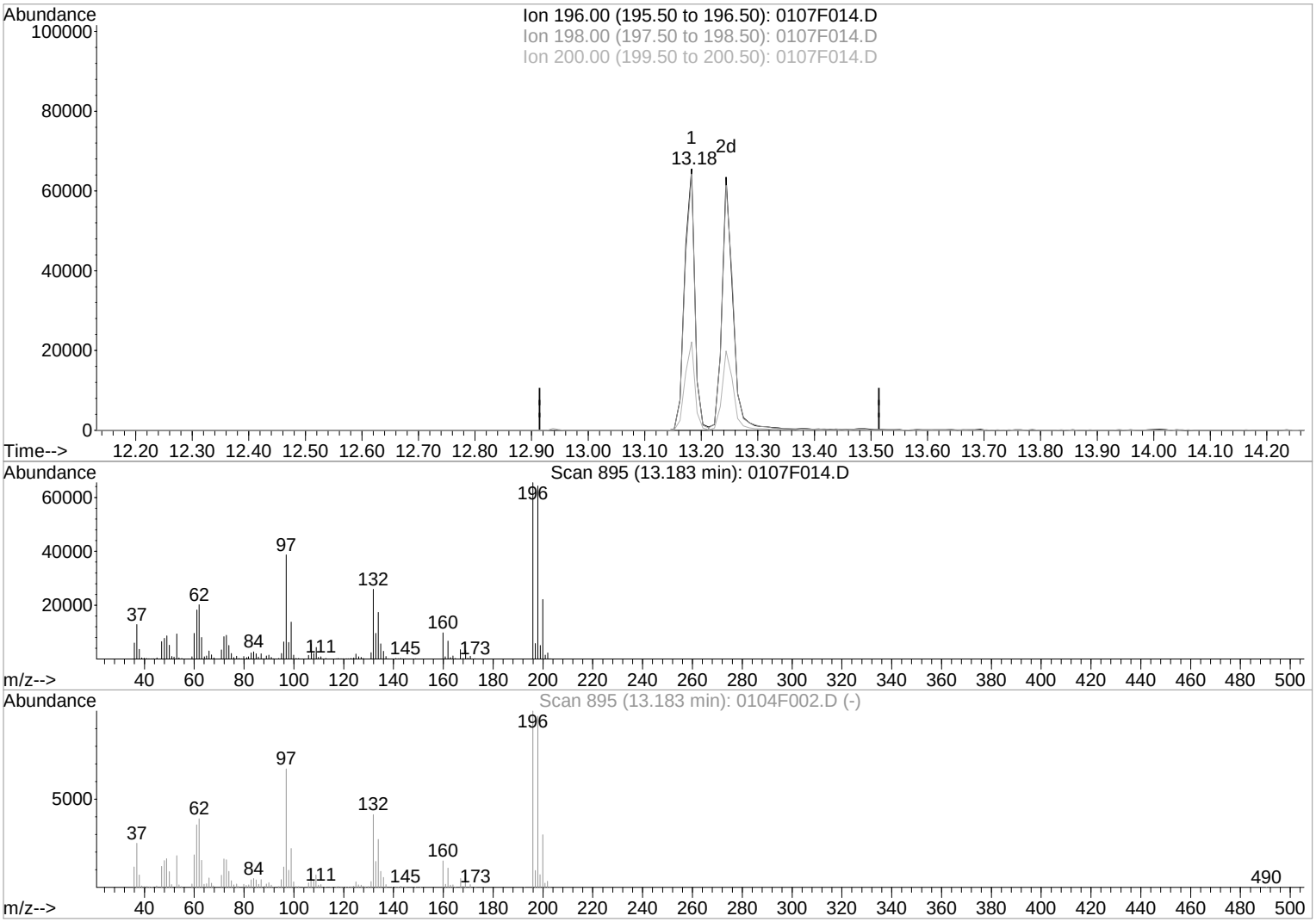
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F014.D Vial: 2
Acq On : 7 Jan 2019 11:45 pm Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:08 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Multiple Level Calibration



TIC: 0107F014.D

(39) 2,4,5-Trichlorophenol (T)

13.18min 78.45ug/ml

response 82449

Ion	Exp%	Act%
196.00	100	100
198.00	98.10	98.15
200.00	33.10	33.91
0.00	0.00	0.00

Manual Integration:

Before

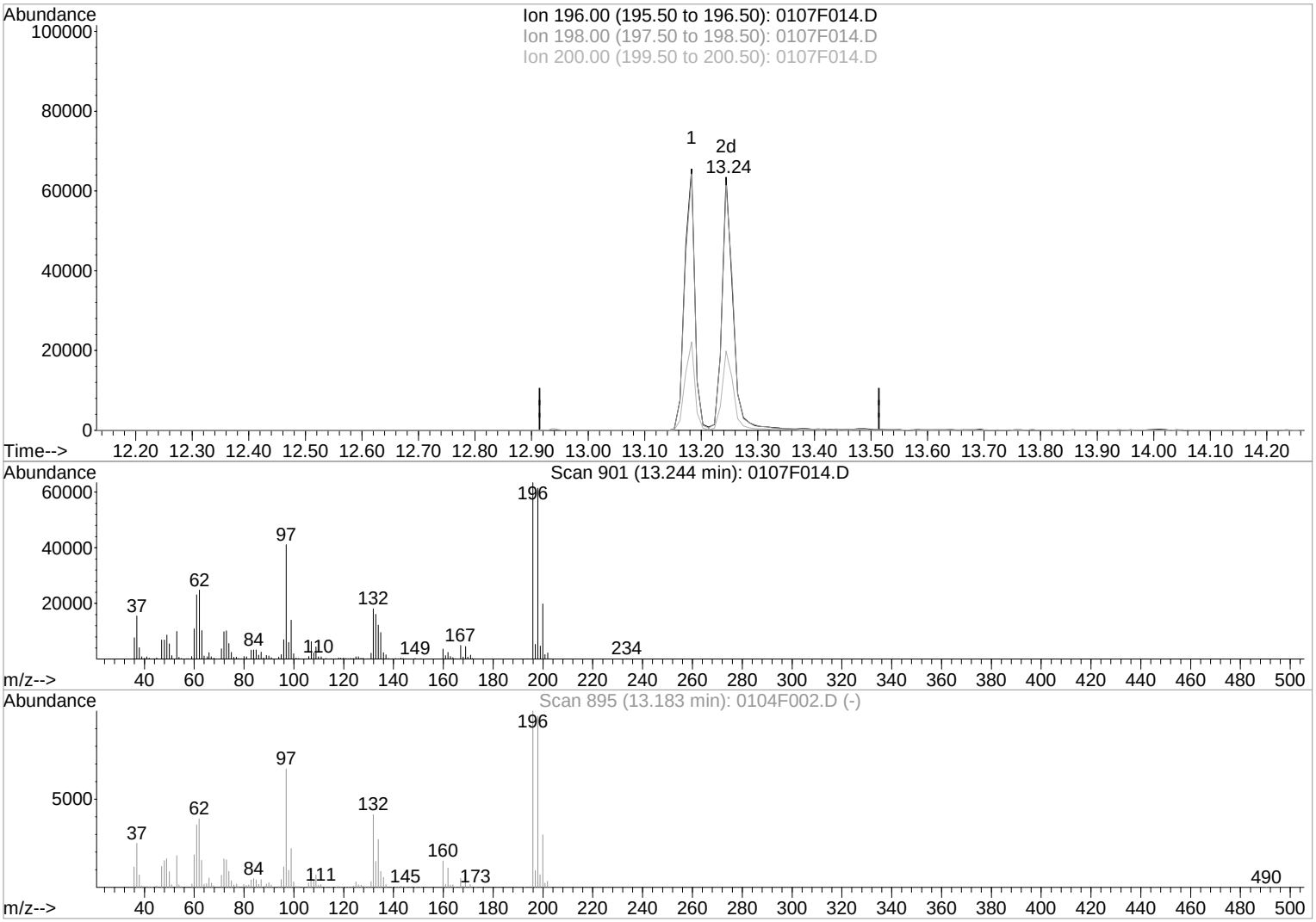
01/10/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F014.D Vial: 2
Acq On : 7 Jan 2019 11:45 pm Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:14 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Multiple Level Calibration



TIC: 0107F014.D

(39) 2,4,5-Trichlorophenol (T)

13.24min 81.66ug/ml m

response 85828

Ion	Exp%	Act%
196.00	100	100
198.00	98.10	96.82
200.00	33.10	31.32
0.00	0.00	0.00

Manual Integration:

After

WP

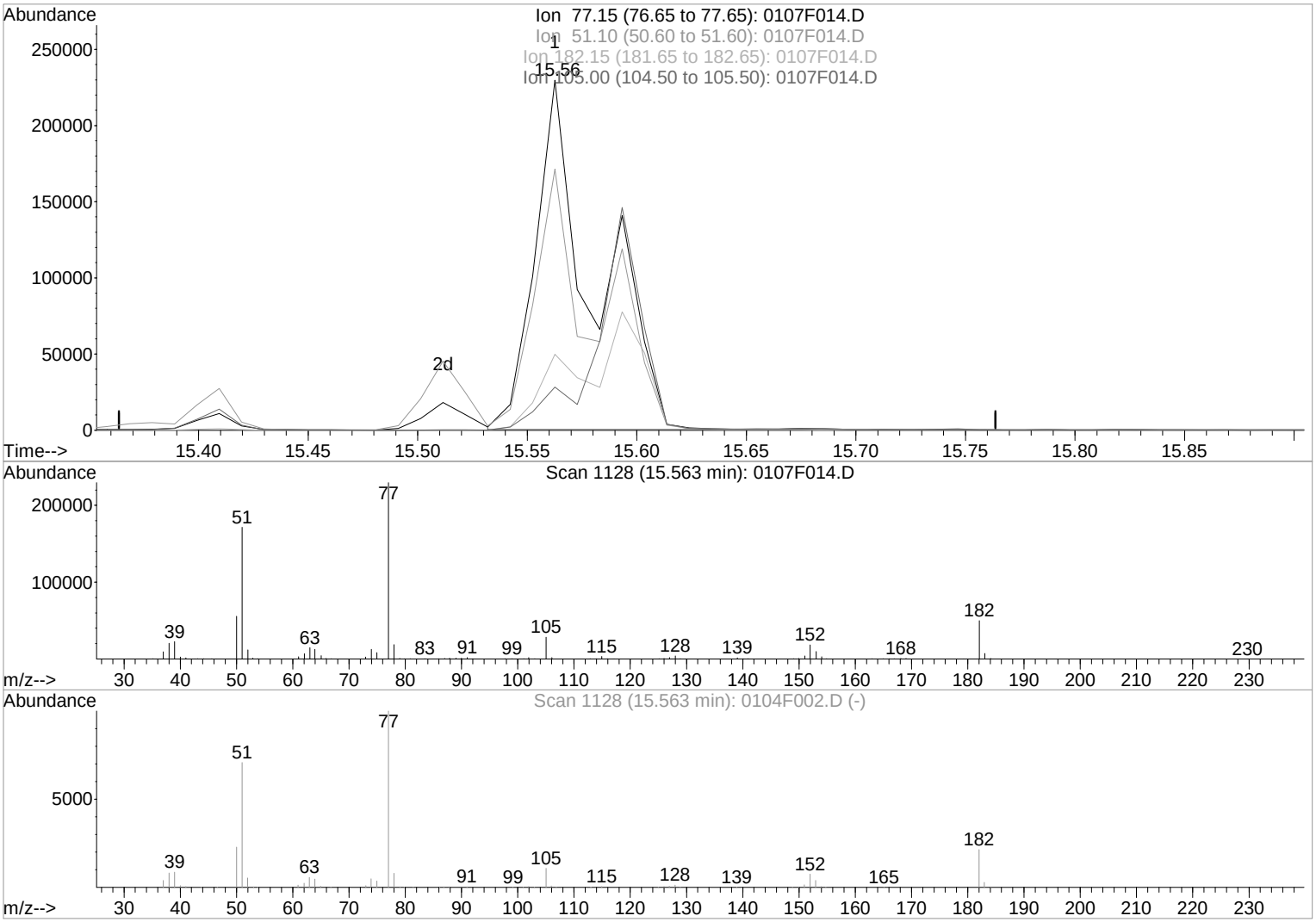
01/10/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F014.D Vial: 2
Acq On : 7 Jan 2019 11:45 pm Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:14 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Multiple Level Calibration



TIC: 0107F014.D

(59) Azobenzene (T)

15.56min 119.48ug/ml

response 433395

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	74.30
182.15	21.70	21.70
105.00	12.30	12.23

Manual Integration:

Before

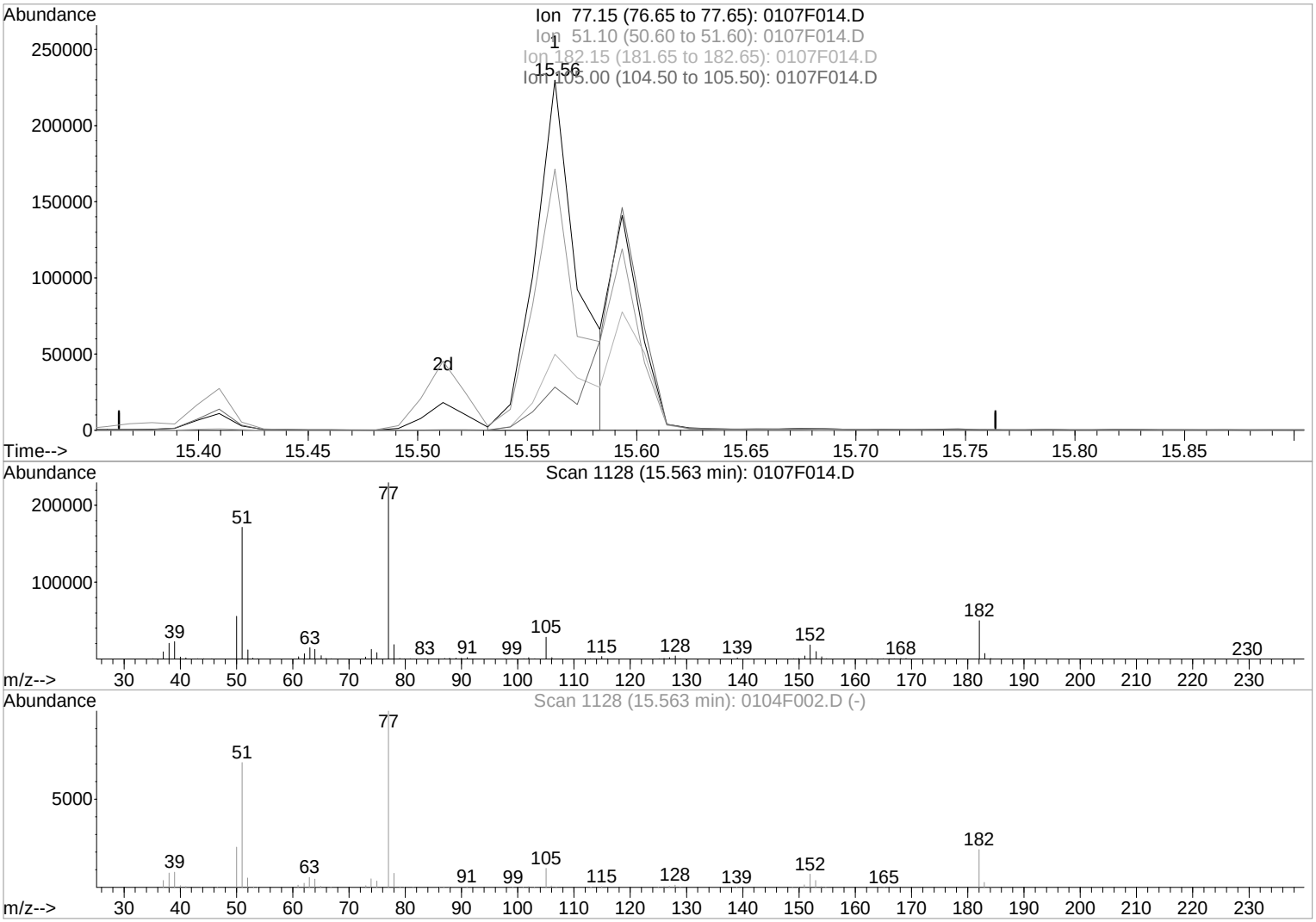
01/10/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F014.D Vial: 2
Acq On : 7 Jan 2019 11:45 pm Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:14 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Multiple Level Calibration



TIC: 0107F014.D

(59) Azobenzene (T)

15.56min 85.49ug/ml m

response 310095

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	74.62
182.15	21.70	21.66
105.00	12.30	12.29

Manual Integration:

After

IC-Overintegrated

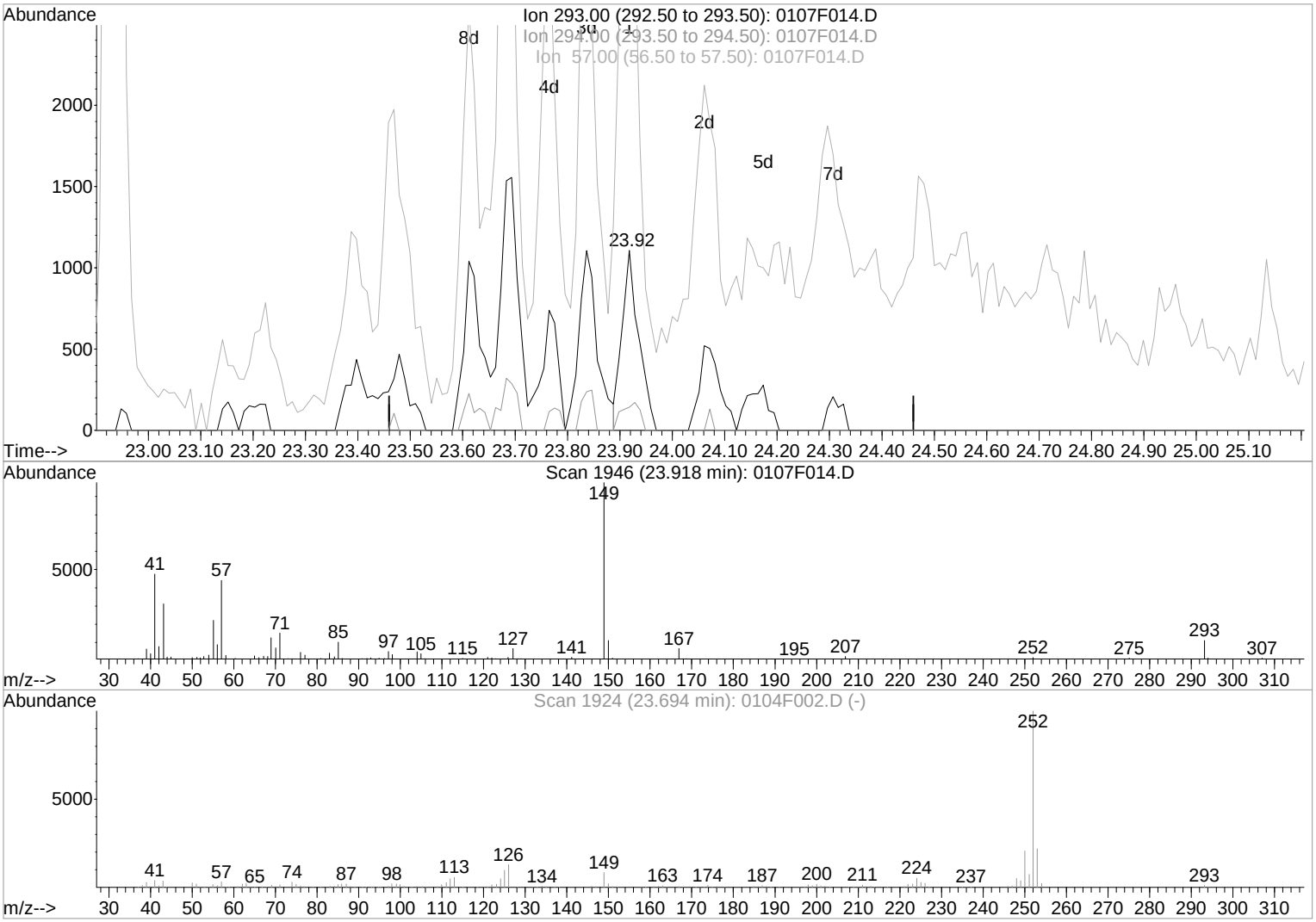
01/10/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F014.D Vial: 2
Acq On : 7 Jan 2019 11:45 pm Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:14 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Multiple Level Calibration



TIC: 0107F014.D

(87) Diisononyl Phthalate (T)

23.92min 12.61ug/ml

response 2445

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	17.01
57.00	33.10	374.44#
0.00	0.00	0.00

Manual Integration:

Before

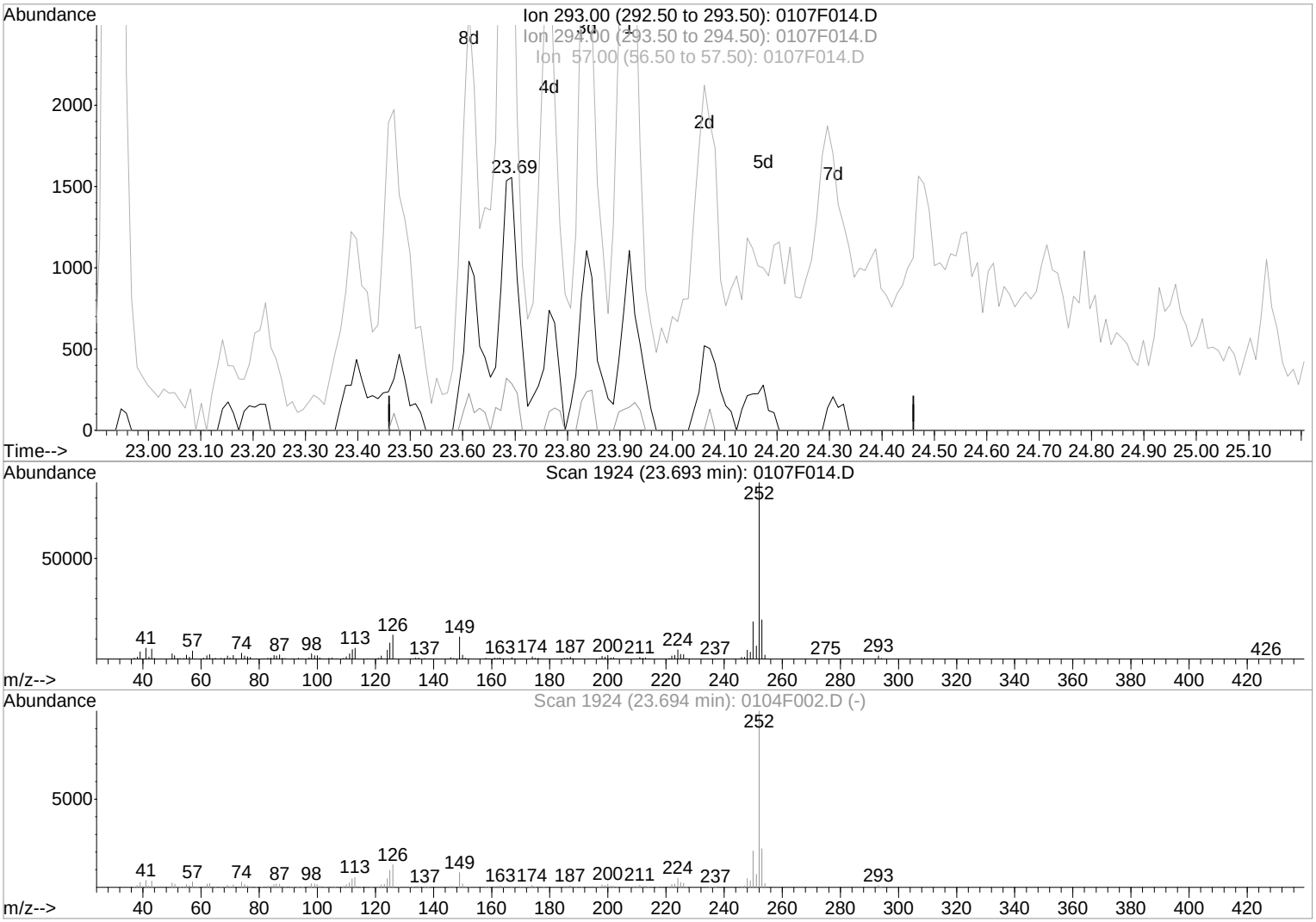
01/10/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F014.D Vial: 2
Acq On : 7 Jan 2019 11:45 pm Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:15 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Multiple Level Calibration



TIC: 0107F014.D

(87) Diisononyl Phthalate (T)

23.69min 96.07ug/ml m

response 18628

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	2.23
57.00	33.10	49.15
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

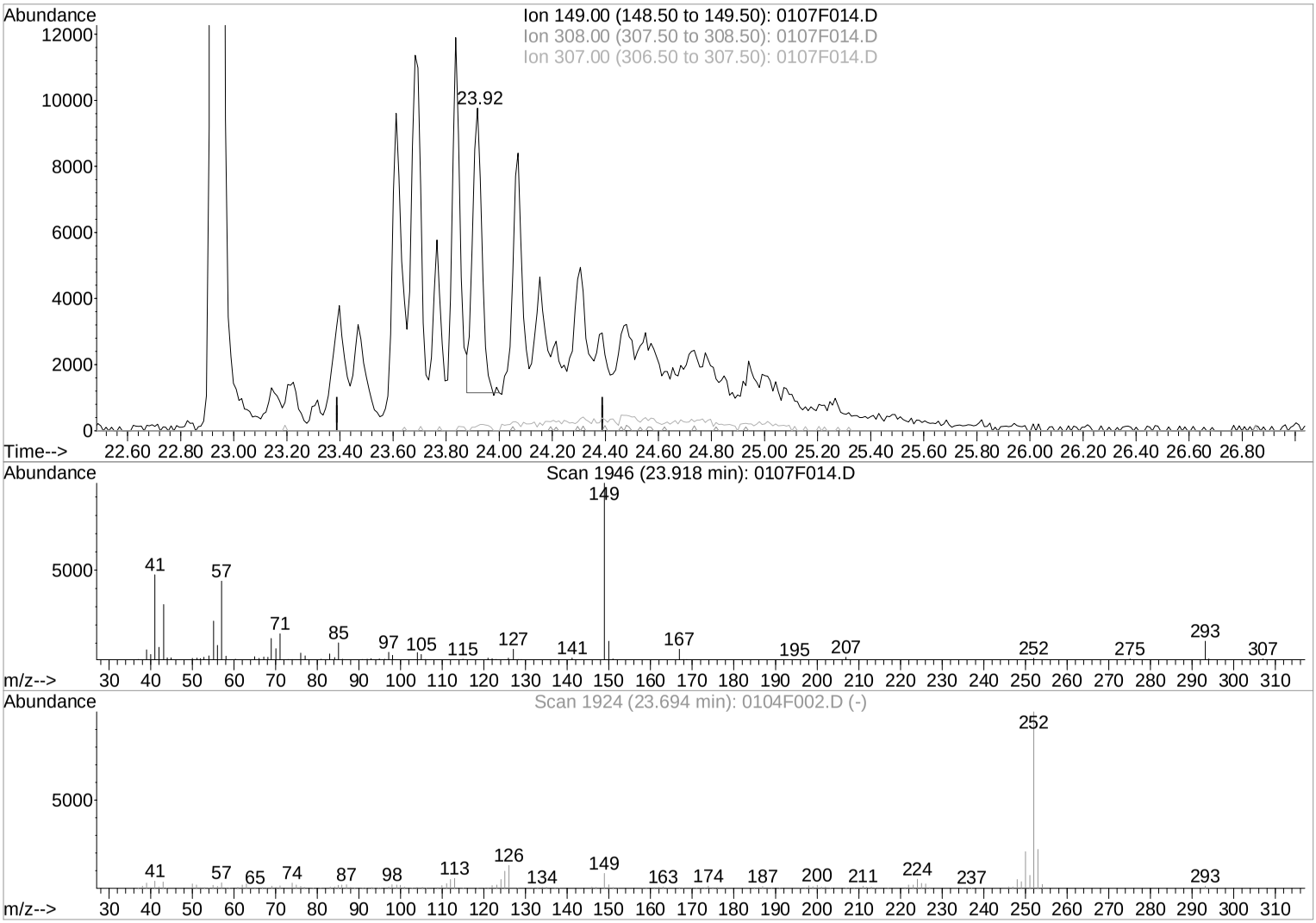
01/10/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F014.D Vial: 2
Acq On : 7 Jan 2019 11:45 pm Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:15 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Multiple Level Calibration



TIC: 0107F014.D

(88) Diisodecyl Phthalate (T)

23.92min 5.69ug/ml

response 20913

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	3.46
0.00	0.00	0.00

Manual Integration:

Before

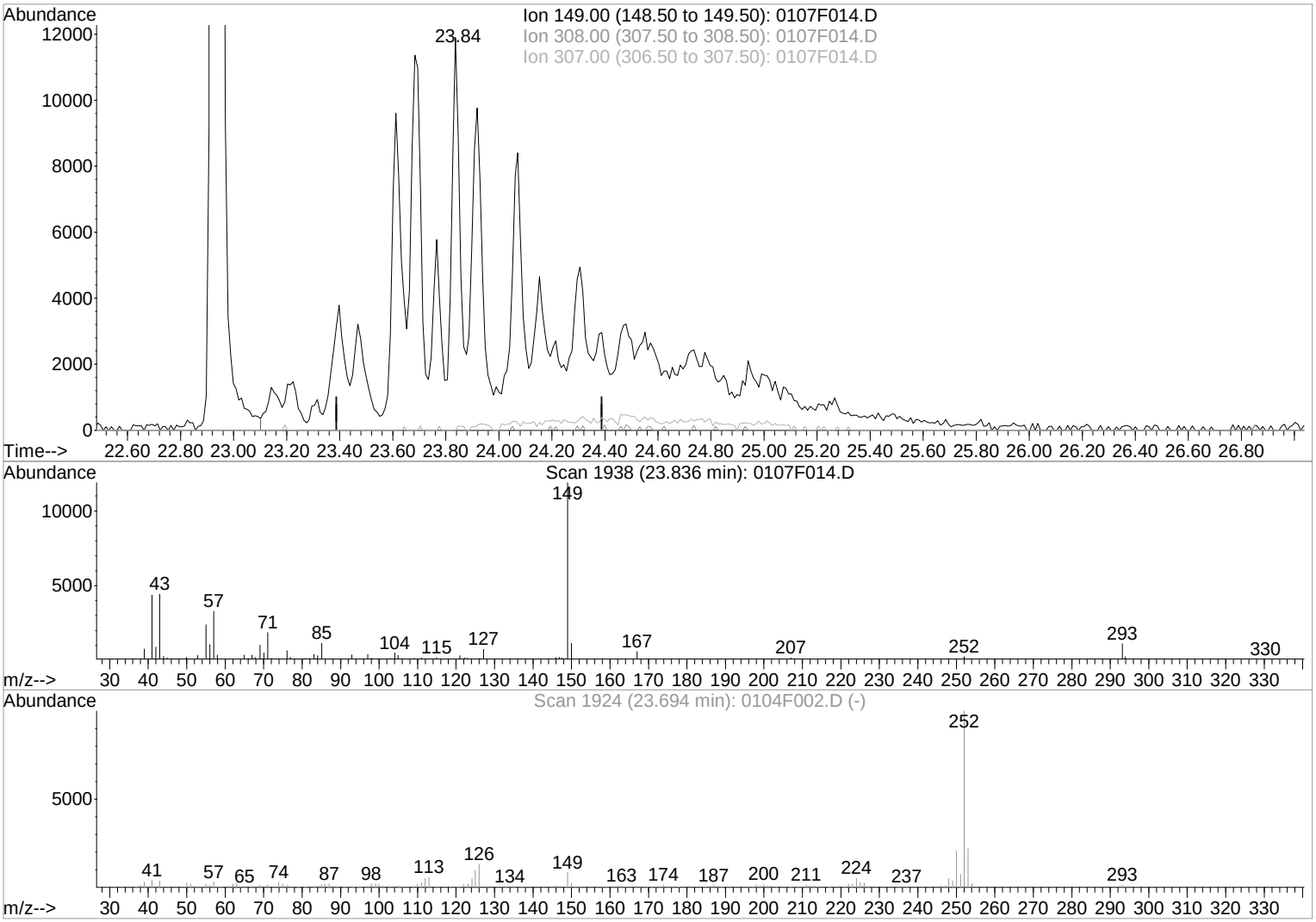
01/10/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F014.D Vial: 2
Acq On : 7 Jan 2019 11:45 pm Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:15 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Multiple Level Calibration



TIC: 0107F014.D

(88) Diisodecyl Phthalate (T)

23.84min 90.16ug/ml m

response 331119

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.22
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

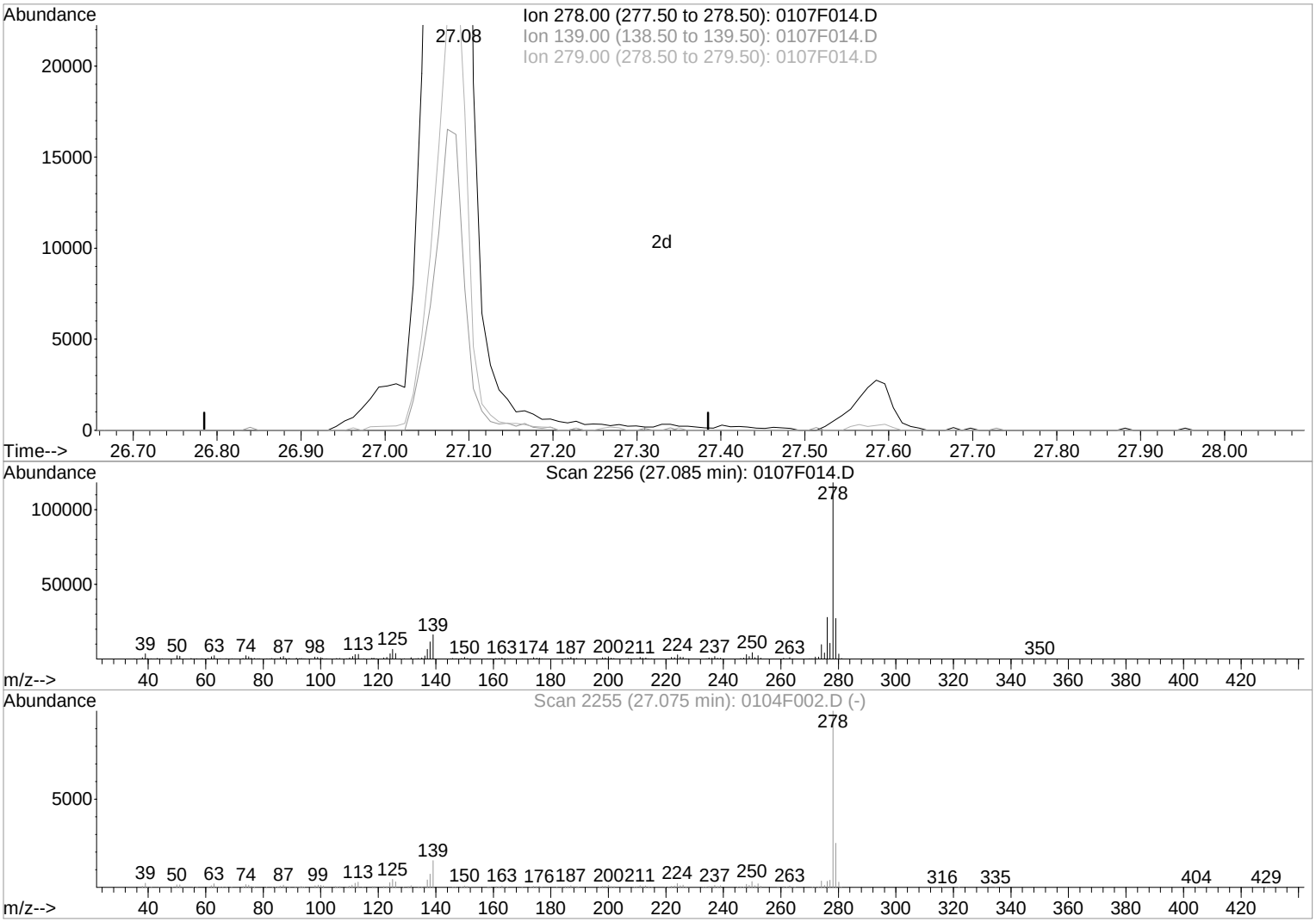
01/10/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F014.D Vial: 2
Acq On : 7 Jan 2019 11:45 pm Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:15 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Single Level Calibration



TIC: 0107F014.D

(91) Dibenz(a,h)anthracene (T)

27.08min 81.43ug/ml

response 293090

Ion	Exp%	Act%
278.00	100	100
139.00	17.30	13.72
279.00	23.20	23.01
0.00	0.00	0.00

Manual Integration:

Before

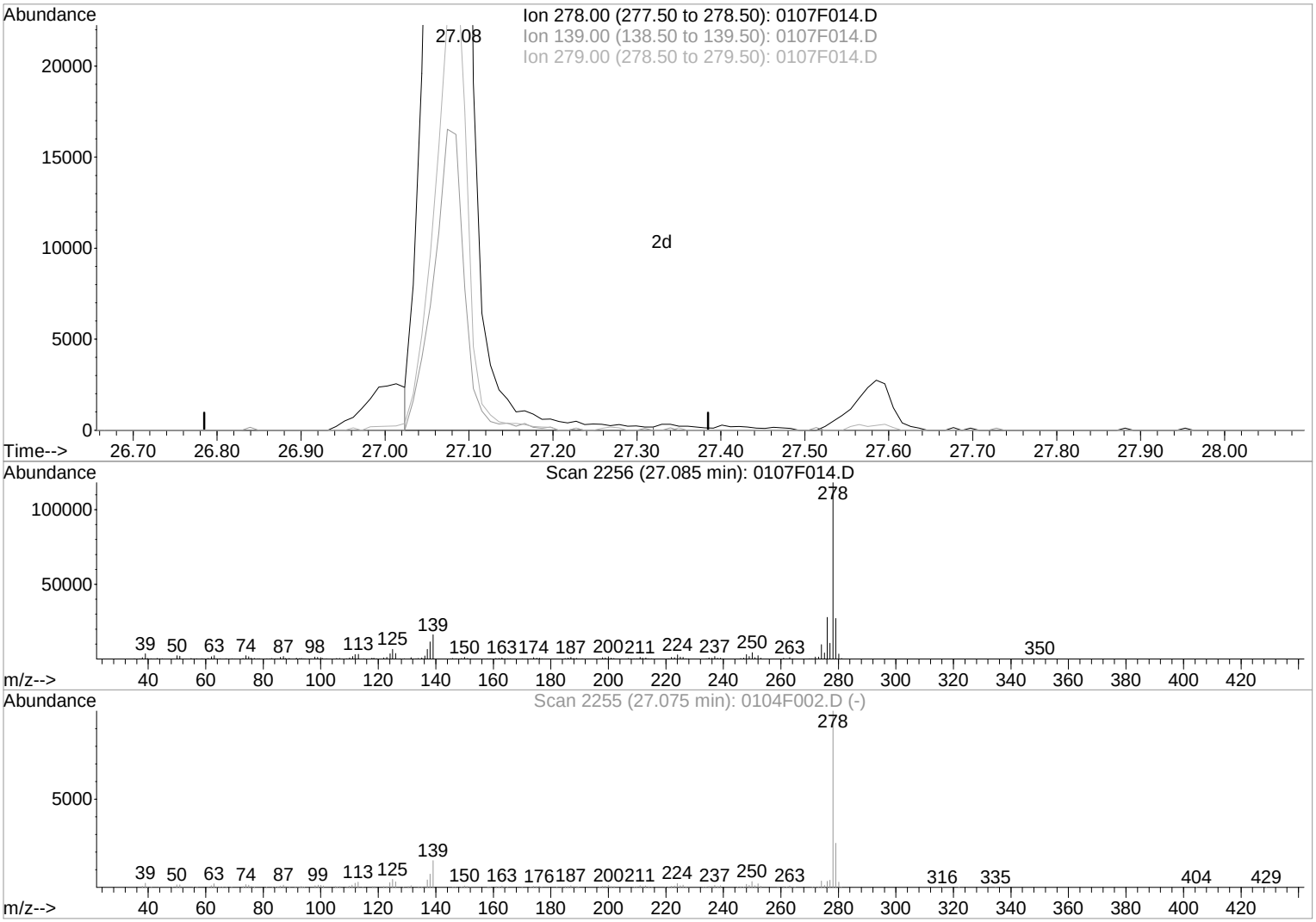
01/10/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F014.D Vial: 2
Acq On : 7 Jan 2019 11:45 pm Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:15 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Single Level Calibration



TIC: 0107F014.D

(91) Dibenz(a,h)anthracene (T)

27.08min 79.07ug/ml m

response 284605

Ion	Exp%	Act%
278.00	100	100
139.00	17.30	13.75
279.00	23.20	22.99
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

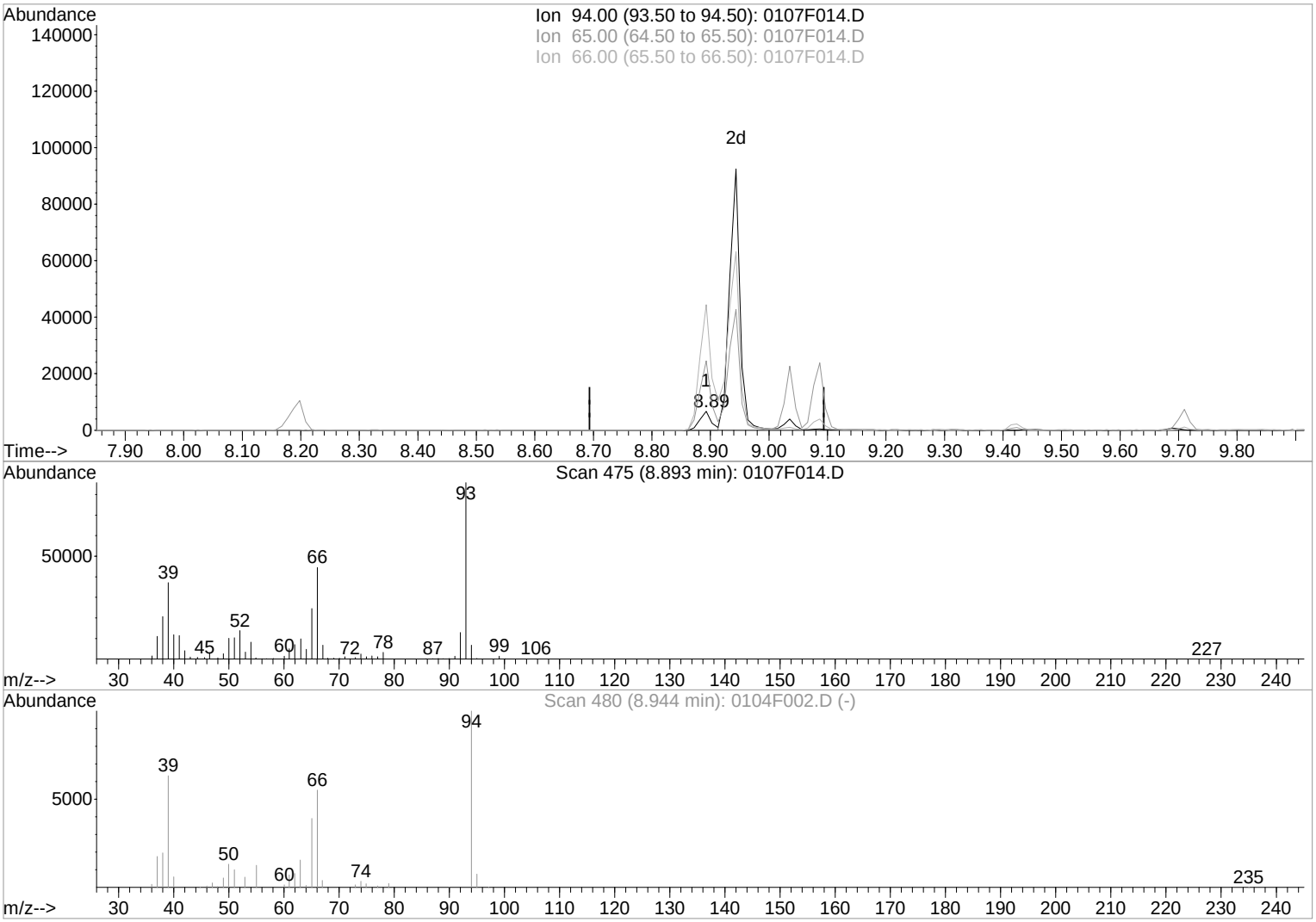
01/10/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F014.D Vial: 2
Acq On : 7 Jan 2019 11:45 pm Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:08 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Multiple Level Calibration



TIC: 0107F014.D

(9) Phenol (T)

8.89min 5.32ug/ml

response 9061

Ion	Exp%	Act%
94.00	100	100
65.00	63.50	371.62#
66.00	103.80	632.00#
0.00	0.00	0.00

Manual Integration:

Before

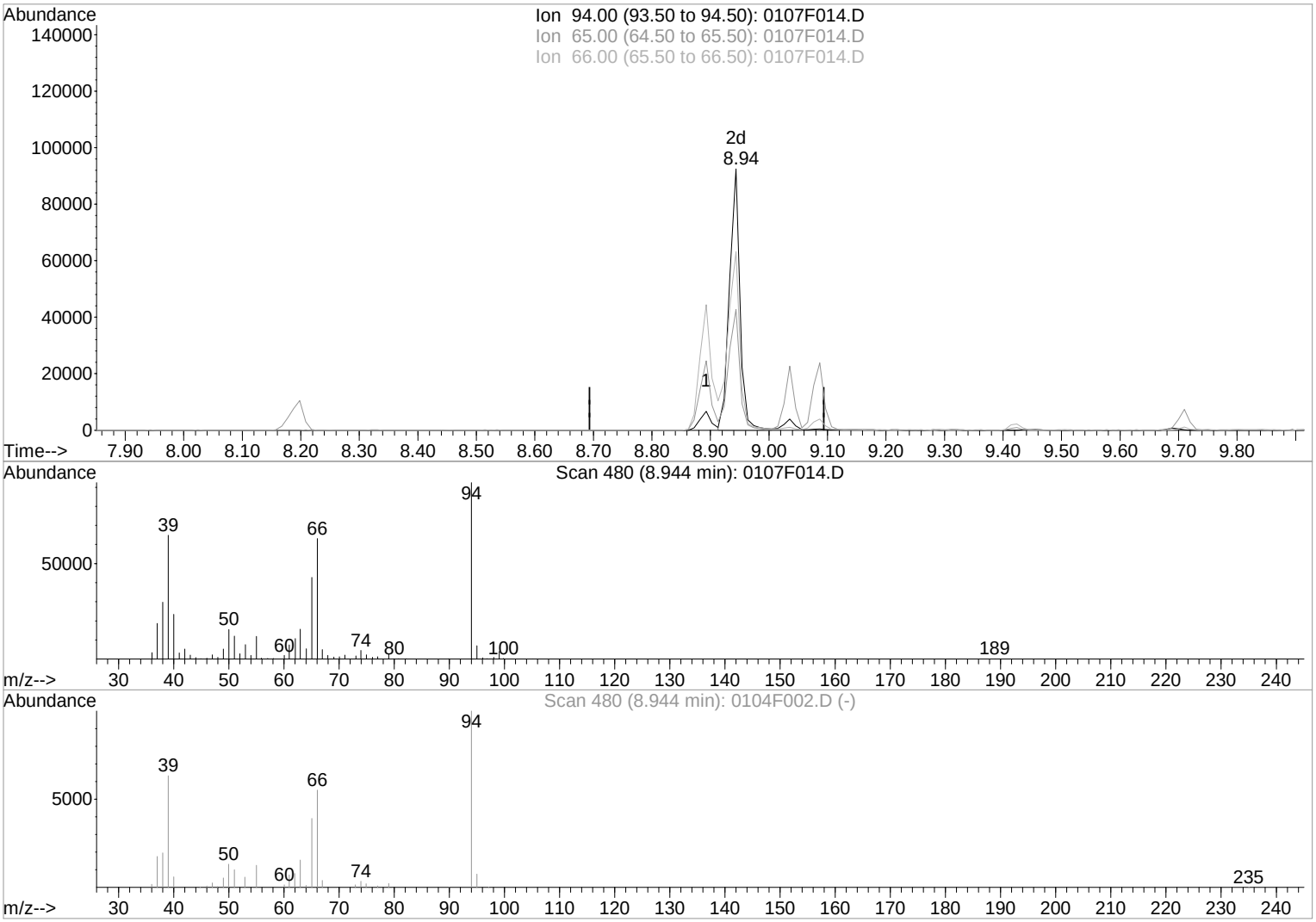
01/10/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F014.D Vial: 2
Acq On : 7 Jan 2019 11:45 pm Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 10 13:08 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Multiple Level Calibration



TIC: 0107F014.D

(9) Phenol (T)

8.94min 67.66ug/ml m

response 115248

Ion	Exp%	Act%
94.00	100	100
65.00	63.50	46.24
66.00	103.80	68.28#
0.00	0.00	0.00

Manual Integration:

After

WP

01/10/19

Evaluate Continuing Calibration Report

1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F014.D Vial: 2
Acq On : 7 Jan 2019 11:45 pm Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	95	0.00
2	T	N-Nitrosodimethylamine	80.000	87.071	-8.8	103	-0.01
3	T	Pyridine	80.000	70.220	12.2	85	-0.03
4	S	2-Fluorophenol	80.000	78.546	1.8	95	0.03
5	T	Ethylene Glycol Butyl Ether	80.000	70.067	12.4	82	-0.01
6	T	Aniline	80.000	58.688	26.6#	71	0.00
7	T	Bis(2-chloroethyl) Ether	80.000	74.280	7.1	91	0.00
8	S	Phenol-d6	80.000	78.688	1.6	96	0.06
9	T	Phenol	80.000	67.662	15.4	81	0.05
10	T	2-Chlorophenol	80.000	77.237	3.5	92	0.02
11	T	1,3-Dichlorobenzene	80.000	76.616	4.2	95	0.00
12	T	1,4-Dichlorobenzene	80.000	78.794	1.5	98	0.00
13	T	1,2-Dichlorobenzene	80.000	76.617	4.2	93	0.00
14	T	Benzyl Alcohol	80.000	72.011	10.0	88	0.00
15	T	2,2'-oxybis(2-chloropropane	80.000	72.546	9.3	88	-0.02
16	T	2-Methylphenol	80.000	83.758	-4.7	104	0.04
17	T	Hexachloroethane	80.000	81.878	-2.3	98	-0.01
18	T	N-Nitrosodi-n-propylamine	80.000	81.183	-1.5	96	0.00
19	T	4-Methylphenol	80.000	75.273	5.9	92	0.04
20	S	Nitrobenzene-d5	80.000	85.972	-7.5	104	0.00
21	T	Nitrobenzene	80.000	82.049	-2.6	99	0.00
22	I	Naphthalene-d8	40.000	40.000	0.0	93	0.00
23	T	Isophorone	80.000	88.612	-10.8	105	0.00
24	T	2-Nitrophenol	80.000	84.871	-6.1	100	0.00
25	T	2,4-Dimethylphenol	80.000	78.482	1.9	93	0.02
26	T	Bis(2-chloroethoxy)methane	80.000	79.375	0.8	93	0.00
27	T	2,4-Dichlorophenol	80.000	83.255	-4.1	97	0.03
28	T	Benzoic Acid	80.000	87.967	-10.0	107	0.08
29	T	1,2,4-Trichlorobenzene	80.000	81.568	-2.0	99	0.00
30	T	Naphthalene	80.000	81.103	-1.4	98	0.00
31	T	n-Dodecane	80.000	79.762	0.3	97	-0.01
32	T	4-Chloroaniline	80.000	75.784	5.3	91	0.00
33	T	Hexachlorobutadiene	80.000	85.703	-7.1	103	-0.01
34	T	4-Chloro-3-methylphenol	80.000	90.462	-13.1	110	0.04
35	T	2-Methylnaphthalene	80.000	80.946	-1.2	99	0.00
36	I	Acenaphthene-d10	40.000	40.000	0.0	112	-0.01
37	T	Hexachlorocyclopentadiene	80.000	71.839	10.2	102	-0.01
38	T	2,4,6-Trichlorophenol	80.000	79.784	0.3	114	0.02
39	T	2,4,5-Trichlorophenol	80.000	81.662	-2.1	108	0.03
40	S	2-Fluorobiphenyl	80.000	76.757	4.1	111	0.00
41	T	2-Chloronaphthalene	80.000	73.436	8.2	107	0.00
42	T	2-Nitroaniline	80.000	80.396	-0.5	111	0.02
43	T	Acenaphthylene	80.000	80.890	-1.1	113	0.00
44	T	Dimethyl Phthalate	80.000	84.105	-5.1	122	0.00
45	T	2,6-Dinitrotoluene	80.000	81.974	-2.5	115	0.00
46	T	Acenaphthene	80.000	76.837	4.0	112	0.00
47	T	3-Nitroaniline	80.000	72.440	9.5	103	0.02
48	T	2,4-Dinitrophenol	80.000	76.951	3.8	107	0.03
49	T	Dibenzofuran	80.000	75.987	5.0	108	0.00
50	T	4-Nitrophenol	80.000	89.008	-11.3	116	0.08
51	T	2,4-Dinitrotoluene	80.000	78.662	1.7	110	0.00
52	T	2,3,4,6-Tetrachlorophenol	80.000	88.233	-10.3	127	0.02
53	T	Fluorene	80.000	78.387	2.0	115	0.00
54	T	4-Chlorophenyl Phenyl Ether	80.000	82.662	-3.3	120	0.00
55	T	Diethyl Phthalate	80.000	85.075	-6.3	124	-0.01

(#) = Out of Range

1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F014.D Vial: 2
Acq On : 7 Jan 2019 11:45 pm Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
56	T	4-Nitroaniline	80.000	68.355	14.6	90	0.03
57	T	2-Methyl-4,6-dinitrophenol	80.000	78.817	1.5	113	0.02
58	T	Diphenylamine	80.000	82.335	-2.9	118	0.00
59	T	Azobenzene	80.000	85.491	-6.9	117	0.00
60	T	Benzophenone	80.000	79.633	0.5	118	0.00
61	I	Phenanthrene-d10	40.000	40.000	0.0	104	0.00
62	S	2,4,6-Tribromophenol	80.000	119.741	-49.7#	154	0.00
63	T	4-Bromophenyl Phenyl Ether	80.000	94.449	-18.1	125	0.00
64	T	Hexachlorobenzene	80.000	97.566	-22.0#	130	0.00
65	T	2,6-Diisopropylnaphthalene	80.000	98.501	-23.1#	130	-0.01
66	T	Pentachlorophenol	80.000	83.262	-4.1	109	0.02
67	T	Diazinon	80.000	85.685	-7.1	107	-0.02
68	T	Phenanthrene	80.000	80.307	-0.4	106	0.00
69	T	Anthracene	80.000	78.395	2.0	103	0.00
70	T	Carbazole	80.000	70.845	11.4	92	0.00
71	T	Di-n-butyl Phthalate	80.000	78.242	2.2	100	-0.01
72	T	Fluoranthene	80.000	77.556	3.1	98	0.00
73	I	Chrysene-d12	40.000	40.000	0.0	105	0.00
74	T	Benzidine	80.000	32.750	59.1#	49	0.00
75	T	Pyrene	80.000	77.346	3.3	97	0.00
76	S	Terphenyl-d14	80.000	80.497	-0.6	104	0.00
77	T	Butyl Benzyl Phthalate	80.000	86.903	-8.6	104	-0.01
78	T	Diethylene Glycol Butyl Eth	80.000	89.064	-11.3	114	-0.01
79	T	3,3'-Dichlorobenzidine	80.000	85.608	-7.0	115	0.00
80	T	Benz(a)anthracene	80.000	81.750	-2.2	104	0.00
81	T	Chrysene	80.000	78.343	2.1	104	0.00
82	T	Bis(2-ethylhexyl) Phthalate	80.000	87.225	-9.0	106	-0.03
83	I	Perylene-d12	40.000	40.000	0.0	109	0.00
84	T	Di-n-octyl Phthalate	80.000	81.936	-2.4	114	-0.04
85	T	Benzo(b)fluoranthene	80.000	81.350	-1.7	117	0.00
86	T	Benzo(k)fluoranthene	80.000	75.911	5.1	111	0.00
87	T	Diisononyl Phthalate	80.000	96.072	-20.1#	136	-0.27
88	T	Diisodecyl Phthalate	80.000	90.158	-12.7	127	-0.05
89	T	Benzo(a)pyrene	80.000	81.247	-1.6	111	0.00
90	T	Indeno(1,2,3-cd)pyrene	80.000	81.188	-1.5	105	0.00
91	T	Dibenz(a,h)anthracene	80.000	79.070	1.2	104	0.00
92	T	Benzo(g,h,i)perylene	80.000	80.222	-0.3	99	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

1st CL 01/10/19
2nd GPW 01/14/19

Validation Report

Data File: J:\MS07\DATA\010719\0107F013.D\
Lab ID: KQ1900278-01
RunType: TUNE
Matrix: Soil

Date Acquired: 1/7/19 23:05:00
Batch ID: 621348
Analysis Method: 8270D/SVO TCLP

Validations

Validation Categories	Pass	Fail
Tune Ion Ratio	X	

Primary Review: _____

Secondary Review: _____

1st 01/10/19
2nd 01/14/19

Quantitation Report

Data File:	J:\MS07\DATA\010719\0107F013.D\	**Instrument:**	K-MS-07
Acqu Date:	1/7/19 23:05:00	**Vial:**	1
Run Type:	TUNE	**Dilution:**	1
Lab ID:	KQ1900278-01	**Raw Units:**	

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	SVO TCLP	**Collect Date:**	11/13/18	**Receive Date:**	11/21/18

Analysis Lot:	621348	**Prep Lot:**		**Report Group:**	KQ1900278
Analysis	8270D	**Prep Method:**			
		Prep Date:			

Title:	TCLP Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800550
		Report List ID:	18580

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
443	442	15	24	18.50	4229	Pass
51	198	30	80	68.92	20900	Pass
68	69	0	2	0.00	0	Pass
69	198	0	100	63.06	19123	Pass
70	69	0	2	0.00	0	Pass
127	198	25	75	44.55	13509	Pass
197	198	0	1	0.00	0	Pass
198	198	100	100	100.00	30323	Pass
199	198	5	9	6.80	2063	Pass
275	198	10	30	26.10	7913	Pass
365	198	0.75	100	4.33	1314	Pass
441	443	0.01	100	84.49	3573	Pass
442	198	40	110	75.40	22863	Pass

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

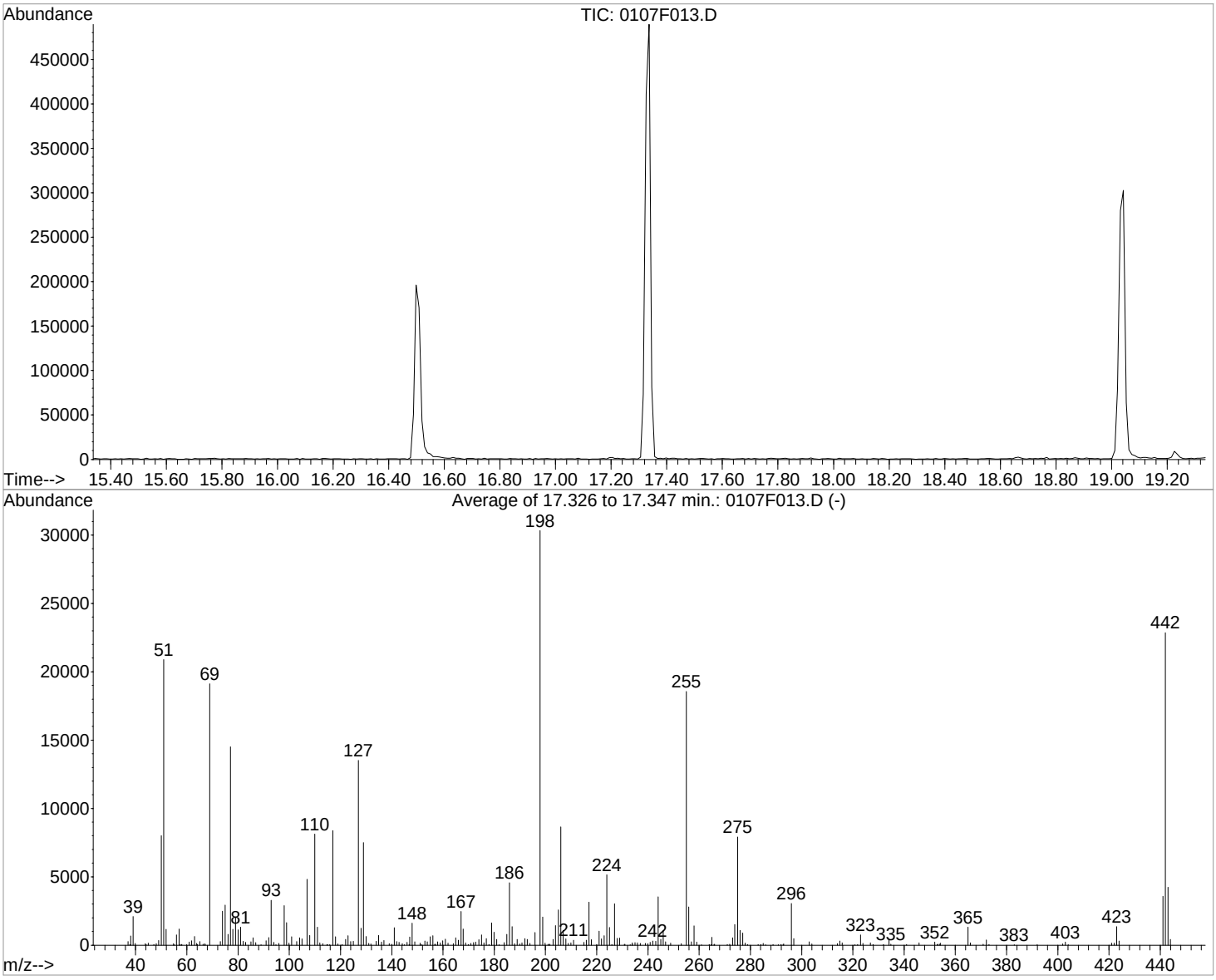
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Printed: 1/10/19 13:44
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

1st 01/10/19
2nd 01/14/19

Data File : J:\MS07\DATA\010719\0107F013.D Vial: 1
Acq On : 7 Jan 2019 11:05 pm Operator: CConover
Sample : DFTPP @ 50ppm | SVM60-17B Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07



AutoFind: Scans 1300, 1301, 1302; Background Corrected with Scan 1295

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	68.9	20900	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	63.1	19123	PASS
70	69	0.00	2	0.0	0	PASS
127	198	25	75	44.6	13509	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	30323	PASS
199	198	5	9	6.8	2063	PASS
275	198	10	30	26.1	7913	PASS
365	198	0.75	100	4.3	1314	PASS
441	443	0.01	100	84.5	3573	PASS
442	198	40	110	75.4	22863	PASS
443	442	15	24	18.5	4229	PASS

1st 01/10/19
2nd 01/14/19

Average of 17.326 to 17.347 min.: 0107F013.D
DFTPP @ 50ppm | SVM60-17B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.00	265	50.00	8005	60.95	234	73.95	2484
37.80	47	51.00	20900	61.90	327	74.95	2921
38.05	676	51.90	1155	63.05	642	76.05	794
39.00	2084	54.80	108	63.85	125	77.00	14511
39.90	125	55.00	36	64.15	52	78.00	1163
43.75	99	55.90	759	65.05	260	79.00	2050
44.10	40	56.95	1179	66.35	69	80.00	1129
44.95	143	57.15	37	66.95	88	80.95	1305
47.10	44	57.85	51	67.15	64	82.00	287
48.05	103	58.05	46	68.95	19123	82.95	207
49.00	338	59.85	36	73.05	259	85.00	245

Average of 17.326 to 17.347 min.: 0107F013.D
DFTPP @ 50ppm | SVM60-17B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
85.90	534	99.90	144	114.75	50	127.00	13509
86.90	192	100.95	608	114.95	35	128.00	1241
89.00	34	102.90	273	115.80	38	128.90	7506
90.95	315	104.00	532	117.00	8376	129.95	640
92.00	559	104.95	465	118.00	608	131.00	128
92.90	3287	106.95	4825	119.00	93	131.80	96
93.90	206	108.00	704	120.60	45	133.90	276
94.80	37	109.95	8127	122.00	427	134.90	711
95.95	125	110.95	1318	122.95	686	136.00	232
97.95	2894	111.95	168	123.95	254	136.95	337
98.95	1646	113.05	102	125.00	290	139.00	102

Average of 17.326 to 17.347 min.: 0107F013.D
DFTPP @ 50ppm | SVM60-17B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
139.95	62	151.00	147	160.95	430	172.80	229
140.95	1283	151.55	52	161.95	145	173.95	406
141.90	269	152.95	308	164.00	113	175.05	756
142.90	214	153.85	243	164.95	540	175.95	169
144.10	102	154.95	610	166.00	370	176.95	472
144.95	38	156.00	693	167.00	2458	177.95	40
145.95	206	156.80	68	167.90	1185	178.95	1618
146.75	40	157.10	71	168.85	170	179.95	952
147.00	588	157.90	247	169.90	48	180.95	413
147.95	1607	158.95	166	170.85	125	181.85	39
148.95	239	159.90	328	171.90	176	183.90	186

Average of 17.326 to 17.347 min.: 0107F013.D
DFTPP @ 50ppm | SVM60-17B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
184.95	789	197.90	30323	207.90	466	222.95	686
185.95	4555	198.90	2063	208.90	134	223.95	5153
186.95	1347	199.90	145	209.90	172	224.95	1293
187.95	105	201.00	64	210.95	369	225.95	53
188.90	427	201.50	58	215.05	199	226.95	3027
189.95	97	201.70	62	215.95	360	227.95	506
190.85	175	202.95	417	216.95	3150	228.90	522
191.95	481	203.95	1434	217.95	405	230.75	52
192.90	415	205.00	2579	219.95	48	231.05	60
193.95	122	206.00	8644	220.95	1021	233.05	34
195.95	926	206.95	1083	221.90	450	233.80	67

Average of 17.326 to 17.347 min.: 0107F013.D
DFTPP @ 50ppm | SVM60-17B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
233.95	162	245.90	1073	264.65	35	277.90	155
234.95	186	246.90	253	264.95	575	278.90	40
235.90	160	248.90	143	265.75	37	283.00	55
237.00	124	253.00	109	265.95	64	284.10	46
238.95	129	254.95	18559	270.95	43	284.95	130
239.95	117	255.95	2797	271.95	62	285.90	37
240.90	201	257.00	249	273.00	541	288.80	42
241.85	300	257.95	1405	273.90	1502	290.90	38
243.00	287	259.00	233	275.00	7913	291.90	50
244.00	3539	260.85	37	275.95	1086	292.75	40
245.00	426	263.95	49	276.95	887	292.95	92

Average of 17.326 to 17.347 min.: 0107F013.D

DFTPP @ 50ppm | SVM60-17B
Modified:subtracted

1st 01/10/19
2nd 01/14/19

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
295.95	3046	326.80	168	354.10	156	420.95	137
296.95	470	327.90	42	364.90	1314	422.05	150
302.95	248	331.95	41	365.90	168	422.95	1344
303.95	81	334.05	464	370.90	59	423.90	293
313.95	113	334.85	62	372.05	385	441.05	3573
314.90	304	340.95	55	373.15	47	442.00	22863
315.85	158	345.85	162	382.95	38	443.00	4229
320.80	33	352.00	233	391.90	33	443.95	417
321.80	47	353.00	43	401.90	81		
323.00	754	353.20	64	402.90	226		
323.95	118	353.90	76	404.10	37		

Injection Log

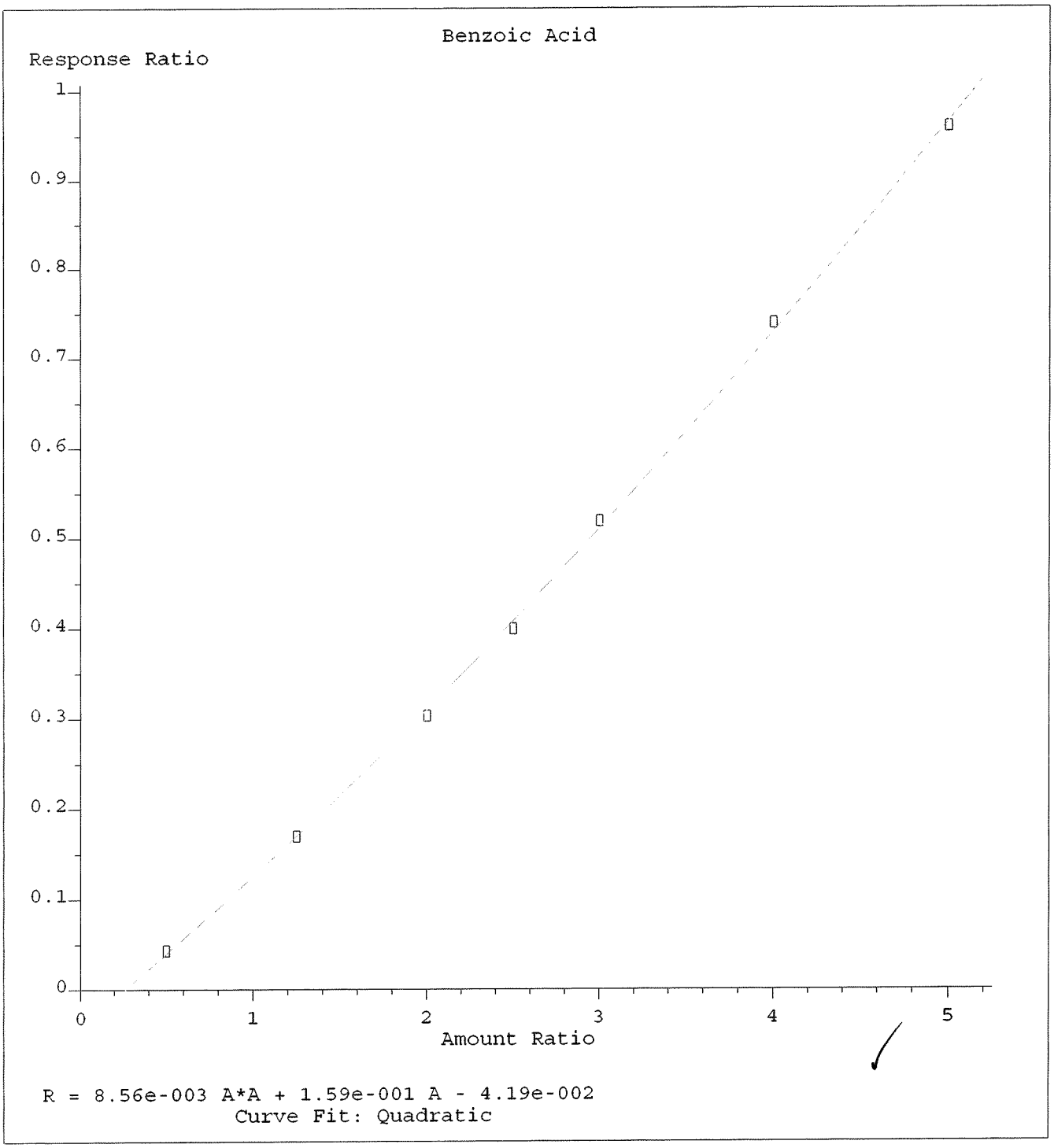
Directory: J:\MS07\DATA\120718

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1207F001.D	1.	DFTPP @ 50ppm | SVM59-97Y		7 Dec 2018 14:41
2	2	1207F002.D	1.	IB		7 Dec 2018 15:51
3	3	1207F003.D	1.	8270/P ICAL @ 1ppm | SVM59-92D		7 Dec 2018 16:32
4	4	1207F004.D	1.	8270/P ICAL @ 5ppm | SVM59-92E		7 Dec 2018 17:13
5	5	1207F005.D	1.	8270/P ICAL @ 10ppm | SVM59-92F		7 Dec 2018 17:54
6	6	1207F006.D	1.	8270/P ICAL @ 20ppm | SVM59-92G		7 Dec 2018 18:35
7	7	1207F007.D	1.	8270/P ICAL @ 50ppm | SVM59-92H		7 Dec 2018 19:16
8	8	1207F008.D	1.	8270/P ICAL @ 80ppm | SVM59-92I		7 Dec 2018 19:57
9	9	1207F009.D	1.	8270/P ICAL @ 100ppm | SVM59-92J		7 Dec 2018 20:38
10	10	1207F010.D	1.	8270/P ICAL @ 120ppm | SVM59-92K		7 Dec 2018 21:19
11	11	1207F011.D	1.	8270/P ICAL @ 160ppm | SVM59-92L		7 Dec 2018 22:00
12	12	1207F012.D	1.	8270/P ICAL @ 200ppm | SVM59-92M		7 Dec 2018 22:41
13	13	1207F013.D	1.	8270 ICV @ 80ppm | SVM59-93C		7 Dec 2018 23:22
14	14	1207F014.D	1.	PAPER ICV @ 80ppm | SVM58-87A		8 Dec 2018 00:03
15	15	1207F015.D	1.	Benzidine ICV @ 50ppm | SVM59-93D		8 Dec 2018 00:44

Cal 15906 / KC1800550

Cl 12.08.18

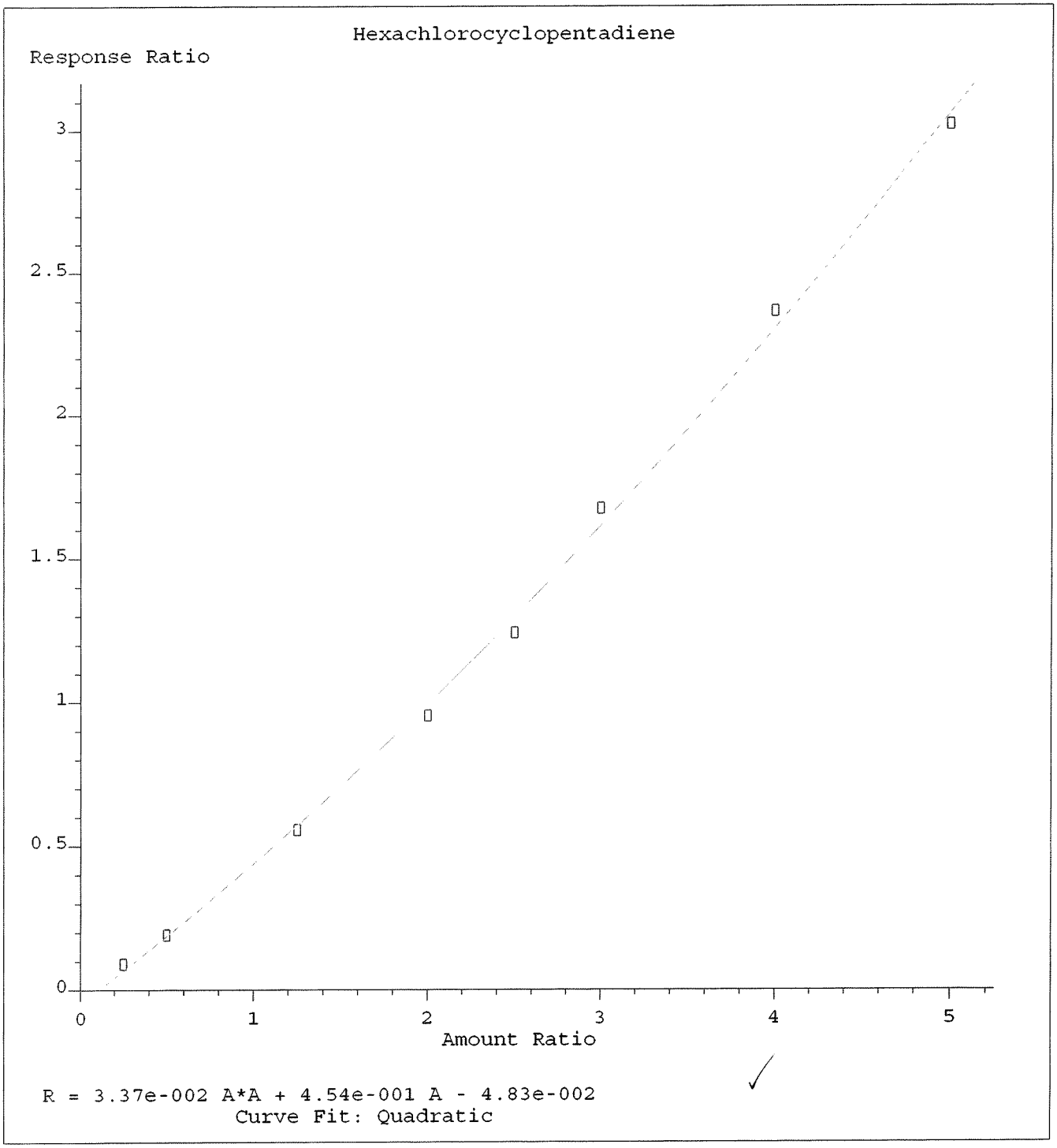
12/13/18



Method Name: J:\MS07\METHODS\8270_625\120718BNP7.M
Calibration Table Last Updated: Fri Dec 07 23:41:58 2018

DEC 0 8 2018

12/13/18



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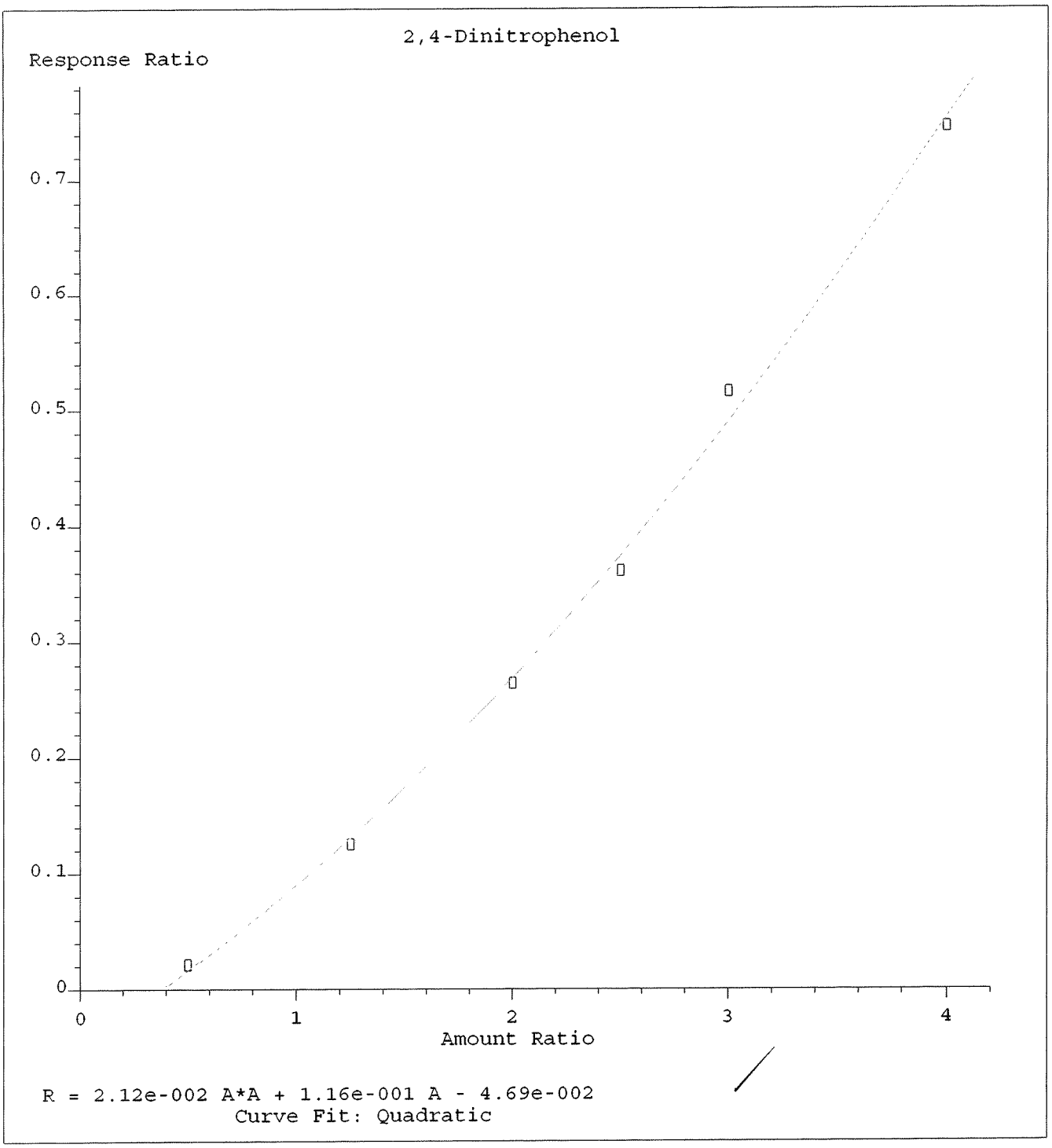
Calibration Table Last Updated: Fri Dec 07 23:41:58 2018

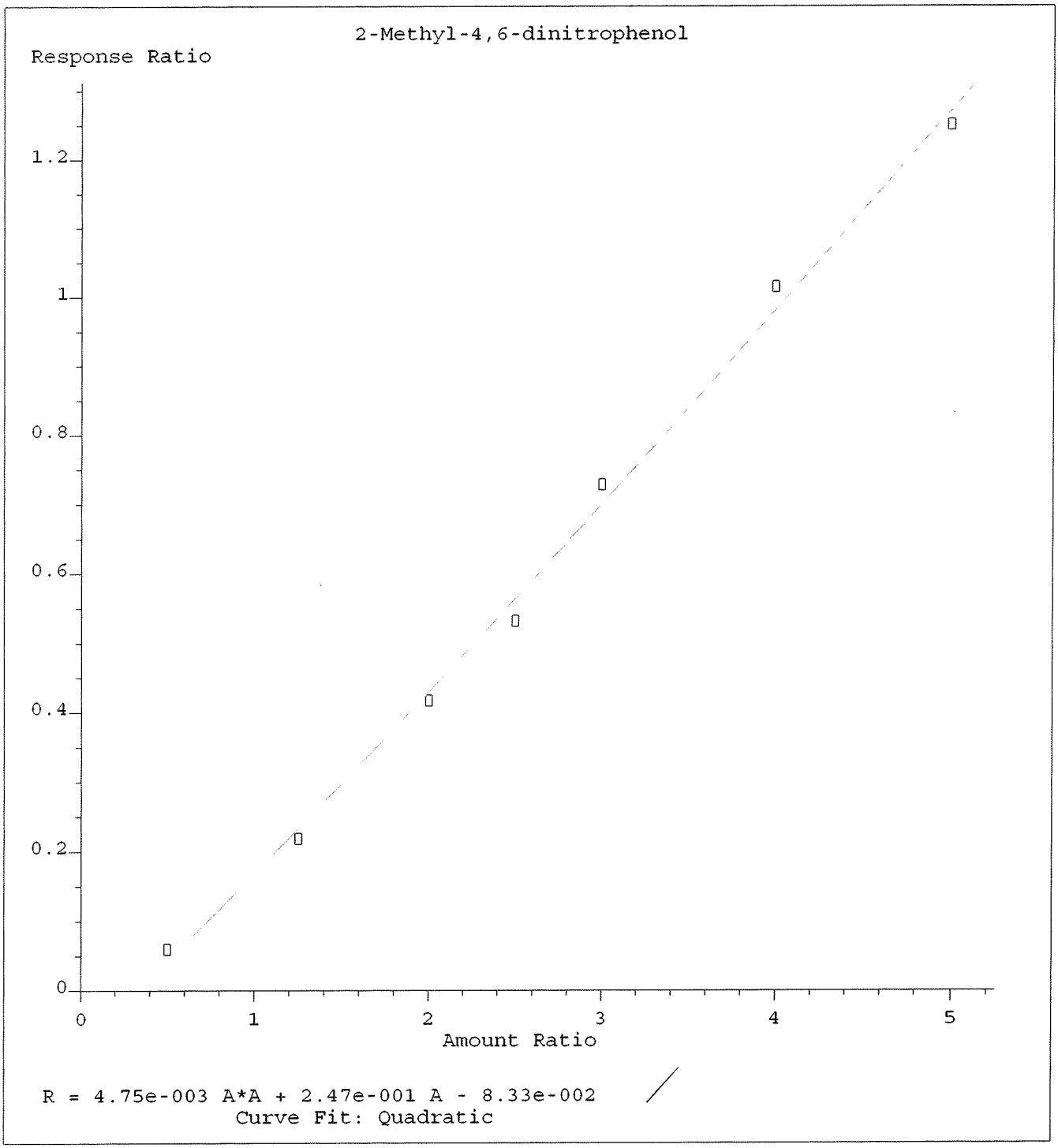
DEC 0 8 2018



Method Name: J:\MS07\METHODS\8270_625\120718BNP7.M
Calibration Table Last Updated: Sat Dec 08 00:05:44 2018

12/13/18

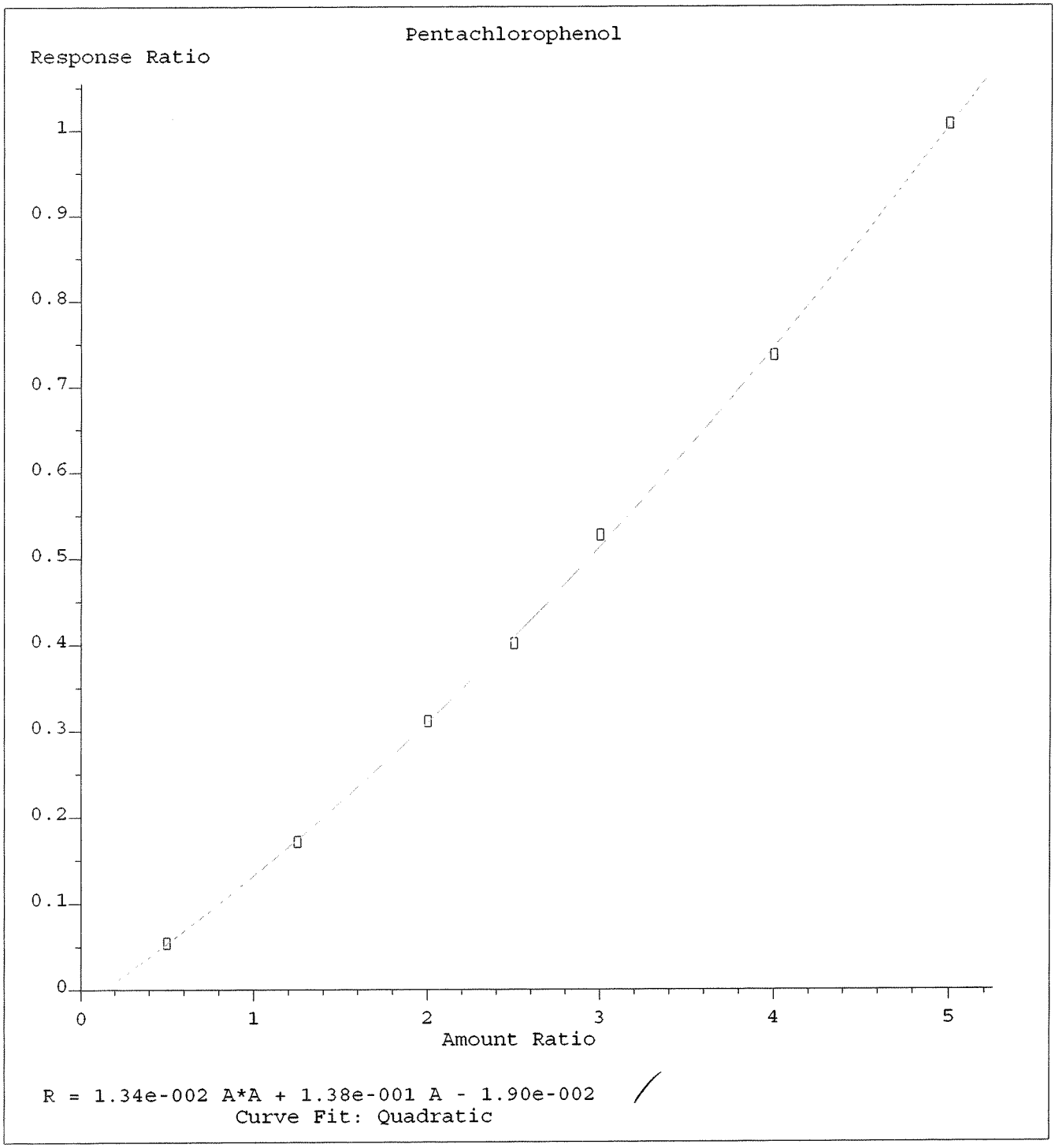
DEC 0 8 2018



Method Name: J:\MS07\METHODS\8270_625\120718BNP7.M
Calibration Table Last Updated: Fri Dec 07 23:41:58 2018

12/13/18

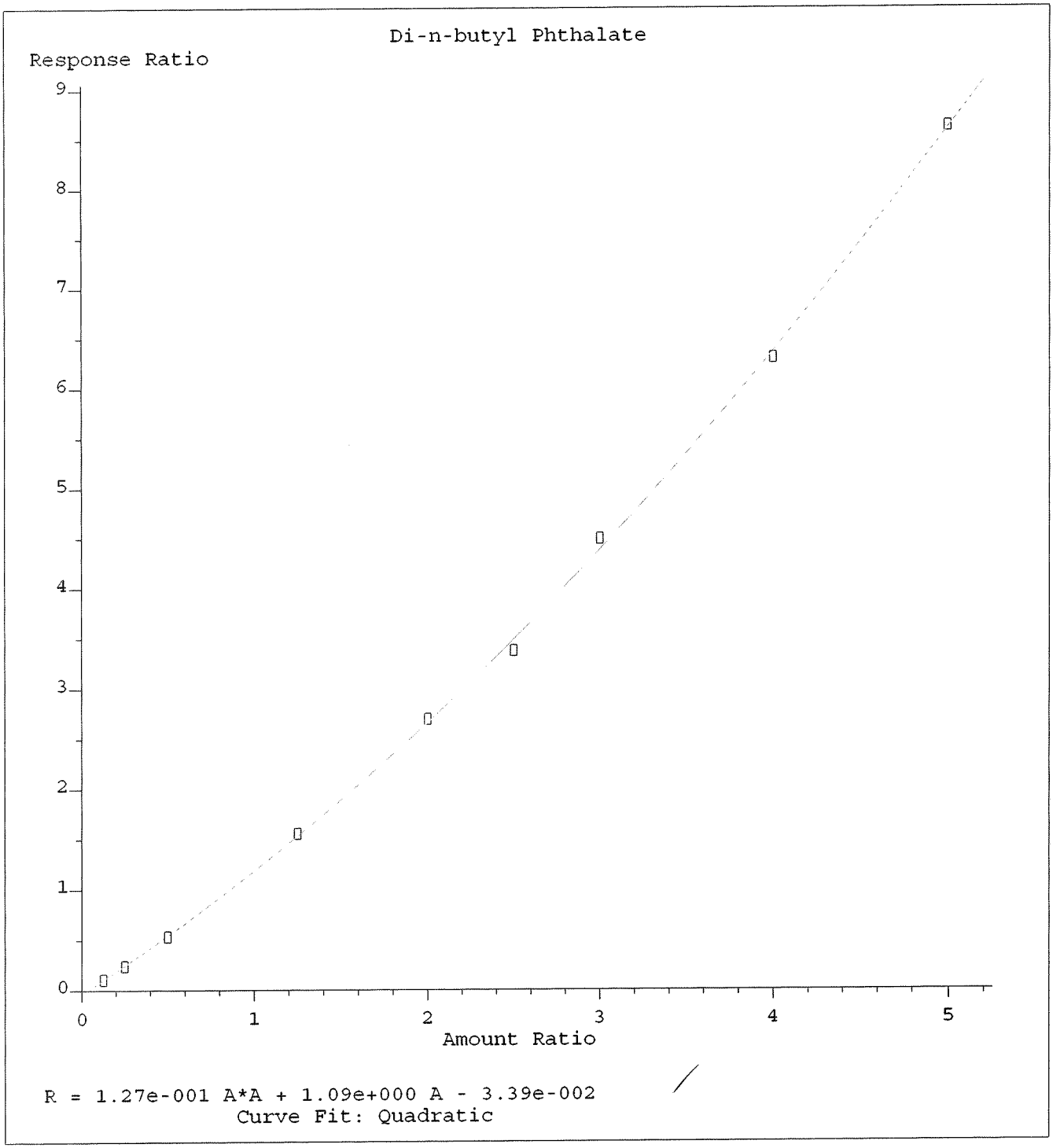
DEC 0 8 2018



Method Name: J:\MS07\METHODS\8270_625\120718BNP7.M
Calibration Table Last Updated: Fri Dec 07 23:41:58 2018

12/13/18

DEC 0 8 2018



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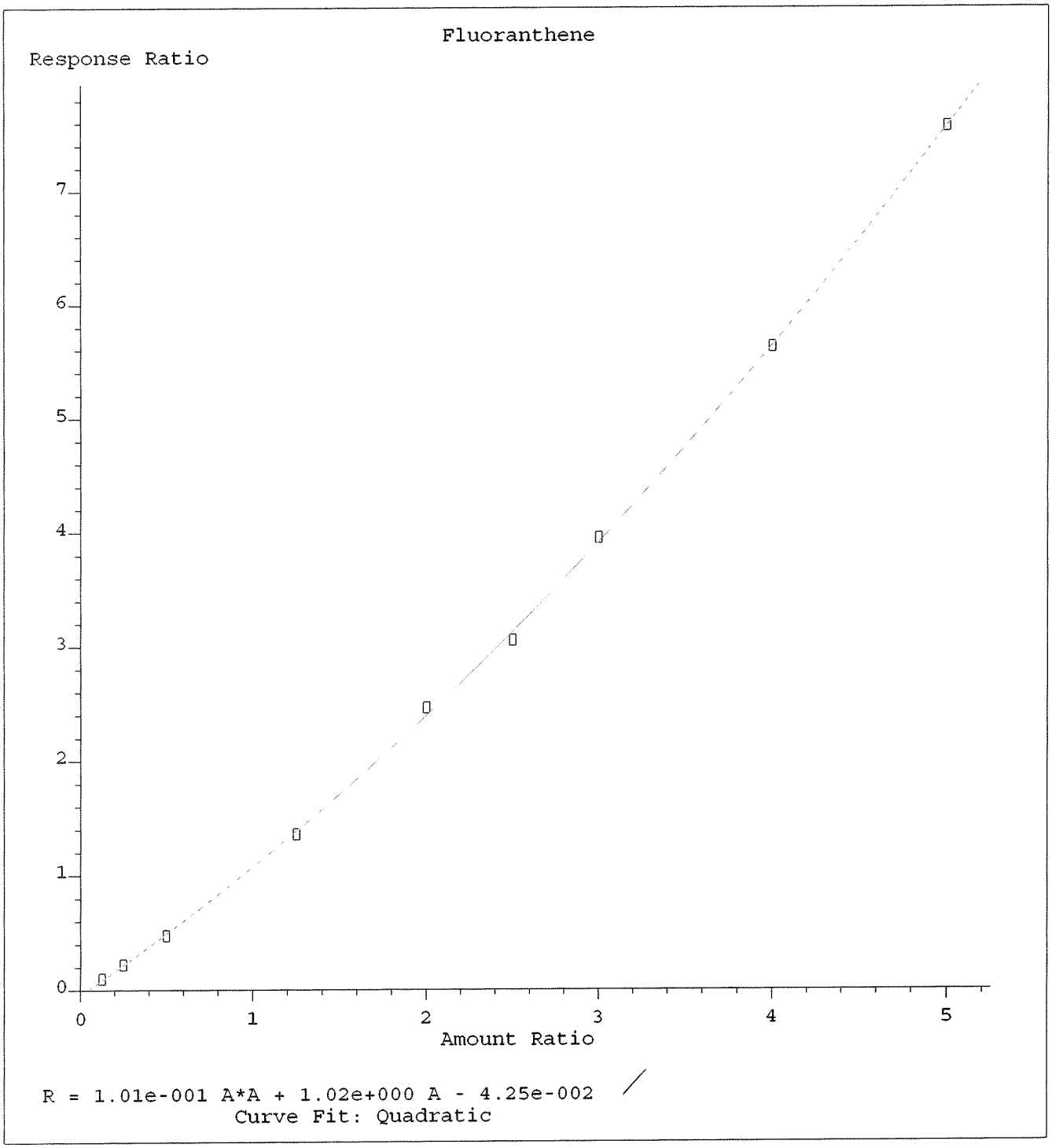
Calibration Table Last Updated: Sat Dec 08 00:06:08 2018

DEC 0 8 2018

12/18/18



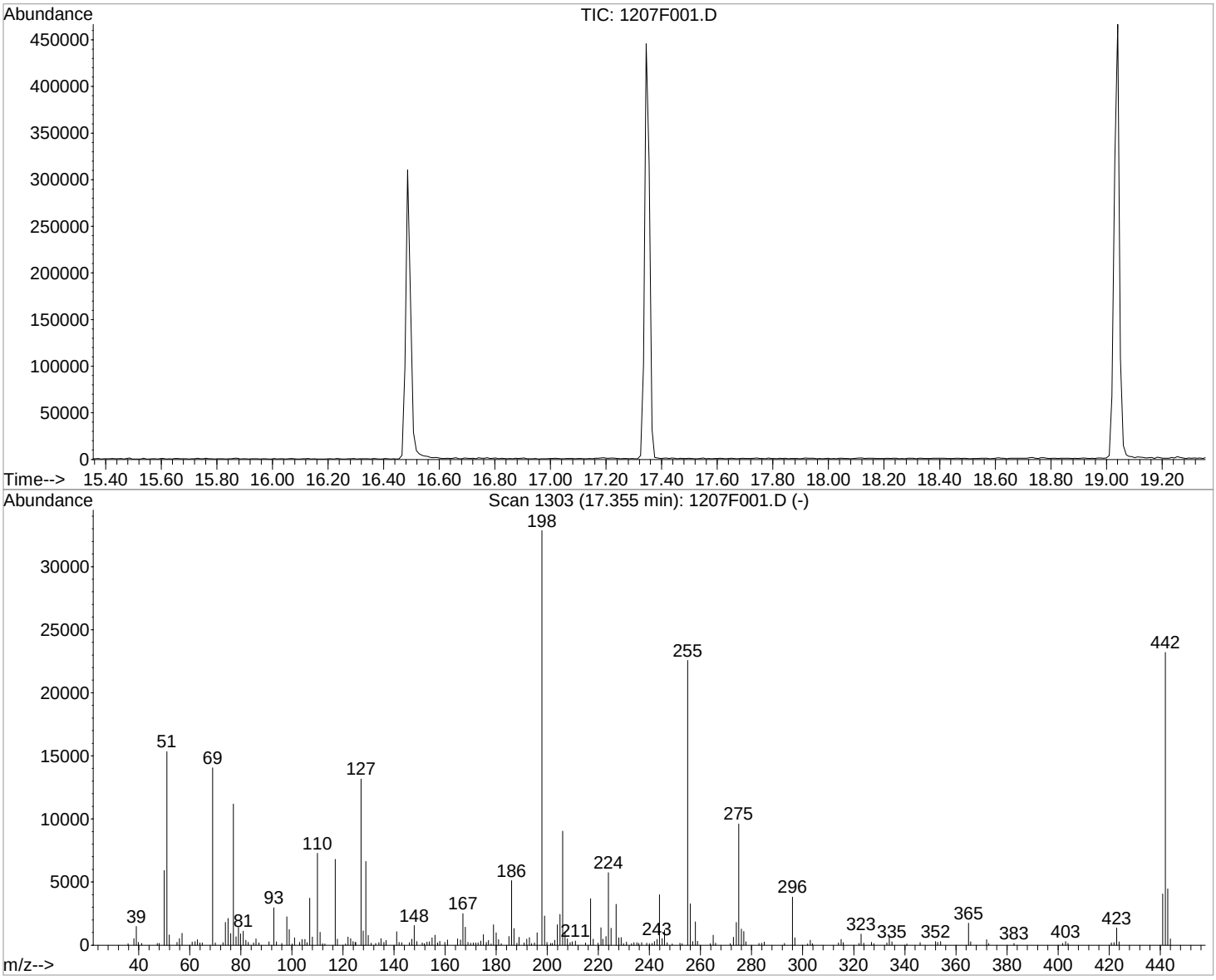
Method Name: J:\MS07\METHODS\8270_625\120718BNP7.M
Calibration Table Last Updated: Fri Dec 07 23:41:58 2018

DEC 0 8 2018

12/13/18

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F001.D Vial: 1
Acq On : 7 Dec 2018 2:41 pm Operator: CConover
Sample : DFTPP @ 50ppm | SVM59-97Y Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07



Spectrum Information: Scan 1303

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	46.7	15328	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	42.7	14042	PASS
70	69	0.00	2	1.2	172	PASS
127	198	25	75	40.1	13177	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	32849	PASS
199	198	5	9	7.0	2307	PASS
275	198	10	30	29.2	9606	PASS
365	198	0.75	100	5.3	1734	PASS
441	443	0.01	100	91.0	4058	PASS
442	198	40	110	70.6	23192	PASS
443	442	15	24	19.2	4461	PASS

1st 12/08/18
2nd 12/13/18

Scan 1303 (17.355 min): 1207F001.D
DFTPP @ 50ppm | SVM59-97Y
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.75	114	55.90	520	74.95	2112	87.00	176
38.10	526	56.95	949	76.05	921	91.00	267
39.00	1478	60.85	245	77.00	11183	92.90	2958
39.90	213	62.05	287	78.10	660	93.90	266
41.10	130	62.95	438	79.00	1410	95.95	143
47.20	128	63.95	191	79.90	896	97.95	2245
48.00	143	64.85	170	80.90	1109	98.95	1230
50.00	5924	68.90	14042	81.90	387	100.05	101
50.95	15328	69.95	172	82.90	226	100.95	577
51.90	821	72.95	205	85.00	177	102.95	222
55.00	218	73.95	1798	85.90	489	103.95	447

Scan 1303 (17.355 min): 1207F001.D
DFTPP @ 50ppm | SVM59-97Y
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
105.05	460	121.90	646	134.00	193	150.95	187
105.85	194	123.00	521	134.90	509	151.85	115
106.95	3731	123.90	280	135.95	229	152.85	246
107.95	649	124.70	228	136.85	372	153.85	275
109.95	7283	125.00	230	140.95	1069	154.90	573
110.95	1023	127.00	13177	141.95	228	156.00	782
111.95	127	127.90	1131	142.95	199	157.00	181
112.85	106	128.90	6634	145.95	195	157.90	297
116.90	6790	129.90	769	146.95	477	159.90	228
117.80	473	131.00	169	147.85	1553	160.90	412
121.00	106	132.80	133	148.95	285	164.90	504

Scan 1303 (17.355 min): 1207F001.D
DFTPP @ 50ppm | SVM59-97Y
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
166.00	409	176.95	377	190.85	173	202.90	390
166.90	2493	177.95	105	191.95	477	203.90	1619
167.90	1414	178.95	1619	192.95	607	205.00	2428
168.90	217	179.95	977	193.85	121	206.00	9030
170.00	164	180.85	440	195.00	175	206.95	1031
171.00	180	181.95	122	196.00	974	207.90	490
171.90	172	184.95	696	197.90	32849	208.90	196
172.90	187	185.95	5104	198.90	2307	209.70	261
173.90	319	186.95	1314	199.90	213	211.00	333
174.95	837	188.05	154	201.30	134	214.95	186
176.05	228	188.95	629	201.90	128	216.95	3681

Scan 1303 (17.355 min): 1207F001.D
DFTPP @ 50ppm | SVM59-97Y
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
217.95	479	230.95	242	243.90	4007	258.85	304
219.85	159	232.95	110	244.90	510	263.85	116
220.95	1392	233.90	211	245.90	1202	264.95	799
221.75	479	235.10	192	246.90	192	265.85	159
222.95	689	235.80	129	248.90	104	271.65	121
223.95	5745	236.90	193	251.90	150	272.90	620
224.95	1346	238.90	161	252.80	109	274.00	1798
226.95	3244	240.00	120	254.95	22576	274.90	9606
227.95	570	241.00	129	255.95	3286	276.00	1266
228.95	612	241.90	278	256.95	290	276.90	1090
229.85	122	243.00	456	257.95	1843	277.80	273

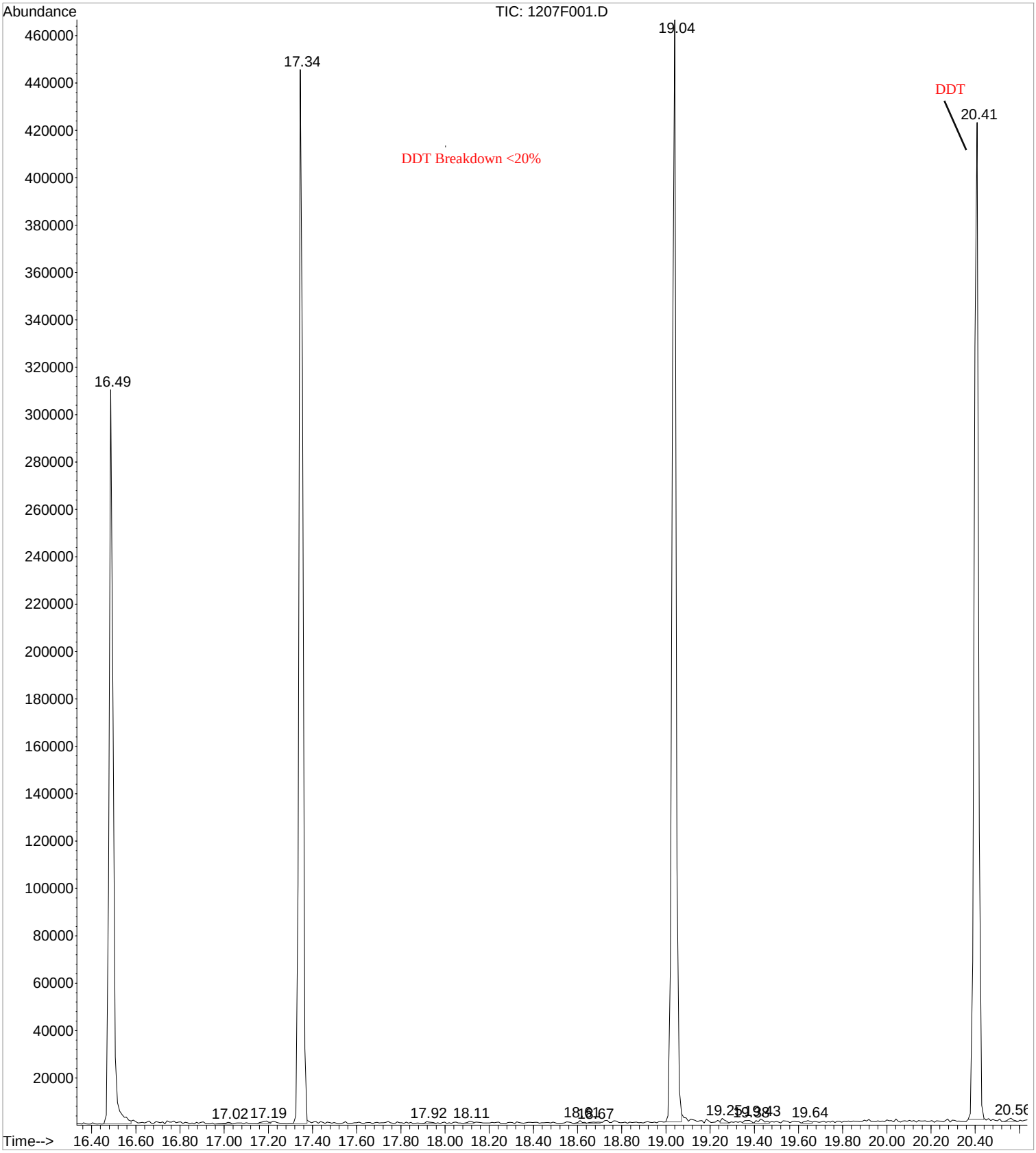
Scan 1303 (17.355 min): 1207F001.D
DFTPP @ 50ppm | SVM59-97Y
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
282.90	142	315.90	203	352.00	286	420.85	170
283.90	151	322.00	137	352.90	222	421.95	201
284.90	251	322.90	886	354.00	288	422.95	1360
292.85	146	323.90	165	364.90	1734	423.95	258
295.95	3815	326.90	218	365.80	268	441.00	4058
296.95	577	327.90	120	372.05	433	442.00	23192
301.95	107	332.95	189	372.85	108	443.00	4461
302.95	388	333.95	681	382.75	141	444.00	487
303.85	114	334.95	263	401.80	136		
314.00	184	340.75	105	403.00	281		
315.00	461	345.95	195	403.90	136		

1st 12/08/18

2nd 12/13/18

File : J:\MS07\DATA\120718\1207F001.D
Operator : CConover
Acquired : 7 Dec 2018 2:41 pm using AcqMethod 8270_1
Instrument : MS07
Sample Name: DFTPP @ 50ppm | SVM59-97Y
Misc Info :
Vial Number: 1

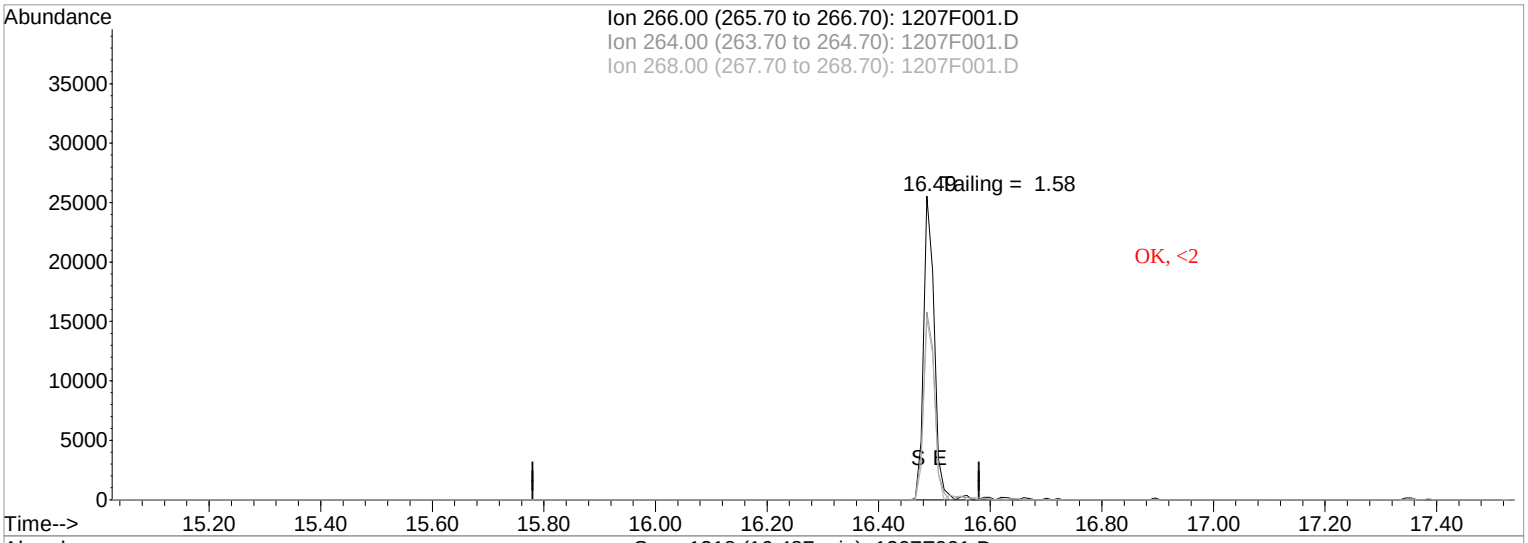


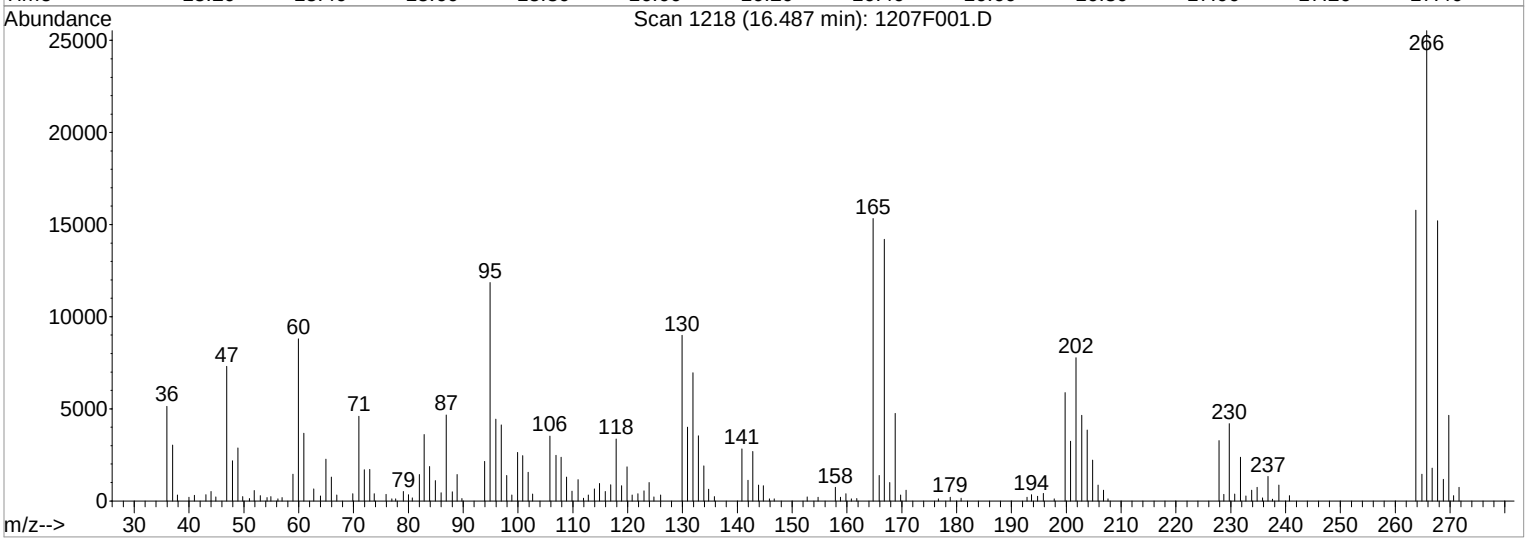
Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F001.D Vial: 1
Acq On : 7 Dec 2018 2:41 pm Operator: CConover
Sample : DFTPP @ 50ppm | SVM59-97Y Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 7 15:33 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\625DFTPP.M (RTE Integrator)
Title : 8270C Calibration/RTX-5MS 30m X .25mm MS08
Last Update : Tue Mar 09 13:28:48 2010
Response via : Single Level Calibration





TIC: 1207F001.D

(1) Pentachlorophenol (TMC)

16.49min 44.90ug/ml

response 33424

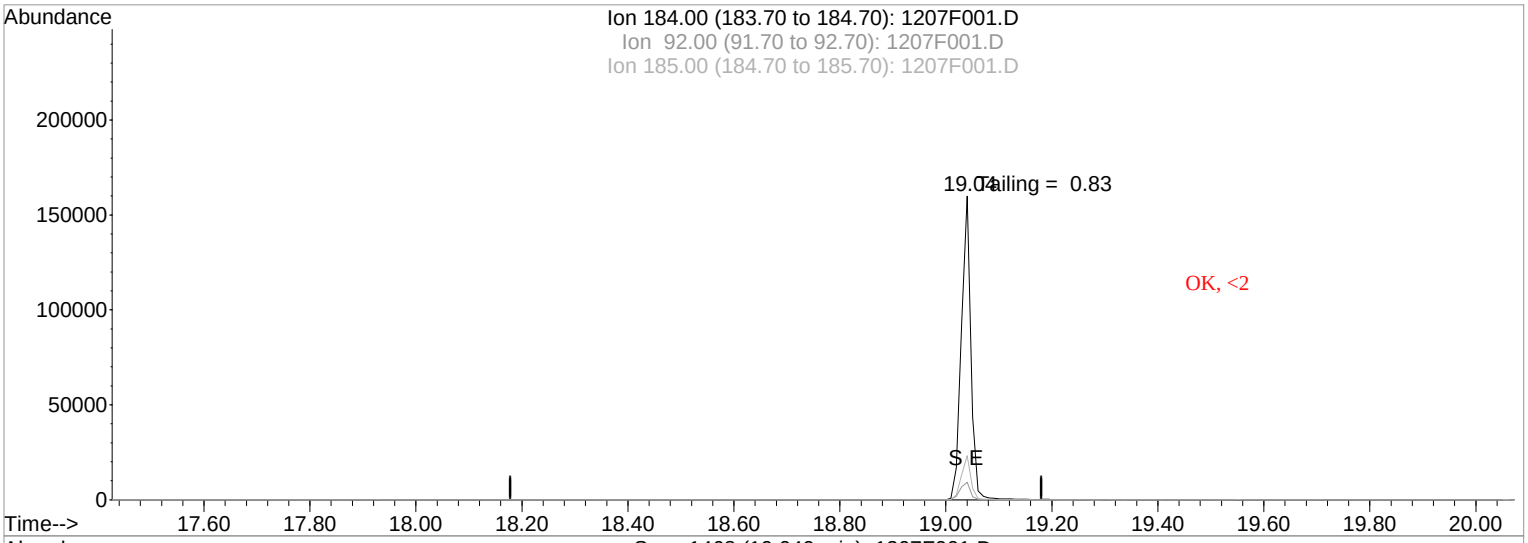
Ion	Exp%	Act%
266.00	100	100
264.00	64.90	61.51
268.00	64.90	59.01
0.00	0.00	0.00

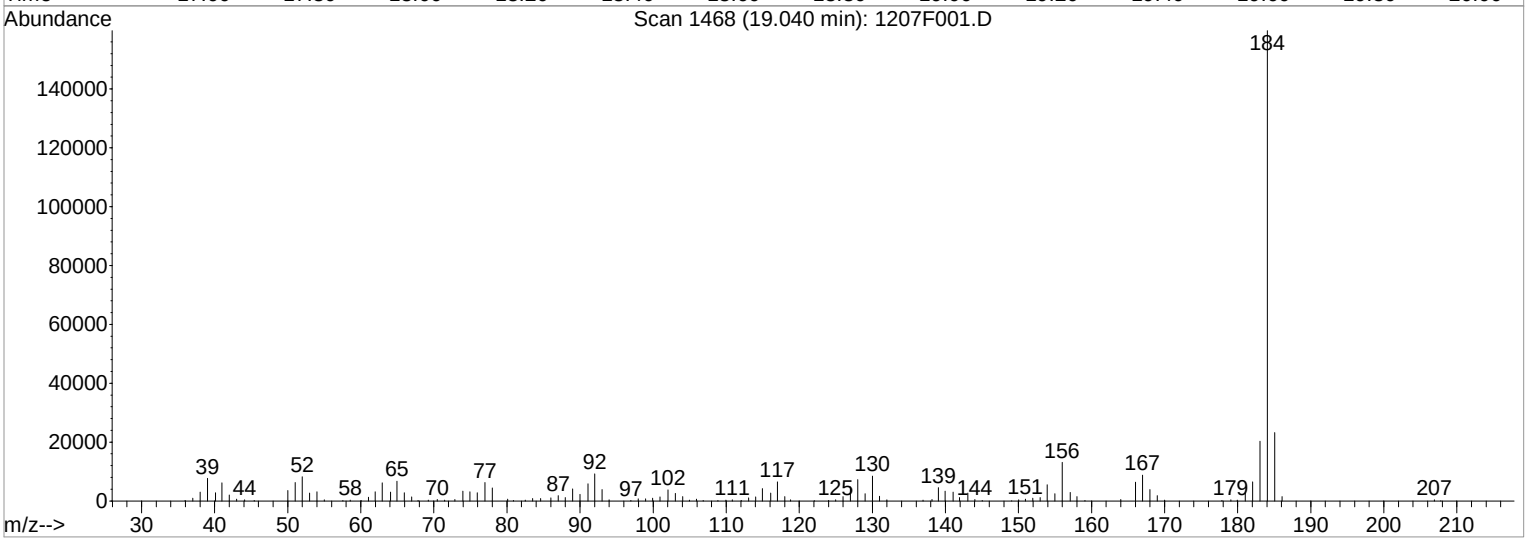
Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F001.D Vial: 1
Acq On : 7 Dec 2018 2:41 pm Operator: CConover
Sample : DFTPP @ 50ppm | SVM59-97Y Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 7 15:33 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\625DFTPP.M (RTE Integrator)
Title : 8270C Calibration/RTX-5MS 30m X .25mm MS08
Last Update : Tue Mar 09 13:28:48 2010
Response via : Single Level Calibration





TIC: 1207F001.D

(2) Benzidine (T)

19.04min 155.85ug/ml

response 196891

Ion	Exp%	Act%
184.00	100	100
92.00	13.20	5.76
185.00	15.50	14.53
0.00	0.00	0.00

1st 12/08/18
2nd 12/13/18

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F002.D Vial: 2
Acq On : 7 Dec 2018 3:51 pm Operator: CConover
Sample : IB Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:24 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	52081	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	192581	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.39	164	111358	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	180099	40.00	ug/ml	0.00
73) Chrysene-d12	21.27	240	125696	40.00	ug/ml	-0.01
83) Perylene-d12	24.50	264	136510	40.00	ug/ml	-0.01

System Monitoring Compounds						
4) 2-Fluorophenol		0.00	112	0	0.00	ug/ml
Spiked Amount	150.000	Range	21 - 100	Recovery	=	0.00%#
8) Phenol-d6		0.00	99	0	0.00	ug/ml
Spiked Amount	150.000	Range	10 - 94	Recovery	=	0.00%#
20) Nitrobenzene-d5		0.00	82	0	0.00	ug/ml
Spiked Amount	100.000	Range	35 - 114	Recovery	=	0.00%#
40) 2-Fluorobiphenyl		0.00	172	0	0.00	ug/ml
Spiked Amount	100.000	Range	43 - 116	Recovery	=	0.00%#
62) 2,4,6-Tribromophenol		0.00	330	0	0.00	ug/ml
Spiked Amount	150.000	Range	10 - 123	Recovery	=	0.00%#
76) Terphenyl-d14		0.00	244	0d	0.00	ug/ml
Spiked Amount	100.000	Range	33 - 141	Recovery	=	0.00%#

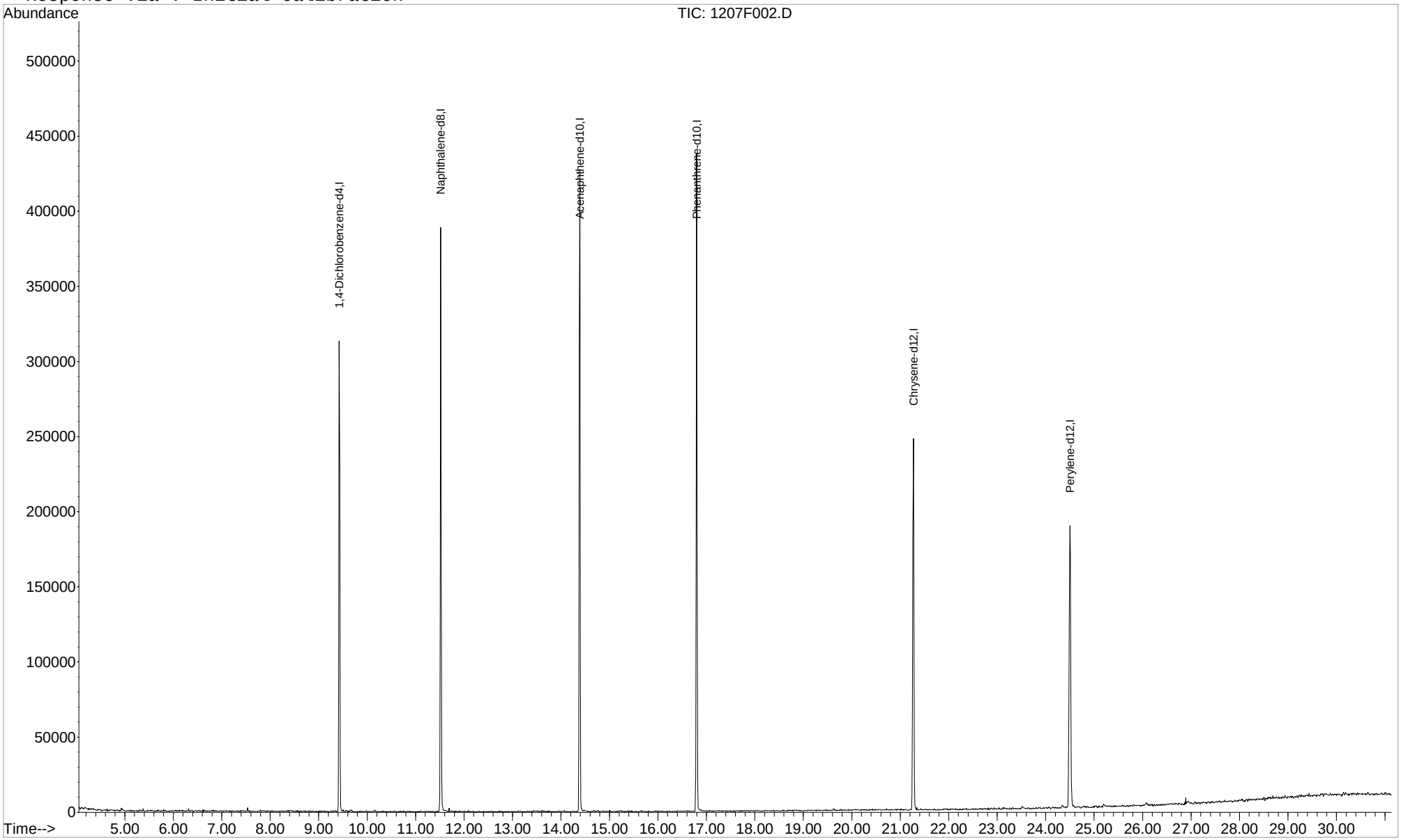
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F002.D Vial: 2
Acq On : 7 Dec 2018 3:51 pm Operator: CConover
Sample : IB Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:56 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F003.D Vial: 3
Acq On : 7 Dec 2018 4:32 pm Operator: CConover
Sample : 8270/P ICAL @ 1ppm | SVM59-92D Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:25 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	42345	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	153806	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.39	164	88721	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	142441	40.00	ug/ml	0.00
73) Chrysene-d12	21.26	240	98652	40.00	ug/ml	-0.02
83) Perylene-d12	24.50	264	91625	40.00	ug/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	ug/ml	
Spiked Amount 150.000	Range 21 - 100		Recovery =	0.00%#		
8) Phenol-d6	0.00	99	0d	0.00	ug/ml	
Spiked Amount 150.000	Range 10 - 94		Recovery =	0.00%#		
20) Nitrobenzene-d5	0.00	82	0d	0.00	ug/ml	
Spiked Amount 100.000	Range 35 - 114		Recovery =	0.00%#		
40) 2-Fluorobiphenyl	0.00	172	0d	0.00	ug/ml	
Spiked Amount 100.000	Range 43 - 116		Recovery =	0.00%#		
62) 2,4,6-Tribromophenol	0.00	330	0d	0.00	ug/ml	
Spiked Amount 150.000	Range 10 - 123		Recovery =	0.00%#		
76) Terphenyl-d14	19.42	244	2633	1.28	ug/ml	-0.01
Spiked Amount 100.000	Range 33 - 141		Recovery =	1.28%#		
Target Compounds						Qvalue
30) Naphthalene	11.55	128	3673	0.98	ug/ml	92
35) 2-Methylnaphthalene	12.69	142	2574	0.96	ug/ml	87
43) Acenaphthylene	14.14	152	3148	0.84	ug/ml	92
44) Dimethyl Phthalate	14.00	163	2694	0.95	ug/ml	97
46) Acenaphthene	14.43	154	2513	1.06	ug/ml	97
49) Dibenzofuran	14.71	168	3692	0.99	ug/ml	95
53) Fluorene	15.28	166	3050	1.11	ug/ml	94
55) Diethyl Phthalate	15.15	149	2570	0.96	ug/ml	87
68) Phenanthrene	16.83	178	3548	0.90	ug/ml	97
69) Anthracene	16.91	178	4072	1.01	ug/ml	94
70) Carbazole	17.20	167	3278	0.92	ug/ml	90
71) Di-n-butyl Phthalate	17.84	149	2773	0.64	ug/ml	97
72) Fluoranthene	18.76	202	2794	0.71	ug/ml	97
75) Pyrene	19.13	202	2809	0.92	ug/ml	95
77) Butyl Benzyl Phthalate	20.28	149	1228	0.84	ug/ml	83
80) Benz(a)anthracene	21.25	228	2797	0.96	ug/ml	91
81) Chrysene	21.31	228	2815	1.01	ug/ml	95
82) Bis(2-ethylhexyl) Phthalat	21.48	149	663	0.33	ug/ml	50
84) Di-n-octyl Phthalate	22.97	149	1150	0.36	ug/ml	84
85) Benzo(b)fluoranthene	23.61	252	2193	0.83	ug/ml	89
86) Benzo(k)fluoranthene	23.67	252	2430	0.93	ug/ml	78
89) Benzo(a)pyrene	24.35	252	1836	0.76	ug/ml	78
90) Indeno(1,2,3-cd)pyrene	26.95	276	1334	0.57	ug/ml	69
91) Dibenz(a,h)anthracene	27.03	278	1559	0.66	ug/ml	89
92) Benzo(g,h,i)perylene	27.52	276	1712	0.70	ug/ml	85

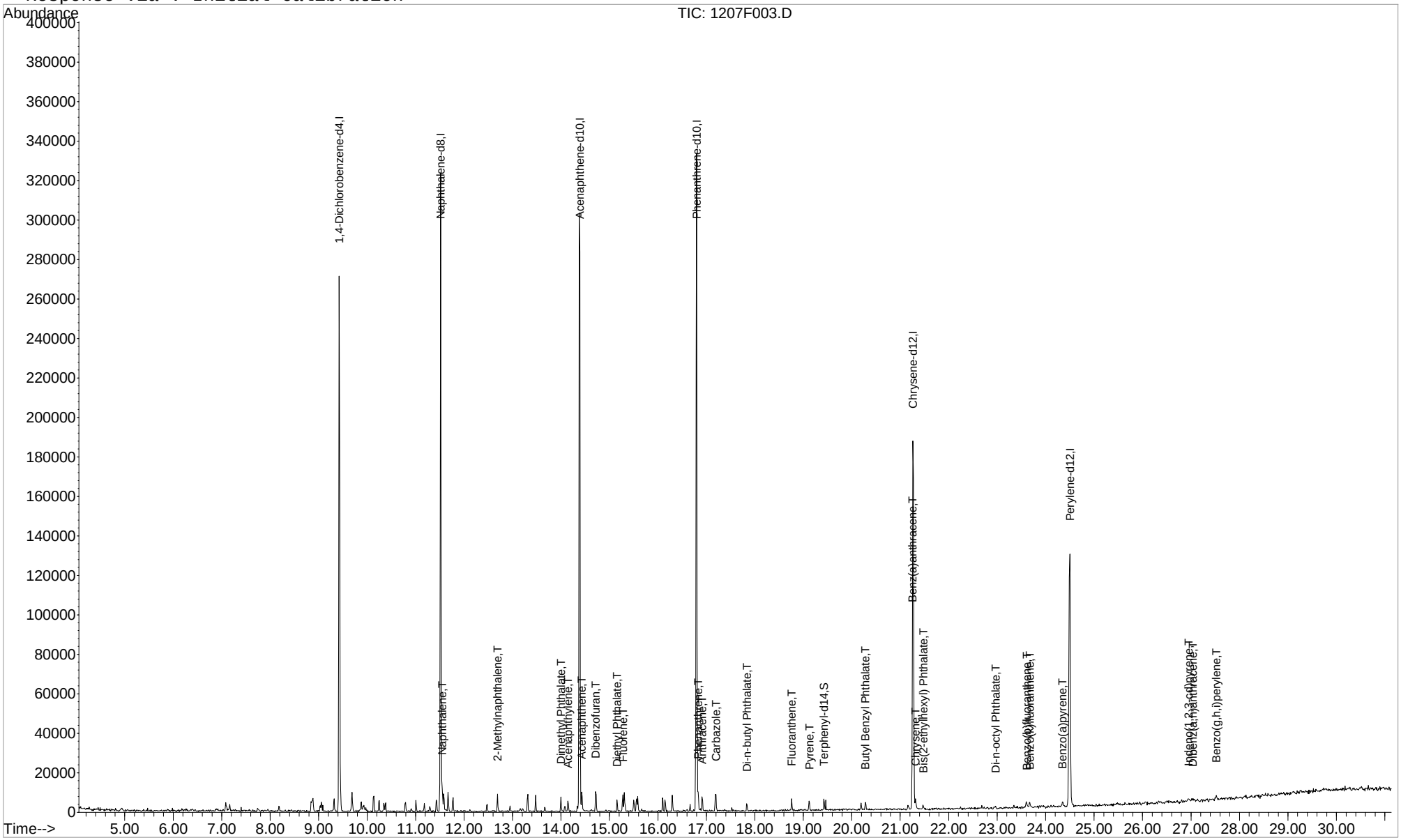
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F003.D Vial: 3
Acq On : 7 Dec 2018 4:32 pm Operator: CConover
Sample : 8270/P ICAL @ 1ppm | SVM59-92D Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:58 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F004.D Vial: 4
Acq On : 7 Dec 2018 5:13 pm Operator: CConover
Sample : 8270/P ICAL @ 5ppm | SVM59-92E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:26 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.43	152	42508	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	163035	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.38	164	95409	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	139095	40.00	ug/ml	0.00
73) Chrysene-d12	21.26	240	107801	40.00	ug/ml	-0.02
83) Perylene-d12	24.50	264	96716	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.16	112	5076	4.57	ug/ml	-0.03
Spiked Amount 150.000	Range 21 - 100		Recovery =	3.05%#		
8) Phenol-d6	8.84	99	5839	4.33	ug/ml	-0.02
Spiked Amount 150.000	Range 10 - 94		Recovery =	2.89%#		
20) Nitrobenzene-d5	10.34	82	6907	5.29	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery =	5.29%#		
40) 2-Fluorobiphenyl	13.31	172	16002	4.73	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery =	4.73%#		
62) 2,4,6-Tribromophenol	15.67	330	1513	2.66	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery =	1.77%#		
76) Terphenyl-d14	19.43	244	10206	4.54	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery =	4.54%#		
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.39	42	5354	5.01	ug/ml	91
3) Pyridine	4.45	79	4759m	5.00	ug/ml	
5) Ethylene Glycol Butyl Ethe	7.73	57	5260	5.22	ug/ml	94
6) Aniline	8.88	93	8661	5.44	ug/ml#	48
7) Bis(2-chloroethyl) Ether	9.03	93	5211	5.19	ug/ml	87
9) Phenol	8.86	94	7070	5.08	ug/ml#	69
10) 2-Chlorophenol	9.06	128	5787	4.24	ug/ml	97
11) 1,3-Dichlorobenzene	9.32	146	7995	4.92	ug/ml	96
12) 1,4-Dichlorobenzene	9.46	146	8359	5.04	ug/ml	95
13) 1,2-Dichlorobenzene	9.69	146	7296	4.62	ug/ml	94
14) Benzyl Alcohol	9.68	108	3532	4.44	ug/ml	90
15) 2,2'-oxybis(2-chloropropan	9.94	45	8102m	6.08	ug/ml	
16) 2-Methylphenol	9.87	107	4464	4.38	ug/ml	90
17) Hexachloroethane	10.24	117	3219	4.78	ug/ml	87
18) N-Nitrosodi-n-propylamine	10.13	70	3962	4.93	ug/ml	82
19) 4-Methylphenol	10.14	107	6391	4.41	ug/ml	90
21) Nitrobenzene	10.38	77	6663	5.33	ug/ml	91
23) Isophorone	10.78	82	11495	5.14	ug/ml	97
24) 2-Nitrophenol	10.91	139	2623	3.28	ug/ml	79
25) 2,4-Dimethylphenol	11.01	122	5082	4.74	ug/ml	87
26) Bis(2-chloroethoxy)methane	11.18	93	6305	5.13	ug/ml	98
27) 2,4-Dichlorophenol	11.29	162	5647	4.46	ug/ml	93
29) 1,2,4-Trichlorobenzene	11.43	180	6983	4.78	ug/ml	93
30) Naphthalene	11.55	128	20455	5.13	ug/ml	98
31) n-Dodecane	11.58	57	7783	6.09	ug/ml	96
32) 4-Chloroaniline	11.67	127	8513	4.77	ug/ml	90
33) Hexachlorobutadiene	11.77	225	5176	5.17	ug/ml	95
34) 4-Chloro-3-methylphenol	12.47	107	4895	4.57	ug/ml	98
35) 2-Methylnaphthalene	12.69	142	13759	4.87	ug/ml	96
37) Hexachlorocyclopentadiene	12.95	237	3680	5.94	ug/ml	91
38) 2,4,6-Trichlorophenol	13.15	196	3448	3.64	ug/ml	84
39) 2,4,5-Trichlorophenol	13.20	196	3986	4.14	ug/ml	97
41) 2-Chloronaphthalene	13.48	162	13432	4.75	ug/ml	99
42) 2-Nitroaniline	13.66	65	3951	5.12	ug/ml	96
43) Acenaphthylene	14.14	152	18557	4.62	ug/ml	99
44) Dimethyl Phthalate	14.00	163	15959	5.26	ug/ml	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F004.D Vial: 4
Acq On : 7 Dec 2018 5:13 pm Operator: CConover
Sample : 8270/P ICAL @ 5ppm | SVM59-92E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:26 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
45)	2,6-Dinitrotoluene	14.08	165	2809	3.97	ug/ml	87
46)	Acenaphthene	14.43	154	12225	4.80	ug/ml	98
47)	3-Nitroaniline	14.34	138	2921	4.08	ug/ml	81
49)	Dibenzofuran	14.72	168	19605	4.90	ug/ml	97
50)	4-Nitrophenol	14.62	109	1436	4.52	ug/ml	86
51)	2,4-Dinitrotoluene	14.73	165	3465	3.93	ug/ml#	66
52)	2,3,4,6-Tetrachlorophenol	14.92	232	2198	3.35	ug/ml	97
53)	Fluorene	15.28	166	14396	4.85	ug/ml	95
54)	4-Chlorophenyl Phenyl Ethe	15.31	204	7677	5.12	ug/ml	88
55)	Diethyl Phthalate	15.16	149	14734	5.11	ug/ml	95
56)	4-Nitroaniline	15.33	138	2386	3.69	ug/ml	91
58)	Diphenylamine	15.50	169	8235	4.25	ug/ml	87
59)	Azobenzene	15.56	77	17569m	6.82	ug/ml	
60)	Benzophenone	15.58	105	12109	5.41	ug/ml	97
63)	4-Bromophenyl Phenyl Ether	16.10	248	3806	3.98	ug/ml	85
64)	Hexachlorobenzene	16.15	284	3790	3.63	ug/ml	84
65)	2,6-Diisopropylnaphthalene	16.30	197	10598	4.29	ug/ml	97
66)	Pentachlorophenol	16.49	266	801	1.92	ug/ml	74
67)	Diazinon	16.67	137	2274	3.99	ug/ml	86
68)	Phenanthrene	16.83	178	17625	4.59	ug/ml	96
69)	Anthracene	16.91	178	17534	4.46	ug/ml	96
70)	Carbazole	17.20	167	14624	4.22	ug/ml	98
71)	Di-n-butyl Phthalate	17.83	149	14893	3.53	ug/ml	96
72)	Fluoranthene	18.76	202	13856	3.61	ug/ml	94
74)	Benzidine	19.03	184	5452	3.74	ug/ml	98
75)	Pyrene	19.12	202	14479	4.34	ug/ml	95
77)	Butyl Benzyl Phthalate	20.28	149	7437	4.64	ug/ml	94
78)	Diethylene Glycol Butyl Et	21.16	105	9236	4.82	ug/ml	94
79)	3,3'-Dichlorobenzidine	21.24	252	5039	3.70	ug/ml	98
80)	Benz(a)anthracene	21.24	228	14840	4.65	ug/ml	98
81)	Chrysene	21.32	228	14906	4.89	ug/ml	93
82)	Bis(2-ethylhexyl) Phthalat	21.47	149	8709	3.94	ug/ml	97
84)	Di-n-octyl Phthalate	22.97	149	10657	3.12	ug/ml	98
85)	Benzo(b)fluoranthene	23.60	252	13347	4.81	ug/ml	96
86)	Benzo(k)fluoranthene	23.67	252	15747	5.71	ug/ml	97
89)	Benzo(a)pyrene	24.35	252	12531	4.89	ug/ml	97
90)	Indeno(1,2,3-cd)pyrene	26.95	276	9265	3.74	ug/ml	100
91)	Dibenz(a,h)anthracene	27.04	278	9946	3.97	ug/ml	89
92)	Benzo(g,h,i)perylene	27.52	276	10666	4.14	ug/ml	95

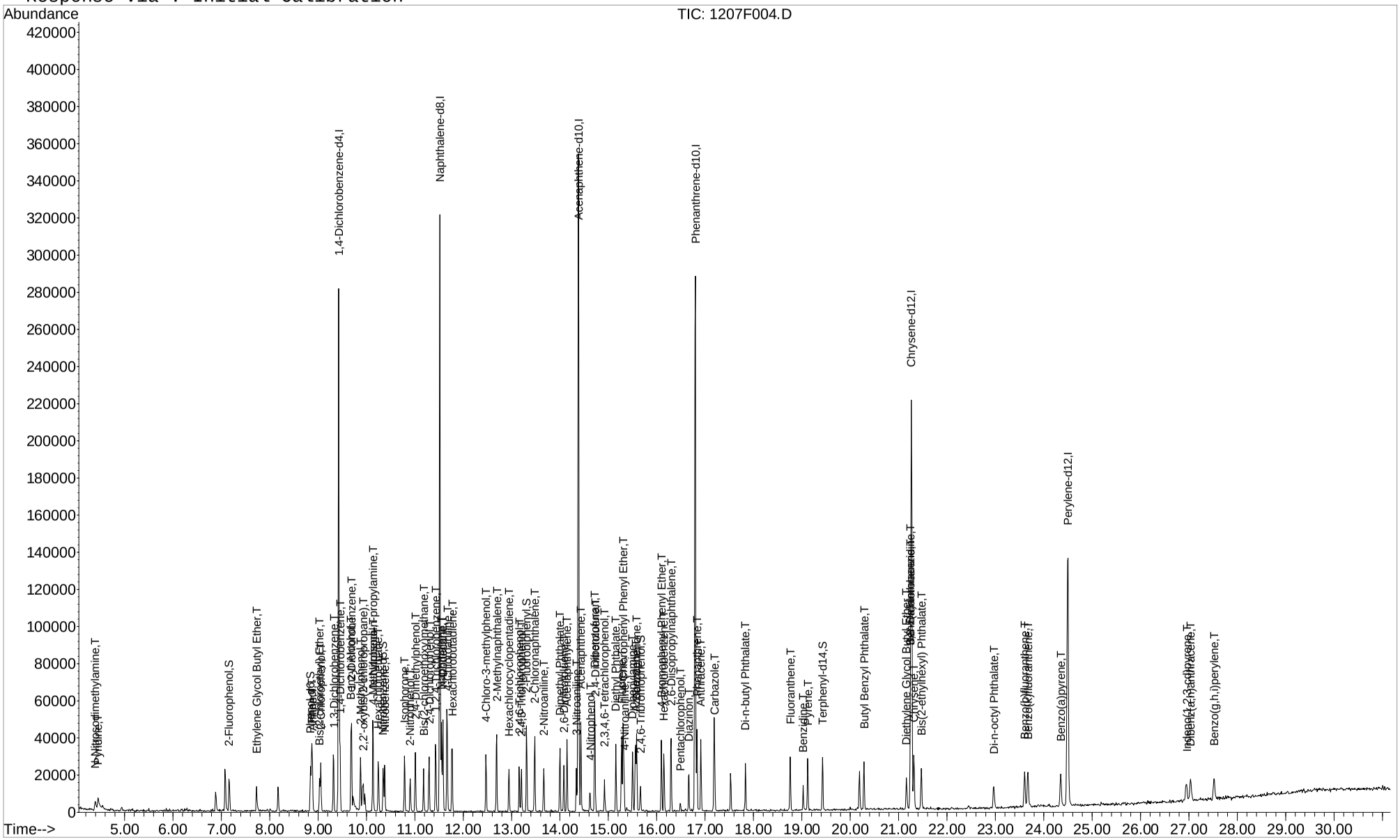
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F004.D Vial: 4
Acq On : 7 Dec 2018 5:13 pm Operator: CConover
Sample : 8270/P ICAL @ 5ppm | SVM59-92E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:00 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

12/08/18 12/13/18 1st 2nd



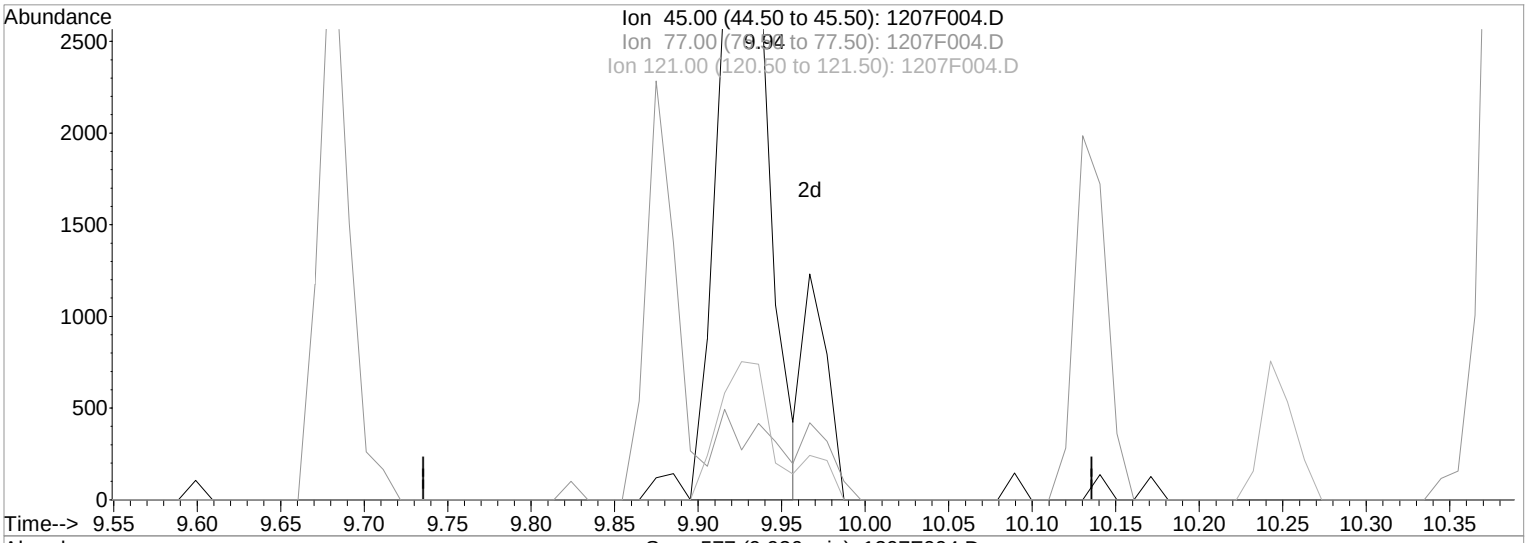
Page 1404 of 1509

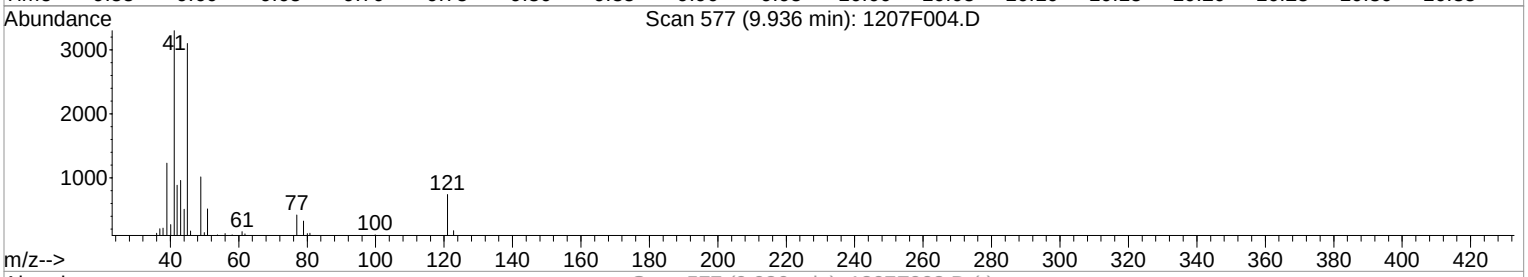
Quantitation Report (Qedit)

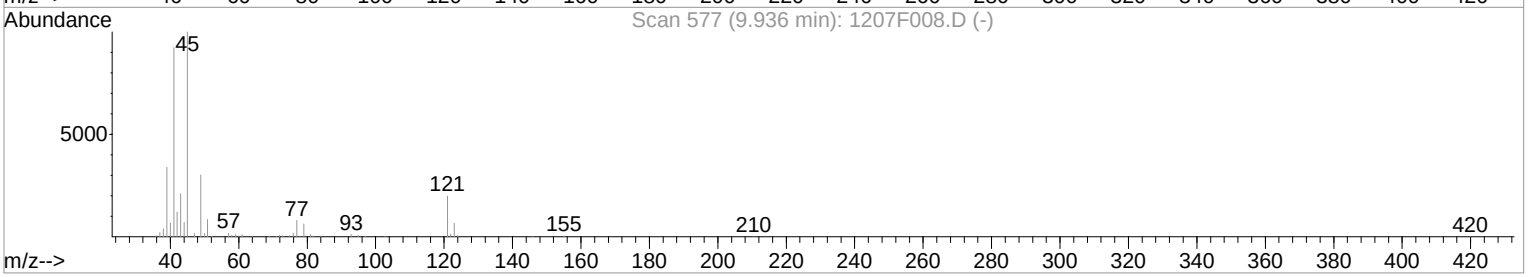
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F004.D Vial: 4
Acq On : 7 Dec 2018 5:13 pm Operator: CConover
Sample : 8270/P ICAL @ 5ppm | SVM59-92E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:58 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F004.D

(15) 2,2'-oxybis(2-chloropropane) (T)

9.94min 5.15ug/ml

response 6862

Ion	Exp%	Act%
45.00	100	100
77.00	9.40	11.04
121.00	19.70	23.19
0.00	0.00	0.00

Manual Integration:

Before

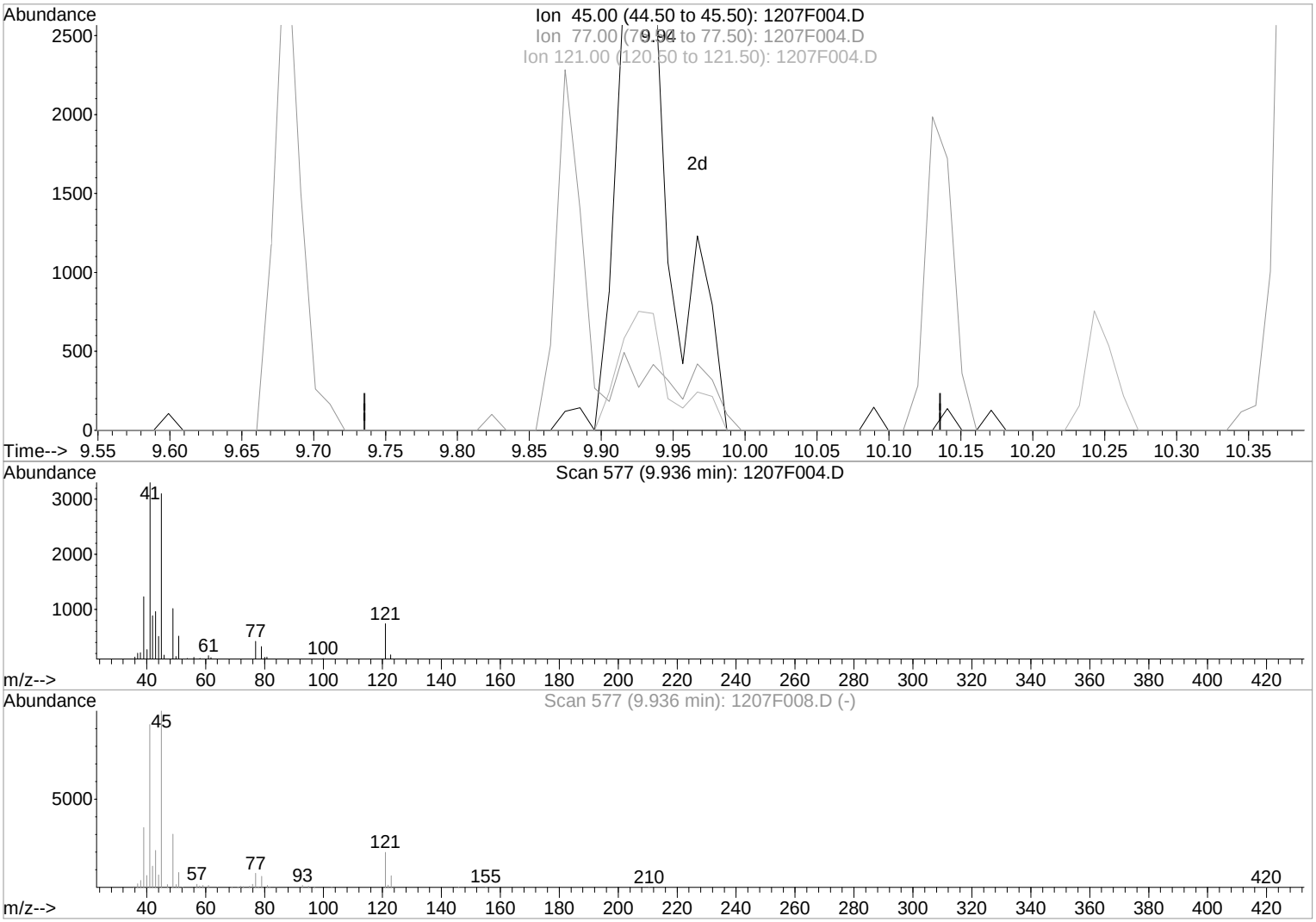
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F004.D Vial: 4
Acq On : 7 Dec 2018 5:13 pm Operator: CConover
Sample : 8270/P ICAL @ 5ppm | SVM59-92E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:59 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F004.D

(15) 2,2'-oxybis(2-chloropropane) (T)

9.94min 6.08ug/ml m

response 8102

Ion	Exp%	Act%
45.00	100	100
77.00	9.40	13.45
121.00	19.70	23.87
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

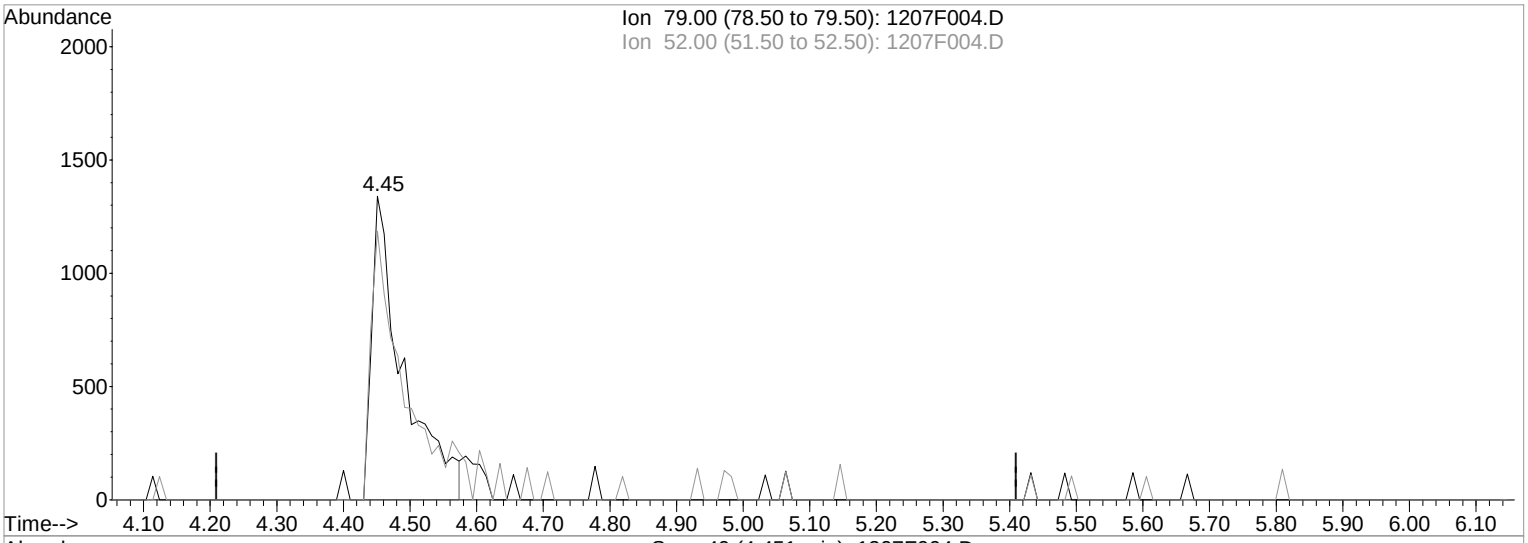
12/07/18

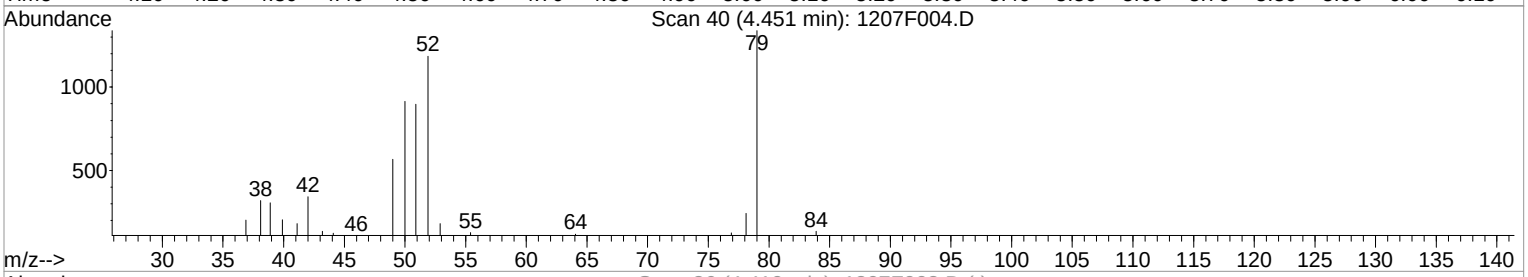
Quantitation Report (Qedit)

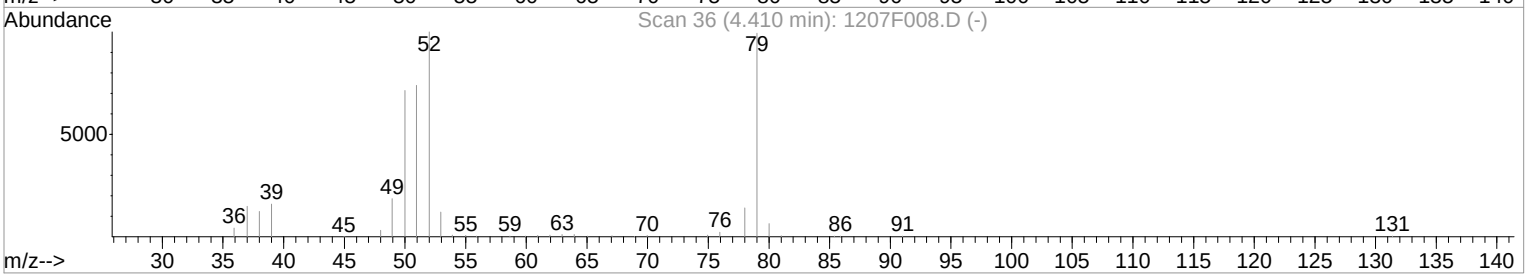
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F004.D Vial: 4
Acq On : 7 Dec 2018 5:13 pm Operator: CConover
Sample : 8270/P ICAL @ 5ppm | SVM59-92E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:54 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F004.D

(3) Pyridine (T)

4.45min 4.61ug/ml

response 4386

Ion	Exp%	Act%
79.00	100	100
52.00	100.80	86.22
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

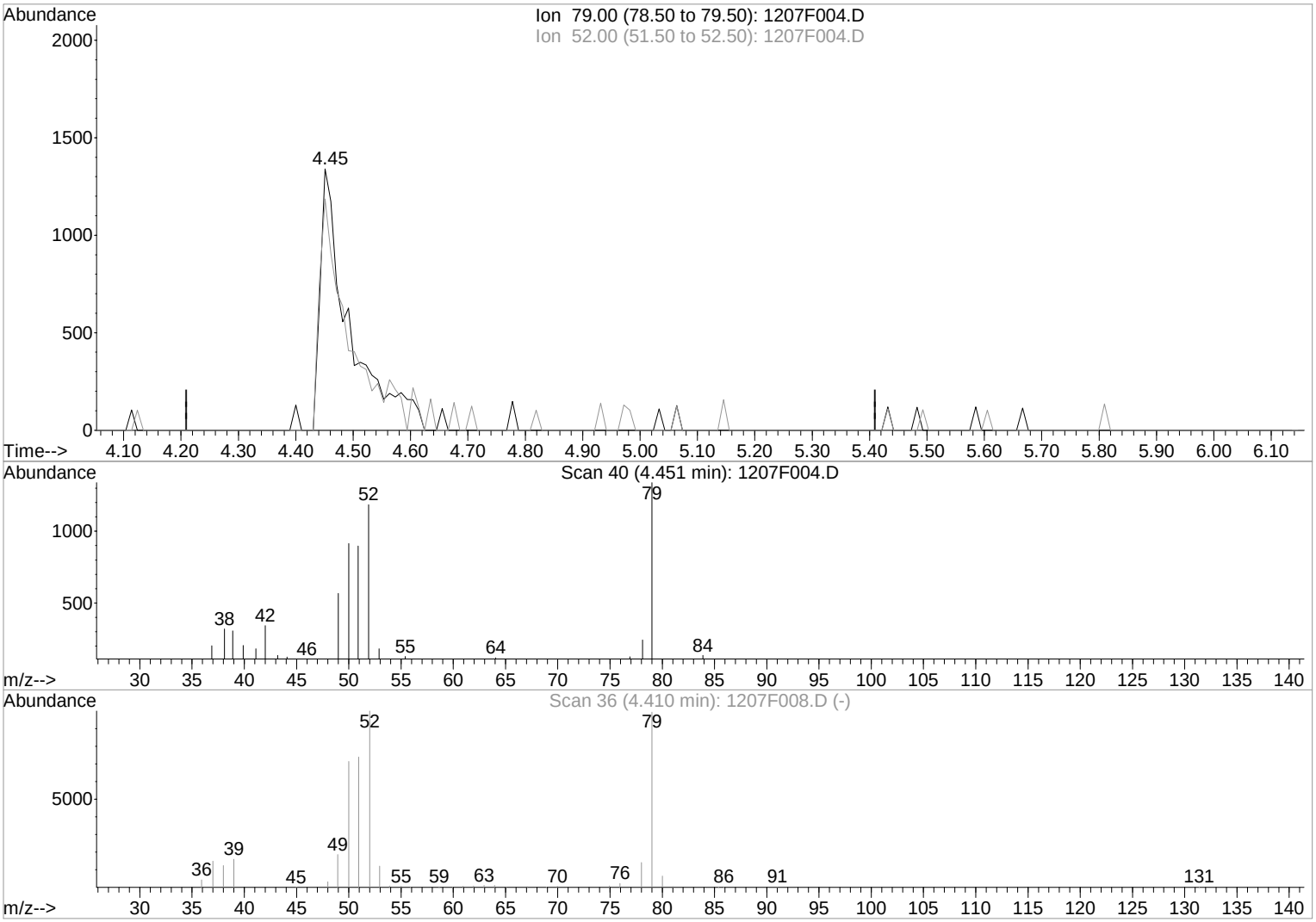
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F004.D Vial: 4
Acq On : 7 Dec 2018 5:13 pm Operator: CConover
Sample : 8270/P ICAL @ 5ppm | SVM59-92E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:58 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F004.D

(3) Pyridine (T)

4.45min 5.00ug/ml m

response 4759

Ion	Exp%	Act%
79.00	100	100
52.00	100.80	88.51
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

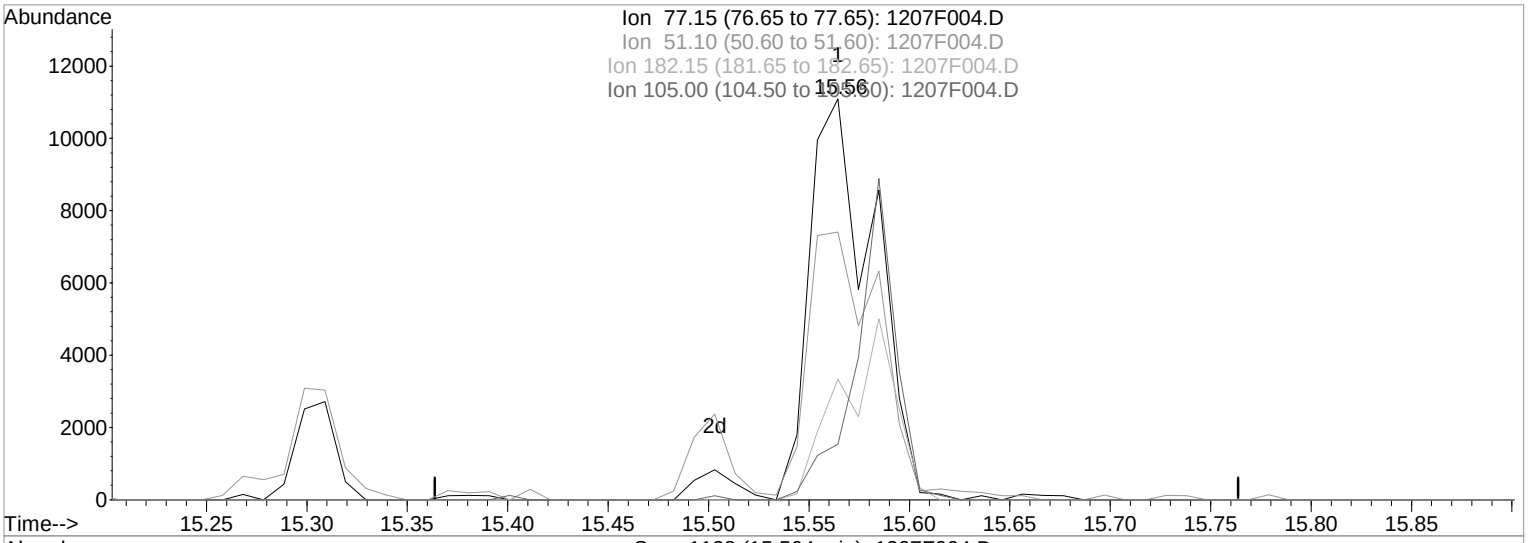
12/07/18

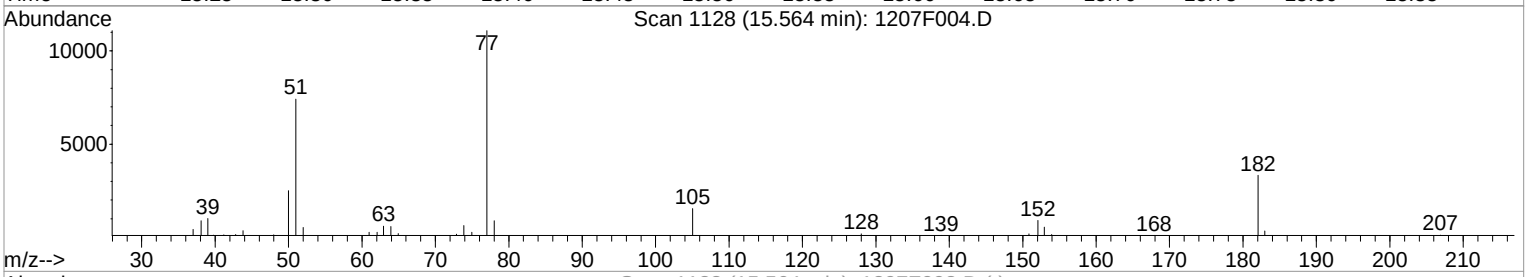
Quantitation Report (Qedit)

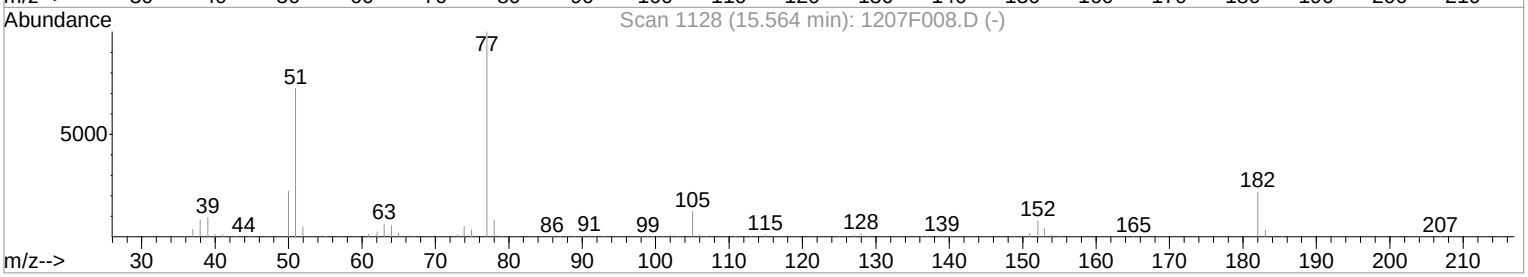
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F004.D Vial: 4
Acq On : 7 Dec 2018 5:13 pm Operator: CConover
Sample : 8270/P ICAL @ 5ppm | SVM59-92E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:59 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F004.D

(59) Azobenzene (T)

15.56min 9.62ug/ml

response 24759

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	65.08
182.15	21.70	30.07
105.00	12.30	13.89

Manual Integration:

Before

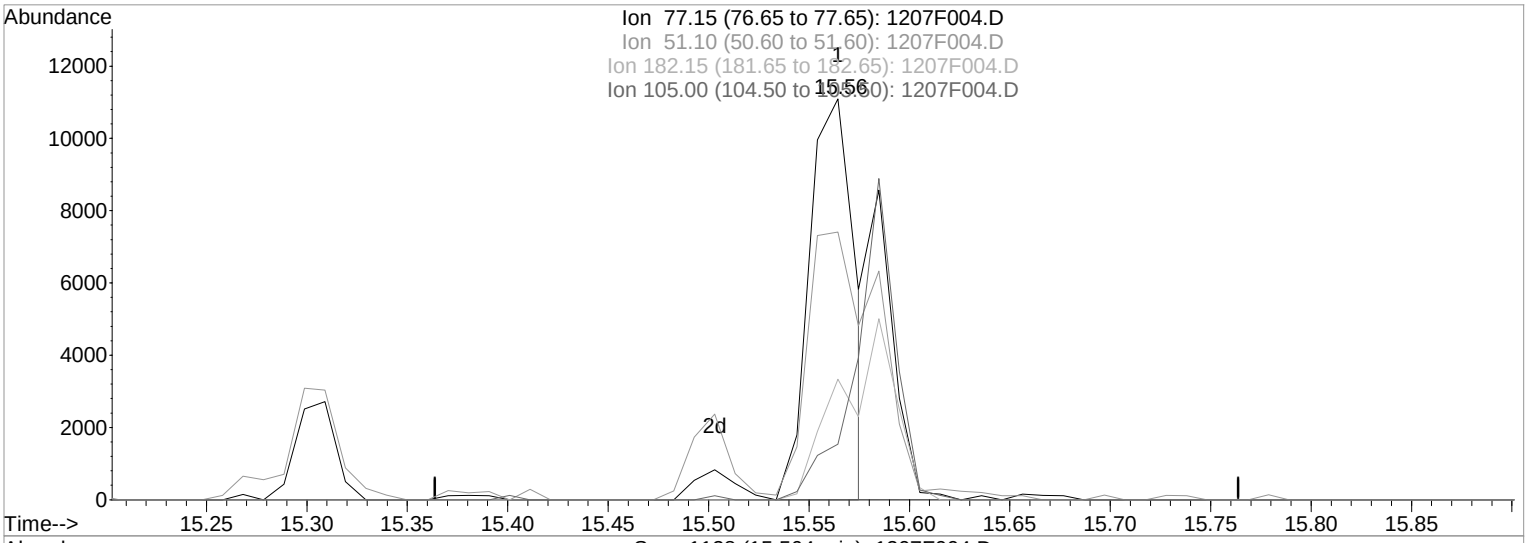
12/07/18

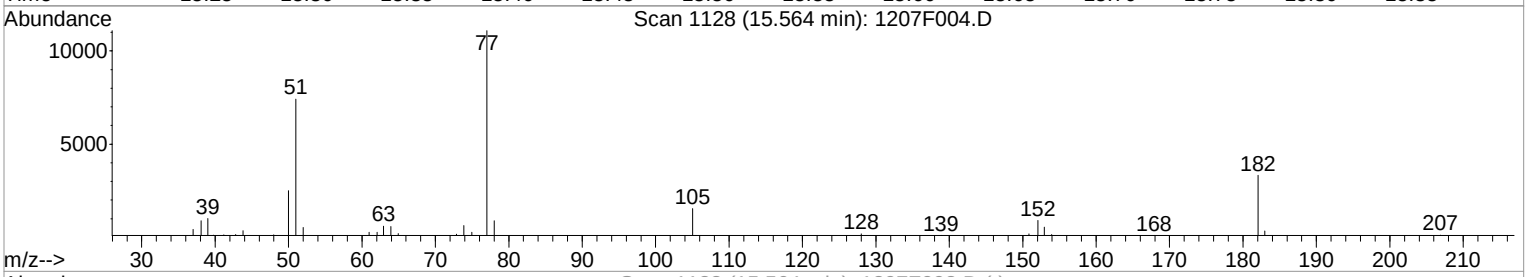
Quantitation Report (Qedit)

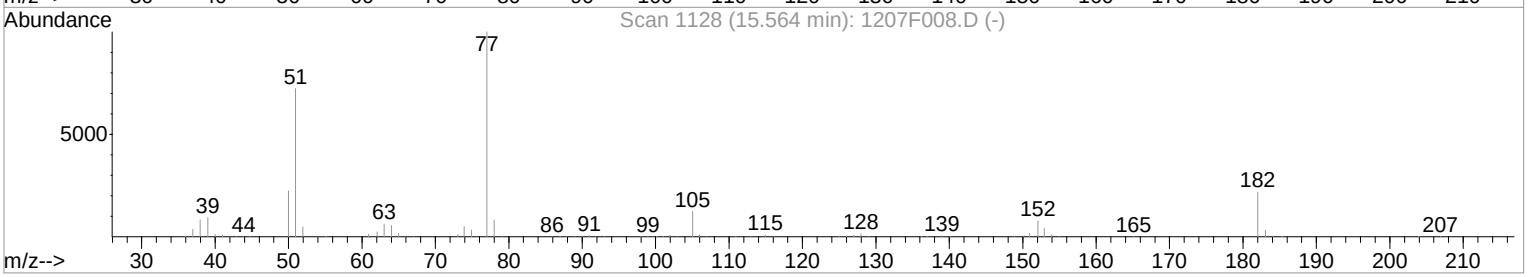
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F004.D Vial: 4
Acq On : 7 Dec 2018 5:13 pm Operator: CConover
Sample : 8270/P ICAL @ 5ppm | SVM59-92E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:59 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F004.D

(59) Azobenzene (T)

15.56min 6.82ug/ml m

response 17569

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	66.75
182.15	21.70	30.07
105.00	12.30	13.89

Manual Integration:

After

IC-Overintegrated

12/07/18

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F005.D Vial: 5
Acq On : 7 Dec 2018 5:54 pm Operator: CConover
Sample : 8270/P ICAL @ 10ppm | SVM59-92F Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:27 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.43	152	44614	40.00	ug/ml	0.00
22) Naphthalene-d8	11.51	136	166235	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.38	164	93020	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.79	188	131846	40.00	ug/ml	0.00
73) Chrysene-d12	21.27	240	110949	40.00	ug/ml	-0.02
83) Perylene-d12	24.50	264	102767	40.00	ug/ml	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	7.16	112	10493	9.00	ug/ml	-0.03
Spiked Amount 150.000	Range 21 - 100		Recovery =	6.00%#		
8) Phenol-d6	8.85	99	12947	9.14	ug/ml	-0.02
Spiked Amount 150.000	Range 10 - 94		Recovery =	6.09%#		
20) Nitrobenzene-d5	10.35	82	13517	9.87	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery =	9.87%#		
40) 2-Fluorobiphenyl	13.31	172	31312	9.49	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery =	9.49%#		
62) 2,4,6-Tribromophenol	15.67	330	3074	5.70	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery =	3.80%#		
76) Terphenyl-d14	19.43	244	20668	8.93	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery =	8.93%#		
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.38	42	13907	12.40	ug/ml	98
3) Pyridine	4.43	79	10753m	10.77	ug/ml	
5) Ethylene Glycol Butyl Ethe	7.72	57	11219	10.60	ug/ml	100
6) Aniline	8.88	93	17921	10.73	ug/ml#	69
7) Bis(2-chloroethyl) Ether	9.03	93	11711	11.11	ug/ml	85
9) Phenol	8.87	94	15205	10.42	ug/ml	81
10) 2-Chlorophenol	9.06	128	12926	9.03	ug/ml	96
11) 1,3-Dichlorobenzene	9.32	146	16618	9.74	ug/ml	95
12) 1,4-Dichlorobenzene	9.45	146	16297	9.36	ug/ml	91
13) 1,2-Dichlorobenzene	9.69	146	15903	9.59	ug/ml	95
14) Benzyl Alcohol	9.68	108	7490	8.97	ug/ml	95
15) 2,2'-oxybis(2-chloropropan	9.93	45	16425	11.74	ug/ml	89
16) 2-Methylphenol	9.88	107	9611	8.98	ug/ml	94
17) Hexachloroethane	10.25	117	7234	10.24	ug/ml	91
18) N-Nitrosodi-n-propylamine	10.13	70	8914	10.56	ug/ml	93
19) 4-Methylphenol	10.13	107	14804	9.74	ug/ml	96
21) Nitrobenzene	10.38	77	14205	10.82	ug/ml	92
23) Isophorone	10.79	82	23535	10.33	ug/ml	97
24) 2-Nitrophenol	10.90	139	6196	7.59	ug/ml	79
25) 2,4-Dimethylphenol	11.01	122	9886	9.04	ug/ml	97
26) Bis(2-chloroethoxy)methane	11.19	93	13282	10.59	ug/ml	96
27) 2,4-Dichlorophenol	11.30	162	11555	8.95	ug/ml	92
28) Benzoic Acid	11.10	122	1441	2.33	ug/ml	82
29) 1,2,4-Trichlorobenzene	11.43	180	14656	9.84	ug/ml	96
30) Naphthalene	11.55	128	40103	9.86	ug/ml	99
31) n-Dodecane	11.58	57	15924	12.22	ug/ml	99
32) 4-Chloroaniline	11.67	127	17610	9.69	ug/ml	93
33) Hexachlorobutadiene	11.77	225	10602	10.40	ug/ml	97
34) 4-Chloro-3-methylphenol	12.47	107	10987	10.05	ug/ml	98
35) 2-Methylnaphthalene	12.69	142	27054	9.38	ug/ml	95
37) Hexachlorocyclopentadiene	12.94	237	8382	13.87	ug/ml	94
38) 2,4,6-Trichlorophenol	13.16	196	7486	8.10	ug/ml	97
39) 2,4,5-Trichlorophenol	13.20	196	8807	9.39	ug/ml	99
41) 2-Chloronaphthalene	13.47	162	26877	9.75	ug/ml	98
42) 2-Nitroaniline	13.67	65	8947	11.90	ug/ml	96
43) Acenaphthylene	14.15	152	37902	9.68	ug/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F005.D Vial: 5
Acq On : 7 Dec 2018 5:54 pm Operator: CConover
Sample : 8270/P ICAL @ 10ppm | SVM59-92F Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:27 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
44) Dimethyl Phthalate	13.99	163	30677	10.37	ug/ml	98
45) 2,6-Dinitrotoluene	14.09	165	6069	8.79	ug/ml	95
46) Acenaphthene	14.43	154	25733	10.36	ug/ml	100
47) 3-Nitroaniline	14.34	138	6625	9.50	ug/ml	92
48) 2,4-Dinitrophenol	14.52	184	497	1.49	ug/ml	81
49) Dibenzofuran	14.72	168	38823	9.96	ug/ml	100
50) 4-Nitrophenol	14.62	109	4046	13.05	ug/ml	95
51) 2,4-Dinitrotoluene	14.73	165	7831	9.12	ug/ml	89
52) 2,3,4,6-Tetrachlorophenol	14.92	232	5576	8.72	ug/ml	96
53) Fluorene	15.27	166	28965	10.01	ug/ml	98
54) 4-Chlorophenyl Phenyl Ethe	15.30	204	15223	10.41	ug/ml	95
55) Diethyl Phthalate	15.16	149	28220	10.03	ug/ml	98
56) 4-Nitroaniline	15.32	138	5665	8.98	ug/ml	91
57) 2-Methyl-4,6-dinitrophenol	15.37	198	1492	3.10	ug/ml#	34
58) Diphenylamine	15.51	169	17337	9.17	ug/ml	99
59) Azobenzene	15.56	77	38561m	15.36	ug/ml	
60) Benzophenone	15.59	105	24621	11.29	ug/ml	95
63) 4-Bromophenyl Phenyl Ether	16.10	248	7995	8.82	ug/ml	96
64) Hexachlorobenzene	16.15	284	7874	7.96	ug/ml	91
65) 2,6-Diisopropylnaphthalene	16.29	197	22414	9.57	ug/ml	98
66) Pentachlorophenol	16.49	266	2681	6.79	ug/ml	94
67) Diazinon	16.66	137	4901	9.07	ug/ml	97
68) Phenanthrene	16.83	178	35546	9.77	ug/ml	98
69) Anthracene	16.92	178	35231	9.45	ug/ml	97
70) Carbazole	17.19	167	29270	8.91	ug/ml	97
71) Di-n-butyl Phthalate	17.84	149	31617	7.90	ug/ml	97
72) Fluoranthene	18.76	202	29226	8.03	ug/ml	98
74) Benzidine	19.03	184	12712	8.47	ug/ml	97
75) Pyrene	19.12	202	30110	8.77	ug/ml	99
77) Butyl Benzyl Phthalate	20.29	149	15530	9.40	ug/ml	96
78) Diethylene Glycol Butyl Et	21.17	105	22628	11.47	ug/ml	99
79) 3,3'-Dichlorobenzidine	21.25	252	12050	8.59	ug/ml	98
80) Benz(a)anthracene	21.25	228	31434	9.57	ug/ml	98
81) Chrysene	21.32	228	32853	10.47	ug/ml	99
82) Bis(2-ethylhexyl) Phthalat	21.47	149	20651	9.09	ug/ml	99
84) Di-n-octyl Phthalate	22.96	149	30241	8.33	ug/ml	99
85) Benzo(b)fluoranthene	23.61	252	30490	10.34	ug/ml	98
86) Benzo(k)fluoranthene	23.67	252	31423	10.73	ug/ml	98
89) Benzo(a)pyrene	24.35	252	26765	9.84	ug/ml	97
90) Indeno(1,2,3-cd)pyrene	26.95	276	19875	7.55	ug/ml	97
91) Dibenz(a,h)anthracene	27.04	278	20555	7.73	ug/ml	100
92) Benzo(g,h,i)perylene	27.52	276	22533	8.22	ug/ml	94

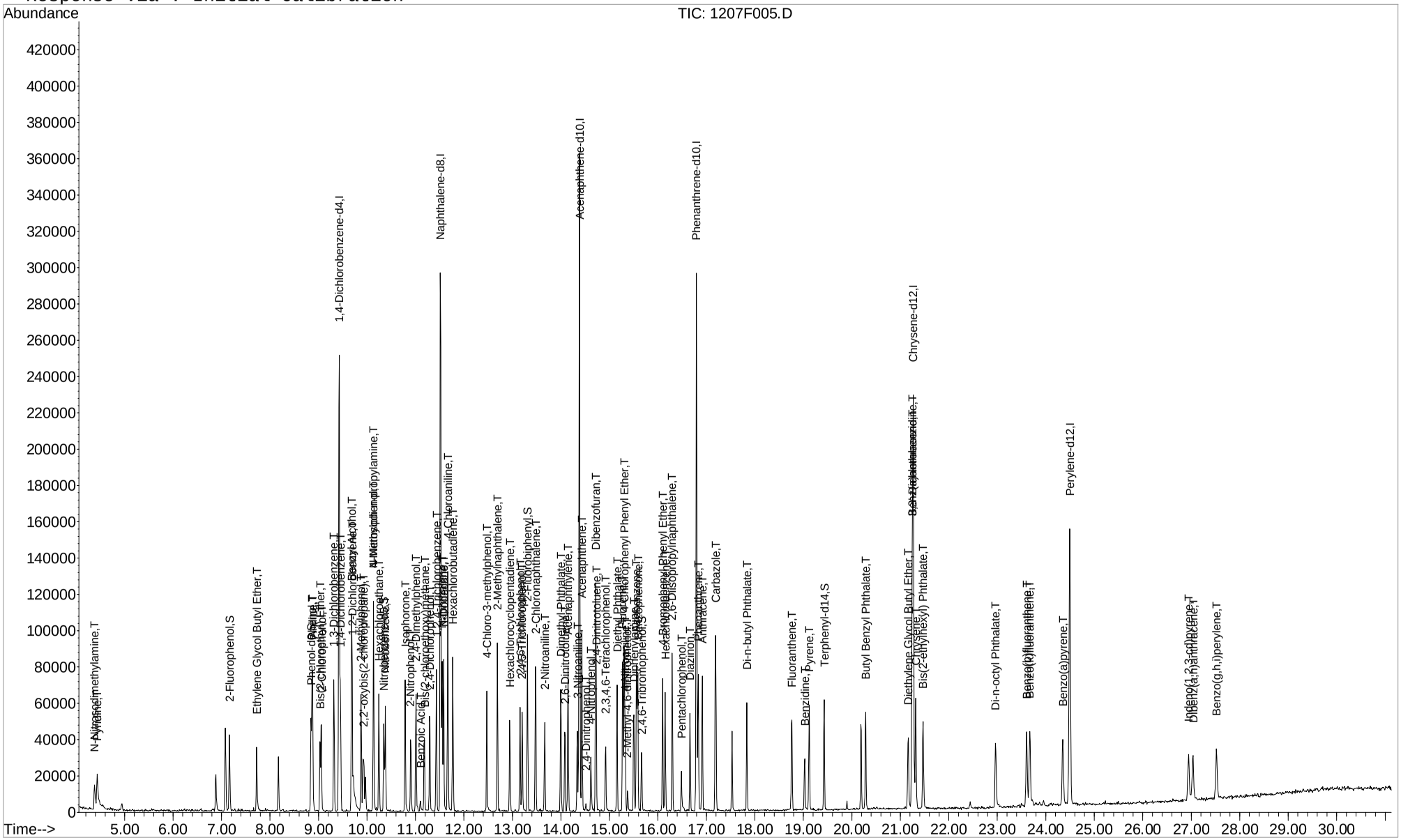
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F005.D Vial: 5
Acq On : 7 Dec 2018 5:54 pm Operator: CConover
Sample : 8270/P ICAL @ 10ppm | SVM59-92F Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:01 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

12/08/18 12/13/18 1st 2nd

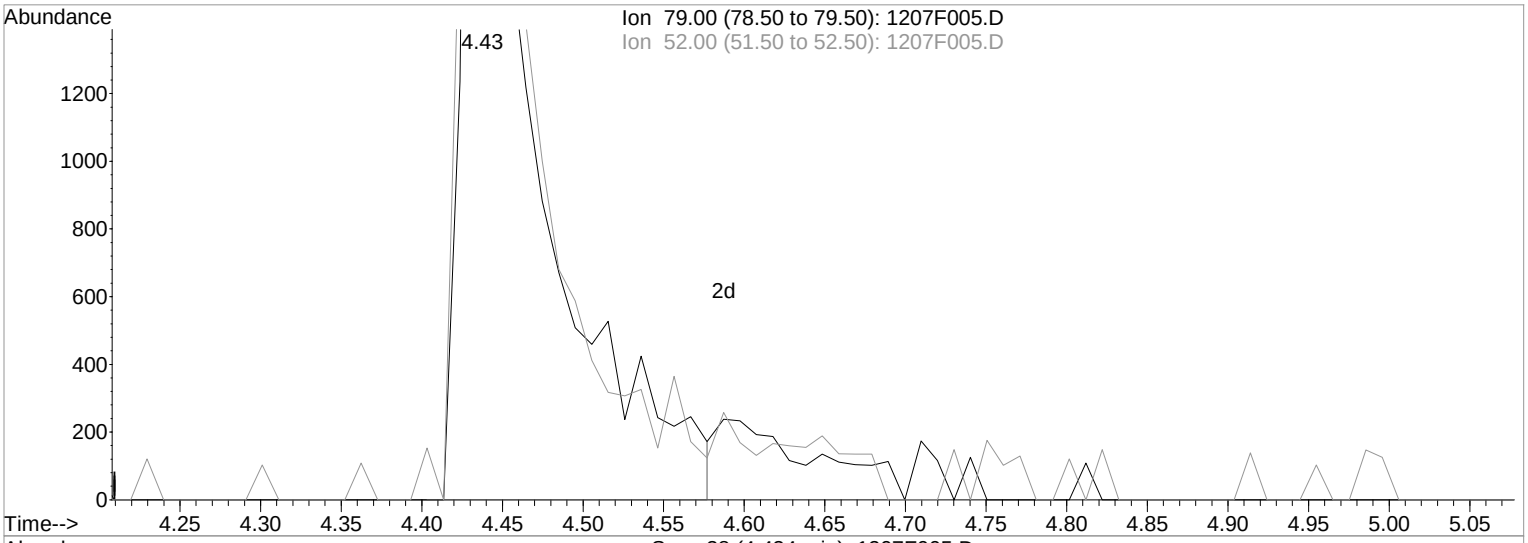


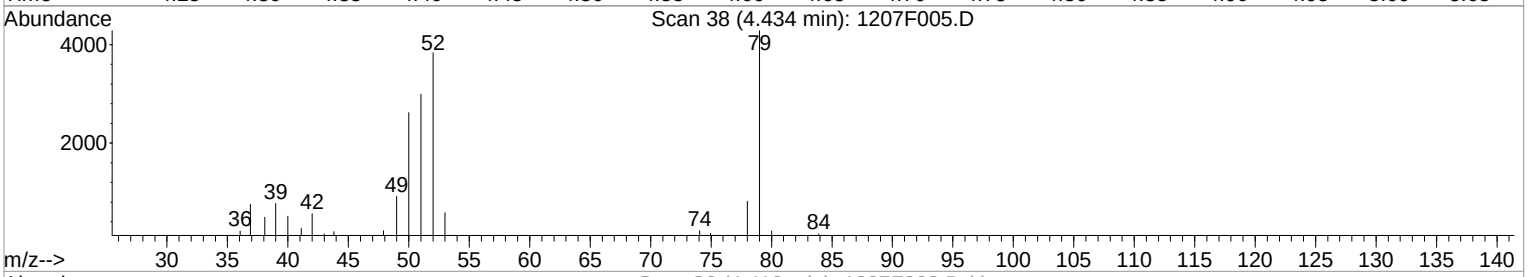
Quantitation Report (Qedit)

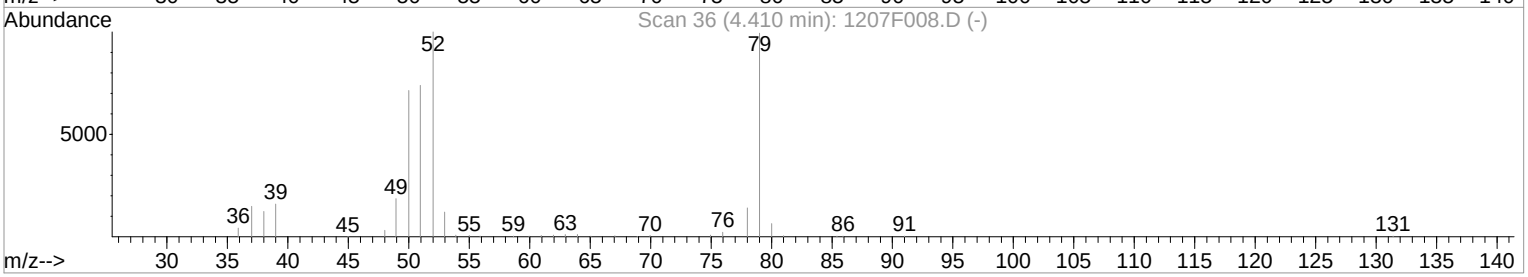
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F005.D Vial: 5
Acq On : 7 Dec 2018 5:54 pm Operator: CConover
Sample : 8270/P ICAL @ 10ppm | SVM59-92F Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:54 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F005.D

(3) Pyridine (T)

4.43min 9.77ug/ml

response 9753

Ion	Exp%	Act%
79.00	100	100
52.00	100.80	87.98
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

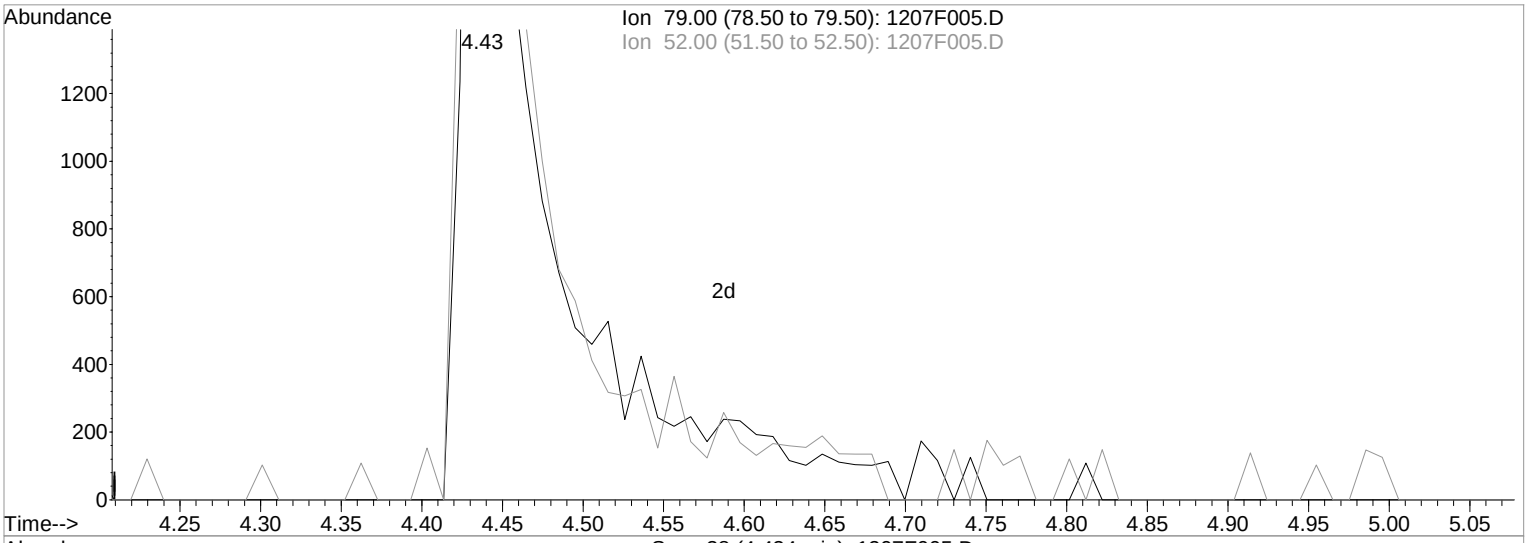
12/07/18

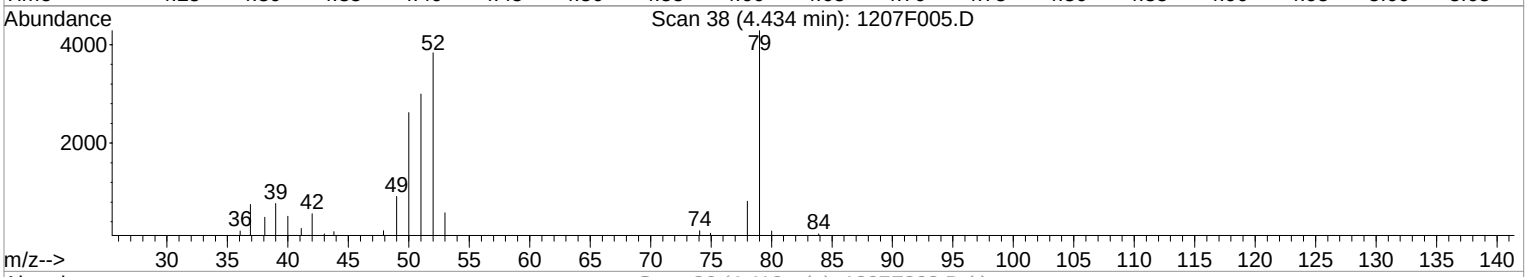
Quantitation Report (Qedit)

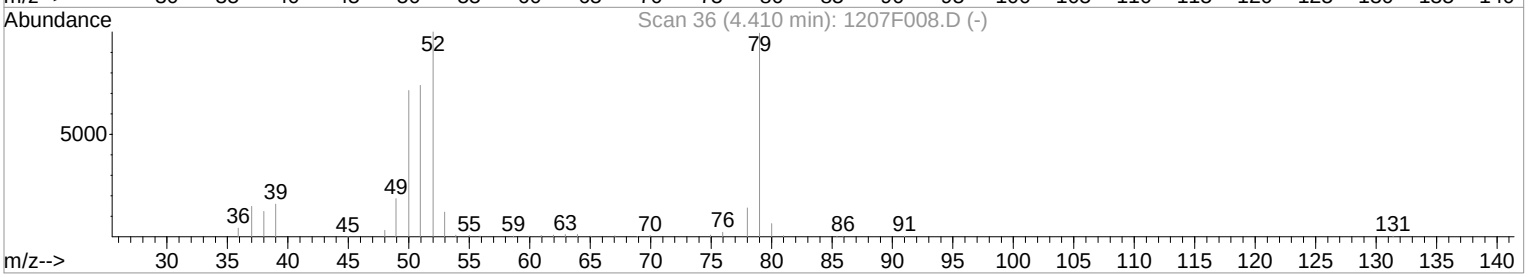
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F005.D Vial: 5
Acq On : 7 Dec 2018 5:54 pm Operator: CConover
Sample : 8270/P ICAL @ 10ppm | SVM59-92F Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:00 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F005.D

(3) Pyridine (T)

4.43min 10.77ug/ml m

response 10753

Ion	Exp%	Act%
79.00	100	100
52.00	100.80	89.43
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

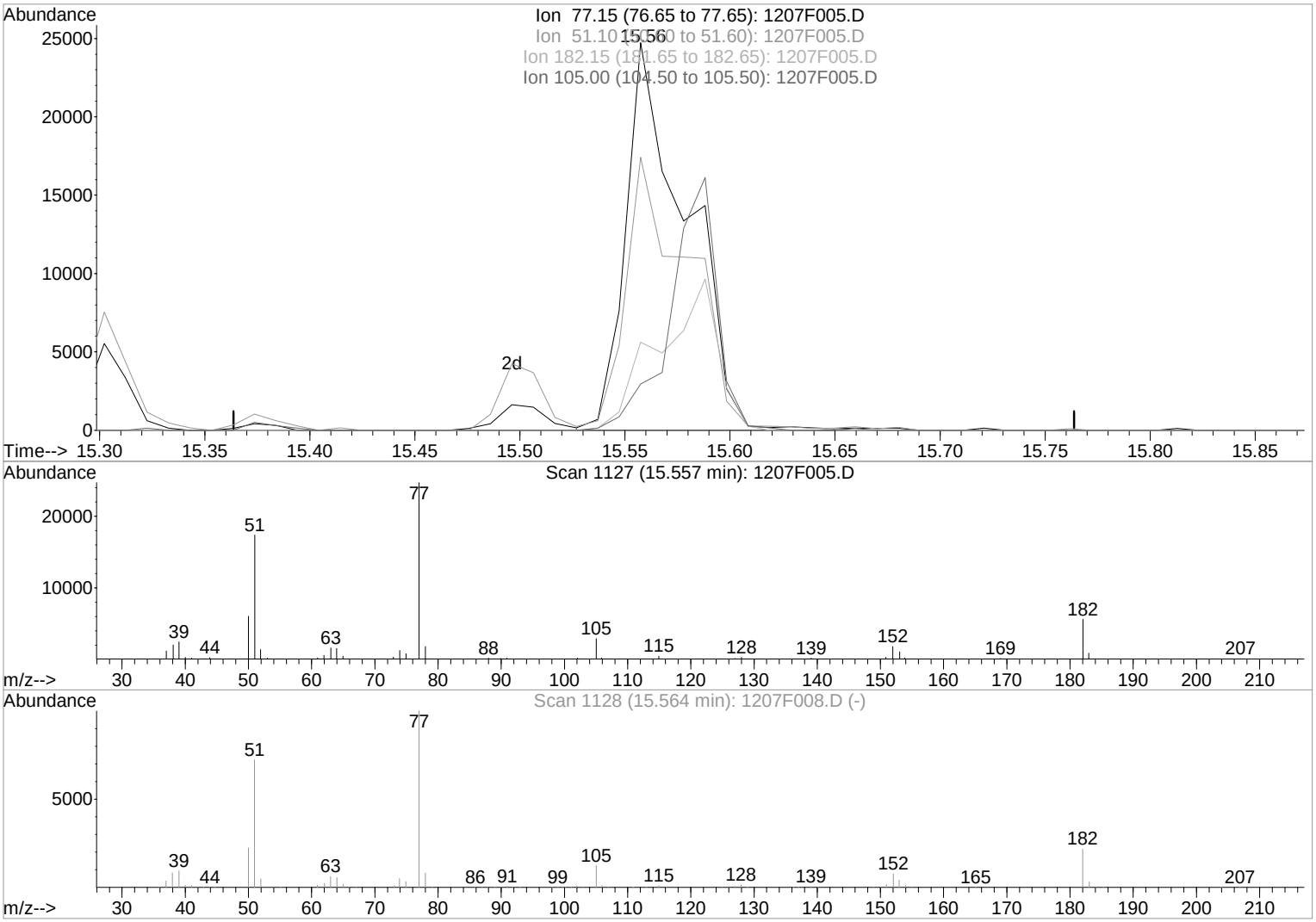
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F005.D Vial: 5
Acq On : 7 Dec 2018 5:54 pm Operator: CConover
Sample : 8270/P ICAL @ 10ppm | SVM59-92F Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:00 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F005.D

(59) Azobenzene (T)

15.56min 19.73ug/ml

response 49539

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	70.04
182.15	21.70	22.60
105.00	12.30	11.94

Manual Integration:

Before

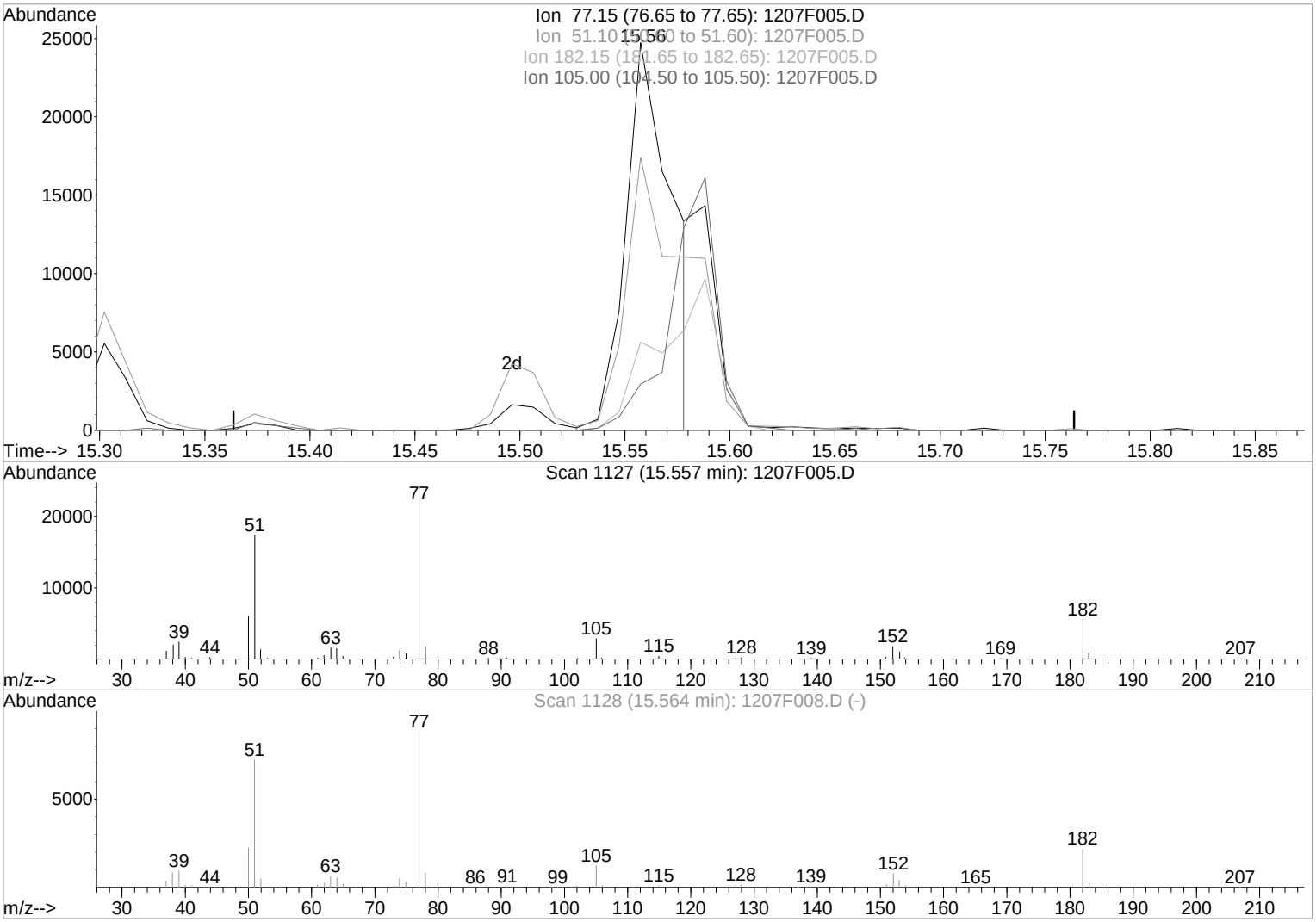
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F005.D Vial: 5
Acq On : 7 Dec 2018 5:54 pm Operator: CConover
Sample : 8270/P ICAL @ 10ppm | SVM59-92F Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:01 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F005.D

(59) Azobenzene (T)

15.56min 15.36ug/ml m

response 38561

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	70.43
182.15	21.70	22.71
105.00	12.30	11.88

Manual Integration:

After

IC-Overintegrated

12/07/18

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F006.D Vial: 6
Acq On : 7 Dec 2018 6:35 pm Operator: CConover
Sample : 8270/P ICAL @ 20ppm | SVM59-92G Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:28 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	48866	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	179120	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.39	164	103375	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	142433	40.00	ug/ml	0.00
73) Chrysene-d12	21.27	240	117418	40.00	ug/ml	-0.01
83) Perylene-d12	24.50	264	103916	40.00	ug/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	7.17	112	24806	19.43	ug/ml	-0.02
Spiked Amount 150.000	Range 21 - 100		Recovery = 12.95%#			
8) Phenol-d6	8.85	99	30396	19.59	ug/ml	-0.01
Spiked Amount 150.000	Range 10 - 94		Recovery = 13.06%			
20) Nitrobenzene-d5	10.35	82	32914	21.93	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 21.93%#			
40) 2-Fluorobiphenyl	13.32	172	70961	19.35	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 19.35%#			
62) 2,4,6-Tribromophenol	15.66	330	7689	13.20	ug/ml	-0.01
Spiked Amount 150.000	Range 10 - 123		Recovery = 8.80%#			
76) Terphenyl-d14	19.43	244	46286	18.90	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 18.90%#			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.38	42	32747	26.66	ug/ml	91
3) Pyridine	4.42	79	22382	20.47	ug/ml	100
5) Ethylene Glycol Butyl Ethe	7.73	57	26303	22.69	ug/ml	99
6) Aniline	8.88	93	40067	21.91	ug/ml#	62
7) Bis(2-chloroethyl) Ether	9.04	93	24989	21.65	ug/ml	93
9) Phenol	8.87	94	33353	20.86	ug/ml	93
10) 2-Chlorophenol	9.06	128	29169	18.61	ug/ml	98
11) 1,3-Dichlorobenzene	9.32	146	34985	18.73	ug/ml	96
12) 1,4-Dichlorobenzene	9.45	146	37809	19.82	ug/ml	98
13) 1,2-Dichlorobenzene	9.69	146	34950	19.24	ug/ml	99
14) Benzyl Alcohol	9.68	108	17163	18.77	ug/ml	91
15) 2,2'-oxybis(2-chloropropan	9.93	45	37058	24.18	ug/ml	91
16) 2-Methylphenol	9.88	107	20772	17.72	ug/ml	96
17) Hexachloroethane	10.25	117	16773	21.68	ug/ml	96
18) N-Nitrosodi-n-propylamine	10.14	70	21152	22.88	ug/ml	97
19) 4-Methylphenol	10.14	107	33200	19.95	ug/ml	98
21) Nitrobenzene	10.38	77	32081	22.32	ug/ml	99
23) Isophorone	10.79	82	54062	22.02	ug/ml	97
24) 2-Nitrophenol	10.90	139	15876	18.05	ug/ml	85
25) 2,4-Dimethylphenol	11.02	122	24372	20.67	ug/ml	97
26) Bis(2-chloroethoxy)methane	11.18	93	30772	22.77	ug/ml	98
27) 2,4-Dichlorophenol	11.29	162	27561	19.81	ug/ml	96
28) Benzoic Acid	11.14	122	7738	11.62	ug/ml	95
29) 1,2,4-Trichlorobenzene	11.44	180	32216	20.07	ug/ml	98
30) Naphthalene	11.55	128	88144	20.12	ug/ml	97
31) n-Dodecane	11.58	57	37772	26.90	ug/ml	99
32) 4-Chloroaniline	11.67	127	41056	20.96	ug/ml	96
33) Hexachlorobutadiene	11.77	225	23776	21.64	ug/ml	98
34) 4-Chloro-3-methylphenol	12.48	107	25722	21.84	ug/ml	98
35) 2-Methylnaphthalene	12.69	142	62423	20.09	ug/ml	100
37) Hexachlorocyclopentadiene	12.95	237	19777	29.44	ug/ml	97
38) 2,4,6-Trichlorophenol	13.16	196	19228	18.73	ug/ml	99
39) 2,4,5-Trichlorophenol	13.20	196	21645	20.77	ug/ml	95
41) 2-Chloronaphthalene	13.48	162	61162	19.97	ug/ml	95
42) 2-Nitroaniline	13.67	65	20884	24.98	ug/ml	85
43) Acenaphthylene	14.14	152	85642	19.68	ug/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F006.D Vial: 6
Acq On : 7 Dec 2018 6:35 pm Operator: CConover
Sample : 8270/P ICAL @ 20ppm | SVM59-92G Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:28 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
44) Dimethyl Phthalate	14.00	163	70232	21.36	ug/ml	99
45) 2,6-Dinitrotoluene	14.08	165	15220	19.84	ug/ml	79
46) Acenaphthene	14.43	154	56075	20.32	ug/ml	99
47) 3-Nitroaniline	14.35	138	15542	20.06	ug/ml	94
48) 2,4-Dinitrophenol	14.52	184	2222	6.01	ug/ml#	76
49) Dibenzofuran	14.71	168	87635	20.22	ug/ml	97
50) 4-Nitrophenol	14.62	109	9489	27.55	ug/ml	94
51) 2,4-Dinitrotoluene	14.74	165	18808	19.70	ug/ml	96
52) 2,3,4,6-Tetrachlorophenol	14.92	232	15146	21.32	ug/ml	85
53) Fluorene	15.28	166	67118	20.87	ug/ml	100
54) 4-Chlorophenyl Phenyl Ethe	15.31	204	35637	21.92	ug/ml	96
55) Diethyl Phthalate	15.16	149	65984	21.11	ug/ml	99
56) 4-Nitroaniline	15.33	138	12749	18.19	ug/ml	94
57) 2-Methyl-4,6-dinitrophenol	15.38	198	6182	11.56	ug/ml#	55
58) Diphenylamine	15.50	169	40828	19.43	ug/ml	99
59) Azobenzene	15.56	77	74262m	26.62	ug/ml	
60) Benzophenone	15.58	105	55000	22.69	ug/ml	97
63) 4-Bromophenyl Phenyl Ether	16.10	248	18384	18.78	ug/ml	93
64) Hexachlorobenzene	16.16	284	16705	15.63	ug/ml	90
65) 2,6-Diisopropylnaphthalene	16.30	197	52905	20.92	ug/ml	99
66) Pentachlorophenol	16.48	266	7719	18.08	ug/ml	98
67) Diazinon	16.67	137	11248	19.26	ug/ml	95
68) Phenanthrene	16.83	178	77662	19.76	ug/ml	98
69) Anthracene	16.91	178	81529	20.23	ug/ml	98
70) Carbazole	17.20	167	66149	18.63	ug/ml	99
71) Di-n-butyl Phthalate	17.84	149	76059	17.60	ug/ml	99
72) Fluoranthene	18.76	202	67670	17.22	ug/ml	98
74) Benzidine	19.03	184	29072	18.31	ug/ml	97
75) Pyrene	19.13	202	69116	19.02	ug/ml	98
77) Butyl Benzyl Phthalate	20.28	149	36752	21.03	ug/ml	95
78) Diethylene Glycol Butyl Et	21.16	105	53064	25.42	ug/ml	98
79) 3,3'-Dichlorobenzidine	21.25	252	28531	19.22	ug/ml	100
80) Benz(a)anthracene	21.24	228	71340	20.52	ug/ml	99
81) Chrysene	21.32	228	69622	20.96	ug/ml	98
82) Bis(2-ethylhexyl) Phthalat	21.47	149	51670	21.48	ug/ml	96
84) Di-n-octyl Phthalate	22.97	149	82273	22.42	ug/ml	96
85) Benzo(b)fluoranthene	23.61	252	66785	22.39	ug/ml	96
86) Benzo(k)fluoranthene	23.67	252	65677	22.18	ug/ml	98
88) Diisodecyl Phthalate	23.72	149	48665m	15.65	ug/ml	
89) Benzo(a)pyrene	24.36	252	57811	21.01	ug/ml	98
90) Indeno(1,2,3-cd)pyrene	26.95	276	52374	19.69	ug/ml	98
91) Dibenz(a,h)anthracene	27.04	278	49416	18.38	ug/ml	100
92) Benzo(g,h,i)perylene	27.52	276	55799	20.14	ug/ml	98

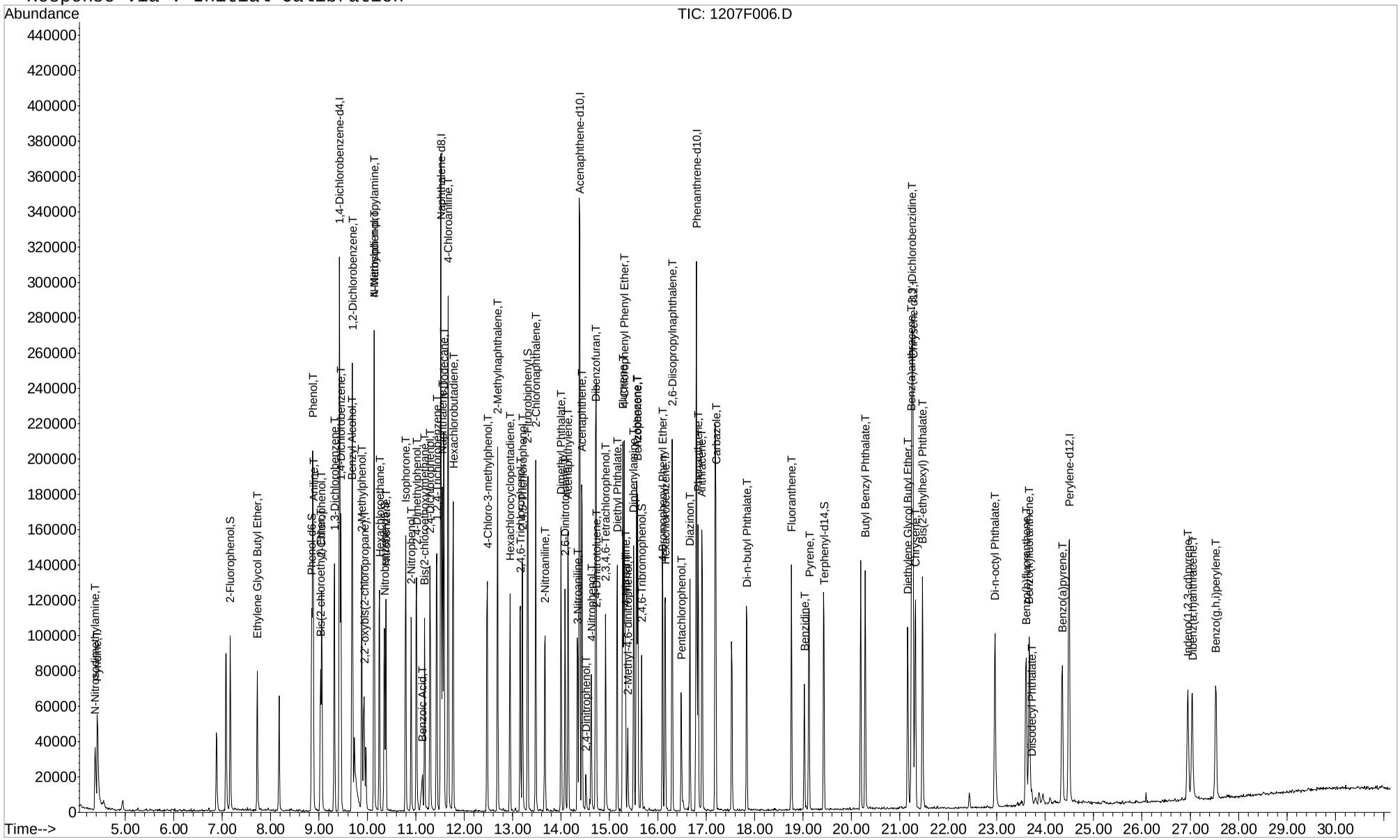
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F006.D Vial: 6
Acq On : 7 Dec 2018 6:35 pm Operator: CConover
Sample : 8270/P ICAL @ 20ppm | SVM59-92G Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:09 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

12/08/18 12/13/18 1st 2nd

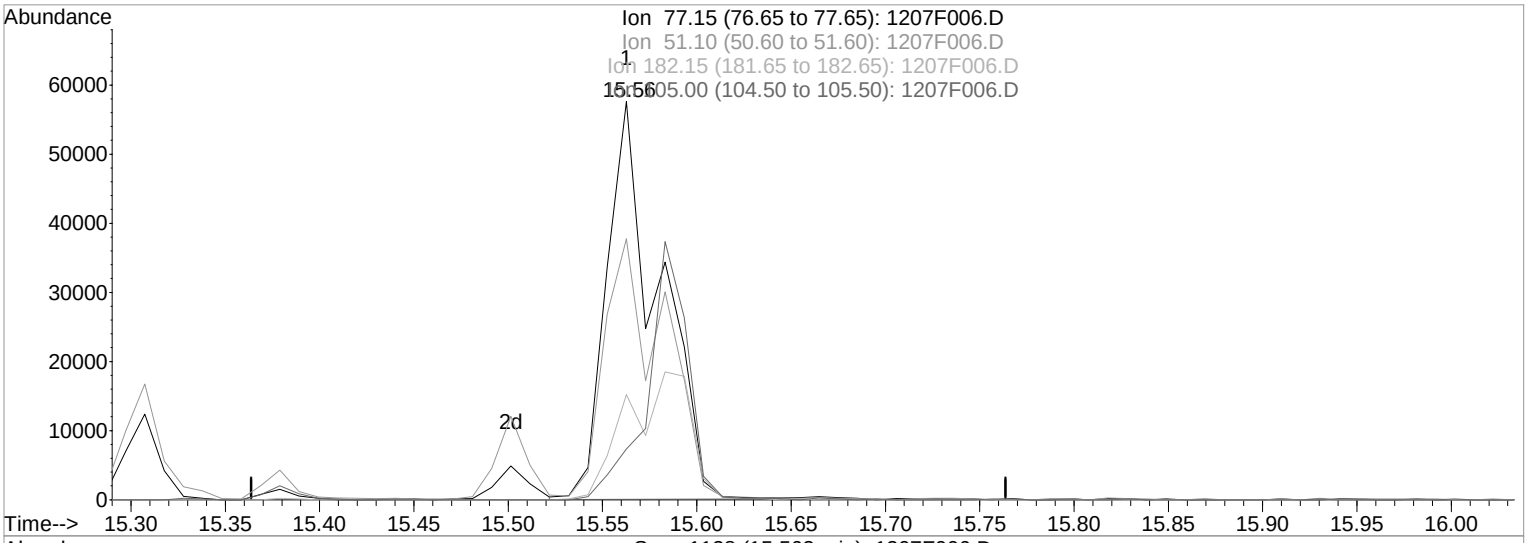


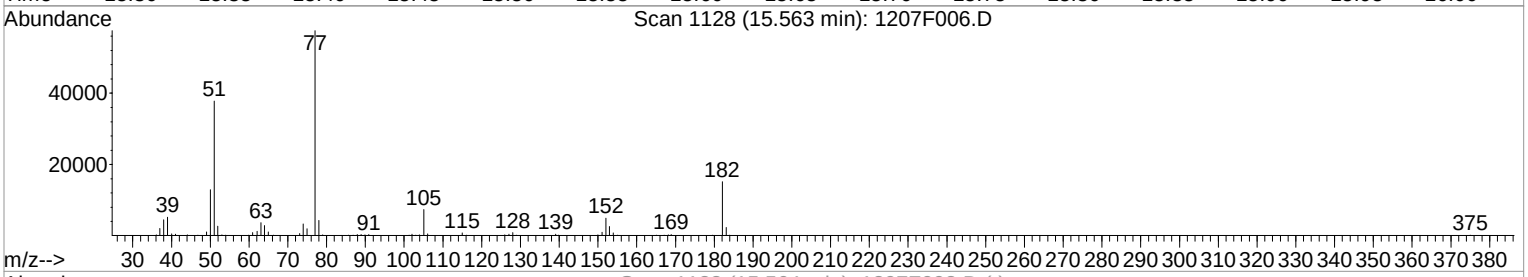
Quantitation Report (Qedit)

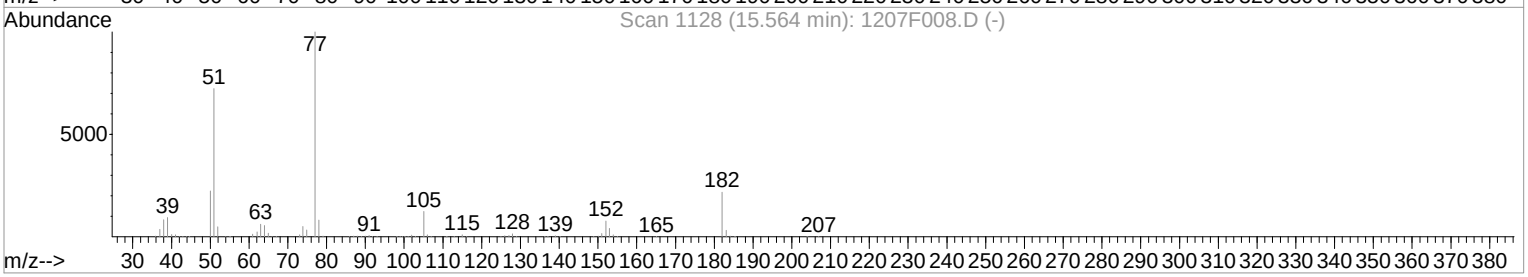
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F006.D Vial: 6
Acq On : 7 Dec 2018 6:35 pm Operator: CConover
Sample : 8270/P ICAL @ 20ppm | SVM59-92G Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:54 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F006.D

(59) Azobenzene (T)

15.56min 39.74ug/ml

response 110864

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	65.14
182.15	21.70	26.53
105.00	12.30	12.67

Manual Integration:

Before

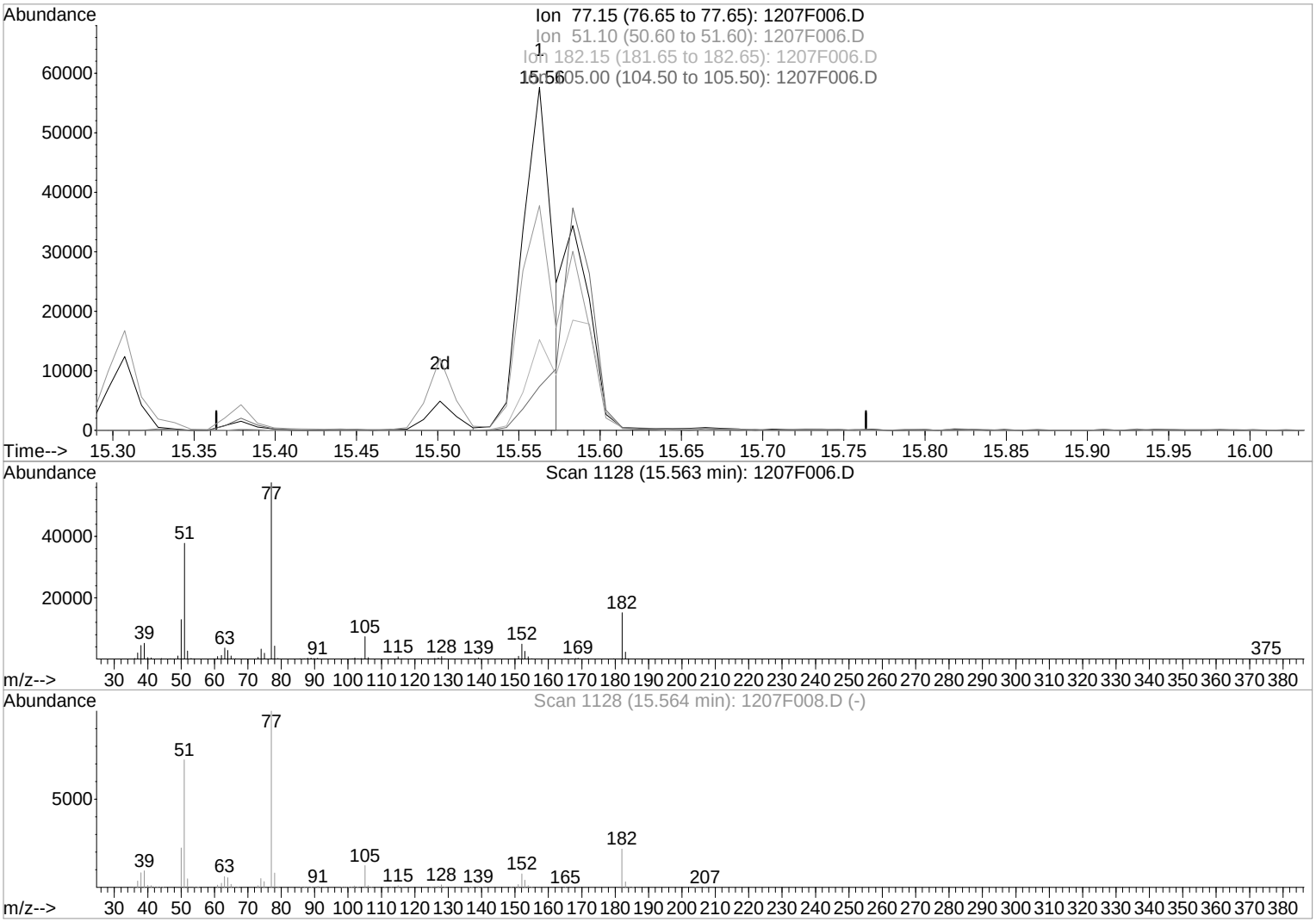
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F006.D Vial: 6
Acq On : 7 Dec 2018 6:35 pm Operator: CConover
Sample : 8270/P ICAL @ 20ppm | SVM59-92G Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:08 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F006.D

(59) Azobenzene (T)

15.56min 26.62ug/ml m

response 74262

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	65.55
182.15	21.70	26.37
105.00	12.30	12.74

Manual Integration:

After

IC-Overintegrated

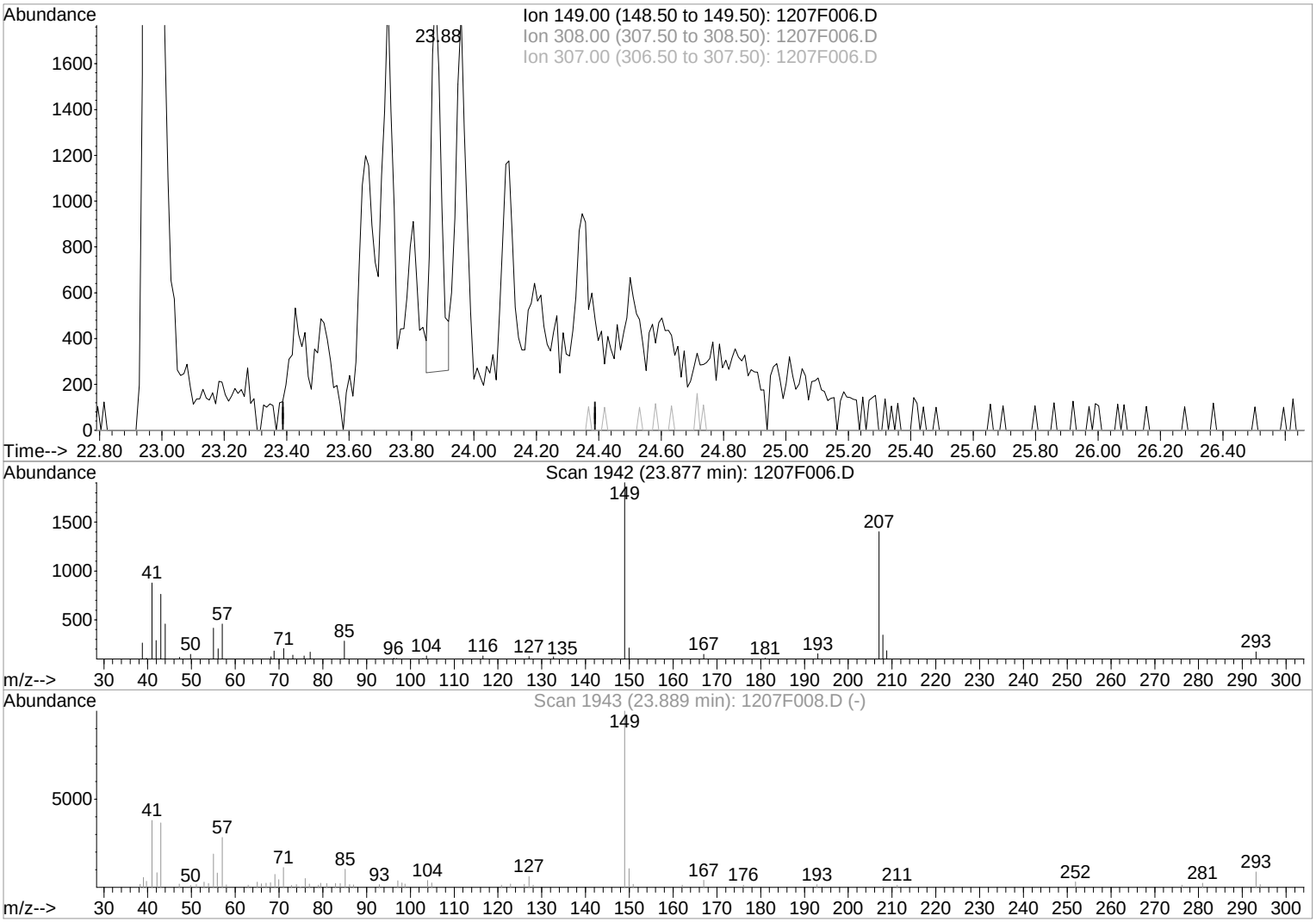
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F006.D Vial: 6
Acq On : 7 Dec 2018 6:35 pm Operator: CConover
Sample : 8270/P ICAL @ 20ppm | SVM59-92G Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:09 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F006.D

(88) Diisodecyl Phthalate (T)

23.88min 1.19ug/ml

response 3688

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

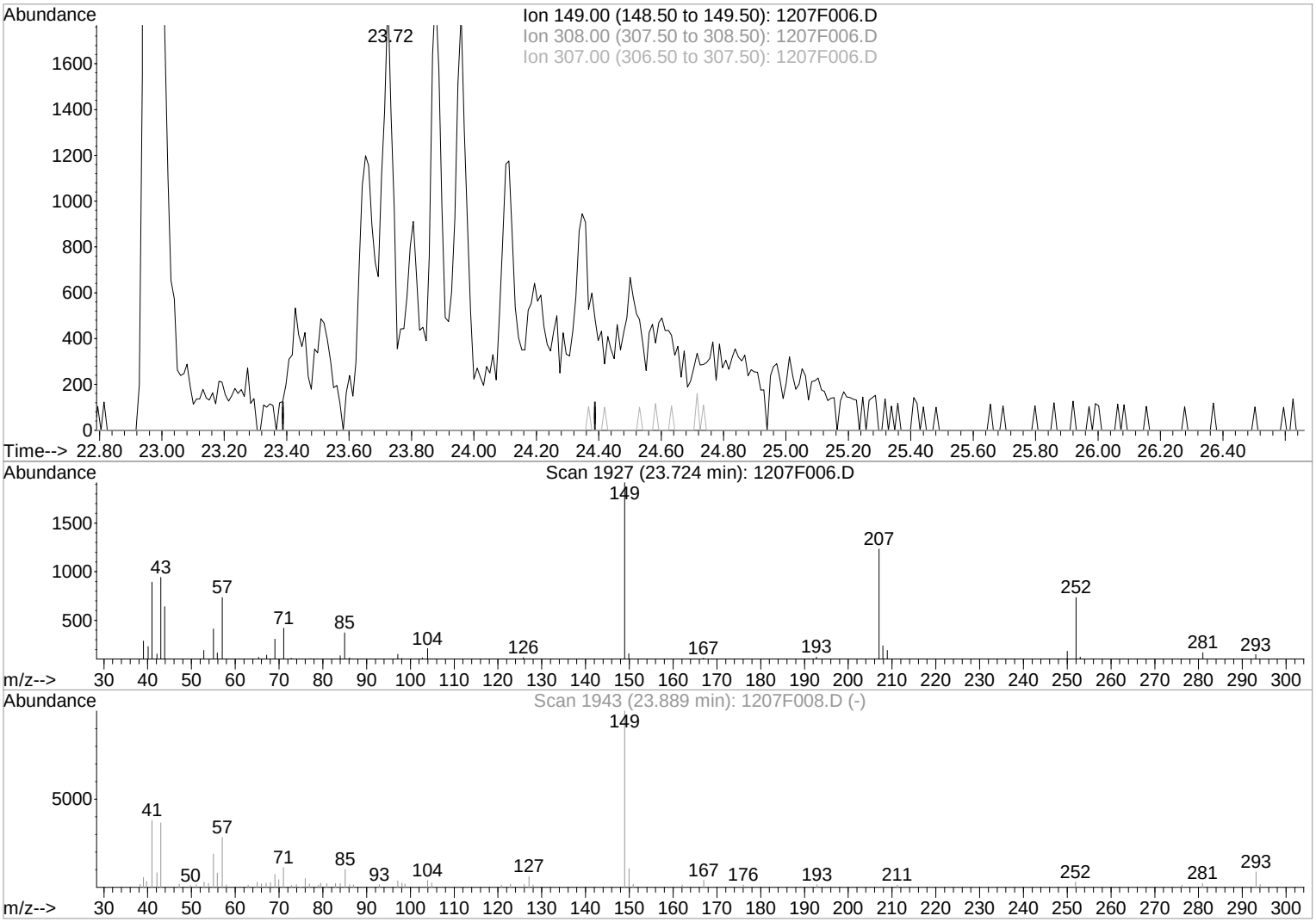
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F006.D Vial: 6
Acq On : 7 Dec 2018 6:35 pm Operator: CConover
Sample : 8270/P ICAL @ 20ppm | SVM59-92G Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:09 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F006.D

(88) Diisodecyl Phthalate (T)

23.72min 15.65ug/ml m

response 48665

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

12/07/18

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:29 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.43	152	45876	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	172430	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.38	164	95825	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	130435	40.00	ug/ml	0.00
73) Chrysene-d12	21.28	240	115888	40.00	ug/ml	0.00
83) Perylene-d12	24.51	264	100899	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.18	112	59306	49.48	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 32.99%			
8) Phenol-d6	8.86	99	75548	51.87	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 34.58%			
20) Nitrobenzene-d5	10.36	82	81882	58.12	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 58.12%			
40) 2-Fluorobiphenyl	13.32	172	172638	50.79	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 50.79%			
62) 2,4,6-Tribromophenol	15.67	330	19372	36.31	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 24.21%			
76) Terphenyl-d14	19.44	244	125095	51.75	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 51.75%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.37	42	79907	69.29	ug/ml	98
3) Pyridine	4.41	79	57204	55.72	ug/ml	96
5) Ethylene Glycol Butyl Ethe	7.73	57	66801	61.39	ug/ml	100
6) Aniline	8.89	93	99653	58.04	ug/ml	79
7) Bis(2-chloroethyl) Ether	9.04	93	61859	57.07	ug/ml	92
9) Phenol	8.88	94	84858	56.53	ug/ml	98
10) 2-Chlorophenol	9.06	128	71037	48.28	ug/ml	98
11) 1,3-Dichlorobenzene	9.32	146	86883	49.55	ug/ml	98
12) 1,4-Dichlorobenzene	9.46	146	87325	48.76	ug/ml	97
13) 1,2-Dichlorobenzene	9.69	146	86792	50.88	ug/ml	95
14) Benzyl Alcohol	9.69	108	46647	54.34	ug/ml	98
15) 2,2'-oxybis(2-chloropropan	9.94	45	95743m	66.53	ug/ml	
16) 2-Methylphenol	9.90	107	52708	47.88	ug/ml	96
17) Hexachloroethane	10.25	117	39637	54.56	ug/ml	87
18) N-Nitrosodi-n-propylamine	10.14	70	51962	59.86	ug/ml	96
19) 4-Methylphenol	10.15	107	82747	52.96	ug/ml	100
21) Nitrobenzene	10.39	77	82531	61.16	ug/ml	98
23) Isophorone	10.80	82	134856	57.07	ug/ml	99
24) 2-Nitrophenol	10.91	139	41816	49.39	ug/ml	93
25) 2,4-Dimethylphenol	11.02	122	58558	51.60	ug/ml	99
26) Bis(2-chloroethoxy)methane	11.19	93	76543	58.84	ug/ml	100
27) 2,4-Dichlorophenol	11.31	162	68351	51.04	ug/ml	91
28) Benzoic Acid	11.21	122	29276	45.68	ug/ml	92
29) 1,2,4-Trichlorobenzene	11.43	180	78528	50.83	ug/ml	97
30) Naphthalene	11.55	128	216217	51.27	ug/ml	100
31) n-Dodecane	11.58	57	93520	69.20	ug/ml	99
32) 4-Chloroaniline	11.68	127	101309	53.72	ug/ml	95
33) Hexachlorobutadiene	11.78	225	60110	56.82	ug/ml	97
34) 4-Chloro-3-methylphenol	12.48	107	62767	55.36	ug/ml	94
35) 2-Methylnaphthalene	12.70	142	154759	51.75	ug/ml	100
37) Hexachlorocyclopentadiene	12.95	237	53284	85.58	ug/ml	98
38) 2,4,6-Trichlorophenol	13.17	196	50367	52.92	ug/ml	95
39) 2,4,5-Trichlorophenol	13.21	196	52026	53.86	ug/ml	95
41) 2-Chloronaphthalene	13.48	162	148706	52.37	ug/ml	95
42) 2-Nitroaniline	13.68	65	50832	65.61	ug/ml	88
43) Acenaphthylene	14.15	152	204640	50.72	ug/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:29 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
44) Dimethyl Phthalate	14.00	163	160409	52.62	ug/ml	99
45) 2,6-Dinitrotoluene	14.10	165	35235	49.54	ug/ml	91
46) Acenaphthene	14.43	154	130190	50.89	ug/ml	98
47) 3-Nitroaniline	14.35	138	35049	48.80	ug/ml	100
48) 2,4-Dinitrophenol	14.53	184	11979	34.94	ug/ml#	74
49) Dibenzofuran	14.72	168	203480	50.65	ug/ml	97
50) 4-Nitrophenol	14.63	109	24921	78.05	ug/ml	98
51) 2,4-Dinitrotoluene	14.74	165	44667	50.47	ug/ml	90
52) 2,3,4,6-Tetrachlorophenol	14.92	232	37514	56.97	ug/ml	90
53) Fluorene	15.28	166	154941	51.98	ug/ml	99
54) 4-Chlorophenyl Phenyl Ethe	15.31	204	84333	55.96	ug/ml	92
55) Diethyl Phthalate	15.17	149	149355	51.54	ug/ml	100
56) 4-Nitroaniline	15.34	138	33273	51.23	ug/ml	96
57) 2-Methyl-4,6-dinitrophenol	15.39	198	20962	42.28	ug/ml	70
58) Diphenylamine	15.51	169	94251	48.38	ug/ml	98
59) Azobenzene	15.57	77	170179m	65.81	ug/ml	
60) Benzophenone	15.59	105	127115	56.56	ug/ml	97
63) 4-Bromophenyl Phenyl Ether	16.11	248	42442	47.34	ug/ml	87
64) Hexachlorobenzene	16.16	284	39502	40.35	ug/ml	86
65) 2,6-Diisopropylnaphthalene	16.30	197	120866	52.18	ug/ml	99
66) Pentachlorophenol	16.49	266	22363	57.21	ug/ml	96
67) Diazinon	16.67	137	28449	53.21	ug/ml	99
68) Phenanthrene	16.83	178	179803	49.95	ug/ml	98
69) Anthracene	16.93	178	184632	50.03	ug/ml	99
70) Carbazole	17.20	167	167063	51.38	ug/ml	99
71) Di-n-butyl Phthalate	17.84	149	203119	51.33	ug/ml	98
72) Fluoranthene	18.76	202	177527	49.32	ug/ml	98
74) Benzidine	19.03	184	70446	44.96	ug/ml	98
75) Pyrene	19.13	202	185978	51.87	ug/ml	100
77) Butyl Benzyl Phthalate	20.30	149	102488	59.42	ug/ml	93
78) Diethylene Glycol Butyl Et	21.18	105	137217	66.60	ug/ml	99
79) 3,3'-Dichlorobenzidine	21.26	252	68994	47.09	ug/ml	98
80) Benz(a)anthracene	21.26	228	185696	54.13	ug/ml	99
81) Chrysene	21.33	228	171960	52.45	ug/ml	99
82) Bis(2-ethylhexyl) Phthalat	21.48	149	138043	58.15	ug/ml	98
84) Di-n-octyl Phthalate	22.97	149	203325	57.07	ug/ml	98
85) Benzo(b)fluoranthene	23.63	252	153522	53.01	ug/ml	98
86) Benzo(k)fluoranthene	23.70	252	153395	53.36	ug/ml	99
87) Diisononyl Phthalate	23.74	293	7382m	36.77	ug/ml	
88) Diisodecyl Phthalate	23.96	149	149768m	49.59	ug/ml	
89) Benzo(a)pyrene	24.37	252	141715	53.05	ug/ml	100
90) Indeno(1,2,3-cd)pyrene	26.98	276	164327	63.61	ug/ml	100
91) Dibenz(a,h)anthracene	27.07	278	158990	60.91	ug/ml	99
92) Benzo(g,h,i)perylene	27.56	276	172872	64.25	ug/ml	99

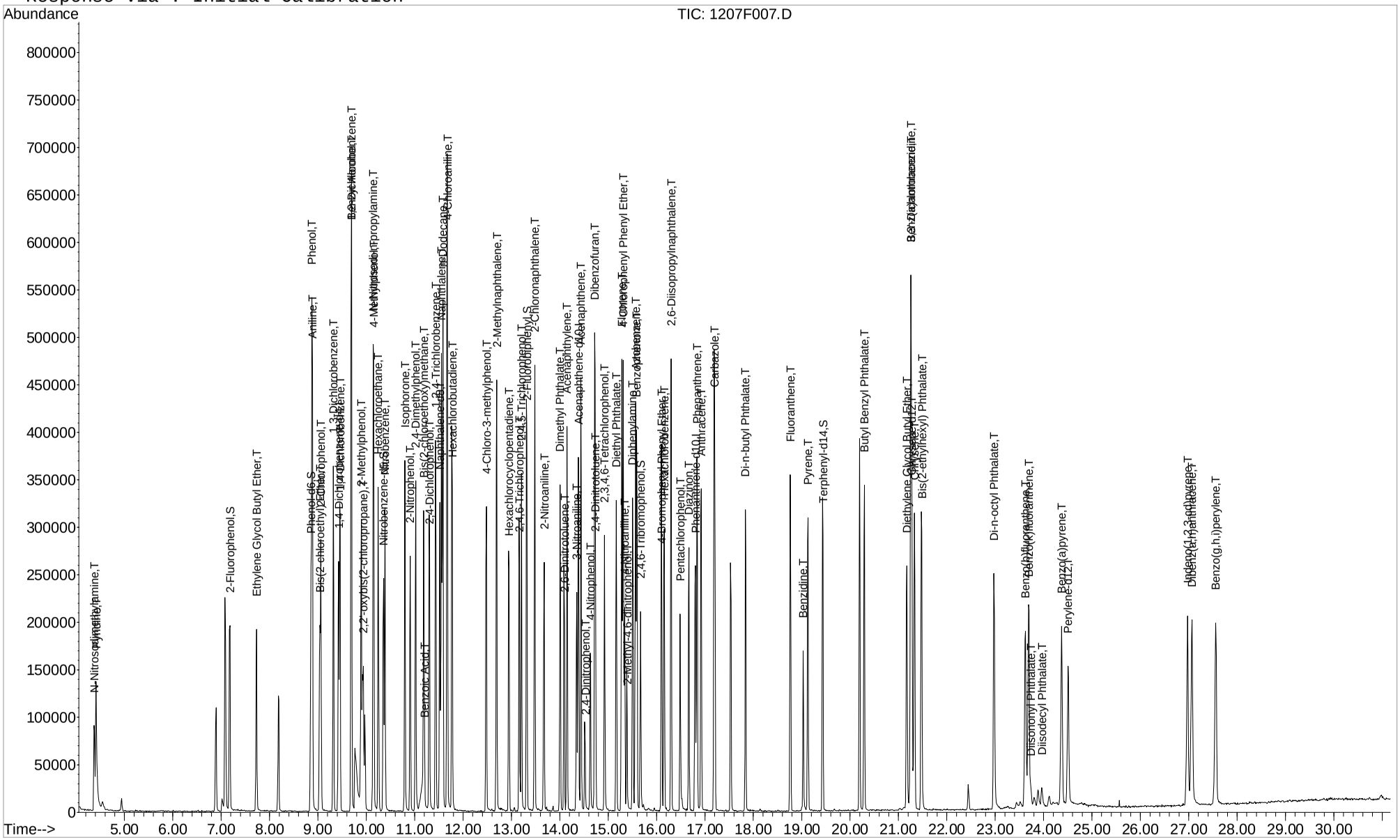
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:15 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

12/08/18 12/13/18 1st 2nd

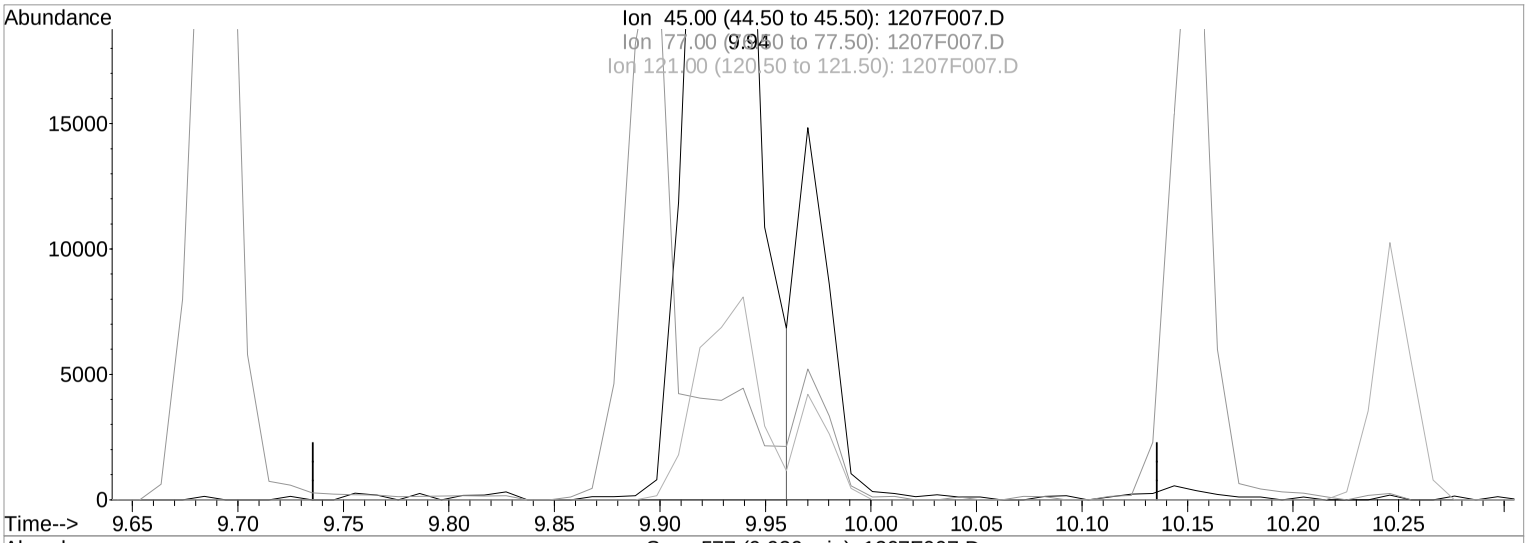


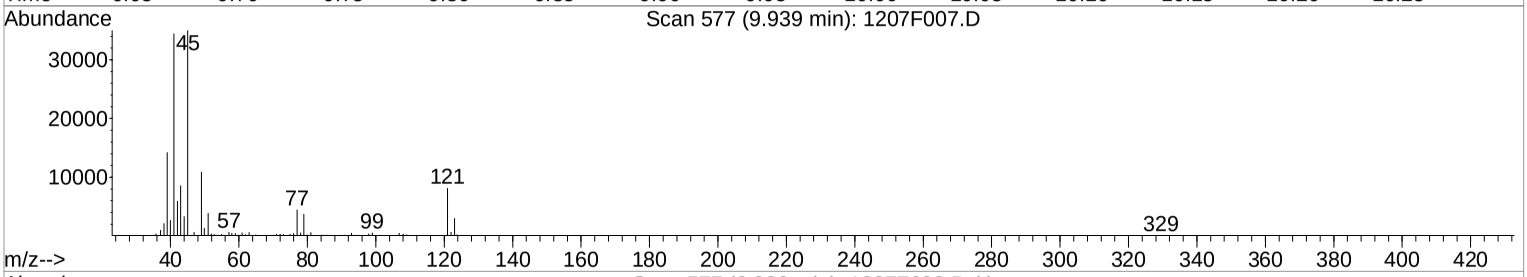
Quantitation Report (Qedit)

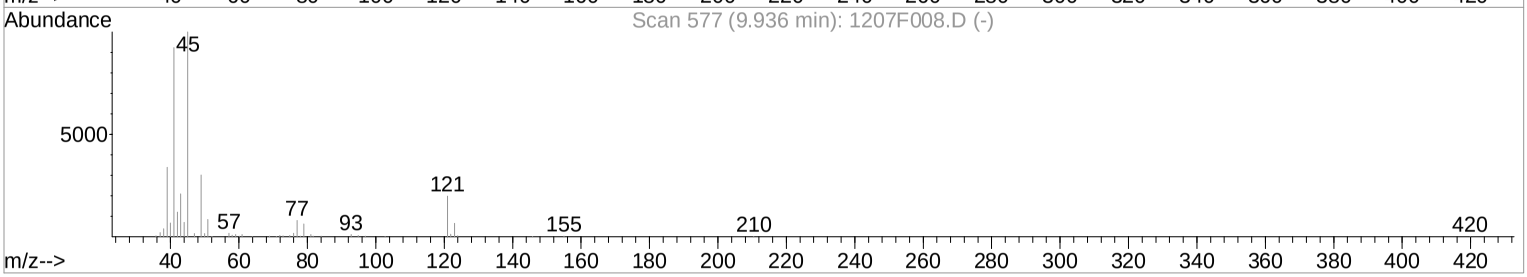
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:54 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F007.D

(15) 2,2'-oxybis(2-chloropropane) (T)

9.94min 55.82ug/ml

response 80321

Ion	Exp%	Act%
45.00	100	100
77.00	9.40	10.56
121.00	19.70	23.79
0.00	0.00	0.00

Manual Integration:

Before

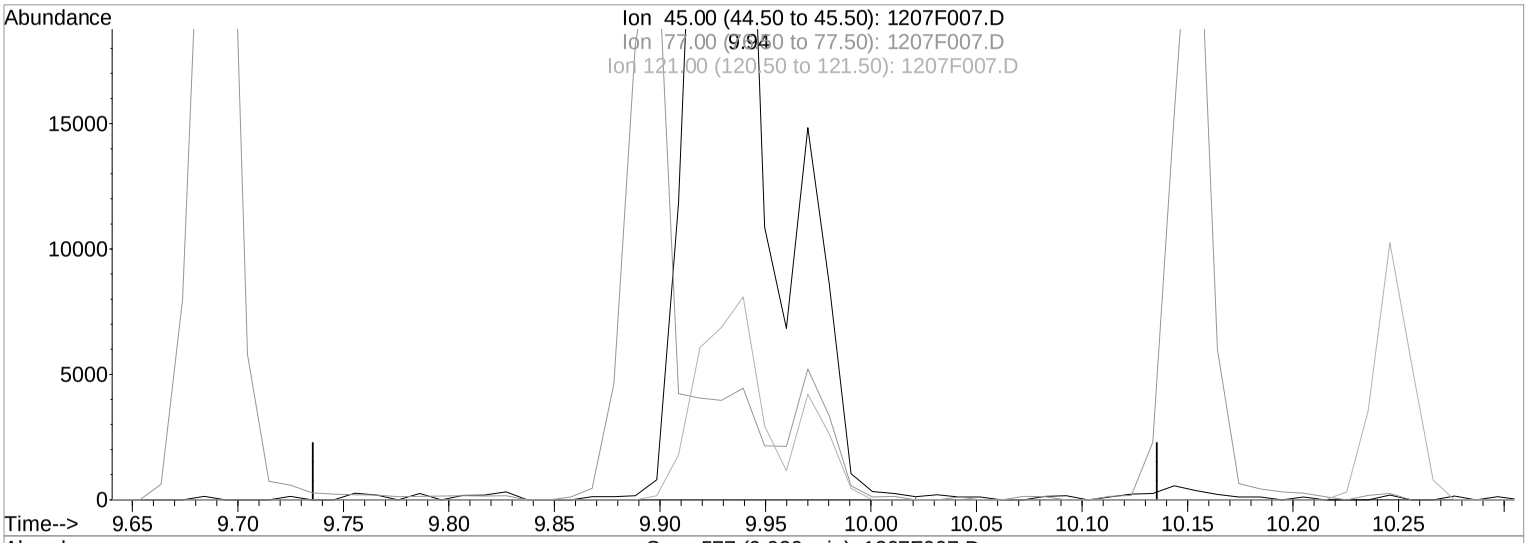
12/07/18

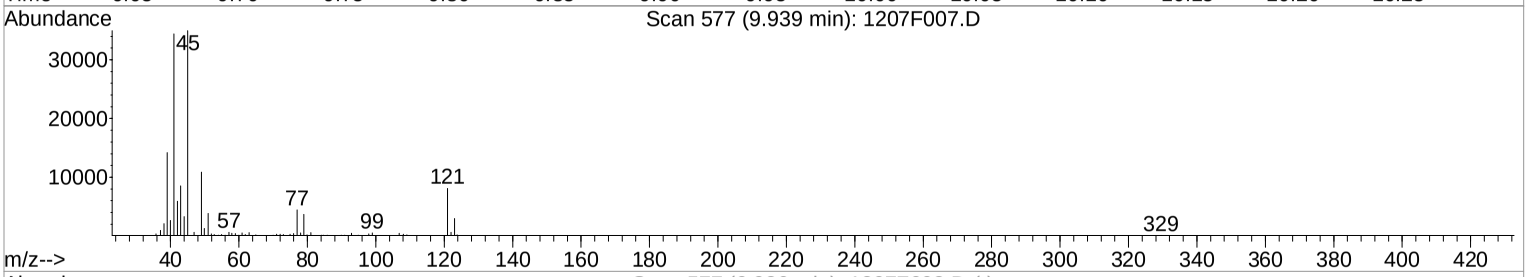
Quantitation Report (Qedit)

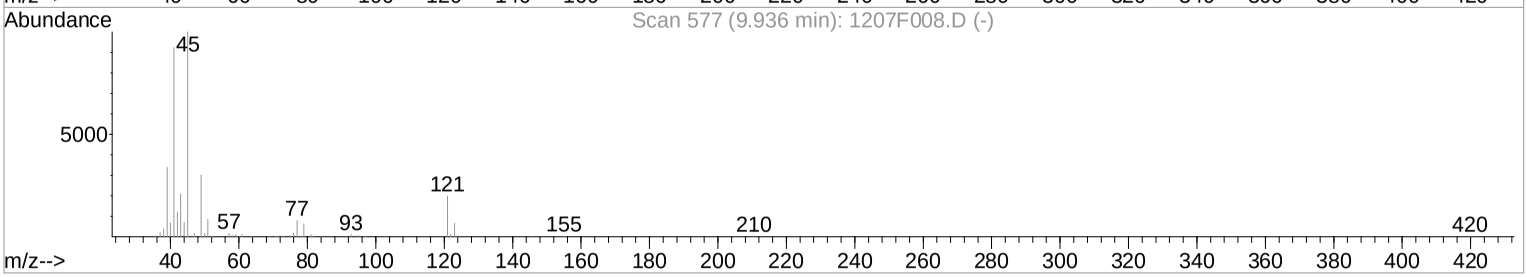
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:10 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F007.D

(15) 2,2'-oxybis(2-chloropropane) (T)

9.94min 66.53ug/ml m

response 95743

Ion	Exp%	Act%
45.00	100	100
77.00	9.40	12.72
121.00	19.70	23.11
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

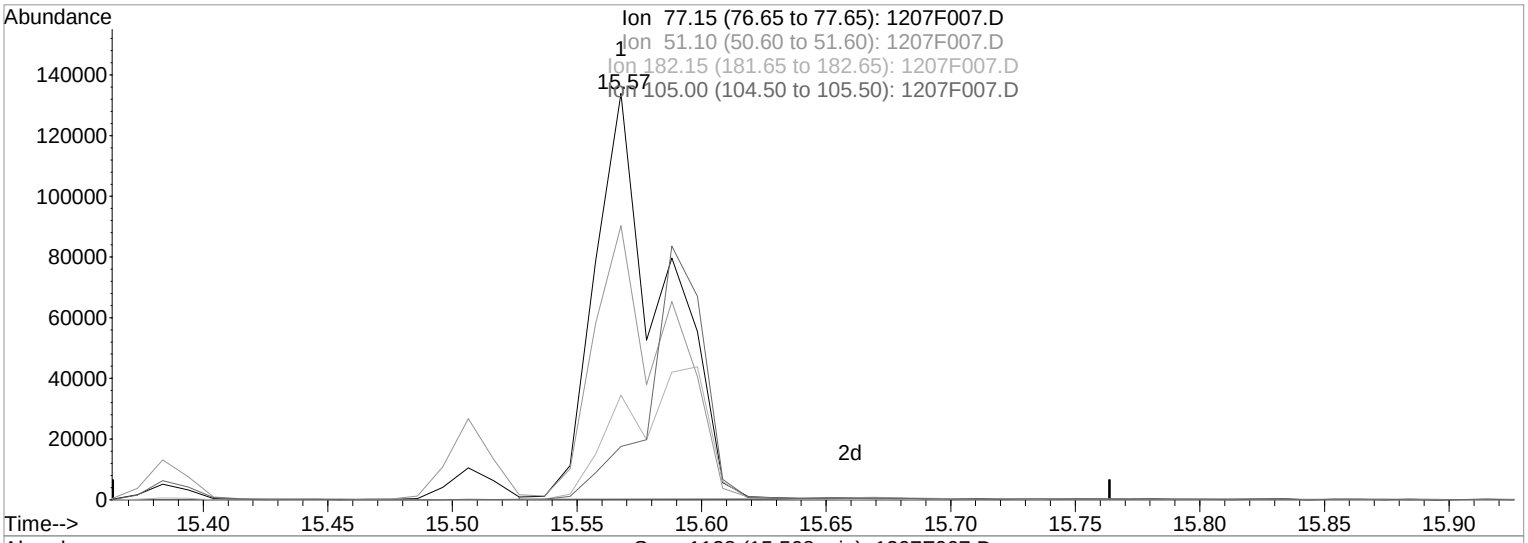
12/07/18

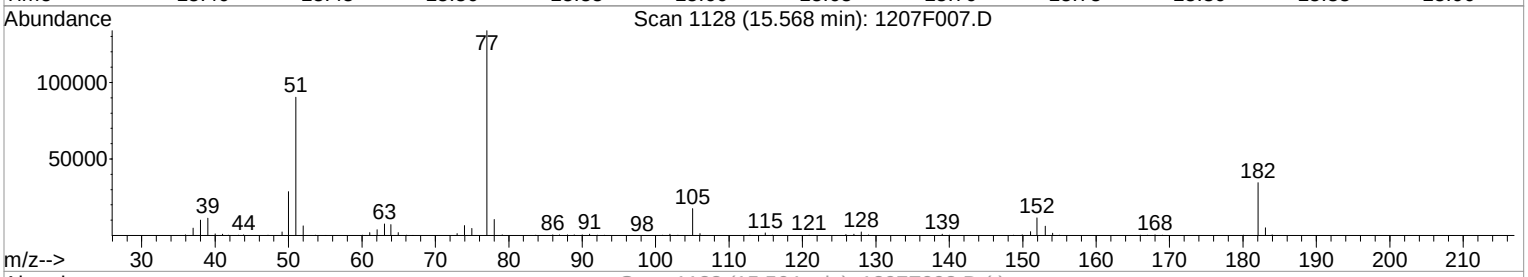
Quantitation Report (Qedit)

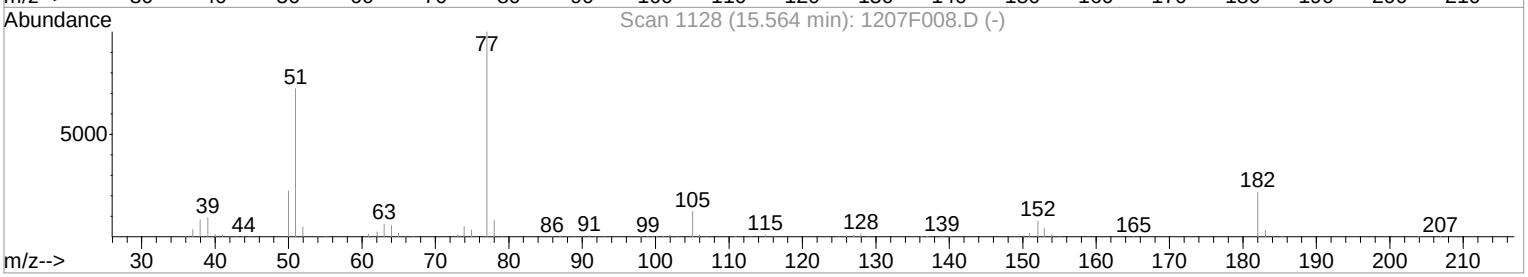
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:10 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F007.D

(59) Azobenzene (T)

15.57min 99.19ug/ml

response 256523

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	66.99
182.15	21.70	25.76
105.00	12.30	12.96

Manual Integration:

Before

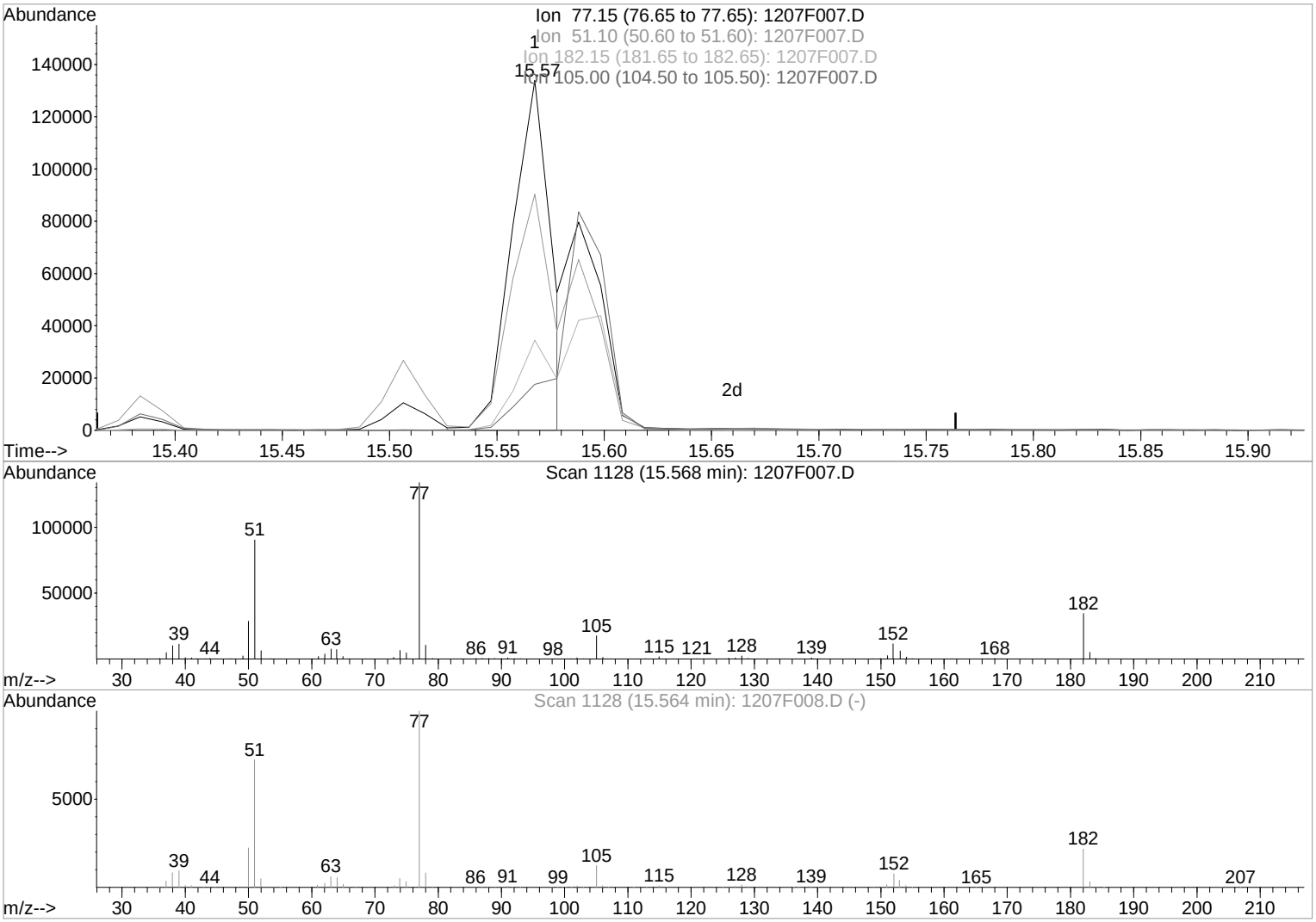
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:15 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F007.D

(59) Azobenzene (T)

15.57min 65.81ug/ml m

response 170179

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	67.44
182.15	21.70	25.71
105.00	12.30	13.11

Manual Integration:

After

IC-Overintegrated

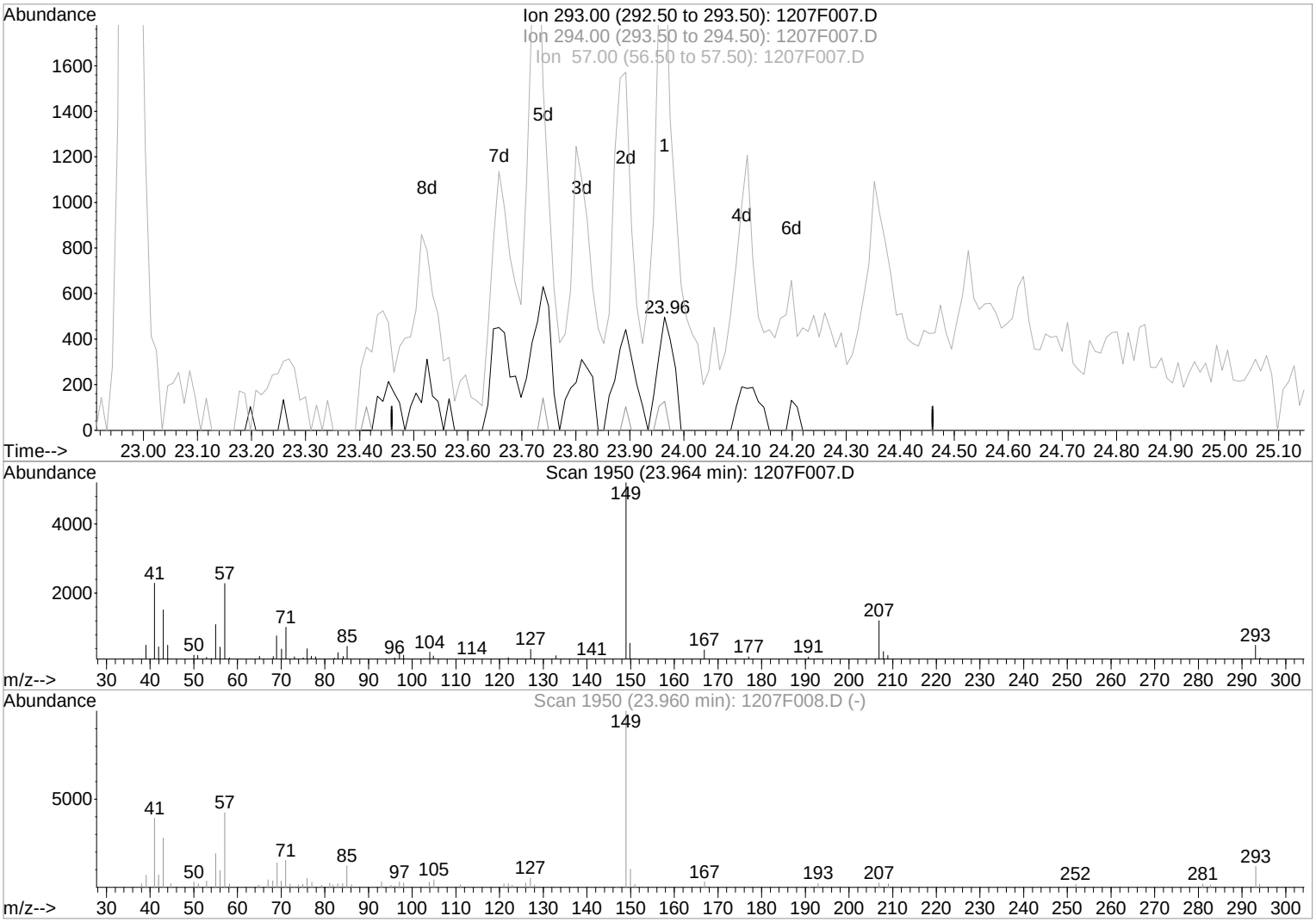
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:15 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F007.D

(87) Diisononyl Phthalate (T)

23.96min 5.02ug/ml

response 1008

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	14.19
57.00	33.10	485.42#
0.00	0.00	0.00

Manual Integration:

Before

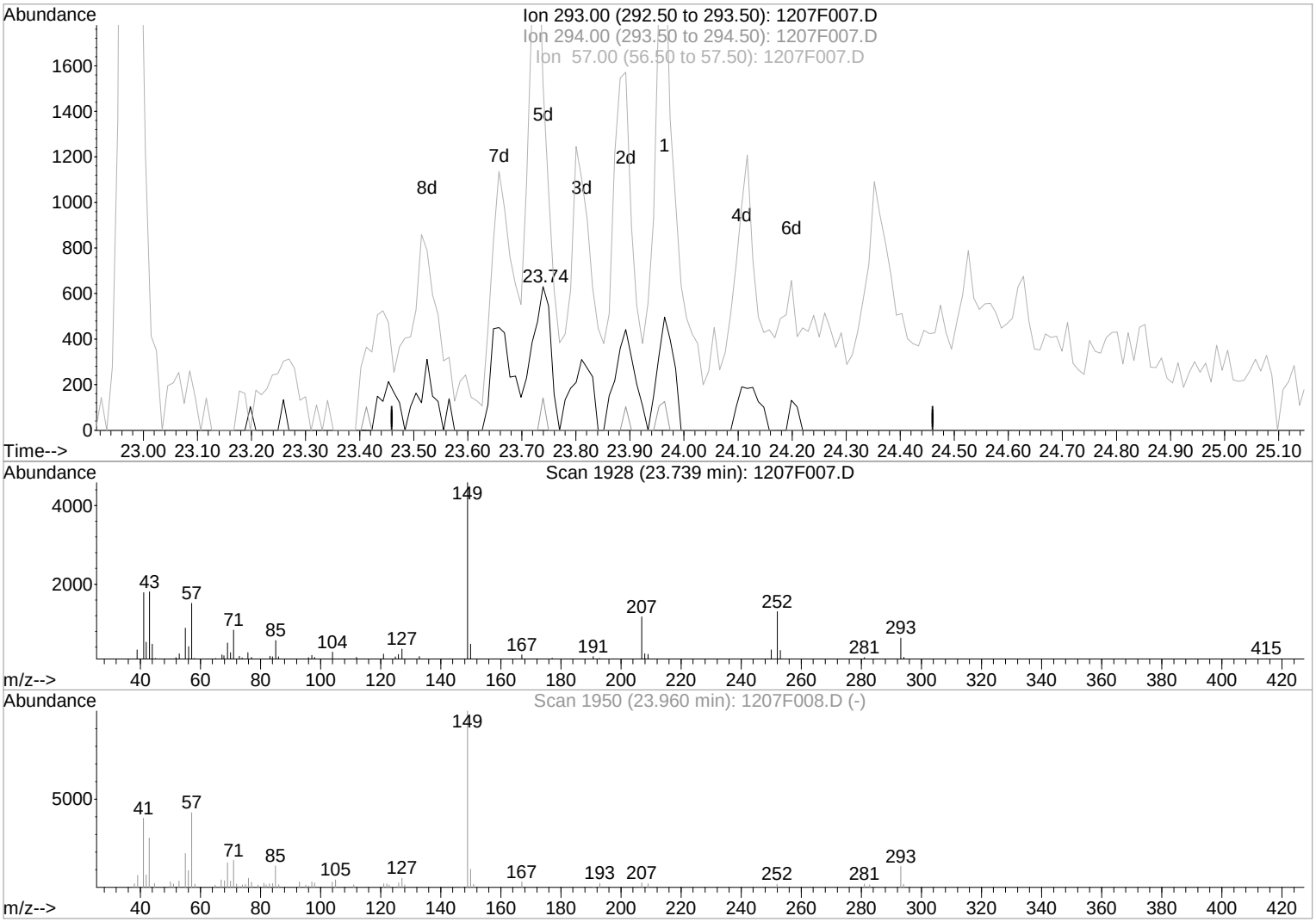
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:15 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F007.D

(87) Diisononyl Phthalate (T)

23.74min 36.77ug/ml m

response 7382

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	1.94
57.00	33.10	66.28#
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

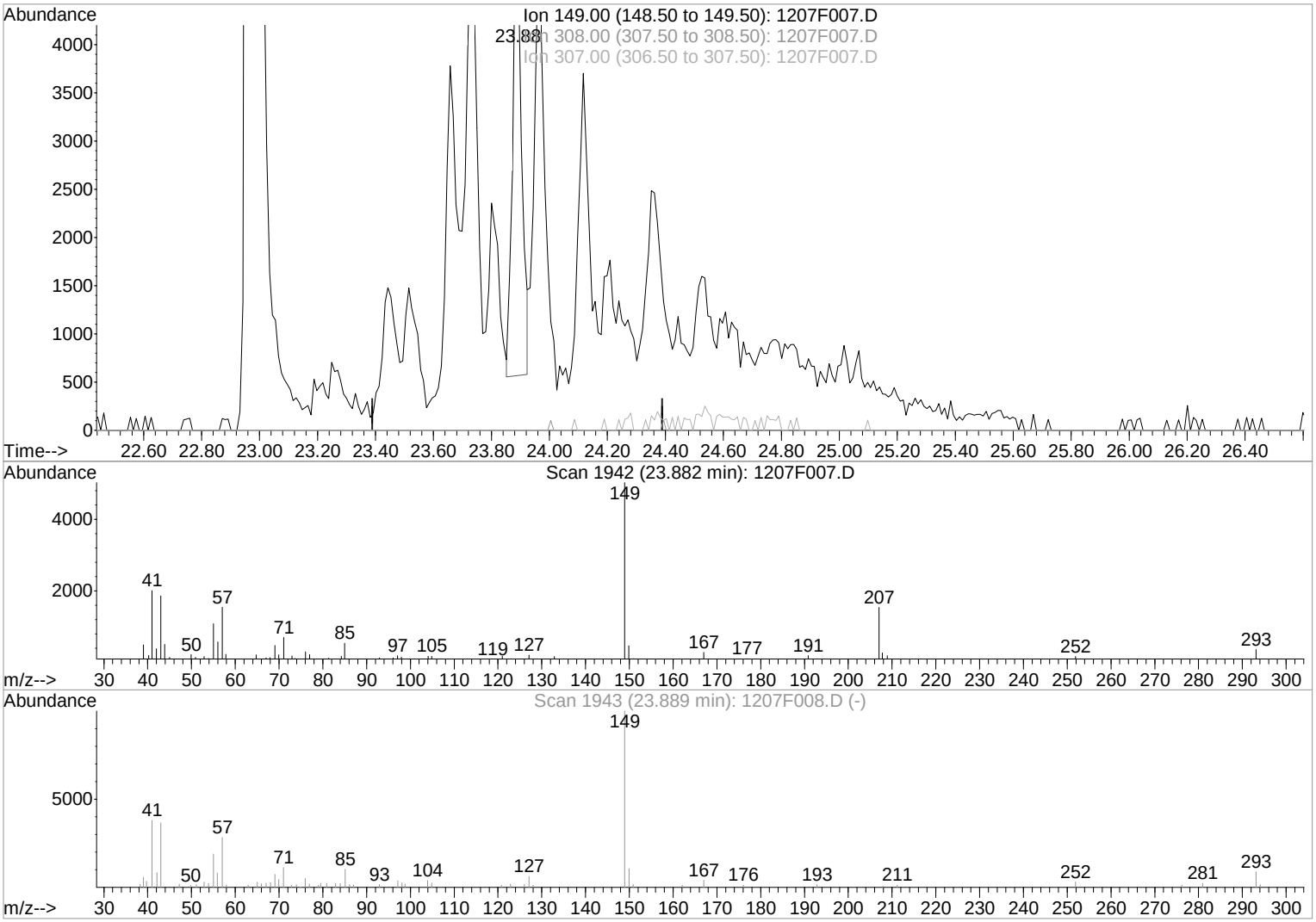
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:15 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F007.D

(88) Diisodecyl Phthalate (T)

23.88min 3.37ug/ml

response 10166

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

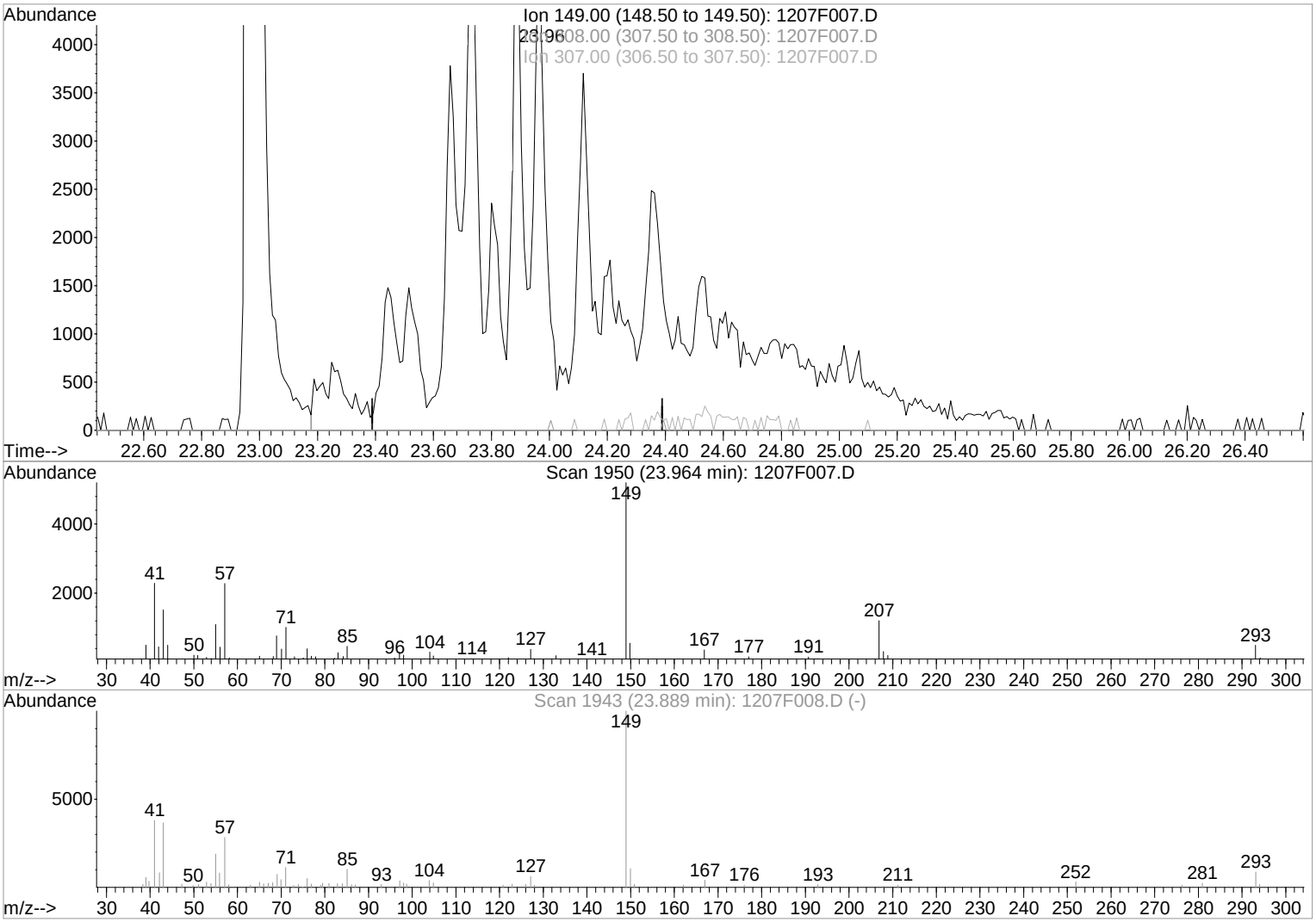
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:15 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F007.D

(88) Diisodecyl Phthalate (T)

23.96min 49.59ug/ml m

response 149768

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

12/07/18

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F008.D Vial: 8
Acq On : 7 Dec 2018 7:57 pm Operator: CConover
Sample : 8270/P ICAL @ 80ppm | SVM59-92I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:30 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	48007	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	174754	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.39	164	88261	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	120482	40.00	ug/ml	0.00
73) Chrysene-d12	21.28	240	116510	40.00	ug/ml	0.00
83) Perylene-d12	24.51	264	118617	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.19	112	98252	78.34	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 52.23%			
8) Phenol-d6	8.86	99	121666	79.82	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 53.21%			
20) Nitrobenzene-d5	10.35	82	129856	88.09	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 88.09%			
40) 2-Fluorobiphenyl	13.32	172	254352	81.24	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 81.24%			
62) 2,4,6-Tribromophenol	15.68	330	27974	56.77	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 37.85%			
76) Terphenyl-d14	19.44	244	217364	89.44	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 89.44%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.38	42	133444	110.57	ug/ml	100
3) Pyridine	4.41	79	95311	88.72	ug/ml	100
5) Ethylene Glycol Butyl Ethe	7.74	57	114289	100.36	ug/ml	100
6) Aniline	8.89	93	161106	89.67	ug/ml	100
7) Bis(2-chloroethyl) Ether	9.04	93	101172	89.20	ug/ml	100
9) Phenol	8.89	94	141833	90.29	ug/ml	100
10) 2-Chlorophenol	9.07	128	120060	77.97	ug/ml	100
11) 1,3-Dichlorobenzene	9.32	146	141593	77.16	ug/ml	100
12) 1,4-Dichlorobenzene	9.46	146	145119	77.44	ug/ml	100
13) 1,2-Dichlorobenzene	9.69	146	143047	80.14	ug/ml	100
14) Benzyl Alcohol	9.70	108	72868	81.11	ug/ml	100
15) 2,2'-oxybis(2-chloropropan	9.94	45	156328	103.81	ug/ml	100
16) 2-Methylphenol	9.90	107	83727	72.69	ug/ml	100
17) Hexachloroethane	10.25	117	66607	87.62	ug/ml	100
18) N-Nitrosodi-n-propylamine	10.15	70	85967	94.64	ug/ml	100
19) 4-Methylphenol	10.16	107	131308	80.31	ug/ml	100
21) Nitrobenzene	10.40	77	130457	92.38	ug/ml	100
23) Isophorone	10.80	82	209630	87.53	ug/ml	100
24) 2-Nitrophenol	10.92	139	67845	79.07	ug/ml	100
25) 2,4-Dimethylphenol	11.03	122	93559	81.35	ug/ml	100
26) Bis(2-chloroethoxy)methane	11.19	93	123664	93.80	ug/ml	100
27) 2,4-Dichlorophenol	11.30	162	112983	83.25	ug/ml	100
28) Benzoic Acid	11.24	122	53038	81.65	ug/ml	98
29) 1,2,4-Trichlorobenzene	11.44	180	125141	79.93	ug/ml	100
30) Naphthalene	11.56	128	347090	81.21	ug/ml	100
31) n-Dodecane	11.58	57	152577	111.40	ug/ml	100
32) 4-Chloroaniline	11.68	127	155601	81.41	ug/ml	100
33) Hexachlorobutadiene	11.77	225	95129	88.73	ug/ml	100
34) 4-Chloro-3-methylphenol	12.48	107	91024	79.21	ug/ml	100
35) 2-Methylnaphthalene	12.69	142	234154	77.25	ug/ml	100
37) Hexachlorocyclopentadiene	12.95	237	84253	146.92	ug/ml	100
38) 2,4,6-Trichlorophenol	13.16	196	72635	82.86	ug/ml	100
39) 2,4,5-Trichlorophenol	13.21	196	79111	88.92	ug/ml	100
41) 2-Chloronaphthalene	13.48	162	216175	82.66	ug/ml	100
42) 2-Nitroaniline	13.67	65	73874	103.51	ug/ml	100
43) Acenaphthylene	14.15	152	296751	79.86	ug/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F008.D Vial: 8
Acq On : 7 Dec 2018 7:57 pm Operator: CConover
Sample : 8270/P ICAL @ 80ppm | SVM59-92I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:30 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
44) Dimethyl Phthalate	14.01	163	224648	80.00 ug/ml	100
45) 2,6-Dinitrotoluene	14.09	165	50313	76.81 ug/ml	100
46) Acenaphthene	14.44	154	189291	80.34 ug/ml	100
47) 3-Nitroaniline	14.36	138	50343	76.10 ug/ml	100
48) 2,4-Dinitrophenol	14.52	184	23333	73.88 ug/ml	100
49) Dibenzofuran	14.73	168	297865	80.50 ug/ml	100
50) 4-Nitrophenol	14.63	109	40744	138.55 ug/ml	100
51) 2,4-Dinitrotoluene	14.75	165	65434	80.27 ug/ml	100
52) 2,3,4,6-Tetrachlorophenol	14.93	232	53051	87.47 ug/ml	100
53) Fluorene	15.29	166	215645	78.55 ug/ml	100
54) 4-Chlorophenyl Phenyl Ethe	15.31	204	117059	84.33 ug/ml	100
55) Diethyl Phthalate	15.18	149	207048	77.58 ug/ml	100
56) 4-Nitroaniline	15.35	138	51341	85.82 ug/ml	100
57) 2-Methyl-4,6-dinitrophenol	15.39	198	36867	80.74 ug/ml	100
58) Diphenylamine	15.51	169	134330	74.86 ug/ml	100
59) Azobenzene	15.56	77	264128m	110.89 ug/ml	
60) Benzophenone	15.59	105	176564	85.30 ug/ml	100
63) 4-Bromophenyl Phenyl Ether	16.11	248	60832	73.46 ug/ml	100
64) Hexachlorobenzene	16.16	284	56946	62.98 ug/ml	100
65) 2,6-Diisopropylnaphthalene	16.30	197	172840	80.78 ug/ml	100
66) Pentachlorophenol	16.49	266	37499	103.85 ug/ml	100
67) Diazinon	16.67	137	38909	78.78 ug/ml	100
68) Phenanthrene	16.84	178	266107	80.03 ug/ml	100
69) Anthracene	16.92	178	274424	80.51 ug/ml	100
70) Carbazole	17.21	167	266786	88.83 ug/ml	100
71) Di-n-butyl Phthalate	17.84	149	325216	88.98 ug/ml	100
72) Fluoranthene	18.77	202	297195	89.39 ug/ml	100
74) Benzidine	19.04	184	86593	54.97 ug/ml	100
75) Pyrene	19.13	202	309688	85.91 ug/ml	100
77) Butyl Benzyl Phthalate	20.29	149	167783	96.76 ug/ml	100
78) Diethylene Glycol Butyl Et	21.17	105	211811	102.26 ug/ml	100
79) 3,3'-Dichlorobenzidine	21.26	252	110430	74.97 ug/ml	100
80) Benz(a)anthracene	21.26	228	294052	85.25 ug/ml	100
81) Chrysene	21.33	228	269481	81.75 ug/ml	100
82) Bis(2-ethylhexyl) Phthalat	21.48	149	226061	94.72 ug/ml	100
84) Di-n-octyl Phthalate	22.98	149	334589	79.88 ug/ml	100
85) Benzo(b)fluoranthene	23.63	252	270086	79.32 ug/ml	100
86) Benzo(k)fluoranthene	23.70	252	268340	79.40 ug/ml	100
87) Diisononyl Phthalate	23.96	293	13664m	57.89 ug/ml	
88) Diisodecyl Phthalate	23.89	149	259719m	73.15 ug/ml	
89) Benzo(a)pyrene	24.38	252	260097	82.82 ug/ml	100
90) Indeno(1,2,3-cd)pyrene	26.99	276	281679	92.75 ug/ml	100
91) Dibenz(a,h)anthracene	27.09	278	273103	88.99 ug/ml	100
92) Benzo(g,h,i)perylene	27.58	276	297328	94.00 ug/ml	100

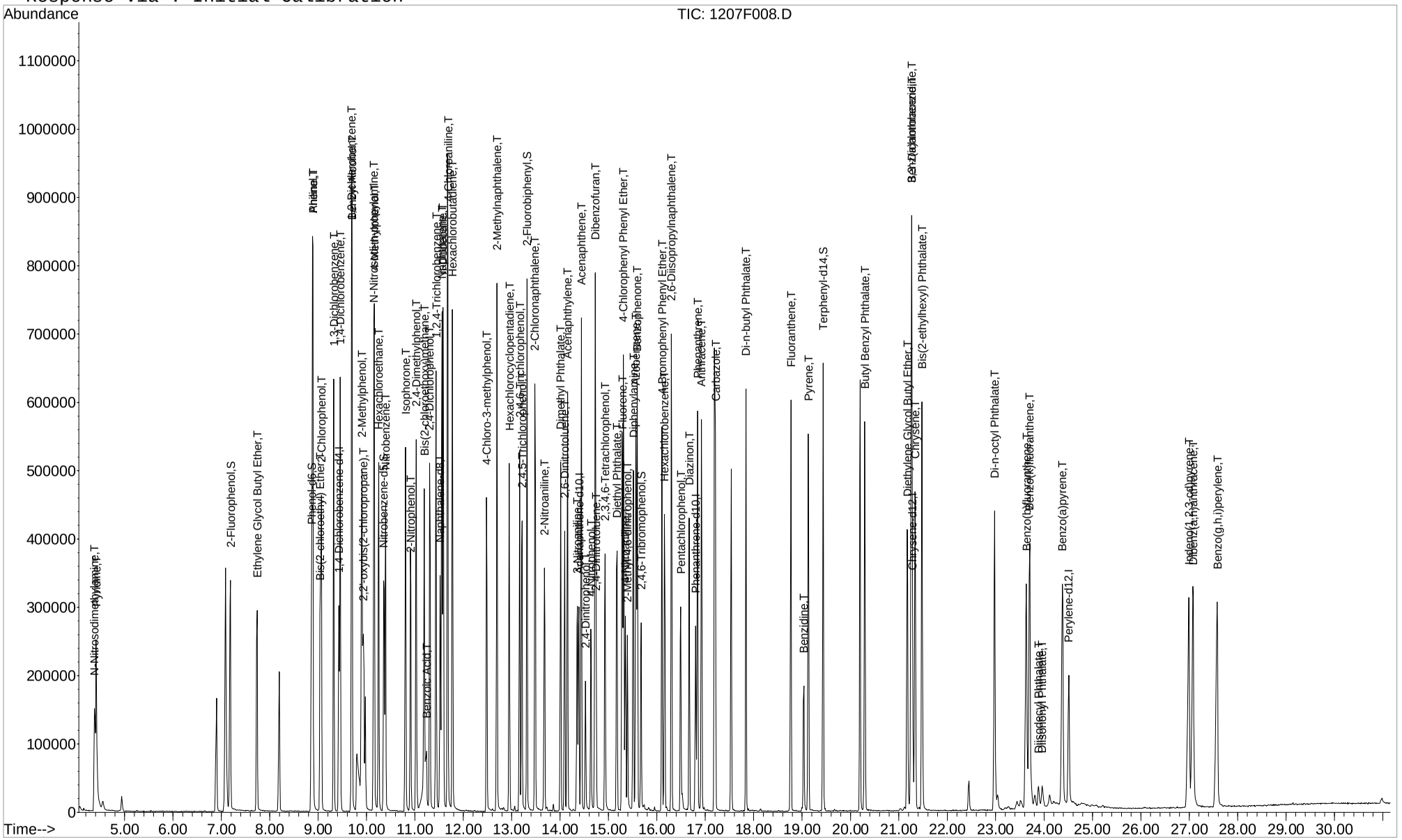
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F008.D Vial: 8
Acq On : 7 Dec 2018 7:57 pm Operator: CConover
Sample : 8270/P ICAL @ 80ppm | SVM59-92I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:17 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

12/08/18 12/13/18 1st 2nd



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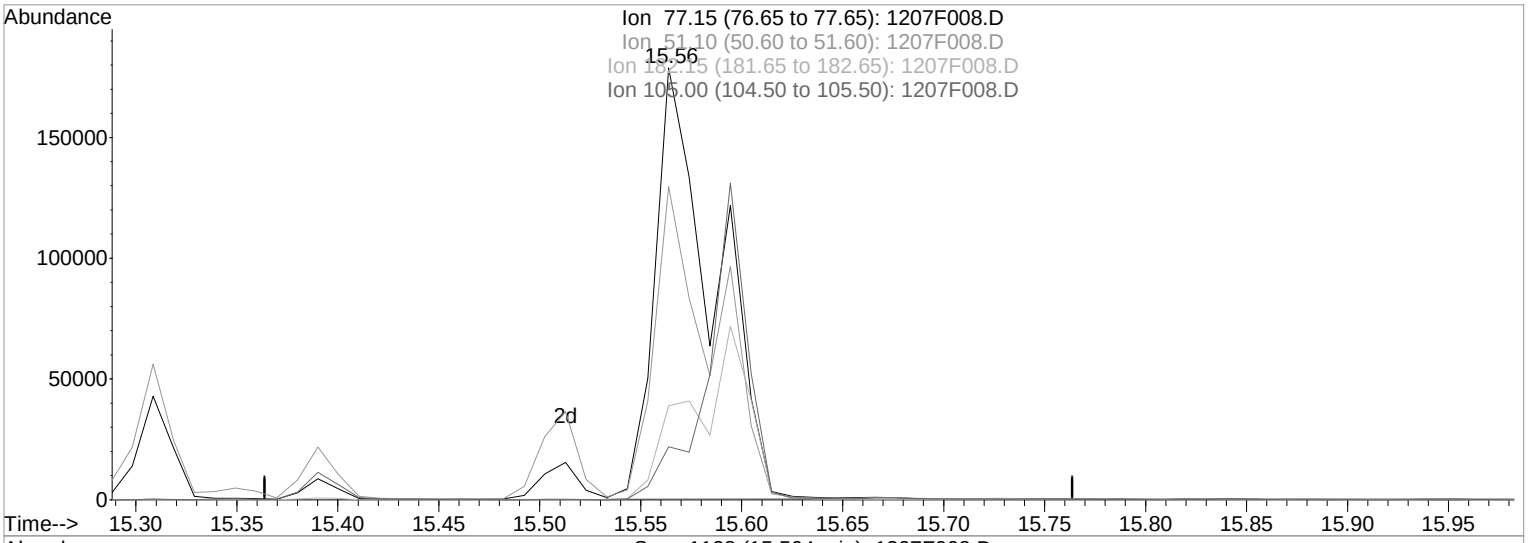
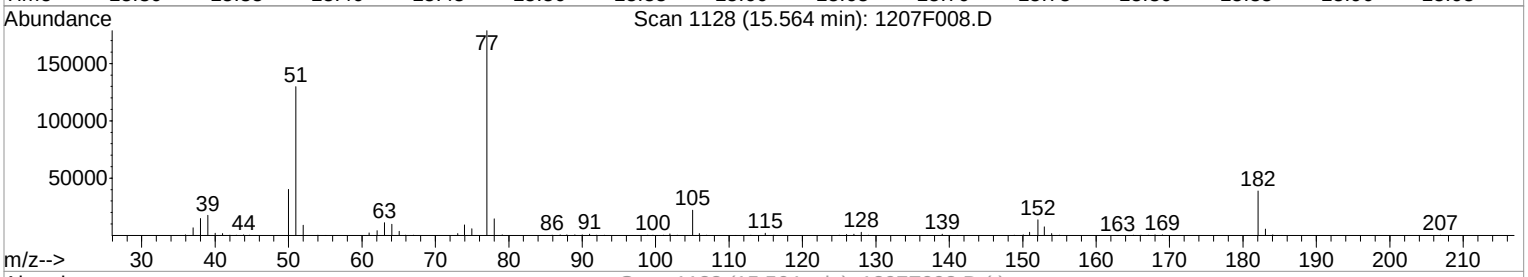
Quantitation Report (Qedit)

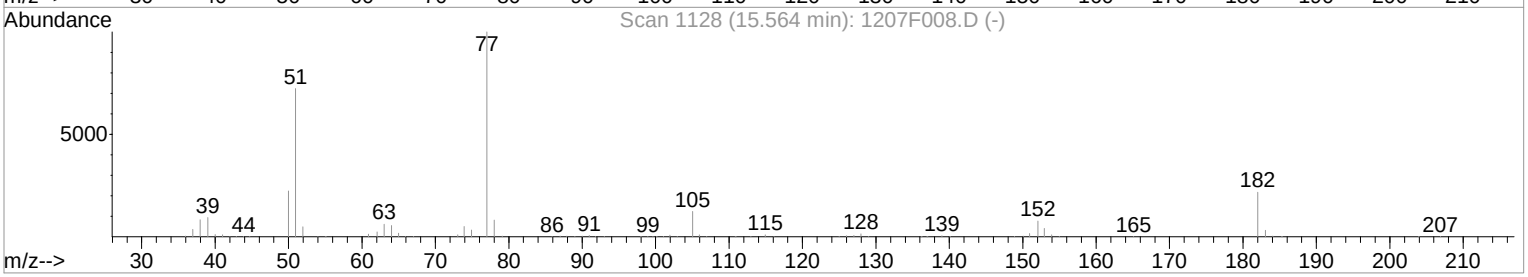
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F008.D Vial: 8
Acq On : 7 Dec 2018 7:57 pm Operator: CConover
Sample : 8270/P ICAL @ 80ppm | SVM59-92I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:54 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F008.D

(59) Azobenzene (T)

15.56min 153.90ug/ml

response 366568

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	72.36
182.15	21.70	21.73
105.00	12.30	12.22

Manual Integration:

Before

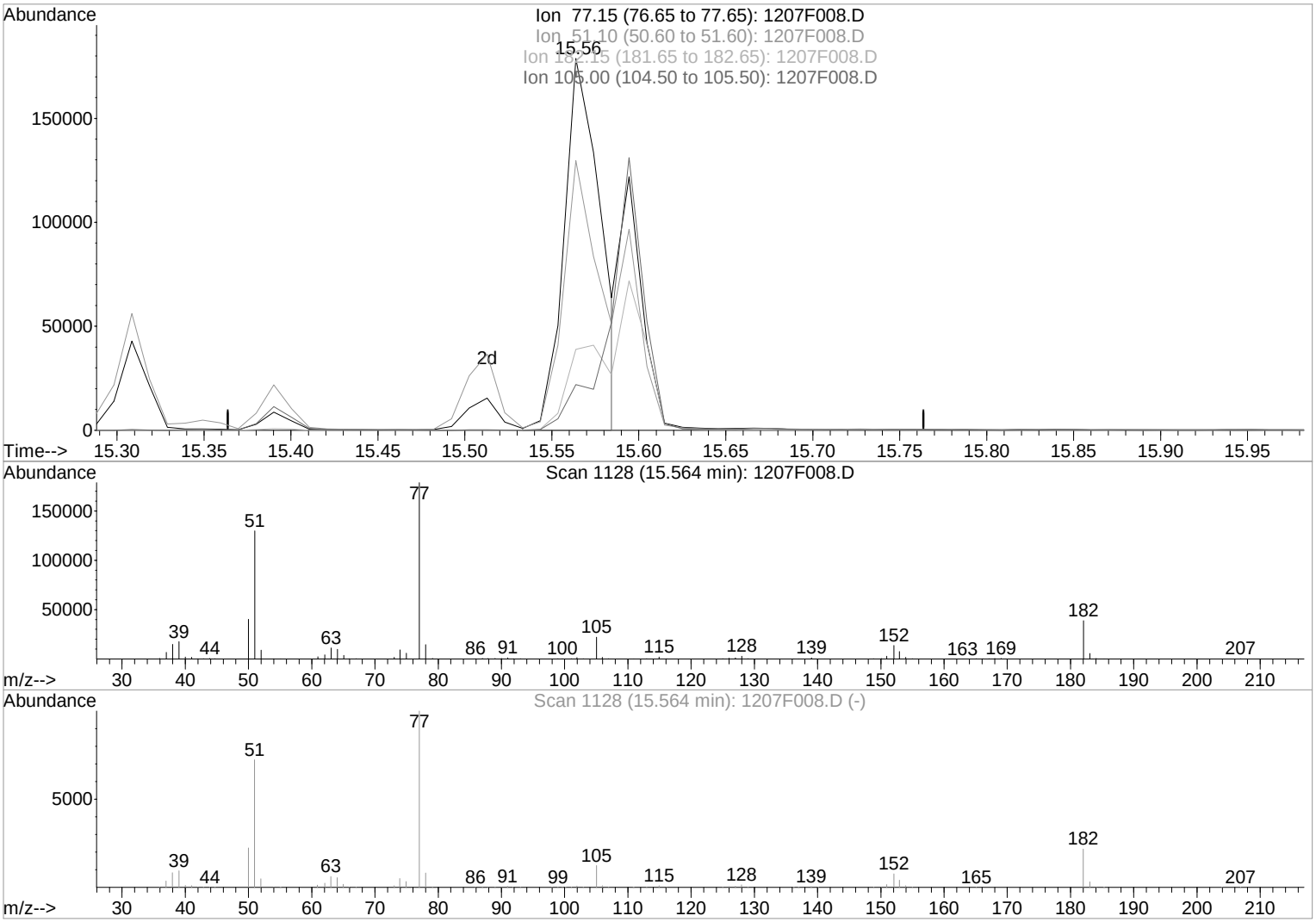
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F008.D Vial: 8
Acq On : 7 Dec 2018 7:57 pm Operator: CConover
Sample : 8270/P ICAL @ 80ppm | SVM59-92I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:16 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F008.D

(59) Azobenzene (T)

15.56min 110.89ug/ml m

response 264128

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	72.52
182.15	21.70	21.73
105.00	12.30	12.28

Manual Integration:

After

IC-Overintegrated

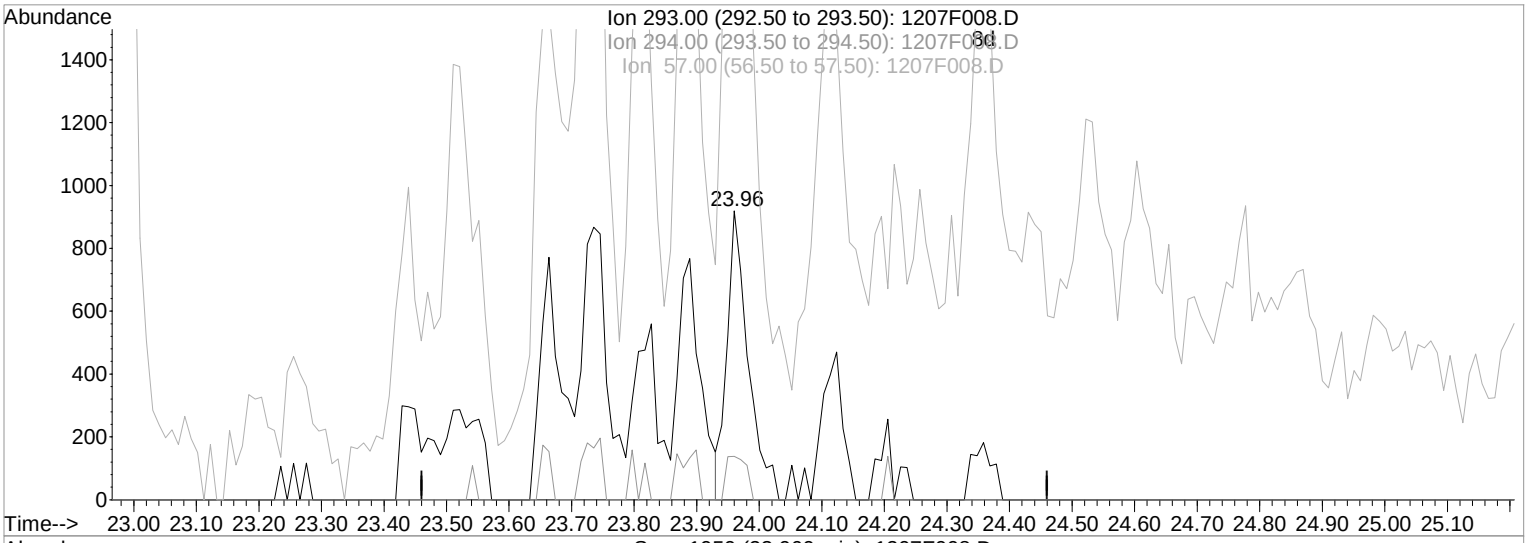
12/07/18

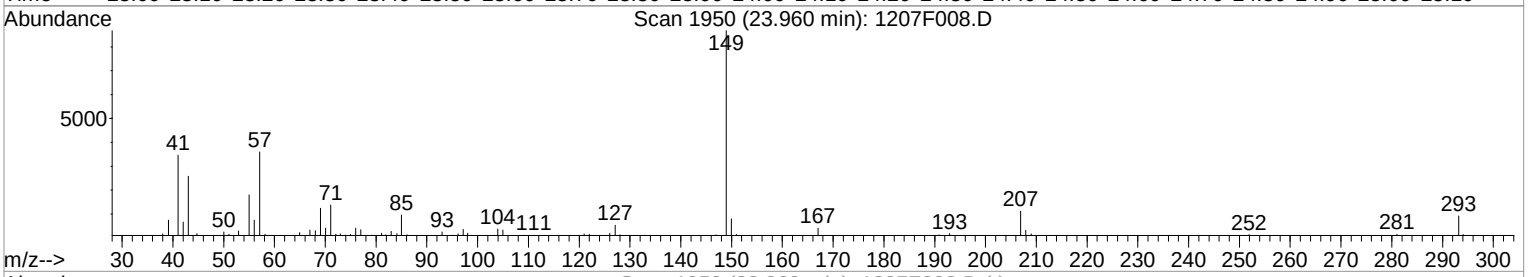
Quantitation Report (Qedit)

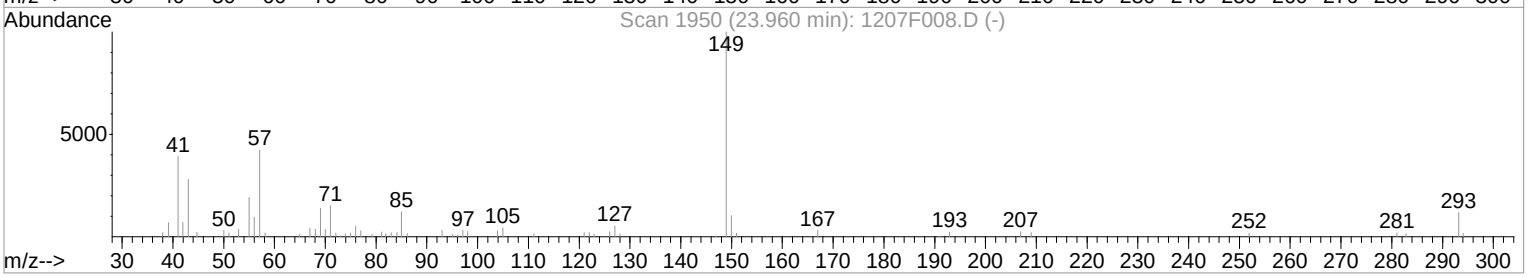
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F008.D Vial: 8
Acq On : 7 Dec 2018 7:57 pm Operator: CConover
Sample : 8270/P ICAL @ 80ppm | SVM59-92I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:16 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F008.D

(87) Diisononyl Phthalate (T)

23.96min 9.21ug/ml

response 2174

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	14.44
57.00	33.10	377.92#
0.00	0.00	0.00

Manual Integration:

Before

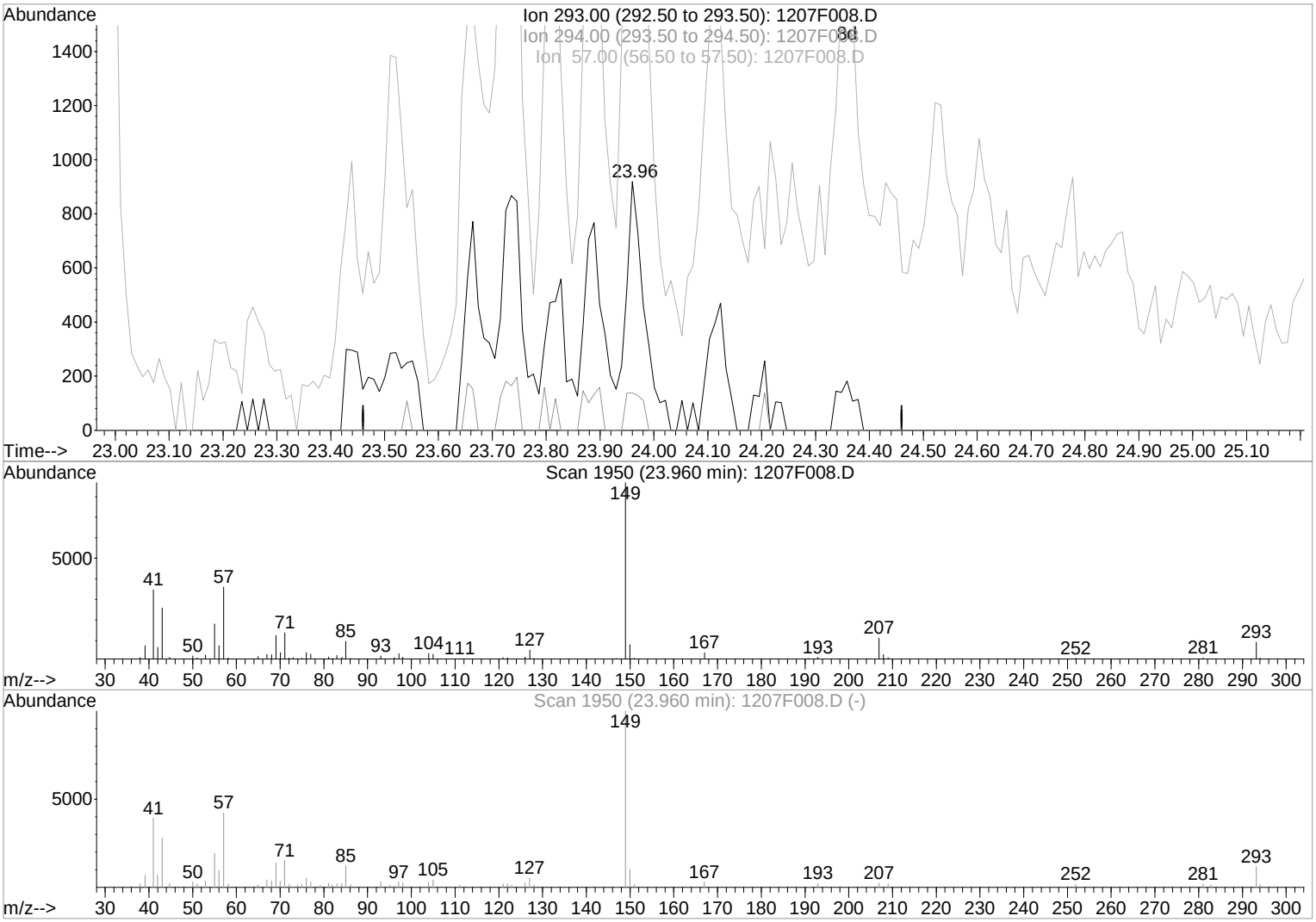
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F008.D Vial: 8
Acq On : 7 Dec 2018 7:57 pm Operator: CConover
Sample : 8270/P ICAL @ 80ppm | SVM59-92I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:17 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F008.D

(87) Diisononyl Phthalate (T)

23.96min 57.89ug/ml m

response 13664

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	2.30
57.00	33.10	60.13
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

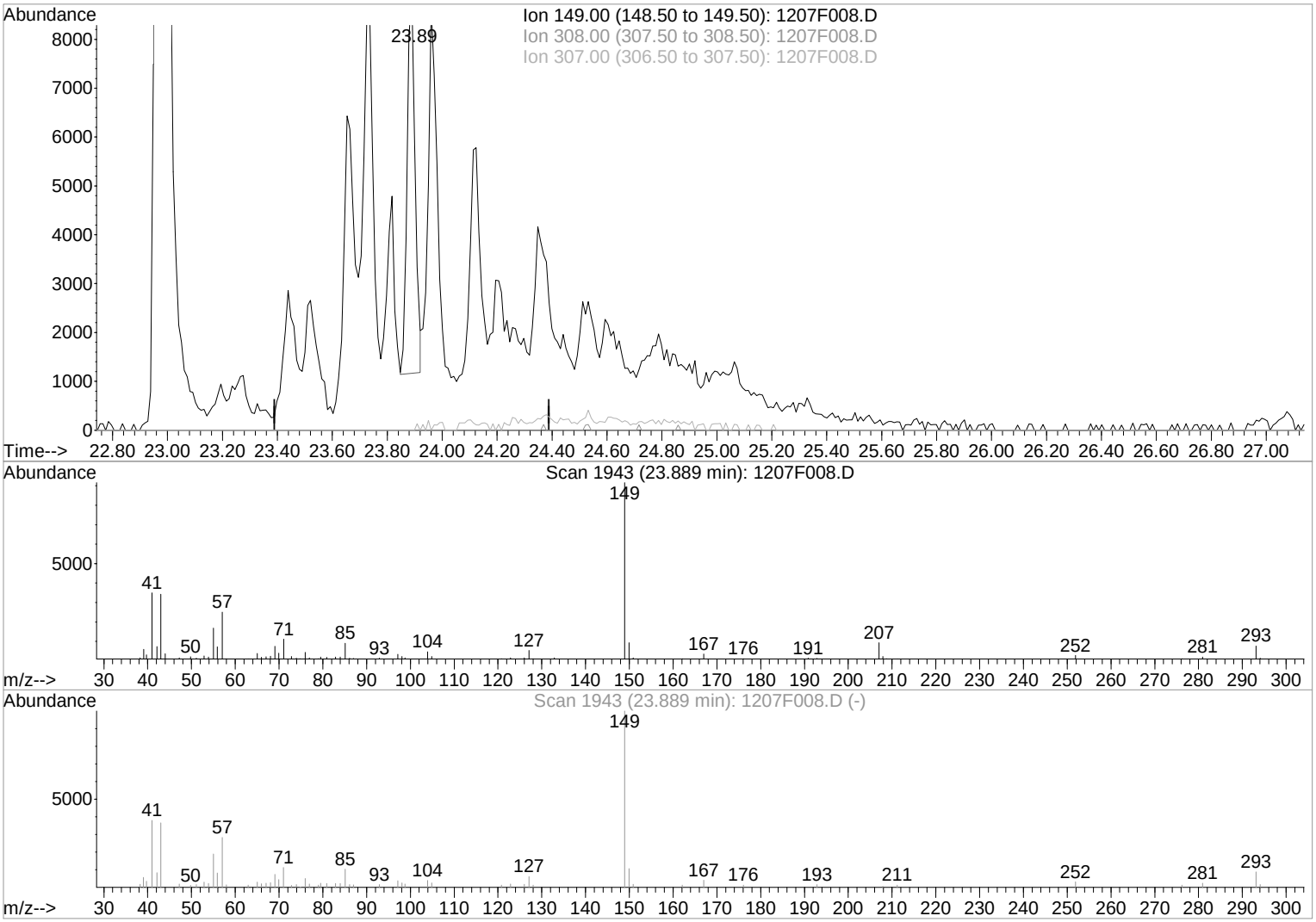
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F008.D Vial: 8
Acq On : 7 Dec 2018 7:57 pm Operator: CConover
Sample : 8270/P ICAL @ 80ppm | SVM59-92I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:17 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F008.D

(88) Diisodecyl Phthalate (T)

23.89min 4.50ug/ml

response 15986

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

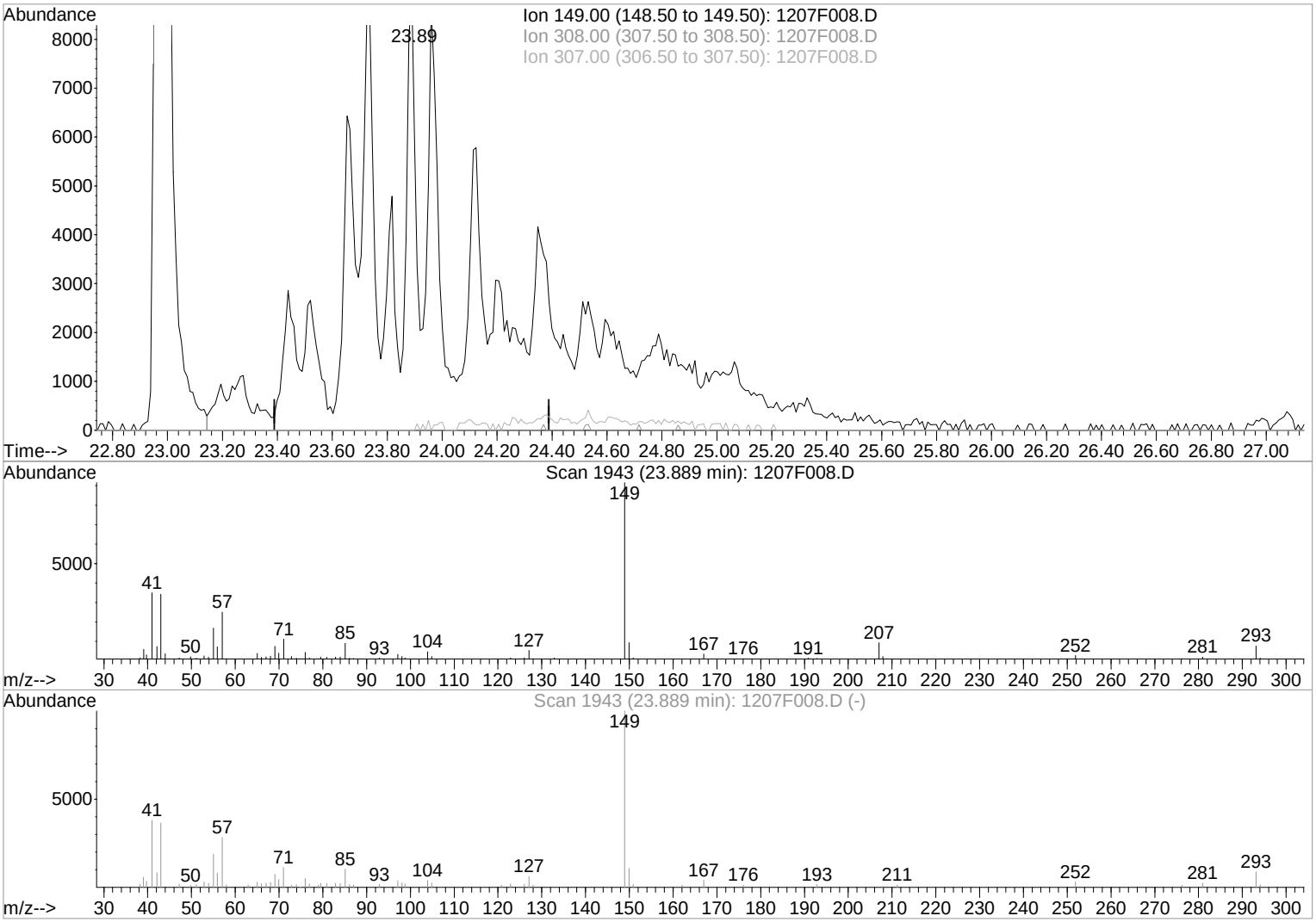
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F008.D Vial: 8
Acq On : 7 Dec 2018 7:57 pm Operator: CConover
Sample : 8270/P ICAL @ 80ppm | SVM59-92I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:17 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F008.D

(88) Diisodecyl Phthalate (T)

23.89min 73.15ug/ml m

response 259719

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

12/07/18

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:31 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	48867	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	174830	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.39	164	89237	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	119705	40.00	ug/ml	0.00
73) Chrysene-d12	21.28	240	116189	40.00	ug/ml	0.00
83) Perylene-d12	24.51	264	122683	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.19	112	125688	98.45	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 65.63%			
8) Phenol-d6	8.87	99	156853	101.09	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 67.39%			
20) Nitrobenzene-d5	10.36	82	169381	112.87	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 112.87%			
40) 2-Fluorobiphenyl	13.32	172	343432	108.50	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 108.50%			
62) 2,4,6-Tribromophenol	15.67	330	36170	73.88	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 49.25%			
76) Terphenyl-d14	19.43	244	272532	112.44	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 112.44%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.39	42	173690	141.39	ug/ml	96
3) Pyridine	4.41	79	123143	112.61	ug/ml	98
5) Ethylene Glycol Butyl Ethe	7.74	57	143585	123.87	ug/ml	100
6) Aniline	8.89	93	207970	113.72	ug/ml	99
7) Bis(2-chloroethyl) Ether	9.05	93	133913	115.99	ug/ml	95
9) Phenol	8.89	94	182929	114.40	ug/ml	89
10) 2-Chlorophenol	9.07	128	151665	96.76	ug/ml	96
11) 1,3-Dichlorobenzene	9.32	146	182068	97.47	ug/ml	99
12) 1,4-Dichlorobenzene	9.45	146	186965	98.01	ug/ml	98
13) 1,2-Dichlorobenzene	9.70	146	180976	99.61	ug/ml	95
14) Benzyl Alcohol	9.70	108	97773	106.92	ug/ml	94
15) 2,2'-oxybis(2-chloropropan	9.93	45	202007	131.79	ug/ml	97
16) 2-Methylphenol	9.90	107	109860	93.70	ug/ml	96
17) Hexachloroethane	10.25	117	83363	107.73	ug/ml	99
18) N-Nitrosodi-n-propylamine	10.16	70	110223	119.21	ug/ml	99
19) 4-Methylphenol	10.17	107	170559	102.49	ug/ml	100
21) Nitrobenzene	10.39	77	165026	114.81	ug/ml	94
23) Isophorone	10.81	82	268351	112.01	ug/ml	96
24) 2-Nitrophenol	10.91	139	89283	104.01	ug/ml	94
25) 2,4-Dimethylphenol	11.03	122	120698	104.90	ug/ml	96
26) Bis(2-chloroethoxy)methane	11.19	93	158219	119.96	ug/ml	98
27) 2,4-Dichlorophenol	11.31	162	144821	106.66	ug/ml	96
28) Benzoic Acid	11.26	122	69891m	107.55	ug/ml	
29) 1,2,4-Trichlorobenzene	11.44	180	162482	103.73	ug/ml	99
30) Naphthalene	11.56	128	446308	104.38	ug/ml	100
31) n-Dodecane	11.59	57	197429	144.08	ug/ml	99
32) 4-Chloroaniline	11.68	127	204661	107.03	ug/ml	96
33) Hexachlorobutadiene	11.77	225	120522	112.37	ug/ml	97
34) 4-Chloro-3-methylphenol	12.49	107	120783	105.07	ug/ml	95
35) 2-Methylnaphthalene	12.69	142	311494	102.73	ug/ml	100
37) Hexachlorocyclopentadiene	12.95	237	110901	191.27	ug/ml	98
38) 2,4,6-Trichlorophenol	13.16	196	97336	109.83	ug/ml	99
39) 2,4,5-Trichlorophenol	13.21	196	99661	110.79	ug/ml	98
41) 2-Chloronaphthalene	13.49	162	301261	113.94	ug/ml	96
42) 2-Nitroaniline	13.68	65	98019	135.85	ug/ml	94
43) Acenaphthylene	14.15	152	388109	103.30	ug/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:31 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
44) Dimethyl Phthalate	14.01	163	293111	103.25 ug/ml	99
45) 2,6-Dinitrotoluene	14.10	165	65605	99.06 ug/ml	93
46) Acenaphthene	14.44	154	254764	106.95 ug/ml	97
47) 3-Nitroaniline	14.36	138	64223	96.02 ug/ml	93
48) 2,4-Dinitrophenol	14.53	184	32266	101.05 ug/ml	84
49) Dibenzofuran	14.72	168	389252	104.05 ug/ml	98
50) 4-Nitrophenol	14.64	109	48085	161.72 ug/ml	95
51) 2,4-Dinitrotoluene	14.75	165	85820	104.13 ug/ml	88
52) 2,3,4,6-Tetrachlorophenol	14.93	232	72157	117.67 ug/ml	92
53) Fluorene	15.29	166	285830	102.97 ug/ml	99
54) 4-Chlorophenyl Phenyl Ethe	15.32	204	153402	109.30 ug/ml	87
55) Diethyl Phthalate	15.17	149	269299	99.80 ug/ml	100
56) 4-Nitroaniline	15.36	138	63804	105.49 ug/ml	99
57) 2-Methyl-4,6-dinitrophenol	15.40	198	47527	102.95 ug/ml#	64
58) Diphenylamine	15.51	169	174905	96.40 ug/ml	99
59) Azobenzene	15.57	77	317678m	131.91 ug/ml	
60) Benzophenone	15.60	105	232530	111.11 ug/ml	98
63) 4-Bromophenyl Phenyl Ether	16.10	248	78325	95.20 ug/ml	98
64) Hexachlorobenzene	16.17	284	73148	81.42 ug/ml	84
65) 2,6-Diisopropylnaphthalene	16.30	197	229172	107.80 ug/ml	99
66) Pentachlorophenol	16.49	266	48064	133.98 ug/ml	99
67) Diazinon	16.67	137	50343	102.59 ug/ml	99
68) Phenanthrene	16.84	178	340052	102.94 ug/ml	98
69) Anthracene	16.92	178	339175	100.15 ug/ml	99
70) Carbazole	17.21	167	336583	112.80 ug/ml	100
71) Di-n-butyl Phthalate	17.84	149	404867	111.49 ug/ml	99
72) Fluoranthene	18.77	202	366120	110.84 ug/ml	99
74) Benzidine	19.04	184	117247	74.64 ug/ml	99
75) Pyrene	19.14	202	390205	108.54 ug/ml	99
77) Butyl Benzyl Phthalate	20.30	149	213563	123.50 ug/ml	89
78) Diethylene Glycol Butyl Et	21.18	105	267366	129.43 ug/ml	99
79) 3,3'-Dichlorobenzidine	21.26	252	142372	96.93 ug/ml	99
80) Benz(a)anthracene	21.26	228	372717	108.36 ug/ml	99
81) Chrysene	21.34	228	344885	104.91 ug/ml	99
82) Bis(2-ethylhexyl) Phthalat	21.48	149	282773	118.81 ug/ml	100
84) Di-n-octyl Phthalate	22.98	149	423400	97.74 ug/ml	98
85) Benzo(b)fluoranthene	23.64	252	348512	98.96 ug/ml	98
86) Benzo(k)fluoranthene	23.71	252	352743	100.92 ug/ml	99
87) Diisononyl Phthalate	23.73	293	16879m	69.15 ug/ml	
88) Diisodecyl Phthalate	23.73	149	336244m	91.57 ug/ml	
89) Benzo(a)pyrene	24.39	252	345882	106.49 ug/ml	98
90) Indeno(1,2,3-cd)pyrene	27.00	276	362256	115.33 ug/ml	98
91) Dibenz(a,h)anthracene	27.08	278	353713	111.44 ug/ml	97
92) Benzo(g,h,i)perylene	27.58	276	367493	112.34 ug/ml	99

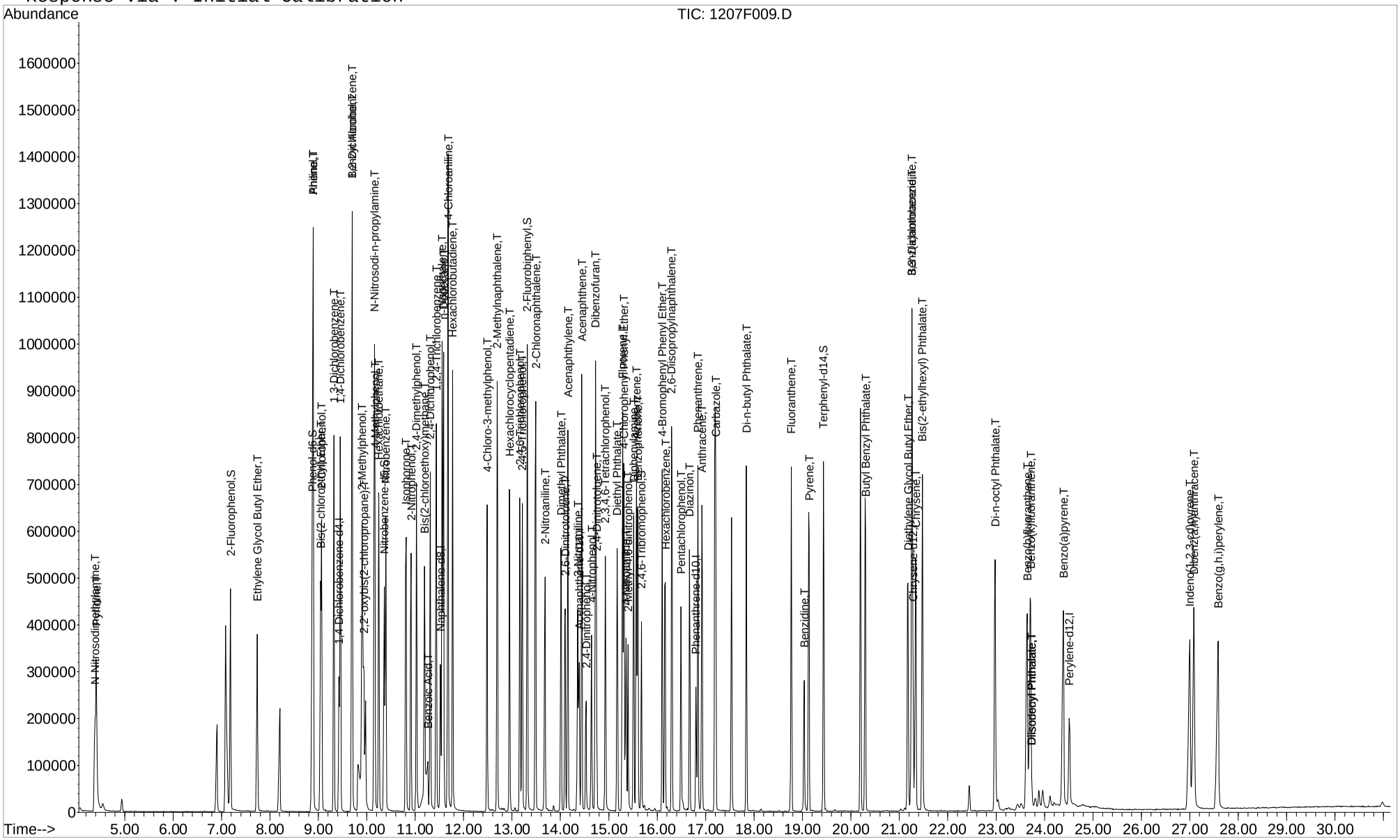
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:20 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

12/08/18 12/13/18 1st 2nd

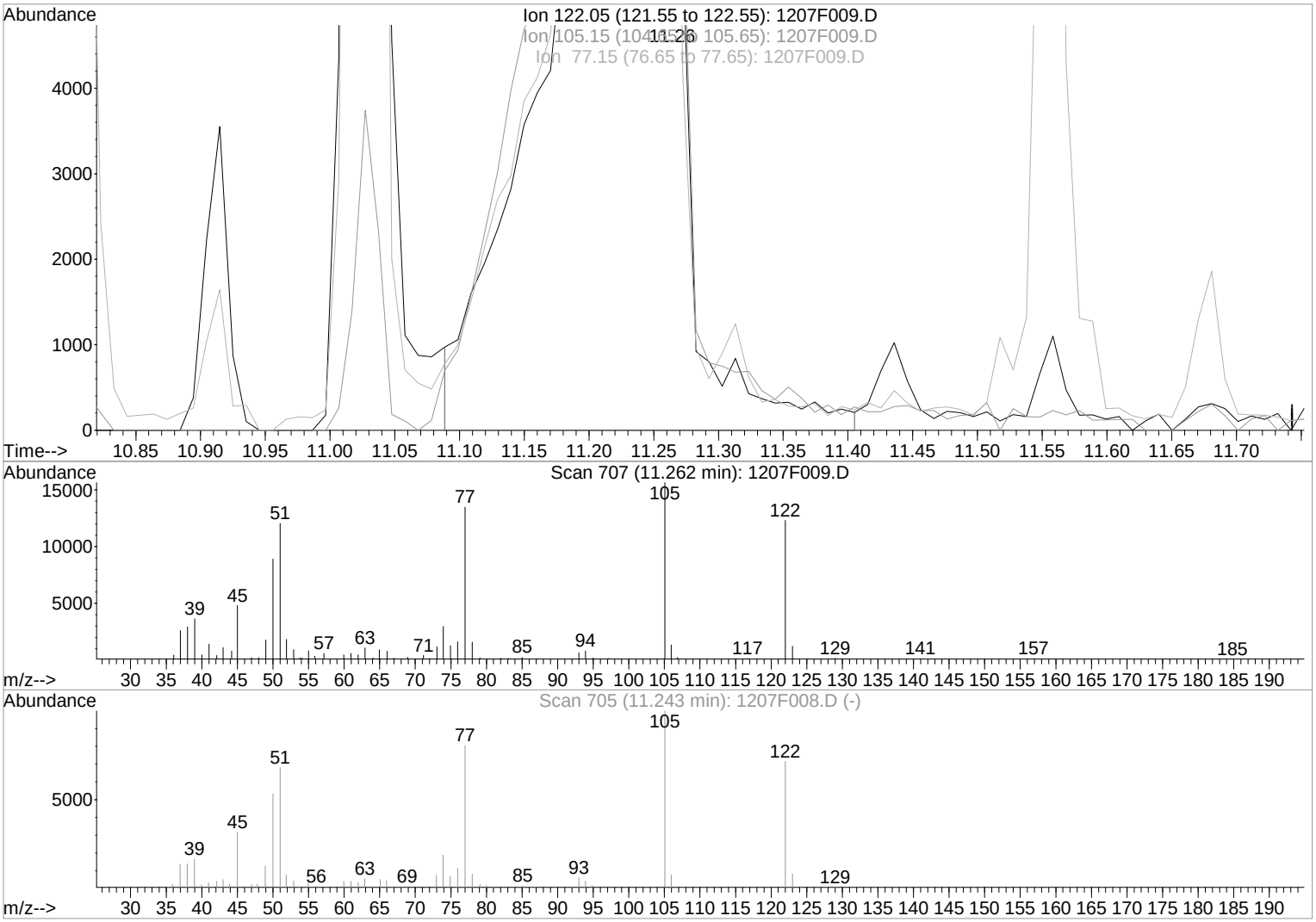


Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:54 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F009.D

(28) Benzoic Acid (T)

11.26min 107.56ug/ml

response 69903

Ion	Exp%	Act%
122.05	100	100
105.15	132.80	129.44
77.15	110.60	110.73
0.00	0.00	0.00

Manual Integration:

Before

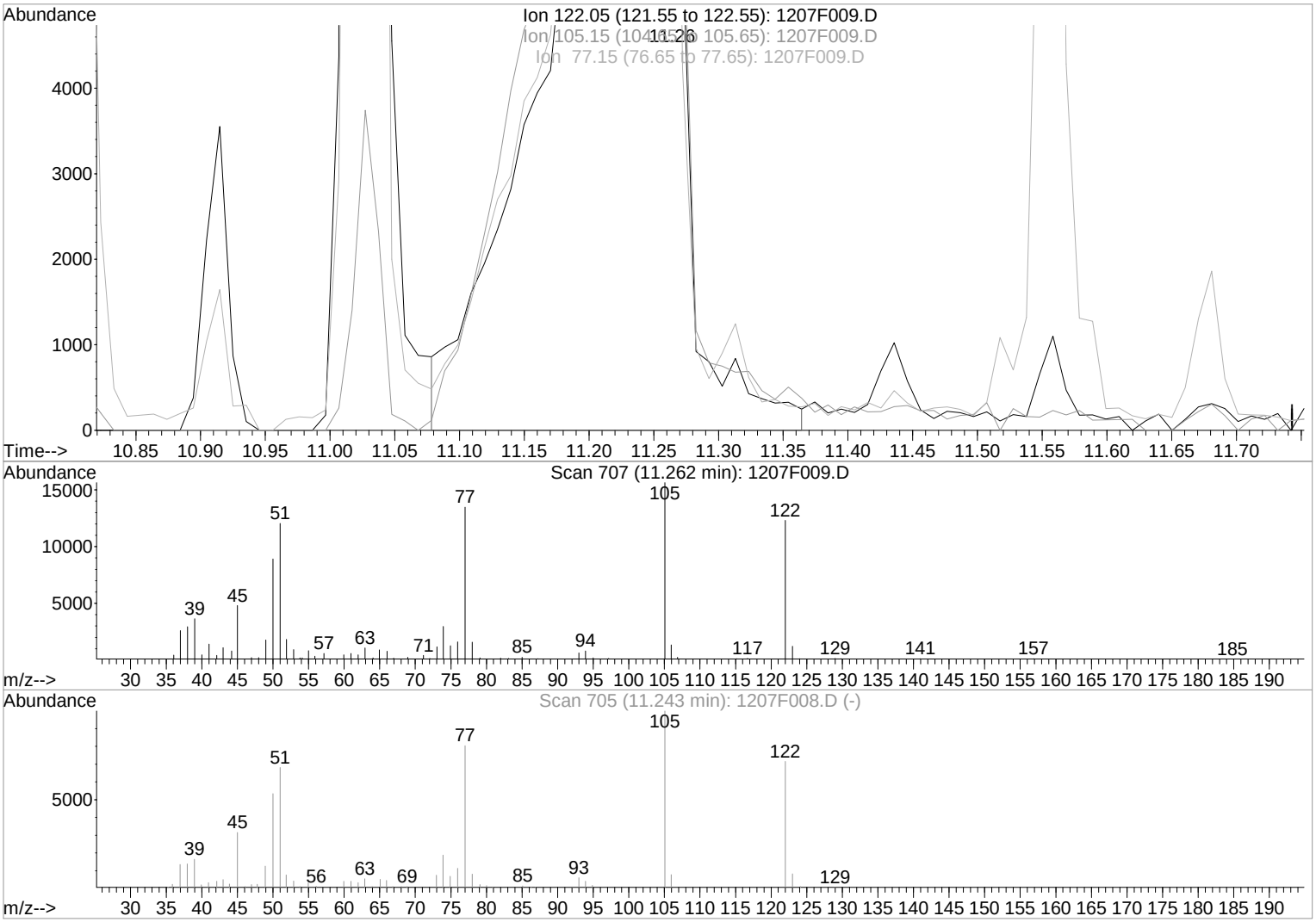
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:18 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F009.D

(28) Benzoic Acid (T)

11.26min 107.55ug/ml m

response 69891

Ion	Exp%	Act%
122.05	100	100
105.15	132.80	127.16
77.15	110.60	109.52
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

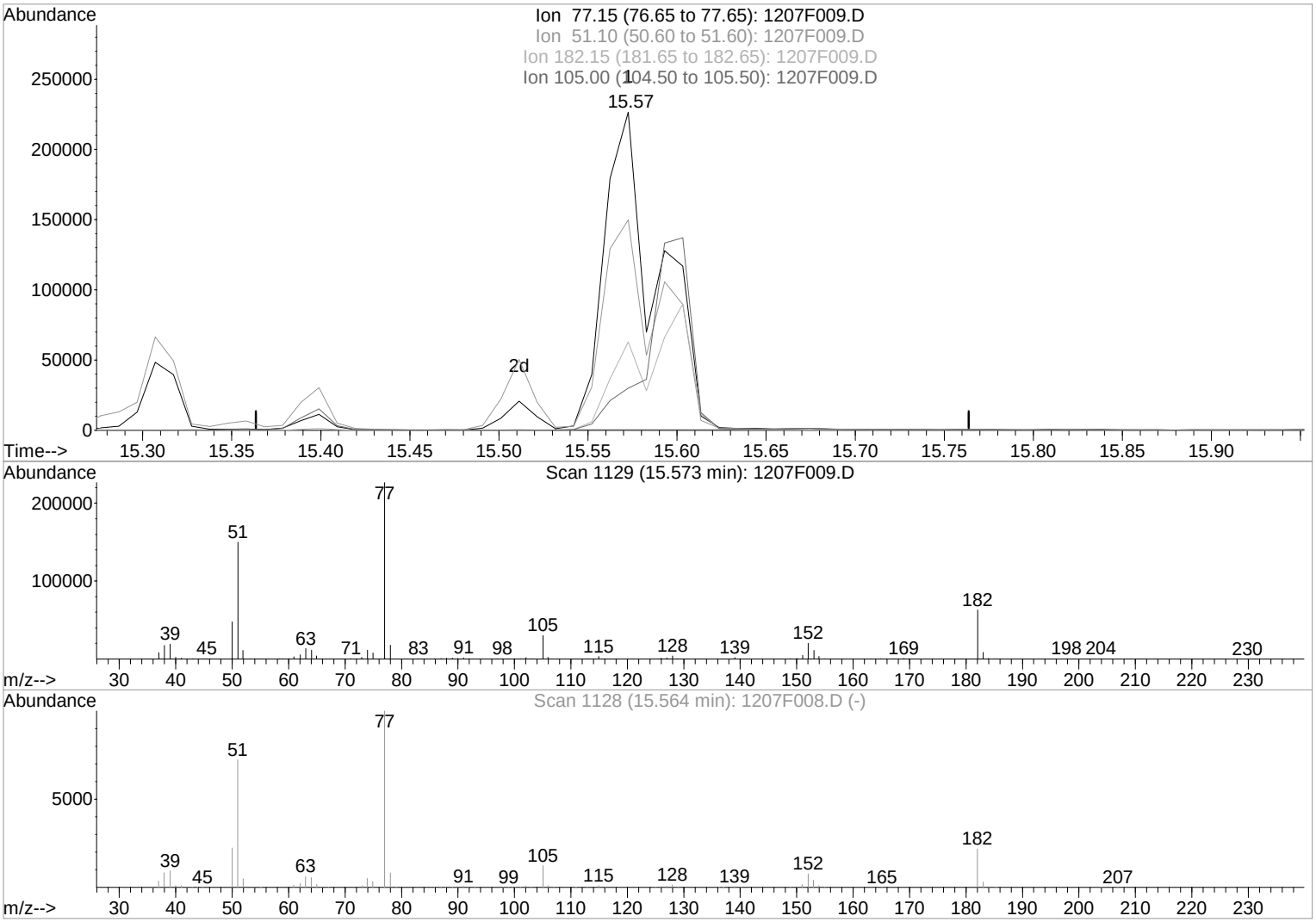
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:18 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F009.D

(59) Azobenzene (T)

15.57min 197.03ug/ml

response 474502

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	65.80
182.15	21.70	27.82
105.00	12.30	13.14

Manual Integration:

Before

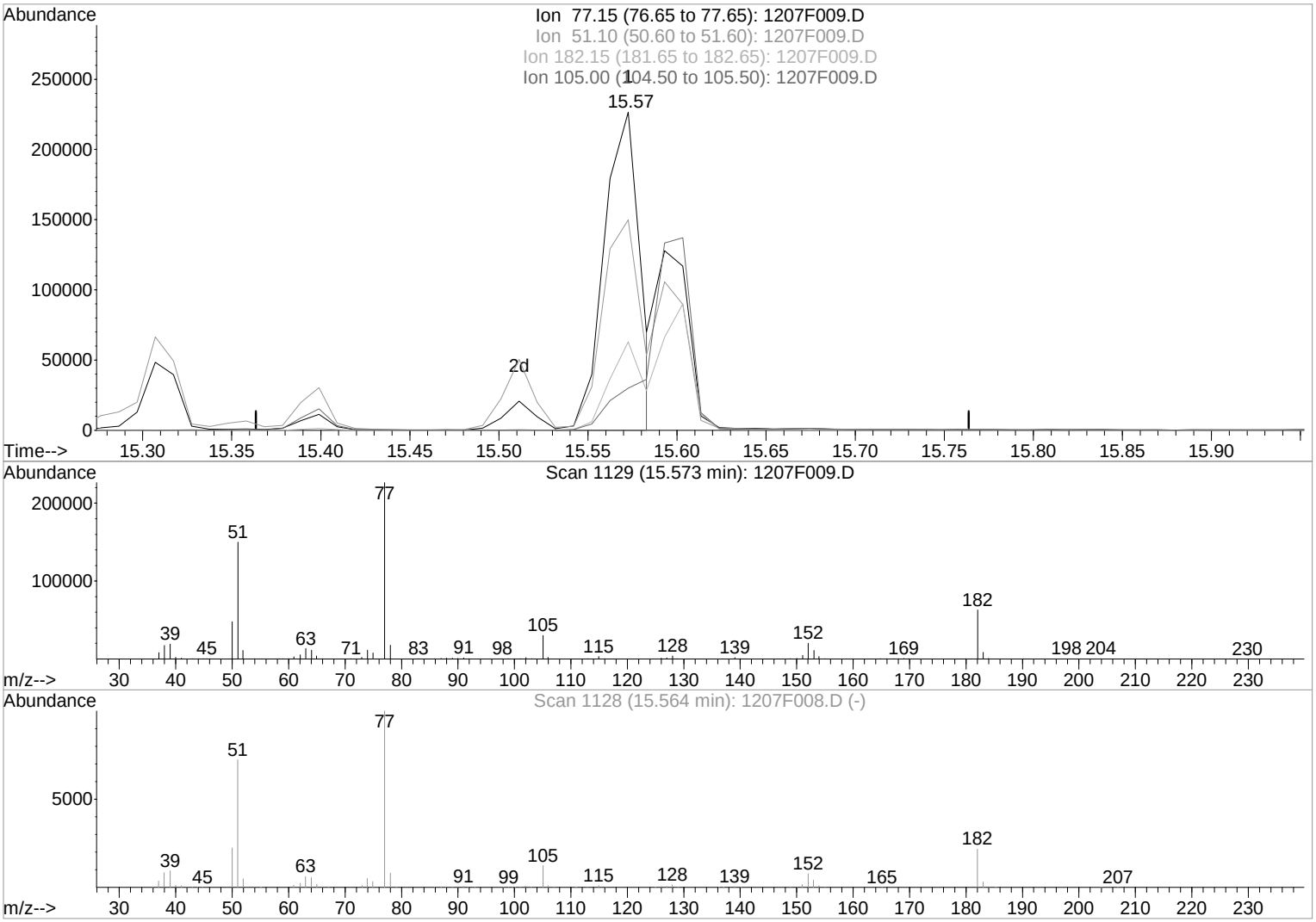
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:19 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F009.D

(59) Azobenzene (T)

15.57min 131.91ug/ml m

response 317678

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	66.12
182.15	21.70	27.80
105.00	12.30	13.22

Manual Integration:

After

IC-Overintegrated

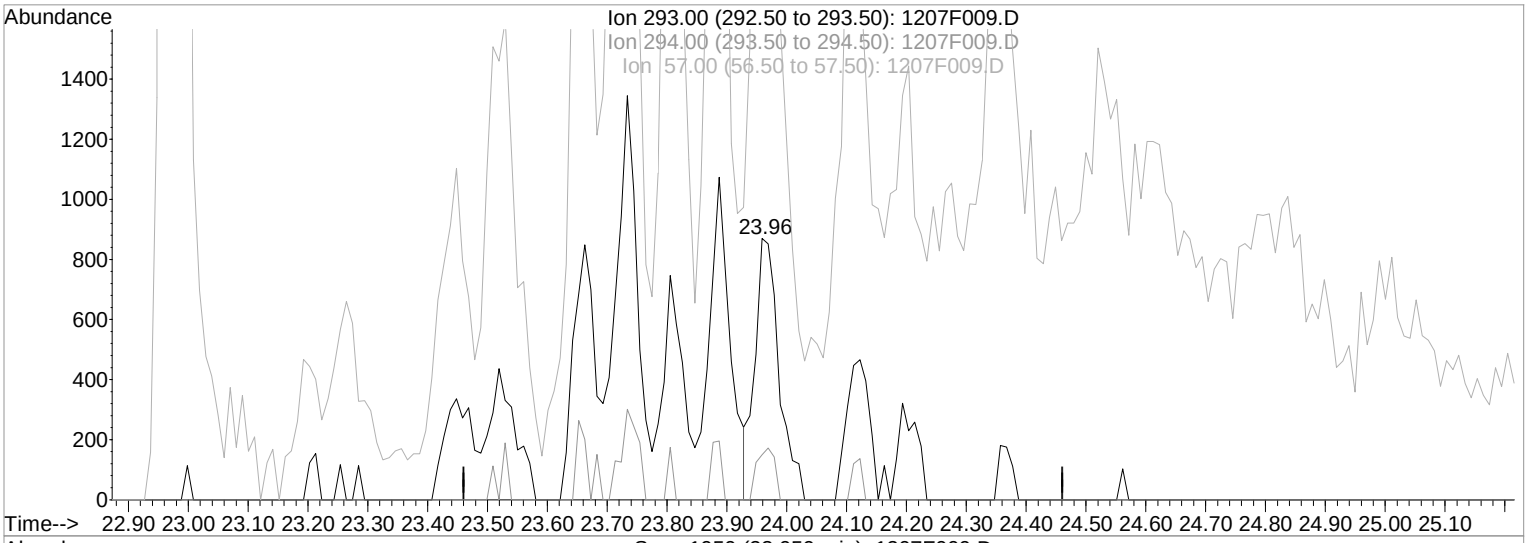
12/07/18

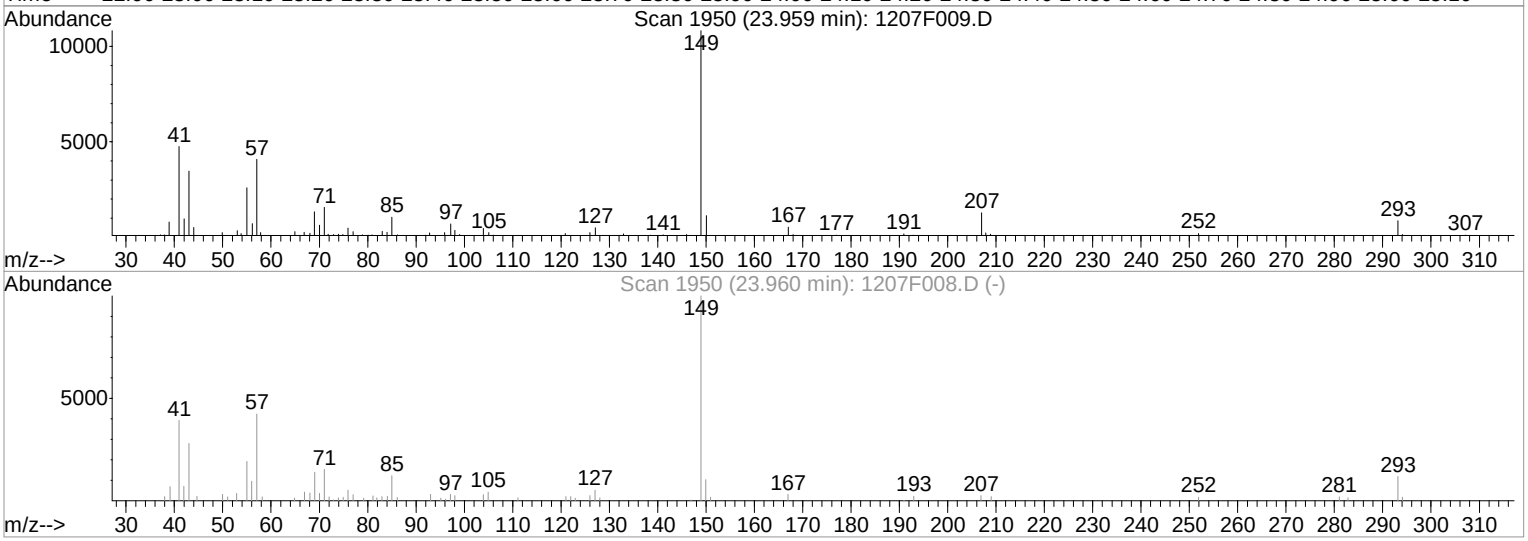
Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:19 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration





TIC: 1207F009.D

(87) Diisononyl Phthalate (T)

23.96min 9.99ug/ml

response 2438

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	14.77
57.00	33.10	391.10#
0.00	0.00	0.00

Manual Integration:

Before

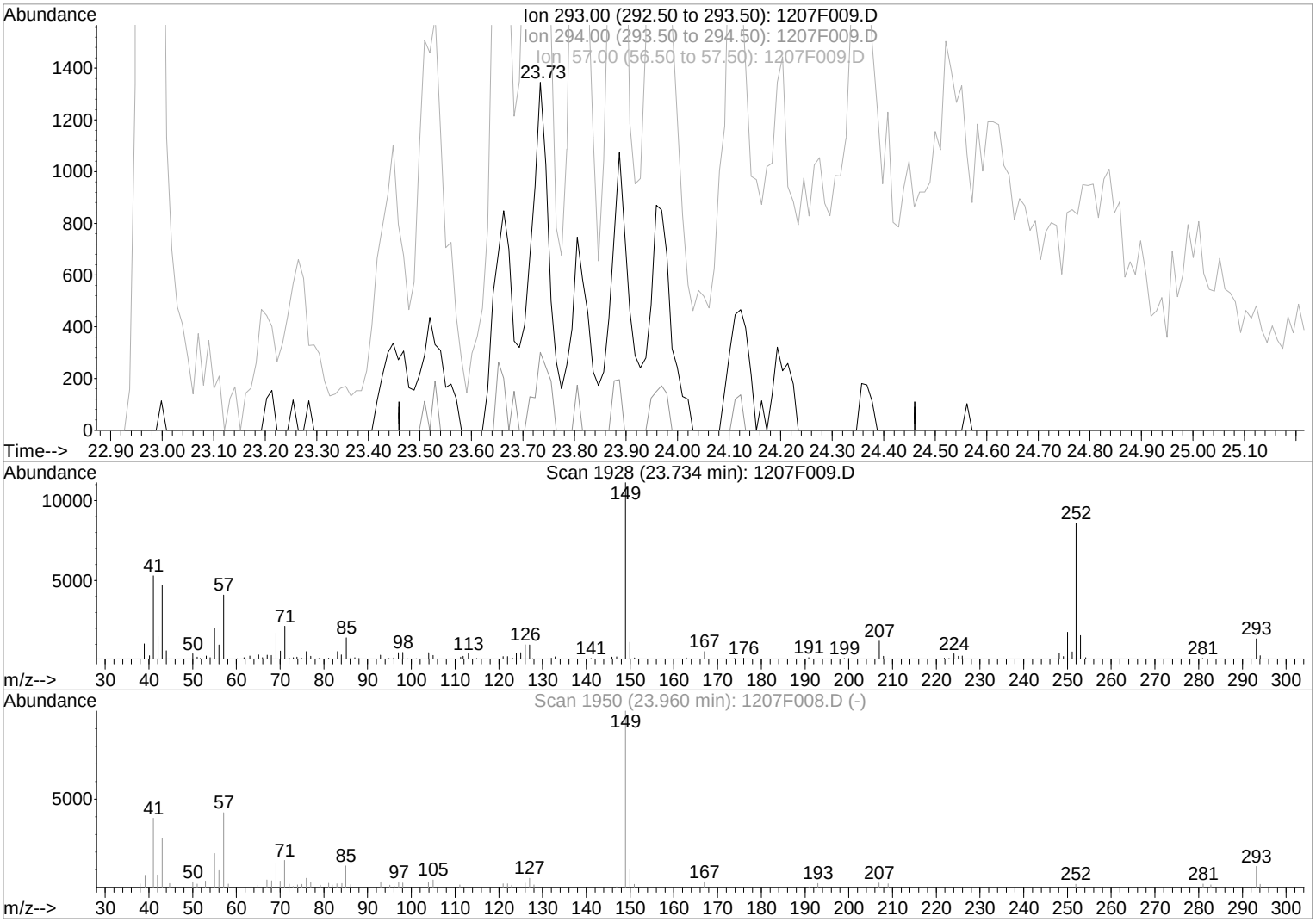
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:19 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F009.D

(87) Diisononyl Phthalate (T)

23.73min 69.15ug/ml m

response 16879

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	2.13
57.00	33.10	56.49
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

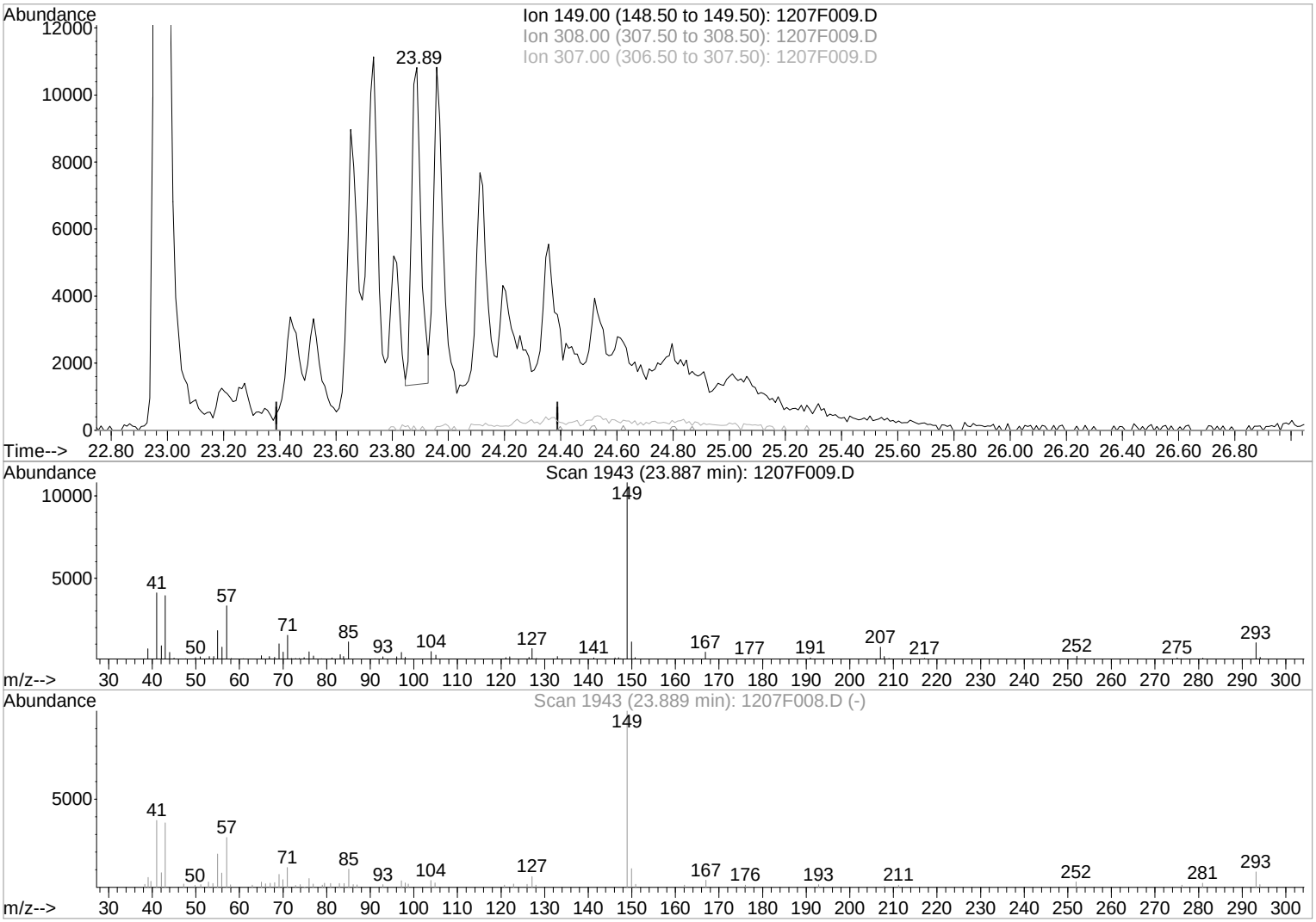
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:19 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F009.D

(88) Diisodecyl Phthalate (T)

23.89min 5.91ug/ml

response 21712

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

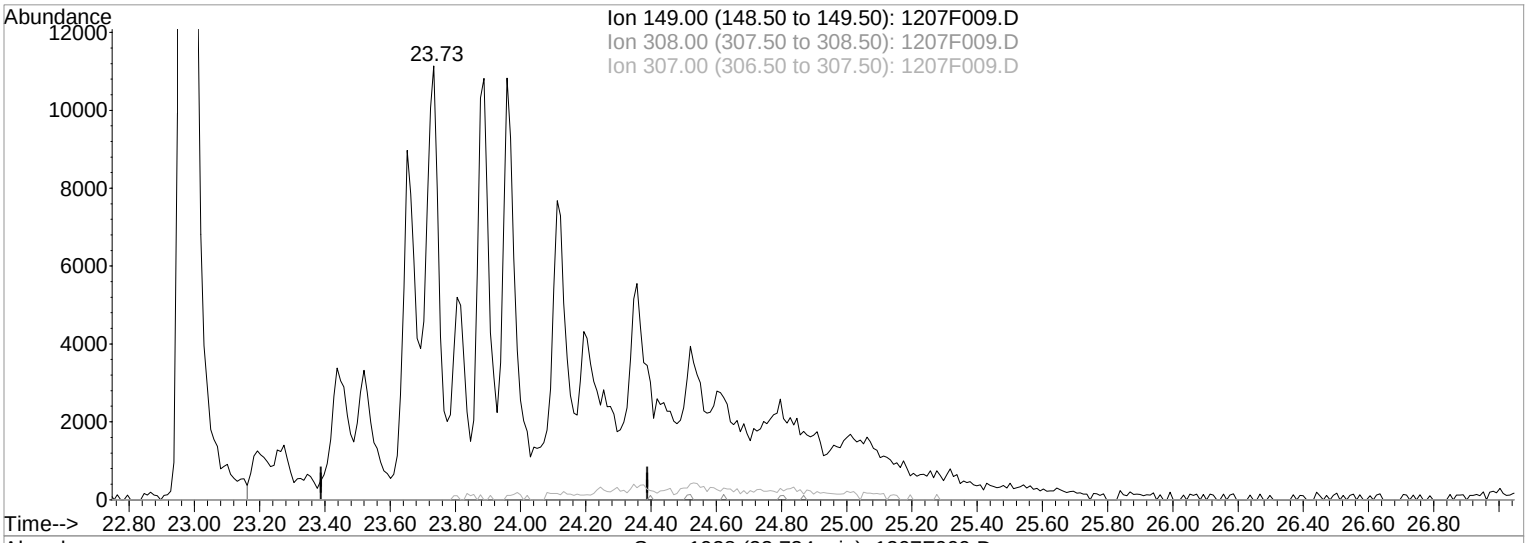
12/07/18

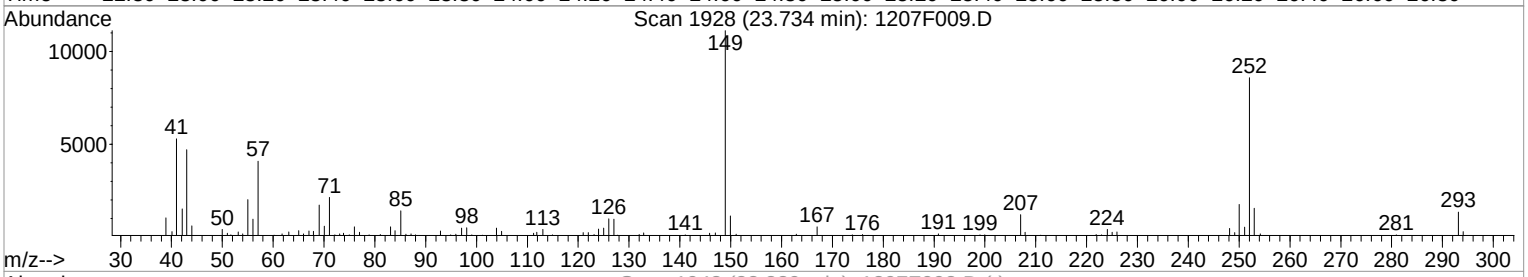
Quantitation Report (Qedit)

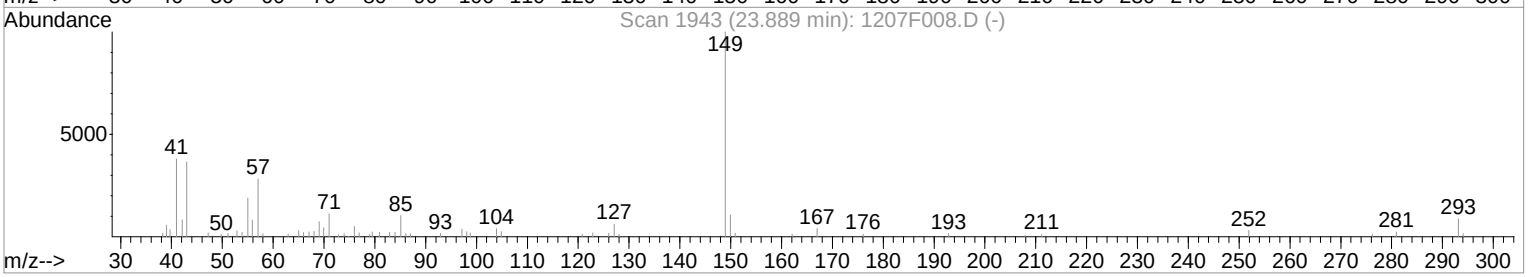
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:20 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F009.D

(88) Diisodecyl Phthalate (T)

23.73min 91.57ug/ml m

response 336244

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

12/07/18

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:32 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	48165	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	167758	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.39	164	81083	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	116321	40.00	ug/ml	0.00
73) Chrysene-d12	21.28	240	117765	40.00	ug/ml	0.00
83) Perylene-d12	24.52	264	129376	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.19	112	157340	125.04	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 83.36%			
8) Phenol-d6	8.88	99	192468	125.86	ug/ml	0.02
Spiked Amount 150.000	Range 10 - 94		Recovery = 83.91%			
20) Nitrobenzene-d5	10.36	82	200083	135.28	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 135.28%#			
40) 2-Fluorobiphenyl	13.32	172	389776	135.52	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 135.52%#			
62) 2,4,6-Tribromophenol	15.68	330	42751	89.86	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 59.91%			
76) Terphenyl-d14	19.43	244	345501	140.64	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 140.64%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.39	42	213585	176.40	ug/ml	95
3) Pyridine	4.41	79	153855	142.75	ug/ml	98
5) Ethylene Glycol Butyl Ethe	7.74	57	184898	161.83	ug/ml	99
6) Aniline	8.89	93	252949	140.33	ug/ml	89
7) Bis(2-chloroethyl) Ether	9.05	93	159896	140.52	ug/ml	98
9) Phenol	8.90	94	224950	142.73	ug/ml	82
10) 2-Chlorophenol	9.07	128	188625	122.09	ug/ml	96
11) 1,3-Dichlorobenzene	9.32	146	227819	123.74	ug/ml	99
12) 1,4-Dichlorobenzene	9.45	146	235455	125.23	ug/ml	99
13) 1,2-Dichlorobenzene	9.70	146	230625	128.78	ug/ml	95
14) Benzyl Alcohol	9.71	108	119612	132.71	ug/ml	98
15) 2,2'-oxybis(2-chloropropan	9.93	45	249295	165.01	ug/ml	98
16) 2-Methylphenol	9.90	107	131084	113.43	ug/ml	98
17) Hexachloroethane	10.25	117	104904	137.54	ug/ml	98
18) N-Nitrosodi-n-propylamine	10.16	70	132524	145.41	ug/ml	99
19) 4-Methylphenol	10.17	107	203485	124.05	ug/ml	97
21) Nitrobenzene	10.39	77	200350	141.41	ug/ml	93
23) Isophorone	10.81	82	311787	135.62	ug/ml	98
24) 2-Nitrophenol	10.92	139	106415	129.19	ug/ml	94
25) 2,4-Dimethylphenol	11.03	122	145208	131.52	ug/ml	100
26) Bis(2-chloroethoxy)methane	11.19	93	188213	148.71	ug/ml	98
27) 2,4-Dichlorophenol	11.31	162	171914	131.95	ug/ml	98
28) Benzoic Acid	11.28	122	87139m	139.74	ug/ml	
29) 1,2,4-Trichlorobenzene	11.44	180	195895	130.33	ug/ml	99
30) Naphthalene	11.56	128	537078	130.91	ug/ml	100
31) n-Dodecane	11.59	57	252218	191.82	ug/ml	99
32) 4-Chloroaniline	11.68	127	237644	129.51	ug/ml	95
33) Hexachlorobutadiene	11.77	225	147848	143.66	ug/ml	98
34) 4-Chloro-3-methylphenol	12.49	107	137402	124.56	ug/ml	96
35) 2-Methylnaphthalene	12.69	142	356395	122.49	ug/ml	99
37) Hexachlorocyclopentadiene	12.95	237	135917	257.99	ug/ml	98
38) 2,4,6-Trichlorophenol	13.16	196	112257	139.40	ug/ml	99
39) 2,4,5-Trichlorophenol	13.21	196	109273	133.69	ug/ml	98
41) 2-Chloronaphthalene	13.49	162	333502	138.81	ug/ml	95
42) 2-Nitroaniline	13.68	65	109195	166.55	ug/ml	93
43) Acenaphthylene	14.15	152	434555	127.29	ug/ml	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:32 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
44) Dimethyl Phthalate	14.02	163	343092	133.00 ug/ml	98
45) 2,6-Dinitrotoluene	14.10	165	75192	124.95 ug/ml	93
46) Acenaphthene	14.44	154	286501	132.36 ug/ml	99
47) 3-Nitroaniline	14.36	138	74339	122.32 ug/ml	90
48) 2,4-Dinitrophenol	14.53	184	41879	144.35 ug/ml	83
49) Dibenzofuran	14.73	168	434889	127.94 ug/ml	99
50) 4-Nitrophenol	14.64	109	61677	228.30 ug/ml	99
51) 2,4-Dinitrotoluene	14.75	165	103775	138.57 ug/ml	82
52) 2,3,4,6-Tetrachlorophenol	14.93	232	82318	147.74 ug/ml	96
53) Fluorene	15.29	166	316046	125.31 ug/ml	99
54) 4-Chlorophenyl Phenyl Ethe	15.32	204	174971	137.20 ug/ml	87
55) Diethyl Phthalate	15.17	149	313133	127.71 ug/ml	99
56) 4-Nitroaniline	15.37	138	78733	143.26 ug/ml	94
57) 2-Methyl-4,6-dinitrophenol	15.40	198	59128	140.95 ug/ml	82
58) Diphenylamine	15.51	169	204171	123.85 ug/ml	99
59) Azobenzene	15.57	77	355834m	162.61 ug/ml	
60) Benzophenone	15.60	105	273623	143.89 ug/ml	94
63) 4-Bromophenyl Phenyl Ether	16.10	248	92268	115.40 ug/ml	99
64) Hexachlorobenzene	16.17	284	86063	98.59 ug/ml	83
65) 2,6-Diisopropylnaphthalene	16.30	197	259798	125.76 ug/ml	99
66) Pentachlorophenol	16.49	266	61398	176.13 ug/ml	98
67) Diazinon	16.67	137	57367	120.31 ug/ml	99
68) Phenanthrene	16.84	178	404879	126.13 ug/ml	99
69) Anthracene	16.93	178	425020	129.15 ug/ml	99
70) Carbazole	17.21	167	424774	146.49 ug/ml	99
71) Di-n-butyl Phthalate	17.84	149	523544	148.37 ug/ml	99
72) Fluoranthene	18.77	202	460426	143.45 ug/ml	98
74) Benzidine	19.04	184	124612	78.26 ug/ml	98
75) Pyrene	19.14	202	477468	131.04 ug/ml	98
77) Butyl Benzyl Phthalate	20.30	149	254769	145.35 ug/ml	92
78) Diethylene Glycol Butyl Et	21.18	105	328058	156.69 ug/ml	99
79) 3,3'-Dichlorobenzidine	21.27	252	179272	120.42 ug/ml	97
80) Benz(a)anthracene	21.26	228	452481	129.79 ug/ml	100
81) Chrysene	21.34	228	410233	123.12 ug/ml	99
82) Bis(2-ethylhexyl) Phthalat	21.48	149	341121	141.41 ug/ml	100
84) Di-n-octyl Phthalate	22.98	149	536667	117.47 ug/ml	100
85) Benzo(b)fluoranthene	23.64	252	458744	123.53 ug/ml	97
86) Benzo(k)fluoranthene	23.71	252	460107	124.82 ug/ml	99
87) Diisononyl Phthalate	23.73	293	22816m	88.63 ug/ml	
88) Diisodecyl Phthalate	23.72	149	441447m	114.00 ug/ml	
89) Benzo(a)pyrene	24.40	252	440837	128.70 ug/ml	99
90) Indeno(1,2,3-cd)pyrene	27.01	276	446497	134.79 ug/ml	98
91) Dibenz(a,h)anthracene	27.09	278	445532m	133.11 ug/ml	
92) Benzo(g,h,i)perylene	27.60	276	454281	131.68 ug/ml	99

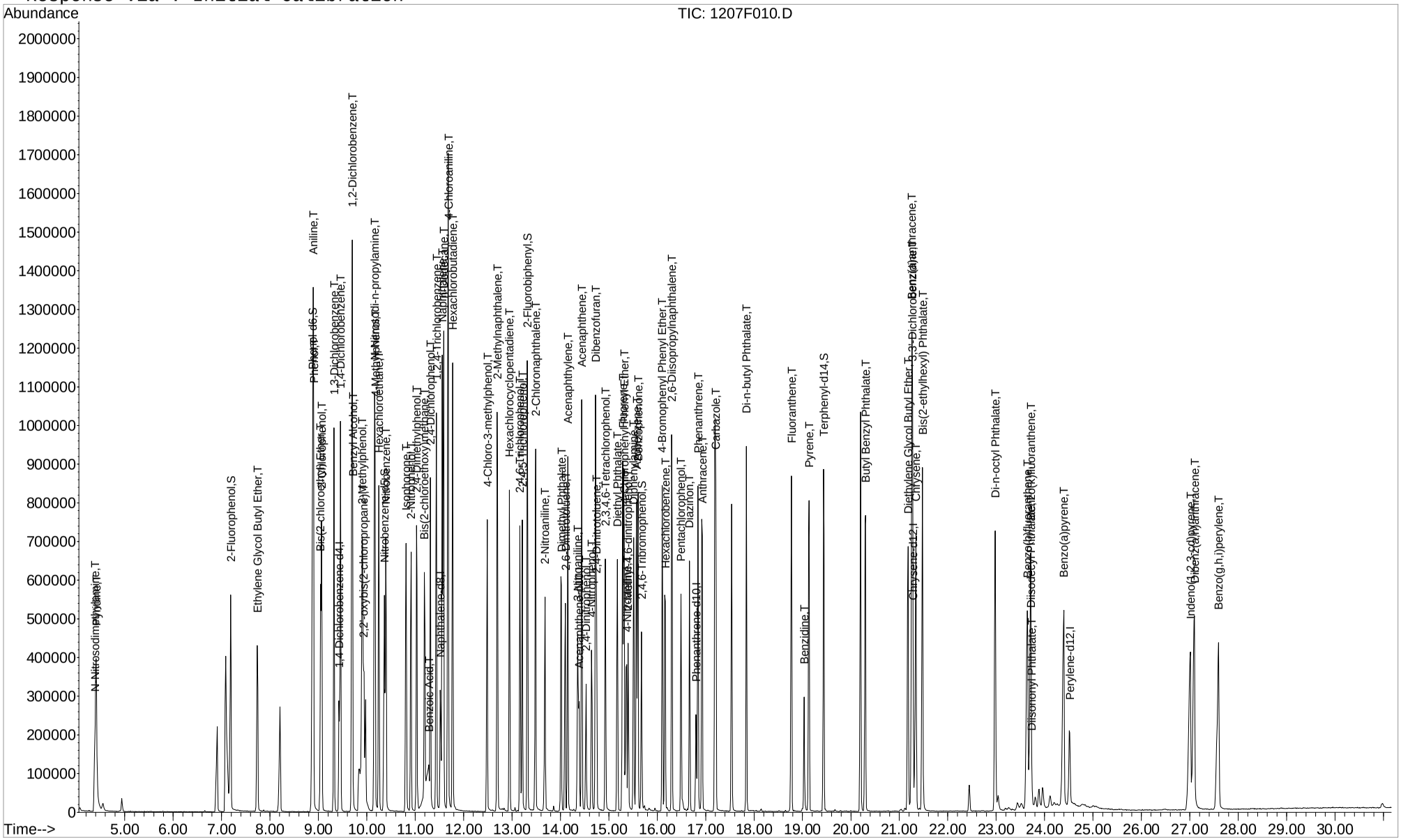
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:22 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

12/08/18 12/13/18 1st 2nd

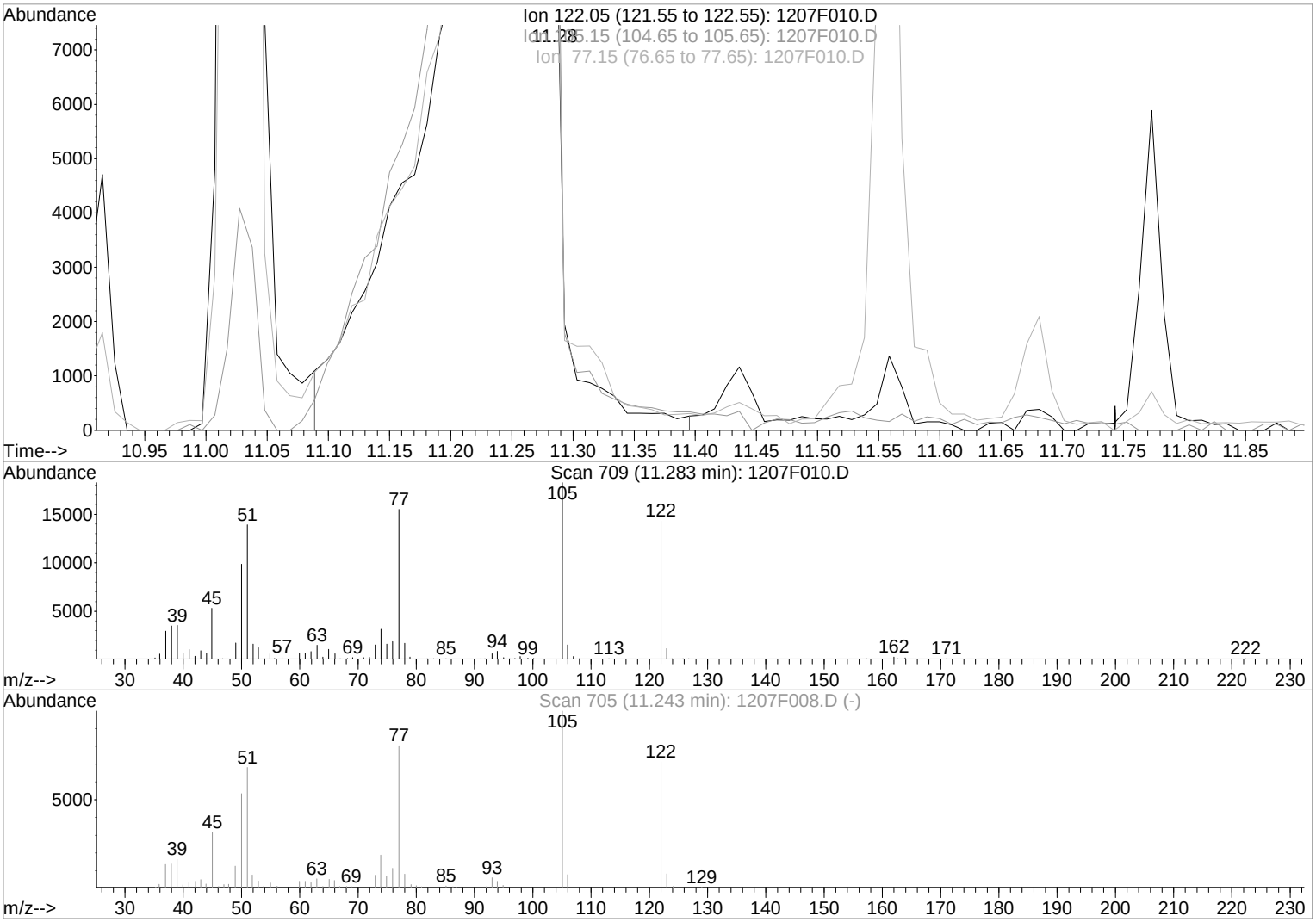


Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:54 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F010.D

(28) Benzoic Acid (T)

11.28min 138.92ug/ml

response 86629

Ion	Exp%	Act%
122.05	100	100
105.15	132.80	130.71
77.15	110.60	108.57
0.00	0.00	0.00

Manual Integration:

Before

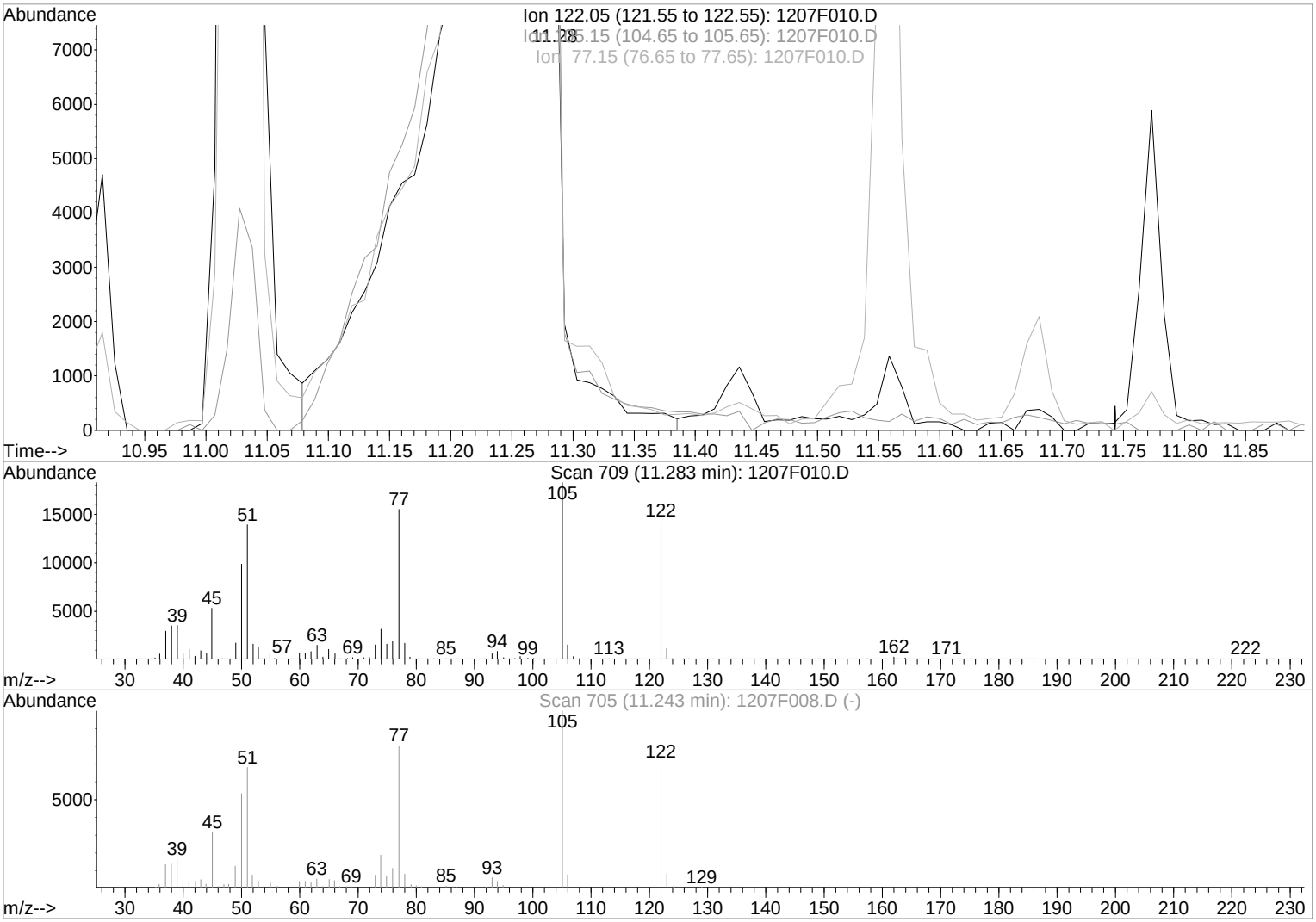
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:20 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F010.D

(28) Benzoic Acid (T)

11.28min 139.74ug/ml m

response 87139

Ion	Exp%	Act%
122.05	100	100
105.15	132.80	127.68
77.15	110.60	108.26
0.00	0.00	0.00

Manual Integration:

After

BLC

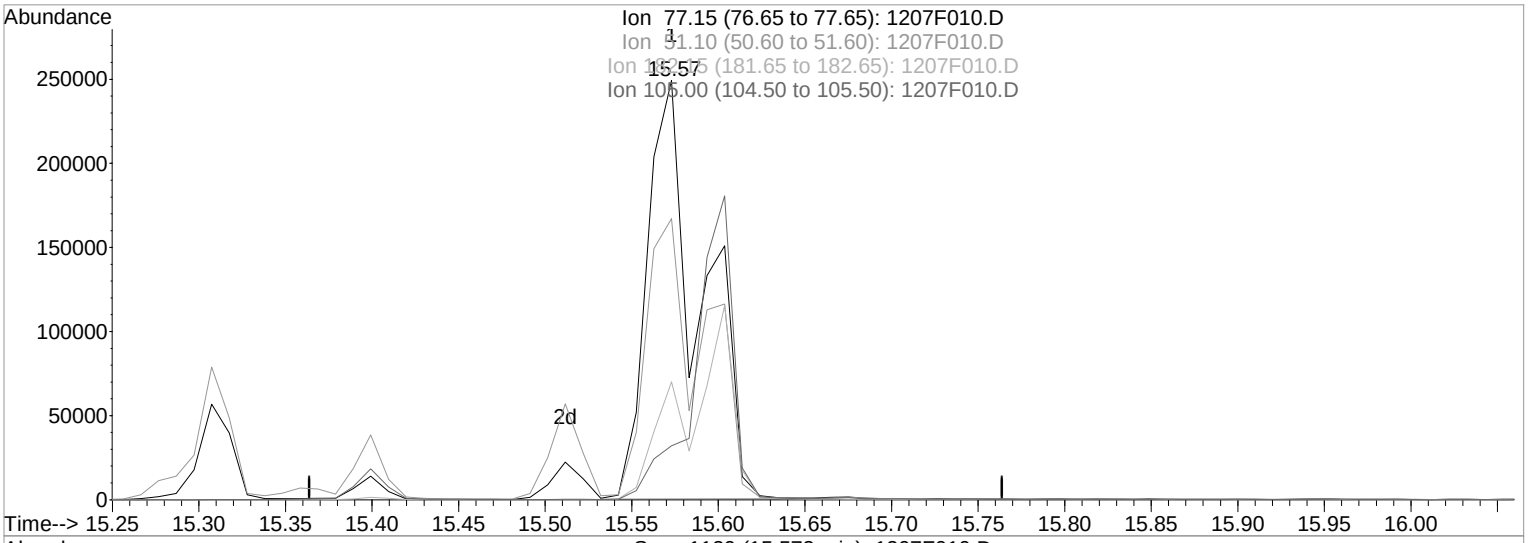
12/07/18

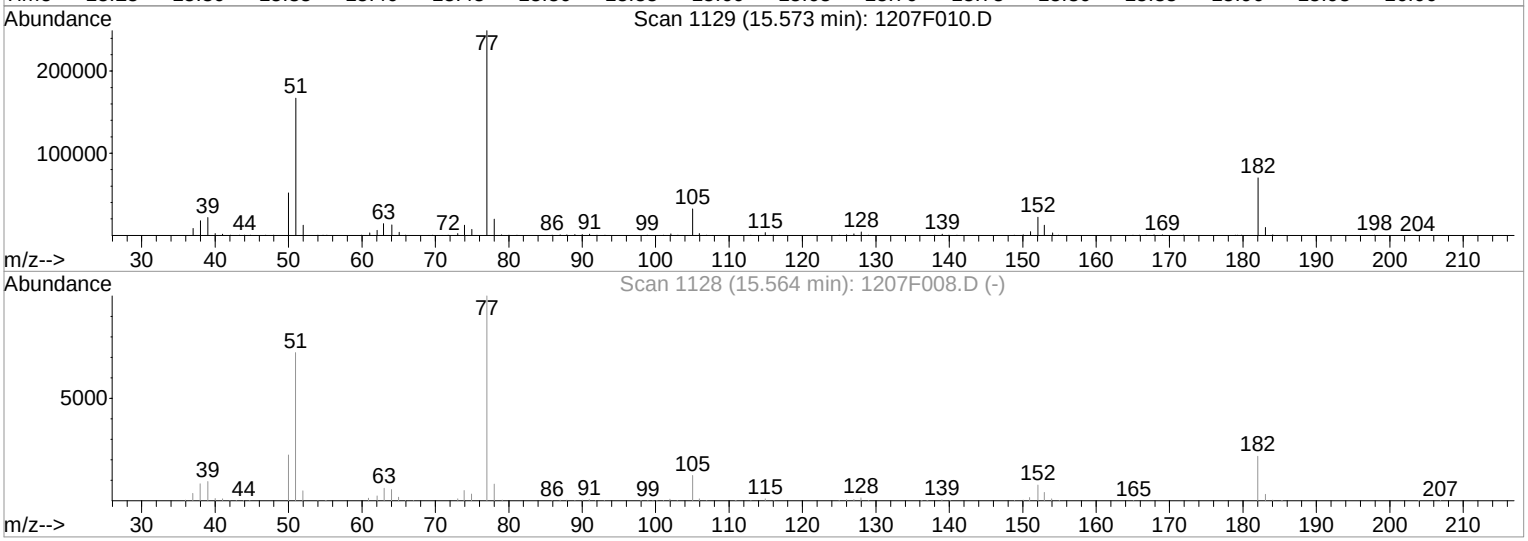
Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:20 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration





TIC: 1207F010.D

(59) Azobenzene (T)

15.57min 246.12ug/ml

response 538569

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	66.61
182.15	21.70	28.09
105.00	12.30	12.78

Manual Integration:

Before

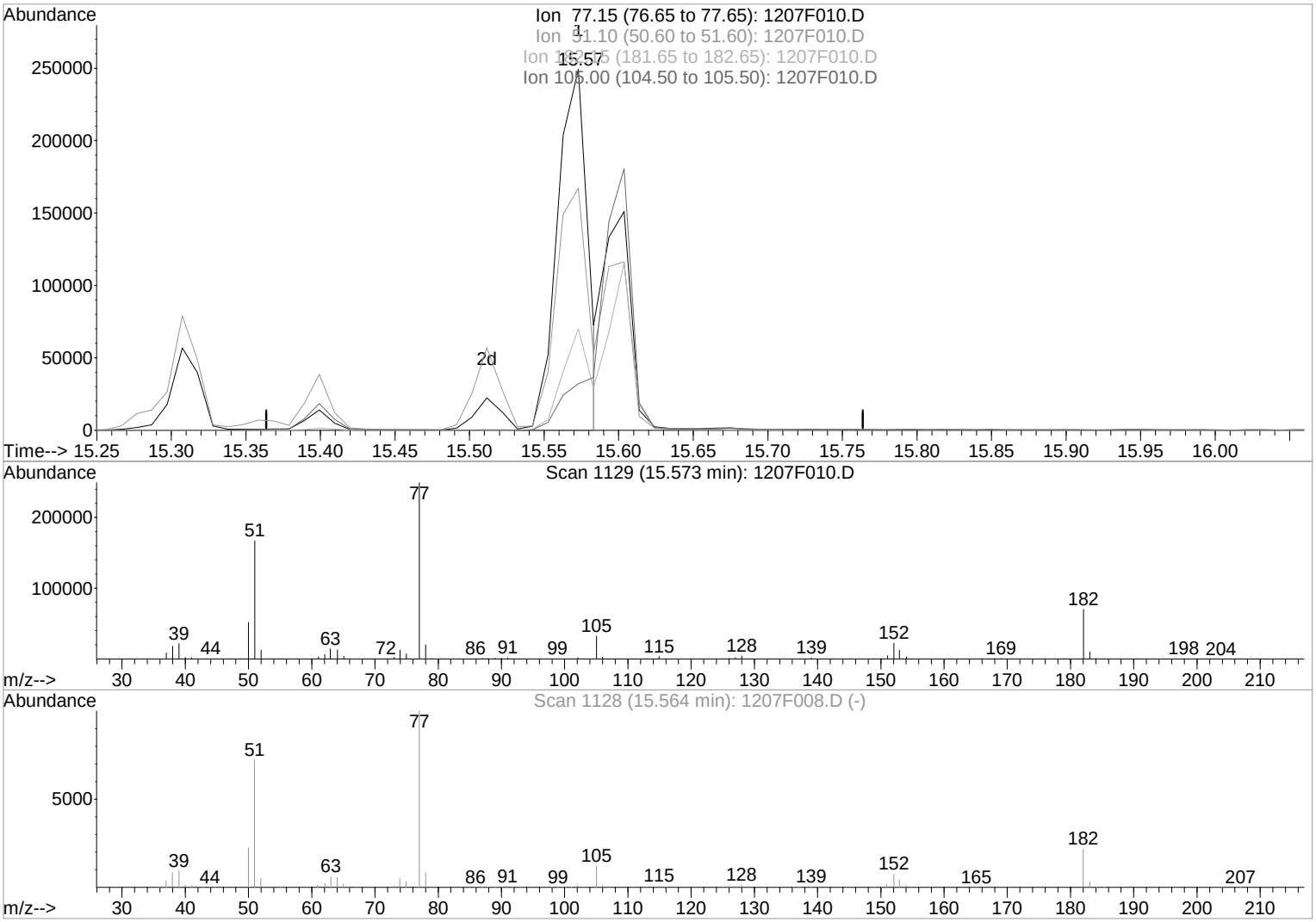
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:21 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F010.D

(59) Azobenzene (T)

15.57min 162.61ug/ml m

response 355834

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	67.03
182.15	21.70	28.10
105.00	12.30	12.90

Manual Integration:

After

IC-Overintegrated

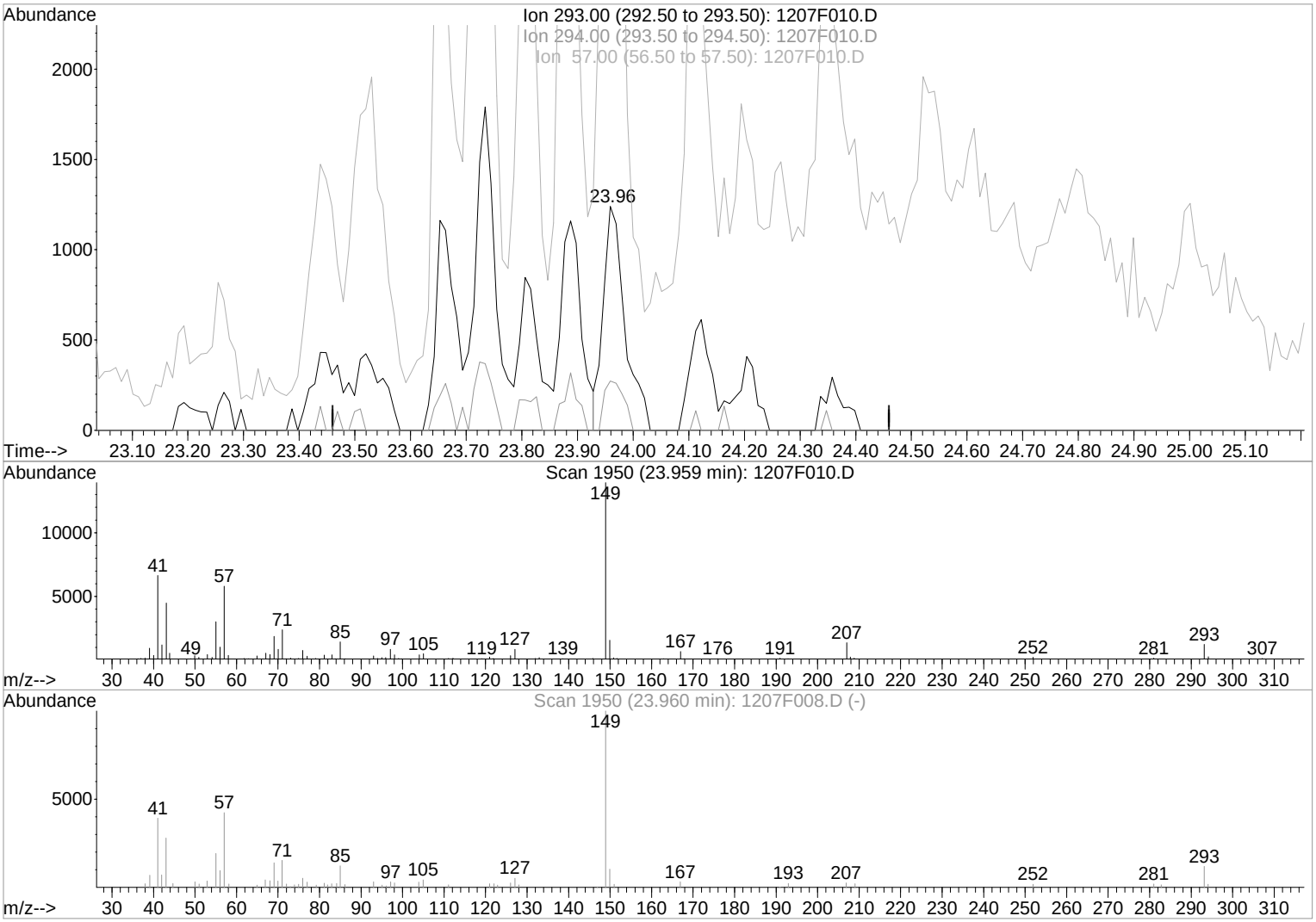
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:21 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F010.D

(87) Diisononyl Phthalate (T)

23.96min 13.00ug/ml

response 3347

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	20.02
57.00	33.10	363.10#
0.00	0.00	0.00

Manual Integration:

Before

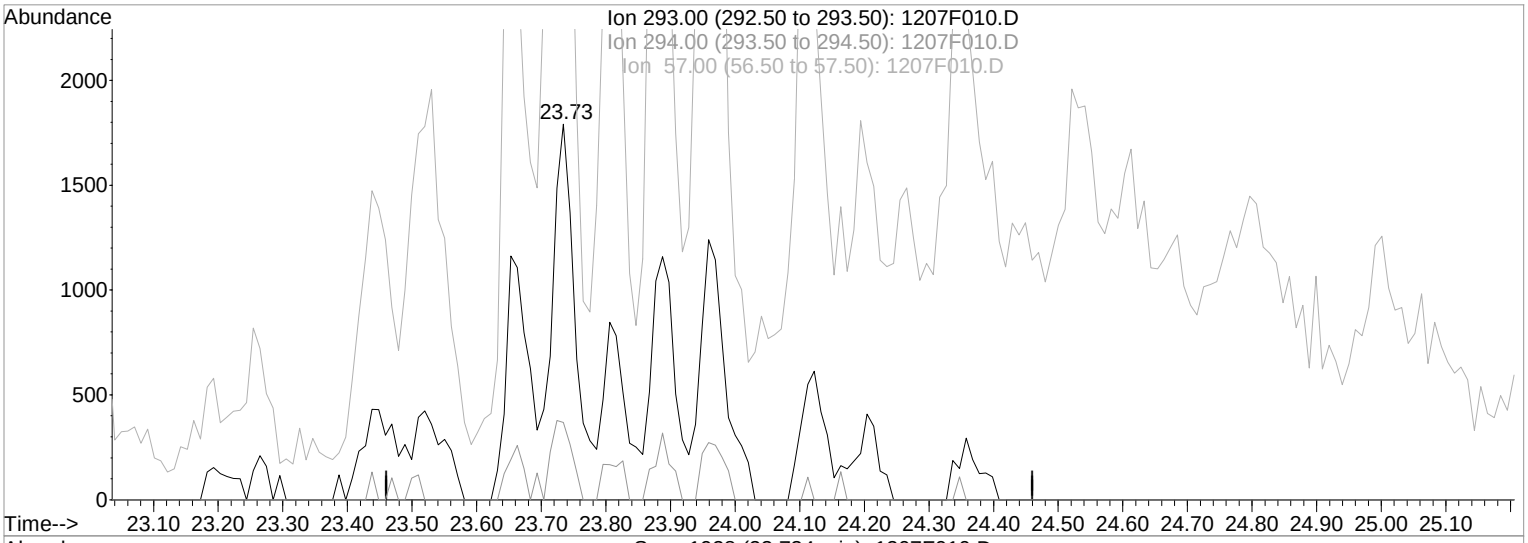
12/07/18

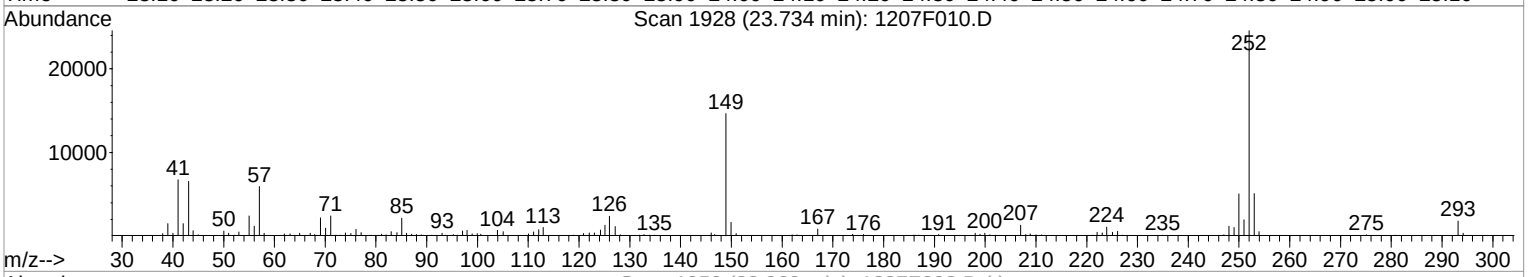
Quantitation Report (Qedit)

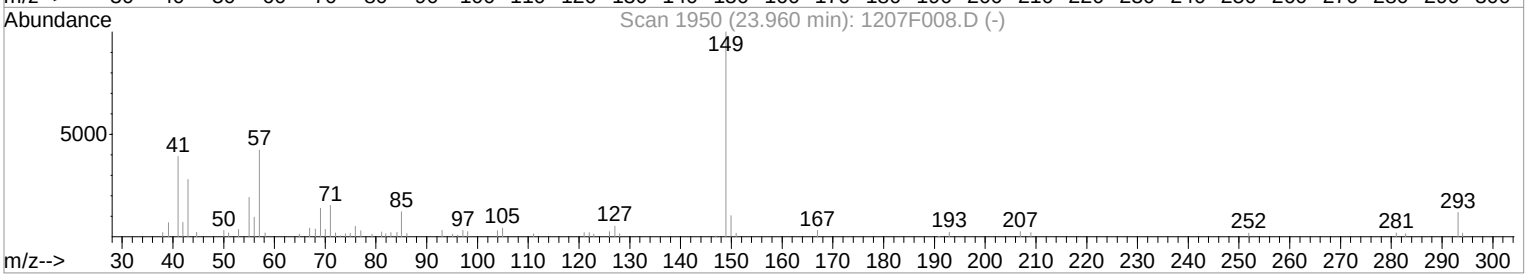
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:21 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F010.D

(87) Diisononyl Phthalate (T)

23.73min 88.63ug/ml m

response 22816

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	2.94
57.00	33.10	53.27
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

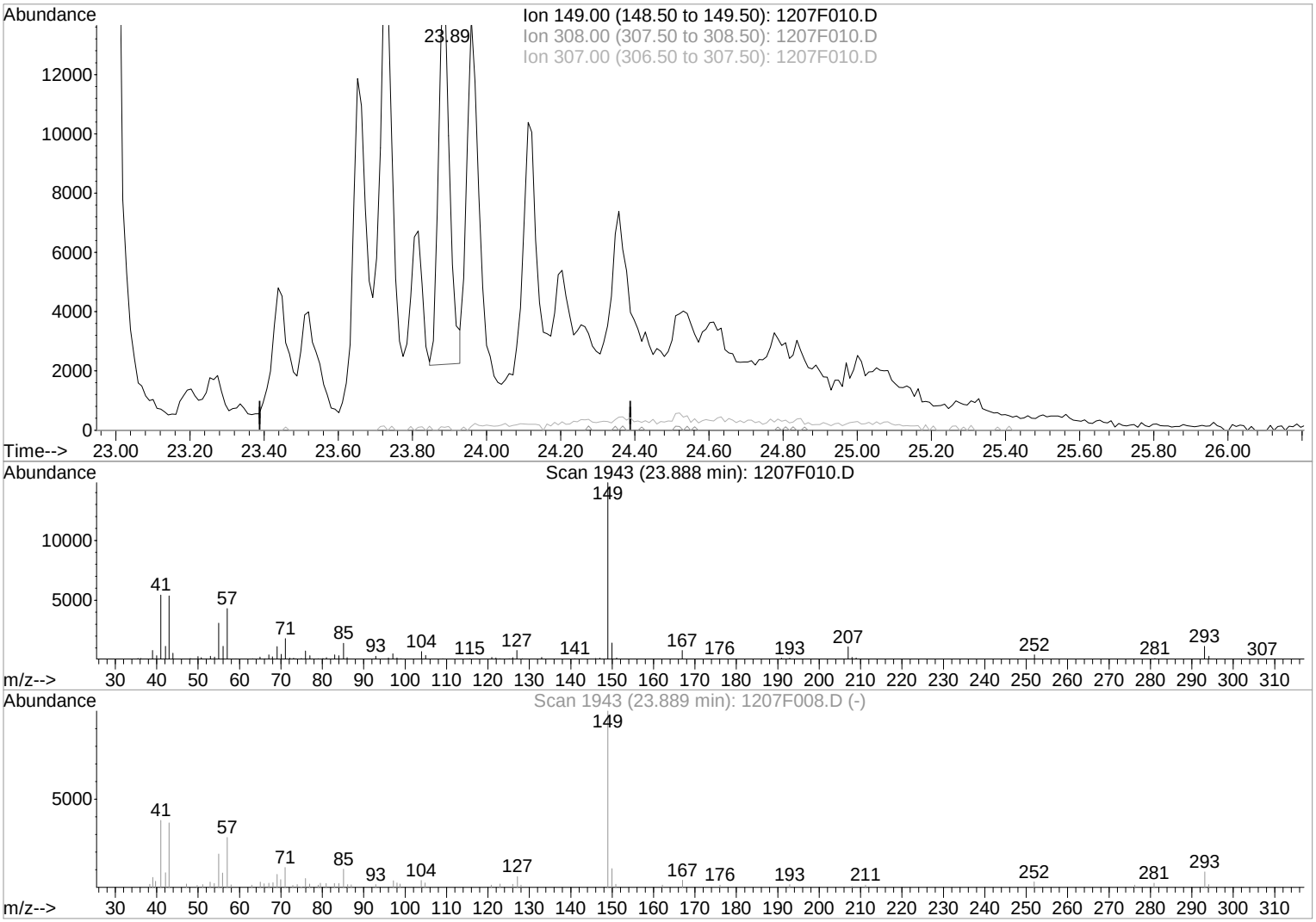
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:21 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F010.D

(88) Diisodecyl Phthalate (T)

23.89min 6.85ug/ml

response 26537

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.80
0.00	0.00	0.00

Manual Integration:

Before

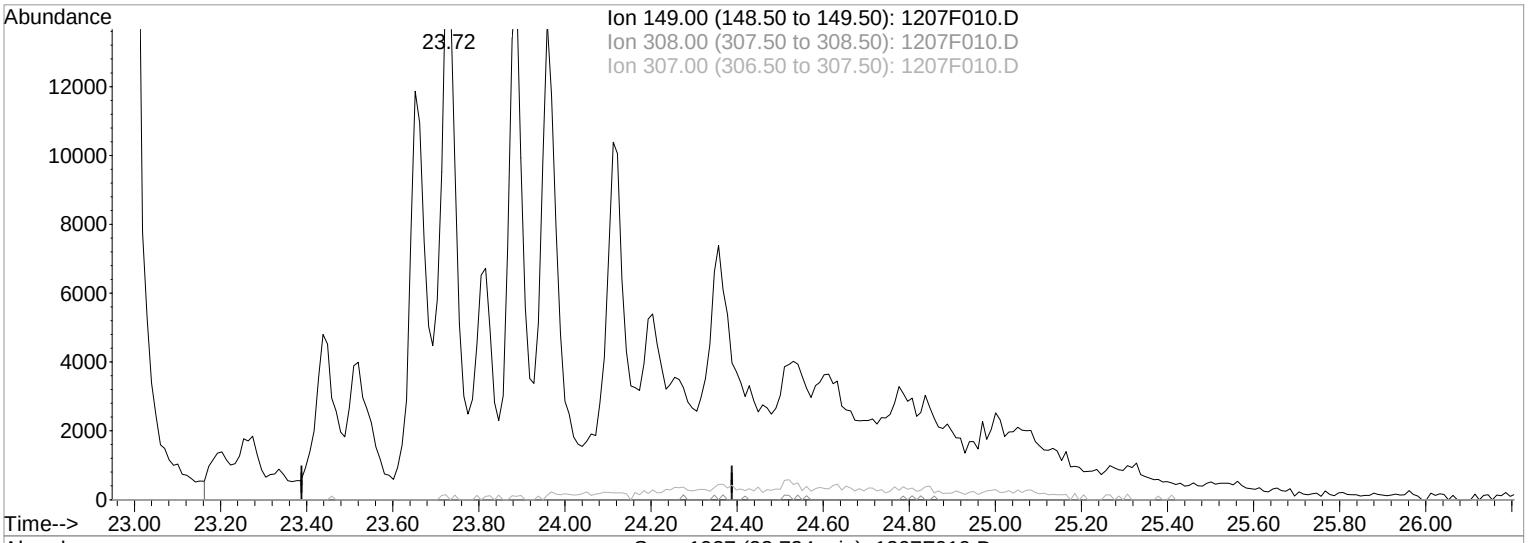
12/07/18

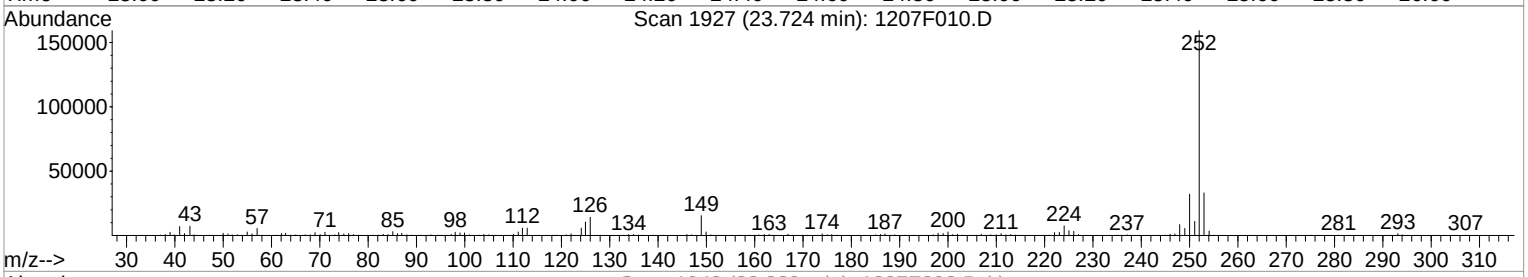
Quantitation Report (Qedit)

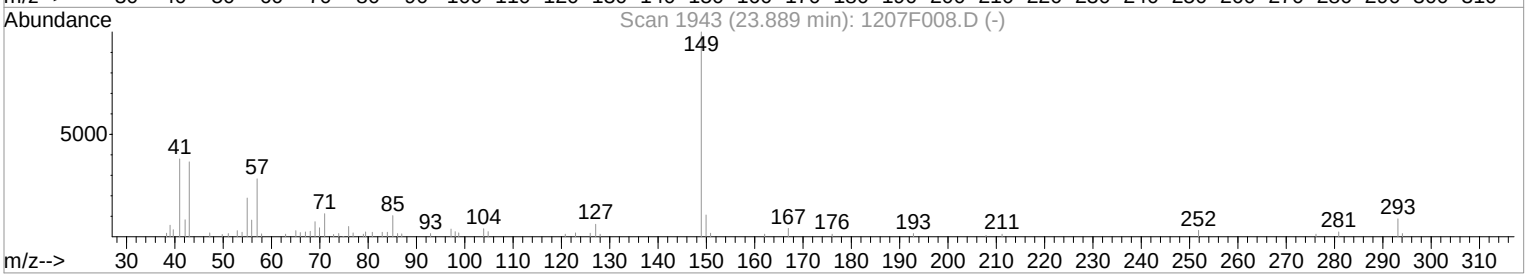
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:22 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F010.D

(88) Diisodecyl Phthalate (T)

23.72min 114.00ug/ml m

response 441447

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.05
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

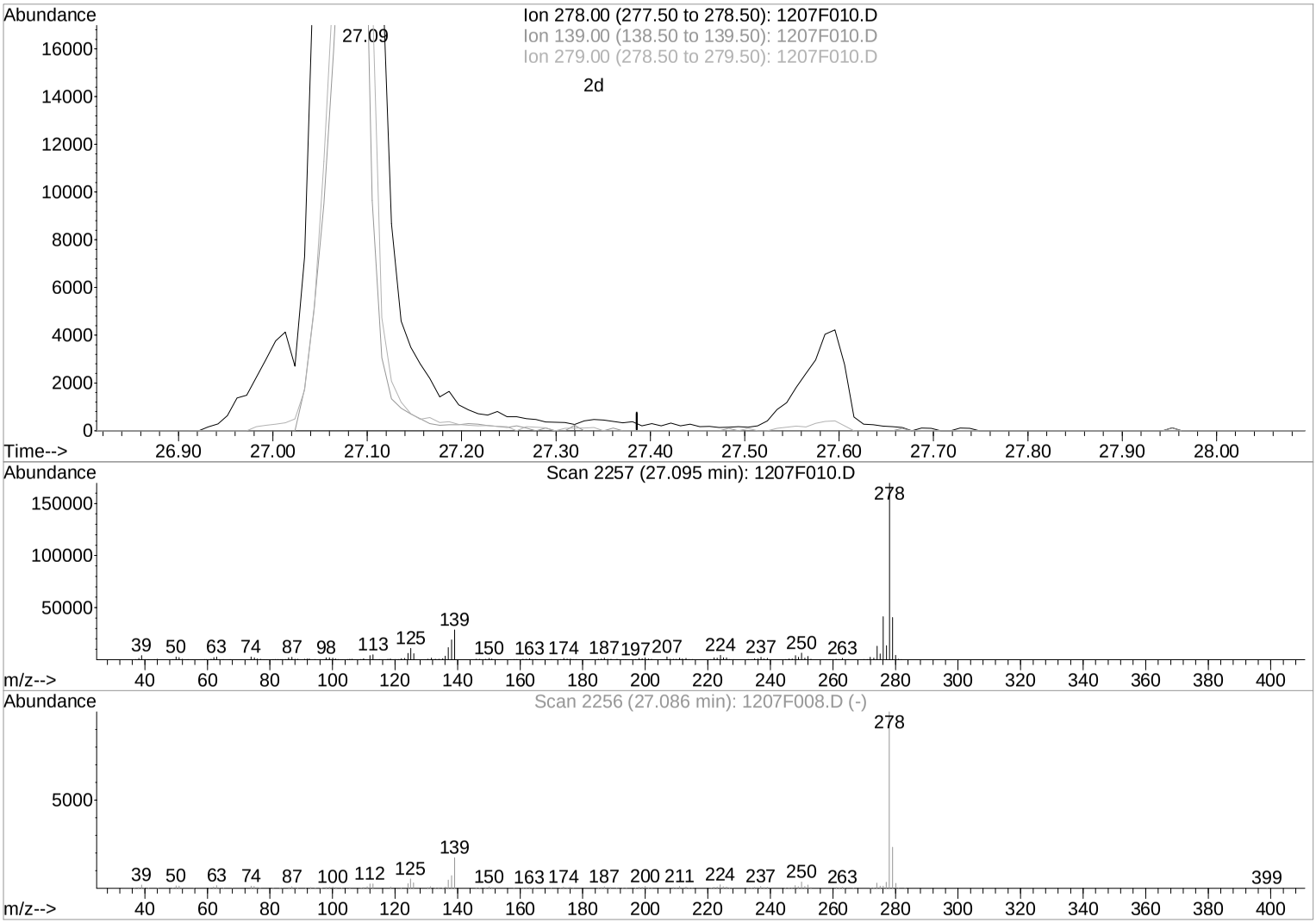
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:22 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F010.D

(91) Dibenz(a,h)anthracene (T)

27.09min 136.72ug/ml

response 457615

Ion	Exp%	Act%
278.00	100	100
139.00	17.30	16.78
279.00	23.20	23.85
0.00	0.00	0.00

Manual Integration:

Before

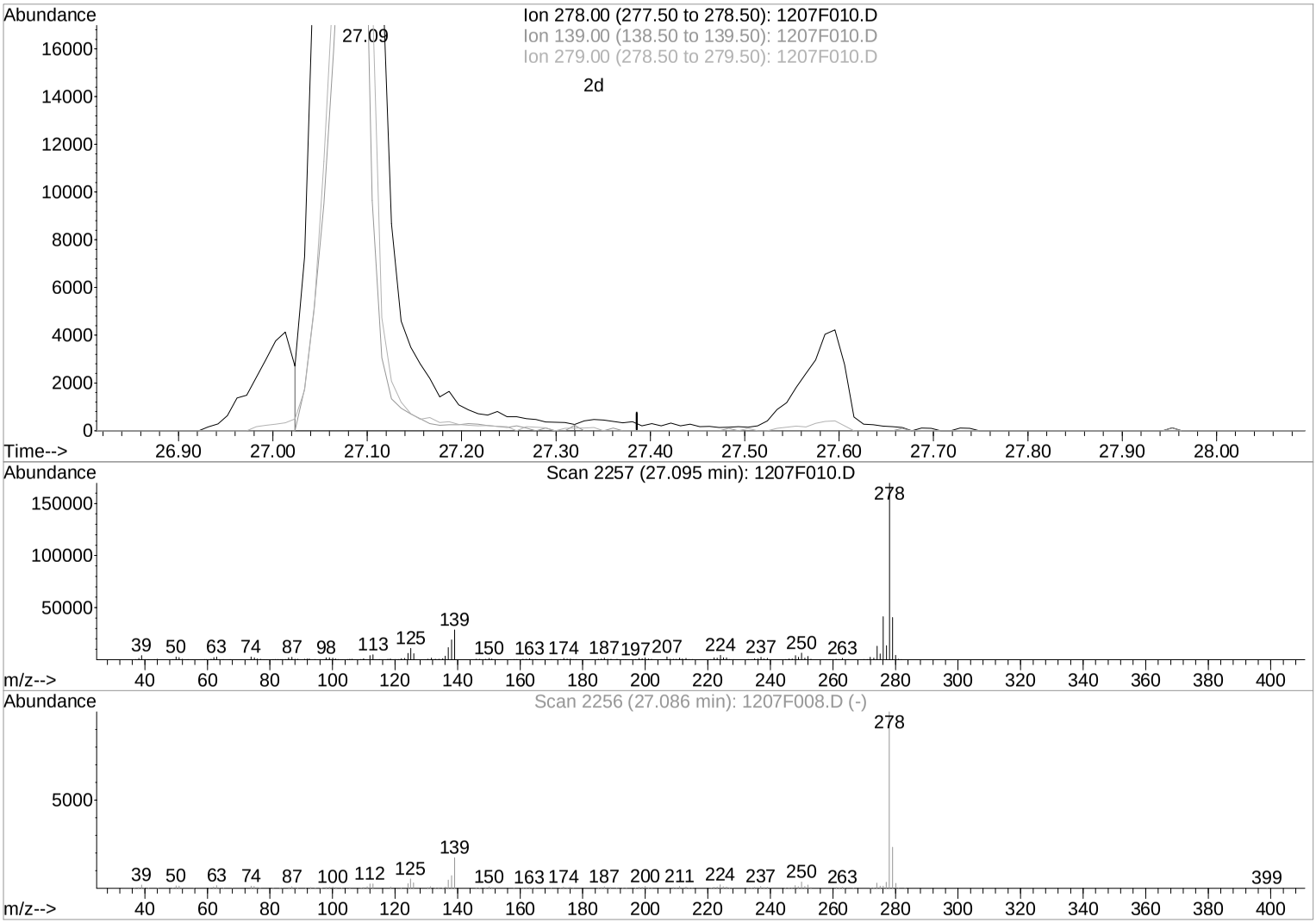
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:22 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F010.D

(91) Dibenz(a,h)anthracene (T)

27.09min 133.11ug/ml m

response 445532

Ion	Exp%	Act%
278.00	100	100
139.00	17.30	16.83
279.00	23.20	23.86
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

12/07/18

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:33 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.43	152	50578	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	185212	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.38	164	88556	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	121612	40.00	ug/ml	0.00
73) Chrysene-d12	21.29	240	122826	40.00	ug/ml	0.00
83) Perylene-d12	24.52	264	135060	40.00	ug/ml	0.01
System Monitoring Compounds						
4) 2-Fluorophenol	7.20	112	230770	174.64	ug/ml	0.01
Spiked Amount 150.000	Range 21 - 100		Recovery = 116.43%#			
8) Phenol-d6	8.89	99	295426	183.97	ug/ml	0.02
Spiked Amount 150.000	Range 10 - 94		Recovery = 122.65%#			
20) Nitrobenzene-d5	10.37	82	297693	191.67	ug/ml	0.01
Spiked Amount 100.000	Range 35 - 114		Recovery = 191.67%#			
40) 2-Fluorobiphenyl	13.32	172	594194	189.16	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 189.16%#			
62) 2,4,6-Tribromophenol	15.68	330	64369	129.42	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 86.28%			
76) Terphenyl-d14	19.44	244	517319	201.91	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 201.91%#			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.40	42	309675	243.56	ug/ml	95
3) Pyridine	4.41	79	224043	197.95	ug/ml	98
5) Ethylene Glycol Butyl Ethe	7.75	57	265356	221.18	ug/ml	99
6) Aniline	8.90	93	373007	197.07	ug/ml	74
7) Bis(2-chloroethyl) Ether	9.05	93	236787	198.16	ug/ml	99
9) Phenol	8.92	94	335093	202.48	ug/ml#	67
10) 2-Chlorophenol	9.07	128	282140	173.91	ug/ml	94
11) 1,3-Dichlorobenzene	9.33	146	328869	170.11	ug/ml	99
12) 1,4-Dichlorobenzene	9.46	146	334301	169.32	ug/ml	98
13) 1,2-Dichlorobenzene	9.70	146	329151	175.03	ug/ml	94
14) Benzyl Alcohol	9.71	108	175814	185.76	ug/ml	96
15) 2,2'-oxybis(2-chloropropan	9.94	45	372020	234.49	ug/ml	98
16) 2-Methylphenol	9.91	107	198630	163.68	ug/ml	98
17) Hexachloroethane	10.24	117	149023	186.06	ug/ml	84
18) N-Nitrosodi-n-propylamine	10.17	70	198652	207.57	ug/ml	96
19) 4-Methylphenol	10.18	107	317183	184.14	ug/ml	98
21) Nitrobenzene	10.41	77	302032	203.01	ug/ml	98
23) Isophorone	10.82	82	470127	185.22	ug/ml	100
24) 2-Nitrophenol	10.92	139	157494	173.19	ug/ml	89
25) 2,4-Dimethylphenol	11.04	122	210495	172.69	ug/ml	95
26) Bis(2-chloroethoxy)methane	11.19	93	278517	199.32	ug/ml	98
27) 2,4-Dichlorophenol	11.33	162	261391	181.72	ug/ml	95
28) Benzoic Acid	11.33	122	136981m	198.97	ug/ml	
29) 1,2,4-Trichlorobenzene	11.44	180	293640	176.95	ug/ml	98
30) Naphthalene	11.56	128	828943	183.01	ug/ml	99
31) n-Dodecane	11.59	57	395308	272.31	ug/ml	99
32) 4-Chloroaniline	11.69	127	361016	178.21	ug/ml	91
33) Hexachlorobutadiene	11.78	225	222458	195.78	ug/ml	98
34) 4-Chloro-3-methylphenol	12.49	107	201317	165.31	ug/ml	98
35) 2-Methylnaphthalene	12.70	142	555301	172.87	ug/ml	100
37) Hexachlorocyclopentadiene	12.95	237	209540	364.17	ug/ml	99
38) 2,4,6-Trichlorophenol	13.17	196	169346	192.54	ug/ml	99
39) 2,4,5-Trichlorophenol	13.22	196	165019	184.86	ug/ml	98
41) 2-Chloronaphthalene	13.49	162	507740	193.50	ug/ml	95
42) 2-Nitroaniline	13.69	65	157602	220.10	ug/ml	96
43) Acenaphthylene	14.16	152	655214	175.74	ug/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:33 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
44)	Dimethyl Phthalate	14.02	163	477868	169.62	ug/ml	98
45)	2,6-Dinitrotoluene	14.11	165	108142	164.54	ug/ml	88
46)	Acenaphthene	14.44	154	425542	180.01	ug/ml	99
47)	3-Nitroaniline	14.37	138	110293	166.16	ug/ml	99
48)	2,4-Dinitrophenol	14.54	184	66138	208.73	ug/ml	95
49)	Dibenzofuran	14.73	168	630548	169.85	ug/ml	98
50)	4-Nitrophenol	14.66	109	84164	285.25	ug/ml	96
51)	2,4-Dinitrotoluene	14.76	165	145468	177.86	ug/ml	98
52)	2,3,4,6-Tetrachlorophenol	14.93	232	120802	198.51	ug/ml	95
53)	Fluorene	15.29	166	475775	172.72	ug/ml	99
54)	4-Chlorophenyl Phenyl Ethe	15.31	204	257454	184.84	ug/ml	97
55)	Diethyl Phthalate	15.18	149	442367	165.20	ug/ml	99
56)	4-Nitroaniline	15.38	138	109147	181.84	ug/ml	98
57)	2-Methyl-4,6-dinitrophenol	15.41	198	89879	196.18	ug/ml	81
58)	Diphenylamine	15.52	169	297339	165.14	ug/ml	99
59)	Azobenzene	15.58	77	510739m	213.71	ug/ml	
60)	Benzophenone	15.61	105	393812	189.62	ug/ml	95
63)	4-Bromophenyl Phenyl Ether	16.11	248	131020	156.74	ug/ml	98
64)	Hexachlorobenzene	16.17	284	125375	137.37	ug/ml	84
65)	2,6-Diisopropylnaphthalene	16.30	197	375858	174.03	ug/ml	99
66)	Pentachlorophenol	16.50	266	89609	245.87	ug/ml	99
67)	Diazinon	16.67	137	73111	146.66	ug/ml	100
68)	Phenanthrene	16.84	178	592612	176.58	ug/ml	98
69)	Anthracene	16.94	178	607272	176.51	ug/ml	99
70)	Carbazole	17.21	167	596784	196.86	ug/ml	99
71)	Di-n-butyl Phthalate	17.84	149	767294	207.98	ug/ml	99
72)	Fluoranthene	18.77	202	685142	204.17	ug/ml	98
74)	Benzidine	19.04	184	146468	88.20	ug/ml	98
75)	Pyrene	19.14	202	717350	188.76	ug/ml	99
77)	Butyl Benzyl Phthalate	20.30	149	361969	198.00	ug/ml	99
78)	Diethylene Glycol Butyl Et	21.18	105	475459	217.73	ug/ml	99
79)	3,3'-Dichlorobenzidine	21.28	252	274550	176.81	ug/ml	99
80)	Benz(a)anthracene	21.27	228	648497	178.35	ug/ml	100
81)	Chrysene	21.35	228	598425	172.20	ug/ml	98
82)	Bis(2-ethylhexyl) Phthalat	21.48	149	480755	191.08	ug/ml	99
84)	Di-n-octyl Phthalate	22.98	149	803505	168.48	ug/ml	99
85)	Benzo(b)fluoranthene	23.66	252	738622	190.52	ug/ml	99
86)	Benzo(k)fluoranthene	23.73	252	692369	179.93	ug/ml	99
87)	Diisononyl Phthalate	23.73	293	34246m	127.44	ug/ml	
88)	Diisodecyl Phthalate	23.73	149	669147m	165.53	ug/ml	
89)	Benzo(a)pyrene	24.41	252	671042	187.67	ug/ml	98
90)	Indeno(1,2,3-cd)pyrene	27.03	276	632594	182.94	ug/ml	100
91)	Dibenz(a,h)anthracene	27.11	278	657535	188.18	ug/ml	99
92)	Benzo(g,h,i)perylene	27.61	276	642156	178.31	ug/ml	100

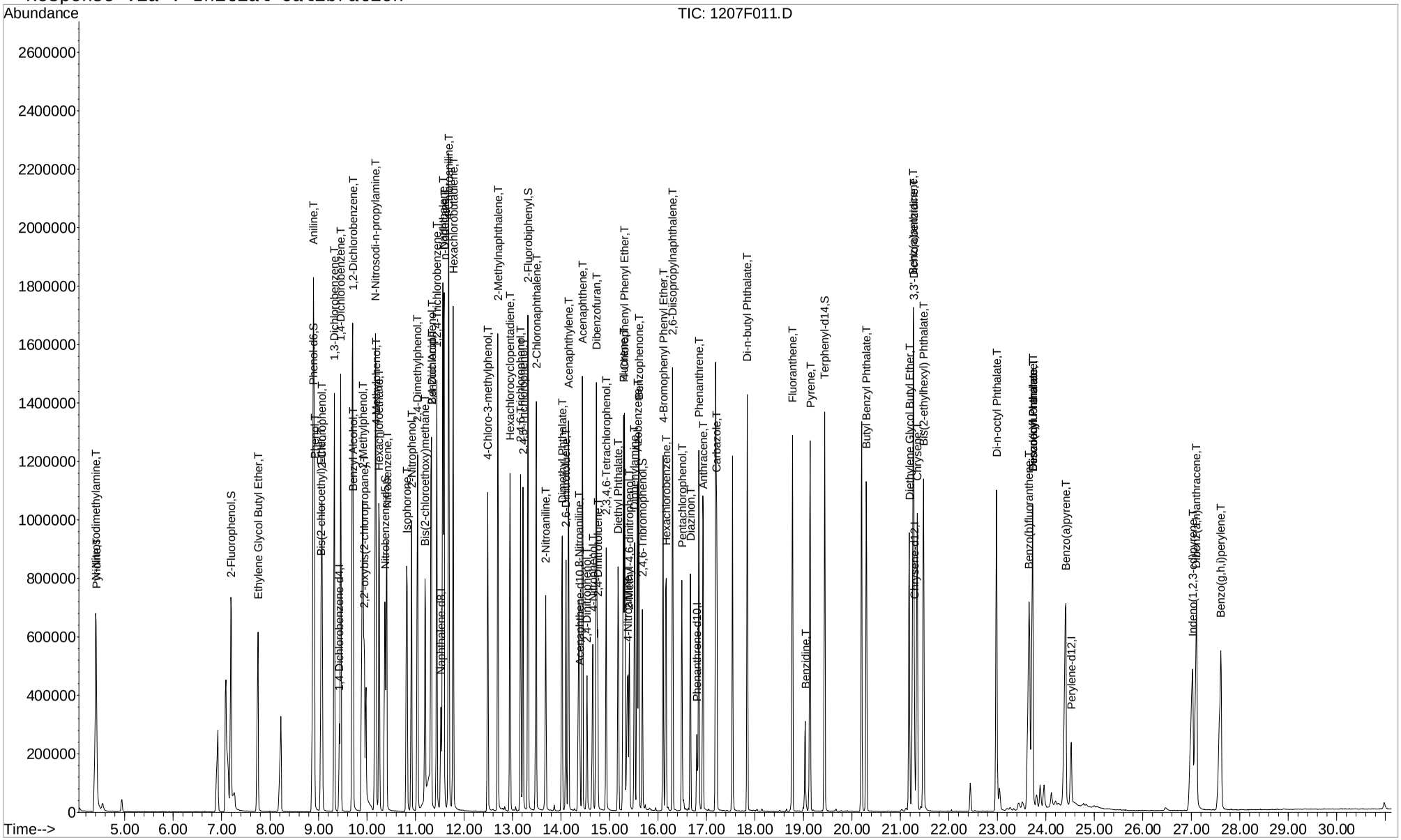
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:24 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

12/08/18 12/13/18 1st 2nd



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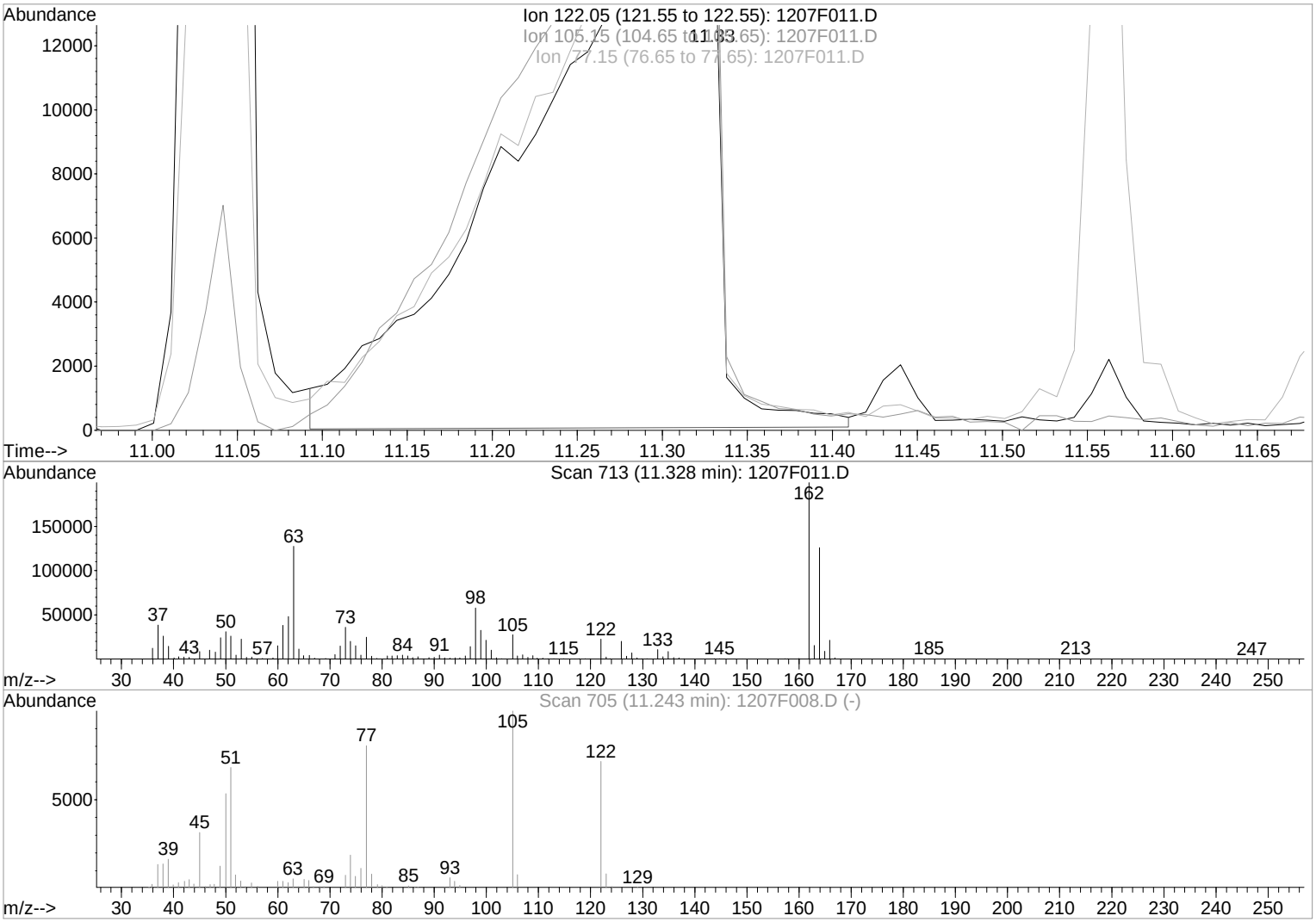
Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:54 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F011.D

(28) Benzoic Acid (T)

11.33min 195.89ug/ml

response 134862

Ion	Exp%	Act%
122.05	100	100
105.15	132.80	124.91
77.15	110.60	110.56
0.00	0.00	0.00

Manual Integration:

Before

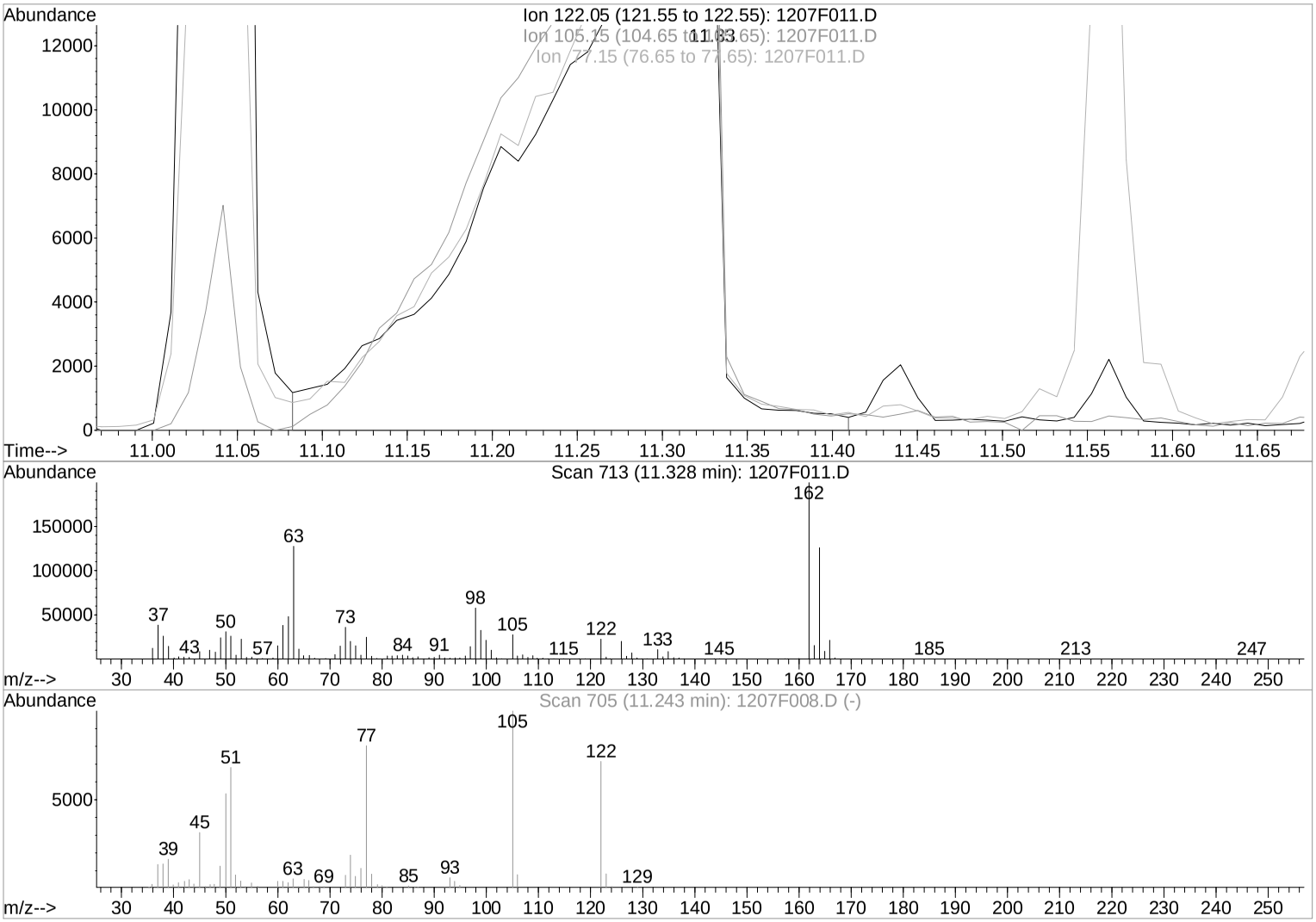
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:23 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F011.D

(28) Benzoic Acid (T)

11.33min 198.97ug/ml m

response 136981

Ion	Exp%	Act%
122.05	100	100
105.15	132.80	122.43
77.15	110.60	109.78
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

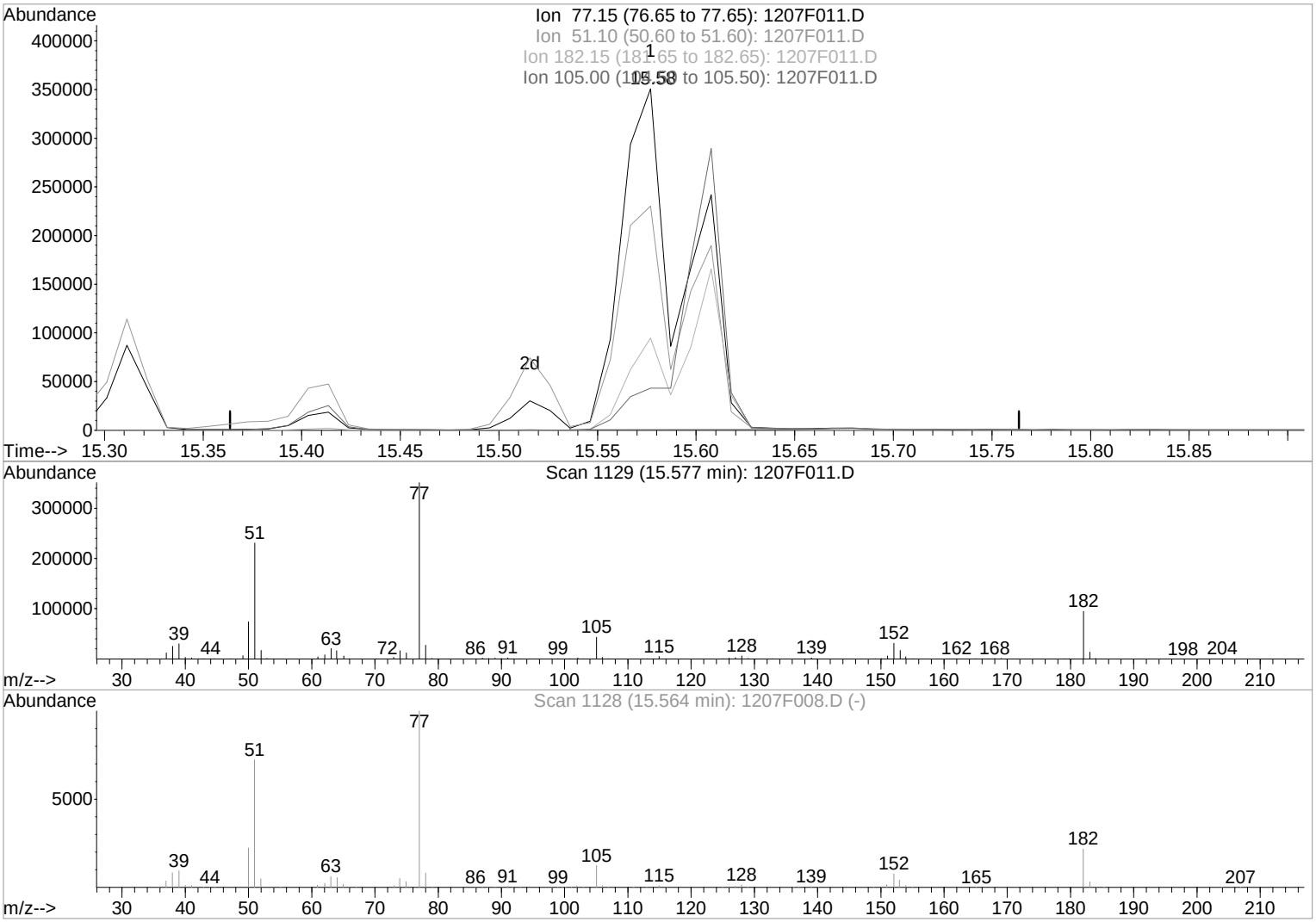
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:23 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F011.D

(59) Azobenzene (T)

15.58min 325.93ug/ml

response 778927

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	65.28
182.15	21.70	27.11
105.00	12.30	12.21

Manual Integration:

Before

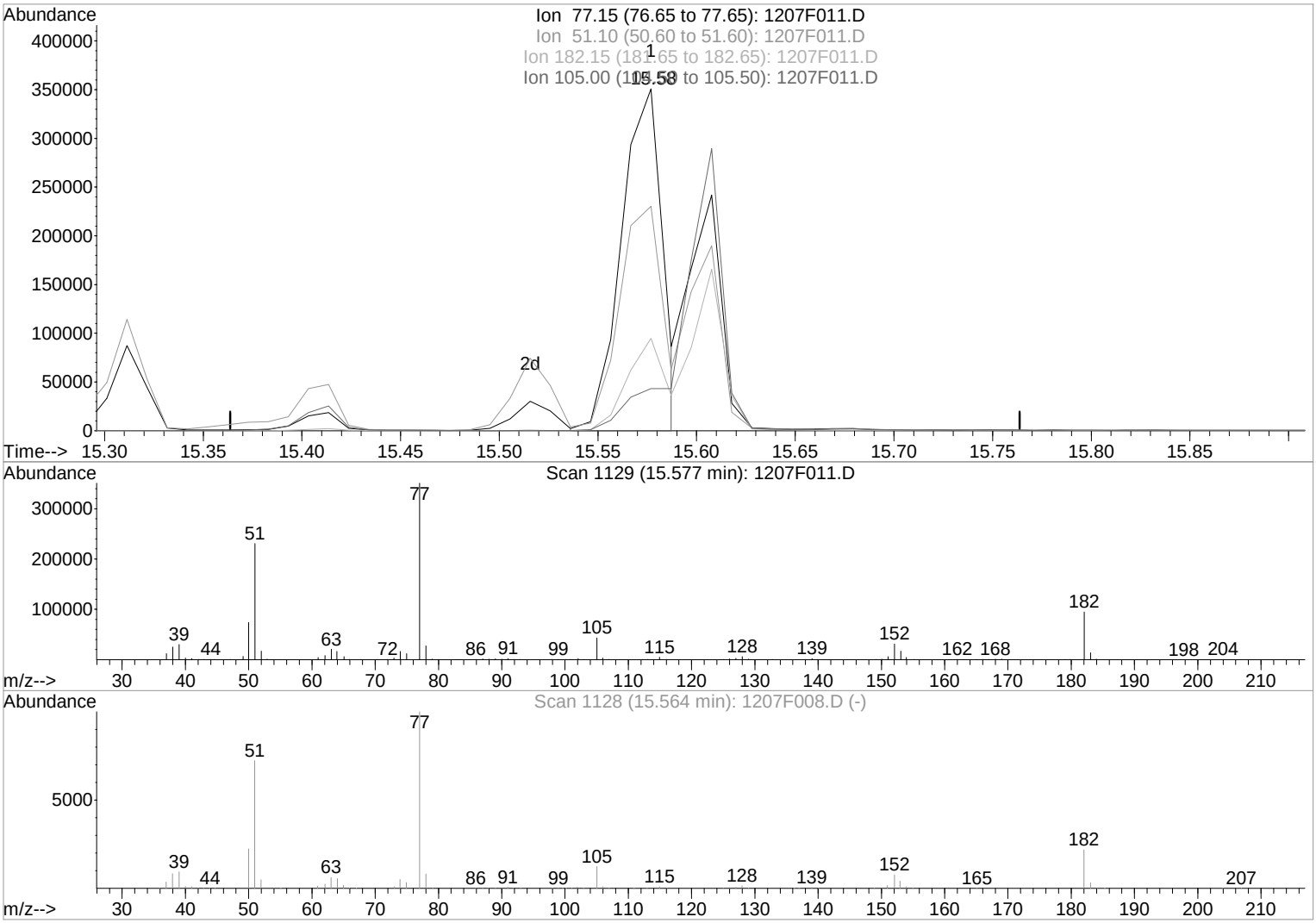
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:23 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F011.D

(59) Azobenzene (T)

15.58min 213.71ug/ml m

response 510739

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	65.65
182.15	21.70	27.02
105.00	12.30	12.31

Manual Integration:

After

IC-Overintegrated

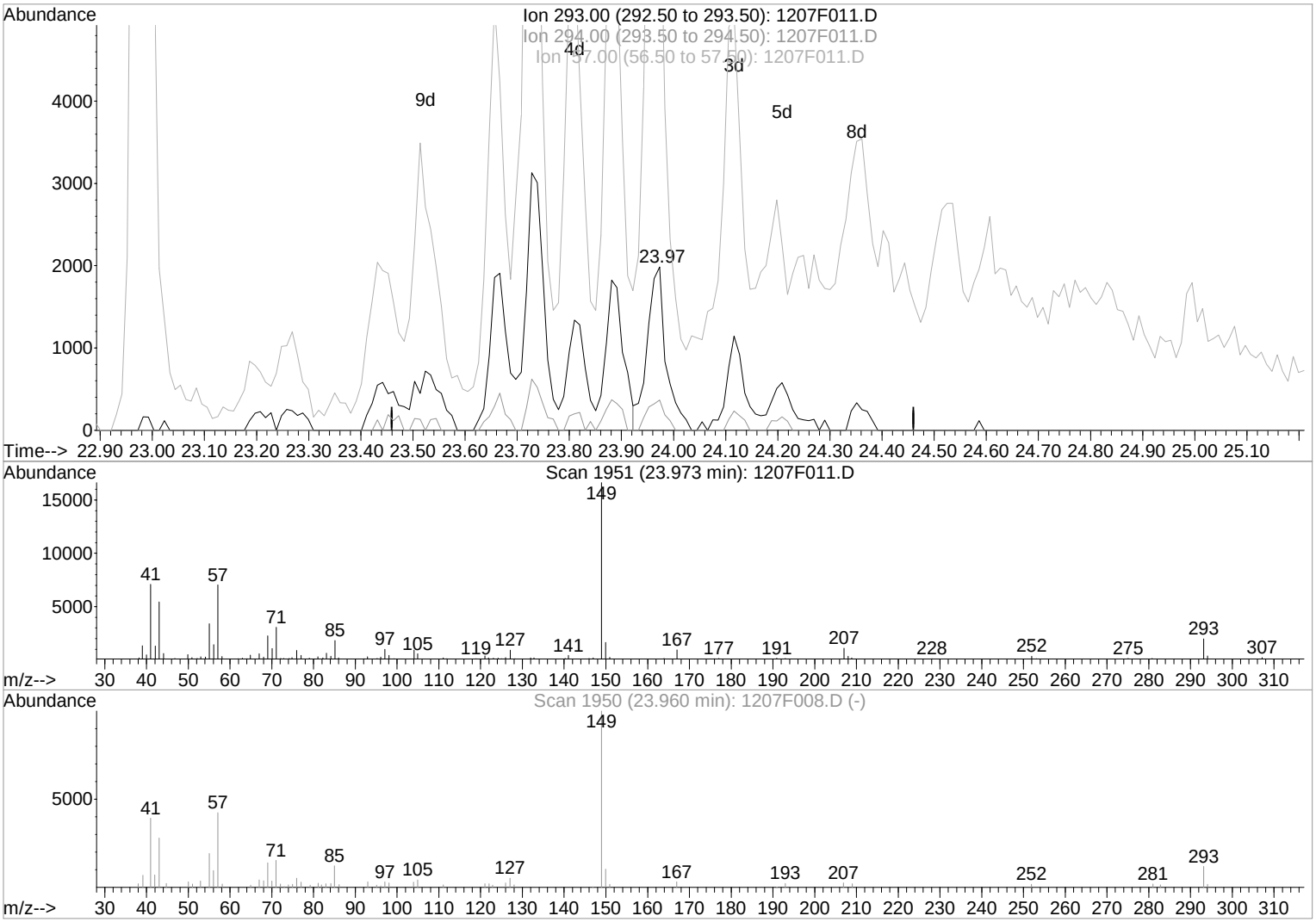
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:23 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F011.D

(87) Diisononyl Phthalate (T)

23.97min 18.48ug/ml

response 4966

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	17.58
57.00	33.10	366.17#
0.00	0.00	0.00

Manual Integration:

Before

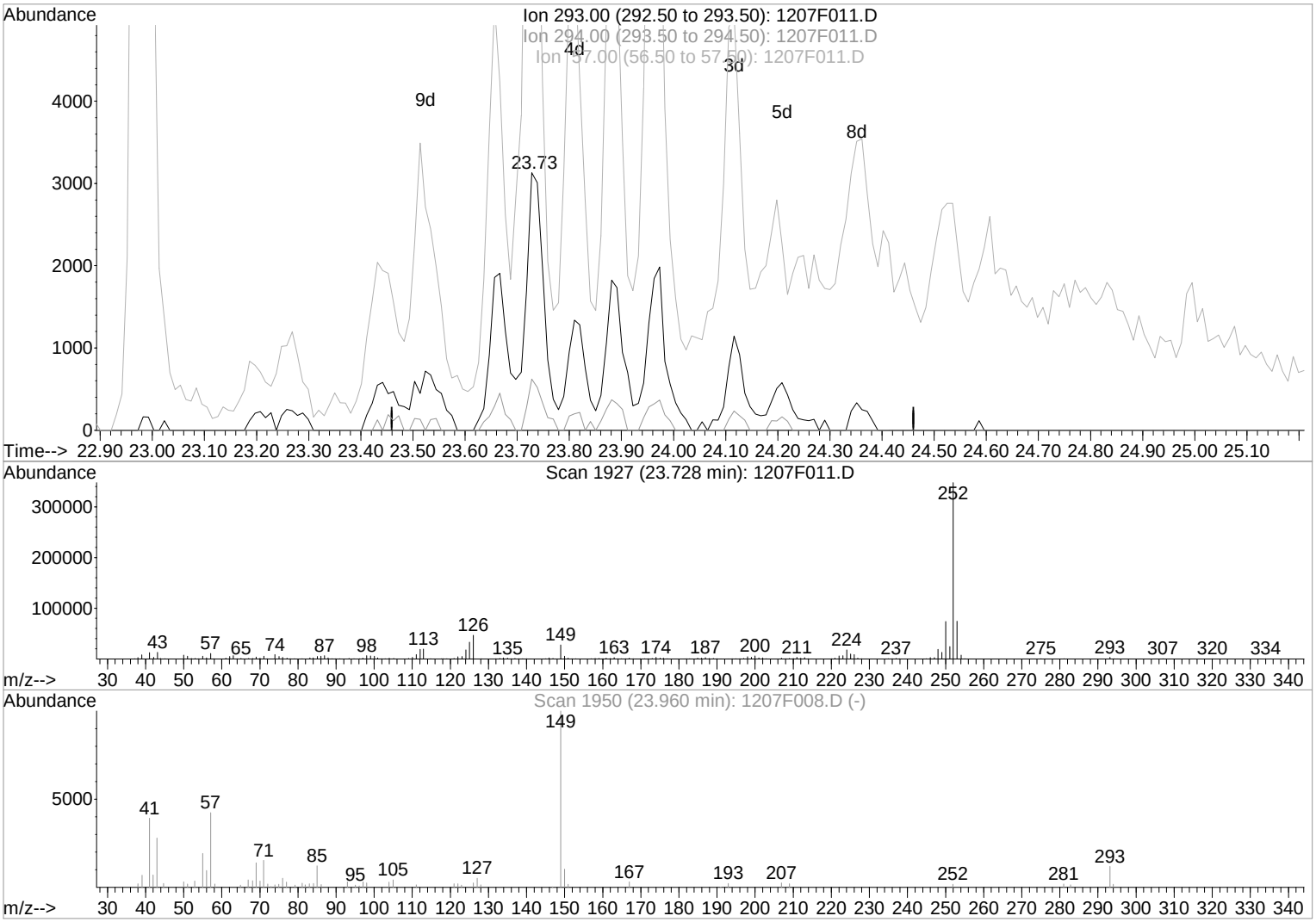
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:24 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F011.D

(87) Diisononyl Phthalate (T)

23.73min 127.44ug/ml m

response 34246

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	2.55
57.00	33.10	53.10
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

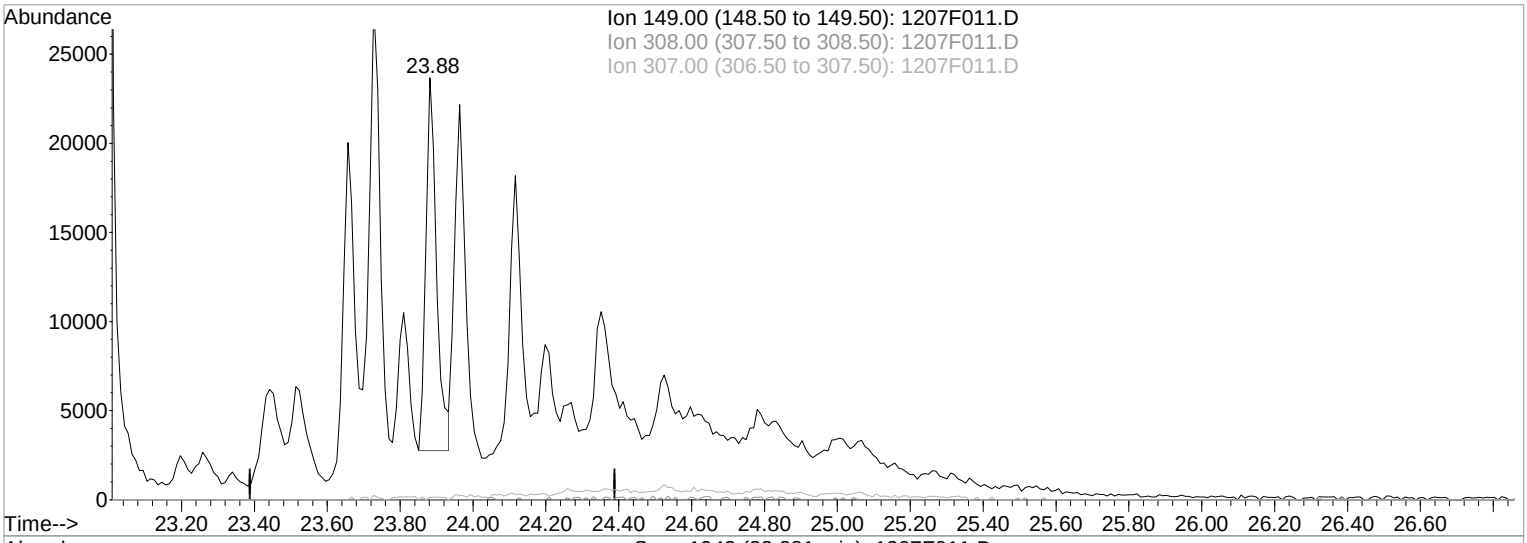
12/07/18

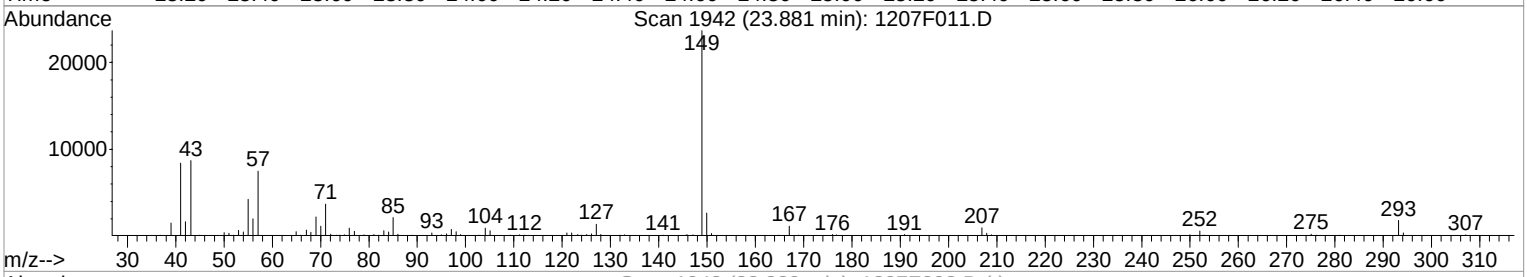
Quantitation Report (Qedit)

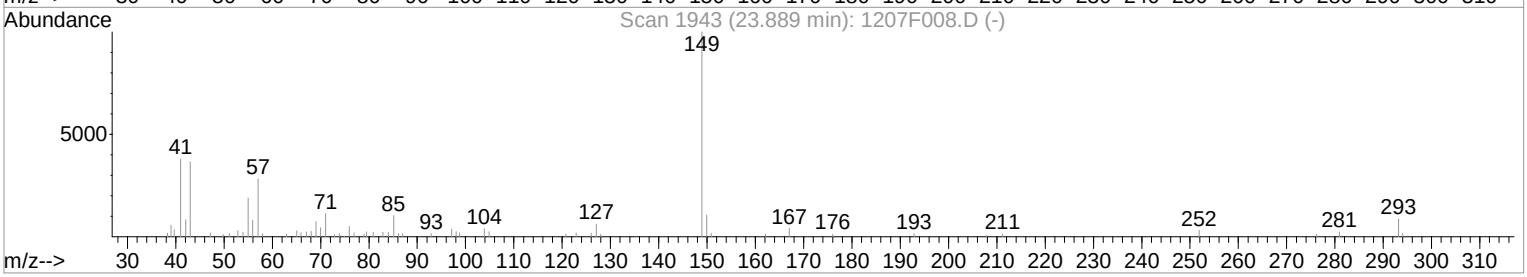
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:24 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F011.D

(88) Diisodecyl Phthalate (T)

23.88min 10.66ug/ml

response 43087

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	1.02
0.00	0.00	0.00

Manual Integration:

Before

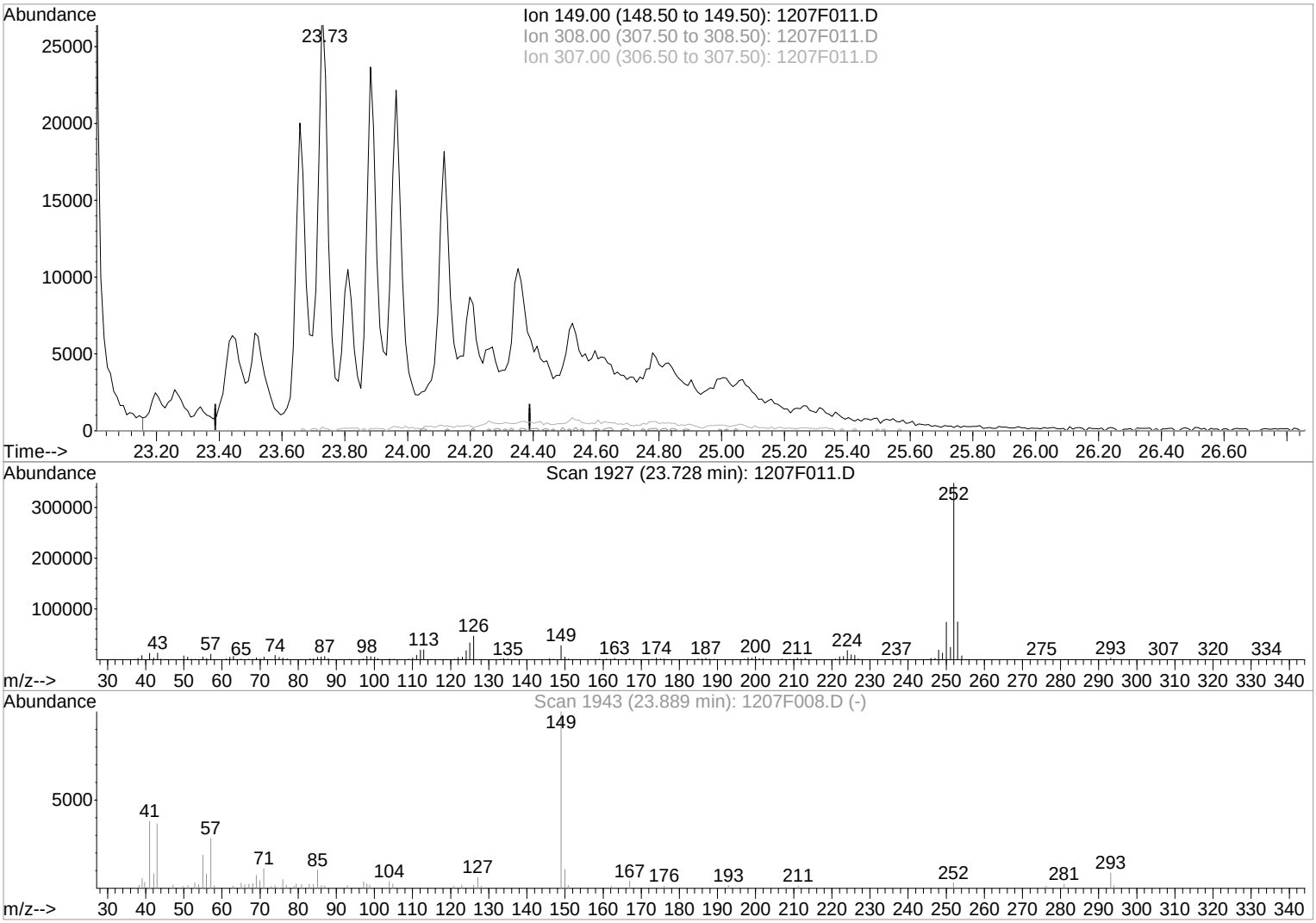
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:24 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F011.D

(88) Diisodecyl Phthalate (T)

23.73min 165.53ug/ml m

response 669147

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.07
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

12/07/18

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 23:25:25 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.43	152	51876	40.00	ug/ml	0.00
22) Naphthalene-d8	11.53	136	182096	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.39	164	90063	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	116870	40.00	ug/ml	0.00
73) Chrysene-d12	21.29	240	124628	40.00	ug/ml	0.00
83) Perylene-d12	24.53	264	136308	40.00	ug/ml	0.02
System Monitoring Compounds						
4) 2-Fluorophenol	7.20	112	299789	221.20	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 147.47%#			
8) Phenol-d6	8.90	99	390028	236.80	ug/ml	0.04
Spiked Amount 150.000	Range 10 - 94		Recovery = 157.87%#			
20) Nitrobenzene-d5	10.37	82	380830	239.06	ug/ml	0.02
Spiked Amount 100.000	Range 35 - 114		Recovery = 239.06%#			
40) 2-Fluorobiphenyl	13.33	172	755307	236.43	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 236.43%#			
62) 2,4,6-Tribromophenol	15.69	330	79948	167.26	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 111.51%			
76) Terphenyl-d14	19.44	244	649114	249.68	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 249.68%#			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.41	42	407798	312.71	ug/ml	94
3) Pyridine	4.42	79	291830	251.39	ug/ml	98
5) Ethylene Glycol Butyl Ethe	7.76	57	352137	286.17	ug/ml	99
6) Aniline	8.90	93	473671	243.99	ug/ml#	70
7) Bis(2-chloroethyl) Ether	9.06	93	314240	256.40	ug/ml	96
9) Phenol	8.92	94	429014	252.74	ug/ml#	69
10) 2-Chlorophenol	9.08	128	367841	221.07	ug/ml	96
11) 1,3-Dichlorobenzene	9.33	146	429180	216.44	ug/ml	97
12) 1,4-Dichlorobenzene	9.46	146	449928	222.19	ug/ml	97
13) 1,2-Dichlorobenzene	9.70	146	426039	220.88	ug/ml	98
14) Benzyl Alcohol	9.73	108	225860	232.66	ug/ml	97
15) 2,2'-oxybis(2-chloropropan	9.94	45	488241	300.04	ug/ml	96
16) 2-Methylphenol	9.91	107	259004	208.08	ug/ml	99
17) Hexachloroethane	10.25	117	200309	243.84	ug/ml	95
18) N-Nitrosodi-n-propylamine	10.18	70	252774	257.52	ug/ml	98
19) 4-Methylphenol	10.20	107	402523	227.84	ug/ml	98
21) Nitrobenzene	10.41	77	396430	259.80	ug/ml	99
23) Isophorone	10.82	82	593624	237.88	ug/ml	99
24) 2-Nitrophenol	10.93	139	204648	228.89	ug/ml	93
25) 2,4-Dimethylphenol	11.05	122	273608	228.31	ug/ml	97
26) Bis(2-chloroethoxy)methane	11.20	93	361989	263.49	ug/ml	97
27) 2,4-Dichlorophenol	11.33	162	340859	241.02	ug/ml	93
28) Benzoic Acid	11.35	122	174851m	258.32	ug/ml	
29) 1,2,4-Trichlorobenzene	11.45	180	385244	236.13	ug/ml	98
30) Naphthalene	11.57	128	1060291	238.09	ug/ml	99
31) n-Dodecane	11.59	57	506447	354.84	ug/ml	99
32) 4-Chloroaniline	11.69	127	453306	227.60	ug/ml	93
33) Hexachlorobutadiene	11.78	225	293775	262.97	ug/ml	97
34) 4-Chloro-3-methylphenol	12.50	107	254692	212.71	ug/ml	98
35) 2-Methylnaphthalene	12.70	142	704593	223.09	ug/ml	99
37) Hexachlorocyclopentadiene	12.95	237	272146	465.06	ug/ml	98
38) 2,4,6-Trichlorophenol	13.17	196	206222	230.55	ug/ml	99
39) 2,4,5-Trichlorophenol	13.22	196	210771	232.16	ug/ml	99
41) 2-Chloronaphthalene	13.49	162	634479	237.76	ug/ml	97
42) 2-Nitroaniline	13.69	65	194686	267.34	ug/ml	93
43) Acenaphthylene	14.16	152	811569	214.03	ug/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 23:25:25 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
44)	Dimethyl Phthalate	14.03	163	591730	206.52	ug/ml	98
45)	2,6-Dinitrotoluene	14.11	165	135816	203.19	ug/ml	92
46)	Acenaphthene	14.45	154	528980	220.02	ug/ml	98
47)	3-Nitroaniline	14.38	138	134937	199.89	ug/ml	99
48)	2,4-Dinitrophenol	14.54	184	85235	264.49	ug/ml	93
49)	Dibenzofuran	14.74	168	797208	211.15	ug/ml	97
50)	4-Nitrophenol	14.66	109	101871	339.48	ug/ml	95
51)	2,4-Dinitrotoluene	14.77	165	177777	213.72	ug/ml	99
52)	2,3,4,6-Tetrachlorophenol	14.94	232	150579	243.30	ug/ml	94
53)	Fluorene	15.29	166	592427	211.47	ug/ml	99
54)	4-Chlorophenyl Phenyl Ethe	15.32	204	321928	227.27	ug/ml	90
55)	Diethyl Phthalate	15.18	149	546750	200.76	ug/ml	99
56)	4-Nitroaniline	15.39	138	131438	215.31	ug/ml	97
57)	2-Methyl-4,6-dinitrophenol	15.42	198	112672m	241.82	ug/ml	
58)	Diphenylamine	15.52	169	362735	198.09	ug/ml	99
59)	Azobenzene	15.57	77	654184	269.15	ug/ml	92
60)	Benzophenone	15.60	105	477082m	225.87	ug/ml	
63)	4-Bromophenyl Phenyl Ether	16.11	248	164061	204.24	ug/ml	88
64)	Hexachlorobenzene	16.17	284	155511	177.30	ug/ml	85
65)	2,6-Diisopropylnaphthalene	16.31	197	466145	224.59	ug/ml	100
66)	Pentachlorophenol	16.49	266	117627	335.84	ug/ml	99
67)	Diazinon	16.67	137	81117	169.32	ug/ml	98
68)	Phenanthrene	16.85	178	731573	226.83	ug/ml	98
69)	Anthracene	16.93	178	747718	226.15	ug/ml	99
70)	Carbazole	17.22	167	774260	265.76	ug/ml	100
71)	Di-n-butyl Phthalate	17.85	149	1008819	284.55	ug/ml	99
72)	Fluoranthene	18.78	202	884895	274.39	ug/ml	99
74)	Benzidine	19.04	184	164044	97.36	ug/ml	98
75)	Pyrene	19.14	202	894562	231.98	ug/ml	99
77)	Butyl Benzyl Phthalate	20.30	149	436940	235.56	ug/ml	99
78)	Diethylene Glycol Butyl Et	21.19	105	584561	263.83	ug/ml	99
79)	3,3'-Dichlorobenzidine	21.28	252	363404	230.65	ug/ml	98
80)	Benz(a)anthracene	21.27	228	817825	221.66	ug/ml	99
81)	Chrysene	21.35	228	741523	210.30	ug/ml	99
82)	Bis(2-ethylhexyl) Phthalat	21.48	149	606076	237.41	ug/ml	99
84)	Di-n-octyl Phthalate	22.99	149	1025804	213.12	ug/ml	100
85)	Benzo(b)fluoranthene	23.66	252	950385	242.90	ug/ml	99
86)	Benzo(k)fluoranthene	23.73	252	887026	228.40	ug/ml	99
87)	Diisononyl Phthalate	23.73	293	45235m	166.79	ug/ml	
88)	Diisodecyl Phthalate	23.73	149	857179m	210.10	ug/ml	
89)	Benzo(a)pyrene	24.42	252	864046	239.43	ug/ml	99
90)	Indeno(1,2,3-cd)pyrene	27.03	276	818388	234.50	ug/ml	99
91)	Dibenz(a,h)anthracene	27.13	278	832822	236.17	ug/ml	97
92)	Benzo(g,h,i)perylene	27.63	276	815037	224.24	ug/ml	99

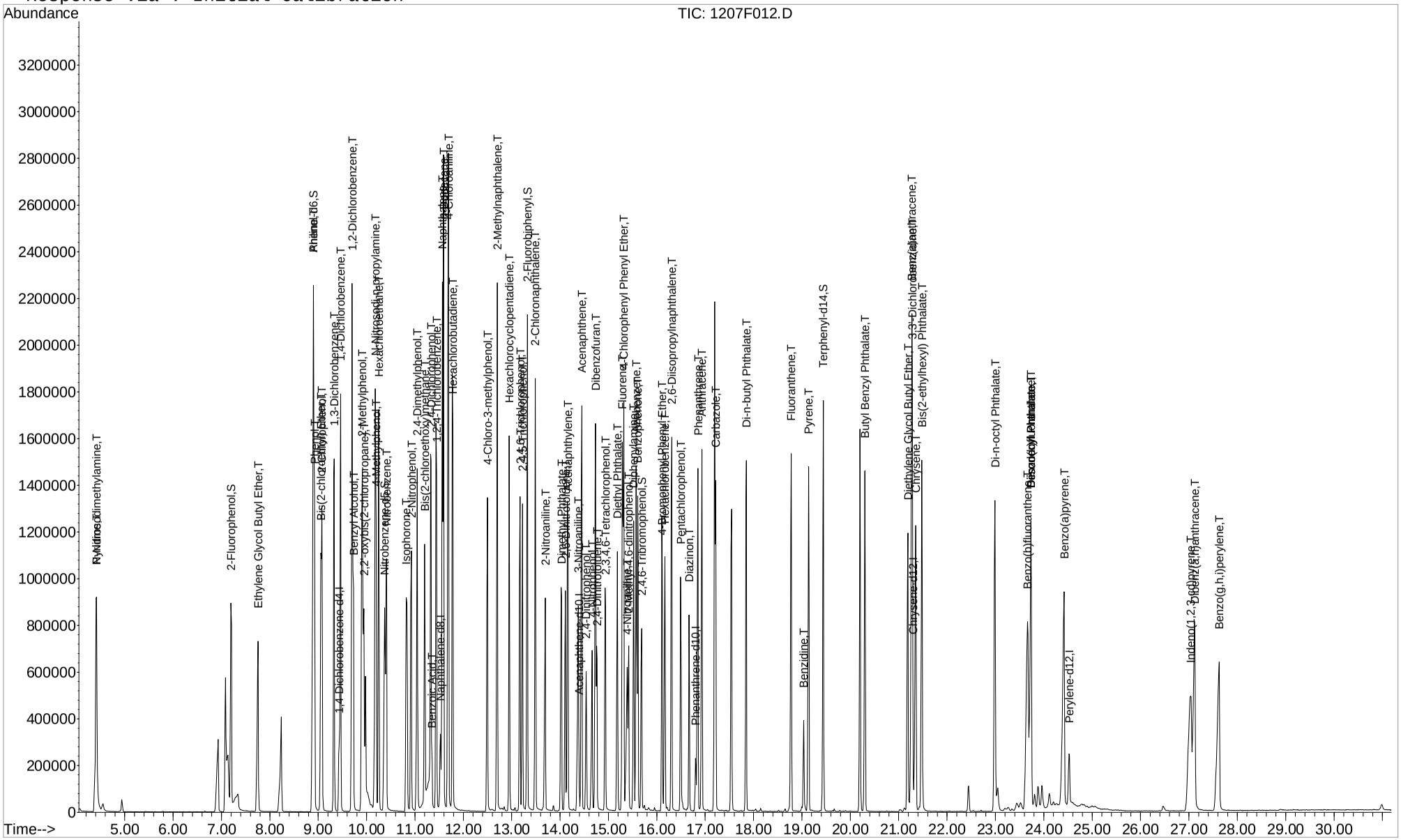
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:27 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

12/08/18 12/13/18 1st 2nd

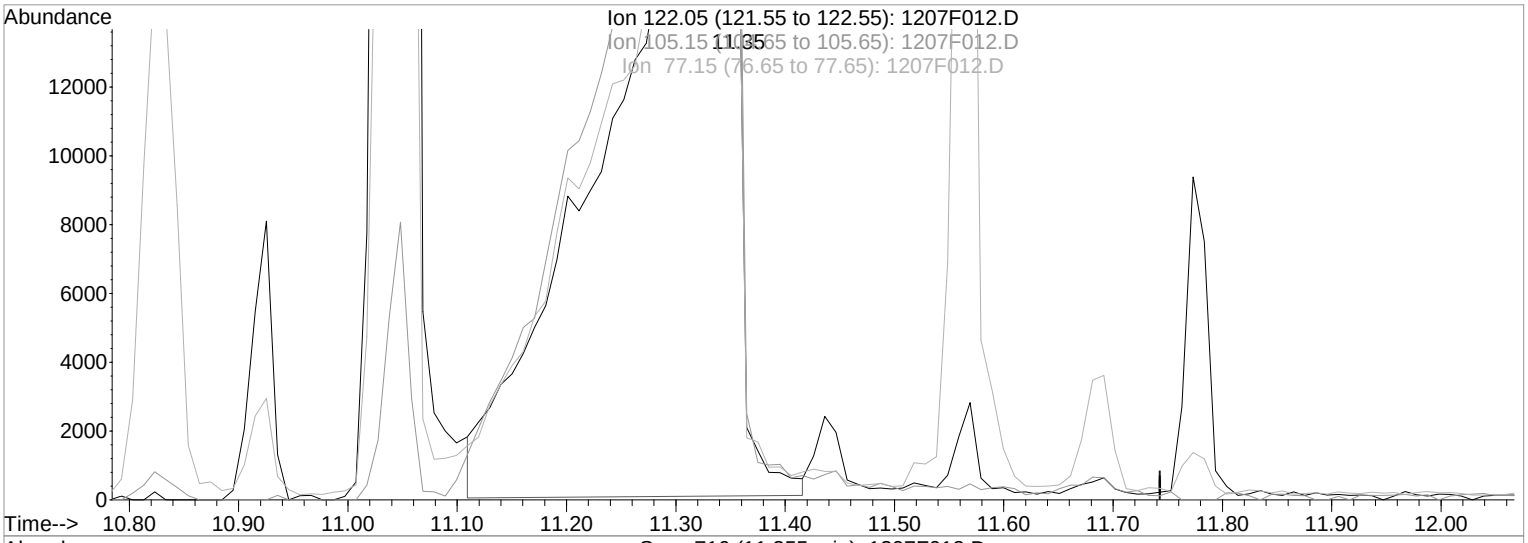


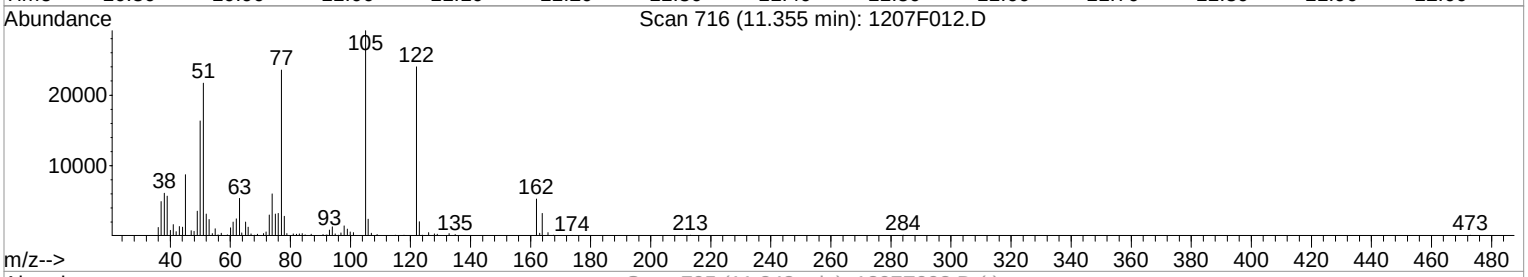
Quantitation Report (Qedit)

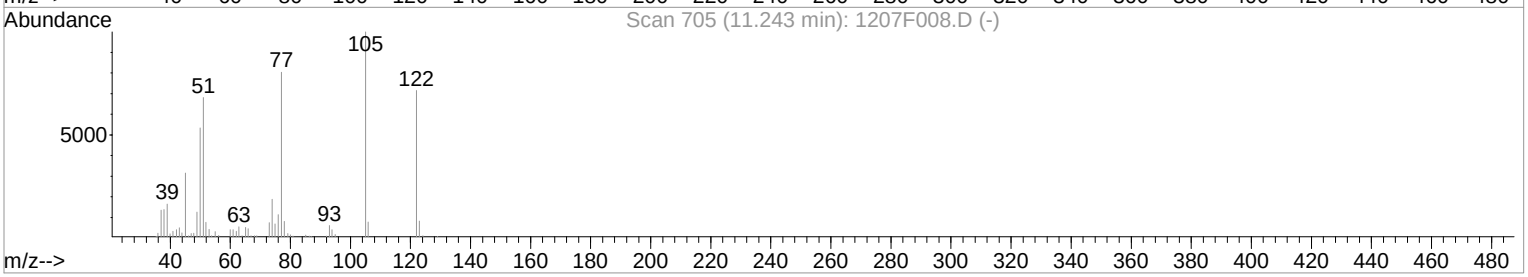
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:25 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F012.D

(28) Benzoic Acid (T)

11.35min 254.20ug/ml

response 172067

Ion	Exp%	Act%
122.05	100	100
105.15	132.80	123.53
77.15	110.60	98.16
0.00	0.00	0.00

Manual Integration:

Before

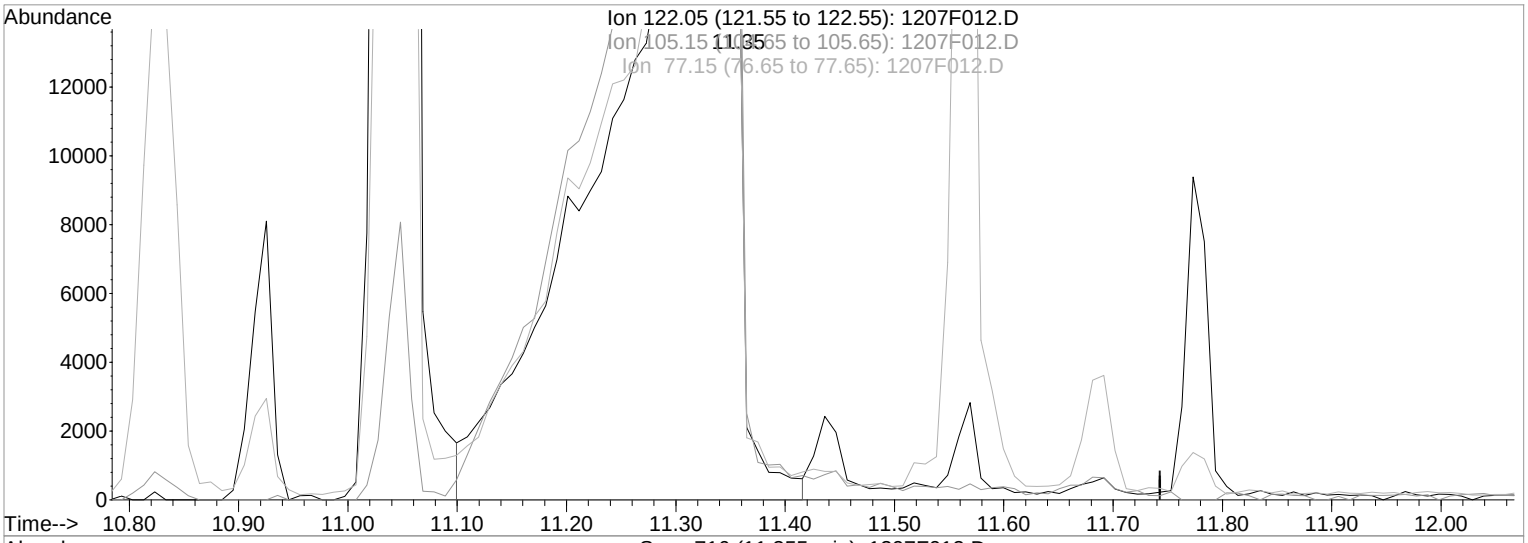
12/07/18

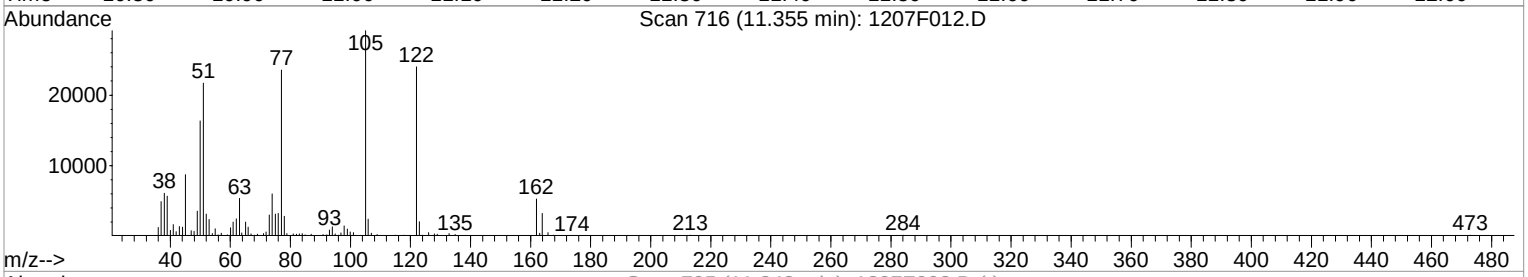
Quantitation Report (Qedit)

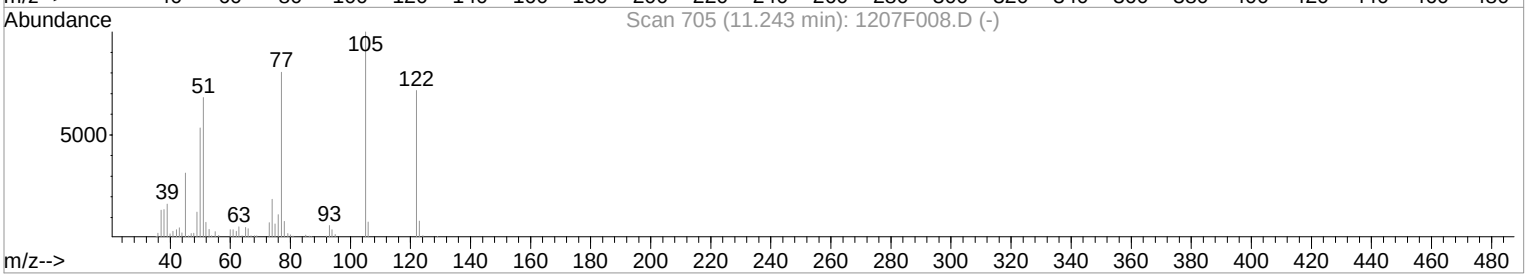
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:25 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F012.D

(28) Benzoic Acid (T)

11.35min 258.32ug/ml m

response 174851

Ion	Exp%	Act%
122.05	100	100
105.15	132.80	121.45
77.15	110.60	98.10
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

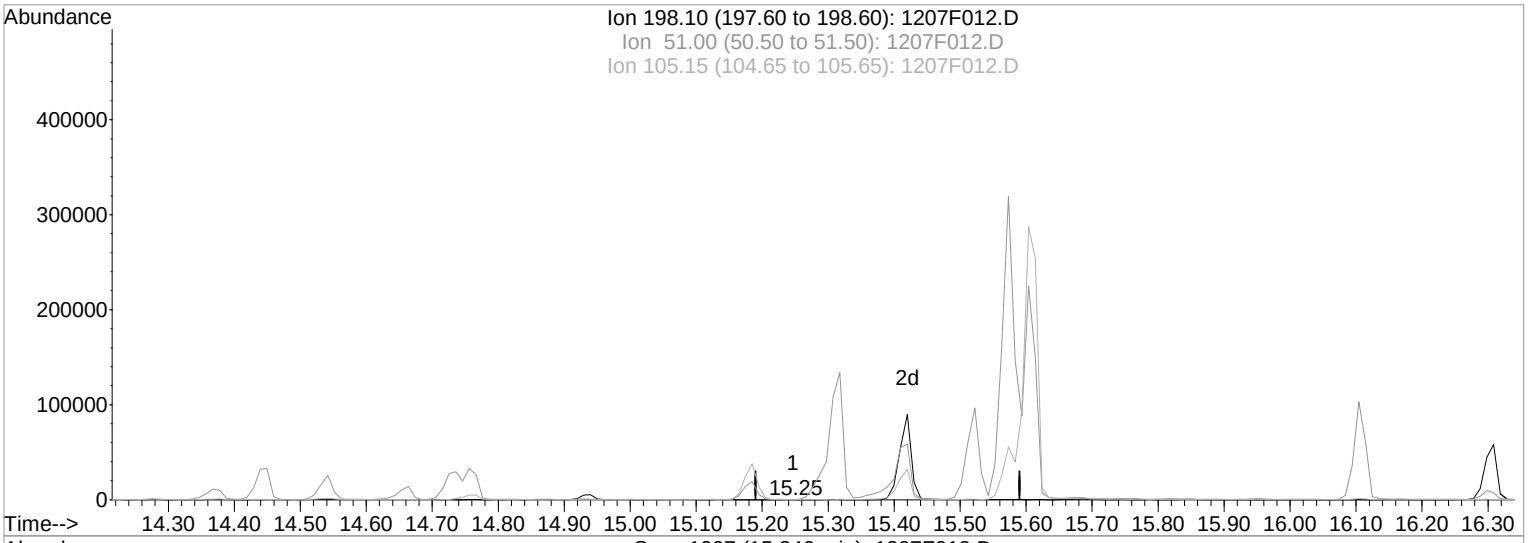
12/07/18

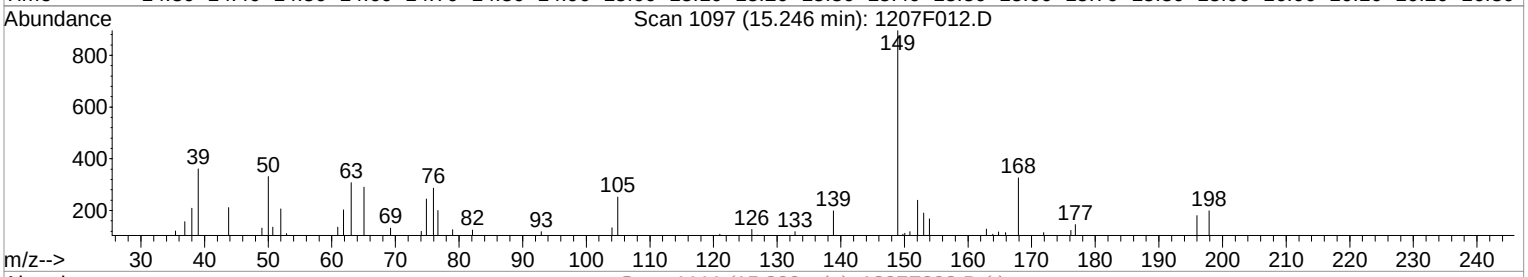
Quantitation Report (Qedit)

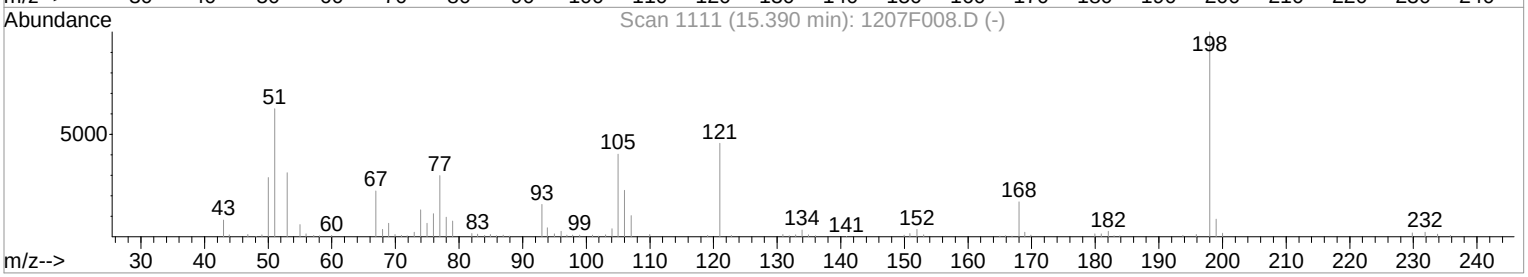
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:25 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Single Level Calibration







TIC: 1207F012.D

(57) 2-Methyl-4,6-dinitrophenol (T)

15.25min 0.44ug/ml

response 207

Ion	Exp%	Act%
198.10	100	100
51.00	23.10	0.00
105.15	40.60	20.10
0.00	0.00	0.00

Manual Integration:

Before

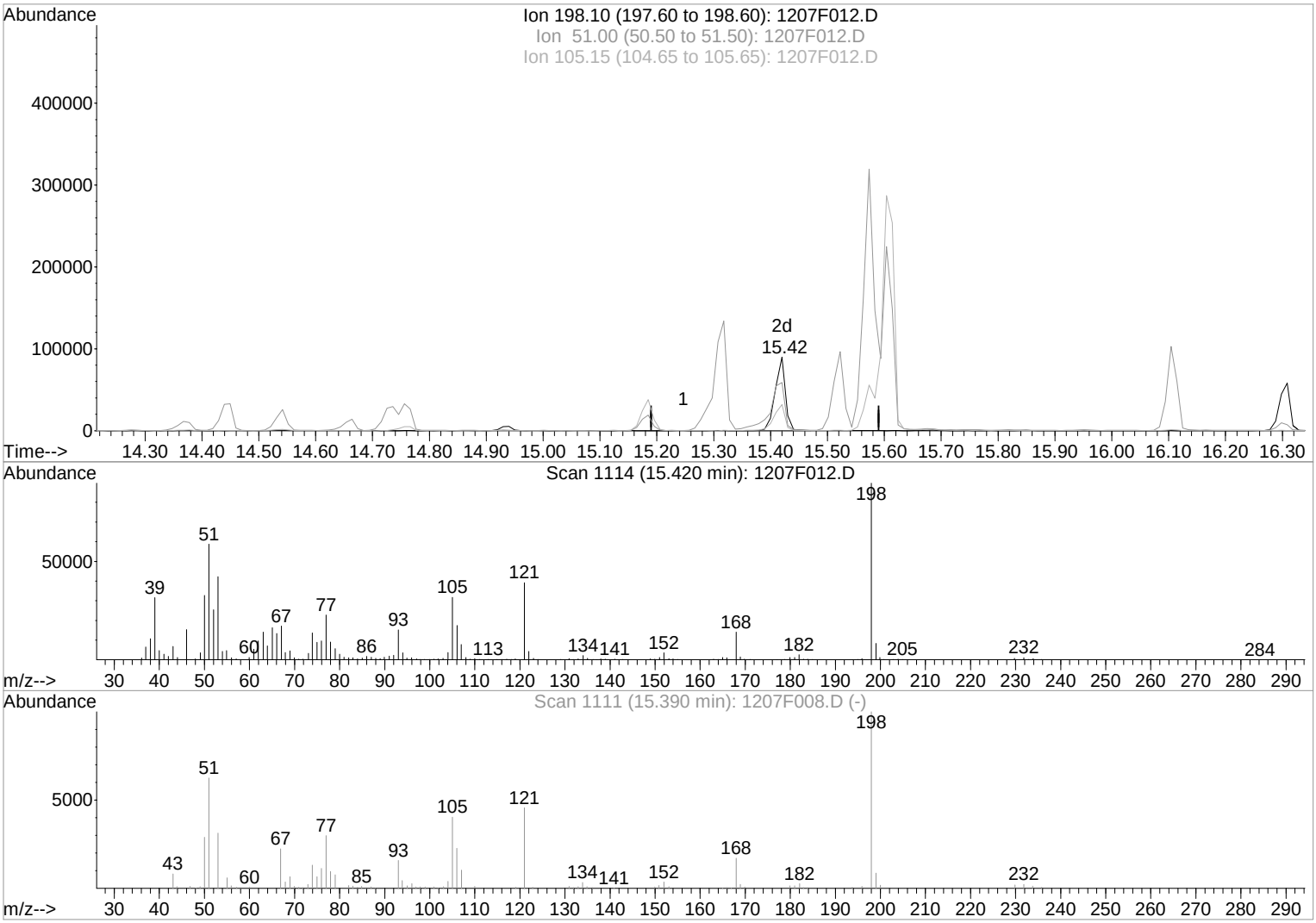
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:26 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Single Level Calibration



TIC: 1207F012.D

(57) 2-Methyl-4,6-dinitrophenol (T)

15.42min 241.82ug/ml m

response 112672

Ion	Exp%	Act%
198.10	100	100
51.00	23.10	65.42#
105.15	40.60	35.31
0.00	0.00	0.00

Manual Integration:

After

WP

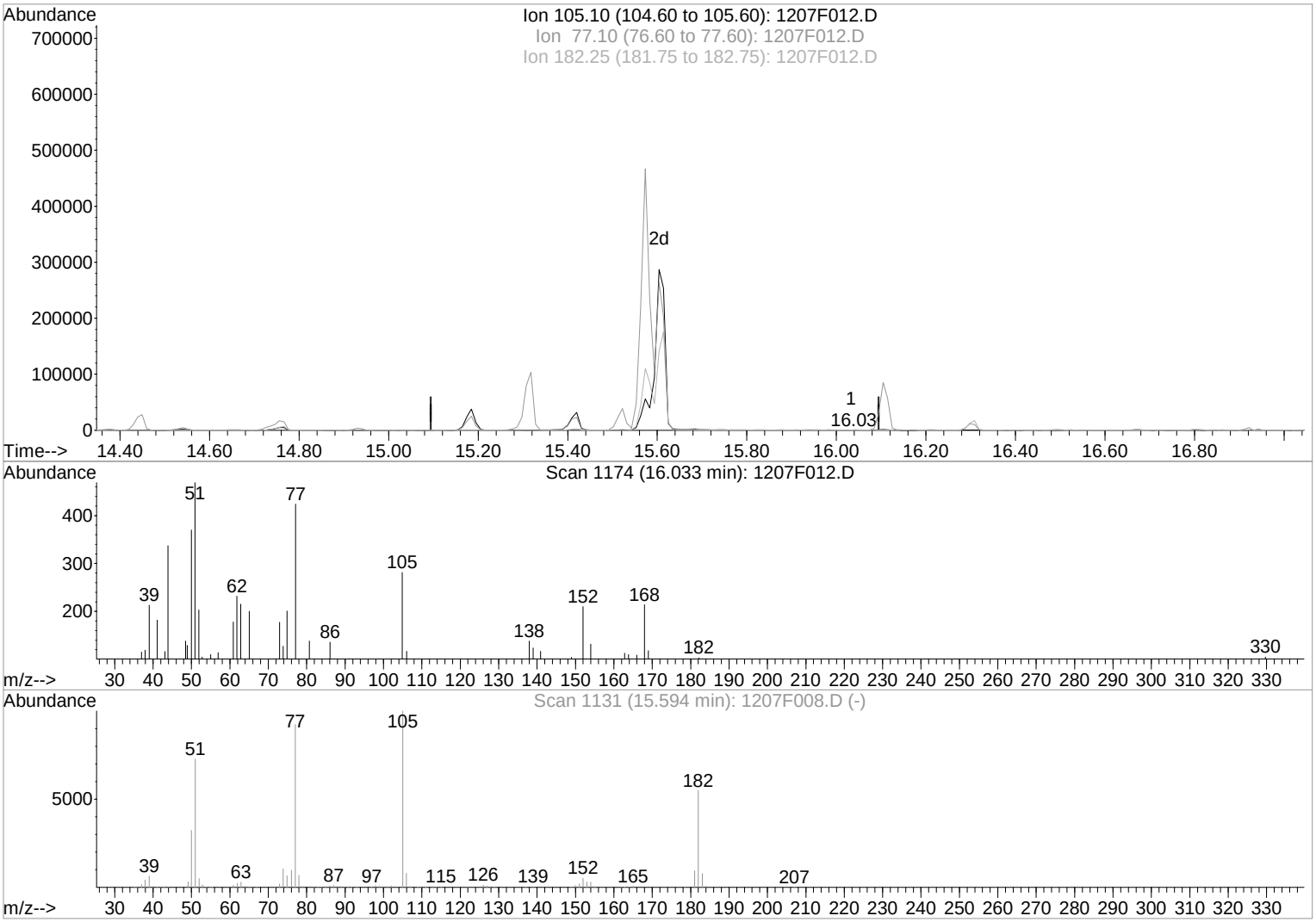
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:26 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F012.D

(60) Benzophenone (T)

16.03min 0.09ug/ml

response 186

Ion	Exp%	Act%
105.10	100	100
77.10	208.40	178.49
182.25	80.80	82.26
0.00	0.00	0.00

Manual Integration:

Before

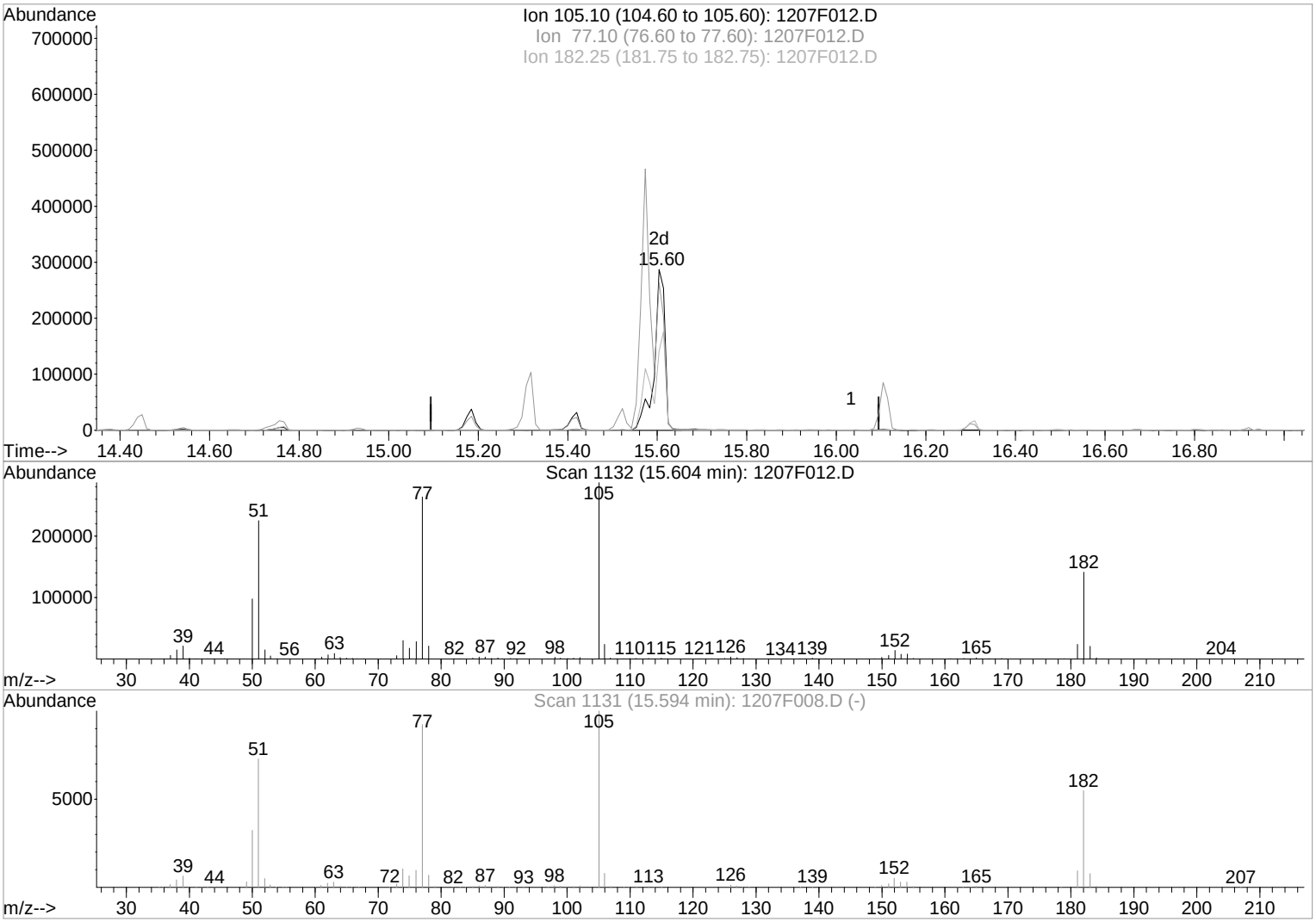
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:26 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F012.D

(60) Benzophenone (T)

15.60min 225.87ug/ml m

response 477082

Ion	Exp%	Act%
105.10	100	100
77.10	208.40	0.07#
182.25	80.80	0.03#
0.00	0.00	0.00

Manual Integration:

After

WP

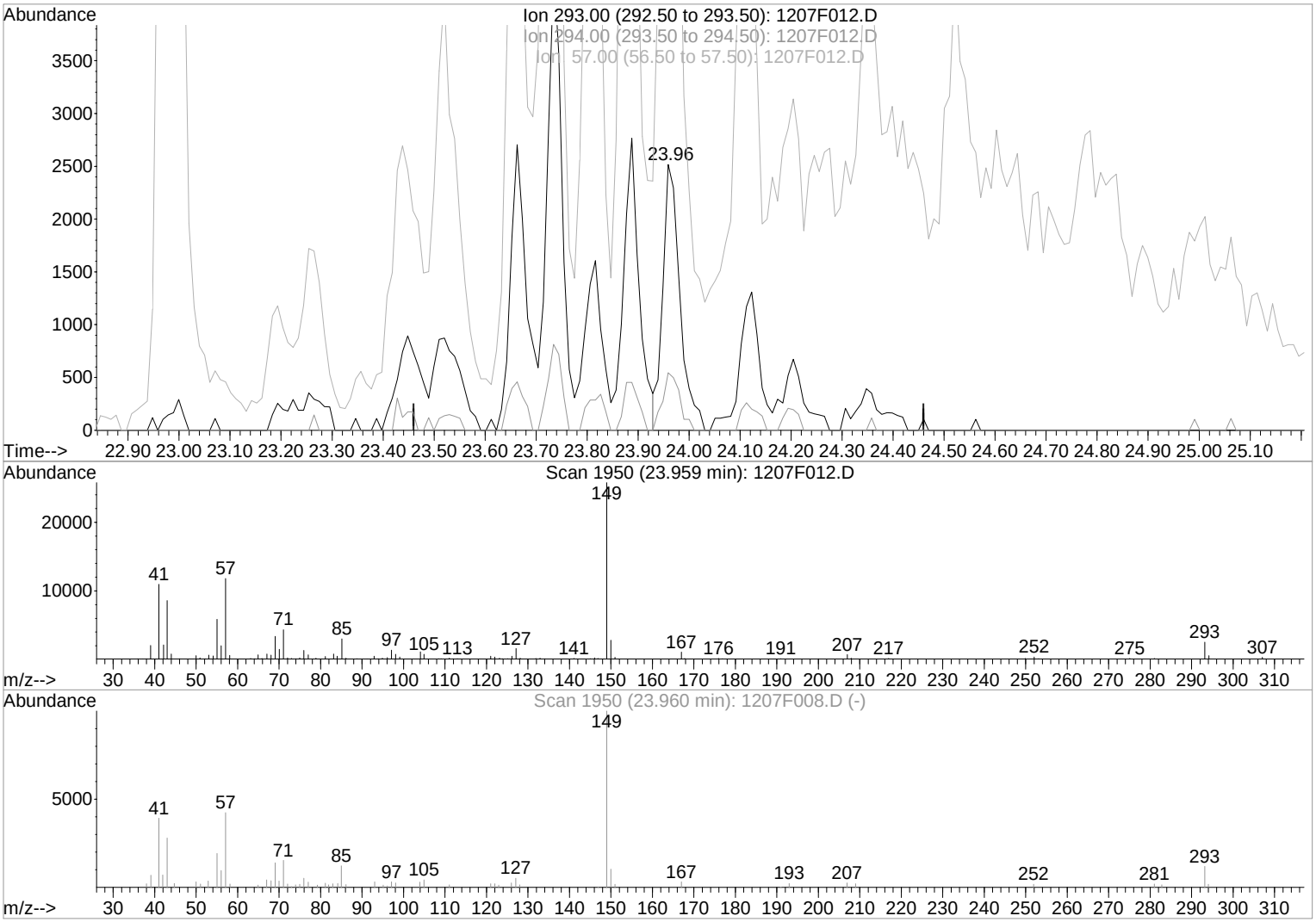
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:26 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F012.D

(87) Diisononyl Phthalate (T)

23.96min 21.66ug/ml

response 5874

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	21.71
57.00	33.10	385.94#
0.00	0.00	0.00

Manual Integration:

Before

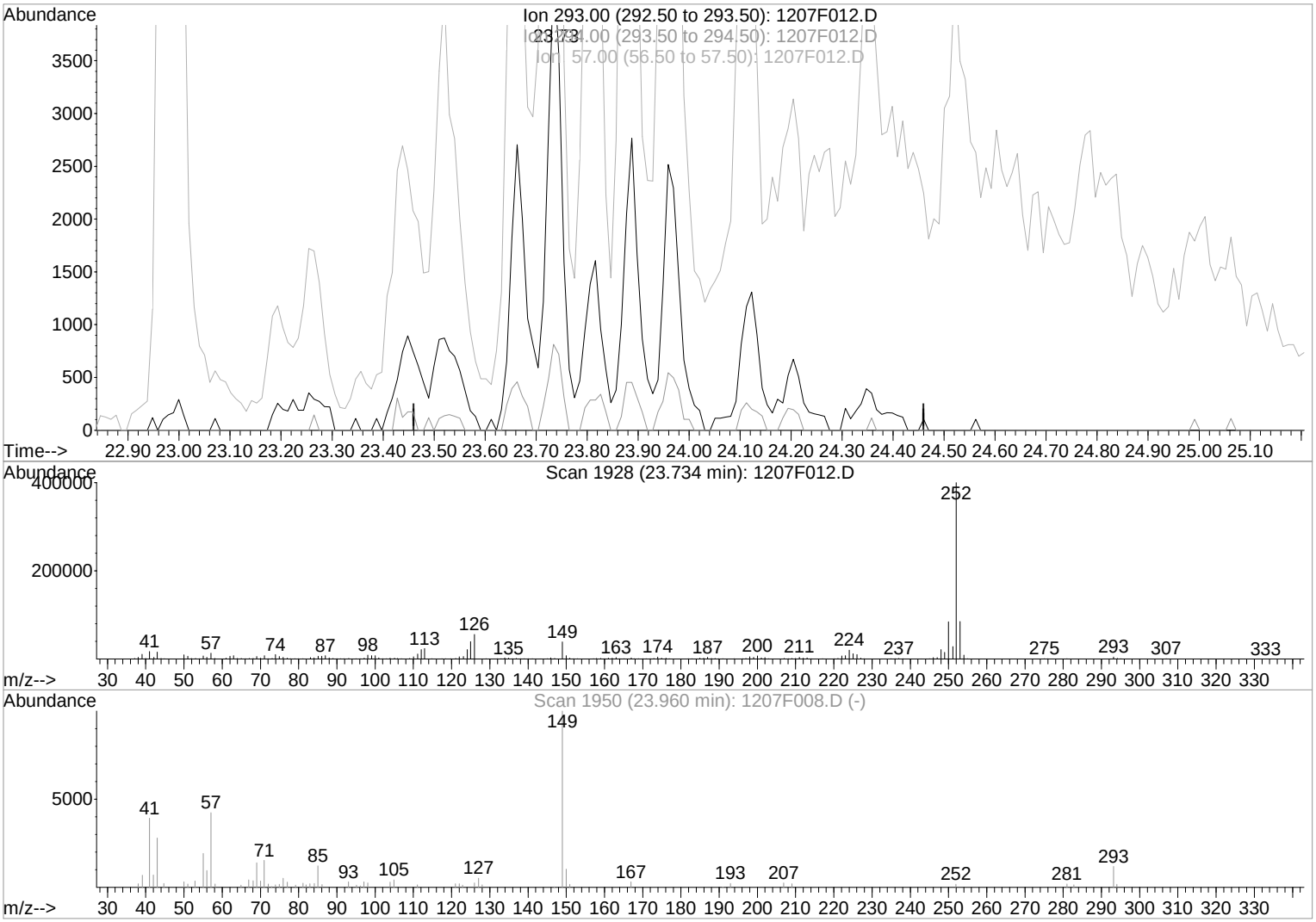
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:27 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F012.D

(87) Diisononyl Phthalate (T)

23.73min 166.79ug/ml m

response 45235

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	2.82
57.00	33.10	50.12
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

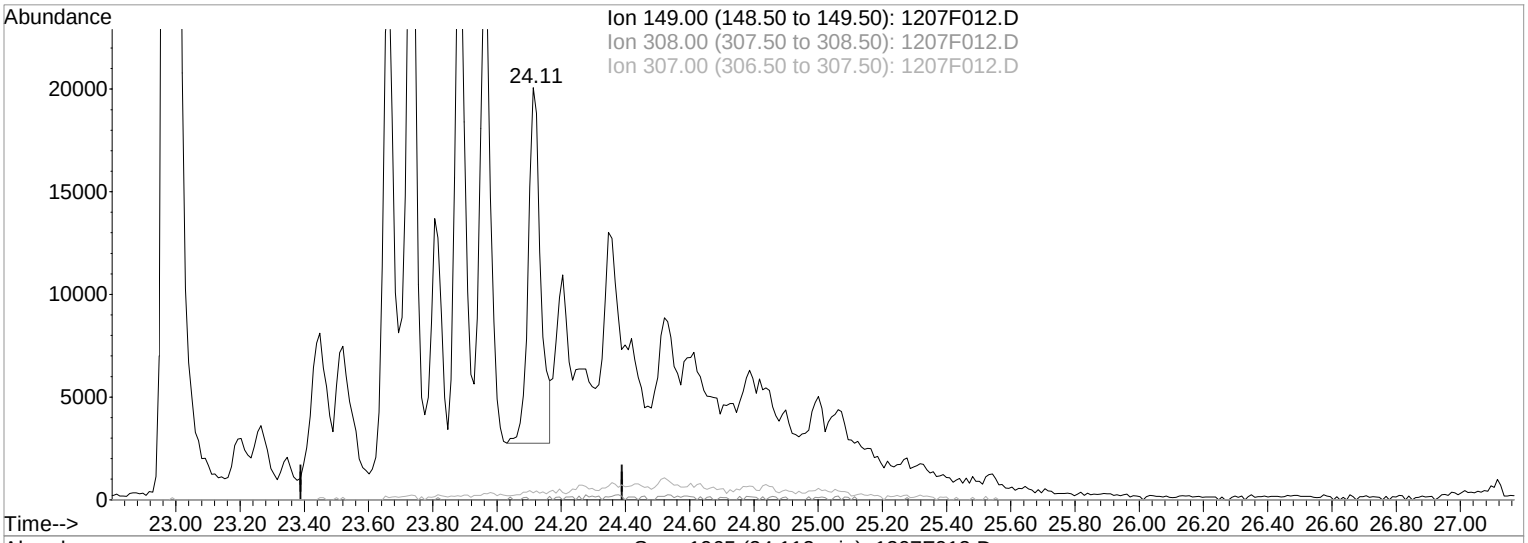
12/07/18

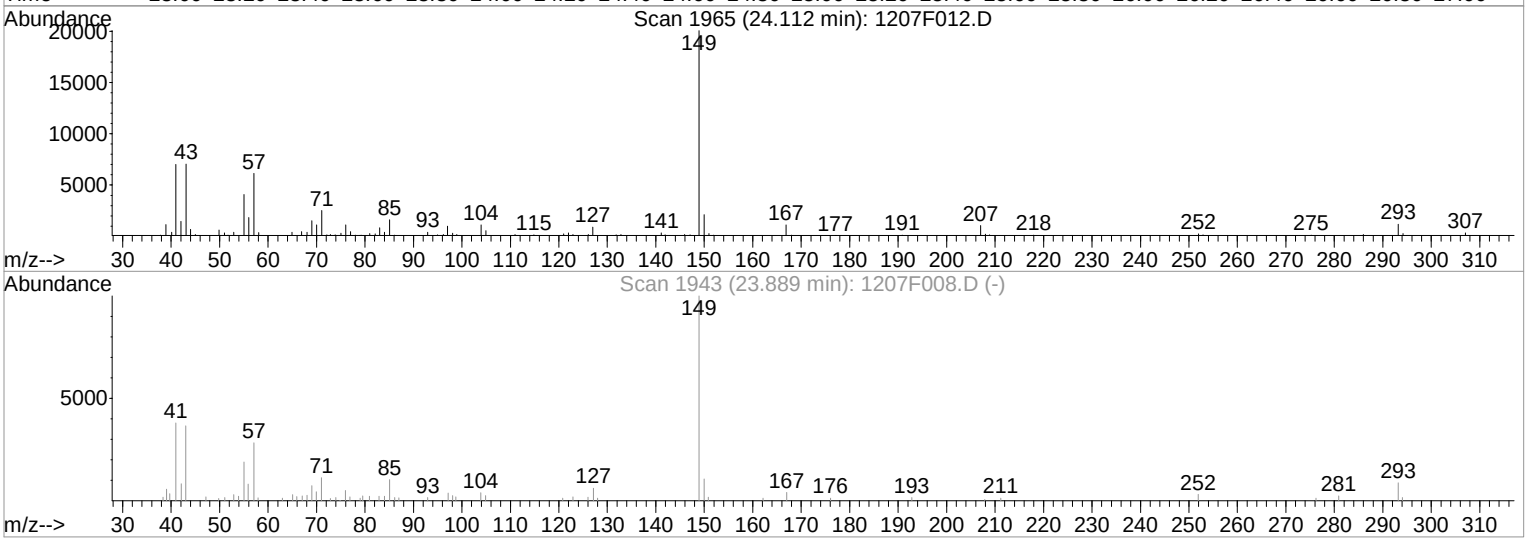
Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:27 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration





TIC: 1207F012.D

(88) Diisodecyl Phthalate (T)

24.11min 11.43ug/ml

response 46629

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.30
307.00	0.00	1.90
0.00	0.00	0.00

Manual Integration:

Before

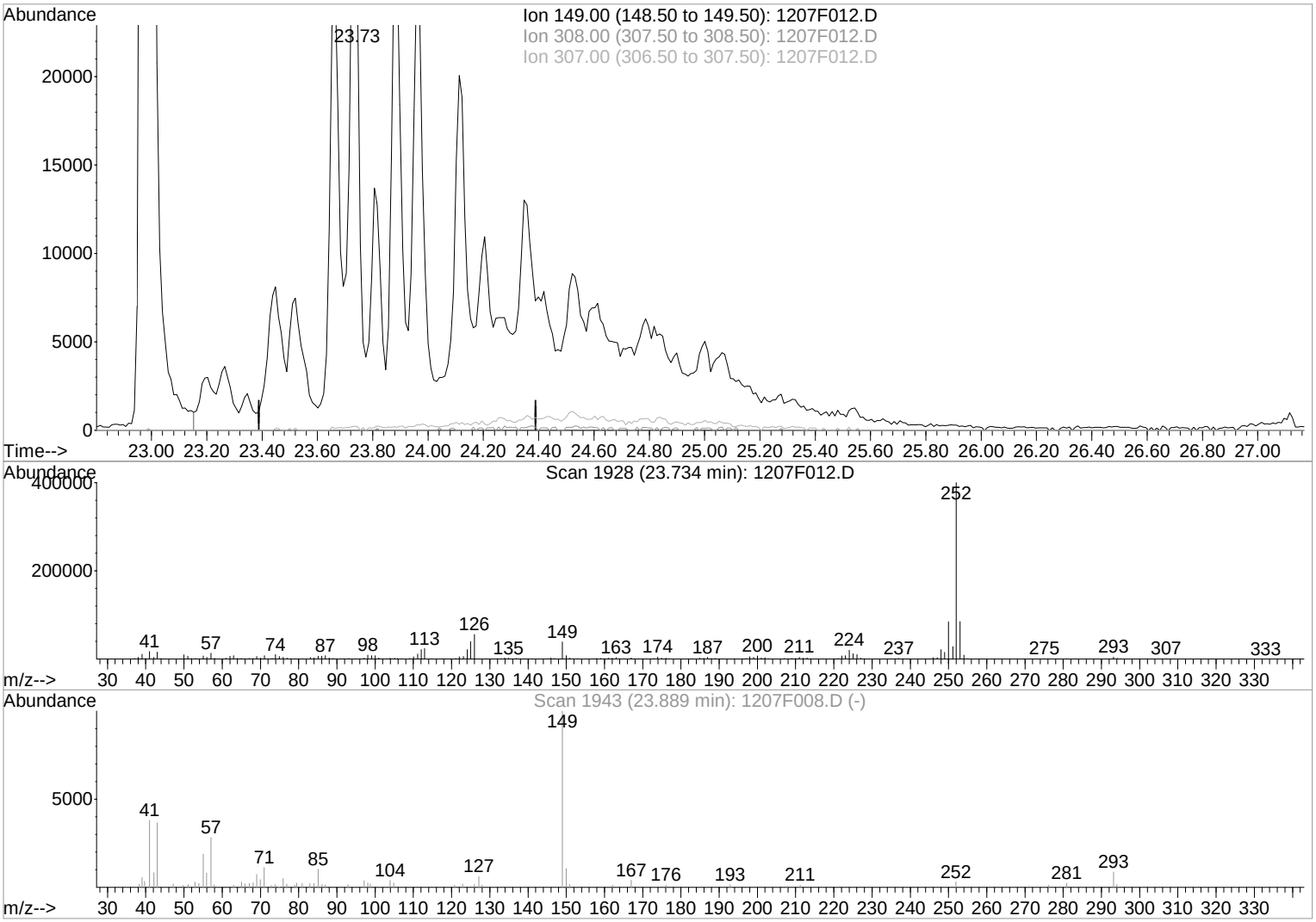
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:27 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F012.D

(88) Diisodecyl Phthalate (T)

23.73min 210.10ug/ml m

response 857179

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.02
307.00	0.00	0.10
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

12/07/18

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F013.D Vial: 13
Acq On : 7 Dec 2018 11:22 pm Operator: CConover
Sample : 8270 ICV @ 80ppm | SVM59-93C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 08 00:07:30 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	50638	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	184360	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.38	164	97140	40.00	ug/ml	-0.01
61) Phenanthrene-d10	16.80	188	128624	40.00	ug/ml	0.00
73) Chrysene-d12	21.27	240	117554	40.00	ug/ml	-0.01
83) Perylene-d12	24.50	264	119146	40.00	ug/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	7.18	112	100468	76.12	ug/ml	-0.01
Spiked Amount 150.000	Range 21 - 100		Recovery = 50.75%			
8) Phenol-d6	8.86	99	126998	77.38	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 51.59%			
20) Nitrobenzene-d5	10.35	82	140850	81.08	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 81.08%			
40) 2-Fluorobiphenyl	13.32	172	291786	80.46	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 80.46%			
62) 2,4,6-Tribromophenol	15.68	330	33067	89.36	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 59.57%			
76) Terphenyl-d14	19.43	244	214628	79.68	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 79.68%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.38	42	121411	69.72	ug/ml	94
3) Pyridine	4.41	79	97245	76.21	ug/ml	99
6) Aniline	8.88	93	171834	79.25	ug/ml	95
7) Bis(2-chloroethyl) Ether	9.04	93	110177	80.17	ug/ml	96
9) Phenol	8.88	94	153709	81.67	ug/ml	96
10) 2-Chlorophenol	9.06	128	132512	83.44	ug/ml	94
11) 1,3-Dichlorobenzene	9.32	146	148326	76.62	ug/ml	97
12) 1,4-Dichlorobenzene	9.45	146	156702	78.66	ug/ml	96
13) 1,2-Dichlorobenzene	9.69	146	149646	78.34	ug/ml	96
14) Benzyl Alcohol	9.69	108	79506	80.99	ug/ml	96
15) 2,2'-oxybis(2-chloropropan	9.93	45	207962	99.15	ug/ml	99
16) 2-Methylphenol	9.89	107	92763	81.12	ug/ml	95
17) Hexachloroethane	10.24	117	69727	79.40	ug/ml	86
18) N-Nitrosodi-n-propylamine	10.15	70	101223	90.09	ug/ml	99
19) 4-Methylphenol	10.17	107	260558	146.74	ug/ml	86
21) Nitrobenzene	10.38	77	144644	82.95	ug/ml	92
23) Isophorone	10.80	82	227827	81.19	ug/ml	100
24) 2-Nitrophenol	10.91	139	75676	83.80	ug/ml	85
25) 2,4-Dimethylphenol	11.03	122	107748	85.95	ug/ml	99
26) Bis(2-chloroethoxy)methane	11.19	93	138236	84.59	ug/ml	99
27) 2,4-Dichlorophenol	11.30	162	124611	83.81	ug/ml	99
28) Benzoic Acid	11.24	122	63029m	86.58	ug/ml	
29) 1,2,4-Trichlorobenzene	11.44	180	137145	79.75	ug/ml	98
30) Naphthalene	11.56	128	378040	79.82	ug/ml	100
32) 4-Chloroaniline	11.67	127	159598	75.26	ug/ml	96
33) Hexachlorobutadiene	11.77	225	104613	81.12	ug/ml	98
34) 4-Chloro-3-methylphenol	12.48	107	103162	82.42	ug/ml	98
35) 2-Methylnaphthalene	12.69	142	257491	79.53	ug/ml	99
37) Hexachlorocyclopentadiene	12.95	237	108622	88.36	ug/ml	97
38) 2,4,6-Trichlorophenol	13.16	196	85489	83.82	ug/ml	98
39) 2,4,5-Trichlorophenol	13.20	196	94391	91.00	ug/ml	97
41) 2-Chloronaphthalene	13.48	162	252150	81.29	ug/ml	97
42) 2-Nitroaniline	13.67	65	83521	83.02	ug/ml	98
43) Acenaphthylene	14.15	152	372705	91.19	ug/ml	99
44) Dimethyl Phthalate	14.02	163	266871	83.06	ug/ml	98
45) 2,6-Dinitrotoluene	14.09	165	58358	83.82	ug/ml	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F013.D Vial: 13
Acq On : 7 Dec 2018 11:22 pm Operator: CConover
Sample : 8270 ICV @ 80ppm | SVM59-93C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 08 00:07:30 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Acenaphthene	14.44	154	221544	81.42	ug/ml	96
47) 3-Nitroaniline	14.36	138	57865	82.08	ug/ml	99
48) 2,4-Dinitrophenol	14.52	184	29793	87.37	ug/ml	99
49) Dibenzofuran	14.73	168	323040	77.60	ug/ml	98
50) 4-Nitrophenol	14.64	109	44281	84.35	ug/ml	88
51) 2,4-Dinitrotoluene	14.75	165	77541	85.74	ug/ml	96
52) 2,3,4,6-Tetrachlorophenol	14.93	232	69974	92.81	ug/ml	93
53) Fluorene	15.28	166	256998	82.16	ug/ml	100
54) 4-Chlorophenyl Phenyl Ethe	15.31	204	136543	81.57	ug/ml	94
55) Diethyl Phthalate	15.17	149	245080	82.31	ug/ml	99
56) 4-Nitroaniline	15.35	138	55169	82.82	ug/ml	95
57) 2-Methyl-4,6-dinitrophenol	15.39	198	44065	83.51	ug/ml#	55
58) Diphenylamine	15.51	169	194903	102.57	ug/ml	98
59) Azobenzene	15.56	77	305458m	85.33	ug/ml	
63) 4-Bromophenyl Phenyl Ether	16.10	248	68793	83.40	ug/ml	91
64) Hexachlorobenzene	16.16	284	65791	84.28	ug/ml	95
66) Pentachlorophenol	16.49	266	42629	84.50	ug/ml	98
68) Phenanthrene	16.84	178	292706	81.62	ug/ml	99
69) Anthracene	16.92	178	310474	83.84	ug/ml	99
70) Carbazole	17.21	167	281055	79.08	ug/ml	99
71) Di-n-butyl Phthalate	17.84	149	335942	78.73	ug/ml	100
72) Fluoranthene	18.77	202	312330	80.88	ug/ml	98
74) Benzidine	19.04	184	199159	159.60	ug/ml	98
75) Pyrene	19.13	202	308659	82.83	ug/ml	99
77) Butyl Benzyl Phthalate	20.29	149	170184	88.31	ug/ml	94
79) 3,3'-Dichlorobenzidine	21.26	252	116846	81.62	ug/ml	98
80) Benz(a)anthracene	21.25	228	307196	84.82	ug/ml	99
81) Chrysene	21.33	228	285439	82.89	ug/ml	98
82) Bis(2-ethylhexyl) Phthalat	21.47	149	234296	88.76	ug/ml	100
84) Di-n-octyl Phthalate	22.97	149	349114	81.26	ug/ml	97
85) Benzo(b)fluoranthene	23.62	252	268194	75.23	ug/ml	99
86) Benzo(k)fluoranthene	23.69	252	271811	75.31	ug/ml	99
89) Benzo(a)pyrene	24.38	252	278120	84.99	ug/ml	98
90) Indeno(1,2,3-cd)pyrene	26.98	276	298810	89.42	ug/ml	100
91) Dibenz(a,h)anthracene	27.07	278	291706	88.00	ug/ml	99
92) Benzo(g,h,i)perylene	27.58	276	325230	96.24	ug/ml	96

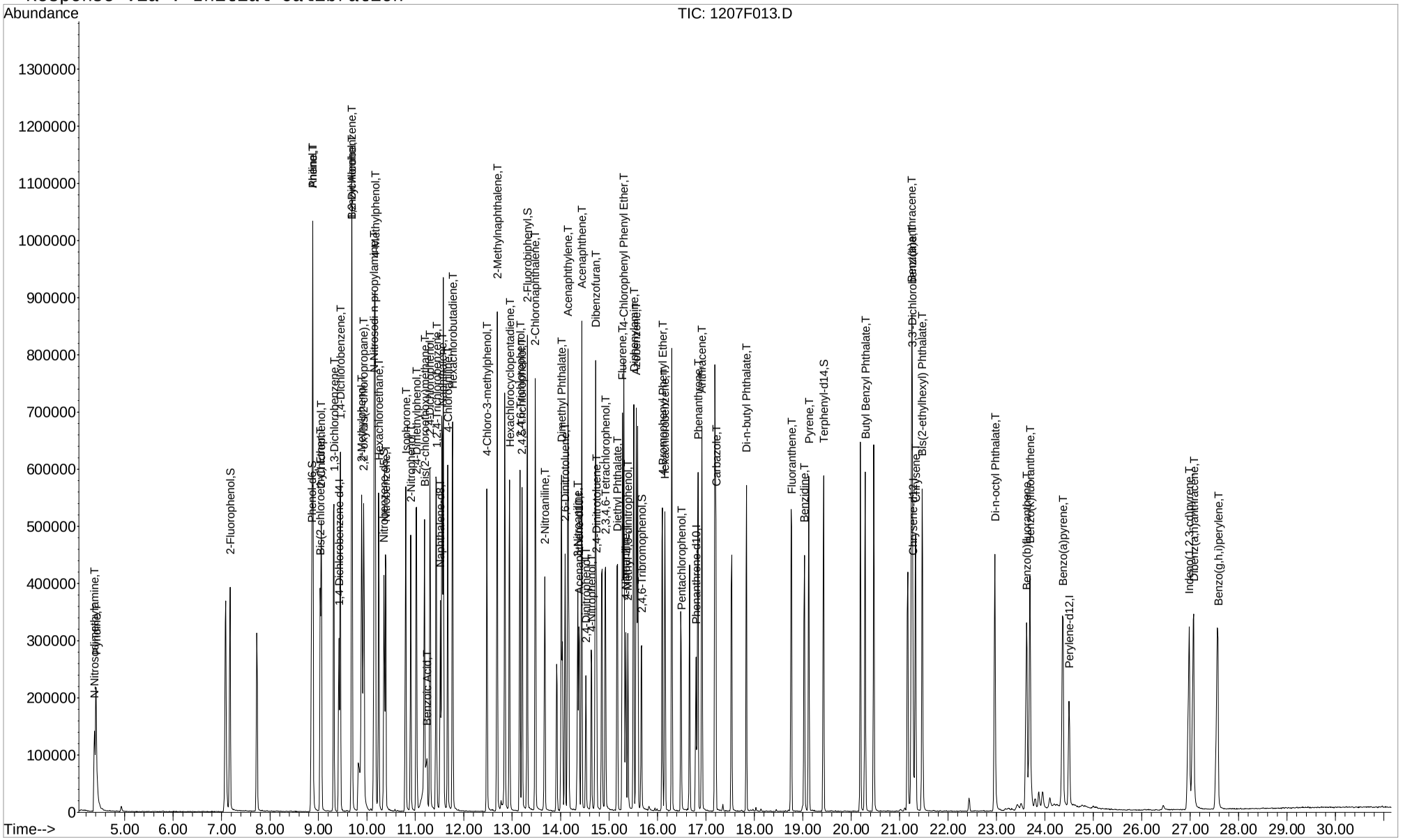
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F013.D Vial: 13
Acq On : 7 Dec 2018 11:22 pm Operator: CConover
Sample : 8270 ICV @ 80ppm | SVM59-93C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 8 0:10 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

12/08/18 12/13/18 1st 2nd

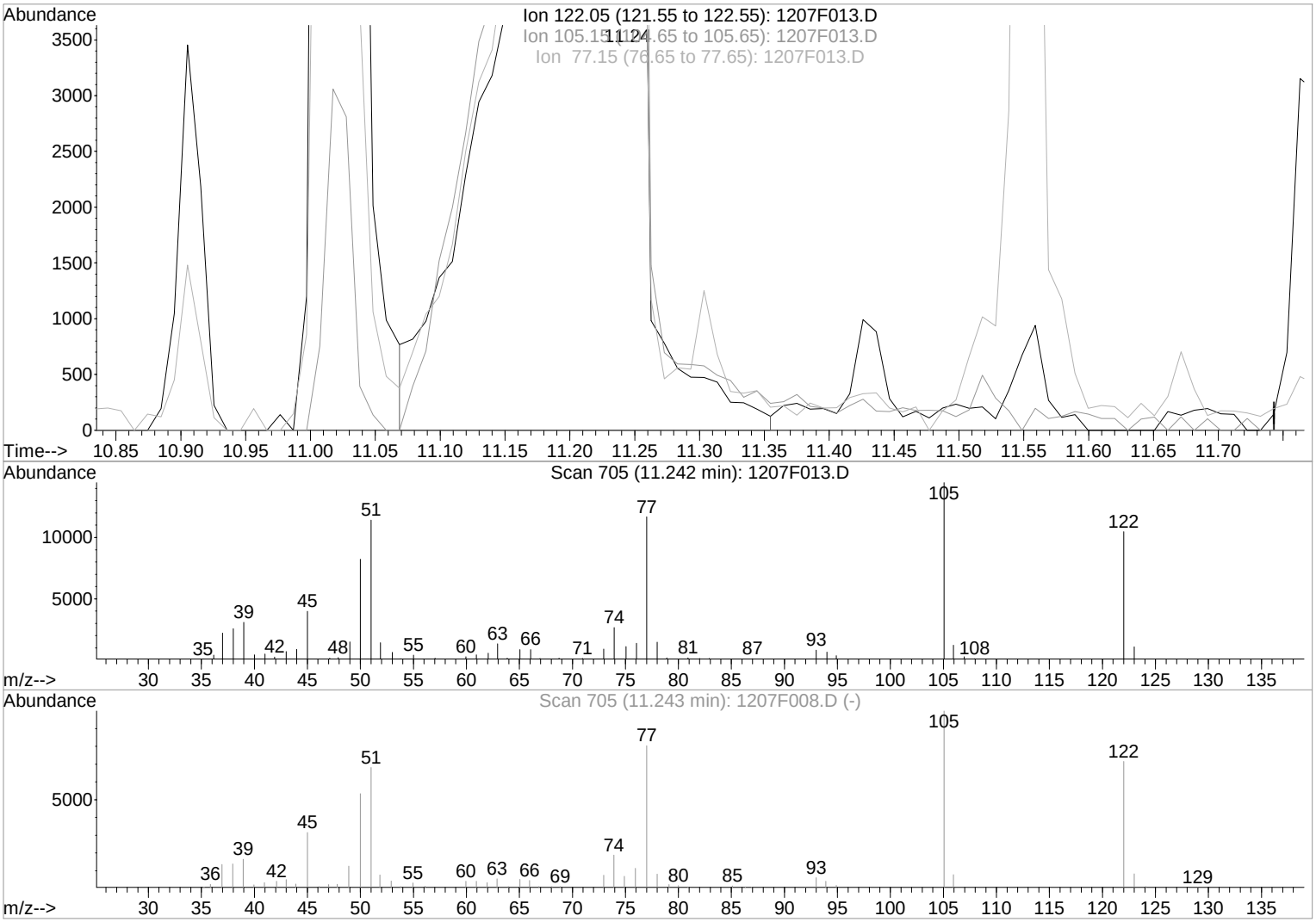


Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F013.D Vial: 13
Acq On : 7 Dec 2018 11:22 pm Operator: CConover
Sample : 8270 ICV @ 80ppm | SVM59-93C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 8 0:08 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Single Level Calibration



TIC: 1207F013.D

(28) Benzoic Acid (T)

11.24min 86.58ug/ml m

response 63029

Ion	Exp%	Act%
122.05	100	100
105.15	132.80	138.27
77.15	110.60	111.48
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

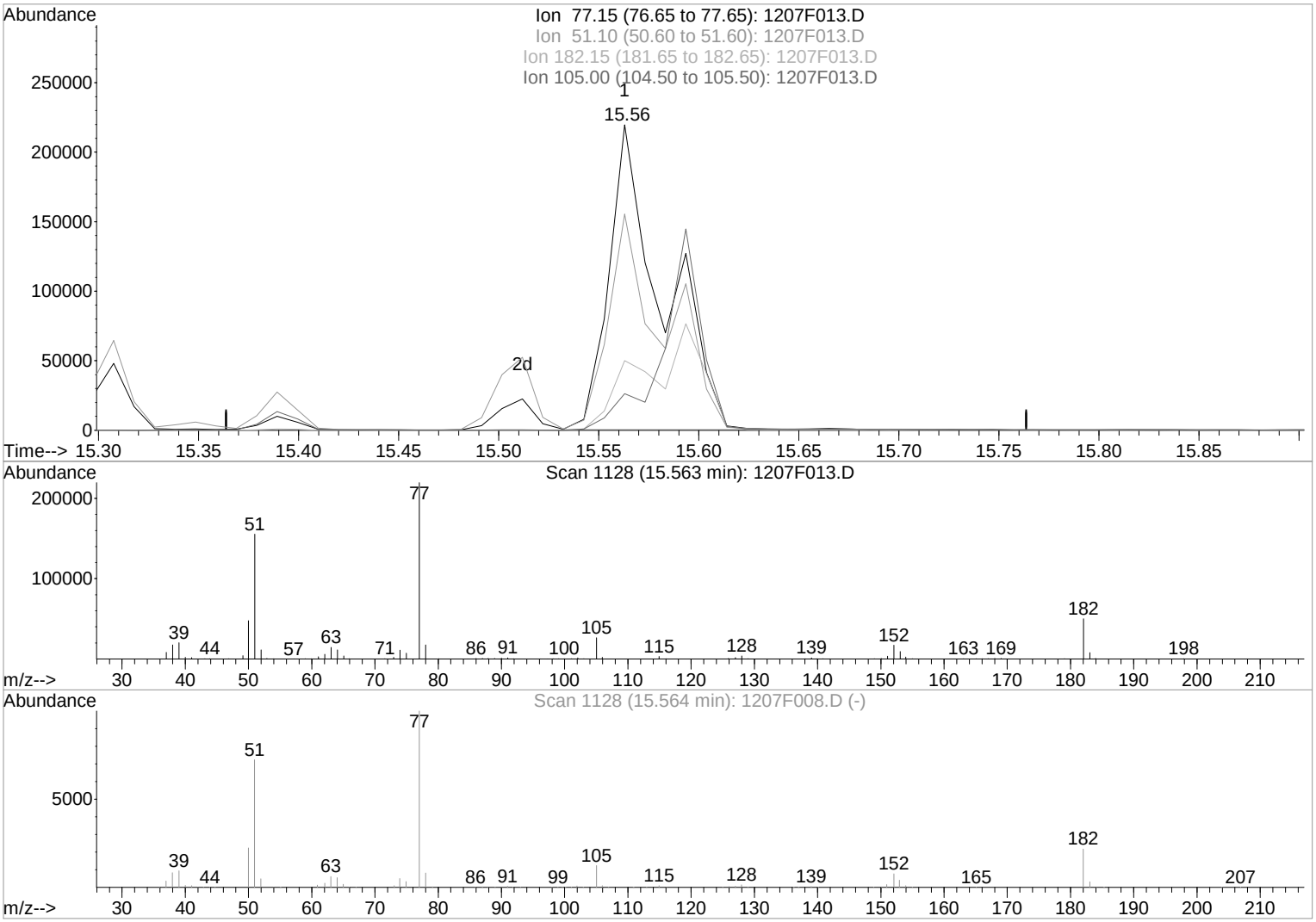
12/08/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F013.D Vial: 13
Acq On : 7 Dec 2018 11:22 pm Operator: CConover
Sample : 8270 ICV @ 80ppm | SVM59-93C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 8 0:08 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Multiple Level Calibration



TIC: 1207F013.D

(59) Azobenzene (T)

15.56min 114.52ug/ml

response 409947

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	70.57
182.15	21.70	22.72
105.00	12.30	11.89

Manual Integration:

Before

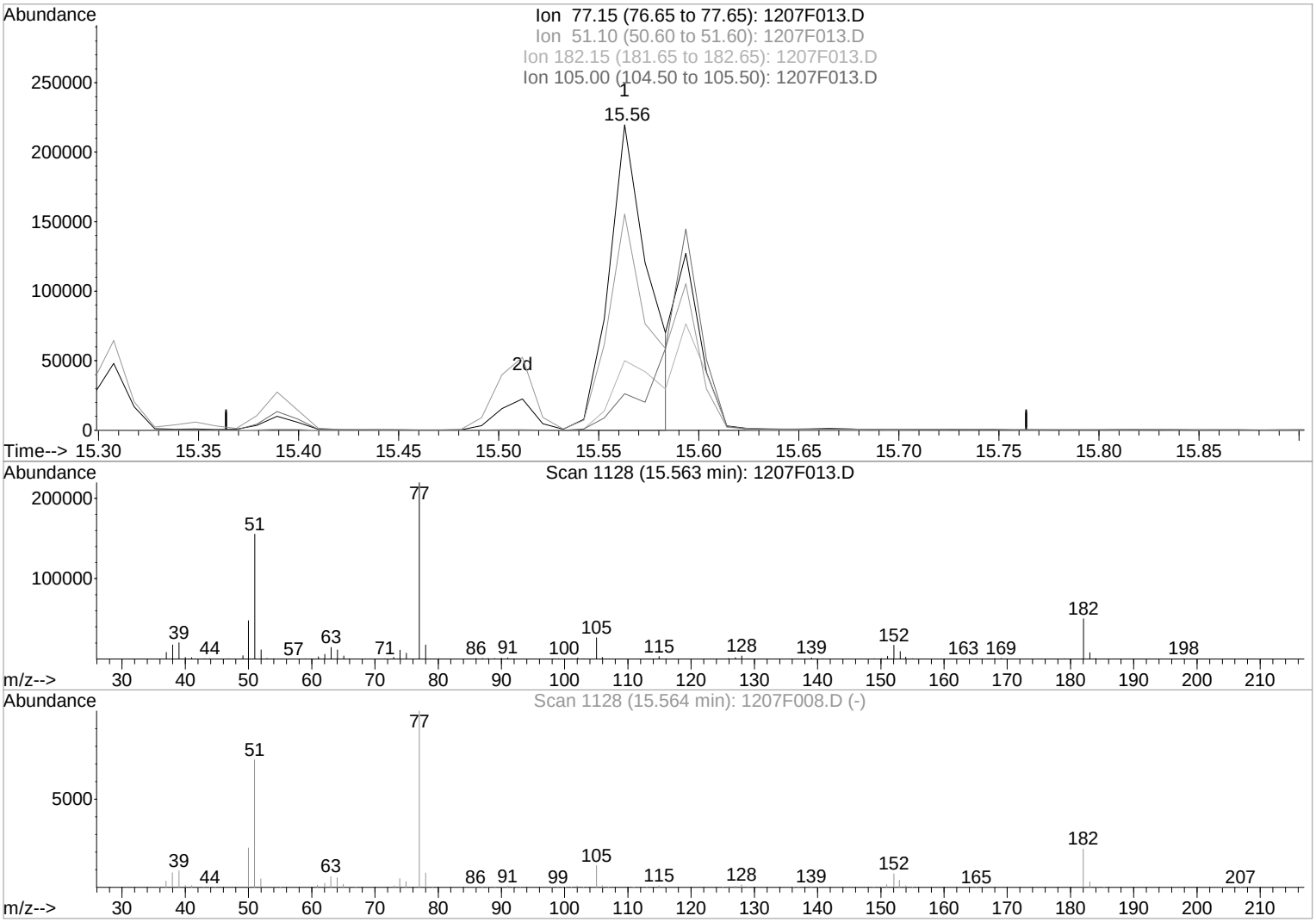
12/08/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F013.D Vial: 13
Acq On : 7 Dec 2018 11:22 pm Operator: CConover
Sample : 8270 ICV @ 80ppm | SVM59-93C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 8 0:08 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Multiple Level Calibration



TIC: 1207F013.D

(59) Azobenzene (T)

15.56min 85.33ug/ml m

response 305458

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	70.76
182.15	21.70	22.73
105.00	12.30	11.97

Manual Integration:

After

IC-Overintegrated

12/08/18

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F014.D Vial: 14
Acq On : 8 Dec 2018 12:03 am Operator: CConover
Sample : PAPER ICV @ 80ppm | SVM58-87A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 08 01:24:26 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

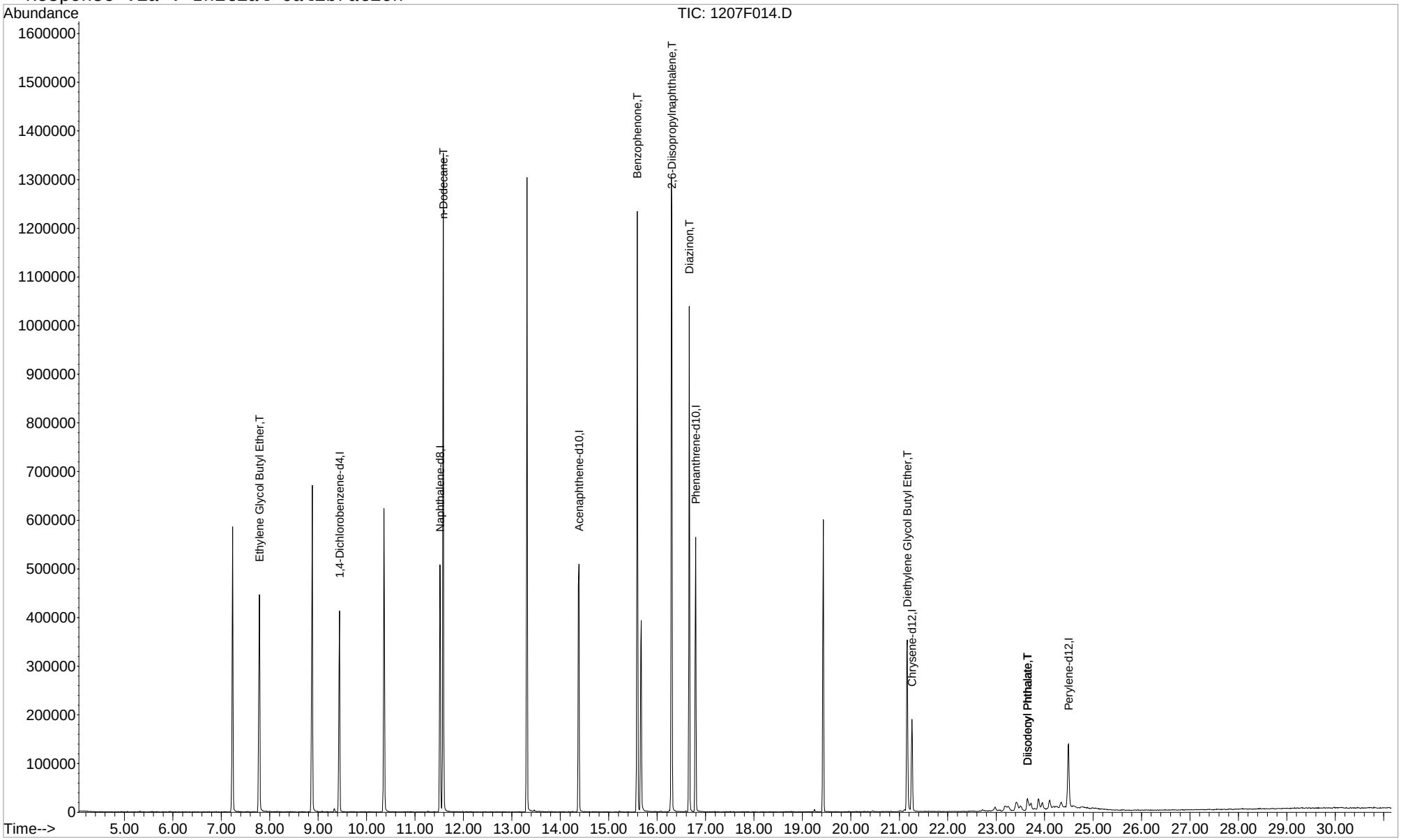
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.44	152	75038	40.00	ug/ml	0.02
22) Naphthalene-d8	11.51	136	273752	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.38	164	144581	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.79	188	243224	40.00	ug/ml	0.00
73) Chrysene-d12	21.26	240	98622	40.00	ug/ml	-0.03
83) Perylene-d12	24.50	264	96376	40.00	ug/ml	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	ug/ml	
Spiked Amount 150.000	Range 21 - 100		Recovery =	0.00%#		
8) Phenol-d6	0.00	99	0d	0.00	ug/ml	
Spiked Amount 150.000	Range 10 - 94		Recovery =	0.00%#		
20) Nitrobenzene-d5	0.00	82	0d	0.00	ug/ml	
Spiked Amount 100.000	Range 35 - 114		Recovery =	0.00%#		
40) 2-Fluorobiphenyl	0.00	172	0d	0.00	ug/ml	
Spiked Amount 100.000	Range 43 - 116		Recovery =	0.00%#		
62) 2,4,6-Tribromophenol	0.00	330	0d	0.00	ug/ml	
Spiked Amount 150.000	Range 10 - 123		Recovery =	0.00%#		
76) Terphenyl-d14	0.00	244	0d	0.00	ug/ml	
Spiked Amount 100.000	Range 33 - 141		Recovery =	0.00%#		
Target Compounds						Qvalue
5) Ethylene Glycol Butyl Ethe	7.79	57	184809	84.03	ug/ml	98
31) n-Dodecane	11.58	57	255734	82.03	ug/ml	97
60) Benzophenone	15.59	105	330817	86.36	ug/ml#	37
65) 2,6-Diisopropylnaphthalene	16.30	197	401524	90.43	ug/ml	99
67) Diazinon	16.66	137	92447	98.08	ug/ml	98
78) Diethylene Glycol Butyl Et	21.17	105	193768	88.24	ug/ml	98
87) Diisononyl Phthalate	23.65	293	11605m	80.34	ug/ml	
88) Diisodecyl Phthalate	23.65	149	256951m	93.91	ug/ml	

(#) = qualifier out of range (m) = manual integration

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F014.D Vial: 14
Acq On : 8 Dec 2018 12:03 am Operator: CConover
Sample : PAPER ICV @ 80ppm | SVM58-87A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 8 1:28 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

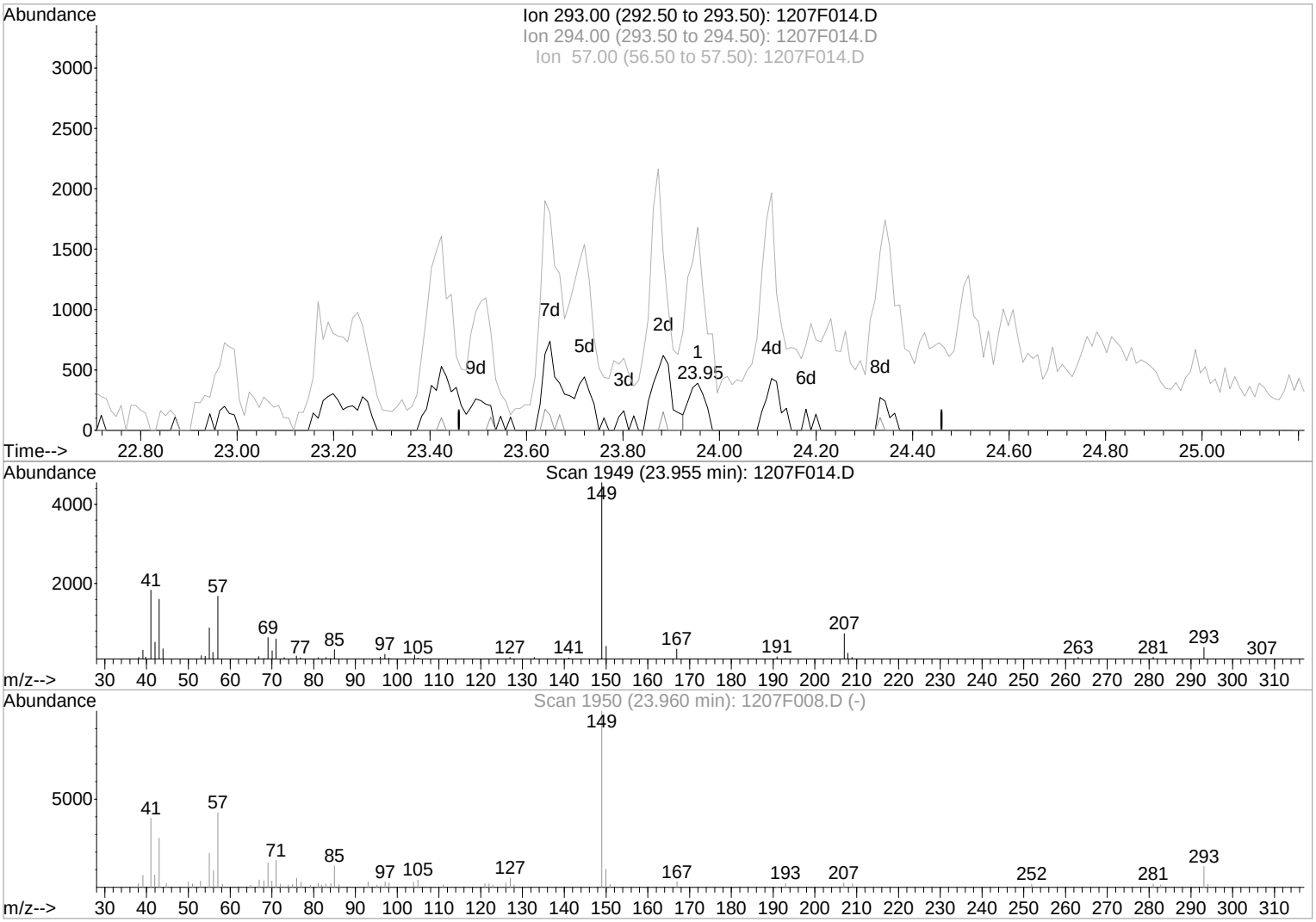


Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F014.D Vial: 14
Acq On : 8 Dec 2018 12:03 am Operator: CConover
Sample : PAPER ICV @ 80ppm | SVM58-87A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 8 1:27 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Multiple Level Calibration



TIC: 1207F014.D

(87) Diisononyl Phthalate (T)

23.95min 6.22ug/ml

response 899

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	0.00
57.00	33.10	376.08#
0.00	0.00	0.00

Manual Integration:

Before

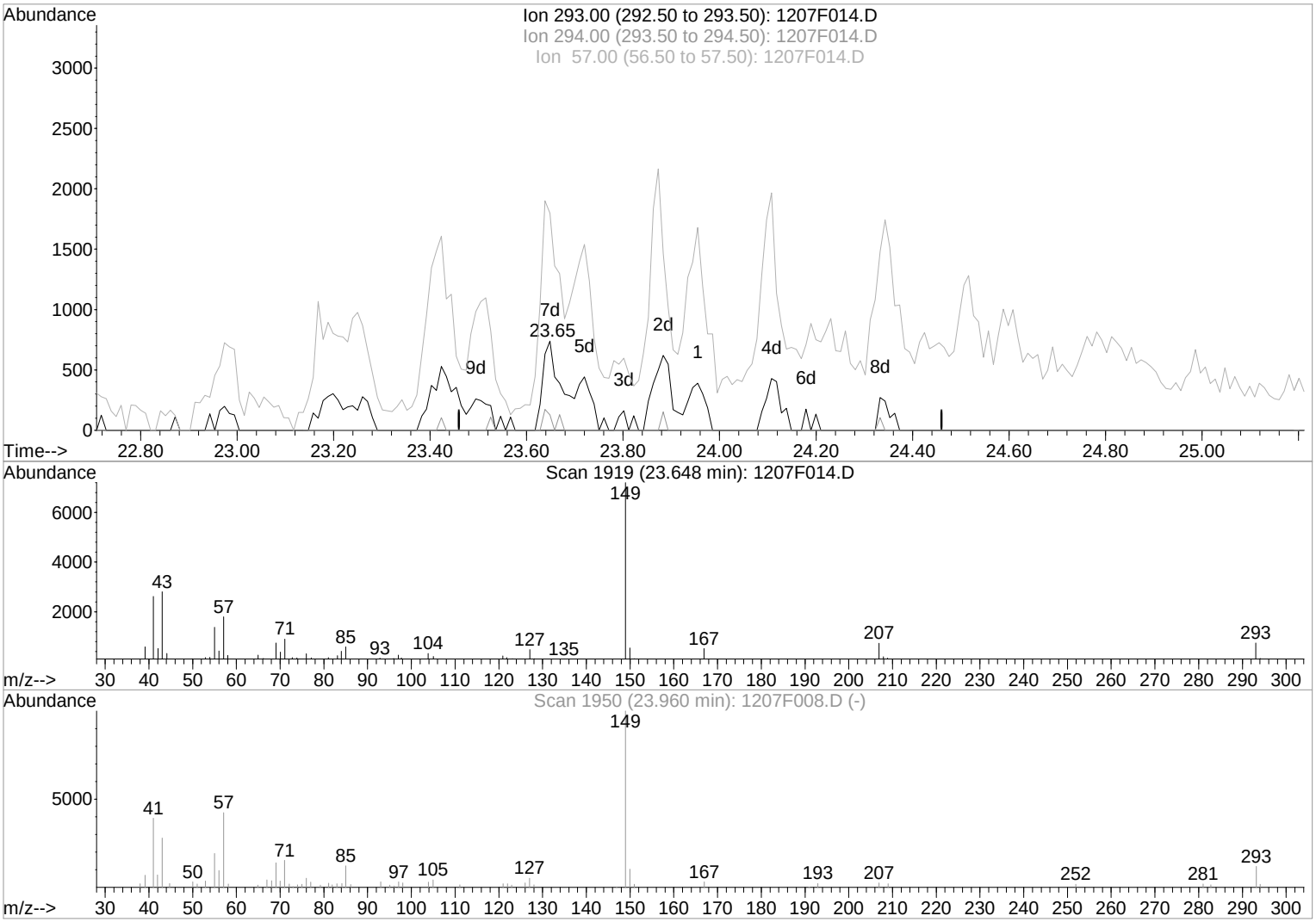
12/08/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F014.D Vial: 14
Acq On : 8 Dec 2018 12:03 am Operator: CConover
Sample : PAPER ICV @ 80ppm | SVM58-87A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 8 1:27 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Multiple Level Calibration



TIC: 1207F014.D

(87) Diisononyl Phthalate (T)

23.65min 80.34ug/ml m

response 11605

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	0.00
57.00	33.10	29.13
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

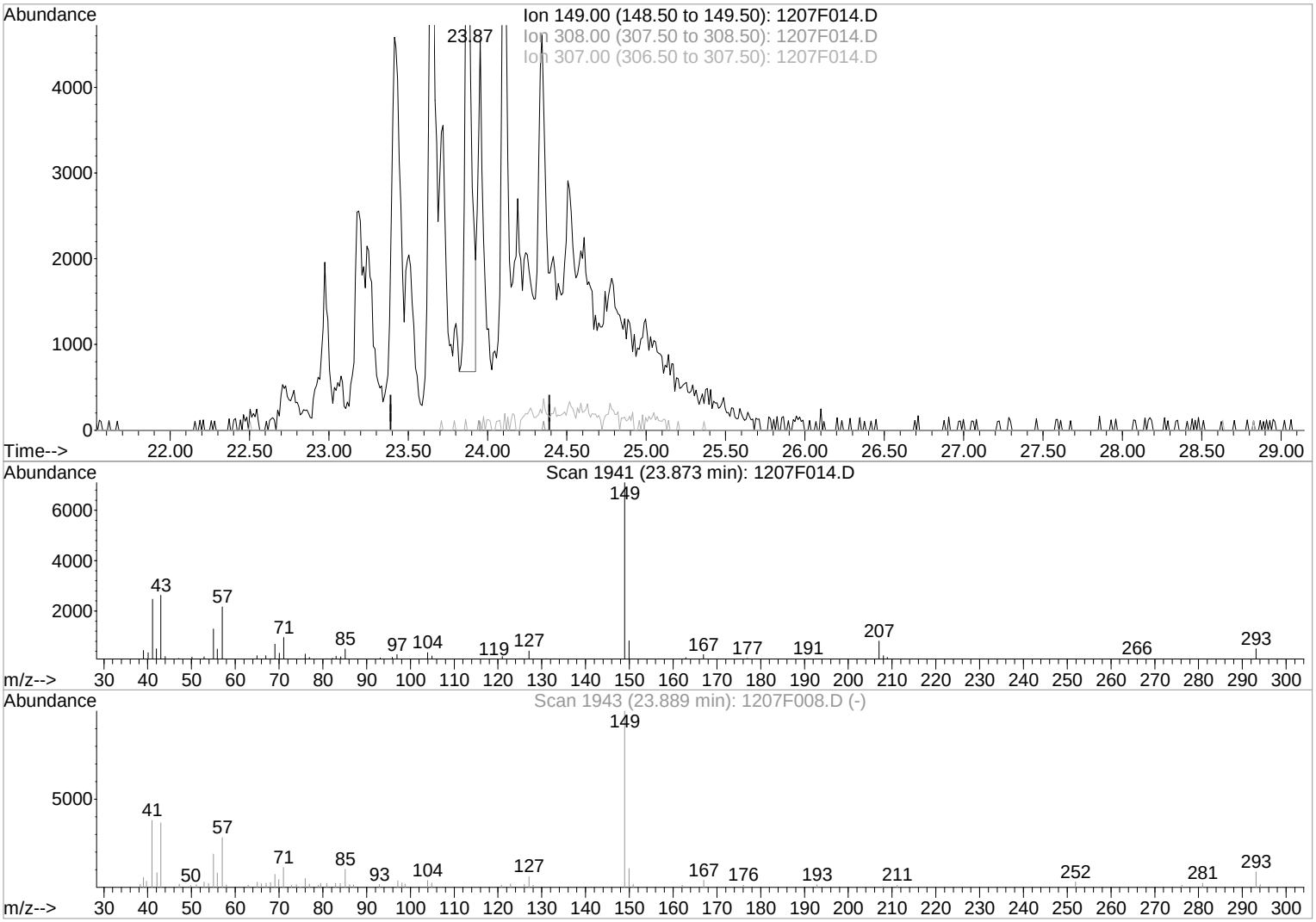
12/08/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F014.D Vial: 14
Acq On : 8 Dec 2018 12:03 am Operator: CConover
Sample : PAPER ICV @ 80ppm | SVM58-87A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 8 1:27 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Multiple Level Calibration



TIC: 1207F014.D

(88) Diisodecyl Phthalate (T)

23.87min 6.11ug/ml

response 16710

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

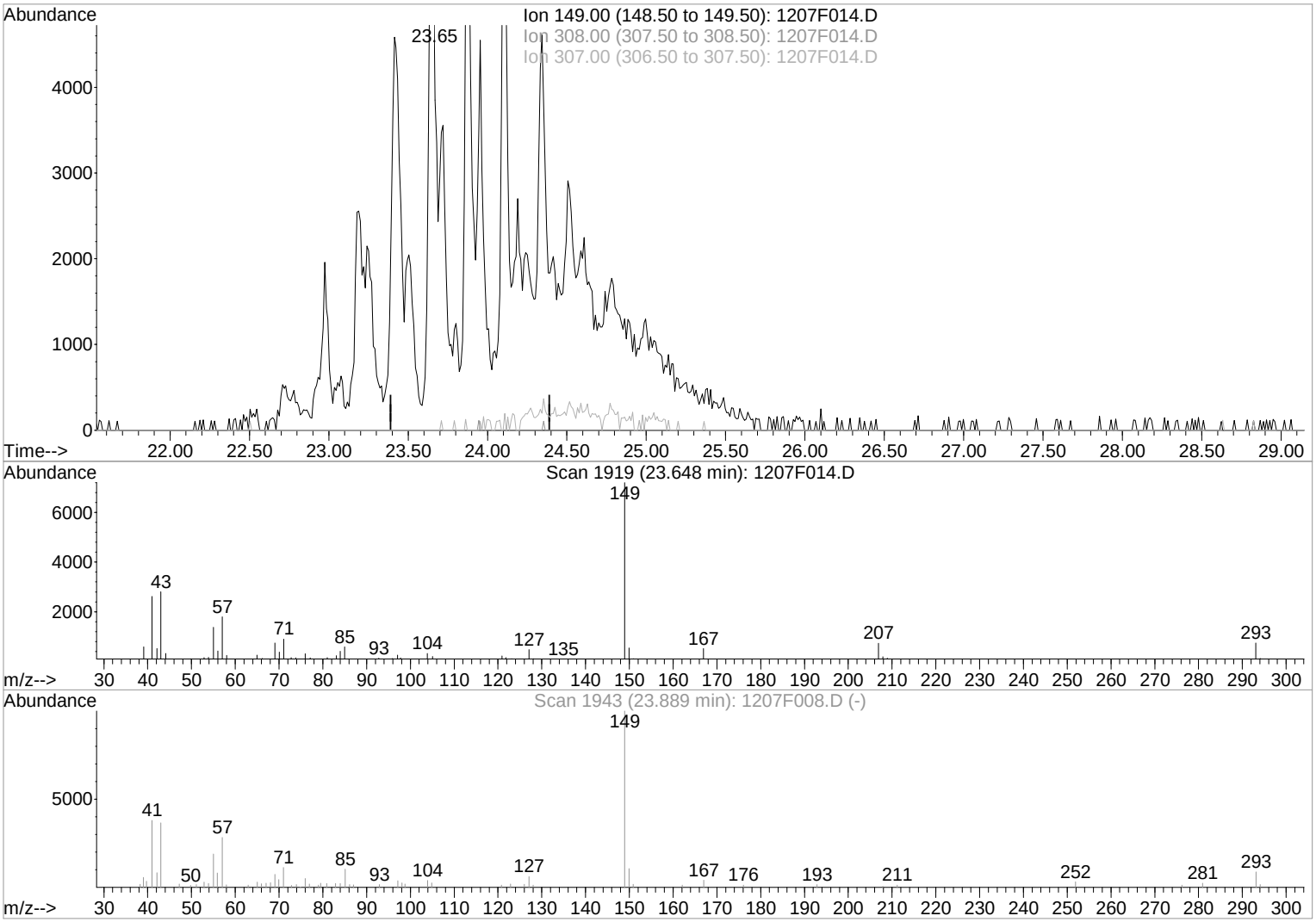
12/08/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F014.D Vial: 14
Acq On : 8 Dec 2018 12:03 am Operator: CConover
Sample : PAPER ICV @ 80ppm | SVM58-87A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 8 1:28 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Multiple Level Calibration



TIC: 1207F014.D

(88) Diisodecyl Phthalate (T)

23.65min 93.91ug/ml m

response 256951

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

12/08/18

1st 12/08/18
2nd 12/13/18

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F015.D Vial: 15
Acq On : 8 Dec 2018 12:44 am Operator: CConover
Sample : Benzidine ICV @ 50ppm | SVM59-93D Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 08 01:29:19 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	41074	40.00	ug/ml	0.00
22) Naphthalene-d8	11.51	136	148976	40.00	ug/ml	-0.01
36) Acenaphthene-d10	14.38	164	84176	40.00	ug/ml	-0.01
61) Phenanthrene-d10	16.79	188	137996	40.00	ug/ml	-0.01
73) Chrysene-d12	21.26	240	98299	40.00	ug/ml	-0.02
83) Perylene-d12	24.49	264	92575	40.00	ug/ml	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	ug/ml	
Spiked Amount 150.000	Range 21 - 100		Recovery =	0.00%#		
8) Phenol-d6	0.00	99	0	0.00	ug/ml	
Spiked Amount 150.000	Range 10 - 94		Recovery =	0.00%#		
20) Nitrobenzene-d5	0.00	82	0	0.00	ug/ml	
Spiked Amount 100.000	Range 35 - 114		Recovery =	0.00%#		
40) 2-Fluorobiphenyl	0.00	172	0	0.00	ug/ml	
Spiked Amount 100.000	Range 43 - 116		Recovery =	0.00%#		
62) 2,4,6-Tribromophenol	0.00	330	0	0.00	ug/ml	
Spiked Amount 150.000	Range 10 - 123		Recovery =	0.00%#		
76) Terphenyl-d14	0.00	244	0d	0.00	ug/ml	
Spiked Amount 100.000	Range 33 - 141		Recovery =	0.00%#		
Target Compounds						Qvalue
74) Benzidine	19.02	184	104168	99.83	ug/ml	98

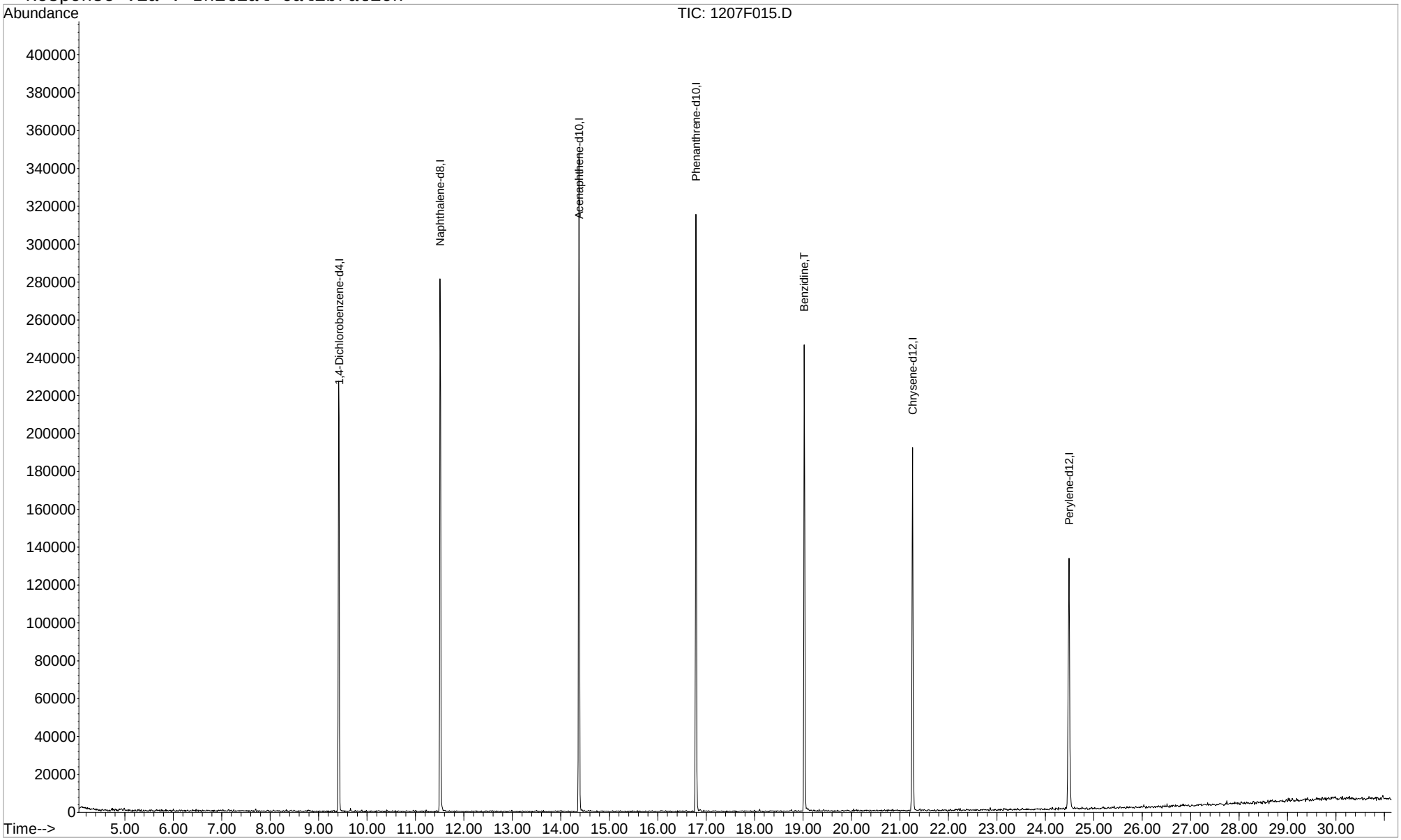
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F015.D Vial: 15
Acq On : 8 Dec 2018 12:44 am Operator: CConover
Sample : Benzidine ICV @ 50ppm | SVM59-93D Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 8 1:30 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration



Injection Log

Directory: J:\MS07\DATA\120818

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1208F001.D	1.	DFTPP @ 50ppm | SVM59-97Y		8 Dec 2018 02:06
2	2	1208F002.D	1.	8270/P CCV @ 80ppm | SVM60-6E		8 Dec 2018 02:47
3	3	1208F003.D	1.	KQ1817224-07 | MB	DI Blank	8 Dec 2018 03:28
4	4	1208F004.D	1.	KQ1817224-03 | MB	Leachate Blank 1	8 Dec 2018 04:09
5	5	1208F005.D	1.	KQ1817224-06 | MB	Leachate Blank 2	8 Dec 2018 04:50
6	6	1208F006.D	1.	KQ1817224-01 | LCS		8 Dec 2018 05:31
7	7	1208F007.D	1.	K1811269-001 | MS		8 Dec 2018 06:12
8	8	1208F008.D	1.	K1811269-001 | DMS		8 Dec 2018 06:53
9	9	1208F009.D	1.	K1811269-001		8 Dec 2018 07:34
10	10	1208F010.D	1.	K1811269-002		8 Dec 2018 08:15
11	11	1208F011.D	1.	K1811269-003		8 Dec 2018 08:55
12	12	1208F012.D	1.	K1811120-001		8 Dec 2018 09:36
13	13	1208F013.D	1.	K1811120-002		8 Dec 2018 10:17
14	14	1208F014.D	1.	K1811120-003		8 Dec 2018 10:58
15	15	1208F015.D	1.	K1811120-004		8 Dec 2018 11:39
16	17	1208F016.D	1.	K1810672-001 2X		8 Dec 2018 12:20
17	1	1208F017.D	1.	DFTPP @ 50ppm | SVM59-97Y		8 Dec 2018 13:00
18	2	1208F018.D	1.	8270/P CCV @ 80ppm | SVM60-6E		8 Dec 2018 13:41
19	18	1208F019.D	1.	KQ1817361-10 | MB	DI Blank	8 Dec 2018 14:22
20	19	1208F020.D	1.	KQ1817361-08 | MB	Leachate Blank 1	8 Dec 2018 15:02
21	20	1208F021.D	1.	KQ1817361-09 | MB	Leachate Blank 2	8 Dec 2018 15:43
22	21	1208F022.D	1.	KQ1817361-07 | LCS		8 Dec 2018 16:23
23	22	1208F023.D	1.	K1811346-001 | MS		8 Dec 2018 17:04
24	23	1208F024.D	1.	K1811346-001 | DMS		8 Dec 2018 17:45
25	24	1208F025.D	1.	K1811346-001 | DUP		8 Dec 2018 18:25
26	25	1208F026.D	1.	K1811346-001		8 Dec 2018 19:06
27	26	1208F027.D	1.	K1811346-002 | MS	NR	8 Dec 2018 19:47
28	27	1208F028.D	1.	K1811346-002 | DMS		8 Dec 2018 20:28
29	28	1208F029.D	1.	K1811346-002 | DUP		8 Dec 2018 21:09
30	29	1208F030.D	1.	K1811346-002		8 Dec 2018 21:49
31	30	1208F031.D	1.	K1811381-004		8 Dec 2018 22:30
32	31	1208F032.D	1.	K1811381-005		8 Dec 2018 23:11
33	32	1208F033.D	1.	K1811438-001		8 Dec 2018 23:52
34	33	1208F034.D	1.	K1811438-002		9 Dec 2018 00:33

KC1800055D
Stanlims 618135
CL 12/19/18

5

Injection Log

Directory: J:\MS07\DATA\010719

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0107F001.D	1.	DFTPP @ 50ppm | SVM60-17B		7 Jan 2019 15:02
2	2	0107F002.D	1.	8270/P CCV @ 80ppm | SVM60-20A		7 Jan 2019 15:42
3	3	0107F003.D	1.	KQ1900019-05 | MB	DI Blank	7 Jan 2019 16:22
4	4	0107F004.D	1.	KQ1900019-04 | MB	Leachate Blank	7 Jan 2019 17:03
5	5	0107F005.D	1.	KQ1900019-03 | LCS		7 Jan 2019 17:43
6	6	0107F006.D	1.	KQ1900019-01 | MS		7 Jan 2019 18:23
7	7	0107F007.D	1.	KQ1900019-02 | DMS		7 Jan 2019 19:04
8	8	0107F008.D	1.	K1812550-001		7 Jan 2019 19:44
9	9	0107F009.D	1.	KQ1816573-03 | LCS		7 Jan 2019 20:24
10	10	0107F010.D	1.	KQ1816573-01 | MS		7 Jan 2019 21:04
11	11	0107F011.D	1.	K1812239-001 | MS		7 Jan 2019 21:45
12	12	0107F012.D	1.	K1812239-001 | DMS		7 Jan 2019 22:25
13	1	0107F013.D	1.	DFTPP @ 50ppm | SVM60-17B		7 Jan 2019 23:05
14	2	0107F014.D	1.	8270/P CCV @ 80ppm | SVM60-20A		7 Jan 2019 23:45
15	13	0107F015.D	1.	KQ1818690-05 | MB	DI Blank	8 Jan 2019 00:26
16	14	0107F016.D	1.	KQ1818690-03 | MB	Leachate Blank 1	8 Jan 2019 01:06
17	15	0107F017.D	1.	KQ1818690-04 | MB	Leachate Blank 2	8 Jan 2019 01:46
18	16	0107F018.D	1.	KQ1818690-01 | LCS		8 Jan 2019 02:26
19	17	0107F019.D	1.	K1811381-004 | MS		8 Jan 2019 03:07
20	18	0107F020.D	1.	K1811381-004 | DMS		8 Jan 2019 03:47
21	19	0107F021.D	1.	K1811381-004 EX		8 Jan 2019 04:27
22	20	0107F022.D	1.	K1811381-005		8 Jan 2019 05:08
23	21	0107F023.D	1.	K1811438-001		8 Jan 2019 05:48
24	22	0107F024.D	1.	K1811438-002		8 Jan 2019 06:28

NC: FO13 optic failure

KC1800550

Starlims 621348

CL 01/10/19

Injection Log

Directory: J:\MS07\DATA\011019

ine	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
	1	0110F001.D	1.	DFTPP @ 50ppm | SVM60-17B		10 Jan 2019 17:01
	2	0110F002.D	1.	8270/P CCV @ 80ppm | SVM60-28A		10 Jan 2019 17:42
	3	0110F003.D	1.	GPC 8 check	01/08/19	10 Jan 2019 18:22
	4	0110F004.D	1.	GPC 6 check NR	01/08/19	10 Jan 2019 19:02
	5	0110F005.D	1.	KQ1818690-05 | MB	DI Blank	10 Jan 2019 19:43
	6	0110F006.D	1.	KQ1818690-03 | MB	Leachate Blank	10 Jan 2019 20:23
	7	0110F007.D	1.	KWG1806573-4 | MB	recleaned	10 Jan 2019 21:04
	8	0110F008.D	1.	KWG1806573-3 | LCS	recleaned	10 Jan 2019 21:44
	9	0110F009.D	1.	K1812282-001 | MS	recleaned	10 Jan 2019 22:24
0	10	0110F010.D	1.	K1812282-001 | DMS	recleaned	10 Jan 2019 23:05
1	11	0110F011.D	1.	K1812282-001	recleaned	10 Jan 2019 23:45
2	12	0110F012.D	1.	K1812282-002	recleaned	11 Jan 2019 00:25
3	13	0110F013.D	1.	KQ1900214-04 | MB		11 Jan 2019 01:06
4	14	0110F014.D	1.	KQ1900214-02 | LCS		11 Jan 2019 01:46
5	15	0110F015.D	1.	KQ1900214-03 | DLCS		11 Jan 2019 02:27
6	16	0110F016.D	1.	KQ1900214-01 | MS		11 Jan 2019 03:07
7	17	0110F017.D	1.	K1811319-001 RX		11 Jan 2019 03:47

NR: thru does not pass for 625

KC1800551

Starting 621711

CL 01/11/19

CL 1/14/19

ALS Environmental
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Kelso, WA 98626
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January 23, 2019

Analytical Report for Service Request No: K1812382

Craig Hutchings
Integral Consulting, Inc.
1205 West Bay Drive NW
Olympia, WA 98502-4670

RE: San Jacinto River Waste Pits PDI-1

Dear Craig,

Enclosed are the results of the sample(s) submitted to our laboratory December 18, 2018
For your reference, these analyses have been assigned our service request number **K1812382.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Integral Consulting, Incorporated
Project: San Jacinto River Waste Pits PDI-1
Sample Matrix: Soil

Service Request: K1812382
Date Received: 12/18/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt:
One soil sample was received for analysis at ALS Environmental on 12/18/2018. The sample was received in good condition and consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4ºC upon receipt at the laboratory.

Semivolatiles by GC/MS:
No significant anomalies were noted with this analysis.

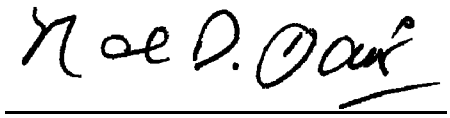
Semivoa GC:
No significant anomalies were noted with this analysis.

Metals:
No significant anomalies were noted with this analysis.

General Chemistry:
Method 9034 Modified, 01/07/2019: The analysis of sample SL0594 was initially performed past the recommended holding time due to a tracking error by the analyst. Efforts were made to analyze the sample as soon as the error was identified. The data was flagged to indicate the holding time violation.

Subcontracted Analytical Parameters:
Cyanide Reactivity
This analysis was performed at ALS Environmental in Holland, MI. The data for this analysis is included in the corresponding section of this report.

Volatiles by GC/MS:
No significant anomalies were noted with this analysis.

Approved by  Date 01/23/2019

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

CHAIN OF CUSTODY FORM

Project: SAN JACINTO RIVER WASTE PITS PDI-1

Samplers: CHRIS TORELL - ANCHOR QEA

Integral Contact: OLIVIA HARGRAVE
Phone 206 9527, 0352

Ship to: HAND DELIVERED
Lab Name ALS HOUSTON
Address 10450 STANCLIFFRD. #210
HOUSTON TX 77099
Contact KRISTIN NEIR
Phone 281 530 5656

integral consulting inc.

ANALYSES REQUESTED

Sample No.	Tag #	Date	Time	Matrix	1613B DIOXANS/FURANS	1311 TCLP	9034 React SULFIDES	7.3.3.2 React. CN-	1010A IGN, 9040 FLASH, PH. CORROS.				Extra Container	Archive	Comments (BELOW CAP)
SL0590	0106	12/9/18	1130	SOIL	1										SJSB038 8-9'
SL0591	0107	12/9/18	1150	SOIL	1										SJSB038 9-10'
SL0592	0108	12/9/18	1150	SOIL	1										SJSB038 10-11'
SL0593	0109	12/9/18	1200	SOIL	1										SJSB038 11-12
SL0594	[illegible]	12/9/18	1500	SOIL		2	1	1	1				1	X	SJSB038 0-9
					TAGS	0111 0110	0114	0113	0112						
	→ SEE →														

PRESERVED W/ ZINC ACETATE

5 GALLON BUCKET (HOMOGENIZE WELL BEFORE USE)

SL0595 TAG 0115

E1801105 5
Integral Consulting, Inc.
San Jacinto Waste Pits

Relinquished by [signature] 12/17/18 1434

Analysis Turn Time: Normal Rush **Rush Results Needed By:**

Shipped by: CRT **Shipping Tracking No.** HAND DELIVERED

Condition of Samples Upon Receipt: **Custody Seal Intact?**

Matrix Code: GW - Groundwater; SL - Soil; SW - Surface water; SD -Sediment; Other:

Relinquished by: [signature] (signature) **Date/Time:** 12/10/18 0703 **Received by:** [signature] (signature) **Date/Time:** 12/10/18 0723

Relinquished by: (signature) **Date/Time:** **Received by:** [signature] (signature) **Date/Time:** 12/18/18 1005

Special Instructions:

44526 o/c - 3.8° #25

c/f 0.3°

PC_____

Cooler Receipt and Preservation Form

Client INTEGRAL Service Request K18

Received: 12-18-18 Opened: 12-18-18 By: JSP Unloaded: 12-18-18 By: JSP

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other*_____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 1 Top Front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number NA	Filed
-1.0	-1.0	0.0	0.0	0.0	308		4512 1075 1270	

4. Packing material: *Inserts* *Baggies* (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

*otes, Discrepancies, & Resolutions:*_____

Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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ALS Group USA, Corp.
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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	12/9/18
Sample Matrix:	Soil	**Date Received:**	12/18/18
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
SL0594	K1812382-001	**45.9**	-	-	1	12/26/18 09:38	

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project	San Jacinto River Waste Pits PDI-1	**Date Collected:**	12/09/18
Sample Matrix:	Soil	**Date Received:**	12/18/18
		Date Analyzed:	12/26/18

Replicate Sample Summary

Inorganic Parameters

Sample Name:	SL0594	**Units:**	Percent
Lab Code:	K1812382-001	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1812382-001DUP Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	-	45.9	44.9	45.4	2	20

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General Chemistry

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	12/9/18
Sample Matrix:	Soil	**Date Received:**	12/18/18
Analysis Method:	1020A Modified	**Units:**	deg C
Prep Method:	None	**Basis:**	As Received

Flash Point

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
SL0594	K1812382-001	**>110**	-	-	1	01/03/19 08:00	
Method Blank	K1812382-MB	**>110**	-	-	1	01/03/19 08:00	

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project	San Jacinto River Waste Pits PDI-1	**Date Collected:**	12/09/18
Sample Matrix:	Soil	**Date Received:**	12/18/18
		Date Analyzed:	01/03/19

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	SL0594	**Units:**	deg C
Lab Code:	K1812382-001	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample K1812382-001DUP Result	Average	RPD	RPD Limit
Flash Point	1020A Modified	-	-	>110	>110	NC	NC	20

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	01/03/19
Sample Matrix:	Soil	**Date Extracted:**	NA

Lab Control Sample Summary
Flash Point

Analysis Method:	1020A Modified	**Units:**	deg C
Prep Method:	None	**Basis:**	As Received
		Analysis Lot:	620892

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1812382-LCS	27	27.0	100	85-115

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	12/9/18
Sample Matrix:	Soil	**Date Received:**	12/18/18
Analysis Method:	9034 Modified	**Units:**	mg/Kg
Prep Method:	SW-846 Ch 7, 7.3.4.2	**Basis:**	Dry

Sulfide, Reactive

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
SL0594	K1812382-001	ND U	70	-	1	01/07/19 14:56	1/7/19	*
Method Blank	K1812382-MB	ND U	32	-	1	01/07/19 14:56	1/7/19	

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	01/07/19
Sample Matrix:	Soil	**Date Extracted:**	01/07/19

Lab Control Sample Summary
Sulfide, Reactive

Analysis Method:	9034 Modified	**Units:**	mg/Kg
Prep Method:	SW-846 Ch 7, 7.3.4.2	**Basis:**	Dry
		Analysis Lot:	621230

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1812382-LCS	513	738	70	60-130

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	12/9/18
Sample Matrix:	Soil	**Date Received:**	12/18/18
Analysis Method:	9045D	**Units:**	pH Units
Prep Method:	None	**Basis:**	As Received

pH

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
SL0594	K1812382-001	**7.84**	-	-	1	12/21/18 13:40	H

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project	San Jacinto River Waste Pits PDI-1	**Date Collected:**	12/09/18
Sample Matrix:	Soil	**Date Received:**	12/18/18
		Date Analyzed:	12/21/18

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	SL0594	**Units:**	pH Units
Lab Code:	K1812382-001	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample K1812382-001DUP Result	Average	RPD	RPD Limit
pH	9045D	-	-	7.84	7.80	7.82	<1	20

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	12/21/18
Sample Matrix:	Soil	**Date Extracted:**	NA

Lab Control Sample Summary
pH

Analysis Method:	9045D	**Units:**	pH Units
Prep Method:	None	**Basis:**	As Received
		Analysis Lot:	619860

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1812382-LCS	8.57	8.64	99	85-115

Metals

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	12/09/18 15:00
Sample Matrix:	Soil	**Date Received:**	12/18/18 10:05
Sample Name:	SL0594	**Basis:**	NA
Lab Code:	K1812382-001		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND U	mg/L	0.050	0.020	5	01/02/19 13:48	12/20/18	
Barium	6010C	**0.9 J**	mg/L	1.0	0.5	5	01/02/19 13:48	12/20/18	
Cadmium	6010C	ND U	mg/L	0.050	0.001	5	01/02/19 13:48	12/20/18	
Chromium	6010C	ND U	mg/L	0.050	0.010	5	01/02/19 13:48	12/20/18	
Lead	6010C	ND U	mg/L	0.050	0.015	5	01/02/19 13:48	12/20/18	
Mercury	7470A	ND U	mg/L	0.0010	0.0001	1	12/21/18 07:56	12/20/18	
Selenium	6010C	ND U	mg/L	0.10	0.02	5	01/02/19 13:48	12/20/18	
Silver	6010C	ND U	mg/L	0.050	0.004	5	01/02/19 13:48	12/20/18	

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	KQ1818537-02		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	**0.022 J**	mg/L	0.050	0.020	5	01/02/19 13:43	12/20/18	
Barium	6010C	ND U	mg/L	1.0	0.5	5	01/02/19 13:43	12/20/18	
Cadmium	6010C	**0.001 J**	mg/L	0.050	0.001	5	01/02/19 13:43	12/20/18	
Chromium	6010C	ND U	mg/L	0.050	0.010	5	01/02/19 13:43	12/20/18	
Lead	6010C	ND U	mg/L	0.050	0.015	5	01/02/19 13:43	12/20/18	
Selenium	6010C	ND U	mg/L	0.10	0.02	5	01/02/19 13:43	12/20/18	
Silver	6010C	**0.005 J**	mg/L	0.050	0.004	5	01/02/19 13:43	12/20/18	

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	KQ1818530-01		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7470A	ND U	mg/L	0.0010	0.0001	1	12/21/18 07:53	12/20/18	

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project	San Jacinto River Waste Pits PDI-1	**Date Collected:**	12/09/18
Sample Matrix:	Soil	**Date Received:**	12/18/18
		Date Analyzed:	01/02/19

Replicate Sample Summary
TCLP Metals

Sample Name:	SL0594	**Units:**	mg/L
Lab Code:	K1812382-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ1818537-03 Result	Average	RPD	RPD Limit
Arsenic	6010C	0.050	0.020	ND U	0.033 J	NC	NC	20
Barium	6010C	1.0	0.5	0.9 J	0.9 J	0.9	<1	20
Cadmium	6010C	0.050	0.001	ND U	ND U	ND	-	20
Chromium	6010C	0.050	0.010	ND U	ND U	ND	-	20
Lead	6010C	0.050	0.015	ND U	ND U	ND	-	20
Selenium	6010C	0.10	0.02	ND U	ND U	ND	-	20
Silver	6010C	0.050	0.004	ND U	ND U	ND	-	20

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project	San Jacinto River Waste Pits PDI-1	**Date Collected:**	12/09/18
Sample Matrix:	Soil	**Date Received:**	12/18/18
		Date Analyzed:	12/21/18

Replicate Sample Summary

TCLP Metals

Sample Name:	SL0594	**Units:**	mg/L
Lab Code:	K1812382-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ1818530-03 Result	Average	RPD	RPD Limit
Mercury	7470A	0.0010	0.0001	ND U	ND U	ND	-	20

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	12/09/18
Sample Matrix:	Soil	**Date Received:**	12/18/18
		Date Analyzed:	01/2/19
		Date Extracted:	12/20/18

Matrix Spike Summary
TCLP Metals

Sample Name:	SL0594	**Units:**	mg/L
Lab Code:	K1812382-001	**Basis:**	NA
Analysis Method:	6010C		
Prep Method:	EPA 3010A		

Matrix Spike
KQ1818537-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	ND U	4.84	5.00	97	75-125
Barium	0.9 J	10.5	10.0	96	75-125
Cadmium	ND U	0.955	1.00	95	75-125
Chromium	ND U	4.61	5.00	92	75-125
Lead	ND U	4.75	5.00	95	75-125
Selenium	ND U	0.98	1.00	98	75-125
Silver	ND U	0.862	1.00	86	75-125

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Printed 1/7/2019 3:38:14 PM Superset Reference:

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	12/09/18
Sample Matrix:	Soil	**Date Received:**	12/18/18
		Date Analyzed:	12/21/18
		Date Extracted:	12/20/18

Matrix Spike Summary
TCLP Metals

Sample Name:	SL0594	**Units:**	mg/L
Lab Code:	K1812382-001	**Basis:**	NA
Analysis Method:	7470A		
Prep Method:	Method		

Matrix Spike
KQ1818530-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Mercury	ND U	0.0047	0.0050	94	75-125

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QA/QC Report

Client: Integral Consulting, Incorporated
Project: San Jacinto River Waste Pits PDI-1
Sample Matrix: Soil

Service Request: K1812382
Date Analyzed: 01/02/19

Lab Control Sample Summary
TCLP Metals

Units:mg/L
Basis:NA

Lab Control Sample
KQ1818537-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6010C	5.02	5.00	100	80-120
Barium	6010C	9.8	10.0	98	80-120
Cadmium	6010C	1.00	1.00	100	80-120
Chromium	6010C	4.76	5.00	95	80-120
Lead	6010C	5.12	5.00	102	80-120
Selenium	6010C	1.02	1.00	102	80-120
Silver	6010C	1.03	1.00	103	80-120

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	12/21/18
Sample Matrix:	Soil		

Lab Control Sample Summary
TCLP Metals

Units:mg/L
Basis:NA

Lab Control Sample
KQ1818530-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7470A	0.0048	0.0050	95	80-120

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Prep Summary Report

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1
Sample Matrix: Soil

Metals

Prep Method: EPA 3010A **Extraction Lot:** 328676
Analytical Method: 6010C **Extraction Date:** 12/20/18 13:45

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
SL0594	K1812382-001	12/9/18	12/18/18	25 mL	25 mL	
Lab Control Sample	KQ1818537-01LCS	NA	NA	25 mL	25 mL	
Method Blank	KQ1818537-02MB	NA	NA	25 mL	25 mL	
Duplicate	KQ1818537-03DUP	12/9/18	12/18/18	25 mL	25 mL	
Matrix Spike	KQ1818537-04MS	12/9/18	12/18/18	25 mL	25 mL	

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Prep Summary Report

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1
Sample Matrix: Soil

Metals

Prep Method: Method **Extraction Lot:** 328670
Analytical Method: 7470A **Extraction Date:** 12/20/18 14:30

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
SL0594	K1812382-001	12/9/18	12/18/18	20 mL	20 mL	
Method Blank	KQ1818530-01MB	NA	NA	20 mL	20 mL	
Lab Control Sample	KQ1818530-02LCS	NA	NA	20 mL	20 mL	
Duplicate	KQ1818530-03DUP	12/9/18	12/18/18	20 mL	20 mL	
Matrix Spike	KQ1818530-04MS	12/9/18	12/18/18	20 mL	20 mL	

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 12/21/18 07:45						
Mercury	7470A	619791	5.1	5.0	102	90-110
CCV 12/21/18 07:50						
Mercury	7470A	619791	5.1	5.0	102	90-110
CCV 12/21/18 08:03						
Mercury	7470A	619791	5.0	5.0	101	90-110
ICV 01/02/19 08:32						
Arsenic	6010C	620740	2420	2500	97	90-110
Barium	6010C	620740	4660	5000	93	90-110
Cadmium	6010C	620740	1200	1250	96	90-110
Chromium	6010C	620740	449	500	90	90-110
Lead	6010C	620740	2430	2500	97	90-110
Selenium	6010C	620740	2460	2500	98	90-110
Silver	6010C	620740	590	625	94	90-110
CCVB 01/02/19 08:48						
Arsenic	6010C	620740	1020	1000	102	90-110
Barium	6010C	620740	9340	10000	93	90-110
CCVA 01/02/19 08:51						
Cadmium	6010C	620740	248	250	99	90-110
Chromium	6010C	620740	247	250	99	90-110
Lead	6010C	620740	249	250	100	90-110
Selenium	6010C	620740	253	250	101	90-110
Silver	6010C	620740	249	250	100	90-110
CCVB 01/02/19 09:42						
Arsenic	6010C	620740	983	1000	98	90-110
Barium	6010C	620740	9270	10000	93	90-110
CCVA 01/02/19 09:45						
Cadmium	6010C	620740	244	250	98	90-110
Chromium	6010C	620740	227	250	91	90-110
Lead	6010C	620740	249	250	100	90-110
Selenium	6010C	620740	255	250	102	90-110
Silver	6010C	620740	248	250	99	90-110
CCVB 01/02/19 10:25						
Arsenic	6010C	620740	997	1000	100	90-110
Barium	6010C	620740	9200	10000	92	90-110
CCVA 01/02/19 10:28						
Cadmium	6010C	620740	243	250	97	90-110

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCVA 01/02/19 10:28						
Chromium	6010C	620740	226	250	91	90-110
Lead	6010C	620740	247	250	99	90-110
Selenium	6010C	620740	254	250	102	90-110
Silver	6010C	620740	249	250	100	90-110
CCVB 01/02/19 11:06						
Arsenic	6010C	620740	995	1000	100	90-110
Barium	6010C	620740	9330	10000	93	90-110
CCVA 01/02/19 11:14						
Cadmium	6010C	620740	245	250	98	90-110
Chromium	6010C	620740	231	250	92	90-110
Lead	6010C	620740	246	250	99	90-110
Selenium	6010C	620740	261	250	104	90-110
Silver	6010C	620740	245	250	98	90-110
CCVB 01/02/19 11:53						
Arsenic	6010C	620740	1030	1000	103	90-110
Barium	6010C	620740	9870	10000	99	90-110
CCVA 01/02/19 11:55						
Cadmium	6010C	620740	244	250	98	90-110
Chromium	6010C	620740	239	250	96	90-110
Lead	6010C	620740	243	250	97	90-110
Selenium	6010C	620740	260	250	104	90-110
Silver	6010C	620740	243	250	97	90-110
CCVB 01/02/19 12:26						
Arsenic	6010C	620740	1000	1000	100	90-110
Barium	6010C	620740	9550	10000	96	90-110
CCVA 01/02/19 12:29						
Cadmium	6010C	620740	246	250	98	90-110
Chromium	6010C	620740	237	250	95	90-110
Lead	6010C	620740	246	250	98	90-110
Selenium	6010C	620740	261	250	105	90-110
Silver	6010C	620740	250	250	100	90-110
CCVB 01/02/19 13:00						
Arsenic	6010C	620740	1000	1000	100	90-110
Barium	6010C	620740	9560	10000	96	90-110
CCVA 01/02/19 13:02						
Cadmium	6010C	620740	246	250	98	90-110

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCVA 01/02/19 13:02						
Chromium	6010C	620740	233	250	93	90-110
Lead	6010C	620740	248	250	99	90-110
Selenium	6010C	620740	261	250	104	90-110
Silver	6010C	620740	250	250	100	90-110
CCVB 01/02/19 13:33						
Arsenic	6010C	620740	1010	1000	101	90-110
Barium	6010C	620740	9350	10000	94	90-110
CCVA 01/02/19 13:36						
Cadmium	6010C	620740	245	250	98	90-110
Chromium	6010C	620740	225	250	90	90-110
Lead	6010C	620740	250	250	100	90-110
Selenium	6010C	620740	261	250	104	90-110
Silver	6010C	620740	252	250	101	90-110
CCVB 01/02/19 14:06						
Arsenic	6010C	620740	1050	1000	105	90-110
Barium	6010C	620740	9770	10000	98	90-110
CCVA 01/02/19 14:09						
Cadmium	6010C	620740	247	250	99	90-110
Chromium	6010C	620740	239	250	96	90-110
Lead	6010C	620740	248	250	99	90-110
Selenium	6010C	620740	261	250	104	90-110
Silver	6010C	620740	250	250	100	90-110
CCVB 01/02/19 15:28						
Arsenic	6010C	620740	998	1000	100	90-110
Barium	6010C	620740	9680	10000	97	90-110
CCVA 01/02/19 15:31						
Cadmium	6010C	620740	247	250	99	90-110
Chromium	6010C	620740	235	250	94	90-110
Lead	6010C	620740	248	250	99	90-110
Selenium	6010C	620740	262	250	105	90-110
Silver	6010C	620740	245	250	98	90-110
CCVB 01/02/19 15:36						
Arsenic	6010C	620740	1040	1000	104	90-110
Barium	6010C	620740	9540	10000	95	90-110
CCVA 01/02/19 15:38						
Cadmium	6010C	620740	248	250	99	90-110

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCVA	01/02/19 15:38						
	Chromium	6010C	620740	240	250	96	90-110
	Lead	6010C	620740	248	250	99	90-110
	Selenium	6010C	620740	263	250	105	90-110
	Silver	6010C	620740	247	250	99	90-110
CCVB	01/02/19 16:17						
	Arsenic	6010C	620740	1000	1000	100	90-110
	Barium	6010C	620740	9250	10000	92	90-110
CCVA	01/02/19 16:20						
	Cadmium	6010C	620740	246	250	99	90-110
	Chromium	6010C	620740	226	250	90	90-110
	Lead	6010C	620740	250	250	100	90-110
	Selenium	6010C	620740	265	250	106	90-110
	Silver	6010C	620740	247	250	99	90-110

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 12/21/18 07:47				
Mercury	7470A	619791	1.0	U
CCB 12/21/18 07:52				
Mercury	7470A	619791	1.0	U
CCB 12/21/18 08:04				
Mercury	7470A	619791	1.0	U
ICB 01/02/19 08:37				
Arsenic	6010C	620740	5	U
Barium	6010C	620740	-0.900	J
Cadmium	6010C	620740	0.4	U
Chromium	6010C	620740	2	U
Lead	6010C	620740	3	U
Selenium	6010C	620740	7	U
Silver	6010C	620740	2	U
CCB 01/02/19 08:54				
Arsenic	6010C	620740	4	U
Barium	6010C	620740	100	U
Cadmium	6010C	620740	0.2	U
Chromium	6010C	620740	2	U
Lead	6010C	620740	3	U
Selenium	6010C	620740	4	U
Silver	6010C	620740	0.8	U
CCB 01/02/19 09:47				
Arsenic	6010C	620740	4	U
Barium	6010C	620740	100	U
Cadmium	6010C	620740	0.2	J
Chromium	6010C	620740	2	U
Lead	6010C	620740	3	U
Selenium	6010C	620740	4	U
Silver	6010C	620740	0.8	U
CCB 01/02/19 10:37				
Arsenic	6010C	620740	4	U
Barium	6010C	620740	100	U
Cadmium	6010C	620740	0.2	U
Chromium	6010C	620740	2	U
Lead	6010C	620740	3	U
Selenium	6010C	620740	4	U

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 01/02/19 10:37				
Silver	6010C	620740	0.8	U
CCB 01/02/19 11:17				
Arsenic	6010C	620740	4	U
Barium	6010C	620740	100	U
Cadmium	6010C	620740	0.2	U
Chromium	6010C	620740	2	U
Lead	6010C	620740	3	U
Selenium	6010C	620740	4	U
Silver	6010C	620740	0.8	U
CCB 01/02/19 11:58				
Arsenic	6010C	620740	4	U
Barium	6010C	620740	100	U
Cadmium	6010C	620740	0.2	U
Chromium	6010C	620740	2	U
Lead	6010C	620740	3	U
Selenium	6010C	620740	4	U
Silver	6010C	620740	0.8	U
CCB 01/02/19 12:31				
Arsenic	6010C	620740	4	U
Barium	6010C	620740	100	U
Cadmium	6010C	620740	0.2	U
Chromium	6010C	620740	2	U
Lead	6010C	620740	3	U
Selenium	6010C	620740	4	U
Silver	6010C	620740	0.8	J
CCB 01/02/19 13:05				
Arsenic	6010C	620740	4	U
Barium	6010C	620740	100	U
Cadmium	6010C	620740	0.2	U
Chromium	6010C	620740	2	U
Lead	6010C	620740	3	U
Selenium	6010C	620740	4	U
Silver	6010C	620740	0.8	U
CCB 01/02/19 13:38				
Arsenic	6010C	620740	4	U
Barium	6010C	620740	100	U

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 01/02/19 13:38				
Cadmium	6010C	620740	0.2	U
Chromium	6010C	620740	2	U
Lead	6010C	620740	3	U
Selenium	6010C	620740	4	U
Silver	6010C	620740	1	J
CCB 01/02/19 14:11				
Arsenic	6010C	620740	4	U
Barium	6010C	620740	100	U
Cadmium	6010C	620740	0.2	U
Chromium	6010C	620740	2	U
Lead	6010C	620740	3	U
Selenium	6010C	620740	4	U
Silver	6010C	620740	0.8	U
CCB 01/02/19 15:33				
Arsenic	6010C	620740	4	U
Barium	6010C	620740	100	U
Cadmium	6010C	620740	0.2	U
Chromium	6010C	620740	2	U
Lead	6010C	620740	3	U
Selenium	6010C	620740	4	U
Silver	6010C	620740	0.8	U
CCB 01/02/19 15:41				
Arsenic	6010C	620740	4	U
Barium	6010C	620740	100	U
Cadmium	6010C	620740	0.2	U
Chromium	6010C	620740	2	U
Lead	6010C	620740	3	U
Selenium	6010C	620740	5	J
Silver	6010C	620740	0.8	U
CCB 01/02/19 16:22				
Arsenic	6010C	620740	4	U
Barium	6010C	620740	100	U
Cadmium	6010C	620740	0.2	U
Chromium	6010C	620740	2	U
Lead	6010C	620740	3	U
Selenium	6010C	620740	4	U

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 01/02/19 16:22				
Silver	6010C	620740	0.8	U

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICV							
Mercury	7470A	619791	0.20	0.2	98	50-199	12/21/18 07:48
LLICV							
Arsenic	6010C	620740	11.9	10.0	119	70-130	01/02/19 08:40
Cadmium	6010C	620740	1.0	1.0	100	70-130	01/02/19 08:40
Chromium	6010C	620740	3.5	4.0	88	70-130	01/02/19 08:40
Lead	6010C	620740	10.9	10.0	109	70-130	01/02/19 08:40
Selenium	6010C	620740	21.6	20.0	108	70-130	01/02/19 08:40
Silver	6010C	620740	4.7	4.0	118	70-130	01/02/19 08:40
LLICV							
Barium	6010C	620740	182	200	91	70-130	01/02/19 08:45
LLCCV							
Arsenic	6010C	620740	12.3	10.0	123	70-130	01/02/19 16:25
Cadmium	6010C	620740	1.0	1.0	100	70-130	01/02/19 16:25
Chromium	6010C	620740	3.1	4.0	78	70-130	01/02/19 16:25
Lead	6010C	620740	10.6	10.0	106	70-130	01/02/19 16:25
Selenium	6010C	620740	23.1	20.0	116	70-130	01/02/19 16:25
Silver	6010C	620740	4.1	4.0	103	70-130	01/02/19 16:25
LLCCV							
Barium	6010C	620740	188	200	94	70-130	01/02/19 16:30

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1

ICP INTERFERENCE CHECK SAMPLE

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

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Arsenic	6010C	620740	5	-	-	-	01/02/19 08:56
Barium	6010C	620740	0.9	-	-	-	01/02/19 08:56
Cadmium	6010C	620740	-7.80	-	-	-	01/02/19 08:56
Chromium	6010C	620740	2	-	-	-	01/02/19 08:56
Lead	6010C	620740	-9.70	-	-	-	01/02/19 08:56
Selenium	6010C	620740	7	-	-	-	01/02/19 08:56
Silver	6010C	620740	2	-	-	-	01/02/19 08:56

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSAB **Concentration Units:** ug/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Arsenic	6010C	620740	5	-	-	-	01/02/19 08:59
Barium	6010C	620740	460	500	92	80-120	01/02/19 08:59
Cadmium	6010C	620740	862	1000	86	80-120	01/02/19 08:59
Chromium	6010C	620740	447	500	89	80-120	01/02/19 08:59
Lead	6010C	620740	841	1000	84	80-120	01/02/19 08:59
Selenium	6010C	620740	7	-	-	-	01/02/19 08:59
Silver	6010C	620740	844	1000	84	80-120	01/02/19 08:59

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1

POST SPIKE SAMPLE RECOVERY

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Initial Sample Result	Post Spike Result	True Value	% Rec	% Rec. Limits	Analysis Date
K1812382-001A								
Mercury	7470A	619791	0.1 U	4.5	5.0	90	85-115	12/21/18 07:58
K1812382-001A								
Arsenic	6010C	620740	20 U	4640	5000	93	80-120	01/02/19 13:59
Barium	6010C	620740	500 U	9500	10000	93	80-120	01/02/19 13:59
Cadmium	6010C	620740	1 U	925	1000	92	80-120	01/02/19 13:59
Chromium	6010C	620740	10 U	4500	5000	90	80-120	01/02/19 13:59
Lead	6010C	620740	15 U	4630	5000	93	80-120	01/02/19 13:59
Selenium	6010C	620740	20 U	950	1000	95	80-120	01/02/19 13:59
Silver	6010C	620740	4 U	878	1000	88	80-120	01/02/19 13:59

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

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1

ICP SERIAL DILUTIONS

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Initial Sample Result	Serial Dillution Result	% Diff	% Diff. Limit	Analysis Date
K1812382-001SDL							
Arsenic	6010C	620740	20 U	70 U	381	10	01/02/19 13:51
Barium	6010C	620740	900 J	900 U	2	10	01/02/19 13:51
Cadmium	6010C	620740	1 U	0.00 U	100	10	01/02/19 13:51
Chromium	6010C	620740	10 U	-22.5 U	-275	10	01/02/19 13:51
Lead	6010C	620740	20 U	5 U	-300	10	01/02/19 13:51
Selenium	6010C	620740	20 U	10 U	38	10	01/02/19 13:51
Silver	6010C	620740	4 U	20 U	600	10	01/02/19 13:51

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1/

Detection Limits

Instrument: K-CVAA-02 **Matrix:** Soil

Analyte	Wavelength (nm)	Units	MRL	MDL	Method
Mercury	253	ug/L	1.0	0.1	7470A

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1/

Detection Limits

Instrument: K-ICP-AES-03 **Matrix:** Soil

Analyte	Wavelength (nm)	Units	MRL	MDL	Method
Arsenic	1890	ug/L	10	4	6010C
Barium	4554	ug/L	200	100	6010C
Cadmium	2265	ug/L	10	0.2	6010C
Chromium	2677	ug/L	10	2	6010C
Lead	2203	ug/L	10	3	6010C
Selenium	1960	ug/L	20	4	6010C
Silver	3280	ug/L	10	0.8	6010C

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1/

ICP Linear Range (Quarterly)

Instrument: K-CVAA-02

Analyte	Concentration (ug/L)	Method
Mercury	10	7470A

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1/

ICP Linear Range (Quarterly)

Instrument: K-ICP-AES-03

Analyte	Concentration (ug/L)	Method
Arsenic 1890	90000	6010C
Barium 4554	45000	6010C
Cadmium 2265	23500	6010C
Chromium 2677	45000	6010C
Lead 2203	22500	6010C
Selenium 1960	45000	6010C
Silver 3280	1800	6010C

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1/

Analysis Run Log

Instrument ID: **K-CVAA-02** **Analytical BatchID:** **619791**

Sample	Dilution Factor	Date/Time	Hg
ZZZZZZ	1	12/21/18 07:35	
ZZZZZZ	1	12/21/18 07:37	
ZZZZZZ	1	12/21/18 07:39	
ZZZZZZ	1	12/21/18 07:40	
ZZZZZZ	1	12/21/18 07:42	
ZZZZZZ	1	12/21/18 07:43	
ICV1	1	12/21/18 07:45	X
ICB1	1	12/21/18 07:47	X
LLICV1	1	12/21/18 07:48	X
CCV1	1	12/21/18 07:50	X
CCB1	1	12/21/18 07:52	X
KQ1818530-01MB	1	12/21/18 07:53	X
KQ1818530-02LCS	1	12/21/18 07:55	X
K1812382-001	1	12/21/18 07:56	X
K1812382-001PS	1	12/21/18 07:58	X
K1812382-001DUP	1	12/21/18 08:00	X
K1812382-001MS	1	12/21/18 08:01	X
CCV2	1	12/21/18 08:03	X
CCB2	1	12/21/18 08:04	X

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1/

Analysis Run Log

Instrument ID: **K-ICP-AES-03** **Analytical BatchID:** **620740**

Sample	Dilution Factor	Date/Time	As	Ba	Cd	Cr	Pb	Se	Ag
ZZZZZZ	1	01/02/19 08:21							
ZZZZZZ	1	01/02/19 08:24							
ZZZZZZ	1	01/02/19 08:26							
ZZZZZZ	1	01/02/19 08:29							
ICV	1	01/02/19 08:32	X	X	X	X	X	X	X
ZZZZZZ	1	01/02/19 08:35							
ICB	1	01/02/19 08:37	X	X	X	X	X	X	X
LLICV	1	01/02/19 08:40	X		X	X	X	X	X
ZZZZZZ	0.5	01/02/19 08:43							
LLICV-TCLP	1	01/02/19 08:45		X					
CCVB1	1	01/02/19 08:48	X	X					
CCVA1	1	01/02/19 08:51			X	X	X	X	X
CCB	1	01/02/19 08:54	X	X	X	X	X	X	X
ICSA	1	01/02/19 08:56	X	X	X	X	X	X	X
ICSAB	1	01/02/19 08:59	X	X	X	X	X	X	X
ZZZZZZ	1	01/02/19 09:16							
ZZZZZZ	1	01/02/19 09:19							
ZZZZZZ	1	01/02/19 09:21							
ZZZZZZ	5	01/02/19 09:24							
ZZZZZZ	1	01/02/19 09:26							
ZZZZZZ	1	01/02/19 09:29							
ZZZZZZ	1	01/02/19 09:32							
ZZZZZZ	1	01/02/19 09:34							
ZZZZZZ	1	01/02/19 09:37							
ZZZZZZ	1	01/02/19 09:39							
CCVB	1	01/02/19 09:42	X	X					
CCVA	1	01/02/19 09:45			X	X	X	X	X
CCB	1	01/02/19 09:47	X	X	X	X	X	X	X
ZZZZZZ	1	01/02/19 09:50							
ZZZZZZ	0.5	01/02/19 09:54							
ZZZZZZ	1.111	01/02/19 09:59							
ZZZZZZ	1.111	01/02/19 10:02							
ZZZZZZ	1.111	01/02/19 10:04							
ZZZZZZ	1.111	01/02/19 10:07							
ZZZZZZ	1	01/02/19 10:09							
ZZZZZZ	1	01/02/19 10:12							
ZZZZZZ	1	01/02/19 10:15							

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1/

Analysis Run Log

Instrument ID: **K-ICP-AES-03** **Analytical BatchID:** **620740**

Sample	Dilution Factor	Date/Time	As	Ba	Cd	Cr	Pb	Se	Ag
ZZZZZZ	1	01/02/19 10:17							
ZZZZZZ	1	01/02/19 10:20							
ZZZZZZ	1	01/02/19 10:22							
CCVB	1	01/02/19 10:25	X	X					
CCVA	1	01/02/19 10:28			X	X	X	X	X
CCB	1	01/02/19 10:37	X	X	X	X	X	X	X
ZZZZZZ	1	01/02/19 10:41							
ZZZZZZ	1	01/02/19 10:43							
ZZZZZZ	1.111	01/02/19 10:56							
ZZZZZZ	1.111	01/02/19 10:58							
ZZZZZZ	1.111	01/02/19 11:01							
ZZZZZZ	1.111	01/02/19 11:04							
CCVB	1	01/02/19 11:06	X	X					
ZZZZZZ	1	01/02/19 11:10							
CCVA	1	01/02/19 11:14			X	X	X	X	X
CCB	1	01/02/19 11:17	X	X	X	X	X	X	X
ZZZZZZ	1	01/02/19 11:20							
ZZZZZZ	0.5	01/02/19 11:23							
ZZZZZZ	5	01/02/19 11:28							
ZZZZZZ	5	01/02/19 11:30							
ZZZZZZ	5	01/02/19 11:32							
ZZZZZZ	5	01/02/19 11:35							
ZZZZZZ	5	01/02/19 11:38							
ZZZZZZ	5	01/02/19 11:40							
ZZZZZZ	5	01/02/19 11:43							
ZZZZZZ	5	01/02/19 11:45							
ZZZZZZ	5	01/02/19 11:48							
ZZZZZZ	5	01/02/19 11:50							
CCVB	1	01/02/19 11:53	X	X					
CCVA	1	01/02/19 11:55			X	X	X	X	X
CCB	1	01/02/19 11:58	X	X	X	X	X	X	X
ZZZZZZ	5	01/02/19 12:00							
ZZZZZZ	5	01/02/19 12:03							
ZZZZZZ	5	01/02/19 12:05							
ZZZZZZ	5	01/02/19 12:08							
ZZZZZZ	5	01/02/19 12:10							
ZZZZZZ	5	01/02/19 12:13							

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1/

Analysis Run Log

Instrument ID: **K-ICP-AES-03** **Analytical BatchID:** **620740**

Sample	Dilution Factor	Date/Time	As	Ba	Cd	Cr	Pb	Se	Ag
ZZZZZZ	5	01/02/19 12:15							
ZZZZZZ	5	01/02/19 12:18							
ZZZZZZ	5	01/02/19 12:21							
ZZZZZZ	5	01/02/19 12:23							
CCVB	1	01/02/19 12:26	X	X					
CCVA	1	01/02/19 12:29			X	X	X	X	X
CCB	1	01/02/19 12:31	X	X	X	X	X	X	X
ZZZZZZ	5	01/02/19 12:34							
ZZZZZZ	5	01/02/19 12:36							
ZZZZZZ	5	01/02/19 12:39							
ZZZZZZ	5	01/02/19 12:42							
ZZZZZZ	5	01/02/19 12:44							
ZZZZZZ	5	01/02/19 12:47							
ZZZZZZ	5	01/02/19 12:49							
ZZZZZZ	5	01/02/19 12:52							
ZZZZZZ	5	01/02/19 12:55							
ZZZZZZ	5	01/02/19 12:57							
CCVB	1	01/02/19 13:00	X	X					
CCVA	1	01/02/19 13:02			X	X	X	X	X
CCB	1	01/02/19 13:05	X	X	X	X	X	X	X
ZZZZZZ	5	01/02/19 13:07							
ZZZZZZ	5	01/02/19 13:10							
ZZZZZZ	5	01/02/19 13:12							
ZZZZZZ	5	01/02/19 13:15							
ZZZZZZ	5	01/02/19 13:18							
ZZZZZZ	5	01/02/19 13:20							
ZZZZZZ	25	01/02/19 13:23							
ZZZZZZ	5	01/02/19 13:25							
ZZZZZZ	5	01/02/19 13:28							
ZZZZZZ	5	01/02/19 13:31							
CCVB	1	01/02/19 13:33	X	X					
CCVA	1	01/02/19 13:36			X	X	X	X	X
CCB	1	01/02/19 13:38	X	X	X	X	X	X	X
ZZZZZZ	5	01/02/19 13:41							
KQ1818537-02MB	5	01/02/19 13:43	X	X	X	X	X	X	X
KQ1818537-01LCS	5	01/02/19 13:46	X	X	X	X	X	X	X
K1812382-001	5	01/02/19 13:48	X	X	X	X	X	X	X

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1/

Analysis Run Log

Instrument ID: **K-ICP-AES-03** **Analytical BatchID:** **620740**

Sample	Dilution Factor	Date/Time	As	Ba	Cd	Cr	Pb	Se	Ag
K1812382-001SDL	25	01/02/19 13:51	X	X	X	X	X	X	X
K1812382-001DUP	5	01/02/19 13:54	X	X	X	X	X	X	X
K1812382-001MS	5	01/02/19 13:56	X	X	X	X	X	X	X
K1812382-001PS	5	01/02/19 13:59	X	X	X	X	X	X	X
ZZZZZZ	5	01/02/19 14:01							
ZZZZZZ	5	01/02/19 14:04							
CCVB	1	01/02/19 14:06	X	X					
CCVA	1	01/02/19 14:09			X	X	X	X	X
CCB	1	01/02/19 14:11	X	X	X	X	X	X	X
ZZZZZZ	5	01/02/19 14:14							
ZZZZZZ	5	01/02/19 14:17							
ZZZZZZ	5	01/02/19 14:19							
ZZZZZZ	5	01/02/19 14:22							
ZZZZZZ	2	01/02/19 14:31							
ZZZZZZ	2	01/02/19 14:33							
ZZZZZZ	2	01/02/19 14:36							
ZZZZZZ	2	01/02/19 14:38							
ZZZZZZ	2	01/02/19 14:41							
ZZZZZZ	2	01/02/19 14:44							
CCVB	1	01/02/19 15:28	X	X					
CCVA	1	01/02/19 15:31			X	X	X	X	X
CCB	1	01/02/19 15:33	X	X	X	X	X	X	X
CCVB	1	01/02/19 15:36	X	X					
CCVA	1	01/02/19 15:38			X	X	X	X	X
CCB	1	01/02/19 15:41	X	X	X	X	X	X	X
ZZZZZZ	1	01/02/19 15:43							
ZZZZZZ	0.5	01/02/19 15:46							
ZZZZZZ	10	01/02/19 16:03							
ZZZZZZ	10	01/02/19 16:05							
ZZZZZZ	10	01/02/19 16:07							
ZZZZZZ	10	01/02/19 16:10							
CCVB	1	01/02/19 16:17	X	X					
CCVA	1	01/02/19 16:20			X	X	X	X	X
CCB	1	01/02/19 16:22	X	X	X	X	X	X	X
LLCCV	1	01/02/19 16:25	X		X	X	X	X	X
ZZZZZZ	0.5	01/02/19 16:28							
LLCCV-TCLP	1	01/02/19 16:30		X					

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1/

Analysis Run Log

Instrument ID: **K-ICP-AES-03** **Analytical BatchID:** **620740**

Sample	Dilution Factor	Date/Time	As	Ba	Cd	Cr	Pb	Se	Ag
ZZZZZZ	1	01/02/19 16:35							

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Al 167.079 {502}	☒	2	Fe	0.001107	0.000000	No
			Mg	0.000027	0.000000	No
Al 394.401 { 85}	☒	4	Ca	0.000032	0.000000	No
			Mg	0.000029	0.000000	No
			Mo	0.000263	0.000000	No
			V	0.000343	0.000000	No
Sb 206.833 {463}	☒	2	Cr	0.014673	0.000000	No
			Ti	0.000551	0.000000	No
Sb 217.581 {455}	☒	5	Fe	-0.000282	0.000000	No
			Pb	-0.000404	0.000000	No
			Mn	-0.000813	0.000000	No
			V	0.002032	0.000000	No
			Cu	-0.000853	0.000000	No
As 189.042 {478}	☒	4	Cr	0.000454	0.000000	No
			Al	0.000046	0.000000	No
			Mn	-0.000282	0.000000	No
			Mo	0.000942	0.000000	No
Ba 455.403 { 74}	☒	None				
Be 234.861 {144}	☒	2	Mn	-0.000061	0.000000	No
			Mo	-0.000388	0.000000	No
B 249.678 {135}	☒	4	Fe	-0.000573	0.000000	No
			Co	0.003033	0.000000	No
			Mo	-0.001572	0.000000	No
			V	-0.000400	0.000000	No
Cd 214.438 {457}	☒	2	Al	-0.000003	0.000000	No
			Fe	0.000029	0.000000	No
Cd 226.502 {449}	☒	3	Fe	0.000142	0.000000	No
			Mo	-0.000024	0.000000	No
			Ti	0.000092	0.000000	No
Ca 315.887 {107}	☒	1	Cr	-0.001266	0.000000	No
Ca 393.366 { 86}	☒	None				
Cr 267.716 {126}	☒	2	Cd	-0.000111	0.000000	No
			Mn	0.000323	0.000000	No
Co 228.616 {447}	☒	4	Mo	-0.000876	0.000000	No
			Ni	0.000137	0.000000	No
			Ti	0.002243	0.000000	No
			Ba	-0.000058	0.000000	No
Co 230.786 {446}	☒	2	Mo	0.000169	0.000000	No
			Ni	0.000907	0.000000	No
Cu 224.700 {450}	☒	6	Fe	0.000480	0.000000	No
			Pb	0.002225	0.000000	No
			Co	0.000179	0.000000	No
			Mo	0.002076	0.000000	No
			Ni	-0.004791	0.000000	No
			Ti	0.000416	0.000000	No
Cu 327.396 {103}	☒	5	Ca	0.000013	0.000000	No
			Co	0.000271	0.000000	No
			Mo	-0.000261	0.000000	No
			Ti	0.000116	0.000000	No
			V	-0.000091	0.000000	No
Fe 259.940 {130}	☒	None				
Pb 220.353 {453}	☒	4	Al	-0.000081	0.000000	No
			Mo	-0.000514	0.000000	No
			Si	0.000255	0.000000	No
			Cu	0.000840	0.000000	No
Li 670.784 { 50}	☒	None				
Mg 279.079 {121}	☒	None				
Mg 279.553 {121}	☒	1	Ca	0.000033	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Mg 285.213 {118}	☒	3	Ca	0.000031	0.000000	No
			Mo	-0.000114	0.000000	No
			V	-0.000108	0.000000	No
Mn 257.610 {131}	☒	1	Fe	0.000008	0.000000	No
Mn 260.569 {129}	☒	None				
Mo 202.030 {467}	☒	None				
Ni 221.647 {452}	☒	4	Cr	-0.000463	0.000000	No
			Co	-0.000144	0.000000	No
			Si	0.000389	0.000000	No
			Ti	-0.001225	0.000000	No
Ni 231.604 {446}	☒	2	Co	-0.000299	0.000000	No
			Mo	-0.000090	0.000000	No
P 178.284 {489}	☒	None				
P 214.914 {457}	☒	6	Al	-0.000698	0.000000	No
			Cd	-0.002905	0.000000	No
			Fe	0.001085	0.000000	No
			Mo	0.007710	0.000000	No
			V	-0.001592	0.000000	No
			Cu	0.001402	0.000000	No
K 766.490 { 44}	☒	None				
Se 196.090 {472}	☒	2	Fe	-0.000219	0.000000	No
			Mn	0.000496	0.000000	No
Si 251.611 {134}	☒	1	Mo	0.011921	0.000000	No
Ag 328.068 {103}	☒	2	Mn	0.000158	0.000000	No
			V	0.000093	0.000000	No
Na 589.592 { 57}	☒	None				
Sr 407.771 { 83}	☒	None				
Tl 190.856 {477}	☒	4	Cr	0.000239	0.000000	No
			Co	0.003317	0.000000	No
			Ti	-0.000314	0.000000	No
			V	0.001634	0.000000	No
Sn 189.989 {477}	☒	None				
Ti 336.121 {100}	☒	3	Ca	0.000012	0.000000	No
			Ni	0.000112	0.000000	No
			V	0.000041	0.000000	No
V 292.402 {115}	☒	4	Cr	-0.006361	0.000000	No
			Mn	-0.000269	0.000000	No
			Mo	-0.000108	0.000000	No
			Ti	0.000520	0.000000	No
Zn 206.200 {463}	☒	2	Cr	-0.000140	0.000000	No
			Mo	0.000288	0.000000	No
Zn 213.856 {458}	☒	5	Fe	0.000107	0.000000	No
			Mo	-0.000105	0.000000	No
			Ni	0.005388	0.000000	No
			Ti	-0.000404	0.000000	No
			Cu	0.001082	0.000000	No
Y 224.306 {450}*	☒	None				
Y 360.073 { 94}*	☒	None				
Y 360.073 { 94}2*	☒	None				
In 230.606 {446}	☒	None				
Bi 223.061 {451}	☒	4	Cr	0.001414	0.000000	No
			Co	-0.004457	0.000000	No
			V	-0.001103	0.000000	No
			Cu	-0.002070	0.000000	No
S 182.034 {485}	☒	1	Mn	0.003490	0.000000	No

Organochlorine Pesticides

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Integral Consulting, Incorporated
Project: San Jacinto River Waste Pits PDI-1

Service Request: K1812382

Cover Page - Organic Analysis Data Package
Organochlorine Pesticides

Sample Name	Lab Code	Date Collected	Date Received
SL0594	K1812382-001	12/09/2018	12/18/2018

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	12/09/2018
Sample Matrix:	Soil	**Date Received:**	12/18/2018
		Date Prepared:	12/19/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Organochlorine Pesticides

Sample Name:	SL0594	**Units:**	mg/L
Lab Code:	K1812382-001	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 3511		
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
gamma-BHC (Lindane)	ND	U	0.00010	0.00010	0.4	1	12/21/18	12/31/18	
Heptachlor	ND	U	0.00010	0.00010	0.008	1	12/21/18	12/31/18	
Heptachlor Epoxide	ND	U	0.00010	0.00010	0.008	1	12/21/18	12/31/18	
Endrin	ND	U	0.00010	0.00010	0.02	1	12/21/18	12/31/18	
Methoxychlor	ND	U	0.00010	0.00010	10	1	12/21/18	12/31/18	
Chlordane	ND	U	0.0010	0.0010	0.03	1	12/21/18	12/31/18	
Toxaphene	ND	U	0.0020	0.0020	0.5	1	12/21/18	12/31/18	

Surrogate Name	%Rec	Control Limits	Note
Tetrachloro-m-xylene	86	70-130	Acceptable
Decachlorobiphenyl	72	70-130	Acceptable

Comments:

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Prepared:	12/19/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Organochlorine Pesticides

Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KWG1806665-5	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 3511		
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
gamma-BHC (Lindane)	ND	U	0.00010	0.00010	0.4	1	12/21/18	12/31/18	
Heptachlor	ND	U	0.00010	0.00010	0.008	1	12/21/18	12/31/18	
Heptachlor Epoxide	ND	U	0.00010	0.00010	0.008	1	12/21/18	12/31/18	
Endrin	ND	U	0.00010	0.00010	0.02	1	12/21/18	12/31/18	
Methoxychlor	ND	U	0.00010	0.00010	10	1	12/21/18	12/31/18	
Chlordane	ND	U	0.0010	0.0010	0.03	1	12/21/18	12/31/18	
Toxaphene	ND	U	0.0020	0.0020	0.5	1	12/21/18	12/31/18	

Surrogate Name	%Rec	Control Limits	Note
Tetrachloro-m-xylene	90	70-130	Acceptable
Decachlorobiphenyl	96	70-130	Acceptable

Comments:

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Prepared:	12/19/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Organochlorine Pesticides

Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KWG1806665-6	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 3511		
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
gamma-BHC (Lindane)	ND	U	0.00010	0.00010	0.4	1	12/21/18	12/31/18	
Heptachlor	ND	U	0.00010	0.00010	0.008	1	12/21/18	12/31/18	
Heptachlor Epoxide	ND	U	0.00010	0.00010	0.008	1	12/21/18	12/31/18	
Endrin	ND	U	0.00010	0.00010	0.02	1	12/21/18	12/31/18	
Methoxychlor	ND	U	0.00010	0.00010	10	1	12/21/18	12/31/18	
Chlordane	ND	U	0.0010	0.0010	0.03	1	12/21/18	12/31/18	
Toxaphene	ND	U	0.0020	0.0020	0.5	1	12/21/18	12/31/18	

Surrogate Name	%Rec	Control Limits	Note
Tetrachloro-m-xylene	72	70-130	Acceptable
Decachlorobiphenyl	86	70-130	Acceptable

Comments:

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1
Sample Matrix: Soil

Surrogate Recovery Summary
Toxicity Characteristic Leaching Procedure (TCLP)
Organochlorine Pesticides

Preparation Method: EPA 1311 **Units:** Percent
Extraction Method: EPA 3511 **Level:** Low
Analysis Method: 8081B

Sample Name	Lab Code	Sur1	Sur2
SL0594	K1812382-001	86	72
Method Blank	KWG1806665-5	90	96
Method Blank	KWG1806665-6	72	86
Lab Control Sample	KWG1806665-1	72	82
Duplicate Lab Control Sample	KWG1806665-2	78	93

Surrogate Recovery Control Limits (%)

Sur1	=	Tetrachloro-m-xylene	70-130
Sur2	=	Decachlorobiphenyl	70-130

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

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

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	12/31/2018
		Time Analyzed:	12:23

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID:	J:\GC23\DATA\123118\1231F003.D	**Lab Code:**	KWG1900100-3
Instrument ID:	GC23	**Analysis Lot:**	KWG1900100
Analysis Method:	8081B	**Column :**	DB XLB

		1-Bromo-2-nitrobenzene	
		Area	**RT**
	ICAL Average ==>	937,754	6.06
	Upper Limit ==>	1,875,509	6.56
	Lower Limit ==>	468,877	5.56
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1900100-3	959,831	6.00
Method Blank	KWG1806665-5	920,259	6.01
Method Blank	KWG1806665-6	937,949	6.00
Lab Control Sample	KWG1806665-1	931,497	6.00
Duplicate Lab Control Sample	KWG1806665-2	891,173	6.01
SL0594	K1812382-001	960,828	6.00

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

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	12/31/2018
		Time Analyzed:	12:23

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID:	J:\GC23\DATA\123118\1231F003.D\1231F003C.D	**Lab Code:**	KWG1900100-3
Instrument ID:	GC23	**Analysis Lot:**	KWG1900100
Analysis Method:	8081B	**Column :**	DB-35MS

		1-Bromo-2-nitrobenzene	
		Area	**RT**
	ICAL Average ==>	2,822,403	5.38
	Upper Limit ==>	5,644,806	5.88
	Lower Limit ==>	1,411,202	4.88
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1900100-3	3,029,535	5.34
Method Blank	KWG1806665-5	2,637,469	5.34
Method Blank	KWG1806665-6	2,699,169	5.34
Lab Control Sample	KWG1806665-1	2,730,748	5.34
Duplicate Lab Control Sample	KWG1806665-2	2,692,076	5.34
SL0594	K1812382-001	2,764,060	5.34

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

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	12/31/2018
		Time Analyzed:	13:22

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID:	J:\GC23\DATA\123118\1231F005.D	**Lab Code:**	KWG1900100-3
Instrument ID:	GC23	**Analysis Lot:**	KWG1900100
Analysis Method:	8081B	**Column :**	DB XLB

		1-Bromo-2-nitrobenzene {2}	
		Area	**RT**
	ICAL Average ==>	1,046,566	6.11
	Upper Limit ==>	2,093,132	6.61
	Lower Limit ==>	523,283	5.61
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1900100-3	879,829	6.00
Method Blank	KWG1806665-5	920,259	6.01
Method Blank	KWG1806665-6	937,949	6.00
Lab Control Sample	KWG1806665-1	912,622	6.01
Duplicate Lab Control Sample	KWG1806665-2	908,693	6.00
SL0594	K1812382-001	960,828	6.00

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

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	12/31/2018
		Time Analyzed:	13:22

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID:	J:\GC23\DATA\123118\1231F005.D\1231F005C.D	**Lab Code:**	KWG1900100-3
Instrument ID:	GC23	**Analysis Lot:**	KWG1900100
Analysis Method:	8081B	**Column :**	DB-35MS

		1-Bromo-2-nitrobenzene {2}	
		Area	**RT**
	ICAL Average ==>	3,234,035	5.42
	Upper Limit ==>	6,468,070	5.92
	Lower Limit ==>	1,617,018	4.92
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1900100-3	2,620,703	5.34
Method Blank	KWG1806665-5	2,637,469	5.34
Method Blank	KWG1806665-6	2,699,169	5.34
Lab Control Sample	KWG1806665-1	2,627,157	5.34
Duplicate Lab Control Sample	KWG1806665-2	2,547,264	5.34
SL0594	K1812382-001	2,764,060	5.34

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

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	12/31/2018
		Time Analyzed:	13:52

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID:	J:\GC23\DATA\123118\1231F006.D	**Lab Code:**	KWG1900100-3
Instrument ID:	GC23	**Analysis Lot:**	KWG1900100
Analysis Method:	8081B	**Column :**	DB XLB

		1-Bromo-2-nitrobenzene {3}	
		Area	**RT**
	ICAL Average ==>	1,060,568	6.11
	Upper Limit ==>	2,121,136	6.61
	Lower Limit ==>	530,284	5.61
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1900100-3	942,525	6.00
Method Blank	KWG1806665-5	920,259	6.01
Method Blank	KWG1806665-6	937,949	6.00
Lab Control Sample	KWG1806665-1	912,622	6.01
Duplicate Lab Control Sample	KWG1806665-2	908,693	6.00
SL0594	K1812382-001	960,828	6.00

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

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	12/31/2018
		Time Analyzed:	13:52

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID:	J:\GC23\DATA\123118\1231F006.D\1231F006C.D	**Lab Code:**	KWG1900100-3
Instrument ID:	GC23	**Analysis Lot:**	KWG1900100
Analysis Method:	8081B	**Column :**	DB-35MS

		1-Bromo-2-nitrobenzene {3}	
		Area	**RT**
	ICAL Average ==>	3,224,098	5.42
	Upper Limit ==>	6,448,196	5.92
	Lower Limit ==>	1,612,049	4.92
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1900100-3	2,886,970	5.34
Method Blank	KWG1806665-5	2,637,469	5.34
Method Blank	KWG1806665-6	2,699,169	5.34
Lab Control Sample	KWG1806665-1	2,627,157	5.34
Duplicate Lab Control Sample	KWG1806665-2	2,547,264	5.34
SL0594	K1812382-001	2,764,060	5.34

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

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Prepared:**	12/19/2018
Sample Matrix:	Soil	**Date Extracted:**	12/21/2018
		Date Analyzed:	12/31/2018

Lab Control Spike/Duplicate Lab Control Spike Summary
Organochlorine Pesticides

Extraction Method:	EPA 1311/EPA 3511	**Units:**	mg/L
Analysis Method:	8081B	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1806665

	Lab Control Sample KWG1806665-1 Lab Control Spike			Duplicate Lab Control Sample KWG1806665-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
gamma-BHC (Lindane)	0.000253	0.000250	101	0.000256	0.000250	103	70-130	1	30
Heptachlor	0.000275	0.000250	110	0.000272	0.000250	109	70-130	1	30
Heptachlor Epoxide	0.000248	0.000250	99	0.000258	0.000250	103	70-130	4	30
Endrin	0.000270	0.000250	108	0.000278	0.000250	111	70-130	3	30
Methoxychlor	0.000273	0.000250	109	0.000276	0.000250	111	70-130	1	30
Chlordane	0.00468	0.00500	94	0.00481	0.00500	96	70-130	3	30
Toxaphene	0.0107	0.0100	107	0.0110	0.0100	110	70-130	3	30

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

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

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Extracted:**	12/21/2018
Sample Matrix:	Soil	**Date Analyzed:**	12/31/2018
		Time Analyzed:	17:48

Method Blank Summary
Organochlorine Pesticides

Sample Name:	Method Blank	**Instrument ID:**	GC23
Lab Code:	KWG1806665-5	**File ID:**	J:\GC23\DATA\123118\1231F014.D
Extraction Method:	EPA 3511	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1806665

This Method Blank applies to the following analyses:

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Extracted:**	12/21/2018
Sample Matrix:	Soil	**Date Analyzed:**	12/31/2018
		Time Analyzed:	18:17

Method Blank Summary
Organochlorine Pesticides

Sample Name:	Method Blank	**Instrument ID:**	GC23
Lab Code:	KWG1806665-6	**File ID:**	J:\GC23\DATA\123118\1231F015.D
Extraction Method:	EPA 3511	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1806665

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1806665-1	J:\GC23\DATA\123118\1231F016.D	12/31/18	18:47
Duplicate Lab Control Sample	KWG1806665-2	J:\GC23\DATA\123118\1231F017.D	12/31/18	19:17
Lab Control Sample	KWG1806665-1	J:\GC23\DATA\123118\1231F018.D	12/31/18	19:46
Duplicate Lab Control Sample	KWG1806665-2	J:\GC23\DATA\123118\1231F019.D	12/31/18	20:16
SL0594	K1812382-001	J:\GC23\DATA\123118\1231F020.D	12/31/18	20:45

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Extracted:**	12/21/2018
Sample Matrix:	Soil	**Date Analyzed:**	12/31/2018
		Time Analyzed:	18:47

Lab Control Sample Summary
Organochlorine Pesticides

Sample Name:	Lab Control Sample	**Instrument ID:**	GC23
Lab Code:	KWG1806665-1	**File ID:**	J:\GC23\DATA\123118\1231F016.D
Extraction Method:	EPA 3511	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1806665

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1806665-5	J:\GC23\DATA\123118\1231F014.D	12/31/18	17:48
Method Blank	KWG1806665-6	J:\GC23\DATA\123118\1231F015.D	12/31/18	18:17
SL0594	K1812382-001	J:\GC23\DATA\123118\1231F020.D	12/31/18	20:45

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Extracted:**	12/21/2018
Sample Matrix:	Soil	**Date Analyzed:**	12/31/2018
		Time Analyzed:	19:46

Lab Control Sample Summary
Organochlorine Pesticides

Sample Name:	Lab Control Sample	**Instrument ID:**	GC23
Lab Code:	KWG1806665-1	**File ID:**	J:\GC23\DATA\123118\1231F018.D
Extraction Method:	EPA 3511	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1806665

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1806665-5	J:\GC23\DATA\123118\1231F014.D	12/31/18	17:48
Method Blank	KWG1806665-6	J:\GC23\DATA\123118\1231F015.D	12/31/18	18:17
SL0594	K1812382-001	J:\GC23\DATA\123118\1231F020.D	12/31/18	20:45

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15919 **Column:** DB XLB
Instrument ID: GC23

Level ID	File ID
A	J:\GC23\data\100918CAL\1009F023.D
B	J:\GC23\data\100918CAL\1009F024.D
C	J:\GC23\data\100918CAL\1009F025.D
D	J:\GC23\data\100918CAL\1009F026.D
E	J:\GC23\data\100918CAL\1009F027.D
F	J:\GC23\data\100918CAL\1009F028.D
G	J:\GC23\data\100918CAL\1009F031.D
H	J:\GC23\data\100918CAL\1009F032.D
I	J:\GC23\data\100918CAL\1009F033.D
J	J:\GC23\data\100918CAL\1009F034.D
K	J:\GC23\data\100918CAL\1009F035.D
L	J:\GC23\data\100918CAL\1009F036.D
M	J:\GC23\data\100918CAL\1009F039.D
N	J:\GC23\data\100918CAL\1009F040.D
O	J:\GC23\data\100918CAL\1009F041.D
P	J:\GC23\data\100918CAL\1009F042.D
Q	J:\GC23\data\100918CAL\1009F043.D
R	J:\GC23\data\100918CAL\1009F044.D
S	J:\GC23\data\101018CAL\1010F006.D
T	J:\GC23\data\101518CAL\1015F013.D
U	J:\GC23\data\101518CAL\1015F015.D
V	J:\GC23\data\101518CAL\1015F016.D
W	J:\GC23\data\101518CAL\1016F007.D
X	J:\GC23\data\101518CAL\1016F010.D
Y	J:\GC23\data\101518CAL\1016F013.D
Z	J:\GC23\data\121418CAL\1214F003.D
AA	J:\GC23\data\121418CAL\1214F004.D
AB	J:\GC23\data\121418CAL\1214F005.D
AC	J:\GC23\data\121418CAL\1214F006.D
AD	J:\GC23\data\121418CAL\1214F007.D
AE	J:\GC23\data\121418CAL\1214F008.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Tetrachloro-m-xylene	Z	0.20	1.77	AA	0.50	1.78	AB	1.0	1.67	AC	2.0	1.76	AD	5.0	1.45
	AE	10	1.47												
Decachlorobiphenyl	Z	0.20	1.77	AA	0.50	1.70	AB	1.0	1.76	AC	2.0	1.82	AD	5.0	1.50
	AE	10	1.48												
gamma-BHC (Lindane)	Z	0.20	1.39	AA	0.50	1.30	AB	1.0	1.31	AC	2.0	1.40	AD	5.0	1.20
	AE	10	1.24												

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

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15919 **Column:** DB XLB
Instrument ID: GC23

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Heptachlor	Z	0.20	1.27	AA	0.50	1.31	AB	1.0	1.26	AC	2.0	1.31	AD	5.0	1.10
	AE	10	1.12												
Heptachlor Epoxide	Z	0.20	1.55	AA	0.50	1.37	AB	1.0	1.31	AC	2.0	1.39	AD	5.0	1.15
	AE	10	1.18												
Endrin	Z	0.20	1.12	AA	0.50	1.17	AB	1.0	1.13	AC	2.0	1.20	AD	5.0	1.01
	AE	10	1.03												
Methoxychlor	Z	0.20	0.539	AA	0.50	0.407	AB	1.0	0.386	AC	2.0	0.394	AD	5.0	0.345
	AE	10	0.359												
Chlordane {1}							M	5.0	0.0662	N	10	0.0564	O	20	0.0614
	P	50	0.0567	Q	100	0.0544	R	200	0.0462	S	2.0	0.0592			

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

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15919 **Column:** DB XLB
Instrument ID: GC23

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Chlordane {2}							M	5.0	0.0725	N	10	0.0718	O	20	0.0742
	P	50	0.0708	Q	100	0.0674	R	200	0.0581	S	2.0	0.0903			
Chlordane {3}							M	5.0	0.0524	N	10	0.0495	O	20	0.0515
	P	50	0.0510	Q	100	0.0468	R	200	0.0395	S	2.0	0.0542			
Chlordane {4}							M	5.0	0.152	N	10	0.148	O	20	0.155
	P	50	0.141	Q	100	0.138	R	200	0.121	S	2.0	0.153			
Chlordane {5}							M	5.0	0.130	N	10	0.123	O	20	0.131
	P	50	0.122	Q	100	0.117	R	200	0.100	S	2.0	0.131			
Chlordane {6}							M	5.0	0.0883	N	10	0.0939	O	20	0.0984
	P	50	0.0882	Q	100	0.0849	R	200	0.0718	S	2.0	0.103			

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

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15919 **Column:** DB XLB
Instrument ID: GC23

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Toxaphene {1}				G	10	0.0221	H	25	0.0237	I	50	0.0252	J	100	0.0230
	K	250	0.0215	L	500	0.0215									
Toxaphene {2}				G	10	0.0154	H	25	0.0135	I	50	0.0121	J	100	0.0106
	K	250	0.00908	L	500	0.00865									
Toxaphene {3}				G	10	0.0212	H	25	0.0179	I	50	0.0180	J	100	0.0160
	K	250	0.0149	L	500	0.0150									
Toxaphene {4}				G	10	0.00901	H	25	0.00687	I	50	0.00695	J	100	0.00690
	K	250	0.00637	L	500	0.00609									
Toxaphene {5}				G	10	0.0115	H	25	0.00978	I	50	0.00893	J	100	0.00871
	K	250	0.00820	L	500	0.00812									

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

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15919 **Column:** DB XLB
Instrument ID: GC23

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Toxaphene {6}				G	10	0.0252	H	25	0.0271	I	50	0.0274	J	100	0.0258
	K	250	0.0252	L	500	0.0246									

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

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15919 **Column:** DB XLB
Instrument ID: GC23

		Calibration Evaluation					RRF Evaluation		
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**	**Average RRF**	**Q**	**Minimum RRF**
Tetrachloro-m-xylene	SURR	AverageRF	% RSD	9.2		≤ 20	1.65		
Decachlorobiphenyl	SURR	AverageRF	% RSD	8.7		≤ 20	1.67		
gamma-BHC (Lindane)	MS	AverageRF	% RSD	5.9		≤ 20	1.30		
Heptachlor	MS	AverageRF	% RSD	7.4		≤ 20	1.23		
Heptachlor Epoxide	MS	AverageRF	% RSD	11.0		≤ 20	1.32		
Endrin	MS	AverageRF	% RSD	6.9		≤ 20	1.11		
Methoxychlor	MS	AverageRF	% RSD	17.1		≤ 20	0.405		
Chlordane {1}	MULTI	AverageRF	% RSD	10.9		≤ 20	0.0572		
Chlordane {2}	MULTI	AverageRF	% RSD	13.3		≤ 20	0.0722		
Chlordane {3}	MULTI	AverageRF	% RSD	9.9		≤ 20	0.0493		
Chlordane {4}	MULTI	AverageRF	% RSD	8.4		≤ 20	0.144		
Chlordane {5}	MULTI	AverageRF	% RSD	9.0		≤ 20	0.122		
Chlordane {6}	MULTI	AverageRF	% RSD	11.2		≤ 20	0.0898		
Toxaphene {1}	MULTI	AverageRF	% RSD	6.4		≤ 20	0.0228		
Toxaphene {2}	MULTI	Quadratic	COD	0.998		≥ 0.990	0.0116		
Toxaphene {3}	MULTI	AverageRF	% RSD	13.9		≤ 20	0.0172		
Toxaphene {4}	MULTI	AverageRF	% RSD	14.6		≤ 20	0.00703		
Toxaphene {5}	MULTI	AverageRF	% RSD	13.8		≤ 20	0.00920		
Toxaphene {6}	MULTI	AverageRF	% RSD	4.4		≤ 20	0.0259		

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

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto River Waste Pits PDI-1

Service Request: K1812382
Calibration Date: 10/09/2018
Date Analyzed: 10/10/2018 - 12/17/2018

Second Source Calibration Verification
Organochlorine Pesticides

Calibration Type: Internal Standard
Analysis Method: 8081B

Calibration ID: CAL15919
Units: ug/L

File ID: J:\GC23\data\100918CAL\1009F029.D
J:\GC23\data\100918CAL\1009F030.D
J:\GC23\data\101018CAL\1010F007.D
J:\GC23\data\101018CAL\1010F008.D
J:\GC23\data\101718ICV\1017F006.D
J:\GC23\data\121718CAL\1217F004.D

Column ID: DB XLB

Analyte Name	Expected	Result	Average RF	SSV RF	%D		%Drift	Criteria	Curve Fit
gamma-BHC (Lindane)	2.0	2.4	1.30	1.57	20	*	NA	± 20 %	AverageRF
Heptachlor	2.0	2.3	1.23	1.41	15		NA	± 20 %	AverageRF
Heptachlor Epoxide	2.0	2.2	1.32	1.46	10		NA	± 20 %	AverageRF
Endrin	2.0	2.4	1.11	1.35	22	*	NA	± 20 %	AverageRF
Methoxychlor	2.0	2.2	0.405	0.442	9		NA	± 20 %	AverageRF
Chlordane {1}	50	40	0.0572	0.0458	-20		NA	± 100 %	AverageRF
Chlordane {2}	50	35	0.0722	0.0502	-30		NA	± 100 %	AverageRF
Chlordane {3}	50	62	0.0493	0.0615	25		NA	± 100 %	AverageRF
Chlordane {4}	50	48	0.144	0.139	-3		NA	± 100 %	AverageRF
Chlordane {5}	50	49	0.122	0.118	-3		NA	± 100 %	AverageRF
Chlordane {6}	50	53	0.0898	0.0948	6		NA	± 100 %	AverageRF
Chlordane	50	48	NA	NA	NA		-4	± 20 %	NA
Toxaphene {1}	200	180	0.0228	0.0208	-9		NA	± 100 %	AverageRF
Toxaphene {2}	200	190	0.0116	0.00910	NA		-7	± 100 %	Quadratic
Toxaphene {3}	200	180	0.0172	0.0156	-9		NA	± 100 %	AverageRF
Toxaphene {4}	200	180	0.00703	0.00643	-9		NA	± 100 %	AverageRF
Toxaphene {5}	200	180	0.00920	0.00821	-11		NA	± 100 %	AverageRF
Toxaphene {6}	200	180	0.0259	0.0227	-12		NA	± 100 %	AverageRF
Toxaphene	200	180	NA	NA	NA		-10	± 20 %	NA

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

† SPCC Compound **‡ CCC Compound**

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15919 **Column:** DB-35MS
Instrument ID: GC23

Level ID	File ID
A	J:\GC23\data\100918CAL\1009F023.D\1009F023c.d
B	J:\GC23\data\100918CAL\1009F024.D\1009F024c.d
C	J:\GC23\data\100918CAL\1009F025.D\1009F025c.d
D	J:\GC23\data\100918CAL\1009F026.D\1009F026c.d
E	J:\GC23\data\100918CAL\1009F027.D\1009F027c.d
F	J:\GC23\data\100918CAL\1009F028.D\1009F028c.d
G	J:\GC23\data\100918CAL\1009F031.D\1009F031c.d
H	J:\GC23\data\100918CAL\1009F032.D\1009F032c.d
I	J:\GC23\data\100918CAL\1009F033.D\1009F033c.d
J	J:\GC23\data\100918CAL\1009F034.D\1009F034c.d
K	J:\GC23\data\100918CAL\1009F035.D\1009F035c.d
L	J:\GC23\data\100918CAL\1009F036.D\1009F036c.d
M	J:\GC23\data\100918CAL\1009F039.D\1009F039c.d
N	J:\GC23\data\100918CAL\1009F040.D\1009F040c.d
O	J:\GC23\data\100918CAL\1009F041.D\1009F041c.d
P	J:\GC23\data\100918CAL\1009F042.D\1009F042c.d
Q	J:\GC23\data\100918CAL\1009F043.D\1009F043c.d
R	J:\GC23\data\100918CAL\1009F044.D\1009F044c.d
S	J:\GC23\data\101018CAL\1010F006.D\1010F006c.d
T	J:\GC23\data\101518CAL\1015F013.D\1015F013c.d
U	J:\GC23\data\101518CAL\1015F015.D\1015F015c.d
V	J:\GC23\data\101518CAL\1015F016.D\1015F016c.d
W	J:\GC23\data\101518CAL\1016F007.D\1016F007c.d
X	J:\GC23\data\101518CAL\1016F010.D\1016F010c.d
Y	J:\GC23\data\101518CAL\1016F013.D\1016F013c.d
Z	J:\GC23\data\121418CAL\1214F003.D\1214F003c.d
AA	J:\GC23\data\121418CAL\1214F004.D\1214F004c.d
AB	J:\GC23\data\121418CAL\1214F005.D\1214F005c.d
AC	J:\GC23\data\121418CAL\1214F006.D\1214F006c.d
AD	J:\GC23\data\121418CAL\1214F007.D\1214F007c.d
AE	J:\GC23\data\121418CAL\1214F008.D\1214F008c.d

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Tetrachloro-m-xylene	Z	0.20	1.53	AA	0.50	1.51	AB	1.0	1.41	AC	2.0	1.57	AD	5.0	1.27
	AE	10	1.35												
Decachlorobiphenyl	Z	0.20	1.36	AA	0.50	1.30	AB	1.0	1.22	AC	2.0	1.36	AD	5.0	1.08
	AE	10	1.11												
gamma-BHC (Lindane)	Z	0.20	1.31	AA	0.50	1.18	AB	1.0	1.12	AC	2.0	1.24	AD	5.0	1.02
	AE	10	1.11												

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

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15919 **Column:** DB-35MS
Instrument ID: GC23

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Heptachlor	Z	0.20	1.41	AA	0.50	1.21	AB	1.0	1.14	AC	2.0	1.29	AD	5.0	1.04
	AE	10	1.10												
Heptachlor Epoxide	Z	0.20	1.10	AA	0.50	1.07	AB	1.0	1.08	AC	2.0	1.15	AD	5.0	0.949
	AE	10	1.00												
Endrin	Z	0.20	0.953	AA	0.50	0.974	AB	1.0	0.942	AC	2.0	1.01	AD	5.0	0.846
	AE	10	0.906												
Methoxychlor	Z	0.20	0.437	AA	0.50	0.420	AB	1.0	0.405	AC	2.0	0.463	AD	5.0	0.384
	AE	10	0.405												
Chlordane {1}							M	5.0	0.0463	N	10	0.0435	O	20	0.0443
	P	50	0.0425	Q	100	0.0406	R	200	0.0349	S	2.0	0.0502			

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

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15919 **Column:** DB-35MS
Instrument ID: GC23

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Chlordane {2}							M	5.0	0.0279	N	10	0.0296	O	20	0.0292
	P	50	0.0282	Q	100	0.0270	R	200	0.0235	S	2.0	0.0278			
Chlordane {3}							M	5.0	0.113	N	10	0.111	O	20	0.110
	P	50	0.110	Q	100	0.105	R	200	0.0968	S	2.0	0.118			
Chlordane {4}							M	5.0	0.0705	N	10	0.0686	O	20	0.0686
	P	50	0.0662	Q	100	0.0610	R	200	0.0542	S	2.0	0.0818			
Chlordane {5}							M	5.0	0.0311	N	10	0.0317	O	20	0.0354
	P	50	0.0341	Q	100	0.0318	R	200	0.0276	S	2.0	0.0314			
Chlordane {6}							M	5.0	0.101	N	10	0.101	O	20	0.0991
	P	50	0.0985	Q	100	0.0930	R	200	0.0850	S	2.0	0.108			

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

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15919 **Column:** DB-35MS
Instrument ID: GC23

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Toxaphene {1}				G	10	0.0201	H	25	0.0171	I	50	0.0182	J	100	0.0169
	K	250	0.0155	L	500	0.0161									
Toxaphene {2}				G	10	0.00736	H	25	0.00634	I	50	0.00659	J	100	0.00613
	K	250	0.00555	L	500	0.00560									
Toxaphene {3}				G	10	0.00649	H	25	0.00622	I	50	0.00580	J	100	0.00513
	K	250	0.00479	L	500	0.00476									
Toxaphene {4}				G	10	0.0115	H	25	0.0108	I	50	0.0106	J	100	0.00995
	K	250	0.00948	L	500	0.00972									
Toxaphene {5}				G	10	0.0242	H	25	0.0186	I	50	0.0209	J	100	0.0194
	K	250	0.0186	L	500	0.0187									

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

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15919 **Column:** DB-35MS
Instrument ID: GC23

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Toxaphene {6}				G	10	0.0174	H	25	0.0166	I	50	0.0173	J	100	0.0162
	K	250	0.0143	L	500	0.0155									

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

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15919 **Column:** DB-35MS
Instrument ID: GC23

		Calibration Evaluation					RRF Evaluation		
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**	**Average RRF**	**Q**	**Minimum RRF**
Tetrachloro-m-xylene	SURR	AverageRF	% RSD	8.2		≤ 20	1.44		
Decachlorobiphenyl	SURR	AverageRF	% RSD	9.9		≤ 20	1.24		
gamma-BHC (Lindane)	MS	AverageRF	% RSD	9.0		≤ 20	1.16		
Heptachlor	MS	AverageRF	% RSD	11.2		≤ 20	1.20		
Heptachlor Epoxide	MS	AverageRF	% RSD	6.9		≤ 20	1.06		
Endrin	MS	AverageRF	% RSD	6.1		≤ 20	0.939		
Methoxychlor	MS	AverageRF	% RSD	6.7		≤ 20	0.419		
Chlordane {1}	MULTI	AverageRF	% RSD	11.0		≤ 20	0.0432		
Chlordane {2}	MULTI	AverageRF	% RSD	7.3		≤ 20	0.0276		
Chlordane {3}	MULTI	AverageRF	% RSD	6.2		≤ 20	0.109		
Chlordane {4}	MULTI	AverageRF	% RSD	12.7		≤ 20	0.0673		
Chlordane {5}	MULTI	AverageRF	% RSD	7.7		≤ 20	0.0319		
Chlordane {6}	MULTI	AverageRF	% RSD	7.5		≤ 20	0.0980		
Toxaphene {1}	MULTI	AverageRF	% RSD	9.5		≤ 20	0.0173		
Toxaphene {2}	MULTI	AverageRF	% RSD	10.8		≤ 20	0.00626		
Toxaphene {3}	MULTI	AverageRF	% RSD	13.5		≤ 20	0.00553		
Toxaphene {4}	MULTI	AverageRF	% RSD	7.3		≤ 20	0.0103		
Toxaphene {5}	MULTI	AverageRF	% RSD	11.1		≤ 20	0.0201		
Toxaphene {6}	MULTI	AverageRF	% RSD	7.2		≤ 20	0.0162		

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

Client: Integral Consulting, Incorporated
Project: San Jacinto River Waste Pits PDI-1

Service Request: K1812382
Calibration Date: 10/09/2018
Date Analyzed: 10/10/2018 - 12/17/2018

Second Source Calibration Verification
Organochlorine Pesticides

Calibration Type: Internal Standard
Analysis Method: 8081B

Calibration ID: CAL15919
Units: ug/L

File ID: J:\GC23\data\100918CAL\1009F029.D\1009F029c.d
J:\GC23\data\100918CAL\1009F030.D\1009F030c.d
J:\GC23\data\101018CAL\1010F007.D\1010F007c.d
J:\GC23\data\101018CAL\1010F008.D\1010F008c.d
J:\GC23\data\101718ICV\1017F006.D\1017F006c.d
J:\GC23\data\121718CAL\1217F004.D\1217F004c.d

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
gamma-BHC (Lindane)	2.0	2.1	1.16	1.20	3	NA	± 20 %	AverageRF
Heptachlor	2.0	2.0	1.20	1.22	2	NA	± 20 %	AverageRF
Heptachlor Epoxide	2.0	2.0	1.06	1.07	1	NA	± 20 %	AverageRF
Endrin	2.0	2.1	0.939	0.982	5	NA	± 20 %	AverageRF
Methoxychlor	2.0	2.0	0.419	0.418	0	NA	± 20 %	AverageRF
Chlordane {1}	50	38	0.0432	0.0328	-24	NA	± 100 %	AverageRF
Chlordane {2}	50	57	0.0276	0.0316	15	NA	± 100 %	AverageRF
Chlordane {3}	50	47	0.109	0.102	-7	NA	± 100 %	AverageRF
Chlordane {4}	50	52	0.0673	0.0693	3	NA	± 100 %	AverageRF
Chlordane {5}	50	58	0.0319	0.0369	16	NA	± 100 %	AverageRF
Chlordane {6}	50	47	0.0980	0.0916	-6	NA	± 100 %	AverageRF
Chlordane	50	50	NA	NA	NA	-1	± 20 %	NA
Toxaphene {1}	200	170	0.0173	0.0146	-16	NA	± 100 %	AverageRF
Toxaphene {2}	200	170	0.00626	0.00539	-14	NA	± 100 %	AverageRF
Toxaphene {3}	200	170	0.00553	0.00472	-15	NA	± 100 %	AverageRF
Toxaphene {4}	200	180	0.0103	0.00911	-12	NA	± 100 %	AverageRF
Toxaphene {5}	200	180	0.0201	0.0182	-9	NA	± 100 %	AverageRF
Toxaphene {6}	200	180	0.0162	0.0147	-10	NA	± 100 %	AverageRF
Toxaphene	200	170	NA	NA	NA	-13	± 20 %	NA

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

† SPCC Compound **‡ CCC Compound**

Client: Integral Consulting, Incorporated
Project: San Jacinto River Waste Pits PDI-1

Service Request: K1812382
Date Analyzed: 12/31/2018

Continuing Calibration Verification Summary
Organochlorine Pesticides

Calibration Type: External Standard
Analysis Method: 8081B

Calibration Date: 10/09/2018
Calibration ID: CAL15919
Analysis Lot: KWG1900100
Units: ug/L

File ID: J:\GC23\DATA\123118\1231F003.D
J:\GC23\DATA\123118\1231F005.D
J:\GC23\DATA\123118\1231F006.D

Column ID: DB XLB

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tetrachloro-m-xylene	2.0	1.7		1.65	1.40	-15	NA	± 20	AverageRF
Decachlorobiphenyl	2.0	1.8		1.67	1.47	-12	NA	± 20	AverageRF
gamma-BHC (Lindane)	2.0	2.0		1.30	1.30	-1	NA	± 20	AverageRF
Heptachlor	2.0	2.1		1.23	1.29	5	NA	± 20	AverageRF
Heptachlor Epoxide	2.0	2.1		1.32	1.37	4	NA	± 20	AverageRF
Endrin	2.0	2.1		1.11	1.15	3	NA	± 20	AverageRF
Methoxychlor	2.0	2.2		0.405	0.438	8	NA	± 20	AverageRF
Chlordane {1}	20	24		0.0572	0.0697	22	NA	± 100	AverageRF
Chlordane {2}	20	19		0.0722	0.0685	-5	NA	± 100	AverageRF
Chlordane {3}	20	20		0.0493	0.0488	-1	NA	± 100	AverageRF
Chlordane {4}	20	23		0.144	0.165	14	NA	± 100	AverageRF
Chlordane {5}	20	22		0.122	0.132	8	NA	± 100	AverageRF
Chlordane {6}	20	20		0.0898	0.0918	2	NA	± 100	AverageRF
Chlordane	20	21		NA	NA	NA	7	± 20	NA
Toxaphene {1}	100	110		0.0228	0.0242	6	NA	± 100	AverageRF
Toxaphene {2}	100	95		0.0116	0.00993	NA	-5	± 100	Quadratic
Toxaphene {3}	100	98		0.0172	0.0169	-2	NA	± 100	AverageRF
Toxaphene {4}	100	81		0.00703	0.00567	-19	NA	± 100	AverageRF
Toxaphene {5}	100	74		0.00920	0.00680	-26	NA	± 100	AverageRF
Toxaphene {6}	100	90		0.0259	0.0234	-10	NA	± 100	AverageRF
Toxaphene	100	91		NA	NA	NA	-9	± 20	NA

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

Client: Integral Consulting, Incorporated
Project: San Jacinto River Waste Pits PDI-1

Service Request: K1812382
Date Analyzed: 12/31/2018

Continuing Calibration Verification Summary
Organochlorine Pesticides

Calibration Type: External Standard
Analysis Method: 8081B

Calibration Date: 10/09/2018
Calibration ID: CAL15919
Analysis Lot: KWG1900100
Units: ug/L

File ID: J:\GC23\DATA\123118\1231F003.D\1231F003C.D
J:\GC23\DATA\123118\1231F005.D\1231F005C.D
J:\GC23\DATA\123118\1231F006.D\1231F006C.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tetrachloro-m-xylene	2.0	1.7		1.44	1.23	-15	NA	± 20	AverageRF
Decachlorobiphenyl	2.0	2.0		1.24	1.22	-2	NA	± 20	AverageRF
gamma-BHC (Lindane)	2.0	1.9		1.16	1.13	-3	NA	± 20	AverageRF
Heptachlor	2.0	1.9		1.20	1.13	-5	NA	± 20	AverageRF
Heptachlor Epoxide	2.0	2.2		1.06	1.14	8	NA	± 20	AverageRF
Endrin	2.0	2.0		0.939	0.958	2	NA	± 20	AverageRF
Methoxychlor	2.0	1.8		0.419	0.371	-11	NA	± 20	AverageRF
Chlordane {1}	20	23		0.0432	0.0492	14	NA	± 100	AverageRF
Chlordane {2}	20	20		0.0276	0.0274	-1	NA	± 100	AverageRF
Chlordane {3}	20	20		0.109	0.110	1	NA	± 100	AverageRF
Chlordane {4}	20	19		0.0673	0.0640	-5	NA	± 100	AverageRF
Chlordane {5}	20	22		0.0319	0.0350	10	NA	± 100	AverageRF
Chlordane {6}	20	20		0.0980	0.0980	0	NA	± 100	AverageRF
Chlordane	20	21		NA	NA	NA	3	± 20	NA
Toxaphene {1}	100	100		0.0173	0.0176	2	NA	± 100	AverageRF
Toxaphene {2}	100	95		0.00626	0.00596	-5	NA	± 100	AverageRF
Toxaphene {3}	100	130		0.00553	0.00732	32	NA	± 100	AverageRF
Toxaphene {4}	100	94		0.0103	0.00974	-6	NA	± 100	AverageRF
Toxaphene {5}	100	91		0.0201	0.0183	-9	NA	± 100	AverageRF
Toxaphene {6}	100	90		0.0162	0.0145	-10	NA	± 100	AverageRF
Toxaphene	100	100		NA	NA	NA	1	± 20	NA

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

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1

Analysis Run Log
Organochlorine Pesticides

Analysis Method: 8081B **Analysis Lot:** KWG1900100
Instrument ID: GC23
Column: DB XLB

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1231F002.D	Performance Evaluation Mixture	KWG1900100-2	12/31/2018	11:54		12/31/2018	12:16
1231F003.D	Continuing Calibration Verification	KWG1900100-3	12/31/2018	12:23		12/31/2018	12:45
1231F004.D	Continuing Calibration Verification	KWG1900100-3	12/31/2018	12:53		12/31/2018	13:15
1231F005.D	Continuing Calibration Verification	KWG1900100-3	12/31/2018	13:22		12/31/2018	13:44
1231F006.D	Continuing Calibration Verification	KWG1900100-3	12/31/2018	13:52		12/31/2018	14:14
1231F007.D	Instrument Blank	KWG1900100-1	12/31/2018	14:21		12/31/2018	14:43
1231F008.D	ZZZZZZ	ZZZZZZ	12/31/2018	14:51		12/31/2018	15:13
1231F009.D	ZZZZZZ	ZZZZZZ	12/31/2018	15:21		12/31/2018	15:43
1231F010.D	ZZZZZZ	ZZZZZZ	12/31/2018	15:50		12/31/2018	16:12
1231F011.D	ZZZZZZ	ZZZZZZ	12/31/2018	16:20		12/31/2018	16:42
1231F012.D	ZZZZZZ	ZZZZZZ	12/31/2018	16:49		12/31/2018	17:11
1231F013.D	ZZZZZZ	ZZZZZZ	12/31/2018	17:18		12/31/2018	17:40
1231F014.D	Method Blank	KWG1806665-5	12/31/2018	17:48		12/31/2018	18:10
1231F015.D	Method Blank	KWG1806665-6	12/31/2018	18:17		12/31/2018	18:39
1231F016.D	Lab Control Sample	KWG1806665-1	12/31/2018	18:47		12/31/2018	19:09
1231F017.D	Duplicate Lab Control Sample	KWG1806665-2	12/31/2018	19:17		12/31/2018	19:39
1231F018.D	Lab Control Sample	KWG1806665-1	12/31/2018	19:46		12/31/2018	20:08
1231F019.D	Duplicate Lab Control Sample	KWG1806665-2	12/31/2018	20:16		12/31/2018	20:38
1231F020.D	SL0594	K1812382-001	12/31/2018	20:45		12/31/2018	21:07
1231F021.D	Performance Evaluation Mixture	KWG1900100-5	12/31/2018	21:15		12/31/2018	21:37
1231F022.D	Continuing Calibration Verification	KWG1900100-6	12/31/2018	21:44		12/31/2018	22:06
1231F023.D	Continuing Calibration Verification	KWG1900100-6	12/31/2018	22:13		12/31/2018	22:35
1231F024.D	Continuing Calibration Verification	KWG1900100-6	12/31/2018	22:42		12/31/2018	23:04
1231F025.D	Instrument Blank	KWG1900100-4	12/31/2018	23:12		12/31/2018	23:34
1231F026.D	ZZZZZZ	ZZZZZZ	12/31/2018	23:41		1/1/2019	00:03
1231F027.D	ZZZZZZ	ZZZZZZ	1/1/2019	00:10		1/1/2019	00:32
1231F028.D	ZZZZZZ	ZZZZZZ	1/1/2019	00:40		1/1/2019	01:02
1231F029.D	ZZZZZZ	ZZZZZZ	1/1/2019	01:10		1/1/2019	01:32
1231F030.D	ZZZZZZ	ZZZZZZ	1/1/2019	01:39		1/1/2019	02:01
1231F031.D	ZZZZZZ	ZZZZZZ	1/1/2019	02:09		1/1/2019	02:31
1231F032.D	ZZZZZZ	ZZZZZZ	1/1/2019	02:38		1/1/2019	03:00
1231F033.D	ZZZZZZ	ZZZZZZ	1/1/2019	03:08		1/1/2019	03:30
1231F034.D	ZZZZZZ	ZZZZZZ	1/1/2019	03:38		1/1/2019	04:00
1231F035.D	Performance Evaluation Mixture	KWG1900100-8	1/1/2019	04:07		1/1/2019	04:29
1231F036.D	Continuing Calibration Verification	KWG1900100-9	1/1/2019	04:37		1/1/2019	04:59

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1

Analysis Run Log
Organochlorine Pesticides

Analysis Method: 8081B **Analysis Lot:** KWG1900100
Instrument ID: GC23
Column: DB XLB

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1231F037.D	Continuing Calibration Verification	KWG1900100-9	1/1/2019	05:06		1/1/2019	05:28
1231F038.D	Continuing Calibration Verification	KWG1900100-9	1/1/2019	05:35		1/1/2019	05:57
1231F039.D	Continuing Calibration Verification	KWG1900100-9	1/1/2019	06:05		1/1/2019	06:27
1231F040.D	Continuing Calibration Verification	KWG1900100-9	1/1/2019	06:34		1/1/2019	06:56
1231F041.D	Instrument Blank	KWG1900100-7	1/1/2019	07:03		1/1/2019	07:25
1231F042.D	ZZZZZZ	ZZZZZZ	1/1/2019	07:33		1/1/2019	07:55
1231F043.D	ZZZZZZ	ZZZZZZ	1/1/2019	08:02		1/1/2019	08:24
1231F044.D	ZZZZZZ	ZZZZZZ	1/1/2019	08:32		1/1/2019	08:54
1231F045.D	ZZZZZZ	ZZZZZZ	1/1/2019	09:01		1/1/2019	09:23
1231F046.D	ZZZZZZ	ZZZZZZ	1/1/2019	09:31		1/1/2019	09:53
1231F047.D	ZZZZZZ	ZZZZZZ	1/1/2019	10:00		1/1/2019	10:22
1231F048.D	ZZZZZZ	ZZZZZZ	1/1/2019	10:30		1/1/2019	10:52
1231F049.D	ZZZZZZ	ZZZZZZ	1/1/2019	10:59		1/1/2019	11:21
1231F050.D	Performance Evaluation Mixture	KWG1900100-11	1/1/2019	11:29		1/1/2019	11:51

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Prepared:**	12/19/2018
Sample Matrix:	Soil	**Date Extracted:**	12/21/2018

Extraction Prep Log
Organochlorine Pesticides

Preparation Method:	EPA 1311	**Extraction Lot:**	KWG1806665
Extraction Method:	EPA 3511	**Level:**	Low
Analysis Method:	8081B		

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
SL0594	K1812382-001	12/09/18	12/18/18	100ml	5ml	NA	
Method Blank	KWG1806665-5	NA	NA	100ml	5ml	NA	
Method Blank	KWG1806665-6	NA	NA	100ml	5ml	NA	
Lab Control Sample	KWG1806665-1	NA	NA	100ml	5ml	NA	
Duplicate Lab Control Sample	KWG1806665-2	NA	NA	100ml	5ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Chlorinated Herbicides

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	12/09/18 15:00
Sample Matrix:	Soil	**Date Received:**	12/18/18 10:05
Sample Name:	SL0594	**Units:**	ug/L
Lab Code:	K1812382-001	**Basis:**	NA

TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Pre-Prep Method:**	EPA 1311
Prep Method:	Method	**Pre-Prep Date:**	12/19/18

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D, TCLP	ND U	100	100	1	01/10/19 15:39	12/21/18	
2,4,5-TP (Silvex), TCLP	ND U	20	20	1	01/10/19 15:39	12/21/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	80	17 - 113	01/10/19 15:39	

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KQ1818602-04	**Basis:**	NA

TCLP Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D, TCLP	ND U	100	100	1	01/10/19 17:36	12/21/18	
2,4,5-TP (Silvex), TCLP	ND U	20	20	1	01/10/19 17:36	12/21/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	85	17 - 113	01/10/19 17:36	

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KQ1818602-05	**Basis:**	NA

TCLP Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D, TCLP	ND U	100	100	1	01/10/19 14:02	12/21/18	
2,4,5-TP (Silvex), TCLP	ND U	20	20	1	01/10/19 14:02	12/21/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	70	17 - 113	01/10/19 14:02	

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Confirmation Results

Client: Integral Consulting, Incorporated
Project: San Jacinto River Waste Pits PDI-1
SRM Matrix: Soil

Service Request: K1812382
Date Collected: 12/09/18 15:00
Date Received: 12/18/18

Sample Name: SL0594
Lab Code: KQ1818602-01

Units: ug/L
Basis: NA

TCLP Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-TP (Silvex), TCLP	20	206	221	7		1	01/10/19 15:14
2,4-D, TCLP	100	205	215	5		1	01/10/19 15:14

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Confirmation Results

Client: Integral Consulting, Incorporated
Project: San Jacinto River Waste Pits PDI-1
SRM Matrix: Soil

Service Request: K1812382
Date Collected: 12/09/18 15:00
Date Received: 12/18/18

Sample Name: SL0594
Lab Code: KQ1818602-02

Units: ug/L
Basis: NA

TCLP Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-TP (Silvex), TCLP	20	236	251	6		1	01/10/19 14:50
2,4-D, TCLP	100	232	245	5		1	01/10/19 14:50

Confirmation Results

Client: Integral Consulting, Incorporated
Project: San Jacinto River Waste Pits PDI-1
SRM Matrix: Soil

Service Request: K1812382
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: KQ1818602-03

Units: ug/L
Basis: NA

TCLP Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-TP (Silvex), TCLP	20	238	256	7		1	01/10/19 14:26
2,4-D, TCLP	100	233	244	5		1	01/10/19 14:26

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
TCLP Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	DCAA 17-113
SL0594	K1812382-001	80
Method Blank	KQ1818602-04	85
Method Blank	KQ1818602-05	70
Lab Control Sample	KQ1818602-03	84
SL0594	KQ1818602-01	77
SL0594	KQ1818602-02	86

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	12/09/18
Sample Matrix:	Soil	**Date Received:**	12/18/18
		Date Analyzed:	01/10/19
		Date Extracted:	12/21/18

Duplicate Matrix Spike Summary
TCLP Chlorinated Herbicides by GC

Sample Name:	SL0594	**Units:**	ug/L
Lab Code:	K1812382-001	**Basis:**	NA
Analysis Method:	8151A		
Prep Method:	Method		

		Matrix Spike KQ1818602-01			**Duplicate Matrix Spike** KQ1818602-02					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
2,4-D, TCLP	ND U	205	250	82	232	250	93	41-108	12	30
2,4,5-TP (Silvex), TCLP	ND U	206	250	82	236	250	94	44-108	14	30

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

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

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

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	01/10/19
Sample Matrix:	Soil	**Date Extracted:**	12/21/18

Lab Control Sample Summary
TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Units:**	ug/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	621714

Lab Control Sample
KQ1818602-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-TP (Silvex), TCLP	238	250	95	37-114
2,4-D, TCLP	233	250	93	35-110

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	01/10/19 17:36
Sample Matrix:	Soil	**Date Extracted:**	12/21/18

Method Blank Summary
TCLP Chlorinated Herbicides by GC

Sample Name:	Method Blank	**Instrument ID:**	K-GC-24
Lab Code:	KQ1818602-04	**File ID:**	J:\gc24\data\011019\01100010.D\
Analysis Method:	8151A	**Analysis Lot:**	621714
Prep Method:	Method	**Extraction Lot:**	328735

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1818602-03	J:\gc24\data\011019\01100006.D\	01/10/19 14:26
SL0594DMS	KQ1818602-02	J:\gc24\data\011019\01100007.D\	01/10/19 14:50
SL0594MS	KQ1818602-01	J:\gc24\data\011019\01100008.D\	01/10/19 15:14
SL0594	K1812382-001	J:\gc24\data\011019\01100009.D\	01/10/19 15:39

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	01/10/19 17:36
Sample Matrix:	Soil	**Date Extracted:**	12/21/18

Method Blank Summary
TCLP Chlorinated Herbicides by GC

Sample Name:	Method Blank	**Instrument ID:**	K-GC-24
Lab Code:	KQ1818602-04	**File ID:**	J:\gc24\data\011019\01100010.D\
Analysis Method:	8151A	**Analysis Lot:**	621714
Prep Method:	Method	**Extraction Lot:**	328735

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1818602-03	J:\gc24\data\011019\01100006.D\	01/10/19 14:26
SL0594DMS	KQ1818602-02	J:\gc24\data\011019\01100007.D\	01/10/19 14:50
SL0594MS	KQ1818602-01	J:\gc24\data\011019\01100008.D\	01/10/19 15:14
SL0594	K1812382-001	J:\gc24\data\011019\01100009.D\	01/10/19 15:39

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	01/10/19 14:26
Sample Matrix:	Soil	**Date Extracted:**	12/21/18

Lab Control Sample Summary
TCLP Chlorinated Herbicides by GC

Sample Name:	Lab Control Sample	**Instrument ID:**	K-GC-24
Lab Code:	KQ1818602-03	**File ID:**	J:\gc24\data\011019\01100006.D\
Analysis Method:	8151A	**Analysis Lot:**	621714
Prep Method:	Method	**Extraction Lot:**	328735

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1818602-05	J:\gc24\data\011019\01100005.D\	01/10/19 14:02
SL0594DMS	KQ1818602-02	J:\gc24\data\011019\01100007.D\	01/10/19 14:50
SL0594MS	KQ1818602-01	J:\gc24\data\011019\01100008.D\	01/10/19 15:14
SL0594	K1812382-001	J:\gc24\data\011019\01100009.D\	01/10/19 15:39
Method Blank	KQ1818602-04	J:\gc24\data\011019\01100010.D\	01/10/19 17:36

QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 10/31/2018

Initial Calibration Summary
TCLP Chlorinated Herbicides by GC

Calibration ID: KC1800499 **Signal ID:** RTX-CLP2
Instrument ID: K-GC-24

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1800499-01	HERB ICAL 10	J:\gc24\data\103118\10310103.D	10/31/2018 16:27
02	KC1800499-02	HERB ICAL 25	J:\gc24\data\103118\10310104.D	10/31/2018 16:51
03	KC1800499-03	HERB ICAL 100	J:\gc24\data\103118\10310106.D	10/31/2018 17:40
04	KC1800499-04	HERB ICAL 125	J:\gc24\data\103118\10310107.D	10/31/2018 18:05
05	KC1800499-05	HERB ICAL 150	J:\gc24\data\103118\10310108.D	10/31/2018 18:29
06	KC1800499-06	HERB ICAL 175	J:\gc24\data\103118\10310109.D	10/31/2018 18:54
07	KC1800499-07	HERB ICAL 200	J:\gc24\data\103118\10310110.D	10/31/2018 19:18
08	KC1800499-08	HERB ICAL 75	J:\gc24\data\110118\11010003.D	11/01/2018 10:58

Analyte

2,4,5-TP (Silvex), TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.510	8.153E4	02	23.760	7.593E4	08	71.300	7.174E4	03	95.100	6.98E4
04	118.820	6.871E4	05	142.580	6.525E4	06	166.340	6.468E4	07	190.100	6.407E4

2,4-D, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.400	2.227E4	02	23.510	1.997E4	08	70.500	1.83E4	03	94.000	1.781E4
04	117.540	1.735E4	05	141.050	1.651E4	06	164.560	1.627E4	07	188.060	1.594E4

DCAA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.020	2.092E4	02	22.550	1.879E4	08	67.600	1.66E4	03	90.200	1.594E4
04	112.730	1.556E4	05	135.280	1.47E4	06	157.830	1.446E4	07	180.370	1.405E4

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 10/31/2018

Initial Calibration Summary
TCLP Chlorinated Herbicides by GC

Calibration ID: KC1800499 **Signal ID:** RTX-CLP2
Instrument ID: K-GC-24

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
2,4,5-TP (Silvex), TCLP	TRG	Average RF	% RSD	8.7	≤20	7.021E4	
2,4-D, TCLP	TRG	Average RF	% RSD	11.9	≤20	1.805E4	
DCAA	SURR	Average RF	% RSD	14.4	≤20	1.638E4	

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 10/31/2018

Initial Calibration Summary
TCLP Chlorinated Herbicides by GC

Calibration ID: KC1800499 **Signal ID:** ZB-XLB-HT
Instrument ID: K-GC-24

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1800499-01	HERB ICAL 10	J:\gc24\data\103118\10310103.D	10/31/2018 16:27
02	KC1800499-02	HERB ICAL 25	J:\gc24\data\103118\10310104.D	10/31/2018 16:51
03	KC1800499-03	HERB ICAL 100	J:\gc24\data\103118\10310106.D	10/31/2018 17:40
04	KC1800499-04	HERB ICAL 125	J:\gc24\data\103118\10310107.D	10/31/2018 18:05
05	KC1800499-05	HERB ICAL 150	J:\gc24\data\103118\10310108.D	10/31/2018 18:29
06	KC1800499-06	HERB ICAL 175	J:\gc24\data\103118\10310109.D	10/31/2018 18:54
07	KC1800499-07	HERB ICAL 200	J:\gc24\data\103118\10310110.D	10/31/2018 19:18
08	KC1800499-08	HERB ICAL 75	J:\gc24\data\110118\11010003.D	11/01/2018 10:58

Analyte

2,4,5-TP (Silvex), TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.510	7.003E4	02	23.760	6.444E4	08	71.300	6.354E4	03	95.100	6.156E4
04	118.820	6.158E4	05	142.580	6E4	06	166.340	6.189E4	07	190.100	5.884E4

2,4-D, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.400	2.057E4	02	23.510	1.77E4	08	70.500	1.61E4	03	94.000	1.539E4
04	117.540	1.519E4	05	141.050	1.477E4	06	164.560	1.514E4	07	188.060	1.419E4

DCAA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.020	1.961E4	02	22.550	1.67E4	08	67.600	1.425E4	03	90.200	1.383E4
04	112.730	1.356E4	05	135.280	1.31E4	06	157.830	1.335E4	07	180.370	1.251E4

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 10/31/2018

Initial Calibration Summary
TCLP Chlorinated Herbicides by GC

Calibration ID: KC1800499 **Signal ID:** ZB-XLB-HT
Instrument ID: K-GC-24

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
2,4,5-TP (Silvex), TCLP	TRG	Average RF	% RSD	5.5	≤20	6.274E4	
2,4-D, TCLP	TRG	Average RF	% RSD	12.9	≤20	1.613E4	
DCAA	SURR	Average RF	% RSD	16.3	≤20	1.461E4	

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 10/31/2018

Initial Calibration Verification Summary
TCLP Chlorinated Herbicides by GC

Calibration ID: KC1800499 **Signal ID:** RTX-CLP2
Instrument ID: K-GC-24

#	Lab Code	Sample Name	File Location	Acquisition Date
09	KC1800499-09	HERB ICV 100	J:\gc24\data\110118\11010004.D	11/01/2018 11:23

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
2,4-D, TCLP	94.0	94.0	1.805E4	1.805E4	-0.022	±20	Average RF
2,4,5-TP (Silvex), TCLP	95.1	102	7.021E4	7.562E4	7.70	±20	Average RF

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 10/31/2018

Initial Calibration Verification Summary
TCLP Chlorinated Herbicides by GC

Calibration ID: KC1800499 **Signal ID:** ZB-XLB-HT
Instrument ID: K-GC-24

#	Lab Code	Sample Name	File Location	Acquisition Date
09	KC1800499-09	HERB ICV 100	J:\gc24\data\110118\11010004.D	11/01/2018 11:23

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
2,4-D, TCLP	94.0	90.8	1.613E4	1.558E4	-3.432	±20	Average RF
2,4,5-TP (Silvex), TCLP	95.1	102	6.274E4	6.709E4	6.94	±20	Average RF

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	01/10/19 13:13

Continuing Calibration Verification (CCV) Summary
TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Calibration Date:**	10/31/2018
File ID:	J:\gc24\data\011019\01100003.D\	**Calibration ID:**	KC1800499
Signal ID:	RTX-CLP2	**Analysis Lot:**	621714
		Units:	ppb

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4-D, TCLP	100	101	1.805E4	1.816E4	0.6	NA	±20	Average RF
2,4,5-TP (Silvex), TCLP	100	102	7.021E4	7.132E4	1.6	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
DCAA	100	90.5	1.638E4	1.482E4	-9.5	NA	±20	Average RF

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	01/10/19 13:13

Continuing Calibration Verification (CCV) Summary
TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Calibration Date:**	10/31/2018
File ID:	J:\gc24\data\011019\01100003.D\	**Calibration ID:**	KC1800499
Signal ID:	ZB-XLB-HT	**Analysis Lot:**	621714
		Units:	ppb

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4-D, TCLP	100	106	1.613E4	1.711E4	6.0	NA	±20	Average RF
2,4,5-TP (Silvex), TCLP	100	108	6.274E4	6.785E4	8.2	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
DCAA	100	96.6	1.461E4	1.412E4	-3.4	NA	±20	Average RF

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	01/10/19 18:00

Continuing Calibration Verification (CCV) Summary
TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Calibration Date:**	10/31/2018
File ID:	J:\gc24\data\011019\01100011.D\	**Calibration ID:**	KC1800499
Signal ID:	RTX-CLP2	**Analysis Lot:**	621714
		Units:	ppb

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4-D, TCLP	100	102	1.805E4	1.838E4	1.8	NA	±20	Average RF
2,4,5-TP (Silvex), TCLP	100	104	7.021E4	7.268E4	3.5	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
DCAA	100	92.0	1.638E4	1.506E4	-8.0	NA	±20	Average RF

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	01/10/19 18:00

Continuing Calibration Verification (CCV) Summary
TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Calibration Date:**	10/31/2018
File ID:	J:\gc24\data\011019\01100011.D\	**Calibration ID:**	KC1800499
Signal ID:	ZB-XLB-HT	**Analysis Lot:**	621714
		Units:	ppb

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4-D, TCLP	100	104	1.613E4	1.672E4	3.6	NA	±20	Average RF
2,4,5-TP (Silvex), TCLP	100	105	6.274E4	6.618E4	5.5	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
DCAA	100	93.5	1.461E4	1.366E4	-6.5	NA	±20	Average RF

Client: Integral Consulting, Incorporated **Service Request:**K1812382
Project: San Jacinto River Waste Pits PDI-1

Analysis Run Log
TCLP Chlorinated Herbicides by GC

Analysis Method: 8151A **Analysis Lot:**621714
Instrument ID:K-GC-24

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\gc24\data\011019\01100003.D\	Continuing Calibration Verification	KQ1900468-01	1/10/2019	13:13:00	
J:\gc24\data\011019\01100004.D\	Continuing Calibration Blank	KQ1900468-02	1/10/2019	13:38:00	
J:\gc24\data\011019\01100005.D\	Method Blank	KQ1818602-05	1/10/2019	14:02:00	
J:\gc24\data\011019\01100006.D\	Lab Control Sample	KQ1818602-03	1/10/2019	14:26:00	
J:\gc24\data\011019\01100007.D\	SL0594 DMS	KQ1818602-02	1/10/2019	14:50:00	
J:\gc24\data\011019\01100008.D\	SL0594 MS	KQ1818602-01	1/10/2019	15:14:00	
J:\gc24\data\011019\01100009.D\	SL0594	K1812382-001	1/10/2019	15:39:00	
J:\gc24\data\011019\01100010.D\	Method Blank	KQ1818602-04	1/10/2019	17:36:00	
J:\gc24\data\011019\01100011.D\	Continuing Calibration Verification	KQ1900468-03	1/10/2019	18:00:00	
J:\gc24\data\011019\01100012.D\	Continuing Calibration Blank	KQ1900468-04	1/10/2019	18:24:00	

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Prep Summary Report

Client: Integral Consulting, Incorporated **Service Request:**K1812382
Project: San Jacinto River Waste Pits PDI-1
Sample Matrix: Soil

Toxicity Characteristics Leachate Procedure (TCLP)
TCLP Chlorinated Herbicides by GC

Prep Method: Method **Extraction Lot:** 328735
Analytical Method: 8151A **Extraction Date:** 12/21/18 11:00

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
SL0594	K1812382-001	12/9/18	12/18/18	10.00 mL	20 mL	
Matrix Spike	KQ1818602-01MS	12/9/18	12/18/18	10.00 mL	20 mL	
Duplicate Matrix Spike	KQ1818602-02DMS	12/9/18	12/18/18	10.00 mL	20 mL	
Lab Control Sample	KQ1818602-03LCS	NA	NA	10.00 mL	20 mL	
Method Blank	KQ1818602-04MB	NA	NA	10.00 mL	20 mL	
Method Blank	KQ1818602-05MB	NA	NA	10.00 mL	20 mL	

Volatile Organic Compounds

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1

Cover Page - Organic Analysis Data Package
Volatile Organic Compounds

Sample Name	Lab Code	Date Collected	Date Received
SL0594	K1812382-001	12/09/2018	12/18/2018
SL0594MS	KWG1900204-1	12/09/2018	12/18/2018

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	12/09/2018
Sample Matrix:	Soil	**Date Received:**	12/18/2018
		Date Prepared:	12/21/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Volatile Organic Compounds

Sample Name:	SL0594	**Units:**	mg/L
Lab Code:	K1812382-001	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 5030B		
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
Vinyl Chloride	ND	U	0.080	0.030	0.2	1	12/31/18	12/31/18	
1,1-Dichloroethene	ND	U	0.20	0.032	0.7	1	12/31/18	12/31/18	
2-Butanone (MEK)	ND	U	8.0	0.76	200	1	12/31/18	12/31/18	
Chloroform	ND	U	0.20	0.029	6	1	12/31/18	12/31/18	
Carbon Tetrachloride	ND	U	0.20	0.039	0.5	1	12/31/18	12/31/18	
Benzene	ND	U	0.20	0.025	0.5	1	12/31/18	12/31/18	
1,2-Dichloroethane (EDC)	ND	U	0.20	0.032	0.5	1	12/31/18	12/31/18	
Trichloroethene (TCE)	ND	U	0.20	0.040	0.5	1	12/31/18	12/31/18	
Tetrachloroethene (PCE)	ND	U	0.20	0.040	0.7	1	12/31/18	12/31/18	
Chlorobenzene	ND	U	0.20	0.044	100	1	12/31/18	12/31/18	
1,4-Dichlorobenzene	ND	U	0.20	0.048	7.5	1	12/31/18	12/31/18	

Surrogate Name	%Rec	Control Limits	Note
Dibromofluoromethane	115	73-122	Acceptable
Toluene-d8	121	65-144	Acceptable
4-Bromofluorobenzene	113	68-117	Acceptable

Comments:

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Prepared:	12/21/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KWG1900204-3	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 5030B		
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
Vinyl Chloride	ND	U	0.080	0.030	0.2	1	12/31/18	12/31/18	
1,1-Dichloroethene	ND	U	0.20	0.032	0.7	1	12/31/18	12/31/18	
2-Butanone (MEK)	ND	U	8.0	0.76	200	1	12/31/18	12/31/18	
Chloroform	ND	U	0.20	0.029	6	1	12/31/18	12/31/18	
Carbon Tetrachloride	ND	U	0.20	0.039	0.5	1	12/31/18	12/31/18	
Benzene	ND	U	0.20	0.025	0.5	1	12/31/18	12/31/18	
1,2-Dichloroethane (EDC)	ND	U	0.20	0.032	0.5	1	12/31/18	12/31/18	
Trichloroethene (TCE)	ND	U	0.20	0.040	0.5	1	12/31/18	12/31/18	
Tetrachloroethene (PCE)	ND	U	0.20	0.040	0.7	1	12/31/18	12/31/18	
Chlorobenzene	ND	U	0.20	0.044	100	1	12/31/18	12/31/18	
1,4-Dichlorobenzene	ND	U	0.20	0.048	7.5	1	12/31/18	12/31/18	

Surrogate Name	%Rec	Control Limits	Note
Dibromofluoromethane	113	73-122	Acceptable
Toluene-d8	120	65-144	Acceptable
4-Bromofluorobenzene	111	68-117	Acceptable

Comments:

QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1
Sample Matrix: Soil

Surrogate Recovery Summary
Toxicity Characteristic Leaching Procedure (TCLP)
Volatile Organic Compounds

Preparation Method: EPA 1311 **Units:** Percent
Extraction Method: EPA 5030B **Level:** Low
Analysis Method: 8260C

Sample Name	Lab Code	Sur1	Sur2	Sur3
SL0594	K1812382-001	115	121	113
Method Blank	KWG1900204-3	113	120	111
SL0594MS	KWG1900204-1	113	122	112
Lab Control Sample	KWG1900204-2	112	123	110

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	73-122
Sur2	=	Toluene-d8	65-144
Sur3	=	4-Bromofluorobenzene	68-117

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

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

Client: Integral Consulting, Incorporated
Project: San Jacinto River Waste Pits PDI-1

Service Request: K1812382
Date Analyzed: 12/31/2018
Time Analyzed: 11:55

Internal Standard Area and RT Summary
Volatile Organic Compounds

File ID: J:\MS46\DATA\123118\1231F003.D
Instrument ID: MS46
Analysis Method: 8260C

Lab Code: KWG1806757-2
Analysis Lot: KWG1806757

		Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	159,067	6.53	58,908	10.01	68,009	12.58
	Upper Limit ==>	318,134	7.03	117,816	10.51	136,018	13.08
	Lower Limit ==>	79,534	6.03	29,454	9.51	34,005	12.08
	ICAL Result ==>	166,468	6.53	62,501	10.01	69,473	12.58
Associated Analyses							
Lab Control Sample	KWG1900204-2	158,563	6.53	61,791	10.01	67,634	12.58
SL0594MS	KWG1900204-1	160,785	6.54	62,447	10.01	70,179	12.58
Method Blank	KWG1900204-3	158,496	6.54	61,890	10.01	68,561	12.58
SL0594	K1812382-001	153,939	6.54	60,121	10.01	67,817	12.58

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Prepared:**	12/21/2018
Sample Matrix:	Soil	**Date Extracted:**	12/31/2018
		Date Analyzed:	12/31/2018

Matrix Spike Summary
Toxicity Characteristic Leaching Procedure (TCLP)
Volatile Organic Compounds

Sample Name:	SL0594	**Units:**	mg/L
Lab Code:	K1812382-001	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 5030B	**Extraction Lot:**	KWG1900204
Analysis Method:	8260C		

SL0594MS
KWG1900204-1
Matrix Spike

Analyte Name	Sample Result	Result	Spike Amount	%Rec	%Rec Limits
Vinyl Chloride	ND	4.29	4.00	107	49-136
1,1-Dichloroethene	ND	4.56	4.00	114	59-171
2-Butanone (MEK)	ND	20.3	20.0	101	65-147
Chloroform	ND	4.10	4.00	102	64-133
Carbon Tetrachloride	ND	4.37	4.00	109	53-161
Benzene	ND	4.26	4.00	107	63-144
1,2-Dichloroethane (EDC)	ND	4.23	4.00	106	56-141
Trichloroethene (TCE)	ND	4.14	4.00	104	53-139
Tetrachloroethene (PCE)	ND	4.09	4.00	102	61-131
Chlorobenzene	ND	3.98	4.00	100	69-126
1,4-Dichlorobenzene	ND	3.82	4.00	96	72-121

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

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

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

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Prepared:**	12/21/2018
Sample Matrix:	Soil	**Date Extracted:**	12/31/2018
		Date Analyzed:	12/31/2018

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 1311/EPA 5030B	**Units:**	mg/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1900204

Lab Control Sample
KWG1900204-2
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Vinyl Chloride	4.31	4.00	108	55-123
1,1-Dichloroethene	4.53	4.00	113	66-129
2-Butanone (MEK)	19.3	20.0	96	71-149
Chloroform	3.93	4.00	98	70-129
Carbon Tetrachloride	4.19	4.00	105	55-140
Benzene	4.16	4.00	104	69-124
1,2-Dichloroethane (EDC)	4.06	4.00	101	56-142
Trichloroethene (TCE)	4.15	4.00	104	67-128
Tetrachloroethene (PCE)	4.13	4.00	103	62-126
Chlorobenzene	3.82	4.00	96	72-116
1,4-Dichlorobenzene	3.74	4.00	94	73-115

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

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

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Extracted:**	12/31/2018
Sample Matrix:	Soil	**Date Analyzed:**	12/31/2018
		Time Analyzed:	17:16

Method Blank Summary
Volatile Organic Compounds

Sample Name:	Method Blank	**Instrument ID:**	MS46
Lab Code:	KWG1900204-3	**File ID:**	J:\MS46\DATA\123118\1231F015.D
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1900204

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1900204-2	J:\MS46\DATA\123118\1231F006.D	12/31/18	13:21
SL0594MS	KWG1900204-1	J:\MS46\DATA\123118\1231F008.D	12/31/18	14:13
SL0594	K1812382-001	J:\MS46\DATA\123118\1231F019.D	12/31/18	18:59

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Extracted:**	12/31/2018
Sample Matrix:	Soil	**Date Analyzed:**	12/31/2018
		Time Analyzed:	13:21

Lab Control Sample Summary
Volatile Organic Compounds

Sample Name:	Lab Control Sample	**Instrument ID:**	MS46
Lab Code:	KWG1900204-2	**File ID:**	J:\MS46\DATA\123118\1231F006.D
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1900204

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
SL0594MS	KWG1900204-1	J:\MS46\DATA\123118\1231F008.D	12/31/18	14:13
Method Blank	KWG1900204-3	J:\MS46\DATA\123118\1231F015.D	12/31/18	17:16
SL0594	K1812382-001	J:\MS46\DATA\123118\1231F019.D	12/31/18	18:59

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto River Waste Pits PDI-1

Service Request: K1812382
Date Analyzed: 12/31/2018
Time Analyzed: 11:37

Tune Summary
Volatile Organic Compounds

File ID: J:\MS46\DATA\123118\1231F002.D
Instrument ID: GCMS46
Column:

Analysis Method: 8260C
Analysis Lot: KWG1806757

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	16.5	3568	PASS
75	95	30	60	46.5	10021	PASS
95	95	100	100	100.0	21568	PASS
96	95	5	9	5.7	1238	PASS
173	174	0	2	0.7	124	PASS
174	95	50	120	79.1	17065	PASS
175	174	5	9	7.4	1265	PASS
176	174	95	101	98.6	16824	PASS
177	176	5	9	6.2	1049	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1806757-2	J:\MS46\DATA\123118\1231F003.D	12/31/2018	11:55	
Lab Control Sample	KWG1900204-2	J:\MS46\DATA\123118\1231F006.D	12/31/2018	13:21	
SL0594MS	KWG1900204-1	J:\MS46\DATA\123118\1231F008.D	12/31/2018	14:13	
Method Blank	KWG1900204-3	J:\MS46\DATA\123118\1231F015.D	12/31/2018	17:16	
SL0594	K1812382-001	J:\MS46\DATA\123118\1231F019.D	12/31/2018	18:59	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 11/19/2018

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15902 **Column:** MS
Instrument ID: MS46

Level ID	File ID	Level ID	File ID
A	J:\MS46\DATA\111918\1119F006.D	G	J:\MS46\DATA\111918\1119F012.D
B	J:\MS46\DATA\111918\1119F007.D	H	J:\MS46\DATA\111918\1119F013.D
C	J:\MS46\DATA\111918\1119F008.D	I	J:\MS46\DATA\111918\1119F014.D
D	J:\MS46\DATA\111918\1119F009.D	J	J:\MS46\DATA\111918\1119F015.D
E	J:\MS46\DATA\111918\1119F010.D	K	J:\MS46\DATA\111918\1119F016.D
F	J:\MS46\DATA\111918\1119F011.D		

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Vinyl Chloride	A	0.10	0.170	B	0.20	0.217	C	0.50	0.230	D	1.0	0.173	E	2.0	0.234
	F	5.0	0.206	G	10	0.207	H	20	0.207	I	40	0.244	J	60	0.235
	K	80	0.225												
1,1-Dichloroethene	A	0.10	0.185	B	0.20	0.228	C	0.50	0.230	D	1.0	0.158	E	2.0	0.214
	F	5.0	0.196	G	10	0.200	H	20	0.194	I	40	0.230	J	60	0.223
	K	80	0.209												
2-Butanone (MEK)	A	4.0	0.0133	B	8.0	0.0158	C	20	0.0166	D	40	0.0166	E	80	0.0163
	F	100	0.0163	G	200	0.0164	H	400	0.0166	I	800	0.0169	J	1600	0.0164
	K	2000	0.0157												
Chloroform	A	0.10	0.423	B	0.20	0.467	C	0.50	0.460	D	1.0	0.371	E	2.0	0.417
	F	5.0	0.405	G	10	0.430	H	20	0.416	I	40	0.423	J	60	0.426
	K	80	0.405												
Carbon Tetrachloride	A	0.10	0.355	B	0.20	0.365	C	0.50	0.374	D	1.0	0.269	E	2.0	0.366
	F	5.0	0.319	G	10	0.332	H	20	0.330	I	40	0.394	J	60	0.382
	K	80	0.365												
Benzene	A	0.10	1.02	B	0.20	1.01	C	0.50	1.03	D	1.0	0.879	E	2.0	0.984
	F	5.0	0.950	G	10	0.950	H	20	0.967	I	40	1.02	J	60	1.02
	K	80	0.983												
1,2-Dichloroethane (EDC)	A	0.10	0.217	B	0.20	0.253	C	0.50	0.231	D	1.0	0.239	E	2.0	0.247
	F	5.0	0.254	G	10	0.254	H	20	0.255	I	40	0.249	J	60	0.253
	K	80	0.241												
Trichloroethene (TCE)	A	0.10	0.302	B	0.20	0.281	C	0.50	0.287	D	1.0	0.237	E	2.0	0.278
	F	5.0	0.271	G	10	0.262	H	20	0.263	I	40	0.289	J	60	0.287
	K	80	0.281												
Tetrachloroethene (PCE)	A	0.10	0.640	B	0.20	0.900	C	0.50	0.841	D	1.0	0.647	E	2.0	0.827
	F	5.0	0.753	G	10	0.780	H	20	0.764	I	40	0.893	J	60	0.855
	K	80	0.841												
Chlorobenzene	A	0.10	2.35	B	0.20	2.46	C	0.50	2.17	D	1.0	2.04	E	2.0	2.18
	F	5.0	2.17	G	10	2.19	H	20	2.18	I	40	2.26	J	60	2.24
	K	80	2.17												

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

† SPCC Compound **‡ CCC Compound**

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 11/19/2018

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15902 **Column:** MS
Instrument ID: MS46

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
1,4-Dichlorobenzene	A	0.10	1.92	B	0.20	1.83	C	0.50	1.69	D	1.0	1.61	E	2.0	1.58
	F	5.0	1.61	G	10	1.62	H	20	1.64	I	40	1.64	J	60	1.66
	K	80	1.60												
Dibromofluoromethane										D	4.0	0.209	E	6.0	0.224
	F	8.0	0.212	G	10	0.237	H	12	0.235	I	14	0.236	J	16	0.229
	K	20	0.218												
Toluene-d8										D	4.0	0.711	E	6.0	0.815
	F	8.0	0.709	G	10	0.913	H	12	0.843	I	14	0.866	J	16	0.760
	K	20	0.754												
4-Bromofluorobenzene										D	4.0	0.822	E	6.0	0.868
	F	8.0	0.802	G	10	0.898	H	12	0.873	I	14	0.875	J	16	0.832
	K	20	0.813												

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

† SPCC Compound **‡ CCC Compound**

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 11/19/2018

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15902 **Column:** MS
Instrument ID: MS46

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Vinyl Chloride	MS	AverageRF	% RSD	11.4		≤ 20	0.213		0.1
1,1-Dichloroethene	MS	AverageRF	% RSD	10.8		≤ 20	0.206		0.1
2-Butanone (MEK)	MS	AverageRF	% RSD	6.1		≤ 20	0.0161		0.01
Chloroform	MS	AverageRF	% RSD	6.2		≤ 20	0.422		0.2
Carbon Tetrachloride	MS	AverageRF	% RSD	10.1		≤ 20	0.350		0.1
Benzene	MS	AverageRF	% RSD	4.6		≤ 20	0.983		0.5
1,2-Dichloroethane (EDC)	MS	AverageRF	% RSD	4.9		≤ 20	0.245		0.1
Trichloroethene (TCE)	MS	AverageRF	% RSD	6.4		≤ 20	0.276		0.2
Tetrachloroethene (PCE)	MS	AverageRF	% RSD	11.1		≤ 20	0.795		0.2
Chlorobenzene	MS	AverageRF	% RSD	5.0		≤ 20	2.22		0.5
1,4-Dichlorobenzene	MS	AverageRF	% RSD	6.3		≤ 20	1.67		0.5
Dibromofluoromethane	SURR	AverageRF	% RSD	4.8		≤ 20	0.225		0.01
Toluene-d8	SURR	AverageRF	% RSD	9.4		≤ 20	0.796		0.01
4-Bromofluorobenzene	SURR	AverageRF	% RSD	4.1		≤ 20	0.848		0.01

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

† SPCC Compound **‡ CCC Compound**

Client: Integral Consulting, Incorporated
Project: San Jacinto River Waste Pits PDI-1

Service Request: K1812382
Calibration Date: 11/19/2018
Date Analyzed: 11/19/2018

Second Source Calibration Verification
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration ID: CAL15902
Units: PPB

File ID: J:\MS46\DATA\111918\1119F020.D
J:\MS46\DATA\111918\1119F022.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Vinyl Chloride	10	8.1	0.213	0.174	-19	NA	± 30 %	AverageRF
1,1-Dichloroethene	10	8.9	0.206	0.183	-11	NA	± 30 %	AverageRF
2-Butanone (MEK)	50	49	0.0161	0.0159	-1	NA	± 30 %	AverageRF
Chloroform	10	9.0	0.422	0.380	-10	NA	± 30 %	AverageRF
Carbon Tetrachloride	10	8.2	0.350	0.288	-18	NA	± 30 %	AverageRF
Benzene	10	8.8	0.983	0.869	-12	NA	± 30 %	AverageRF
1,2-Dichloroethane (EDC)	10	9.6	0.245	0.235	-4	NA	± 30 %	AverageRF
Trichloroethene (TCE)	10	8.7	0.276	0.241	-13	NA	± 30 %	AverageRF
Tetrachloroethene (PCE)	10	8.7	0.795	0.689	-13	NA	± 30 %	AverageRF
Chlorobenzene	10	9.2	2.22	2.05	-8	NA	± 30 %	AverageRF
1,4-Dichlorobenzene	10	9.3	1.67	1.56	-7	NA	± 30 %	AverageRF

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

† SPCC Compound **‡ CCC Compound**

Client: Integral Consulting, Incorporated
Project: San Jacinto River Waste Pits PDI-1

Service Request: K1812382
Date Analyzed: 12/31/2018

Continuing Calibration Verification Summary
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 11/19/2018
Calibration ID: CAL15902
Analysis Lot: KWG1806757
Units: PPB

File ID: J:\MS46\DATA\123118\1231F003.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Vinyl Chloride	10	12	0.1	0.213	0.246	15	NA	± 20	AverageRF
1,1-Dichloroethene	10	11	0.1	0.206	0.234	14	NA	± 20	AverageRF
2-Butanone (MEK)	200	180	0.01	0.0161	0.0144	-11	NA	± 20	AverageRF
Chloroform	10	10	0.2	0.422	0.436	3	NA	± 20	AverageRF
Carbon Tetrachloride	10	11	0.1	0.350	0.378	8	NA	± 20	AverageRF
Benzene	10	11	0.5	0.983	1.05	7	NA	± 20	AverageRF
1,2-Dichloroethane (EDC)	10	11	0.1	0.245	0.260	6	NA	± 20	AverageRF
Trichloroethene (TCE)	10	10	0.2	0.276	0.288	4	NA	± 20	AverageRF
Tetrachloroethene (PCE)	10	11	0.2	0.795	0.836	5	NA	± 20	AverageRF
Chlorobenzene	10	10	0.5	2.22	2.26	2	NA	± 20	AverageRF
1,4-Dichlorobenzene	10	9.9	0.5	1.67	1.66	-1	NA	± 20	AverageRF
Dibromofluoromethane	10	11	0.01	0.225	0.251	12	NA	± 20	AverageRF
Toluene-d8	10	12	0.01	0.796	0.944	19	NA	± 20	AverageRF
4-Bromofluorobenzene	10	11	0.01	0.848	0.974	15	NA	± 20	AverageRF

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

† SPCC Compound **‡ CCC Compound**

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1

Analysis Run Log
Volatile Organic Compounds

Analysis Method: 8260C **Analysis Lot:** KWG1806757
Instrument ID: MS46

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1231F002.D	GC/MS Tuning - Bromofluorobenzene	KWG1806757-1	12/31/2018	11:37		12/31/2018	11:40
1231F003.D	Continuing Calibration Verification	KWG1806757-2	12/31/2018	11:55		12/31/2018	12:12
1231F004.D	ZZZZZZ	ZZZZZZ	12/31/2018	12:29		12/31/2018	12:46
1231F006.D	Lab Control Sample	KWG1900204-2	12/31/2018	13:21		12/31/2018	13:38
1231F007.D	ZZZZZZ	ZZZZZZ	12/31/2018	13:47		12/31/2018	14:04
1231F008.D	SL0594MS	KWG1900204-1	12/31/2018	14:13		12/31/2018	14:30
1231F009.D	ZZZZZZ	ZZZZZZ	12/31/2018	14:39		12/31/2018	14:56
1231F010.D	ZZZZZZ	ZZZZZZ	12/31/2018	15:05		12/31/2018	15:22
1231F011.D	ZZZZZZ	ZZZZZZ	12/31/2018	15:31		12/31/2018	15:48
1231F014.D	ZZZZZZ	ZZZZZZ	12/31/2018	16:50		12/31/2018	17:07
1231F015.D	Method Blank	KWG1900204-3	12/31/2018	17:16		12/31/2018	17:33
1231F016.D	ZZZZZZ	ZZZZZZ	12/31/2018	17:41		12/31/2018	17:58
1231F017.D	ZZZZZZ	ZZZZZZ	12/31/2018	18:07		12/31/2018	18:24
1231F018.D	ZZZZZZ	ZZZZZZ	12/31/2018	18:33		12/31/2018	18:50
1231F019.D	SL0594	K1812382-001	12/31/2018	18:59		12/31/2018	19:16
1231F020.D	ZZZZZZ	ZZZZZZ	12/31/2018	19:26		12/31/2018	19:43

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Prepared:**	12/21/2018
Sample Matrix:	Soil	**Date Extracted:**	12/31/2018

Extraction Prep Log
Volatile Organic Compounds

Preparation Method:	EPA 1311	**Extraction Lot:**	KWG1900204
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
SL0594	K1812382-001	12/09/18	12/18/18	125uL	50ml	NA	
Method Blank	KWG1900204-3	NA	NA	125uL	50ml	NA	
SL0594MS	KWG1900204-1	12/09/18	12/18/18	125uL	50ml	NA	
Lab Control Sample	KWG1900204-2	NA	NA	125uL	50ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Semi-Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	12/09/18 15:00
Sample Matrix:	Soil	**Date Received:**	12/18/18 10:05
Sample Name:	SL0594	**Units:**	mg/L
Lab Code:	K1812382-001	**Basis:**	NA

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 3510C	**Pre-Prep Date:**	12/19/18

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-Trichlorophenol, TCLP	ND U	0.10	0.0087	1	01/04/19 14:43	12/26/18	
2,4,6-Trichlorophenol, TCLP	ND U	0.10	0.0069	1	01/04/19 14:43	12/26/18	
2,4-Dinitrotoluene, TCLP	ND U	0.10	0.013	1	01/04/19 14:43	12/26/18	
2-Methylphenol, TCLP	ND U	0.10	0.0086	1	01/04/19 14:43	12/26/18	
4-Methylphenol, TCLP	ND U	0.10	0.0047	1	01/04/19 14:43	12/26/18	
Hexachlorobenzene, TCLP	ND U	0.10	0.0094	1	01/04/19 14:43	12/26/18	
Hexachlorobutadiene, TCLP	ND U	0.10	0.0064	1	01/04/19 14:43	12/26/18	
Hexachloroethane, TCLP	ND U	0.10	0.0048	1	01/04/19 14:43	12/26/18	
Nitrobenzene, TCLP	ND U	0.10	0.0079	1	01/04/19 14:43	12/26/18	
Pentachlorophenol (PCP), TCLP	ND U	0.25	0.011	1	01/04/19 14:43	12/26/18	
Pyridine, TCLP	ND U	0.50	0.25	1	01/04/19 14:43	12/26/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	100	52 - 122	01/04/19 14:43	
2-Fluorobiphenyl	68	44 - 114	01/04/19 14:43	
Nitrobenzene-d5	76	45 - 122	01/04/19 14:43	
Phenol-d6	61	35 - 105	01/04/19 14:43	
p-Terphenyl-d14	87	50 - 145	01/04/19 14:43	

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KQ1818722-04	**Basis:**	NA

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-Trichlorophenol, TCLP	ND U	0.10	0.0087	1	01/04/19 12:00	12/26/18	
2,4,6-Trichlorophenol, TCLP	ND U	0.10	0.0069	1	01/04/19 12:00	12/26/18	
2,4-Dinitrotoluene, TCLP	ND U	0.10	0.013	1	01/04/19 12:00	12/26/18	
2-Methylphenol, TCLP	ND U	0.10	0.0086	1	01/04/19 12:00	12/26/18	
4-Methylphenol, TCLP	ND U	0.10	0.0047	1	01/04/19 12:00	12/26/18	
Hexachlorobenzene, TCLP	ND U	0.10	0.0094	1	01/04/19 12:00	12/26/18	
Hexachlorobutadiene, TCLP	ND U	0.10	0.0064	1	01/04/19 12:00	12/26/18	
Hexachloroethane, TCLP	ND U	0.10	0.0048	1	01/04/19 12:00	12/26/18	
Nitrobenzene, TCLP	ND U	0.10	0.0079	1	01/04/19 12:00	12/26/18	
Pentachlorophenol (PCP), TCLP	ND U	0.25	0.011	1	01/04/19 12:00	12/26/18	
Pyridine, TCLP	ND U	0.50	0.25	1	01/04/19 12:00	12/26/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	100	52 - 122	01/04/19 12:00	
2-Fluorobiphenyl	74	44 - 114	01/04/19 12:00	
Nitrobenzene-d5	79	45 - 122	01/04/19 12:00	
Phenol-d6	63	35 - 105	01/04/19 12:00	
p-Terphenyl-d14	93	50 - 145	01/04/19 12:00	

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KQ1818722-05	**Basis:**	NA

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-Trichlorophenol, TCLP	ND U	0.10	0.0087	1	01/04/19 11:20	12/26/18	
2,4,6-Trichlorophenol, TCLP	ND U	0.10	0.0069	1	01/04/19 11:20	12/26/18	
2,4-Dinitrotoluene, TCLP	ND U	0.10	0.013	1	01/04/19 11:20	12/26/18	
2-Methylphenol, TCLP	ND U	0.10	0.0086	1	01/04/19 11:20	12/26/18	
4-Methylphenol, TCLP	ND U	0.10	0.0047	1	01/04/19 11:20	12/26/18	
Hexachlorobenzene, TCLP	ND U	0.10	0.0094	1	01/04/19 11:20	12/26/18	
Hexachlorobutadiene, TCLP	ND U	0.10	0.0064	1	01/04/19 11:20	12/26/18	
Hexachloroethane, TCLP	ND U	0.10	0.0048	1	01/04/19 11:20	12/26/18	
Nitrobenzene, TCLP	ND U	0.10	0.0079	1	01/04/19 11:20	12/26/18	
Pentachlorophenol (PCP), TCLP	ND U	0.25	0.011	1	01/04/19 11:20	12/26/18	
Pyridine, TCLP	ND U	0.50	0.25	1	01/04/19 11:20	12/26/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	95	52 - 122	01/04/19 11:20	
2-Fluorobiphenyl	76	44 - 114	01/04/19 11:20	
Nitrobenzene-d5	83	45 - 122	01/04/19 11:20	
Phenol-d6	68	35 - 105	01/04/19 11:20	
p-Terphenyl-d14	94	50 - 145	01/04/19 11:20	

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3510C

Sample Name	Lab Code	2,4,6-Tribromophenol 52-122	2-Fluorobiphenyl 44-114	Nitrobenzene-d5 45-122
SL0594	K1812382-001	100	68	76
Method Blank	KQ1818722-04	100	74	79
Method Blank	KQ1818722-05	95	76	83
Lab Control Sample	KQ1818722-03	119	72	77
SL0594	KQ1818722-01	119	73	86
SL0594	KQ1818722-02	113	75	84

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3510C

Sample Name	Lab Code	Phenol-d6 35-105	p-Terphenyl-d14 50-145
SL0594	K1812382-001	61	87
Method Blank	KQ1818722-04	63	93
Method Blank	KQ1818722-05	68	94
Lab Control Sample	KQ1818722-03	64	74
SL0594	KQ1818722-01	72	74
SL0594	KQ1818722-02	68	75

ALS Group USA, Corp.
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QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:**K1812382
Project: San Jacinto River Waste Pits PDI-1 **Date Analyzed:**01/04/19 10:39

Internal Standard Area and RT SUMMARY
TCLP Semivolatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\010419\0104F002.D\ **Lab Code:**KQ1900290-02
Instrument ID: K-MS-07 **Analysis Lot:**621360
Analysis Method: 8270D **Signal ID:**1

		1,4-Dichlorobenzene-d4		Acenaphthene-d10		Chrysene-d12	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Result ==>	37,441	9.43	84,343	14.39	105,835	21.28
	Upper Limit ==>	74,882	9.93	168,686	14.89	211,670	21.78
	Lower Limit ==>	18,721	8.93	42,172	13.89	52,918	20.78
Associated Analyses							
Method Blank	KQ1818722-05	40581	9.42	82278	14.39	102395	21.27
Method Blank	KQ1818722-04	43108	9.42	85707	14.39	100447	21.27
Lab Control Sample	KQ1818722-03	43336	9.44	92763	14.39	108860	21.28
SL0594MS	KQ1818722-01	38874	9.43	89816	14.39	109441	21.28
SL0594DMS	KQ1818722-02	38789	9.43	87625	14.39	112615	21.28
SL0594	K1812382-001	39694	9.43	80483	14.39	103498	21.27

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:**K1812382
Project: San Jacinto River Waste Pits PDI-1 **Date Analyzed:**01/04/19 10:39

Internal Standard Area and RT SUMMARY
TCLP Semivolatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\010419\0104F002.D\ **Lab Code:**KQ1900290-02
Instrument ID: K-MS-07 **Analysis Lot:**621360
Analysis Method: 8270D **Signal ID:**1

		Naphthalene-d8		Perylene-d12		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Result ==>	135,929	11.53	104,929	24.51	117,734	16.80
	Upper Limit ==>	271,858	12.03	209,858	25.01	235,468	17.30
	Lower Limit ==>	67,965	11.03	52,465	24.01	58,867	16.30
Associated Analyses							
Method Blank	KQ1818722-05	144326	11.52	106698	24.51	144941	16.80
Method Blank	KQ1818722-04	141709	11.52	107000	24.50	152364	16.80
Lab Control Sample	KQ1818722-03	152459	11.53	114263	24.51	115746	16.80
SL0594MS	KQ1818722-01	138331	11.53	114027	24.51	120708	16.81
SL0594DMS	KQ1818722-02	137320	11.53	114811	24.51	123843	16.81
SL0594	K1812382-001	138716	11.52	113534	24.50	144410	16.80

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Collected:**	12/09/18
Sample Matrix:	Soil	**Date Received:**	12/18/18
		Date Analyzed:	01/4/19
		Date Extracted:	12/26/18

Duplicate Matrix Spike Summary
TCLP Semivolatile Organic Compounds by GC/MS

Sample Name:	SL0594	**Units:**	mg/L
Lab Code:	K1812382-001	**Basis:**	NA
Analysis Method:	8270D		
Prep Method:	EPA 3510C		

		Matrix Spike KQ1818722-01			**Duplicate Matrix Spike** KQ1818722-02					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
2,4,5-Trichlorophenol, TCLP	ND U	0.776	1.00	78	0.793	1.00	79	53-115	2	30
2,4,6-Trichlorophenol, TCLP	ND U	0.734	1.00	73	0.765	1.00	77	58-113	4	30
2,4-Dinitrotoluene, TCLP	ND U	0.756	1.00	76	0.756	1.00	76	70-130	<1	50
2-Methylphenol, TCLP	ND U	0.768	1.00	77	0.731	1.00	73	49-109	5	30
4-Methylphenol, TCLP	ND U	0.682	1.00	68	0.702	1.00	70	39-112	3	30
Hexachlorobenzene, TCLP	ND U	0.816	1.00	82	0.821	1.00	82	57-114	<1	30
Hexachlorobutadiene, TCLP	ND U	0.740	1.00	74	0.738	1.00	74	38-112	<1	30
Hexachloroethane, TCLP	ND U	0.685	1.00	68	0.632	1.00	63	35-106	8	30
Nitrobenzene, TCLP	ND U	0.730	1.00	73	0.751	1.00	75	45-117	3	30
Pentachlorophenol (PCP), TCLP	ND U	0.736	1.00	74	0.775	1.00	77	57-128	5	30
Pyridine, TCLP	ND U	1.07	2.00	54	0.998	2.00	50	10-113	7	30

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

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

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

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	01/04/19
Sample Matrix:	Soil	**Date Extracted:**	12/26/18

Lab Control Sample Summary
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Units:**	mg/L
Prep Method:	EPA 3510C	**Basis:**	NA
		Analysis Lot:	621360

Lab Control Sample
KQ1818722-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-Trichlorophenol, TCLP	0.791	1.00	79	63-107
2,4,6-Trichlorophenol, TCLP	0.759	1.00	76	64-108
2,4-Dinitrotoluene, TCLP	0.699	1.00	70	55-121
2-Methylphenol, TCLP	0.716	1.00	72	51-104
4-Methylphenol, TCLP	0.641	1.00	64	53-101
Hexachlorobenzene, TCLP	0.850	1.00	85	59-113
Hexachlorobutadiene, TCLP	0.697	1.00	70	45-98
Hexachloroethane, TCLP	0.640	1.00	64	41-97
Nitrobenzene, TCLP	0.703	1.00	70	50-107
Pentachlorophenol (PCP), TCLP	0.697	1.00	70	52-122
Pyridine, TCLP	0.696	2.00	35	10-117

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dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	01/04/19 12:00
Sample Matrix:	Soil	**Date Extracted:**	12/26/18

Method Blank Summary
TCLP Semivolatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Instrument ID:**	K-MS-07
Lab Code:	KQ1818722-04	**File ID:**	J:\MS07\DATA\010419\0104F004.D\
Analysis Method:	8270D	**Analysis Lot:**	621360
Prep Method:	EPA 3510C	**Extraction Lot:**	328902

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1818722-03	J:\MS07\DATA\010419\0104F005.D\	01/04/19 12:41
SL0594MS	KQ1818722-01	J:\MS07\DATA\010419\0104F006.D\	01/04/19 13:21
SL0594DMS	KQ1818722-02	J:\MS07\DATA\010419\0104F007.D\	01/04/19 14:02
SL0594	K1812382-001	J:\MS07\DATA\010419\0104F008.D\	01/04/19 14:43

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	01/04/19 12:00
Sample Matrix:	Soil	**Date Extracted:**	12/26/18

Method Blank Summary
TCLP Semivolatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Instrument ID:**	K-MS-07
Lab Code:	KQ1818722-04	**File ID:**	J:\MS07\DATA\010419\0104F004.D\
Analysis Method:	8270D	**Analysis Lot:**	621360
Prep Method:	EPA 3510C	**Extraction Lot:**	328902

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1818722-03	J:\MS07\DATA\010419\0104F005.D\	01/04/19 12:41
SL0594MS	KQ1818722-01	J:\MS07\DATA\010419\0104F006.D\	01/04/19 13:21
SL0594DMS	KQ1818722-02	J:\MS07\DATA\010419\0104F007.D\	01/04/19 14:02
SL0594	K1812382-001	J:\MS07\DATA\010419\0104F008.D\	01/04/19 14:43

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	01/04/19 12:41
Sample Matrix:	Soil	**Date Extracted:**	12/26/18

Lab Control Sample Summary
TCLP Semivolatile Organic Compounds by GC/MS

Sample Name:	Lab Control Sample	**Instrument ID:**	K-MS-07
Lab Code:	KQ1818722-03	**File ID:**	J:\MS07\DATA\010419\0104F005.D\
Analysis Method:	8270D	**Analysis Lot:**	621360
Prep Method:	EPA 3510C	**Extraction Lot:**	328902

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1818722-05	J:\MS07\DATA\010419\0104F003.D\	01/04/19 11:20
Method Blank	KQ1818722-04	J:\MS07\DATA\010419\0104F004.D\	01/04/19 12:00
SL0594MS	KQ1818722-01	J:\MS07\DATA\010419\0104F006.D\	01/04/19 13:21
SL0594DMS	KQ1818722-02	J:\MS07\DATA\010419\0104F007.D\	01/04/19 14:02
SL0594	K1812382-001	J:\MS07\DATA\010419\0104F008.D\	01/04/19 14:43

Client: Integral Consulting, Incorporated **Service Request:**K1812382
Project: San Jacinto River Waste Pits PDI-1 **Date Analyzed:**01/04/19 09:59

Tune Summary
TCLP Semivolatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\010419\0104F001.D\ **Analytical Method:** 8270D
Instrument ID: K-MS-07 **Analysis Lot:** 621360

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
443	442	15	24	19.43	3083	Pass
51	198	30	80	71.50	17258	Pass
68	69	0	2	0.00	0	Pass
69	198	0	100	66.84	16133	Pass
70	69	0	2	0.00	0	Pass
127	198	25	75	45.45	10970	Pass
197	198	0	1	0.00	0	Pass
198	198	100	100	100.00	24137	Pass
199	198	5	9	6.33	1527	Pass
275	198	10	30	25.41	6134	Pass
365	198	0.75	100	3.87	934	Pass
441	443	0.01	100	80.41	2479	Pass
442	198	40	110	65.73	15866	Pass

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	KQ1900290-02	J:\MS07\DATA\010419\0104F002.D\	01/04/19 10:39	
Method Blank	KQ1818722-05	J:\MS07\DATA\010419\0104F003.D\	01/04/19 11:20	
Method Blank	KQ1818722-04	J:\MS07\DATA\010419\0104F004.D\	01/04/19 12:00	
Lab Control Sample	KQ1818722-03	J:\MS07\DATA\010419\0104F005.D\	01/04/19 12:41	
SL0594	KQ1818722-01	J:\MS07\DATA\010419\0104F006.D\	01/04/19 13:21	
SL0594	KQ1818722-02	J:\MS07\DATA\010419\0104F007.D\	01/04/19 14:02	
SL0594	K1812382-001	J:\MS07\DATA\010419\0104F008.D\	01/04/19 14:43	

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 12/7/2018

Initial Calibration Summary
TCLP Semivolatile Organic Compounds by GC/MS

Calibration ID: KC1800550 **Signal ID:** 1
Instrument ID: K-MS-07

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1800550-01	8270/P ICAL @ 1ppm | SVM59-92D	J:\MS07\DATA\120718\1207F003.D	12/07/2018 16:32
02	KC1800550-02	8270/P ICAL @ 5ppm | SVM59-92E	J:\MS07\DATA\120718\1207F004.D	12/07/2018 17:13
03	KC1800550-03	8270/P ICAL @ 10ppm | SVM59-92F	J:\MS07\DATA\120718\1207F005.D	12/07/2018 17:54
04	KC1800550-04	8270/P ICAL @ 20ppm | SVM59-92G	J:\MS07\DATA\120718\1207F006.D	12/07/2018 18:35
05	KC1800550-05	8270/P ICAL @ 50ppm | SVM59-92H	J:\MS07\DATA\120718\1207F007.D	12/07/2018 19:16
06	KC1800550-06	8270/P ICAL @ 80ppm | SVM59-92I	J:\MS07\DATA\120718\1207F008.D	12/07/2018 19:57
07	KC1800550-07	8270/P ICAL @ 100ppm | SVM59-92J	J:\MS07\DATA\120718\1207F009.D	12/07/2018 20:38
08	KC1800550-08	8270/P ICAL @ 120ppm | SVM59-92K	J:\MS07\DATA\120718\1207F010.D	12/07/2018 21:19
09	KC1800550-09	8270/P ICAL @ 160ppm | SVM59-92L	J:\MS07\DATA\120718\1207F011.D	12/07/2018 22:00
10	KC1800550-10	8270/P ICAL @ 200ppm | SVM59-92M	J:\MS07\DATA\120718\1207F012.D	12/07/2018 22:41

Analyte

2,4,5-Trichlorophenol, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.3342	03	10.000	0.3787	04	20.000	0.4188	05	50.000	0.4343
06	80.000	0.4482	07	100.000	0.4467	08	120.000	0.4492	09	160.000	0.4659
10	200.000	0.4681									

2,4,6-Tribromophenol

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.08702	03	10.000	0.09326	04	20.000	0.108	05	50.000	0.1188
06	80.000	0.1161	07	100.000	0.1209	08	120.000	0.1225	09	160.000	0.1323
10	200.000	0.1368									

2,4,6-Trichlorophenol, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
03	10.000	0.3219	04	20.000	0.372	05	50.000	0.4205	06	80.000	0.4115
07	100.000	0.4363	08	120.000	0.4615	09	160.000	0.4781	10	200.000	0.458

2,4-Dinitrotoluene, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.2905	03	10.000	0.3367	04	20.000	0.3639	05	50.000	0.3729
06	80.000	0.3707	07	100.000	0.3847	08	120.000	0.4266	09	160.000	0.4107
10	200.000	0.3948									

2-Fluorobiphenyl

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	1.342	03	10.000	1.346	04	20.000	1.373	05	50.000	1.441
06	80.000	1.441	07	100.000	1.539	08	120.000	1.602	09	160.000	1.677
10	200.000	1.677									

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 12/7/2018

Initial Calibration Summary
TCLP Semivolatile Organic Compounds by GC/MS

Calibration ID: KC1800550 **Signal ID:** 1
Instrument ID: K-MS-07

Analyte

2-Methylphenol, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.8401	03	10.000	0.8617	04	20.000	0.8502	05	50.000	0.9191
06	80.000	0.872	07	100.000	0.8993	08	120.000	0.9072	09	160.000	0.9818
10	200.000	0.9986									

4-Methylphenol, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	1.203	03	10.000	1.327	04	20.000	1.359	05	50.000	1.443
06	80.000	1.368	07	100.000	1.396	08	120.000	1.408	09	160.000	1.568
10	200.000	1.552									

Hexachlorobenzene, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.218	03	10.000	0.2389	04	20.000	0.2346	05	50.000	0.2423
06	80.000	0.2363	07	100.000	0.2444	08	120.000	0.2466	09	160.000	0.2577
10	200.000	0.2661									

Hexachlorobutadiene, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.254	03	10.000	0.2551	04	20.000	0.2655	05	50.000	0.2789
06	80.000	0.2722	07	100.000	0.2757	08	120.000	0.2938	09	160.000	0.3003
10	200.000	0.3227									

Hexachloroethane, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.6058	03	10.000	0.6486	04	20.000	0.6865	05	50.000	0.6912
06	80.000	0.6937	07	100.000	0.6824	08	120.000	0.726	09	160.000	0.7366
10	200.000	0.7723									

Nitrobenzene, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	1.254	03	10.000	1.274	04	20.000	1.313	05	50.000	1.439
06	80.000	1.359	07	100.000	1.351	08	120.000	1.387	09	160.000	1.493
10	200.000	1.528									

Nitrobenzene-d5

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	1.3	03	10.000	1.212	04	20.000	1.347	05	50.000	1.428
06	80.000	1.352	07	100.000	1.386	08	120.000	1.385	09	160.000	1.471
10	200.000	1.468									

Pentachlorophenol (PCP), TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
04	20.000	0.1084	05	50.000	0.1372	06	80.000	0.1556	07	100.000	0.1606
08	120.000	0.1759	09	160.000	0.1842	10	200.000	0.2013			

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 12/7/2018

Initial Calibration Summary
TCLP Semivolatile Organic Compounds by GC/MS

Calibration ID: KC1800550 **Signal ID:** 1
Instrument ID: K-MS-07

Analyte

Phenol-d6

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	1.099	03	10.000	1.161	04	20.000	1.244	05	50.000	1.317
06	80.000	1.267	07	100.000	1.284	08	120.000	1.332	09	160.000	1.46
10	200.000	1.504									

Pyridine, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.8956	03	10.000	0.9641	04	20.000	0.9161	05	50.000	0.9975
06	80.000	0.9927	07	100.000	1.008	08	120.000	1.065	09	160.000	1.107
10	200.000	1.125									

p-Terphenyl-d14

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.000	1.068	02	5.000	0.7574	03	10.000	0.7451	04	20.000	0.7884
05	50.000	0.8636	06	80.000	0.9328	07	100.000	0.9382	08	120.000	0.9779
09	160.000	1.053	10	200.000	1.042						

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 12/7/2018

Initial Calibration Summary
TCLP Semivolatile Organic Compounds by GC/MS

Calibration ID: KC1800550 **Signal ID:** 1
Instrument ID: K-MS-07

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
2,4,5-Trichlorophenol, TCLP	TRG	Average RF	% RSD	10.3	≤20	0.4271	0.200
2,4,6-Tribromophenol	SURR	Average RF	% RSD	14.4	≤20	0.1151	0.010
2,4,6-Trichlorophenol, TCLP	TRG	Average RF	% RSD	12.3	≤20	0.42	0.200
2,4-Dinitrotoluene, TCLP	TRG	Average RF	% RSD	10.9	≤20	0.3724	0.200
2-Fluorobiphenyl	SURR	Average RF	% RSD	9.1	≤20	1.493	0.010
2-Methylphenol, TCLP	TRG	Average RF	% RSD	6.2	≤20	0.9033	0.700
4-Methylphenol, TCLP	TRG	Average RF	% RSD	8.0	≤20	1.403	0.600
Hexachlorobenzene, TCLP	TRG	Average RF	% RSD	5.7	≤20	0.2428	0.100
Hexachlorobutadiene, TCLP	TRG	Average RF	% RSD	8.0	≤20	0.2798	0.010
Hexachloroethane, TCLP	TRG	Average RF	% RSD	7.0	≤20	0.6937	0.300
Nitrobenzene, TCLP	TRG	Average RF	% RSD	6.9	≤20	1.377	0.200
Nitrobenzene-d5	SURR	Average RF	% RSD	6.0	≤20	1.372	0.010
Pentachlorophenol (PCP), TCLP	TRG	Quadratic	COD	0.9994	≥0.990	0.1605	0.050
Phenol-d6	SURR	Average RF	% RSD	9.9	≤20	1.296	0.010
Pyridine, TCLP	TRG	Average RF	% RSD	7.9	≤20	1.008	0.010
p-Terphenyl-d14	SURR	Average RF	% RSD	13.4	≤20	0.9166	0.010

Client: Integral Consulting, Incorporated **Service Request:** K1812382
Project: San Jacinto River Waste Pits PDI-1 **Calibration Date:** 12/7/2018

Initial Calibration Verification Summary
TCLP Semivolatile Organic Compounds by GC/MS

Calibration ID: KC1800550 **Signal ID:** 1
Instrument ID: K-MS-07

#	Lab Code	Sample Name	File Location	Acquisition Date
11	KC1800550-11	8270 ICV @ 80ppm | SVM59-93C	J:\MS07\DATA\120718\1207F013.D	12/07/2018 23:22
12	KC1800550-12	PAPER ICV @ 80ppm | SVM58-87A	J:\MS07\DATA\120718\1207F014.D	12/08/2018 00:03
13	KC1800550-13	Benzidine ICV @ 50ppm | SVM59-93D	J:\MS07\DATA\120718\1207F015.D	12/08/2018 00:44

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
2,4,5-Trichlorophenol, TCLP	80.0	91.0	4.271E-1	4.859E-1	13.75	±30	Average RF
2,4,6-Trichlorophenol, TCLP	80.0	83.8	4.2E-1	4.4E-1	4.78	±30	Average RF
2,4-Dinitrotoluene, TCLP	80.0	85.7	3.724E-1	3.991E-1	7.18	±30	Average RF
2-Methylphenol, TCLP	80.0	81.1	9.033E-1	9.159E-1	1.40	±30	Average RF
4-Methylphenol, TCLP	160	147	1.403E0	1.286E0	-8.287	±30	Average RF
Hexachlorobenzene, TCLP	80.0	84.3	2.428E-1	2.557E-1	5.35	±30	Average RF
Hexachlorobutadiene, TCLP	80.0	81.1	2.798E-1	2.837E-1	1.41	±30	Average RF
Hexachloroethane, TCLP	80.0	79.4	6.937E-1	6.885E-1	-0.748	±30	Average RF
Nitrobenzene, TCLP	80.0	82.9	1.377E0	1.428E0	3.69	±30	Average RF
Pentachlorophenol (PCP), TCLP	80.0	84.5	1.605E-1	1.657E-1	5.62	±30	Quadratic
Pyridine, TCLP	80.0	76.2	1.008E0	9.602E-1	-4.735	±30	Average RF

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
2,4,6-Tribromophenol	80.0	89.4	1.151E-1	1.285E-1	11.70	±30	Average RF
2-Fluorobiphenyl	80.0	80.5	1.493E0	1.502E0	0.574	±30	Average RF
Nitrobenzene-d5	80.0	81.1	1.372E0	1.391E0	1.35	±30	Average RF
Phenol-d6	80.0	77.4	1.296E0	1.254E0	-3.277	±30	Average RF
p-Terphenyl-d14	80.0	79.7	9.166E-1	9.129E-1	-0.401	±30	Average RF

Client:	Integral Consulting, Incorporated	**Service Request:**	K1812382
Project:	San Jacinto River Waste Pits PDI-1	**Date Analyzed:**	01/04/19 10:39

Continuing Calibration Verification (CCV) Summary
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Calibration Date:**	12/7/2018
File ID:	J:\MS07\DATA\010419\0104F002.D\	**Calibration ID:**	KC1800550
Signal ID:	1	**Analysis Lot:**	621360
		Units:	ug/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4,5-Trichlorophenol, TCLP	80.0	77.0	0.4271	0.411	-3.8	NA	±20	Average RF
2,4,6-Trichlorophenol, TCLP	80.0	78.3	0.42	0.411	-2.1	NA	±20	Average RF
2,4-Dinitrotoluene, TCLP	80.0	83.7	0.3724	0.3896	4.6	NA	±20	Average RF
2-Methylphenol, TCLP	80.0	86.0	0.9033	0.9705	7.4	NA	±20	Average RF
4-Methylphenol, TCLP	80.0	77.4	1.4026	1.3576	-3.2	NA	±20	Average RF
Hexachlorobenzene, TCLP	80.0	89.9	0.2428	0.2728	12.4	NA	±20	Average RF
Hexachlorobutadiene, TCLP	80.0	84.7	0.2798	0.2963	5.9	NA	±20	Average RF
Hexachloroethane, TCLP	80.0	85.1	0.6937	0.7375	6.3	NA	±20	Average RF
Nitrobenzene, TCLP	80.0	81.1	1.3775	1.3969	1.4	NA	±20	Average RF
Pentachlorophenol (PCP), TCLP	80.0	74.6	0.1605	0.1421	NA	-6.7	±20	Quadratic
Pyridine, TCLP	80.0	73.1	1.0079	0.9204	-8.7	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4,6-Tribromophenol	80.0	110	0.1151	0.1587	37.9*	NA	±20	Average RF
2-Fluorobiphenyl	80.0	73.6	1.4933	1.3734	-8.0	NA	±20	Average RF
Nitrobenzene-d5	80.0	85.5	1.3722	1.4662	6.8	NA	±20	Average RF
Phenol-d6	80.0	79.4	1.2965	1.2861	-0.8	NA	±20	Average RF
p-Terphenyl-d14	80.0	76.6	0.9166	0.8775	-4.3	NA	±20	Average RF

Client: Integral Consulting, Incorporated **Service Request:**K1812382
Project: San Jacinto River Waste Pits PDI-1

Analysis Run Log
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: **Analysis Lot:**621360
Instrument ID:K-MS-07

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\MS07\DATA\010419\0104F001.D\	ZZZZZZZ	ZZZZZZZ	1/4/2019	09:59:00	
J:\MS07\DATA\010419\0104F001.D\	ZZZZZZZ	ZZZZZZZ	1/4/2019	09:59:00	
J:\MS07\DATA\010419\0104F002.D\	Continuing Calibration Verification	KQ1900290-02	1/4/2019	10:39:00	
J:\MS07\DATA\010419\0104F002.D\	ZZZZZZZ	ZZZZZZZ	1/4/2019	10:39:00	
J:\MS07\DATA\010419\0104F003.D\	Method Blank	KQ1818722-05	1/4/2019	11:20:00	
J:\MS07\DATA\010419\0104F004.D\	Method Blank	KQ1818722-04	1/4/2019	12:00:00	
J:\MS07\DATA\010419\0104F005.D\	Lab Control Sample	KQ1818722-03	1/4/2019	12:41:00	
J:\MS07\DATA\010419\0104F006.D\	SL0594 MS	KQ1818722-01	1/4/2019	13:21:00	
J:\MS07\DATA\010419\0104F007.D\	SL0594 DMS	KQ1818722-02	1/4/2019	14:02:00	
J:\MS07\DATA\010419\0104F008.D\	SL0594	K1812382-001	1/4/2019	14:43:00	
J:\MS07\DATA\010419\0104F009.D\	ZZZZZZZ	ZZZZZZZ	1/4/2019	15:23:00	
J:\MS07\DATA\010419\0104F010.D\	ZZZZZZZ	ZZZZZZZ	1/4/2019	16:04:00	
J:\MS07\DATA\010419\0104F011.D\	ZZZZZZZ	ZZZZZZZ	1/4/2019	16:45:00	
J:\MS07\DATA\010419\0104F012.D\	ZZZZZZZ	ZZZZZZZ	1/4/2019	17:25:00	
J:\MS07\DATA\010419\0104F013.D\	ZZZZZZZ	ZZZZZZZ	1/4/2019	18:05:00	
J:\MS07\DATA\010419\0104F014.D\	ZZZZZZZ	ZZZZZZZ	1/4/2019	18:46:00	
J:\MS07\DATA\010419\0104F015.D\	ZZZZZZZ	ZZZZZZZ	1/4/2019	19:26:00	

ALS Group USA, Corp.
dba ALS Environmental

Prep Summary Report

Client: Integral Consulting, Incorporated **Service Request:**K1812382
Project: San Jacinto River Waste Pits PDI-1
Sample Matrix: Soil

Toxicity Characteristics Leachate Procedure (TCLP)
TCLP Semivolatile Organic Compounds by GC/MS

Prep Method: EPA 3510C **Extraction Lot:** 328902
Analytical Method: 8270D **Extraction Date:** 12/26/18 15:00

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
SL0594	K1812382-001	12/9/18	12/18/18	100 mL	1 mL	
Matrix Spike	KQ1818722-01MS	12/9/18	12/18/18	100 mL	1 mL	
Duplicate Matrix Spike	KQ1818722-02DMS	12/9/18	12/18/18	100 mL	1 mL	
Lab Control Sample	KQ1818722-03LCS	NA	NA	100 mL	1 mL	
Method Blank	KQ1818722-04MB	NA	NA	100 mL	1 mL	
Method Blank	KQ1818722-05MB	NA	NA	100 mL	1 mL	

Subcontract Lab Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

07-Jan-2019

Mark Harris
ALS Environmental
1317 S. 13th Avenue
Kelso, WA 98626

Re: **K1812382** Work Order: **1901162**

Dear Mark,

ALS Environmental received 1 sample on 04-Jan-2019 for the analyses presented in the following report.

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

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

The total number of pages in this report is 7.

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

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

Sincerely,

Ehrland Bosworth

Electronically approved by: Alex J. Csaszar

Ehrland Bosworth
Project Manager

ALS Group, USA

Date: 07-Jan-19

Client: ALS Environmental
Project: K1812382
Work Order: **1901162**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1901162-01	K1812382-001	Soil		12/9/2018 15:00	1/4/2019 09:30	☐

ALS Group, USA

Date: 07-Jan-19

Client: ALS Environmental
Project: K1812382
WorkOrder: **1901162**

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
mg/Kg	Milligrams per Kilogram

ALS Group, USA

Date: *07-Jan-19*

Client: ALS Environmental
Project: K1812382
Sample ID: K1812382-001
Collection Date: 12/9/2018 03:00 PM

Work Order: 1901162
Lab ID: 1901162-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE		Method: **SW7.3.3.2**					Analyst: **DTV**
Cyanide, Reactive	U		17	100	mg/Kg	1	1/4/2019 16:00

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 07-Jan-19

Client: ALS Environmental

Work Order: 1901162

Project: K1812382

QC BATCH REPORT

Batch ID: **R252654** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **MB-R252654-R252654** Units: **mg/Kg** Analysis Date: **1/4/2019 04:00 PM**

Client ID: Run ID: **WETCHEM_190104J** SeqNo: **5470139** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	U	17	100								

LCS Sample ID: **LCS-R252654-R252654** Units: **mg/Kg** Analysis Date: **1/4/2019 04:00 PM**

Client ID: Run ID: **WETCHEM_190104J** SeqNo: **5470140** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	124.8	17	100	125	0	99.8	84-112	0			

MS Sample ID: **1901162-01A MS** Units: **mg/Kg** Analysis Date: **1/4/2019 04:00 PM**

Client ID: **K1812382-001** Run ID: **WETCHEM_190104J** SeqNo: **5470142** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	234.9	17	100	250	0	94	84-112	0			

MSD Sample ID: **1901162-01A MSD** Units: **mg/Kg** Analysis Date: **1/4/2019 04:00 PM**

Client ID: **K1812382-001** Run ID: **WETCHEM_190104J** SeqNo: **5470143** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	234.9	17	100	250	0	94	84-112	234.9	0	8	

The following samples were analyzed in this batch: 1901162-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

ALS Contact: Mark Harris

1901162

Project Number: K1812382
Project Manager: Mark Harris
QAP: LAB QAP

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	CN React 9014
K1812382-001	SL0594	1	Soil	12/9/18	1500	Holland ALS	X

Test Comments

CN React - 9014	K1812382-001	EPA 7.3.3.2

Folder Comments:
See attached Form V for special project requirements.

Special Instructions/Comments
Please provide the electronic (PDF and EDD) report to the following e-mail address: ALKLS.Data@alsglobal.com.

H - Test is On Hold P - Test is Authorized for Prep Only

Turnaround Requirements
____ **RUSH** (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
✓ **STANDARD**
Requested FAX Date: _____
Requested Report Date: 01/09/19

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
✓ IV. Data Validation Report with Raw Data
PQL/MDL/J Y
EDD Y

Invoice Information
PO# 51K1812382
Bill to

Relinquished By: 1/3/19 Received By: 1/4/19 0930 Airbill Number: 3.4°C SPR

ALS Group, USA

Sample Receipt Checklist

Client Name: **ALS - KELSO** Date/Time Received: **04-Jan-19 09:30**

Work Order: **1901162** Received by: **KRW**

Checklist completed by Keith Wierenga (eSignature) 04-Jan-19 (Date) Reviewed by: Bill Carey (eSignature) 04-Jan-19 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.4/3.4 C	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	1/4/2019 11:03:13 AM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

Raw Data

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Benchsheet

Service Request #: K1812382, KQ1818682, K1812550
Run #: 620061
Test: TS
Balance ID: K-BALANCE-47
Method: 160.3 Modified

Matrix	Lab Code	Tare (g)	Wet Wt. (g)	Tare + Dry Wt. (g)	Dry Weight (g)	% Total Solids	RPD
Soil	K1812382-001	1.273	10.182	5.944	4.67	45.9	
Soil	K1812382-001DUP	1.272	10.148	5.827	4.56	44.9	2
Misc. Solid	K1812550-001	1.266	10.395	4.096	2.83	27.2	

	Oven ID	Temp In	Temp Out	Date In	Time In	Date Out	Time Out	Thermometer ID
Oven1	K-Oven-07	105	105	12/26/2018	09:38	12/27/2018	08:09	

	Cal EQID	Cal Start Value	Cal End Value	Start Date	Start Time	End Date	End Time
Calibration1	K-BALANCE-47	0.999,	0.999, 99.999	12/26/2018	09:25	12/26/2018	09:38
Calibration2	K-BALANCE-55	1.002, 100.001	1.000, 100.000	12/27/2018	09:55	12/27/2018	09:59

Comments: LA SN 42868 Reviewed by SC 12/27/18

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Work Request # K1812433, 12299, 12691, 12282, 12382

Tier: I I I II IV

Date Analyzed: 1/3/19

Analyst: Jonathan Madison

Run # 620892

Analysis: 1020A/Flashpoint

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:

Final Approved by: [signature] Date: 01/03/19

DQREPORT

Analytical Results Summary

Instrument Name: K-FlashPoint-01 **Analyst:** JMADISON **Analysis Lot:** 620892 **Method/Testcode:** 1020A Modified/IgnitClosedCup

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K1812282-001	Flash Point	N/A		Soil	>110 deg C	2 g	>110 deg C	1					1/3/19 08:00:00	N	II
K1812282-002	Flash Point	N/A		Soil	>110 deg C	2 g	>110 deg C	1					1/3/19 08:00:00	N	II
K1812299-001	Flash Point	N/A		Misc. Liquid	>110 deg C	2 mL	>110 deg C	1					1/3/19 08:00:00	N	I
K1812299-002	Flash Point	N/A		Misc. Liquid	>110 deg C	2 mL	>110 deg C	1					1/3/19 08:00:00	N	I
K1812299-003	Flash Point	N/A		Misc. Liquid	>110 deg C	2 mL	>110 deg C	1					1/3/19 08:00:00	N	I
K1812382-001	Flash Point	N/A		Soil	>110 deg C	2 g	>110 deg C	1					1/3/19 08:00:00	N	IV
K1812433-001	Flash Point	N/A		Oil	>110 deg C	2 mL	>110 deg C	1					1/3/19 08:00:00	N	I
K1812691-001	Flash Point	N/A		Oil	>110 deg C	2 mL	>110 deg C	1					1/3/19 08:00:00	N	I
KQ1900075-01	Flash Point	MB		Oil	>110 deg C	2 mL	>110 deg C	1					1/3/19 08:00:00	N	I
KQ1900075-02	Flash Point	MB		Misc. Liquid	>110 deg C	2 mL	>110 deg C	1					1/3/19 08:00:00	N	I
KQ1900075-03	Flash Point	MB		Soil	>110 deg C	2 g	>110 deg C	1					1/3/19 08:00:00	N	IV
KQ1900075-04	Flash Point	LCS		Oil	27.00 deg C	2 mL	27.0 deg C	1			100		1/3/19 08:00:00	N	I
KQ1900075-05	Flash Point	LCS		Misc. Liquid	27.00 deg C	2 mL	27.0 deg C	1			100		1/3/19 08:00:00	N	I
KQ1900075-06	Flash Point	LCS		Soil	27.00 deg C	2 g	27.0 deg C	1			100		1/3/19 08:00:00	N	IV
KQ1900075-07	Flash Point	DUP	K1812433-001	Oil	>110 deg C	2 mL	>110 deg C	1				NC	1/3/19 08:00:00	N	I
KQ1900075-08	Flash Point	DUP	K1812299-001	Misc. Liquid	>110 deg C	2 mL	>110 deg C	1				NC	1/3/19 08:00:00	N	I
KQ1900075-09	Flash Point	DUP	K1812382-001	Soil	>110 deg C	2 g	>110 deg C	1				NC	1/3/19 08:00:00	N	IV

1/3/19

01/03/19

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

ALS Environmental

Service Request: K1812433, 12299, 12691, 12282, 12382

Analysis For: Flashpoint

Method: EPA 1020

p-xylene STD 1

°C	Yes	No
20		
25		X
30		
35		
40		
45		
50		
55		
60		
65		
70		
75		
80		
85		
90		
95		
100		
105		
110		
26		X
27	X	

Verification		
26		X
27	X	

Obs. Flash = 27

Flashpoint = 27

1-butanol STD 2

°C	Yes	No
20		
25		
30		
35		X
40		
45		
50		
55		
60		
65		
70		
75		
80		
85		
90		
95		
100		
105		
110		
36		X
37	X	

Verification		
36		X
37	X	

Obs. Flash = 37

Flashpoint = 37

DI Water Blank

°C	Yes	No
20		X
25		
30		
35		
40		X
45		
50		
55		
60		X
65		
70		
75		
80		X
85		
90		
95		
100		X
105		
110		X

Verification		
110		X

Obs. Flash = >110

Flashpoint = >110

Sample #: K1812433-001

°C	Yes	No
20		X
25		
30		
35		
40		X
45		
50		
55		
60		X
65		
70		
75		
80		X
85		
90		
95		
100		X
105		
110		X

Verification		
110		X

Obs. Flash = >110

Flashpoint = >110

Sample #: K1812433-001D

°C	Yes	No
20		
25		
30		
35		
40		
45		
50		
55		
60		
65		
70		
75		
80		
85		
90		
95		
100		X
105		
110		X

Verification		
110		X

Obs. Flash = >110

Flashpoint = >110

Standard 1: **p-xylene T.V. = 27.0 °C ±0.5 °C Lot #:** **10191795 %REC=**

Standard 2: **1-butanol T.V. = 37.0 °C ±1.0 °C Lot #:** **186512 %REC=**

Barometric Pressure

Beginning : 762.762

763 **End :** 762.762

Actual Flashpoint (°C) = Observed flashpoint + 0.03 (760 - Avg. barometric pressure (mm Hg))

Comments:

Instrument ID: K-Flashpoint-01

Analyst: JM

Date: 1/3/2019 8:00

Reviewed By:

Date: 01/03/19

Revision 1-R:/WET/ANALYSES/FLASH/TEMPLATE/fpointF&C

ALS Environmental

Service Request:

Analysis For: _____ Method: EPA 1020

°C	Yes	No	°C	Yes	No	°C	Yes	No	°C	Yes	No	°C	Yes	No
Sample #:	K1812299-001		Sample #:	K1812299-001D		Sample #:	K1812299-002		Sample #:	K1812299-003		Sample #:	K1812691-001	
20		X	20			20		X	20		X	20		X
25			25			25			25			25		
30			30			30			30			30		
35			35			35			35			35		
40		X	40			40		X	40		X	40		X
45			45			45			45			45		
50			50			50			50			50		
55			55			55			55			55		
60		X	60			60		X	60		X	60		X
65			65			65			65			65		
70			70			70			70			70		
75			75			75			75			75		
80		X	80			80		X	80		X	80		X
85			85			85			85			85		
90			90			90			90			90		
95			95			95			95			95		
100		X	100		X	100		X	100		X	100		X
105			105			105			105			105		
110		X	110		X	110		X	110		X	110		X
Verification			Verification			Verification			Verification			Verification		
110		X	110		X	110		X	110		X	110		X
Obs. Flash =		>110	Obs. Flash =		>110	Obs. Flash =		>110	Obs. Flash =		>110	Obs. Flash =		>110
Flashpoint =		>110	Flashpoint =		>110	Flashpoint =		>110	Flashpoint =		>110	Flashpoint =		>110

Comments:

Analyst: JM Date: 1/3/2019 Time: 8:08

Reviewed By: [signature] Date: 01/03/19

ALS Environmental

Service Request:

Analysis For: Flashpoint Method: EPA 1020

Sample #:	K1812282-001	Sample #:	K1812282-002	Sample #:	K1812382-001	Sample #:	K1812382-001D	Sample #:	
°C	Yes / No	°C	Yes / No	°C	Yes / No	°C	Yes / No	°C	Yes / No
20	No X	20	No X	20	No X	20		20	
25		25		25		25		25	
30		30		30		30		30	
35		35		35		35		35	
40	No X	40	No X	40	No X	40		40	
45		45		45		45		45	
50		50		50		50		50	
55		55		55		55		55	
60	No X	60	No X	60	No X	60		60	
65		65		65		65		65	
70		70		70		70		70	
75		75		75		75		75	
80	No X	80	No X	80	No X	80		80	
85		85		85		85		85	
90		90		90		90		90	
95		95		95		95		95	
100		100	No X	100	No X	100	No X	100	
105		105		105		105		105	
110	No X	110	No X	110	No X	110	No X	110	
Verification		Verification		Verification		Verification		Verification	
110	No X	110	No X	110	No X	110	No X		
Obs. Flash =	>110	Obs. Flash =	>110	Obs. Flash =	>110	Obs. Flash =	>110	Obs. Flash =	
Flashpoint =	>110	Flashpoint =	>110	Flashpoint =	>110	Flashpoint =	>110	Flashpoint =	

Comments:

Analyst: JM	Date: 1/3/2019	8:00
Reviewed By: [signature]	Date: 01/03/19	

Work Request # (Original) K1900061, K1812382

Tier: I IV

Date Analyzed: 1/7/19

Analyst: CES Run # 621230

Analysis: Sulfide Reactive

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:

2382 received past hold.

Final Approved by: [signature] Date: 01/10/19

DQREPORT

Analytical Results Summary

Instrument Name: K-Buret-01 **Analyst:** CSETHE **Analysis Lot:** 621230 **Method/Testcode:** 9034 Modified/Sulfide React

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K1812382-001	Sulfide, Reactive	N/A		Soil	3.21 mg/L	2.4960 g	70 mg/Kg U	1		70			1/7/19 14:56:00	N	IV
K1900061-001	Sulfide, Reactive	N/A		Soil	6.58 mg/L	2.4350 g	140 mg/Kg U	1		140			1/7/19 14:56:00	N	I
KQ1900237-01	Sulfide, Reactive	DUP	K1900061-001	Soil	22.60 mg/L	2.4790 g	140 mg/Kg U	1		140		NC	1/7/19 14:56:00	N	I
KQ1900237-02	Sulfide, Reactive	MB		Soil	0.00 mg/L	2.5000 g	32 mg/Kg U	1		32			1/7/19 14:56:00	N	I
KQ1900237-03	Sulfide, Reactive	LCS		Soil	513.00 mg/L	2.5000 g	513 mg/Kg	1		32	70		1/7/19 14:56:00	N	I

CES 1/10/19

01/10/19

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

StarLims Run #: 621230

Analysis: **Reactive Sulfide**

Method: **9034M**

Iodine Solution: S2/4-63-G

HCl (6N): S2/4-63-E

Sodium Thiosulfate 0.025N: 1807J62

Sodium Thiosulfate 0.025N (ICV): 196983

Starch Indicator Solution: 17K035002

Sulfide Standard: S2/3-2-E

Equipment: K-Buret-01

Pipettes: N11314F

Analyzed By: CES	Date Analyzed: 1/7/19
Reviewed By: [signature]	Date Reviewed: 01/10/19

Work Order #.: K1900061, K1812382 Method: SM 9034M or SM 9034 Distilled

Analysis: Reactive Sulfides

Sample Number	MB	LCS	0061-1	0061-1d	2382-1		
Sample Wt./Vol. (g) or (ml)	2.500	2.500	2.435	2.479	2.496		
Scrubber Volume (ml)	40	40	40	40	40		
Titrated Volume (ml)	40	40	40	40	40		
I_2 Volume (ml)	1.0	5.0	1.0	1.0	1.0		CCS
S_2O_3 Volume (ml)	1.01	1.80	0.96	0.86	0.98		1/10/19
S as received mg/Kg/mg/L	0.0	513	6.58	22.6	321		
S Dry Weight mg/Kg							

Sample Number							
Sample Wt./Vol. (g) or (ml)							
Scrubber Volume (ml)							
Titrated Volume (ml)					CCS		
I_2 Volume (ml)					1/10/19		
S_2O_3 Volume (ml)							
S as received mg/Kg/mg/L							
S Dry Weight mg/Kg							

$[S_2O_3] = 0.025N$ $[I_2] = 0.025$ N Titrated 5.0 mls I2 with 5.01 mls S_2O_3.

Sulfide Standard ID# = S2/3-2-E 3690 mg/L

Comments:

LCS= (0.5 ml)(3690 mg/L)/ 2.5g = 738 mg/kg

X= RPD=

Sulfide mg/Kg or mg/L = [(ml of I_2 X N of I_2)-(ml of titrant X N of titrant)](16030)(Scrubber Vol)

sample weight (g) x Scrubber Titrated (ml)

Analyst: CCS	Date Analyzed: 1/7/19 14:56
Reviewed By:	Date Reviewed: 01/10/19

Work Request # 12382

Tier: IV

Date Analyzed: 12-21-18

Analyst: A Cheatham

Analysis: PH/Soil 9045D Run # 619860

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:

Final Approved by: [signature] Date: 12/27/18

DQREPORT

ALS ENVIRONMENTAL

Service Request #:

Analysis: pH Corrosivity

Method: 9045D

Matrix: Soil/Solid

Calibration

Buffer	1.00	4.00	7.00	10.00	12.45	Value of Buffers at 25 °C
Reading	1.00	4.00	7.00	10.00	12.45	pH Slope: 97.2:1.
Temp °C	24.4	24.8	24.4	24.9	24.3	Slope Acceptance: 92-102%

Sample Number	Sample Wt. (g)	Vol of Ext Sol (mLs)	pH	Time Analyzed	Temp °C	% Solids
Buffer Check	Buffer Value:	4.00	3.99	1236	24.7	
LCS	--	--	8.57	1237	24.1	
12382-1	10.074	10	7.84	1240	24.8	
↓ -1d	10.282	↓	7.80	1241	24.7	
Buffer Check	Buf. Val.	4.00	4.01	1242	24.1	
Buffer Check	Buffer Value:					
Buffer Check	Buffer Value:					

LCS: ERA Lot # 5244-779 **ID #** 12-GEN.pH-001-1-H **T. V. =** 8.64 **% REC =**

pH 4.00 buffer: 12-GEN. pH-001-22 G pH 7.00 buffer: 12-GEN. pH-001-36 D pH 10.00 buffer: 12-GEN. pH-001-50 D

ph 1.00 buffer: 12-GEN. pH-001-12 A pH 12.45 buffer: 12-GEN. pH-001-64 E

Probe ID# 12-GEN.pH-001-73-E Meter ID# K-pH-14 Water Bath ID# K-Waterbath-pH

Extraction Solution: DI Water

Comments:

Analyst: A Chalfant Date: 12-21-18 1231

Reviewed By: Date: 12/21/18

R: WET/Analysis/PH/Templates/SOILPH Revison: 2

Analytical Results Summary

Instrument Name: K-pH-14 **Analyst:** ACHEATLEY **Analysis Lot:** 619860 **Method/Testcode:** 9045D/pH

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	As Received*	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?
K1812382-001	pH	N/A		Soil	7.84 pH Units	7.74	7.84 pH Units	1					12/21/18 13:40:00	N
KQ1818628-01	pH	DUP	K1812382-001	Soil	7.80 pH Units	7.72	7.80 pH Units	1				<1	12/21/18 12:41:00	N
KQ1818628-02	pH	LCS		Soil	8.57 pH Units	8.57	8.57 pH Units	1			99		12/21/18 12:37:00	N

12/21/18

* Not adjusted for changes in units
# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Printed 12/21/18 12:54

Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Preparation Information Benchsheet

Prep Run: 328676
Team: Metals
Analyst: JHINSON
Prep Workflow: MetDigLP
Prep Method: EPA 3010A
Rush/NPDES: N/A
Status: Prepped
Current Step: Digestion
Prep Date: 12/20/2018 13:45
Due Date: 12/28/2018
Hold Date: 06/17/2019

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1818537-02	Method Blank		25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
KQ1818537-01	Lab Control Sample		25 mL	25 mL	0.25 mL	189554	Metals TCLP	6%HNO3, 5%HCl
K1812382-001	SL0594	.07	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1812382-001: KQ1818537-03	Duplicate	.07	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1812382-001: KQ1818537-04	Matrix Spike	.07	25 mL	25 mL	0.25 mL	189554	Metals TCLP	6%HNO3, 5%HCl

5 Total Samples consisting of 1 Client Sample, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET TCLP (ALS-57-R1)	Spike	189554	4/19/2019

Preparation Materials

Step	Name	ID
Digestion	K-MET HNO3	193780
Digestion	K-MET 50ml Centrifuge Tube	194302

Step	Name	ID
Digestion	K-MET HCL	194595

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-DG 250C			
Digestion	K-HotPlate-03	Corrected Temperature	95	deg C
Digestion	K-HotPlate-03	Correction Factor	0	deg C

Step	Name	Property	Value	
Digestion	K-HotPlate-03	Observed Temperature	95	deg C
Digestion	K-HotPlate-03	Thermometer ID 662788		deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	20-DEC-18 13:45	20-DEC-18 17:00	JHINSON		N	

Comments

Review

Reviewed by: _____ Date: 12/21/18

TCLP Spike Solution

Lims Solution ID 189554

Expires 4/19/19

Analyte	Solution Concentration
Ag	100
Pb	500
As	500
Ba	1000
Cd	100
Cr	500
Se	100
Cu	100
Ni	100
Zn	1000

Additional spikes						
Element	Source	Lot #	mls of	ppm	Exp. date	Initials and date

This solution is a custom mix: ALS-57-R1

HP 3

Preparation Information Benchsheet

Prep Run: 328676
Team: Metals
Analyst: JHINSON

Prep Workflow: MetDigLP
Prep Method: EPA 3010A
Rush/NPDES: N/A

Status: Draft
Current Step: Digestion

Prep Date: 12/20/2018 13:01
Due Date: 12/28/2018
Hold Date: 06/17/2019

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1818537-02	Method Blank		25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
KQ1818537-01	Lab Control Sample		25 mL	25 mL	0.25 mL	189554	Metals TCLP	6%HNO3, 5%HCl
K1812382-001	SL0594	.07	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1812382-001: KQ1818537-03	Duplicate	.07	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1812382-001: KQ1818537-04	Matrix Spike	.07	25 mL	25 mL	0.25 mL	189554	Metals TCLP	6%HNO3, 5%HCl

5 Total Samples consisting of 1 Client Sample, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET TCLP (ALS-57-R1)	Spike	189554	4/19/2019

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion					N	

Comments

Review

Reviewed by: _____ Date: _____

TCLP Extraction Worksheet

Service Request Number(s): K1812382

If Autofluff sample is used please place an X in this box ☐

Method : TCLP 1311 ☒ SPLP 1312 ☐ Wet Ext. ☐ MEP ☐ Prep Run# : 328582

Note: 1 Blank needed per every 20 extracts.

Sample Number	Teflon Extraction Vessel #	Sample Description (Solid, Liquid, Multiphasic)	Partical Size < 1cm ?	Solution Determination Weight (g)	Initial pH	Aliquot of 1N HCl (mL)	Final pH	Solution To Be Used	Extraction Weight (g)	Extraction Solution Volume (mL)	Post-Extraction pH
K1812382-1	26	S	Y	5.19	8.68	3.5	5.65	2	100.24	2000	5.69
MB	36	L	-	-	-	-	-	↓	-	↓	-
					CEL 12/18						

pH Meter Calibrated at pH4 & pH7 Today? ☒ 12/19/18 12/20/18 pH Meter I.D. K-pH-08 Balance I.D. 57 Date Balance Checked: 12/19/18

Extraction Solution Prep date: 12/6/18 Tumbler # 1 Thermometer# 664244 Hot Plate Temp °C(50°C): 50

Today's Solution pH: 2.86 12/19/18 Extraction Solution I.D. MET-NG-73-I Filter Lot # 180145 HCl I.D. RE1-48-A

Extraction Started Time: 1430 Date: 12/19/18 Disposable Extraction Vessel Lot #: -

Extraction Finished Time: 815 Date: 12/20/18

Tumbler Rotational Speed (28 - 32 rpm): 29.6

Room Temperature at the Beginning of Extraction (Temp. Range 21° C - 25°C): 21.83

Analyst: [signature] Date: 12/19/18 Reviewer: [signature] Date: 12/21/18

Pre-Prep Information Benchsheet

Prep Run #: 328582 **Prep Method:** **Team:** **Container Lot No:** **Prep Due Date:** Dec-28-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1812382-001	.01	TCLP	100.24g		PrepComments:~~SSPAIN K~~-Balance-51 CLUKKEN
2	K1812382-001 DUP KQ1818459-01	.01	TCLP	5.19g		PrepComments:~~SSPAIN K~~-Balance-51 CCL 12/19

Relinquished By:	Date/Time:	Received By:	Date/Time:
Cody Lilly	12/19/18 11:17	Cody Lilly	12/19/18 11:27

Service Request # K1812521, K1812395, K1812396, K1900002, K1812299, K1812417, K1812357, K1812358, K1812382, K1812550
Instrument ID# K-ICP-AES-03
Calibration 010219AICP03
ALS LIMS Run # 620740
Pipette IDs: OU18256, 242761252, DJ07632
Pipette Calibration Due: 03/20/18

ICP-OES Data Review Form

		Yes	No
1.	Appropriate standardization completed	X	
2.	ICV within control limits	X	
3.	CCV's in control	X	
4.	ICB/CCB's below MRL	X	
4.	LLICV standard analyzed and in control	X	
5.	ICS standards within 20% of true value	X	
7.	All analytes within instrument linear range	X	
7.	Adequate rinse out time allowed	X	
8.	Was the run terminated? If so, why.		X

See Benchsheet exception report for sample batch QC information.
Comments:
6010: MRL for Cu3273=2X
After 11:23 MRL for K=2X
After 13:05 NR Al1670
After 15:46 MRL for B=2X

Primary Review by AFm Date 1/3/19

Secondary Review by JC Date 1/3/19

Data Review Form

Instrument ID#: **K-ICP-AES-03**
DataFile Name: **R:\ICP\WIP\DATA\K-ICP-AES-03 (6500)\010219AICP03.txt**
RUNNO: **620740**

K1812299

No exceptions to report.

K1812357

No exceptions to report.

K1812358

No exceptions to report.

K1812382

No exceptions to report.

K1812395

No exceptions to report.

K1812396

No exceptions to report.

K1812417

No exceptions to report.

K1812521

No exceptions to report.

K1812550

K1812550-001MS - Metals T -
RSD Evaluation
As1890 - Range: 20 Result: 35.90 1 PS is in control

K1900002

No exceptions to report.

Primary Approver: 1/3/19
Secondary Approver: 1/3/19

Sample Name: BLK Acquired: 1/2/2019 8:21:46 Type: Cal
Method: 2018B-6010-ICP-03(v31) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: INT.STD.ICP17-94-C

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.0004	-58.52	4.090	2.109	.0177	5.6425	33.46
Stddev	.0001	6.29	1.034	.749	.0029	1.9765	5.79
%RSD	17.34	10.75	25.28	35.53	16.16	35.029	17.32
#1	-.0004	-54.07	4.821	2.639	.0197	7.0401	29.36
#2	-.0003	-62.97	3.359	1.579	.0157	4.2449	37.55

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.0003	-.0002	.0033	.0701	.0000	.0003	-.0005
Stddev	.0004	.0001	.0018	.0009	.000	.0002	.0001
%RSD	127.2	39.93	54.89	1.242	36.54	54.33	31.18
#1	.0000	-.0002	.0020	.0694	-.0001	.0004	-.0004
#2	-.0005	-.0003	.0046	.0707	.0000	.0002	-.0006

Elem	Cu3273	Fe2599	Pb2203	Li6707	Mg2790	Mg2795	Mg2852
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-141.7	.0007	-.0001	1.757	.0002	.0019	-4.725
Stddev	.9	.0006	.0002	15.89	.0004	.0003	.743
%RSD	.6337	89.48	219.4	904.3	231.9	16.43	15.71
#1	-142.4	.0011	.0000	13.00	-.0001	.0021	-5.250
#2	-141.1	.0003	-.0002	-9.480	.0005	.0017	-4.200

Elem	Mn2576	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00004	.0000	.0002	.0005	.0004	99.66	-.0001
Stddev	.00001	.000	.0001	.0002	.0002	15.98	.0001
%RSD	23.320	235.6	33.65	32.46	51.83	16.03	83.80
#1	.00005	.0000	.0001	.0006	.0005	88.36	-.0001
#2	.00003	-.0001	.0002	.0004	.0002	111.0	.0000

Sample Name: BLK Acquired: 1/2/2019 8:21:46 Type: Cal
Method: 2018B-6010-ICP-03(v31) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: INT.STD.ICP17-94-C

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.925	-28.59	-44.11	-.00507	.0000	.0003	.0016
Stddev	1.167	6.47	13.14	.00096	.000	.0000	.0001
%RSD	60.61	22.62	29.78	19.028	276.7	6.178	4.132
#1	1.100	-24.02	-34.82	-.00575	-.0001	.0003	.0017
#2	2.750	-33.16	-53.40	-.00439	.0000	.0003	.0016

Elem	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0001	.0000	1.869	.0014	-.3450
Stddev	.0001	.000	.787	.0000	.2549
%RSD	170.6	1265.	42.09	2.936	73.87
#1	.0000	-.0001	1.313	.0013	-.1648
#2	.0001	.0001	2.426	.0014	-.5252

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4880.7	78641.	4930.2
Stddev	21.0	424.	3.9
%RSD	.42999	.53855	.07888
#1	4865.8	78341.	4927.5
#2	4895.5	78940.	4933.0

1/2/19

Sample Name: STD A Acquired: 1/2/2019 8:24:12 Type: Cal
Method: 2018B-6010-ICP-03(v31) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP18-1-F

Elem	Al1670	Sb2068	Be2348	B_2496	Cd2144	Cd2265	Ca3933	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0979	208.6	20609.	2080.	1.371	1.143	18.78	.0692
Stddev	.0004	1.2	68.	3.	.002	.002	.07	.0006
%RSD	.3672	.5990	.32986	.1236	.1720	.1871	.3829	.8898
#1	.0976	209.4	20560.	2079.	1.369	1.141	18.73	.0696
#2	.0981	207.7	20657.	2082.	1.373	1.144	18.83	.0687

Elem	Co2307	Cu2247	Cu3273	Pb2203	Mg2795	Mn2576	Mo2020	Ni2216
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.3962	.2226	6584.	.0921	3.353	.45443	.3049	.4460
Stddev	.0008	.0007	17.	.0000	.021	.00180	.0002	.0011
%RSD	.2116	.3113	.2529	.0525	.6240	.39541	.0668	.2509
#1	.3956	.2221	6596.	.0921	3.338	.45570	.3051	.4452
#2	.3968	.2231	6572.	.0921	3.367	.45315	.3048	.4468

Elem	Se1960	Ag3280	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0300	8906.	.0590	.0717	.2673	.0901	.3489	4855.
Stddev	.0001	12.	.0000	.0004	.0026	.0007	.0010	9.
%RSD	.3342	.1332	.0725	.5618	.9835	.8074	.2785	.1843
#1	.0301	8897.	.0589	.0714	.2691	.0906	.3482	4861.
#2	.0300	8914.	.0590	.0720	.2654	.0896	.3496	4849.

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4950.7	77292.	4961.6
Stddev	14.2	468.	12.9
%RSD	.28585	.60579	.25901
#1	4960.7	76961.	4970.7
#2	4940.7	77623.	4952.5

Sample Name: STD B Acquired: 1/2/2019 8:26:34 Type: Cal
Method: 2018B-6010-ICP-03(v31) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-85-B

Elem	Al3944	As1890	Ba4554	Ca3158	Fe2599	Li6707	Mg2790	Mg2852
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	89390.	568.3	117.5	2.726	2.765	18370.	.5114	38970.
Stddev	1517.	.1	1.5	.029	.027	10.	.0025	45.
%RSD	1.697	.0214	1.241	1.079	.9741	.0550	.4898	.1161
#1	90460.	568.4	118.5	2.747	2.784	18370.	.5131	39000.
#2	88320.	568.2	116.5	2.706	2.746	18360.	.5096	38940.

Elem	Mn2605	P_1782	K_7664	Si2516	Na5895	Sr4077	Bi2230	S_1820
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0533	1.087	6640.	3950.	26670.	23.171	.2413	275.0
Stddev	.0002	.004	78.	4.	89.	.237	.0002	1.3
%RSD	.3953	.3824	1.178	.1088	.3353	1.0220	.0831	.4587
#1	.0534	1.090	6696.	3947.	26610.	23.339	.2412	275.9
#2	.0531	1.084	6585.	3953.	26740.	23.004	.2414	274.1

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4796.0	74859.	4811.7
Stddev	16.4	496.	34.4
%RSD	.34186	.66204	.71457
#1	4784.4	74509.	4787.4
#2	4807.6	75210.	4836.0

Sample Name: ICVB Acquired: 1/2/2019 8:29:56 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP18-1-A

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9891	1.033	-.0035	.0043	-.0002	-.00004	1.994	-.0001
Stddev	.0007	.000	.0006	.0027	.0002	.00011	.003	.0000
%RSD	.0754	.0248	17.11	63.16	114.7	278.14	.1252	1.654
#1	.9896	1.034	-.0031	.0024	.0000	.00004	1.996	-.0001
#2	.9886	1.033	-.0040	.0062	-.0003	-.00011	1.992	-.0001
Check ?	Chk Pass	None	None	None	None	None	Chk Pass	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	4.793	4.710	-.0012	.0007	.0013	-.0008	9.769
Stddev	.0000	.041	.023	.0002	.0002	.0002	.0004	.020
%RSD	1.266	.8604	.4817	18.22	22.87	15.41	48.37	.2018
#1	-.0004	4.764	4.694	-.0011	.0006	.0014	-.0005	9.755
#2	-.0004	4.822	4.726	-.0014	.0008	.0012	-.0011	9.783
Check ?	None	None	Chk Pass	None	None	None	None	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026	1.982	4.853	4.822	4.956	9.4512	9.612	-.0003
Stddev	.0008	.028	.036	.019	.061	.1140	.003	.0000
%RSD	32.22	1.402	.7499	.4007	1.233	1.2063	.0307	1.896
#1	.0020	2.002	4.827	4.808	4.999	9.3706	9.615	-.0003
#2	.0032	1.962	4.879	4.835	4.912	9.5318	9.610	-.0003
Check ?	None	Chk Pass	None	Chk Pass	None	None	Chk Pass	None
Value								
Range								

Sample Name: ICVB Acquired: 1/2/2019 8:29:56 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP18-1-A

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	4.977	-.0184	-.0012	5.005	.0001	13.91	1.9651
Stddev	.000	.005	.0591	.0034	.054	.0004	.15	.0011
%RSD	280.0	.0922	321.0	291.9	1.084	270.9	1.087	.05383
#1	.0000	4.980	.0234	.0012	5.043	.0004	14.02	1.9659
#2	-.0001	4.973	-.0602	-.0035	4.967	-.0001	13.80	1.9644
Check ?	None	Chk Pass	None	None	Chk Pass	None	None	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	4.865	.0003	.0010	.0003	.0002	5.103	4.967
Stddev	.0016	.003	.0004	.0001	.0003	.0000	.010	.012
%RSD	230.9	.0541	121.1	15.18	95.01	16.34	.2036	.2434
#1	-.0018	4.867	.0006	.0009	.0001	.0002	5.110	4.976
#2	.0004	4.863	.0000	.0011	.0005	.0003	5.095	4.959
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4778.7	76728.	4894.2
Stddev	4.1	795.	72.1
%RSD	.08521	1.0359	1.4727
#1	4775.8	77290.	4945.2
#2	4781.6	76166.	4843.3

Sample Name: ICV Acquired: 1/2/2019 8:32:34 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-90-A

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.471	5.009	2.395	2.419	4.664	.12418	.0041	1.219
Stddev	.062	.006	.001	.009	.000	.00040	.0009	.002
%RSD	1.387	.1111	.0346	.3553	.0033	.31876	21.45	.1735
#1	4.427	5.013	2.395	2.413	4.664	.12446	.0035	1.217
#2	4.515	5.005	2.396	2.425	4.664	.12390	.0047	1.220
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.204	11.68	11.16	.4490	1.208	.6136	.5730	2.421
Stddev	.003	.01	.04	.0034	.002	.0002	.0012	.007
%RSD	.2143	.0990	.3170	.7674	.1458	.0362	.2069	.2787
#1	1.206	11.69	11.18	.4466	1.207	.6137	.5721	2.426
#2	1.202	11.67	11.13	.4514	1.209	.6134	.5738	2.416
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.429	.0027	11.81	11.31	12.22	1.1543	1.157	.4992
Stddev	.004	.0001	.01	.02	.05	.0006	.004	.0016
%RSD	.1692	2.763	.0648	.2205	.3911	.04736	.3282	.3191
#1	2.431	.0026	11.82	11.32	12.18	1.1547	1.154	.5003
#2	2.426	.0027	11.81	11.29	12.25	1.1539	1.159	.4980
Check ?	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: ICV Acquired: 1/2/2019 8:32:34 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-90-A

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.199	.0021	12.05	2.461	.0093	.5897	12.43	.00027
Stddev	.003	.0029	.06	.006	.0086	.0016	.05	.00001
%RSD	.2097	140.7	.5130	.2256	92.67	.2645	.4271	4.7227
#1	1.201	.0042	12.01	2.465	.0032	.5886	12.39	.00026
#2	1.197	.0000	12.09	2.457	.0154	.5908	12.47	.00028
Check ?	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.385	.0031	1.808	1.216	1.221	1.158	.0010	.0042
Stddev	.004	.0007	.009	.003	.007	.003	.0005	.0000
%RSD	.1508	23.80	.4891	.2220	.5551	.2966	51.42	1.141
#1	2.383	.0025	1.802	1.218	1.216	1.156	.0006	.0043
#2	2.388	.0036	1.814	1.214	1.226	1.160	.0014	.0042
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4727.5	78910.	5010.7
Stddev	13.0	55.	10.4
%RSD	.27431	.07001	.20717
#1	4718.3	78949.	5003.3
#2	4736.7	78871.	5018.0

Sample Name: ICB Acquired: 1/2/2019 8:35:01 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0008	.0133	.0014	-.0005	-.00009	-.0002	.0000
Stddev	.0000	.0011	.0043	.0006	.0001	.00007	.0004	.000
%RSD	7.841	143.3	32.21	39.28	24.62	76.660	239.9	13190.
#1	.0005	.0015	.0103	.0018	-.0006	-.00004	-.0005	.0000
#2	.0006	.0000	.0164	.0010	-.0004	-.00014	.0001	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0045	-.0002	.0002	.0001	.0000	-.0008	.0074
Stddev	.0002	.0047	.0001	.0001	.0000	.000	.0003	.0024
%RSD	375.5	104.2	72.38	77.96	17.12	482.2	35.91	32.57
#1	.0002	-.0079	-.0003	.0003	.0002	-.0002	-.0010	.0057
#2	-.0001	-.0012	-.0001	.0001	.0001	.0001	-.0006	.0091
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0019	.0209	.0000	-.0007	.00001	-.0002	.0017
Stddev	.0001	.0005	.0045	.000	.0036	.00005	.0003	.0000
%RSD	28.57	26.88	21.73	203.6	554.8	483.87	133.5	.2297
#1	.0004	.0016	.0177	.0000	.0019	.00005	-.0005	.0017
#2	.0003	.0023	.0241	.0000	-.0032	-.00003	.0000	.0017
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

See review
ARM 01/2/19

Sample Name: ICB Acquired: 1/2/2019 8:35:01 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0010	.0156	.0068	.0050	.0004	-.0131	.00001
Stddev	.0003	.0044	.0022	.0005	.0059	.0003	.0035	.00003
%RSD	275.7	422.6	14.21	6.950	117.1	78.77	26.42	303.23
#1	.0003	-.0041	.0140	.0071	.0092	.0002	-.0106	-.00001
#2	-.0001	.0021	.0172	.0064	.0009	.0006	-.0155	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0110	-.0003	.0002	-.0004	-.0001	.0000	-.0001	.0001
Stddev	.0023	.0003	.0004	.0009	.0000	.0001	.0019	.0020
%RSD	20.89	82.37	182.1	212.3	54.92	320.1	1441.	2458.
#1	.0094	-.0001	-.0001	.0002	.0000	.0001	.0012	-.0013
#2	.0126	-.0005	.0006	-.0010	-.0001	.0000	-.0015	.0015
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.0100							
Low Limit	-.0100							

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4756.7	80537.	5097.1
Stddev	8.8	305.	20.8
%RSD	.18588	.37856	.40855
#1	4762.9	80321.	5111.8
#2	4750.4	80752.	5082.4

01/2/19

Sample Name: ICB Acquired: 1/2/2019 8:37:42 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0025	-.0028	-.0002	-.0009	-.00007	-.0018	.0000
Stddev	.0000	.0009	.0014	.0006	.0000	.00013	.0007	.0001
%RSD	11.76	36.40	49.50	369.8	5.627	203.99	37.80	463.1
#1	.0001	-.0019	-.0038	-.0006	-.0009	-.00016	-.0013	.0000
#2	.0001	-.0031	-.0019	.0002	-.0008	.00003	-.0023	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0087	-.0003	.0002	.0004	.0003	-.0009	.0028
Stddev	.0001	.0000	.0001	.0001	.0001	.0001	.0001	.0012
%RSD	133.8	.0168	23.09	24.31	14.11	35.38	7.997	40.71
#1	.0002	-.0087	-.0003	.0002	.0004	.0002	-.0009	.0020
#2	.0000	-.0087	-.0002	.0003	.0004	.0003	-.0010	.0036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.0037	-.0238	-.0001	-.0013	-.00001	.0004	.0003
Stddev	.0009	.0012	.0057	.0000	.0025	.00006	.0001	.0004
%RSD	85.01	31.91	23.75	53.51	196.6	897.63	36.17	124.9
#1	.0017	.0029	-.0198	-.0001	.0005	-.00005	.0003	.0006
#2	.0004	.0046	-.0278	.0000	-.0031	.00004	.0005	.0000
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: ICB Acquired: 1/2/2019 8:37:42 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-.0029	-.0112	.0023	.0051	.0006	-.0140	-.00004
Stddev	.0004	.0001	.0006	.0001	.0045	.0009	.0177	.00006
%RSD	133.1	2.931	5.192	5.905	88.36	142.0	126.7	165.47
#1	.0006	-.0029	-.0108	.0022	.0082	.0013	-.0015	-.00008
#2	.0000	-.0030	-.0117	.0024	.0019	.0000	-.0265	.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	-.0011	.0000	.0000	.0000	-.0001	.0001	-.0037
Stddev	.0001	.0000	.0002	.000	.0001	.0001	.0028	.0022
%RSD	19.55	2.217	1282.	1637.	1674.	62.78	3419.	59.07
#1	.0004	-.0010	-.0001	.0000	.0001	-.0001	-.0019	-.0053
#2	.0003	-.0011	.0002	.0000	-.0001	-.0001	.0020	-.0022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4727.3	80433.	5111.6
Stddev	7.2	148.	.5
%RSD	.15234	.18401	.00899
#1	4732.4	80328.	5112.0
#2	4722.2	80538.	5111.3

Sample Name: LLICV Acquired: 1/2/2019 8:40:33 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-91-C 0.5/50mL

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0105	.0102	.0206	.0119	.0028	.00096	.0167	.0010
Stddev	.0003	.0004	.0005	.0003	.0000	.00005	.0004	.0001
%RSD	3.339	3.645	2.566	2.723	.6385	4.7023	2.584	5.931
#1	.0102	.0105	.0203	.0122	.0028	.00099	.0164	.0010
#2	.0107	.0100	.0210	.0117	.0028	.00093	.0170	.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	F .0126	.0171	.0035	.0021	.0040	.0031	.0170
Stddev	.0001	.0089	.0001	.0004	.0001	.0002	.0001	.0074
%RSD	10.17	71.07	.4424	11.13	3.061	4.278	3.800	43.59
#1	.0010	.0062	.0171	.0032	.0022	.0042	.0032	.0222
#2	.0011	.0189	.0172	.0038	.0021	.0039	.0030	.0117
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.0200						
Range		-30.00%						

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0109	.0195	-.0130	.0044	F .0029	.00088	-.0009	.0038
Stddev	.0008	.0002	.0005	.0001	.0006	.00016	.0001	.0002
%RSD	7.201	.8471	3.702	2.719	19.76	17.794	17.19	4.707
#1	.0104	.0196	-.0127	.0043	.0025	.00099	-.0010	.0037
#2	.0115	.0194	-.0134	.0044	.0033	.00077	-.0008	.0039
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Fail	Chk Pass	None	Chk Pass
Value					.0050			
Range					-30.00%			

Sample Name: LLICV Acquired: 1/2/2019 8:40:33 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-91-C 0.5/50mL

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037	.0390	.1757	.0216	.2049	.0047	.1934	.00098
Stddev	.0001	.0004	.0619	.0016	.0141	.0003	.0133	.00023
%RSD	1.678	.9463	35.24	7.553	6.905	6.753	6.883	23.156
#1	.0037	.0388	.1319	.0204	.1949	.0044	.1840	.00082
#2	.0038	.0393	.2195	.0227	.2149	.0049	.2028	.00114
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0100	.0187	.0018	.0033	.0038	.0036	.0200	.0392
Stddev	.0006	.0002	.0002	.0001	.0001	.0001	.0006	.0036
%RSD	5.684	.9468	13.03	3.733	3.838	3.680	3.017	9.201
#1	.0096	.0189	.0016	.0034	.0040	.0037	.0204	.0366
#2	.0104	.0186	.0019	.0032	.0037	.0035	.0196	.0417
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4740.5	79721.	5099.9
Stddev	9.6	60.	5.2
%RSD	.20259	.07511	.10260
#1	4747.3	79763.	5096.2
#2	4733.7	79679.	5103.6

Sample Name: LLICV,0.5 Acquired: 1/2/2019 8:43:06 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-91-C 1/50mL

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0206	.0233	.0388	.0239	.0066	.00197	.0369	.0021
Stddev	.0002	.0004	.0005	.0011	.0003	.00000	.0010	.0000
%RSD	.7826	1.895	1.281	4.451	5.199	.06250	2.582	1.350
#1	.0204	.0230	.0392	.0231	.0064	.00196	.0362	.0021
#2	.0207	.0237	.0385	.0246	.0069	.00197	.0376	.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	.0294	.0366	.0077	.0036	.0081	.0073	.0389
Stddev	.0001	.0007	.0002	.0003	.0004	.0011	.0004	.0024
%RSD	6.374	2.305	.4740	3.666	12.24	14.07	5.246	6.049
#1	.0022	.0298	.0364	.0079	.0039	.0089	.0071	.0372
#2	.0020	.0289	.0367	.0075	.0033	.0073	.0076	.0405
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0207	.0431	.0035	.0092	.0090	.00189	.0030	.0078
Stddev	.0004	.0005	.0085	.0000	.0006	.00001	.0015	.0002
%RSD	2.076	1.219	246.0	.1384	6.648	.72113	51.58	2.238
#1	.0204	.0435	-.0026	.0091	.0094	.00190	.0019	.0079
#2	.0210	.0427	.0095	.0092	.0086	.00188	.0040	.0077
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

ARun 01/2/19

Sample Name: LLICV,0.5 Acquired: 1/2/2019 8:43:06 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-91-C 1/50mL

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0082	.0751	.4454	.0429	.4045	.0087	.4149	.00195
Stddev	.0001	.0009	.0182	.0037	.0100	.0005	.0186	.00014
%RSD	1.159	1.264	4.075	8.548	2.480	5.409	4.486	7.3297
#1	.0081	.0744	.4583	.0455	.3975	.0083	.4017	.00185
#2	.0083	.0758	.4326	.0403	.4116	.0090	.4280	.00205
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0212	.0400	.0035	.0075	.0078	.0074	.0435	.0803
Stddev	.0014	.0007	.0000	.0002	.0005	.0001	.0005	.0013
%RSD	6.476	1.763	.5953	2.504	6.647	1.414	1.253	1.642
#1	.0202	.0405	.0035	.0077	.0074	.0073	.0439	.0794
#2	.0222	.0395	.0035	.0074	.0082	.0074	.0431	.0812
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4745.4	78987.	5015.1
Stddev	14.6	104.	23.9
%RSD	.30702	.13178	.47657
#1	4735.1	79061.	5032.0
#2	4755.7	78913.	4998.2

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Sample Name: LLICV-TCLP Acquired: 1/2/2019 8:45:56 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-81-I 0.2/10mL

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0005	.0001	.0019	.1815	-.00014	-.0037	-.0001
Stddev	.0003	.0000	.0030	.0021	.0006	.00010	.0002	.0000
%RSD	493.4	5.009	5976.	109.5	.3169	71.582	4.829	38.91
#1	-.0001	-.0005	.0022	.0034	.1819	-.00021	-.0038	-.0001
#2	.0003	-.0005	-.0021	.0004	.1811	-.00007	-.0036	.0000
Check ?	None	None	None	None	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.0006	.0021	.0002	.0003	.0001	-.0006	.0001
Stddev	.0000	.0118	.0001	.0002	.0000	.0010	.0000	.0018
%RSD	38.83	1909.	6.606	114.5	.1605	881.4	5.503	1749.
#1	.0000	.0077	.0022	.0000	.0003	-.0006	-.0006	-.0012
#2	-.0001	-.0090	.0020	.0003	.0003	.0008	-.0007	.0014
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0014	.0032	.0002	.0013	.00008	.0015	.0002
Stddev	.0005	.0017	.0156	.0000	.0029	.00000	.0003	.0003
%RSD	30.71	126.0	490.8	7.925	226.9	5.7482	20.17	196.4
#1	.0012	.0026	-.0078	.0003	-.0008	.00008	.0017	.0004
#2	.0018	.0001	.0142	.0002	.0034	.00008	.0013	-.0001
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Sample Name: LLICV-TCLP Acquired: 1/2/2019 8:45:56 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-81-I 0.2/10mL

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0001	-.0112	.0009	.0105	.0004	.0139	.00014
Stddev	.0000	.0007	.0632	.0013	.0079	.0004	.0109	.00000
%RSD	424.8	791.6	562.2	151.2	75.02	97.64	78.80	.05832
#1	.0000	-.0006	.0335	-.0001	.0049	.0007	.0061	.00014
#2	.0000	.0004	-.0560	.0018	.0161	.0001	.0216	.00014
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0019	-.0002	-.0002	-.0005	.1953	.1884	-.0011	.0003
Stddev	.0011	.0003	.0001	.0004	.0003	.0009	.0025	.0014
%RSD	56.55	222.4	73.91	80.19	.1597	.4742	228.3	461.9
#1	-.0026	-.0004	-.0003	-.0002	.1955	.1877	.0007	.0013
#2	-.0011	.0001	-.0001	-.0008	.1951	.1890	-.0028	-.0007
Check ?	None	None	None	None	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4768.0	79328.	4918.2
Stddev	28.3	502.	83.9
%RSD	.59278	.63326	1.7066
#1	4748.0	79683.	4858.9
#2	4788.0	78973.	4977.6

Sample Name: CCVB1 Acquired: 1/2/2019 8:48:54 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.565	10.36	-.0022	1.023	9.337	-.00002	-.0041	-.0001
Stddev	.044	.00	.0015	.002	.070	.00005	.0006	.0000
%RSD	.5777	.0178	71.51	.1856	.7534	222.02	15.51	40.02
#1	7.595	10.36	-.0011	1.022	9.288	-.00006	-.0046	-.0002
#2	7.534	10.35	-.0032	1.025	9.387	.00001	-.0037	-.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	9.503	9.147	.0001	.0002	.0011	-.0009	9.762
Stddev	.0001	.087	.090	.0004	.0004	.0002	.0001	.062
%RSD	27.08	.9190	.9846	256.9	166.1	19.43	8.391	.6312
#1	-.0005	9.442	9.083	.0004	.0005	.0010	-.0008	9.719
#2	-.0004	9.565	9.211	-.0001	.0000	.0013	-.0009	9.806
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	1.018	9.737	9.460	10.20	.96182	.9783	-.0004
Stddev	.0004	.004	.119	.160	.07	.00400	.0064	.0000
%RSD	128.6	.4090	1.220	1.693	.7338	.41599	.6578	7.789
#1	.0000	1.015	9.653	9.347	10.15	.96465	.9737	-.0004
#2	-.0005	1.021	9.821	9.573	10.25	.95899	.9828	-.0004
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB1 Acquired: 1/2/2019 8:48:54 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	10.14	9.904	-.0019	10.29	.0007	10.36	.96254
Stddev	.0003	.01	.098	.0004	.08	.0004	.08	.01020
%RSD	37.09	.1340	.9916	20.18	.8115	53.66	.7865	1.0594
#1	-.0006	10.13	9.835	-.0021	10.23	.0004	10.30	.95533
#2	-.0011	10.15	9.974	-.0016	10.35	.0009	10.41	.96975
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	-.0009	.0003	.0000	.0000	.0001	1.027	1.015
Stddev	.0006	.0001	.0003	.0007	.000	.0001	.004	.004
%RSD	115.6	12.12	74.35	4302.	572.9	203.8	.4225	.3953
#1	-.0001	-.0010	.0005	-.0005	.0001	.0000	1.024	1.012
#2	-.0009	-.0008	.0002	.0005	-.0001	.0001	1.030	1.018
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4890.6	78580.	5093.4
Stddev	1.4	148.	15.4
%RSD	.02769	.18784	.30309
#1	4889.6	78476.	5104.3
#2	4891.5	78685.	5082.5

Sample Name: CCVA1 Acquired: 1/2/2019 8:51:39 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2552	.2787	.2510	.2560	.2449	.25475	.2518	.2518
Stddev	.0011	.0007	.0017	.0039	.0016	.00072	.0019	.0001
%RSD	.4354	.2382	.6802	1.510	.6560	.28246	.7351	.0358
#1	.2544	.2783	.2498	.2587	.2461	.25424	.2505	.2518
#2	.2560	.2792	.2522	.2533	.2438	.25525	.2531	.2519
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2477	.4994	.4905	.2469	.2521	.2529	.2534	.2566
Stddev	.0002	.0047	.0030	.0003	.0005	.0014	.0012	.0011
%RSD	.0739	.9370	.6201	.1300	.2100	.5550	.4834	.4359
#1	.2476	.5027	.4927	.2467	.2518	.2519	.2543	.2574
#2	.2478	.4961	.4884	.2471	.2525	.2539	.2525	.2558
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2494	.0013	.2232	.2540	.2580	.24932	.2531	.2504
Stddev	.0015	.0004	.0254	.0006	.0015	.00091	.0026	.0000
%RSD	.6182	27.68	11.38	.2354	.5823	.36512	1.044	.0036
#1	.2483	.0016	.2053	.2544	.2569	.24868	.2549	.2504
#2	.2505	.0010	.2412	.2536	.2591	.24996	.2512	.2504
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA1 Acquired: 1/2/2019 8:51:39 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2494	-.0025	2.554	.2531	.1411	.2492	.2705	-.00004
Stddev	.0003	.0002	.009	.0021	.0121	.0009	.0007	.00001
%RSD	.1118	9.348	.3656	.8322	8.550	.3738	.2467	25.680
#1	.2492	-.0026	2.547	.2546	.1325	.2498	.2701	-.00003
#2	.2496	-.0023	2.560	.2517	.1496	.2485	.2710	-.00005
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2521	.2506	.2520	.2469	.2535	.2545	.0002	-.0018
Stddev	.0000	.0002	.0001	.0009	.0007	.0001	.0014	.0021
%RSD	.0148	.0957	.0490	.3520	.2684	.0277	888.5	117.1
#1	.2520	.2507	.2520	.2462	.2530	.2545	.0012	-.0003
#2	.2521	.2504	.2521	.2475	.2540	.2544	-.0009	-.0033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5000.4	77885.	5054.3
Stddev	3.6	59.	3.0
%RSD	.07297	.07518	.05924
#1	5003.0	77926.	5052.2
#2	4997.9	77843.	5056.4

Sample Name: CCB Acquired: 1/2/2019 8:54:01 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0034	-.0015	-.0009	-.0010	.00008	-.0016	.0000
Stddev	.000	.0022	.0015	.0002	.0003	.00000	.0001	.000
%RSD	260.6	66.09	101.5	17.99	33.70	5.1009	7.616	195.9
#1	.0000	.0050	-.0004	-.0008	-.0012	.00009	-.0016	.0000
#2	-.0001	.0018	-.0026	-.0010	-.0008	.00008	-.0015	-.0001
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0034	.0009	-.0006	.0001	.0002	-.0015	.0065
Stddev	.0000	.0046	.0001	.0004	.0004	.0005	.0001	.0013
%RSD	150.0	135.6	10.61	67.13	402.0	306.9	7.614	20.47
#1	.0000	.0066	.0010	-.0003	-.0002	.0005	-.0016	.0074
#2	.0000	.0001	.0008	-.0009	.0004	-.0002	-.0015	.0055
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	.0001	.0071	-.0001	.0015	.00003	.0015	.0006
Stddev	.0010	.0002	.0215	.0001	.0028	.00007	.0003	.0001
%RSD	601.3	164.9	303.8	103.1	183.7	236.64	18.48	11.99
#1	-.0009	.0003	-.0081	.0000	-.0004	-.00002	.0013	.0007
#2	.0005	.0000	.0222	-.0001	.0035	.00008	.0017	.0006
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 1/2/2019 8:54:01 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0027	.0134	.0020	.0115	.0001	.0010	.00011
Stddev	.0001	.0023	.0993	.0005	.0211	.0001	.0040	.00012
%RSD	155.6	85.37	740.1	25.55	183.5	184.7	416.0	106.48
#1	.0002	-.0011	-.0568	.0016	-.0034	.0000	-.0019	.00020
#2	.0000	-.0043	.0836	.0023	.0265	.0001	.0038	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	-.0004	.0001	-.0001	-.0002	.0000	-.0010	.0004
Stddev	.0018	.0001	.0002	.0009	.0000	.000	.0021	.0043
%RSD	180.4	17.80	148.0	625.4	28.98	229.6	207.1	1064.
#1	-.0003	-.0005	.0002	.0005	-.0002	-.0001	-.0025	-.0027
#2	.0023	-.0004	.0000	-.0008	-.0001	.0000	.0005	.0035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4916.1	77090.	4903.8
Stddev	11.2	79.	9.5
%RSD	.22789	.10260	.19467
#1	4924.0	77146.	4897.0
#2	4908.1	77034.	4910.5

Sample Name: ICSA Acquired: 1/2/2019 8:56:37 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-96-A

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	27.45	384.9	.0052	-.0021	-.0002	.00082	.0041	-.0017
Stddev	.19	2.0	.0032	.0020	.0004	.00009	.0023	.0000
%RSD	.6968	.5216	61.41	96.30	164.0	10.794	56.03	.1139
#1	27.32	386.3	.0074	-.0007	-.0005	.00088	.0025	-.0017
#2	27.59	383.4	.0029	-.0036	.0000	.00076	.0057	-.0017
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0078	458.7	*****	.0019	-.0017	.0133	.0001	180.6
Stddev	.0003	.8	-----	.0002	.0001	.0016	.0004	.4
%RSD	4.346	.1657	-----	11.46	8.707	11.71	765.7	.2045
#1	-.0076	459.3	-----	.0017	-.0016	.0144	-.0002	180.4
#2	-.0081	458.2	-----	.0020	-.0018	.0122	.0004	180.9
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0097	.0034	495.0	*****	444.9	-.00153	-.0135	-.0009
Stddev	.0036	.0028	1.2	-----	1.5	.00008	.0000	.0001
%RSD	36.76	80.99	.2453	-----	.3263	5.3286	.3539	5.667
#1	-.0122	.0054	495.9	-----	443.9	-.00159	-.0134	-.0009
#2	-.0072	.0015	494.1	-----	445.9	-.00147	-.0135	-.0010
Check ?	None	None	Chk Pass	None	None	None	None	None
Value								
Range								

Sample Name: ICSA Acquired: 1/2/2019 8:56:37 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-96-A

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017	.0040	-.1155	.0035	.0129	.0005	.0134	.00443
Stddev	.0002	.0023	.0398	.0038	.0091	.0002	.0096	.00014
%RSD	10.30	57.78	34.46	107.6	70.50	27.79	72.07	3.0983
#1	.0015	.0057	-.1436	.0062	.0065	.0007	.0202	.00453
#2	.0018	.0024	-.0873	.0008	.0193	.0004	.0066	.00434
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024	.0004	.0010	.0030	.0002	-.0022	.0192	.0098
Stddev	.0011	.0031	.0002	.0002	.0002	.0000	.0008	.0011
%RSD	46.75	763.4	17.68	7.086	131.1	.1119	4.371	10.82
#1	.0016	-.0018	.0009	.0029	.0004	-.0021	.0198	.0090
#2	.0032	.0026	.0011	.0032	.0000	-.0022	.0186	.0105
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4305.7	67508.	4714.5
Stddev	.5	317.	25.4
%RSD	.01053	.46898	.53909
#1	4305.4	67732.	4732.5
#2	4306.1	67284.	4696.6

Sample Name: ICSAB Acquired: 1/2/2019 8:59:22 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-92-C

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	27.58	378.3	.8445	.0039	.4623	.45166	.0041	.8895
Stddev	.18	.5	.0018	.0006	.0015	.00111	.0003	.0089
%RSD	.6617	.1367	.2123	15.44	.3323	.24503	7.951	1.004
#1	27.45	378.7	.8433	.0044	.4634	.45244	.0043	.8832
#2	27.71	378.0	.8458	.0035	.4612	.45087	.0038	.8958
Check ?	None	None	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8616	449.0	*****	.4470	.4396	.4714	.4219	181.4
Stddev	.0085	.4	-----	.0000	.0051	.0049	.0004	.4
%RSD	.9881	.0797	-----	.0034	1.153	1.049	.0923	.1989
#1	.8556	449.3	-----	.4470	.4360	.4679	.4216	181.2
#2	.8676	448.8	-----	.4470	.4432	.4749	.4221	181.7
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8412	.0044	488.5	*****	440.2	.45221	.4795	-.0007
Stddev	.0042	.0002	.2	-----	.9	.00019	.0043	.0002
%RSD	.5043	3.709	.0449	-----	.2152	.04287	.8939	29.67
#1	.8382	.0045	488.3	-----	439.6	.45234	.4765	-.0005
#2	.8442	.0043	488.6	-----	440.9	.45207	.4825	-.0008
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	None
Value								
Range								

Sample Name: ICSAB Acquired: 1/2/2019 8:59:22 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-92-C

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8598	.0069	-.0654	-.0006	-.0042	.8441	.0122	.00445
Stddev	.0089	.0076	.0228	.0021	.0064	.0046	.0086	.00001
%RSD	1.040	110.9	34.87	332.4	154.4	.5471	70.35	.26390
#1	.8534	.0015	-.0815	.0009	-.0087	.8474	.0061	.00445
#2	.8661	.0123	-.0493	-.0021	.0004	.8409	.0183	.00444
Check ?	Chk Pass	None	None	None	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022	-.0006	.0012	.4984	.8874	.8014	.0153	.0036
Stddev	.0024	.0004	.0001	.0017	.0105	.0036	.0007	.0003
%RSD	108.1	65.34	4.977	.3407	1.181	.4501	4.514	8.307
#1	.0005	-.0009	.0011	.4996	.8800	.7988	.0158	.0034
#2	.0039	-.0003	.0012	.4972	.8948	.8039	.0149	.0038
Check ?	None	None	None	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4255.3	67645.	4730.7
Stddev	22.1	126.	3.0
%RSD	.51991	.18598	.06400
#1	4270.9	67734.	4732.8
#2	4239.7	67556.	4728.5

Sample Name: KQ1818678-02 Acquired: 1/2/2019 9:16:42 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 010219A K1812521-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	-.0006	.0014	-.0011	-.00015	-.0040	-.0001	-.0001
#1	.0021	-.0012	.0011	-.0014	-.00025	-.0028	-.0001	-.0002
#2	.0019	-.0001	.0018	-.0007	-.00005	-.0052	-.0001	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019	.0001	.0004	.0002	-.0009	.0004	.0011	.0013
#1	.0019	.0004	.0003	.0000	-.0005	.0009	.0006	.0011
#2	.0020	-.0002	.0005	.0004	-.0013	-.0001	.0016	.0015

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.00001	-.0003	-.0002	.0100	.0269	.0028	.0442
#1	.0001	.00003	-.0002	.0001	.0118	.0588	.0037	.0599
#2	.0001	-.00001	-.0003	-.0004	.0082	-.0049	.0020	.0285

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0084	.00002	-.0004	-.0016	-.0002	.0001	-.0001
#1	.0001	.0006	.00000	-.0008	-.0014	-.0003	.0001	-.0001
#2	.0003	.0162	.00004	.0001	-.0018	-.0002	.0001	-.0001

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0001	-.0004	-.0004
#1	.0002	-.0015	.0000
#2	.0001	.0006	-.0008

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4907.2	80059.	5001.4
#1	4895.5	80044.	4951.5
#2	4919.0	80074.	5051.3

Sample Name: KQ1818678-01 Acquired: 1/2/2019 9:19:16 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 010219A K1812521-LCSW

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.424	1.728	2.148	4.142	.10537	.4089	1.042	1.017
#1	4.442	1.724	2.156	4.131	.10542	.4108	1.043	1.015
#2	4.406	1.732	2.139	4.153	.10532	.4070	1.040	1.018

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.36	.4120	1.063	.5225	.5327	2.052	2.040	.0019
#1	10.29	.4134	1.063	.5236	.5352	2.052	2.037	.0031
#2	10.42	.4106	1.062	.5215	.5302	2.051	2.043	.0008

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.92	1.0290	.8849	1.028	.0113	10.75	F 1.918	.0342
#1	10.96	1.0302	.8854	1.028	.0112	10.75	1.921	.0396
#2	10.87	1.0278	.8845	1.028	.0115	10.75	1.916	.0288

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4994	11.08	.00014	2.091	-.0014	.0000	1.068	1.049
#1	.5012	11.16	.00023	2.100	-.0012	-.0003	1.069	1.054
#2	.4976	11.01	.00005	2.082	-.0016	.0002	1.067	1.044

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.012	.0010	-.0049
#1	1.013	.0034	-.0052
#2	1.011	-.0013	-.0047

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4939.8	77134.	4969.2
#1	4942.8	77234.	5004.1
#2	4936.8	77034.	4934.4

Sample Name: K1812521-001 Acquired: 1/2/2019 9:21:41 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: AM 010219A DISS

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0038	-.0001	.0057	.1899	-.00002	.0830	-.0002	.0001
#1	.0034	.0002	.0045	.1895	.00004	.0843	-.0001	.0000
#2	.0042	-.0004	.0070	.1903	-.00008	.0818	-.0002	.0002

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	90.29	.0001	.0006	.0006	-.0021	.0108	-.0008	.0157
#1	89.96	.0003	.0006	.0000	-.0017	.0090	-.0023	.0141
#2	90.61	-.0001	.0006	.0011	-.0024	.0126	.0008	.0174

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	27.43	.04001	.0024	.0000	.0210	2.730	.0074	3.097
#1	27.36	.04013	.0024	-.0001	.0218	2.712	.0075	3.083
#2	27.51	.03988	.0024	.0002	.0203	2.747	.0074	3.112

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	65.47	.69725	.0153	-.0014	.0000	.0023	.0008
#1	.0004	65.32	.69500	.0143	-.0016	-.0001	.0020	.0009
#2	-.0001	65.61	.69951	.0163	-.0012	.0000	.0027	.0008

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0011	.0002	35.25
#1	.0010	.0026	35.36
#2	.0011	-.0022	35.15

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4763.5	73459.	4859.8
#1	4771.5	73484.	4861.2
#2	4755.5	73434.	4858.4

Sample Name: K1812521-001L Acquired: 1/2/2019 9:24:19 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: D Sample Type:
Comment: AM 010219A DISS 1/5

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019	-.0001	.0013	.0364	-.00008	.0139	.0000	.0000
#1	.0022	.0006	.0009	.0360	.00002	.0140	.0000	.0000
#2	.0016	-.0008	.0017	.0368	-.00018	.0138	.0000	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.26	.0004	.0005	.0001	-.0015	.0047	-.0009	.0018
#1	18.24	.0003	.0006	.0006	-.0009	.0020	-.0004	.0040
#2	18.27	.0005	.0004	-.0004	-.0022	.0074	-.0014	-.0004

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.584	.00819	.0001	.0002	.0030	.6026	.0024	.6186
#1	5.582	.00820	.0000	.0003	.0018	.6141	.0028	.6145
#2	5.585	.00818	.0002	.0001	.0041	.5911	.0020	.6226

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	13.15	.14041	.0006	-.0003	.0001	.0002	.0004
#1	.0005	13.17	.14011	.0025	-.0015	.0000	.0005	.0003
#2	.0002	13.12	.14071	-.0012	.0009	.0002	-.0001	.0004

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0003	-.0028	7.271
#1	.0003	-.0034	7.297
#2	.0002	-.0022	7.245

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4857.5	75746.	4914.3
#1	4874.5	75650.	4923.6
#2	4840.4	75842.	4905.0

Sample Name: KQ1818678-03 Acquired: 1/2/2019 9:26:56 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: AM 010219A DISS K1812521-001D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037	-.0022	.0022	.1855	-.00018	.0810	.0000	.0000
#1	.0035	-.0042	.0018	.1869	-.00012	.0810	.0000	-.0001
#2	.0039	-.0001	.0026	.1840	-.00024	.0809	.0000	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	88.53	.0000	.0004	.0007	-.0002	.0030	.0008	.0162
#1	89.24	.0000	.0001	.0010	.0000	-.0035	.0017	.0157
#2	87.81	.0000	.0006	.0004	-.0004	.0095	-.0001	.0167

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.96	.03901	.0013	.0007	.0219	2.737	.0050	3.025
#1	27.02	.03896	.0013	.0005	.0229	2.716	.0058	3.011
#2	26.90	.03906	.0013	.0009	.0210	2.758	.0041	3.039

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	65.17	.69079	-.0001	-.0018	-.0002	.0033	.0011
#1	.0008	65.18	.69506	-.0001	-.0021	.0000	.0028	.0010
#2	-.0007	65.16	.68651	-.0001	-.0015	-.0005	.0038	.0012

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0012	.0011	33.72
#1	.0011	.0009	33.63
#2	.0012	.0013	33.82

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4658.7	74284.	4862.5
#1	4655.0	74285.	4834.9
#2	4662.5	74283.	4890.2

Sample Name: KQ1818678-04 Acquired: 1/2/2019 9:29:35 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: AM 010219A DISS K1812521-001S

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.604	1.531	.3701	.7651	.9134	.03856	.4612	.0388
#1	1.597	1.519	.3728	.7630	.9173	.03847	.4597	.0388
#2	1.611	1.544	.3673	.7673	.9094	.03865	.4628	.0388

Elem	Cd2265	Ca3158 *	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0377	88.78	.1451	.3942	.1975	.1869	.7708	.3755
#1	.0376	88.95	.1444	.3946	.1964	.1873	.7726	.3751
#2	.0378	88.61	.1458	.3938	.1986	.1865	.7690	.3758

Elem	Li6707	Mg2852 **	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0131	33.32	.41202	.8452	.3789	.0205	10.16	.7452
#1	.0115	33.31	.41288	.8455	.3792	.0219	10.18	.7473
#2	.0147	33.33	.41117	.8449	.3786	.0191	10.14	.7432

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.995	.0366	70.02	.63987	.1551	-.0004	-.0002	.4059
#1	2.988	.0373	70.07	.64323	.1540	-.0010	-.0002	.4064
#2	3.003	.0360	69.97	.63651	.1561	.0003	-.0001	.4055

Elem	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm
Avg	.3926	.3622	.0020	33.78
#1	.3930	.3633	.0025	33.85
#2	.3922	.3612	.0015	33.70

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4609.3	76047.	5013.9
#1	4620.0	75840.	5011.3
#2	4598.5	76254.	5016.5

* - NR

** - SDL is in control

ATBm 1/2/19

Sample Name: K1812521-001A Acquired: 1/2/2019 9:32:03 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: AM 010219A DISS A=0.05/10mL CICV1,3

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.316	-.0019	2.225	4.396	.11322	.0810	1.119	1.083
#1	4.320	-.0002	2.231	4.369	.11293	.0803	1.120	1.085
#2	4.311	-.0037	2.220	4.422	.11351	.0817	1.118	1.081

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	91.88	.4116	1.135	.5725	.5368	2.213	2.183	.0174
#1	91.48	.4092	1.135	.5740	.5350	2.214	2.184	.0162
#2	92.28	.4140	1.135	.5711	.5387	2.213	2.183	.0186

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	37.31	1.1031	.0021	1.094	.0197	13.70	2.132	3.073
#1	37.27	1.0976	.0020	1.095	.0183	13.66	2.131	3.062
#2	37.36	1.1086	.0021	1.093	.0211	13.75	2.133	3.085

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5264	74.98	.63968	2.194	-.0018	-.0006	1.155	1.138
#1	.5255	74.98	.63653	2.195	-.0016	-.0006	1.151	1.139
#2	.5272	74.98	.64282	2.193	-.0019	-.0006	1.159	1.136

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.042	.0015	34.31
#1	1.044	.0007	34.37
#2	1.040	.0022	34.25

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4603.1	76964.	5083.4
#1	4610.7	77137.	5104.6
#2	4595.6	76792.	5062.1

* - NA

** - SDL in control

ARm 1/2/19

Sample Name: K1812521-002 Acquired: 1/2/2019 9:34:27 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: AM 010219A DISS

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033	-.0015	.0031	.1730	-.00015	.0809	.0000	.0001
#1	.0034	.0010	-.0002	.1724	-.00011	.0821	.0000	.0001
#2	.0031	-.0040	.0064	.1735	-.00019	.0798	.0001	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	83.32	.0001	.0003	.0004	-.0012	.0002	-.0004	.0140
#1	83.18	-.0004	.0001	.0004	-.0008	-.0001	-.0012	.0145
#2	83.46	.0005	.0006	.0003	-.0015	.0004	.0004	.0135

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.27	.03810	.0016	.0002	.0186	2.566	.0072	3.057
#1	26.22	.03804	.0017	.0001	.0174	2.574	.0106	3.048
#2	26.33	.03815	.0015	.0002	.0197	2.559	.0039	3.066

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	63.61	.65459	.0013	-.0009	-.0005	.0022	.0012
#1	.0000	63.44	.65537	.0018	-.0008	-.0002	.0025	.0012
#2	.0005	63.77	.65381	.0007	-.0009	-.0007	.0020	.0011

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0012	.0012	34.51
#1	.0012	-.0008	34.44
#2	.0012	.0032	34.59

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4614.0	76867.	5016.9
#1	4618.7	77122.	5011.2
#2	4609.3	76612.	5022.6

Sample Name: K1812521-003 Acquired: 1/2/2019 9:37:05 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: AM 010219A DISS

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	-.0009	.0014	-.0008	-.00006	-.0035	-.0002	.0000
#1	.0004	-.0008	.0017	-.0005	-.00011	-.0037	-.0001	.0001
#2	.0011	-.0011	.0011	-.0011	-.00001	-.0032	-.0003	-.0002

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0123	-.0001	.0005	.0005	-.0011	.0013	.0013	-.0002
#1	.0125	-.0002	.0008	.0008	-.0004	-.0009	.0010	.0002
#2	.0121	.0001	.0001	.0003	-.0018	.0034	.0016	-.0006

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.00024	.0004	.0000	.0098	.0339	.0041	.0752
#1	.0012	.00023	.0004	.0001	.0093	.0039	.0022	.0741
#2	.0009	.00025	.0003	.0000	.0103	.0640	.0060	.0764

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	.0098	.00012	-.0003	-.0012	-.0005	-.0002	.0002
#1	-.0004	.0123	.00016	.0004	-.0015	-.0001	-.0005	.0002
#2	.0000	.0072	.00009	-.0011	-.0009	-.0009	.0002	.0003

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0003	.0005	.0133
#1	.0002	.0007	.0151
#2	.0004	.0002	.0114

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4809.8	80920.	5129.4
#1	4807.4	80583.	5084.4
#2	4812.2	81258.	5174.4

Sample Name: KQ1818818-02 Acquired: 1/2/2019 9:39:39 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 010219A K1812395-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	-.0016	-.0029	-.0008	-.00014	-.0048	-.0001	-.0001
#1	.0009	-.0052	-.0019	-.0008	-.00012	-.0060	-.0002	.0000
#2	.0014	.0020	-.0038	-.0008	-.00017	-.0036	-.0001	-.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	.0002	.0000	-.0004	-.0022	.0041	.0014	-.0010
#1	.0042	.0000	.0003	-.0002	-.0025	.0053	.0018	-.0027
#2	.0042	.0003	-.0004	-.0006	-.0019	.0029	.0009	.0006

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-.00002	.0001	.0000	.0067	.0391	.0026	.0510
#1	.0002	.00000	.0000	.0004	.0036	.0406	.0043	.0541
#2	.0003	-.00003	.0001	-.0004	.0097	.0376	.0009	.0480

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0186	.00007	-.0013	-.0010	-.0005	-.0005	.0006
#1	.0007	.0266	.00004	-.0020	-.0004	-.0004	-.0004	.0006
#2	-.0003	.0106	.00009	-.0007	-.0015	-.0005	-.0007	.0006

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0007	.0007	.0000
#1	.0007	-.0004	-.0026
#2	.0007	.0018	.0025

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4804.0	80174.	5056.9
#1	4802.4	79694.	5040.3
#2	4805.6	80655.	5073.5

Sample Name: CCVB Acquired: 1/2/2019 9:42:15 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.635	10.08	-.0014	.9828	9.265	-.00007	-.0044	-.0001
Stddev	.046	.05	.0012	.0008	.033	.00001	.0010	.0000
%RSD	.5289	.5190	88.83	.0780	.3604	14.017	21.67	19.20
#1	8.603	10.12	-.0023	.9833	9.241	-.00008	-.0051	-.0001
#2	8.668	10.05	-.0005	.9822	9.288	-.00006	-.0037	-.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	9.170	8.917	.0001	.0004	.0005	-.0010	9.540
Stddev	.0001	.026	.105	.0004	.0001	.0005	.0006	.120
%RSD	52.35	.2809	1.177	327.7	15.12	108.6	62.64	1.257
#1	-.0003	9.152	8.843	.0004	.0005	.0001	-.0005	9.455
#2	-.0001	9.188	8.991	-.0001	.0004	.0008	-.0014	9.625
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.9779	9.570	9.374	9.895	.95015	.9642	-.0001
Stddev	.0003	.0035	.020	.101	.018	.00383	.0160	.0001
%RSD	30.36	.3553	.2125	1.081	.1865	.40307	1.658	107.0
#1	.0012	.9755	9.556	9.302	9.882	.94744	.9529	-.0002
#2	.0008	.9804	9.585	9.445	9.908	.95286	.9755	.0000
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 1/2/2019 9:42:15 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	10.20	9.513	.0006	10.10	.0006	10.08	.93812
Stddev	.0002	.01	.103	.0041	.03	.0006	.01	.00421
%RSD	29.46	.0488	1.084	671.9	.2490	93.20	.1210	.44879
#1	-.0006	10.21	9.440	-.0023	10.08	.0002	10.09	.93514
#2	-.0009	10.20	9.586	.0036	10.12	.0010	10.07	.94110
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-.0009	.0003	-.0002	.0003	.0000	1.034	.9728
Stddev	.0008	.0002	.0001	.0006	.0002	.0001	.001	.0018
%RSD	148.7	22.63	55.51	342.7	81.72	194.3	.1091	.1900
#1	.0000	-.0008	.0002	.0003	.0004	.0000	1.034	.9741
#2	.0011	-.0011	.0004	-.0006	.0001	.0001	1.035	.9715
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4763.6	78102.	5048.4
Stddev	17.1	937.	25.2
%RSD	.35806	1.2002	.50008
#1	4775.6	78765.	5066.2
#2	4751.5	77439.	5030.5

Sample Name: CCVA Acquired: 1/2/2019 9:45:01 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2632	.2718	.2410	.2474	.2309	.25367	.2466	.2494
Stddev	.0055	.0023	.0005	.0006	.0000	.00135	.0005	.0006
%RSD	2.101	.8334	.1917	.2428	.0086	.53393	.1889	.2258
#1	.2671	.2702	.2413	.2470	.2309	.25272	.2463	.2490
#2	.2593	.2734	.2407	.2478	.2309	.25463	.2469	.2498
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2441	.4627	.4558	.2273	.2518	.2561	.2448	.2451
Stddev	.0002	.0031	.0008	.0012	.0004	.0003	.0020	.0007
%RSD	.0723	.6720	.1717	.5137	.1405	.1166	.7987	.2713
#1	.2439	.4605	.4564	.2265	.2521	.2559	.2434	.2447
#2	.2442	.4649	.4553	.2281	.2516	.2563	.2462	.2456
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2492	-.0016	.2457	.2399	.2456	.23910	.2370	.2525
Stddev	.0010	.0010	.0365	.0014	.0001	.00033	.0015	.0003
%RSD	.3953	62.31	14.86	.6021	.0415	.13691	.6534	.1036
#1	.2485	-.0023	.2199	.2409	.2455	.23887	.2381	.2527
#2	.2499	-.0009	.2715	.2389	.2457	.23933	.2359	.2523
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 1/2/2019 9:45:01 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2479	-.0009	2.356	.2545	.1264	.2481	.2531	.00018
Stddev	.0003	.0004	.026	.0003	.0042	.0009	.0097	.00009
%RSD	.1223	42.02	1.104	.0989	3.306	.3468	3.826	50.347
#1	.2477	-.0012	2.337	.2547	.1234	.2487	.2600	.00011
#2	.2481	-.0006	2.374	.2544	.1293	.2475	.2463	.00024
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2577	.2501	.2314	.2420	.2531	.2441	.0030	-.0029
Stddev	.0010	.0024	.0001	.0004	.0006	.0005	.0029	.0055
%RSD	.3910	.9794	.0379	.1561	.2514	.1870	94.88	187.6
#1	.2570	.2518	.2314	.2417	.2527	.2438	.0051	.0010
#2	.2584	.2484	.2313	.2423	.2536	.2444	.0010	-.0068
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4800.8	79440.	4978.5
Stddev	1.5	51.	41.8
%RSD	.03087	.06455	.83947
#1	4799.8	79476.	4949.0
#2	4801.9	79404.	5008.1

Sample Name: CCB Acquired: 1/2/2019 9:47:23 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0024	.0034	.0023	-.0004	.00004	-.0036	.0000
Stddev	.0002	.0011	.0005	.0004	.0002	.00007	.0004	.000
%RSD	388.3	47.84	15.58	17.03	43.60	173.22	10.53	321.3
#1	-.0001	-.0032	.0038	.0020	-.0005	-.00001	-.0034	.0000
#2	.0002	-.0016	.0030	.0026	-.0003	.00009	-.0039	.0000
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0046	.0004	.0005	.0000	-.0001	-.0013	.0078
Stddev	.0000	.0126	.0001	.0008	.000	.0001	.0006	.0032
%RSD	28.70	275.9	15.66	148.6	332.7	88.10	44.58	40.61
#1	.0001	.0043	.0003	.0000	-.0001	-.0002	-.0009	.0056
#2	.0002	-.0135	.0004	.0011	.0000	.0000	-.0018	.0100
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0022	.0043	-.0001	-.0030	.00004	-.0005	.0006
Stddev	.0007	.0010	.0781	.0000	.0016	.00001	.0002	.0001
%RSD	47.89	43.02	1799.	4.769	52.59	40.157	32.30	19.95
#1	.0010	.0029	.0596	-.0001	-.0041	.00005	-.0007	.0006
#2	.0020	.0016	-.0509	-.0001	-.0019	.00003	-.0004	.0005
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 1/2/2019 9:47:23 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0012	.0056	.0031	.0162	.0002	.0057	-.00001
Stddev	.0001	.0015	.0338	.0030	.0081	.0002	.0062	.00002
%RSD	176.7	125.5	607.8	96.69	49.73	106.4	108.9	276.41
#1	.0000	-.0023	-.0184	.0010	.0219	.0000	.0101	-.00002
#2	.0001	-.0001	.0295	.0053	.0105	.0003	.0013	.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	-.0017	.0001	.0003	.0000	-.0001	-.0042	.0066
Stddev	.0001	.0010	.0001	.0004	.0001	.0000	.0006	.0089
%RSD	8.822	56.64	38.63	159.0	322.2	40.86	13.74	135.4
#1	.0016	-.0010	.0002	.0006	.0001	-.0001	-.0046	.0129
#2	.0014	-.0024	.0001	.0000	.0000	-.0001	-.0038	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4872.5	79209.	4977.5
Stddev	23.2	218.	7.6
%RSD	.47583	.27489	.15343
#1	4856.1	79056.	4972.1
#2	4888.9	79363.	4982.9

Sample Name: LLCCV Acquired: 1/2/2019 9:50:27 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0106	.0102	.0194	.0101	.0032	.00099	.0155	.0010
Stddev	.0004	.0012	.0004	.0015	.0004	.00002	.0002	.0000
%RSD	4.124	11.46	1.885	14.38	12.32	1.9978	1.603	2.419
#1	.0103	.0111	.0196	.0091	.0029	.00100	.0154	.0010
#2	.0109	.0094	.0191	.0111	.0035	.00097	.0157	.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	F .0065	.0192	.0035	.0019	.0035	F .0024	.0193
Stddev	.0000	.0006	.0001	.0003	.0003	.0002	.0006	.0045
%RSD	.1740	8.427	.4623	8.414	16.51	6.613	23.91	23.23
#1	.0012	.0069	.0192	.0037	.0017	.0037	.0020	.0225
#2	.0012	.0062	.0193	.0033	.0022	.0034	.0029	.0161
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value		.0200					.0040	
Range		-30.00%					-30.00%	

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0113	.0192	-.0301	.0049	.0039	.00087	.0006	.0036
Stddev	.0000	.0009	.0058	.0001	.0006	.00003	.0012	.0001
%RSD	.1505	4.486	19.22	2.114	15.87	3.3786	208.9	4.076
#1	.0114	.0186	-.0342	.0048	.0035	.00089	.0014	.0037
#2	.0113	.0198	-.0260	.0049	.0043	.00085	-.0003	.0035
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

* - 2X
ARun 1/2/19

Sample Name: LLCCV Acquired: 1/2/2019 9:50:27 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043	.0362	.1759	.0223	.2079	.0050	.2131	.00095
Stddev	.0003	.0001	.0384	.0017	.0073	.0003	.0054	.00002
%RSD	7.790	.1484	21.81	7.639	3.533	5.093	2.528	1.6543
#1	.0046	.0362	.1488	.0235	.2027	.0052	.2170	.00097
#2	.0041	.0362	.2030	.0211	.2131	.0049	.2093	.00094
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0088	.0199	.0018	.0041	.0040	.0038	.0210	.0429
Stddev	.0005	.0002	.0004	.0001	.0002	.0000	.0016	.0068
%RSD	6.100	1.088	19.81	1.756	4.371	.4278	7.837	15.79
#1	.0092	.0198	.0020	.0041	.0041	.0038	.0198	.0477
#2	.0085	.0201	.0015	.0042	.0039	.0038	.0222	.0381
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4994.3	78482.	4921.6
Stddev	1.9	226.	38.5
%RSD	.03869	.28746	.78160
#1	4992.9	78642.	4948.8
#2	4995.6	78323.	4894.4

Sample Name: LLCCV,0.5 Acquired: 1/2/2019 9:54:04 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0214	.0253	.0374	.0235	.0071	.00202	.0345	.0021
Stddev	.0008	.0008	.0007	.0010	.0001	.00009	.0004	.0001
%RSD	3.919	3.279	1.998	4.311	1.538	4.2879	1.272	2.844
#1	.0209	.0247	.0368	.0228	.0070	.00196	.0348	.0020
#2	.0220	.0259	.0379	.0242	.0071	.00208	.0342	.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	.0393	.0396	.0073	.0041	.0078	.0061	.0365
Stddev	.0001	.0117	.0004	.0005	.0003	.0000	.0002	.0012
%RSD	5.358	29.75	1.116	7.181	6.535	.2868	3.585	3.412
#1	.0021	.0310	.0399	.0077	.0043	.0078	.0063	.0373
#2	.0020	.0476	.0393	.0070	.0039	.0078	.0059	.0356
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0198	.0413	-.0174	.0099	.0102	.00187	.0024	.0078
Stddev	.0018	.0019	.0279	.0000	.0001	.00004	.0028	.0000
%RSD	8.869	4.699	161.0	.3433	.5379	2.0538	113.7	.5630
#1	.0210	.0427	-.0371	.0099	.0102	.00189	.0005	.0079
#2	.0186	.0399	.0024	.0099	.0101	.00184	.0044	.0078
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLCCV,0.5 Acquired: 1/2/2019 9:54:04 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0081	.0746	.4311	.0439	.4216	.0088	.4263	.00195
Stddev	.0000	.0012	.0610	.0009	.0109	.0002	.0015	.00010
%RSD	.4342	1.599	14.16	1.959	2.591	2.795	.3520	5.1131
#1	.0081	.0737	.4742	.0433	.4294	.0090	.4252	.00188
#2	.0080	.0754	.3879	.0445	.4139	.0087	.4273	.00202
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0199	.0401	.0042	.0071	.0078	.0077	.0422	.0843
Stddev	.0001	.0003	.0001	.0004	.0001	.0002	.0002	.0002
%RSD	.5938	.7407	1.961	5.499	1.305	2.147	.4377	.2095
#1	.0200	.0403	.0043	.0073	.0078	.0078	.0424	.0845
#2	.0198	.0399	.0042	.0068	.0077	.0076	.0421	.0842
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4923.5	77982.	4901.5
Stddev	3.1	663.	42.2
%RSD	.06204	.85074	.86053
#1	4925.7	78451.	4871.7
#2	4921.4	77513.	4931.4

Sample Name: KQ1900028-01 Acquired: 1/2/2019 9:59:41 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1.111 Test Type: Sample Type:
Comment: AM 010219A 9/10 K1900004-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	-.0021	.0014	-.0003	-.00003	-.0045	-.0001	.0001
#1	.0021	-.0027	.0005	-.0007	-.00013	-.0043	-.0001	.0001
#2	.0020	-.0016	.0023	.0001	.00007	-.0047	-.0001	.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062	.0039	.0001	.0002	-.0001	F .0233	.0010	-.0009
#1	.0063	.0041	.0003	.0004	.0000	.0211	.0007	-.0027
#2	.0062	.0037	.0000	.0000	-.0003	.0256	.0013	.0008

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.00027	.0006	.0032	-.0020	.0650	-.0017	-.0065
#1	.0002	.00030	.0006	.0030	-.0008	.1103	-.0002	-.0128
#2	.0003	.00024	.0006	.0034	-.0032	.0196	-.0031	-.0001

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0074	-.00001	-.0002	-.0008	.0000	-.0001	.0001
#1	-.0003	.0122	.00005	-.0009	-.0004	-.0001	-.0007	.0002
#2	.0004	.0026	-.00007	.0005	-.0012	.0000	.0005	-.0001

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0000	-.0023	.0002
#1	-.0001	-.0038	.0016
#2	.0001	-.0007	-.0012

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4823.6	78762.	4997.5
#1	4831.5	78772.	4963.9
#2	4815.7	78751.	5031.1

HCl contamination
See rerun
AKm 1/2/19

Sample Name: K1900004-001 Acquired: 1/2/2019 10:02:15 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1.111 Test Type: Sample Type:
Comment: AM 010219A 9/10

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0046	-.0020	.0024	-.0006	-.00005	-.0033	.0000	.0001
#1	.0045	-.0024	.0032	-.0007	-.00008	-.0034	.0000	.0002
#2	.0046	-.0017	.0016	-.0005	-.00003	-.0032	.0000	.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0086	.0050	.0004	-.0004	-.0018	.0292	.0016	-.0011
#1	.0085	.0048	.0004	-.0006	-.0009	.0288	.0025	-.0037
#2	.0088	.0053	.0005	-.0002	-.0027	.0297	.0007	.0015

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.00041	.0007	.0037	.4284	.7148	.0019	.0097
#1	.0007	.00041	.0009	.0036	.4290	.6719	-.0006	.0039
#2	.0007	.00040	.0005	.0039	.4279	.7578	.0043	.0156

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.1138	.00002	.0001	.3922	.0001	-.0001	.0004
#1	.0007	.1199	.00011	-.0012	.3923	.0002	.0000	.0002
#2	.0006	.1077	-.00007	.0014	.3921	-.0001	-.0001	.0005

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0003	-.0009	.0020
#1	.0004	-.0007	.0011
#2	.0003	-.0010	.0029

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4833.2	78483.	5088.7
#1	4827.4	78411.	5095.9
#2	4839.0	78555.	5081.4

AFm 1/2/19

Sample Name: KQ1900028-01 Acquired: 1/2/2019 10:04:49 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1.111 Test Type: Sample Type:
Comment: AM 010219A 9/10 K1900004-001D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043	-.0031	.0020	-.0010	.00000	-.0049	.0000	-.0001
#1	.0045	-.0042	.0019	-.0005	-.00002	-.0044	.0000	.0000
#2	.0041	-.0020	.0022	-.0015	.00003	-.0054	.0000	-.0002

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0089	.0052	.0004	.0000	-.0005	.0261	-.0001	-.0025
#1	.0089	.0055	.0005	.0000	-.0008	.0227	-.0002	-.0012
#2	.0088	.0049	.0002	.0001	-.0002	.0296	.0000	-.0038

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.00036	.0006	.0037	.4300	.7707	-.0008	.0115
#1	.0007	.00037	.0008	.0038	.4313	.7888	.0007	.0120
#2	.0005	.00035	.0005	.0037	.4288	.7527	-.0022	.0110

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.1357	.00025	-.0004	.3947	.0000	-.0005	.0004
#1	.0007	.1422	.00026	-.0016	.3943	-.0001	-.0002	.0005
#2	.0003	.1292	.00025	.0009	.3951	.0001	-.0007	.0002

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0004	-.0007	.0012
#1	.0004	.0001	.0017
#2	.0004	-.0015	.0007

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4820.4	78403.	5060.2
#1	4822.2	77669.	5075.7
#2	4818.6	79137.	5044.7

AR 1/2/19

Sample Name: K1900004-002 Acquired: 1/2/2019 10:07:22 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1.111 Test Type: Sample Type:
Comment: AM 010219A 9/10

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	-.0051	.0017	-.0009	-.00004	-.0044	-.0001	.0002
#1	.0042	-.0060	.0029	-.0008	-.00008	-.0036	.0000	.0001
#2	.0043	-.0042	.0006	-.0010	-.00001	-.0052	-.0002	.0002

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0106	.0054	.0001	-.0003	-.0014	.0278	.0009	-.0001
#1	.0106	.0058	-.0001	-.0004	-.0016	.0262	.0011	-.0011
#2	.0106	.0050	.0004	-.0002	-.0013	.0294	.0007	.0009

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017	.00037	.0006	.0032	.4810	.7633	.0024	-.0011
#1	.0016	.00034	.0005	.0028	.4792	.6860	.0035	.0052
#2	.0017	.00040	.0008	.0035	.4828	.8406	.0013	-.0075

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.1333	.00012	-.0005	.4145	.0002	-.0007	.0013
#1	.0000	.1266	.00008	-.0015	.4145	.0003	-.0010	.0015
#2	-.0001	.1399	.00015	.0006	.4146	.0001	-.0004	.0011

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0012	-.0026	.0013
#1	.0012	-.0035	.0033
#2	.0013	-.0017	-.0007

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4806.6	78236.	4925.0
#1	4800.7	77730.	4827.8
#2	4812.5	78741.	5022.3

ARm 1/2/19

Sample Name: KQ1818818-01 Acquired: 1/2/2019 10:09:57 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 010219A K1812395-LCSW

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.358	1.653	2.101	4.007	.10241	.3988	1.037
#1	4.384	1.649	2.094	3.968	.10246	.4001	1.036
#2	4.332	1.658	2.109	4.046	.10235	.3975	1.037

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.013	F 9.887	F .3932	1.041	.5174	.5126	2.004
#1	1.013	9.786	.3934	1.040	.5172	.5154	1.999
#2	1.013	9.988	.3930	1.043	.5176	.5097	2.009

Elem	Pb2203	Li6707	Mg2852	Mn2576	Mo2020	Ni2216	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.064	.0020	10.48	F .98957	.8862	1.007	.0169
#1	2.070	.0029	10.43	.98721	.8869	1.007	.0171
#2	2.058	.0011	10.53	.99193	.8856	1.007	.0167

Elem	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.36	F 1.922	.0355	F .4928	10.72	.00026	2.116
#1	10.36	1.923	.0349	.4950	10.69	.00028	2.118
#2	10.37	1.921	.0361	.4906	10.75	.00024	2.113

Elem	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	-.0002	1.037	1.022	F .9676	-.0031	-.0014
#1	-.0016	-.0003	1.035	1.021	.9650	-.0033	-.0041
#2	.0006	-.0002	1.040	1.023	.9702	-.0030	.0013

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4837.8	77792.	4981.3
#1	4823.0	78053.	5001.1
#2	4852.6	77531.	4961.4

Sample Name: K1812395-001 Acquired: 1/2/2019 10:12:22 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 010219A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1461	-.0002	.0023	.0965	-.00009	.7828	-.0001	-.0001
#1	.1429	-.0008	.0024	.0967	-.00018	.7838	-.0001	-.0001
#2	.1494	.0004	.0022	.0963	.00000	.7818	-.0001	-.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	33.95	.0002	.0002	.0009	-.0009	.0902	.0011	.0224
#1	34.11	.0008	.0003	.0007	-.0018	.0846	.0010	.0221
#2	33.79	-.0003	.0001	.0011	.0000	.0959	.0012	.0228

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.19	.00628	.0043	.0021	.0140	3.245	.0034	2.425
#1	10.17	.00635	.0041	.0019	.0147	3.206	.0032	2.412
#2	10.20	.00621	.0044	.0023	.0133	3.283	.0036	2.437

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	165.4	.98694	.0149	.0003	.0099	.0011	.0011
#1	.0004	165.2	.99120	.0145	.0012	.0100	.0012	.0009
#2	.0006	165.6	.98268	.0153	-.0006	.0097	.0010	.0012

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0011	.0014	131.1
#1	.0010	-.0014	131.4
#2	.0011	.0041	130.8

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4866.4	75563.	4967.4
#1	4849.4	75542.	4933.2
#2	4883.5	75585.	5001.7

Sample Name: KQ1818818-03 Acquired: 1/2/2019 10:15:04 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 010219A K1812395-001D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1612	-.0022	.0005	.0979	-.00013	.7867	-.0001	.0001
#1	.1608	-.0020	.0018	.0978	-.00021	.7865	-.0001	.0001
#2	.1616	-.0025	-.0009	.0980	-.00005	.7869	-.0002	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	34.75	.0002	.0003	.0006	-.0008	.0933	.0009	.0211
#1	34.70	.0003	.0003	.0008	-.0001	.0898	.0012	.0201
#2	34.80	.0001	.0002	.0004	-.0016	.0968	.0007	.0221

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.31	.00638	.0031	.0021	.0150	3.239	.0024	2.443
#1	10.30	.00633	.0031	.0019	.0177	3.243	.0046	2.448
#2	10.31	.00643	.0031	.0024	.0123	3.235	.0001	2.438

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	165.9	1.0006	-.0003	-.0002	.0098	.0006	.0008
#1	.0007	165.8	.99971	.0010	.0004	.0101	.0005	.0008
#2	.0014	166.0	1.0014	-.0017	-.0009	.0095	.0006	.0009

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0012	.0000	130.2
#1	.0012	.0013	130.3
#2	.0012	-.0012	130.2

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4875.9	74752.	4949.2
#1	4885.7	74790.	4958.8
#2	4866.1	74715.	4939.6

Sample Name: KQ1818818-04 Acquired: 1/2/2019 10:17:46 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 010219A K1812395-001S

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.725	1.696	.3928	.8227	.9004	.04032	1.148	.0401
#1	1.738	1.717	.3930	.8248	.8999	.04048	1.155	.0402
#2	1.713	1.676	.3925	.8205	.9009	.04016	1.141	.0400

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0392	40.98	.1582	.4131	.2014	.1992	.8950	.3843
#1	.0391	40.90	.1575	.4139	.2017	.2001	.8923	.3854
#2	.0392	41.05	.1589	.4122	.2010	.1983	.8976	.3832

Elem	Li6707	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0188	17.82	.40435	.8651	.3987	.0126	11.13	.7573
#1	.0201	17.84	.40305	.8672	.3998	.0110	11.16	.7639
#2	.0175	17.79	.40565	.8629	.3976	.0141	11.09	.7507

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.319	.0382	165.4	.95809	.1552	-.0013	.0077	.4279
#1	2.322	.0386	165.5	.95795	.1555	-.0016	.0075	.4264
#2	2.316	.0377	165.4	.95823	.1549	-.0010	.0079	.4293

Elem	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm
Avg	.4164	.3919	.0012	124.0
#1	.4168	.3916	.0027	124.2
#2	.4161	.3922	-.0002	123.7

* - NR

ARm 1/2/19

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4782.3	74549.	4882.5
#1	4772.7	75101.	4902.5
#2	4792.0	73997.	4862.5

Sample Name: K1812395-001A Acquired: 1/2/2019 10:20:15 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 010219A A=0.05/10mL CICV1,3

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.549	-.0001	2.299	4.595	.11449	.7600	1.136	1.100
#1	4.579	-.0042	2.311	4.594	.11480	.7649	1.137	1.101
#2	4.518	.0040	2.287	4.597	.11417	.7551	1.135	1.100

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.52	.4433	1.160	.5711	.5566	2.364	2.182	.0224
#1	44.54	.4431	1.160	.5709	.5583	2.373	2.184	.0221
#2	44.50	.4436	1.159	.5714	.5549	2.356	2.179	.0227

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.65	1.1209	.0043	1.120	.0153	14.77	2.138	2.396
#1	21.72	1.1208	.0044	1.120	.0140	14.77	2.145	2.401
#2	21.58	1.1210	.0041	1.119	.0166	14.76	2.130	2.392

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5236	172.3	.96779	2.168	-.0017	.0110	1.200	1.172
#1	.5255	172.7	.96807	2.168	-.0016	.0105	1.200	1.172
#2	.5217	171.8	.96751	2.168	-.0018	.0115	1.201	1.172

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.087	-.0001	125.7
#1	1.090	-.0013	125.8
#2	1.084	.0012	125.5

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4714.6	74449.	4938.6
#1	4719.7	74608.	4957.4
#2	4709.4	74290.	4919.8

* - NA

AM 1/2/19

Sample Name: K1812395-001 Acquired: 1/2/2019 10:22:42 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: AM 010219A DISS

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0121	-.0033	.0028	.0883	-.00020	.7705	-.0001	-.0001
#1	.0121	-.0035	.0046	.0878	-.00014	.7732	-.0002	-.0002
#2	.0122	-.0031	.0009	.0887	-.00026	.7678	-.0001	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	32.60	-.0001	.0002	.0002	-.0026	.0042	.0006	.0203
#1	32.44	-.0001	.0003	.0000	-.0025	.0016	.0010	.0195
#2	32.76	-.0002	.0001	.0005	-.0027	.0067	.0002	.0212

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.758	.00128	.0034	.0018	.0097	3.037	.0058	2.096
#1	9.794	.00134	.0034	.0016	.0082	3.015	.0060	2.094
#2	9.722	.00122	.0034	.0019	.0112	3.058	.0056	2.099

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	159.1	.94705	.0025	-.0014	-.0001	.0010	.0006
#1	.0001	160.1	.94355	.0020	-.0025	-.0002	.0014	.0007
#2	.0006	158.2	.95055	.0030	-.0003	-.0001	.0005	.0006

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0006	.0006	126.3
#1	.0006	.0004	126.5
#2	.0006	.0008	126.1

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4707.8	76472.	4983.7
#1	4719.7	76572.	5020.9
#2	4696.0	76371.	4946.5

Sample Name: CCVB Acquired: 1/2/2019 10:25:26 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.504	10.16	-.0007	.9971	9.201	.00002	-.0009	-.0001
Stddev	.150	.00	.0028	.0022	.078	.00010	.0019	.0001
%RSD	1.770	.0414	386.4	.2254	.8433	666.25	204.6	107.0
#1	8.610	10.16	.0012	.9955	9.146	.00009	.0004	.0000
#2	8.397	10.16	-.0027	.9987	9.256	-.00006	-.0023	-.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	9.250	8.898	-.0001	.0006	.0000	-.0014	9.603
Stddev	.0001	.044	.044	.0006	.0005	.0000	.0004	.029
%RSD	28.12	.4786	.4999	1068.	79.08	8.162	26.00	.3013
#1	-.0002	9.281	8.867	.0003	.0009	.0000	-.0017	9.583
#2	-.0003	9.219	8.930	-.0005	.0003	.0000	-.0012	9.624
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017	.9913	9.613	9.304	10.01	.94735	.9651	.0000
Stddev	.0008	.0012	.067	.076	.02	.00381	.0064	.0003
%RSD	44.76	.1162	.6961	.8151	.1661	.40201	.6647	6500.
#1	.0012	.9905	9.566	9.358	10.02	.94466	.9605	-.0002
#2	.0022	.9921	9.660	9.251	9.996	.95004	.9696	.0002
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 1/2/2019 10:25:26 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	10.20	9.572	.0018	10.18	.0003	10.22	.93737
Stddev	.0000	.03	.026	.0009	.05	.0001	.03	.00441
%RSD	4.835	.2815	.2754	50.94	.5284	33.88	.3047	.46999
#1	-.0007	10.22	9.554	.0012	10.14	.0002	10.24	.94049
#2	-.0008	10.18	9.591	.0025	10.22	.0004	10.19	.93426
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0006	-.0001	.0001	.0002	.0002	1.039	1.004
Stddev	.0009	.0002	.0004	.0006	.0001	.0001	.002	.012
%RSD	370.5	44.43	310.1	658.8	53.58	38.00	.2040	1.151
#1	-.0004	-.0007	.0001	.0005	.0001	.0002	1.038	1.013
#2	.0009	-.0004	-.0004	-.0003	.0002	.0003	1.041	.9962
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4840.1	79097.	5110.4
Stddev	9.5	671.	6.6
%RSD	.19634	.84780	.12845
#1	4846.8	79571.	5105.7
#2	4833.4	78623.	5115.0

Sample Name: CCVA Acquired: 1/2/2019 10:28:11 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2711	.2710	.2404	.2494	.2302	.25680	.2515	.2506
Stddev	.0068	.0021	.0007	.0025	.0026	.00074	.0001	.0005
%RSD	2.505	.7684	.2973	.9968	1.110	.28682	.0224	.1943
#1	.2663	.2695	.2399	.2476	.2320	.25628	.2515	.2502
#2	.2759	.2724	.2409	.2511	.2284	.25732	.2515	.2509
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2432	.4692	.4541	.2263	.2523	.2564	.2448	.2441
Stddev	.0001	.0067	.0047	.0003	.0005	.0007	.0017	.0038
%RSD	.0469	1.424	1.039	.1546	.1979	.2867	.6901	1.539
#1	.2433	.4740	.4574	.2265	.2520	.2559	.2436	.2468
#2	.2432	.4645	.4507	.2260	.2527	.2569	.2460	.2415
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2469	.0004	.2404	.2408	.2472	.23897	.2391	.2531
Stddev	.0003	.0009	.0380	.0013	.0000	.00175	.0009	.0010
%RSD	.1015	215.2	15.81	.5578	.0040	.73163	.3834	.3996
#1	.2471	.0010	.2135	.2418	.2472	.24021	.2398	.2538
#2	.2467	-.0002	.2673	.2399	.2472	.23774	.2385	.2524
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 1/2/2019 10:28:11 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2478	.0016	2.371	.2539	.1228	.2489	.2664	.00001
Stddev	.0002	.0017	.054	.0015	.0083	.0017	.0142	.00009
%RSD	.1005	105.2	2.269	.5834	6.770	.6875	5.312	687.57
#1	.2480	.0004	2.333	.2550	.1287	.2477	.2764	-.00005
#2	.2476	.0027	2.409	.2529	.1169	.2501	.2564	.00008
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2548	.2515	.2317	.2405	.2554	.2465	.0019	.0095
Stddev	.0003	.0021	.0016	.0012	.0000	.0010	.0031	.0012
%RSD	.1025	.8487	.6964	.5037	.0161	.4216	166.3	12.22
#1	.2546	.2530	.2328	.2413	.2554	.2473	-.0003	.0103
#2	.2550	.2500	.2306	.2396	.2554	.2458	.0041	.0086
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4845.1	79960.	5072.2
Stddev	4.6	773.	5.6
%RSD	.09558	.96727	.11136
#1	4848.3	79413.	5068.2
#2	4841.8	80507.	5076.2

Sample Name: CCB Acquired: 1/2/2019 10:37:47 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	-.0025	-.0005	.0021	-.0009	.00001	-.0037	-.0001
Stddev	.0004	.0028	.0017	.0048	.0002	.00002	.0002	.0001
%RSD	75.48	109.8	339.3	228.0	25.16	151.01	4.185	74.00
#1	-.0008	-.0045	.0007	-.0013	-.0011	.00003	-.0038	-.0001
#2	-.0002	-.0006	-.0017	.0055	-.0008	.00000	-.0036	.0000
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0026	.0005	.0000	.0001	.0000	-.0010	.0031
Stddev	.0000	.0158	.0001	.000	.0002	.0002	.0004	.0015
%RSD	104.1	609.0	28.47	862.0	444.1	745.4	35.07	46.88
#1	.0000	.0086	.0006	-.0003	-.0001	.0002	-.0013	.0042
#2	.0001	-.0138	.0004	.0002	.0002	-.0001	-.0008	.0021
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0000	-.0080	-.0002	-.0026	-.00005	.0014	.0002
Stddev	.0012	.002	.0187	.0000	.0021	.00002	.0036	.0000
%RSD	79.65	4483.	233.4	18.92	82.43	44.558	251.0	3.264
#1	.0024	-.0012	.0052	-.0001	-.0011	-.00007	-.0011	.0002
#2	.0007	.0011	-.0212	-.0002	-.0040	-.00003	.0039	.0002
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 1/2/2019 10:37:47 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	-.0041	-.0031	.0011	.0068	.0003	.0027	.00008
Stddev	.0003	.0007	.0136	.0027	.0048	.0003	.0186	.00002
%RSD	77.46	16.20	442.2	241.0	70.73	107.6	697.8	27.737
#1	.0002	-.0036	-.0127	-.0008	.0034	.0005	.0158	.00010
#2	.0006	-.0046	.0065	.0031	.0103	.0001	-.0105	.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	-.0008	.0000	-.0002	.0000	-.0001	-.0018	.0030
Stddev	.0004	.0009	.0001	.0004	.000	.0001	.0008	.0021
%RSD	41.76	115.8	810.9	213.2	770.0	69.28	42.56	70.46
#1	.0011	-.0014	.0001	-.0005	.0002	.0000	-.0012	.0045
#2	.0006	-.0001	-.0001	.0001	-.0002	-.0001	-.0023	.0015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4813.4	78526.	4934.1
Stddev	7.3	223.	15.0
%RSD	.15199	.28393	.30454
#1	4818.6	78368.	4923.5
#2	4808.2	78683.	4944.7

Sample Name: K1812396-001 Acquired: 1/2/2019 10:41:17 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 010219A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2509	-.0012	-.0007	.0216	-.00005	.0160	-.0001	.0000
#1	.2511	-.0044	-.0033	.0211	-.00009	.0161	-.0001	-.0001
#2	.2507	.0019	.0018	.0221	-.00001	.0158	-.0001	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	28.18	.0007	.0013	.0000	-.0009	.4615	-.0008	.0037
#1	28.10	.0008	.0015	.0004	-.0009	.4597	-.0022	.0034
#2	28.27	.0005	.0010	-.0003	-.0009	.4633	.0005	.0039

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.62	.05926	.0001	.0006	.0077	1.275	.0003	7.248
#1	12.61	.05916	.0001	.0005	.0079	1.291	.0019	7.231
#2	12.62	.05936	.0001	.0007	.0075	1.260	-.0014	7.265

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	10.89	.29202	-.0001	-.0014	.0054	.0008	.0042
#1	.0007	10.91	.29177	.0007	-.0014	.0052	.0005	.0043
#2	.0001	10.86	.29227	-.0010	-.0013	.0057	.0010	.0041

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0046	.0009	39.73
#1	.0044	.0012	39.50
#2	.0047	.0005	39.96

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4754.6	77181.	4936.7
#1	4746.0	77260.	4955.8
#2	4763.2	77102.	4917.7

Sample Name: K1812396-001 Acquired: 1/2/2019 10:43:59 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: AM 010219A DISS

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1035	-.0003	-.0005	.0207	-.00006	.0168	-.0002	-.0001
#1	.1020	-.0018	-.0011	.0209	-.00008	.0166	-.0002	-.0001
#2	.1050	.0013	.0000	.0206	-.00004	.0169	-.0002	-.0002

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	28.06	.0012	.0003	-.0002	-.0010	.1743	-.0007	.0048
#1	27.95	.0009	.0002	.0002	-.0005	.1689	-.0012	.0058
#2	28.16	.0014	.0004	-.0006	-.0015	.1797	-.0001	.0038

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.63	.01848	.0002	.0003	.0070	1.257	.0033	7.071
#1	12.61	.01863	.0001	.0007	.0054	1.238	.0024	7.074
#2	12.65	.01833	.0003	.0000	.0086	1.276	.0043	7.069

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	10.95	.29088	-.0010	-.0013	.0055	.0002	.0031
#1	-.0003	10.95	.29033	.0001	-.0017	.0054	.0005	.0034
#2	.0004	10.95	.29143	-.0021	-.0008	.0055	.0000	.0029

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0035	-.0019	39.69
#1	.0034	-.0020	39.56
#2	.0036	-.0017	39.83

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4811.3	77699.	4977.3
#1	4794.7	76906.	4987.9
#2	4827.9	78493.	4966.7

Sample Name: KQ1900028-01 Acquired: 1/2/2019 10:56:02 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1.111 Test Type: Sample Type:
Comment: AM 010219A 9/10 K1900004-MB Rerun

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	-.0021	.0003	-.0009	.00006	-.0054	.0000	.0002
#1	.0010	-.0025	.0009	-.0012	.00000	-.0046	.0001	.0001
#2	.0003	-.0017	-.0002	-.0007	.00011	-.0063	.0000	.0002

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	.0002	.0003	-.0001	-.0015	.0007	.0008	.0002
#1	.0042	.0005	.0002	-.0001	-.0015	-.0003	.0010	-.0003
#2	.0041	.0000	.0003	-.0001	-.0015	.0016	.0006	.0007

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.00003	-.0001	.0001	-.0035	-.0473	-.0016	.0065
#1	.0001	-.00004	-.0002	.0002	-.0033	-.1198	-.0001	.0082
#2	.0001	-.00001	.0001	.0000	-.0037	.0253	-.0030	.0047

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0166	.00023	.0006	-.0002	.0002	-.0002	.0001
#1	.0003	.0125	.00018	.0013	-.0001	.0005	-.0003	.0002
#2	.0005	.0208	.00028	-.0001	-.0002	.0000	-.0001	.0001

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	-.0001	.0005	-.0011
#1	-.0001	.0013	-.0009
#2	-.0001	-.0003	-.0012

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4875.4	78709.	4997.4
#1	4882.5	78675.	5023.4
#2	4868.2	78744.	4971.5

Sample Name: K1900004-001 Acquired: 1/2/2019 10:58:36 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1.111 Test Type: Sample Type:
Comment: AM 010219A 9/10 Rerun

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0025	-.0035	.0024	-.0013	-.00003	-.0036	.0000	.0000
#1	.0020	-.0038	.0029	-.0013	-.00013	-.0028	.0000	.0000
#2	.0029	-.0033	.0019	-.0014	.00007	-.0044	-.0001	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036	.0002	.0001	-.0002	-.0019	-.0014	.0013	-.0005
#1	.0037	-.0003	-.0001	-.0002	-.0016	-.0055	.0015	-.0007
#2	.0036	.0008	.0004	-.0002	-.0022	.0026	.0010	-.0003

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.00004	.0003	.0006	.4218	.7067	.0021	.0072
#1	.0004	.00004	.0003	.0008	.4216	.7699	.0023	.0085
#2	.0004	.00003	.0002	.0004	.4220	.6435	.0019	.0059

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.1325	.00013	.0000	.3895	-.0001	-.0002	.0005
#1	.0003	.1278	.00012	-.0008	.3879	.0001	-.0002	.0003
#2	.0001	.1372	.00013	.0008	.3911	-.0002	-.0002	.0007

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0002	-.0020	.0005
#1	.0003	-.0038	.0032
#2	.0002	-.0002	-.0022

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4832.2	80308.	5190.6
#1	4830.7	80496.	5182.9
#2	4833.7	80119.	5198.4

Sample Name: KQ1900028-01 Acquired: 1/2/2019 11:01:26 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1.111 Test Type: Sample Type:
Comment: AM 010219A 9/10 K1900004-001D Rerun

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026	-.0025	.0017	-.0008	.00003	-.0050	.0000	.0001
#1	.0025	.0008	.0020	-.0006	-.00002	-.0057	.0000	.0000
#2	.0026	-.0058	.0013	-.0010	.00007	-.0044	.0001	.0002

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039	.0001	.0003	-.0002	-.0012	-.0020	.0008	-.0006
#1	.0038	.0000	.0005	-.0006	-.0011	-.0028	.0020	-.0023
#2	.0040	.0002	.0002	.0001	-.0012	-.0012	-.0004	.0011

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.00009	-.0002	.0003	.4284	.7114	-.0009	.0103
#1	.0005	.00011	.0000	.0006	.4270	.7479	-.0003	.0060
#2	.0005	.00007	-.0003	.0001	.4297	.6748	-.0014	.0146

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.1144	.00018	-.0007	.3936	-.0003	.0003	.0003
#1	-.0008	.1170	.00006	-.0014	.3933	-.0002	.0001	.0002
#2	.0008	.1117	.00029	-.0001	.3938	-.0004	.0005	.0004

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0002	-.0002	.0035
#1	.0002	.0000	.0053
#2	.0002	-.0005	.0017

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4842.8	79329.	5151.4
#1	4843.6	79496.	5171.5
#2	4841.9	79162.	5131.4

Sample Name: K1900004-002 Acquired: 1/2/2019 11:04:00 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1.111 Test Type: Sample Type:
Comment: AM 010219A 9/10 Rerun

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030	-.0040	.0008	-.0012	.00001	-.0038	.0001	.0001
#1	.0034	-.0043	.0034	-.0010	-.00002	-.0048	.0001	.0000
#2	.0026	-.0037	-.0018	-.0015	.00004	-.0028	.0001	.0002

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050	.0006	.0003	-.0003	-.0019	.0011	.0005	-.0002
#1	.0050	.0006	.0003	-.0004	-.0021	.0041	.0007	-.0019
#2	.0050	.0007	.0004	-.0001	-.0017	-.0020	.0003	.0015

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	.00000	.0000	.0007	.4769	.6743	.0010	.0151
#1	.0013	.00003	.0000	.0007	.4763	.6709	.0016	.0194
#2	.0015	-.00003	-.0001	.0007	.4774	.6778	.0004	.0108

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.1185	.00011	.0001	.4158	-.0001	-.0003	.0012
#1	.0001	.1196	.00008	.0000	.4178	-.0001	.0005	.0014
#2	.0004	.1175	.00014	.0002	.4138	-.0001	-.0010	.0011

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0010	-.0033	.0009
#1	.0009	-.0043	.0035
#2	.0010	-.0024	-.0018

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4781.5	75632.	5063.8
#1	4719.7	75852.	5105.4
#2	4843.2	75412.	5022.2

Sample Name: CCVB Acquired: 1/2/2019 11:06:50 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.678	9.957	-.0008	.9954	9.331	.00012	-.0038	-.0001
Stddev	.033	.065	.0018	.0007	.130	.00005	.0003	.0000
%RSD	.3845	.6508	225.3	.0724	1.394	38.441	8.811	3.007
#1	8.654	9.911	.0005	.9959	9.423	.00009	-.0035	-.0001
#2	8.701	10.00	-.0021	.9949	9.239	.00015	-.0040	-.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	9.335	9.078	-.0003	.0000	.0005	-.0001	9.651
Stddev	.0000	.015	.075	.0003	.0001	.0006	.0003	.026
%RSD	3.057	.1608	.8224	104.1	252.7	119.4	295.5	.2676
#1	-.0004	9.325	9.131	-.0004	.0001	.0009	-.0004	9.633
#2	-.0004	9.346	9.025	-.0001	.0000	.0001	.0001	9.670
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.9911	9.664	9.494	9.959	.95495	.9790	-.0004
Stddev	.0012	.0092	.022	.018	.061	.00262	.0023	.0000
%RSD	636.7	.9286	.2257	.1908	.6104	.27410	.2390	1.937
#1	.0010	.9846	9.679	9.507	9.916	.95680	.9773	-.0004
#2	-.0006	.9976	9.649	9.481	10.00	.95310	.9806	-.0004
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 1/2/2019 11:06:50 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	10.28	9.623	-.0002	10.12	.0006	10.13	.95550
Stddev	.0003	.11	.170	.0021	.05	.0001	.07	.00221
%RSD	33.96	1.067	1.765	933.5	.5031	18.75	.7153	.23108
#1	-.0006	10.20	9.503	.0012	10.08	.0005	10.08	.95393
#2	-.0009	10.35	9.743	-.0017	10.15	.0006	10.18	.95706
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	.0006	.0006	-.0006	.0001	.0000	1.045	.9847
Stddev	.0022	.0011	.0001	.0003	.0006	.0001	.008	.0050
%RSD	282.2	188.8	19.36	56.33	885.3	429.0	.8033	.5055
#1	.0008	-.0002	.0007	-.0008	-.0003	.0000	1.039	.9812
#2	-.0024	.0014	.0005	-.0003	.0005	.0001	1.051	.9883
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4765.6	77517.	5007.0
Stddev	38.5	146.	27.2
%RSD	.80782	.18855	.54341
#1	4792.8	77414.	4987.7
#2	4738.4	77621.	5026.2

Sample Name: CCVA Acquired: 1/2/2019 11:10:09 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .2766	.2724	.2403	.2502	.2365	.25068	.2438	.2506
Stddev	.0011	.0027	.0024	.0011	.0008	.00122	.0030	.0004
%RSD	.4032	.9796	.9800	.4210	.3494	.48607	1.215	.1543
#1	.2758	.2705	.2420	.2495	.2359	.24982	.2417	.2508
#2	.2774	.2743	.2387	.2510	.2370	.25154	.2459	.2503
Check ?	Chk Fail	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value	.2500							
Range	10.44%							

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2464	.4635	.4666	.2319	.2537	.2578	.2438	.2413
Stddev	.0005	.0039	.0011	.0023	.0001	.0009	.0005	.0016
%RSD	.2032	.8344	.2252	1.010	.0522	.3328	.2078	.6793
#1	.2468	.4608	.4659	.2335	.2536	.2572	.2435	.2424
#2	.2461	.4662	.4673	.2302	.2538	.2584	.2442	.2401
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2482	.0012	.2303	.2425	.2465	.24072	.2391	.2556
Stddev	.0018	.0020	.0209	.0010	.0004	.00126	.0004	.0000
%RSD	.7164	160.0	9.058	.4001	.1512	.52366	.1841	.0032
#1	.2495	-.0002	.2451	.2418	.2463	.24161	.2388	.2556
#2	.2470	.0027	.2156	.2432	.2468	.23982	.2394	.2555
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

See rerun
AHm 1/2/19

Sample Name: CCVA Acquired: 1/2/2019 11:10:09 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2493	-.0044	2.283	.2595	.1313	.2459	.2658	.00004
Stddev	.0006	.0011	.036	.0056	.0079	.0011	.0017	.00009
%RSD	.2262	24.80	1.578	2.157	6.039	.4578	.6249	210.70
#1	.2497	-.0051	2.257	.2556	.1257	.2451	.2646	-.00002
#2	.2489	-.0036	2.308	.2635	.1369	.2467	.2670	.00011
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2556	.2514	.2389	.2443	.2540	.2432	-.0005	-.0029
Stddev	.0002	.0009	.0012	.0016	.0007	.0002	.0018	.0008
%RSD	.0758	.3721	.4887	.6408	.2563	.0622	329.9	26.19
#1	.2557	.2508	.2397	.2454	.2536	.2433	.0007	-.0035
#2	.2554	.2521	.2380	.2432	.2545	.2431	-.0018	-.0024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4714.3	77411.	4927.1
Stddev	3.6	559.	11.0
%RSD	.07642	.72247	.22272
#1	4711.7	77015.	4919.3
#2	4716.8	77806.	4934.9

ABen 1/2/19

Sample Name: CCVA Acquired: 1/2/2019 11:14:57 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2504	.2654	.2439	.2468	.2360	.25060	.2434	.2495
Stddev	.0012	.0038	.0009	.0037	.0019	.00139	.0002	.0003
%RSD	.4907	1.416	.3865	1.484	.8008	.55573	.0749	.1291
#1	.2513	.2627	.2433	.2442	.2347	.24962	.2433	.2497
#2	.2495	.2680	.2446	.2494	.2374	.25159	.2435	.2492
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2446	.4687	.4669	.2305	.2525	.2566	.2419	.2358
Stddev	.0001	.0122	.0051	.0010	.0005	.0007	.0023	.0041
%RSD	.0249	2.603	1.083	.4502	.1924	.2622	.9488	1.731
#1	.2446	.4601	.4633	.2312	.2528	.2571	.2403	.2387
#2	.2445	.4773	.4705	.2298	.2521	.2562	.2435	.2329
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2464	-.0006	.2543	.2409	.2465	.24068	.2408	.2547
Stddev	.0022	.0018	.0201	.0012	.0010	.00058	.0007	.0007
%RSD	.8802	281.1	7.905	.5182	.4214	.23926	.2885	.2919
#1	.2449	-.0019	.2685	.2400	.2472	.24028	.2403	.2541
#2	.2479	.0006	.2401	.2418	.2457	.24109	.2413	.2552
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 1/2/2019 11:14:57 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2482	-.0021	2.386	.2606	.1356	.2449	.2629	.00014
Stddev	.0005	.0025	.027	.0030	.0015	.0007	.0139	.00015
%RSD	.1989	122.3	1.119	1.160	1.073	.2943	5.271	106.07
#1	.2486	-.0003	2.367	.2584	.1345	.2444	.2727	.00024
#2	.2479	-.0039	2.405	.2627	.1366	.2454	.2531	.00003
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2554	.2506	.2349	.2442	.2547	.2430	.0005	-.0039
Stddev	.0020	.0010	.0031	.0003	.0009	.0004	.0002	.0030
%RSD	.7767	.3834	1.310	.1256	.3424	.1637	32.57	77.18
#1	.2568	.2499	.2327	.2440	.2553	.2427	.0004	-.0018
#2	.2540	.2513	.2371	.2444	.2541	.2433	.0007	-.0060
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4749.3	77700.	4964.7
Stddev	10.8	70.	19.5
%RSD	.22727	.09000	.39189
#1	4741.7	77750.	4978.4
#2	4756.9	77651.	4950.9

Sample Name: CCB Acquired: 1/2/2019 11:17:38 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0006	.0003	.0023	-.0011	-.00006	-.0057	.0000
Stddev	.0000	.0030	.0033	.0002	.0002	.00001	.0007	.000
%RSD	19.64	497.4	1036.	7.715	21.29	10.457	12.90	114.4
#1	.0002	-.0027	-.0020	.0025	-.0010	-.00007	-.0051	-.0001
#2	.0002	.0015	.0027	.0022	-.0013	-.00006	-.0062	.0000
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0029	.0004	-.0003	-.0001	.0006	-.0006	.0042
Stddev	.0000	.0035	.0000	.0002	.0001	.0003	.0005	.0041
%RSD	419.4	122.1	.8199	50.20	47.21	54.75	86.94	96.48
#1	.0000	-.0004	.0004	-.0004	-.0002	.0008	-.0010	.0071
#2	.0000	-.0053	.0004	-.0002	-.0001	.0003	-.0002	.0013
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0007	-.0098	-.0001	-.0026	-.00001	.0012	.0005
Stddev	.0008	.0001	.0225	.0000	.0005	.00006	.0011	.0001
%RSD	793.9	8.553	230.3	3.195	18.48	543.04	91.32	10.77
#1	-.0004	.0007	.0061	-.0001	-.0022	.00003	.0020	.0006
#2	.0006	.0007	-.0257	-.0001	-.0029	-.00006	.0004	.0005
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 1/2/2019 11:17:38 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0032	.0082	.0039	.0084	.0003	.0191	-.00018
Stddev	.0002	.0025	.0376	.0033	.0184	.0004	.0133	.00021
%RSD	86.16	79.78	458.9	84.91	220.9	122.2	69.44	118.64
#1	.0003	-.0050	.0348	.0062	.0214	.0000	.0097	-.00003
#2	.0001	-.0014	-.0184	.0016	-.0047	.0006	.0285	-.00033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	-.0010	.0003	-.0003	-.0003	.0000	.0004	-.0026
Stddev	.0014	.0003	.0001	.0002	.0002	.000	.0004	.0017
%RSD	171.7	30.72	17.45	92.41	72.41	252.5	108.2	66.90
#1	-.0002	-.0012	.0003	-.0001	-.0001	-.0001	.0007	-.0014
#2	.0017	-.0008	.0003	-.0004	-.0004	.0000	.0001	-.0038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4865.8	77538.	4993.5
Stddev	33.1	112.	36.6
%RSD	.67995	.14395	.73352
#1	4842.4	77617.	5019.4
#2	4889.2	77459.	4967.6

Sample Name: LLCCV Acquired: 1/2/2019 11:20:18 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0106	.0079	.0160	.0123	.0029	.00092	.0158	.0010
Stddev	.0001	.0000	.0005	.0014	.0001	.00000	.0011	.0000
%RSD	1.398	.5020	3.180	11.46	4.758	.47382	7.213	1.307
#1	.0107	.0078	.0157	.0133	.0030	.00092	.0166	.0010
#2	.0105	.0079	.0164	.0113	.0028	.00091	.0150	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	F .0079	.0194	.0036	.0019	.0039	F .0028	.0212
Stddev	.0001	.0081	.0003	.0010	.0009	.0001	.0001	.0011
%RSD	12.95	102.4	1.372	27.06	47.26	3.661	5.069	5.239
#1	.0009	.0022	.0193	.0029	.0013	.0038	.0027	.0220
#2	.0011	.0136	.0196	.0043	.0026	.0040	.0029	.0204
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value		.0200					.0040	
Range		-30.00%					-30.00%	

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0108	.0241	-.0168	.0050	.0030	.00089	.0001	.0039
Stddev	.0009	.0034	.0041	.0000	.0011	.00006	.0011	.0001
%RSD	8.428	14.12	24.31	.0065	36.73	7.2684	762.5	2.085
#1	.0101	.0265	-.0197	.0050	.0037	.00093	.0009	.0040
#2	.0114	.0217	-.0139	.0050	.0022	.00084	-.0006	.0039
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

- 2 X
Afm 1/2/19

Sample Name: LLCCV Acquired: 1/2/2019 11:20:18 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037	.0380	.1656	.0216	.2022	.0047	.2256	.00097
Stddev	.0001	.0007	.1054	.0009	.0104	.0005	.0086	.00014
%RSD	1.463	1.771	63.63	4.223	5.138	10.66	3.798	14.767
#1	.0037	.0375	.0911	.0209	.1949	.0043	.2316	.00108
#2	.0038	.0385	.2401	.0222	.2096	.0050	.2195	.00087
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0108	.0198	.0019	.0034	.0039	.0038	.0199	.0363
Stddev	.0006	.0007	.0003	.0005	.0002	.0001	.0006	.0023
%RSD	5.246	3.566	13.32	13.33	3.982	3.487	3.058	6.217
#1	.0112	.0193	.0021	.0037	.0040	.0037	.0195	.0379
#2	.0104	.0203	.0018	.0031	.0038	.0039	.0204	.0347
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4908.3	76868.	4937.9
Stddev	6.6	105.	74.0
%RSD	.13368	.13712	1.4979
#1	4913.0	76942.	4990.2
#2	4903.7	76793.	4885.6

Sample Name: LLCCV,0.5 Acquired: 1/2/2019 11:23:29 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0218	.0211	.0361	.0196	.0067	.00201	.0352	.0021
Stddev	.0002	.0009	.0002	.0021	.0005	.00002	.0005	.0000
%RSD	.7789	4.041	.6647	10.94	6.771	.89062	1.378	1.790
#1	.0217	.0205	.0362	.0181	.0064	.00203	.0348	.0021
#2	.0219	.0217	.0359	.0211	.0070	.00200	.0355	.0020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	.0328	.0389	.0077	.0039	.0079	.0070	.0363
Stddev	.0000	.0025	.0002	.0002	.0003	.0003	.0004	.0004
%RSD	1.370	7.552	.4751	3.247	6.975	4.115	6.045	1.105
#1	.0021	.0310	.0387	.0075	.0037	.0077	.0073	.0366
#2	.0021	.0345	.0390	.0079	.0041	.0082	.0067	.0360
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0208	.0405	.0012	.0098	.0109	.00189	.0036	.0078
Stddev	.0003	.0023	.0426	.0000	.0017	.00001	.0008	.0002
%RSD	1.293	5.570	3455.	.1497	15.29	.44166	23.14	2.574
#1	.0210	.0421	.0314	.0098	.0097	.00189	.0030	.0079
#2	.0206	.0389	-.0289	.0098	.0121	.00190	.0041	.0076
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLCCV,0.5 Acquired: 1/2/2019 11:23:29 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0079	.0756	.3543	.0441	.4090	.0092	.4393	.00205
Stddev	.0004	.0041	.0100	.0023	.0052	.0001	.0080	.00015
%RSD	4.662	5.376	2.835	5.117	1.269	1.011	1.829	7.4325
#1	.0076	.0727	.3472	.0457	.4127	.0092	.4336	.00215
#2	.0081	.0785	.3614	.0425	.4053	.0091	.4450	.00194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0201	.0409	.0040	.0070	.0080	.0076	.0435	.0810
Stddev	.0002	.0008	.0002	.0001	.0002	.0001	.0008	.0007
%RSD	1.013	1.949	3.980	1.365	2.024	.8183	1.771	.8762
#1	.0200	.0414	.0039	.0071	.0079	.0077	.0430	.0805
#2	.0203	.0403	.0042	.0069	.0081	.0076	.0440	.0815
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4826.2	76158.	4962.8
Stddev	1.4	124.	1.4
%RSD	.02946	.16223	.02850
#1	4827.2	76245.	4963.8
#2	4825.2	76070.	4961.8

Sample Name: KQ1818375-02 Acquired: 1/2/2019 11:28:06 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812299-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062	-.0033	.0009	.0107	-.00004	.0387	.0000	.0000
#1	.0061	-.0042	.0003	.0108	.00000	.0385	.0000	.0000
#2	.0063	-.0024	.0016	.0106	-.00008	.0390	.0000	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4101	.0000	.0003	-.0001	-.0033	.0026	.0006	.0007
#1	.4094	.0000	.0004	-.0005	-.0032	.0043	.0008	.0018
#2	.4108	-.0001	.0003	.0003	-.0034	.0010	.0003	-.0005

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0585	.00013	.0001	.0006	.0011	.0695	.0051	.1631
#1	.0585	.00010	.0001	.0009	.0004	.0680	.0024	.1579
#2	.0586	.00015	.0002	.0003	.0018	.0710	.0077	.1682

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	225.7	.00071	.0011	.0000	-.0005	-.0005	.0035
#1	-.0005	225.5	.00068	.0004	.0007	-.0006	-.0007	.0034
#2	.0002	225.8	.00075	.0019	-.0007	-.0004	-.0003	.0035

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0033	-.0002	.0012
#1	.0032	-.0019	.0025
#2	.0034	.0014	-.0001

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4572.9	74513.	5007.1
#1	4565.7	74549.	5014.2
#2	4580.2	74478.	5000.0

Sample Name: KQ1818375-01 Acquired: 1/2/2019 11:30:31 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812299-LCSE

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0074	-.0041	.9610	1.862	-.00007	.0438	.1988	.1926
#1	.0072	-.0064	.9604	1.864	-.00008	.0433	.1988	.1927
#2	.0077	-.0019	.9616	1.859	-.00006	.0442	.1989	.1925

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4253	.8979	-.0002	.2000	.1811	.0009	.9409	.0007
#1	.4254	.9023	-.0003	.1999	.1819	-.0035	.9416	-.0011
#2	.4253	.8934	.0000	.2000	.1803	.0053	.9402	.0025

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0612	.00012	.0001	.1930	-.0020	.1523	.1975	.1404
#1	.0613	.00010	.0001	.1930	-.0036	.1463	.1980	.1366
#2	.0612	.00013	.0001	.1929	-.0004	.1583	.1971	.1442

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1805	232.0	.00070	.0000	-.0003	-.0008	.0024	2.039
#1	.1807	232.1	.00062	-.0001	.0002	-.0008	.0027	2.041
#2	.1802	231.9	.00079	.0001	-.0008	-.0008	.0022	2.037

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.829	.0004	.0010
#1	1.826	.0001	-.0002
#2	1.832	.0007	.0022

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4549.0	74980.	4996.4
#1	4545.7	74936.	4977.0
#2	4552.2	75024.	5015.7

Sample Name: K1812299-001 Acquired: 1/2/2019 11:32:59 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0394	-.0035	.0057	.1222	-.00001	.1124	.0030	.0029
#1	.0390	-.0041	.0045	.1228	-.00004	.1144	.0030	.0028
#2	.0398	-.0029	.0068	.1216	.00002	.1104	.0031	.0030

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.93	-.0006	.0107	.0209	.0175	.9791	.0011	.0014
#1	11.88	-.0007	.0106	.0214	.0175	.9765	.0015	.0007
#2	11.99	-.0004	.0109	.0203	.0176	.9816	.0007	.0021

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.802	1.2745	.0018	.0072	.0092	1.110	.0021	1.725
#1	2.786	1.2762	.0016	.0069	.0077	1.140	-.0008	1.723
#2	2.818	1.2727	.0020	.0075	.0108	1.080	.0051	1.726

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	153.8	.07400	.0003	-.0013	-.0010	-.0001	.3523
#1	.0000	154.3	.07395	.0004	-.0015	-.0007	-.0003	.3522
#2	.0011	153.3	.07405	.0001	-.0012	-.0012	.0001	.3524

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.3230	-.0012	.0786
#1	.3236	.0015	.0804
#2	.3225	-.0038	.0768

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4583.8	75542.	4947.1
#1	4584.7	75786.	4972.4
#2	4582.9	75298.	4921.8

Sample Name: K1812299-002 Acquired: 1/2/2019 11:35:34 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0110	.0012	.0040	.0084	-.00005	.1276	.0000	.0001
#1	.0112	.0007	.0021	.0087	.00000	.1285	.0000	.0001
#2	.0108	.0017	.0060	.0082	-.00011	.1268	.0000	.0002

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4918	.0000	.0003	.0008	-.0013	.0023	.0016	.0024
#1	.4914	.0002	.0003	.0012	-.0016	.0007	.0015	.0032
#2	.4923	-.0001	.0004	.0005	-.0011	.0039	.0017	.0015

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0598	.00014	.0004	.0003	.0071	.1456	.0003	.3587
#1	.0596	.00011	.0005	.0003	.0070	.1445	.0027	.3652
#2	.0601	.00017	.0002	.0004	.0071	.1467	-.0021	.3521

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	40.84	.00070	-.0010	-.0011	-.0004	-.0004	.0035
#1	.0012	41.03	.00072	-.0005	-.0014	-.0005	-.0003	.0033
#2	.0005	40.65	.00068	-.0015	-.0009	-.0002	-.0004	.0037

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0032	-.0002	.0019
#1	.0032	-.0013	.0045
#2	.0032	.0008	-.0007

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4660.1	77025.	5045.1
#1	4663.8	76598.	5070.6
#2	4656.4	77451.	5019.6

Sample Name: KQ1818375-03 Acquired: 1/2/2019 11:38:07 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812299-002D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0149	-.0045	.0008	.0086	-.00009	.1277	-.0001	.0001
#1	.0149	-.0045	.0015	.0082	-.00004	.1287	-.0001	.0000
#2	.0150	-.0045	.0001	.0090	-.00014	.1267	-.0001	.0002

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4835	.0000	.0002	.0002	-.0014	.0036	.0000	-.0014
#1	.4785	.0001	.0001	.0004	-.0009	.0050	-.0001	-.0021
#2	.4885	-.0001	.0002	.0000	-.0019	.0023	.0000	-.0008

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0615	.00014	.0000	.0000	.0051	.1560	.0009	.4593
#1	.0607	.00015	-.0001	-.0002	.0054	.1567	.0018	.4537
#2	.0623	.00013	.0001	.0002	.0048	.1554	.0000	.4648

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	38.29	.00067	-.0019	-.0008	-.0006	.0001	.0037
#1	.0000	38.23	.00088	-.0021	-.0009	-.0008	.0001	.0037
#2	.0002	38.35	.00045	-.0018	-.0008	-.0004	.0000	.0036

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0033	-.0006	.0029
#1	.0033	-.0030	.0011
#2	.0033	.0017	.0048

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4672.5	76880.	4966.3
#1	4663.7	77103.	4990.8
#2	4681.4	76657.	4941.7

Sample Name: KQ1818375-04 Acquired: 1/2/2019 11:40:39 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812299-002S

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0156	-.0028	.9650	1.899	-.00006	.1231	.1988	.1947
#1	.0158	-.0014	.9663	1.893	-.00008	.1226	.1992	.1952
#2	.0154	-.0041	.9637	1.906	-.00003	.1236	.1984	.1941

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4849	.9062	.0004	.2029	.1918	.0026	.9757	.0012
#1	.4819	.8996	.0005	.2035	.1925	.0045	.9760	.0023
#2	.4878	.9128	.0003	.2022	.1911	.0007	.9754	.0001

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0599	.00022	-.0001	.1964	.0050	.1537	.1976	.4221
#1	.0595	.00018	-.0003	.1964	.0051	.1509	.1989	.4178
#2	.0602	.00026	.0001	.1963	.0048	.1564	.1963	.4263

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1893	38.14	.00088	-.0006	-.0015	-.0003	.0024	2.018
#1	.1909	38.07	.00091	-.0005	-.0018	-.0002	.0022	2.022
#2	.1876	38.22	.00084	-.0007	-.0012	-.0004	.0025	2.014

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.865	.0003	.0032
#1	1.866	-.0018	.0020
#2	1.863	.0024	.0044

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4644.2	77085.	4937.3
#1	4644.4	77941.	4942.3
#2	4644.1	76229.	4932.4

Sample Name: K1812299-002A Acquired: 1/2/2019 11:43:05 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E A=0.1/10mL MET3-37-D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0143	.0106	4.791	9.571	-.00009	.1279	.9909	.9709
#1	.0142	.0080	4.791	9.449	-.00009	.1283	.9900	.9700
#2	.0144	.0132	4.790	9.694	-.00010	.1276	.9917	.9718

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5022	4.601	.0002	1.024	.9487	.0014	4.888	.0005
#1	.4984	4.614	-.0001	1.024	.9402	.0046	4.891	-.0017
#2	.5059	4.589	.0004	1.025	.9572	-.0018	4.886	.0027

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0605	.00008	.0008	.9884	.0011	.1266	.9933	.3574
#1	.0599	.00000	.0006	.9864	.0007	.1042	.9940	.3568
#2	.0611	.00017	.0009	.9903	.0016	.1491	.9926	.3579

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9025	40.04	.00083	-.0002	-.0004	-.0005	.0148	10.04
#1	.9007	40.19	.00075	-.0011	-.0002	-.0006	.0147	10.04
#2	.9044	39.89	.00091	.0006	-.0006	-.0004	.0150	10.05

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	-.0009	.0018
#1	8.995	-.0003	-.0020
#2	9.019	-.0014	.0057

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4583.2	75755.	4905.7
#1	4576.8	75475.	4961.4
#2	4589.6	76035.	4850.0

Sample Name: KQ1818374-02 Acquired: 1/2/2019 11:45:35 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812299-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0084	.0003	.0049	-.0011	.00000	-.0031	.0000	.0000
#1	.0080	-.0039	.0051	-.0012	-.00002	-.0019	.0001	.0001
#2	.0088	.0044	.0048	-.0010	.00002	-.0042	.0000	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0180	.0003	.0001	.0009	-.0009	.0022	.0003	-.0019
#1	.0178	.0005	.0001	.0003	-.0003	.0068	.0006	-.0036
#2	.0182	.0001	.0001	.0014	-.0016	-.0024	.0000	-.0001

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.00004	-.0002	.0004	-.0005	.0363	.0030	.0860
#1	.0008	-.00006	-.0003	.0004	-.0002	.0285	.0035	.0860
#2	.0008	.00013	-.0001	.0004	-.0008	.0440	.0025	.0860

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0431	.00019	-.0005	-.0016	-.0002	-.0002	.0013
#1	.0006	.0372	.00005	-.0019	-.0025	.0000	-.0008	.0013
#2	-.0001	.0491	.00034	.0009	-.0006	-.0003	.0004	.0012

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0014	-.0012	-.0010
#1	.0013	-.0020	.0011
#2	.0015	-.0004	-.0032

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4718.7	76585.	4930.2
#1	4711.5	75933.	4954.8
#2	4725.9	77238.	4905.6

Sample Name: KQ1818374-01 Acquired: 1/2/2019 11:48:09 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812299-LCSE

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0149	.0011	.9790	1.919	-.00006	.0072	.1998	.1968
#1	.0151	.0009	.9769	1.921	-.00003	.0080	.1996	.1969
#2	.0147	.0012	.9812	1.917	-.00010	.0063	.2001	.1967

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0313	.9275	.0002	.2071	.1972	-.0019	1.001	-.0010
#1	.0312	.9215	.0003	.2074	.1971	-.0035	1.003	.0019
#2	.0313	.9335	.0002	.2069	.1972	-.0002	.9999	-.0040

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.00004	.0000	.1999	-.0006	.0330	.1999	.2028
#1	.0007	.00008	.0001	.1999	.0022	.0377	.2024	.2084
#2	.0007	.00000	-.0001	.2000	-.0034	.0284	.1974	.1972

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1987	.0252	.00028	-.0018	-.0005	.0001	.0029	2.012
#1	.1987	.0249	.00042	-.0017	-.0014	.0002	.0030	2.010
#2	.1988	.0256	.00013	-.0018	.0004	.0000	.0028	2.013

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.903	-.0001	-.0025
#1	1.900	.0006	-.0031
#2	1.906	-.0008	-.0018

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4756.3	78171.	4941.4
#1	4749.8	78494.	4921.6
#2	4762.9	77848.	4961.2

Sample Name: K1812299-003 Acquired: 1/2/2019 11:50:35 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0981	-.0013	.0049	.0146	.00007	.0508	.0000	.0001
#1	.0966	-.0015	.0072	.0146	-.00001	.0508	.0000	.0000
#2	.0996	-.0012	.0026	.0146	.00014	.0509	.0001	.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.770	.0001	.0003	.0063	.0039	.1642	.0015	.0033
#1	1.765	-.0002	.0006	.0064	.0043	.1643	.0023	.0024
#2	1.776	.0004	.0000	.0063	.0034	.1641	.0006	.0042

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5576	.00369	.0039	.0000	.1261	22.44	-.0001	2.880
#1	.5534	.00375	.0040	-.0001	.1239	22.44	-.0009	2.885
#2	.5618	.00364	.0038	.0001	.1284	22.44	.0008	2.874

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	56.59	.01438	-.0001	.0003	.0028	.0027	.0051
#1	.0004	56.64	.01426	.0008	.0002	.0030	.0030	.0052
#2	-.0002	56.54	.01451	-.0010	.0003	.0026	.0023	.0049

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0047	-.0029	13.99
#1	.0047	-.0031	14.02
#2	.0047	-.0027	13.96

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4784.1	76648.	5024.3
#1	4784.6	76198.	5044.9
#2	4783.6	77097.	5003.6

Sample Name: CCVB Acquired: 1/2/2019 11:53:08 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.520	10.32	-.0019	1.027	9.871	.00005	-.0061	-.0001
Stddev	.006	.01	.0021	.001	.064	.00007	.0002	.0000
%RSD	.0755	.0837	113.5	.0442	.6491	142.24	3.646	63.09
#1	8.525	10.33	-.0034	1.027	9.916	.00000	-.0063	-.0001
#2	8.516	10.32	-.0004	1.027	9.825	.00010	-.0060	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	9.680	9.697	.0000	.0006	.0002	-.0021	9.728
Stddev	.0001	.040	.026	.000	.0001	.0003	.0007	.007
%RSD	24.57	.4123	.2675	526.2	24.03	193.2	33.39	.0769
#1	-.0003	9.708	9.715	.0001	.0005	-.0001	-.0016	9.733
#2	-.0004	9.651	9.679	-.0001	.0007	.0004	-.0026	9.723
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	1.028	9.887	9.940	10.24	.97609	1.014	-.0001
Stddev	.0000	.001	.021	.011	.01	.00701	.016	.0000
%RSD	4.776	.1263	.2144	.1146	.1454	.71778	1.620	32.27
#1	.0000	1.027	9.872	9.948	10.23	.97114	1.002	-.0002
#2	.0000	1.029	9.902	9.932	10.25	.98104	1.025	-.0001
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 1/2/2019 11:53:08 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	10.33	10.03	.0008	10.21	.0006	10.40	.98684
Stddev	.0000	.00	.08	.0005	.01	.0004	.00	.00112
%RSD	5.294	.0308	.7885	72.23	.0619	67.14	.0057	.11335
#1	-.0008	10.33	9.978	.0004	10.21	.0009	10.40	.98763
#2	-.0009	10.32	10.09	.0011	10.22	.0003	10.40	.98605
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	-.0015	.0007	.0001	.0001	.0000	1.047	1.002
Stddev	.0002	.0001	.0001	.0003	.0001	.0001	.002	.001
%RSD	16.63	5.740	11.15	545.6	133.8	679.4	.1666	.0564
#1	-.0013	-.0015	.0006	.0003	.0000	.0001	1.048	1.001
#2	-.0010	-.0014	.0007	-.0002	.0001	-.0001	1.046	1.002
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4836.3	75969.	4957.9
Stddev	16.8	586.	9.9
%RSD	.34775	.77147	.20057
#1	4848.1	76384.	4950.8
#2	4824.4	75555.	4964.9

Sample Name: CCVA Acquired: 1/2/2019 11:55:53 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2663	.2715	.2404	.2521	.2422	.25066	.2452	.2495
Stddev	.0027	.0029	.0038	.0031	.0031	.00228	.0052	.0000
%RSD	1.009	1.079	1.596	1.216	1.285	.90843	2.111	.0152
#1	.2644	.2694	.2431	.2499	.2444	.24905	.2415	.2495
#2	.2682	.2736	.2377	.2542	.2400	.25227	.2488	.2495
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2440	.4818	.4871	.2392	.2522	.2547	.2470	.2460
Stddev	.0000	.0139	.0085	.0012	.0003	.0004	.0000	.0012
%RSD	.0052	2.882	1.744	.4961	.1103	.1494	.0166	.4719
#1	.2440	.4916	.4931	.2400	.2520	.2544	.2470	.2451
#2	.2440	.4720	.4811	.2383	.2524	.2550	.2470	.2468
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2433	.0024	.2385	.2532	.2527	.24465	.2507	.2523
Stddev	.0009	.0009	.0200	.0029	.0016	.00010	.0028	.0008
%RSD	.3759	37.68	8.406	1.160	.6159	.04290	1.098	.3071
#1	.2439	.0018	.2527	.2553	.2516	.24473	.2487	.2528
#2	.2426	.0031	.2243	.2512	.2538	.24458	.2526	.2517
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 1/2/2019 11:55:53 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2473	-.0015	2.448	.2604	.1485	.2425	.2760	.00015
Stddev	.0009	.0001	.060	.0001	.0203	.0035	.0040	.00007
%RSD	.3719	8.746	2.454	.0546	13.67	1.445	1.462	45.052
#1	.2466	-.0014	2.491	.2605	.1629	.2400	.2732	.00020
#2	.2479	-.0016	2.406	.2603	.1342	.2450	.2789	.00010
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2568	.2523	.2498	.2461	.2551	.2468	-.0006	-.0049
Stddev	.0015	.0005	.0017	.0011	.0002	.0006	.0011	.0007
%RSD	.5732	.1996	.6873	.4464	.0840	.2413	172.1	13.44
#1	.2557	.2519	.2510	.2453	.2549	.2472	-.0014	-.0045
#2	.2578	.2526	.2486	.2469	.2552	.2463	.0001	-.0054
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4810.1	76194.	4924.3
Stddev	10.3	350.	63.6
%RSD	.21356	.45963	1.2910
#1	4817.4	75947.	4879.3
#2	4802.8	76442.	4969.3

Sample Name: CCB Acquired: 1/2/2019 11:58:16 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0007	.0010	.0021	-.0010	-.00008	-.0046	.0001
Stddev	.0005	.0033	.0008	.0013	.0002	.00002	.0010	.0001
%RSD	425.3	497.3	79.31	63.28	18.09	18.816	21.82	58.15
#1	-.0002	.0017	.0004	.0012	-.0009	-.00007	-.0039	.0001
#2	.0005	-.0030	.0015	.0030	-.0011	-.00009	-.0053	.0001
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0005	.0003	-.0002	.0002	-.0003	-.0009	.0052
Stddev	.0001	.0064	.0000	.0003	.0000	.0002	.0002	.0021
%RSD	92.34	1341.	10.32	115.0	.2066	84.00	18.67	40.07
#1	.0000	.0040	.0003	.0000	.0002	-.0001	-.0010	.0067
#2	.0002	-.0050	.0003	-.0004	.0002	-.0004	-.0008	.0038
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	.0003	-.0261	-.0002	-.0014	.00008	.0008	.0003
Stddev	.0013	.0048	.0155	.0002	.0010	.00004	.0009	.0006
%RSD	107.9	1508.	59.38	154.5	71.33	50.775	112.1	224.2
#1	.0021	-.0031	-.0152	.0000	-.0007	.00011	.0014	-.0002
#2	.0003	.0037	-.0371	-.0003	-.0021	.00005	.0002	.0007
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 1/2/2019 11:58:16 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0020	.0236	.0029	.0105	.0006	.0181	-.00001
Stddev	.0002	.0008	.0379	.0001	.0082	.0007	.0397	.00009
%RSD	288.5	37.60	160.3	3.767	78.33	121.8	219.7	957.61
#1	.0002	-.0015	.0504	.0028	.0047	.0011	-.0100	-.00008
#2	-.0001	-.0025	-.0032	.0030	.0163	.0001	.0461	.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	-.0009	.0003	-.0002	.0002	.0000	-.0017	-.0064
Stddev	.0004	.0006	.0002	.0002	.0002	.000	.0003	.0047
%RSD	32.03	69.85	69.81	74.93	103.4	76.86	16.98	73.01
#1	.0010	-.0004	.0005	-.0003	.0001	.0000	-.0015	-.0031
#2	.0015	-.0013	.0002	-.0001	.0003	-.0001	-.0020	-.0097
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4709.2	75817.	4850.4
Stddev	15.2	105.	44.7
%RSD	.32319	.13838	.92135
#1	4698.5	75891.	4818.8
#2	4720.0	75743.	4882.0

Sample Name: KQ1818374-03 Acquired: 1/2/2019 12:00:52 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812299-003D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1055	-.0010	.0026	.0141	-.00004	.0449	-.0001	.0001
#1	.1047	-.0014	.0038	.0145	-.00004	.0456	-.0001	.0001
#2	.1063	-.0006	.0014	.0137	-.00004	.0442	-.0001	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.699	.0000	-.0001	.0057	.0042	.1516	.0011	.0035
#1	1.709	-.0003	-.0001	.0050	.0046	.1523	.0011	.0032
#2	1.688	.0004	-.0002	.0065	.0039	.1509	.0012	.0039

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5318	.00353	.0042	.0005	.1266	21.06	.0013	2.845
#1	.5349	.00348	.0042	-.0001	.1252	21.21	.0022	2.821
#2	.5286	.00358	.0041	.0010	.1280	20.90	.0003	2.869

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	53.28	.01395	.0001	-.0009	.0028	.0021	.0045
#1	.0004	53.31	.01419	-.0002	-.0019	.0024	.0020	.0042
#2	.0007	53.24	.01372	.0004	.0002	.0031	.0023	.0047

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0043	-.0019	13.26
#1	.0043	-.0007	13.25
#2	.0043	-.0030	13.27

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4603.2	75054.	4902.9
#1	4608.4	75403.	4884.7
#2	4598.0	74705.	4921.1

Sample Name: KQ1818374-04 Acquired: 1/2/2019 12:03:24 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812299-003S

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1296	.0014	.9696	1.910	-.00004	.0555	.2018	.1969
#1	.1293	.0012	.9745	1.910	-.00001	.0558	.2020	.1973
#2	.1299	.0015	.9647	1.911	-.00007	.0552	.2016	.1964

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.836	.9122	.0003	.2111	.1929	.1775	.9808	.0034
#1	1.836	.9138	.0002	.2109	.1924	.1749	.9824	.0029
#2	1.837	.9106	.0004	.2113	.1933	.1801	.9792	.0038

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5639	.00388	.0046	.1992	.1367	22.41	.1981	3.036
#1	.5650	.00391	.0046	.1991	.1368	22.43	.1986	3.024
#2	.5629	.00385	.0045	.1993	.1366	22.38	.1976	3.048

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1845	56.81	.01512	-.0013	-.0009	.0029	.0058	2.072
#1	.1843	56.84	.01512	-.0018	-.0008	.0031	.0064	2.073
#2	.1846	56.78	.01513	-.0008	-.0009	.0027	.0053	2.072

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.886	-.0001	14.04
#1	1.888	-.0024	14.07
#2	1.884	.0023	14.02

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4593.0	76116.	4921.4
#1	4592.5	76359.	4925.1
#2	4593.6	75873.	4917.7

Sample Name: K1812299-003A Acquired: 1/2/2019 12:05:48 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E A=0.1/10mL MET3-37-D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1057	.0089	4.792	9.263	-.00007	.0518	.9970	.9749
#1	.1070	.0081	4.802	9.334	-.00002	.0512	.9984	.9752
#2	.1044	.0096	4.782	9.193	-.00011	.0524	.9957	.9746

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.713	4.567	.0004	1.032	.9334	.1670	4.883	.0039
#1	1.727	4.564	.0005	1.032	.9375	.1693	4.885	.0037
#2	1.699	4.570	.0003	1.032	.9293	.1646	4.881	.0041

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5398	.00363	.0051	.9911	.1330	21.76	.9886	2.865
#1	.5437	.00363	.0052	.9906	.1310	21.78	.9840	2.833
#2	.5358	.00363	.0050	.9916	.1350	21.73	.9932	2.898

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8932	55.46	.01408	-.0011	-.0008	.0024	.0160	10.19
#1	.8954	55.33	.01407	-.0012	-.0012	.0029	.0162	10.21
#2	.8910	55.58	.01409	-.0010	-.0005	.0019	.0158	10.17

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	.0021	13.58
#1	9.039	.0021	13.61
#2	9.020	.0021	13.54

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4556.9	75740.	4987.1
#1	4563.2	75820.	4953.6
#2	4550.7	75661.	5020.6

Sample Name: KQ1818536-01 Acquired: 1/2/2019 12:08:18 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812417-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019	-.0037	.0034	.0026	-.00009	.0907	.0000	.0000
#1	.0021	-.0028	.0050	.0026	-.00016	.0898	.0000	.0000
#2	.0017	-.0046	.0018	.0025	-.00003	.0915	-.0001	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6888	-.0001	.0005	.0000	-.0014	.0056	.0013	.0018
#1	.6833	-.0009	.0002	.0003	-.0012	.0044	.0014	.0002
#2	.6944	.0006	.0008	-.0003	-.0016	.0068	.0012	.0035

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0976	.00015	-.0003	.0007	.0012	.1094	.0022	.1100
#1	.0971	.00019	-.0002	.0008	.0014	.1015	.0009	.1184
#2	.0981	.00011	-.0003	.0007	.0011	.1173	.0034	.1016

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	214.9	.00096	-.0022	.0001	-.0010	-.0010	.0033
#1	-.0002	214.1	.00100	-.0013	.0001	-.0009	-.0012	.0033
#2	.0002	215.8	.00093	-.0032	.0001	-.0010	-.0007	.0033

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0030	.0009	.1405
#1	.0030	.0000	.1369
#2	.0031	.0017	.1441

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4525.6	74748.	4950.2
#1	4522.2	74355.	4973.1
#2	4529.0	75141.	4927.4

Sample Name: KQ1818536-02 Acquired: 1/2/2019 12:10:51 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812417-LCSE

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0038	-.0026	.9551	1.871	-.00007	.0971	.1989	.1937
#1	.0037	-.0032	.9557	1.888	-.00004	.0968	.1989	.1936
#2	.0040	-.0019	.9545	1.853	-.00009	.0974	.1990	.1938

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7359	.9144	.0000	.1991	.1803	-.0007	.9468	.0015
#1	.7430	.9082	.0000	.1996	.1792	.0081	.9477	.0011
#2	.7288	.9205	.0000	.1985	.1813	-.0095	.9459	.0018

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1053	.00011	-.0003	.1931	-.0009	.1878	.1981	.0520
#1	.1065	.00012	-.0006	.1933	-.0003	.1782	.2013	.0594
#2	.1041	.00009	.0000	.1930	-.0016	.1974	.1950	.0447

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1798	228.6	.00085	.0001	-.0002	-.0006	.0026	2.029
#1	.1782	228.6	.00087	.0006	-.0003	-.0007	.0033	2.028
#2	.1813	228.7	.00084	-.0004	.0000	-.0005	.0019	2.030

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.814	-.0007	.1500
#1	1.813	.0008	.1513
#2	1.815	-.0022	.1487

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4513.4	73481.	4877.3
#1	4509.9	73577.	4851.6
#2	4516.8	73385.	4903.1

Sample Name: K1812417-001 Acquired: 1/2/2019 12:13:19 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0499	-.0043	.0022	.0319	-.00002	.0907	.0000	.0001
#1	.0505	-.0058	.0018	.0320	.00003	.0917	.0001	.0001
#2	.0492	-.0028	.0027	.0319	-.00008	.0898	.0000	.0002

Elem	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.221	8.168	.0002	.0035	.0021	-.0004	.2484	.0000
#1	8.231	8.124	.0001	.0039	.0022	-.0008	.2477	-.0006
#2	8.211	8.212	.0004	.0030	.0019	.0000	.2491	.0005

Elem	Li6707	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027	1.226	.18023	-.0002	.0032	.0039	.7639	.0021
#1	.0028	1.226	.18025	-.0003	.0034	.0035	.7204	.0014
#2	.0025	1.225	.18021	-.0002	.0031	.0043	.8074	.0027

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5120	.0004	224.6	.03184	-.0008	-.0006	-.0008	-.0003
#1	.5082	.0004	225.1	.03197	-.0009	.0004	-.0010	.0000
#2	.5158	.0004	224.2	.03171	-.0007	-.0015	-.0007	-.0005

Elem	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm
Avg	.0086	.0079	.0005	.1946
#1	.0087	.0079	.0002	.1923
#2	.0085	.0079	.0008	.1968

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4525.7	73152.	4832.0
#1	4531.1	73278.	4832.9
#2	4520.3	73026.	4831.2

Sample Name: KQ1818536-03 Acquired: 1/2/2019 12:15:57 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812417-001D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0501	-.0001	.0036	.0337	.00006	.0945	-.0001	.0000
#1	.0506	-.0014	.0016	.0339	.00010	.0948	.0000	.0001
#2	.0496	.0011	.0056	.0335	.00002	.0941	-.0002	.0000

Elem	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.565	8.468	.0007	.0035	.0020	-.0004	.2536	.0008
#1	8.563	8.399	.0012	.0036	.0025	-.0009	.2530	.0014
#2	8.568	8.536	.0002	.0033	.0015	.0002	.2542	.0002

Elem	Li6707	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	1.273	.18631	-.0001	.0033	.0037	.8196	.0006
#1	.0001	1.270	.18644	-.0001	.0032	.0058	.8402	-.0009
#2	.0015	1.275	.18619	.0000	.0035	.0016	.7989	.0022

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5771	.0003	231.8	.03329	-.0028	-.0003	-.0007	-.0003
#1	.5705	.0004	231.7	.03323	-.0034	-.0007	-.0004	-.0005
#2	.5837	.0002	232.0	.03334	-.0023	.0001	-.0010	-.0001

Elem	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm
Avg	.0087	.0079	.0000	.1979
#1	.0088	.0079	-.0015	.1995
#2	.0086	.0079	.0015	.1964

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4506.0	72719.	4813.9
#1	4509.5	72820.	4812.1
#2	4502.5	72619.	4815.8

Sample Name: KQ1818536-04 Acquired: 1/2/2019 12:18:37 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812417-001S

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0518	-.0029	.9698	1.940	-.00006	.0953	.1976	.1931
#1	.0513	-.0032	.9727	1.946	.00007	.0951	.1975	.1931
#2	.0522	-.0025	.9669	1.935	-.00020	.0955	.1978	.1931

Elem	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.388	8.341	.9202	.0033	.1994	.1840	.2504	.9402
#1	8.430	8.356	.9238	.0032	.1982	.1846	.2482	.9410
#2	8.347	8.325	.9166	.0034	.2005	.1834	.2526	.9394

Elem	Li6707	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	1.245	.18385	-.0004	.1954	.0062	.7698	.1968
#1	.0030	1.252	.18438	-.0003	.1952	.0076	.7097	.1990
#2	-.0001	1.237	.18333	-.0005	.1956	.0048	.8299	.1946

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5215	.1809	228.7	.03271	.0007	-.0011	-.0005	.0030
#1	.5130	.1814	231.4	.03284	.0001	-.0008	-.0002	.0029
#2	.5300	.1803	226.0	.03257	.0013	-.0015	-.0009	.0032

Elem	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm
Avg	2.012	1.829	-.0005	.1998
#1	2.009	1.830	.0002	.2019
#2	2.014	1.828	-.0012	.1976

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4557.9	73487.	4830.6
#1	4559.2	73383.	4806.5
#2	4556.6	73590.	4854.6

Sample Name: K1812417-001A Acquired: 1/2/2019 12:21:12 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E A=0.1/10mL MET3-37-D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0544	.0028	4.761	9.473	-.00001	.0947	.9794	.9594
#1	.0543	.0044	4.765	9.581	-.00004	.0950	.9821	.9622
#2	.0544	.0011	4.757	9.366	.00001	.0945	.9767	.9566

Elem	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.152	8.121	4.612	.0037	.9959	.9176	.2440	4.724
#1	8.217	8.270	4.622	.0037	.9969	.9168	.2417	4.734
#2	8.088	7.973	4.603	.0038	.9948	.9185	.2463	4.714

Elem	Li6707	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031	1.211	.18138	-.0002	.9669	.0036	.8733	.9934
#1	.0038	1.218	.18212	.0000	.9678	.0019	.9186	1.001
#2	.0023	1.204	.18064	-.0003	.9660	.0054	.8280	.9857

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5266	.8729	229.0	.03210	-.0005	-.0005	-.0008	.0146
#1	.5098	.8700	229.5	.03221	-.0019	-.0015	-.0009	.0143
#2	.5434	.8757	228.5	.03199	.0008	.0005	-.0006	.0148

Elem	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm
Avg	9.932	>4.500	.0014	.1903
#1	9.960	8.743	.0017	.1883
#2	9.904	8.723	.0012	.1923

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4477.7	74077.	4949.5
#1	4469.9	73919.	4922.8
#2	4485.6	74234.	4976.2

Sample Name: KQ1818533-02 Acquired: 1/2/2019 12:23:49 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812357-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0053	-.0034	.0037	.0031	-.00011	.1030	.0000	.0001
#1	.0054	-.0023	.0059	.0032	-.00018	.1043	.0001	.0000
#2	.0052	-.0044	.0016	.0030	-.00004	.1017	-.0001	.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7807	.0010	-.0001	-.0001	-.0011	-.0007	.0028	.0014
#1	.7792	.0010	-.0002	-.0004	-.0014	-.0006	.0029	.0032
#2	.7823	.0009	-.0001	.0001	-.0008	-.0009	.0027	-.0004

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1103	.00007	.0000	.0008	.0027	.1062	.0032	.1046
#1	.1100	.00009	.0001	.0008	.0035	.0892	.0011	.0954
#2	.1106	.00004	.0000	.0007	.0019	.1233	.0052	.1138

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	237.9	.00098	-.0011	.0008	-.0009	-.0006	.0033
#1	.0007	238.4	.00091	.0005	.0007	-.0011	-.0004	.0032
#2	.0000	237.4	.00105	-.0027	.0009	-.0008	-.0008	.0033

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0031	-.0021	.1628
#1	.0031	-.0024	.1706
#2	.0032	-.0019	.1550

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4603.1	74168.	4958.0
#1	4591.3	74151.	4930.5
#2	4614.8	74186.	4985.5

Sample Name: CCVB Acquired: 1/2/2019 12:26:29 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.370	10.37	-.0012	1.004	9.550	.00004	-.0057	-.0001
Stddev	.052	.08	.0002	.000	.001	.00000	.0009	.0000
%RSD	.6223	.7876	15.07	.0117	.0077	.04220	16.43	35.60
#1	8.407	10.31	-.0014	1.004	9.550	.00004	-.0050	-.0001
#2	8.333	10.43	-.0011	1.004	9.549	.00004	-.0064	-.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	9.282	9.290	.0007	.0006	.0006	-.0014	9.618
Stddev	.0002	.048	.153	.0007	.0000	.0002	.0001	.018
%RSD	51.16	.5157	1.651	109.3	2.412	37.42	9.852	.1854
#1	-.0005	9.248	9.399	.0012	.0006	.0008	-.0015	9.605
#2	-.0002	9.316	9.182	.0001	.0006	.0004	-.0013	9.631
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	1.017	9.460	9.332	9.991	.95622	.9776	-.0005
Stddev	.0008	.006	.032	.064	.003	.00985	.0148	.0000
%RSD	142.1	.6048	.3350	.6805	.0284	1.0297	1.513	5.295
#1	.0000	1.013	9.438	9.287	9.993	.96318	.9881	-.0005
#2	.0012	1.021	9.483	9.376	9.989	.94926	.9671	-.0005
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 1/2/2019 12:26:29 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	10.47	9.836	.0025	10.10	.0005	10.32	.96359
Stddev	.0000	.01	.001	.0049	.01	.0007	.04	.00577
%RSD	4.324	.1414	.0057	201.5	.1399	133.2	.3945	.59844
#1	-.0004	10.48	9.837	.0060	10.11	.0000	10.29	.95951
#2	-.0004	10.46	9.836	-.0010	10.09	.0011	10.35	.96766
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	-.0005	.0003	-.0003	.0002	.0001	1.048	1.008
Stddev	.0013	.0005	.0001	.0003	.0001	.0000	.004	.015
%RSD	121.7	95.39	36.08	80.63	74.51	14.36	.4189	1.475
#1	.0002	-.0008	.0004	-.0001	.0001	.0001	1.051	.9976
#2	.0020	-.0002	.0002	-.0005	.0003	.0001	1.045	1.019
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4753.9	77000.	5015.7
Stddev	21.8	763.	9.0
%RSD	.45867	.99137	.17946
#1	4738.5	76460.	5022.1
#2	4769.3	77540.	5009.4

Sample Name: CCVA Acquired: 1/2/2019 12:29:14 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2687	.2751	.2497	.2576	.2373	.25564	.2508	.2507
Stddev	.0012	.0007	.0008	.0031	.0026	.00076	.0023	.0007
%RSD	.4571	.2445	.3063	1.194	1.099	.29887	.9115	.2639
#1	.2678	.2746	.2492	.2554	.2392	.25510	.2492	.2502
#2	.2696	.2755	.2503	.2598	.2355	.25618	.2524	.2511
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2458	.4696	.4727	.2373	.2535	.2552	.2517	.2406
Stddev	.0003	.0033	.0012	.0006	.0006	.0009	.0001	.0061
%RSD	.1150	.7016	.2644	.2400	.2243	.3499	.0411	2.526
#1	.2456	.4719	.4736	.2377	.2531	.2546	.2517	.2449
#2	.2460	.4673	.4718	.2369	.2539	.2559	.2516	.2363
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2459	.0008	.2455	.2447	.2571	.24284	.2476	.2547
Stddev	.0016	.0005	.0113	.0004	.0022	.00146	.0023	.0007
%RSD	.6376	67.69	4.615	.1456	.8746	.59939	.9104	.2856
#1	.2470	.0012	.2535	.2444	.2555	.24387	.2492	.2552
#2	.2448	.0004	.2375	.2449	.2587	.24181	.2460	.2542
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 1/2/2019 12:29:14 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2484	-.0012	2.478	.2614	.1342	.2495	.2938	-.00003
Stddev	.0002	.0015	.067	.0012	.0083	.0018	.0179	.00001
%RSD	.0823	125.9	2.687	.4630	6.218	.7053	6.087	38.675
#1	.2482	-.0022	2.525	.2622	.1401	.2483	.3064	-.00004
#2	.2485	-.0001	2.431	.2605	.1283	.2508	.2812	-.00002
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2568	.2536	.2438	.2451	.2550	.2515	-.0023	-.0026
Stddev	.0000	.0016	.0039	.0017	.0004	.0020	.0002	.0046
%RSD	.0110	.6117	1.580	.6884	.1710	.7765	10.56	179.7
#1	.2567	.2525	.2466	.2463	.2547	.2501	-.0025	.0007
#2	.2568	.2547	.2411	.2439	.2553	.2529	-.0021	-.0059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4899.1	78179.	5123.1
Stddev	29.8	799.	18.0
%RSD	.60892	1.0221	.35082
#1	4878.0	77614.	5135.8
#2	4920.2	78744.	5110.4

Sample Name: CCB Acquired: 1/2/2019 12:31:37 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0008	.0023	.0020	-.0007	.00003	-.0043	.0000
Stddev	.0002	.0014	.0014	.0041	.0005	.00005	.0006	.0001
%RSD	246.7	178.9	60.30	206.3	77.95	139.99	13.91	443.3
#1	.0001	-.0002	.0013	-.0009	-.0010	.00000	-.0047	-.0001
#2	-.0003	.0017	.0033	.0049	-.0003	.00006	-.0039	.0001
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0026	.0003	.0002	-.0001	-.0002	-.0015	.0028
Stddev	.0000	.0141	.0002	.0008	.0003	.0010	.0001	.0001
%RSD	97.06	538.7	74.50	468.6	273.0	479.3	7.224	5.050
#1	.0000	.0126	.0001	-.0004	.0001	-.0009	-.0014	.0027
#2	.0001	-.0074	.0004	.0007	-.0003	.0005	-.0015	.0029
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0005	-.0387	-.0002	-.0009	-.00003	.0029	.0004
Stddev	.0014	.0007	.0063	.0000	.0068	.00003	.0021	.0000
%RSD	352.6	140.7	16.21	17.12	766.5	90.689	72.34	6.057
#1	-.0006	.0010	-.0431	-.0002	.0039	-.00001	.0043	.0005
#2	.0014	.0000	-.0343	-.0001	-.0057	-.00006	.0014	.0004
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 1/2/2019 12:31:37 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0020	-.0215	.0035	-.0014	.0008	.0408	.00004
Stddev	.0001	.0020	.0041	.0018	.0036	.0005	.0153	.00002
%RSD	36.92	98.53	19.15	52.10	256.1	65.71	37.40	57.079
#1	.0002	-.0006	-.0244	.0048	.0011	.0004	.0300	.00002
#2	.0001	-.0034	-.0186	.0022	-.0039	.0012	.0516	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	.0007	.0003	.0000	.0000	.0000	.0004	-.0056
Stddev	.0001	.0004	.0001	.0005	.0000	.000	.0012	.0031
%RSD	8.297	54.45	27.36	4370.	226.4	860.9	302.1	56.02
#1	.0012	.0010	.0004	-.0004	.0000	.0000	.0013	-.0078
#2	.0014	.0005	.0003	.0004	.0000	-.0001	-.0005	-.0034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4898.1	77608.	4998.0
Stddev	11.4	195.	23.7
%RSD	.23241	.25081	.47395
#1	4906.1	77746.	5014.8
#2	4890.0	77470.	4981.3

Sample Name: KQ1818533-01 Acquired: 1/2/2019 12:34:14 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812357-LCSE

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0095	-.0019	.9878	1.941	-.00008	.1036	.1998	.1954
#1	.0093	-.0034	.9860	1.940	-.00006	.1028	.2000	.1960
#2	.0097	-.0004	.9895	1.943	-.00010	.1045	.1996	.1949

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8011	.9517	.0004	.1992	.1878	.0038	.9411	.0029
#1	.8002	.9543	.0001	.1991	.1886	.0029	.9412	.0019
#2	.8019	.9490	.0006	.1994	.1870	.0046	.9410	.0040

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1136	.00017	.0004	.1938	.0009	.1194	.2014	.6017
#1	.1132	.00017	.0004	.1941	-.0013	.1086	.1996	.6044
#2	.1139	.00017	.0004	.1934	.0032	.1302	.2032	.5991

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1829	240.0	.00097	-.0010	-.0013	-.0006	.0025	2.033
#1	.1840	238.8	.00101	-.0013	-.0015	-.0008	.0021	2.032
#2	.1818	241.3	.00092	-.0006	-.0011	-.0005	.0028	2.034

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.865	.0029	.1546
#1	1.864	.0028	.1583
#2	1.865	.0029	.1509

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4628.9	73674.	4938.9
#1	4618.6	73563.	4958.0
#2	4639.3	73785.	4919.9

Sample Name: K1812357-001 Acquired: 1/2/2019 12:36:45 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0061	-.0041	.0016	.0080	-.00006	.0792	-.0001	.0001
#1	.0059	-.0058	.0009	.0083	-.00003	.0788	.0000	.0001
#2	.0062	-.0024	.0022	.0077	-.00010	.0795	-.0001	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.73	.0002	.0000	.0007	-.0018	.0126	-.0004	.0016
#1	15.64	.0009	.0000	.0011	-.0022	.0113	-.0004	.0009
#2	15.82	-.0006	.0000	.0003	-.0014	.0139	-.0003	.0023

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.529	.07859	-.0003	.0006	9.331	9.665	.0037	.2924
#1	1.517	.07876	-.0004	.0003	9.335	9.621	.0027	.2891
#2	1.540	.07842	-.0002	.0009	9.328	9.710	.0047	.2957

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	247.5	.02655	-.0003	-.0008	-.0005	-.0006	.0347
#1	.0007	246.3	.02632	-.0012	-.0005	-.0004	-.0010	.0347
#2	.0000	248.7	.02678	.0006	-.0011	-.0007	-.0003	.0348

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0326	.0024	.1908
#1	.0325	.0009	.1899
#2	.0328	.0039	.1916

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4657.3	74465.	4992.5
#1	4662.4	74511.	5012.3
#2	4652.1	74419.	4972.6

Sample Name: K1812357-002 Acquired: 1/2/2019 12:39:29 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0547	-.0028	.0041	.0825	-.00010	.0999	.0002	.0002
#1	.0546	-.0035	.0061	.0828	.00002	.0993	.0002	.0001
#2	.0547	-.0021	.0021	.0822	-.00022	.1005	.0001	.0004

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.35	.0013	.0004	.0005	-.0006	.0425	.0016	.0004
#1	21.41	.0011	.0007	.0003	-.0004	.0428	.0023	.0000
#2	21.29	.0015	.0002	.0007	-.0009	.0422	.0008	.0008

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.591	.44468	-.0001	.0021	.1875	.3444	.0016	1.005
#1	2.600	.44382	.0000	.0021	.1890	.3144	-.0005	.9910
#2	2.581	.44553	-.0001	.0021	.1861	.3745	.0038	1.019

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	224.6	.09099	-.0010	-.0008	-.0005	.0000	.0674
#1	.0005	223.5	.09123	.0003	-.0005	-.0003	.0002	.0675
#2	.0001	225.7	.09075	-.0024	-.0010	-.0007	-.0002	.0674

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0616	.0009	.5010
#1	.0616	.0015	.5063
#2	.0615	.0003	.4957

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4575.4	74690.	4994.8
#1	4573.4	74858.	4961.3
#2	4577.3	74523.	5028.3

Sample Name: KQ1818533-03 Acquired: 1/2/2019 12:42:05 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812357-002D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0524	-.0003	.0052	.0824	-.00011	.1004	.0002	.0003
#1	.0525	.0007	.0040	.0824	-.00017	.0997	.0002	.0003
#2	.0523	-.0013	.0065	.0825	-.00005	.1012	.0002	.0003

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.40	.0011	.0002	.0012	-.0003	.0494	-.0001	.0003
#1	21.42	.0012	.0001	.0012	-.0008	.0497	.0004	-.0004
#2	21.38	.0010	.0002	.0013	.0001	.0490	-.0005	.0009

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.598	.45468	-.0005	.0030	.1896	.3038	.0031	.8083
#1	2.602	.45405	-.0004	.0027	.1873	.3931	.0049	.7988
#2	2.594	.45532	-.0005	.0034	.1920	.2145	.0012	.8178

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	226.4	.09126	-.0002	-.0007	-.0006	.0002	.0696
#1	.0006	225.9	.09096	-.0004	-.0011	-.0010	.0003	.0695
#2	.0004	226.8	.09155	.0000	-.0003	-.0003	.0001	.0697

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0629	-.0012	.4998
#1	.0631	-.0017	.4958
#2	.0628	-.0008	.5037

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4530.0	73295.	4985.1
#1	4533.3	73477.	4950.8
#2	4526.6	73113.	5019.4

Sample Name: KQ1818533-04 Acquired: 1/2/2019 12:44:45 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812357-002S

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0540	-.0023	.9623	1.907	-.00001	.0996	.1939	.1890
#1	.0547	-.0016	.9598	1.901	.00003	.0991	.1940	.1894
#2	.0533	-.0030	.9648	1.913	-.00005	.1000	.1938	.1887

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.76	.8861	.0004	.1970	.1818	.0405	.9289	-.0004
#1	20.66	.8903	.0007	.1971	.1813	.0430	.9303	-.0004
#2	20.86	.8818	.0001	.1969	.1823	.0379	.9276	-.0004

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.522	.43760	-.0002	.1910	.1882	.3148	.1979	.7188
#1	2.514	.44093	-.0004	.1913	.1937	.3065	.1988	.7281
#2	2.531	.43426	.0001	.1906	.1828	.3230	.1970	.7094

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1810	226.3	.08917	-.0019	-.0011	-.0010	.0029	2.030
#1	.1807	228.1	.08904	-.0006	-.0008	-.0010	.0026	2.032
#2	.1813	224.4	.08930	-.0031	-.0015	-.0011	.0032	2.028

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.870	.0001	.4982
#1	1.870	-.0029	.4992
#2	1.870	.0032	.4972

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4596.0	76105.	5119.3
#1	4591.3	75642.	5147.1
#2	4600.8	76568.	5091.5

Sample Name: K1812357-002A Acquired: 1/2/2019 12:47:15 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E A=0.1/10mL MET3-37-D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0573	.0072	4.853	9.397	-.00006	.1036	.9728	.9525
#1	.0570	.0065	4.863	9.340	-.00006	.1030	.9763	.9545
#2	.0576	.0079	4.843	9.454	-.00006	.1042	.9694	.9506

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.28	4.565	.0008	.9963	.9256	.0424	4.706	.0010
#1	21.23	4.586	.0008	.9995	.9284	.0447	4.715	.0024
#2	21.34	4.545	.0009	.9931	.9228	.0401	4.697	-.0005

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.611	.44673	.0003	.9614	.1930	.3368	.9853	1.011
#1	2.611	.44837	.0003	.9660	.1922	.3250	.9893	.9936
#2	2.611	.44509	.0003	.9567	.1937	.3486	.9813	1.028

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8791	229.1	.09148	-.0010	-.0014	-.0006	.0149	9.944
#1	.8775	229.4	.09106	-.0002	-.0017	-.0005	.0153	9.963
#2	.8807	228.7	.09191	-.0017	-.0010	-.0007	.0144	9.925

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	-.0009	.4997
#1	8.956	-.0017	.5007
#2	8.895	-.0001	.4988

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4561.7	75007.	5053.8
#1	4565.7	74761.	5048.4
#2	4557.7	75252.	5059.2

Sample Name: K1812357-004 Acquired: 1/2/2019 12:49:52 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0102	-.0046	.0155	.1131	-.00015	.1232	.0003	.0004
#1	.0097	-.0041	.0141	.1131	-.00012	.1231	.0003	.0005
#2	.0106	-.0052	.0169	.1131	-.00019	.1234	.0003	.0003

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	110.9	.0007	.0006	.0017	-.0001	.0081	.0013	.0050
#1	110.9	.0006	.0008	.0019	-.0003	.0063	-.0007	.0038
#2	111.0	.0008	.0004	.0015	.0000	.0100	.0034	.0061

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.510	.52221	.0003	.0018	1.877	3.566	.0041	1.059
#1	5.508	.52386	.0005	.0017	1.881	3.581	.0064	1.062
#2	5.513	.52056	.0001	.0019	1.873	3.550	.0017	1.056

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	244.0	.18498	-.0009	-.0012	-.0006	.0006	.0429
#1	.0004	244.3	.18414	-.0004	-.0017	-.0007	.0007	.0428
#2	-.0003	243.8	.18582	-.0013	-.0006	-.0004	.0004	.0429

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0399	.0007	1.314
#1	.0399	-.0015	1.307
#2	.0398	.0030	1.320

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4531.5	73964.	5024.8
#1	4529.3	73676.	5033.0
#2	4533.6	74253.	5016.7

Sample Name: KQ1818534-02 Acquired: 1/2/2019 12:52:32 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812357-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0111	-.0030	-.0004	.0023	-.00011	.1320	.0000	.0002
#1	.0116	-.0026	.0011	.0024	-.00017	.1326	.0000	.0002
#2	.0106	-.0035	-.0018	.0022	-.00006	.1314	.0001	.0002

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7402	.0002	.0001	.0007	-.0001	.0000	.0016	.0003
#1	.7429	.0002	.0003	.0004	.0002	-.0011	.0015	.0015
#2	.7374	.0001	.0000	.0009	-.0004	.0011	.0016	-.0009

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1420	.00013	.0002	.0001	.0011	.1324	.0019	.0305
#1	.1420	.00010	.0003	.0002	-.0013	.1413	.0004	.0205
#2	.1421	.00015	.0000	.0000	.0036	.1235	.0034	.0404

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	7.121	.00095	-.0006	-.0002	-.0002	-.0005	.0042
#1	.0000	7.116	.00108	-.0015	.0002	-.0003	-.0003	.0043
#2	.0004	7.126	.00081	.0002	-.0007	-.0001	-.0008	.0042

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0041	-.0006	.1543
#1	.0041	-.0011	.1545
#2	.0042	-.0001	.1541

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4792.1	80067.	5104.8
#1	4782.8	80467.	5099.6
#2	4801.3	79667.	5110.0

Sample Name: KQ1818534-01 Acquired: 1/2/2019 12:55:06 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812357-LCSE

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0237	.0017	1.006	1.913	-.00007	.1402	.2009	.1986
#1	.0237	.0004	1.008	1.901	-.00007	.1413	.2005	.1988
#2	.0238	.0030	1.005	1.926	-.00007	.1392	.2013	.1983

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7586	.9279	.0001	.2090	.1997	.0042	1.007	.0019
#1	.7519	.9249	.0002	.2084	.1990	.0070	1.005	.0025
#2	.7653	.9309	.0000	.2097	.2003	.0013	1.009	.0012

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1460	.00017	-.0004	.2021	.0004	.0785	.2041	.2956
#1	.1451	.00013	-.0005	.2022	-.0013	.0578	.2028	.2973
#2	.1469	.00022	-.0003	.2020	.0021	.0991	.2054	.2939

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2010	7.318	.00091	-.0012	-.0014	.0002	.0026	2.025
#1	.2009	7.291	.00090	-.0010	-.0013	.0002	.0023	2.023
#2	.2011	7.345	.00092	-.0015	-.0015	.0003	.0029	2.028

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.944	-.0009	.1543
#1	1.946	-.0019	.1564
#2	1.941	.0000	.1522

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4770.4	79114.	5137.8
#1	4775.3	79222.	5145.9
#2	4765.6	79005.	5129.6

Sample Name: K1812357-003 Acquired: 1/2/2019 12:57:31 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0147	-.0034	.0284	.2923	-.00003	.0383	.0016	.0016
#1	.0147	-.0022	.0283	.2910	-.00001	.0370	.0016	.0017
#2	.0147	-.0047	.0286	.2936	-.00006	.0397	.0017	.0016

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	187.3	-.0005	.0012	.0032	.0030	.0087	-.0004	.0021
#1	187.0	-.0007	.0012	.0029	.0019	.0038	-.0002	.0018
#2	187.6	-.0003	.0012	.0035	.0041	.0136	-.0006	.0024

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.66	1.3608	-.0002	.0036	3.352	4.363	.0033	1.592
#1	12.70	1.3505	.0001	.0041	3.361	4.358	.0055	1.591
#2	12.63	1.3710	-.0005	.0031	3.344	4.368	.0012	1.592

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	17.35	.53682	.0006	-.0006	.0005	.0007	.1884
#1	.0004	17.40	.53586	.0000	-.0003	.0004	.0005	.1882
#2	.0003	17.30	.53778	.0012	-.0009	.0007	.0008	.1886

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1779	.0007	2.644
#1	.1781	-.0011	2.647
#2	.1777	.0026	2.641

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4566.1	74792.	4996.2
#1	4569.2	75147.	5011.7
#2	4563.1	74437.	4980.8

Sample Name: CCVB Acquired: 1/2/2019 13:00:09 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.722	10.32	-.0024	1.003	9.557	-.00001	-.0049	-.0001
Stddev	.065	.05	.0011	.001	.013	.00021	.0014	.0000
%RSD	.7391	.4885	44.72	.0649	.1382	2460.6	29.20	62.62
#1	8.676	10.28	-.0031	1.002	9.547	-.00016	-.0059	.0000
#2	8.767	10.35	-.0016	1.003	9.566	.00014	-.0039	-.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	9.301	9.356	-.0001	.0003	.0009	-.0008	9.628
Stddev	.0000	.038	.074	.0002	.0002	.0008	.0003	.068
%RSD	2.615	.4114	.7920	118.8	73.53	89.86	33.53	.7012
#1	-.0003	9.328	9.408	.0000	.0005	.0003	-.0009	9.675
#2	-.0003	9.274	9.304	-.0003	.0002	.0014	-.0006	9.580
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	1.019	9.526	9.421	9.958	.95434	.9776	.0000
Stddev	.0015	.002	.033	.002	.057	.00521	.0119	.0000
%RSD	119.2	.2377	.3426	.0225	.5725	.54609	1.217	95.51
#1	.0023	1.017	9.503	9.423	9.998	.95802	.9861	.0000
#2	.0002	1.021	9.549	9.420	9.917	.95065	.9692	.0001
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 1/2/2019 13:00:09 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	10.45	9.866	-.0004	9.992	-.0003	10.28	.97211
Stddev	.0001	.02	.121	.0015	.046	.0004	.01	.00147
%RSD	12.34	.1747	1.228	376.7	.4647	119.4	.0852	.15152
#1	-.0009	10.46	9.952	.0007	10.02	-.0001	10.27	.97315
#2	-.0008	10.43	9.780	-.0014	9.959	-.0006	10.28	.97107
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	-.0013	.0001	.0003	-.0001	.0001	1.052	1.003
Stddev	.0004	.0007	.0001	.0000	.0001	.0001	.001	.003
%RSD	144.7	56.25	134.0	12.16	93.80	122.8	.1070	.2843
#1	-.0006	-.0008	.0000	.0004	.0000	.0000	1.051	1.001
#2	.0000	-.0018	.0002	.0003	-.0001	.0002	1.053	1.005
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4725.3	76792.	4959.5
Stddev	12.1	646.	4.3
%RSD	.25604	.84096	.08706
#1	4716.7	76336.	4962.5
#2	4733.8	77249.	4956.4

Sample Name: CCVA Acquired: 1/2/2019 13:02:55 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2743	.2782	.2449	.2503	.2391	.25313	.2491	.2494
Stddev	.0019	.0064	.0007	.0022	.0006	.00071	.0014	.0004
%RSD	.6781	2.318	.2774	.8982	.2342	.27930	.5564	.1773
#1	.2730	.2736	.2444	.2519	.2387	.25263	.2481	.2497
#2	.2756	.2828	.2454	.2487	.2395	.25363	.2500	.2491
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2462	.4590	.4719	.2334	.2529	.2562	.2481	.2444
Stddev	.0007	.0012	.0024	.0015	.0001	.0003	.0030	.0022
%RSD	.2803	.2654	.5000	.6566	.0332	.1132	1.194	.9044
#1	.2467	.4598	.4702	.2323	.2529	.2559	.2460	.2460
#2	.2457	.4581	.4736	.2344	.2528	.2564	.2502	.2429
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2483	-.0001	.2106	.2424	.2524	.24201	.2466	.2561
Stddev	.0002	.0013	.0140	.0001	.0032	.00140	.0001	.0009
%RSD	.0822	856.0	6.631	.0498	1.264	.58036	.0409	.3389
#1	.2485	-.0010	.2007	.2425	.2546	.24102	.2467	.2567
#2	.2482	.0007	.2204	.2424	.2501	.24300	.2466	.2555
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 1/2/2019 13:02:55 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2495	-.0022	2.503	.2610	.1343	.2499	.2813	.00003
Stddev	.0007	.0024	.025	.0044	.0062	.0011	.0038	.00005
%RSD	.2936	107.9	.9778	1.671	4.594	.4452	1.343	158.86
#1	.2501	-.0038	2.521	.2641	.1299	.2491	.2787	.00000
#2	.2490	-.0005	2.486	.2580	.1387	.2507	.2840	.00007
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2549	.2511	.2389	.2444	.2531	.2459	.0003	-.0087
Stddev	.0035	.0008	.0012	.0012	.0007	.0002	.0007	.0031
%RSD	1.368	.3295	.5138	.4811	.2778	.0919	221.4	35.53
#1	.2524	.2517	.2381	.2436	.2536	.2457	-.0002	-.0109
#2	.2574	.2506	.2398	.2452	.2526	.2461	.0009	-.0065
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4775.2	77875.	5013.0
Stddev	6.1	183.	5.3
%RSD	.12733	.23469	.10571
#1	4770.9	78005.	5009.2
#2	4779.5	77746.	5016.7

Sample Name: CCB Acquired: 1/2/2019 13:05:17 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.0017	.0015	.0038	-.0009	-.00006	-.0048	-.0001
Stddev	.0001	.0028	.0032	.0026	.0001	.00007	.0001	.0001
%RSD	138.8	169.3	210.0	68.41	9.039	114.81	2.281	68.11
#1	-.0002	.0003	-.0007	.0019	-.0009	-.00001	-.0047	-.0001
#2	.0000	-.0036	.0037	.0056	-.0008	-.00010	-.0049	-.0002
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0003	.0002	.0003	-.0002	.0004	-.0005	.0048
Stddev	.0000	.0029	.0000	.0000	.0004	.0004	.0010	.0020
%RSD	10.16	1067.	9.956	12.41	222.2	98.42	188.4	40.86
#1	.0001	-.0023	.0003	.0004	-.0004	.0007	.0002	.0062
#2	.0001	.0018	.0002	.0003	.0001	.0001	-.0012	.0034
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	.0011	.0063	-.0002	-.0010	-.00002	.0000	.0008
Stddev	.0004	.0007	.0055	.0000	.0019	.00002	.001	.0001
%RSD	30.28	63.64	87.47	12.37	181.6	113.48	4502.	15.88
#1	.0016	.0006	.0024	-.0002	-.0024	.00000	-.0007	.0007
#2	.0010	.0016	.0102	-.0002	.0003	-.00004	.0006	.0009
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 1/2/2019 13:05:17 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0043	.1328	.0032	.0095	.0000	.0328	.00013
Stddev	.0000	.0017	.0281	.0030	.0097	.0000	.0078	.00015
%RSD	22.43	38.25	21.13	94.70	101.9	31.44	23.77	112.64
#1	.0001	-.0032	.1526	.0010	.0163	.0000	.0273	.00024
#2	.0001	-.0055	.1129	.0053	.0026	.0000	.0383	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017	-.0011	-.0001	-.0008	-.0001	-.0001	-.0025	-.0020
Stddev	.0002	.0011	.0001	.0000	.0002	.0000	.0007	.0032
%RSD	10.33	102.4	133.5	2.773	226.0	51.66	27.39	164.6
#1	.0016	-.0019	.0000	-.0008	.0001	-.0001	-.0030	-.0042
#2	.0018	-.0003	-.0001	-.0008	-.0003	-.0001	-.0020	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4768.4	76826.	4952.3
Stddev	6.9	61.	56.1
%RSD	.14408	.07955	1.1323
#1	4763.5	76869.	4991.9
#2	4773.3	76782.	4912.6

Sample Name: KQ1818534-03 Acquired: 1/2/2019 13:07:54 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812357-003D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0145	-.0032	.0275	.3039	-.00007	.0370	.0016	.0017
#1	.0144	-.0045	.0273	.3041	.00000	.0381	.0016	.0017
#2	.0146	-.0020	.0277	.3037	-.00014	.0359	.0016	.0017

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	194.7	.0004	.0011	.0046	.0023	.0109	.0015	.0029
#1	194.8	.0007	.0013	.0043	.0019	.0115	.0020	.0031
#2	194.6	.0001	.0009	.0048	.0027	.0104	.0010	.0028

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.87	1.4041	.0002	.0036	3.410	4.474	.0014	1.652
#1	12.87	1.4028	-.0001	.0038	3.410	4.524	.0019	1.642
#2	12.87	1.4055	.0006	.0034	3.410	4.423	.0009	1.661

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	17.47	.55453	-.0010	-.0011	.0003	.0000	.1927
#1	-.0005	17.45	.55511	-.0003	-.0006	.0002	-.0003	.1930
#2	.0000	17.49	.55395	-.0017	-.0015	.0004	.0002	.1923

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1812	.0033	2.697
#1	.1815	.0039	2.692
#2	.1808	.0027	2.701

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4548.1	73750.	4892.7
#1	4546.5	73809.	4892.2
#2	4549.7	73690.	4893.2

Sample Name: KQ1818534-04 Acquired: 1/2/2019 13:10:29 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812357-003S

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0174	-.0036	.9798	2.247	-.00011	.0391	.1934	.1914
#1	.0171	-.0021	.9792	2.252	-.00014	.0392	.1935	.1913
#2	.0178	-.0052	.9803	2.241	-.00008	.0390	.1932	.1915

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	199.3	.9290	.0011	.1990	.1911	.0084	.9457	.0024
#1	199.5	.9285	.0013	.1995	.1904	.0031	.9458	.0017
#2	199.1	.9296	.0010	.1985	.1919	.0138	.9456	.0031

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.10	1.4339	.0001	.1932	3.494	4.573	.1951	1.640
#1	13.12	1.4359	.0001	.1930	3.488	4.643	.1927	1.640
#2	13.08	1.4319	.0001	.1933	3.499	4.503	.1975	1.641

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1824	17.81	.56896	.0005	-.0009	.0003	.0029	2.100
#1	.1817	17.83	.57039	-.0006	-.0009	.0002	.0032	2.101
#2	.1831	17.80	.56752	.0017	-.0008	.0004	.0026	2.099

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.963	-.0014	2.744
#1	1.963	-.0014	2.743
#2	1.963	-.0013	2.745

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4539.4	73542.	4875.5
#1	4539.3	73557.	4879.6
#2	4539.6	73527.	4871.4

Sample Name: K1812357-003A Acquired: 1/2/2019 13:12:58 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E A=0.1/10mL MET3-37-D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0175	.0023	4.810	9.943	-.00004	.0372	.9637	.9548
#1	.0179	.0040	4.806	9.841	-.00005	.0369	.9637	.9551
#2	.0172	.0007	4.815	10.04	-.00002	.0375	.9636	.9546

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	189.3	4.624	.0014	.9989	.9456	.0082	4.777	.0055
#1	188.1	4.595	.0011	.9984	.9457	.0096	4.779	.0058
#2	190.5	4.654	.0017	.9994	.9455	.0068	4.775	.0051

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.62	1.3683	.0004	.9665	3.388	4.392	.9852	1.588
#1	12.63	1.3580	.0004	.9654	3.403	4.370	.9867	1.589
#2	12.60	1.3786	.0004	.9677	3.373	4.414	.9836	1.587

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8868	17.19	.54119	.0002	.0002	.0003	.0151	9.780
#1	.8872	17.23	.53747	.0006	-.0005	.0002	.0153	9.768
#2	.8863	17.15	.54492	-.0002	.0009	.0003	.0148	9.792

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	.0006	2.615
#1	8.858	-.0009	2.620
#2	8.871	.0022	2.609

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4494.6	74088.	4934.7
#1	4488.1	74681.	4972.2
#2	4501.2	73496.	4897.2

Sample Name: KQ1818532-04 Acquired: 1/2/2019 13:15:32 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812358-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037	-.0057	.0054	.0027	-.00004	.0956	-.0001	.0001
#1	.0040	-.0060	.0043	.0027	.00001	.0960	-.0001	.0002
#2	.0033	-.0054	.0065	.0026	-.00008	.0951	.0000	.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7580	.0002	-.0001	.0004	-.0016	.0001	.0028	.0001
#1	.7618	.0003	.0000	-.0002	-.0016	-.0028	.0020	-.0003
#2	.7542	.0001	-.0001	.0010	-.0016	.0031	.0035	.0004

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1061	.00012	.0000	.0005	.0028	.1999	.0060	.0524
#1	.1065	.00008	.0002	.0006	.0039	.1878	.0063	.0494
#2	.1058	.00016	-.0001	.0004	.0017	.2121	.0057	.0553

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	228.0	.00094	-.0011	-.0002	-.0007	-.0002	.0033
#1	.0003	225.7	.00093	-.0007	-.0005	-.0006	-.0001	.0033
#2	-.0001	230.3	.00094	-.0015	.0000	-.0008	-.0002	.0033

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0029	-.0010	.1582
#1	.0029	-.0005	.1598
#2	.0030	-.0015	.1567

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4572.7	73132.	4893.3
#1	4565.1	73211.	4821.5
#2	4580.4	73053.	4965.1

Sample Name: KQ1818532-03 Acquired: 1/2/2019 13:18:09 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812358-LCSE

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	-.0017	1.004	1.921	-.00009	.0975	.1981	.1947
#1	.0037	.0002	1.003	1.927	-.00013	.0979	.1982	.1949
#2	.0044	-.0036	1.006	1.915	-.00005	.0971	.1981	.1945

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7516	.9291	.0003	.1984	.1875	-.0052	.9445	.0026
#1	.7537	.9273	.0004	.1982	.1878	-.0014	.9460	.0015
#2	.7496	.9310	.0003	.1987	.1873	-.0090	.9429	.0037

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1052	.00006	.0001	.1931	.0028	.1936	.2001	.0381
#1	.1051	.00004	.0002	.1931	.0049	.2713	.1990	.0400
#2	.1052	.00008	.0000	.1931	.0007	.1158	.2012	.0363

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1854	237.0	.00103	-.0004	-.0004	-.0007	.0025	2.007
#1	.1853	235.9	.00109	.0015	-.0005	-.0007	.0026	2.007
#2	.1856	238.0	.00097	-.0023	-.0002	-.0006	.0025	2.007

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.877	-.0026	.1571
#1	1.874	-.0014	.1573
#2	1.879	-.0039	.1568

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4685.7	75420.	5070.6
#1	4680.1	75346.	5057.6
#2	4691.3	75494.	5083.7

Sample Name: K1812358-001 Acquired: 1/2/2019 13:20:40 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1026	-.0061	.0023	.0115	-.00003	.2168	.0000	.0001
#1	.1014	-.0056	.0048	.0113	-.00009	.2185	.0000	.0001
#2	.1038	-.0066	-.0002	.0116	.00003	.2152	.0000	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.08	.0013	.0016	.0086	.0044	.8192	.0016	.0035
#1	16.10	.0011	.0011	.0085	.0039	.8207	.0018	.0045
#2	16.06	.0015	.0020	.0087	.0050	.8176	.0013	.0026

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.577	.09880	.0001	.0055	3.614	2.495	.0027	.6240
#1	2.585	.09863	.0002	.0053	3.621	2.537	.0056	.6379
#2	2.570	.09898	.0000	.0056	3.606	2.452	-.0003	.6101

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	240.3	.04204	-.0002	.0002	.0059	.0037	.0738
#1	.0004	240.8	.04227	.0012	.0001	.0060	.0040	.0741
#2	.0006	239.8	.04180	-.0017	.0003	.0058	.0034	.0734

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0729	-.0004	1.491
#1	.0727	-.0008	1.489
#2	.0730	-.0001	1.494

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4871.5	77467.	5300.7
#1	4864.1	78035.	5294.9
#2	4878.8	76898.	5306.5

Sample Name: K1812358-001L Acquired: 1/2/2019 13:23:21 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 25 Test Type: E Sample Type:
Comment: AM 010219A 1/25 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0215	-.0055	.0012	.0017	.00000	.0389	.0000	.0001
#1	.0217	-.0064	-.0009	.0018	-.00001	.0387	.0000	.0000
#2	.0212	-.0047	.0033	.0017	.00001	.0391	.0000	.0002

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.384	.0007	.0006	.0019	-.0002	.1680	.0012	.0028
#1	3.403	.0010	.0005	.0014	.0001	.1696	.0025	.0041
#2	3.364	.0003	.0007	.0024	-.0005	.1664	-.0001	.0014

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5465	.02039	.0000	.0007	.6981	.4529	-.0009	.1368
#1	.5479	.02041	-.0002	.0007	.6987	.4661	-.0003	.1282
#2	.5452	.02037	.0002	.0007	.6975	.4398	-.0015	.1454

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	47.05	.00866	-.0012	-.0007	.0016	.0000	.0153
#1	.0008	47.19	.00897	-.0012	-.0010	.0016	-.0002	.0154
#2	.0007	46.92	.00835	-.0012	-.0004	.0015	.0002	.0152

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0151	-.0035	.2908
#1	.0151	-.0005	.2899
#2	.0151	-.0064	.2917

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4939.2	77273.	5161.4
#1	4942.3	77449.	5168.6
#2	4936.2	77097.	5154.2

Sample Name: KQ1818532-05 Acquired: 1/2/2019 13:25:58 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812358-001D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1082	-.0046	.0011	.0126	-.00012	.2214	.0000	.0001
#1	.1082	-.0068	-.0005	.0127	-.00010	.2202	-.0001	.0000
#2	.1081	-.0023	.0027	.0124	-.00014	.2227	.0000	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.06	.0017	.0017	.0084	.0056	.8439	.0016	.0000
#1	17.11	.0016	.0014	.0088	.0056	.8436	.0025	-.0009
#2	17.01	.0018	.0019	.0080	.0055	.8443	.0007	.0009

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.752	.10349	.0000	.0053	3.704	2.599	-.0003	.7073
#1	2.757	.10340	-.0001	.0050	3.714	2.594	-.0015	.7189
#2	2.746	.10359	.0002	.0057	3.695	2.604	.0010	.6957

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	236.9	.04438	-.0005	.0006	.0059	.0032	.0759
#1	.0018	233.9	.04437	-.0006	.0012	.0061	.0035	.0758
#2	.0003	239.8	.04439	-.0004	-.0001	.0056	.0028	.0760

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0733	.0001	1.484
#1	.0737	.0023	1.489
#2	.0729	-.0021	1.479

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4774.5	75362.	5074.1
#1	4788.3	75125.	5048.6
#2	4760.8	75598.	5099.6

Sample Name: KQ1818532-01 Acquired: 1/2/2019 13:28:39 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812358-001S

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1098	-.0003	1.015	1.940	-.00013	.2292	.1941	.1905
#1	.1093	-.0017	1.012	1.944	-.00016	.2295	.1944	.1910
#2	.1103	.0012	1.018	1.936	-.00010	.2289	.1939	.1900

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.44	.9381	.0011	.2066	.2010	.8786	.9454	.0045
#1	17.50	.9394	.0012	.2071	.2014	.8778	.9453	.0045
#2	17.38	.9367	.0011	.2062	.2006	.8793	.9456	.0044

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.786	.10576	-.0002	.1975	3.894	2.794	.1979	.6660
#1	2.800	.10575	-.0003	.1981	3.891	2.858	.1960	.6686
#2	2.772	.10578	.0000	.1970	3.896	2.729	.1998	.6633

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1869	246.1	.04553	-.0020	-.0002	.0058	.0072	2.067
#1	.1862	247.7	.04565	-.0001	-.0001	.0058	.0069	2.068
#2	.1877	244.6	.04542	-.0039	-.0003	.0057	.0075	2.066

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.977	.0017	1.536
#1	1.977	.0026	1.533
#2	1.978	.0007	1.540

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4741.6	75859.	5154.6
#1	4735.9	75990.	5143.9
#2	4747.3	75728.	5165.3

Sample Name: KQ1818532-02 Acquired: 1/2/2019 13:31:12 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812358-001SD

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1163	-.0004	.9713	1.832	-.00001	.2278	.1877	.1843
#1	.1152	.0002	.9695	1.831	-.00007	.2282	.1877	.1844
#2	.1174	-.0011	.9732	1.832	.00004	.2273	.1878	.1843

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.81	.8801	.0013	.2001	.1894	.8583	.9191	.0023
#1	16.75	.8845	.0013	.1994	.1894	.8564	.9191	.0037
#2	16.88	.8756	.0014	.2008	.1894	.8602	.9191	.0010

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.662	.10259	.0002	.1909	3.878	2.557	.1927	.6936
#1	2.665	.10286	.0004	.1907	3.880	2.501	.1918	.6993
#2	2.658	.10232	-.0001	.1910	3.877	2.614	.1936	.6878

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1830	245.4	.04401	.0003	-.0002	.0072	.0063	1.994
#1	.1832	244.6	.04386	.0007	-.0006	.0071	.0064	1.991
#2	.1828	246.2	.04416	.0000	.0002	.0073	.0062	1.996

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.896	-.0012	1.530
#1	1.896	-.0020	1.525
#2	1.897	-.0005	1.536

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4708.3	77538.	5269.0
#1	4705.8	77183.	5285.8
#2	4710.7	77893.	5252.2

Sample Name: CCVB Acquired: 1/2/2019 13:33:45 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.610	10.17	-.0022	1.014	9.351	-.00005	-.0050	-.0001
Stddev	.071	.05	.0011	.001	.024	.00013	.0014	.0000
%RSD	.8245	.4520	49.84	.0765	.2575	259.82	28.64	37.06
#1	8.560	10.14	-.0014	1.015	9.334	.00004	-.0060	-.0001
#2	8.661	10.21	-.0030	1.014	9.368	-.00014	-.0040	-.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	9.168	8.858	-.0003	.0004	.0007	-.0002	9.604
Stddev	.0001	.037	.089	.0003	.0001	.0003	.0001	.009
%RSD	23.76	.4010	1.004	89.34	28.67	40.36	54.53	.0988
#1	-.0003	9.194	8.795	-.0001	.0003	.0005	-.0001	9.610
#2	-.0004	9.142	8.921	-.0006	.0005	.0008	-.0003	9.597
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	1.019	9.385	9.121	10.08	.93881	.9584	-.0004
Stddev	.0009	.005	.023	.045	.08	.00641	.0151	.0003
%RSD	74.55	.4978	.2462	.4911	.7943	.68254	1.577	63.88
#1	.0005	1.023	9.369	9.089	10.13	.94334	.9691	-.0002
#2	.0018	1.016	9.402	9.152	10.02	.93428	.9478	-.0006
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 1/2/2019 13:33:45 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	10.53	9.881	.0037	10.35	.0003	10.40	.94776
Stddev	.0001	.01	.038	.0020	.12	.0007	.10	.00258
%RSD	10.64	.0776	.3884	54.63	1.182	248.7	.9253	.27174
#1	-.0008	10.53	9.854	.0023	10.43	.0008	10.46	.94958
#2	-.0009	10.52	9.908	.0051	10.26	-.0002	10.33	.94594
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0003	.0003	.0003	.0001	.0002	1.041	1.035
Stddev	.0004	.0007	.0001	.0003	.0005	.0001	.001	.008
%RSD	220.2	222.6	40.96	106.9	378.2	51.50	.0684	.7994
#1	-.0001	-.0008	.0002	.0001	-.0002	.0002	1.042	1.040
#2	.0005	.0002	.0004	.0005	.0005	.0003	1.041	1.029
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4779.5	79791.	5184.8
Stddev	1.0	816.	35.7
%RSD	.02018	1.0223	.68841
#1	4778.8	79214.	5210.0
#2	4780.2	80368.	5159.5

Sample Name: CCVA Acquired: 1/2/2019 13:36:30 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .2768	.2718	.2430	.2552	.2296	.25579	.2513	.2492
Stddev	.0004	.0015	.0004	.0037	.0001	.00064	.0003	.0008
%RSD	.1317	.5458	.1649	1.431	.0570	.24904	.1155	.3367
#1	.2766	.2707	.2427	.2578	.2295	.25624	.2511	.2498
#2	.2771	.2728	.2432	.2526	.2297	.25534	.2515	.2486
Check ?	Chk Fail	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value	.2500							
Range	10.44%							

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2452	.4513	.4500	.2251	.2515	.2570	.2458	.2411
Stddev	.0009	.0048	.0013	.0021	.0007	.0011	.0000	.0016
%RSD	.3553	1.062	.2812	.9493	.2615	.4447	.0067	.6698
#1	.2458	.4479	.4509	.2266	.2520	.2578	.2458	.2400
#2	.2446	.4547	.4491	.2236	.2510	.2562	.2458	.2422
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2501	.0020	.2103	.2328	.2541	.23625	.2382	.2549
Stddev	.0012	.0014	.0207	.0012	.0024	.00183	.0001	.0009
%RSD	.4633	67.36	9.848	.5360	.9449	.77355	.0214	.3688
#1	.2509	.0030	.1956	.2336	.2558	.23754	.2383	.2556
#2	.2493	.0011	.2249	.2319	.2524	.23495	.2382	.2543
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

F - NR Al 1670 after 13:05

AEM 1/2/19

Sample Name: CCVA Acquired: 1/2/2019 13:36:30 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2482	-.0013	2.462	.2611	.1390	.2522	.3075	-.00009
Stddev	.0002	.0017	.046	.0017	.0144	.0004	.0059	.00014
%RSD	.0833	123.3	1.871	.6585	10.35	.1743	1.915	160.94
#1	.2483	-.0025	2.429	.2599	.1491	.2518	.3116	.00001
#2	.2480	-.0002	2.494	.2623	.1288	.2525	.3033	-.00019
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2567	.2512	.2268	.2409	.2531	.2459	-.0007	-.0025
Stddev	.0002	.0001	.0011	.0022	.0003	.0005	.0017	.0003
%RSD	.0847	.0253	.4981	.9258	.1057	.2116	243.0	10.19
#1	.2565	.2513	.2276	.2425	.2533	.2463	-.0019	-.0023
#2	.2568	.2512	.2260	.2393	.2529	.2455	.0005	-.0027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4808.3	80753.	5241.9
Stddev	2.8	456.	16.8
%RSD	.05877	.56479	.31968
#1	4806.3	80431.	5230.1
#2	4810.3	81076.	5253.8

Sample Name: CCB Acquired: 1/2/2019 13:38:53 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	.0000	.0009	-.0009	-.0015	-.00006	-.0035	-.0001
Stddev	.0004	.0022	.0011	.0014	.0001	.00005	.0019	.0001
%RSD	138.3	21040.	119.0	157.8	8.361	88.321	54.52	175.5
#1	.0000	.0016	.0001	-.0018	-.0015	-.00002	-.0021	-.0001
#2	-.0005	-.0016	.0017	.0001	-.0016	-.00010	-.0048	.0000
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0098	-.0001	-.0005	.0003	.0002	-.0007	.0032
Stddev	.0001	.0011	.0001	.0007	.0001	.0007	.0007	.0034
%RSD	619.1	10.87	190.9	130.1	49.37	288.7	108.5	105.3
#1	.0001	-.0105	.0000	.0000	.0004	.0008	-.0002	.0008
#2	-.0001	-.0090	-.0001	-.0011	.0002	-.0003	-.0012	.0056
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0013	-.0169	-.0001	-.0018	-.00007	-.0001	.0006
Stddev	.0011	.0005	.0228	.0001	.0010	.00001	.0019	.0003
%RSD	1413.	37.85	135.4	90.30	56.37	15.143	1535.	44.16
#1	.0007	.0010	-.0007	-.0002	-.0025	-.00006	-.0015	.0004
#2	-.0008	.0016	-.0330	.0000	-.0011	-.00008	.0012	.0007
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 1/2/2019 13:38:53 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0027	-.0303	.0018	-.0036	.0014	.0416	-.00001
Stddev	.0000	.0014	.0254	.0003	.0052	.0001	.0108	.00014
%RSD	20.34	49.57	83.79	16.34	146.3	4.951	26.06	2512.8
#1	.0002	-.0018	-.0123	.0016	.0001	.0014	.0492	-.00010
#2	.0002	-.0037	-.0482	.0021	-.0072	.0013	.0339	.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0004	.0000	.0003	.0002	-.0001	.0002	-.0032
Stddev	.002	.0010	.0004	.0004	.0001	.0001	.0014	.0034
%RSD	21720.	281.5	1624.	114.1	66.42	69.83	655.4	106.3
#1	.0011	-.0004	-.0002	.0001	.0003	-.0001	-.0008	-.0008
#2	-.0011	.0011	.0003	.0006	.0001	-.0002	.0012	-.0056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4809.3	79926.	5176.9
Stddev	.8	536.	14.4
%RSD	.01704	.67056	.27796
#1	4808.7	80305.	5166.8
#2	4809.9	79547.	5187.1

Sample Name: K1812358-001A Acquired: 1/2/2019 13:41:29 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E A=0.1/10mL MET3-37-D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1078	.0058	4.678	9.158	.00000	.2026	.9372	.9210
#1	.1075	.0045	4.658	9.165	-.00004	.2018	.9386	.9216
#2	.1082	.0072	4.697	9.151	.00005	.2033	.9357	.9205

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.55	4.438	.0017	.9729	.8696	.8482	4.599	.0031
#1	16.61	4.458	.0016	.9746	.8687	.8460	4.598	.0021
#2	16.49	4.418	.0017	.9713	.8706	.8503	4.599	.0041

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.607	.09860	.0003	.9393	3.707	2.232	.9593	.5661
#1	2.609	.09876	.0006	.9395	3.699	2.209	.9584	.5530
#2	2.606	.09843	.0000	.9390	3.714	2.255	.9601	.5792

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8473	204.2	.04240	-.0006	.0006	.0058	.0182	9.614
#1	.8430	201.0	.04236	.0001	.0005	.0056	.0184	9.650
#2	.8517	207.4	.04243	-.0014	.0008	.0059	.0180	9.578

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	.0047	1.422
#1	8.598	.0056	1.418
#2	8.652	.0038	1.426

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4539.5	73339.	4629.1
#1	4521.4	72993.	4557.5
#2	4557.5	73684.	4700.8

Sample Name: KQ1818537-02 Acquired: 1/2/2019 13:43:56 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812382-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031	-.0014	.0043	.0015	-.00006	.0012	.0000	.0002
#1	.0033	.0005	.0022	.0018	-.00002	.0014	.0000	.0002
#2	.0030	-.0033	.0065	.0012	-.00010	.0010	.0000	.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0434	.0002	-.0002	.0012	.0004	-.0014	.0003	.0007
#1	.0431	.0004	-.0002	.0008	.0001	-.0069	.0007	.0023
#2	.0436	.0001	-.0003	.0016	.0007	.0040	-.0001	-.0009

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0103	.00023	.0000	.0001	-.0001	.0460	.0035	.0262
#1	.0102	.00020	-.0002	-.0003	-.0026	.0028	.0033	.0323
#2	.0104	.00027	.0002	.0004	.0025	.0891	.0037	.0201

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	.1084	.00002	-.0005	-.0003	-.0003	.0001	.0008
#1	.0004	.0967	-.00001	-.0005	.0000	-.0002	.0003	.0007
#2	.0014	.1202	.00006	-.0006	-.0007	-.0003	.0000	.0009

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0010	-.0027	.0032
#1	.0008	-.0024	.0018
#2	.0011	-.0030	.0046

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4762.3	78657.	4933.1
#1	4752.9	78388.	4895.3
#2	4771.7	78925.	4971.0

Sample Name: KQ1818537-01 Acquired: 1/2/2019 13:46:30 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812382-LCSE

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0070	-.0014	1.003	1.968	-.00003	.0029	.2030	.2008
#1	.0069	-.0021	1.007	1.958	-.00006	.0024	.2027	.2011
#2	.0071	-.0007	.9989	1.978	-.00001	.0033	.2032	.2006

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0452	.9516	-.0004	.2109	.2040	.0057	1.023	.0003
#1	.0448	.9555	-.0006	.2108	.2029	.0029	1.023	-.0015
#2	.0457	.9477	-.0002	.2110	.2051	.0085	1.023	.0022

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0105	.00022	.0000	.2036	-.0002	-.0591	.2049	.1048
#1	.0104	.00019	.0001	.2030	-.0015	-.0617	.2040	.0986
#2	.0106	.00025	.0000	.2041	.0011	-.0565	.2058	.1111

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2057	.1140	.00019	-.0012	-.0001	.0002	.0024	2.023
#1	.2054	.1160	.00013	-.0012	-.0002	.0003	.0025	2.022
#2	.2059	.1121	.00024	-.0011	.0000	.0001	.0024	2.025

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.935	-.0003	.0014
#1	1.939	.0007	.0000
#2	1.930	-.0013	.0027

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4769.1	79006.	5008.1
#1	4781.4	78843.	4993.4
#2	4756.8	79168.	5022.8

Sample Name: K1812382-001 Acquired: 1/2/2019 13:48:56 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0107	-.0005	.0027	.1817	.00003	.0178	.0000	.0001
#1	.0105	-.0016	.0011	.1816	.00008	.0174	.0000	.0001
#2	.0109	.0005	.0043	.1818	-.00001	.0182	.0000	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	261.2	-.0012	.0014	-.0001	-.0001	.0503	-.0005	.0028
#1	260.4	-.0016	.0013	-.0003	.0009	.0461	.0004	.0035
#2	262.0	-.0008	.0016	.0001	-.0011	.0545	-.0014	.0021

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.016	.90445	.0019	.0052	.0606	1.656	.0032	.8780
#1	4.006	.90168	.0019	.0054	.0621	1.579	.0026	.8740
#2	4.025	.90722	.0018	.0050	.0592	1.732	.0037	.8821

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	17.63	.50096	-.0013	-.0006	.0004	.0026	.0558
#1	.0001	17.60	.50021	-.0018	-.0014	.0003	.0027	.0559
#2	.0009	17.66	.50172	-.0007	.0002	.0005	.0025	.0557

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0523	.0031	.6300
#1	.0523	.0030	.6317
#2	.0523	.0032	.6284

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4528.9	74236.	4925.8
#1	4529.2	74677.	4924.9
#2	4528.6	73795.	4926.8

Sample Name: K1812382-001L Acquired: 1/2/2019 13:51:28 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 25 Test Type: E Sample Type:
Comment: AM 010219A 1/25 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031	-.0025	.0026	.0355	-.00004	-.0007	.0000	.0000
#1	.0034	-.0001	.0012	.0360	-.00005	-.0003	.0000	-.0001
#2	.0027	-.0048	.0040	.0350	-.00004	-.0010	.0000	.0002

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	52.35	-.0009	.0005	-.0005	-.0007	.0098	.0002	.0015
#1	52.41	-.0009	.0007	-.0004	-.0009	.0127	-.0027	.0008
#2	52.29	-.0010	.0003	-.0006	-.0004	.0069	.0031	.0021

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8147	.18715	.0004	.0014	.0107	.3502	.0004	.1685
#1	.8144	.18869	.0004	.0015	.0119	.3844	.0007	.1574
#2	.8150	.18561	.0005	.0012	.0095	.3159	.0001	.1797

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	3.607	.10109	-.0010	-.0008	.0003	.0003	.0116
#1	.0010	3.606	.10119	-.0015	.0002	.0007	.0006	.0118
#2	.0004	3.609	.10099	-.0005	-.0018	-.0001	-.0001	.0115

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0112	.0000	.1269
#1	.0113	.0026	.1263
#2	.0111	-.0025	.1274

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4692.3	76740.	5062.6
#1	4688.4	76072.	5077.5
#2	4696.2	77408.	5047.8

Sample Name: KQ1818537-03 Acquired: 1/2/2019 13:54:03 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812382-001D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0111	-.0015	.0065	.1837	-.00012	.0202	.0000	.0001
#1	.0116	-.0041	.0046	.1836	-.00015	.0211	-.0001	.0001
#2	.0105	.0011	.0083	.1838	-.00010	.0192	.0001	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	264.6	-.0008	.0020	-.0003	.0002	.0532	.0022	.0044
#1	265.3	-.0010	.0018	.0000	.0005	.0502	.0027	.0054
#2	264.0	-.0005	.0023	-.0006	-.0002	.0561	.0017	.0034

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.084	.92417	.0024	.0051	.0624	1.631	.0007	.8464
#1	4.101	.91953	.0024	.0052	.0595	1.532	-.0008	.8707
#2	4.068	.92880	.0024	.0051	.0654	1.730	.0021	.8221

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	18.23	.50963	-.0020	.0001	.0000	.0022	.0567
#1	-.0002	18.22	.51106	-.0030	.0000	.0000	.0024	.0566
#2	.0002	18.25	.50820	-.0009	.0001	.0000	.0020	.0568

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0533	-.0027	.6473
#1	.0534	-.0029	.6453
#2	.0532	-.0025	.6493

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4522.7	73923.	4960.4
#1	4513.1	74055.	4930.3
#2	4532.4	73790.	4990.4

Sample Name: KQ1818537-04 Acquired: 1/2/2019 13:56:35 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812382-001S

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0125	-.0037	.9682	2.109	.00000	.0174	.1935	.1909
#1	.0126	-.0044	.9719	2.120	-.00001	.0169	.1940	.1910
#2	.0124	-.0031	.9646	2.098	.00001	.0179	.1930	.1908

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	260.0	.9229	.0020	.1976	.1884	.0484	.9499	.0035
#1	260.8	.9275	.0019	.1991	.1873	.0459	.9508	.0036
#2	259.3	.9183	.0021	.1962	.1894	.0509	.9490	.0033

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.013	.90624	.0020	.1965	.0609	1.603	.1956	.8660
#1	4.035	.90942	.0018	.1966	.0628	1.613	.1982	.8516
#2	3.991	.90306	.0022	.1963	.0589	1.593	.1930	.8804

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1724	17.87	.50130	-.0005	-.0007	.0003	.0056	1.977
#1	.1712	17.87	.50302	-.0021	-.0015	.0003	.0058	1.982
#2	.1735	17.86	.49957	.0011	.0000	.0003	.0054	1.972

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.854	.0028	.6181
#1	1.858	.0033	.6182
#2	1.850	.0024	.6180

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4541.1	74021.	4976.0
#1	4540.6	73360.	4964.7
#2	4541.5	74682.	4987.3

Sample Name: K1812382-001A Acquired: 1/2/2019 13:59:01 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E A=0.1/10mL MET3-37-D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0140	.0026	4.644	9.492	.00000	.0186	.9316	.9246
#1	.0139	.0058	4.629	9.532	.00005	.0176	.9314	.9228
#2	.0141	-.0006	4.659	9.451	-.00006	.0195	.9318	.9264

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	264.2	4.500	.0017	.9641	.9072	.0521	4.631	.0035
#1	264.1	4.510	.0016	.9644	.9068	.0502	4.619	.0022
#2	264.3	4.489	.0017	.9637	.9077	.0539	4.642	.0049

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.076	.91769	.0024	.9388	.0589	1.656	.9489	.8606
#1	4.078	.91882	.0022	.9383	.0608	1.649	.9473	.8719
#2	4.074	.91656	.0026	.9394	.0569	1.662	.9505	.8494

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8781	17.90	.50964	.0003	-.0011	.0001	.0170	9.325
#1	.8756	17.91	.50988	.0002	-.0005	.0004	.0171	9.334
#2	.8805	17.89	.50939	.0004	-.0018	-.0001	.0168	9.316

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	.0013	.6363
#1	8.475	.0009	.6308
#2	8.513	.0017	.6417

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4489.2	73552.	4933.2
#1	4485.6	73318.	4933.2
#2	4492.7	73786.	4933.2

Sample Name: KQ1818762-01 Acquired: 1/2/2019 14:04:11 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812550-LCSE

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050	-.0025	1.033	1.939	-.00013	-.0031	.1996	.1956
#1	.0051	-.0032	1.034	1.936	-.00013	-.0035	.1996	.1959
#2	.0048	-.0019	1.032	1.942	-.00013	-.0027	.1995	.1954

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0204	.9611	.0007	.1966	.1885	.0000	.9329	.0003
#1	.0205	.9661	.0004	.1958	.1890	-.0012	.9318	.0014
#2	.0203	.9561	.0009	.1974	.1880	.0011	.9340	-.0008

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063	.00015	.0002	.1929	.0013	.0325	.2027	.1066
#1	.0062	.00018	.0003	.1929	.0011	.0036	.2016	.1064
#2	.0065	.00012	.0000	.1930	.0015	.0613	.2037	.1067

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1832	362.7	.00019	-.0003	-.0010	-.0009	.0023	2.027
#1	.1825	358.7	.00021	-.0016	-.0011	-.0008	.0025	2.029
#2	.1839	366.7	.00017	.0010	-.0009	-.0009	.0021	2.025

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.917	-.0004	-.0006
#1	1.918	.0014	-.0044
#2	1.917	-.0023	.0032

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4770.4	73940.	5115.0
#1	4766.2	73525.	5099.3
#2	4774.6	74355.	5130.7

Sample Name: KQ1818762-01 Acquired: 1/2/2019 14:04:11 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812550-LCSE

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050	-.0025	1.033	1.939	-.00013	-.0031	.1996	.1956
#1	.0051	-.0032	1.034	1.936	-.00013	-.0035	.1996	.1959
#2	.0048	-.0019	1.032	1.942	-.00013	-.0027	.1995	.1954

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0204	.9611	.0007	.1966	.1885	.0000	.9329	.0003
#1	.0205	.9661	.0004	.1958	.1890	-.0012	.9318	.0014
#2	.0203	.9561	.0009	.1974	.1880	.0011	.9340	-.0008

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063	.00015	.0002	.1929	.0013	.0325	.2027	.1066
#1	.0062	.00018	.0003	.1929	.0011	.0036	.2016	.1064
#2	.0065	.00012	.0000	.1930	.0015	.0613	.2037	.1067

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1832	362.7	.00019	-.0003	-.0010	-.0009	.0023	2.027
#1	.1825	358.7	.00021	-.0016	-.0011	-.0008	.0025	2.029
#2	.1839	366.7	.00017	.0010	-.0009	-.0009	.0021	2.025

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.917	-.0004	-.0006
#1	1.918	.0014	-.0044
#2	1.917	-.0023	.0032

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4770.4	73940.	5115.0
#1	4766.2	73525.	5099.3
#2	4774.6	74355.	5130.7

Sample Name: CCVB Acquired: 1/2/2019 14:06:45 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.714	10.50	-.0046	1.045	9.767	.00011	-.0058	-.0001
Stddev	.045	.03	.0022	.007	.004	.00005	.0017	.0000
%RSD	.5226	.2940	46.67	.7039	.0460	46.044	29.76	46.79
#1	8.681	10.48	-.0061	1.051	9.764	.00007	-.0046	-.0001
#2	8.746	10.52	-.0031	1.040	9.770	.00014	-.0071	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	9.554	9.544	.0005	.0004	.0011	-.0010	9.727
Stddev	.0000	.089	.039	.0004	.0006	.0007	.0001	.088
%RSD	3.472	.9332	.4047	78.79	132.9	58.95	8.876	.9003
#1	-.0003	9.617	9.516	.0002	.0008	.0016	-.0011	9.789
#2	-.0003	9.491	9.571	.0009	.0000	.0006	-.0009	9.665
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	1.058	9.701	9.819	10.50	.97472	1.014	-.0002
Stddev	.0008	.007	.123	.017	.07	.00437	.010	.0002
%RSD	73.37	.6777	1.268	.1765	.6999	.44814	.9449	88.67
#1	.0005	1.063	9.788	9.807	10.55	.97781	1.021	-.0003
#2	.0016	1.053	9.614	9.832	10.45	.97163	1.008	-.0001
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 1/2/2019 14:06:45 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	10.40	10.34	.0020	10.50	.0006	10.74	.98548
Stddev	.0002	.01	.00	.0040	.09	.0010	.06	.00630
%RSD	30.27	.1018	.0181	204.9	.8748	164.7	.6037	.63948
#1	-.0006	10.39	10.34	-.0009	10.57	-.0001	10.79	.98994
#2	-.0010	10.41	10.34	.0048	10.44	.0014	10.69	.98102
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	-.0013	.0003	.0000	.0004	.0002	1.044	1.035
Stddev	.0008	.0008	.0002	.000	.0003	.0001	.001	.003
%RSD	93.11	62.45	84.79	86.74	83.62	26.03	.1187	.2483
#1	-.0003	-.0007	.0005	.0000	.0006	.0003	1.045	1.037
#2	-.0014	-.0019	.0001	.0000	.0002	.0002	1.043	1.033
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4923.8	77739.	5127.0
Stddev	19.1	298.	6.6
%RSD	.38857	.38292	.12803
#1	4937.3	77529.	5122.4
#2	4910.3	77950.	5131.7

Sample Name: CCVA Acquired: 1/2/2019 14:09:30 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .2802	.2763	.2487	.2567	.2427	.25643	.2513	.2502
Stddev	.0001	.0000	.0036	.0000	.0005	.00075	.0030	.0002
%RSD	.0430	.0087	1.428	.0031	.2067	.29365	1.177	.0665
#1	.2801	.2763	.2512	.2567	.2431	.25589	.2492	.2503
#2	.2803	.2763	.2462	.2567	.2423	.25696	.2534	.2500
Check ?	Chk Fail	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value	.2500							
Range	10.44%							

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2465	.4677	.4837	.2389	.2532	.2562	.2547	.2468
Stddev	.0005	.0073	.0002	.0008	.0012	.0001	.0017	.0026
%RSD	.2217	1.563	.0405	.3362	.4837	.0511	.6730	1.064
#1	.2461	.4729	.4838	.2383	.2541	.2563	.2534	.2449
#2	.2469	.4625	.4836	.2395	.2523	.2561	.2559	.2486
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2483	.0003	.2138	.2491	.2588	.24512	.2530	.2549
Stddev	.0001	.0011	.0112	.0004	.0006	.00044	.0010	.0006
%RSD	.0493	355.2	5.235	.1576	.2170	.18137	.3912	.2248
#1	.2482	-.0005	.2217	.2488	.2592	.24543	.2537	.2553
#2	.2484	.0011	.2059	.2494	.2584	.24480	.2523	.2545
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 1/2/2019 14:09:30 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2480	-.0045	2.525	.2611	.1370	.2504	.3202	.00016
Stddev	.0006	.0025	.012	.0028	.0078	.0015	.0147	.00009
%RSD	.2493	55.76	.4669	1.066	5.659	.5819	4.600	56.451
#1	.2484	-.0062	2.517	.2630	.1315	.2494	.3306	.00022
#2	.2476	-.0027	2.534	.2591	.1425	.2515	.3098	.00009
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2557	.2521	.2465	.2469	.2546	.2523	-.0008	.0000
Stddev	.0012	.0000	.0008	.0006	.0007	.0000	.0008	.004
%RSD	.4836	.0159	.3388	.2257	.2608	.0066	91.48	10440.
#1	.2566	.2520	.2471	.2473	.2550	.2523	-.0003	-.0026
#2	.2548	.2521	.2459	.2465	.2541	.2523	-.0014	.0025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4902.1	78167.	5143.2
Stddev	1.5	577.	13.3
%RSD	.03039	.73862	.25915
#1	4901.0	77758.	5152.6
#2	4903.1	78575.	5133.8

Sample Name: CCB Acquired: 1/2/2019 14:11:53 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	-.0005	.0032	.0021	-.0006	.00005	-.0049	.0001
Stddev	.0006	.0029	.0035	.0001	.0003	.00002	.0005	.0001
%RSD	306.1	632.8	111.9	6.255	42.12	37.372	9.604	79.86
#1	-.0006	-.0025	.0007	.0021	-.0008	.00004	-.0052	.0001
#2	.0002	.0016	.0057	.0020	-.0004	.00007	-.0046	.0000
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0020	.0001	-.0001	.0003	-.0004	-.0008	-.0037
Stddev	.0000	.0087	.0001	.0008	.0000	.0000	.0004	.0060
%RSD	52.13	427.6	66.59	767.7	9.902	10.78	47.19	162.2
#1	.0001	.0082	.0001	-.0007	.0003	-.0004	-.0010	-.0080
#2	.0000	-.0041	.0000	.0005	.0002	-.0004	-.0005	.0005
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	.0007	.0116	-.0002	-.0024	.00002	.0025	.0007
Stddev	.0006	.0011	.0153	.0001	.0014	.00002	.0012	.0002
%RSD	42.75	160.4	132.2	42.81	58.09	117.84	46.83	23.76
#1	.0018	-.0001	.0224	-.0001	-.0014	.00000	.0016	.0009
#2	.0010	.0014	.0008	-.0003	-.0033	.00004	.0033	.0006
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 1/2/2019 14:11:53 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.0019	-.0150	.0016	-.0077	.0004	.0344	.00000
Stddev	.0002	.0031	.0191	.0012	.0018	.0004	.0135	.00004
%RSD	291.0	157.5	127.4	75.35	23.13	86.27	39.20	1343.8
#1	-.0002	.0002	-.0285	.0025	-.0065	.0007	.0439	.00003
#2	.0001	-.0041	-.0015	.0008	-.0090	.0002	.0249	-.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	-.0005	.0000	-.0003	-.0001	.0000	-.0024	-.0075
Stddev	.0012	.0005	.000	.0000	.0002	.000	.0016	.0000
%RSD	97.48	103.9	20.61	4.101	314.9	142.4	64.75	.3729
#1	.0004	-.0001	.0000	-.0003	-.0002	-.0001	-.0035	-.0075
#2	.0021	-.0008	.0000	-.0003	.0001	.0000	-.0013	-.0076
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4876.3	79141.	5127.7
Stddev	11.2	142.	47.2
%RSD	.22964	.17944	.92118
#1	4884.3	79041.	5161.1
#2	4868.4	79242.	5094.3

Sample Name: K1812550-001 Acquired: 1/2/2019 14:14:29 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045	-.0023	.0016	.9309	-.00012	.0483	-.0001	.0000
#1	.0043	-.0009	.0040	.9317	-.00005	.0487	-.0001	.0001
#2	.0047	-.0036	-.0007	.9300	-.00020	.0478	-.0001	-.0002

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.97	-.0006	.0008	.0055	.0027	2.282	.0000	.0071
#1	11.00	-.0003	.0009	.0053	.0021	2.280	.0009	.0056
#2	10.94	-.0009	.0007	.0057	.0033	2.284	-.0009	.0085

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.646	1.6402	-.0001	.0037	.0770	3.365	.0053	1.818
#1	1.648	1.6394	.0000	.0037	.0743	3.395	.0062	1.829
#2	1.643	1.6410	-.0002	.0038	.0798	3.336	.0045	1.807

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	363.0	.06703	-.0016	.0003	-.0010	-.0002	.1385
#1	-.0006	360.2	.06724	-.0013	.0003	-.0009	-.0002	.1383
#2	-.0001	365.9	.06682	-.0019	.0003	-.0011	-.0003	.1387

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1275	-.0009	1.432
#1	.1275	-.0025	1.443
#2	.1276	.0008	1.421

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4595.8	75729.	5191.4
#1	4585.4	75734.	5195.9
#2	4606.3	75725.	5186.8

Sample Name: KQ1818762-03 Acquired: 1/2/2019 14:17:09 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812550-001D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045	-.0036	.0012	.8813	-.00002	.0450	-.0001	.0000
#1	.0047	-.0025	.0013	.8818	-.00004	.0457	-.0001	.0000
#2	.0044	-.0047	.0010	.8808	.00000	.0444	.0000	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.40	-.0004	.0009	.0005	-.0020	2.133	-.0002	.0083
#1	10.37	-.0008	.0010	.0006	-.0025	2.130	.0004	.0091
#2	10.42	-.0001	.0008	.0003	-.0015	2.137	-.0007	.0076

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.558	1.5515	-.0001	.0031	.0726	3.177	.0013	1.682
#1	1.559	1.5434	-.0001	.0035	.0739	3.206	-.0017	1.665
#2	1.557	1.5596	.0000	.0027	.0714	3.149	.0044	1.700

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	332.8	.06358	.0005	-.0001	-.0012	.0005	.1257
#1	.0008	331.1	.06344	.0007	-.0004	-.0013	.0007	.1259
#2	-.0002	334.5	.06372	.0003	.0001	-.0011	.0003	.1254

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1165	-.0001	1.332
#1	.1164	.0024	1.337
#2	.1166	-.0026	1.328

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4605.8	74867.	5115.8
#1	4602.2	75358.	5130.2
#2	4609.4	74376.	5101.4

Sample Name: KQ1818762-04 Acquired: 1/2/2019 14:19:50 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E K1812550-001S

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0060	-.0016	.9862	2.847	-.00004	.0489	.1954	.1916
#1	.0059	-.0002	.9868	2.867	-.00003	.0494	.1954	.1917
#2	.0061	-.0030	.9856	2.826	-.00004	.0484	.1955	.1915

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.23	.9263	.0009	.1979	.1816	2.292	.9370	.0088
#1	11.31	.9241	.0007	.1976	.1816	2.302	.9388	.0087
#2	11.15	.9285	.0010	.1982	.1817	2.282	.9351	.0089

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.687	1.6578	-.0001	.1941	.0795	3.360	.1994	1.755
#1	1.702	1.6483	.0001	.1943	.0809	3.387	.2005	1.754
#2	1.673	1.6673	-.0003	.1940	.0781	3.332	.1982	1.756

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1729	359.5	.06831	.0003	.0004	-.0014	.0027	2.131
#1	.1726	358.6	.06891	.0011	.0006	-.0015	.0035	2.130
#2	.1732	360.5	.06772	-.0005	.0003	-.0013	.0020	2.133

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.956	.0000	1.395
#1	1.957	-.0034	1.402
#2	1.955	.0035	1.388

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4587.8	74037.	5037.5
#1	4588.7	74567.	5012.8
#2	4587.0	73506.	5062.3

Sample Name: K1812550-001A Acquired: 1/2/2019 14:22:24 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 010219A 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0078	.0049	4.738	9.964	-.00004	.0512	.9426	.9232
#1	.0081	.0022	4.739	10.04	-.00011	.0500	.9441	.9251
#2	.0075	.0076	4.737	9.883	.00003	.0524	.9410	.9213

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.99	4.454	.0006	.9628	.8843	2.268	4.543	.0062
#1	11.00	4.433	.0007	.9660	.8767	2.278	4.558	.0035
#2	10.97	4.475	.0006	.9595	.8919	2.257	4.527	.0089

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.641	1.6461	.0002	.9306	.0978	3.400	.9664	1.808
#1	1.643	1.6370	.0002	.9312	.0976	3.430	.9674	1.813
#2	1.638	1.6553	.0003	.9301	.0980	3.370	.9653	1.804

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8714	355.2	.06720	-.0013	.0015	-.0008	.0136	9.716
#1	.8652	351.3	.06746	-.0008	.0015	-.0010	.0128	9.727
#2	.8775	359.0	.06693	-.0019	.0014	-.0007	.0144	9.704

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	-.0006	1.422
#1	8.710	.0017	1.427
#2	8.705	-.0029	1.417

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4555.7	74537.	5133.5
#1	4551.2	74509.	5129.1
#2	4560.1	74565.	5137.9

Sample Name: KQ1818654-03 Acquired: 1/2/2019 14:31:13 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: AM 010219A 1/2 K1812550-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	-.0009	.0016	-.0010	-.00016	-.0044	-.0001	.0000
#1	.0017	.0002	.0018	-.0010	-.00014	-.0032	-.0002	-.0001
#2	.0024	-.0019	.0014	-.0010	-.00017	-.0056	.0000	.0002

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0065	.0006	-.0001	.0003	-.0011	-.0019	.0009	-.0005
#1	.0066	.0007	.0002	-.0001	-.0012	-.0025	.0011	-.0020
#2	.0064	.0005	-.0003	.0008	-.0011	-.0013	.0007	.0009

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.00004	.0000	.0000	.0201	.0147	.0003	.0076
#1	.0003	.00007	-.0002	.0002	.0227	.0106	.0003	.0057
#2	.0004	.00001	.0001	-.0002	.0175	.0189	.0002	.0095

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0616	.00004	-.0011	.0185	-.0001	-.0001	.0025
#1	.0004	.0627	.00000	-.0014	.0187	-.0004	.0002	.0024
#2	.0003	.0604	.00008	-.0009	.0183	.0001	-.0003	.0026

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0027	-.0005	-.0063
#1	.0027	-.0019	-.0056
#2	.0028	.0009	-.0071

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4966.1	80640.	5181.8
#1	4947.1	81226.	5132.0
#2	4985.1	80054.	5231.6

Sample Name: KQ1818654-04 Acquired: 1/2/2019 14:33:48 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: AM 010219A 1/2 K1812550-LCSW

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.151	.5065	.5075	.9855	.04964	.2349	.0490	.0483
#1	2.134	.5055	.5083	.9867	.04976	.2346	.0490	.0482
#2	2.168	.5074	.5067	.9843	.04953	.2351	.0491	.0483

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.840	.1935	.5108	.2513	.2561	.9797	.4875	.0002
#1	4.875	.1944	.5112	.2504	.2540	.9855	.4865	.0004
#2	4.805	.1925	.5104	.2522	.2581	.9740	.4885	.0000

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.962	.48878	.5282	.4921	.0221	5.190	.4666	.0105
#1	4.964	.49114	.5289	.4919	.0212	5.174	.4705	.0163
#2	4.959	.48641	.5275	.4923	.0230	5.205	.4627	.0047

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0495	5.417	.00005	.1012	.0177	.0005	.5070	.4982
#1	.0494	5.392	-.00012	.1010	.0184	.0006	.5094	.4982
#2	.0495	5.442	.00021	.1013	.0171	.0004	.5046	.4982

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.4821	-.0022	-.0066
#1	.4829	-.0039	-.0056
#2	.4813	-.0004	-.0075

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4927.9	78455.	5123.7
#1	4926.6	78150.	5116.4
#2	4929.2	78759.	5131.1

Sample Name: K1812550-001 Acquired: 1/2/2019 14:36:14 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: AM 010219A 1/2

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.590	1.596	-.0116	.0001	4.388	.00274	.0172	-.0033
#1	1.565	1.602	-.0131	.0005	4.392	.00269	.0170	-.0032
#2	1.615	1.590	-.0101	-.0002	4.385	.00279	.0173	-.0034

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0155	10.76	.1773	.0142	.2243	.1709	>360.0	.0167
#1	-.0152	10.73	.1781	.0140	.2260	.1705	514.0	.0161
#2	-.0159	10.78	.1765	.0145	.2225	.1713	519.6	.0172

Elem	Li6707	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062	1.361	1.9256	.0127	.1076	19.71	2.263	.0077
#1	.0054	1.361	1.9285	.0127	.1076	19.72	2.200	.0054
#2	.0070	1.362	1.9228	.0127	.1076	19.70	2.326	.0101

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.794	.0138	14.14	.09515	.0024	.0371	.0385	.0152
#1	5.824	.0133	14.23	.09526	.0032	.0367	.0388	.0151
#2	5.764	.0144	14.06	.09504	.0016	.0374	.0382	.0152

Elem	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm
Avg	1.081	1.023	.0482	15.55
#1	1.080	1.023	.0497	15.56
#2	1.081	1.023	.0467	15.55

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4761.6	75956.	5070.5
#1	4762.4	75699.	5087.2
#2	4760.7	76214.	5053.9

4 - True value for Fe =
= 108.5 x (5) 542.5 ppm
See 1/10 dilution

* - True value after interferance calculation = (0.23 ppb)
(Please see the interferance calculation sheet.)

ARM 1/2/19

Sample Name: KQ1818654-01 Acquired: 1/2/2019 14:38:37 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: AM 010219A 1/2 K1812550-001D

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.620	1.566	-.0132	.0025	4.184	.00298	.0104	-.0030
#1	1.617	1.568	-.0147	-.0005	4.198	.00302	.0074	-.0029
#2	1.622	1.563	-.0117	.0055	4.170	.00295	.0134	-.0030

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0136	10.30	.1541	.0138	.2327	.1686	>360.0	.0187
#1	-.0128	10.31	.1545	.0137	.2304	.1707	492.3	.0194
#2	-.0144	10.29	.1536	.0139	.2349	.1666	494.9	.0179

Elem	Li6707	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0076	1.306	1.8554	.0121	.0944	19.25	2.150	.0043
#1	.0080	1.309	1.8509	.0118	.0943	19.25	2.179	.0066
#2	.0071	1.303	1.8600	.0123	.0945	19.25	2.120	.0019

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.020	.0145	13.61	.09162	.0018	.0360	.0422	.0146
#1	4.037	.0147	13.64	.09180	.0044	.0363	.0422	.0153
#2	4.004	.0143	13.58	.09144	-.0009	.0357	.0421	.0140

Elem	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm
Avg	1.068	1.009	.0486	15.21
#1	1.068	1.014	.0498	15.24
#2	1.068	1.004	.0474	15.19

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4739.3	76496.	5101.9
#1	4745.5	76731.	5118.0
#2	4733.2	76261.	5085.8

4 - True value = 104.8 x5 =
= 524 ppm

* - 1.6ppb - true value

ABm 1/2/19

Sample Name: KQ1818654-02 Acquired: 1/2/2019 14:41:08 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: AM 010219A 1/2 K1812550-001S

Elem	Al3944	Sb2068	As1890 *	Ba4554 *	Be2348	B_2496	Cd2144	Cd2265 ***
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.518	.3214	.3797	5.025	.05043	.2412	.0463	.0342
#1	3.504	.4351	.4761	5.008	.05033	.2440	.0438	.0300
#2	3.531	.2077	.2833	5.043	.05054	.2385	.0488	.0385

Elem	Ca3158	Cr2677 ** 71%	Co2307	Cu2247	Cu3273	Fe2599 ▲	Pb2203 ✓	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.94	.3214	.5107	.5066	.4069	>360.0	.4996	.0066
#1	14.93	.3212	.5053	.4815	.4052	513.9	.4785	.0056
#2	14.94	.3216	.5162	.5317	.4085	506.8	.5207	.0076

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.960	2.3119	.5346	.5814	21.95	7.064	.5081	7.224
#1	5.970	2.3085	.5337	.5666	19.71	7.060	.4551	7.210
#2	5.950	2.3153	.5355	.5962	24.18	7.067	.5611	7.238

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0603	18.62	.09122	.1006	.0456	.0358	.5122	1.658
#1	.0606	18.54	.09126	.0978	.0389	.0350	.5130	1.528
#2	.0601	18.69	.09118	.1034	.0522	.0366	.5115	1.788

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.000	.1042	11.36
#1	1.425	.0540	15.14
#2	.5754	.1544	7.578

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	3296.1	77201.	5072.6
#1	4664.5	77291.	5060.1
#2	1927.8	77111.	5085.2

* - 4X

** - PS is in control

*** - true value = 0.04967 ppm

▲ - True value = 106.7 x5 =

= 533.5 ppm

ABm 1/2/19

Sample Name: K1812550-001A Acquired: 1/2/2019 14:44:34 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: AM 010219A 1/2 A=0.05/10mL CICV1,3

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.995	-.0109	2.211	8.445	.11708	.0140	1.111	1.077
#1	5.989	-.0131	2.215	8.458	.11743	.0155	1.113	1.080
#2	6.001	-.0087	2.207	8.432	.11672	.0125	1.110	1.074

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.78	.5871	1.169	.8311	.7146	>360.0	2.210	.0054
#1	20.70	.5831	1.171	.8366	.7121	499.5	2.211	.0064
#2	20.86	.5911	1.167	.8255	.7172	505.6	2.209	.0043

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.24	2.9379	.0115	1.224	20.17	13.72	2.150	5.711
#1	13.21	2.9329	.0118	1.227	20.19	13.63	2.146	5.714
#2	13.26	2.9428	.0111	1.221	20.16	13.80	2.154	5.708

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5527	26.09	.09109	2.129	.0383	.0352	1.187	2.202
#1	.5529	25.98	.09090	2.125	.0379	.0349	1.184	2.206
#2	.5525	26.19	.09129	2.132	.0387	.0354	1.189	2.199

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	2.017	.0477	15.37
#1	2.013	.0491	15.38
#2	2.020	.0462	15.36

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4592.1	77121.	5163.2
#1	4581.1	77352.	5174.2
#2	4603.1	76890.	5152.2

A - True value = 109.5 x 5 =
= 547.5 ppm

* - True value = 1.09288 ppm

ABm 1/2/19

Sample Name: CCVB Acquired: 1/2/2019 15:28:31 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.207	10.22	-.0034	.9980	9.684	.00008	-.0057	.0000
Stddev	.058	.03	.0005	.0019	.060	.00006	.0021	.000
%RSD	.6310	.2588	15.71	.1908	.6207	77.845	36.34	888.7
#1	9.166	10.20	-.0030	.9966	9.641	.00012	-.0071	-.0001
#2	9.248	10.24	-.0038	.9993	9.726	.00004	-.0042	.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	9.410	9.280	.0000	.0007	.0011	-.0012	9.714
Stddev	.0002	.064	.169	.000	.0002	.0006	.0005	.080
%RSD	54.85	.6756	1.820	505.1	27.09	58.40	45.07	.8260
#1	-.0005	9.365	9.161	.0000	.0006	.0015	-.0008	9.658
#2	-.0002	9.455	9.399	.0000	.0008	.0006	-.0015	9.771
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	1.006	9.569	9.543	9.842	.95567	.9697	-.0005
Stddev	.0024	.013	.120	.153	.106	.00658	.0042	.0004
%RSD	384.5	1.314	1.251	1.602	1.079	.68892	.4281	77.50
#1	.0023	1.015	9.485	9.435	9.917	.95102	.9667	-.0002
#2	-.0011	.9962	9.654	9.651	9.767	.96033	.9726	-.0007
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 1/2/2019 15:28:31 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	10.48	9.714	.0034	9.886	.0008	10.15	.97600
Stddev	.0001	.01	.110	.0035	.101	.0005	.11	.00341
%RSD	16.46	.0627	1.127	100.9	1.018	59.51	1.078	.34959
#1	-.0010	10.49	9.791	.0059	9.957	.0004	10.23	.97359
#2	-.0008	10.48	9.636	.0010	9.815	.0011	10.08	.97841
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	-.0008	.0004	.0002	.0001	.0001	1.049	.9883
Stddev	.0010	.0008	.0002	.0001	.0001	.0000	.002	.0035
%RSD	74.85	102.0	61.16	65.60	79.35	24.21	.2296	.3584
#1	.0006	-.0013	.0002	.0001	.0001	.0002	1.051	.9908
#2	.0020	-.0002	.0006	.0002	.0002	.0001	1.047	.9858
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4710.4	76368.	4869.4
Stddev	3.9	825.	78.9
%RSD	.08308	1.0806	1.6196
#1	4707.6	76952.	4925.2
#2	4713.1	75785.	4813.6

Sample Name: CCVA Acquired: 1/2/2019 15:31:13 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .2851	.2727	.2417	.2485	.2420	.24888	.2409	.2497
Stddev	.0053	.0008	.0000	.0016	.0002	.00045	.0006	.0002
%RSD	1.844	.3062	.0156	.6375	.0859	.18139	.2320	.0985
#1	.2888	.2721	.2417	.2473	.2419	.24920	.2405	.2495
#2	.2814	.2733	.2417	.2496	.2422	.24856	.2413	.2499
Check ?	Chk Fail	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value	.2500							
Range	10.44%							

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2466	.4721	.4788	.2351	.2520	.2561	.2430	.2486
Stddev	.0004	.0024	.0010	.0027	.0004	.0007	.0001	.0045
%RSD	.1502	.5070	.2075	1.135	.1632	.2578	.0554	1.815
#1	.2468	.4738	.4781	.2370	.2517	.2566	.2431	.2454
#2	.2463	.4704	.4795	.2332	.2523	.2556	.2429	.2518
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2480	.0026	.2047	.2438	.2477	.24292	.2415	.2572
Stddev	.0012	.0012	.0132	.0009	.0020	.00181	.0016	.0004
%RSD	.4803	45.08	6.456	.3816	.8034	.74552	.6701	.1526
#1	.2489	.0035	.2141	.2431	.2463	.24420	.2426	.2575
#2	.2472	.0018	.1954	.2444	.2492	.24163	.2403	.2569
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 1/2/2019 15:31:13 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2494	-.0018	2.446	.2622	.1138	.2449	.2679	-.00001
Stddev	.0012	.0005	.075	.0030	.0057	.0003	.0063	.00022
%RSD	.4807	24.61	3.086	1.146	4.979	.1368	2.345	1991.8
#1	.2503	-.0015	2.499	.2644	.1178	.2446	.2634	-.00017
#2	.2486	-.0022	2.392	.2601	.1098	.2451	.2723	.00015
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2551	.2512	.2390	.2460	.2531	.2429	-.0016	-.0044
Stddev	.0007	.0017	.0028	.0016	.0003	.0004	.0005	.0017
%RSD	.2699	.6652	1.187	.6619	.1037	.1667	32.00	38.30
#1	.2546	.2524	.2410	.2472	.2529	.2426	-.0012	-.0055
#2	.2555	.2501	.2370	.2449	.2533	.2432	-.0020	-.0032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4726.8	76713.	4886.9
Stddev	13.8	481.	13.5
%RSD	.29211	.62689	.27592
#1	4717.1	76373.	4896.5
#2	4736.6	77053.	4877.4

Sample Name: CCB Acquired: 1/2/2019 15:33:36 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	-.0018	.0016	-.0002	-.0003	.00000	-.0057	.0000
Stddev	.0000	.0005	.0003	.0017	.0002	.0001	.0017	.0001
%RSD	6.908	27.89	19.55	774.4	60.92	29317.	29.04	433.7
#1	-.0004	-.0021	.0018	-.0014	-.0004	.00007	-.0045	-.0001
#2	-.0005	-.0014	.0014	.0010	-.0002	-.00007	-.0069	.0001
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0071	.0001	-.0003	.0002	-.0005	-.0004	.0012
Stddev	.0001	.0059	.0001	.0003	.0002	.0005	.0001	.0015
%RSD	72.98	84.13	147.5	102.0	125.9	110.0	21.87	120.1
#1	.0001	-.0029	.0000	-.0001	.0003	-.0009	-.0004	.0023
#2	.0002	-.0113	.0001	-.0004	.0000	-.0001	-.0005	.0002
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0012	-.0154	-.0002	-.0009	-.00004	.0006	.0005
Stddev	.0007	.0009	.0281	.0002	.0003	.00006	.0002	.0001
%RSD	189.4	72.31	183.0	107.7	35.37	167.61	28.04	12.09
#1	-.0001	.0018	.0045	.0000	-.0011	-.00008	.0005	.0005
#2	.0009	.0006	-.0353	-.0003	-.0007	.00001	.0007	.0006
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 1/2/2019 15:33:36 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0025	-.0133	-.0003	.0063	.0003	.0044	-.00009
Stddev	.0000	.0017	.0102	.0047	.0027	.0010	.0041	.00003
%RSD	26.94	66.48	76.59	1406.	42.48	374.0	93.40	33.861
#1	.0001	-.0037	-.0061	-.0036	.0082	.0009	.0015	-.00007
#2	.0001	-.0013	-.0205	.0030	.0044	-.0004	.0073	-.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	-.0008	.0001	-.0008	-.0001	.0000	-.0028	-.0046
Stddev	.0010	.0000	.0002	.0002	.0003	.000	.0003	.0051
%RSD	114.3	5.042	232.5	22.32	323.5	292.1	10.21	109.5
#1	.0016	-.0008	.0002	-.0007	.0001	.0000	-.0026	-.0010
#2	.0002	-.0007	-.0001	-.0009	-.0003	.0000	-.0030	-.0082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4738.2	77240.	4894.5
Stddev	2.4	839.	1.0
%RSD	.05154	1.0857	.02023
#1	4736.5	77833.	4895.2
#2	4739.9	76647.	4893.8

Sample Name: CCVB Acquired: 1/2/2019 15:36:11 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.934	10.27	-.0015	1.037	9.538	.00004	-.0056	-.0001
Stddev	.159	.03	.0036	.001	.086	.00004	.0010	.0001
%RSD	1.776	.2725	237.0	.1136	.8970	91.249	18.40	84.14
#1	8.822	10.29	.0010	1.038	9.598	.00007	-.0063	.0000
#2	9.046	10.26	-.0040	1.036	9.477	.00002	-.0049	-.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	9.428	9.275	-.0003	.0008	.0010	-.0012	9.705
Stddev	.0001	.004	.201	.0003	.0006	.0004	.0006	.027
%RSD	13.99	.0428	2.162	93.59	72.70	43.96	52.96	.2819
#1	-.0004	9.426	9.133	-.0005	.0004	.0013	-.0017	9.685
#2	-.0003	9.431	9.417	-.0001	.0012	.0007	-.0008	9.724
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	1.022	9.603	9.509	10.13	.96221	.9858	-.0001
Stddev	.0005	.002	.064	.037	.03	.00171	.0035	.0001
%RSD	62.62	.2243	.6638	.3911	.2854	.17806	.3529	141.5
#1	.0011	1.024	9.558	9.483	10.15	.96342	.9883	.0000
#2	.0004	1.020	9.648	9.536	10.11	.96100	.9833	-.0002
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 1/2/2019 15:36:11 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	10.51	9.857	.0016	10.22	.0009	10.36	.97518
Stddev	.0001	.03	.029	.0025	.01	.0007	.01	.00071
%RSD	16.25	.2656	.2923	153.2	.1051	81.12	.0978	.07231
#1	-.0009	10.53	9.837	-.0001	10.23	.0014	10.37	.97568
#2	-.0007	10.49	9.878	.0034	10.21	.0004	10.36	.97468
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0013	.0005	.0000	.0001	.0001	1.046	1.029
Stddev	.002	.0003	.0001	.0006	.0001	.0001	.002	.000
%RSD	3289.	21.50	10.60	1768.	70.50	88.91	.2333	.0177
#1	-.0011	-.0011	.0006	-.0004	.0002	.0002	1.048	1.029
#2	.0010	-.0015	.0005	.0005	.0001	.0001	1.044	1.029
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4839.0	77565.	5033.9
Stddev	20.1	133.	14.2
%RSD	.41607	.17101	.28126
#1	4824.8	77471.	5043.9
#2	4853.3	77659.	5023.9

Sample Name: CCVA Acquired: 1/2/2019 15:38:56 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .2861	.2760	.2492	.2547	.2446	.25535	.2504	.2515
Stddev	.0003	.0028	.0037	.0010	.0011	.00192	.0027	.0005
%RSD	.0937	1.018	1.475	.3834	.4657	.75194	1.084	.1874
#1	.2863	.2780	.2466	.2540	.2438	.25399	.2485	.2512
#2	.2859	.2741	.2517	.2554	.2454	.25671	.2524	.2519
Check ?	Chk Fail	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value	.2500							
Range	10.44%							

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2480	.4829	.4894	.2401	.2543	.2570	.2506	.2511
Stddev	.0006	.0034	.0012	.0021	.0003	.0011	.0015	.0008
%RSD	.2304	.7118	.2522	.8853	.1279	.4400	.5807	.3153
#1	.2476	.4805	.4885	.2386	.2540	.2562	.2496	.2505
#2	.2484	.4853	.4902	.2416	.2545	.2578	.2517	.2517
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2483	-.0014	.2164	.2509	.2578	.24648	.2506	.2561
Stddev	.0021	.0037	.0293	.0007	.0038	.00032	.0008	.0007
%RSD	.8430	271.9	13.56	.2847	1.481	.13080	.2997	.2842
#1	.2468	-.0040	.2371	.2503	.2551	.24625	.2511	.2556
#2	.2497	.0013	.1957	.2514	.2605	.24671	.2501	.2567
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 1/2/2019 15:38:56 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2494	-.0027	2.476	.2634	.1416	.2472	.2705	.00003
Stddev	.0001	.0028	.040	.0012	.0047	.0009	.0152	.00007
%RSD	.0467	105.3	1.610	.4585	3.306	.3472	5.606	254.95
#1	.2495	-.0047	2.448	.2626	.1383	.2466	.2813	-.00002
#2	.2493	-.0007	2.504	.2643	.1449	.2478	.2598	.00007
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2554	.2535	.2475	.2480	.2562	.2521	-.0019	-.0062
Stddev	.0006	.0007	.0010	.0002	.0003	.0001	.0020	.0067
%RSD	.2340	.2732	.3885	.0987	.1185	.0455	108.7	108.4
#1	.2558	.2530	.2482	.2482	.2564	.2520	-.0033	-.0110
#2	.2550	.2540	.2469	.2478	.2559	.2521	-.0004	-.0015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4873.1	77519.	5017.8
Stddev	10.9	205.	4.1
%RSD	.22403	.26429	.08258
#1	4880.8	77374.	5014.9
#2	4865.3	77664.	5020.8

Sample Name: CCB Acquired: 1/2/2019 15:41:18 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	-.0002	.0018	.0019	-.0008	.00002	-.0038	-.0001
Stddev	.0002	.0016	.0014	.0034	.0001	.00012	.0004	.0000
%RSD	54.52	1049.	75.49	177.2	6.322	548.15	11.76	12.69
#1	-.0006	.0010	.0028	.0043	-.0008	.00010	-.0034	-.0001
#2	-.0003	-.0013	.0009	-.0005	-.0009	-.00006	-.0041	-.0001
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.0060	.0001	-.0002	.0002	-.0001	-.0008	.0027
Stddev	.0001	.0012	.0001	.0000	.0000	.0010	.0007	.0024
%RSD	195.6	20.55	81.74	2.250	10.98	1388.	85.29	87.06
#1	-.0002	-.0051	.0001	-.0002	.0002	.0006	-.0003	.0010
#2	.0000	-.0068	.0000	-.0002	.0001	-.0008	-.0013	.0044
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0006	-.0241	-.0002	.0011	.00005	.0004	.0006
Stddev	.0010	.0002	.0090	.0001	.0017	.00003	.0012	.0002
%RSD	253.1	27.02	37.26	37.52	149.5	73.452	283.9	37.96
#1	.0012	.0007	-.0305	-.0002	.0023	.00007	.0013	.0007
#2	-.0003	.0005	-.0178	-.0001	-.0001	.00002	-.0004	.0004
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 1/2/2019 15:41:18 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0021	-.0816	.0047	.0062	.0000	.0133	.00004
Stddev	.0005	.0025	.0539	.0028	.0122	.001	.0111	.00001
%RSD	205.4	117.5	66.06	60.23	196.5	1748.	83.19	15.160
#1	.0006	-.0039	-.1197	.0067	-.0024	.0004	.0211	.00004
#2	-.0001	-.0004	-.0435	.0027	.0148	-.0004	.0055	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0001	.0003	-.0003	.0002	.0000	.0005	-.0052
Stddev	.0014	.0006	.0002	.0002	.0000	.0001	.0008	.0006
%RSD	254.5	422.7	64.85	70.01	14.11	42500.	140.9	12.38
#1	.0015	.0005	.0001	-.0004	.0002	.0001	.0011	-.0047
#2	-.0004	-.0003	.0004	-.0001	.0002	-.0001	.0000	-.0057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4822.3	77032.	4986.4
Stddev	13.2	238.	22.3
%RSD	.27405	.30914	.44669
#1	4831.7	77201.	4970.7
#2	4813.0	76864.	5002.2

Sample Name: LLCCV Acquired: 1/2/2019 15:43:53 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0117	.0106	.0166	.0118	.0029	.00094	.0144	.0010
Stddev	.0006	.0015	.0041	.0018	.0011	.00000	.0002	.0000
%RSD	4.969	14.25	24.63	15.27	38.20	.44004	1.450	1.808
#1	.0121	.0095	.0137	.0130	.0021	.00093	.0142	.0010
#2	.0113	.0116	.0195	.0105	.0037	.00094	.0145	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	F .0120	.0191	.0042	.0024	.0040	F .0021	.0174
Stddev	.0000	.0035	.0002	.0009	.0004	.0007	.0006	.0030
%RSD	.3224	29.48	1.061	22.54	15.62	17.86	29.27	17.30
#1	.0012	.0145	.0192	.0048	.0026	.0035	.0026	.0153
#2	.0012	.0095	.0189	.0035	.0021	.0045	.0017	.0195
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value		.0200					.0040	
Range		-30.00%					-30.00%	

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0113	.0198	.0249	.0045	.0059	.00087	.0022	.0038
Stddev	.0004	.0004	.0205	.0001	.0003	.00003	.0011	.0005
%RSD	3.305	1.991	82.62	1.440	5.841	3.0110	50.86	12.64
#1	.0116	.0201	.0103	.0045	.0061	.00085	.0014	.0042
#2	.0110	.0195	.0394	.0044	.0057	.00089	.0030	.0035
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

* — 2X
AEC 1/2/19

Sample Name: LLCCV Acquired: 1/2/2019 15:43:53 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	.0391	F .1271	.0250	.1984	.0040	.2257	.00093
Stddev	.0000	.0013	.0737	.0018	.0075	.0004	.0023	.00004
%RSD	.8318	3.352	57.95	7.079	3.788	10.90	1.030	4.7784
#1	.0041	.0381	.1792	.0238	.2037	.0043	.2273	.00096
#2	.0040	.0400	.0750	.0263	.1931	.0037	.2240	.00090
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.2000					
Range			-30.00%					

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0098	.0198	.0019	.0036	.0039	.0037	.0220	.0389
Stddev	.0018	.0006	.0003	.0001	.0001	.0002	.0036	.0016
%RSD	18.64	3.204	18.30	2.074	2.397	4.244	16.18	4.168
#1	.0085	.0193	.0021	.0036	.0038	.0036	.0194	.0400
#2	.0111	.0202	.0016	.0037	.0040	.0038	.0245	.0377
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4800.2	77387.	4953.4
Stddev	8.6	693.	31.7
%RSD	.17966	.89594	.63953
#1	4806.3	77877.	4931.0
#2	4794.1	76897.	4975.8

± - 2X

AKm 1/2/19

Sample Name: LLCCV,0.5 Acquired: 1/2/2019 15:46:26 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0235	.0211	.0378	.0207	.0065	.00203	.0339	.0021
Stddev	.0000	.0002	.0016	.0033	.0002	.00002	.0012	.0000
%RSD	.1874	.8843	4.180	15.91	3.430	1.0438	3.477	2.059
#1	.0235	.0213	.0389	.0183	.0063	.00202	.0348	.0021
#2	.0235	.0210	.0367	.0230	.0066	.00205	.0331	.0020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022	.0284	.0372	.0066	.0041	.0077	.0061	.0432
Stddev	.0001	.0001	.0003	.0002	.0004	.0005	.0008	.0010
%RSD	5.628	.3864	.7557	2.710	8.781	7.037	12.97	2.407
#1	.0022	.0283	.0370	.0065	.0044	.0073	.0067	.0424
#2	.0021	.0285	.0374	.0068	.0038	.0081	.0056	.0439
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0198	.0418	-.0053	.0093	.0085	.00185	.0009	.0077
Stddev	.0012	.0013	.0093	.0001	.0032	.00008	.0021	.0003
%RSD	5.835	3.022	176.5	.9912	37.65	4.4327	232.9	3.815
#1	.0206	.0409	.0013	.0092	.0062	.00190	.0024	.0075
#2	.0189	.0427	-.0119	.0093	.0107	.00179	-.0006	.0080
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLCCV,0.5 Acquired: 1/2/2019 15:46:26 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0076	.0794	.3644	.0452	.4163	.0086	.4185	.00204
Stddev	.0000	.0007	.0074	.0020	.0195	.0005	.0257	.00003
%RSD	.6111	.8842	2.044	4.393	4.690	5.480	6.141	1.3469
#1	.0076	.0789	.3591	.0466	.4301	.0089	.4367	.00202
#2	.0076	.0799	.3696	.0438	.4025	.0082	.4004	.00206
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0188	.0396	.0038	.0074	.0081	.0077	.0434	.0790
Stddev	.0005	.0013	.0005	.0002	.0001	.0001	.0018	.0051
%RSD	2.908	3.316	12.70	3.324	1.395	1.151	4.253	6.473
#1	.0185	.0405	.0035	.0076	.0080	.0076	.0421	.0826
#2	.0192	.0387	.0041	.0072	.0081	.0078	.0447	.0754
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4785.2	78329.	5023.8
Stddev	4.7	316.	49.9
%RSD	.09841	.40309	.99371
#1	4788.5	78552.	5059.1
#2	4781.9	78106.	4988.5

Sample Name: K1812550-001 Acquired: 1/2/2019 16:03:07 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 10 Test Type: Sample Type:
Comment: AM 010219A 1/10

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3401	-.0053	.0021	.8624	.00050	.0017	-.0009	-.0039
#1	.3381	-.0092	.0001	.8680	.00054	.0027	-.0009	-.0041
#2	.3420	-.0015	.0041	.8568	.00046	.0007	-.0009	-.0037

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.150	.0341	.0031	.0487	.0324	108.5	.0026	-.0011
#1	2.166	.0338	.0034	.0495	.0318	108.9	.0035	.0000
#2	2.133	.0345	.0029	.0478	.0330	108.2	.0018	-.0022

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2677	.38669	.0022	.0224	4.143	.3824	.0003	1.125
#1	.2703	.38658	.0022	.0221	4.139	.3989	.0018	1.128
#2	.2652	.38680	.0022	.0228	4.148	.3660	-.0012	1.122

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030	2.751	.01884	-.0007	.0075	.0070	.0031	.2249
#1	.0027	2.758	.01894	.0020	.0071	.0072	.0029	.2248
#2	.0034	2.743	.01875	-.0034	.0079	.0068	.0034	.2250

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.2150	.0097	3.274
#1	.2144	.0100	3.269
#2	.2156	.0095	3.278

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4764.7	77940.	5012.6
#1	4758.5	77776.	4991.4
#2	4770.9	78105.	5033.9

A - True value for Fe =
= 108.5 × 5 = 542.5 ppm

AM 1/2/19

Sample Name: KQ1818654-01 Acquired: 1/2/2019 16:05:24 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 10 Test Type: Sample Type:
Comment: AM 010219A 1/10 K1812550-001D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3394	-.0047	-.0001	.8324	.00052	-.0008	-.0007	-.0035
#1	.3339	-.0011	-.0012	.8374	.00062	-.0001	-.0007	-.0037
#2	.3449	-.0084	.0011	.8274	.00042	-.0015	-.0007	-.0034

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.089	.0314	.0029	.0442	.0334	104.8	.0040	.0008
#1	2.102	.0311	.0031	.0444	.0339	105.5	.0040	-.0012
#2	2.076	.0316	.0028	.0439	.0328	104.1	.0041	.0027

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2646	.37728	.0021	.0193	3.970	.3496	.0038	.7864
#1	.2664	.37526	.0023	.0188	3.974	.3742	.0027	.7824
#2	.2628	.37931	.0020	.0197	3.965	.3251	.0049	.7904

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032	2.697	.01826	.0003	.0068	.0084	.0028	.2220
#1	.0028	2.684	.01847	-.0008	.0068	.0085	.0030	.2218
#2	.0037	2.709	.01805	.0015	.0068	.0082	.0025	.2223

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.2165	.0094	3.209
#1	.2160	.0075	3.206
#2	.2169	.0114	3.211

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4889.1	77733.	5090.2
#1	4883.2	78056.	5053.2
#2	4895.0	77410.	5127.2

A - True value = 104.8 x 5 = 524 ppm

ABm 1/2/19

Sample Name: KQ1818654-02 Acquired: 1/2/2019 16:07:52 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 10 Test Type: Sample Type:
Comment: AM 010219A 1/10 K1812550-001S

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7922	.0913	.1010	1.016	.01049	.0491	.0091	.0060
#1	.7895	.0909	.1028	1.020	.01058	.0485	.0091	.0060
#2	.7948	.0917	.0992	1.012	.01039	.0496	.0090	.0059

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.096	.0685	.1044	.0958	.0844	106.7	.1003	.0021
#1	3.112	.0691	.1047	.0963	.0851	107.2	.0992	.0007
#2	3.079	.0678	.1042	.0953	.0837	106.3	.1013	.0036

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.248	.48233	.1048	.1170	4.035	1.439	.1062	1.459
#1	1.253	.48339	.1050	.1175	4.053	1.436	.1093	1.468
#2	1.243	.48126	.1047	.1166	4.017	1.443	.1030	1.450

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0129	3.773	.01833	.0183	.0071	.0073	.1024	.3208
#1	.0131	3.777	.01829	.0194	.0065	.0073	.1025	.3215
#2	.0127	3.770	.01838	.0172	.0076	.0073	.1024	.3200

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.3114	.0094	3.191
#1	.3126	.0070	3.203
#2	.3101	.0118	3.179

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4857.9	76888.	5083.8
#1	4864.3	76892.	5061.1
#2	4851.6	76884.	5106.4

4 - True value = 106.7 * 5 = 533.5 ppm

ABm 1/2/19

Sample Name: K1812550-001A Acquired: 1/2/2019 16:10:19 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 10 Test Type: Sample Type:
Comment: AM 010219A 1/10 A=0.05/10mL CICV1,3

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.896	-.0058	2.293	5.282	.11581	.0008	1.120	1.094
#1	4.965	-.0076	2.302	5.297	.11675	-.0002	1.121	1.095
#2	4.828	-.0041	2.283	5.267	.11488	.0018	1.120	1.093

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.02	.4722	1.152	.6216	.5930	109.5	2.195	.0003
#1	13.06	.4742	1.153	.6233	.5979	109.4	2.199	.0007
#2	12.97	.4703	1.151	.6199	.5882	109.7	2.191	-.0001

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.95	1.4866	.0020	1.127	4.262	11.86	2.240	1.165
#1	11.94	1.4870	.0021	1.129	4.266	11.92	2.245	1.167
#2	11.95	1.4862	.0019	1.126	4.259	11.79	2.235	1.163

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5333	14.76	.01908	2.233	.0061	.0078	1.154	1.371
#1	.5373	14.74	.01936	2.233	.0053	.0075	1.152	1.372
#2	.5294	14.77	.01881	2.233	.0069	.0081	1.155	1.370

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.296	.0119	3.241
#1	1.300	.0131	3.255
#2	1.291	.0107	3.228

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4763.0	75735.	5017.9
#1	4769.9	75993.	5009.2
#2	4756.2	75478.	5026.5

4 - True value = 109.5 x 5 = 547.5 ppm

AMm 1/2/19

Sample Name: CCVB Acquired: 1/2/2019 16:17:46 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.151	9.956	-.0060	1.002	9.246	.00006	-.0069	.0000
Stddev	.013	.004	.0005	.004	.036	.00002	.0008	.000
%RSD	.1393	.0380	8.962	.3905	.3886	31.198	12.18	163.2
#1	9.160	9.959	-.0056	1.005	9.221	.00005	-.0063	.0000
#2	9.142	9.953	-.0064	.9991	9.272	.00007	-.0075	-.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	9.129	8.935	.0002	.0003	.0014	-.0016	9.629
Stddev	.0001	.081	.153	.0000	.0002	.0006	.0006	.041
%RSD	26.17	.8922	1.709	15.17	56.17	41.67	34.49	.4283
#1	-.0004	9.187	8.827	.0001	.0002	.0010	-.0012	9.658
#2	-.0003	9.072	9.043	.0002	.0005	.0019	-.0020	9.600
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	1.008	9.364	9.250	9.921	.94364	.9655	-.0003
Stddev	.0005	.008	.058	.054	.055	.00044	.0004	.0001
%RSD	252.6	.8357	.6137	.5805	.5540	.04692	.0426	27.04
#1	.0002	1.014	9.404	9.288	9.960	.94332	.9658	-.0002
#2	-.0006	1.002	9.323	9.212	9.882	.94395	.9652	-.0003
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 1/2/2019 16:17:46 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	10.63	9.636	.0040	10.20	.0004	10.27	.94657
Stddev	.0005	.01	.096	.0032	.00	.0001	.09	.01086
%RSD	60.50	.0905	.9951	80.32	.0288	29.93	.8557	1.1474
#1	-.0011	10.64	9.703	.0062	10.20	.0005	10.33	.95425
#2	-.0004	10.63	9.568	.0017	10.20	.0003	10.21	.93889
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0113	-.0008	.0000	.0000	.0000	.0002	1.050	1.007
Stddev	.0020	.0010	.000	.0012	.000	.0001	.000	.002
%RSD	17.93	127.5	799.1	4492.	353.7	27.85	.0419	.1768
#1	.0128	-.0015	-.0001	.0008	.0001	.0003	1.049	1.006
#2	.0099	-.0001	.0001	-.0008	-.0001	.0002	1.050	1.008
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4713.0	78082.	5091.8
Stddev	6.9	276.	19.1
%RSD	.14746	.35384	.37554
#1	4717.9	78278.	5078.3
#2	4708.0	77887.	5105.3

Sample Name: CCVA Acquired: 1/2/2019 16:20:32 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .2919	.2654	.2425	.2497	.2335	.25215	.2450	.2504
Stddev	.0017	.0010	.0021	.0019	.0005	.00052	.0010	.0003
%RSD	.5861	.3934	.8836	.7548	.2260	.20710	.4039	.1172
#1	.2906	.2661	.2441	.2483	.2339	.25252	.2457	.2506
#2	.2931	.2647	.2410	.2510	.2331	.25179	.2443	.2502
Check ?	Chk Fail	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value	.2500							
Range	10.44%							

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2464	.4567	.4593	.2262	.2526	.2585	.2410	.2496
Stddev	.0006	.0050	.0021	.0006	.0005	.0011	.0007	.0025
%RSD	.2286	1.087	.4563	.2595	.1878	.4327	.2975	.9888
#1	.2468	.4532	.4607	.2257	.2529	.2593	.2404	.2513
#2	.2460	.4602	.4578	.2266	.2523	.2578	.2415	.2478
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2497	.0020	.1876	.2368	.2472	.23956	.2400	.2569
Stddev	.0003	.0026	.0581	.0001	.0044	.00070	.0055	.0003
%RSD	.1165	130.7	30.97	.0386	1.774	.29426	2.271	.1086
#1	.2495	.0002	.1465	.2368	.2441	.23906	.2362	.2571
#2	.2499	.0038	.2287	.2369	.2503	.24006	.2439	.2567
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 1/2/2019 16:20:32 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2487	-.0018	2.360	.2645	.1253	.2473	.2505	.00014
Stddev	.0011	.0023	.039	.0016	.0098	.0010	.0413	.00015
%RSD	.4272	124.7	1.661	.6041	7.785	.4047	16.48	106.53
#1	.2495	-.0035	2.332	.2656	.1322	.2480	.2213	.00004
#2	.2480	-.0002	2.387	.2634	.1184	.2466	.2797	.00025
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2578	.2528	.2316	.2441	.2550	.2440	-.0022	-.0028
Stddev	.0007	.0008	.0014	.0007	.0001	.0002	.0026	.0010
%RSD	.2757	.3311	.5989	.2949	.0538	.0904	120.7	35.09
#1	.2573	.2534	.2306	.2436	.2551	.2442	-.0003	-.0035
#2	.2583	.2522	.2325	.2446	.2549	.2438	-.0040	-.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4734.4	78269.	5053.3
Stddev	2.8	208.	79.8
%RSD	.05913	.26595	1.5788
#1	4736.4	78416.	4996.9
#2	4732.4	78122.	5109.7

Sample Name: CCB Acquired: 1/2/2019 16:22:55 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0004	-.0010	.0034	-.0009	-.00008	-.0039	.0000
Stddev	.0002	.0051	.0007	.0006	.0002	.00000	.0002	.000
%RSD	105.8	1287.	69.58	16.38	27.26	5.3330	4.060	141.2
#1	.0001	.0040	-.0005	.0038	-.0011	-.00008	-.0038	.0000
#2	.0004	-.0032	-.0014	.0030	-.0007	-.00007	-.0040	.0000
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0113	-.0003	.0005	.0003	.0000	-.0010	.0029
Stddev	.0002	.0213	.0001	.0000	.0003	.0001	.0006	.0041
%RSD	211.3	188.1	17.20	9.517	109.7	178.0	65.79	140.5
#1	.0002	-.0264	-.0003	.0005	.0001	.0001	-.0005	.0059
#2	.0000	.0037	-.0004	.0004	.0005	.0000	-.0014	.0000
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0012	-.0254	-.0002	-.0014	-.00003	.0007	.0006
Stddev	.0017	.0034	.0065	.0000	.0025	.00003	.0005	.0002
%RSD	319.5	276.5	25.55	24.39	175.6	117.52	74.95	39.32
#1	.0018	.0036	-.0208	-.0002	.0003	-.00005	.0003	.0008
#2	-.0007	-.0012	-.0300	-.0001	-.0032	.00000	.0011	.0004
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 1/2/2019 16:22:55 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.0019	-.0262	.0022	-.0001	-.0002	.0093	.00003
Stddev	.0002	.0047	.0926	.0003	.0129	.0002	.0153	.00005
%RSD	196.8	249.1	353.1	13.28	9632.	116.8	163.6	180.03
#1	.0000	-.0052	.0393	.0020	-.0093	-.0003	.0201	-.00001
#2	-.0002	.0014	-.0917	.0024	.0090	.0000	-.0015	.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	-.0004	-.0001	-.0004	.0000	.0000	-.0004	-.0020
Stddev	.0007	.0016	.0000	.0001	.000	.000	.0003	.0003
%RSD	113.1	395.0	27.71	13.78	352.3	6264.	95.44	16.24
#1	.0011	.0007	-.0001	-.0004	.0000	-.0001	-.0006	-.0018
#2	.0001	-.0016	-.0001	-.0004	-.0001	.0001	-.0001	-.0023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4735.7	78322.	5041.0
Stddev	12.5	404.	18.8
%RSD	.26426	.51586	.37382
#1	4744.6	78607.	5027.7
#2	4726.9	78036.	5054.3

Sample Name: LLCCV Acquired: 1/2/2019 16:25:30 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0116	.0106	.0178	.0123	.0032	.00098	F .0133	.0010
Stddev	.0006	.0002	.0000	.0007	.0000	.00007	.0010	.0000
%RSD	5.068	2.272	.0150	5.362	.2303	6.6778	7.687	2.522
#1	.0112	.0107	.0178	.0127	.0032	.00093	.0141	.0010
#2	.0120	.0104	.0178	.0118	.0032	.00103	.0126	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value							.0200	
Range							-30.00%	

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	F .0116	.0184	.0031	.0018	.0040	F .0026	.0186
Stddev	.0001	.0041	.0002	.0001	.0001	.0000	.0003	.0056
%RSD	7.535	35.32	1.112	2.566	8.059	.9538	11.36	30.32
#1	.0011	.0145	.0183	.0032	.0019	.0040	.0024	.0226
#2	.0010	.0087	.0186	.0031	.0017	.0040	.0029	.0146
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value		.0200					.0040	
Range		-30.00%					-30.00%	

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0106	.0208	-.0091	.0045	.0027	.00088	.0003	.0040
Stddev	.0011	.0005	.0495	.0000	.0022	.00004	.0001	.0001
%RSD	10.09	2.626	546.7	.9730	81.76	4.3082	23.92	3.048
#1	.0113	.0212	-.0441	.0045	.0011	.00086	.0003	.0041
#2	.0098	.0204	.0260	.0045	.0043	.00091	.0004	.0040
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

* - 2x
AFin 1/2/19

Sample Name: LLCCV Acquired: 1/2/2019 16:25:30 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039	.0365	.1231	.0231	.2068	.0041	.2056	.00091
Stddev	.0002	.0017	.0313	.0002	.0197	.0014	.0105	.00002
%RSD	5.848	4.690	25.45	1.064	9.529	34.58	5.111	2.1772
#1	.0040	.0353	.1009	.0233	.1928	.0051	.2130	.00090
#2	.0037	.0377	.1452	.0229	.2207	.0031	.1982	.00093
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.2000					
Range			-30.00%					

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0105	.0188	.0019	.0034	.0038	.0038	.0222	.0363
Stddev	.0002	.0008	.0002	.0005	.0001	.0001	.0002	.0037
%RSD	1.615	4.224	12.60	13.65	3.118	1.657	.9319	10.30
#1	.0106	.0182	.0017	.0037	.0039	.0038	.0224	.0336
#2	.0104	.0193	.0021	.0030	.0037	.0039	.0221	.0389
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4749.2	77939.	5004.9
Stddev	6.7	286.	29.5
%RSD	.14116	.36671	.58985
#1	4744.5	78141.	5025.8
#2	4754.0	77737.	4984.1

K - 2X

AKm 1/2/19

Sample Name: LLCCV,0.5 Acquired: 1/2/2019 16:28:04 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0244	.0213	.0387	.0187	.0062	.00198	.0355	.0020
Stddev	.0003	.0017	.0006	.0015	.0004	.00011	.0008	.0001
%RSD	1.094	7.817	1.592	8.284	7.037	5.5972	2.314	5.027
#1	.0246	.0224	.0391	.0176	.0065	.00206	.0360	.0020
#2	.0242	.0201	.0383	.0198	.0059	.00190	.0349	.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	.0355	.0383	.0070	.0037	.0078	.0072	.0397
Stddev	.0001	.0061	.0003	.0007	.0002	.0004	.0006	.0016
%RSD	3.011	17.14	.7910	10.03	6.598	4.669	8.633	4.014
#1	.0021	.0312	.0385	.0075	.0035	.0081	.0076	.0408
#2	.0020	.0398	.0381	.0065	.0039	.0076	.0067	.0385
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0191	.0427	.0265	.0094	.0086	.00190	.0023	.0080
Stddev	.0005	.0009	.0159	.0000	.0001	.00006	.0026	.0004
%RSD	2.522	2.050	60.04	.1231	.8467	3.1655	116.4	4.668
#1	.0195	.0420	.0152	.0094	.0085	.00195	.0004	.0083
#2	.0188	.0433	.0377	.0094	.0086	.00186	.0041	.0078
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLCCV,0.5 Acquired: 1/2/2019 16:28:04 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0079	.0781	.4136	.0446	.4042	.0093	.4275	.00192
Stddev	.0002	.0010	.0234	.0019	.0102	.0004	.0102	.00001
%RSD	2.537	1.314	5.662	4.204	2.525	4.714	2.380	.41921
#1	.0081	.0774	.4301	.0459	.4114	.0090	.4346	.00193
#2	.0078	.0789	.3970	.0433	.3969	.0096	.4203	.00192
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0219	.0402	.0038	.0072	.0080	.0075	.0444	.0815
Stddev	.0016	.0002	.0002	.0002	.0000	.0000	.0001	.0003
%RSD	7.386	.4636	5.447	2.838	.4882	.6390	.1630	.3719
#1	.0208	.0403	.0036	.0070	.0081	.0075	.0444	.0813
#2	.0231	.0401	.0039	.0073	.0080	.0075	.0445	.0817
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4755.6	77474.	4913.9
Stddev	14.8	119.	20.5
%RSD	.31024	.15325	.41731
#1	4766.1	77558.	4899.4
#2	4745.2	77390.	4928.4

Sample Name: LLCCV-TCLP Acquired: 1/2/2019 16:30:54 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0010	-.0033	.0013	.1880	-.00010	-.0055	.0000
Stddev	.0001	.0011	.0002	.0050	.0015	.00004	.0001	.000
%RSD	19.20	115.7	6.572	382.0	.7752	36.851	1.438	424.3
#1	.0008	.0018	-.0031	.0048	.1890	-.00007	-.0054	.0000
#2	.0006	.0002	-.0034	-.0022	.1870	-.00013	-.0055	-.0001
Check ?	None	None	None	None	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0084	.0024	.0001	-.0001	-.0002	-.0012	-.0019
Stddev	.0001	.0142	.0000	.0006	.0000	.0002	.0004	.0006
%RSD	93.18	169.9	.0025	923.9	9.719	131.1	30.78	30.13
#1	.0002	.0017	.0024	.0005	-.0001	.0000	-.0010	-.0015
#2	.0000	-.0185	.0024	-.0003	-.0001	-.0003	-.0015	-.0024
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0010	.0024	.0003	-.0008	-.00002	.0011	-.0004
Stddev	.0006	.0006	.0267	.0001	.0000	.00004	.0027	.0002
%RSD	610.3	62.27	1118.	33.19	2.119	221.23	239.0	47.93
#1	-.0005	.0015	-.0165	.0002	-.0008	-.00005	-.0008	-.0003
#2	.0003	.0006	.0213	.0004	-.0009	.00001	.0030	-.0006
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Sample Name: LLCCV-TCLP Acquired: 1/2/2019 16:30:54 Type: QC
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0001	-.0097	.0018	.0156	.0002	.0162	-.00011
Stddev	.0000	.0019	.0978	.0010	.0150	.0000	.0137	.00011
%RSD	1.525	1463.	1010.	57.92	96.53	4.522	84.77	99.592
#1	.0001	-.0012	.0595	.0010	.0262	.0002	.0259	-.00019
#2	.0001	.0015	-.0788	.0025	.0049	.0002	.0065	-.00003
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	-.0011	.0000	-.0004	.1970	.1904	-.0003	-.0060
Stddev	.0000	.0006	.000	.0000	.0000	.0001	.0006	.0045
%RSD	5.958	53.64	74.10	7.443	.0072	.0369	169.5	73.87
#1	-.0004	-.0007	.0000	-.0004	.1970	.1905	-.0008	-.0029
#2	-.0005	-.0015	-.0001	-.0004	.1970	.1904	.0001	-.0092
Check ?	None	None	None	None	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4738.9	77063.	4932.7
Stddev	3.1	75.	25.7
%RSD	.06636	.09719	.52180
#1	4741.1	77116.	4914.5
#2	4736.7	77010.	4950.9

Sample Name: Fe 500ppm Acquired: 1/2/2019 16:35:36 Type: Unk
Method: 2018B-6010-ICP-03(v31) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 010219A 0.5/10 mL MET3-45-F

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265 *
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0060	-.0194	-.0009	-.0009	.00289	-.0244	-.0037	-.0145
#1	.0009	-.0200	.0009	-.0005	.00308	-.0266	-.0036	-.0141
#2	.0111	-.0188	-.0028	-.0013	.00270	-.0222	-.0038	-.0149

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0640	.0018	.0007	.0655	-.0006	>360.0	.0140	-.0004
#1	-.0637	.0020	.0005	.0681	-.0003	451.4	.0132	.0001
#2	-.0643	.0016	.0008	.0629	-.0009	455.5	.0148	-.0008

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0670	.00139	-.0030	.0015	.0055	-.1918	-.0005	-.0363
#1	-.0668	.00140	-.0033	.0017	.0071	-.2159	-.0017	-.0439
#2	-.0673	.00139	-.0028	.0012	.0039	-.1676	.0006	-.0287

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0056	-.00006	.0008	.0029	-.0003	.0033	-.0024
#1	.0006	.0005	.00001	.0016	.0034	-.0003	.0033	-.0025
#2	.0006	.0108	-.00014	.0000	.0023	-.0003	.0033	-.0024

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	-.0004	.0397	-.0124
#1	-.0003	.0406	-.0133
#2	-.0005	.0389	-.0115

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4670.4	75911.	4993.5
#1	4658.3	76171.	4989.9
#2	4682.4	75651.	4997.1

* - See all calculations on separate "Interferance calculation sheet".

ABm 1/2/19

K1812550-001

High conc. Element	True value (ppm)	Interfiring element	Result against high conc.	Correlation coeficient	Result for high conc. Element	Value of interferance	Result for interfiring element	Final Result (ppm)
Fe	500	**Cd**	-0.0145	-0.000029000	542.5	-0.01573	-0.01550	0.00023

K1812550-001D

High conc. Element	True value (ppm)	Interfiring element	Result against high conc.	Correlation coeficient	Result for high conc. Element	Value of interferance	Result for interfiring element	Final Result (ppm)
Fe	500	**Cd**	-0.0145	-0.000029000	524	-0.0152	-0.01360	0.00160

K1812550-001S

High conc. Element	True value (ppm)	Interfiring element	Result against high conc.	Correlation coeficient	Result for high conc. Element	Value of interferance	Result for interfiring element	Final Result (ppm)
Fe	500	**Cd**	-0.0145	-0.000029000	533.5	-0.01547	0.03420	0.04967

K1812550-001A

High conc. Element	True value (ppm)	Interfiring element	Result against high conc.	Correlation coeficient	Result for high conc. Element	Value of interferance	Result for interfiring element	Final Result (ppm)
Fe	500	**Cd**	-0.0145	-0.000029000	547.5	-0.01588	1.07700	1.09288

Interferance calculation sheet

ARm 1/2/19

CVAA Mercury Data Review Form

K-CVAA-02

Element: Hg

Analysis Lot #: 122118C HG2

Starlims #: 619791

Cal. STD/CCV Source: HG3-16-T

Pipette IDs: U52540, HG2-5.0

16mL Tube Lot #: P7233936

Service Request Numbers:

K1812382 TCLP

	Yes	No	NA
1) Appropriate standardization completed	X		
2) ICV within 10% of true value	X		
3) CCVs in control (+/- 10%)	X		
4) CCBs and or ICBs below MRL	X		
5) CCV/CCB check run every 10 samples	X		
6) All reported samples within calibration range	X		
7) Calculations correct	X		

Comments:

Data reviewed against service request(s) to ensure no samples were omitted: KC (Initials)

Primary Reviewed By: [signature] Date: 12-21-18

Secondary Reviewed By: [signature] Date: 12/21/18

Data Review Form

Instrument ID#: **K-CVAA-02**
DataFile Name: **R:\ICP\WIP\DATA\K-CVAA-02 (QUICKTRACE)\122118C HG2.csv**
RUNNO: **619791**

K1812382

No exceptions to report.

Primary Approver: Keith 12-21-18
Secondary Approver: 12/21/18

CVAA Hg ANALYTICAL WORKSHEET

Method: 7470A TCLP	Cal. Inter. Std* (100ppb): HG3-16-T 2nd Source Inter Std** (1ppm): HG3-16-A

Analysis For: Hg

DATA

Pos.	SAMPLE NUMBER	Measured (µg/L)	Dilution Factor	Recoveries (ICV, CCV, LCS, MS)		Comments:
1	Cal. Blk.	0.000	~	~		
2	Std 0.2*	0.200	~	(0.10-50mL)		
3	Std 0.5*	0.500	~	(0.25-50mL)		
4	Std 1.0*	1.000	~	(0.5-50mL)		
5	Std 5.0*	5.000	~	(2.5-50mL)		
6	Std 10.0*	10.000	~	(5.0-50mL)		
7	ICV1**	5.110	~	102%		
8	ICB1	-0.008	~	~		
9	LLICV1*	0.196	~	98%		
10	CCV1*	5.080	~	102%		
11	CCB1	-0.013	~	~		
12	KQ1818530-01	-0.002	~			
13	KQ1818530-02	4.760	~	95%		
14	K1812382-001 E	-0.004	~			
15	K1812382-001A E	4.520	~	90%		
16	KQ1818530-03	-0.002	~			
17	KQ1818530-04	4.720	~	94%		
18	CCV2	5.040	~	101%		
19	CCB2	-0.013	~			
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

Comments:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD	Post-Spike @ 5ppb
7470A Water	5.0 µg/L	0.2 µg/L	80-120%	75-125%	20%	+/- 20%
245.1 Water	5.0 µg/L	0.2 µg/L	85-115%	70-130%	20%	+/- 20%
7470A TCLP	5.0 µg/L	1.0 µg/L	80-120%	75-125%	20%	+/- 20%
7471A Soil LCSS	12mg/kg	0.02 mg/kg	51-149%	80-120%	20%	+/- 20%
7471A Tissue Dorm	0.41 mg/kg	0.02 mg/kg	68-136%	80-120%	20%	+/- 20%

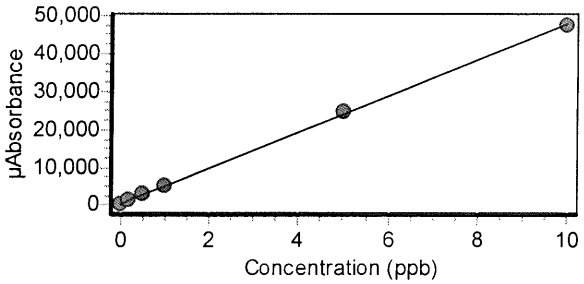
Report Generated By CETAC QuickTrace
Analyst: alkls.alklsxp196
Worksheet file: C:\Program Files\QuickTrace\Worksheets\122118C HG2.wsz
Date Started: 12/21/2018 6:07:53 AM
Comment:

Results

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
Calibration Blank				STD	12/21/18 07:35:50 am	0.000	174	16.87	
Replicates	134.5	202.0	171.0	189.4					
Standard #1				STD	12/21/18 07:37:27 am	0.200	1188	3.98	
Replicates	1244.2	1132.6	1204.2	1172.9					
Standard #2				STD	12/21/18 07:39:04 am	0.500	2713	1.25	
Replicates	2760.0	2679.1	2706.3	2706.6					
Standard #3				STD	12/21/18 07:40:41 am	1.000	5168	0.65	
Replicates	5142.4	5198.4	5135.3	5195.7					
Standard #4				STD	12/21/18 07:42:19 am	5.000	24748	0.15	
Replicates	24765.4	24785.4	24700.0	24739.5					
Standard #5				STD	12/21/18 07:43:58 am	10.000	47743	0.34	
Replicates	47520.0	47757.1	47904.7	47789.9					

Calibration

Equation: A = 174.226 + 4790.719C
R2: 0.99965
SEE: 433.4459
Flags:



ICV1				ICV	12/21/18 07:45:37 am	5.110	24639	0.40	
Replicates	24558.9	24666.1	24766.1	24563.1					
% Recovery	102.13								
ICB1				ICB	12/21/18 07:47:13 am	-0.008	137	34.16	
Replicates	167.8	67.5	151.2	161.3					

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
LLICV1					CRDL	12/21/18 07:48:49 am	0.196	1112	1.06	
	Replicates	1117.8	1096.3	1109.2	1123.3					
	% Recovery	97.84								
CCV1					CCV	12/21/18 07:50:27 am	5.080	24523	0.41	
	Replicates	24388.9	24503.1	24612.0	24587.0					
	% Recovery	101.65								
CCB1					CCB	12/21/18 07:52:03 am	-0.013	110	64.33	
	Replicates	154.4	35.5	66.1	185.3					
KQ1818530-01					UNK	12/21/18 07:53:39 am	-0.002	163	12.55	
	Replicates	149.1	188.0	143.6	170.8					
KQ1818530-02					UNK	12/21/18 07:55:15 am	4.760	22988	0.71	
	Replicates	22778.4	22943.0	23109.6	23123.0					
K1812382-001 E					UNK	12/21/18 07:56:51 am	-0.004	154	17.53	
	Replicates	189.3	126.0	142.3	157.4					
K1812382-001A E					UNK	12/21/18 07:58:28 am	4.520	21836	0.70	
	Replicates	21651.6	21800.4	21869.7	22021.9					
KQ1818530-03					UNK	12/21/18 08:00:04 am	-0.002	167	35.93	
	Replicates	143.1	154.8	116.2	253.6					
KQ1818530-04					UNK	12/21/18 08:01:42 am	4.720	22798	0.70	
	Replicates	22606.9	22745.2	22982.7	22856.3					
CCV2					CCV	12/21/18 08:03:20 am	5.040	24319	0.86	
	Replicates	24054.1	24249.9	24479.5	24491.0					
	% Recovery	100.80								
CCB2					CCB	12/21/18 08:04:55 am	-0.012	114	47.42	
	Replicates	130.6	36.6	127.5	162.7					

Preparation Information Benchsheet

Prep Run#: 328670
Team: Metals/KLINN
Number of Copies to make: 1

Prep WorkFlow: HgDigLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 12/20/18 02:30 PM

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	KQ1818530-01	MB		7470A/Hg TCLP		Solid	20mL	20.00mL	
2	KQ1818530-02	LCS		7470A/Hg TCLP		Solid	20mL	20.00mL	
3	K1812382-001	SL0594	.07	7470A/Hg TCLP		Soil	20mL	20.00mL	
4	KQ1818530-03	K1812382-001 DUP	.07	7470A/Hg TCLP		Solid	20mL	20.00mL	
5	KQ1818530-04	K1812382-001 MS	.07	7470A/Hg TCLP		Solid	20mL	20.00mL	

Spiking Solutions

Name: K-MET Hg Source Standard 1000 ug/L Inventory ID 195366 Logbook Ref: HG3-16-A Expires On: 01/01/2019

KQ1818530-02 0.10mL KQ1818530-04 0.10mL

Preparation Materials

K-MET 100ml Centrifuge Tube	1802043 (193761)	K-MET 50ml Centrifuge Tube	P7265113 (195433)	K-MET H2SO4 Hg	57011 (185918)
K-MET HCl Hg	0000192813 (194700)	K-MET K2S2O8 Hg	0000166617 (186360)	K-MET KMnO4 Hg	0000177909 (190708)
K-MET NH2OH-HCl Hg	0000215387 (195658)	K-MET HNO3 Hg	0000205793 (195596)	K-MET SnCl Hg	0000208736 (195097)
K-MET NACl Hg	0000164455 (184228)				

Preparation Steps

Step: Digestion
Started: 12/20/18 14:30
Finished: 12/20/18 16:30
By: KLINN
Comments

Preparation Equipment

K-Block-Digester-14	Digestion	Corrected Temperature	95 deg C	K-Block-Digester-14	Digestion	Correction Factor	0 deg C
K-Block-Digester-14	Digestion	Observed Temperature	95 deg C	K-Block-Digester-14	Digestion	Thermometer ID 661495	NONE
K-Block-Digester-14	Digestion	Thermometer Location	31 NONE	K-BlockDigester-08	Digestion	Corrected Temperature	95 deg C
K-BlockDigester-08	Digestion	Correction Factor	0 deg C	K-BlockDigester-08	Digestion	Observed Temperature	95 deg C
K-BlockDigester-08	Digestion	Thermometer ID 4184960	NONE	K-BlockDigester-08	Digestion	Thermometer Location	16 NONE
K-DG100A	Digestion			K-DG1000C	Digestion		
K-U52540	Digestion			K-DG250A	Digestion		
K-HG2-5.0	Digestion			K-DG500A	Digestion		

Comments: Cal. Std./CCV Source: HG3-16-T.

Reviewed By: _____ Date: 12/21/18

Preparation Information Benchsheet

Prep Run#: 328670
Team: Metals/KLINN
Number of Copies to make: 1

Prep WorkFlow: HgDigLP
Prep Method: Method TCLP 2

Status: Draft
Prep Date/Time: 12/20/18 12:47 PM

#	Lab Code	Client ID	B#	√	Method /Test	Matrix	Amt. Ext.	pH	Int. Vol	Final Vol	Surr Amt	Spike Amt
1	**KQ1818530-01**	MB			7470A / Hg TCLP	Solid						
2	**KQ1818530-02**	LCS			7470A / Hg TCLP	Solid						
3	**K1812382-001**	SL0594	.07		7470A / Hg TCLP	Soil						
4	**KQ1818530-03**	K1812382-001 DUP	.07		7470A / Hg TCLP	Solid						
5	**KQ1818530-04**	K1812382-001 MS	.07		7470A / Hg TCLP	Solid						

619791

Comments: HG3-16-T BD14,8 T95,95 T231,16 12-20-18 1430-1630

Surrogate ID: _____ Spike ID: _____

Witnessed By: _____

Analyst: _____ Assisted By: _____

Organochlorine Pesticides

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F020.D
Lab ID: K1812382-001
RunType: SMPL
Matrix: SOIL

Date Acquired: 12/31/2018 20:45
Date Quantitated: 01/01/2019 15:53
Batch ID: KWG1900100
Analysis Method: 8081B
ListJoinID: LJ19075

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	gamma-BHC (Lindane)	20.5	NA	20	ICVOK
	Endrin	21.7	NA	20	ICVOK
Lab Control Spike	Toxaphene {1}	0	70	130	MCavg
	Chlordane {2}	62	70	130	MCavg
Duplicate Lab Control Spike	Toxaphene {1}	0	70	130	MCavg
	Chlordane {2}	68	70	130	MCavg
Surrogates	Decachlorobiphenyl	67	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F020.D\1231F020C.D
Lab ID: K1812382-001
RunType: SMPL
Matrix: SOIL

Date Acquired: 12/31/2018 20:45
Date Quantitated: 01/01/2019 15:53
Batch ID: KWG1900100
Analysis Method: 8081B
ListJoinID: LJ19075

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Toxaphene {1}	0	70	130	MCavg
	Chlordane {2}	62	70	130	MCavg
Duplicate Lab Control Spike	Toxaphene {1}	0	70	130	MCavg
	Chlordane {2}	68	70	130	MCavg

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F020.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F020.D\1231F020c.d			**Vial:**	20
Acqu Date:	12/31/2018 20:45	**Quant Date:**	01/01/2019 15:53	**Dilution:**	1.0
Run Type:	SMPL	**ListJoinID:**	LJ19075	**Soln Conc. Units:**	ug/L
Lab ID:	K1812382-001				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**	12/09/2018	**Receive Date:**	12/18/2018

Analysis Lot:	KWG1900100	**Prep Lot:**	KWG1806665	**Report Group:**	K1812382
Analysis Method:	8081B	**Prep Method:**	EPA 3511		
Prep Ref:	1707454	**Prep Date:**	12/21/2018		

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:	Organochlorine Pesticides	**Report List ID:**	LJ19075
MB Ref:	J:\GC23\DATA\123118\1231F015.D	**Method ID:**	MJ1711
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.00 -0.06 c	5.34 -0.04 c	960828	2764060	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.00 -0.11 c	5.34 -0.08 c	960828	2764060	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.00 -0.11 c	5.34 -0.08 c	960828	2764060	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2				Rpt	
1	Tetrachloro-m-xylene	8.72	7.10	68512	168290	4.32	4.23				86	OK
					%Recovery =	86	OK	85	OK	Limits =	70-130	
1	Decachlorobiphenyl	18.40 +0.01	16.86	53917	123293	3.36	3.60				72	OK
					%Recovery =	67	*	72	OK	Limits =	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-BHC (Lindane)	10.22 -0.01	9.07 +0.01	5895	13550	0.4700	0.4220	0.00010U	0.00010U	0.00010U
1	Heptachlor	11.40 -0.02	9.75 +0.01	1982	27931	0.1680	0.8450	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide	12.69 -0.01	11.43 +0.03	1288	24932	0.1010	0.8510	0.00010U	0.00010U	0.00010U
1	Endrin	14.15 +0.03	12.93 -0.01	3426	21189	0.3210	0.8160	0.00010U	0.00010U	0.00010U
1	Methoxychlor	15.63 -0.02	14.73 +0.01	3153	2647	0.8100	0.2290	0.00010U	0.00010U	0.00010U
2	Toxaphene {1}		13.41 -0.01	0	3748	0.0000	7.83	0.0020U	0.0020U	
	Toxaphene			0	0	36.29	17.84	0.0020U	0.0020U	0.0020U
2	Toxaphene {2}	14.57 +0.01	13.47 -0.01	7514	6642	72.55	38.38	0.0036	0.0020U	
2	Toxaphene {3}	15.08 -0.01		4331	0d	26.27	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}		14.12 +0.03	0d	6647	0.0000	23.26	0.0020U	0.0020U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F020.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F020.D\1231F020c.d			**Vial:**	20
Acqu Date:	12/31/2018 20:45	**Quant Date:**	01/01/2019 15:53	**Dilution:**	1.0
Run Type:	SMPL	**ListJoinID:**	LJ19075	**Soln Conc. Units:**	ug/L
Lab ID:	K1812382-001				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
2	Toxaphene {5}	15.54	14.48 +0.01	3273	2355	37.01	4.25	0.0020U	0.0020U	
2	Toxaphene {6}	15.97 +0.01	14.66 -0.01	2323	6926	9.34	15.47	0.0020U	0.0020U	
3	Chlordane {1}		9.36 -0.03	0	8410	0.0000	7.05	0.0010U	0.0010U	
	Chlordane			0	0	9.80	5.20	0.0010U	0.0010U	0.0010U
3	Chlordane {2}	11.40 -0.02		1982	0	2.86	0.0000	0.0010U	0.0010U	
3	Chlordane {3}	12.03	11.84 +0.02	10068	5809	21.27	1.92	0.0011	0.0010U	
3	Chlordane {4}	13.24 +0.02	11.89 +0.02	12176	13838	8.81	7.44	0.0010U	0.0010U	
3	Chlordane {5}	13.34 +0.05	11.94 +0.01	7965	6384	6.81	7.25	0.0010U	0.0010U	
3	Chlordane {6}	13.34 -0.03	11.94 -0.03	7965	6384	9.24	2.36	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F020.D Vial: 20
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:45 pm Operator: MCHAPPELLE
Sample : K1812382-001 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:53:11 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.002	5.339	960828	2764060	100.000	100.000
29)	1-Bromo-2...	6.002	5.339	960828	2764060	100.000	100.000
36)	1-Bromo-2...	6.002	5.339	960828	2764060	100.000	100.000
43)	1-Bromo-2...	6.002	5.339	960828	2764060	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.722	7.102	68512	168290	4.317	4.232
28) s	Decachlor...	18.396	16.859	53917	123293	3.356	3.603
	Target Compounds						
3)	alpha-BHC	9.559	8.325	13488	31416	0.941m	0.877
4)	Hexachlor...	9.689f	8.109	11656	4863	0.585	0.101 #
5)	beta-BHC	10.829	9.599	456	5917	0.066m	0.357m#
6)	gamma-BHC...	10.222	9.072	5895	13550	0.470	0.422
7)	delta-BHC	11.346	10.115	4183	3112	0.346	0.104 #
8)	Heptachlor	11.402	9.749	1982	27931	0.168	0.845 #
9)	Aldrin	0.000	10.305	0	78096	N.D.	2.451 #
10)	Isodrin	12.536f	11.099	2139	3323	0.190	0.123 #
11)	Heptachlo...	12.689	11.425	1288	24932	0.101	0.851 #
12)	gamma-Chl...	13.239	11.805	12176	14895	0.987	0.502m#
13)	Endosulfan I	13.342	12.032	7965	3970	0.717	0.151 #
14)	alpha-Chl...	0.000	11.935f	0	6384	N.D.	0.213 #
15)	Dieldrin	13.762	0.000	6702	0	0.567	N.D. d#
16)	4,4'-DDE	13.586	12.312	11249	8629	0.898	0.296m#
17)	Endrin	14.146	12.932	3426	21189	0.321	0.816 #
18)	Endosulfa...	14.572	0.000	7514	0	0.677	N.D. d#
19)	4,4'-DDD	14.406	13.169f	5355	12065	0.593	0.568
20)	Endrin Al...	14.769	0.000	2655	0	0.269	N.D. #
21)	Endosulfa...	15.239	14.025f	11073	8552	1.026	0.335 #
22)	4,4'-DDT	14.902	13.619	3029	3528	0.475	0.176m#
23)	Endrin Ke...	15.912	0.000	1490	0	0.134	N.D. d#
24)	Methoxychlor	15.626	14.729	3153	2647	0.810	0.229 #
25)	2,4'-DDE	12.996	11.885	13131	13838	1.360	0.618 #
26)	2,4'-DDD	13.762	12.632	6702	196248	0.767	10.050 #
27)	2,4'-DDT	14.206	13.039	2961	1529	0.341	0.065 #
30)	Toxaphene	0.000	13.412	0	3748	N.D.	7.828 #
31)	Toxaphene...	14.572	13.469	7514	6642	72.547	38.380 #
32)	Toxaphene...	15.079	0.000	4331	0	26.268	N.D. d#
33)	Toxaphene...	0.000	14.122	0	6647	N.D. d	23.256
34)	Toxaphene...	15.539	14.482	3273	2355	37.009	4.248 #
35)	Toxaphene...	15.969	14.659	2323	6926	9.341	15.468 #
37)	Chlordane	0.000	9.355f	0	8410	N.D.	7.048 #
38)	Chlordane...	11.402	0.000	1982	0	2.859	N.D. #
39)	Chlordane...	12.032	11.842	10068	5809	21.266	1.924 #
40)	Chlordane...	13.239	11.885	12176	13838	8.811	7.442
41)	Chlordane...	13.342f	11.935	7965	6384	6.806	7.249
42)	Chlordane...	13.342f	11.935f	7965	6384	9.235	2.358 #
44)	Chlorpyrifos	11.916	10.722	10908	25640	1.717	1.415
45)	Oxychlordane	12.646	0.000	9414	0	0.734	N.D. #
46)	cis-Nonac...	14.406	13.039	5355	1529	0.368	0.039 #
47)	trans-Non...	13.342f	11.885	7965	8114	0.571	0.220m#

Quantitation Report (QT Reviewed)

1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F020.D Vial: 20
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:45 pm Operator: MCHAPPELLE
Sample : K1812382-001 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:53:11 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
48)	Mirex	0.000	15.195f	0	33512	N.D.	1.030	#
49)	HCE	0.000	3.345	0	2438	N.D.	0.047	#
50)	HCBD	4.762	3.889	1546	2562	0.089	0.060	#
52)	Perthane	13.926f	0.000	13988	0	41.583	N.D.	#

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

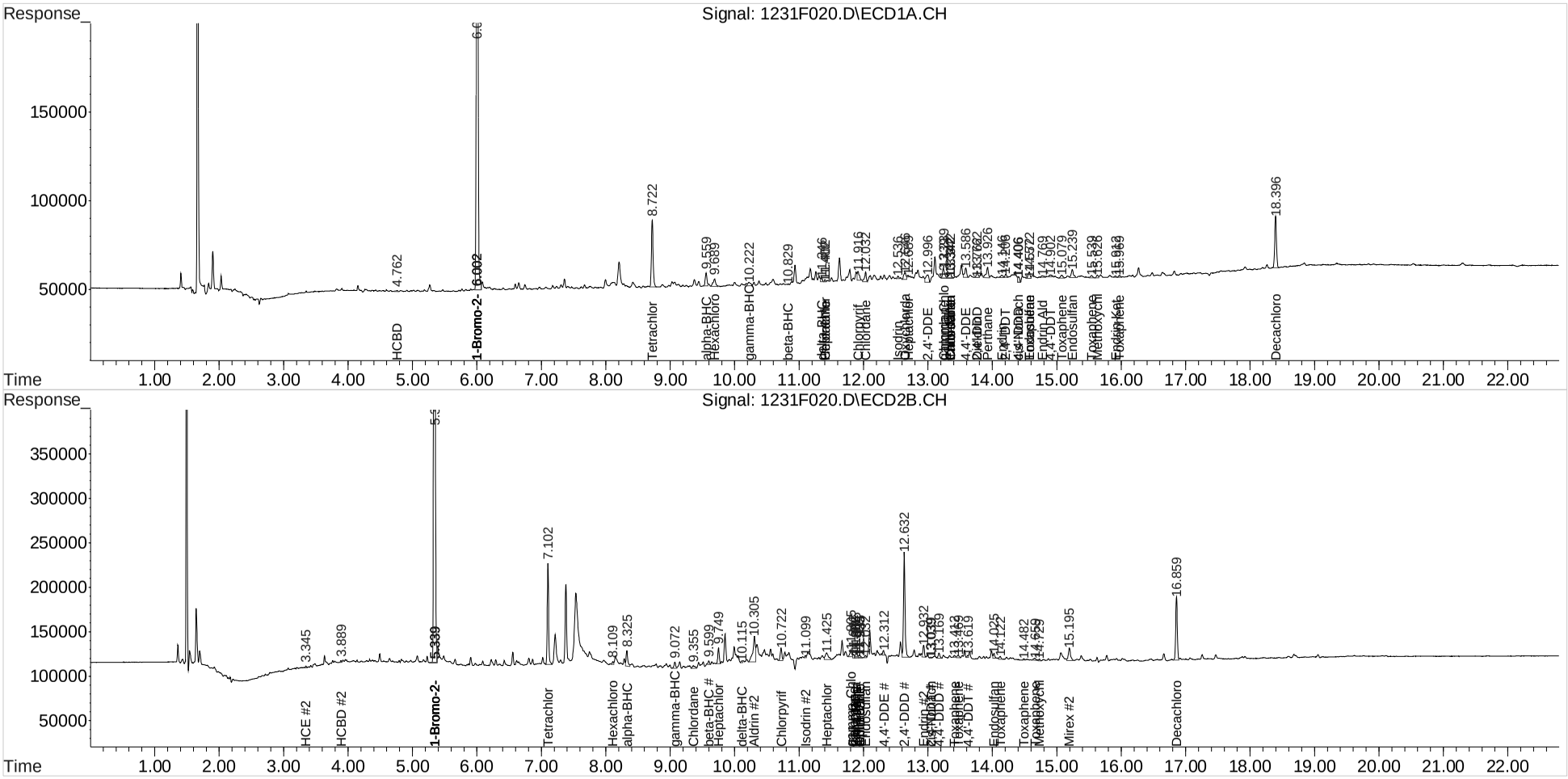
1st SM 01/01/19
2nd UA 01/07/19

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\123118\1231F020.D Vial: 20
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:45 pm Operator: MCHAPPELLE
Sample : K1812382-001 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:53:11 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



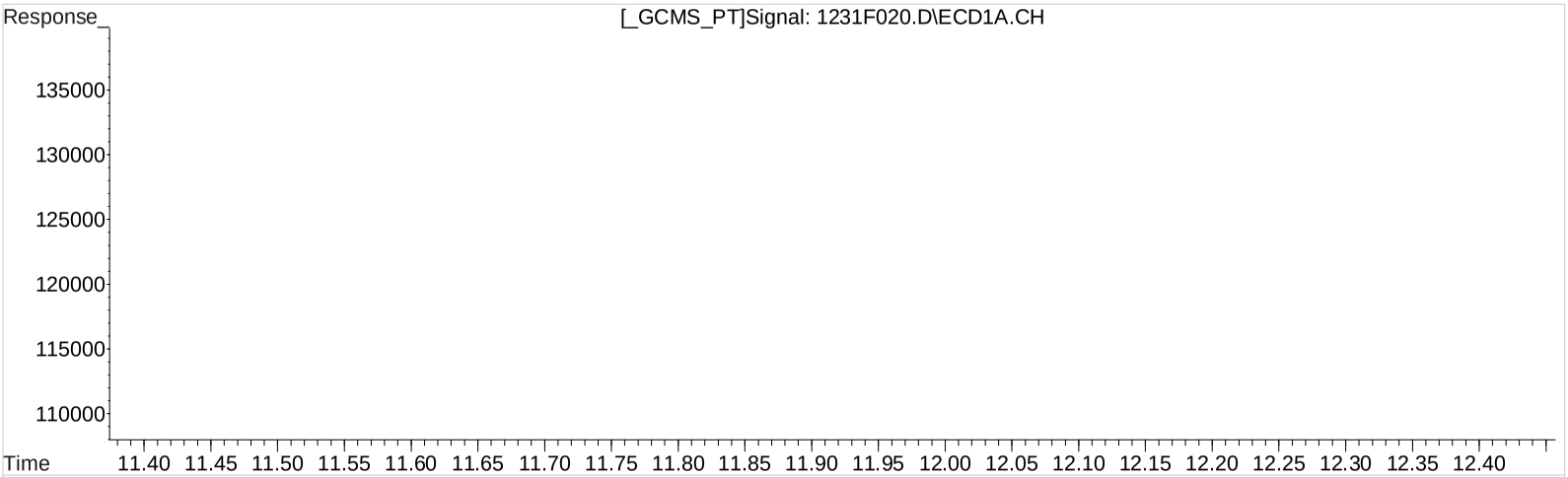
Quantitation Report (Qedit)

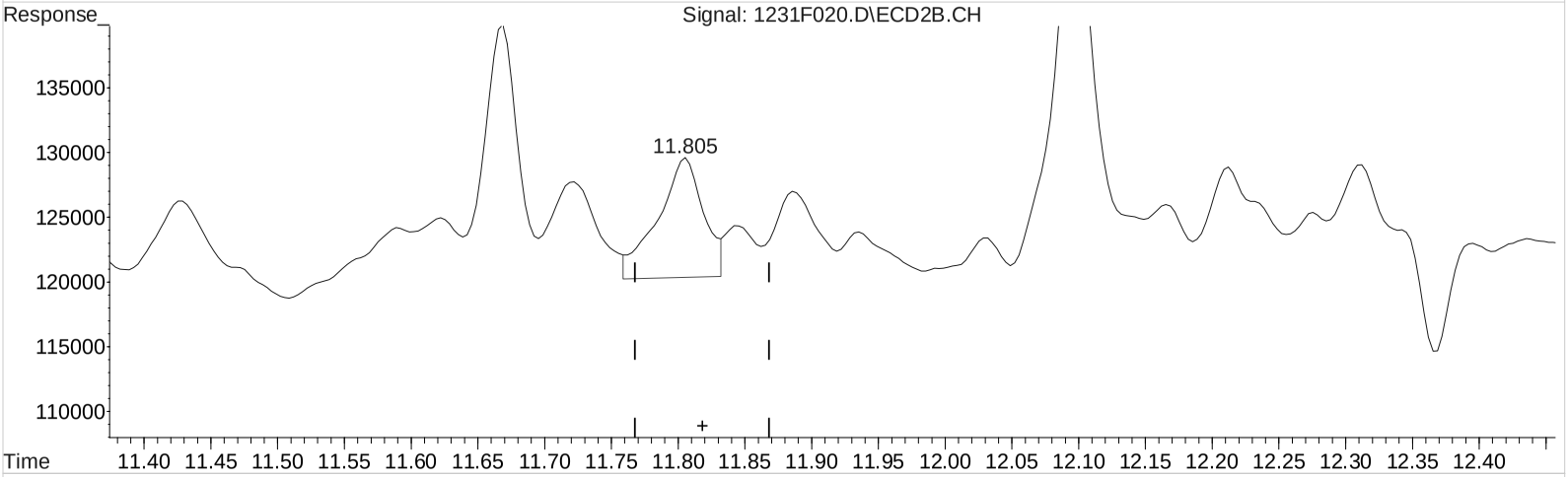
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F020.D Vial: 20
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:45 pm Operator: MCHAPPELLE
Sample : K1812382-001 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:48 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(12) gamma-Chlordane

13.239min 0.987 ug/L

response 12176

Manual Integration:

Before

01/01/19

(12) gamma-Chlordane #2

11.805min 0.744 ug/L

response 22067

(+) = Expected Retention Time

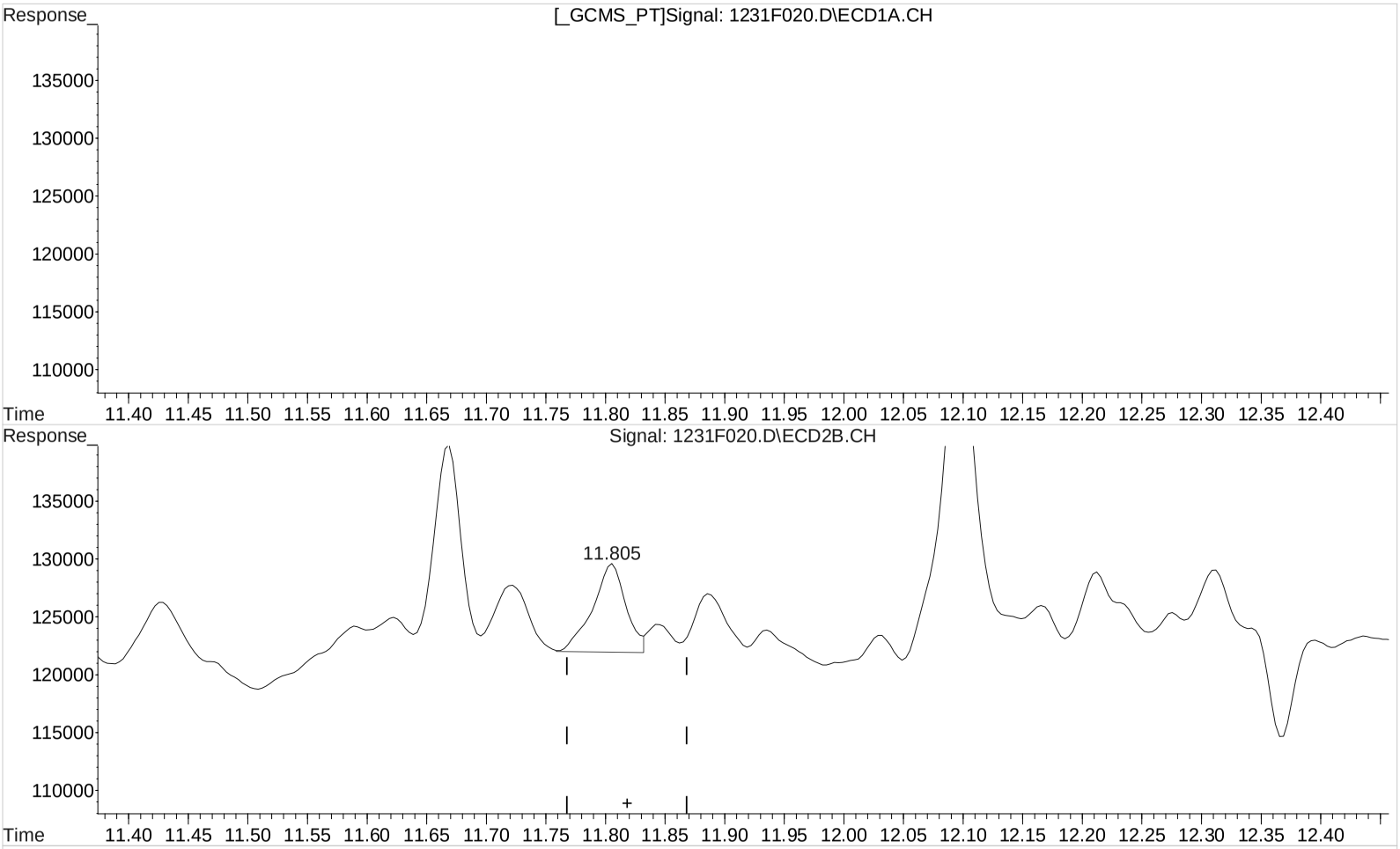
Quantitation Report (Qedit)

1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F020.D Vial: 20
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:45 pm Operator: MCHAPPELLE
Sample : K1812382-001 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:48 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(12) gamma-Chlordane

13.239min 0.987 ug/L

response 12176

Manual Integration:

After

Baseline/Shoulder

01/01/19

(12) gamma-Chlordane #2

11.805min 0.502 ug/L m

response 14895

(+) = Expected Retention Time

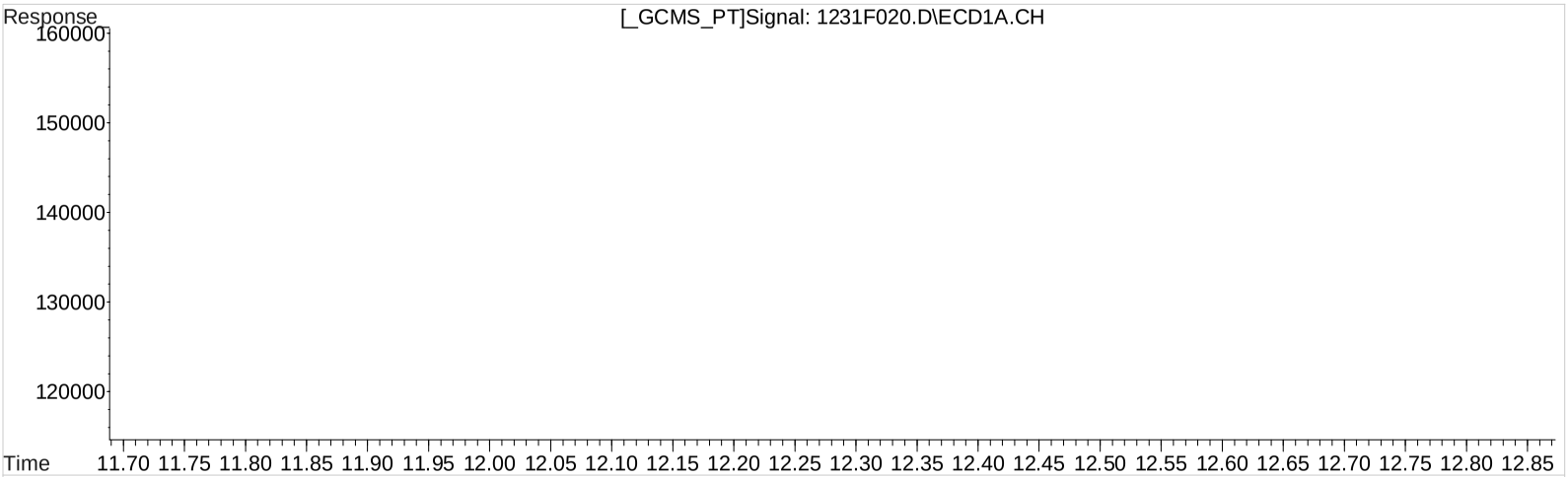
Quantitation Report (Qedit)

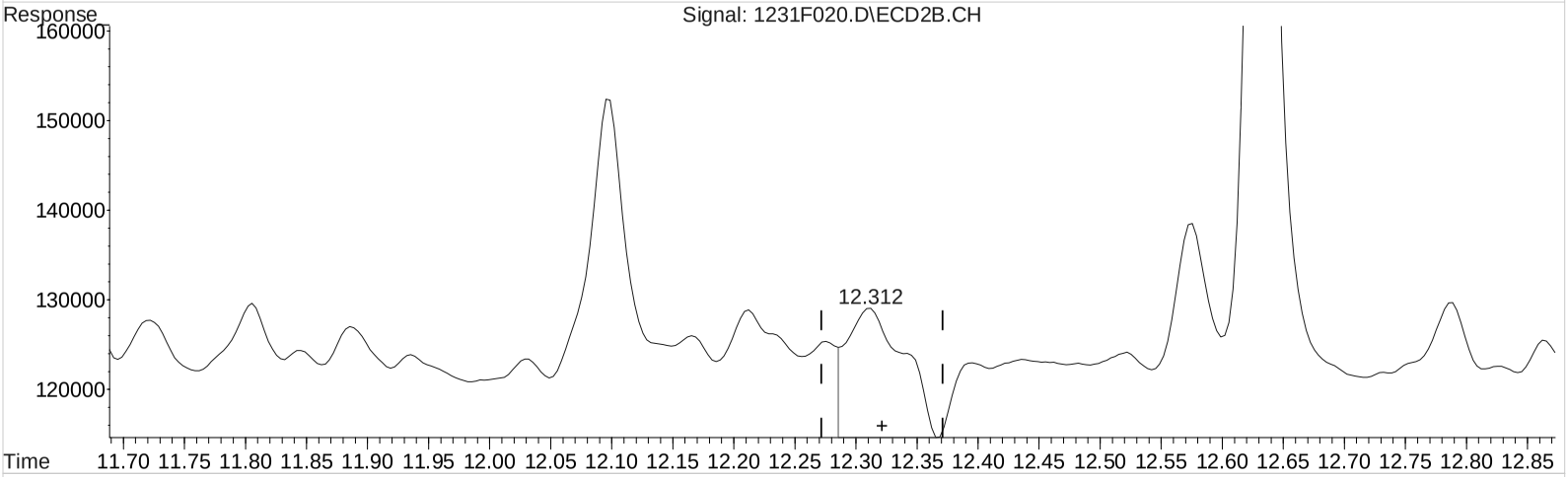
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F020.D Vial: 20
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:45 pm Operator: MCHAPPELLE
Sample : K1812382-001 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:48 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(16) 4,4'-DDE

13.586min 0.898 ug/L

response 11249

Manual Integration:

Before

01/01/19

(16) 4,4'-DDE #2

12.312min 1.593 ug/L

response 46383

(+) = Expected Retention Time

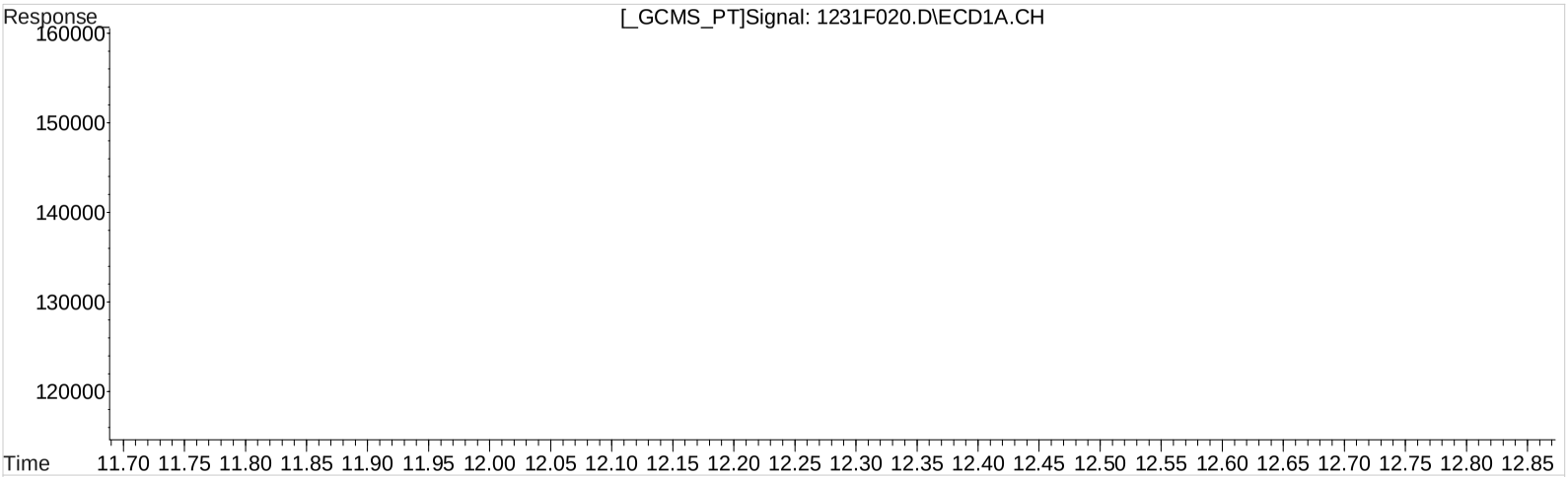
Quantitation Report (Qedit)

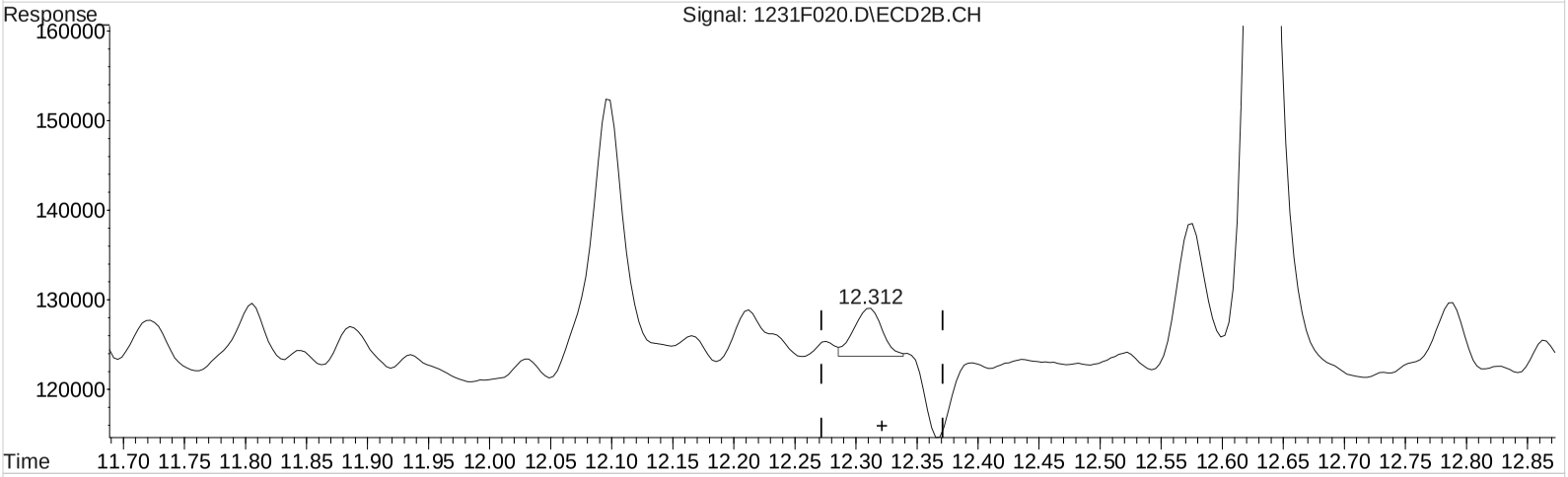
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F020.D Vial: 20
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:45 pm Operator: MCHAPPELLE
Sample : K1812382-001 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:48 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(16) 4,4'-DDE

13.586min 0.898 ug/L

response 11249

Manual Integration:

After

Baseline/Shoulder

01/01/19

(16) 4,4'-DDE #2

12.312min 0.296 ug/L m

response 8629

(+) = Expected Retention Time

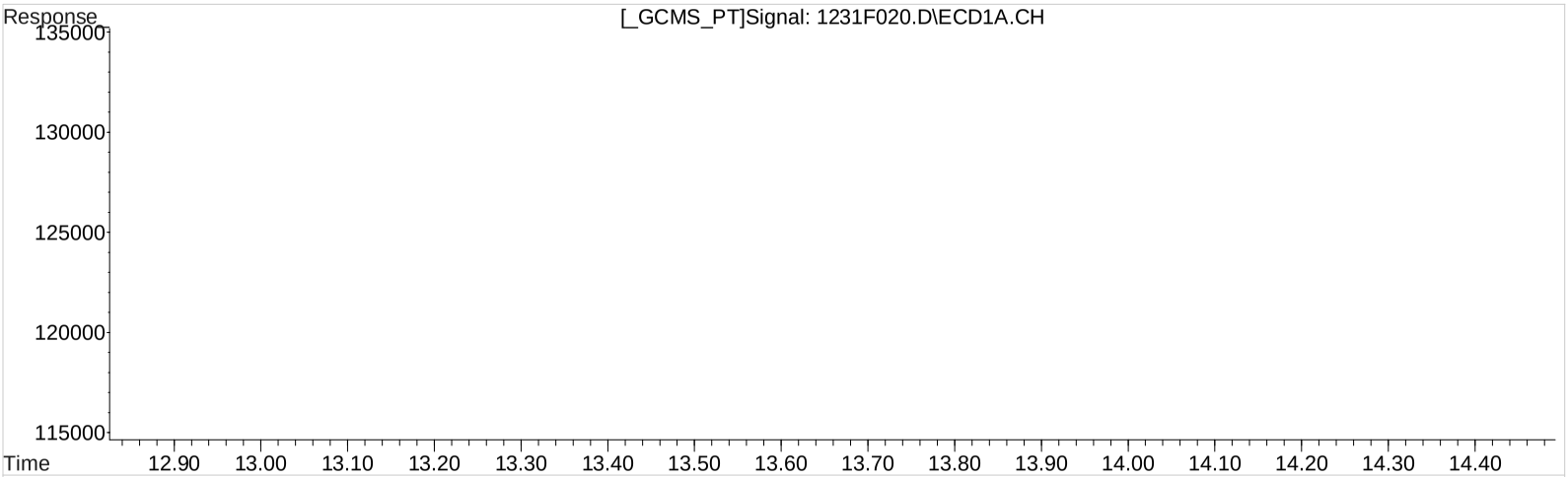
Quantitation Report (Qedit)

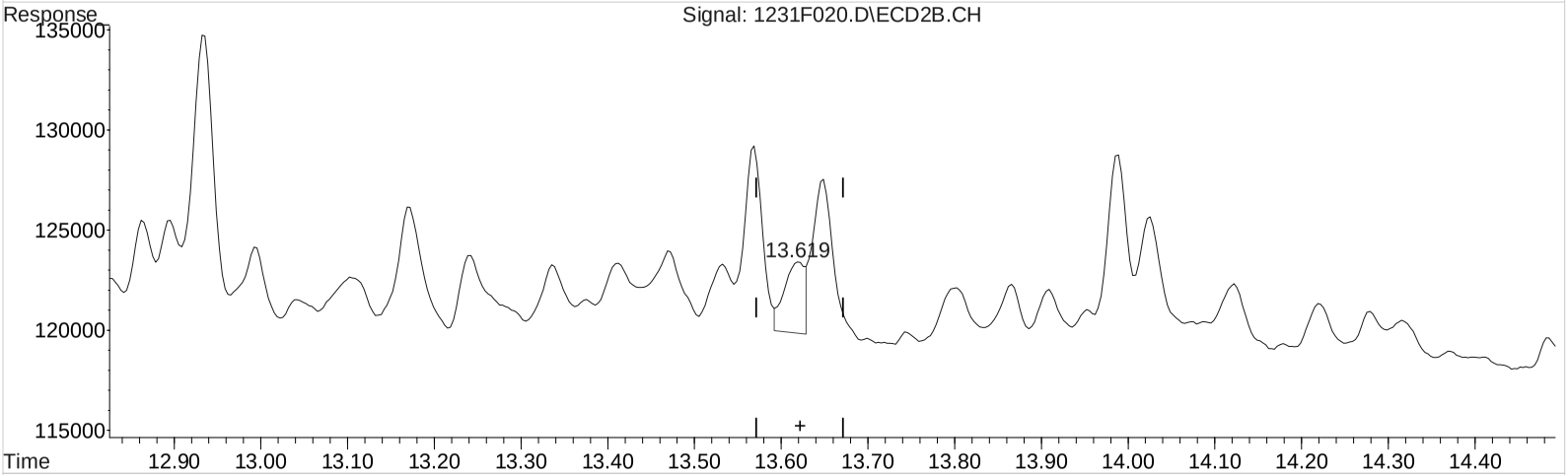
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F020.D Vial: 20
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:45 pm Operator: MCHAPPELLE
Sample : K1812382-001 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:48 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(22) 4,4'-DDT

14.902min 0.475 ug/L

response 3029

Manual Integration:

Before

01/01/19

(22) 4,4'-DDT #2

13.619min 0.301 ug/L

response 6038

(+) = Expected Retention Time

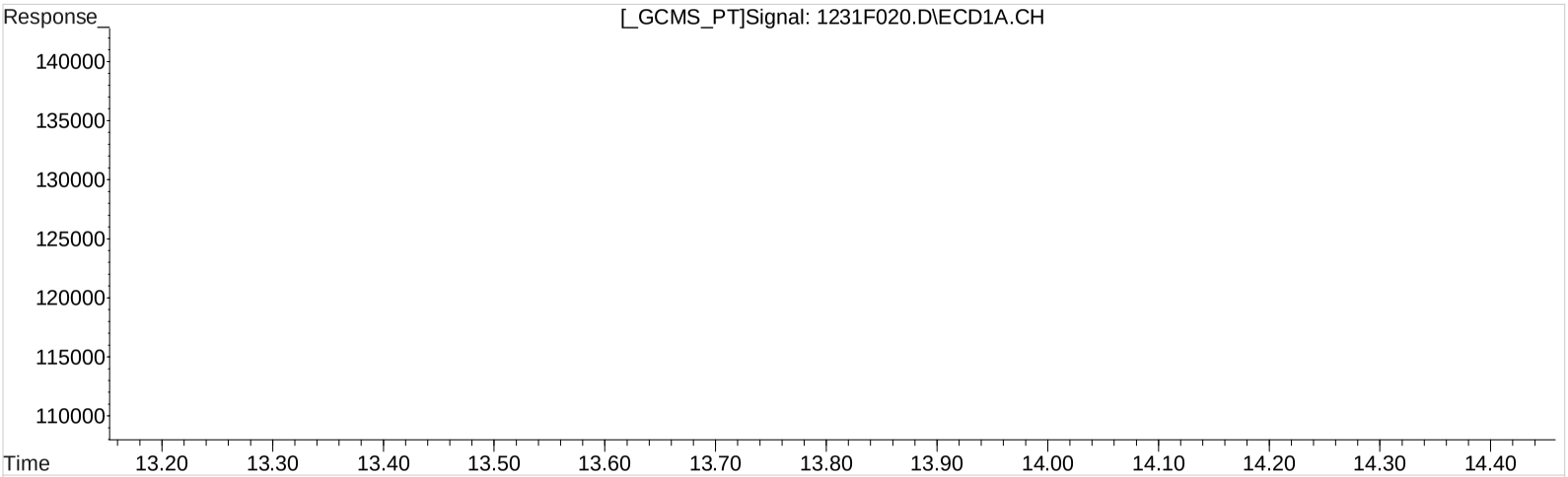
Quantitation Report (Qedit)

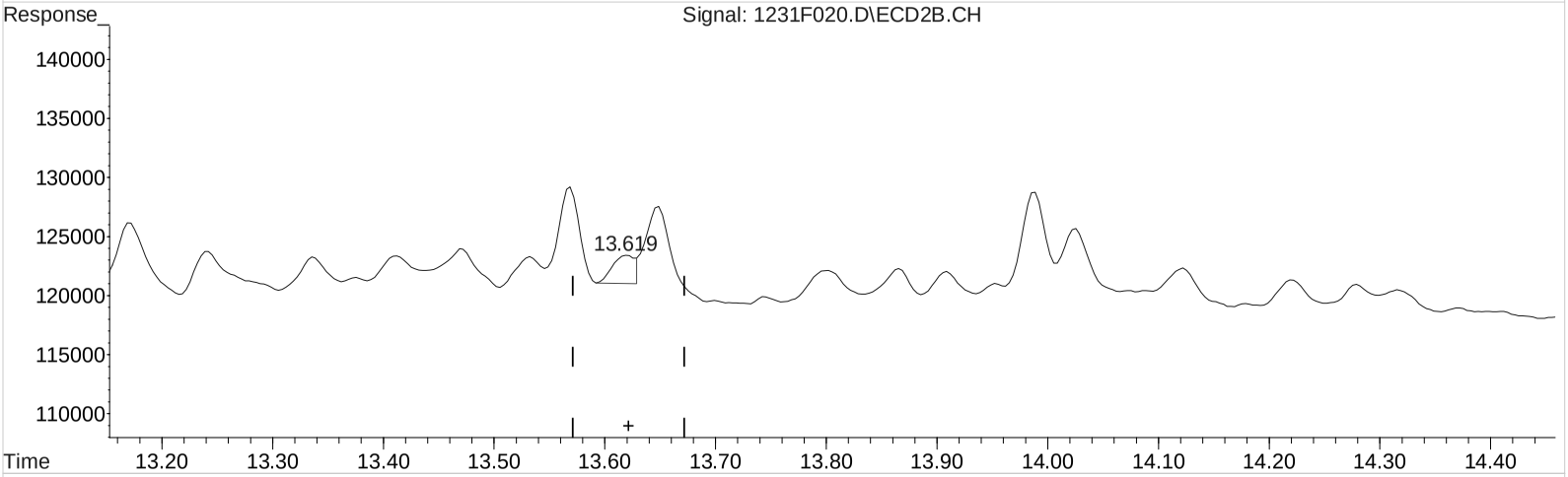
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F020.D Vial: 20
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:45 pm Operator: MCHAPPELLE
Sample : K1812382-001 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:48 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(22) 4,4'-DDT

14.902min 0.475 ug/L

response 3029

Manual Integration:

After

Baseline/Shoulder

01/01/19

(22) 4,4'-DDT #2

13.619min 0.176 ug/L m

response 3528

(+) = Expected Retention Time

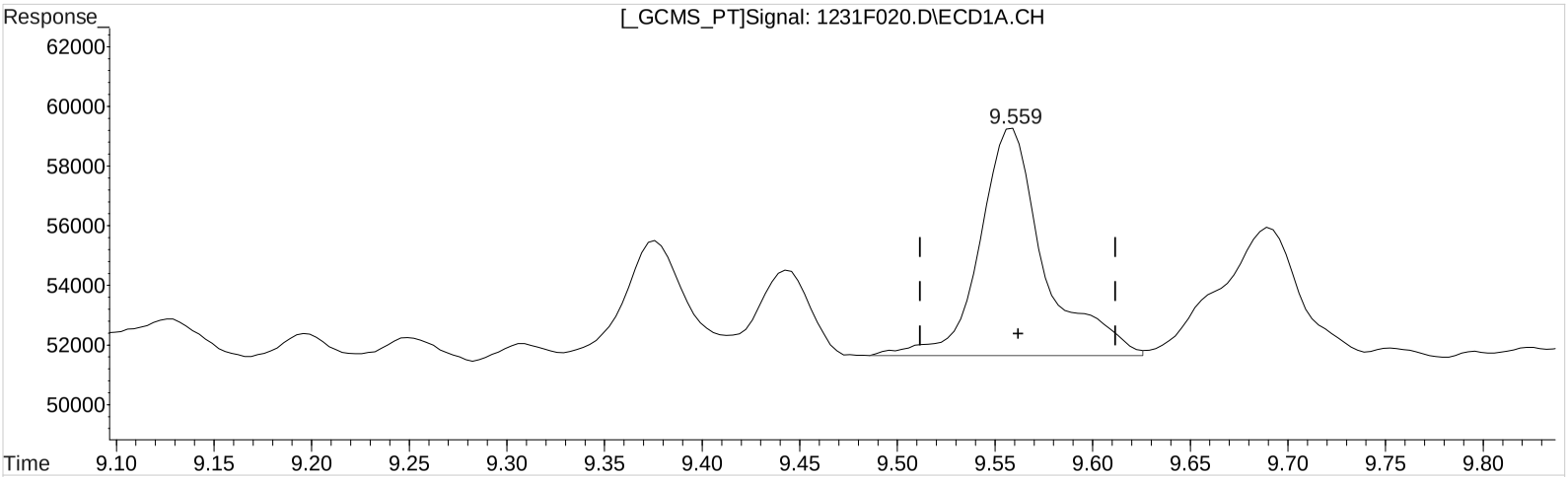
Quantitation Report (Qedit)

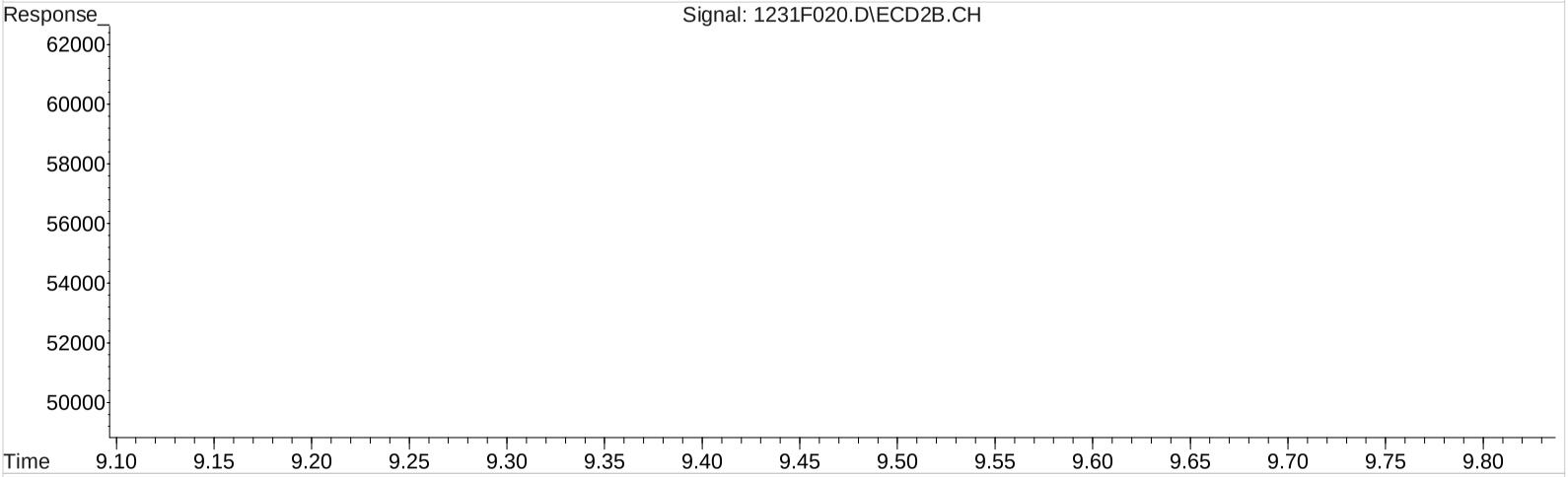
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F020.D Vial: 20
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:45 pm Operator: MCHAPPELLE
Sample : K1812382-001 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:48 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(3) alpha-BHC

9.559min 1.221 ug/L

response 17502

Manual Integration:

Before

01/01/19

(3) alpha-BHC #2

8.325min 0.877 ug/L

response 31416

(+) = Expected Retention Time

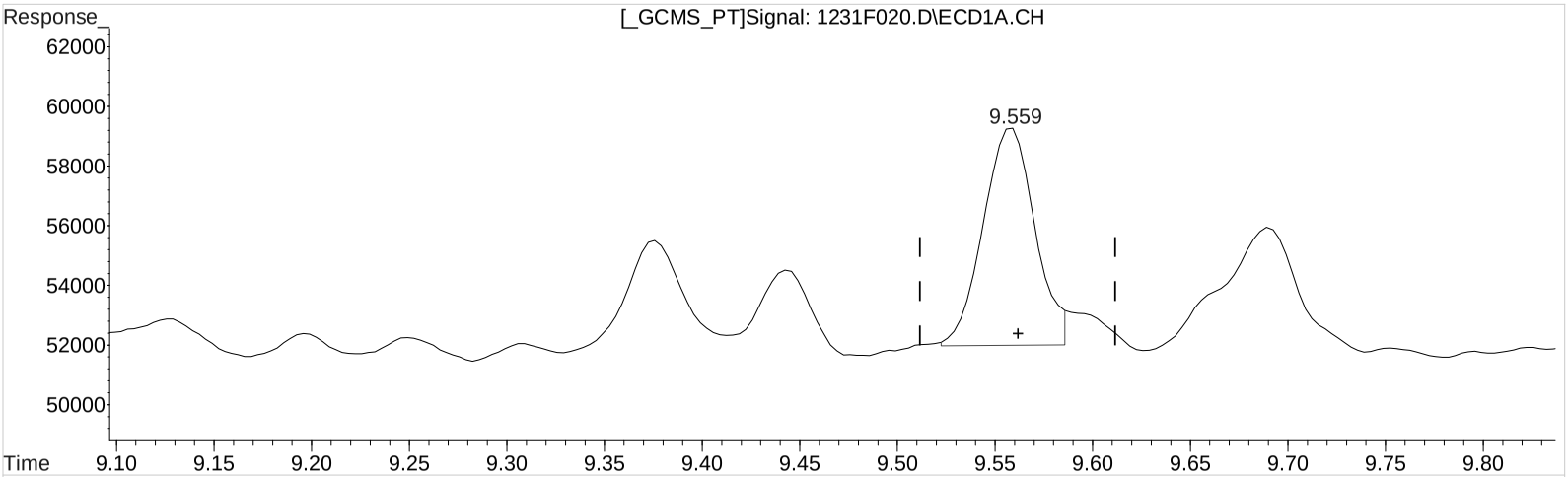
Quantitation Report (Qedit)

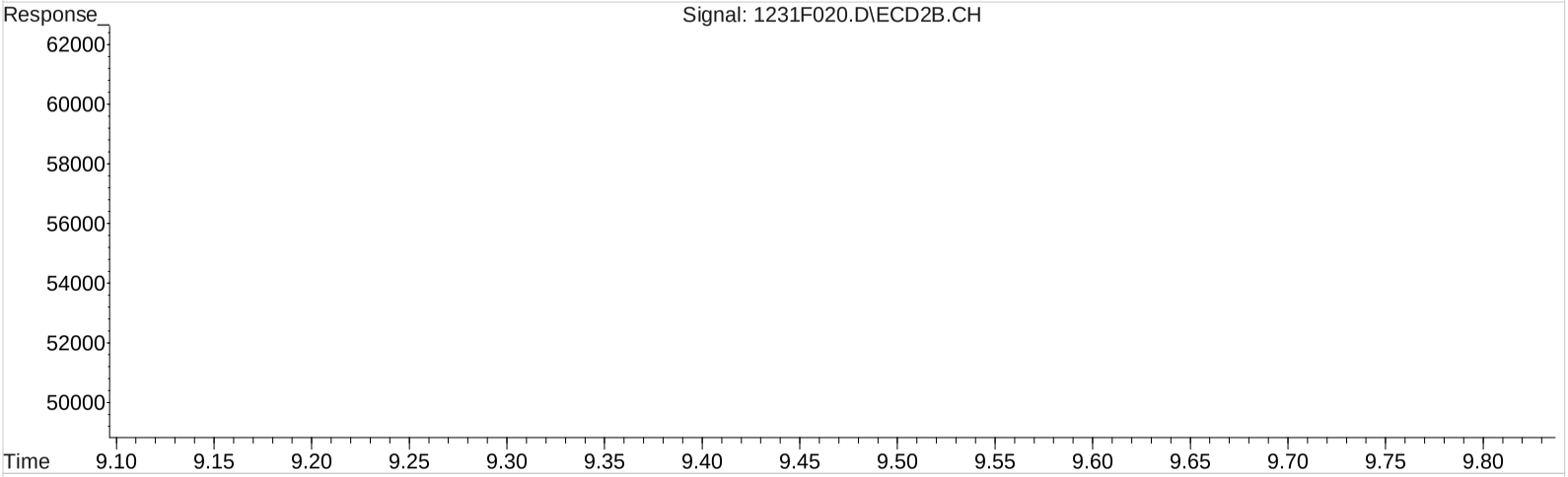
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F020.D Vial: 20
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:45 pm Operator: MCHAPPELLE
Sample : K1812382-001 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:48 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(3) alpha-BHC

9.559min 0.941 ug/L m

response 13488

Manual Integration:

After

Baseline/Shoulder

01/01/19

(3) alpha-BHC #2

8.325min 0.877 ug/L

response 31416

(+) = Expected Retention Time

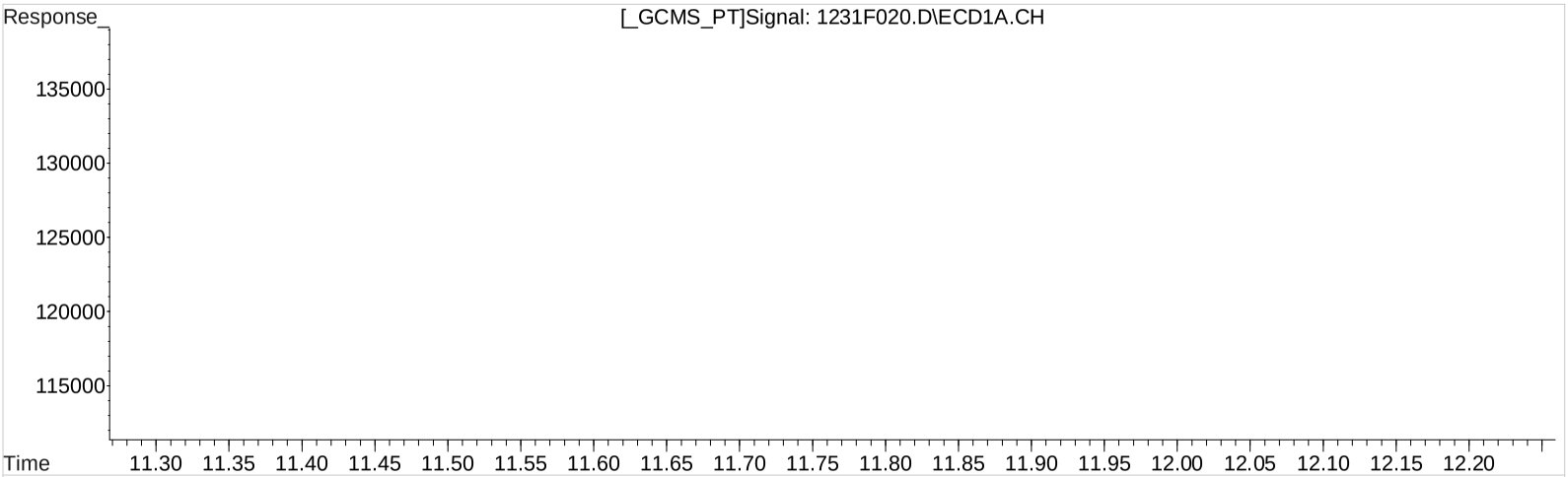
Quantitation Report (Qedit)

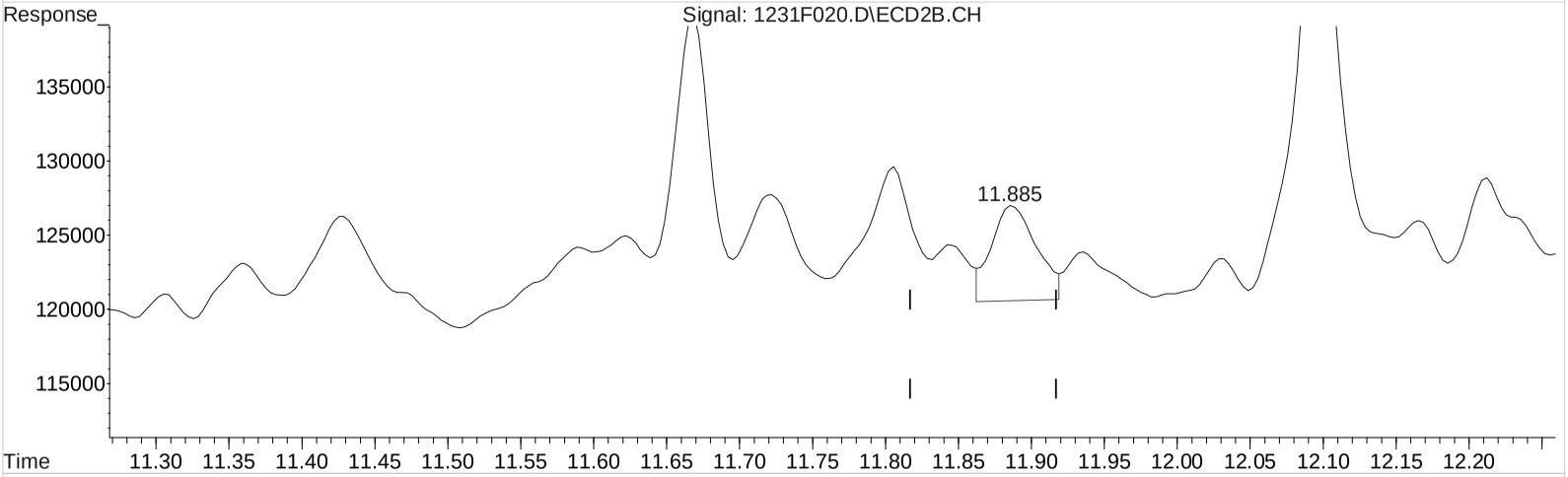
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F020.D Vial: 20
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:45 pm Operator: MCHAPPELLE
Sample : K1812382-001 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:48 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(47) trans-Nonachlor

13.342min 0.571 ug/L

response 7965

Manual Integration:

Before

01/01/19

(47) trans-Nonachlor #2

11.885min 0.375 ug/L

response 13838

(+) = Expected Retention Time

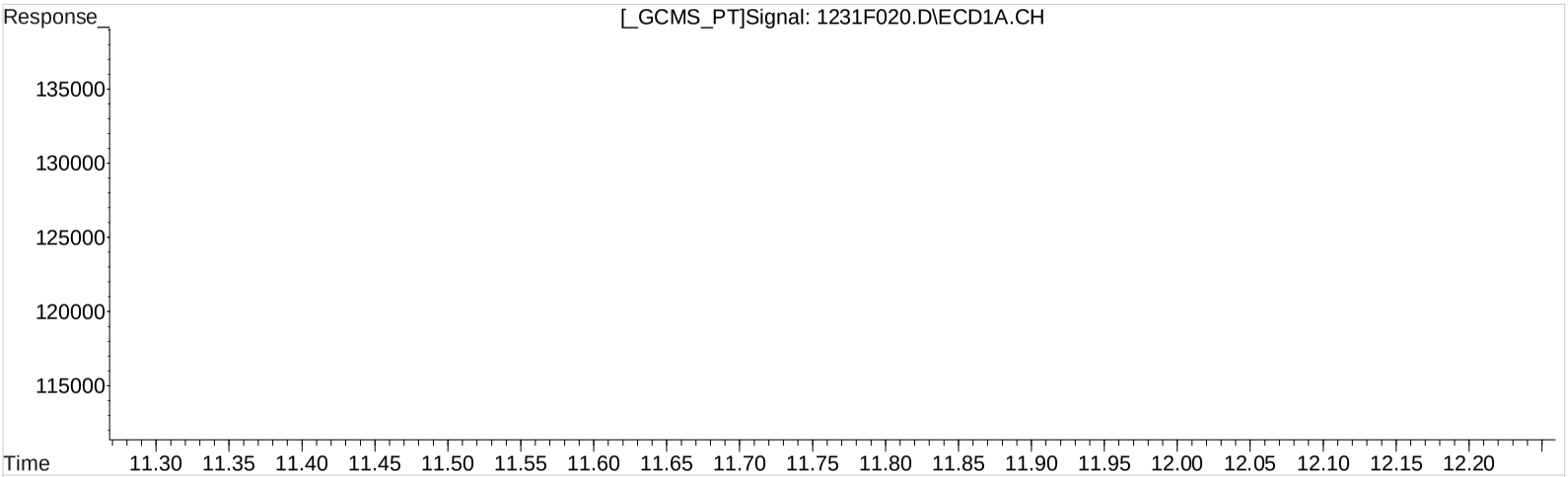
Quantitation Report (Qedit)

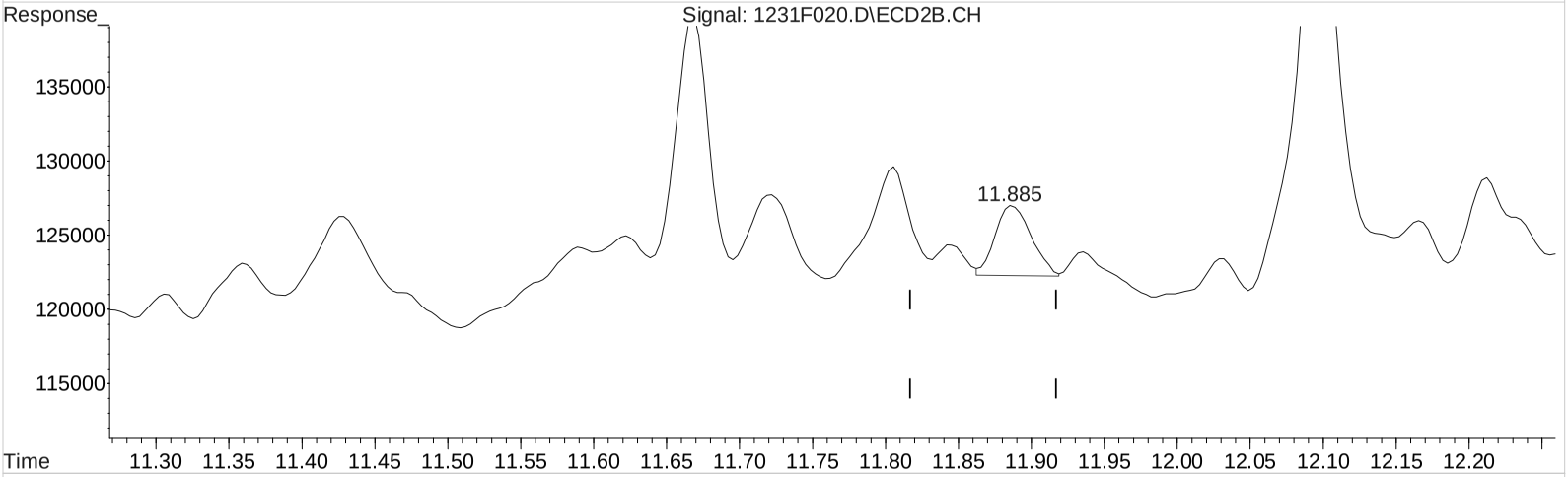
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F020.D Vial: 20
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:45 pm Operator: MCHAPPELLE
Sample : K1812382-001 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:48 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(47) trans-Nonachlor

13.342min 0.571 ug/L

response 7965

Manual Integration:

After

Baseline/Shoulder

01/01/19

(47) trans-Nonachlor #2

11.885min 0.220 ug/L m

response 8114

(+) = Expected Retention Time

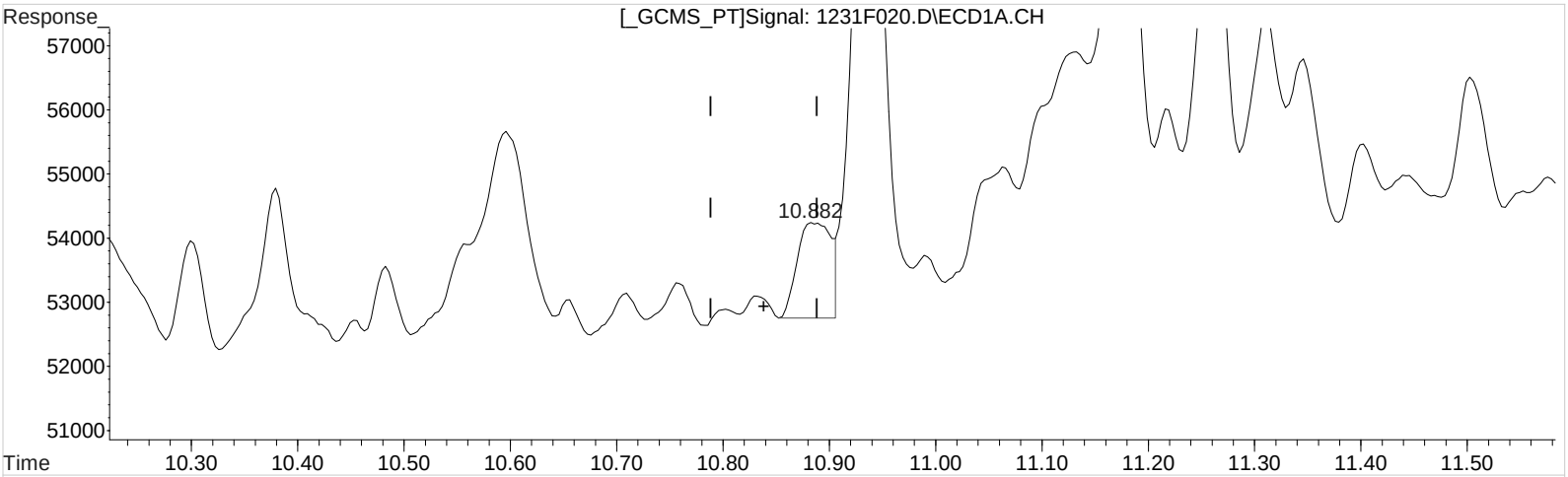
Quantitation Report (Qedit)

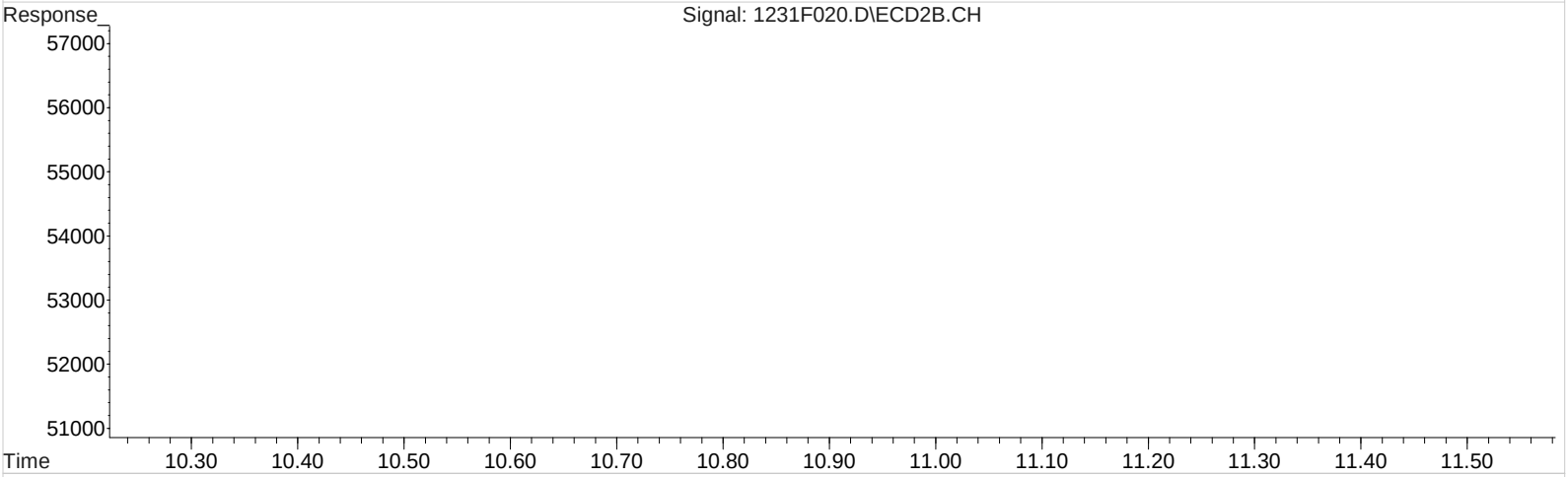
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F020.D Vial: 20
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:45 pm Operator: MCHAPPELLE
Sample : K1812382-001 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:48 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.882min 0.489 ug/L

response 3405

Manual Integration:

Before

01/01/19

(5) beta-BHC #2

9.599min 0.986 ug/L

response 16358

(+) = Expected Retention Time

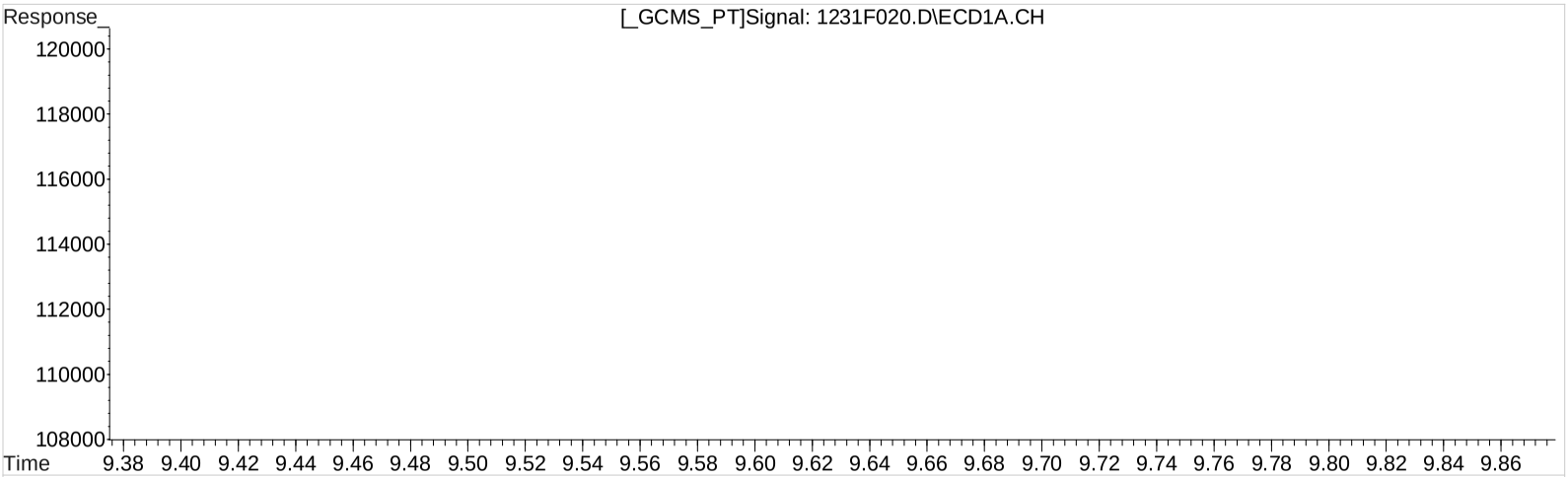
Quantitation Report (Qedit)

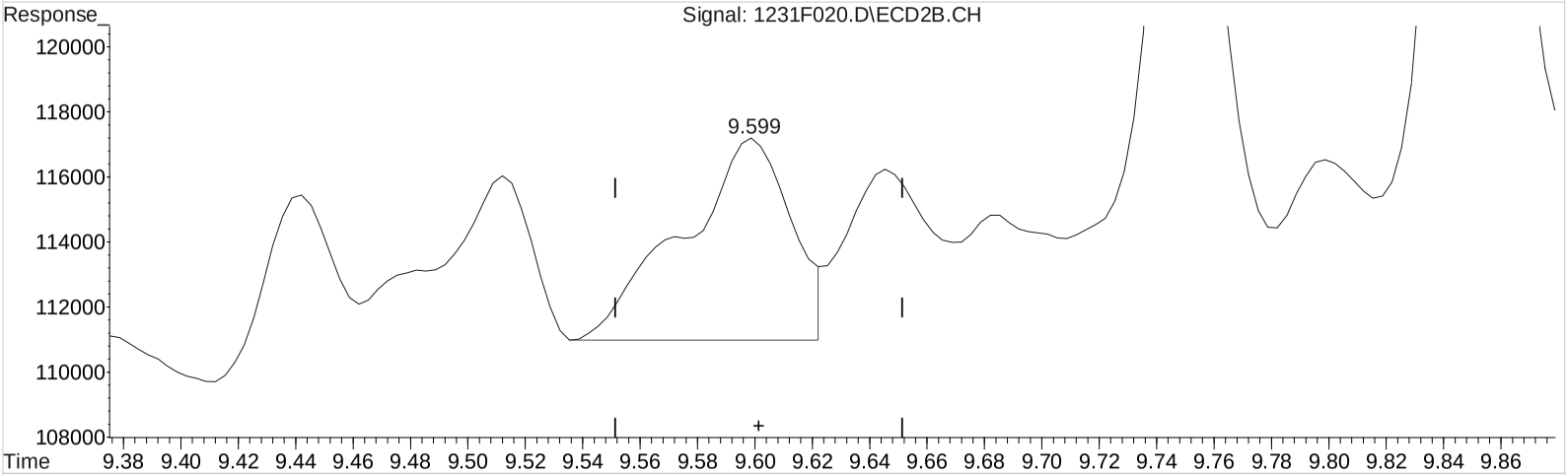
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F020.D Vial: 20
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:45 pm Operator: MCHAPPELLE
Sample : K1812382-001 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:48 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.829min 0.066 ug/L m

response 456

(5) beta-BHC #2

9.599min 0.986 ug/L

response 16358

Manual Integration:

Before

01/01/19

(+) = Expected Retention Time

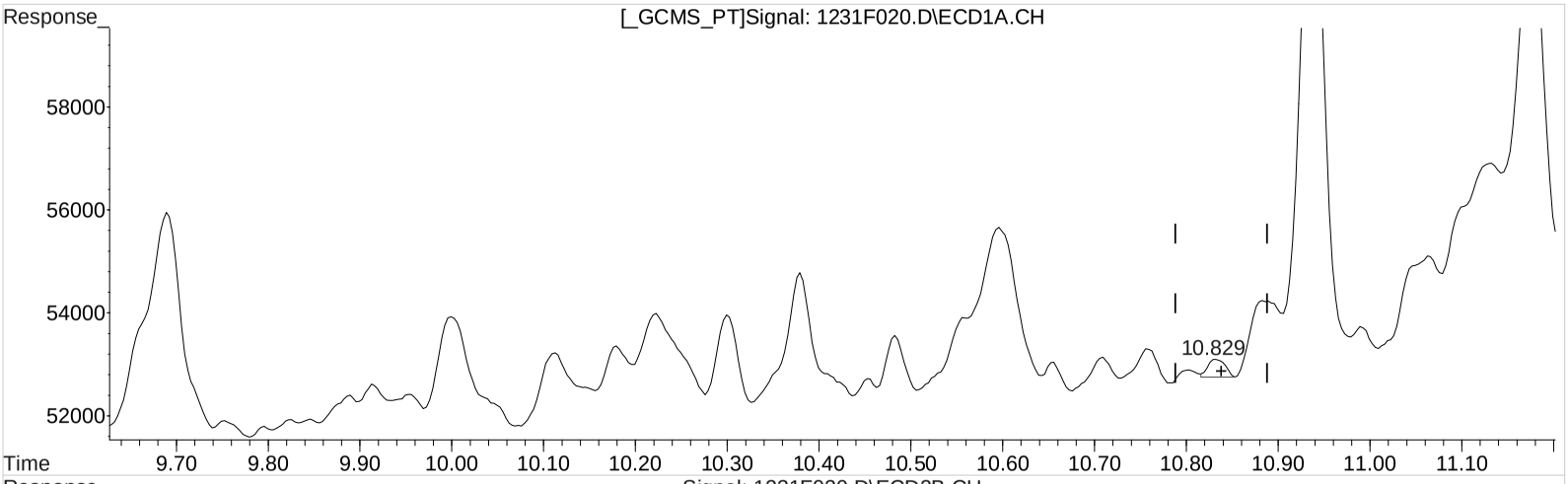
Quantitation Report (Qedit)

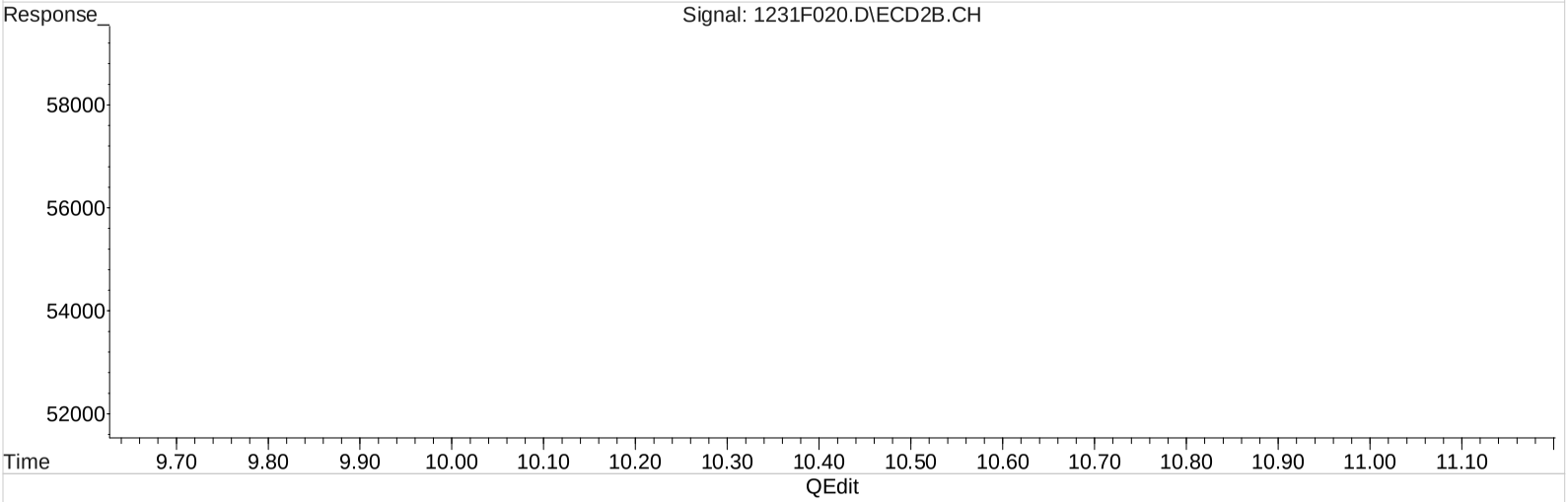
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F020.D Vial: 20
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:45 pm Operator: MCHAPPELLE
Sample : K1812382-001 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:48 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.829min 0.066 ug/L m

response 456

Manual Integration:

After

Wrong Peak

01/01/19

(5) beta-BHC #2

9.599min 0.986 ug/L

response 16358

(+) = Expected Retention Time

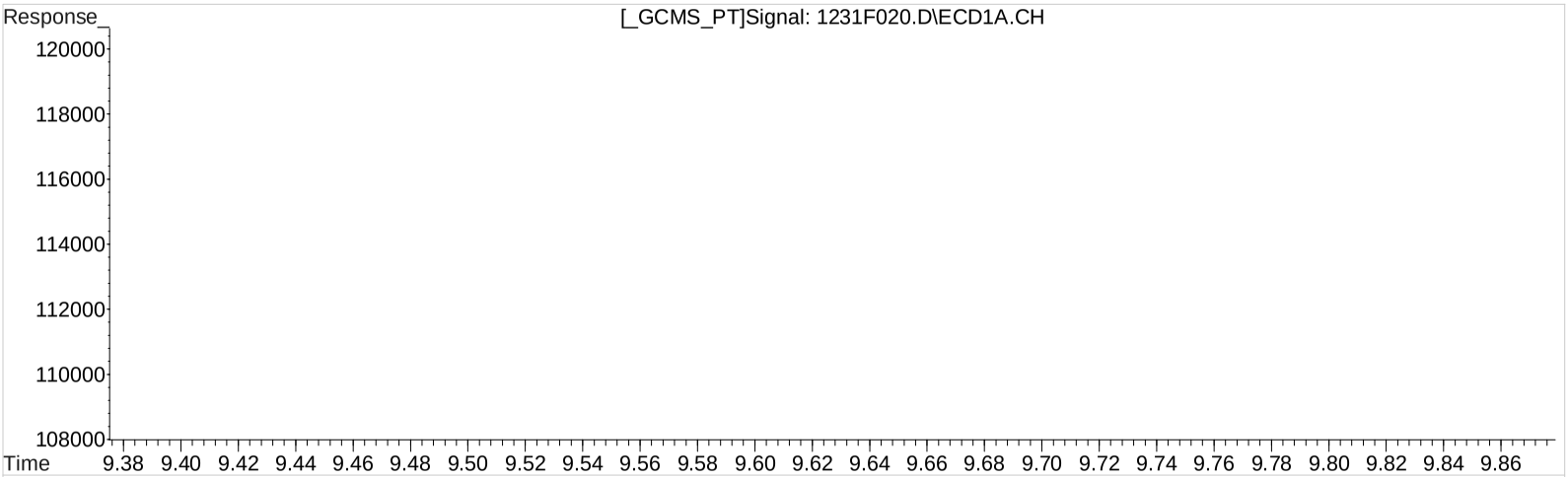
Quantitation Report (Qedit)

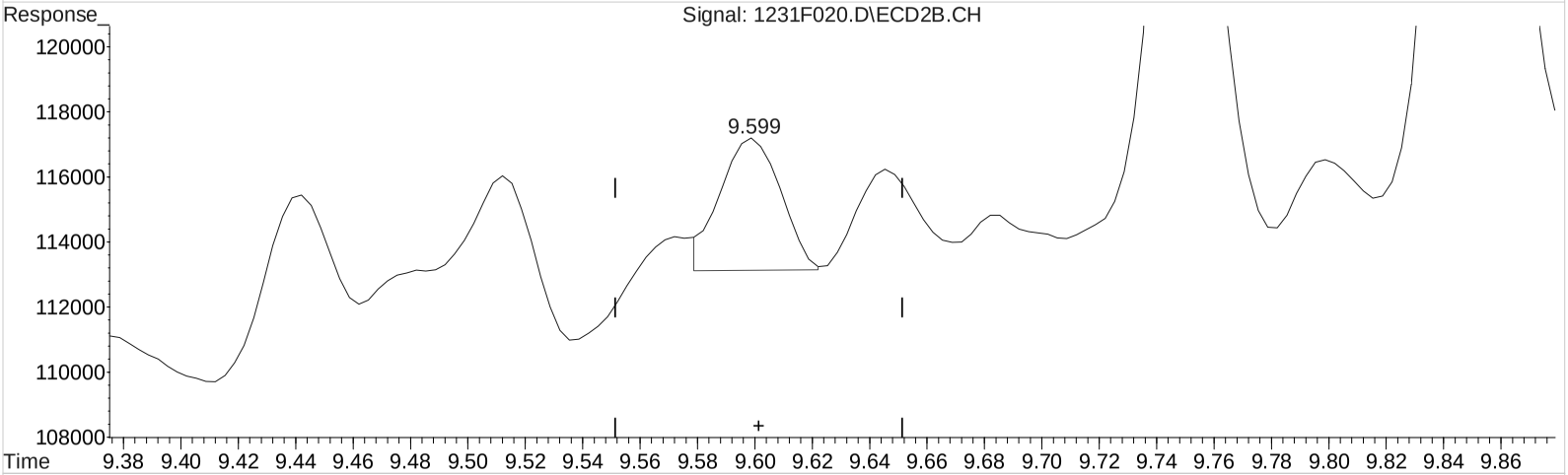
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F020.D Vial: 20
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:45 pm Operator: MCHAPPELLE
Sample : K1812382-001 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:48 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.829min 0.066 ug/L m

response 456

Manual Integration:

After

Baseline/Shoulder

01/01/19

(5) beta-BHC #2

9.599min 0.357 ug/L m

response 5917

(+) = Expected Retention Time

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F014.D
Lab ID: KWG1806665-5
RunType: MB
Matrix: SOIL

Date Acquired: 12/31/2018 17:48
Date Quantitated: 01/01/2019 15:46
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	alpha-BHC	21.1	NA	20	ICVOK
	Hexachlorobenzene	21.7	NA	20	
	beta-BHC	24.9	NA	20	
	gamma-BHC (Lindane)	20.5	NA	20	
	delta-BHC	23.5	NA	20	
	Aldrin	24.6	NA	20	
	Isodrin	33.6	NA	20	
	gamma-Chlordane	23.5	NA	20	
	Endosulfan I	28.0	NA	20	
	alpha-Chlordane	20.7	NA	20	
	4,4'-DDE	23.6	NA	20	
	Endrin	21.7	NA	20	
	4,4'-DDD	21.0	NA	20	
	Endrin Aldehyde	22.5	NA	20	
	2,4'-DDE	27.0	NA	20	
	2,4'-DDT	20.4	NA	20	

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F014.D\1231F014C.D
Lab ID: KWG1806665-5
RunType: MB
Matrix: SOIL

Date Acquired: 12/31/2018 17:48
Date Quantitated: 01/01/2019 15:46
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F014.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F014.D\1231F014c.d			**Vial:**	14
Acqu Date:	12/31/2018 17:48	**Quant Date:**	01/01/2019 15:46	**Dilution:**	1.0
Run Type:	MB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806665-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/21/2018

Analysis Lot:	KWG1900100	**Prep Lot:**	KWG1806665	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511		
Prep Ref:	1707459	**Prep Date:**	12/21/2018		

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:			
MB Ref:		**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	-0.05 c	5.34	-0.04 c	920259	2637469	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01	-0.10 c	5.34	-0.08 c	920259	2637469	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01	-0.10 c	5.34	-0.08 c	920259	2637469	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.01	-0.10 c	5.34	-0.08 c	920259	2637469	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2	Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt	
1	Tetrachloro-m-xylene	8.73	+0.01	7.10	60705	170120	3.99		4.48				90	OK
					%Recovery =		80	OK	90	OK	Limits =	70-130		
1	Decachlorobiphenyl	18.40	+0.01	16.86	67779	156859	4.41		4.80				96	OK
					%Recovery =		88	OK	96	OK	Limits =	70-130		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC	9.55	-0.01	8.31	-0.01	1082	499m	0.0790	0.0150	0.00010U	0.00010U	0.00010U
1	Hexachlorobenzene	9.69	-0.03	8.11	+0.01	1278	1802	0.0670	0.0390	0.00010U	0.00010U	0.00010U
1	beta-BHC			9.60		0	4140	0.0000	0.2620	0.00010U	0.00010U	0.00010U
1	gamma-BHC (Lindane)	10.26	+0.03	9.05	-0.01	1217	2166	0.1010	0.0710	0.00010U	0.00010U	0.00010U
1	delta-BHC					0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor	11.43	+0.01	9.75	+0.01	1016	29195	0.0900	0.9260	0.00010U	0.00010U	0.00010U
1	Aldrin					0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Isodrin			11.14	+0.03	0d	1718	0.0000	0.0670	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide					0	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F014.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F014.D\1231F014c.d			**Vial:**	14
Acqu Date:	12/31/2018 17:48	**Quant Date:**	01/01/2019 15:46	**Dilution:**	1.0
Run Type:	MB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806665-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane		11.84 +0.02c	0	705	0.0000	0.0250	0.00010U	0.00010U	0.00010U
1	Endosulfan I		12.04 +0.02	0	1445	0.0000	0.0570	0.00010U	0.00010U	0.00010U
1	alpha-Chlordane		11.94 -0.02	0	3923	0.0000	0.1370	0.00010U	0.00010U	0.00010U
1	Dieldrin		12.45 -0.01	0	2272	0.0000	0.0840	0.00010U	0.00010U	0.00010U
1	4,4'-DDE	13.57	12.33 +0.01	1158m	7043	0.0960	0.2540	0.00010U	0.00010U	0.00010U
1	Endrin			0d	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan II	14.58 +0.01		5974	0	0.5620	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDD	14.41 +0.01	13.17 -0.03	932m	5297	0.1080	0.2610	0.00010U	0.00010U	0.00010U
1	Endrin Aldehyde			0d	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan Sulfate		14.03 -0.02	0	23098	0.0000	0.9480	0.00010U	0.00010U	0.00010U
1	4,4'-DDT		13.65 +0.03	0	11524	0.0000	0.6030	0.00010U	0.00010U	0.00010U
1	Endrin Ketone		14.95 -0.03	0	9117	0.0000	0.3400	0.00010U	0.00010U	0.00010U
1	Methoxychlor	15.63 -0.02	14.72	4516	1382	1.21	0.1250	0.00010U	0.00010U	0.00010U
1	2,4'-DDE	12.98	11.84 c	4297	705	0.4650	0.0330	0.00010U	0.00010U	0.00010U
1	2,4'-DDD		12.64	0	21389	0.0000	1.15	0.00010U	0.00010U	0.00010U
1	2,4'-DDT		13.09	0	980	0.0000	0.0440	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	0.0000	5.13	0.00200U	0.00200U	0.00200U
2	Toxaphene {1}			0	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {2}		13.48	0d	1899	0.0000	11.50	0.0020U	0.0020U	
2	Toxaphene {3}			0d	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}		14.13 +0.04	0	1072	0.0000	3.93	0.0020U	0.0020U	
2	Toxaphene {5}		14.47	0	983	0.0000	1.86	0.0020U	0.0020U	
2	Toxaphene {6}		14.72 +0.05	0d	1382	0.0000	3.24	0.0020U	0.0020U	
	Chlordane			0	0	0.0000	1.54	0.00100U	0.00100U	0.00100U
3	Chlordane {1}		9.38 -0.01	0	992	0.0000	0.8710	0.0010U	0.0010U	
3	Chlordane {2}			0d	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {3}		11.84 +0.02	0d	705	0.0000	0.2450	0.0010U	0.0010U	
3	Chlordane {4}		11.84 -0.03	0	705	0.0000	0.3970	0.0010U	0.0010U	
3	Chlordane {5}		11.94 +0.01	0	3923	0.0000	4.67	0.0010U	0.0010U	
3	Chlordane {6}		11.94 -0.03	0	3923	0.0000	1.52	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F014.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 5:48 pm Operator: MCHAPPELLE
Sample : KWG1806665-5 LB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:46:02 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.009	5.342	920259	2637469	100.000	100.000
29)	1-Bromo-2...	6.009	5.342	920259	2637469	100.000	100.000
36)	1-Bromo-2...	6.009	5.342	920259	2637469	100.000	100.000
43)	1-Bromo-2...	6.009	5.342	920259	2637469	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.729	7.105	60705	170120	3.994	4.483
28) s	Decachlor...	18.402	16.865	67779	156859	4.405	4.804
	Target Compounds						
3)	alpha-BHC	9.549	8.312	1082	499	0.079	0.015m#
4)	Hexachlor...	9.692f	8.115	1278	1802	0.067	0.039 #
5)	beta-BHC	0.000	9.605	0	4140	N.D.	0.262 #
6)	gamma-BHC...	10.262f	9.055	1217	2166	0.101	0.071 #
8)	Heptachlor	11.425	9.755	1016	29195	0.090	0.926 #
10)	Isodrin	0.000	11.138	0	1718	N.D. d	0.067
12)	gamma-Chl...	0.000	11.845f	0	705	N.D.	0.025 #
13)	Endosulfan I	0.000	12.038	0	1445	N.D.	0.057 #
14)	alpha-Chl...	0.000	11.938	0	3923	N.D.	0.137 #
15)	Dieldrin	0.000	12.452	0	2272	N.D.	0.084 #
16)	4,4'-DDE	13.565	12.328	1158	7043	0.096m	0.254 #
18)	Endosulfa...	14.582	0.000	5974	0	0.562	N.D. #
19)	4,4'-DDD	14.409	13.175f	932	5297	0.108m	0.261 #
21)	Endosulfa...	0.000	14.028f	0	23098	N.D.	0.948 #
22)	4,4'-DDT	0.000	13.655f	0	11524	N.D.	0.603 #
23)	Endrin Ke...	0.000	14.952f	0	9117	N.D.	0.340 #
24)	Methoxychlor	15.632	14.722	4516	1382	1.212	0.125 #
25)	2,4'-DDE	12.979	11.845	4297	705	0.465	0.033 #
26)	2,4'-DDD	0.000	12.638	0	21389	N.D.	1.148 #
27)	2,4'-DDT	0.000	13.092f	0	980	N.D.	0.044 #
31)	Toxaphene...	0.000	13.478	0	1899	N.D. d	11.500
33)	Toxaphene...	0.000	14.128f	0	1072	N.D.	3.931 #
34)	Toxaphene...	0.000	14.472	0	983	N.D.	1.858 #
35)	Toxaphene...	0.000	14.722f	0	1382	N.D. d	3.235
37)	Chlordane	0.000	9.382	0	992	N.D.	0.871 #
39)	Chlordane...	0.000	11.845	0	705	N.D. d	0.245
40)	Chlordane...	0.000	11.845	0	705	N.D.	0.397 #
41)	Chlordane...	0.000	11.938	0	3923	N.D.	4.668 #
42)	Chlordane...	0.000	11.938f	0	3923	N.D.	1.518 #
44)	Chlorpyrifos	11.892	10.705	1954	1461	0.321	0.084 #
45)	Oxychlordane	12.632f	11.172	1750	2426	0.143	0.072 #
46)	cis-Nonac...	14.362f	0.000	6067	0	0.435	N.D. d#
47)	trans-Non...	0.000	11.845	0	705	N.D.	0.020 #
48)	Mirex	0.000	15.188	0	2174	N.D.	0.070 #
49)	HCE	0.000	3.355	0	932	N.D.	0.019 #
50)	HCBD	0.000	3.895	0	2136	N.D.	0.053 #
52)	Perthane	13.899	12.758f	4030	1353	12.508	1.484 #

SemiQuant Compounds - Not Calibrated on this Instrument

Quantitation Report (QT Reviewed)

1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F014.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 5:48 pm Operator: MCHAPPELLE
Sample : KWG1806665-5 LB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:46:02 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

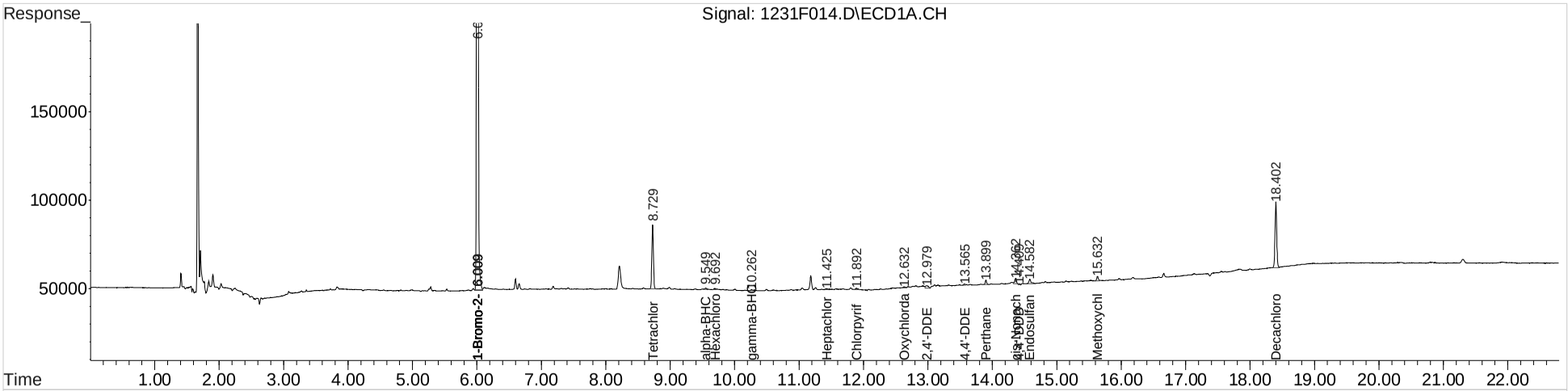
1st SM 01/01/19
2nd UA 01/07/19

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\123118\1231F014.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 5:48 pm Operator: MCHAPPELLE
Sample : KWG1806665-5 LB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:46:02 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

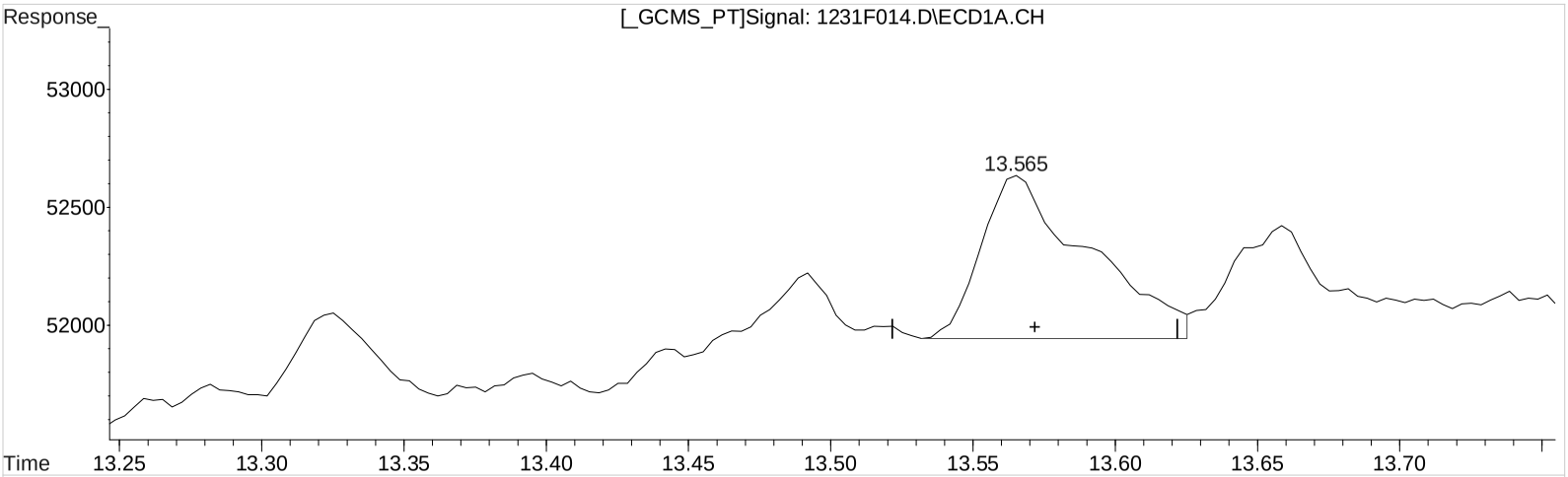


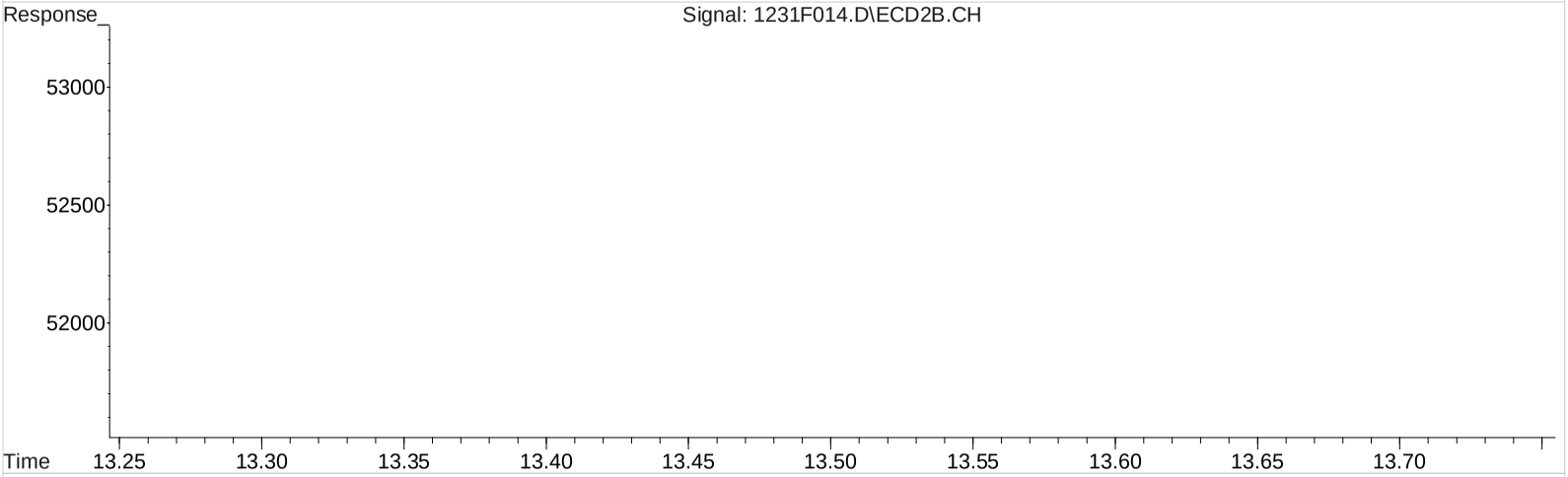
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F014.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 5:48 pm Operator: MCHAPPELLE
Sample : KWG1806665-5 LB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:23 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(16) 4,4'-DDE

13.565min 0.152 ug/L

response 1823

Manual Integration:

Before

01/01/19

(16) 4,4'-DDE #2

12.328min 0.254 ug/L

response 7043

(+) = Expected Retention Time

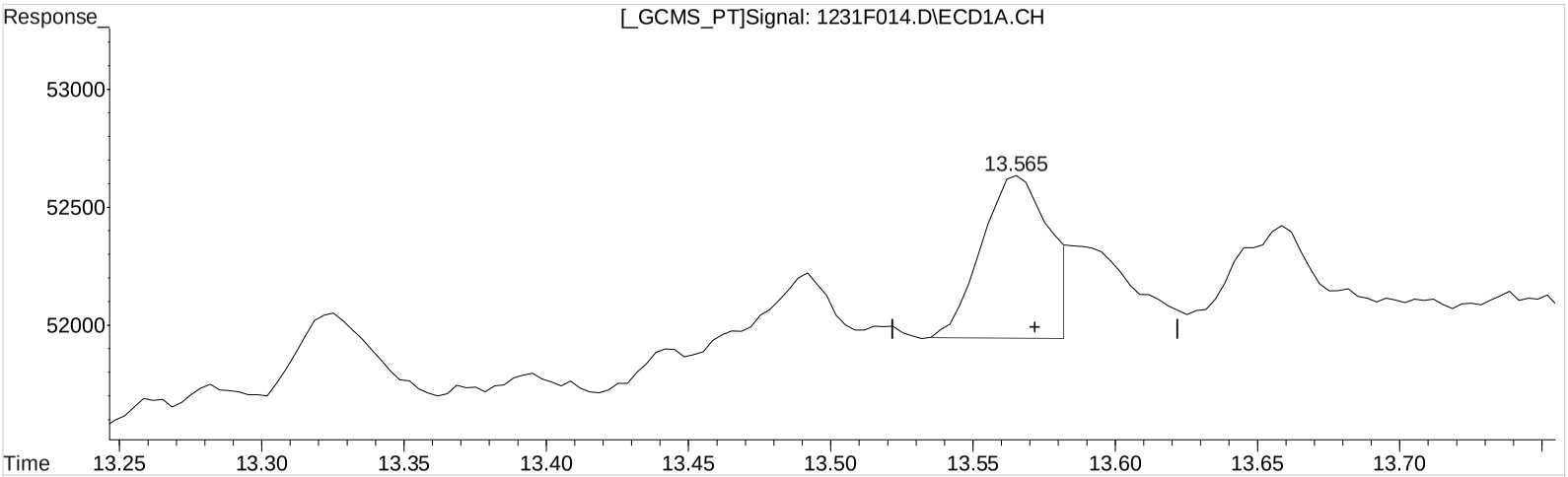
Quantitation Report (Qedit)

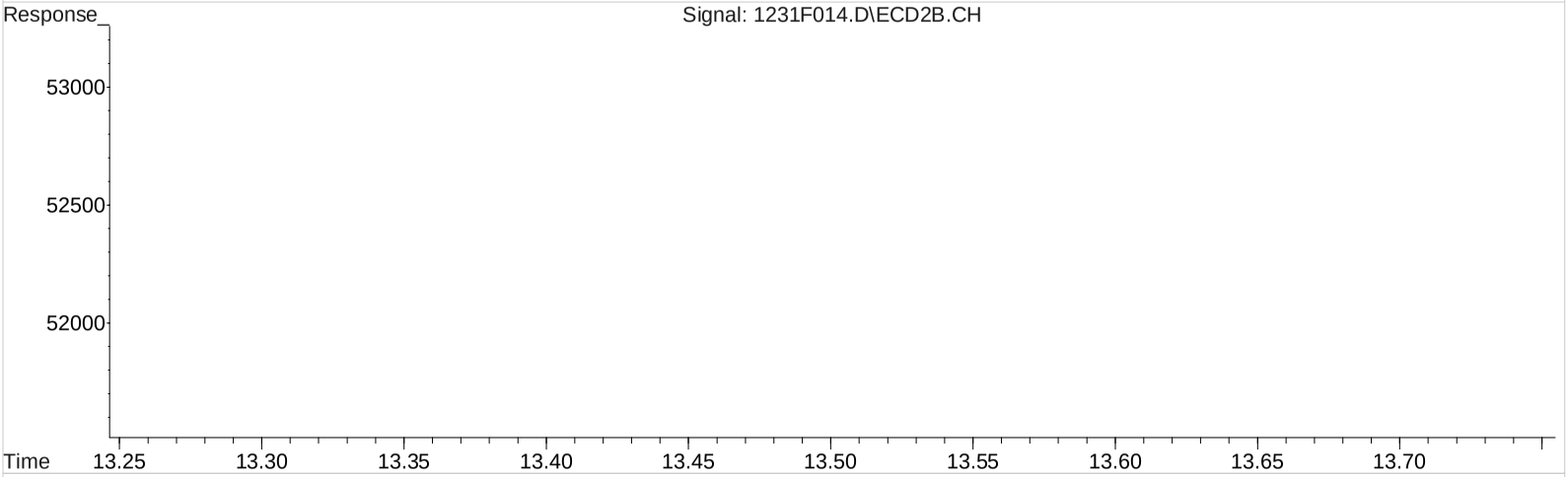
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F014.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 5:48 pm Operator: MCHAPPELLE
Sample : KWG1806665-5 LB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:23 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(16) 4,4'-DDE

13.565min 0.096 ug/L m

response 1158

Manual Integration:

After

Baseline/Shoulder

01/01/19

(16) 4,4'-DDE #2

12.328min 0.254 ug/L

response 7043

(+) = Expected Retention Time

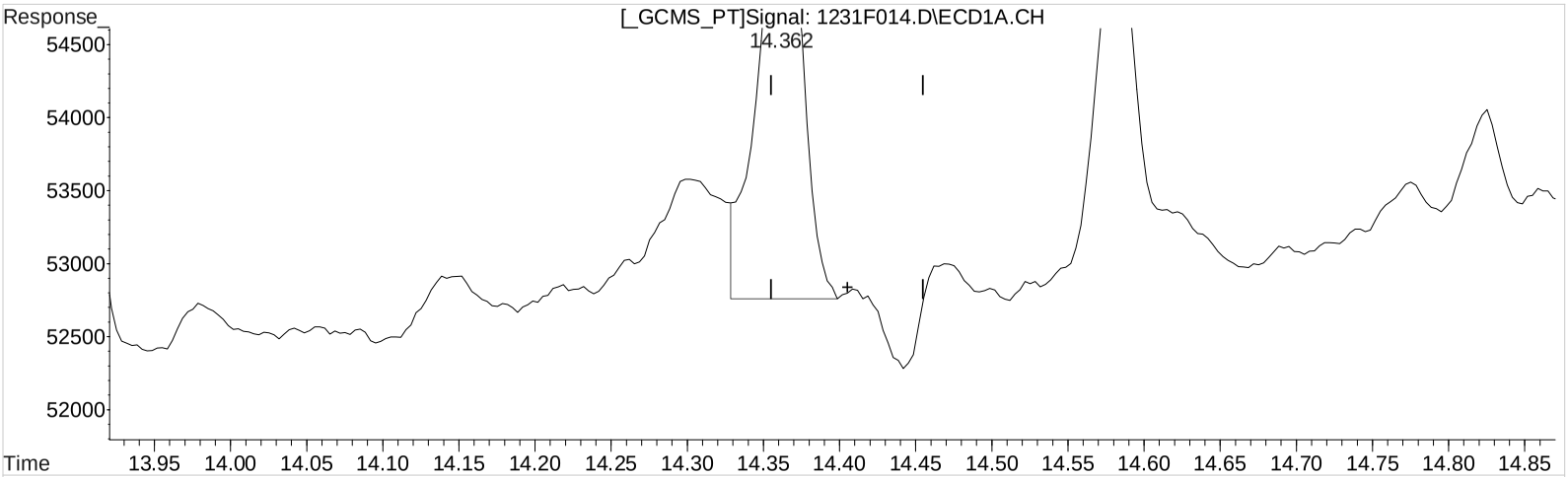
Quantitation Report (Qedit)

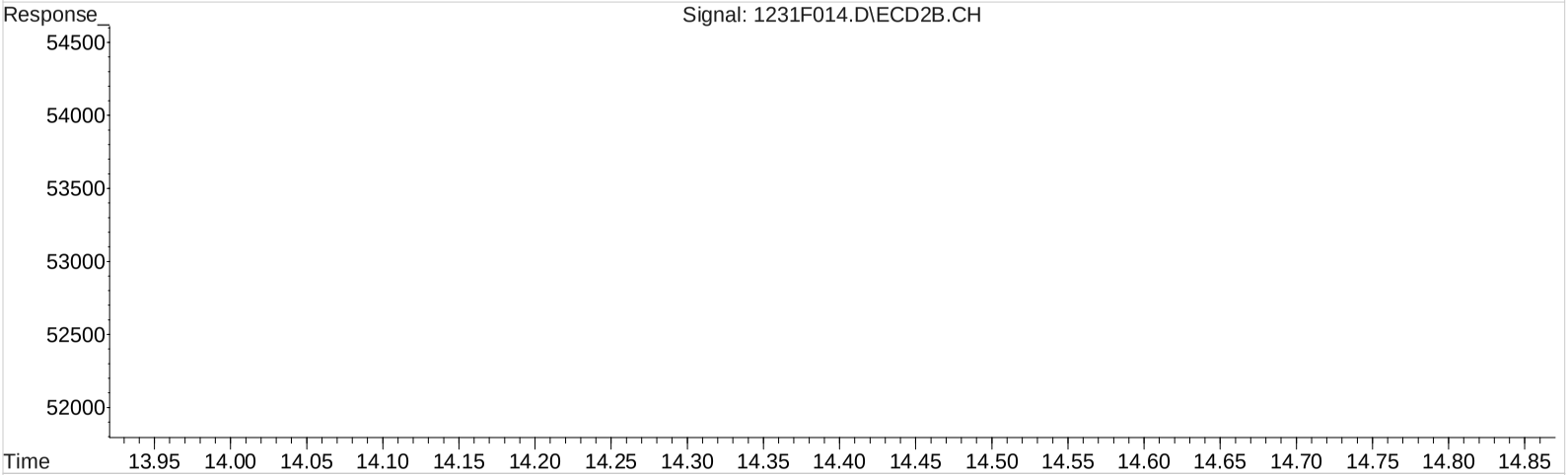
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F014.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 5:48 pm Operator: MCHAPPELLE
Sample : KWG1806665-5 LB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:23 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(19) 4,4'-DDD

14.362min 0.701 ug/L

response 6067

Manual Integration:

Before

01/01/19

(19) 4,4'-DDD #2

13.175min 0.261 ug/L

response 5297

(+) = Expected Retention Time

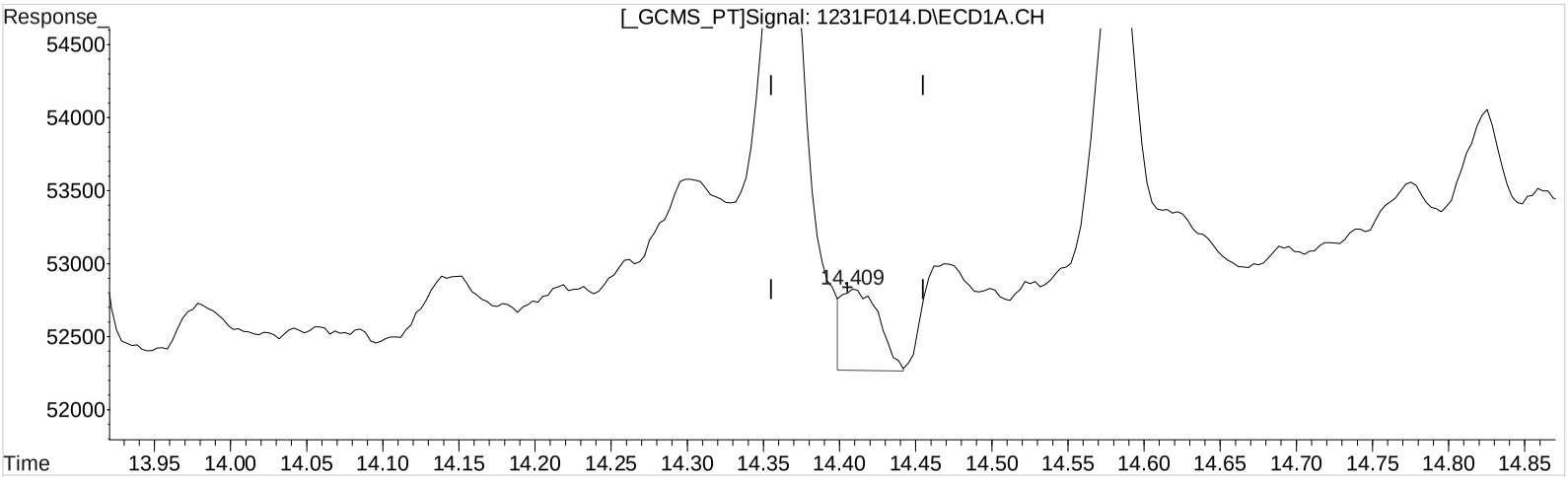
Quantitation Report (Qedit)

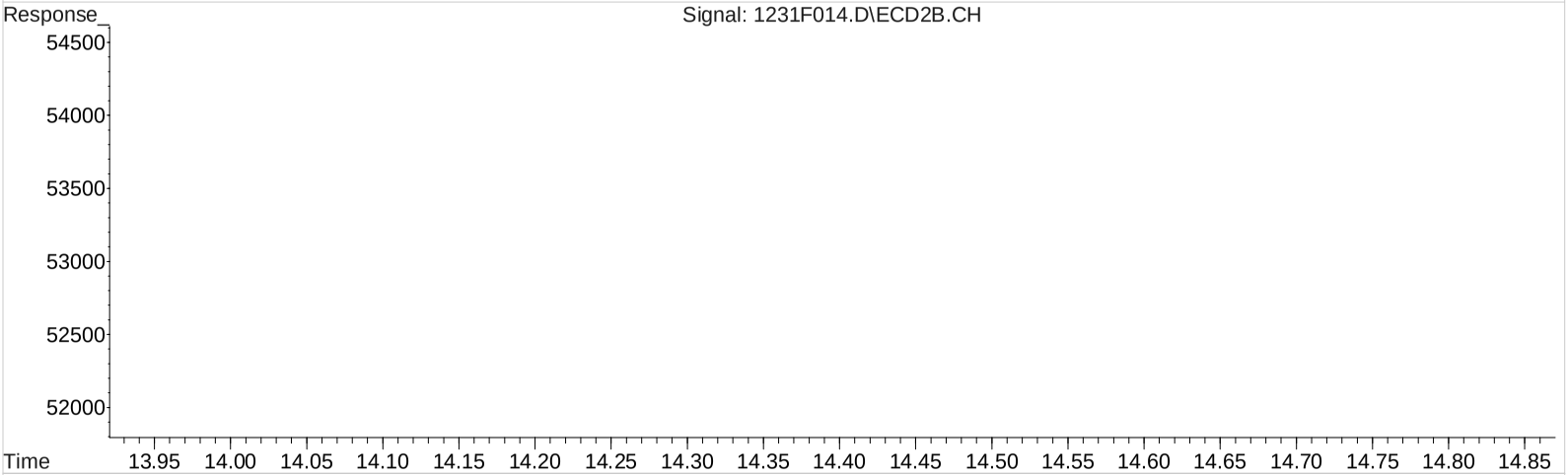
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F014.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 5:48 pm Operator: MCHAPPELLE
Sample : KWG1806665-5 LB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:23 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(19) 4,4'-DDD

14.409min 0.108 ug/L m

response 932

Manual Integration:

After

Wrong Peak

01/01/19

(19) 4,4'-DDD #2

13.175min 0.261 ug/L

response 5297

(+) = Expected Retention Time

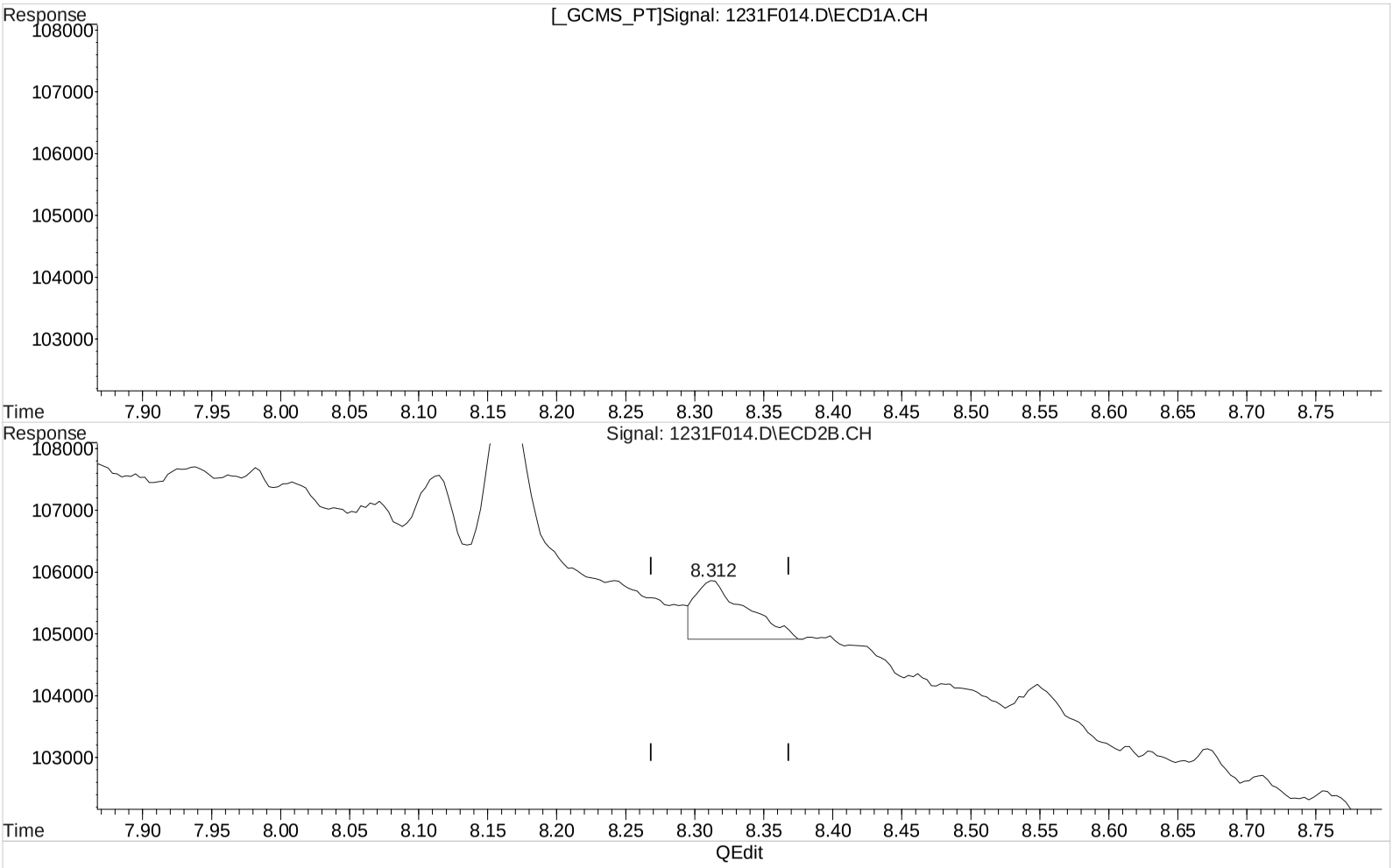
Quantitation Report (Qedit)

1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F014.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 5:48 pm Operator: MCHAPPELLE
Sample : KWG1806665-5 LB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:23 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(3) alpha-BHC

9.549min 0.079 ug/L

response 1082

Manual Integration:

Before

01/01/19

(3) alpha-BHC #2

8.312min 0.071 ug/L

response 2414

(+) = Expected Retention Time

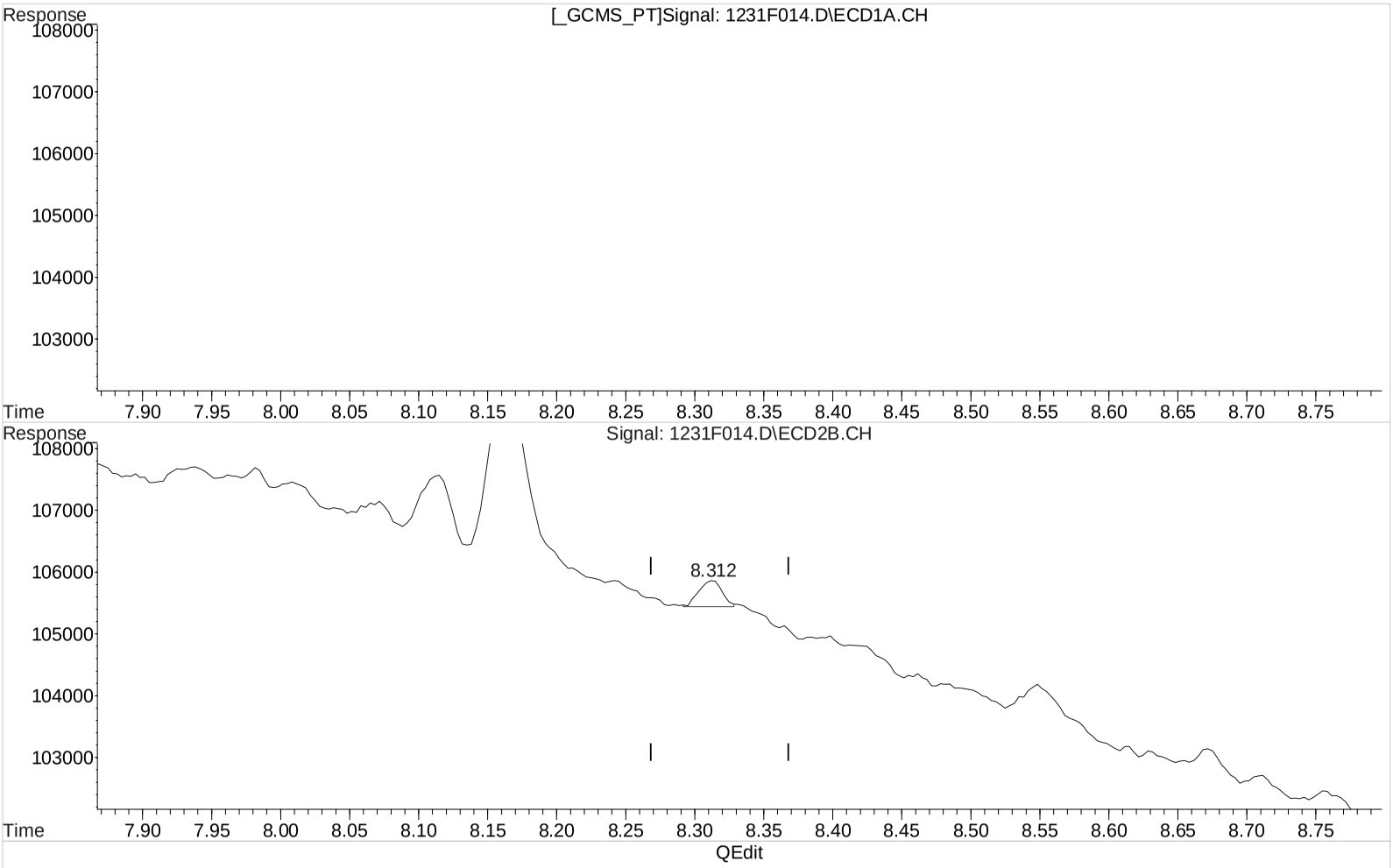
Quantitation Report (Qedit)

1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F014.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 5:48 pm Operator: MCHAPPELLE
Sample : KWG1806665-5 LB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:23 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(3) alpha-BHC

9.549min 0.079 ug/L

response 1082

Manual Integration:

After

Baseline/Shoulder

01/01/19

(3) alpha-BHC #2

8.312min 0.015 ug/L m

response 499

(+) = Expected Retention Time

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F015.D
Lab ID: KWG1806665-6
RunType: MB
Matrix: SOIL

Date Acquired: 12/31/2018 18:17
Date Quantitated: 01/01/2019 15:46
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	alpha-BHC	21.1	NA	20	ICVOK
	Hexachlorobenzene	21.7	NA	20	
	beta-BHC	24.9	NA	20	
	gamma-BHC (Lindane)	20.5	NA	20	
	delta-BHC	23.5	NA	20	
	Aldrin	24.6	NA	20	
	Isodrin	33.6	NA	20	
	gamma-Chlordane	23.5	NA	20	
	Endosulfan I	28.0	NA	20	
	alpha-Chlordane	20.7	NA	20	
	4,4'-DDE	23.6	NA	20	
	Endrin	21.7	NA	20	
	4,4'-DDD	21.0	NA	20	
	Endrin Aldehyde	22.5	NA	20	
	2,4'-DDE	27.0	NA	20	
	2,4'-DDT	20.4	NA	20	
Surrogates	Tetrachloro-m-xylene	68	70	130	

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F015.D\1231F015C.D
Lab ID: KWG1806665-6
RunType: MB
Matrix: SOIL

Date Acquired: 12/31/2018 18:17
Date Quantitated: 01/01/2019 15:46
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F015.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F015.D\1231F015c.d			**Vial:**	15
Acqu Date:	12/31/2018 18:17	**Quant Date:**	01/01/2019 15:46	**Dilution:**	1.0
Run Type:	MB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806665-6				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/21/2018

Analysis Lot:	KWG1900100	**Prep Lot:**	KWG1806665	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511		
Prep Ref:	1707460	**Prep Date:**	12/21/2018		

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:			
MB Ref:		**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.00 -0.06 c	5.34 -0.04 c	937949	2699169	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.00 -0.11 c	5.34 -0.08 c	937949	2699169	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.00 -0.11 c	5.34 -0.08 c	937949	2699169	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.00 -0.11 c	5.34 -0.08 c	937949	2699169	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt	
1	Tetrachloro-m-xylene	8.72	7.10	52832	139180	3.41	3.58			72	OK
				%Recovery =		68 *	72 OK	**Limits =**	70-130		
1	Decachlorobiphenyl	18.40 +0.01	16.86	63042	143308	4.02	4.29			86	OK
				%Recovery =		80 OK	86 OK	**Limits =**	70-130		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC	9.55 -0.01	8.31 -0.01	1530	2016	0.1090	0.0580	0.00010U	0.00010U	0.00010U
1	Hexachlorobenzene		8.11 +0.01	0	1566	0.0000	0.0330	0.00010U	0.00010U	0.00010U
1	beta-BHC		9.60	0	3891	0.0000	0.2400	0.00010U	0.00010U	0.00010U
1	gamma-BHC (Lindane)			0	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	delta-BHC			0	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor		9.75 +0.01	0	30340	0.0000	0.9400	0.00010U	0.00010U	0.00010U
1	Aldrin			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Isodrin			0	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide	12.69 -0.01		2032	0	0.1640	0.0000	0.00010U	0.00010U	0.00010U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F015.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F015.D\1231F015c.d			**Vial:**	15
Acqu Date:	12/31/2018 18:17	**Quant Date:**	01/01/2019 15:46	**Dilution:**	1.0
Run Type:	MB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806665-6				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan I		12.04 +0.02	0	892	0.0000	0.0350	0.00010U	0.00010U	0.00010U
1	alpha-Chlordane			0	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Dieldrin			0	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDE	13.56 -0.01		1095	0d	0.0900	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan II	14.58 +0.01		6482	0	0.5980	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDD	14.40	13.17 -0.03	2646	4754	0.3000	0.2290	0.00010U	0.00010U	0.00010U
1	Endrin Aldehyde			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan Sulfate		14.03 -0.02	0	8698	0.0000	0.3490	0.00010U	0.00010U	0.00010U
1	4,4'-DDT		13.65 +0.03	0	9148	0.0000	0.4680	0.00010U	0.00010U	0.00010U
1	Endrin Ketone			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Methoxychlor	15.63 -0.02	14.73 +0.01	2198	770	0.5790	0.0680	0.00010U	0.00010U	0.00010U
1	2,4'-DDE			0d	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDD		12.64	0	12183	0.0000	0.6390	0.00010U	0.00010U	0.00010U
1	2,4'-DDT			0	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	0.0000	22.62	0.00200U	0.00200U	0.00200U
2	Toxaphene {1}			0	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {2}		13.47 -0.01	0d	5692	0.0000	33.68	0.0020U	0.0020U	
2	Toxaphene {3}			0	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}			0	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {5}			0	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {6}		14.65 -0.02	0	5058	0.0000	11.57	0.0020U	0.0020U	
	Chlordane			0	0	0.0000	0.0000	0.00100U	0.00100U	0.00100U
3	Chlordane {1}			0d	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {2}			0	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {3}			0	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {4}			0	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {5}			0	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {6}			0	0d	0.0000	0.0000	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\123118\1231F015.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 6:17 pm Operator: MCHAPPELLE
Sample : KWG1806665-6 MB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:46:58 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.004	5.341	937949	2699169	100.000	100.000	
29)	1-Bromo-2...	6.004	5.341	937949	2699169	100.000	100.000	
36)	1-Bromo-2...	6.004	5.341	937949	2699169	100.000	100.000	
43)	1-Bromo-2...	6.004	5.341	937949	2699169	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	8.724	7.104	52832	139180	3.411	3.584	
28) s	Decachlor...	18.401	16.864	63042	143308	4.019	4.288	
	Target Compounds							
3)	alpha-BHC	9.548	8.307	1530	2016	0.109	0.058	#
4)	Hexachlor...	0.000	8.111	0	1566	N.D.	0.033	#
5)	beta-BHC	0.000	9.601	0	3891	N.D.	0.240	#
8)	Heptachlor	0.000	9.754	0	30340	N.D.	0.940	#
11)	Heptachlo...	12.694	0.000	2032	0	0.164	N.D.	#
13)	Endosulfan I	0.000	12.044	0	892	N.D.	0.035	#
16)	4,4'-DDE	13.561	0.000	1095	0	0.090	N.D.	d#
18)	Endosulfa...	14.578	0.000	6482	0	0.598	N.D.	#
19)	4,4'-DDD	14.404	13.174f	2646	4754	0.300	0.229	
21)	Endosulfa...	0.000	14.027f	0	8698	N.D.	0.349	#
22)	4,4'-DDT	0.000	13.651f	0	9148	N.D.	0.468	#
24)	Methoxychlor	15.631	14.727	2198	770	0.579	0.068	#
26)	2,4'-DDD	0.000	12.637	0	12183	N.D.	0.639	#
31)	Toxaphene...	0.000	13.474	0	5692	N.D. d	33.681	
35)	Toxaphene...	0.000	14.654	0	5058	N.D.	11.568	#
44)	Chlorpyrifos	0.000	10.704	0	1217	N.D.	0.069	#
45)	Oxychlordane	12.694f	11.171	2032	2606	0.162	0.076	#
46)	cis-Nonac...	0.000	13.087f	0	814	N.D. d	0.021	
48)	Mirex	0.000	15.191	0	862	N.D.	0.027	#
50)	HCBD	0.000	3.887	0	1599	N.D.	0.039	#
52)	Perthane	13.898	0.000	3336	0	10.159	N.D.	#

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

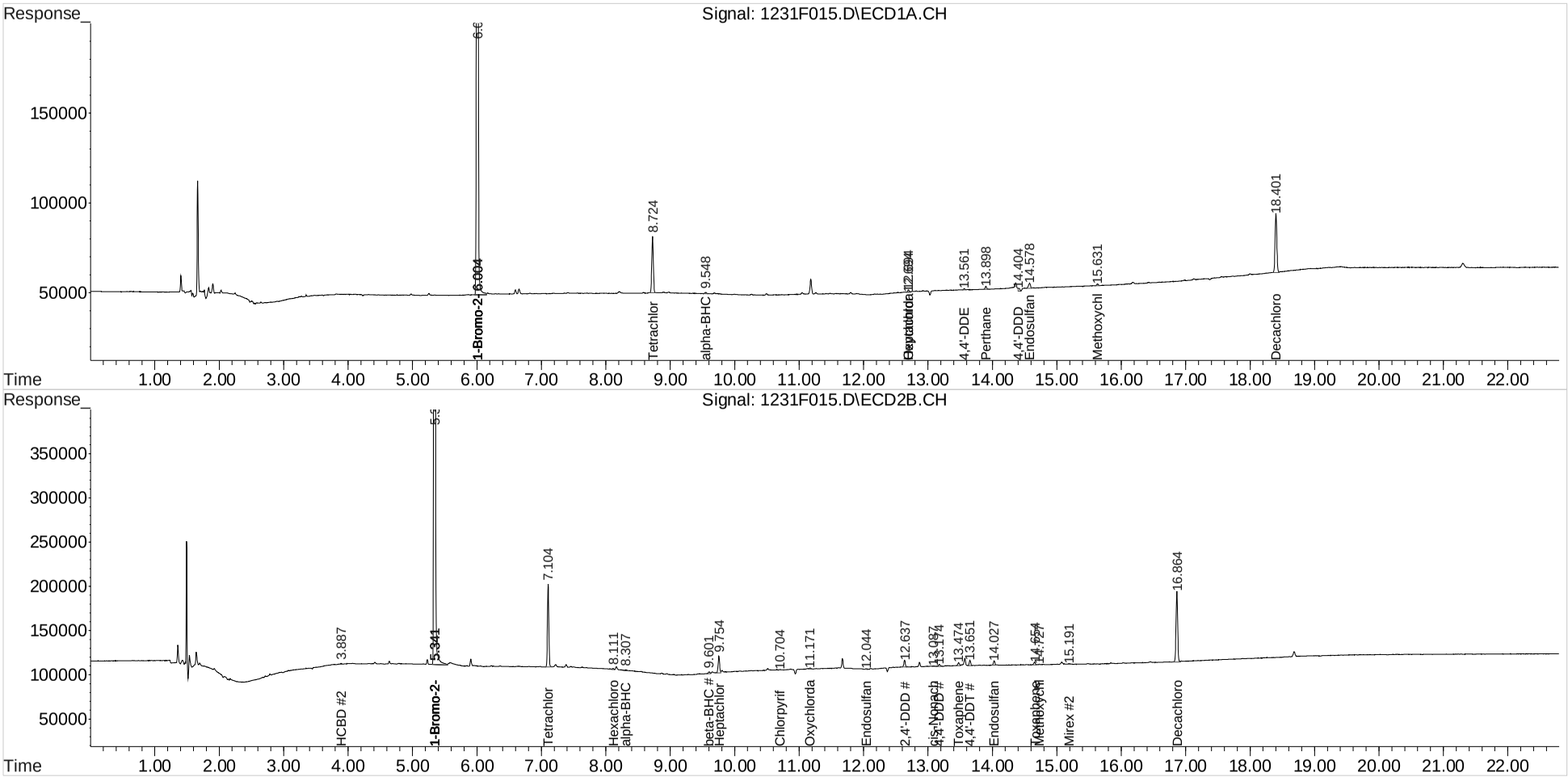
1st SM 01/01/19
2nd UA 01/07/19

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\123118\1231F015.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 6:17 pm Operator: MCHAPPELLE
Sample : KWG1806665-6 MB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:46:58 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F016.D
Lab ID: KWG1806665-1
RunType: LCS
Matrix: SOIL

Date Acquired: 12/31/2018 18:47
Date Quantitated: 01/01/2019 15:47
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	alpha-BHC	21.1	NA	20	ICVOK
	Hexachlorobenzene	21.7	NA	20	
	beta-BHC	24.9	NA	20	
	gamma-BHC (Lindane)	20.5	NA	20	
	delta-BHC	23.5	NA	20	
	Aldrin	24.6	NA	20	
	Isodrin	33.6	NA	20	
	gamma-Chlordane	23.5	NA	20	
	Endosulfan I	28.0	NA	20	
	alpha-Chlordane	20.7	NA	20	
	4,4'-DDE	23.6	NA	20	
	Endrin	21.7	NA	20	
	4,4'-DDD	21.0	NA	20	
	Endrin Aldehyde	22.5	NA	20	
	2,4'-DDE	27.0	NA	20	
	2,4'-DDT	20.4	NA	20	
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	523283	2093132	NR

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F016.D
Lab ID: KWG1806665-1
RunType: LCS
Matrix: SOIL

Date Acquired: 12/31/2018 18:47
Date Quantitated: 01/01/2019 15:47
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1711

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	1-Bromo-2-nitrobenzene {3}	0	)284.071428	21136.28571	NR
	1-Bromo-2-nitrobenzene {4}	0	[403.583333	45614.33333	NR

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F016.D\1231F016C.D
Lab ID: KWG1806665-1
RunType: LCS
Matrix: SOIL

Date Acquired: 12/31/2018 18:47
Date Quantitated: 01/01/2019 15:47
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	17017.33333	58069.33333	NR
	1-Bromo-2-nitrobenzene {3}	0	12049.14285	48196.57142	NR
	1-Bromo-2-nitrobenzene {4}	0	32606.41666	30425.66666	NR

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F016.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F016.D\1231F016c.d			**Vial:**	16
Acqu Date:	12/31/2018 18:47	**Quant Date:**	01/01/2019 15:47	**Dilution:**	1.0
Run Type:	LCS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806665-1				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/21/2018

Analysis Lot:	KWG1900100	**Prep Lot:**	KWG1806665	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511		
Prep Ref:	1707455	**Prep Date:**	12/21/2018		

Quant Method:	J:\GC23\METHODS\GC23-121418-			**Calibration ID:**	CAL15919
Title:					
MB Ref:	J:\GC23\DATA\123118\1231F015.D			**Method ID:**	MJ1711
				Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.00	-0.06	5.34	-0.04	931497	2730748	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt	
1	Tetrachloro-m-xylene	8.72		7.10		53845	141792	3.50		3.61				72	OK
						%Recovery =		70	OK	72	OK	**Limits =**	70-130		
1	Decachlorobiphenyl	18.40	+0.01	16.86		60664	138684	3.90		4.10				82	OK
						%Recovery =		78	OK	82	OK	**Limits =**	70-130		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC	9.57	+0.01	8.32		70049	179908	5.04	5.09	0.000252	0.000254	**0.000252**
1	Hexachlorobenzene	9.72		8.11	+0.01	82796	206555	4.29	4.33	0.000214	0.000216	**0.000214**
1	beta-BHC	10.85	+0.01	9.61	+0.01	35465	88518	5.26	5.40	0.000263	0.000270	**0.000263**
1	gamma-BHC (Lindane)	10.24	+0.01	9.06		63163	160559	5.20	5.06	0.000260	0.000253	**0.000253**
1	delta-BHC	11.34		10.13	+0.01	63168	168643	5.39	5.70	0.000269	0.000285	**0.000269**
1	Heptachlor	11.42		9.74		62969	180019	5.51	5.51	0.000275	0.000276	**0.000275**
1	Aldrin	11.98		10.33	+0.01	65633	161790	4.94	5.14	0.000247	0.000257	**0.000247**
1	Isodrin	12.51	+0.01	11.12	+0.01	58655	146026	5.37	5.47	0.000269	0.000273	**0.000269**
1	Heptachlor Epoxide	12.70		11.41	+0.01	61166	146742	4.96	5.07	0.000248	0.000254	**0.000248**

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F016.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F016.D\1231F016c.d			**Vial:**	16
Acqu Date:	12/31/2018 18:47	**Quant Date:**	01/01/2019 15:47	**Dilution:**	1.0
Run Type:	LCS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806665-1				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane	13.22 +0.01	11.82	63235	152133	5.29	5.19	0.000264	0.000259	**0.000259**
1	Endosulfan I	13.34	12.03 +0.01	51152	120371	4.75	4.62	0.000237	0.000231	**0.000231**
1	alpha-Chlordane	13.29	11.96	64500	153675	5.20	5.20	0.000260	0.000260	**0.000260**
1	Dieldrin	13.76	12.47 +0.01	60525	145965	5.28	5.21	0.000264	0.000260	**0.000260**
1	4,4'-DDE	13.57	12.32	69485	189149	5.72	6.58	0.000286	0.000329	**0.000286**
1	Endrin	14.13 +0.01	12.94	56790	138477	5.48	5.40	0.000274	0.000270	**0.000270**
1	Endosulfan II	14.57	13.37	55695	122112	5.17	4.81	0.000259	0.000240	**0.000240**
1	4,4'-DDD	14.41 +0.01	13.20	52730	119722	6.02	5.71	0.000301	0.000285	**0.000285**
1	Endrin Aldehyde	14.76 +0.01	13.73	49798	116032	5.21	5.24	0.000260	0.000262	**0.000260**
1	Endosulfan Sulfate	15.23	14.06 +0.01	52979	132748	5.07	5.26	0.000253	0.000263	**0.000253**
1	4,4'-DDT	14.90	13.62	39754	110894	6.43	5.60	0.000321	0.000280	**0.000280**
1	Endrin Ketone	15.91	14.99 +0.01	55543	140549	5.16	5.06	0.000258	0.000253	**0.000253**
1	Methoxychlor	15.65	14.72	25738	62511	6.82	5.46	0.000341	0.000273	**0.000273**
1	2,4'-DDE			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDD			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDT			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	0.0000	0.0000	0.00200U	0.00200U	NR
2	Toxaphene {1}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {2}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {3}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {5}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {6}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
	Chlordane			0	0	0.0000	0.0000	0.00100U	0.00100U	NR
3	Chlordane {1}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {2}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {3}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {4}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {5}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {6}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F016.D Vial: 16
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 6:47 pm Operator: MCHAPPELLE
Sample : KWG1806665-LCS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:47:27 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.005	5.341	931497	2730748	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.725	7.104	53845	141792	3.500	3.609
28) s	Decachlor...	18.398	16.861	60664	138684	3.895	4.102
	Target Compounds						
3)	alpha-BHC	9.568	8.324	70049	179908	5.041	5.086
4)	Hexachlor...	9.725	8.111	82796	206555	4.286	4.328
5)	beta-BHC	10.848	9.608	35465	88518	5.256	5.403
6)	gamma-BHC...	10.238	9.064	63163	160559	5.196	5.056
7)	delta-BHC	11.345	10.128	63168	168643	5.386	5.703
8)	Heptachlor	11.425	9.744	62969	180019	5.505	5.513
9)	Aldrin	11.981	10.331	65633	161790	4.936	5.141
10)	Isodrin	12.508	11.121	58655	146026	5.370	5.468
11)	Heptachlo...	12.701	11.411	61166	146742	4.956	5.071
12)	gamma-Chl...	13.218	11.824	63235	152133	5.285	5.189
13)	Endosulfan I	13.345	12.028	51152	120371	4.748	4.619
14)	alpha-Chl...	13.295	11.964	64500	153675	5.204	5.199
15)	Dieldrin	13.761	12.471	60525	145965	5.283	5.207
16)	4,4'-DDE	13.571	12.324	69485	189149	5.720	6.577
17)	Endrin	14.128	12.944	56790	138477	5.483	5.400
18)	Endosulfa...	14.575	13.374	55695	122112	5.173	4.809
19)	4,4'-DDD	14.408	13.204	52730	119722	6.023	5.706
20)	Endrin Al...	14.758	13.734	49798	116032	5.206	5.236
21)	Endosulfa...	15.228	14.058	52979	132748	5.065	5.260
22)	4,4'-DDT	14.901	13.621	39754	110894	6.426	5.604
23)	Endrin Ke...	15.911	14.988	55543	140549	5.164	5.055
24)	Methoxychlor	15.648	14.718	25738	62511	6.823	5.463
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

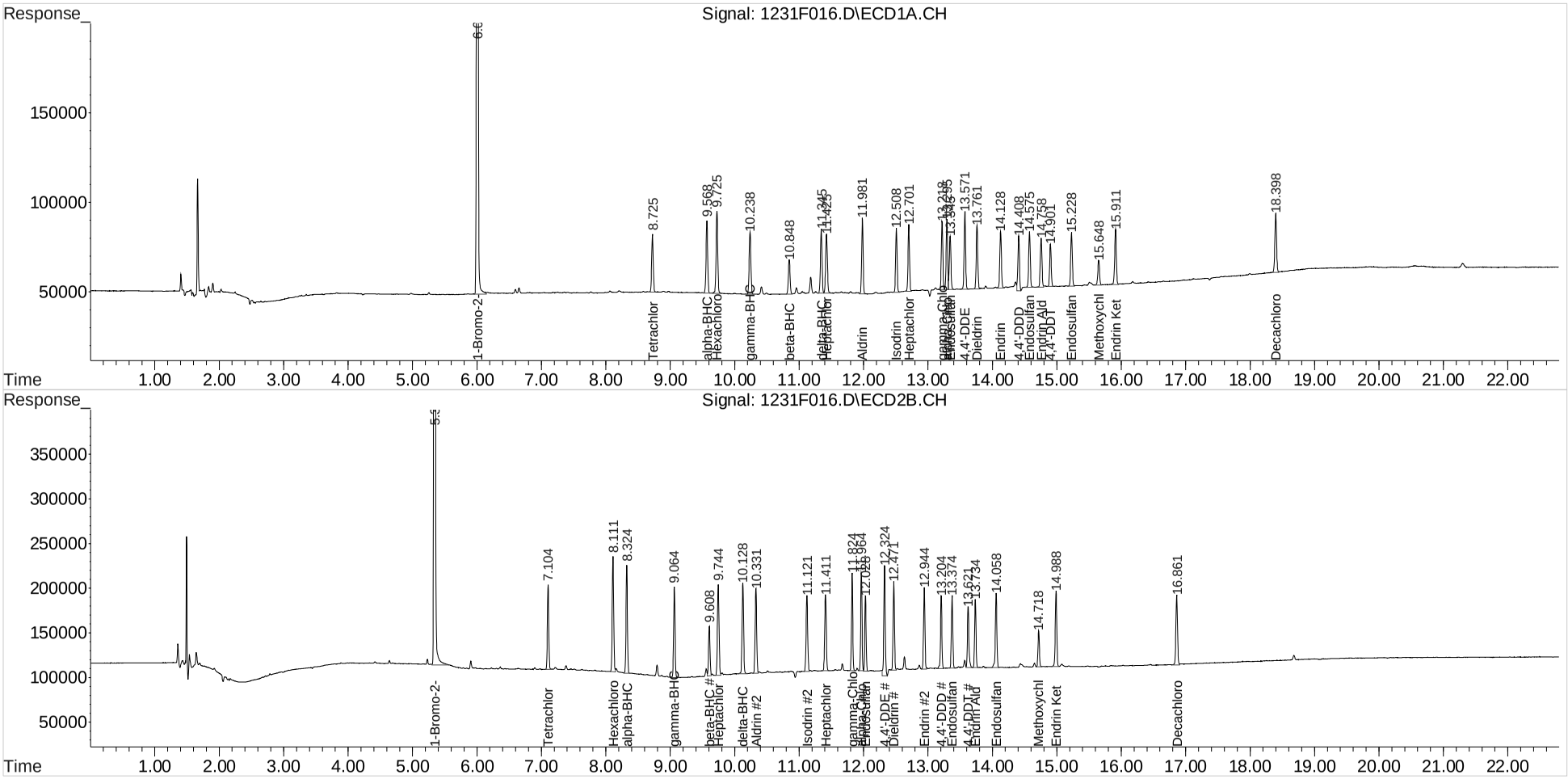
1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\123118\1231F016.D Vial: 16
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 6:47 pm Operator: MCHAPPELLE
Sample : KWG1806665-LCS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:47:27 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F018.D
Lab ID: KWG1806665-1
RunType: LCS
Matrix: SOIL

Date Acquired: 12/31/2018 19:46
Date Quantitated: 01/01/2019 15:49
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	alpha-BHC	21.1	NA	20	ICVOK
	Hexachlorobenzene	21.7	NA	20	
	beta-BHC	24.9	NA	20	
	gamma-BHC (Lindane)	20.5	NA	20	
	delta-BHC	23.5	NA	20	
	Aldrin	24.6	NA	20	
	Isodrin	33.6	NA	20	
	gamma-Chlordane	23.5	NA	20	
	Endosulfan I	28.0	NA	20	
	alpha-Chlordane	20.7	NA	20	
	4,4'-DDE	23.6	NA	20	
	Endrin	21.7	NA	20	
	4,4'-DDD	21.0	NA	20	
	Endrin Aldehyde	22.5	NA	20	
	2,4'-DDE	27.0	NA	20	
	2,4'-DDT	20.4	NA	20	
Internal Standards	1-Bromo-2-nitrobenzene {4}	0	[403.583333	45614.33333	NR

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F018.D\1231F018C.D
Lab ID: KWG1806665-1
RunType: LCS
Matrix: SOIL

Date Acquired: 12/31/2018 19:46
Date Quantitated: 01/01/2019 15:49
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Internal Standards	1-Bromo-2-nitrobenzene {4}	0	32606.41666	30425.66666	NR

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F018.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F018.D\1231F018c.d			**Vial:**	18
Acqu Date:	12/31/2018 19:46	**Quant Date:**	01/01/2019 15:49	**Dilution:**	1.0
Run Type:	LCS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806665-1				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/21/2018

Analysis Lot:	KWG1900100	**Prep Lot:**	KWG1806665	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511		
Prep Ref:	1707455	**Prep Date:**	12/21/2018		

Quant Method:	J:\GC23\METHODS\GC23-121418-			**Calibration ID:**	CAL15919
Title:					
MB Ref:	J:\GC23\DATA\123118\1231F015.D			**Method ID:**	MJ1711
				Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01 -0.05 c	5.34 -0.04 c	912622	2627157	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01 -0.10 c	5.34 -0.08 c	912622	2627157	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01 -0.10 c	5.34 -0.08 c	912622	2627157	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}			0d	0d	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.73 +0.01	7.11 +0.01	53207	143215	3.53	3.79			NR
				%Recovery =		71 OK	76 OK	**Limits =**	70-130	
1	Decachlorobiphenyl	18.40 +0.01	16.86	63593	145977	4.17	4.49			NR
				%Recovery =		83 OK	90 OK	**Limits =**	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Hexachlorobenzene			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	beta-BHC			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	gamma-BHC (Lindane)			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR
1	delta-BHC			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR
1	Aldrin			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Isodrin			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F018.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F018.D\1231F018c.d			**Vial:**	18
Acqu Date:	12/31/2018 19:46	**Quant Date:**	01/01/2019 15:49	**Dilution:**	1.0
Run Type:	LCS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806665-1				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan I			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	alpha-Chlordane			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Dieldrin			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDE			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR
1	Endosulfan II			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDD			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin Aldehyde			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDT			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin Ketone			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Methoxychlor			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR
1	2,4'-DDE			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDD			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDT			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	222.73	213.04	0.0111	0.0107	**0.0107**
2	Toxaphene {1}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {2}	14.57 +0.01	13.49 +0.01	24346	35874m	284.53	218.10	0.0142	0.0109	
2	Toxaphene {3}	15.10 +0.01	13.96 +0.01	31043	36304m	198.23	249.81	0.00991	0.0125	
2	Toxaphene {4}	15.28 +0.01	14.10 +0.01	18619	58381	290.17	214.90	0.0145	0.0107	
2	Toxaphene {5}	15.55 +0.01	14.48 +0.01	12481	104628	148.58	198.58	0.00743	0.00993	
2	Toxaphene {6}	15.97 +0.01	14.68 +0.01	45391	78224m	192.16	183.80	0.00961	0.00919	
	Chlordane			0	0	93.53	121.21	0.00468	0.00606	**0.00468**
3	Chlordane {1}	11.00	9.39	42163	96952	80.76	85.49	0.00404	0.00427	
3	Chlordane {2}	11.43 +0.01	11.49 +0.01	40921	93848	62.15	129.44	0.00311	0.00647	
3	Chlordane {3}	12.03	11.82	50202	323392	111.64	112.69	0.00558	0.00563	
3	Chlordane {4}	13.22	11.87	139595	217933	106.35	123.31	0.00532	0.00617	
3	Chlordane {5}	13.30 +0.01	11.93	108058	143583	97.22	171.54	0.00486	0.00858	
3	Chlordane {6}	13.38 +0.01	11.97	84439	269739	103.08	104.81	0.00515	0.00524	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\123118\1231F018.D Vial: 18
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 7:46 pm Operator: MCHAPPELLE
Sample : KWG1806665-LCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:49:12 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.008	5.341	912622	2627157	100.000	100.000
29)	1-Bromo-2...	6.008	5.341	912622	2627157	100.000	100.000
36)	1-Bromo-2...	6.008	5.341	912622	2627157	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.728	7.108	53207	143215	3.530	3.789
28) s	Decachlor...	18.402	16.865	63593	145977	4.167	4.488
	Target Compounds						
31)	Toxaphene...	14.568	13.491	24346	35874	284.533	218.097m
32)	Toxaphene...	15.102	13.961	31043	36304	198.227	249.813m#
33)	Toxaphene...	15.278	14.105	18619	58381	290.165	214.902 #
34)	Toxaphene...	15.548	14.485	12481	104628	148.584	198.580 #
35)	Toxaphene...	15.975	14.685	45391	78224	192.157	183.803m
37)	Chlordane	11.002	9.391	42163	96952	80.759	85.486
38)	Chlordane...	11.428	11.491	40921	93848	62.145	129.444 #
39)	Chlordane...	12.035	11.825	50202	323392	111.640	112.685
40)	Chlordane...	13.225	11.871	139595	217933	106.347	123.308
41)	Chlordane...	13.298	11.935	108058	143583	97.216	171.536 #
42)	Chlordane...	13.378	11.968	84439	269739	103.075	104.814
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

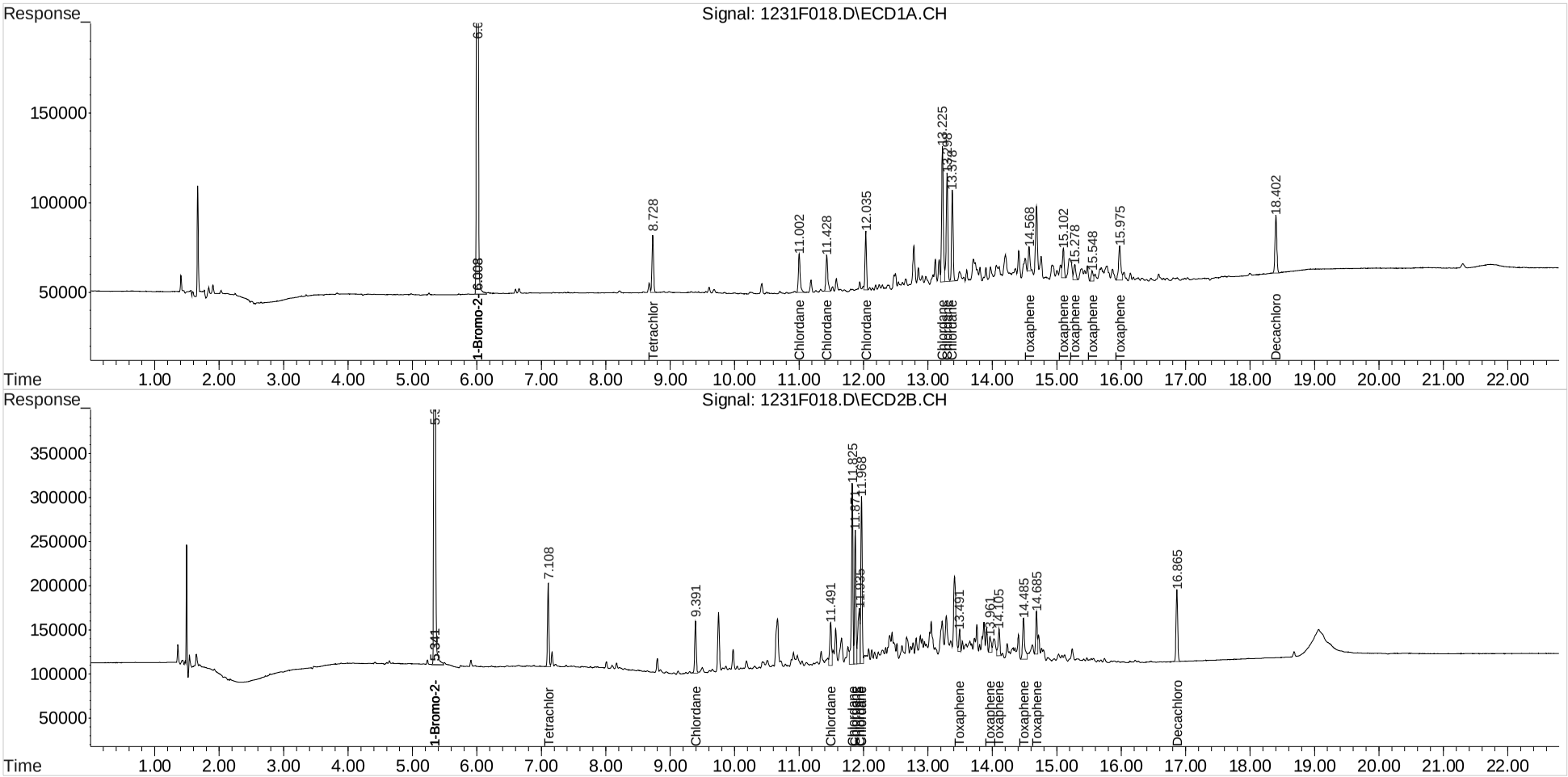
1st SM 01/01/19
2nd UA 01/07/19

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\123118\1231F018.D Vial: 18
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 7:46 pm Operator: MCHAPPELLE
Sample : KWG1806665-LCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:49:12 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



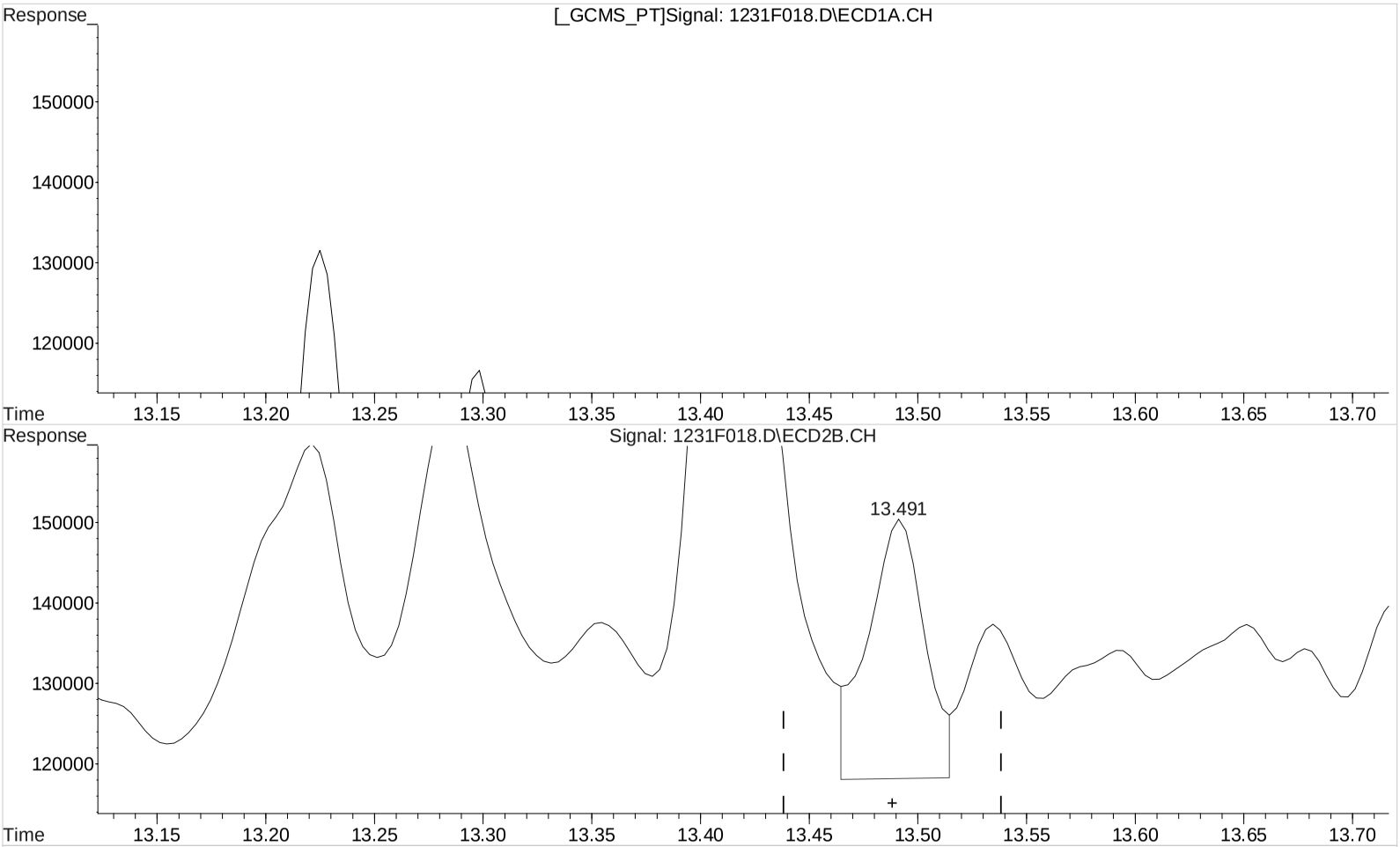
Quantitation Report (Qedit)

1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F018.D Vial: 18
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 7:46 pm Operator: MCHAPPELLE
Sample : KWG1806665-LCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:40 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(31) Toxaphene {2}

14.568min 284.533 ug/L

response 24346

Manual Integration:

Before

01/01/19

(31) Toxaphene {2} #2

13.491min 354.753 ug/L

response 58352

(+) = Expected Retention Time

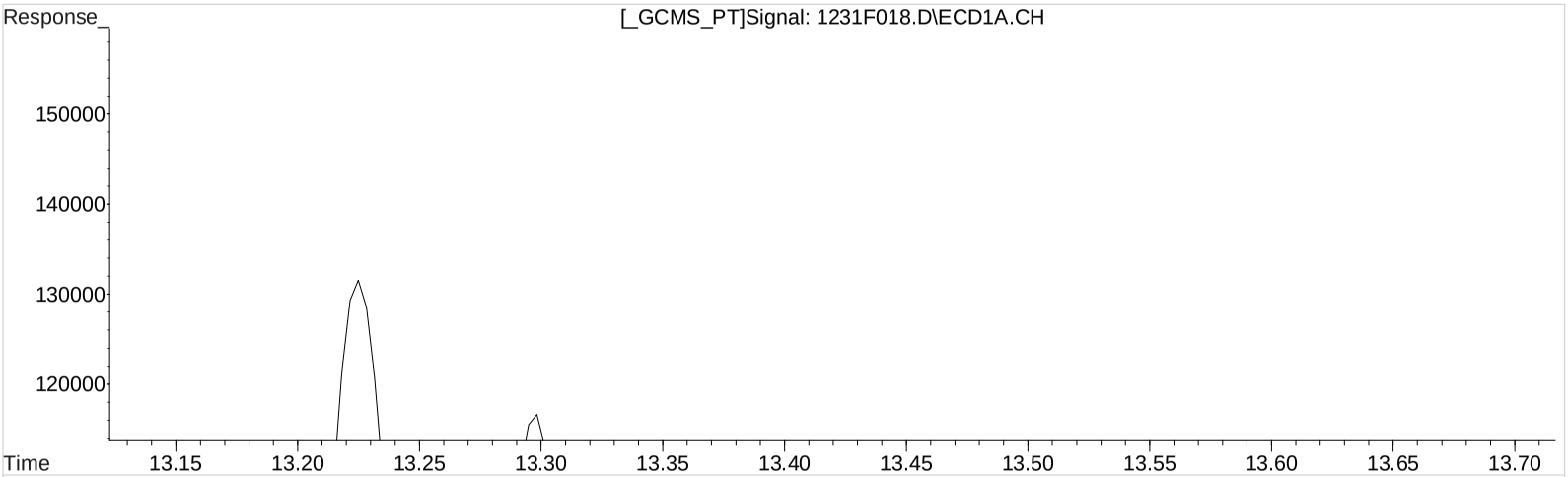
Quantitation Report (Qedit)

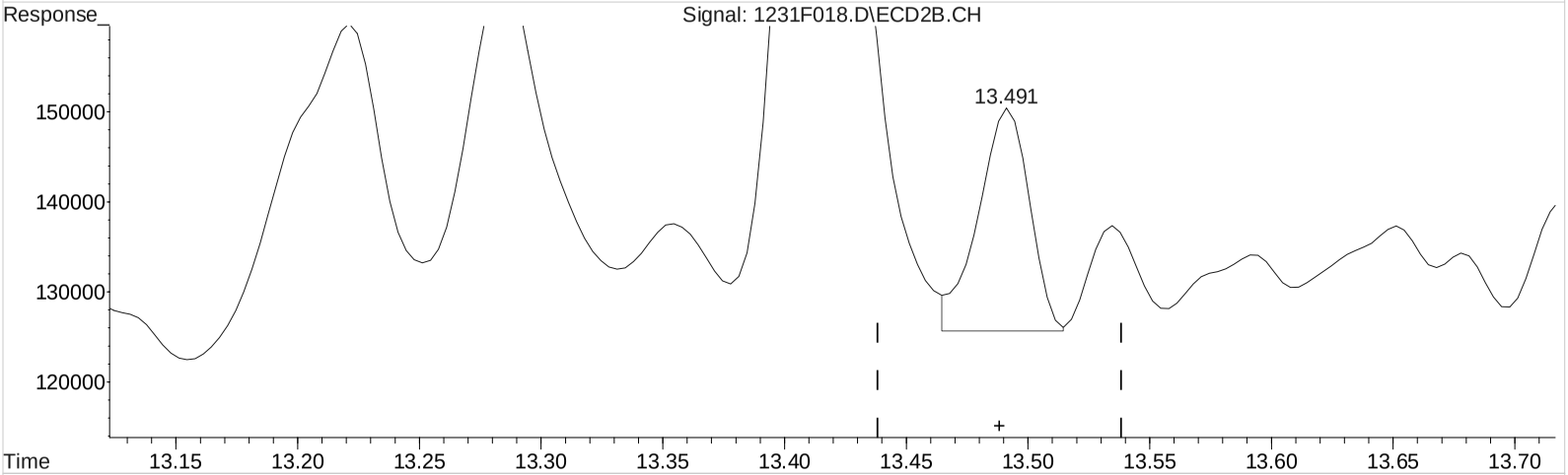
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F018.D Vial: 18
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 7:46 pm Operator: MCHAPPELLE
Sample : KWG1806665-LCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:40 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(31) Toxaphene {2}

14.568min 284.533 ug/L

response 24346

(31) Toxaphene {2} #2

13.491min 218.097 ug/L m

response 35874

Manual Integration:

After

Baseline/Shoulder

01/01/19

(+) = Expected Retention Time

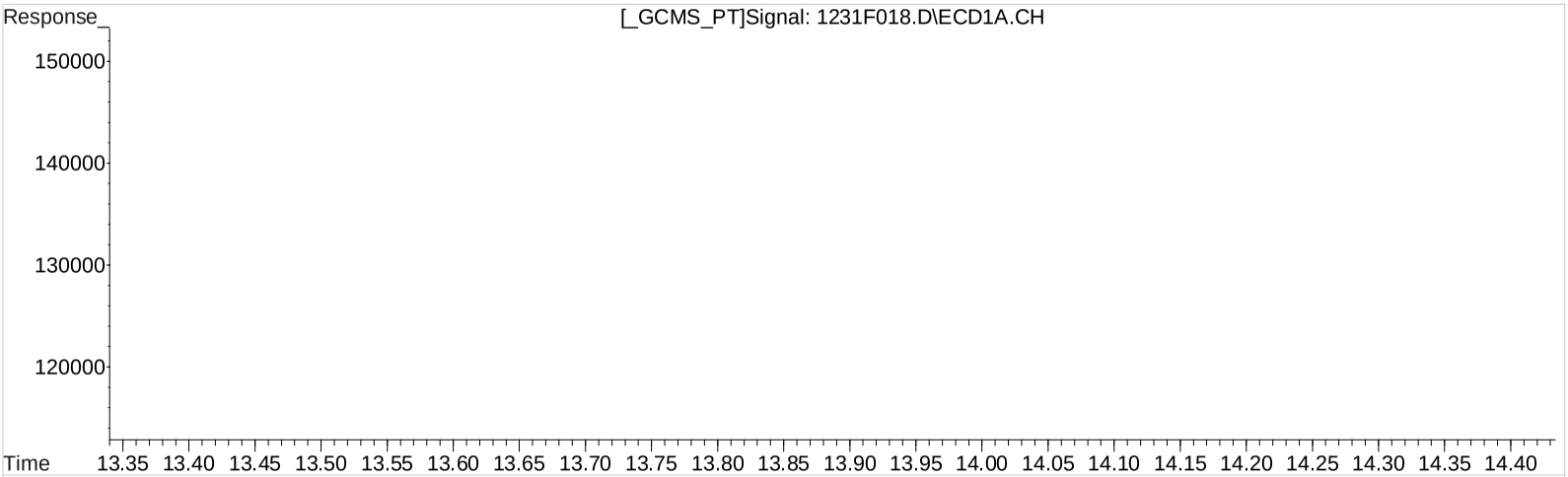
Quantitation Report (Qedit)

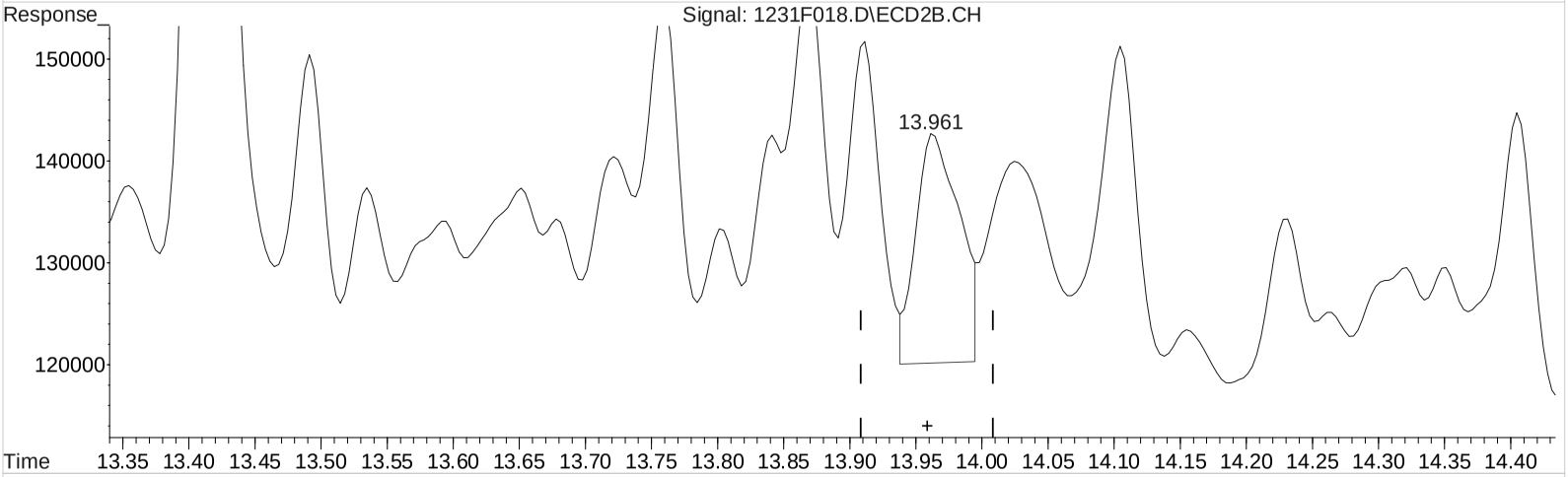
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F018.D Vial: 18
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 7:46 pm Operator: MCHAPPELLE
Sample : KWG1806665-LCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:40 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(32) Toxaphene {3}

15.102min 198.227 ug/L

response 31043

Manual Integration:

Before

01/01/19

(32) Toxaphene {3} #2

13.961min 356.711 ug/L

response 51839

(+) = Expected Retention Time

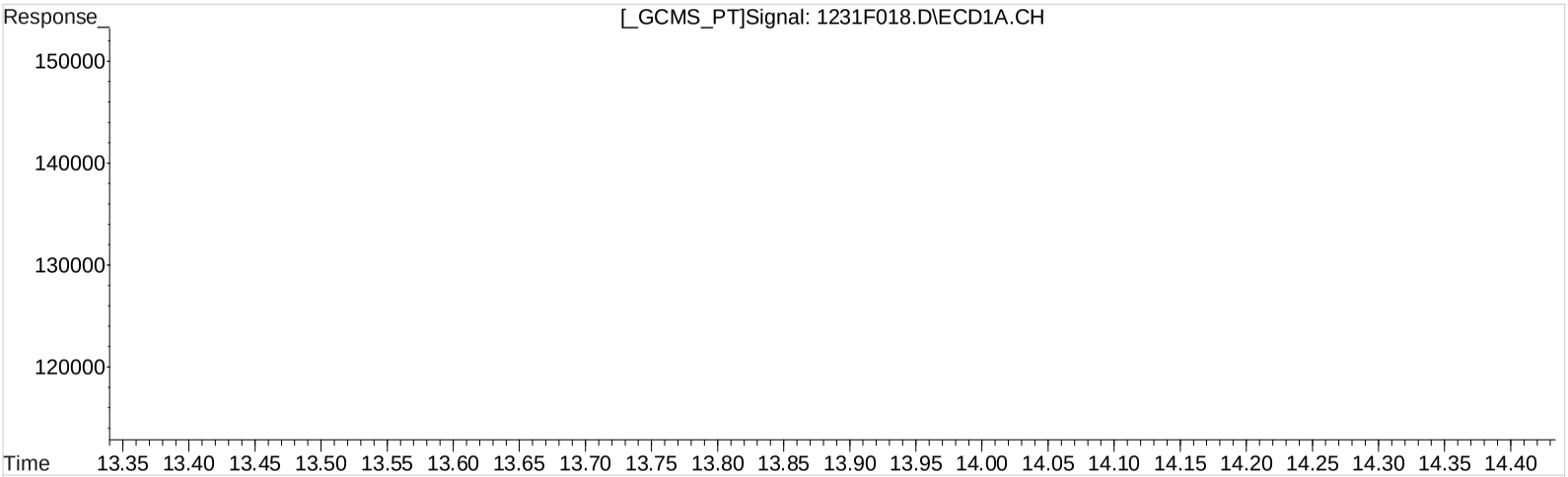
Quantitation Report (Qedit)

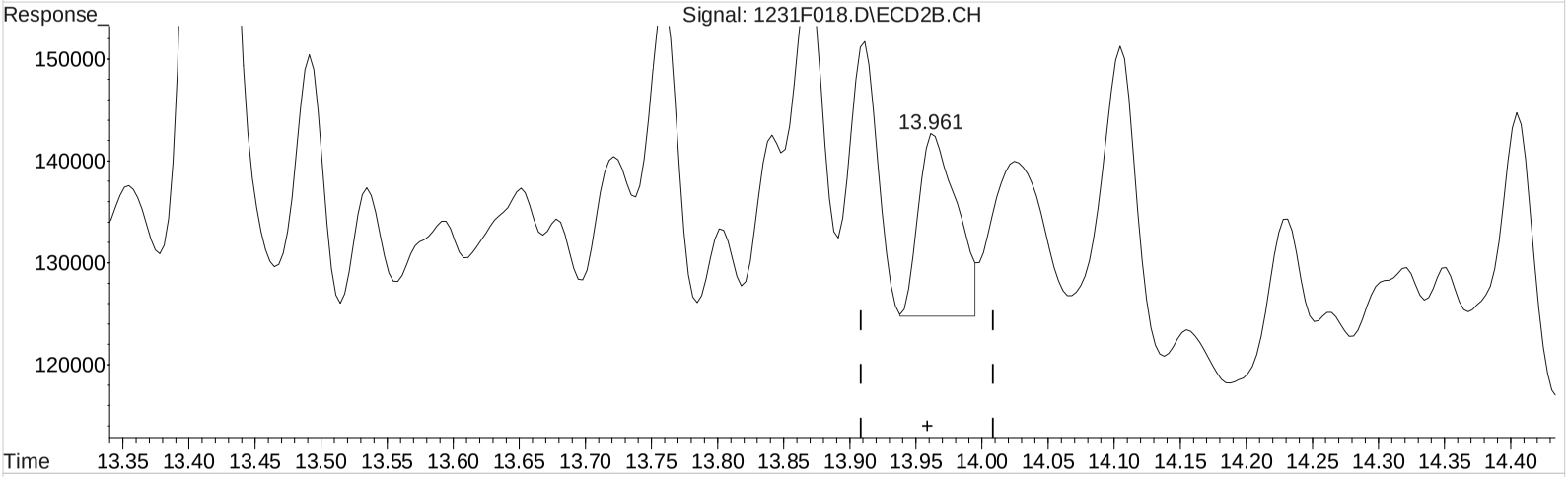
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F018.D Vial: 18
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 7:46 pm Operator: MCHAPPELLE
Sample : KWG1806665-LCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:40 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(32) Toxaphene {3}

15.102min 198.227 ug/L

response 31043

Manual Integration:

After

Baseline/Shoulder

01/01/19

(32) Toxaphene {3} #2

13.961min 249.813 ug/L m

response 36304

(+) = Expected Retention Time

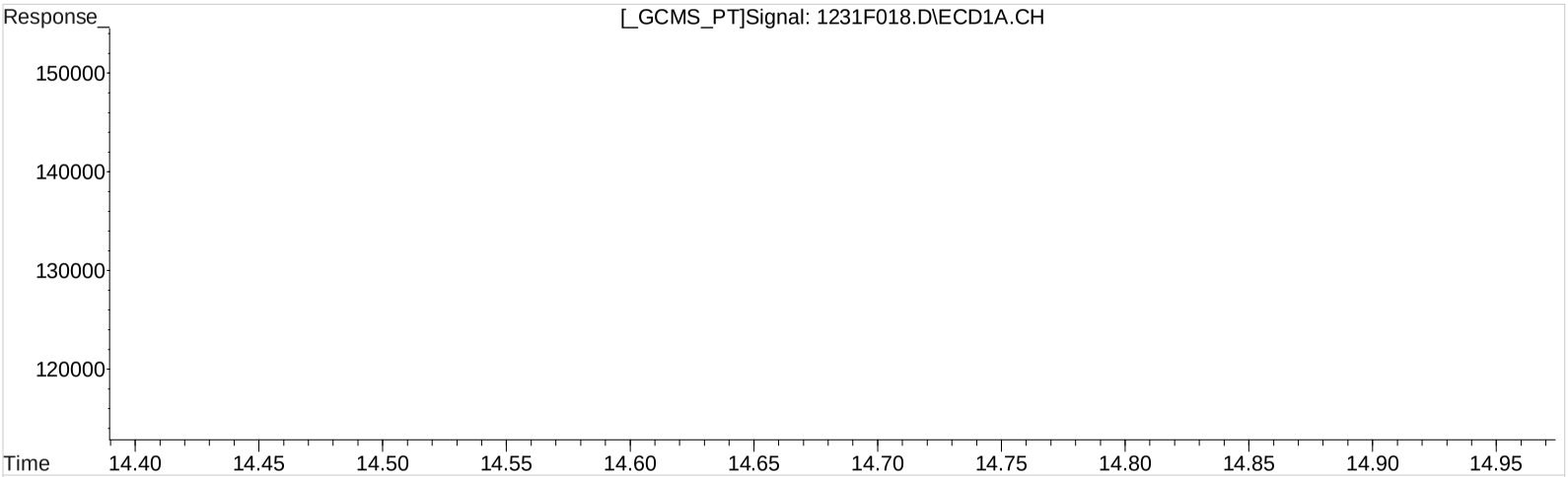
Quantitation Report (Qedit)

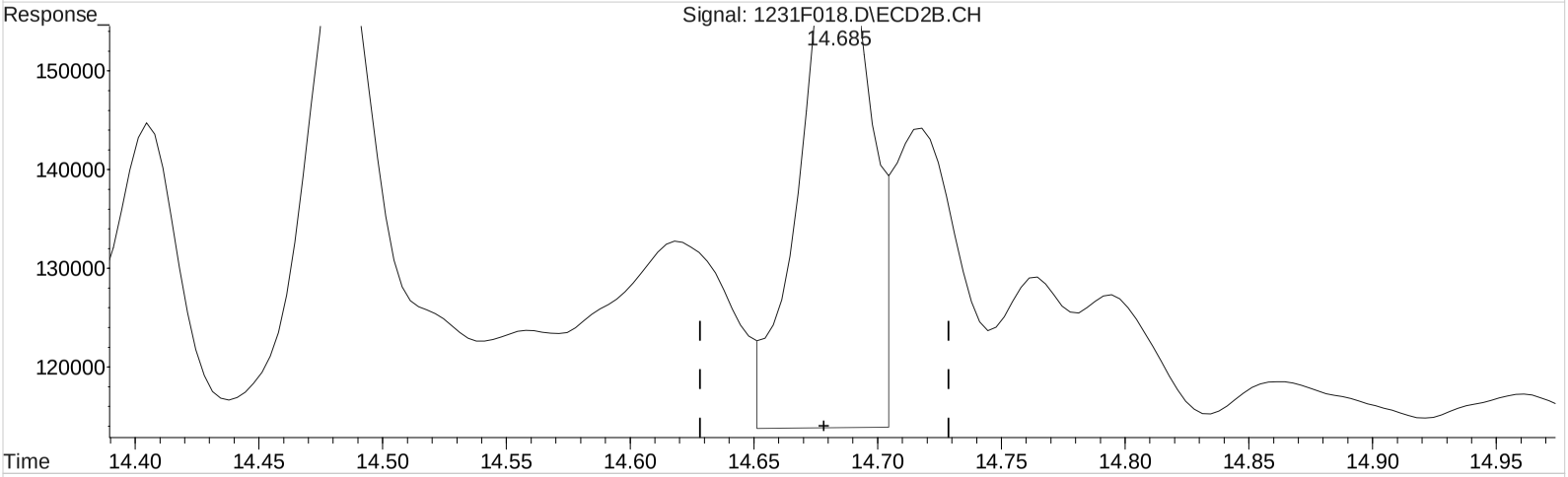
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F018.D Vial: 18
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 7:46 pm Operator: MCHAPPELLE
Sample : KWG1806665-LCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:40 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(35) Toxaphene {6}

15.975min 192.157 ug/L

response 45391

Manual Integration:

Before

01/01/19

(35) Toxaphene {6} #2

14.685min 248.875 ug/L

response 105918

(+) = Expected Retention Time

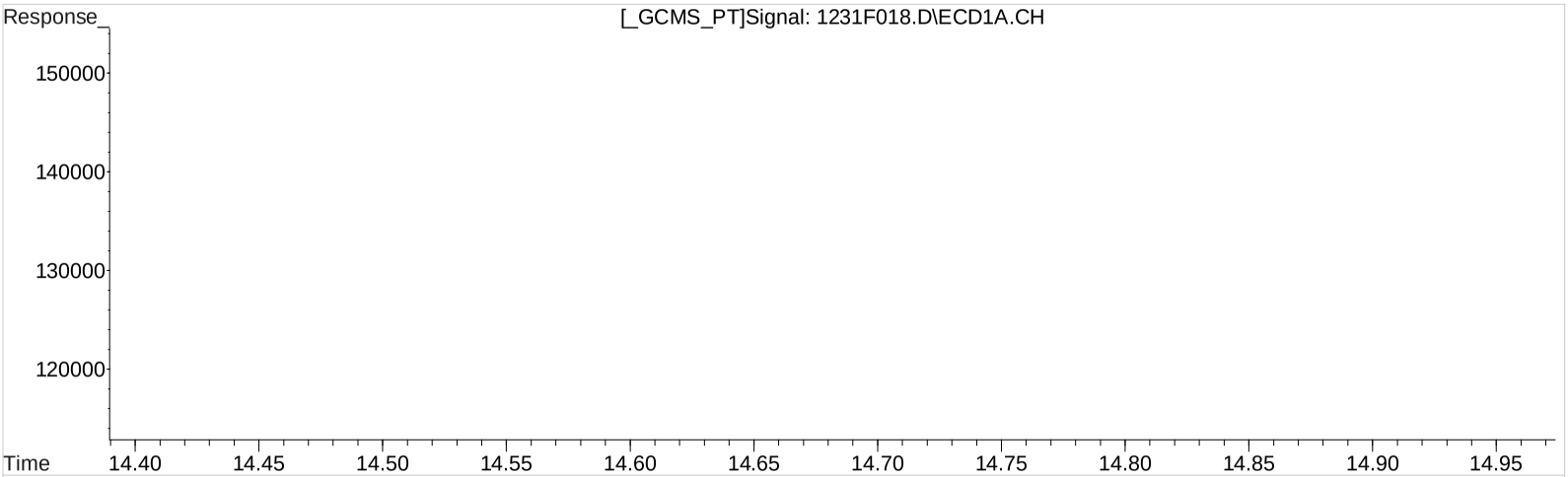
Quantitation Report (Qedit)

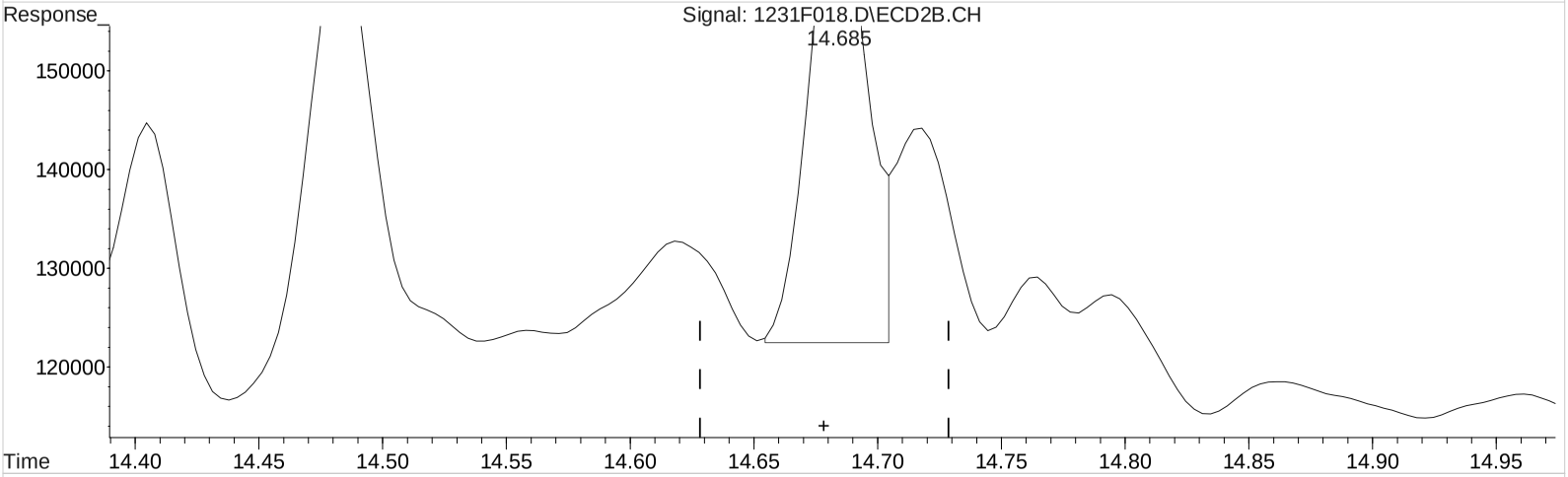
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F018.D Vial: 18
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 7:46 pm Operator: MCHAPPELLE
Sample : KWG1806665-LCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:40 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(35) Toxaphene {6}

15.975min 192.157 ug/L

response 45391

Manual Integration:

After

Baseline/Shoulder

01/01/19

(35) Toxaphene {6} #2

14.685min 183.803 ug/L m

response 78224

(+) = Expected Retention Time

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F017.D
Lab ID: KWG1806665-2
RunType: DLCS
Matrix: SOIL

Date Acquired: 12/31/2018 19:17
Date Quantitated: 01/01/2019 15:47
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	alpha-BHC	21.1	NA	20	ICVOK
	Hexachlorobenzene	21.7	NA	20	
	beta-BHC	24.9	NA	20	
	gamma-BHC (Lindane)	20.5	NA	20	
	delta-BHC	23.5	NA	20	
	Aldrin	24.6	NA	20	
	Isodrin	33.6	NA	20	
	gamma-Chlordane	23.5	NA	20	
	Endosulfan I	28.0	NA	20	
	alpha-Chlordane	20.7	NA	20	
	4,4'-DDE	23.6	NA	20	
	Endrin	21.7	NA	20	
	4,4'-DDD	21.0	NA	20	
	Endrin Aldehyde	22.5	NA	20	
	2,4'-DDE	27.0	NA	20	
	2,4'-DDT	20.4	NA	20	
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	523283	2093132	NR

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F017.D
Lab ID: KWG1806665-2
RunType: DLCS
Matrix: SOIL

Date Acquired: 12/31/2018 19:17
Date Quantitated: 01/01/2019 15:47
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1711

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	1-Bromo-2-nitrobenzene {3}	0	)284.071428	21136.28571	NR
	1-Bromo-2-nitrobenzene {4}	0	[403.583333	45614.33333	NR

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F017.D\1231F017C.D
Lab ID: KWG1806665-2
RunType: DLCS
Matrix: SOIL

Date Acquired: 12/31/2018 19:17
Date Quantitated: 01/01/2019 15:47
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	17017.33333	58069.33333	NR
	1-Bromo-2-nitrobenzene {3}	0	12049.14285	48196.57142	NR
	1-Bromo-2-nitrobenzene {4}	0	32606.41666	30425.66666	NR

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F017.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F017.D\1231F017c.d			**Vial:**	17
Acqu Date:	12/31/2018 19:17	**Quant Date:**	01/01/2019 15:47	**Dilution:**	1.0
Run Type:	DLCS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806665-2				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/21/2018

Analysis Lot:	KWG1900100	**Prep Lot:**	KWG1806665	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511		
Prep Ref:	1707456	**Prep Date:**	12/21/2018		

Quant Method:	J:\GC23\METHODS\GC23-121418-			**Calibration ID:**	CAL15919
Title:					
MB Ref:	J:\GC23\DATA\123118\1231F015.D			**Method ID:**	MJ1711
				Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	-0.05	5.34	-0.04	891173	2692076	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2	Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt	
1	Tetrachloro-m-xylene	8.73	+0.01	7.10	55794	150223	3.79		3.88				78	OK
					%Recovery =		76	OK	78	OK	**Limits =**	70-130		
1	Decachlorobiphenyl	18.40	+0.01	16.86	64088	154571	4.30		4.64				93	OK
					%Recovery =		86	OK	93	OK	**Limits =**	70-130		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC	9.57	+0.01	8.32		68456	180178	5.15	5.17	0.000257	0.000258	**0.000257**
1	Hexachlorobenzene	9.73	+0.01	8.11	+0.01	82891	209938	4.49	4.46	0.000224	0.000223	**0.000223**
1	beta-BHC	10.85	+0.01	9.61	+0.01	34747	88739	5.38	5.49	0.000269	0.000275	**0.000269**
1	gamma-BHC (Lindane)	10.24	+0.01	9.06		62459	160419	5.37	5.13	0.000269	0.000256	**0.000256**
1	delta-BHC	11.35	+0.01	10.13	+0.01	61906	169009	5.52	5.80	0.000276	0.000290	**0.000276**
1	Heptachlor	11.43	+0.01	9.74		62185	174858	5.68	5.43	0.000284	0.000272	**0.000272**
1	Aldrin	11.99	+0.01	10.33	+0.01	64321	162297	5.06	5.23	0.000253	0.000262	**0.000253**
1	Isodrin	12.51	+0.01	11.12	+0.01	58070	149774	5.56	5.69	0.000278	0.000284	**0.000278**
1	Heptachlor Epoxide	12.71	+0.01	11.41	+0.01	60855	148184	5.15	5.19	0.000258	0.000260	**0.000258**

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F017.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F017.D\1231F017c.d			**Vial:**	17
Acqu Date:	12/31/2018 19:17	**Quant Date:**	01/01/2019 15:47	**Dilution:**	1.0
Run Type:	DLCS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806665-2				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane	13.22 +0.01	11.82	62230	151910	5.44	5.26	0.000272	0.000263	**0.000263**
1	Endosulfan I	13.35 +0.01	12.03 +0.01	50144	121484	4.87	4.73	0.000243	0.000236	**0.000236**
1	alpha-Chlordane	13.30 +0.01	11.97 +0.01	63941	153854	5.39	5.28	0.000270	0.000264	**0.000264**
1	Dieldrin	13.77 +0.01	12.47 +0.01	59288	147941	5.41	5.35	0.000270	0.000268	**0.000268**
1	4,4'-DDE	13.58 +0.01	12.32	67795	180928	5.83	6.38	0.000292	0.000319	**0.000292**
1	Endrin	14.13 +0.01	12.94	55037	141987	5.55	5.62	0.000278	0.000281	**0.000278**
1	Endosulfan II	14.58 +0.01	13.37	54963	123839	5.34	4.95	0.000267	0.000247	**0.000247**
1	4,4'-DDD	14.41 +0.01	13.21 +0.01	48620	119463	5.81	5.78	0.000290	0.000289	**0.000289**
1	Endrin Aldehyde	14.76 +0.01	13.74 +0.01	48264	116105	5.27	5.31	0.000264	0.000266	**0.000264**
1	Endosulfan Sulfate	15.23	14.06 +0.01	52146	133673	5.21	5.37	0.000261	0.000269	**0.000261**
1	4,4'-DDT	14.91 +0.01	13.62	37935	108603	6.41	5.57	0.000320	0.000278	**0.000278**
1	Endrin Ketone	15.92 +0.01	14.99 +0.01	54346	139667	5.28	5.10	0.000264	0.000255	**0.000255**
1	Methoxychlor	15.66 +0.01	14.72	24561	62333	6.81	5.53	0.000340	0.000276	**0.000276**
1	2,4'-DDE			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDD			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDT			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	0.0000	0.0000	0.00200U	0.00200U	NR
2	Toxaphene {1}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {2}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {3}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {5}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {6}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
	Chlordane			0	0	0.0000	0.0000	0.00100U	0.00100U	NR
3	Chlordane {1}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {2}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {3}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {4}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {5}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {6}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F017.D Vial: 17
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 7:17 pm Operator: MCHAPPELLE
Sample : KWG1806665-DLCS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:47:57 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.009	5.345	891173	2692076	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.729	7.105	55794	150223	3.791	3.879
28) s	Decachlor...	18.402	16.865	64088	154571	4.301	4.638
	Target Compounds						
3)	alpha-BHC	9.572	8.325	68456	180178	5.149	5.167
4)	Hexachlor...	9.725	8.112	82891	209938	4.485	4.462
5)	beta-BHC	10.845	9.608	34747	88739	5.383	5.494
6)	gamma-BHC...	10.242	9.065	62459	160419	5.371	5.125
7)	delta-BHC	11.345	10.128	61906	169009	5.518	5.797
8)	Heptachlor	11.429	9.745	62185	174858	5.682	5.432
9)	Aldrin	11.985	10.332	64321	162297	5.056	5.231
10)	Isodrin	12.512	11.122	58070	149774	5.557	5.688
11)	Heptachlo...	12.705	11.412	60855	148184	5.154	5.194
12)	gamma-Chl...	13.222	11.825	62230	151910	5.436	5.256
13)	Endosulfan I	13.345	12.032	50144	121484	4.866	4.729
14)	alpha-Chl...	13.295	11.968	63941	153854	5.392	5.280
15)	Dieldrin	13.765	12.472	59288	147941	5.409	5.353
16)	4,4'-DDE	13.575	12.325	67795	180928	5.833	6.381
17)	Endrin	14.132	12.945	55037	141987	5.554	5.617
18)	Endosulfa...	14.579	13.375	54963	123839	5.336	4.947
19)	4,4'-DDD	14.412	13.208	48620	119463	5.805	5.775
20)	Endrin Al...	14.762	13.738	48264	116105	5.274	5.314
21)	Endosulfa...	15.232	14.062	52146	133673	5.211	5.373
22)	4,4'-DDT	14.905	13.625	37935	108603	6.409	5.567
23)	Endrin Ke...	15.915	14.992	54346	139667	5.281	5.096
24)	Methoxychlor	15.655	14.722	24561	62333	6.806	5.526
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

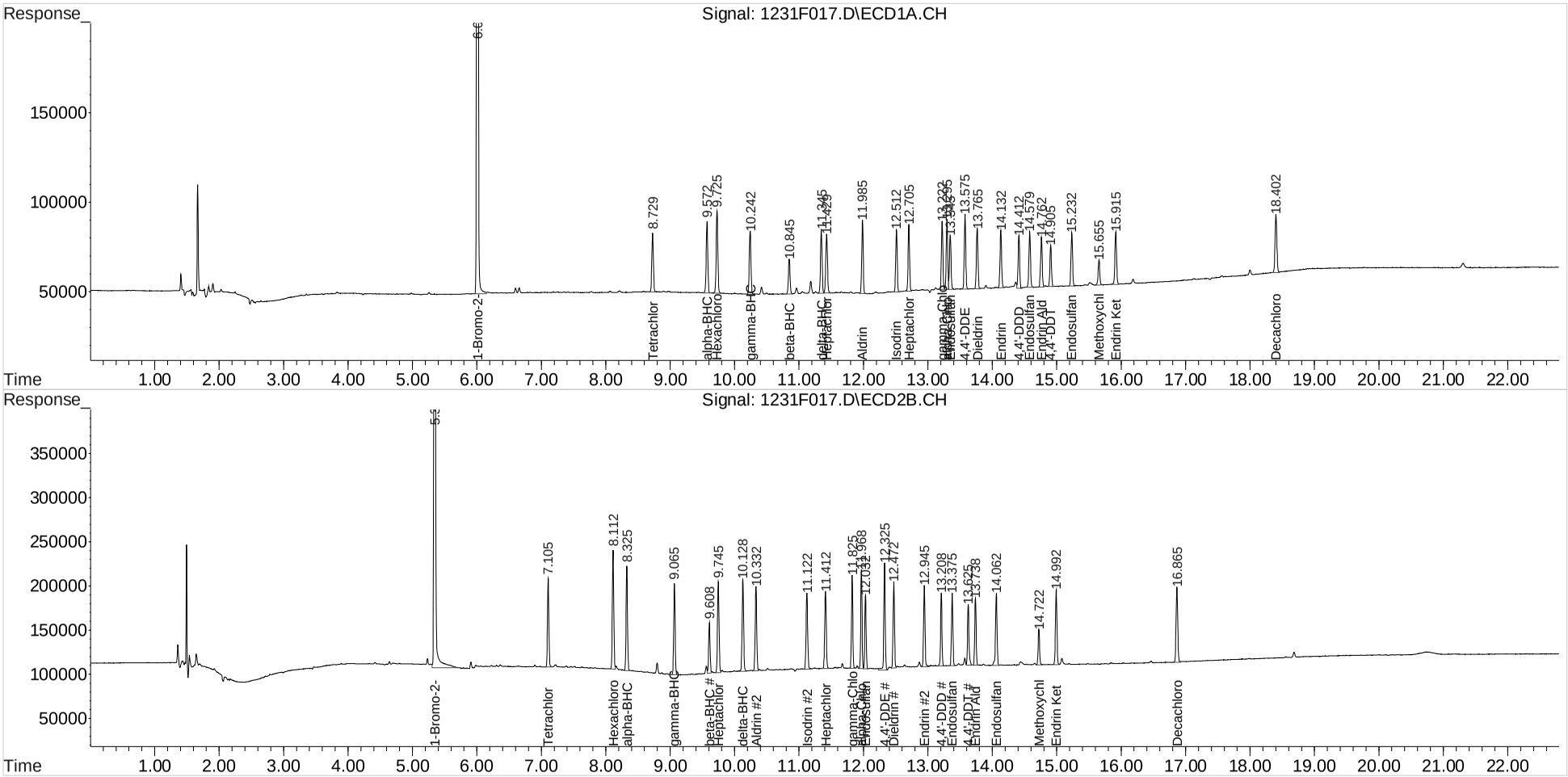
1st SM 01/01/19
2nd UA 01/07/19

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\123118\1231F017.D Vial: 17
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 7:17 pm Operator: MCHAPPELLE
Sample : KWG1806665-DLCS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:47:57 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F019.D
Lab ID: KWG1806665-2
RunType: DLCS
Matrix: SOIL

Date Acquired: 12/31/2018 20:16
Date Quantitated: 01/01/2019 15:50
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	alpha-BHC	21.1	NA	20	NR
	Hexachlorobenzene	21.7	NA	20	
	beta-BHC	24.9	NA	20	
	gamma-BHC (Lindane)	20.5	NA	20	
	delta-BHC	23.5	NA	20	
	Aldrin	24.6	NA	20	
	Isodrin	33.6	NA	20	
	gamma-Chlordane	23.5	NA	20	
	Endosulfan I	28.0	NA	20	
	alpha-Chlordane	20.7	NA	20	
	4,4'-DDE	23.6	NA	20	
	Endrin	21.7	NA	20	
	4,4'-DDD	21.0	NA	20	
	Endrin Aldehyde	22.5	NA	20	
	2,4'-DDE	27.0	NA	20	
	2,4'-DDT	20.4	NA	20	
Internal Standards	1-Bromo-2-nitrobenzene {4}	0	403.583333	45614.33333	

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F019.D\1231F019C.D
Lab ID: KWG1806665-2
RunType: DLCS
Matrix: SOIL

Date Acquired: 12/31/2018 20:16
Date Quantitated: 01/01/2019 15:50
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Internal Standards	1-Bromo-2-nitrobenzene {4}	0	32606.41666	30425.66666	NR

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F019.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F019.D\1231F019c.d			**Vial:**	19
Acqu Date:	12/31/2018 20:16	**Quant Date:**	01/01/2019 15:50	**Dilution:**	1.0
Run Type:	DLCS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806665-2				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/21/2018

Analysis Lot:	KWG1900100	**Prep Lot:**	KWG1806665	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511		
Prep Ref:	1707456	**Prep Date:**	12/21/2018		

Quant Method:	J:\GC23\METHODS\GC23-121418-			**Calibration ID:**	CAL15919
Title:					
MB Ref:	J:\GC23\DATA\123118\1231F015.D			**Method ID:**	MJ1711
				Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.00 -0.06 c	5.34 -0.04 c	908693	2547264	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.00 -0.11 c	5.34 -0.08 c	908693	2547264	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.00 -0.11 c	5.34 -0.08 c	908693	2547264	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}			0d	0d	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2				Rpt
1	Tetrachloro-m-xylene	8.72	7.10	54565	146269	3.64	3.99				NR
				%Recovery =		73	OK 80	OK	Limits =	70-130	
1	Decachlorobiphenyl	18.40 +0.01	16.86	62970	143480	4.14	4.55				NR
				%Recovery =		83	OK 91	OK	Limits =	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Hexachlorobenzene			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	beta-BHC			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	gamma-BHC (Lindane)			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR
1	delta-BHC			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR
1	Aldrin			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Isodrin			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F019.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F019.D\1231F019c.d			**Vial:**	19
Acqu Date:	12/31/2018 20:16	**Quant Date:**	01/01/2019 15:50	**Dilution:**	1.0
Run Type:	DLCS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806665-2				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan I			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	alpha-Chlordane			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Dieldrin			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDE			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR
1	Endosulfan II			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDD			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin Aldehyde			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDT			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin Ketone			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Methoxychlor			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR
1	2,4'-DDE			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDD			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDT			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	229.57	220.09	0.0115	0.0110	**0.0110**
2	Toxaphene {1}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {2}	14.56	13.49 +0.01	25129m	37711	296.53	236.46	0.0148	0.0118	
2	Toxaphene {3}	15.10 +0.01	13.96 +0.01	32815	36129m	210.45	256.41	0.0105	0.0128	
2	Toxaphene {4}	15.27	14.10 +0.01	18816	58050m	294.50	220.39	0.0147	0.0110	
2	Toxaphene {5}	15.55 +0.01	14.48 +0.01	12392	104378m	148.16	204.32	0.00741	0.0102	
2	Toxaphene {6}	15.97 +0.01	14.68 +0.01	46620	75465m	198.21	182.88	0.00991	0.00914	
	Chlordane			0	0	96.23	110.56	0.00481	0.00553	**0.00481**
3	Chlordane {1}	11.00	9.39	43013	97446	82.74	88.62	0.00414	0.00443	
3	Chlordane {2}	11.43 +0.01	11.49 +0.01	44278	74870	67.53	106.51	0.00338	0.00533	
3	Chlordane {3}	12.03	11.82	51288	295017	114.55	106.02	0.00573	0.00530	
3	Chlordane {4}	13.22	11.87	141672	197507	108.40	115.26	0.00542	0.00576	
3	Chlordane {5}	13.29	11.93	109758	119920	99.17	147.76	0.00496	0.00739	
3	Chlordane {6}	13.37	11.97	85614	247482	104.96	99.18	0.00525	0.00496	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F019.D Vial: 19
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:16 pm Operator: MCHAPPELLE
Sample : KWG1806665-DLCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:50:23 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.004	5.340	908693	2547264	100.000	100.000
29)	1-Bromo-2...	6.004	5.340	908693	2547264	100.000	100.000
36)	1-Bromo-2...	6.004	5.340	908693	2547264	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.724	7.104	54565	146269	3.636	3.991
28) s	Decachlor...	18.401	16.860	62970	143480	4.144	4.549
	Target Compounds						
31)	Toxaphene...	14.564	13.487	25129	37711	296.529m	236.456
32)	Toxaphene...	15.097	13.957	32815	36129	210.448	256.406m
33)	Toxaphene...	15.274	14.100	18816	58050	294.503	220.385m#
34)	Toxaphene...	15.547	14.480	12392	104378	148.162	204.319m#
35)	Toxaphene...	15.974	14.680	46620	75465	198.213	182.881m
37)	Chlordane	11.001	9.387	43013	97446	82.743	88.616
38)	Chlordane...	11.427	11.487	44278	74870	67.533	106.507 #
39)	Chlordane...	12.034	11.824	51288	295017	114.548	106.022
40)	Chlordane...	13.221	11.867	141672	197507	108.396	115.256
41)	Chlordane...	13.294	11.934	109758	119920	99.172	147.760 #
42)	Chlordane...	13.374	11.967	85614	247482	104.961	99.181
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

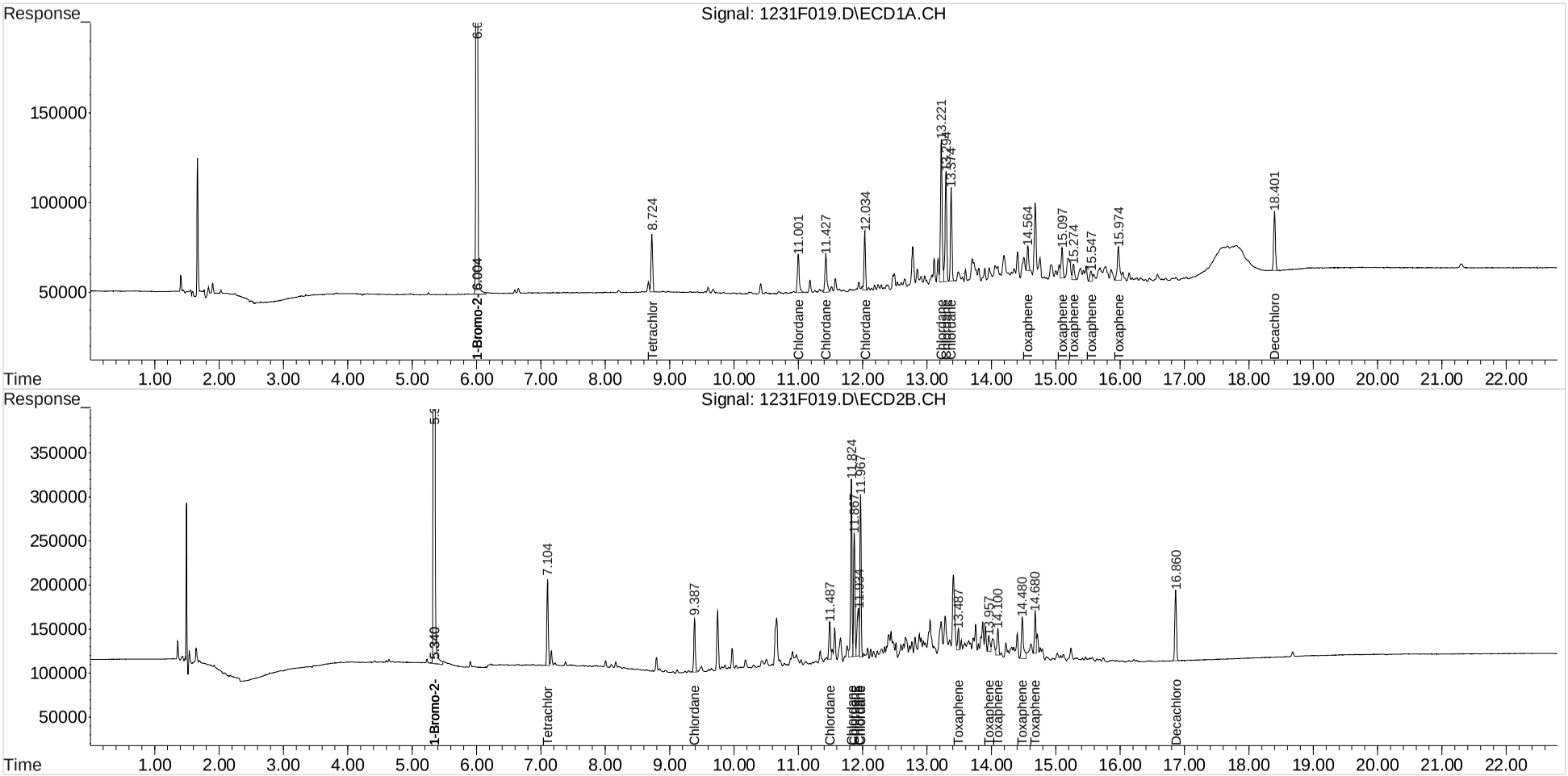
1st SM 01/01/19
2nd UA 01/07/19

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\123118\1231F019.D Vial: 19
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:16 pm Operator: MCHAPPELLE
Sample : KWG1806665-DLCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:50:23 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



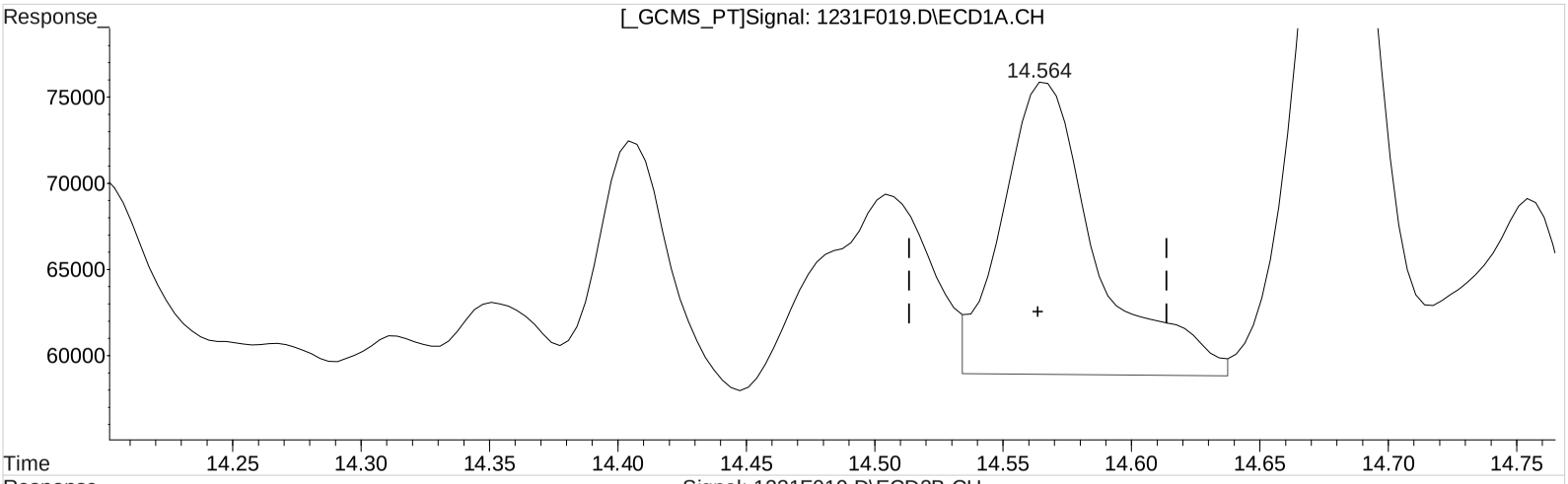
Quantitation Report (Qedit)

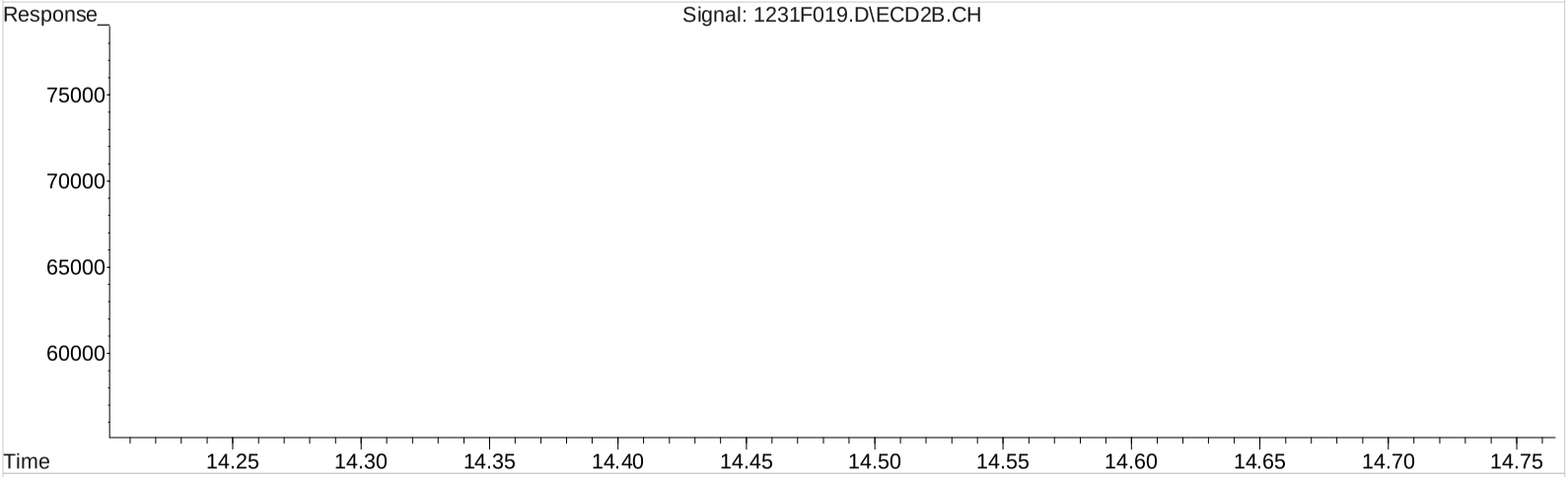
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F019.D Vial: 19
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:16 pm Operator: MCHAPPELLE
Sample : KWG1806665-DLCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:43 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(31) Toxaphene {2}

14.564min 572.981 ug/L

response 43160

Manual Integration:

Before

01/01/19

(31) Toxaphene {2} #2

13.487min 236.456 ug/L

response 37711

(+) = Expected Retention Time

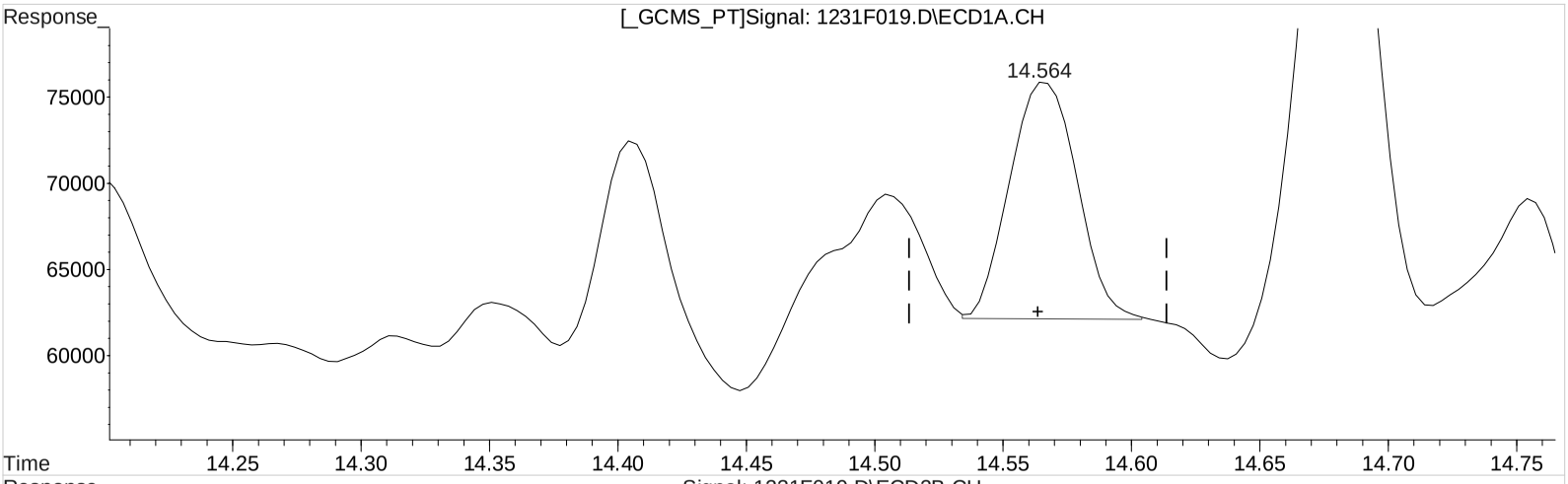
Quantitation Report (Qedit)

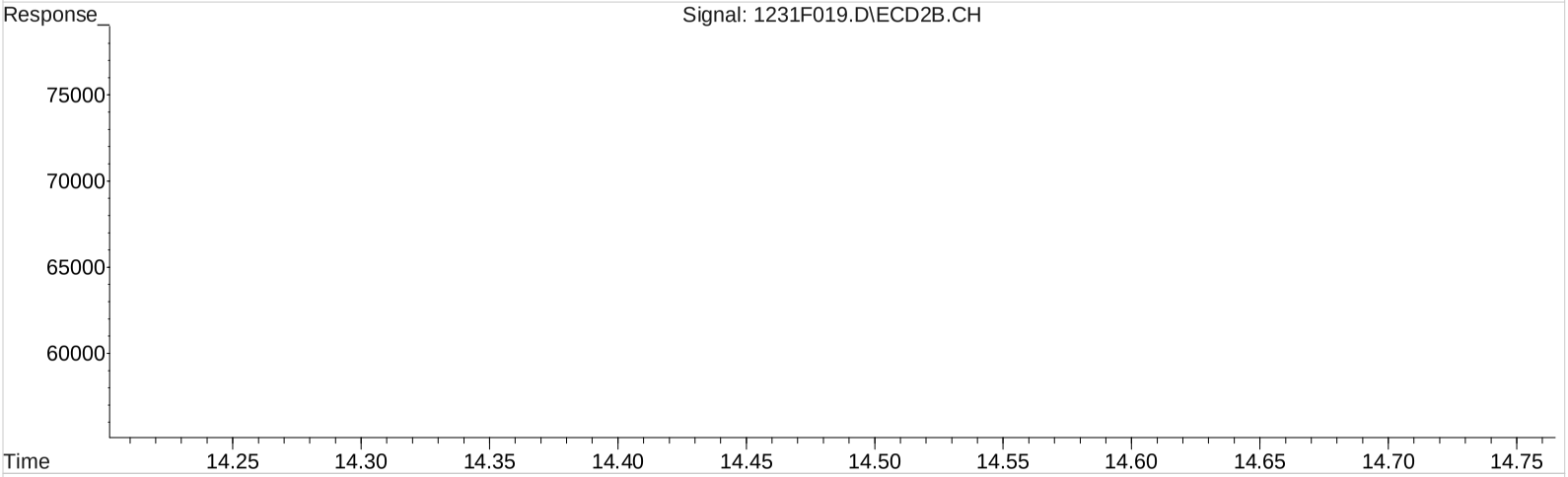
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F019.D Vial: 19
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:16 pm Operator: MCHAPPELLE
Sample : KWG1806665-DLCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:43 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(31) Toxaphene {2}

14.564min 296.529 ug/L m

response 25129

Manual Integration:

After

Baseline/Shoulder

01/01/19

(31) Toxaphene {2} #2

13.487min 236.456 ug/L

response 37711

(+) = Expected Retention Time

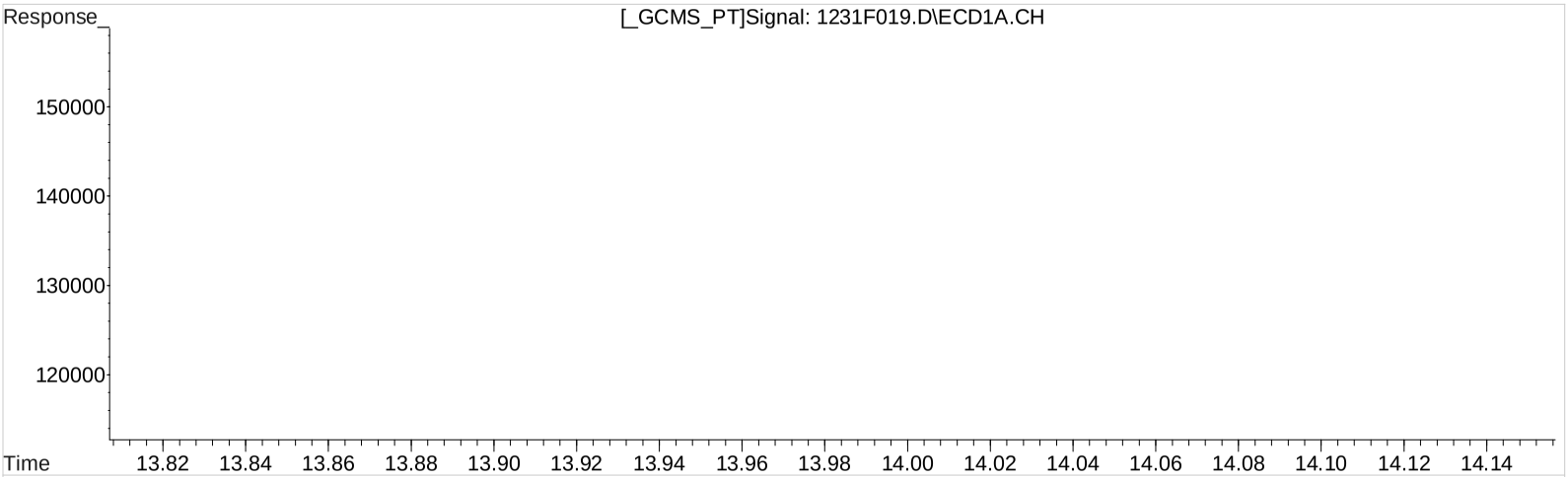
Quantitation Report (Qedit)

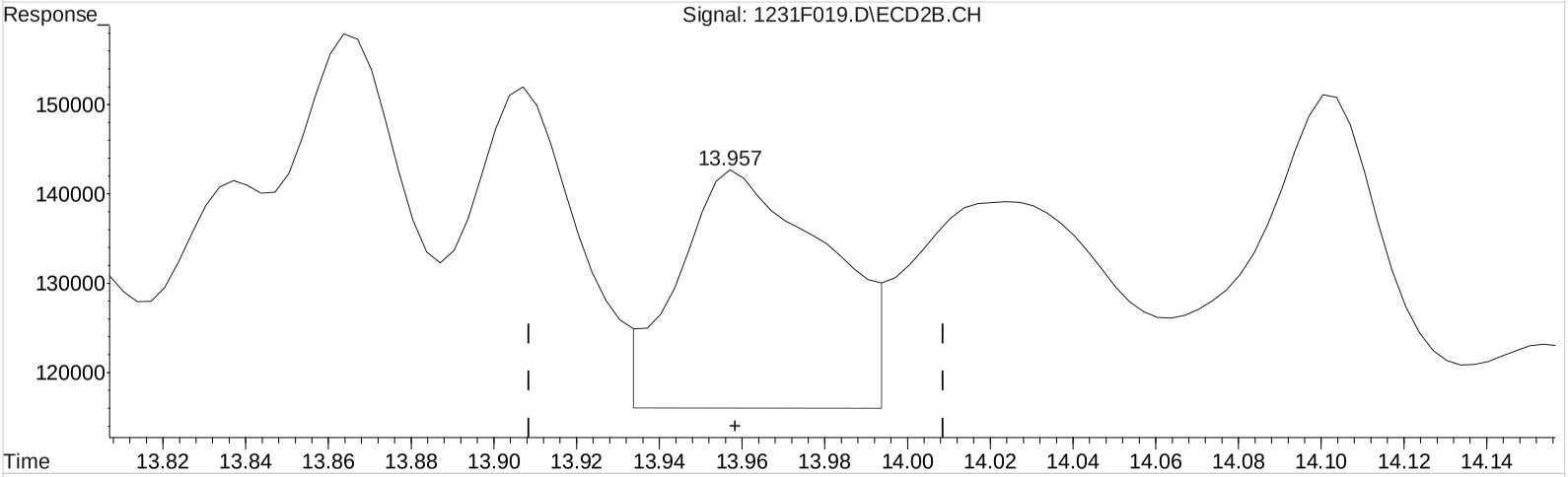
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F019.D Vial: 19
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:16 pm Operator: MCHAPPELLE
Sample : KWG1806665-DLCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:43 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(32) Toxaphene {3}

15.097min 210.448 ug/L

response 32815

Manual Integration:

Before

01/01/19

(32) Toxaphene {3} #2

13.957min 477.043 ug/L

response 67218

(+) = Expected Retention Time

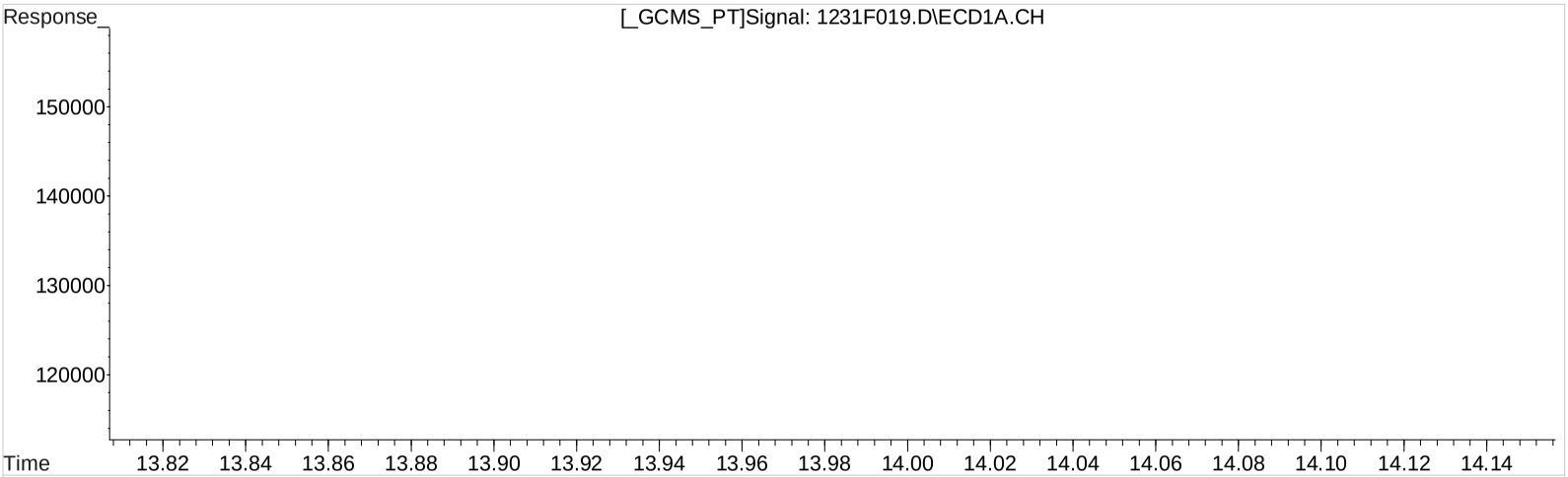
Quantitation Report (Qedit)

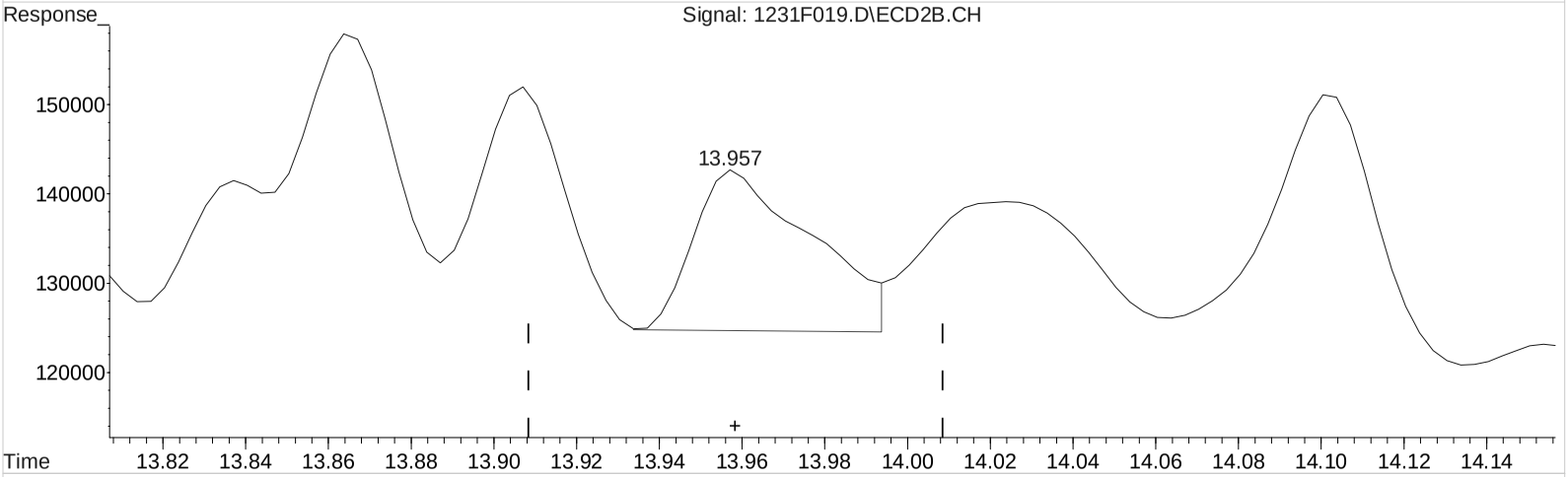
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F019.D Vial: 19
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:16 pm Operator: MCHAPPELLE
Sample : KWG1806665-DLCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:43 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(32) Toxaphene {3}

15.097min 210.448 ug/L

response 32815

Manual Integration:

After

Baseline/Shoulder

01/01/19

(32) Toxaphene {3} #2

13.957min 256.406 ug/L m

response 36129

(+) = Expected Retention Time

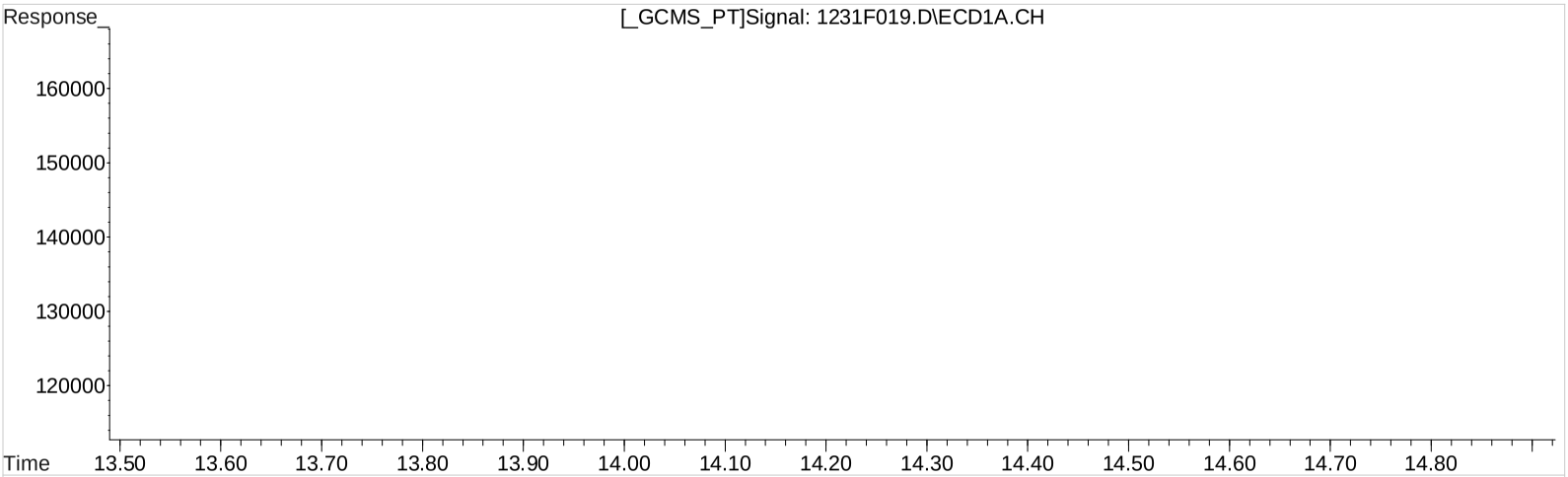
Quantitation Report (Qedit)

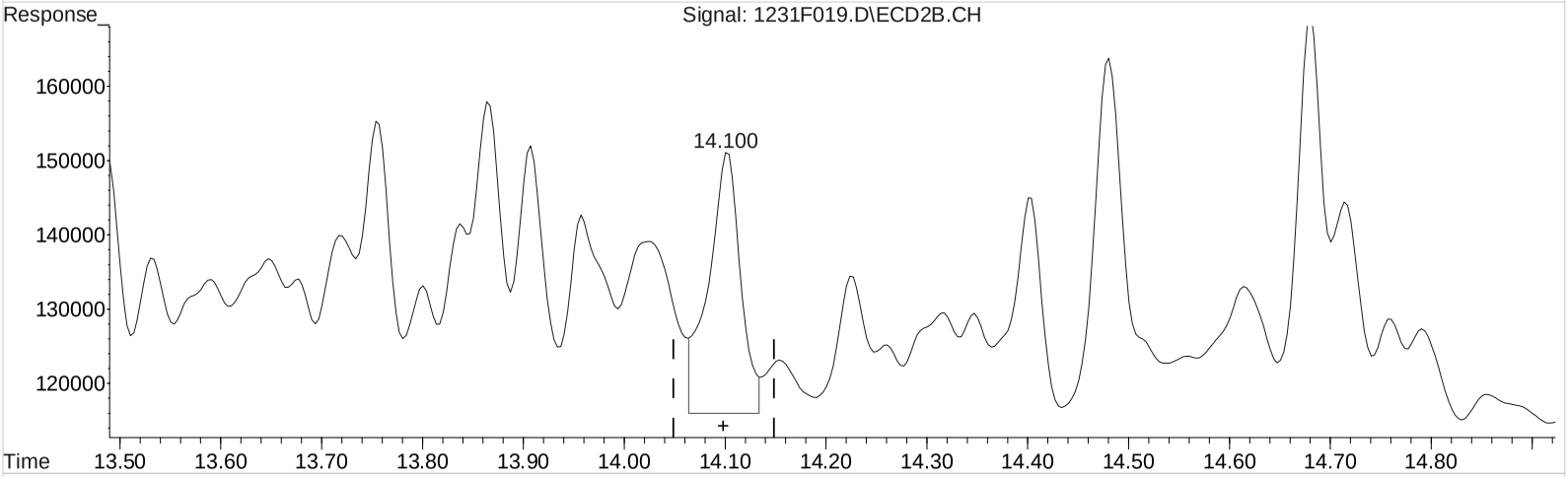
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F019.D Vial: 19
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:16 pm Operator: MCHAPPELLE
Sample : KWG1806665-DLCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:43 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(33) Toxaphene {4}

15.274min 294.503 ug/L

response 18816

Manual Integration:

Before

01/01/19

(33) Toxaphene {4} #2

14.100min 294.101 ug/L

response 77467

(+) = Expected Retention Time

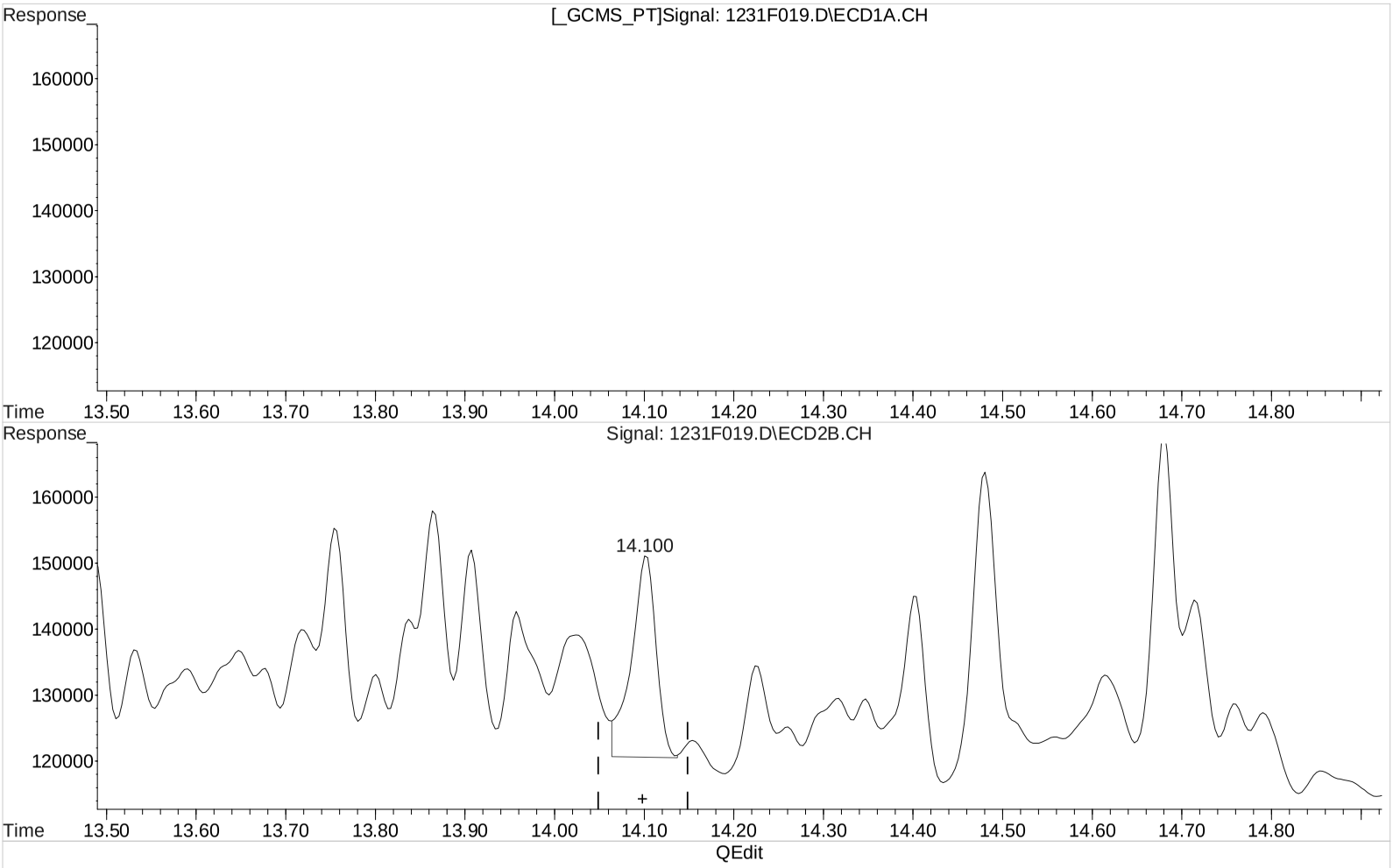
Quantitation Report (Qedit)

1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F019.D Vial: 19
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:16 pm Operator: MCHAPPELLE
Sample : KWG1806665-DLCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:43 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(33) Toxaphene {4}

15.274min 294.503 ug/L

response 18816

Manual Integration:

After

Baseline/Shoulder

01/01/19

(33) Toxaphene {4} #2

14.100min 220.385 ug/L m

response 58050

(+) = Expected Retention Time

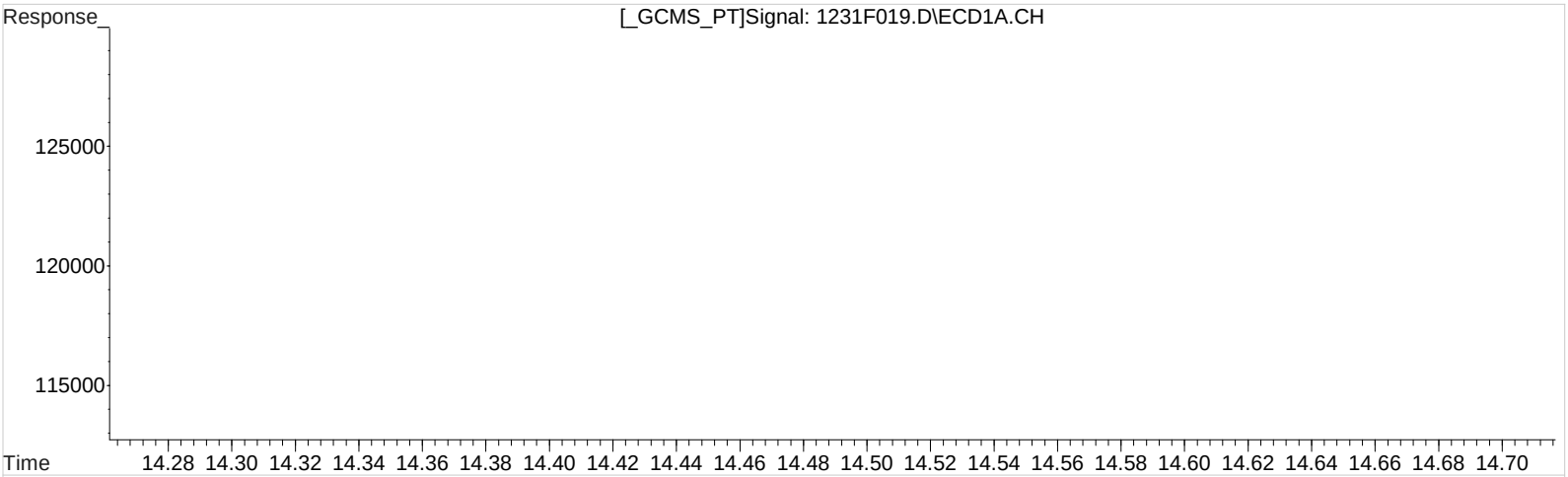
Quantitation Report (Qedit)

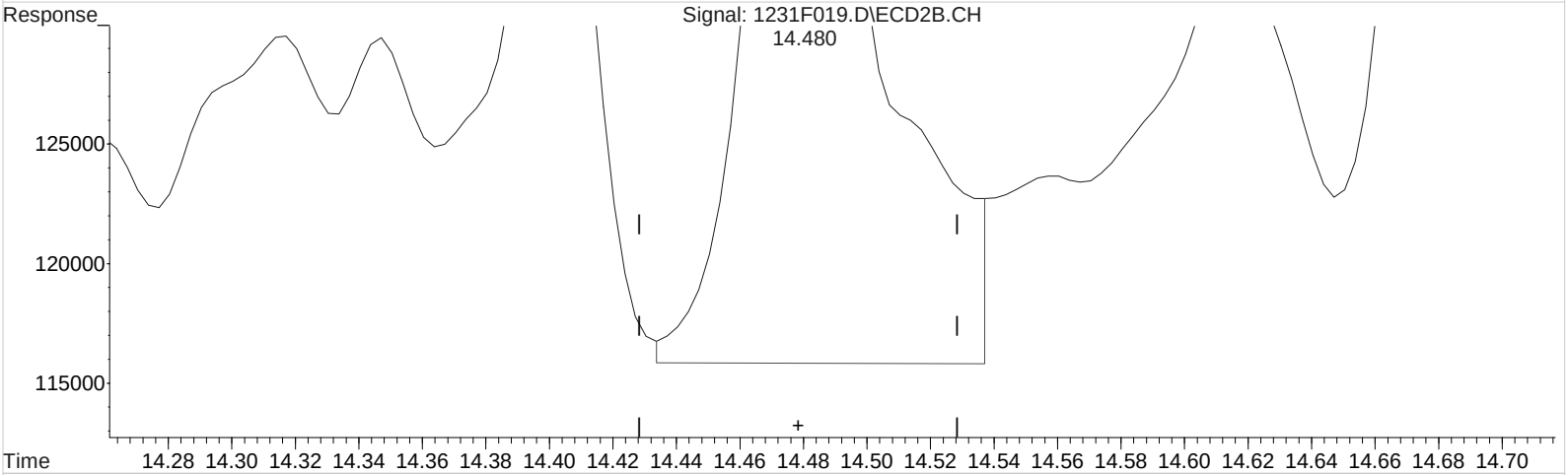
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F019.D Vial: 19
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:16 pm Operator: MCHAPPELLE
Sample : KWG1806665-DLCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:43 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(34) Toxaphene {5}

15.547min 148.162 ug/L

response 12392

Manual Integration:

Before

01/01/19

(34) Toxaphene {5} #2

14.480min 214.042 ug/L

response 109345

(+) = Expected Retention Time

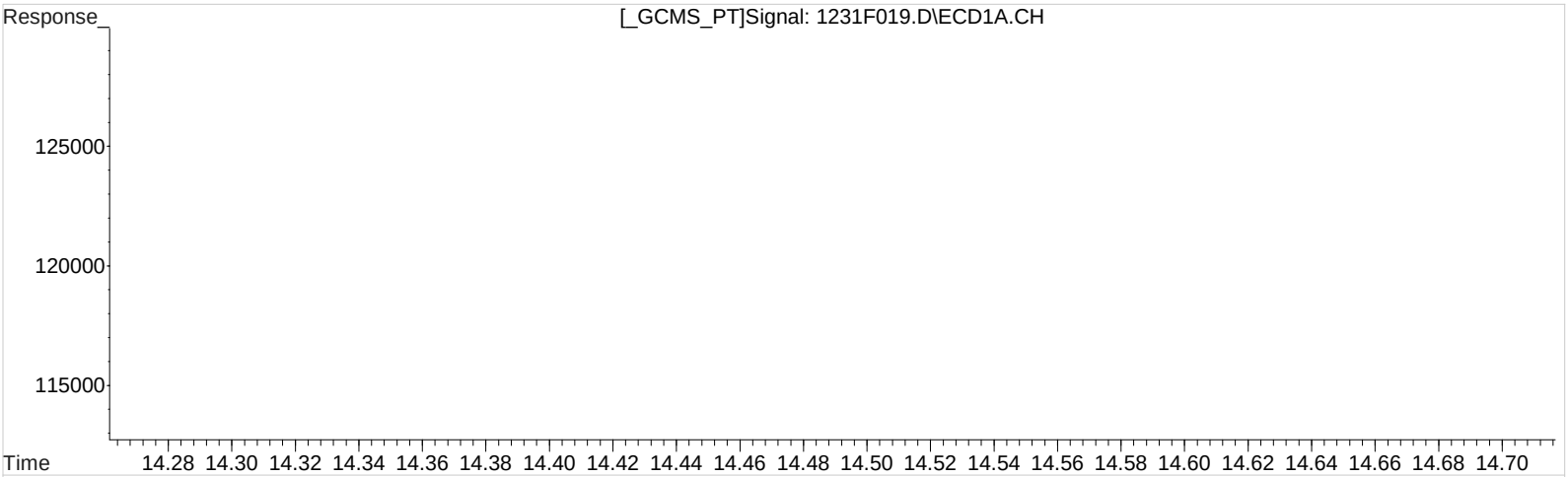
Quantitation Report (Qedit)

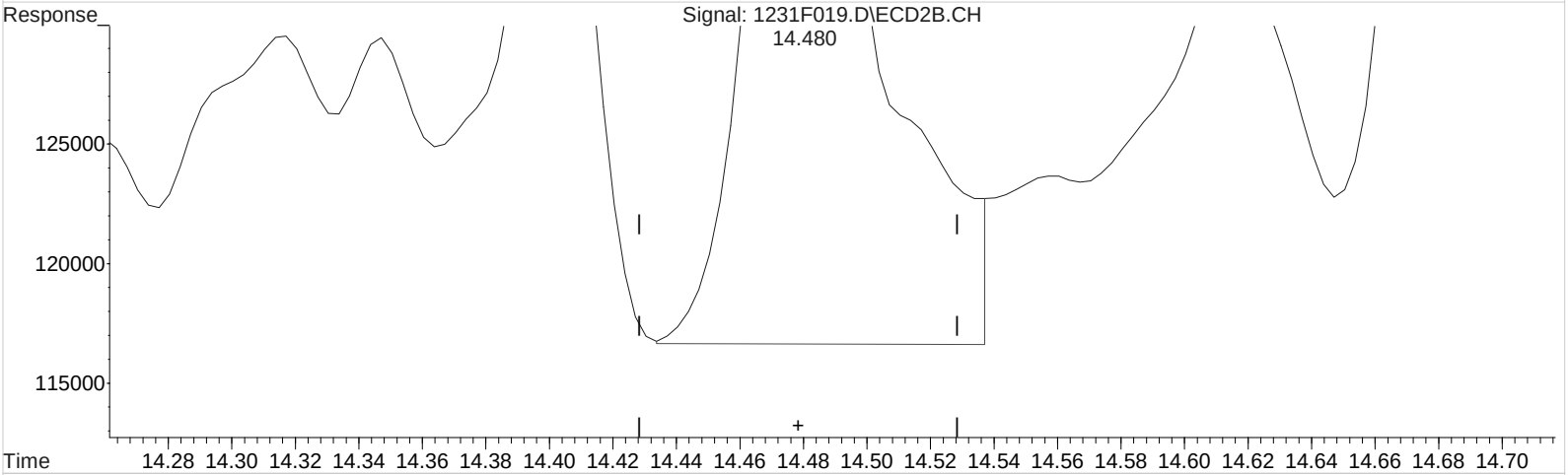
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F019.D Vial: 19
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:16 pm Operator: MCHAPPELLE
Sample : KWG1806665-DLCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:43 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(34) Toxaphene {5}

15.547min 148.162 ug/L

response 12392

Manual Integration:

After

Baseline/Shoulder

01/01/19

(34) Toxaphene {5} #2

14.480min 204.319 ug/L m

response 104378

(+) = Expected Retention Time

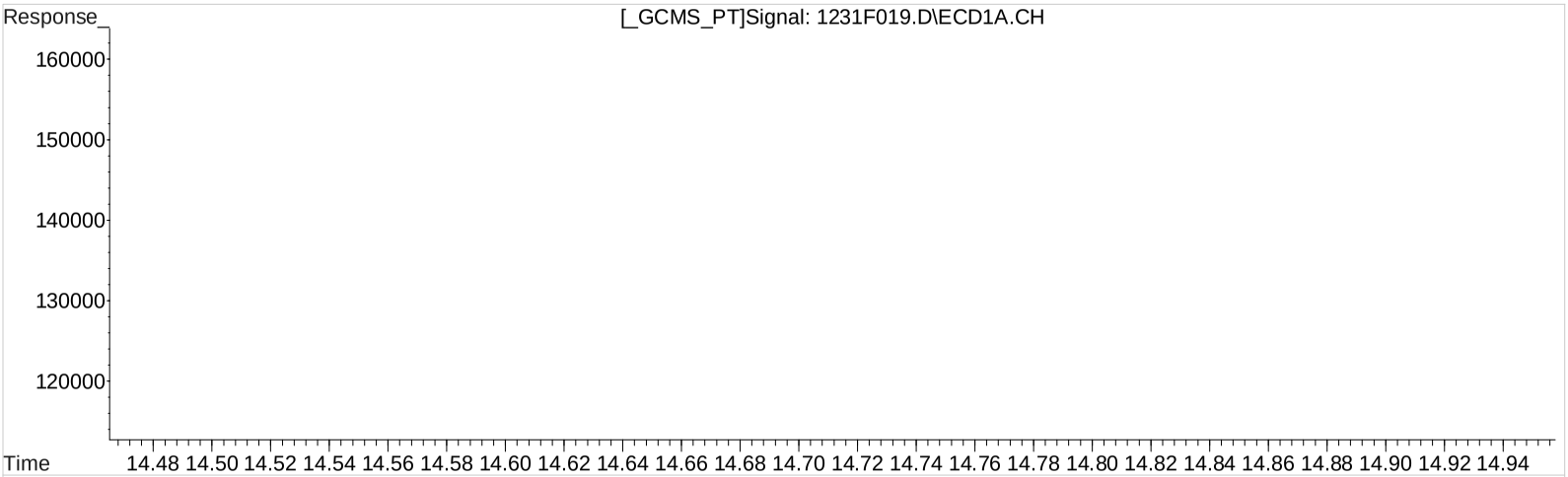
Quantitation Report (Qedit)

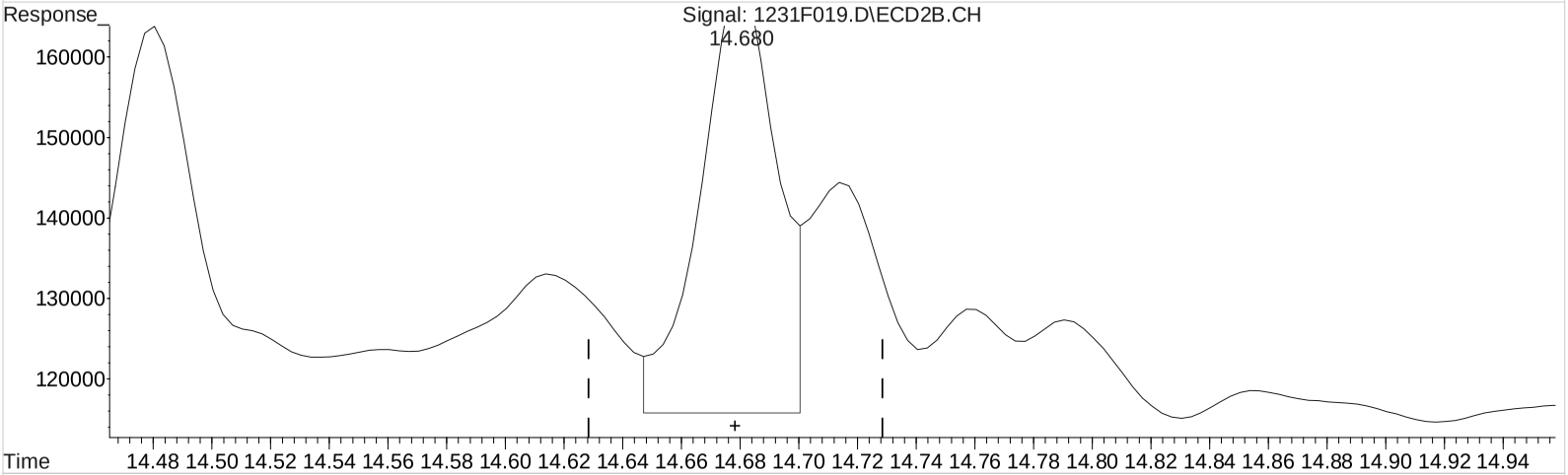
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F019.D Vial: 19
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:16 pm Operator: MCHAPPELLE
Sample : KWG1806665-DLCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:43 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(35) Toxaphene {6}

15.974min 198.213 ug/L

response 46620

Manual Integration:

Before

01/01/19

(35) Toxaphene {6} #2

14.680min 236.586 ug/L

response 97626

(+) = Expected Retention Time

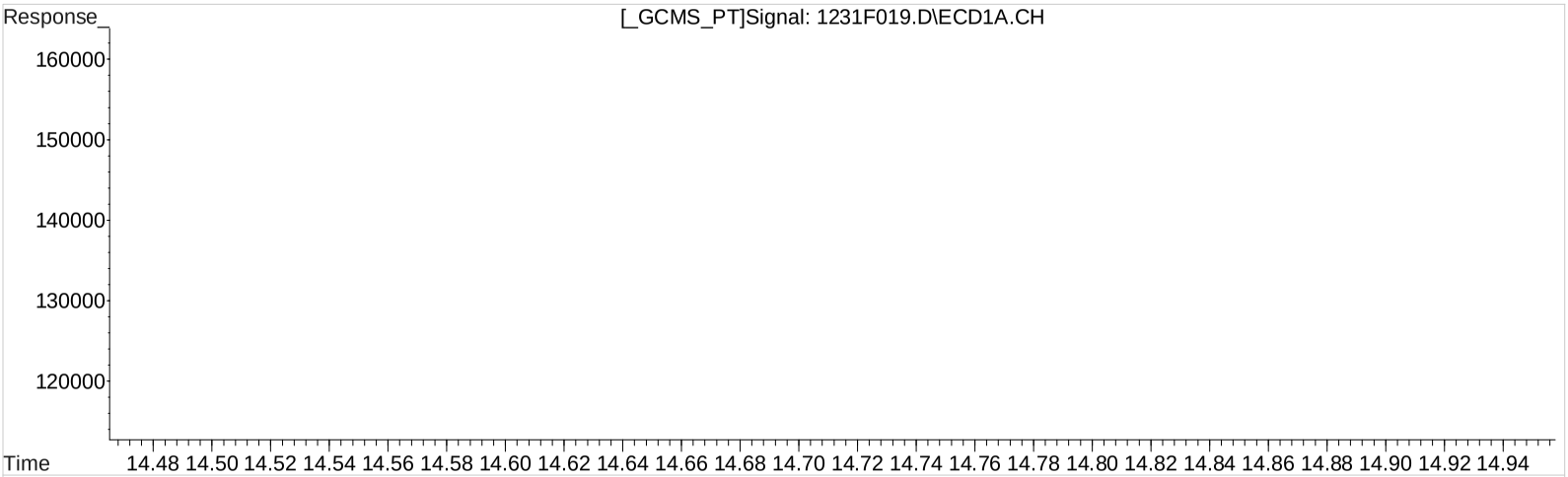
Quantitation Report (Qedit)

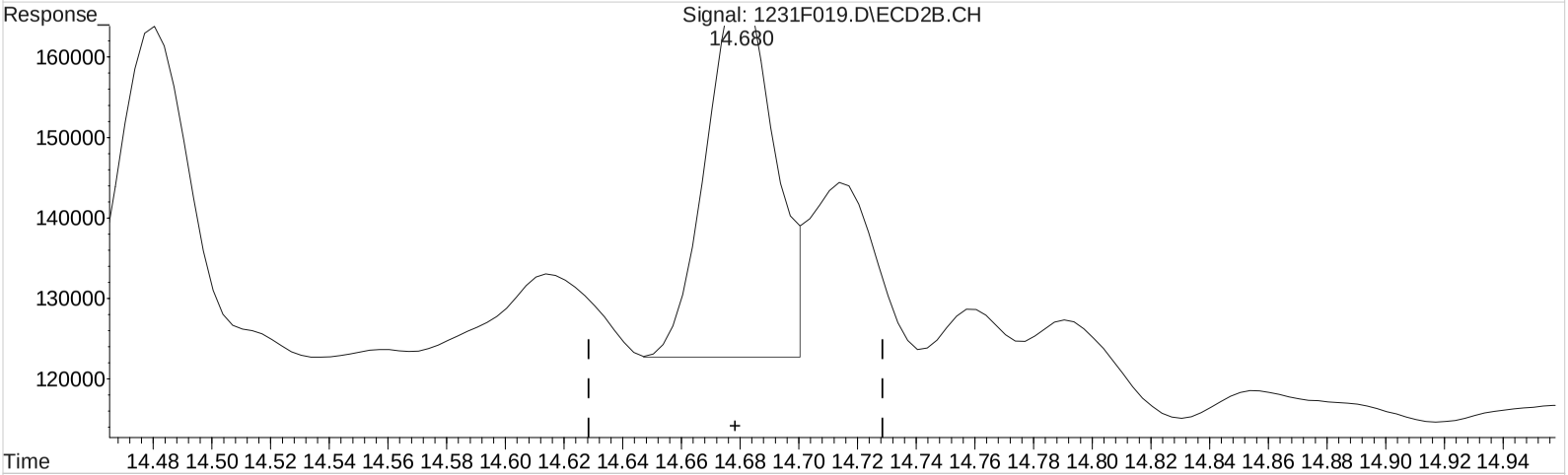
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F019.D Vial: 19
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 8:16 pm Operator: MCHAPPELLE
Sample : KWG1806665-DLCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:37:43 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(35) Toxaphene {6}

15.974min 198.213 ug/L

response 46620

Manual Integration:

After

Baseline/Shoulder

01/01/19

(35) Toxaphene {6} #2

14.680min 182.881 ug/L m

response 75465

(+) = Expected Retention Time

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F003.D
Lab ID: KWG1900100-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/31/2018 12:23
Date Quantitated: 01/01/2019 15:32
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	alpha-BHC	21.1	NA	20	ICVOK
	Hexachlorobenzene	21.7	NA	20	
	beta-BHC	24.9	NA	20	
	gamma-BHC (Lindane)	20.5	NA	20	
	delta-BHC	23.5	NA	20	
	Aldrin	24.6	NA	20	
	Isodrin	33.6	NA	20	
	gamma-Chlordane	23.5	NA	20	
	Endosulfan I	28.0	NA	20	
	alpha-Chlordane	20.7	NA	20	
	4,4'-DDE	23.6	NA	20	
	Endrin	21.7	NA	20	NR
	4,4'-DDD	21.0	NA	20	NR
	Endrin Aldehyde	22.5	NA	20	
	2,4'-DDE	27.0	NA	20	
	2,4'-DDT	20.4	NA	20	
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	523283	2093132	NR
	1-Bromo-2-nitrobenzene {3}	0	)284.071428	21136.28571	NR
	1-Bromo-2-nitrobenzene {4}	0	[403.583333	45614.33333	NR

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F003.D\1231F003C.D
Lab ID: KWG1900100-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/31/2018 12:23
Date Quantitated: 01/01/2019 15:32
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	17017.33333	68069.33333	NR
	1-Bromo-2-nitrobenzene {3}	0	12049.14285	48196.57142	NR
	1-Bromo-2-nitrobenzene {4}	0	32606.41666	30425.66666	NR

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F003.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F003.D\1231F003c.d			**Vial:**	2
Acqu Date:	12/31/2018 12:23	**Quant Date:**	01/01/2019 15:32	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1806233	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:			
MB Ref:		**Method ID:**	MJ1647
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.00	-0.06	5.34	-0.04	959831	3029535	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.72	7.10	26869	74443	1.70	1.71			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	18.39	16.86	28205**m**	73656	1.76	1.96			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC	9.56	8.32	28910	81766	2.02	2.08			
1	Hexachlorobenzene	9.72	8.10	38198	100413	1.92	1.90			
1	beta-BHC	10.84	9.60	14401	38369	2.07	2.11			
1	gamma-BHC (Lindane)	10.23	9.06	24860	68272	1.99	1.94			
1	delta-BHC	11.34	10.12	25791	71485	2.13	2.18			
1	Heptachlor	11.42	9.74	24746	68549	2.10	1.89			
1	Aldrin	11.98	10.32	28564	76047	2.09	2.18			
1	Isodrin	12.50	11.11	23164	62034	2.06	2.09			
1	Heptachlor Epoxide	12.70	11.40	26344	69122	2.07	2.15			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F003.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F003.D\1231F003c.d			**Vial:**	2
Acqu Date:	12/31/2018 12:23	**Quant Date:**	01/01/2019 15:32	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	gamma-Chlordane	13.21	11.82	25180	66729	2.04	2.05			
1	Endosulfan I	13.34	12.02	23336	60652	2.10	2.10			
1	alpha-Chlordane	13.29	11.96	25708	67258	2.01	2.05			
1	Dieldrin	13.76	12.46	25072	66644	2.12	2.14			
1	4,4'-DDE	13.57	12.32	26529	73945	2.12	2.32			
1	Endrin	14.12	12.94	22051	58029	2.07	2.04			
1	Endosulfan II	14.57	13.37	22694	57620	2.05	2.05			
1	4,4'-DDD	14.40	13.20	19263	49408	2.14	2.12			
1	Endrin Aldehyde	14.75	13.73	19899	49320	2.02	2.01			
1	Endosulfan Sulfate	15.23	14.05	21422	57233**m**	1.99	2.04			
1	4,4'-DDT	14.90	13.62	12277	39463	1.93	1.80			
1	Endrin Ketone	15.91	14.98	21761	61733	1.96	2.00			
1	Methoxychlor	15.65	14.72	8414	22502	2.17	1.77			
1	2,4'-DDE			0**d**	0**d**	0.0000	0.0000			NR
1	2,4'-DDD			0**d**	0**d**	0.0000	0.0000			NR
1	2,4'-DDT			0**d**	0**d**	0.0000	0.0000			NR
	Toxaphene			0	0	0.0000	0.0000			NR
2	Toxaphene {1}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {2}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {3}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {4}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {5}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {6}			0**d**	0**d**	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.0000			NR
3	Chlordane {1}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {2}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {3}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {4}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {5}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {6}			0**d**	0**d**	0.0000	0.0000			
4	Chlorpyrifos			0**d**	0**d**	0.0000	0.0000			NR
4	Oxychlordane			0**d**	0**d**	0.0000	0.0000			NR
4	cis-Nonachlor			0**d**	0**d**	0.0000	0.0000			NR
4	trans-Nonachlor			0**d**	0**d**	0.0000	0.0000			NR
4	Mirex			0**d**	0**d**	0.0000	0.0000			NR
4	Hexachloroethane			0**d**	0**d**	0.0000	0.0000			NR
4	Hexachlorobutadiene			0**d**	0**d**	0.0000	0.0000			NR
4	Perthane			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F003.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F003.D\1231F003c.d			**Vial:**	2
Acqu Date:	12/31/2018 12:23	**Quant Date:**	01/01/2019 15:32	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1690	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1900100	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-			**Calibration ID:**	CAL15919
Title:					
MB Ref:				**Method ID:**	MJ1690
				Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.00	-0.06	5.34	-0.04	959831	3029535	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.72	7.10	26869	74443	1.70	1.71			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	18.39	16.86	28205**m**	73656	1.76	1.96			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	alpha-BHC	9.56	8.32	28910	81766	2.02	2.08			
1	Hexachlorobenzene	9.72	8.10	38198	100413	1.92	1.90			
1	beta-BHC	10.84	9.60	14401	38369	2.07	2.11			
1	gamma-BHC (Lindane)	10.23	9.06	24860	68272	1.99	1.94			
1	delta-BHC	11.34	10.12	25791	71485	2.13	2.18			
1	Heptachlor	11.42	9.74	24746	68549	2.10	1.89			
1	Aldrin	11.98	10.32	28564	76047	2.09	2.18			
1	Isodrin	12.50	11.11	23164	62034	2.06	2.09			
1	Heptachlor Epoxide	12.70	11.40	26344	69122	2.07	2.15			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F003.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F003.D\1231F003c.d			**Vial:**	2
Acqu Date:	12/31/2018 12:23	**Quant Date:**	01/01/2019 15:32	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1690	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	gamma-Chlordane	13.21	11.82	25180	66729	2.04	2.05			
1	Endosulfan I	13.34	12.02	23336	60652	2.10	2.10			
1	alpha-Chlordane	13.29	11.96	25708	67258	2.01	2.05			
1	Dieldrin	13.76	12.46	25072	66644	2.12	2.14			
1	4,4'-DDE	13.57	12.32	26529	73945	2.12	2.32			
1	Endrin	14.12	12.94	22051	58029	2.07	2.04			
1	Endosulfan II	14.57	13.37	22694	57620	2.05	2.05			
1	4,4'-DDD	14.40	13.20	19263	49408	2.14	2.12			
1	Endrin Aldehyde	14.75	13.73	19899	49320	2.02	2.01			
1	Endosulfan Sulfate	15.23	14.05	21422	57233**m**	1.99	2.04			
1	4,4'-DDT	14.90	13.62	12277	39463	1.93	1.80			
1	Endrin Ketone	15.91	14.98	21761	61733	1.96	2.00			
1	Methoxychlor	15.65	14.72	8414	22502	2.17	1.77			
1	2,4'-DDE			0**d**	0**d**	0.0000	0.0000			NR
1	2,4'-DDD			0**d**	0**d**	0.0000	0.0000			NR
1	2,4'-DDT			0**d**	0**d**	0.0000	0.0000			NR
	Toxaphene			0	0	0.0000	0.0000			NR
2	Toxaphene {1}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {2}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {3}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {4}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {5}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {6}			0**d**	0**d**	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.0000			NR
3	Chlordane {1}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {2}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {3}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {4}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {5}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {6}			0**d**	0**d**	0.0000	0.0000			
4	Chlorpyrifos			0**d**	0**d**	0.0000	0.0000			NR
4	Oxychlordane			0**d**	0**d**	0.0000	0.0000			NR
4	cis-Nonachlor			0**d**	0**d**	0.0000	0.0000			NR
4	trans-Nonachlor			0**d**	0**d**	0.0000	0.0000			NR
4	Mirex			0**d**	0**d**	0.0000	0.0000			NR
4	Hexachloroethane			0**d**	0**d**	0.0000	0.0000			NR
4	Hexachlorobutadiene			0**d**	0**d**	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F003.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F003.D\1231F003c.d			**Vial:**	2
Acqu Date:	12/31/2018 12:23	**Quant Date:**	01/01/2019 15:32	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1900100	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:			
MB Ref:		**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.00	-0.06	5.34	-0.04	959831	3029535	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.72	7.10	26869	74443	1.70	1.71			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	18.39	16.86	28205**m**	73656	1.76	1.96			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC	9.56	8.32	28910	81766	2.02	2.08			
1	Hexachlorobenzene	9.72	8.10	38198	100413	1.92	1.90			
1	beta-BHC	10.84	9.60	14401	38369	2.07	2.11			
1	gamma-BHC (Lindane)	10.23	9.06	24860	68272	1.99	1.94			
1	delta-BHC	11.34	10.12	25791	71485	2.13	2.18			
1	Heptachlor	11.42	9.74	24746	68549	2.10	1.89			
1	Aldrin	11.98	10.32	28564	76047	2.09	2.18			
1	Isodrin	12.50	11.11	23164	62034	2.06	2.09			
1	Heptachlor Epoxide	12.70	11.40	26344	69122	2.07	2.15			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F003.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F003.D\1231F003c.d			**Vial:**	2
Acqu Date:	12/31/2018 12:23	**Quant Date:**	01/01/2019 15:32	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane	13.21	11.82	25180	66729	2.04	2.05			
1	Endosulfan I	13.34	12.02	23336	60652	2.10	2.10			
1	alpha-Chlordane	13.29	11.96	25708	67258	2.01	2.05			
1	Dieldrin	13.76	12.46	25072	66644	2.12	2.14			
1	4,4'-DDE	13.57	12.32	26529	73945	2.12	2.32			
1	Endrin	14.12	12.94	22051	58029	2.07	2.04			
1	Endosulfan II	14.57	13.37	22694	57620	2.05	2.05			
1	4,4'-DDD	14.40	13.20	19263	49408	2.14	2.12			
1	Endrin Aldehyde	14.75	13.73	19899	49320	2.02	2.01			
1	Endosulfan Sulfate	15.23	14.05	21422	57233**m**	1.99	2.04			
1	4,4'-DDT	14.90	13.62	12277	39463	1.93	1.80			
1	Endrin Ketone	15.91	14.98	21761	61733	1.96	2.00			
1	Methoxychlor	15.65	14.72	8414	22502	2.17	1.77			
1	2,4'-DDE			0**d**	0**d**	0.0000	0.0000			NR
1	2,4'-DDD			0**d**	0**d**	0.0000	0.0000			NR
1	2,4'-DDT			0**d**	0**d**	0.0000	0.0000			NR
	Toxaphene			0	0	0.0000	0.0000			NR
2	Toxaphene {1}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {2}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {3}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {4}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {5}			0**d**	0**d**	0.0000	0.0000			
2	Toxaphene {6}			0**d**	0**d**	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.0000			NR
3	Chlordane {1}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {2}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {3}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {4}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {5}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {6}			0**d**	0**d**	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F003.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 12:23 pm Operator: MCHAPPELLE
Sample : 81 2PPB GCPS8-50K Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:32:21 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:31:14 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	5.998	5.338	959831	3029535	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.718	7.098	26869	74443	1.695	1.708
28) s	Decachlor...	18.395	16.858	28205	73656	1.757m	1.964
	Target Compounds						
3)	alpha-BHC	9.562	8.318	28910	81766	2.019	2.084
4)	Hexachlor...	9.718	8.105	38198	100413	1.919	1.897
5)	beta-BHC	10.838	9.601	14401	38369	2.071	2.111
6)	gamma-BHC...	10.232	9.058	24860	68272	1.985	1.938
7)	delta-BHC	11.338	10.121	25791	71485	2.134	2.179
8)	Heptachlor	11.422	9.738	24746	68549	2.100	1.892
9)	Aldrin	11.978	10.325	28564	76047	2.085	2.178
10)	Isodrin	12.505	11.115	23164	62034	2.058	2.094
11)	Heptachlo...	12.698	11.405	26344	69122	2.072	2.153
12)	gamma-Chl...	13.215	11.818	25180	66729	2.042	2.052
13)	Endosulfan I	13.342	12.025	23336	60652	2.102	2.098
14)	alpha-Chl...	13.292	11.961	25708	67258	2.013	2.051
15)	Dieldrin	13.758	12.465	25072	66644	2.124	2.143
16)	4,4'-DDE	13.572	12.321	26529	73945	2.119	2.318
17)	Endrin	14.125	12.938	22051	58029	2.066	2.040
18)	Endosulfa...	14.575	13.371	22694	57620	2.046	2.045
19)	4,4'-DDD	14.405	13.201	19263	49408	2.135	2.123
20)	Endrin Al...	14.755	13.731	19899	49320	2.019	2.006
21)	Endosulfa...	15.228	14.055	21422	57233	1.988	2.044m
22)	4,4'-DDT	14.902	13.621	12277	39463	1.926	1.798
23)	Endrin Ke...	15.908	14.985	21761	61733	1.963	2.001
24)	Methoxychlor	15.648	14.718	8414	22502	2.165	1.773

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

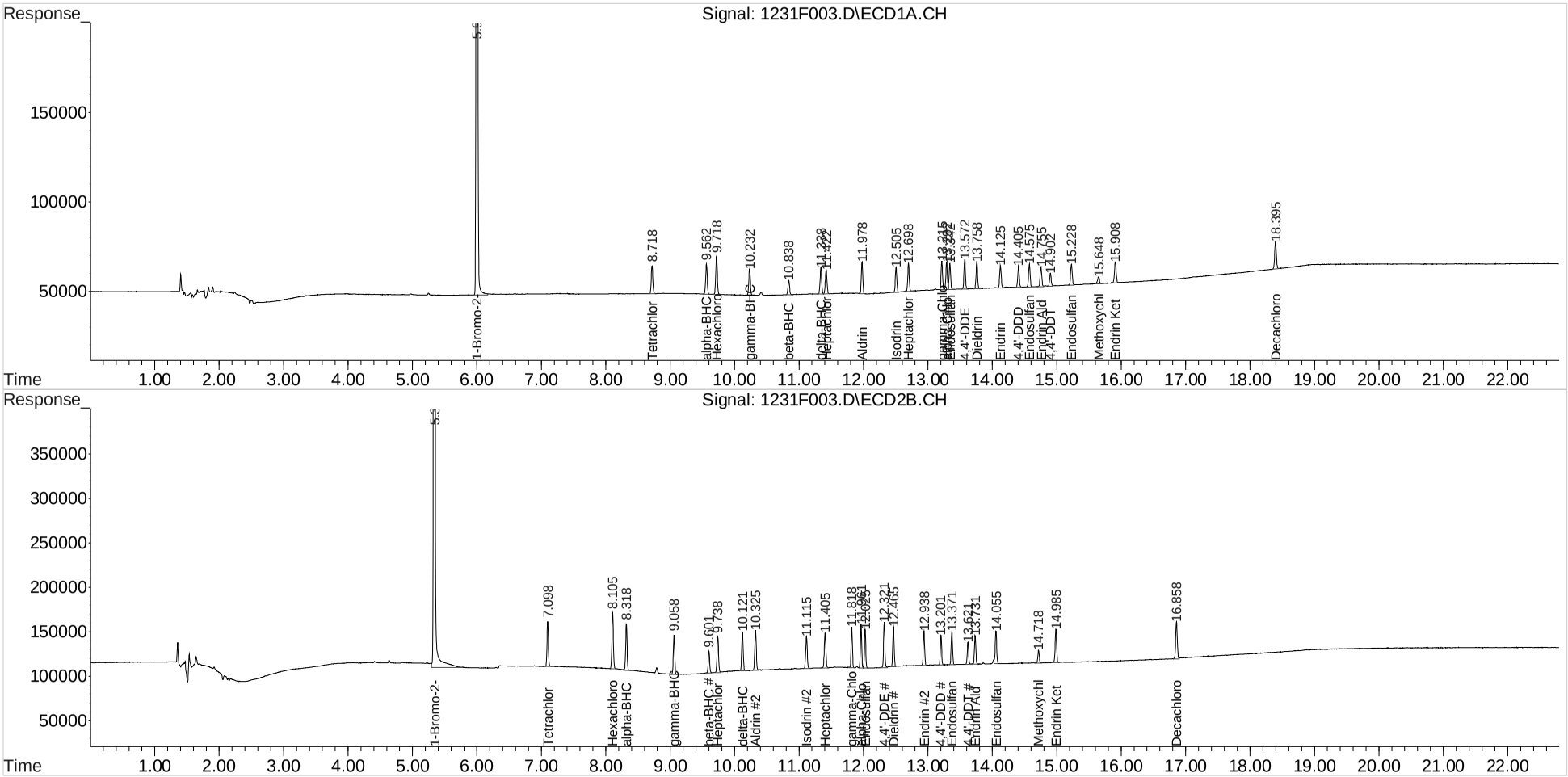
1st SM 01/01/19
2nd UA 01/07/19

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\123118\1231F003.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 12:23 pm Operator: MCHAPPELLE
Sample : 81 2PPB GCPS8-50K Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:32:21 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:31:14 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



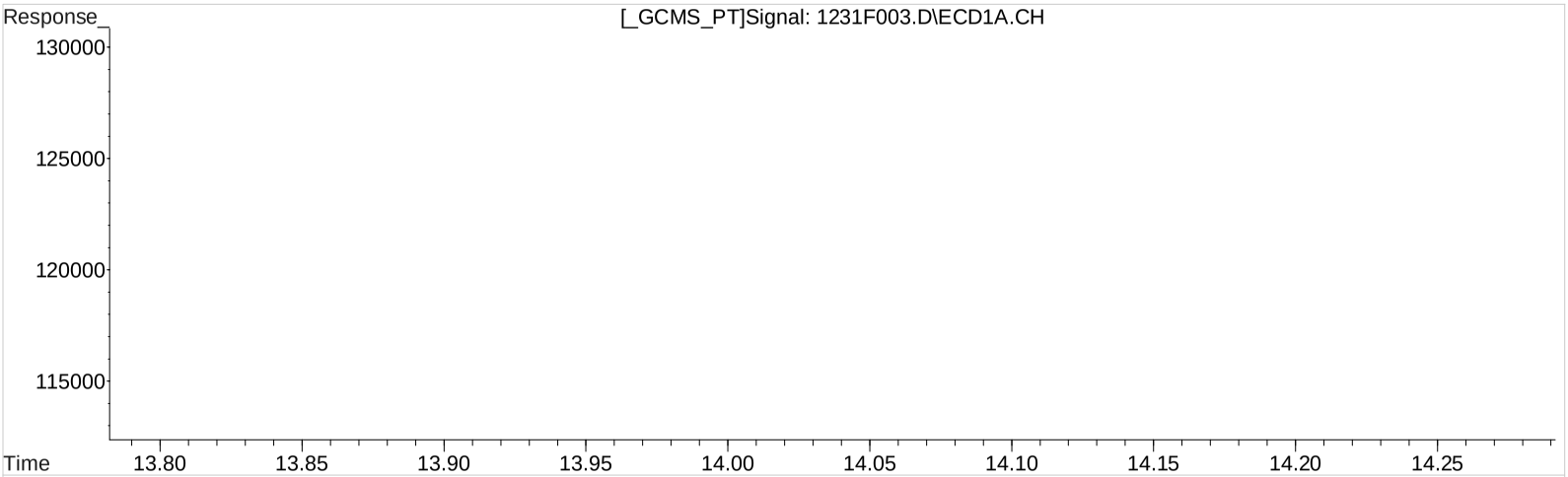
Quantitation Report (Qedit)

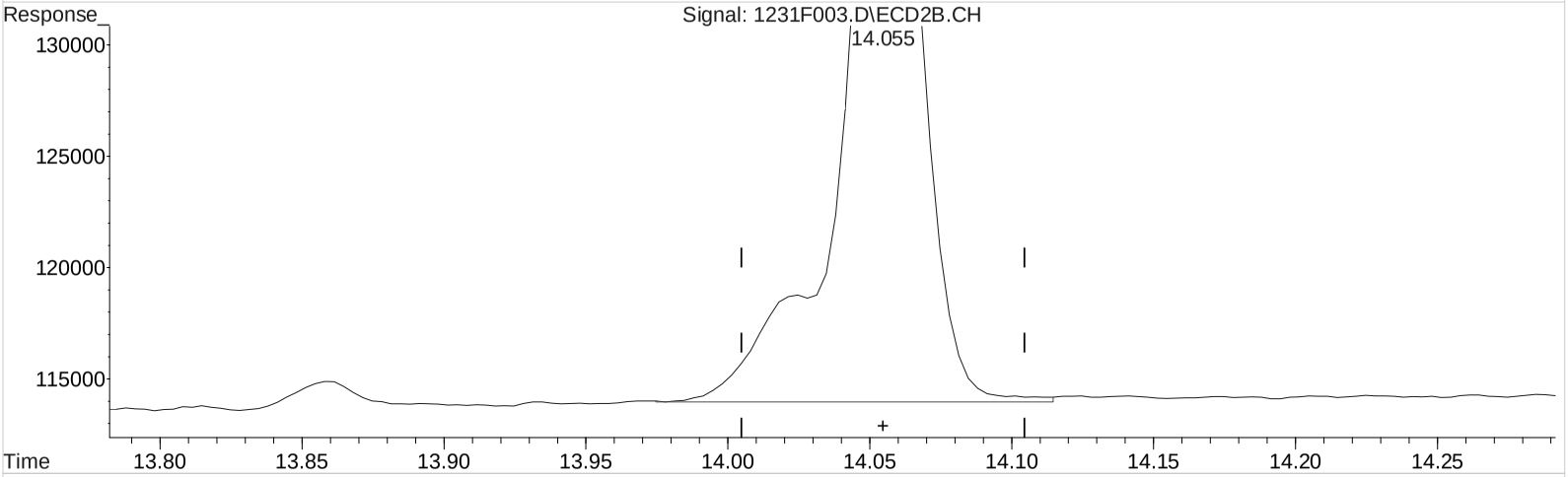
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F003.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 12:23 pm Operator: MCHAPPELLE
Sample : 81 2PPB GCPS8-50K Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:31:22 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:31:14 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(21) Endosulfan Sulfate

15.228min 1.988 ug/L

response 21422

Manual Integration:

Before

01/01/19

(21) Endosulfan Sulfate #2

14.055min 2.291 ug/L

response 64148

(+) = Expected Retention Time

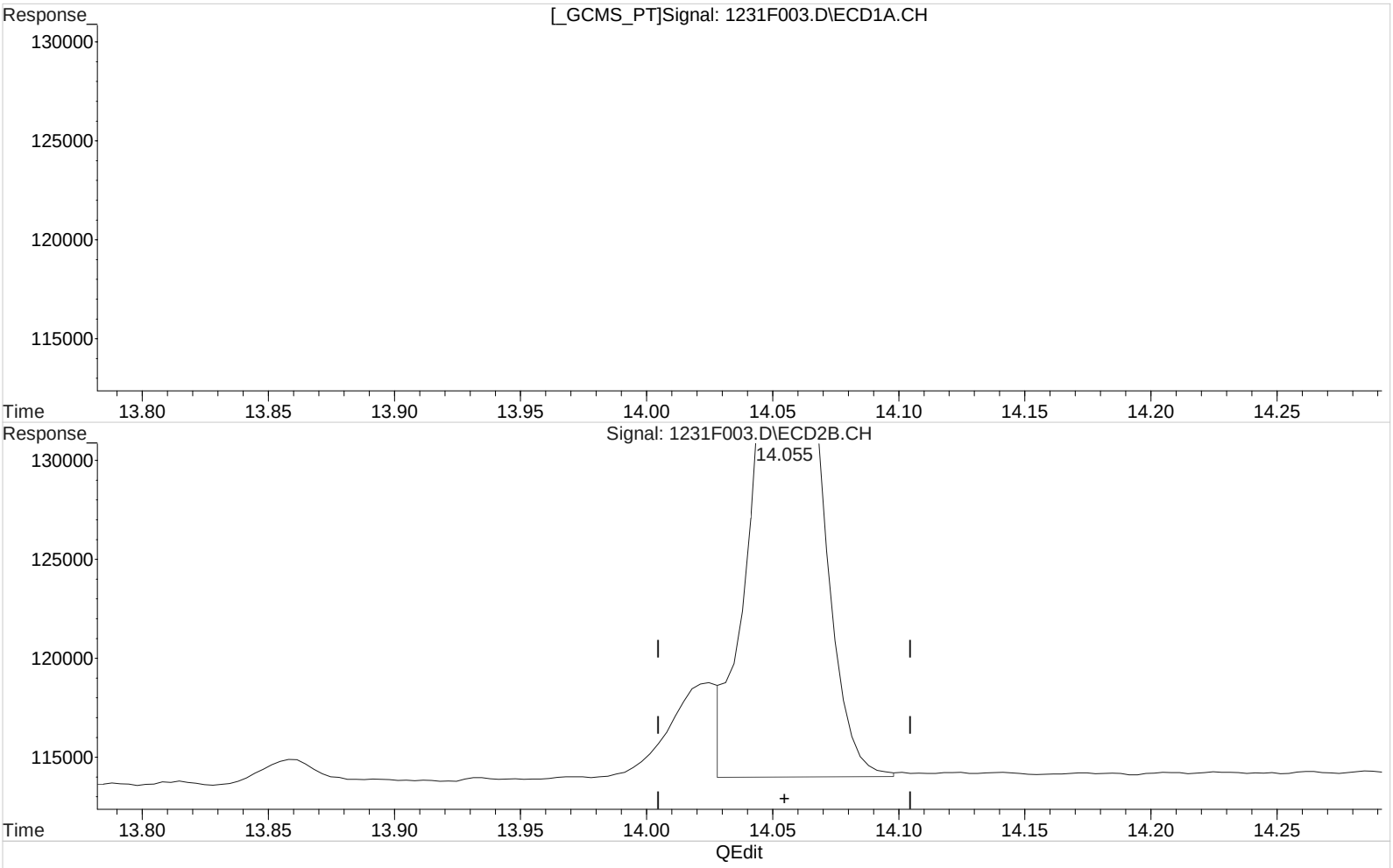
Quantitation Report (Qedit)

1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F003.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 12:23 pm Operator: MCHAPPELLE
Sample : 81 2PPB GCPS8-50K Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:31:22 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:31:14 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(21) Endosulfan Sulfate

15.228min 1.988 ug/L

response 21422

Manual Integration:

After

Baseline/Shoulder

01/01/19

(21) Endosulfan Sulfate #2

14.055min 2.044 ug/L m

response 57233

(+) = Expected Retention Time

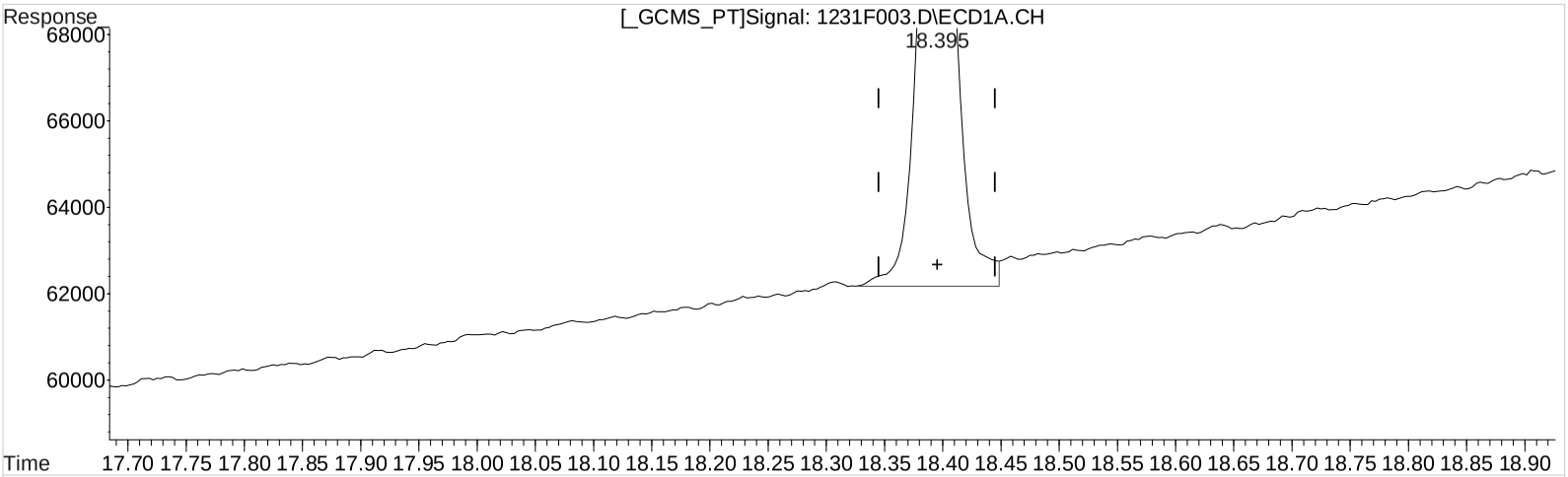
Quantitation Report (Qedit)

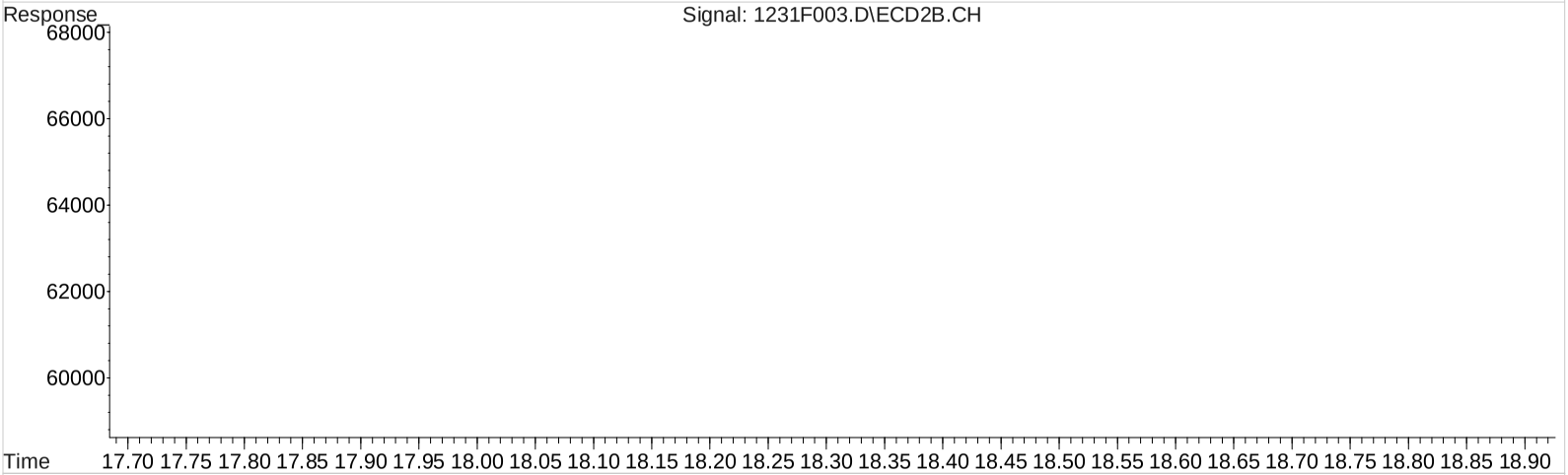
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F003.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 12:23 pm Operator: MCHAPPELLE
Sample : 81 2PPB GCPS8-50K Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:31:22 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:31:14 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(28) Decachlorobiphenyl (s)

18.395min 1.909 ug/L

response 30640

Manual Integration:

Before

01/01/19

(28) Decachlorobiphenyl #2 (s)

16.858min 1.964 ug/L

response 73656

(+) = Expected Retention Time

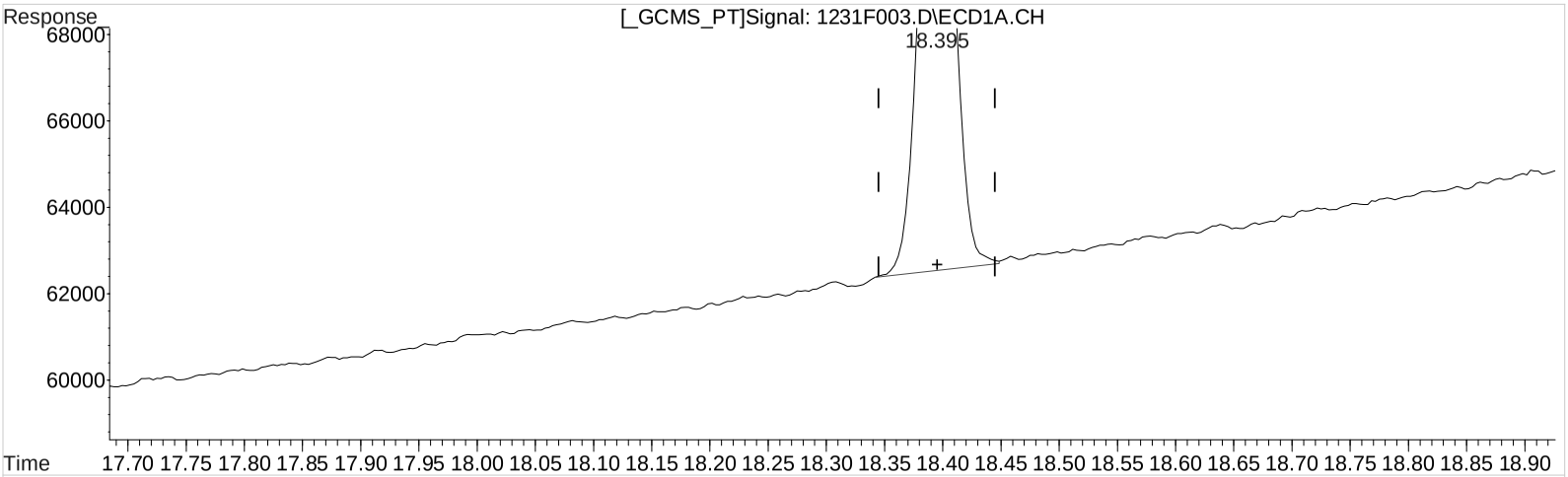
Quantitation Report (Qedit)

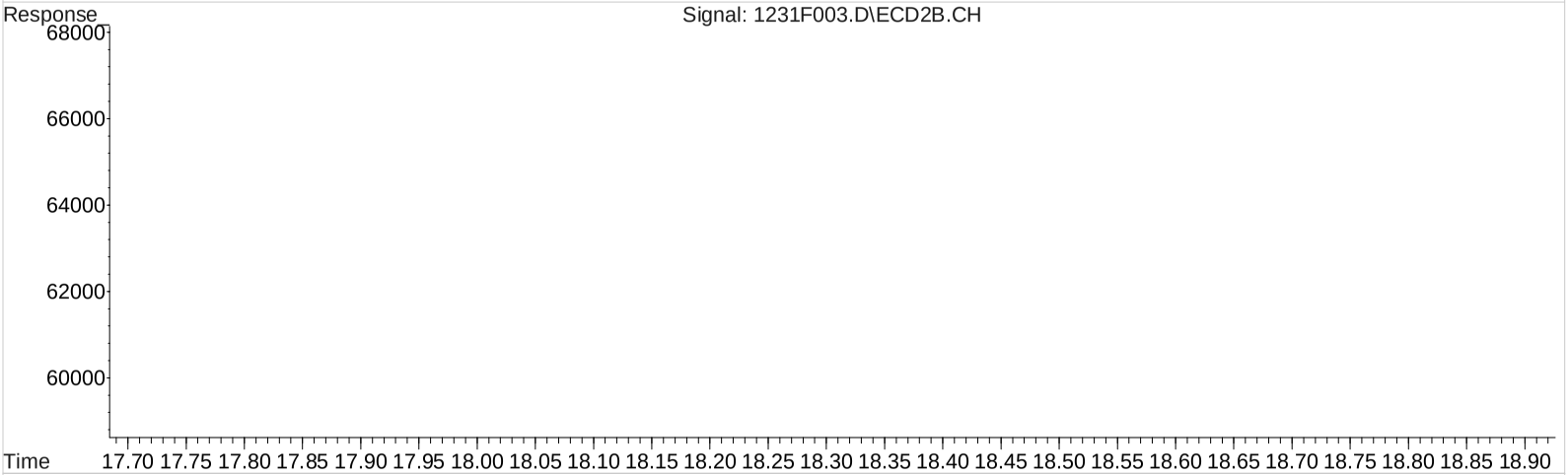
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F003.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 12:23 pm Operator: MCHAPPELLE
Sample : 81 2PPB GCPS8-50K Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:31:22 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:31:14 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(28) Decachlorobiphenyl (s)

18.395min 1.757 ug/L m

response 28205

Manual Integration:

After

Baseline/Shoulder

01/01/19

(28) Decachlorobiphenyl #2 (s)

16.858min 1.964 ug/L

response 73656

(+) = Expected Retention Time

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F005.D
Lab ID: KWG1900100-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/31/2018 13:22
Date Quantitated: 01/01/2019 15:34
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	alpha-BHC	21.1	NA	20	NR
	Hexachlorobenzene	21.7	NA	20	
	beta-BHC	24.9	NA	20	
	gamma-BHC (Lindane)	20.5	NA	20	
	delta-BHC	23.5	NA	20	
	Aldrin	24.6	NA	20	
	Isodrin	33.6	NA	20	
	gamma-Chlordane	23.5	NA	20	
	Endosulfan I	28.0	NA	20	
	alpha-Chlordane	20.7	NA	20	
	4,4'-DDE	23.6	NA	20	
	Endrin	21.7	NA	20	
	4,4'-DDD	21.0	NA	20	
	Endrin Aldehyde	22.5	NA	20	
	2,4'-DDE	27.0	NA	20	
	2,4'-DDT	20.4	NA	20	
Internal Standards	1-Bromo-2-nitrobenzene	0	3877.208333	75508.83333	
	1-Bromo-2-nitrobenzene {3}	0	0284.071428	21136.28571	
	1-Bromo-2-nitrobenzene {4}	0	1403.583333	45614.33333	

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F005.D\1231F005C.D
Lab ID: KWG1900100-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/31/2018 13:22
Date Quantitated: 01/01/2019 15:34
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Internal Standards	1-Bromo-2-nitrobenzene	0	1201.54166	4806.16666	NR
	1-Bromo-2-nitrobenzene {3}	0	2049.14285	8196.57142	NR
	1-Bromo-2-nitrobenzene {4}	0	2606.41666	0425.66666	NR

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F005.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F005.D\1231F005c.d			**Vial:**	5
Acqu Date:	12/31/2018 13:22	**Quant Date:**	01/01/2019 15:34	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1806233	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:			
MB Ref:		**Method ID:**	MJ1647
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene					0d	0d	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.00	-0.11	5.34	-0.08	879829	2620703	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0d	0d	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0d	0d	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0d	0d		0.0000			NR
				%Recovery =		NA	NA	Limits =	70-130	
1	Decachlorobiphenyl	0.00		0d	0d		0.0000			NR
				%Recovery =		NA	NA	Limits =	70-130	

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC			0d	0d	0.0000	0.0000			NR
1	Hexachlorobenzene			0d	0d	0.0000	0.0000			NR
1	beta-BHC			0d	0d	0.0000	0.0000			NR
1	gamma-BHC (Lindane)			0d	0d	0.0000	0.0000			NR
1	delta-BHC			0d	0d	0.0000	0.0000			NR
1	Heptachlor			0d	0d	0.0000	0.0000			NR
1	Aldrin			0d	0d	0.0000	0.0000			NR
1	Isodrin			0d	0d	0.0000	0.0000			NR
1	Heptachlor Epoxide			0d	0d	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F005.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F005.D\1231F005c.d			**Vial:**	5
Acqu Date:	12/31/2018 13:22	**Quant Date:**	01/01/2019 15:34	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000			NR
1	Endosulfan I			0d	0d	0.0000	0.0000			NR
1	alpha-Chlordane			0d	0d	0.0000	0.0000			NR
1	Dieldrin			0d	0d	0.0000	0.0000			NR
1	4,4'-DDE			0d	0d	0.0000	0.0000			NR
1	Endrin			0d	0d	0.0000	0.0000			NR
1	Endosulfan II			0d	0d	0.0000	0.0000			NR
1	4,4'-DDD			0d	0d	0.0000	0.0000			NR
1	Endrin Aldehyde			0d	0d	0.0000	0.0000			NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000			NR
1	4,4'-DDT			0d	0d	0.0000	0.0000			NR
1	Endrin Ketone			0d	0d	0.0000	0.0000			NR
1	Methoxychlor			0d	0d	0.0000	0.0000			NR
1	2,4'-DDE			0d	0d	0.0000	0.0000			NR
1	2,4'-DDD			0d	0d	0.0000	0.0000			NR
1	2,4'-DDT			0d	0d	0.0000	0.0000			NR
	Toxaphene			0	0	90.62	100.69			
2	Toxaphene {1}	14.68	13.42	21249	46157m	105.71	101.68			
2	Toxaphene {2}	14.56	13.48	8737	15622m	94.68	95.21			
2	Toxaphene {3}	15.09	13.95	14861	19178m	98.43	132.29			
2	Toxaphene {4}	15.27	14.09	4985	25513m	80.58	94.15			
2	Toxaphene {5}	15.54	14.47	5982	47973	73.87	91.28			
2	Toxaphene {6}	15.96	14.67	20594	38024m	90.43	89.57			
	Chlordane			0	0	0.0000	0.0000			NR
3	Chlordane {1}			0d	0d	0.0000	0.0000			
3	Chlordane {2}			0d	0d	0.0000	0.0000			
3	Chlordane {3}			0d	0d	0.0000	0.0000			
3	Chlordane {4}			0d	0d	0.0000	0.0000			
3	Chlordane {5}			0d	0d	0.0000	0.0000			
3	Chlordane {6}			0d	0d	0.0000	0.0000			
4	Chlorpyrifos			0d	0d	0.0000	0.0000			NR
4	Oxychlordane			0d	0d	0.0000	0.0000			NR
4	cis-Nonachlor			0d	0d	0.0000	0.0000			NR
4	trans-Nonachlor			0d	0d	0.0000	0.0000			NR
4	Mirex			0d	0d	0.0000	0.0000			NR
4	Hexachloroethane			0d	0d	0.0000	0.0000			NR
4	Hexachlorobutadiene			0d	0d	0.0000	0.0000			NR
4	Perthane			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F005.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F005.D\1231F005c.d			**Vial:**	5
Acqu Date:	12/31/2018 13:22	**Quant Date:**	01/01/2019 15:34	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1690	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1900100	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:			
MB Ref:		**Method ID:**	MJ1690
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene					0d	0d	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.00	-0.11	5.34	-0.08	879829	2620703	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0d	0d	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0d	0d	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0d	0d		0.0000			NR
				%Recovery =		NA	NA	Limits =	70-130	
1	Decachlorobiphenyl	0.00		0d	0d		0.0000			NR
				%Recovery =		NA	NA	Limits =	70-130	

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	alpha-BHC			0d	0d	0.0000	0.0000			NR
1	Hexachlorobenzene			0d	0d	0.0000	0.0000			NR
1	beta-BHC			0d	0d	0.0000	0.0000			NR
1	gamma-BHC (Lindane)			0d	0d	0.0000	0.0000			NR
1	delta-BHC			0d	0d	0.0000	0.0000			NR
1	Heptachlor			0d	0d	0.0000	0.0000			NR
1	Aldrin			0d	0d	0.0000	0.0000			NR
1	Isodrin			0d	0d	0.0000	0.0000			NR
1	Heptachlor Epoxide			0d	0d	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F005.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F005.D\1231F005c.d			**Vial:**	5
Acqu Date:	12/31/2018 13:22	**Quant Date:**	01/01/2019 15:34	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1690	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000			NR
1	Endosulfan I			0d	0d	0.0000	0.0000			NR
1	alpha-Chlordane			0d	0d	0.0000	0.0000			NR
1	Dieldrin			0d	0d	0.0000	0.0000			NR
1	4,4'-DDE			0d	0d	0.0000	0.0000			NR
1	Endrin			0d	0d	0.0000	0.0000			NR
1	Endosulfan II			0d	0d	0.0000	0.0000			NR
1	4,4'-DDD			0d	0d	0.0000	0.0000			NR
1	Endrin Aldehyde			0d	0d	0.0000	0.0000			NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000			NR
1	4,4'-DDT			0d	0d	0.0000	0.0000			NR
1	Endrin Ketone			0d	0d	0.0000	0.0000			NR
1	Methoxychlor			0d	0d	0.0000	0.0000			NR
1	2,4'-DDE			0d	0d	0.0000	0.0000			NR
1	2,4'-DDD			0d	0d	0.0000	0.0000			NR
1	2,4'-DDT			0d	0d	0.0000	0.0000			NR
	Toxaphene			0	0	90.62	100.69			
2	Toxaphene {1}	14.68	13.42	21249	46157m	105.71	101.68			
2	Toxaphene {2}	14.56	13.48	8737	15622m	94.68	95.21			
2	Toxaphene {3}	15.09	13.95	14861	19178m	98.43	132.29			
2	Toxaphene {4}	15.27	14.09	4985	25513m	80.58	94.15			
2	Toxaphene {5}	15.54	14.47	5982	47973	73.87	91.28			
2	Toxaphene {6}	15.96	14.67	20594	38024m	90.43	89.57			
	Chlordane			0	0	0.0000	0.0000			NR
3	Chlordane {1}			0d	0d	0.0000	0.0000			
3	Chlordane {2}			0d	0d	0.0000	0.0000			
3	Chlordane {3}			0d	0d	0.0000	0.0000			
3	Chlordane {4}			0d	0d	0.0000	0.0000			
3	Chlordane {5}			0d	0d	0.0000	0.0000			
3	Chlordane {6}			0d	0d	0.0000	0.0000			
4	Chlorpyrifos			0d	0d	0.0000	0.0000			NR
4	Oxychlordane			0d	0d	0.0000	0.0000			NR
4	cis-Nonachlor			0d	0d	0.0000	0.0000			NR
4	trans-Nonachlor			0d	0d	0.0000	0.0000			NR
4	Mirex			0d	0d	0.0000	0.0000			NR
4	Hexachloroethane			0d	0d	0.0000	0.0000			NR
4	Hexachlorobutadiene			0d	0d	0.0000	0.0000			NR

U: Undetected at or above MDL
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#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F005.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F005.D\1231F005c.d			**Vial:**	5
Acqu Date:	12/31/2018 13:22	**Quant Date:**	01/01/2019 15:34	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1900100	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:			
MB Ref:		**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene					0d	0d	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.00	-0.11	5.34	-0.08	879829	2620703	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0d	0d	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0d	0d	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0d	0d		0.0000			NR
				%Recovery =		NA	NA	Limits =	70-130	
1	Decachlorobiphenyl	0.00		0d	0d		0.0000			NR
				%Recovery =		NA	NA	Limits =	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC			0d	0d	0.0000	0.0000			NR
1	Hexachlorobenzene			0d	0d	0.0000	0.0000			NR
1	beta-BHC			0d	0d	0.0000	0.0000			NR
1	gamma-BHC (Lindane)			0d	0d	0.0000	0.0000			NR
1	delta-BHC			0d	0d	0.0000	0.0000			NR
1	Heptachlor			0d	0d	0.0000	0.0000			NR
1	Aldrin			0d	0d	0.0000	0.0000			NR
1	Isodrin			0d	0d	0.0000	0.0000			NR
1	Heptachlor Epoxide			0d	0d	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F005.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F005.D\1231F005c.d			**Vial:**	5
Acqu Date:	12/31/2018 13:22	**Quant Date:**	01/01/2019 15:34	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0**d**	0**d**	0.0000	0.0000			NR
1	Endosulfan I			0**d**	0**d**	0.0000	0.0000			NR
1	alpha-Chlordane			0**d**	0**d**	0.0000	0.0000			NR
1	Dieldrin			0**d**	0**d**	0.0000	0.0000			NR
1	4,4'-DDE			0**d**	0**d**	0.0000	0.0000			NR
1	Endrin			0**d**	0**d**	0.0000	0.0000			NR
1	Endosulfan II			0**d**	0**d**	0.0000	0.0000			NR
1	4,4'-DDD			0**d**	0**d**	0.0000	0.0000			NR
1	Endrin Aldehyde			0**d**	0**d**	0.0000	0.0000			NR
1	Endosulfan Sulfate			0**d**	0**d**	0.0000	0.0000			NR
1	4,4'-DDT			0**d**	0**d**	0.0000	0.0000			NR
1	Endrin Ketone			0**d**	0**d**	0.0000	0.0000			NR
1	Methoxychlor			0**d**	0**d**	0.0000	0.0000			NR
1	2,4'-DDE			0**d**	0**d**	0.0000	0.0000			NR
1	2,4'-DDD			0**d**	0**d**	0.0000	0.0000			NR
1	2,4'-DDT			0**d**	0**d**	0.0000	0.0000			NR
	Toxaphene			0	0	90.62	100.69			
2	Toxaphene {1}	14.68	13.42	21249	46157**m**	105.71	101.68			
2	Toxaphene {2}	14.56	13.48	8737	15622**m**	94.68	95.21			
2	Toxaphene {3}	15.09	13.95	14861	19178**m**	98.43	132.29			
2	Toxaphene {4}	15.27	14.09	4985	25513**m**	80.58	94.15			
2	Toxaphene {5}	15.54	14.47	5982	47973	73.87	91.28			
2	Toxaphene {6}	15.96	14.67	20594	38024**m**	90.43	89.57			
	Chlordane			0	0	0.0000	0.0000			NR
3	Chlordane {1}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {2}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {3}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {4}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {5}			0**d**	0**d**	0.0000	0.0000			
3	Chlordane {6}			0**d**	0**d**	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 1:22 pm Operator: MCHAPPELLE
Sample : TOX 100PPB GCPS8-50H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:34:37 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Dec 17 09:04:10 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
29)	1-Bromo-2...	6.003	5.340	879829	2620703	100.000	100.000
	System Monitoring Compounds						
	Target Compounds						
30)	Toxaphene	14.680	13.416	21249	46157	105.709	101.679m
31)	Toxaphene...	14.557	13.480	8737	15622	94.684	95.208m
32)	Toxaphene...	15.093	13.953	14861	19178	98.433	132.291m#
33)	Toxaphene...	15.273	14.093	4985	25513	80.583	94.145m
34)	Toxaphene...	15.540	14.473	5982	47973	73.869	91.275
35)	Toxaphene...	15.963	14.673	20594	38024	90.432	89.565m
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

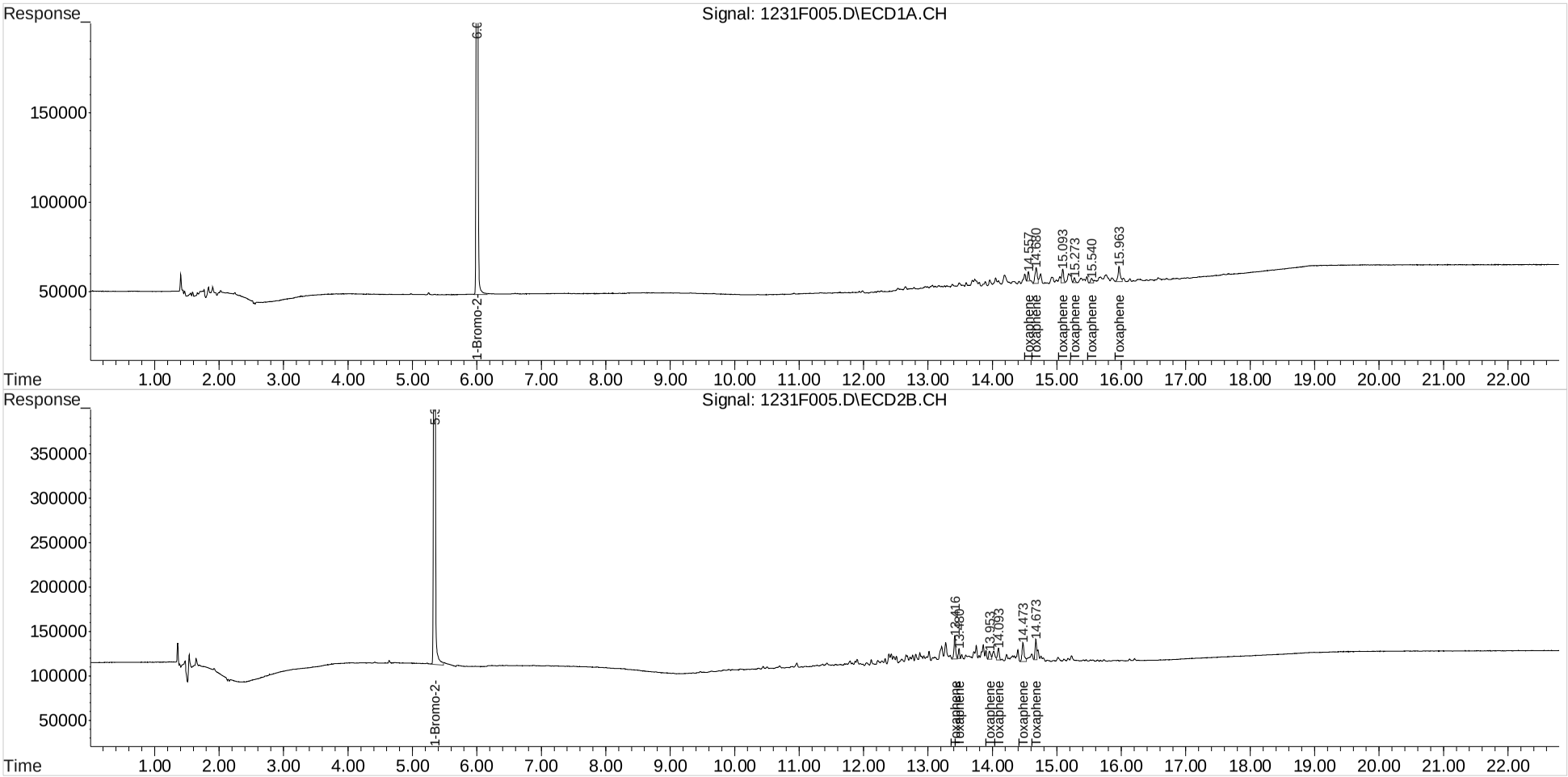
1st SM 01/01/19
2nd UA 01/07/19

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\123118\1231F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 1:22 pm Operator: MCHAPPELLE
Sample : TOX 100PPB GCPS8-50H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:34:37 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Dec 17 09:04:10 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



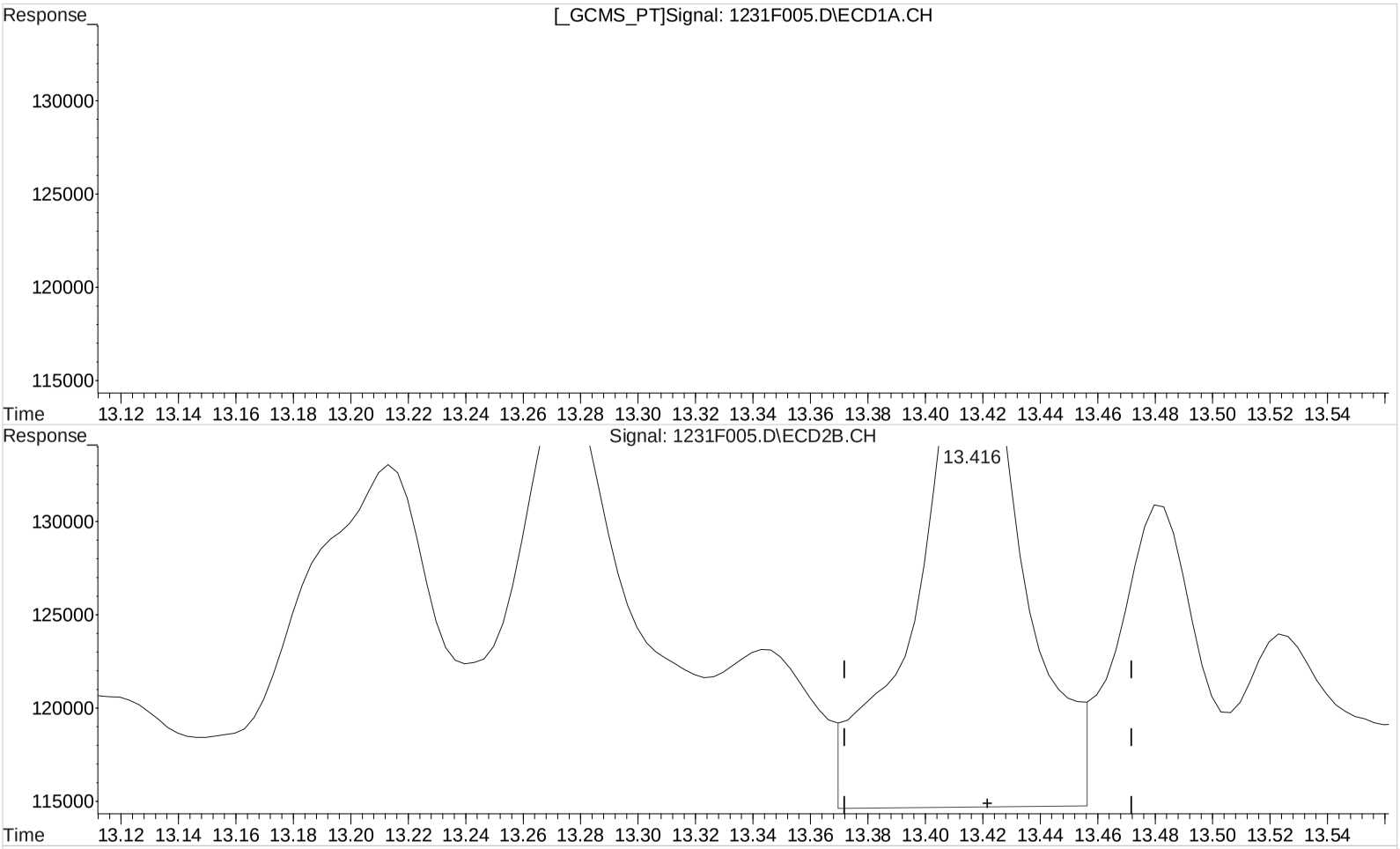
Quantitation Report (Qedit)

1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 1:22 pm Operator: MCHAPPELLE
Sample : TOX 100PPB GCPS8-50H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:22:54 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Dec 17 09:04:10 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(30) Toxaphene

14.680min 105.709 ug/L

response 21249

Manual Integration:

Before

01/01/19

(30) Toxaphene #2

13.416min 153.537 ug/L

response 69698

(+) = Expected Retention Time

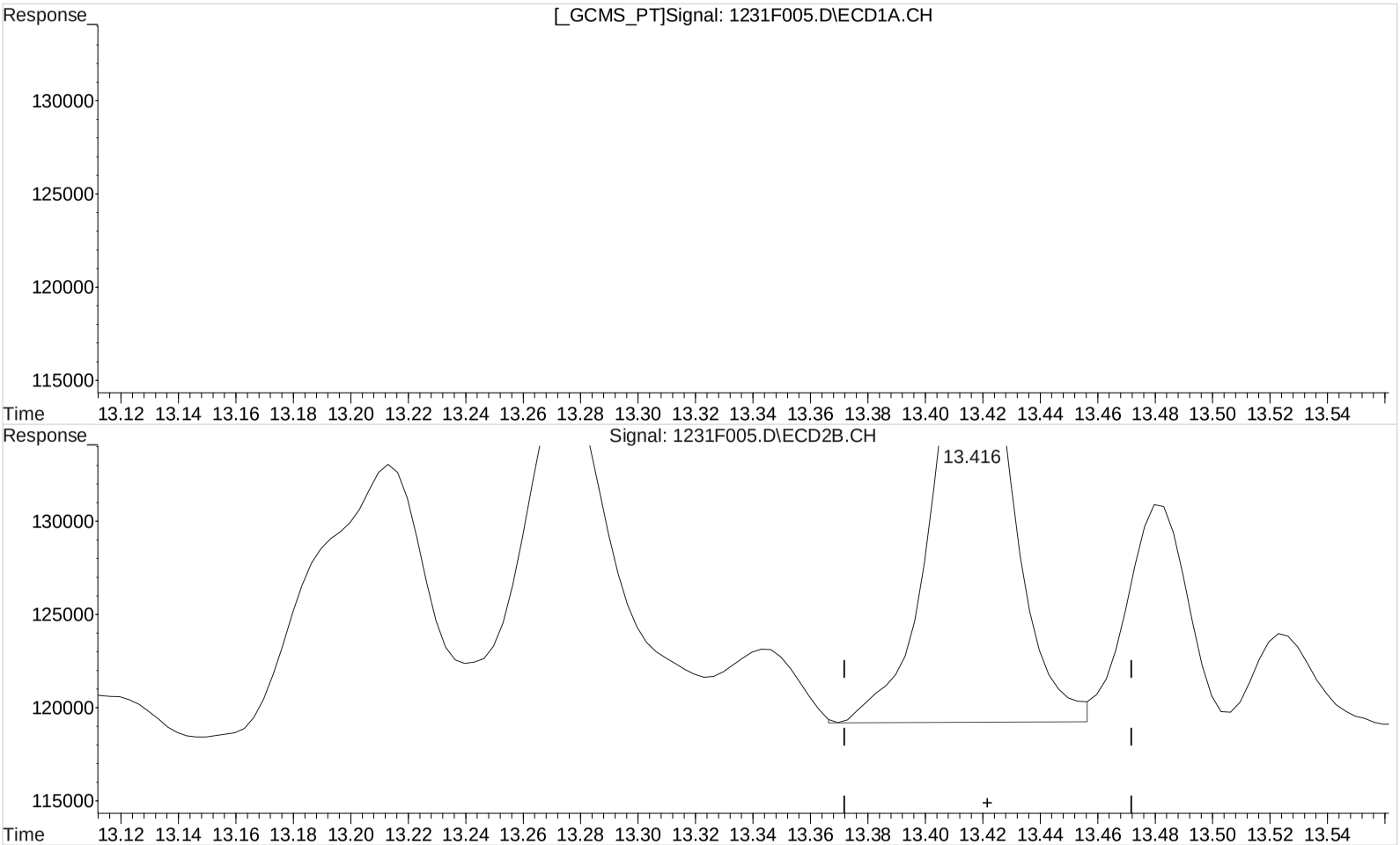
Quantitation Report (Qedit)

1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 1:22 pm Operator: MCHAPPELLE
Sample : TOX 100PPB GCPS8-50H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:22:54 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Dec 17 09:04:10 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(30) Toxaphene

14.680min 105.709 ug/L

response 21249

Manual Integration:

After

Baseline/Shoulder

01/01/19

(30) Toxaphene #2

13.416min 101.679 ug/L m

response 46157

(+) = Expected Retention Time

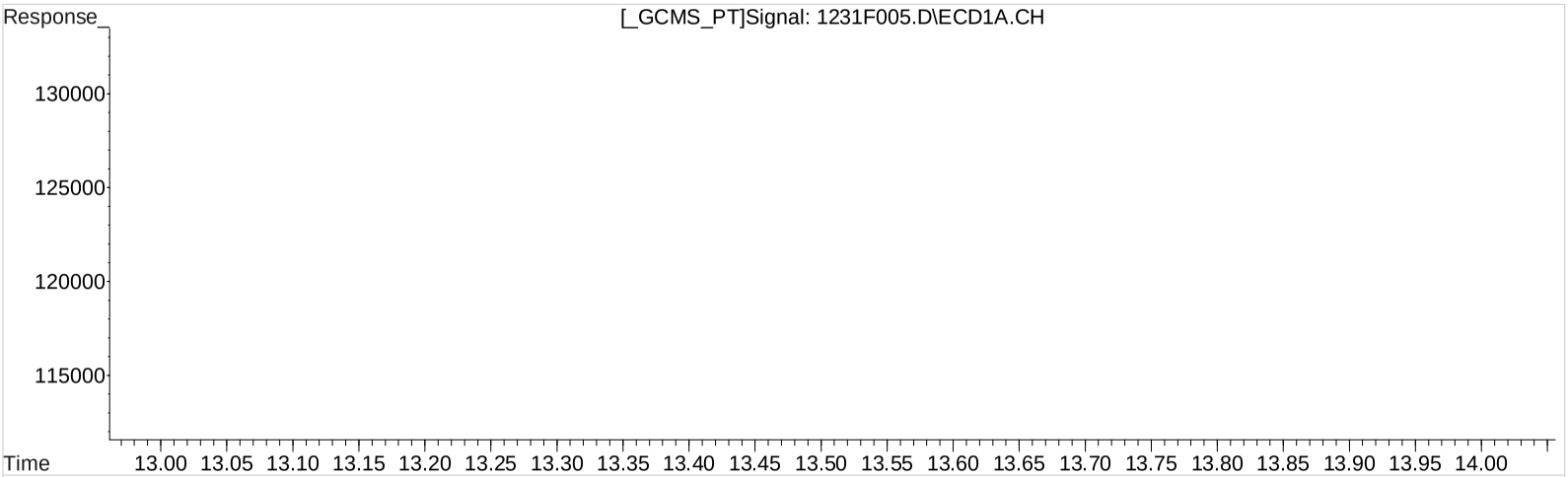
Quantitation Report (Qedit)

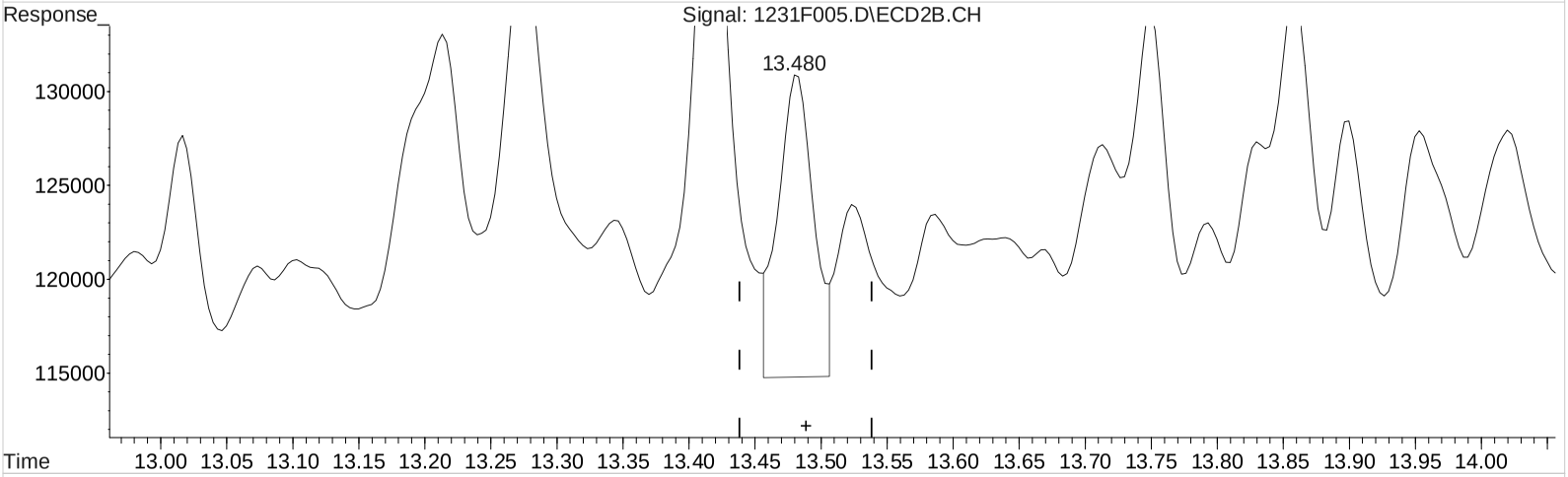
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 1:22 pm Operator: MCHAPPELLE
Sample : TOX 100PPB GCPS8-50H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:22:54 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Dec 17 09:04:10 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(31) Toxaphene {2}

14.557min 94.684 ug/L

response 8737

Manual Integration:

Before

01/01/19

(31) Toxaphene {2} #2

13.480min 184.456 ug/L

response 30266

(+) = Expected Retention Time

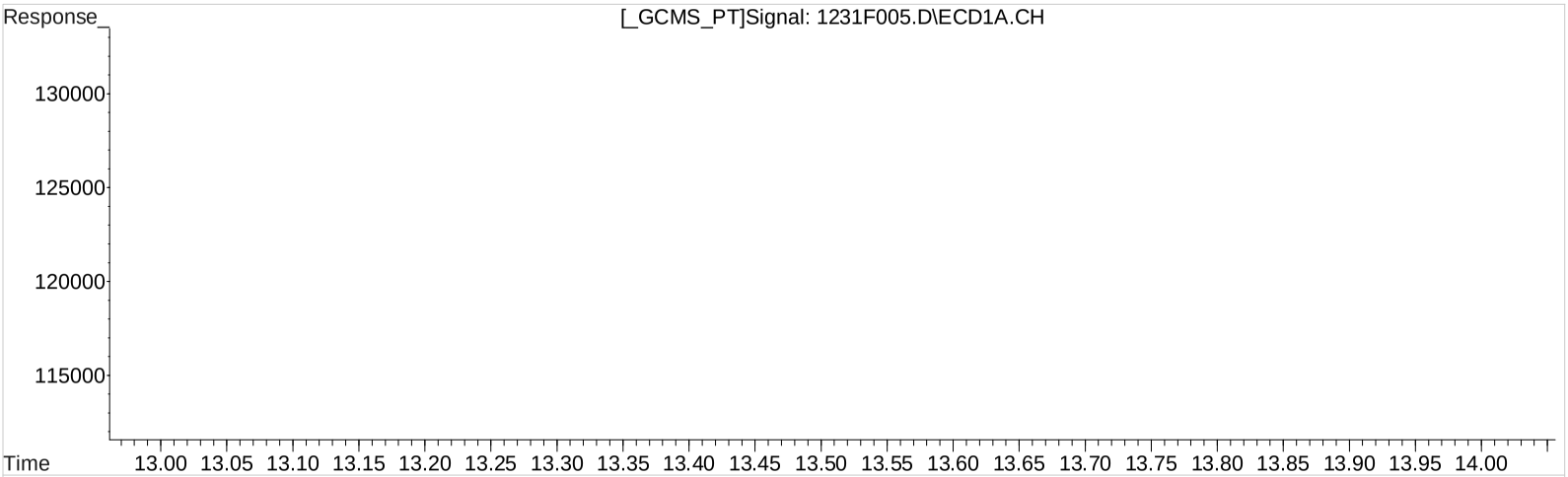
Quantitation Report (Qedit)

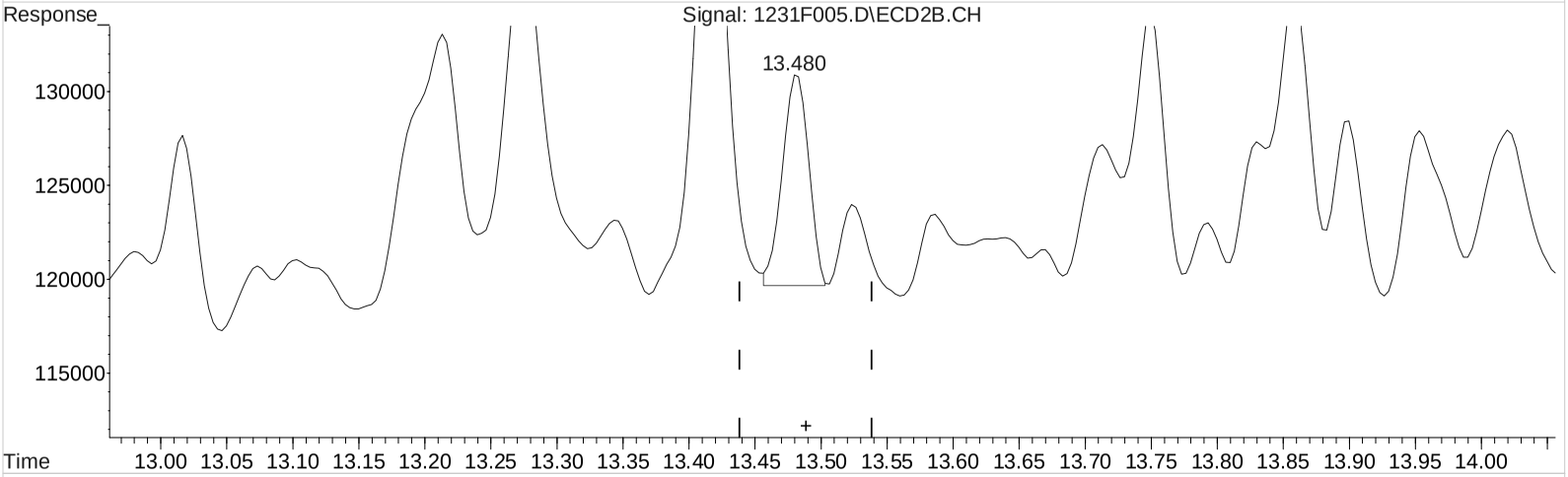
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 1:22 pm Operator: MCHAPPELLE
Sample : TOX 100PPB GCPS8-50H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:22:54 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Dec 17 09:04:10 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(31) Toxaphene {2}

14.557min 94.684 ug/L

response 8737

Manual Integration:

After

Baseline/Shoulder

01/01/19

(31) Toxaphene {2} #2

13.480min 95.208 ug/L m

response 15622

(+) = Expected Retention Time

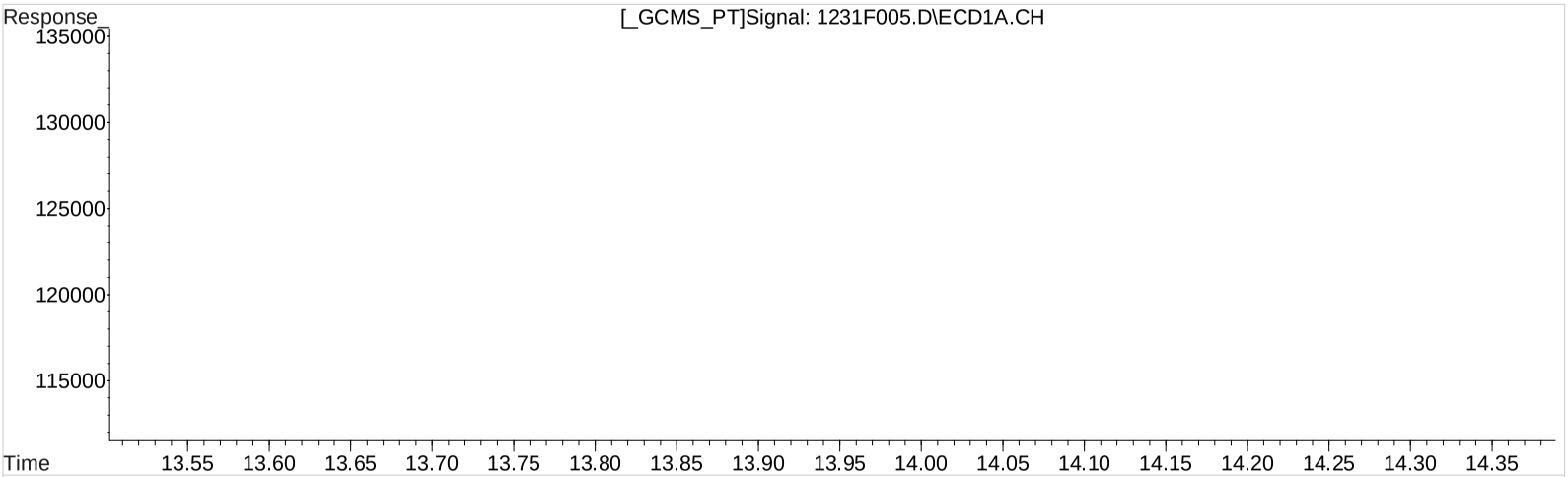
Quantitation Report (Qedit)

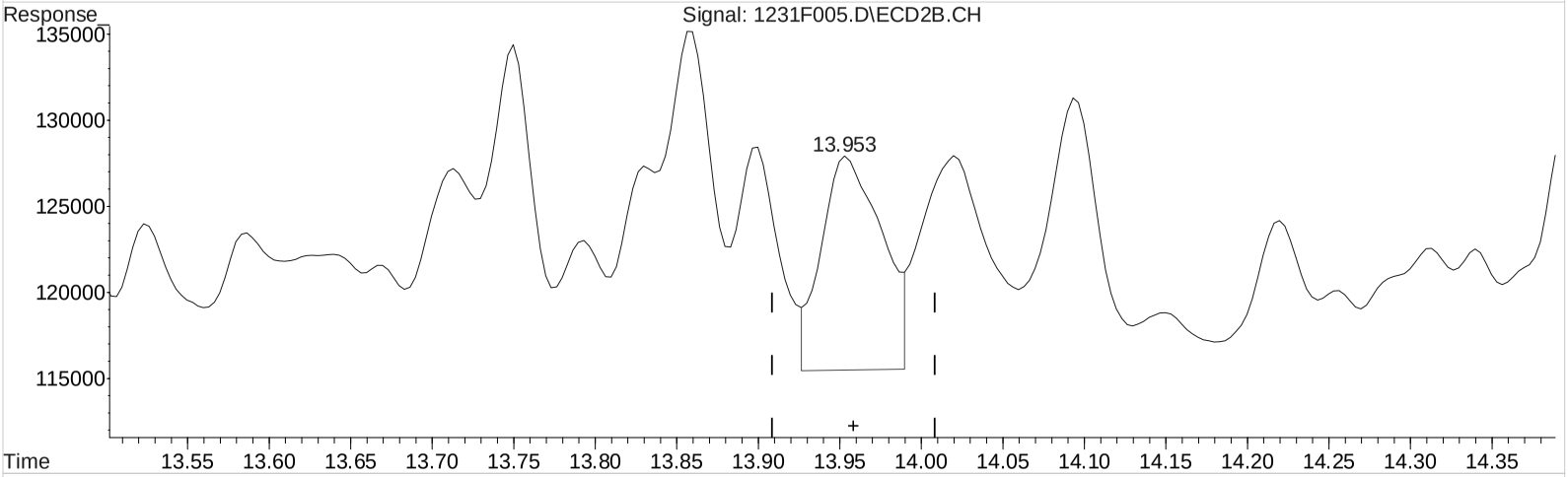
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 1:22 pm Operator: MCHAPPELLE
Sample : TOX 100PPB GCPS8-50H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:22:54 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Dec 17 09:04:10 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(32) Toxaphene {3}

15.093min 98.433 ug/L

response 14861

Manual Integration:

Before

01/01/19

(32) Toxaphene {3} #2

13.953min 223.808 ug/L

response 32445

(+) = Expected Retention Time

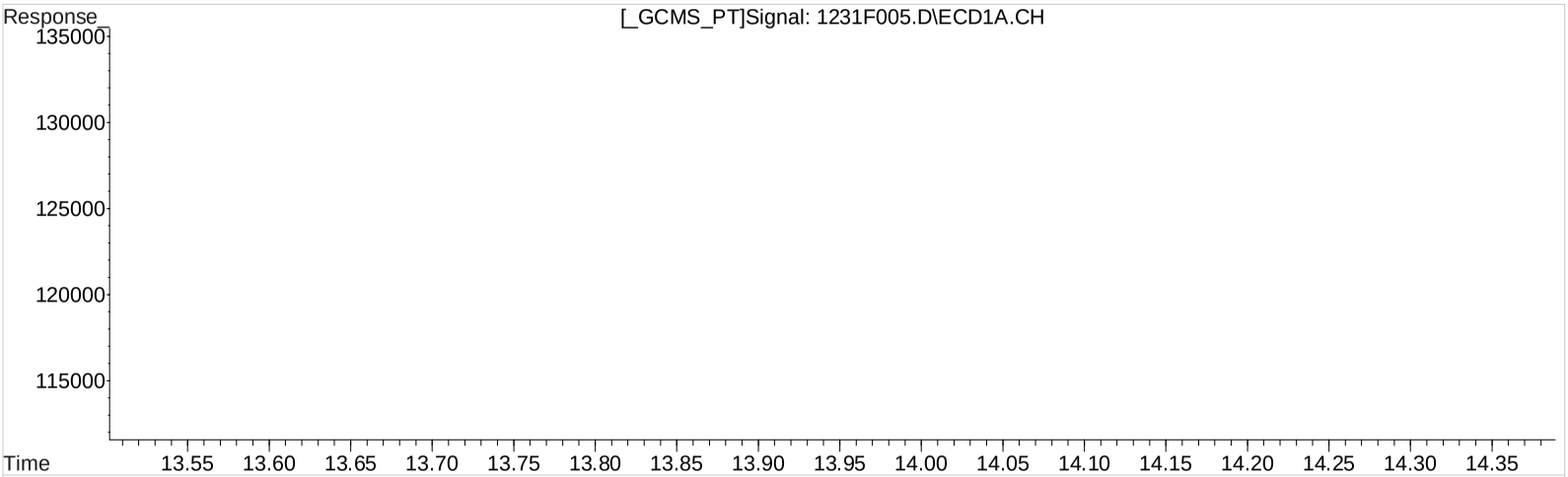
Quantitation Report (Qedit)

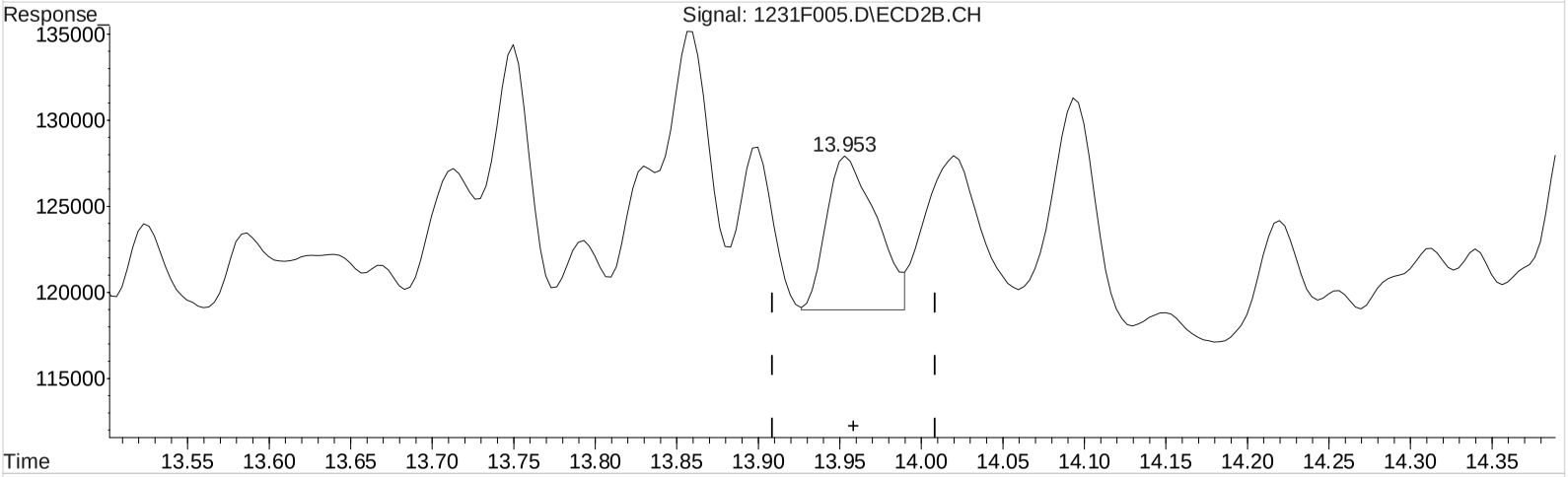
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 1:22 pm Operator: MCHAPPELLE
Sample : TOX 100PPB GCPS8-50H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:22:54 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Dec 17 09:04:10 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(32) Toxaphene {3}

15.093min 98.433 ug/L

response 14861

Manual Integration:

After

Baseline/Shoulder

01/01/19

(32) Toxaphene {3} #2

13.953min 132.291 ug/L m

response 19178

(+) = Expected Retention Time

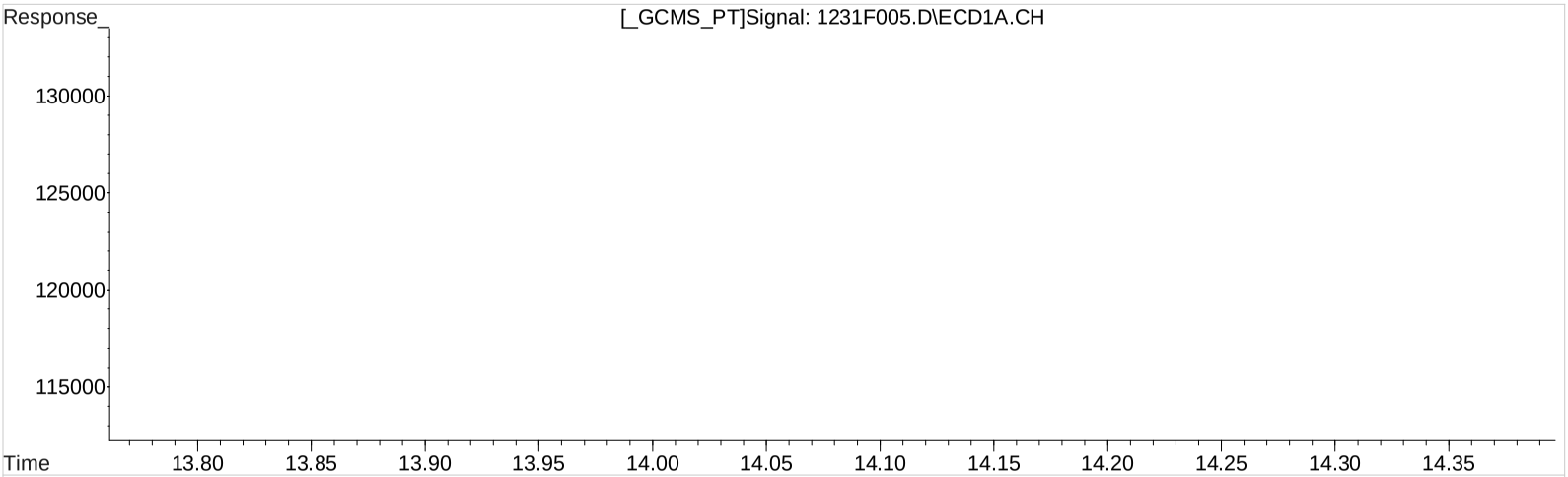
Quantitation Report (Qedit)

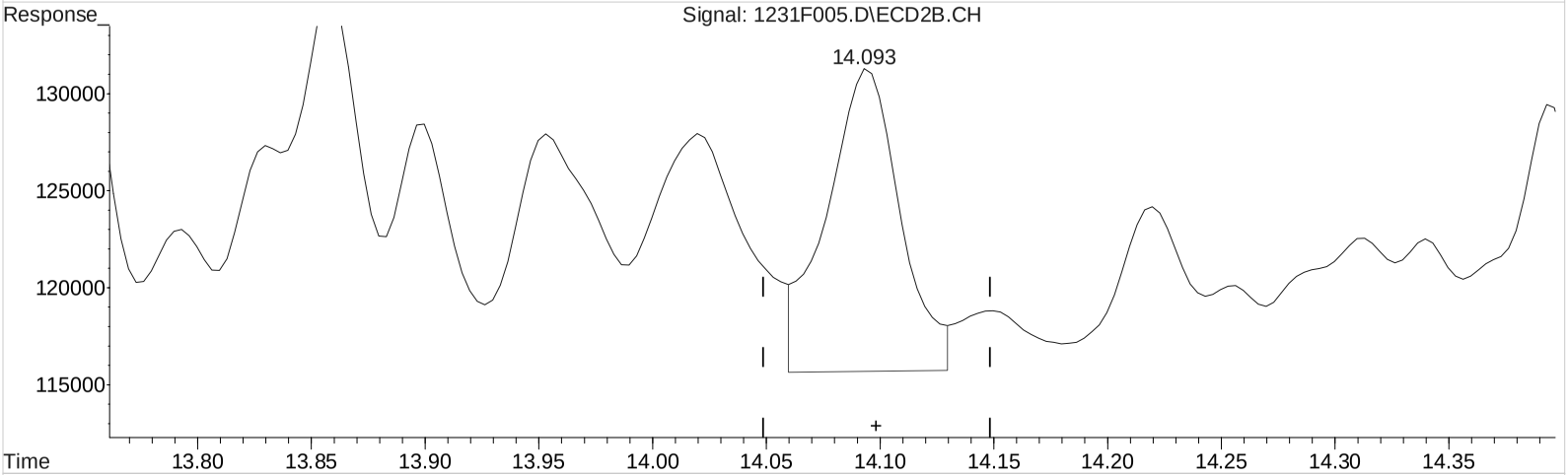
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 1:22 pm Operator: MCHAPPELLE
Sample : TOX 100PPB GCPS8-50H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:22:54 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Dec 17 09:04:10 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(33) Toxaphene {4}

15.273min 80.583 ug/L

response 4985

Manual Integration:

Before

01/01/19

(33) Toxaphene {4} #2

14.093min 128.917 ug/L

response 34936

(+) = Expected Retention Time

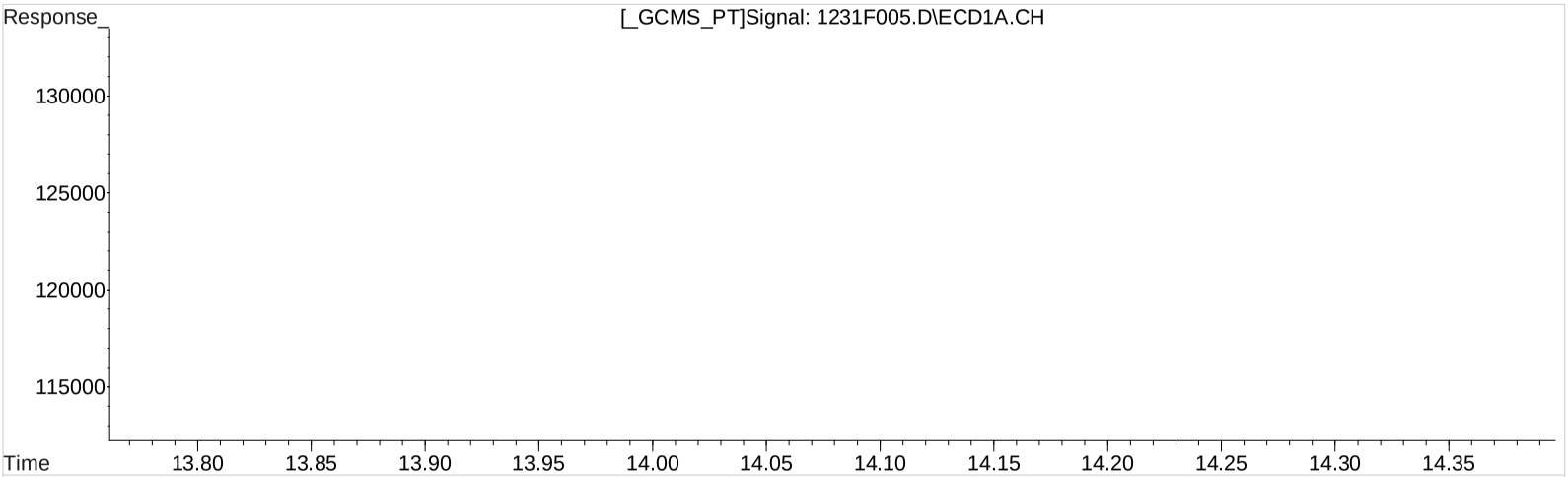
Quantitation Report (Qedit)

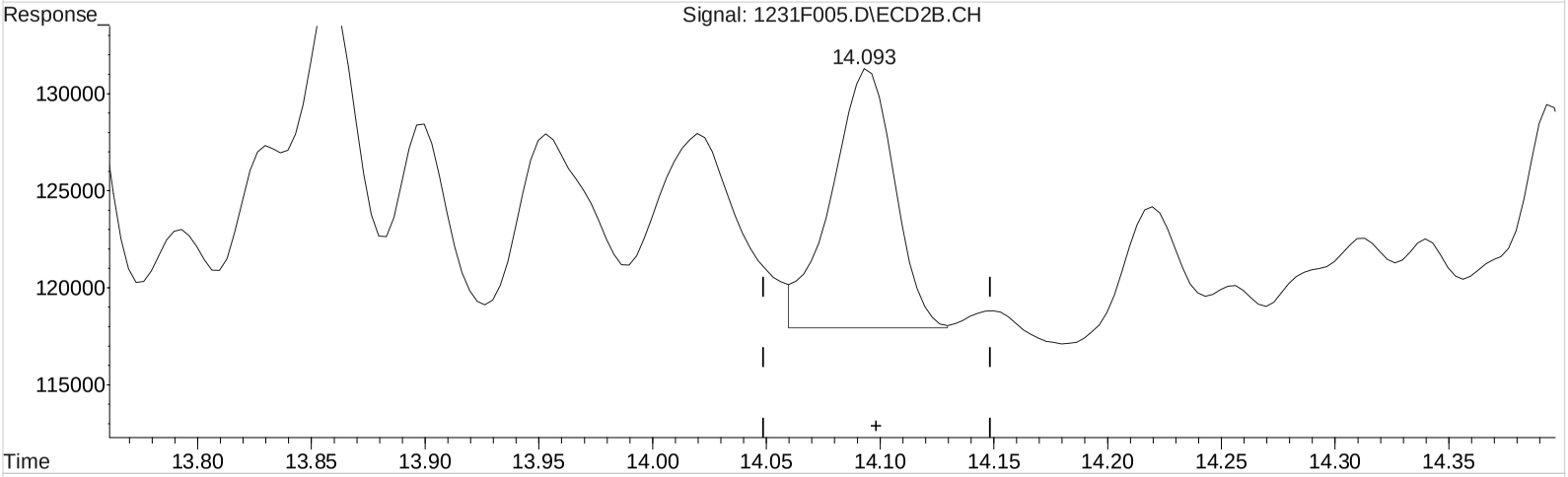
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 1:22 pm Operator: MCHAPPELLE
Sample : TOX 100PPB GCPS8-50H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:22:54 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Dec 17 09:04:10 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(33) Toxaphene {4}

15.273min 80.583 ug/L

response 4985

Manual Integration:

After

Baseline/Shoulder

01/01/19

(33) Toxaphene {4} #2

14.093min 94.145 ug/L m

response 25513

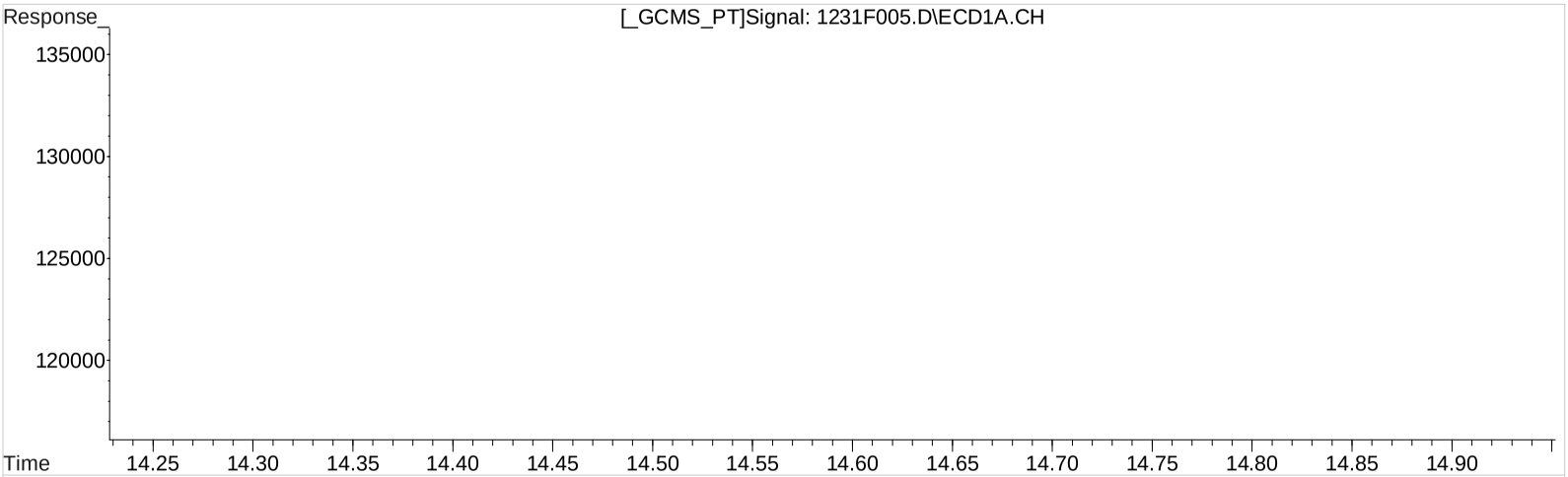
(+) = Expected Retention Time

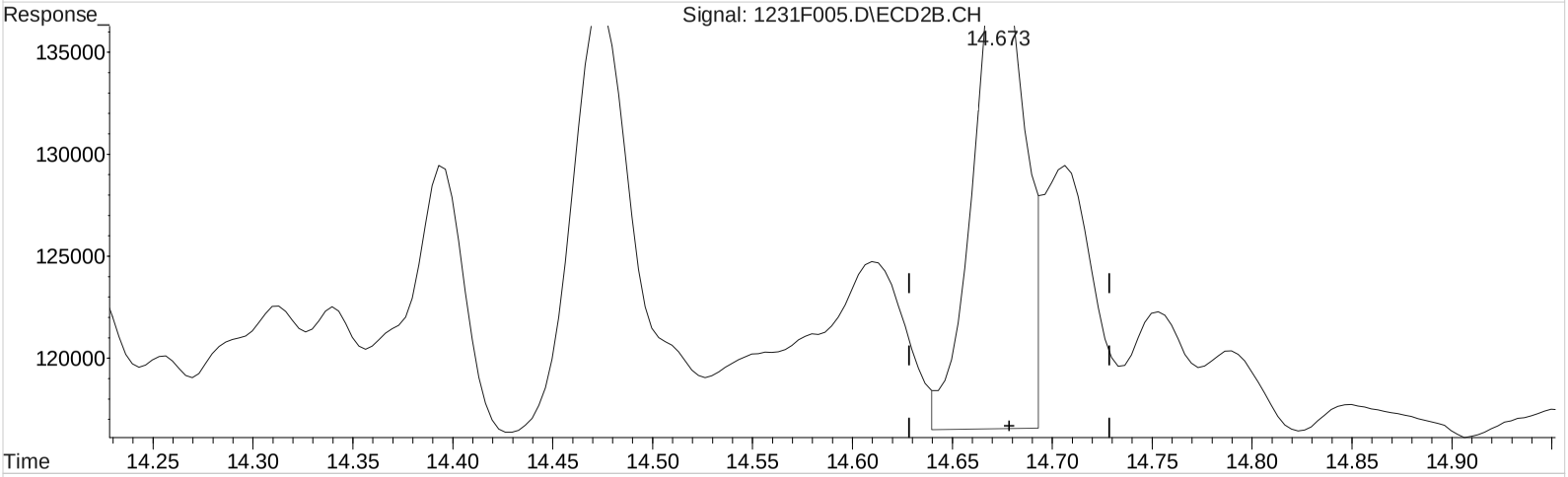
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 1:22 pm Operator: MCHAPPELLE
Sample : TOX 100PPB GCPS8-50H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:22:54 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Dec 17 09:04:10 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(35) Toxaphene {6}

15.963min 90.432 ug/L

response 20594

Manual Integration:

Before

01/01/19

(35) Toxaphene {6} #2

14.673min 102.351 ug/L

response 43452

(+) = Expected Retention Time

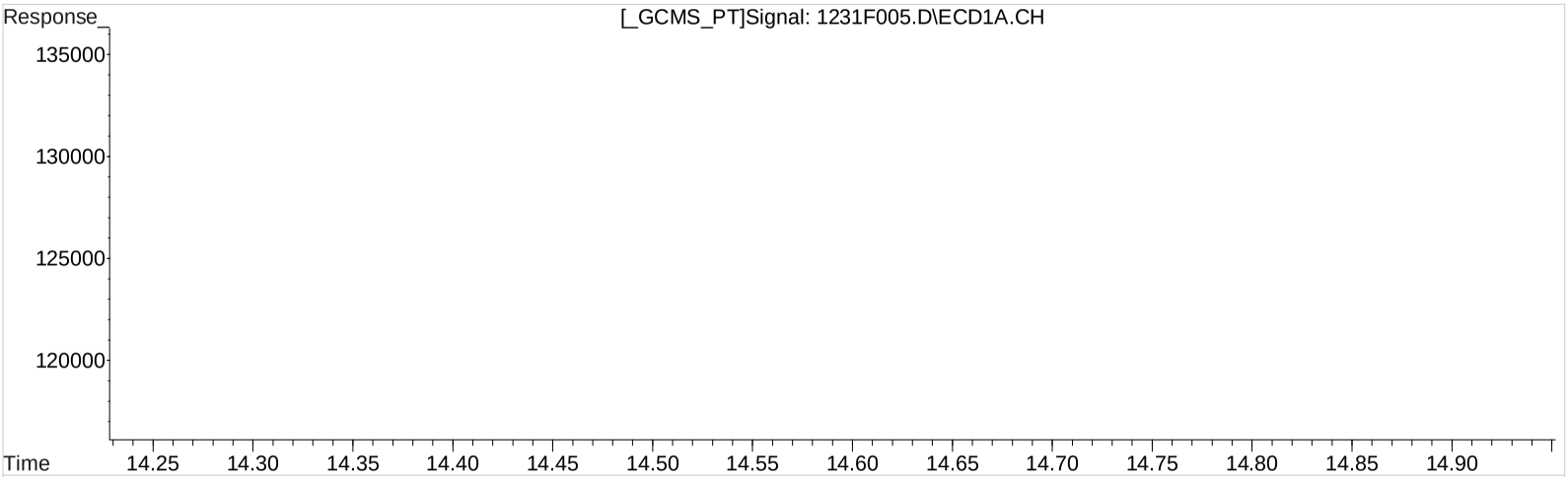
Quantitation Report (Qedit)

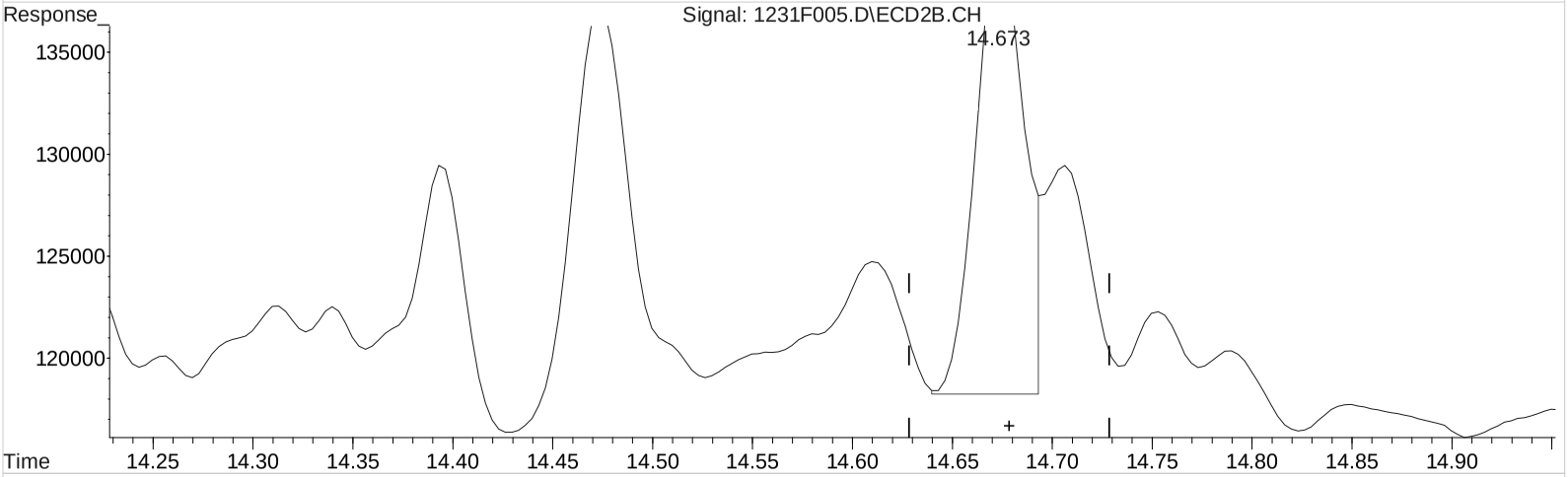
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 1:22 pm Operator: MCHAPPELLE
Sample : TOX 100PPB GCPS8-50H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:22:54 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Dec 17 09:04:10 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(35) Toxaphene {6}

15.963min 90.432 ug/L

response 20594

(35) Toxaphene {6} #2

14.673min 89.565 ug/L m

response 38024

Manual Integration:

After

Baseline/Shoulder

01/01/19

(+) = Expected Retention Time

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F006.D
Lab ID: KWG1900100-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/31/2018 13:52
Date Quantitated: 01/01/2019 15:36
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	alpha-BHC	21.1	NA	20	NR
	Hexachlorobenzene	21.7	NA	20	
	beta-BHC	24.9	NA	20	
	gamma-BHC (Lindane)	20.5	NA	20	
	delta-BHC	23.5	NA	20	
	Aldrin	24.6	NA	20	
	Isodrin	33.6	NA	20	
	gamma-Chlordane	23.5	NA	20	
	Endosulfan I	28.0	NA	20	
	alpha-Chlordane	20.7	NA	20	
	4,4'-DDE	23.6	NA	20	
	Endrin	21.7	NA	20	
	4,4'-DDD	21.0	NA	20	
	Endrin Aldehyde	22.5	NA	20	
	2,4'-DDE	27.0	NA	20	
	2,4'-DDT	20.4	NA	20	
Internal Standards	1-Bromo-2-nitrobenzene	0	3877.208333	75508.83333	
	1-Bromo-2-nitrobenzene {2}	0	523283	2093132	
	1-Bromo-2-nitrobenzene {4}	0	1403.583333	45614.33333	

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F006.D\1231F006C.D
Lab ID: KWG1900100-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/31/2018 13:52
Date Quantitated: 01/01/2019 15:36
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Internal Standards	1-Bromo-2-nitrobenzene	0	1201.54166	4806.16666	NR
	1-Bromo-2-nitrobenzene {2}	0	7017.33333	8069.33333	NR
	1-Bromo-2-nitrobenzene {4}	0	2606.41666	0425.66666	NR

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F006.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F006.D\1231F006c.d			**Vial:**	6
Acqu Date:	12/31/2018 13:52	**Quant Date:**	01/01/2019 15:36	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1806233	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:			
MB Ref:		**Method ID:**	MJ1647
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene					0**d**	0**d**	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.00	-0.11	5.34	-0.08	942525	2886970	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Hexachlorobenzene			0**d**	0**d**	0.0000	0.0000			NR
1	beta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	gamma-BHC (Lindane)			0**d**	0**d**	0.0000	0.0000			NR
1	delta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor			0**d**	0**d**	0.0000	0.0000			NR
1	Aldrin			0**d**	0**d**	0.0000	0.0000			NR
1	Isodrin			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor Epoxide			0**d**	0**d**	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F006.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F006.D\1231F006c.d			**Vial:**	6
Acqu Date:	12/31/2018 13:52	**Quant Date:**	01/01/2019 15:36	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000			NR
1	Endosulfan I			0d	0d	0.0000	0.0000			NR
1	alpha-Chlordane			0d	0d	0.0000	0.0000			NR
1	Dieldrin			0d	0d	0.0000	0.0000			NR
1	4,4'-DDE			0d	0d	0.0000	0.0000			NR
1	Endrin			0d	0d	0.0000	0.0000			NR
1	Endosulfan II			0d	0d	0.0000	0.0000			NR
1	4,4'-DDD			0d	0d	0.0000	0.0000			NR
1	Endrin Aldehyde			0d	0d	0.0000	0.0000			NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000			NR
1	4,4'-DDT			0d	0d	0.0000	0.0000			NR
1	Endrin Ketone			0d	0d	0.0000	0.0000			NR
1	Methoxychlor			0d	0d	0.0000	0.0000			NR
1	2,4'-DDE			0d	0d	0.0000	0.0000			NR
1	2,4'-DDD			0d	0d	0.0000	0.0000			NR
1	2,4'-DDT			0d	0d	0.0000	0.0000			NR
	Toxaphene			0	0	0.0000	0.0000			NR
2	Toxaphene {1}			0d	0d	0.0000	0.0000			
2	Toxaphene {2}			0d	0d	0.0000	0.0000			
2	Toxaphene {3}			0d	0d	0.0000	0.0000			
2	Toxaphene {4}			0d	0d	0.0000	0.0000			
2	Toxaphene {5}			0d	0d	0.0000	0.0000			
2	Toxaphene {6}			0d	0d	0.0000	0.0000			
	Chlordane			0	0	21.35	20.63			
3	Chlordane {1}	11.00	9.39	13140	28406	24.37	22.79			
3	Chlordane {2}	11.42	11.48	12910	15806	18.98	19.84			
3	Chlordane {3}	12.03	11.82	9190	63570	19.79	20.16			
3	Chlordane {4}	13.22	11.87	31011	36944	22.88	19.02			
3	Chlordane {5}	13.29	11.93	24841	20202	21.64	21.96			
3	Chlordane {6}	13.37	11.97	17312	56570	20.46	20.00			
4	Chlorpyrifos			0d	0d	0.0000	0.0000			NR
4	Oxychlordane			0d	0d	0.0000	0.0000			NR
4	cis-Nonachlor			0d	0d	0.0000	0.0000			NR
4	trans-Nonachlor			0d	0d	0.0000	0.0000			NR
4	Mirex			0d	0d	0.0000	0.0000			NR
4	Hexachloroethane			0d	0d	0.0000	0.0000			NR
4	Hexachlorobutadiene			0d	0d	0.0000	0.0000			NR
4	Perthane			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F006.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F006.D\1231F006c.d			**Vial:**	6
Acqu Date:	12/31/2018 13:52	**Quant Date:**	01/01/2019 15:36	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1690	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1900100	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:			
MB Ref:		**Method ID:**	MJ1690
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene					0**d**	0**d**	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.00	-0.11	5.34	-0.08	942525	2886970	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	alpha-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Hexachlorobenzene			0**d**	0**d**	0.0000	0.0000			NR
1	beta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	gamma-BHC (Lindane)			0**d**	0**d**	0.0000	0.0000			NR
1	delta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor			0**d**	0**d**	0.0000	0.0000			NR
1	Aldrin			0**d**	0**d**	0.0000	0.0000			NR
1	Isodrin			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor Epoxide			0**d**	0**d**	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F006.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F006.D\1231F006c.d			**Vial:**	6
Acqu Date:	12/31/2018 13:52	**Quant Date:**	01/01/2019 15:36	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1690	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000			NR
1	Endosulfan I			0d	0d	0.0000	0.0000			NR
1	alpha-Chlordane			0d	0d	0.0000	0.0000			NR
1	Dieldrin			0d	0d	0.0000	0.0000			NR
1	4,4'-DDE			0d	0d	0.0000	0.0000			NR
1	Endrin			0d	0d	0.0000	0.0000			NR
1	Endosulfan II			0d	0d	0.0000	0.0000			NR
1	4,4'-DDD			0d	0d	0.0000	0.0000			NR
1	Endrin Aldehyde			0d	0d	0.0000	0.0000			NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000			NR
1	4,4'-DDT			0d	0d	0.0000	0.0000			NR
1	Endrin Ketone			0d	0d	0.0000	0.0000			NR
1	Methoxychlor			0d	0d	0.0000	0.0000			NR
1	2,4'-DDE			0d	0d	0.0000	0.0000			NR
1	2,4'-DDD			0d	0d	0.0000	0.0000			NR
1	2,4'-DDT			0d	0d	0.0000	0.0000			NR
	Toxaphene			0	0	0.0000	0.0000			NR
2	Toxaphene {1}			0d	0d	0.0000	0.0000			
2	Toxaphene {2}			0d	0d	0.0000	0.0000			
2	Toxaphene {3}			0d	0d	0.0000	0.0000			
2	Toxaphene {4}			0d	0d	0.0000	0.0000			
2	Toxaphene {5}			0d	0d	0.0000	0.0000			
2	Toxaphene {6}			0d	0d	0.0000	0.0000			
	Chlordane			0	0	21.35	20.63			
3	Chlordane {1}	11.00	9.39	13140	28406	24.37	22.79			
3	Chlordane {2}	11.42	11.48	12910	15806	18.98	19.84			
3	Chlordane {3}	12.03	11.82	9190	63570	19.79	20.16			
3	Chlordane {4}	13.22	11.87	31011	36944	22.88	19.02			
3	Chlordane {5}	13.29	11.93	24841	20202	21.64	21.96			
3	Chlordane {6}	13.37	11.97	17312	56570	20.46	20.00			
4	Chlorpyrifos			0d	0d	0.0000	0.0000			NR
4	Oxychlordane			0d	0d	0.0000	0.0000			NR
4	cis-Nonachlor			0d	0d	0.0000	0.0000			NR
4	trans-Nonachlor			0d	0d	0.0000	0.0000			NR
4	Mirex			0d	0d	0.0000	0.0000			NR
4	Hexachloroethane			0d	0d	0.0000	0.0000			NR
4	Hexachlorobutadiene			0d	0d	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
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NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F006.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F006.D\1231F006c.d			**Vial:**	6
Acqu Date:	12/31/2018 13:52	**Quant Date:**	01/01/2019 15:36	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1900100	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:			
MB Ref:		**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene					0d	0d	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0d	0d	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.00	-0.11	5.34	-0.08	942525	2886970	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0d	0d	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0d	0d		0.0000			NR
				%Recovery =		NA	NA	Limits =	70-130	
1	Decachlorobiphenyl	0.00		0d	0d		0.0000			NR
				%Recovery =		NA	NA	Limits =	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC			0d	0d	0.0000	0.0000			NR
1	Hexachlorobenzene			0d	0d	0.0000	0.0000			NR
1	beta-BHC			0d	0d	0.0000	0.0000			NR
1	gamma-BHC (Lindane)			0d	0d	0.0000	0.0000			NR
1	delta-BHC			0d	0d	0.0000	0.0000			NR
1	Heptachlor			0d	0d	0.0000	0.0000			NR
1	Aldrin			0d	0d	0.0000	0.0000			NR
1	Isodrin			0d	0d	0.0000	0.0000			NR
1	Heptachlor Epoxide			0d	0d	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F006.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F006.D\1231F006c.d			**Vial:**	6
Acqu Date:	12/31/2018 13:52	**Quant Date:**	01/01/2019 15:36	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000			NR
1	Endosulfan I			0d	0d	0.0000	0.0000			NR
1	alpha-Chlordane			0d	0d	0.0000	0.0000			NR
1	Dieldrin			0d	0d	0.0000	0.0000			NR
1	4,4'-DDE			0d	0d	0.0000	0.0000			NR
1	Endrin			0d	0d	0.0000	0.0000			NR
1	Endosulfan II			0d	0d	0.0000	0.0000			NR
1	4,4'-DDD			0d	0d	0.0000	0.0000			NR
1	Endrin Aldehyde			0d	0d	0.0000	0.0000			NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000			NR
1	4,4'-DDT			0d	0d	0.0000	0.0000			NR
1	Endrin Ketone			0d	0d	0.0000	0.0000			NR
1	Methoxychlor			0d	0d	0.0000	0.0000			NR
1	2,4'-DDE			0d	0d	0.0000	0.0000			NR
1	2,4'-DDD			0d	0d	0.0000	0.0000			NR
1	2,4'-DDT			0d	0d	0.0000	0.0000			NR
	Toxaphene			0	0	0.0000	0.0000			NR
2	Toxaphene {1}			0d	0d	0.0000	0.0000			
2	Toxaphene {2}			0d	0d	0.0000	0.0000			
2	Toxaphene {3}			0d	0d	0.0000	0.0000			
2	Toxaphene {4}			0d	0d	0.0000	0.0000			
2	Toxaphene {5}			0d	0d	0.0000	0.0000			
2	Toxaphene {6}			0d	0d	0.0000	0.0000			
	Chlordane			0	0	21.35	20.63			
3	Chlordane {1}	11.00	9.39	13140	28406	24.37	22.79			
3	Chlordane {2}	11.42	11.48	12910	15806	18.98	19.84			
3	Chlordane {3}	12.03	11.82	9190	63570	19.79	20.16			
3	Chlordane {4}	13.22	11.87	31011	36944	22.88	19.02			
3	Chlordane {5}	13.29	11.93	24841	20202	21.64	21.96			
3	Chlordane {6}	13.37	11.97	17312	56570	20.46	20.00			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\123118\1231F006.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 1:52 pm Operator: MCHAPPELLE
Sample : CHLOR 20PPB GCPS8-50F Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:36:35 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
36)	1-Bromo-2...	6.005	5.341	942525	2886970	100.000	100.000
	System Monitoring Compounds						
	Target Compounds						
37)	Chlordane	10.998	9.388	13140	28406	24.370	22.792
38)	Chlordane...	11.425	11.484	12910	15806	18.984	19.839
39)	Chlordane...	12.031	11.821	9190	63570	19.788	20.157
40)	Chlordane...	13.221	11.868	31011	36944	22.875	19.022
41)	Chlordane...	13.295	11.931	24841	20202	21.639	21.963
42)	Chlordane...	13.375	11.968	17312	56570	20.462	20.003
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

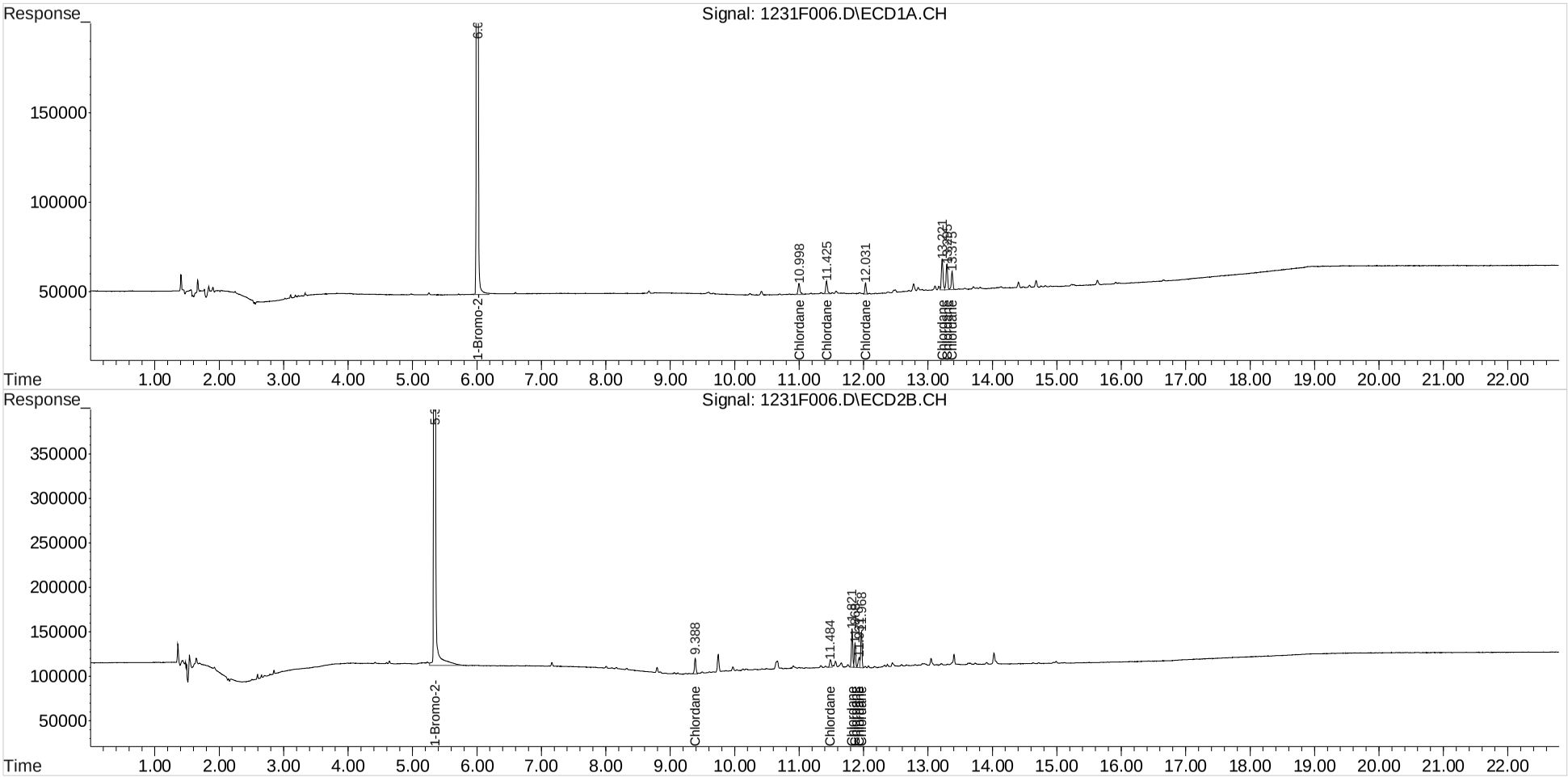
1st SM 01/01/19
2nd UA 01/07/19

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\123118\1231F006.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 1:52 pm Operator: MCHAPPELLE
Sample : CHLOR 20PPB GCPS8-50F Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:36:35 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Jan 01 15:35:55 2019
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F007.D
Lab ID: KWG1900100-1
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 12/31/2018 14:21
Date Quantitated: 01/01/2019 15:23
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	alpha-BHC	21.1	NA	20	ICVOK
	Hexachlorobenzene	21.7	NA	20	
	beta-BHC	24.9	NA	20	
	gamma-BHC (Lindane)	20.5	NA	20	
	delta-BHC	23.5	NA	20	
	Aldrin	24.6	NA	20	
	Isodrin	33.6	NA	20	
	gamma-Chlordane	23.5	NA	20	
	Endosulfan I	28.0	NA	20	
	alpha-Chlordane	20.7	NA	20	
	4,4'-DDE	23.6	NA	20	
	Endrin	21.7	NA	20	
	4,4'-DDD	21.0	NA	20	
	Endrin Aldehyde	22.5	NA	20	
	2,4'-DDE	27.0	NA	20	
	2,4'-DDT	20.4	NA	20	

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F007.D\1231F007C.D
Lab ID: KWG1900100-1
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 12/31/2018 14:21
Date Quantitated: 01/01/2019 15:23
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F007.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F007.D\1231F007c.d			**Vial:**	7
Acqu Date:	12/31/2018 14:21	**Quant Date:**	01/01/2019 15:23	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-1				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1806233	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:			
MB Ref:		**Method ID:**	MJ1647
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	c	5.34	c	918682	2729789	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01	c	5.34	c	918682	2729789	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01	c	5.34	c	918682	2729789	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.01	c	5.34	c	918682	2729789	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	Limits =	70-130	
1	Decachlorobiphenyl	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	Limits =	70-130	

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC			0	0	0.0000	0.0000			
1	Hexachlorobenzene			0	0	0.0000	0.0000			
1	beta-BHC			0	0	0.0000	0.0000			
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor		9.75	0	1290	0.0000	0.0400			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F007.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F007.D\1231F007c.d			**Vial:**	7
Acqu Date:	12/31/2018 14:21	**Quant Date:**	01/01/2019 15:23	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-1				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000			
1	Endosulfan I			0	0	0.0000	0.0000			
1	alpha-Chlordane			0	0	0.0000	0.0000			
1	Dieldrin			0	0	0.0000	0.0000			
1	4,4'-DDE			0	0	0.0000	0.0000			
1	Endrin			0	0	0.0000	0.0000			
1	Endosulfan II			0	0	0.0000	0.0000			
1	4,4'-DDD			0	0	0.0000	0.0000			
1	Endrin Aldehyde			0	0	0.0000	0.0000			
1	Endosulfan Sulfate		14.02	0	8537	0.0000	0.3380			
1	4,4'-DDT		13.65	0	1234	0.0000	0.0620			
1	Endrin Ketone			0	0	0.0000	0.0000			
1	Methoxychlor	15.63		1886	0	0.5070	0.0000			
1	2,4'-DDE			0	0	0.0000	0.0000			
1	2,4'-DDD			0	0	0.0000	0.0000			
1	2,4'-DDT			0	0	0.0000	0.0000			
	Toxaphene			0	0	0.0000	0.0000			
2	Toxaphene {1}			0	0	0.0000	0.0000			
2	Toxaphene {2}			0	0	0.0000	0.0000			
2	Toxaphene {3}			0	0	0.0000	0.0000			
2	Toxaphene {4}			0	0	0.0000	0.0000			
2	Toxaphene {5}			0	0	0.0000	0.0000			
2	Toxaphene {6}			0	0	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.6830			
3	Chlordane {1}		9.39	0	805	0.0000	0.6830			
3	Chlordane {2}			0	0	0.0000	0.0000			
3	Chlordane {3}			0	0	0.0000	0.0000			
3	Chlordane {4}			0	0	0.0000	0.0000			
3	Chlordane {5}			0	0	0.0000	0.0000			
3	Chlordane {6}			0	0	0.0000	0.0000			
4	Chlorpyrifos		10.70	0	790	0.0000	0.0440			
4	Oxychlordane			0	0	0.0000	0.0000			
4	cis-Nonachlor			0	0	0.0000	0.0000			
4	trans-Nonachlor			0	0	0.0000	0.0000			
4	Mirex			0	0	0.0000	0.0000			
4	Hexachloroethane		3.32	0	979	0.0000	0.0190			
4	Hexachlorobutadiene			0	0	0.0000	0.0000			
4	Perthane			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F007.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F007.D\1231F007c.d			**Vial:**	7
Acqu Date:	12/31/2018 14:21	**Quant Date:**	01/01/2019 15:23	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1690	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-1				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1900100	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:			
MB Ref:		**Method ID:**	MJ1690
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	c	5.34	c	918682	2729789	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01	c	5.34	c	918682	2729789	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01	c	5.34	c	918682	2729789	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.01	c	5.34	c	918682	2729789	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	Limits =	70-130	
1	Decachlorobiphenyl	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	Limits =	70-130	

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	alpha-BHC			0	0	0.0000	0.0000			
1	Hexachlorobenzene			0	0	0.0000	0.0000			
1	beta-BHC			0	0	0.0000	0.0000			
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor		9.75	0	1290	0.0000	0.0400			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F007.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F007.D\1231F007c.d			**Vial:**	7
Acqu Date:	12/31/2018 14:21	**Quant Date:**	01/01/2019 15:23	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1690	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-1				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000			
1	Endosulfan I			0	0	0.0000	0.0000			
1	alpha-Chlordane			0	0	0.0000	0.0000			
1	Dieldrin			0	0	0.0000	0.0000			
1	4,4'-DDE			0	0	0.0000	0.0000			
1	Endrin			0	0	0.0000	0.0000			
1	Endosulfan II			0	0	0.0000	0.0000			
1	4,4'-DDD			0	0	0.0000	0.0000			
1	Endrin Aldehyde			0	0	0.0000	0.0000			
1	Endosulfan Sulfate		14.02	0	8537	0.0000	0.3380			
1	4,4'-DDT		13.65	0	1234	0.0000	0.0620			
1	Endrin Ketone			0	0	0.0000	0.0000			
1	Methoxychlor	15.63		1886	0	0.5070	0.0000			
1	2,4'-DDE			0	0	0.0000	0.0000			
1	2,4'-DDD			0	0	0.0000	0.0000			
1	2,4'-DDT			0	0	0.0000	0.0000			
	Toxaphene			0	0	0.0000	0.0000			
2	Toxaphene {1}			0	0	0.0000	0.0000			
2	Toxaphene {2}			0	0	0.0000	0.0000			
2	Toxaphene {3}			0	0	0.0000	0.0000			
2	Toxaphene {4}			0	0	0.0000	0.0000			
2	Toxaphene {5}			0	0	0.0000	0.0000			
2	Toxaphene {6}			0	0	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.6830			
3	Chlordane {1}		9.39	0	805	0.0000	0.6830			
3	Chlordane {2}			0	0	0.0000	0.0000			
3	Chlordane {3}			0	0	0.0000	0.0000			
3	Chlordane {4}			0	0	0.0000	0.0000			
3	Chlordane {5}			0	0	0.0000	0.0000			
3	Chlordane {6}			0	0	0.0000	0.0000			
4	Chlorpyrifos		10.70	0	790	0.0000	0.0440			
4	Oxychlordane			0	0	0.0000	0.0000			
4	cis-Nonachlor			0	0	0.0000	0.0000			
4	trans-Nonachlor			0	0	0.0000	0.0000			
4	Mirex			0	0	0.0000	0.0000			
4	Hexachloroethane		3.32	0	979	0.0000	0.0190			
4	Hexachlorobutadiene			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F007.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F007.D\1231F007c.d			**Vial:**	7
Acqu Date:	12/31/2018 14:21	**Quant Date:**	01/01/2019 15:23	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-1				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1900100	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:			
MB Ref:		**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	c	5.34	c	918682	2729789	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01	c	5.34	c	918682	2729789	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01	c	5.34	c	918682	2729789	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.01	c	5.34	c	918682	2729789	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC			0	0	0.0000	0.0000			
1	Hexachlorobenzene			0	0	0.0000	0.0000			
1	beta-BHC			0	0	0.0000	0.0000			
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor		9.75	0	1290	0.0000	0.0400			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F007.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F007.D\1231F007c.d			**Vial:**	7
Acqu Date:	12/31/2018 14:21	**Quant Date:**	01/01/2019 15:23	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-1				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000			
1	Endosulfan I			0	0	0.0000	0.0000			
1	alpha-Chlordane			0	0	0.0000	0.0000			
1	Dieldrin			0	0	0.0000	0.0000			
1	4,4'-DDE			0	0	0.0000	0.0000			
1	Endrin			0	0	0.0000	0.0000			
1	Endosulfan II			0	0	0.0000	0.0000			
1	4,4'-DDD			0	0	0.0000	0.0000			
1	Endrin Aldehyde			0	0	0.0000	0.0000			
1	Endosulfan Sulfate		14.02	0	8537	0.0000	0.3380			
1	4,4'-DDT		13.65	0	1234	0.0000	0.0620			
1	Endrin Ketone			0	0	0.0000	0.0000			
1	Methoxychlor	15.63		1886	0	0.5070	0.0000			
1	2,4'-DDE			0	0	0.0000	0.0000			
1	2,4'-DDD			0	0	0.0000	0.0000			
1	2,4'-DDT			0	0	0.0000	0.0000			
	Toxaphene			0	0	0.0000	0.0000			
2	Toxaphene {1}			0	0	0.0000	0.0000			
2	Toxaphene {2}			0	0	0.0000	0.0000			
2	Toxaphene {3}			0	0	0.0000	0.0000			
2	Toxaphene {4}			0	0	0.0000	0.0000			
2	Toxaphene {5}			0	0	0.0000	0.0000			
2	Toxaphene {6}			0	0	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.6830			
3	Chlordane {1}		9.39	0	805	0.0000	0.6830			
3	Chlordane {2}			0	0	0.0000	0.0000			
3	Chlordane {3}			0	0	0.0000	0.0000			
3	Chlordane {4}			0	0	0.0000	0.0000			
3	Chlordane {5}			0	0	0.0000	0.0000			
3	Chlordane {6}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report (Not Reviewed)

Data File : J:\GC23\data\123118\1231F007.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 2:21 pm Operator: MCHAPPELLE
Sample : IB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:23:02 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Wed Dec 26 10:51:17 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.007	5.344	918682	2729789	100.000	100.000	
29)	1-Bromo-2...	6.007	5.344	918682	2729789	100.000	100.000	
36)	1-Bromo-2...	6.007	5.344	918682	2729789	100.000	100.000	
43)	1-Bromo-2...	6.007	5.344	918682	2729789	100.000	100.000	
	System Monitoring Compounds							
	Target Compounds							
8)	Heptachlor	0.000	9.754	0	1290	N.D.	0.040	#
21)	Endosulfa...	0.000	14.020f	0	8537	N.D.	0.338	#
22)	4,4'-DDT	0.000	13.650	0	1234	N.D.	0.062	#
24)	Methoxychlor	15.631f	0.000	1886	0	0.507	N.D.	#
37)	Chlordane	0.000	9.387	0	805	N.D.	0.683	#
44)	Chlorpyrifos	0.000	10.700	0	790	N.D.	0.044	#
49)	HCE	0.000	3.320f	0	979	N.D.	0.019	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

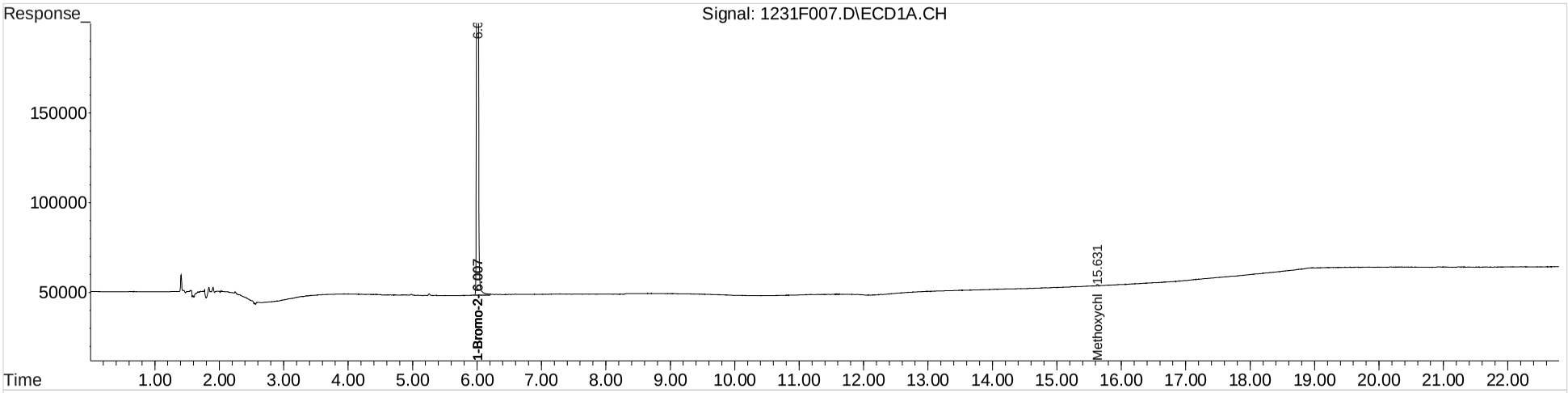
1st SM 01/01/19
2nd UA 01/07/19

Quantitation Report (Not Reviewed)

Data File : J:\GC23\data\123118\1231F007.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 2:21 pm Operator: MCHAPPELLE
Sample : IB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:23:02 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Wed Dec 26 10:51:17 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F002.D
Lab ID: KWG1900100-2
RunType: PEM
Matrix: NOT APPLICABLE

Date Acquired: 12/31/2018 11:54
Date Quantitated: 01/01/2019 15:29
Batch ID: KWG1900100
Analysis Method: 8081B
ListJoinID: LJ17418

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Pesticide Breakdown	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	4,4'-DDE	23.6	NA	20	ICVOK
	Endrin	21.7	NA	20	ICVOK
	4,4'-DDD	21.0	NA	20	ICVOK
	Endrin Aldehyde	22.5	NA	20	ICVOK
Above Highest ICAL Level	4,4'-DDT	12.06	NA	10	breakdown ok

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F002.D\1231F002C.D
Lab ID: KWG1900100-2
RunType: PEM
Matrix: NOT APPLICABLE

Date Acquired: 12/31/2018 11:54
Date Quantitated: 01/01/2019 15:29
Batch ID: KWG1900100
Analysis Method: 8081B
ListJoinID: LJ17418

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Pesticide Breakdown	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	4,4'-DDT	11.12	NA	10	breakdown ok

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F002.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F002.D\1231F002c.d			**Vial:**	1
Acqu Date:	12/31/2018 11:54	**Quant Date:**	01/01/2019 15:29	**Dilution:**	1.0
Run Type:	PEM	**ListJoinID:**	LJ17418	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-2				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1900100	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:	Organochlorine Pesticides	**Report List ID:**	LJ17418
MB Ref:		**Method ID:**	MJ1006
		Quant based on Report List	

BreakDown Results

Parameter Name	Resp #1	Respe #2	Percent Breakdown #1	Percent Breakdown #1
1-Bromo-2-nitrobenzene	992649	3093157		
4,4'-DDE	1281	4994		
Endrin	63294	177356	8.3	7.1
4,4'-DDD	11733	24967		
Endrin Aldehyde	1210**m**	2442		
4,4'-DDT	79490	249162	14.1	10.7
Endrin Ketone	4524	11166		

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E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F002.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 11:54 am Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:29:41 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Dec 17 09:04:10 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	5.996	5.332	992649	3093157	100.000	100.000	
	System Monitoring Compounds							
	Target Compounds							
16)	4,4'-DDE	13.566	12.319	1281	4994	0.099	0.153	#
17)	Endrin	14.123	12.932	63294	177356	5.734	6.106	
19)	4,4'-DDD	14.403	13.196	11733	24967	1.258	1.051	
20)	Endrin Al...	14.749	13.729	1210	2442	0.119m	0.097	
22)	4,4'-DDT	14.893	13.616	79490	249162	12.057	11.116	
23)	Endrin Ke...	15.903	14.979	4524	11166	0.395	0.355	
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

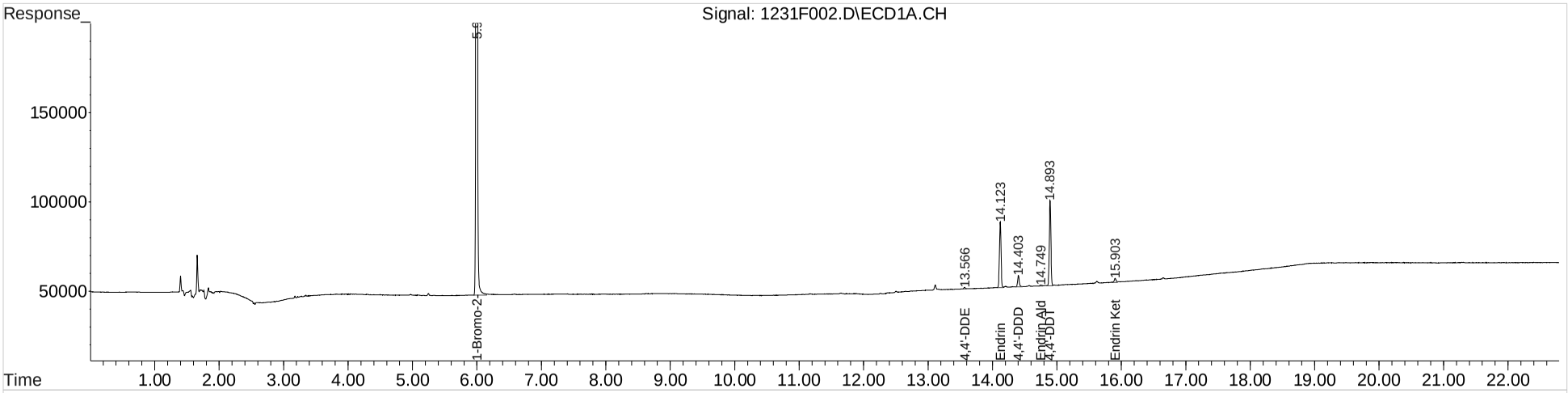
1st SM 01/01/19
2nd UA 01/07/19

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\123118\1231F002.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 11:54 am Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:29:41 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Dec 17 09:04:10 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



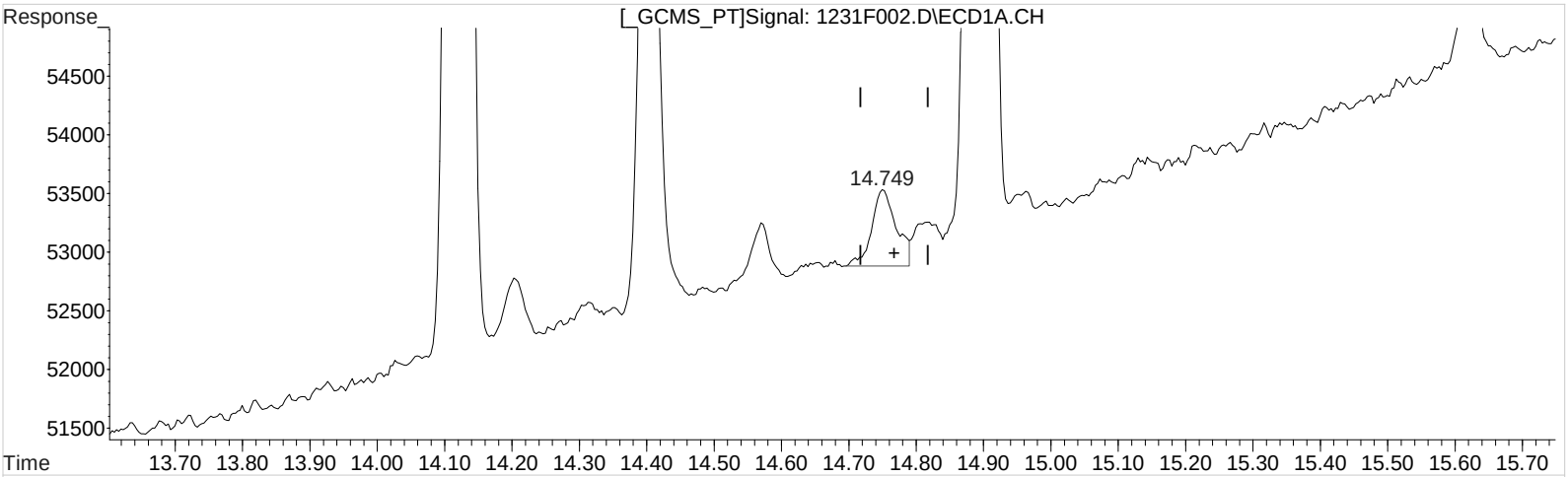
Quantitation Report (Qedit)

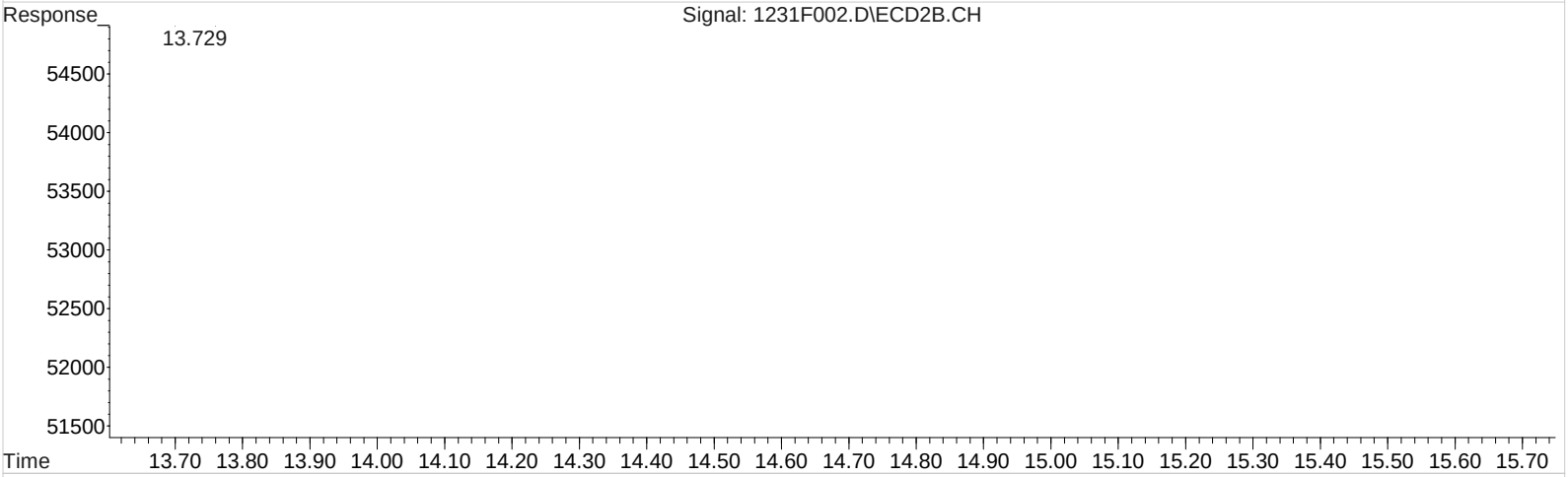
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F002.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 11:54 am Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 31 12:28:36 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Dec 17 09:04:10 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(20) Endrin Aldehyde

14.749min 0.163 ug/L

response 1666

Manual Integration:

Before

01/01/19

(20) Endrin Aldehyde #2

13.729min 0.097 ug/L

response 2442

(+) = Expected Retention Time

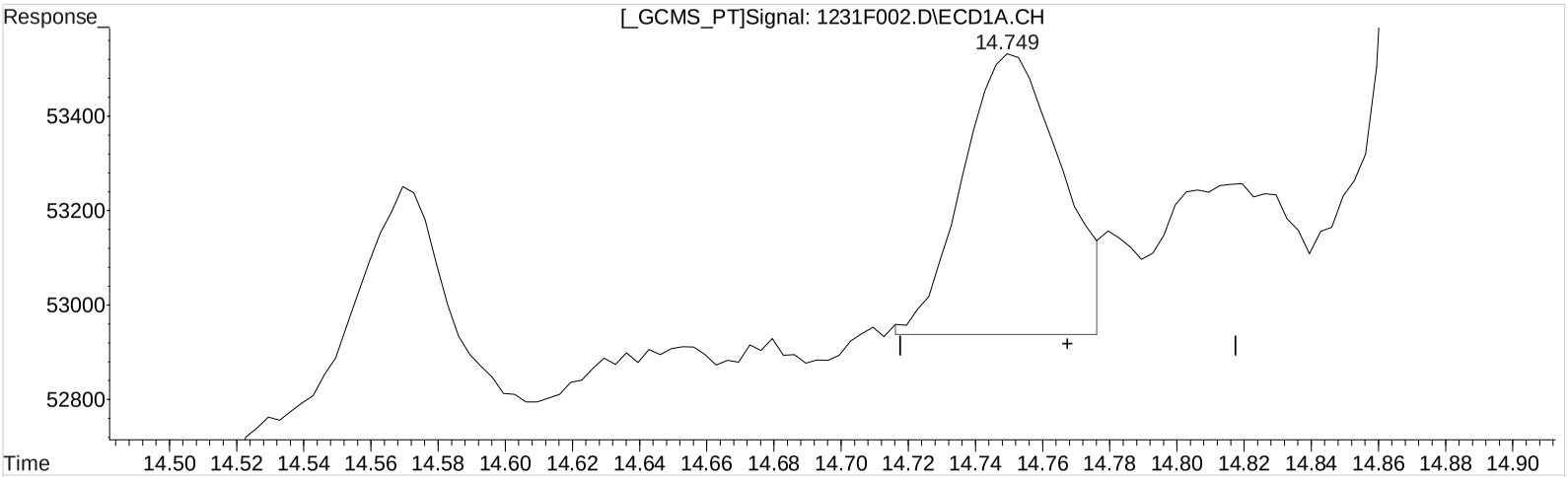
Quantitation Report (Qedit)

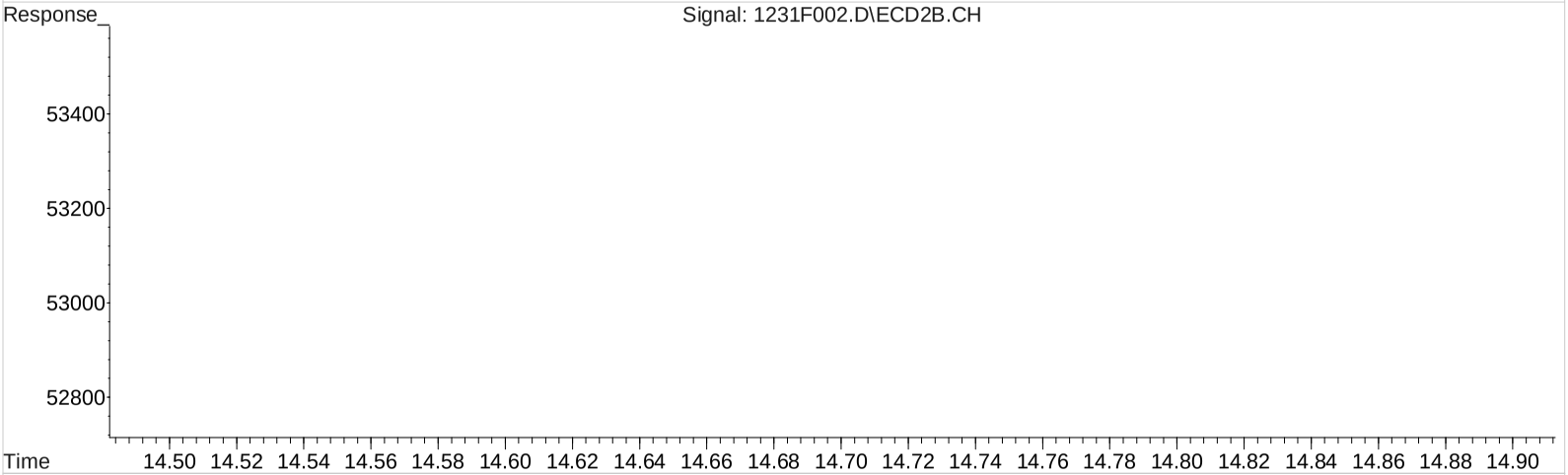
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F002.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 11:54 am Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 31 12:28:36 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Dec 17 09:04:10 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(20) Endrin Aldehyde

14.749min 0.119 ug/L m

response 1210

Manual Integration:

After

Baseline/Shoulder

01/01/19

(20) Endrin Aldehyde #2

13.729min 0.097 ug/L

response 2442

(+) = Expected Retention Time

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F025.D
Lab ID: KWG1900100-4
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 12/31/2018 23:12
Date Quantitated: 01/01/2019 15:57
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	alpha-BHC	21.1	NA	20	ICVOK
	Hexachlorobenzene	21.7	NA	20	
	beta-BHC	24.9	NA	20	
	gamma-BHC (Lindane)	20.5	NA	20	
	delta-BHC	23.5	NA	20	
	Aldrin	24.6	NA	20	
	Isodrin	33.6	NA	20	
	gamma-Chlordane	23.5	NA	20	
	Endosulfan I	28.0	NA	20	
	alpha-Chlordane	20.7	NA	20	
	4,4'-DDE	23.6	NA	20	
	Endrin	21.7	NA	20	
	4,4'-DDD	21.0	NA	20	
	Endrin Aldehyde	22.5	NA	20	
	2,4'-DDE	27.0	NA	20	
	2,4'-DDT	20.4	NA	20	

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F025.D\1231F025C.D
Lab ID: KWG1900100-4
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 12/31/2018 23:12
Date Quantitated: 01/01/2019 15:57
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F025.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F025.D\1231F025c.d			**Vial:**	7
Acqu Date:	12/31/2018 23:12	**Quant Date:**	01/01/2019 15:57	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-4				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1806233	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:			
MB Ref:		**Method ID:**	MJ1647
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	c	5.34	c	850929	2481883	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01	c	5.34	c	850929	2481883	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01	c	5.34	c	850929	2481883	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.01	c	5.34	c	850929	2481883	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC			0	0	0.0000	0.0000			
1	Hexachlorobenzene			0	0	0.0000	0.0000			
1	beta-BHC			0	0	0.0000	0.0000			
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor		9.72	0	2552	0.0000	0.0860			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Data File #1:	J:\GC23\DATA\123118\1231F025.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F025.D\1231F025c.d			**Vial:**	7
Acqu Date:	12/31/2018 23:12	**Quant Date:**	01/01/2019 15:57	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1647	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-4				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000			
1	Endosulfan I			0	0	0.0000	0.0000			
1	alpha-Chlordane			0	0	0.0000	0.0000			
1	Dieldrin		12.48	0	1154	0.0000	0.0450			
1	4,4'-DDE		12.27	0	764	0.0000	0.0290			
1	Endrin			0	0	0.0000	0.0000			
1	Endosulfan II			0	0	0.0000	0.0000			
1	4,4'-DDD			0	0	0.0000	0.0000			
1	Endrin Aldehyde			0	0	0.0000	0.0000			
1	Endosulfan Sulfate		14.03	0	25273	0.0000	1.10			
1	4,4'-DDT		13.66	0	4900	0.0000	0.2720			
1	Endrin Ketone			0	0	0.0000	0.0000			
1	Methoxychlor	15.63		5520	0	1.60	0.0000			
1	2,4'-DDE			0	0	0.0000	0.0000			
1	2,4'-DDD			0	0	0.0000	0.0000			
1	2,4'-DDT			0	0	0.0000	0.0000			
	Toxaphene			0	0	8.03	9.09			
2	Toxaphene {1}			0	0	0.0000	0.0000			
2	Toxaphene {2}			0	0	0.0000	0.0000			
2	Toxaphene {3}			0	0	0.0000	0.0000			
2	Toxaphene {4}			0	0	0.0000	0.0000			
2	Toxaphene {5}			0	0	0.0000	0.0000			
2	Toxaphene {6}	15.97	14.63	1768	3655	8.03	9.09			
	Chlordane			0	0	0.0000	0.0000			
3	Chlordane {1}			0	0	0.0000	0.0000			
3	Chlordane {2}			0	0	0.0000	0.0000			
3	Chlordane {3}			0	0	0.0000	0.0000			
3	Chlordane {4}			0	0	0.0000	0.0000			
3	Chlordane {5}			0	0	0.0000	0.0000			
3	Chlordane {6}			0	0	0.0000	0.0000			
4	Chlorpyrifos		10.71	0	1011	0.0000	0.0620			
4	Oxychlordane			0	0	0.0000	0.0000			
4	cis-Nonachlor			0	0	0.0000	0.0000			
4	trans-Nonachlor			0	0	0.0000	0.0000			
4	Mirex			0	0	0.0000	0.0000			
4	Hexachloroethane		3.32	0	2114	0.0000	0.0450			
4	Hexachlorobutadiene			0	0	0.0000	0.0000			
4	Perthane			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F025.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F025.D\1231F025c.d			**Vial:**	7
Acqu Date:	12/31/2018 23:12	**Quant Date:**	01/01/2019 15:57	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1648	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-4				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1900100	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:			
MB Ref:		**Method ID:**	MJ1648
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	c	5.34	c	850929	2481883	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01	c	5.34	c	850929	2481883	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01	c	5.34	c	850929	2481883	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.01	c	5.34	c	850929	2481883	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	Limits =	70-130	
1	Decachlorobiphenyl	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	Limits =	70-130	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC			0	0	0.0000	0.0000			
1	Hexachlorobenzene			0	0	0.0000	0.0000			
1	beta-BHC			0	0	0.0000	0.0000			
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor		9.72	0	2552	0.0000	0.0860			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F025.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F025.D\1231F025c.d			**Vial:**	7
Acqu Date:	12/31/2018 23:12	**Quant Date:**	01/01/2019 15:57	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1648	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-4				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000			
1	Endosulfan I			0	0	0.0000	0.0000			
1	alpha-Chlordane			0	0	0.0000	0.0000			
1	Dieldrin		12.48	0	1154	0.0000	0.0450			
1	4,4'-DDE		12.27	0	764	0.0000	0.0290			
1	Endrin			0	0	0.0000	0.0000			
1	Endosulfan II			0	0	0.0000	0.0000			
1	4,4'-DDD			0	0	0.0000	0.0000			
1	Endrin Aldehyde			0	0	0.0000	0.0000			
1	Endosulfan Sulfate		14.03	0	25273	0.0000	1.10			
1	4,4'-DDT		13.66	0	4900	0.0000	0.2720			
1	Endrin Ketone			0	0	0.0000	0.0000			
1	Methoxychlor	15.63		5520	0	1.60	0.0000			
1	2,4'-DDE			0	0	0.0000	0.0000			
1	2,4'-DDD			0	0	0.0000	0.0000			
1	2,4'-DDT			0	0	0.0000	0.0000			
	Toxaphene			0	0	8.03	9.09			
2	Toxaphene {1}			0	0	0.0000	0.0000			
2	Toxaphene {2}			0	0	0.0000	0.0000			
2	Toxaphene {3}			0	0	0.0000	0.0000			
2	Toxaphene {4}			0	0	0.0000	0.0000			
2	Toxaphene {5}			0	0	0.0000	0.0000			
2	Toxaphene {6}	15.97	14.63	1768	3655	8.03	9.09			
	Chlordane			0	0	0.0000	0.0000			
3	Chlordane {1}			0	0	0.0000	0.0000			
3	Chlordane {2}			0	0	0.0000	0.0000			
3	Chlordane {3}			0	0	0.0000	0.0000			
3	Chlordane {4}			0	0	0.0000	0.0000			
3	Chlordane {5}			0	0	0.0000	0.0000			
3	Chlordane {6}			0	0	0.0000	0.0000			
4	Chlorpyrifos		10.71	0	1011	0.0000	0.0620			
4	Oxychlordane			0	0	0.0000	0.0000			
4	cis-Nonachlor			0	0	0.0000	0.0000			
4	trans-Nonachlor			0	0	0.0000	0.0000			
4	Mirex			0	0	0.0000	0.0000			
4	Hexachloroethane		3.32	0	2114	0.0000	0.0450			
4	Hexachlorobutadiene			0	0	0.0000	0.0000			
4	Perthane			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F025.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F025.D\1231F025c.d			**Vial:**	7
Acqu Date:	12/31/2018 23:12	**Quant Date:**	01/01/2019 15:57	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1690	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-4				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1900100	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:			
MB Ref:		**Method ID:**	MJ1690
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	c	5.34	c	850929	2481883	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01	c	5.34	c	850929	2481883	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01	c	5.34	c	850929	2481883	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.01	c	5.34	c	850929	2481883	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	alpha-BHC			0	0	0.0000	0.0000			
1	Hexachlorobenzene			0	0	0.0000	0.0000			
1	beta-BHC			0	0	0.0000	0.0000			
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor		9.72	0	2552	0.0000	0.0860			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F025.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F025.D\1231F025c.d			**Vial:**	7
Acqu Date:	12/31/2018 23:12	**Quant Date:**	01/01/2019 15:57	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1690	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-4				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000			
1	Endosulfan I			0	0	0.0000	0.0000			
1	alpha-Chlordane			0	0	0.0000	0.0000			
1	Dieldrin		12.48	0	1154	0.0000	0.0450			
1	4,4'-DDE		12.27	0	764	0.0000	0.0290			
1	Endrin			0	0	0.0000	0.0000			
1	Endosulfan II			0	0	0.0000	0.0000			
1	4,4'-DDD			0	0	0.0000	0.0000			
1	Endrin Aldehyde			0	0	0.0000	0.0000			
1	Endosulfan Sulfate		14.03	0	25273	0.0000	1.10			
1	4,4'-DDT		13.66	0	4900	0.0000	0.2720			
1	Endrin Ketone			0	0	0.0000	0.0000			
1	Methoxychlor	15.63		5520	0	1.60	0.0000			
1	2,4'-DDE			0	0	0.0000	0.0000			
1	2,4'-DDD			0	0	0.0000	0.0000			
1	2,4'-DDT			0	0	0.0000	0.0000			
	Toxaphene			0	0	8.03	9.09			
2	Toxaphene {1}			0	0	0.0000	0.0000			
2	Toxaphene {2}			0	0	0.0000	0.0000			
2	Toxaphene {3}			0	0	0.0000	0.0000			
2	Toxaphene {4}			0	0	0.0000	0.0000			
2	Toxaphene {5}			0	0	0.0000	0.0000			
2	Toxaphene {6}	15.97	14.63	1768	3655	8.03	9.09			
	Chlordane			0	0	0.0000	0.0000			
3	Chlordane {1}			0	0	0.0000	0.0000			
3	Chlordane {2}			0	0	0.0000	0.0000			
3	Chlordane {3}			0	0	0.0000	0.0000			
3	Chlordane {4}			0	0	0.0000	0.0000			
3	Chlordane {5}			0	0	0.0000	0.0000			
3	Chlordane {6}			0	0	0.0000	0.0000			
4	Chlorpyrifos		10.71	0	1011	0.0000	0.0620			
4	Oxychlordane			0	0	0.0000	0.0000			
4	cis-Nonachlor			0	0	0.0000	0.0000			
4	trans-Nonachlor			0	0	0.0000	0.0000			
4	Mirex			0	0	0.0000	0.0000			
4	Hexachloroethane		3.32	0	2114	0.0000	0.0450			
4	Hexachlorobutadiene			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F025.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F025.D\1231F025c.d			**Vial:**	7
Acqu Date:	12/31/2018 23:12	**Quant Date:**	01/01/2019 15:57	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-4				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1900100	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:			
MB Ref:		**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	c	5.34	c	850929	2481883	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01	c	5.34	c	850929	2481883	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01	c	5.34	c	850929	2481883	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.01	c	5.34	c	850929	2481883	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC			0	0	0.0000	0.0000			
1	Hexachlorobenzene			0	0	0.0000	0.0000			
1	beta-BHC			0	0	0.0000	0.0000			
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor		9.72	0	2552	0.0000	0.0860			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Data File #1:	J:\GC23\DATA\123118\1231F025.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F025.D\1231F025c.d			**Vial:**	7
Acqu Date:	12/31/2018 23:12	**Quant Date:**	01/01/2019 15:57	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-4				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000			
1	Endosulfan I			0	0	0.0000	0.0000			
1	alpha-Chlordane			0	0	0.0000	0.0000			
1	Dieldrin		12.48	0	1154	0.0000	0.0450			
1	4,4'-DDE		12.27	0	764	0.0000	0.0290			
1	Endrin			0	0	0.0000	0.0000			
1	Endosulfan II			0	0	0.0000	0.0000			
1	4,4'-DDD			0	0	0.0000	0.0000			
1	Endrin Aldehyde			0	0	0.0000	0.0000			
1	Endosulfan Sulfate		14.03	0	25273	0.0000	1.10			
1	4,4'-DDT		13.66	0	4900	0.0000	0.2720			
1	Endrin Ketone			0	0	0.0000	0.0000			
1	Methoxychlor	15.63		5520	0	1.60	0.0000			
1	2,4'-DDE			0	0	0.0000	0.0000			
1	2,4'-DDD			0	0	0.0000	0.0000			
1	2,4'-DDT			0	0	0.0000	0.0000			
	Toxaphene			0	0	8.03	9.09			
2	Toxaphene {1}			0	0	0.0000	0.0000			
2	Toxaphene {2}			0	0	0.0000	0.0000			
2	Toxaphene {3}			0	0	0.0000	0.0000			
2	Toxaphene {4}			0	0	0.0000	0.0000			
2	Toxaphene {5}			0	0	0.0000	0.0000			
2	Toxaphene {6}	15.97	14.63	1768	3655	8.03	9.09			
	Chlordane			0	0	0.0000	0.0000			
3	Chlordane {1}			0	0	0.0000	0.0000			
3	Chlordane {2}			0	0	0.0000	0.0000			
3	Chlordane {3}			0	0	0.0000	0.0000			
3	Chlordane {4}			0	0	0.0000	0.0000			
3	Chlordane {5}			0	0	0.0000	0.0000			
3	Chlordane {6}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report (Not Reviewed)

Data File : J:\GC23\data\123118\1231F025.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 11:12 pm Operator: MCHAPPELLE
Sample : IB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:57:27 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Dec 17 09:04:10 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.006	5.343	850929	2481883	100.000	100.000	
29)	1-Bromo-2...	6.006	5.343	850929	2481883	100.000	100.000	
36)	1-Bromo-2...	6.006	5.343	850929	2481883	100.000	100.000	
43)	1-Bromo-2...	6.006	5.343	850929	2481883	100.000	100.000	
	System Monitoring Compounds							
	Target Compounds							
8)	Heptachlor	0.000	9.723	0	2552	N.D.	0.086	#
15)	Dieldrin	0.000	12.476	0	1154	N.D.	0.045	#
16)	4,4'-DDE	0.000	12.273f	0	764	N.D.	0.029	#
21)	Endosulfa...	0.000	14.026f	0	25273	N.D.	1.102	#
22)	4,4'-DDT	0.000	13.659f	0	4900	N.D.	0.272	#
24)	Methoxychlor	15.630	0.000	5520	0	1.602	N.D.	#
35)	Toxaphene...	15.966	14.633f	1768	3655	8.027	9.091	
44)	Chlorpyrifos	0.000	10.706	0	1011	N.D.	0.062	#
49)	HCE	0.000	3.316f	0	2114	N.D.	0.045	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

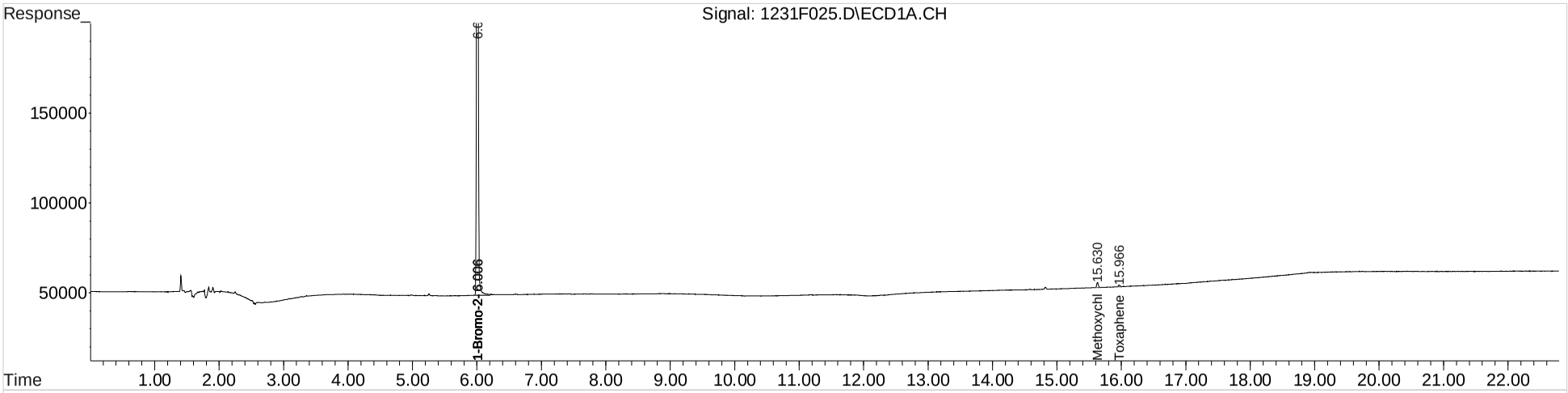
1st SM 01/01/19
2nd UA 01/07/19

Quantitation Report (Not Reviewed)

Data File : J:\GC23\data\123118\1231F025.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 11:12 pm Operator: MCHAPPELLE
Sample : IB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:57:27 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Dec 17 09:04:10 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F021.D
Lab ID: KWG1900100-5
RunType: PEM
Matrix: NOT APPLICABLE

Date Acquired: 12/31/2018 21:15
Date Quantitated: 01/01/2019 15:53
Batch ID: KWG1900100
Analysis Method: 8081B
ListJoinID: LJ17418

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Pesticide Breakdown	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	4,4'-DDE	23.6	NA	20	ICVOK
	Endrin	21.7	NA	20	ICVOK
	4,4'-DDD	21.0	NA	20	ICVOK
	Endrin Aldehyde	22.5	NA	20	ICVOK
Above Highest ICAL Level	4,4'-DDT	14.29	NA	10	breakdown ok

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F021.D\1231F021C.D
Lab ID: KWG1900100-5
RunType: PEM
Matrix: NOT APPLICABLE

Date Acquired: 12/31/2018 21:15
Date Quantitated: 01/01/2019 15:53
Batch ID: KWG1900100
Analysis Method: 8081B
ListJoinID: LJ17418

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Pesticide Breakdown	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	4,4'-DDT	12.67	NA	10	breakdown ok

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F021.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F021.D\1231F021c.d			**Vial:**	1
Acqu Date:	12/31/2018 21:15	**Quant Date:**	01/01/2019 15:53	**Dilution:**	1.0
Run Type:	PEM	**ListJoinID:**	LJ17418	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1900100	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:	Organochlorine Pesticides	**Report List ID:**	LJ17418
MB Ref:		**Method ID:**	MJ1006
		Quant based on Report List	

BreakDown Results

Parameter Name	Resp #1	Respe #2	Percent Breakdown #1	Percent Breakdown #1
1-Bromo-2-nitrobenzene	874130	2541459		
4,4'-DDE	1666	4701		
Endrin	63149	160620	7.5	7.1
4,4'-DDD	10971	23046		
Endrin Aldehyde	830**m**	1953		
4,4'-DDT	82977	233332	13.2	10.6
Endrin Ketone	4279	10384		

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B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F021.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 9:15 pm Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:53:52 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Wed Dec 26 10:51:17 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.001	5.341	874130	2541459	100.000	100.000
	System Monitoring Compounds						
	Target Compounds						
16)	4,4'-DDE	13.571	12.321	1666	4701	0.146	0.176
17)	Endrin	14.124	12.937	63149	160620	6.497	6.730
19)	4,4'-DDD	14.408	13.204	10971	23046	1.335	1.180
20)	Endrin Al...	14.754	13.734	830	1953	0.092m	0.095
22)	4,4'-DDT	14.901	13.621	82977	233332	14.293	12.669
23)	Endrin Ke...	15.911	14.984	4279	10384	0.424	0.401
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

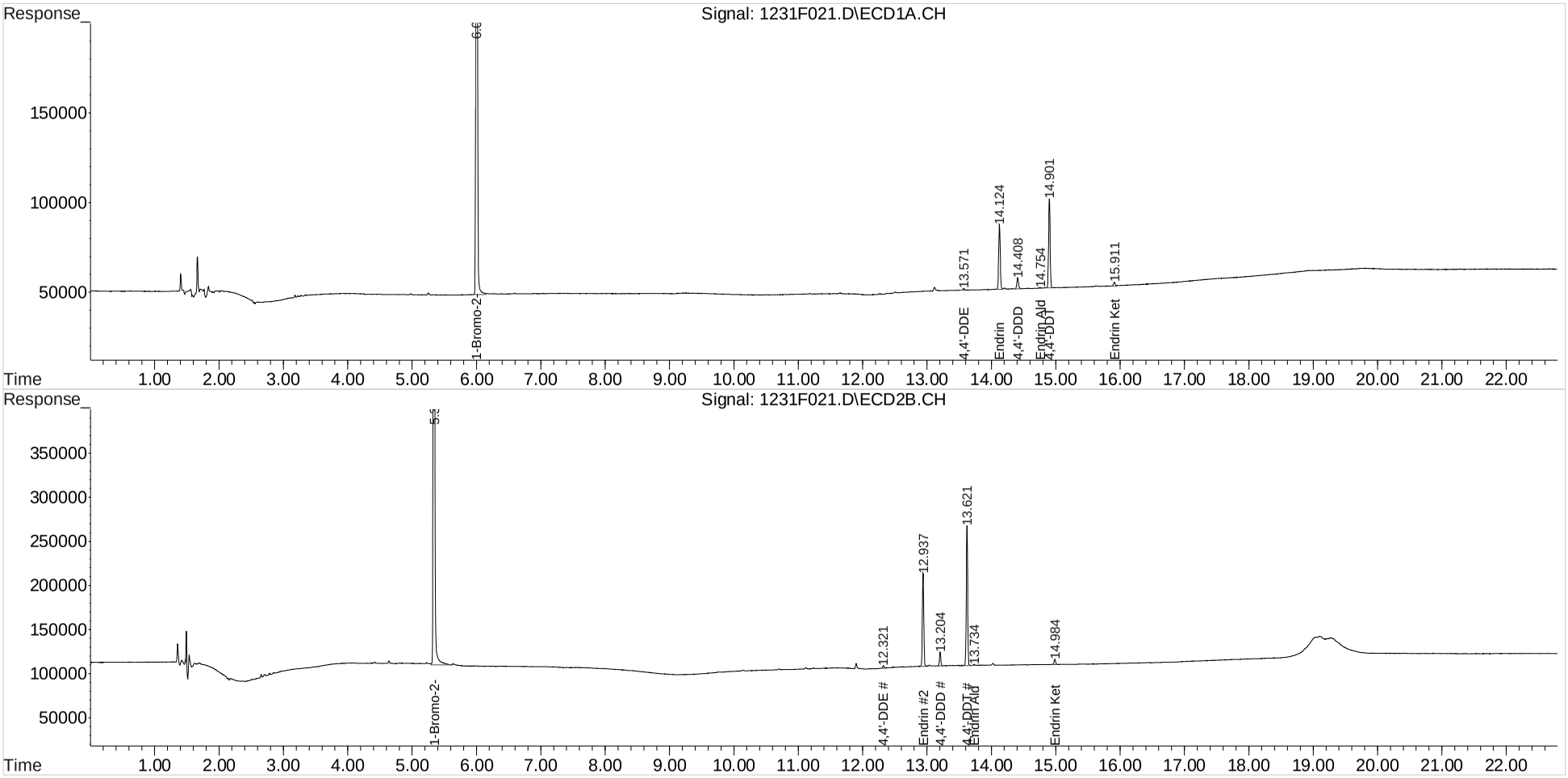
1st SM 01/01/19
2nd UA 01/07/19

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\123118\1231F021.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 9:15 pm Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:53:52 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Wed Dec 26 10:51:17 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



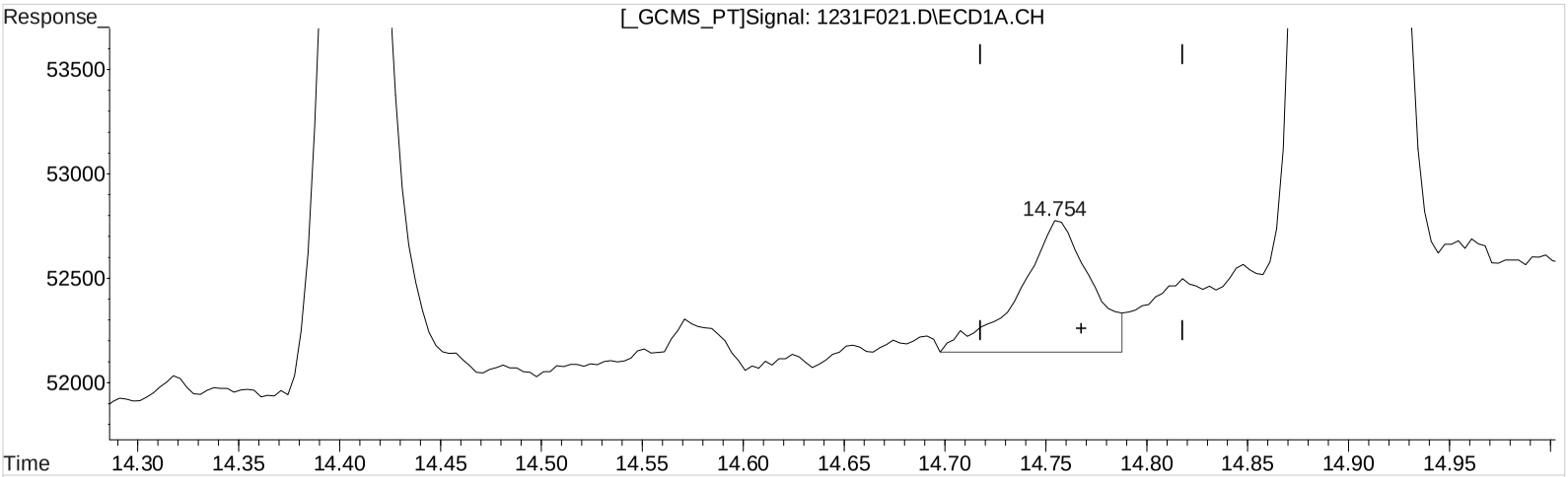
Quantitation Report (Qedit)

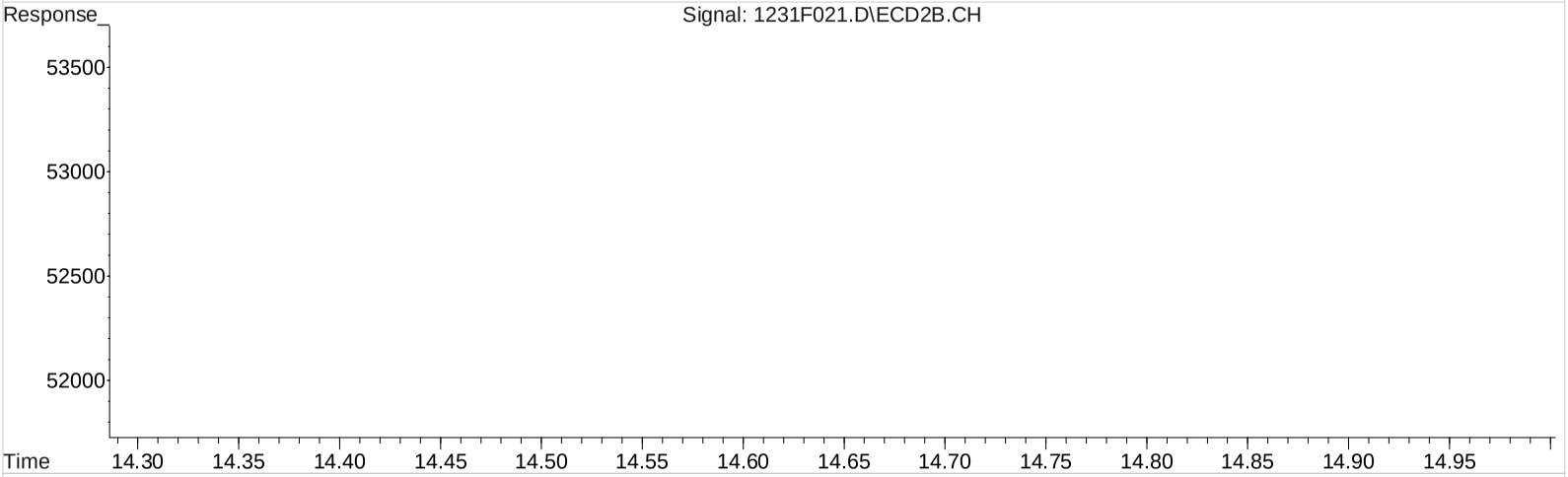
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F021.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 9:15 pm Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:23:59 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Wed Dec 26 10:51:17 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(20) Endrin Aldehyde

14.754min 0.173 ug/L

response 1555

Manual Integration:

Before

01/01/19

(20) Endrin Aldehyde #2

13.734min 0.095 ug/L

response 1953

(+) = Expected Retention Time

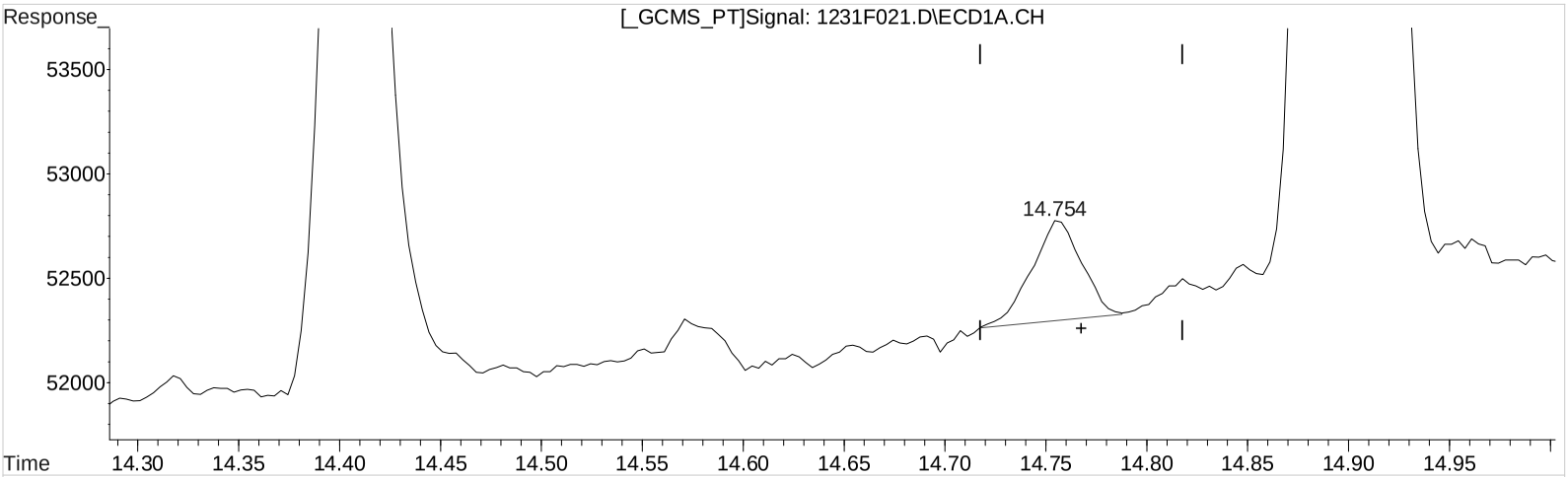
Quantitation Report (Qedit)

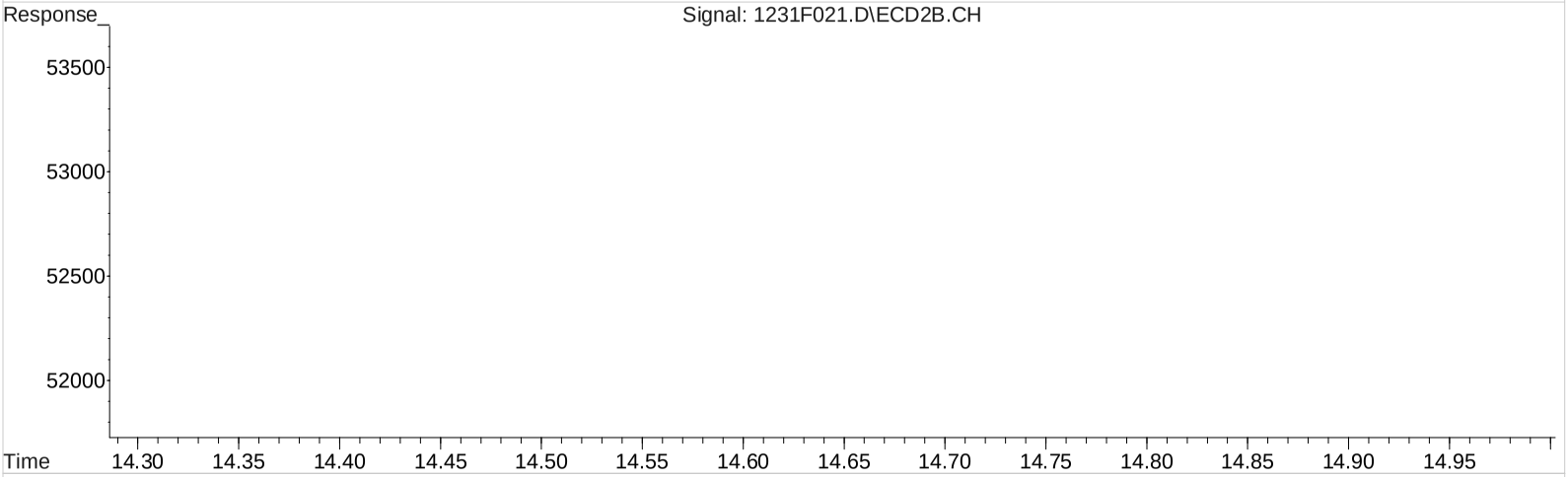
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F021.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Dec 2018 9:15 pm Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:23:59 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Wed Dec 26 10:51:17 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(20) Endrin Aldehyde

14.754min 0.092 ug/L m

response 830

Manual Integration:

After

Baseline/Shoulder

01/01/19

(20) Endrin Aldehyde #2

13.734min 0.095 ug/L

response 1953

(+) = Expected Retention Time

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F041.D
Lab ID: KWG1900100-7
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 01/01/2019 07:03
Date Quantitated: 01/01/2019 15:25
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	alpha-BHC	21.1	NA	20	ICVOK
	Hexachlorobenzene	21.7	NA	20	
	beta-BHC	24.9	NA	20	
	gamma-BHC (Lindane)	20.5	NA	20	
	delta-BHC	23.5	NA	20	
	Aldrin	24.6	NA	20	
	Isodrin	33.6	NA	20	
	gamma-Chlordane	23.5	NA	20	
	Endosulfan I	28.0	NA	20	
	alpha-Chlordane	20.7	NA	20	
	4,4'-DDE	23.6	NA	20	
	Endrin	21.7	NA	20	
	4,4'-DDD	21.0	NA	20	
	Endrin Aldehyde	22.5	NA	20	
	2,4'-DDE	27.0	NA	20	
	2,4'-DDT	20.4	NA	20	

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F041.D\1231F041C.D
Lab ID: KWG1900100-7
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 01/01/2019 07:03
Date Quantitated: 01/01/2019 15:25
Batch ID: KWG1900100
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F041.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F041.D\1231F041c.d			**Vial:**	97
Acqu Date:	01/01/2019 07:03	**Quant Date:**	01/01/2019 15:25	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1648	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-7				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1900100	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:			
MB Ref:		**Method ID:**	MJ1648
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.00	c	5.34	c	825552	2385536	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.00	c	5.34	c	825552	2385536	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.00	c	5.34	c	825552	2385536	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.00	c	5.34	c	825552	2385536	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	Limits =	70-130	
1	Decachlorobiphenyl	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	Limits =	70-130	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC			0	0	0.0000	0.0000			
1	Hexachlorobenzene			0	0	0.0000	0.0000			
1	beta-BHC		9.62	0	1068	0.0000	0.0750			
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor		9.76	0	2000	0.0000	0.0700			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F041.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F041.D\1231F041c.d			**Vial:**	97
Acqu Date:	01/01/2019 07:03	**Quant Date:**	01/01/2019 15:25	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1648	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-7				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000			
1	Endosulfan I			0	0	0.0000	0.0000			
1	alpha-Chlordane			0	0	0.0000	0.0000			
1	Dieldrin			0	0	0.0000	0.0000			
1	4,4'-DDE		12.35	0	1181	0.0000	0.0470			
1	Endrin			0	0	0.0000	0.0000			
1	Endosulfan II			0	0	0.0000	0.0000			
1	4,4'-DDD			0	0	0.0000	0.0000			
1	Endrin Aldehyde			0	0	0.0000	0.0000			
1	Endosulfan Sulfate		14.03	0	3028	0.0000	0.1370			
1	4,4'-DDT		13.66	0	868	0.0000	0.0500			
1	Endrin Ketone			0	0	0.0000	0.0000			
1	Methoxychlor			0	0	0.0000	0.0000			
1	2,4'-DDE			0	0	0.0000	0.0000			
1	2,4'-DDD			0	0	0.0000	0.0000			
1	2,4'-DDT			0	0	0.0000	0.0000			
	Toxaphene			0	0	0.0000	0.0000			
2	Toxaphene {1}			0	0	0.0000	0.0000			
2	Toxaphene {2}			0	0	0.0000	0.0000			
2	Toxaphene {3}			0	0	0.0000	0.0000			
2	Toxaphene {4}			0	0	0.0000	0.0000			
2	Toxaphene {5}			0	0	0.0000	0.0000			
2	Toxaphene {6}			0	0	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.0000			
3	Chlordane {1}			0	0	0.0000	0.0000			
3	Chlordane {2}			0	0	0.0000	0.0000			
3	Chlordane {3}			0	0	0.0000	0.0000			
3	Chlordane {4}			0	0	0.0000	0.0000			
3	Chlordane {5}			0	0	0.0000	0.0000			
3	Chlordane {6}			0	0	0.0000	0.0000			
4	Chlorpyrifos	11.93		1231	0	0.2250	0.0000			
4	Oxychlordane			0	0	0.0000	0.0000			
4	cis-Nonachlor			0	0	0.0000	0.0000			
4	trans-Nonachlor			0	0	0.0000	0.0000			
4	Mirex			0	0	0.0000	0.0000			
4	Hexachloroethane		3.35	0	2446	0.0000	0.0540			
4	Hexachlorobutadiene			0	0	0.0000	0.0000			
4	Perthane			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F041.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F041.D\1231F041c.d			**Vial:**	97
Acqu Date:	01/01/2019 07:03	**Quant Date:**	01/01/2019 15:25	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1690	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-7				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1900100	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:			
MB Ref:		**Method ID:**	MJ1690
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.00	c	5.34	c	825552	2385536	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.00	c	5.34	c	825552	2385536	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.00	c	5.34	c	825552	2385536	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.00	c	5.34	c	825552	2385536	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	Limits =	70-130	
1	Decachlorobiphenyl	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	Limits =	70-130	

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	alpha-BHC			0	0	0.0000	0.0000			
1	Hexachlorobenzene			0	0	0.0000	0.0000			
1	beta-BHC		9.62	0	1068	0.0000	0.0750			
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor		9.76	0	2000	0.0000	0.0700			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\123118\1231F041.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F041.D\1231F041c.d			**Vial:**	97
Acqu Date:	01/01/2019 07:03	**Quant Date:**	01/01/2019 15:25	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1690	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-7				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000			
1	Endosulfan I			0	0	0.0000	0.0000			
1	alpha-Chlordane			0	0	0.0000	0.0000			
1	Dieldrin			0	0	0.0000	0.0000			
1	4,4'-DDE		12.35	0	1181	0.0000	0.0470			
1	Endrin			0	0	0.0000	0.0000			
1	Endosulfan II			0	0	0.0000	0.0000			
1	4,4'-DDD			0	0	0.0000	0.0000			
1	Endrin Aldehyde			0	0	0.0000	0.0000			
1	Endosulfan Sulfate		14.03	0	3028	0.0000	0.1370			
1	4,4'-DDT		13.66	0	868	0.0000	0.0500			
1	Endrin Ketone			0	0	0.0000	0.0000			
1	Methoxychlor			0	0	0.0000	0.0000			
1	2,4'-DDE			0	0	0.0000	0.0000			
1	2,4'-DDD			0	0	0.0000	0.0000			
1	2,4'-DDT			0	0	0.0000	0.0000			
	Toxaphene			0	0	0.0000	0.0000			
2	Toxaphene {1}			0	0	0.0000	0.0000			
2	Toxaphene {2}			0	0	0.0000	0.0000			
2	Toxaphene {3}			0	0	0.0000	0.0000			
2	Toxaphene {4}			0	0	0.0000	0.0000			
2	Toxaphene {5}			0	0	0.0000	0.0000			
2	Toxaphene {6}			0	0	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.0000			
3	Chlordane {1}			0	0	0.0000	0.0000			
3	Chlordane {2}			0	0	0.0000	0.0000			
3	Chlordane {3}			0	0	0.0000	0.0000			
3	Chlordane {4}			0	0	0.0000	0.0000			
3	Chlordane {5}			0	0	0.0000	0.0000			
3	Chlordane {6}			0	0	0.0000	0.0000			
4	Chlorpyrifos	11.93		1231	0	0.2250	0.0000			
4	Oxychlordane			0	0	0.0000	0.0000			
4	cis-Nonachlor			0	0	0.0000	0.0000			
4	trans-Nonachlor			0	0	0.0000	0.0000			
4	Mirex			0	0	0.0000	0.0000			
4	Hexachloroethane		3.35	0	2446	0.0000	0.0540			
4	Hexachlorobutadiene			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F041.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F041.D\1231F041c.d			**Vial:**	97
Acqu Date:	01/01/2019 07:03	**Quant Date:**	01/01/2019 15:25	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-7				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1900100	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:			
MB Ref:		**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.00	c	5.34	c	825552	2385536	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.00	c	5.34	c	825552	2385536	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.00	c	5.34	c	825552	2385536	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.00	c	5.34	c	825552	2385536	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	Limits =	70-130	
1	Decachlorobiphenyl	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	Limits =	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC			0	0	0.0000	0.0000			
1	Hexachlorobenzene			0	0	0.0000	0.0000			
1	beta-BHC		9.62	0	1068	0.0000	0.0750			
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor		9.76	0	2000	0.0000	0.0700			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Data File #1:	J:\GC23\DATA\123118\1231F041.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F041.D\1231F041c.d			**Vial:**	97
Acqu Date:	01/01/2019 07:03	**Quant Date:**	01/01/2019 15:25	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-7				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000			
1	Endosulfan I			0	0	0.0000	0.0000			
1	alpha-Chlordane			0	0	0.0000	0.0000			
1	Dieldrin			0	0	0.0000	0.0000			
1	4,4'-DDE		12.35	0	1181	0.0000	0.0470			
1	Endrin			0	0	0.0000	0.0000			
1	Endosulfan II			0	0	0.0000	0.0000			
1	4,4'-DDD			0	0	0.0000	0.0000			
1	Endrin Aldehyde			0	0	0.0000	0.0000			
1	Endosulfan Sulfate		14.03	0	3028	0.0000	0.1370			
1	4,4'-DDT		13.66	0	868	0.0000	0.0500			
1	Endrin Ketone			0	0	0.0000	0.0000			
1	Methoxychlor			0	0	0.0000	0.0000			
1	2,4'-DDE			0	0	0.0000	0.0000			
1	2,4'-DDD			0	0	0.0000	0.0000			
1	2,4'-DDT			0	0	0.0000	0.0000			
	Toxaphene			0	0	0.0000	0.0000			
2	Toxaphene {1}			0	0	0.0000	0.0000			
2	Toxaphene {2}			0	0	0.0000	0.0000			
2	Toxaphene {3}			0	0	0.0000	0.0000			
2	Toxaphene {4}			0	0	0.0000	0.0000			
2	Toxaphene {5}			0	0	0.0000	0.0000			
2	Toxaphene {6}			0	0	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.0000			
3	Chlordane {1}			0	0	0.0000	0.0000			
3	Chlordane {2}			0	0	0.0000	0.0000			
3	Chlordane {3}			0	0	0.0000	0.0000			
3	Chlordane {4}			0	0	0.0000	0.0000			
3	Chlordane {5}			0	0	0.0000	0.0000			
3	Chlordane {6}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F041.D Vial: 97
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01 Jan 2019 7:03 am Operator: MCHAPPELLE
Sample : IB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:25:19 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Wed Dec 26 10:51:17 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.005	5.341	825552	2385536	100.000	100.000	
29)	1-Bromo-2...	6.005	5.341	825552	2385536	100.000	100.000	
36)	1-Bromo-2...	6.005	5.341	825552	2385536	100.000	100.000	
43)	1-Bromo-2...	6.005	5.341	825552	2385536	100.000	100.000	
	System Monitoring Compounds							
	Target Compounds							
5)	beta-BHC	0.000	9.618	0	1068	N.D.	0.075	#
8)	Heptachlor	0.000	9.761	0	2000	N.D.	0.070	#
16)	4,4'-DDE	0.000	12.351	0	1181	N.D.	0.047	#
21)	Endosulfa...	0.000	14.028f	0	3028	N.D.	0.137	#
22)	4,4'-DDT	0.000	13.658f	0	868	N.D.	0.050	#
44)	Chlorpyrifos	11.935	0.000	1231	0	0.225	N.D.	#
49)	HCE	0.000	3.348	0	2446	N.D.	0.054	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

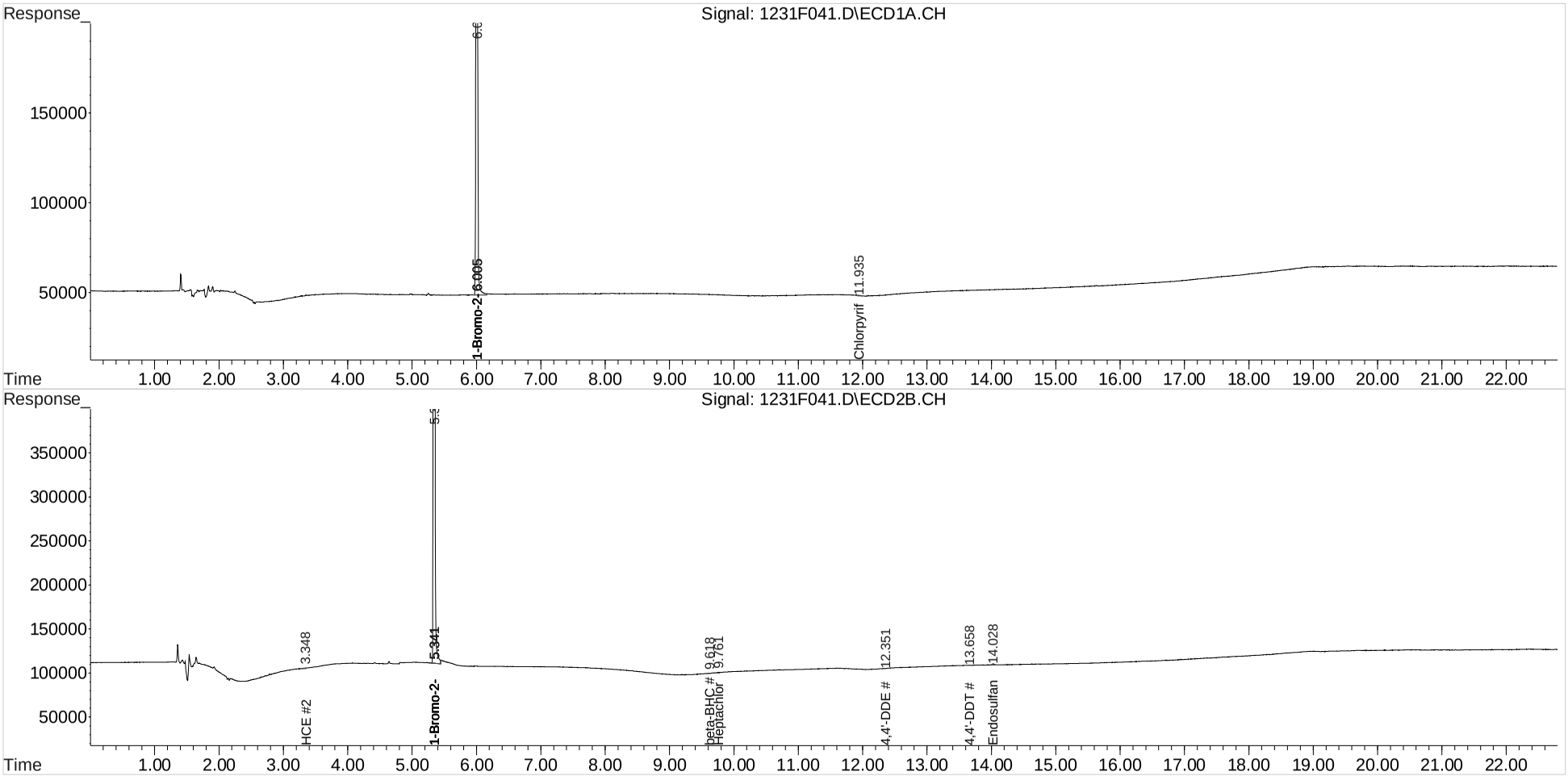
Quantitation Report (Not Reviewed)

1st SM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F041.D Vial: 97
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01 Jan 2019 7:03 am Operator: MCHAPPELLE
Sample : IB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:25:19 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Wed Dec 26 10:51:17 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F035.D
Lab ID: KWG1900100-8
RunType: PEM
Matrix: NOT APPLICABLE

Date Acquired: 01/01/2019 04:07
Date Quantitated: 01/01/2019 16:57
Batch ID: KWG1900100
Analysis Method: 8081B
ListJoinID: LJ17418

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Pesticide Breakdown	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	4,4'-DDE	23.6	NA	20	ICVOK
	Endrin	21.7	NA	20	ICVOK
	4,4'-DDD	21.0	NA	20	ICVOK
	Endrin Aldehyde	22.5	NA	20	ICVOK
Above Highest ICAL Level	4,4'-DDT	14.54	NA	10	breakdown ok

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Exception Report

Data File: J:\GC23\DATA\123118\1231F035.D\1231F035C.D
Lab ID: KWG1900100-8
RunType: PEM
Matrix: NOT APPLICABLE

Date Acquired: 01/01/2019 04:07
Date Quantitated: 01/01/2019 16:57
Batch ID: KWG1900100
Analysis Method: 8081B
ListJoinID: LJ17418

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Pesticide Breakdown	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	4,4'-DDT	12.75	NA	10	breakdown ok

Primary Review: _____

Secondary Review: _____

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report

Data File #1:	J:\GC23\DATA\123118\1231F035.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\123118\1231F035.D\1231F035c.d			**Vial:**	1
Acqu Date:	01/01/2019 04:07	**Quant Date:**	01/01/2019 16:57	**Dilution:**	1.0
Run Type:	PEM	**ListJoinID:**	LJ17418	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1900100-8				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081A PEST_OC	**Collect Date:**		**Receive Date:**	01/01/2019

Analysis Lot:	KWG1900100	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-121418-	**Calibration ID:**	CAL15919
Title:	Organochlorine Pesticides	**Report List ID:**	LJ17418
MB Ref:		**Method ID:**	MJ1006
		Quant based on Report List	

BreakDown Results

Parameter Name	Resp #1	Respe #2	Percent Breakdown #1	Percent Breakdown #1
1-Bromo-2-nitrobenzene	966930	2724713		
4,4'-DDE	1576	3619**m**		
Endrin	65547	170239	6.1	6.0
4,4'-DDD	10075	21442		
Endrin Aldehyde	1134	1539		
4,4'-DDT	93368	251765	11.1	9.1
Endrin Ketone	3133**m**	9242		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st STM 01/01/19
2nd UA 01/07/19

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\123118\1231F035.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01 Jan 2019 4:07 am Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 16:57:40 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Wed Dec 26 10:51:17 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.007	5.343	966930	2724713	100.000	100.000	
	System Monitoring Compounds							
	Target Compounds							
16)	4,4'-DDE	13.574	12.327	1576	3619	0.125	0.126m	
17)	Endrin	14.130	12.943	65547	170239	6.096	6.654	
19)	4,4'-DDD	14.410	13.207	10075	21442	1.109	1.024	
20)	Endrin Al...	14.760	13.737	1134	1539	0.114	0.070	#
22)	4,4'-DDT	14.904	13.623	93368	251765	14.539	12.751	
23)	Endrin Ke...	15.917	14.990	3133	9242	0.281m	0.333	
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

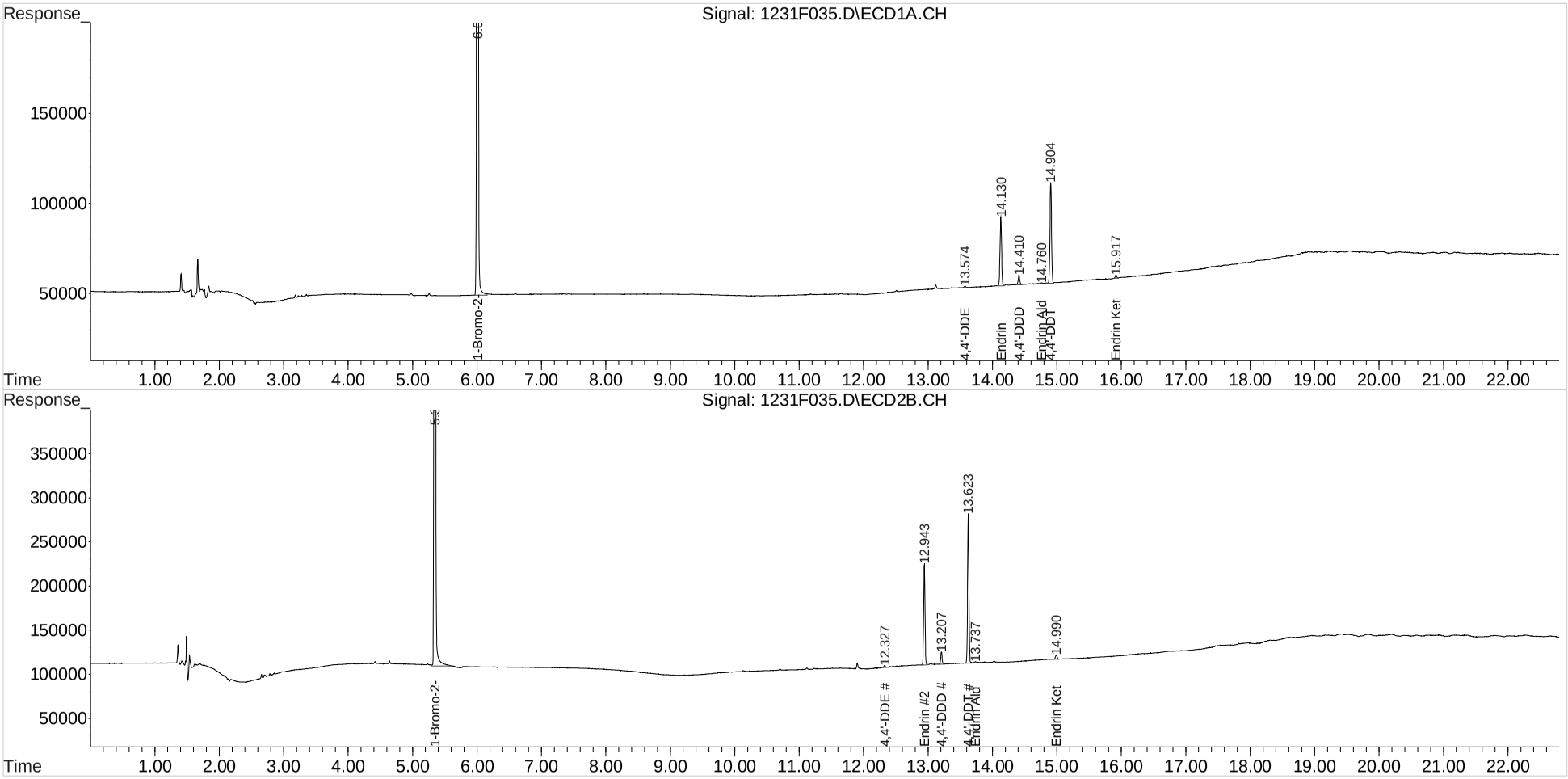
1st SM 01/01/19
2nd UA 01/07/19

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\123118\1231F035.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01 Jan 2019 4:07 am Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 16:57:40 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Wed Dec 26 10:51:17 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



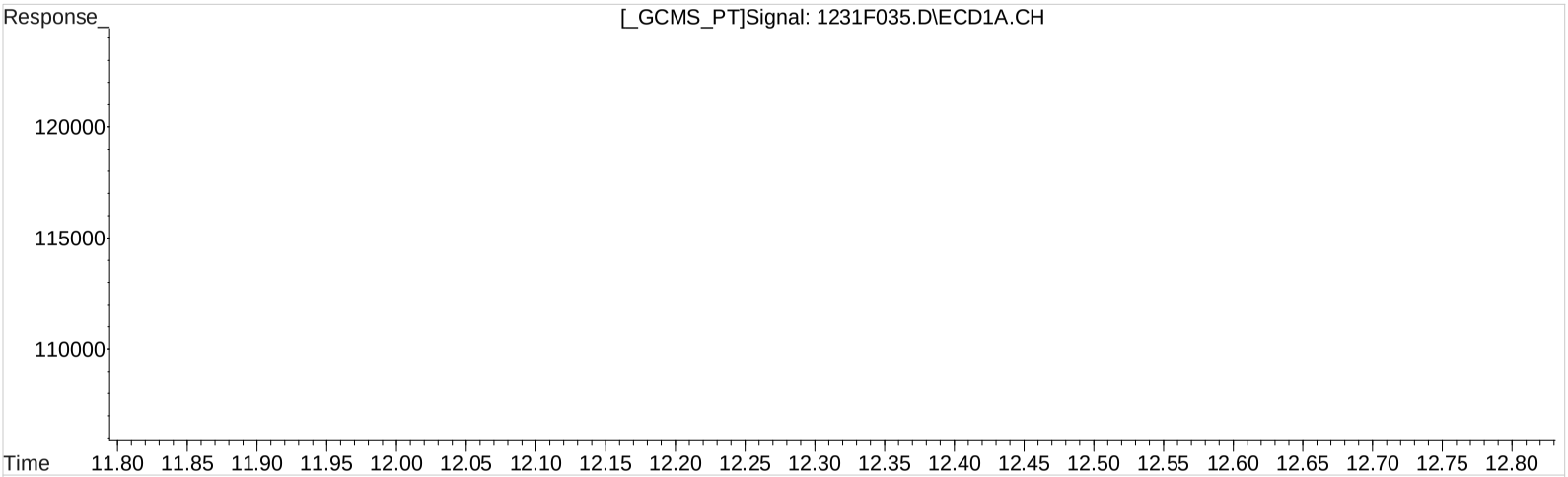
Quantitation Report (Qedit)

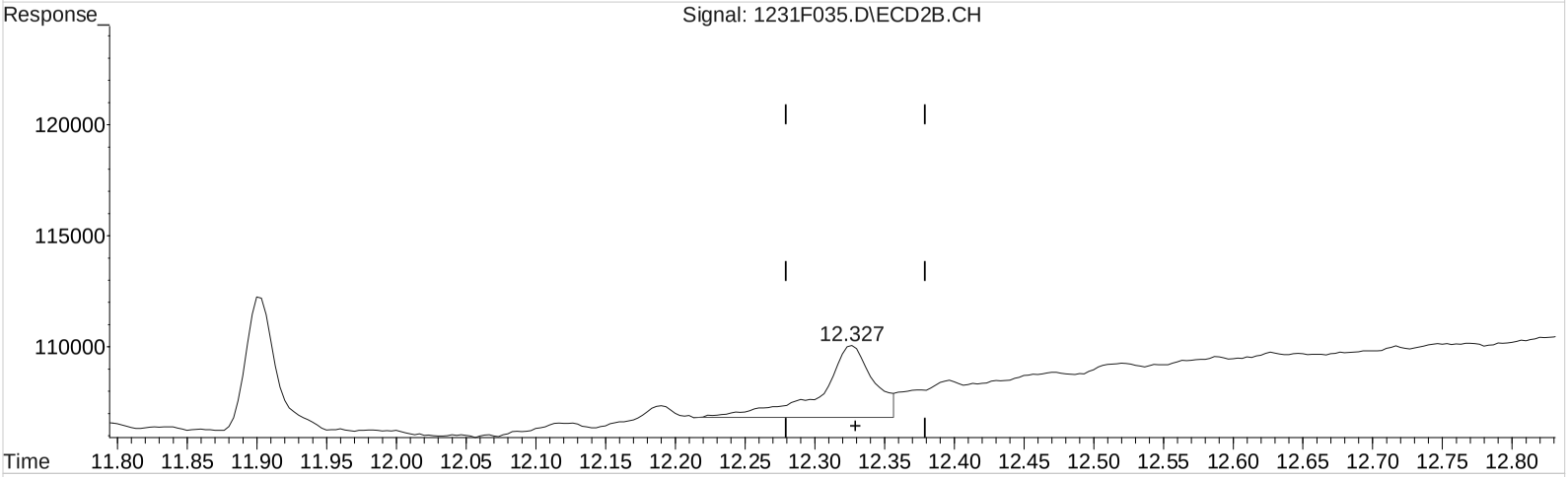
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F035.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01 Jan 2019 4:07 am Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:24:56 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Wed Dec 26 10:51:17 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(16) 4,4'-DDE

13.574min 0.125 ug/L

response 1576

Manual Integration:

Before

01/01/19

(16) 4,4'-DDE #2

12.327min 0.301 ug/L

response 8629

(+) = Expected Retention Time

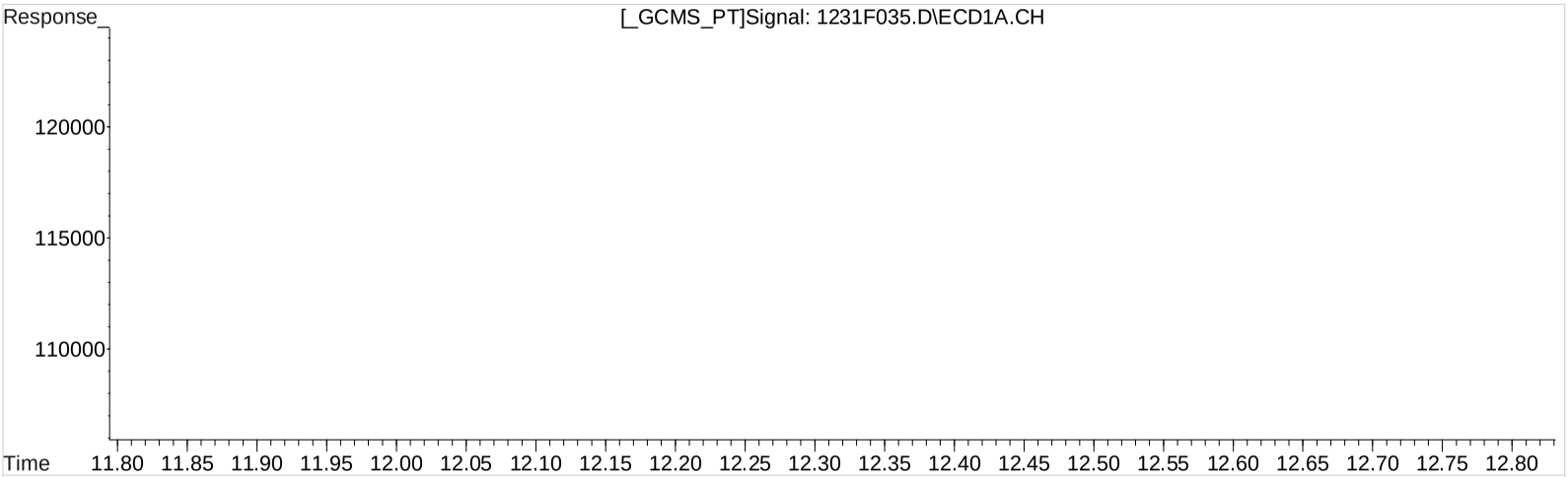
Quantitation Report (Qedit)

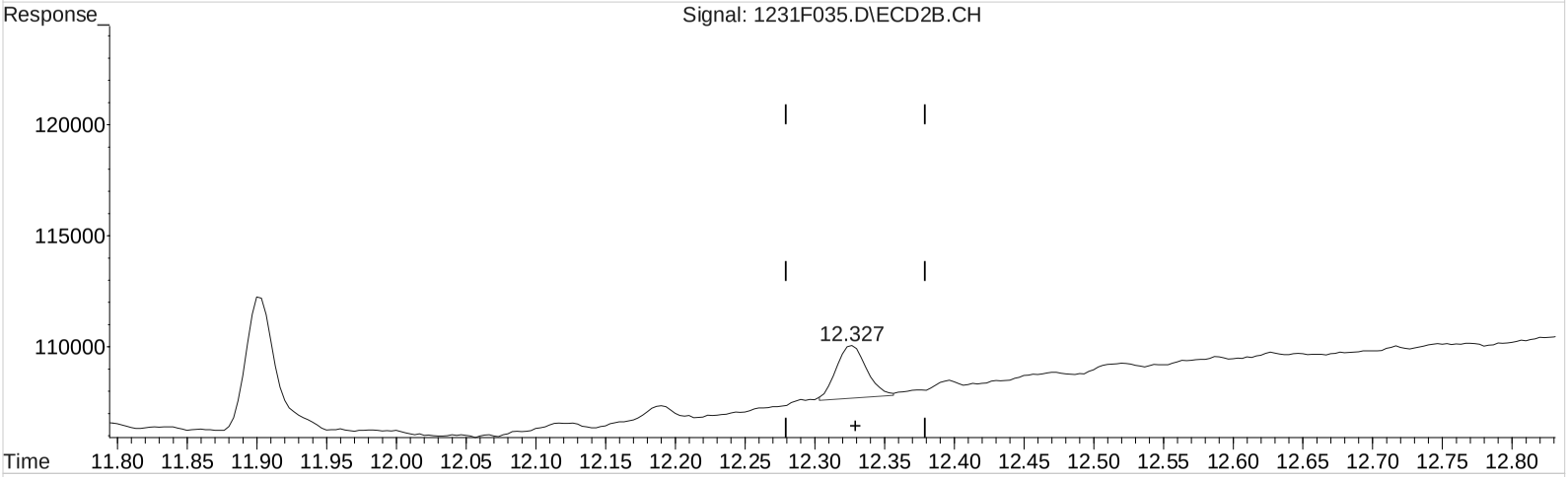
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F035.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01 Jan 2019 4:07 am Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:24:56 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Wed Dec 26 10:51:17 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(16) 4,4'-DDE

13.574min 0.125 ug/L

response 1576

Manual Integration:

After

Baseline/Shoulder

01/01/19

(16) 4,4'-DDE #2

12.327min 0.126 ug/L m

response 3619

(+) = Expected Retention Time

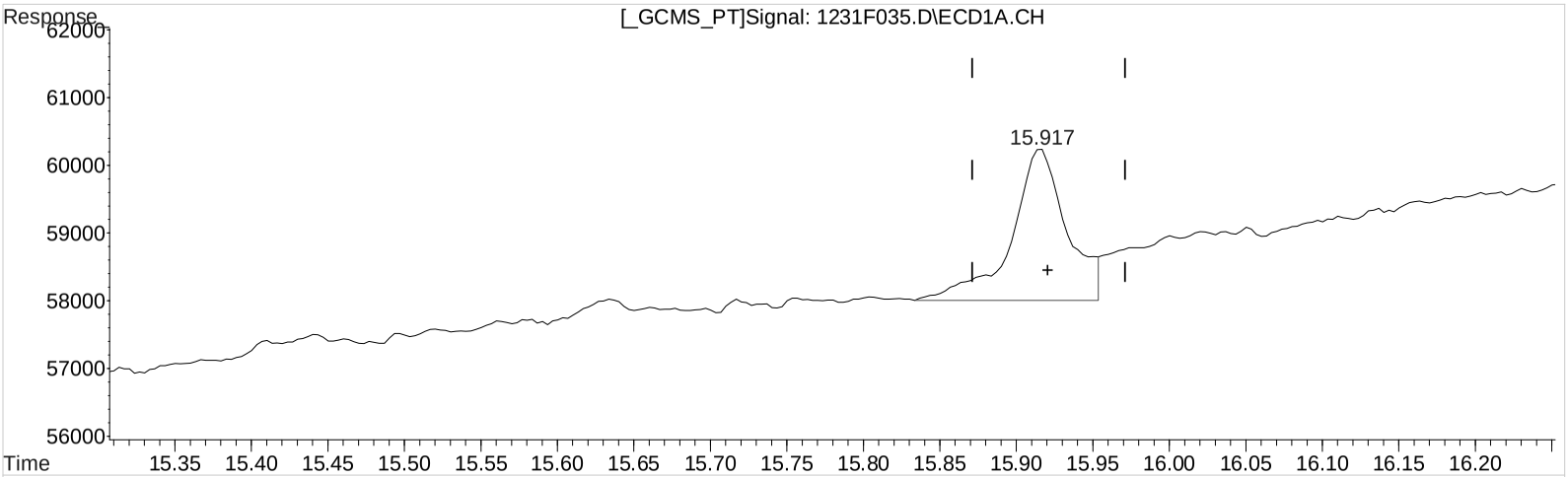
Quantitation Report (Qedit)

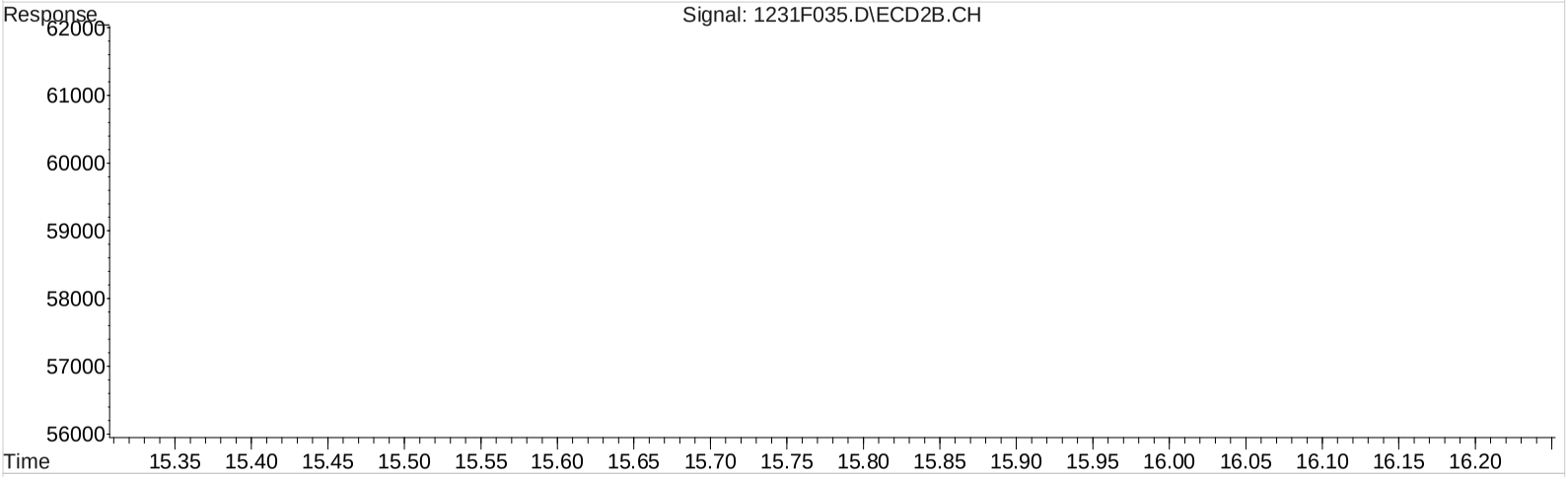
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F035.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01 Jan 2019 4:07 am Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:24:56 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Wed Dec 26 10:51:17 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(23) Endrin Ketone

15.917min 0.507 ug/L

response 5660

Manual Integration:

Before

01/01/19

(23) Endrin Ketone #2

14.990min 0.333 ug/L

response 9242

(+) = Expected Retention Time

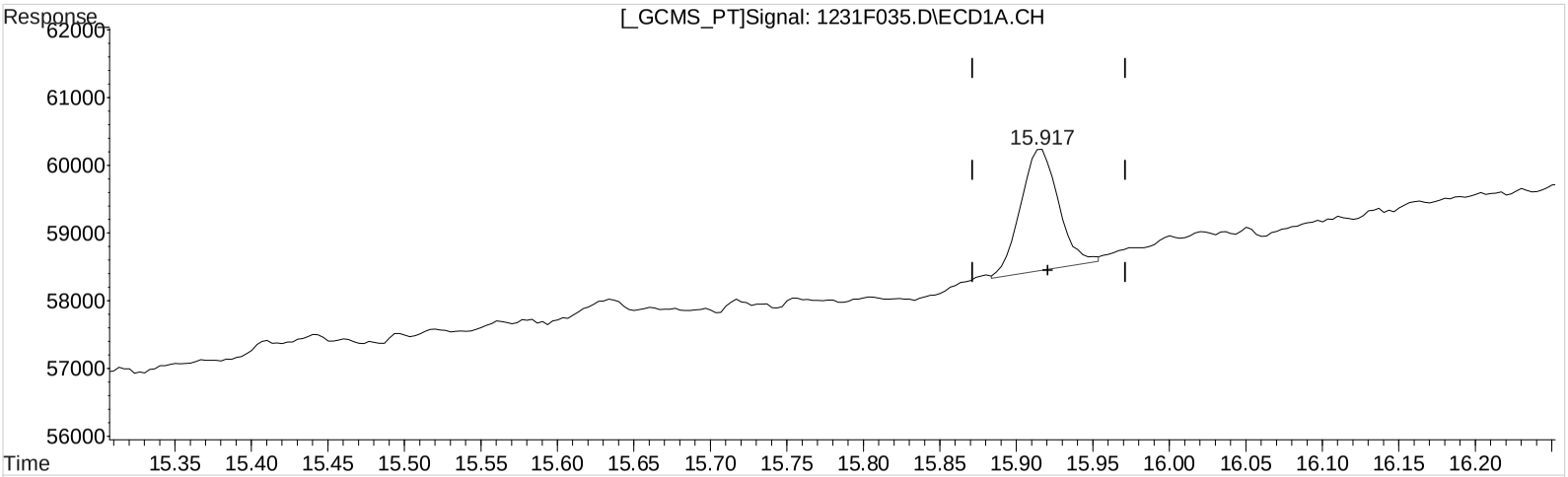
Quantitation Report (Qedit)

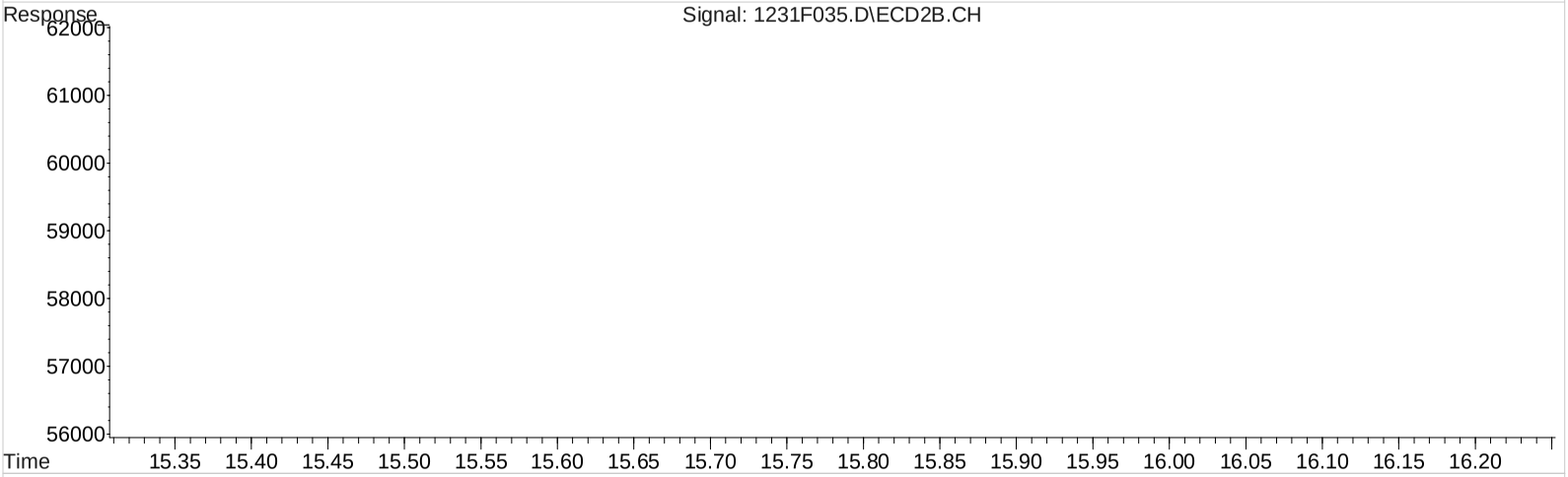
1st STM 01/01/19
2nd UA 01/07/19

Data File : J:\GC23\data\123118\1231F035.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01 Jan 2019 4:07 am Operator: MCHAPPELLE
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 01 15:24:56 2019
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Wed Dec 26 10:51:17 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(23) Endrin Ketone

15.917min 0.281 ug/L m

response 3133

Manual Integration:

After

Baseline/Shoulder

01/01/19

(23) Endrin Ketone #2

14.990min 0.333 ug/L

response 9242

(+) = Expected Retention Time

Comment: OC PESTICIDES VIA 8081B
Operator: MC
Data Path: C:\GC23\DATA\121418CAL\
Pre-Seq Cmd:
Post-Seq Cmd:

cal: 15919

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	PEM	1	1214F001	PESTCLIP	PEM GCPS8-49H
2	IB	2	1214F002	PESTCLIP	IB
3	ICAL	3	1214F003	PESTCLIP	81 0.2PPB GCPS8-50D @10X
4	ICAL	4	1214F004	PESTCLIP	81 0.5PPB GCPS8-49C @2X
5	ICAL	5	1214F005	PESTCLIP	81 1.0PPB GCPS8-49C
6	ICAL	6	1214F006	PESTCLIP	81 2.0PPB GCPS8-50D
7	ICAL	7	1214F007	PESTCLIP	81 5.0PPB GCPS8-49E @4X
8	ICAL	8	1214F008	PESTCLIP	81 10PPB GCPS8-49E @2X
9	ICV	9	1214F009	PESTCLIP	81 ICV 2PPB GCPS8-49A - NR
10	IB	2	1214F010	PESTCLIP	RUN STOP PRIMER
11	ICV	10	1214F011	PESTCLIP	81 ICV 2PPB GCPS8-49A - NR

Last Modified: Sun Dec 16 13:11:11 2018 Page: 1

Sequence Name: C:\GC23\SEQUENCE\121718CAL.S
Comment: OC PESTICIDES VIA 8081B
Operator: MC
Data Path: C:\GC23\DATA\121718CAL\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	IB	99	1217F001	PESTCLIP	HEX
2	PEM	11	1217F002	PESTCLIP	PEM GCPS8-49H
3	IB	12	1217F003	PESTCLIP	IB
4	ICV	13	1217F004	PESTCLIP	81 ICV 2PPB GCPS8-49A

Initial Calibration - Summary Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
Tetrachloro-m-xylene	SURR	AverageRF		1.652	20	9.2			NA	
alpha-BHC	MS	AverageRF		1.492	20	6.6			OK	
Hexachlorobenzene	MS	AverageRF		2.074	20	12.0			OK	
beta-BHC	MS	AverageRF		0.724	20	8.7			OK	
gamma-BHC (Lindane)	MS	AverageRF		1.305	20	5.9			OK	
delta-BHC	MS	AverageRF		1.259	20	5.9			OK	
Heptachlor	MS	AverageRF		1.228	20	7.4			OK	
Aldrin	MS	AverageRF		1.428	20	9.2			OK	
Isodrin	MS	AverageRF		1.173	20	9.5			OK	
Heptachlor Epoxide	MS	AverageRF		1.325	20	11.0			OK	
gamma-Chlordane	MS	AverageRF		1.285	20	6.8			OK	
Endosulfan I	MS	AverageRF		1.156	20	6.9			OK	
alpha-Chlordane	MS	AverageRF		1.331	20	8.8			OK	
Dieldrin	MS	AverageRF		1.230	20	6.4			OK	
4,4'-DDE	MS	AverageRF		1.304	20	7.3			OK	
Endrin	MS	AverageRF		1.112	20	6.9			OK	
Endosulfan II	MS	AverageRF		1.156	20	12.9			OK	
4,4'-DDD	MS	AverageRF		0.940	20	5.6			OK	
Endrin Aldehyde	MS	AverageRF		1.027	20	10.2			OK	
Endosulfan Sulfate	MS	AverageRF		1.123	20	7.7			OK	
4,4'-DDT	MS	AverageRF		0.664	20	5.9			OK	
Endrin Ketone	MS	AverageRF		1.155	20	8.2			OK	
Methoxychlor	MS	AverageRF		0.405	20	17.1			OK	
2,4'-DDE	MS	AverageRF		1.005	20	14.9			OK	
2,4'-DDD	MS	AverageRF		0.909	20	17.8			OK	
2,4'-DDT	MS	AverageRF		0.902	20	5.6			OK	
Decachlorobiphenyl	SURR	AverageRF		1.672	20	8.7			NA	
Toxaphene {1}	MULTI	AverageRF		0.023	20	6.4			OK	
Toxaphene {2}	MULTI	Quadratic		0.012			0.990	0.9983	OK	0.94
Toxaphene {3}	MULTI	AverageRF		0.017	20	13.9			OK	
Toxaphene {4}	MULTI	AverageRF		0.007	20	14.6			OK	
Toxaphene {5}	MULTI	AverageRF		0.009	20	13.8			OK	
Toxaphene {6}	MULTI	AverageRF		0.026	20	4.4			OK	
Chlordane {1}	MULTI	AverageRF		0.057	20	10.9			OK	
Chlordane {2}	MULTI	AverageRF		0.072	20	13.3			OK	
Chlordane {3}	MULTI	AverageRF		0.049	20	9.9			OK	
Chlordane {4}	MULTI	AverageRF		0.144	20	8.4			OK	
Chlordane {5}	MULTI	AverageRF		0.122	20	9.0			OK	
Chlordane {6}	MULTI	AverageRF		0.090	20	11.2			OK	
Chlorpyrifos	MS	AverageRF		0.661	20	3.2			OK	
Oxychlordane	MS	AverageRF		1.334	20	10.6			OK	
cis-Nonachlor	MS	AverageRF		1.515	20	8.6			OK	
trans-Nonachlor	MS	AverageRF		1.452	20	10.6			OK	
Mirex	MS	AverageRF		1.171	20	7.3			OK	
Hexachloroethane	MS	AverageRF		2.176	20	8.8			OK	
Hexachlorobutadiene	MS	AverageRF		1.813	20	11.6			OK	
Perthane	MS	AverageRF		0.035	20	8.5			OK	

Initial Calibration - Summary Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
Tetrachloro-m-xylene	SURR	AverageRF		1.439	20	8.2			NA	
alpha-BHC	MS	AverageRF		1.295	20	9.1			OK	
Hexachlorobenzene	MS	AverageRF		1.748	20	10.2			OK	
beta-BHC	MS	AverageRF		0.600	20	8.8			OK	
gamma-BHC (Lindane)	MS	AverageRF		1.163	20	9.0			OK	
delta-BHC	MS	AverageRF		1.083	20	6.9			OK	
Heptachlor	MS	AverageRF		1.196	20	11.2			OK	
Aldrin	MS	AverageRF		1.153	20	8.7			OK	
Isodrin	MS	AverageRF		0.978	20	8.7			OK	
Heptachlor Epoxide	MS	AverageRF		1.060	20	6.9			OK	
gamma-Chlordane	MS	AverageRF		1.074	20	9.0			OK	
Endosulfan I	MS	AverageRF		0.954	20	8.0			OK	
alpha-Chlordane	MS	AverageRF		1.082	20	10.8			OK	
Dieldrin	MS	AverageRF		1.027	20	8.1			OK	
4,4'-DDE	MS	AverageRF		1.053	20	8.7			OK	
Endrin	MS	AverageRF		0.939	20	6.1			OK	
Endosulfan II	MS	AverageRF		0.930	20	10.7			OK	
4,4'-DDD	MS	AverageRF		0.768	20	6.5			OK	
Endrin Aldehyde	MS	AverageRF		0.812	20	8.1			OK	
Endosulfan Sulfate	MS	AverageRF		0.924	20	8.1			OK	
4,4'-DDT	MS	AverageRF		0.725	20	7.2			OK	
Endrin Ketone	MS	AverageRF		1.018	20	7.1			OK	
Methoxychlor	MS	AverageRF		0.419	20	6.7			OK	
2,4'-DDE	MS	AverageRF		0.810	20	13.9			OK	
2,4'-DDD	MS	AverageRF		0.706	20	8.3			OK	
2,4'-DDT	MS	AverageRF		0.849	20	17.2			OK	
Decachlorobiphenyl	SURR	AverageRF		1.238	20	9.9			NA	
Toxaphene {1}	MULTI	AverageRF		0.017	20	9.5			OK	
Toxaphene {2}	MULTI	AverageRF		0.006	20	10.8			OK	
Toxaphene {3}	MULTI	AverageRF		0.006	20	13.5			OK	
Toxaphene {4}	MULTI	AverageRF		0.010	20	7.3			OK	
Toxaphene {5}	MULTI	AverageRF		0.020	20	11.1			OK	
Toxaphene {6}	MULTI	AverageRF		0.016	20	7.2			OK	
Chlordane {1}	MULTI	AverageRF		0.043	20	11.0			OK	
Chlordane {2}	MULTI	AverageRF		0.028	20	7.3			OK	
Chlordane {3}	MULTI	AverageRF		0.109	20	6.2			OK	
Chlordane {4}	MULTI	AverageRF		0.067	20	12.7			OK	
Chlordane {5}	MULTI	AverageRF		0.032	20	7.7			OK	
Chlordane {6}	MULTI	AverageRF		0.098	20	7.5			OK	
Chlorpyrifos	MS	AverageRF		0.656	20	10.3			OK	
Oxychlordane	MS	AverageRF		1.275	20	14.1			OK	
cis-Nonachlor	MS	AverageRF		1.429	20	10.9			OK	
trans-Nonachlor	MS	AverageRF		1.335	20	11.5			OK	
Mirex	MS	AverageRF		1.177	20	12.7			OK	
Hexachloroethane	MS	AverageRF		1.887	20	9.0			OK	
Hexachlorobutadiene	MS	AverageRF		1.536	20	11.1			OK	
Perthane	MS	AverageRF		0.035	20	13.4			OK	

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	284598	J:\GC23\data\100918CAL\1009F023.D	10/09/2018 19:20	10/10/2018 08:16	12/17/2018 15:26
2	284600	J:\GC23\data\100918CAL\1009F024.D	10/09/2018 19:49	10/10/2018 08:22	12/17/2018 15:26
3	284602	J:\GC23\data\100918CAL\1009F025.D	10/09/2018 20:19	10/10/2018 08:24	12/17/2018 15:26
4	284604	J:\GC23\data\100918CAL\1009F026.D	10/09/2018 20:49	10/10/2018 08:38	12/17/2018 15:27
5	284606	J:\GC23\data\100918CAL\1009F027.D	10/09/2018 21:20	10/10/2018 08:42	12/17/2018 15:27
6	284608	J:\GC23\data\100918CAL\1009F028.D	10/09/2018 21:50	10/10/2018 08:45	12/17/2018 15:27
7	284614	J:\GC23\data\100918CAL\1009F031.D	10/09/2018 23:19	10/10/2018 09:00	12/17/2018 15:27
8	284616	J:\GC23\data\100918CAL\1009F032.D	10/09/2018 23:49	10/10/2018 09:02	12/17/2018 15:27
9	284618	J:\GC23\data\100918CAL\1009F033.D	10/10/2018 00:19	10/10/2018 09:04	12/17/2018 15:27
10	284620	J:\GC23\data\100918CAL\1009F034.D	10/10/2018 00:50	10/10/2018 09:06	12/17/2018 15:27
11	284622	J:\GC23\data\100918CAL\1009F035.D	10/10/2018 01:20	10/10/2018 09:08	12/17/2018 15:27
12	284624	J:\GC23\data\100918CAL\1009F036.D	10/10/2018 01:50	10/10/2018 09:11	12/17/2018 15:27
13	284626	J:\GC23\data\100918CAL\1009F039.D	10/10/2018 03:19	10/10/2018 09:22	12/17/2018 15:27
14	284628	J:\GC23\data\100918CAL\1009F040.D	10/10/2018 03:49	10/10/2018 09:23	12/17/2018 15:27
15	284630	J:\GC23\data\100918CAL\1009F041.D	10/10/2018 04:19	10/10/2018 09:26	12/17/2018 15:27
16	284632	J:\GC23\data\100918CAL\1009F042.D	10/10/2018 04:49	10/10/2018 09:29	12/17/2018 15:27
17	284634	J:\GC23\data\100918CAL\1009F043.D	10/10/2018 05:19	10/10/2018 09:32	12/17/2018 15:28
18	284636	J:\GC23\data\100918CAL\1009F044.D	10/10/2018 05:49	10/10/2018 09:34	12/17/2018 15:28
19	284640	J:\GC23\data\101018CAL\1010F006.D	10/10/2018 12:29	10/10/2018 12:56	12/17/2018 15:28
20	284744	J:\GC23\data\101518CAL\1015F013.D	10/15/2018 19:37	10/16/2018 09:02	12/17/2018 15:28
21	284746	J:\GC23\data\101518CAL\1015F015.D	10/15/2018 20:36	10/16/2018 09:03	12/17/2018 15:28
22	284748	J:\GC23\data\101518CAL\1015F016.D	10/15/2018 21:06	10/16/2018 09:04	12/17/2018 15:28
23	284750	J:\GC23\data\101518CAL\1016F007.D	10/16/2018 12:59	10/16/2018 13:50	12/17/2018 15:28
24	284752	J:\GC23\data\101518CAL\1016F010.D	10/16/2018 14:27	10/16/2018 15:21	12/17/2018 15:28
25	284754	J:\GC23\data\101518CAL\1016F013.D	10/16/2018 15:57	10/16/2018 16:22	12/17/2018 15:28
26	285724	J:\GC23\data\121418CAL\1214F003.D	12/14/2018 14:52	12/16/2018 12:59	12/17/2018 15:28
27	285726	J:\GC23\data\121418CAL\1214F004.D	12/14/2018 15:21	12/16/2018 13:00	12/17/2018 15:29
28	285728	J:\GC23\data\121418CAL\1214F005.D	12/14/2018 15:51	12/16/2018 13:01	12/17/2018 15:29
29	285730	J:\GC23\data\121418CAL\1214F006.D	12/14/2018 16:20	12/16/2018 13:01	12/17/2018 15:29
30	285732	J:\GC23\data\121418CAL\1214F007.D	12/14/2018 16:51	12/16/2018 13:02	12/17/2018 15:29
31	285734	J:\GC23\data\121418CAL\1214F008.D	12/14/2018 17:21	12/16/2018 13:03	12/17/2018 15:29

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Tetrachloro-m-xylene													1.652	9.2
			26	1.773	27	1.779	28	1.673	29	1.761	30	1.450		
	31	1.473												
alpha-BHC													1.492	6.6
			26	1.591	27	1.539	28	1.523	29	1.557	30	1.337		
	31	1.404												

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Hexachlorobenzene													2.074	12.0
	31	1.743	26	2.276	27	2.294	28	2.141	29	2.213	30	1.775		
beta-BHC													0.724	8.7
	31	0.651	26	0.787	27	0.762	28	0.713	29	0.783	30	0.651		
gamma-BHC (Lindane)													1.305	5.9
	31	1.243	26	1.386	27	1.296	28	1.306	29	1.398	30	1.201		
delta-BHC													1.259	5.9
	31	1.202	26	1.329	27	1.270	28	1.254	29	1.347	30	1.152		
Heptachlor													1.228	7.4
	31	1.123	26	1.267	27	1.309	28	1.260	29	1.305	30	1.104		
Aldrin													1.428	9.2
	31	1.303	26	1.569	27	1.560	28	1.399	29	1.482	30	1.253		
Isodrin													1.173	9.5
	31	1.059	26	1.331	27	1.163	28	1.181	29	1.257	30	1.045		
Heptachlor Epoxide													1.325	11.0
	31	1.180	26	1.550	27	1.368	28	1.311	29	1.386	30	1.154		

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
gamma-Chlordane													1.285	6.8
			26	1.352	27	1.290	28	1.310	29	1.392	30	1.174		
	31	1.190												
Endosulfan I													1.156	6.9
			26	1.242	27	1.160	28	1.154	29	1.249	30	1.066		
	31	1.066												
alpha-Chlordane													1.331	8.8
			26	1.484	27	1.334	28	1.351	29	1.420	30	1.186		
	31	1.208												
Dieldrin													1.230	6.4
			26	1.199	27	1.281	28	1.262	29	1.343	30	1.140		
	31	1.154												
4,4'-DDE													1.304	7.3
			26	1.392	27	1.293	28	1.330	29	1.418	30	1.179		
	31	1.213												
Endrin													1.112	6.9
			26	1.124	27	1.172	28	1.130	29	1.203	30	1.010		
	31	1.032												
Endosulfan II													1.156	12.9
			26	1.406	27	1.179	28	1.116	29	1.214	30	1.009		
	31	1.012												
4,4'-DDD													0.940	5.6
			26	0.976	27	0.926	28	0.947	29	1.019	30	0.879		
	31	0.893												

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Endrin Aldehyde							1.027	10.2
		26 1.178	27 1.060	28 1.003	29 1.094	30 0.912		
	31 0.913							
Endosulfan Sulfate							1.123	7.7
		26 1.211	27 1.163	28 1.133	29 1.198	30 1.018		
	31 1.015							
4,4'-DDT							0.664	5.9
		26 0.650	27 0.718	28 0.653	29 0.707	30 0.622		
	31 0.636							
Endrin Ketone							1.155	8.2
		26 1.293	27 1.102	28 1.200	29 1.211	30 1.062		
	31 1.061							
Methoxychlor							0.405	17.1
		26 0.539	27 0.407	28 0.386	29 0.394	30 0.345		
	31 0.359							
2,4'-DDE							1.005	14.9
		20 1.001	21 0.925	22 0.840	23 0.985	24 1.283		
	25 0.994							
2,4'-DDD							0.909	17.8
		20 0.914	21 0.843	22 0.733	23 0.866	24 1.214		
	25 0.885							
2,4'-DDT							0.902	5.6
		20 0.951	21 0.911	22 0.810	23 0.888	24 0.941		
	25 0.914							

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Decachlorobiphenyl													1.672	8.7
			26	1.774	27	1.701	28	1.756	29	1.819	30	1.499		
	31	1.484												
Toxaphene {1}													0.023	6.4
	7	0.022	8	0.024	9	0.025	10	0.023	11	0.022	12	0.021		
Toxaphene {2}													0.012	22.7#
	7	0.015	8	0.013	9	0.012	10	0.011	11	0.009	12	0.009		
Toxaphene {3}													0.017	13.9
	7	0.021	8	0.018	9	0.018	10	0.016	11	0.015	12	0.015		
Toxaphene {4}													0.007	14.6
	7	0.009	8	0.007	9	0.007	10	0.007	11	0.006	12	0.006		
Toxaphene {5}													0.009	13.8
	7	0.011	8	0.010	9	0.009	10	0.009	11	0.008	12	0.008		
Toxaphene {6}													0.026	4.4
	7	0.025	8	0.027	9	0.027	10	0.026	11	0.025	12	0.025		
Chlordane {1}													0.057	10.9
	13	0.066	14	0.056	15	0.061	16	0.057	17	0.054	18	0.046		
	19	0.059												

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Chlordane {2}							0.072	13.3
	13 0.072 19 0.090	14 0.072	15 0.074	16 0.071	17 0.067	18 0.058		
Chlordane {3}							0.049	9.9
	13 0.052 19 0.054	14 0.049	15 0.052	16 0.051	17 0.047	18 0.040		
Chlordane {4}							0.144	8.4
	13 0.152 19 0.153	14 0.148	15 0.155	16 0.141	17 0.138	18 0.121		
Chlordane {5}							0.122	9.0
	13 0.130 19 0.131	14 0.123	15 0.131	16 0.122	17 0.117	18 0.100		
Chlordane {6}							0.090	11.2
	13 0.088 19 0.103	14 0.094	15 0.098	16 0.088	17 0.085	18 0.072		
Chlorpyrifos	1 0.649	2 0.673	3 0.633	4 0.664	5 0.653	6 0.695	0.661	3.2
Oxychlordane	1 1.555	2 1.405	3 1.337	4 1.329	5 1.142	6 1.236	1.334	10.6
cis-Nonachlor	1 1.719	2 1.574	3 1.507	4 1.517	5 1.332	6 1.439	1.515	8.6

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
trans-Nonachlor	1	1.685	2	1.544	3	1.460	4	1.435	5	1.243	6	1.345	1.452	10.6
Mirex	1	1.276	2	1.212	3	1.170	4	1.220	5	1.040	6	1.106	1.171	7.3
Hexachloroethane	1	2.440	2	2.292	3	2.184	4	2.098	5	1.867	6	2.175	2.176	8.8
Hexachlorobutadiene	1	2.136	2	1.944	3	1.809	4	1.762	5	1.520	6	1.707	1.813	11.6
Perthane			2	0.031	3	0.039	4	0.033	5	0.035	6	0.036	0.035	8.5

 # RSD Not Applicable. Compound being quantitated from curve. Included in Average RF summary for Average %RSD calculation.

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	Quadratic

FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
284598	J:\GC23\data\100918CAL\1009F023.D	10/09/2018 19:20	10/10/2018 08:16	12/17/2018 15:26
284600	J:\GC23\data\100918CAL\1009F024.D	10/09/2018 19:49	10/10/2018 08:22	12/17/2018 15:26
284602	J:\GC23\data\100918CAL\1009F025.D	10/09/2018 20:19	10/10/2018 08:24	12/17/2018 15:26
284604	J:\GC23\data\100918CAL\1009F026.D	10/09/2018 20:49	10/10/2018 08:38	12/17/2018 15:27
284606	J:\GC23\data\100918CAL\1009F027.D	10/09/2018 21:20	10/10/2018 08:42	12/17/2018 15:27
284608	J:\GC23\data\100918CAL\1009F028.D	10/09/2018 21:50	10/10/2018 08:45	12/17/2018 15:27
284614	J:\GC23\data\100918CAL\1009F031.D	10/09/2018 23:19	10/10/2018 09:00	12/17/2018 15:27
284616	J:\GC23\data\100918CAL\1009F032.D	10/09/2018 23:49	10/10/2018 09:02	12/17/2018 15:27
284618	J:\GC23\data\100918CAL\1009F033.D	10/10/2018 00:19	10/10/2018 09:04	12/17/2018 15:27
284620	J:\GC23\data\100918CAL\1009F034.D	10/10/2018 00:50	10/10/2018 09:06	12/17/2018 15:27
284622	J:\GC23\data\100918CAL\1009F035.D	10/10/2018 01:20	10/10/2018 09:08	12/17/2018 15:27
284624	J:\GC23\data\100918CAL\1009F036.D	10/10/2018 01:50	10/10/2018 09:11	12/17/2018 15:27
284626	J:\GC23\data\100918CAL\1009F039.D	10/10/2018 03:19	10/10/2018 09:22	12/17/2018 15:27
284628	J:\GC23\data\100918CAL\1009F040.D	10/10/2018 03:49	10/10/2018 09:23	12/17/2018 15:27
284630	J:\GC23\data\100918CAL\1009F041.D	10/10/2018 04:19	10/10/2018 09:26	12/17/2018 15:27
284632	J:\GC23\data\100918CAL\1009F042.D	10/10/2018 04:49	10/10/2018 09:29	12/17/2018 15:27
284634	J:\GC23\data\100918CAL\1009F043.D	10/10/2018 05:19	10/10/2018 09:32	12/17/2018 15:28
284636	J:\GC23\data\100918CAL\1009F044.D	10/10/2018 05:49	10/10/2018 09:34	12/17/2018 15:28
284640	J:\GC23\data\101018CAL\1010F006.D	10/10/2018 12:29	10/10/2018 12:56	12/17/2018 15:28
284744	J:\GC23\data\101518CAL\1015F013.D	10/15/2018 19:37	10/16/2018 09:02	12/17/2018 15:28
284746	J:\GC23\data\101518CAL\1015F015.D	10/15/2018 20:36	10/16/2018 09:03	12/17/2018 15:28
284748	J:\GC23\data\101518CAL\1015F016.D	10/15/2018 21:06	10/16/2018 09:04	12/17/2018 15:28
284750	J:\GC23\data\101518CAL\1016F007.D	10/16/2018 12:59	10/16/2018 13:50	12/17/2018 15:28
284752	J:\GC23\data\101518CAL\1016F010.D	10/16/2018 14:27	10/16/2018 15:21	12/17/2018 15:28
284754	J:\GC23\data\101518CAL\1016F013.D	10/16/2018 15:57	10/16/2018 16:22	12/17/2018 15:28
285724	J:\GC23\data\121418CAL\1214F003.D	12/14/2018 14:52	12/16/2018 12:59	12/17/2018 15:28
285726	J:\GC23\data\121418CAL\1214F004.D	12/14/2018 15:21	12/16/2018 13:00	12/17/2018 15:29
285728	J:\GC23\data\121418CAL\1214F005.D	12/14/2018 15:51	12/16/2018 13:01	12/17/2018 15:29
285730	J:\GC23\data\121418CAL\1214F006.D	12/14/2018 16:20	12/16/2018 13:01	12/17/2018 15:29
285732	J:\GC23\data\121418CAL\1214F007.D	12/14/2018 16:51	12/16/2018 13:02	12/17/2018 15:29
285734	J:\GC23\data\121418CAL\1214F008.D	12/14/2018 17:21	12/16/2018 13:03	12/17/2018 15:29

Parameter Name	CoefX2	CoefX	Y-intercept	COD	Mean RF
Toxaphene {2}		0.010	0.001	0.9983	0.012

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	284598	J:\GC23\data\100918CAL\1009F023.D	10/09/2018 19:20	10/10/2018 08:16	12/17/2018 15:26
2	284600	J:\GC23\data\100918CAL\1009F024.D	10/09/2018 19:49	10/10/2018 08:22	12/17/2018 15:26
3	284602	J:\GC23\data\100918CAL\1009F025.D	10/09/2018 20:19	10/10/2018 08:24	12/17/2018 15:26
4	284604	J:\GC23\data\100918CAL\1009F026.D	10/09/2018 20:49	10/10/2018 08:38	12/17/2018 15:27
5	284606	J:\GC23\data\100918CAL\1009F027.D	10/09/2018 21:20	10/10/2018 08:42	12/17/2018 15:27
6	284608	J:\GC23\data\100918CAL\1009F028.D	10/09/2018 21:50	10/10/2018 08:45	12/17/2018 15:27
7	284614	J:\GC23\data\100918CAL\1009F031.D	10/09/2018 23:19	10/10/2018 09:00	12/17/2018 15:27
8	284616	J:\GC23\data\100918CAL\1009F032.D	10/09/2018 23:49	10/10/2018 09:02	12/17/2018 15:27
9	284618	J:\GC23\data\100918CAL\1009F033.D	10/10/2018 00:19	10/10/2018 09:04	12/17/2018 15:27
10	284620	J:\GC23\data\100918CAL\1009F034.D	10/10/2018 00:50	10/10/2018 09:06	12/17/2018 15:27
11	284622	J:\GC23\data\100918CAL\1009F035.D	10/10/2018 01:20	10/10/2018 09:08	12/17/2018 15:27
12	284624	J:\GC23\data\100918CAL\1009F036.D	10/10/2018 01:50	10/10/2018 09:11	12/17/2018 15:27
13	284626	J:\GC23\data\100918CAL\1009F039.D	10/10/2018 03:19	10/10/2018 09:22	12/17/2018 15:27
14	284628	J:\GC23\data\100918CAL\1009F040.D	10/10/2018 03:49	10/10/2018 09:23	12/17/2018 15:27
15	284630	J:\GC23\data\100918CAL\1009F041.D	10/10/2018 04:19	10/10/2018 09:26	12/17/2018 15:27
16	284632	J:\GC23\data\100918CAL\1009F042.D	10/10/2018 04:49	10/10/2018 09:29	12/17/2018 15:27
17	284634	J:\GC23\data\100918CAL\1009F043.D	10/10/2018 05:19	10/10/2018 09:32	12/17/2018 15:28
18	284636	J:\GC23\data\100918CAL\1009F044.D	10/10/2018 05:49	10/10/2018 09:34	12/17/2018 15:28
19	284640	J:\GC23\data\101018CAL\1010F006.D	10/10/2018 12:29	10/10/2018 12:56	12/17/2018 15:28
20	284744	J:\GC23\data\101518CAL\1015F013.D	10/15/2018 19:37	10/16/2018 09:02	12/17/2018 15:28
21	284746	J:\GC23\data\101518CAL\1015F015.D	10/15/2018 20:36	10/16/2018 09:03	12/17/2018 15:28
22	284748	J:\GC23\data\101518CAL\1015F016.D	10/15/2018 21:06	10/16/2018 09:04	12/17/2018 15:28
23	284750	J:\GC23\data\101518CAL\1016F007.D	10/16/2018 12:59	10/16/2018 13:50	12/17/2018 15:28
24	284752	J:\GC23\data\101518CAL\1016F010.D	10/16/2018 14:27	10/16/2018 15:21	12/17/2018 15:28
25	284754	J:\GC23\data\101518CAL\1016F013.D	10/16/2018 15:57	10/16/2018 16:22	12/17/2018 15:28
26	285724	J:\GC23\data\121418CAL\1214F003.D	12/14/2018 14:52	12/16/2018 12:59	12/17/2018 15:28
27	285726	J:\GC23\data\121418CAL\1214F004.D	12/14/2018 15:21	12/16/2018 13:00	12/17/2018 15:29
28	285728	J:\GC23\data\121418CAL\1214F005.D	12/14/2018 15:51	12/16/2018 13:01	12/17/2018 15:29
29	285730	J:\GC23\data\121418CAL\1214F006.D	12/14/2018 16:20	12/16/2018 13:01	12/17/2018 15:29
30	285732	J:\GC23\data\121418CAL\1214F007.D	12/14/2018 16:51	12/16/2018 13:02	12/17/2018 15:29
31	285734	J:\GC23\data\121418CAL\1214F008.D	12/14/2018 17:21	12/16/2018 13:03	12/17/2018 15:29

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Tetrachloro-m-xylene												
					26	0.2	0.2147	7.3	27	0.5	0.5385	7.7
	28	1	1.013	1.3	29	2	2.133	6.6	30	5	4.390	-12.2
	31	10	8.921	-10.8								

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
alpha-BHC												
					26	0.2	0.2132	6.6	27	0.5	0.5159	3.2
	28	1	1.021	2.1	29	2	2.087	4.4	30	5	4.482	-10.4
	31	10	9.414	-5.9								
Hexachlorobenzene												
					26	0.2	0.2195	9.8	27	0.5	0.5531	10.6
	28	1	1.033	3.3	29	2	2.134	6.7	30	5	4.281	-14.4
	31	10	8.404	-16.0								
beta-BHC												
					26	0.2	0.2173	8.7	27	0.5	0.5257	5.1
	28	1	0.9841	-1.6	29	2	2.161	8.1	30	5	4.491	-10.2
	31	10	8.989	-10.1								
gamma-BHC (Lindane)												
					26	0.2	0.2124	6.2	27	0.5	0.4967	-0.7
	28	1	1.000	0.0	29	2	2.143	7.1	30	5	4.601	-8.0
	31	10	9.528	-4.7								

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
delta-BHC												
					26	0.2	0.2111	5.5	27	0.5	0.5045	0.9
	28	1	0.9962	-0.4	29	2	2.140	7.0	30	5	4.574	-8.5
	31	10	9.548	-4.5								
Heptachlor												
					26	0.2	0.2064	3.2	27	0.5	0.5331	6.6
	28	1	1.026	2.6	29	2	2.126	6.3	30	5	4.495	-10.1
	31	10	9.143	-8.6								
Aldrin												
					26	0.2	0.2198	9.9	27	0.5	0.5462	9.2
	28	1	0.9801	-2.0	29	2	2.076	3.8	30	5	4.389	-12.2
	31	10	9.128	-8.7								
Isodrin												
					26	0.2	0.2269	13.5	27	0.5	0.4960	-0.8
	28	1	1.007	0.7	29	2	2.143	7.2	30	5	4.455	-10.9
	31	10	9.032	-9.7								

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Heptachlor Epoxide												
					26	0.2	0.2340	17.0	27	0.5	0.5164	3.3
	28	1	0.9894	-1.1	29	2	2.093	4.6	30	5	4.356	-12.9
	31	10	8.906	-10.9								
gamma-Chlordane												
					26	0.2	0.2105	5.3	27	0.5	0.5021	0.4
	28	1	1.020	2.0	29	2	2.167	8.3	30	5	4.570	-8.6
	31	10	9.261	-7.4								
Endosulfan I												
					26	0.2	0.2148	7.4	27	0.5	0.5016	0.3
	28	1	0.9980	-0.2	29	2	2.161	8.0	30	5	4.611	-7.8
	31	10	9.220	-7.8								
alpha-Chlordane												
					26	0.2	0.2231	11.6	27	0.5	0.5012	0.2
	28	1	1.016	1.6	29	2	2.135	6.7	30	5	4.457	-10.9
	31	10	9.076	-9.2								

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Dieldrin												
					26	0.2	0.1949	-2.5	27	0.5	0.5209	4.2
	28	1	1.026	2.6	29	2	2.184	9.2	30	5	4.635	-7.3
	31	10	9.386	-6.1								
4,4'-DDE												
					26	0.2	0.2135	6.7	27	0.5	0.4957	-0.9
	28	1	1.019	1.9	29	2	2.175	8.8	30	5	4.522	-9.6
	31	10	9.300	-7.0								
Endrin												
					26	0.2	0.2022	1.1	27	0.5	0.5271	5.4
	28	1	1.016	1.6	29	2	2.164	8.2	30	5	4.542	-9.2
	31	10	9.282	-7.2								
Endosulfan II												
					26	0.2	0.2433	21.6	27	0.5	0.5099	2.0
	28	1	0.9654	-3.5	29	2	2.100	5.0	30	5	4.364	-12.7
	31	10	8.753	-12.5								

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
4,4'-DDD												
					26	0.2	0.2076	3.8	27	0.5	0.4926	-1.5
	28	1	1.007	0.7	29	2	2.168	8.4	30	5	4.678	-6.4
	31	10	9.497	-5.0								
Endrin Aldehyde												
					26	0.2	0.2295	14.8	27	0.5	0.5162	3.2
	28	1	0.9764	-2.4	29	2	2.131	6.5	30	5	4.443	-11.1
	31	10	8.895	-11.0								
Endosulfan Sulfate												
					26	0.2	0.2157	7.8	27	0.5	0.5176	3.5
	28	1	1.009	0.9	29	2	2.134	6.7	30	5	4.531	-9.4
	31	10	9.039	-9.6								
4,4'-DDT												
					26	0.2	0.1956	-2.2	27	0.5	0.5404	8.1
	28	1	0.9827	-1.7	29	2	2.130	6.5	30	5	4.682	-6.4
	31	10	9.572	-4.3								

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Endrin Ketone												
					26	0.2	0.2240	12.0	27	0.5	0.4770	-4.6
	28	1	1.039	3.9	29	2	2.097	4.8	30	5	4.597	-8.1
	31	10	9.191	-8.1								
Methoxychlor												
					26	0.2	0.2661	**33.0**	27	0.5	0.5024	0.5
	28	1	0.9536	-4.6	29	2	1.946	-2.7	30	5	4.256	-14.9
	31	10	8.869	-11.3								
2,4'-DDE												
					20	1	0.9964	-0.4	21	5	4.601	-8.0
	22	10	8.362	-16.4	23	2	1.960	-2.0	24	0.2	0.2555	27.7
	25	0.5	0.4948	-1.0								
2,4'-DDD												
					20	1	1.006	0.6	21	5	4.634	-7.3
	22	10	8.059	-19.4	23	2	1.905	-4.8	24	0.2	0.2671	**33.6**
	25	0.5	0.4869	-2.6								

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
2,4'-DDT												
					20	1	1.054	5.4	21	5	5.047	0.9
	22	10	8.971	-10.3	23	2	1.968	-1.6	24	0.2	0.2086	4.3
	25	0.5	0.5062	1.2								
Decachlorobiphenyl												
					26	0.2	0.2122	6.1	27	0.5	0.5087	1.7
	28	1	1.050	5.0	29	2	2.176	8.8	30	5	4.482	-10.4
	31	10	8.873	-11.3								
Toxaphene {1}												
	7	10	9.676	-3.2	8	25	25.93	3.7	9	50	55.23	10.5
	10	100	100.8	0.8	11	250	235.6	-5.8	12	500	470.2	-6.0
Toxaphene {2}												
	7	10	8.601	-14.0	8	25	26.93	7.7	9	50	54.07	8.1
	10	100	102.1	2.1	11	250	236.8	-5.3	12	500	507.0	1.4

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Toxaphene {3}												
	7	10	12.34	23.4	8	25	26.01	4.0	9	50	52.48	5.0
	10	100	93.35	-6.7	11	250	216.5	-13.4	12	500	438.1	-12.4
Toxaphene {4}												
	7	10	12.81	28.1	8	25	24.43	-2.3	9	50	49.42	-1.2
	10	100	98.07	-1.9	11	250	226.6	-9.3	12	500	433.0	-13.4
Toxaphene {5}												
	7	10	12.48	24.8	8	25	26.55	6.2	9	50	48.52	-3.0
	10	100	94.68	-5.3	11	250	222.6	-11.0	12	500	441.1	-11.8
Toxaphene {6}												
	7	10	9.736	-2.6	8	25	26.20	4.8	9	50	52.97	5.9
	10	100	99.75	-0.3	11	250	243.1	-2.8	12	500	474.6	-5.1

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {1}												
	13	5	5.782	15.6	14	10	9.857	-1.4	15	20	21.45	7.3
	16	50	49.56	-0.9	17	100	95.15	-4.9	18	200	161.5	-19.3
	19	2	2.070	3.5								
Chlordane {2}												
	13	5	5.021	0.4	14	10	9.950	-0.5	15	20	20.57	2.9
	16	50	49.05	-1.9	17	100	93.40	-6.6	18	200	161.1	-19.5
	19	2	2.503	25.2								
Chlordane {3}												
	13	5	5.314	6.3	14	10	10.04	0.4	15	20	20.92	4.6
	16	50	51.73	3.5	17	100	95.02	-5.0	18	200	160.4	-19.8
	19	2	2.201	10.0								
Chlordane {4}												
	13	5	5.277	5.5	14	10	10.27	2.7	15	20	21.59	7.9
	16	50	49.06	-1.9	17	100	95.76	-4.2	18	200	167.6	-16.2
	19	2	2.124	6.2								

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {5}												
	13	5	5.316	6.3	14	10	10.10	1.0	15	20	21.49	7.4
	16	50	49.89	-0.2	17	100	95.74	-4.3	18	200	164.4	-17.8
	19	2	2.150	7.5								
Chlordane {6}												
	13	5	4.921	-1.6	14	10	10.46	4.6	15	20	21.92	9.6
	16	50	49.15	-1.7	17	100	94.58	-5.4	18	200	160.0	-20.0
	19	2	2.290	14.5								
Chlorpyrifos	1	0.2	0.1964	-1.8	2	0.5	0.5086	1.7	3	1	0.9579	-4.2
	4	2	2.009	0.4	5	5	4.939	-1.2	6	10	10.51	5.1
Oxychlordane	1	0.2	0.2331	16.6	2	0.5	0.5267	5.3	3	1	1.002	0.2
	4	2	1.992	-0.4	5	5	4.279	-14.4	6	10	9.266	-7.3

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
cis-Nonachlor	1	0.2	0.2270	13.5	2	0.5	0.5195	3.9	3	1	0.9947	-0.5
	4	2	2.003	0.2	5	5	4.398	-12.0	6	10	9.500	-5.0
trans-Nonachlor	1	0.2	0.2320	16.0	2	0.5	0.5318	6.4	3	1	1.005	0.5
	4	2	1.977	-1.1	5	5	4.280	-14.4	6	10	9.264	-7.4
Mirex	1	0.2	0.2180	9.0	2	0.5	0.5177	3.5	3	1	0.9996	0.0
	4	2	2.084	4.2	5	5	4.442	-11.2	6	10	9.449	-5.5
Hexachloroethane	1	0.2	0.2242	12.1	2	0.5	0.5267	5.3	3	1	1.004	0.4
	4	2	1.928	-3.6	5	5	4.291	-14.2	6	10	9.995	-0.1

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Hexachlorobutadiene	1	0.2	0.2356	17.8	2	0.5	0.5361	7.2	3	1	0.9978	-0.2
	4	2	1.943	-2.8	5	5	4.193	-16.1	6	10	9.416	-5.8
Perthane					2	2.5	2.248	-10.1	3	5	5.636	12.7
	4	10	9.560	-4.4	5	25	24.89	-0.4	6	50	51.10	2.2

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	284599	J:\GC23\data\100918CAL\1009F023.D\1009F023c.d	10/09/2018 19:20	10/10/2018 08:16	12/17/2018 15:26
2	284601	J:\GC23\data\100918CAL\1009F024.D\1009F024c.d	10/09/2018 19:49	10/10/2018 08:22	12/17/2018 15:26
3	284603	J:\GC23\data\100918CAL\1009F025.D\1009F025c.d	10/09/2018 20:19	10/10/2018 08:24	12/17/2018 15:27
4	284605	J:\GC23\data\100918CAL\1009F026.D\1009F026c.d	10/09/2018 20:49	10/10/2018 08:38	12/17/2018 15:27
5	284607	J:\GC23\data\100918CAL\1009F027.D\1009F027c.d	10/09/2018 21:20	10/10/2018 08:42	12/17/2018 15:27
6	284609	J:\GC23\data\100918CAL\1009F028.D\1009F028c.d	10/09/2018 21:50	10/10/2018 08:45	12/17/2018 15:27
7	284615	J:\GC23\data\100918CAL\1009F031.D\1009F031c.d	10/09/2018 23:19	10/10/2018 09:00	12/17/2018 15:27
8	284617	J:\GC23\data\100918CAL\1009F032.D\1009F032c.d	10/09/2018 23:49	10/10/2018 09:02	12/17/2018 15:27
9	284619	J:\GC23\data\100918CAL\1009F033.D\1009F033c.d	10/10/2018 00:19	10/10/2018 09:04	12/17/2018 15:27
10	284621	J:\GC23\data\100918CAL\1009F034.D\1009F034c.d	10/10/2018 00:50	10/10/2018 09:06	12/17/2018 15:27
11	284623	J:\GC23\data\100918CAL\1009F035.D\1009F035c.d	10/10/2018 01:20	10/10/2018 09:08	12/17/2018 15:27
12	284625	J:\GC23\data\100918CAL\1009F036.D\1009F036c.d	10/10/2018 01:50	10/10/2018 09:11	12/17/2018 15:27
13	284627	J:\GC23\data\100918CAL\1009F039.D\1009F039c.d	10/10/2018 03:19	10/10/2018 09:22	12/17/2018 15:27
14	284629	J:\GC23\data\100918CAL\1009F040.D\1009F040c.d	10/10/2018 03:49	10/10/2018 09:23	12/17/2018 15:27
15	284631	J:\GC23\data\100918CAL\1009F041.D\1009F041c.d	10/10/2018 04:19	10/10/2018 09:26	12/17/2018 15:27
16	284633	J:\GC23\data\100918CAL\1009F042.D\1009F042c.d	10/10/2018 04:49	10/10/2018 09:29	12/17/2018 15:28
17	284635	J:\GC23\data\100918CAL\1009F043.D\1009F043c.d	10/10/2018 05:19	10/10/2018 09:32	12/17/2018 15:28
18	284637	J:\GC23\data\100918CAL\1009F044.D\1009F044c.d	10/10/2018 05:49	10/10/2018 09:34	12/17/2018 15:28
19	284641	J:\GC23\data\101018CAL\1010F006.D\1010F006c.d	10/10/2018 12:29	10/10/2018 12:56	12/17/2018 15:28
20	284745	J:\GC23\data\101518CAL\1015F013.D\1015F013c.d	10/15/2018 19:37	10/16/2018 09:02	12/17/2018 15:28
21	284747	J:\GC23\data\101518CAL\1015F015.D\1015F015c.d	10/15/2018 20:36	10/16/2018 09:03	12/17/2018 15:28
22	284749	J:\GC23\data\101518CAL\1015F016.D\1015F016c.d	10/15/2018 21:06	10/16/2018 09:04	12/17/2018 15:28
23	284751	J:\GC23\data\101518CAL\1016F007.D\1016F007c.d	10/16/2018 12:59	10/16/2018 13:50	12/17/2018 15:28
24	284753	J:\GC23\data\101518CAL\1016F010.D\1016F010c.d	10/16/2018 14:27	10/16/2018 15:21	12/17/2018 15:28
25	284755	J:\GC23\data\101518CAL\1016F013.D\1016F013c.d	10/16/2018 15:57	10/16/2018 16:22	12/17/2018 15:28
26	285725	J:\GC23\data\121418CAL\1214F003.D\1214F003c.d	12/14/2018 14:52	12/16/2018 12:59	12/17/2018 15:28
27	285727	J:\GC23\data\121418CAL\1214F004.D\1214F004c.d	12/14/2018 15:21	12/16/2018 13:00	12/17/2018 15:29
28	285729	J:\GC23\data\121418CAL\1214F005.D\1214F005c.d	12/14/2018 15:51	12/16/2018 13:01	12/17/2018 15:29
29	285731	J:\GC23\data\121418CAL\1214F006.D\1214F006c.d	12/14/2018 16:20	12/16/2018 13:01	12/17/2018 15:29
30	285733	J:\GC23\data\121418CAL\1214F007.D\1214F007c.d	12/14/2018 16:51	12/16/2018 13:02	12/17/2018 15:29
31	285735	J:\GC23\data\121418CAL\1214F008.D\1214F008c.d	12/14/2018 17:21	12/16/2018 13:03	12/17/2018 15:29

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Tetrachloro-m-xylene													1.439	8.2
			26	1.529	27	1.515	28	1.410	29	1.567	30	1.266		
	31	1.346												
alpha-BHC													1.295	9.1
			26	1.457	27	1.348	28	1.219	29	1.367	30	1.128		
	31	1.253												

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Hexachlorobenzene							1.748	10.2
		26 1.955	27 1.832	28 1.702	29 1.904	30 1.524		
	31 1.569							
beta-BHC							0.600	8.8
		26 0.638	27 0.647	28 0.594	29 0.645	30 0.522		
	31 0.554							
gamma-BHC (Lindane)							1.163	9.0
		26 1.312	27 1.184	28 1.121	29 1.235	30 1.017		
	31 1.107							
delta-BHC							1.083	6.9
		26 1.157	27 1.091	28 1.017	29 1.174	30 0.985		
	31 1.074							
Heptachlor							1.196	11.2
		26 1.406	27 1.208	28 1.136	29 1.285	30 1.037		
	31 1.102							
Aldrin							1.153	8.7
		26 1.293	27 1.163	28 1.132	29 1.227	30 1.010		
	31 1.091							
Isodrin							0.978	8.7
		26 1.100	27 0.976	28 0.949	29 1.051	30 0.868		
	31 0.924							
Heptachlor Epoxide							1.060	6.9
		26 1.101	27 1.066	28 1.083	29 1.154	30 0.949		
	31 1.005							

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
gamma-Chlordane							1.074	9.0
		26 1.206	27 1.052	28 1.083	29 1.155	30 0.941		
	31 1.005							
Endosulfan I							0.954	8.0
		26 1.042	27 0.977	28 0.930	29 1.031	30 0.847		
	31 0.899							
alpha-Chlordane							1.082	10.8
		26 1.269	27 1.088	28 1.057	29 1.146	30 0.938		
	31 0.996							
Dieldrin							1.027	8.1
		26 1.106	27 1.066	28 0.989	29 1.120	30 0.912		
	31 0.966							
4,4'-DDE							1.053	8.7
		26 1.165	27 1.046	28 1.021	29 1.158	30 0.938		
	31 0.991							
Endrin							0.939	6.1
		26 0.953	27 0.974	28 0.942	29 1.013	30 0.846		
	31 0.906							
Endosulfan II							0.930	10.7
		26 1.090	27 0.908	28 0.888	29 1.006	30 0.823		
	31 0.864							
4,4'-DDD							0.768	6.5
		26 0.763	27 0.777	28 0.784	29 0.847	30 0.695		
	31 0.743							

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Endrin Aldehyde							0.812	8.1
	26 0.881	27 0.835	28 0.787	29 0.884	30 0.723	31 0.759		
Endosulfan Sulfate							0.924	8.1
	26 1.004	27 0.916	28 0.926	29 1.011	30 0.822	31 0.866		
4,4'-DDT							0.725	7.2
	26 0.738	27 0.737	28 0.702	29 0.812	30 0.655	31 0.704		
Endrin Ketone							1.018	7.1
	26 1.071	27 1.040	28 1.007	29 1.113	30 0.916	31 0.963		
Methoxychlor							0.419	6.7
	26 0.437	27 0.420	28 0.405	29 0.463	30 0.384	31 0.405		
2,4'-DDE							0.810	13.9
	20 0.793	21 0.750	22 0.679	23 0.752	24 0.904	25 0.982		
2,4'-DDD							0.706	8.3
	20 0.754	21 0.690	22 0.616	23 0.689	24 0.786	25 0.704		
2,4'-DDT							0.849	17.2
	20 0.840	21 0.792	22 0.720	23 0.790	24 1.135	25 0.819		

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Decachlorobiphenyl													1.238	9.9
			26	1.360	27	1.297	28	1.224	29	1.358	30	1.080		
	31	1.110												
Toxaphene {1}													0.017	9.5
	7	0.020	8	0.017	9	0.018	10	0.017	11	0.016	12	0.016		
Toxaphene {2}													0.006	10.8
	7	0.007	8	0.006	9	0.007	10	0.006	11	0.006	12	0.006		
Toxaphene {3}													0.006	13.5
	7	0.006	8	0.006	9	0.006	10	0.005	11	0.005	12	0.005		
Toxaphene {4}													0.010	7.3
	7	0.011	8	0.011	9	0.011	10	0.010	11	0.009	12	0.010		
Toxaphene {5}													0.020	11.1
	7	0.024	8	0.019	9	0.021	10	0.019	11	0.019	12	0.019		
Toxaphene {6}													0.016	7.2
	7	0.017	8	0.017	9	0.017	10	0.016	11	0.014	12	0.015		
Chlordane {1}													0.043	11.0
	13	0.046	14	0.043	15	0.044	16	0.042	17	0.041	18	0.035		
	19	0.050												

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Chlordane {2}							0.028	7.3
	13 0.028	14 0.030	15 0.029	16 0.028	17 0.027	18 0.024		
	19 0.028							
Chlordane {3}							0.109	6.2
	13 0.113	14 0.111	15 0.110	16 0.110	17 0.105	18 0.097		
	19 0.118							
Chlordane {4}							0.067	12.7
	13 0.070	14 0.069	15 0.069	16 0.066	17 0.061	18 0.054		
	19 0.082							
Chlordane {5}							0.032	7.7
	13 0.031	14 0.032	15 0.035	16 0.034	17 0.032	18 0.028		
	19 0.031							
Chlordane {6}							0.098	7.5
	13 0.101	14 0.101	15 0.099	16 0.098	17 0.093	18 0.085		
	19 0.108							
Chlorpyrifos	1 0.743	2 0.741	3 0.628	4 0.610	5 0.612	6 0.601	0.656	10.3
Oxychlordane	1 1.511	2 1.489	3 1.226	4 1.191	5 1.107	6 1.125	1.275	14.1
cis-Nonachlor	1 1.611	2 1.640	3 1.383	4 1.354	5 1.283	6 1.303	1.429	10.9

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
trans-Nonachlor	1	1.551	2	1.507	3	1.285	4	1.247	5	1.199	6	1.219	1.335	11.5
Mirex	1	1.351	2	1.351	3	1.184	4	1.134	5	1.030	6	1.013	1.177	12.7
Hexachloroethane	1	2.068	2	2.052	3	1.781	4	1.758	5	1.672	6	1.987	1.887	9.0
Hexachlorobutadiene	1	1.805	2	1.660	3	1.482	4	1.433	5	1.328	6	1.509	1.536	11.1
Perthane			2	0.043	3	0.032	4	0.031	5	0.033	6	0.034	0.035	13.4

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	284599	J:\GC23\data\100918CAL\1009F023.D\1009F023c.d	10/09/2018 19:20	10/10/2018 08:16	12/17/2018 15:26
2	284601	J:\GC23\data\100918CAL\1009F024.D\1009F024c.d	10/09/2018 19:49	10/10/2018 08:22	12/17/2018 15:26
3	284603	J:\GC23\data\100918CAL\1009F025.D\1009F025c.d	10/09/2018 20:19	10/10/2018 08:24	12/17/2018 15:27
4	284605	J:\GC23\data\100918CAL\1009F026.D\1009F026c.d	10/09/2018 20:49	10/10/2018 08:38	12/17/2018 15:27
5	284607	J:\GC23\data\100918CAL\1009F027.D\1009F027c.d	10/09/2018 21:20	10/10/2018 08:42	12/17/2018 15:27
6	284609	J:\GC23\data\100918CAL\1009F028.D\1009F028c.d	10/09/2018 21:50	10/10/2018 08:45	12/17/2018 15:27
7	284615	J:\GC23\data\100918CAL\1009F031.D\1009F031c.d	10/09/2018 23:19	10/10/2018 09:00	12/17/2018 15:27
8	284617	J:\GC23\data\100918CAL\1009F032.D\1009F032c.d	10/09/2018 23:49	10/10/2018 09:02	12/17/2018 15:27
9	284619	J:\GC23\data\100918CAL\1009F033.D\1009F033c.d	10/10/2018 00:19	10/10/2018 09:04	12/17/2018 15:27
10	284621	J:\GC23\data\100918CAL\1009F034.D\1009F034c.d	10/10/2018 00:50	10/10/2018 09:06	12/17/2018 15:27
11	284623	J:\GC23\data\100918CAL\1009F035.D\1009F035c.d	10/10/2018 01:20	10/10/2018 09:08	12/17/2018 15:27
12	284625	J:\GC23\data\100918CAL\1009F036.D\1009F036c.d	10/10/2018 01:50	10/10/2018 09:11	12/17/2018 15:27
13	284627	J:\GC23\data\100918CAL\1009F039.D\1009F039c.d	10/10/2018 03:19	10/10/2018 09:22	12/17/2018 15:27
14	284629	J:\GC23\data\100918CAL\1009F040.D\1009F040c.d	10/10/2018 03:49	10/10/2018 09:23	12/17/2018 15:27
15	284631	J:\GC23\data\100918CAL\1009F041.D\1009F041c.d	10/10/2018 04:19	10/10/2018 09:26	12/17/2018 15:27
16	284633	J:\GC23\data\100918CAL\1009F042.D\1009F042c.d	10/10/2018 04:49	10/10/2018 09:29	12/17/2018 15:28
17	284635	J:\GC23\data\100918CAL\1009F043.D\1009F043c.d	10/10/2018 05:19	10/10/2018 09:32	12/17/2018 15:28
18	284637	J:\GC23\data\100918CAL\1009F044.D\1009F044c.d	10/10/2018 05:49	10/10/2018 09:34	12/17/2018 15:28
19	284641	J:\GC23\data\101018CAL\1010F006.D\1010F006c.d	10/10/2018 12:29	10/10/2018 12:56	12/17/2018 15:28
20	284745	J:\GC23\data\101518CAL\1015F013.D\1015F013c.d	10/15/2018 19:37	10/16/2018 09:02	12/17/2018 15:28
21	284747	J:\GC23\data\101518CAL\1015F015.D\1015F015c.d	10/15/2018 20:36	10/16/2018 09:03	12/17/2018 15:28
22	284749	J:\GC23\data\101518CAL\1015F016.D\1015F016c.d	10/15/2018 21:06	10/16/2018 09:04	12/17/2018 15:28
23	284751	J:\GC23\data\101518CAL\1016F007.D\1016F007c.d	10/16/2018 12:59	10/16/2018 13:50	12/17/2018 15:28
24	284753	J:\GC23\data\101518CAL\1016F010.D\1016F010c.d	10/16/2018 14:27	10/16/2018 15:21	12/17/2018 15:28
25	284755	J:\GC23\data\101518CAL\1016F013.D\1016F013c.d	10/16/2018 15:57	10/16/2018 16:22	12/17/2018 15:28
26	285725	J:\GC23\data\121418CAL\1214F003.D\1214F003c.d	12/14/2018 14:52	12/16/2018 12:59	12/17/2018 15:28
27	285727	J:\GC23\data\121418CAL\1214F004.D\1214F004c.d	12/14/2018 15:21	12/16/2018 13:00	12/17/2018 15:29
28	285729	J:\GC23\data\121418CAL\1214F005.D\1214F005c.d	12/14/2018 15:51	12/16/2018 13:01	12/17/2018 15:29
29	285731	J:\GC23\data\121418CAL\1214F006.D\1214F006c.d	12/14/2018 16:20	12/16/2018 13:01	12/17/2018 15:29
30	285733	J:\GC23\data\121418CAL\1214F007.D\1214F007c.d	12/14/2018 16:51	12/16/2018 13:02	12/17/2018 15:29
31	285735	J:\GC23\data\121418CAL\1214F008.D\1214F008c.d	12/14/2018 17:21	12/16/2018 13:03	12/17/2018 15:29

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Tetrachloro-m-xylene												
					26	0.2	0.2125	6.3	27	0.5	0.5265	5.3
	28	1	0.9798	-2.0	29	2	2.178	8.9	30	5	4.398	-12.0
	31	10	9.359	-6.4								

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
alpha-BHC												
					26	0.2	0.2250	12.5	27	0.5	0.5202	4.0
	28	1	0.9411	-5.9	29	2	2.111	5.5	30	5	4.353	-12.9
	31	10	9.676	-3.2								
Hexachlorobenzene												
					26	0.2	0.2237	11.9	27	0.5	0.5241	4.8
	28	1	0.9741	-2.6	29	2	2.179	8.9	30	5	4.360	-12.8
	31	10	8.979	-10.2								
beta-BHC												
					26	0.2	0.2126	6.3	27	0.5	0.5391	7.8
	28	1	0.9898	-1.0	29	2	2.151	7.6	30	5	4.347	-13.1
	31	10	9.239	-7.6								
gamma-BHC (Lindane)												
					26	0.2	0.2257	12.9	27	0.5	0.5091	1.8
	28	1	0.9639	-3.6	29	2	2.124	6.2	30	5	4.373	-12.5
	31	10	9.524	-4.8								

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
delta-BHC												
					26	0.2	0.2137	6.9	27	0.5	0.5036	0.7
	28	1	0.9395	-6.1	29	2	2.168	8.4	30	5	4.546	-9.1
	31	10	9.915	-0.8								
Heptachlor												
					26	0.2	0.2351	17.5	27	0.5	0.5053	1.1
	28	1	0.9502	-5.0	29	2	2.150	7.5	30	5	4.336	-13.3
	31	10	9.218	-7.8								
Aldrin												
					26	0.2	0.2245	12.2	27	0.5	0.5044	0.9
	28	1	0.9821	-1.8	29	2	2.129	6.4	30	5	4.381	-12.4
	31	10	9.464	-5.4								
Isodrin												
					26	0.2	0.2249	12.5	27	0.5	0.4989	-0.2
	28	1	0.9700	-3.0	29	2	2.149	7.5	30	5	4.438	-11.2
	31	10	9.452	-5.5								

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Heptachlor Epoxide												
					26	0.2	0.2078	3.9	27	0.5	0.5031	0.6
	28	1	1.022	2.2	29	2	2.179	8.9	30	5	4.478	-10.4
	31	10	9.482	-5.2								
gamma-Chlordane												
					26	0.2	0.2246	12.3	27	0.5	0.4901	-2.0
	28	1	1.009	0.9	29	2	2.151	7.6	30	5	4.381	-12.4
	31	10	9.361	-6.4								
Endosulfan I												
					26	0.2	0.2183	9.2	27	0.5	0.5119	2.4
	28	1	0.9743	-2.6	29	2	2.162	8.1	30	5	4.440	-11.2
	31	10	9.416	-5.8								
alpha-Chlordane												
					26	0.2	0.2345	17.3	27	0.5	0.5027	0.5
	28	1	0.9764	-2.4	29	2	2.117	5.9	30	5	4.335	-13.3
	31	10	9.199	-8.0								

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Dieldrin												
					26	0.2	0.2154	7.7	27	0.5	0.5193	3.9
	28	1	0.9637	-3.6	29	2	2.183	9.1	30	5	4.441	-11.2
	31	10	9.409	-5.9								
4,4'-DDE												
					26	0.2	0.2212	10.6	27	0.5	0.4967	-0.7
	28	1	0.9694	-3.1	29	2	2.199	9.9	30	5	4.454	-10.9
	31	10	9.411	-5.9								
Endrin												
					26	0.2	0.2030	1.5	27	0.5	0.5186	3.7
	28	1	1.003	0.3	29	2	2.158	7.9	30	5	4.505	-9.9
	31	10	9.651	-3.5								
Endosulfan II												
					26	0.2	0.2344	17.2	27	0.5	0.4882	-2.4
	28	1	0.9554	-4.5	29	2	2.165	8.2	30	5	4.424	-11.5
	31	10	9.291	-7.1								

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
4,4'-DDD												
					26	0.2	0.1986	-0.7	27	0.5	0.5058	1.2
	28	1	1.021	2.1	29	2	2.204	10.2	30	5	4.526	-9.5
	31	10	9.673	-3.3								
Endrin Aldehyde												
					26	0.2	0.2170	8.5	27	0.5	0.5145	2.9
	28	1	0.9694	-3.1	29	2	2.179	8.9	30	5	4.457	-10.9
	31	10	9.357	-6.4								
Endosulfan Sulfate												
					26	0.2	0.2173	8.7	27	0.5	0.4955	-0.9
	28	1	1.002	0.2	29	2	2.189	9.4	30	5	4.445	-11.1
	31	10	9.366	-6.3								
4,4'-DDT												
					26	0.2	0.2036	1.8	27	0.5	0.5088	1.8
	28	1	0.9688	-3.1	29	2	2.241	12.0	30	5	4.520	-9.6
	31	10	9.712	-2.9								

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Endrin Ketone												
					26	0.2	0.2103	5.2	27	0.5	0.5106	2.1
	28	1	0.9887	-1.1	29	2	2.187	9.3	30	5	4.499	-10.0
	31	10	9.453	-5.5								
Methoxychlor												
					26	0.2	0.2084	4.2	27	0.5	0.5007	0.1
	28	1	0.9669	-3.3	29	2	2.212	10.6	30	5	4.582	-8.4
	31	10	9.676	-3.2								
2,4'-DDE												
					20	1	0.9785	-2.2	21	5	4.630	-7.4
	22	10	8.385	-16.1	23	2	1.856	-7.2	24	0.2	0.2233	11.7
	25	0.5	0.6063	21.3								
2,4'-DDD												
					20	1	1.067	6.7	21	5	4.880	-2.4
	22	10	8.723	-12.8	23	2	1.950	-2.5	24	0.2	0.2224	11.2
	25	0.5	0.4986	-0.3								

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
2,4'-DDT												
					20	1	0.9888	-1.1	21	5	4.665	-6.7
	22	10	8.473	-15.3	23	2	1.861	-7.0	24	0.2	0.2673	**33.7**
	25	0.5	0.4820	-3.6								
Decachlorobiphenyl												
					26	0.2	0.2196	9.8	27	0.5	0.5238	4.8
	28	1	0.9888	-1.1	29	2	2.194	9.7	30	5	4.360	-12.8
	31	10	8.964	-10.4								
Toxaphene {1}												
	7	10	11.61	16.1	8	25	24.73	-1.1	9	50	52.57	5.1
	10	100	97.53	-2.5	11	250	224.1	-10.4	12	500	463.4	-7.3
Toxaphene {2}												
	7	10	11.76	17.6	8	25	25.33	1.3	9	50	52.62	5.2
	10	100	97.84	-2.2	11	250	221.5	-11.4	12	500	446.9	-10.6

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Toxaphene {3}												
	7	10	11.72	17.2	8	25	28.13	12.5	9	50	52.45	4.9
	10	100	92.82	-7.2	11	250	216.4	-13.4	12	500	429.8	-14.0
Toxaphene {4}												
	7	10	11.09	10.9	8	25	26.13	4.5	9	50	51.30	2.6
	10	100	96.26	-3.7	11	250	229.2	-8.3	12	500	470.1	-6.0
Toxaphene {5}												
	7	10	12.06	20.6	8	25	23.17	-7.3	9	50	52.23	4.5
	10	100	96.74	-3.3	11	250	231.4	-7.5	12	500	465.0	-7.0
Toxaphene {6}												
	7	10	10.71	7.1	8	25	25.60	2.4	9	50	53.26	6.5
	10	100	100.2	0.2	11	250	220.2	-11.9	12	500	478.0	-4.4

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {1}												
	13	5	5.368	7.4	14	10	10.07	0.7	15	20	20.52	2.6
	16	50	49.20	-1.6	17	100	93.94	-6.1	18	200	161.6	-19.2
	19	2	2.325	16.2								
Chlordane {2}												
	13	5	5.056	1.1	14	10	10.73	7.3	15	20	21.13	5.7
	16	50	51.16	2.3	17	100	97.79	-2.2	18	200	170.3	-14.8
	19	2	2.013	0.6								
Chlordane {3}												
	13	5	5.164	3.3	14	10	10.19	1.9	15	20	20.07	0.3
	16	50	50.51	1.0	17	100	96.37	-3.6	18	200	177.2	-11.4
	19	2	2.169	8.5								
Chlordane {4}												
	13	5	5.238	4.8	14	10	10.20	2.0	15	20	20.39	2.0
	16	50	49.20	-1.6	17	100	90.72	-9.3	18	200	161.1	-19.5
	19	2	2.433	21.7								

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {5}												
	13	5	4.875	-2.5	14	10	9.934	-0.7	15	20	22.22	11.1
	16	50	53.46	6.9	17	100	99.96	0.0	18	200	173.1	-13.4
	19	2	1.973	-1.4								
Chlordane {6}												
	13	5	5.132	2.6	14	10	10.33	3.3	15	20	20.24	1.2
	16	50	50.26	0.5	17	100	94.91	-5.1	18	200	173.5	-13.3
	19	2	2.213	10.7								
Chlorpyrifos	1	0.2	0.2267	13.4	2	0.5	0.5650	13.0	3	1	0.9572	-4.3
	4	2	1.859	-7.0	5	5	4.667	-6.7	6	10	9.163	-8.4
Oxychlordane	1	0.2	0.2371	18.5	2	0.5	0.5840	16.8	3	1	0.9618	-3.8
	4	2	1.869	-6.5	5	5	4.340	-13.2	6	10	8.824	-11.8

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
cis-Nonachlor	1	0.2	0.2254	12.7	2	0.5	0.5739	14.8	3	1	0.9676	-3.2
	4	2	1.896	-5.2	5	5	4.490	-10.2	6	10	9.119	-8.8
trans-Nonachlor	1	0.2	0.2324	16.2	2	0.5	0.5647	12.9	3	1	0.9629	-3.7
	4	2	1.869	-6.6	5	5	4.491	-10.2	6	10	9.132	-8.7
Mirex	1	0.2	0.2295	14.8	2	0.5	0.5738	14.8	3	1	1.006	0.6
	4	2	1.927	-3.7	5	5	4.373	-12.5	6	10	8.608	-13.9
Hexachloroethane	1	0.2	0.2193	9.6	2	0.5	0.5439	8.8	3	1	0.9441	-5.6
	4	2	1.864	-6.8	5	5	4.430	-11.4	6	10	10.53	5.3

Initial Calibration - Detailed Report

Calibration ID: CAL15919
Method ID: MJ1647
Instrument ID: GC23
Column Name: DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Hexachlorobutadiene	1	0.2	0.2351	17.5	2	0.5	0.5402	8.0	3	1	0.9647	-3.5
	4	2	1.865	-6.7	5	5	4.323	-13.5	6	10	9.823	-1.8
Perthane					2	2.5	3.086	23.4	3	5	4.579	-8.4
	4	10	9.097	-9.0	5	25	24.07	-3.7	6	50	48.85	-2.3

Second Source Calibration Verification Summary

CalibrationID: CAL15919

Method ID: MJ1647

DataFile Location: J:\GC23\DATA\121718CAL\1217F004.D

Units: ug/L

Column: DB XLB

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
alpha-BHC	285736	AverageRF	20	1.492	1.806	21.1 *	2.00	2.4	
Hexachlorobenzene	285736	AverageRF	20	2.074	2.525	21.7 *	2.00	2.4	
beta-BHC	285736	AverageRF	20	0.724	0.905	24.9 *	2.00	2.5	
gamma-BHC (Lindane)	285736	AverageRF	20	1.305	1.572	20.5 *	2.00	2.4	
delta-BHC	285736	AverageRF	20	1.259	1.555	23.5 *	2.00	2.5	
Heptachlor	285736	AverageRF	20	1.228	1.412	15.0	2.00	2.3	
Aldrin	285736	AverageRF	20	1.428	1.779	24.6 *	2.00	2.5	
Isodrin	285736	AverageRF	20	1.173	1.567	33.6 *	2.00	2.7	
Heptachlor Epoxide	285736	AverageRF	20	1.325	1.463	10.5	2.00	2.2	
gamma-Chlordane	285736	AverageRF	20	1.285	1.587	23.5 *	2.00	2.5	
Endosulfan I	285736	AverageRF	20	1.156	1.481	28.0 *	2.00	2.6	
alpha-Chlordane	285736	AverageRF	20	1.331	1.606	20.7 *	2.00	2.4	
Dieldrin	285736	AverageRF	20	1.230	1.434	16.6	2.00	2.3	
4,4'-DDE	285736	AverageRF	20	1.304	1.612	23.6 *	2.00	2.5	
Endrin	285736	AverageRF	20	1.112	1.353	21.7 *	2.00	2.4	
Endosulfan II	285736	AverageRF	20	1.156	1.382	19.6	2.00	2.4	
4,4'-DDD	285736	AverageRF	20	0.940	1.137	21.0 *	2.00	2.4	
Endrin Aldehyde	285736	AverageRF	20	1.027	1.258	22.5 *	2.00	2.5	
Endosulfan Sulfate	285736	AverageRF	20	1.123	1.304	16.1	2.00	2.3	
4,4'-DDT	285736	AverageRF	20	0.664	0.640	-3.6	2.00	1.9	
Endrin Ketone	285736	AverageRF	20	1.155	1.194	3.4	2.00	2.1	
Methoxychlor	285736	AverageRF	20	0.405	0.442	9.1	2.00	2.2	
2,4'-DDE	284756	AverageRF	20	1.005	1.276	27.0 *	2.00	2.5	
2,4'-DDD	284756	AverageRF	20	0.909	1.077	18.4	2.00	2.4	
2,4'-DDT	284756	AverageRF	20	0.902	1.087	20.4 *	2.00	2.4	
Toxaphene	284644	NA	20				200.00	181.0	-9.5
Toxaphene {1}	284644	AverageRF	100	0.023	0.021	-8.8	200.00	182.4	
Toxaphene {2}	284644	Quadratic	100				200.00	185.0	-7.5
Toxaphene {3}	284644	AverageRF	100	0.017	0.016	-9.2	200.00	181.5	
Toxaphene {4}	284644	AverageRF	100	0.007	0.006	-8.6	200.00	182.8	
Toxaphene {5}	284644	AverageRF	100	0.009	0.008	-10.8	200.00	178.4	
Toxaphene {6}	284644	AverageRF	100	0.026	0.023	-12.2	200.00	175.6	
Chlordane	284642	NA	20				50.00	47.8	-4.4
Chlordane {1}	284642	AverageRF	100	0.057	0.046	-20.0	50.00	40.0	
Chlordane {2}	284642	AverageRF	100	0.072	0.050	-30.4	50.00	34.8	
Chlordane {3}	284642	AverageRF	100	0.049	0.062	24.9	50.00	62.4	
Chlordane {4}	284642	AverageRF	100	0.144	0.139	-3.4	50.00	48.3	
Chlordane {5}	284642	AverageRF	100	0.122	0.118	-2.9	50.00	48.6	
Chlordane {6}	284642	AverageRF	100	0.090	0.095	5.6	50.00	52.8	
Chlorpyrifos	284610	AverageRF	20	0.661	0.744	12.6	2.00	2.3	
Oxychlordane	284610	AverageRF	20	1.334	1.287	-3.6	2.00	1.9	
cis-Nonachlor	284610	AverageRF	20	1.515	1.575	4.0	2.00	2.1	
trans-Nonachlor	284610	AverageRF	20	1.452	1.501	3.4	2.00	2.1	
Mirex	284610	AverageRF	20	1.171	1.217	3.9	2.00	2.1	
Hexachloroethane	284610	AverageRF	20	2.176	2.020	-7.2	2.00	1.9	
Hexachlorobutadiene	284610	AverageRF	20	1.813	1.705	-6.0	2.00	1.9	
Perthane	284612	AverageRF	20	0.035	0.037	6.8	25.00	26.7	

16 compound out of 47 failed max individual %D criteria.

Second Source Calibration Verification Summary

CalibrationID: CAL15919
Method ID: MJ1647
DataFile Location: J:\GC23\DATA\100918CAL\1009F030.D

Units: ug/L
Column: DB XLB

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift

16 compound out of 47 failed max individual %D criteria.

Second Source Calibration Verification Summary

CalibrationID: CAL15919

Method ID: MJ1647

DataFile Location: J:\GC23\DATA\121718CAL\1217F004.D\1217F004C.D

Units: ug/L

Column: DB-35MS

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
alpha-BHC	285737	AverageRF	20	1.295	1.329	2.6	2.00	2.1	
Hexachlorobenzene	285737	AverageRF	20	1.748	1.754	0.3	2.00	2.0	
beta-BHC	285737	AverageRF	20	0.600	0.624	3.9	2.00	2.1	
gamma-BHC (Lindane)	285737	AverageRF	20	1.163	1.200	3.2	2.00	2.1	
delta-BHC	285737	AverageRF	20	1.083	1.102	1.8	2.00	2.0	
Heptachlor	285737	AverageRF	20	1.196	1.225	2.4	2.00	2.0	
Aldrin	285737	AverageRF	20	1.153	1.175	2.0	2.00	2.0	
Isodrin	285737	AverageRF	20	0.978	1.136	16.1	2.00	2.3	
Heptachlor Epoxide	285737	AverageRF	20	1.060	1.073	1.2	2.00	2.0	
gamma-Chlordane	285737	AverageRF	20	1.074	1.123	4.6	2.00	2.1	
Endosulfan I	285737	AverageRF	20	0.954	1.017	6.6	2.00	2.1	
alpha-Chlordane	285737	AverageRF	20	1.082	1.134	4.8	2.00	2.1	
Dieldrin	285737	AverageRF	20	1.027	1.035	0.8	2.00	2.0	
4,4'-DDE	285737	AverageRF	20	1.053	1.088	3.3	2.00	2.1	
Endrin	285737	AverageRF	20	0.939	0.982	4.6	2.00	2.1	
Endosulfan II	285737	AverageRF	20	0.930	0.975	4.9	2.00	2.1	
4,4'-DDD	285737	AverageRF	20	0.768	0.796	3.7	2.00	2.1	
Endrin Aldehyde	285737	AverageRF	20	0.812	0.861	6.1	2.00	2.1	
Endosulfan Sulfate	285737	AverageRF	20	0.924	0.953	3.1	2.00	2.1	
4,4'-DDT	285737	AverageRF	20	0.725	0.736	1.6	2.00	2.0	
Endrin Ketone	285737	AverageRF	20	1.018	0.998	-1.9	2.00	2.0	
Methoxychlor	285737	AverageRF	20	0.419	0.418	-0.2	2.00	2.0	
2,4'-DDE	284757	AverageRF	20	0.810	0.939	15.9	2.00	2.3	
2,4'-DDD	284757	AverageRF	20	0.706	0.840	18.9	2.00	2.4	
2,4'-DDT	284757	AverageRF	20	0.849	0.982	15.6	2.00	2.3	
Toxaphene	284645	NA	20				200.00	174.9	-12.6
Toxaphene {1}	284645	AverageRF	100	0.017	0.015	-16.0	200.00	168.1	
Toxaphene {2}	284645	AverageRF	100	0.006	0.005	-14.0	200.00	172.1	
Toxaphene {3}	284645	AverageRF	100	0.006	0.005	-14.7	200.00	170.5	
Toxaphene {4}	284645	AverageRF	100	0.010	0.009	-11.9	200.00	176.1	
Toxaphene {5}	284645	AverageRF	100	0.020	0.018	-9.2	200.00	181.6	
Toxaphene {6}	284645	AverageRF	100	0.016	0.015	-9.5	200.00	180.9	
Chlordane	284643	NA	20				50.00	49.7	-0.6
Chlordane {1}	284643	AverageRF	100	0.043	0.033	-24.1	50.00	37.9	
Chlordane {2}	284643	AverageRF	100	0.028	0.032	14.5	50.00	57.3	
Chlordane {3}	284643	AverageRF	100	0.109	0.102	-6.7	50.00	46.6	
Chlordane {4}	284643	AverageRF	100	0.067	0.069	3.0	50.00	51.5	
Chlordane {5}	284643	AverageRF	100	0.032	0.037	15.9	50.00	58.0	
Chlordane {6}	284643	AverageRF	100	0.098	0.092	-6.5	50.00	46.8	
Chlorpyrifos	284611	AverageRF	20	0.656	0.614	-6.4	2.00	1.9	
Oxychlordane	284611	AverageRF	20	1.275	1.055	-17.3	2.00	1.7	
cis-Nonachlor	284611	AverageRF	20	1.429	1.215	-15.0	2.00	1.7	
trans-Nonachlor	284611	AverageRF	20	1.335	1.197	-10.3	2.00	1.8	
Mirex	284611	AverageRF	20	1.177	1.037	-12.0	2.00	1.8	
Hexachloroethane	284611	AverageRF	20	1.887	1.624	-13.9	2.00	1.7	
Hexachlorobutadiene	284611	AverageRF	20	1.536	1.339	-12.8	2.00	1.7	
Perthane	284613	AverageRF	20	0.035	0.034	-1.9	25.00	24.5	

Second Source Calibration Verification Summary

CalibrationID: CAL15919

Method ID: MJ1647

DataFile Location: J:\GC23\DATA\100918CAL\1009F030.D\1009F030C.D

Units: ug/L

Column: DB-35MS

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift

Quantitation Report (QT Reviewed)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:59:06 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.013	5.341	861302	2390118	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.740	7.108	3054	7307	0.088	0.187 #
28) s	Decachlor...	18.433	16.874	3056	6499	0.156	0.198 #
	Target Compounds						
3)	alpha-BHC	9.586	8.328	2740	6966	0.179	0.208
4)	Hexachlor...	9.743	8.114	3921	9344	0.006m	0.202m#
5)	beta-BHC	10.866	9.614	1356	3048	0.181m	0.185m
6)	gamma-BHC...	10.253	9.071	2387	6274	0.182	0.204
7)	delta-BHC	11.363	10.134	2289	5532	0.168	0.188
9)	Aldrin	12.000	10.338	2702	6183	0.182m	0.200
10)	Isodrin	12.530	11.128	2292	5258	0.184	0.196
11)	Heptachlo...	12.723	11.418	2670	5262	0.198	0.179m
12)	gamma-Chl...	13.240	11.828	2329	5764	0.170	0.199m
13)	Endosulfan I	13.366	12.038	2140	4979	0.156	0.184
14)	alpha-Chl...	13.316	11.974	2557	6067	0.173	0.208
15)	Dieldrin	13.786	12.478	2065	5286	0.148	0.192m#
16)	4,4'-DDE	13.596	12.334	2398	5568	0.155	0.187m
17)	Endrin	14.153	12.951	1937	4556	0.148	0.168
18)	Endosulfa...	14.600	13.384	2422	5210	0.068	0.207m#
19)	4,4'-DDD	14.433	13.214	1681	3648	0.160	0.166
20)	Endrin Al...	14.780	13.744	2030	4210	0.171	0.183
21)	Endosulfa...	15.253	14.068	2086	4801	0.167	0.190
22)	4,4'-DDT	14.930	13.631	1119	3527	0.123	0.066m#
23)	Endrin Ke...	15.940	14.998	2228	5118	0.180	0.184
24)	Methoxychlor	15.676	14.731	928	2087	N.D. m	0.166
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

1st SM 12/18/18
2nd UA 12/19/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
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QLast Update : Thu Dec 13 08:59:48 2018
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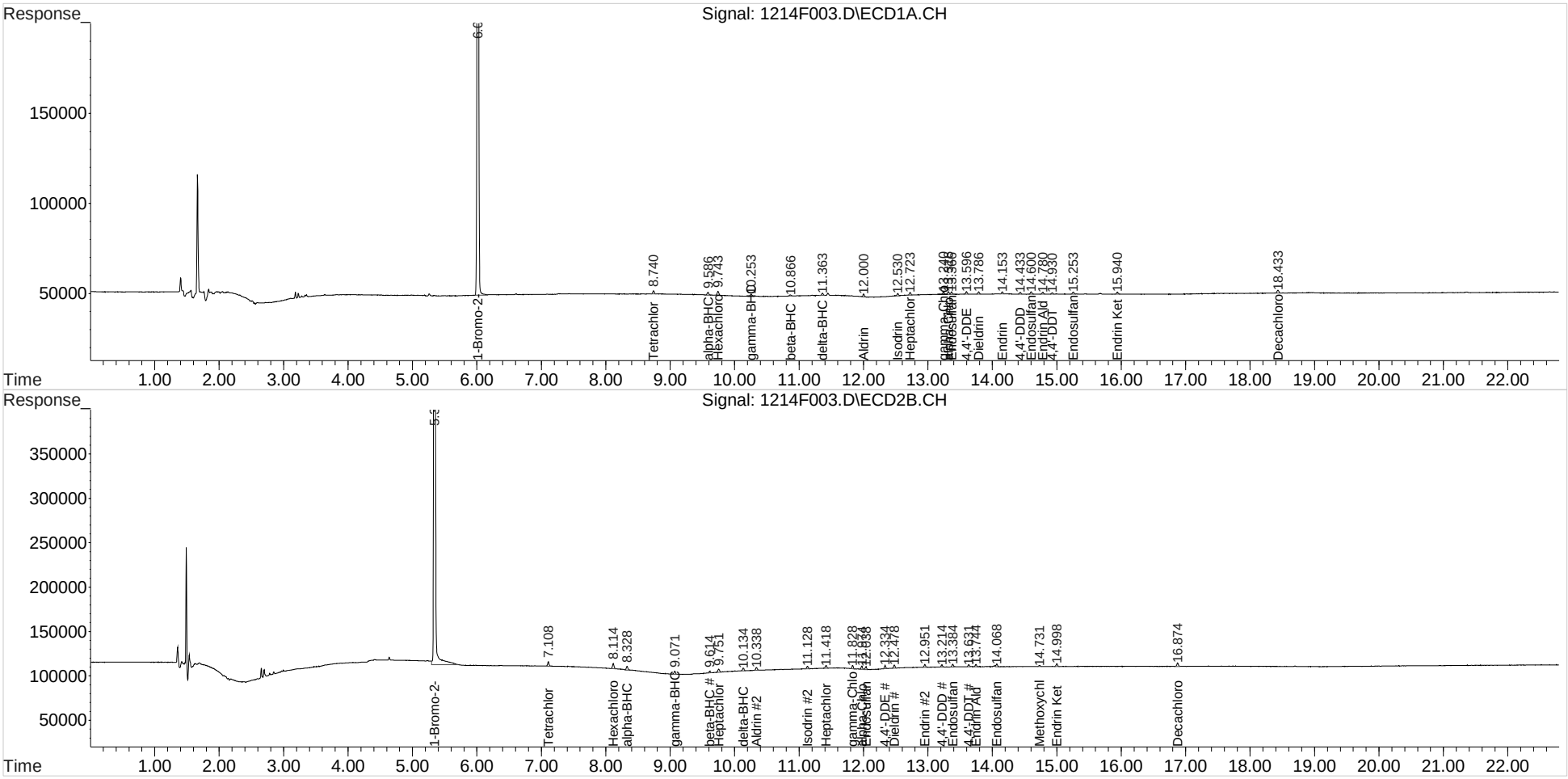
Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
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Volume Inj. :
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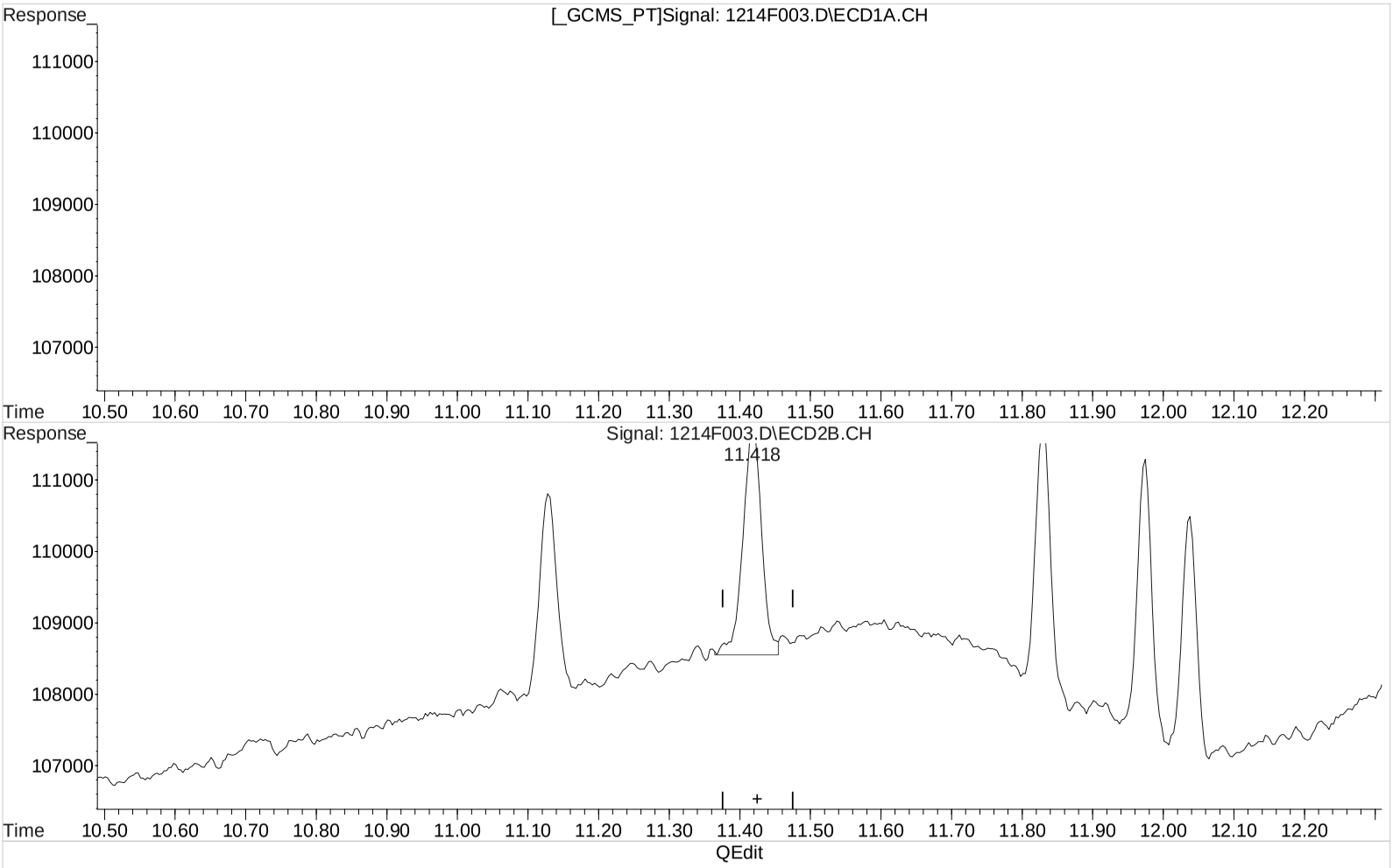

QEdit

(11) Heptachlor Epoxide

12.723min 0.198 ug/L

response 2670

Manual Integration:

Before

12/16/18

(11) Heptachlor Epoxide #2

11.418min 0.200 ug/L

response 5900

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
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QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
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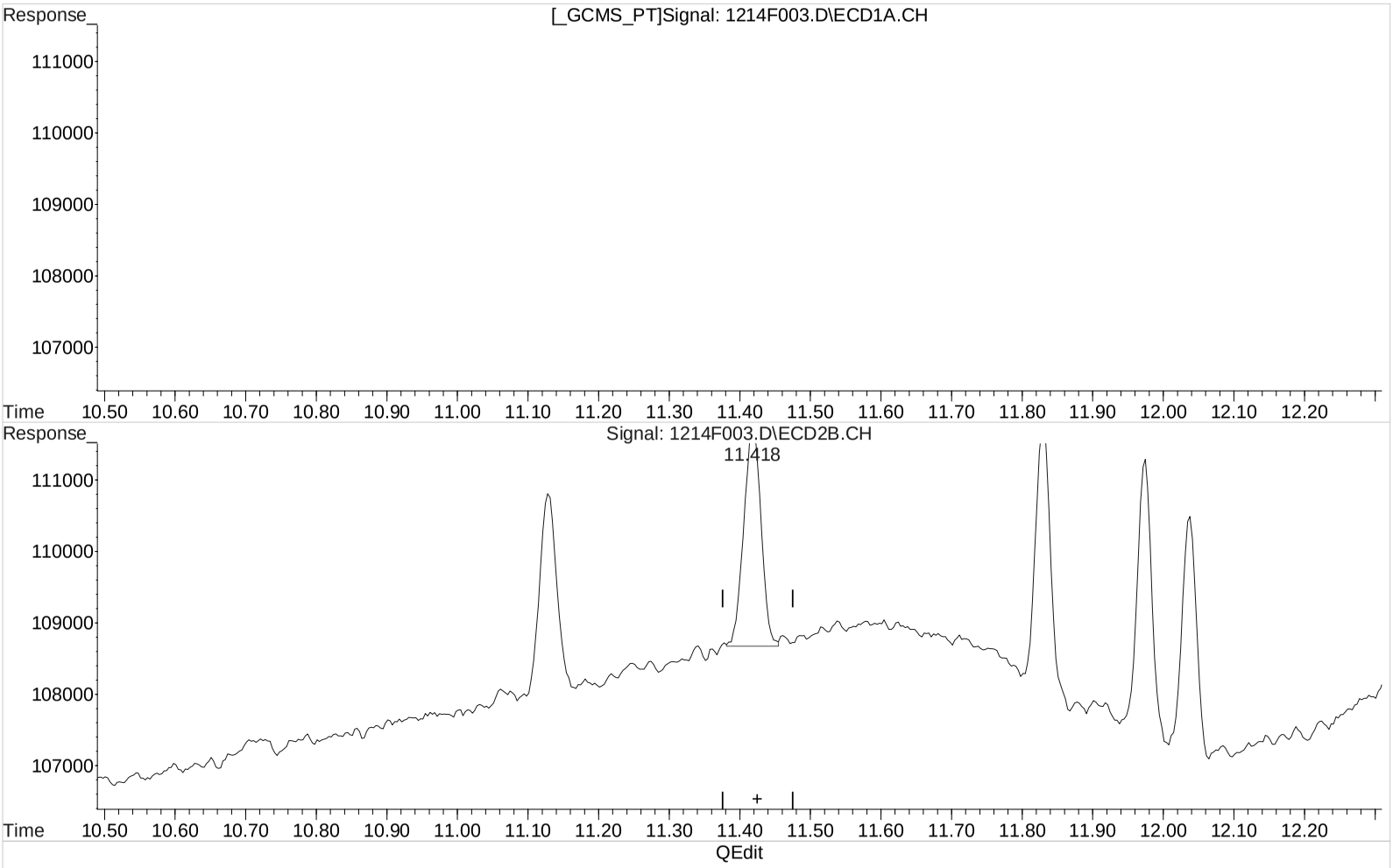
Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(11) Heptachlor Epoxide

12.723min 0.198 ug/L

response 2670

Manual Integration:

After

Baseline/Shoulder

12/16/18

(11) Heptachlor Epoxide #2

11.418min 0.179 ug/L m

response 5262

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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Volume Inj. :
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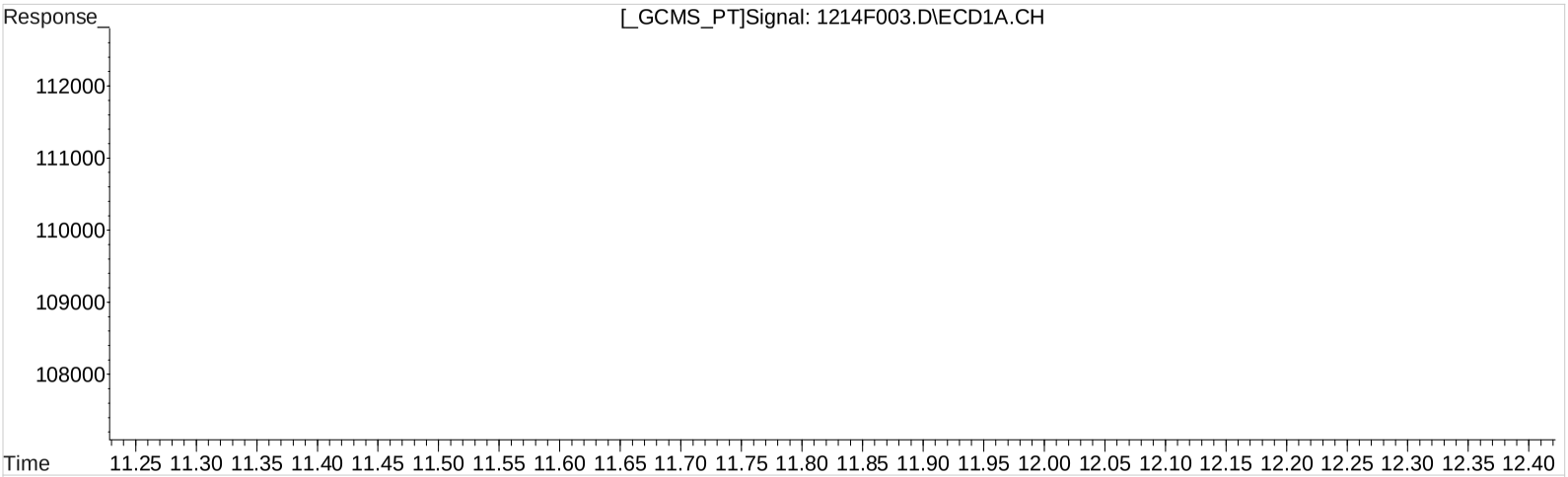
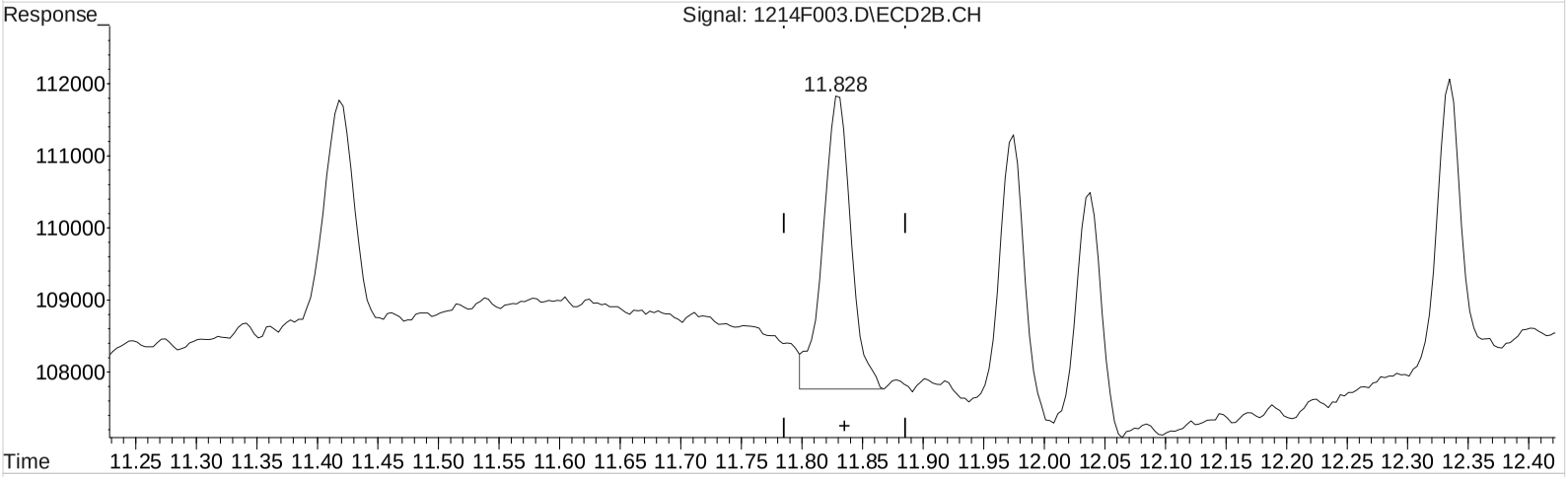
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(12) gamma-Chlordane

13.240min 0.170 ug/L

response 2329

Manual Integration:

Before

12/16/18

(12) gamma-Chlordane #2

11.828min 0.227 ug/L

response 6553

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
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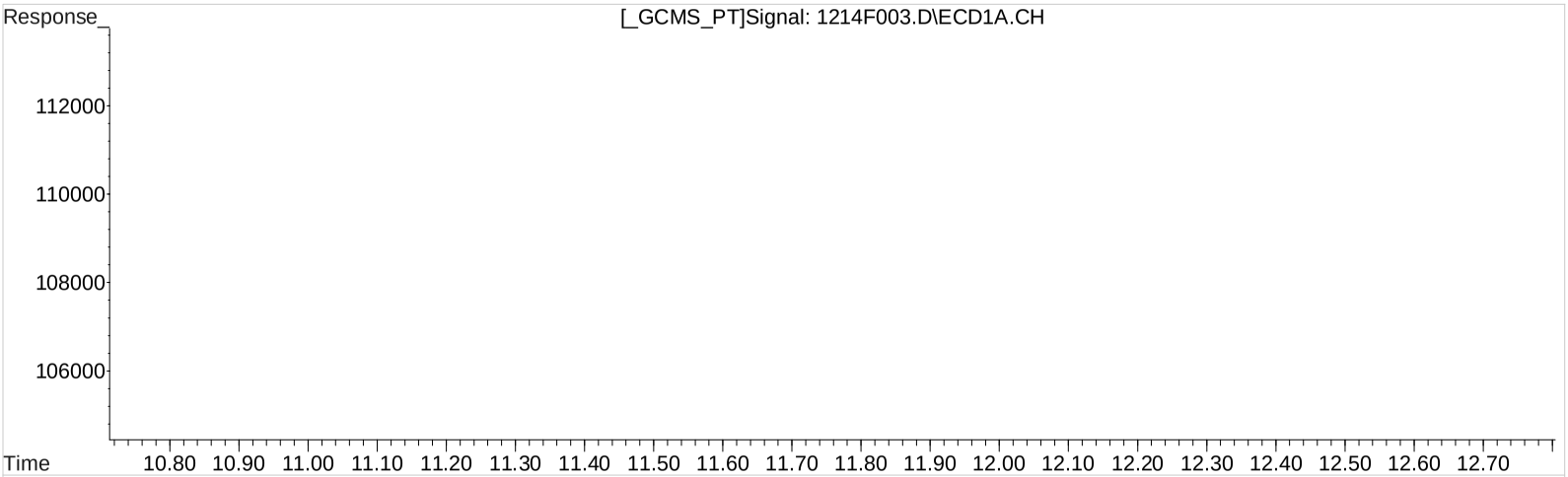
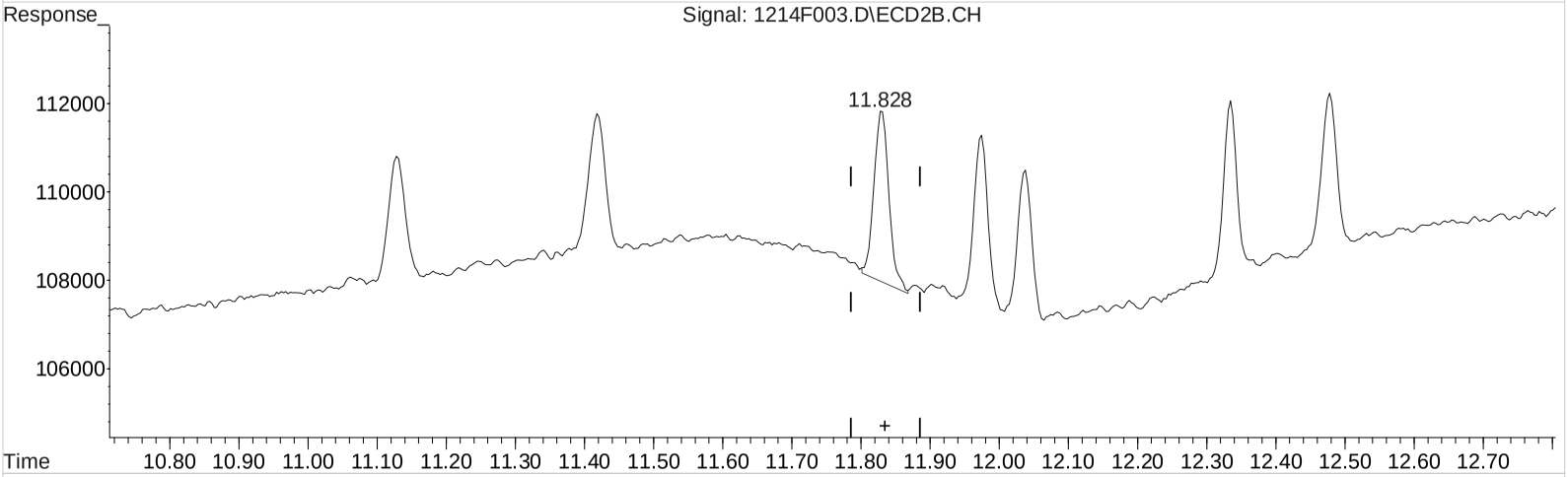
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(12) gamma-Chlordane

13.240min 0.170 ug/L

response 2329

Manual Integration:

After

Baseline/Shoulder

12/16/18

(12) gamma-Chlordane #2

11.828min 0.199 ug/L m

response 5764

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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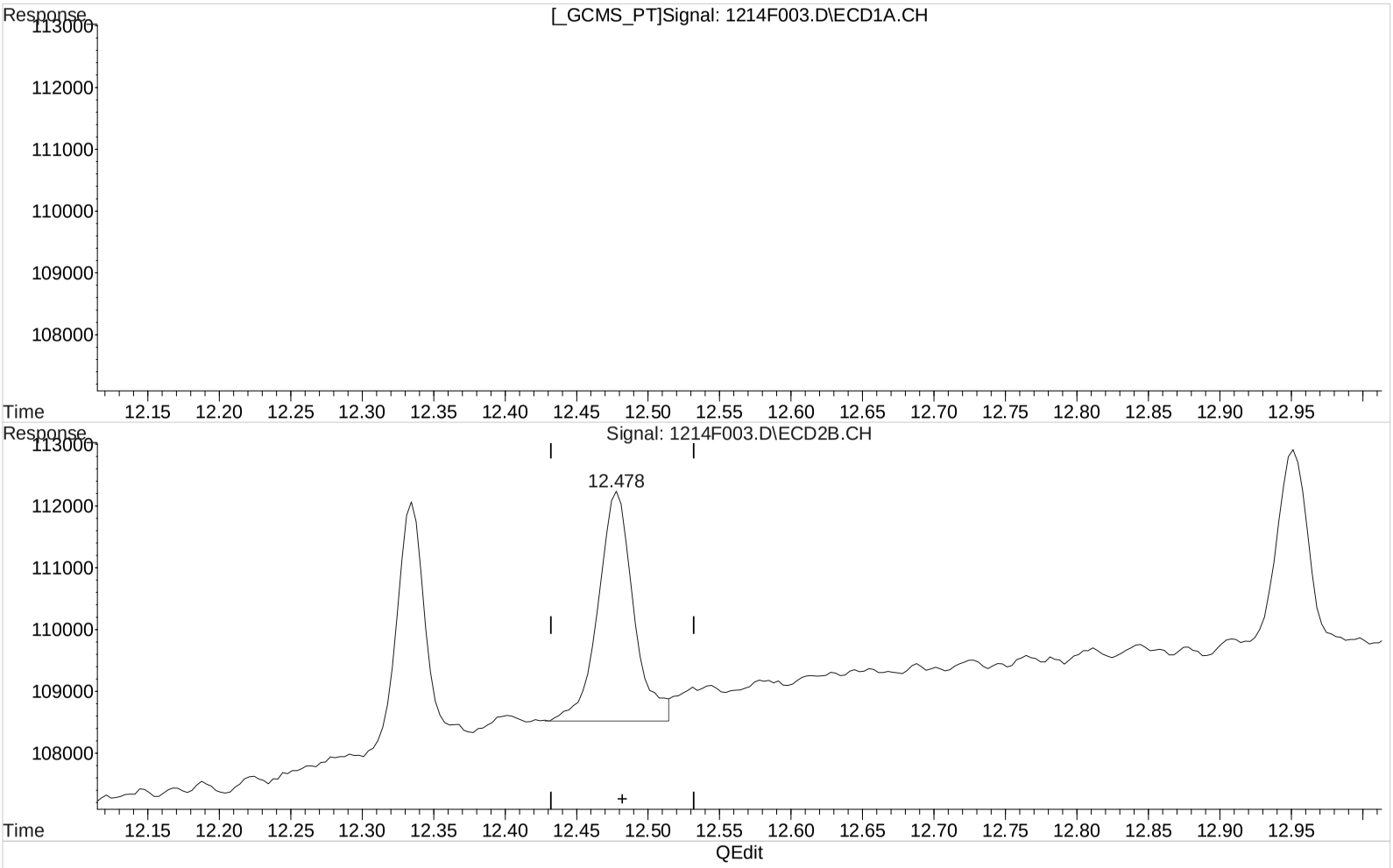
Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(15) Dieldrin

13.786min 0.148 ug/L

response 2065

Manual Integration:

Before

12/16/18

(15) Dieldrin #2

12.478min 0.232 ug/L

response 6410

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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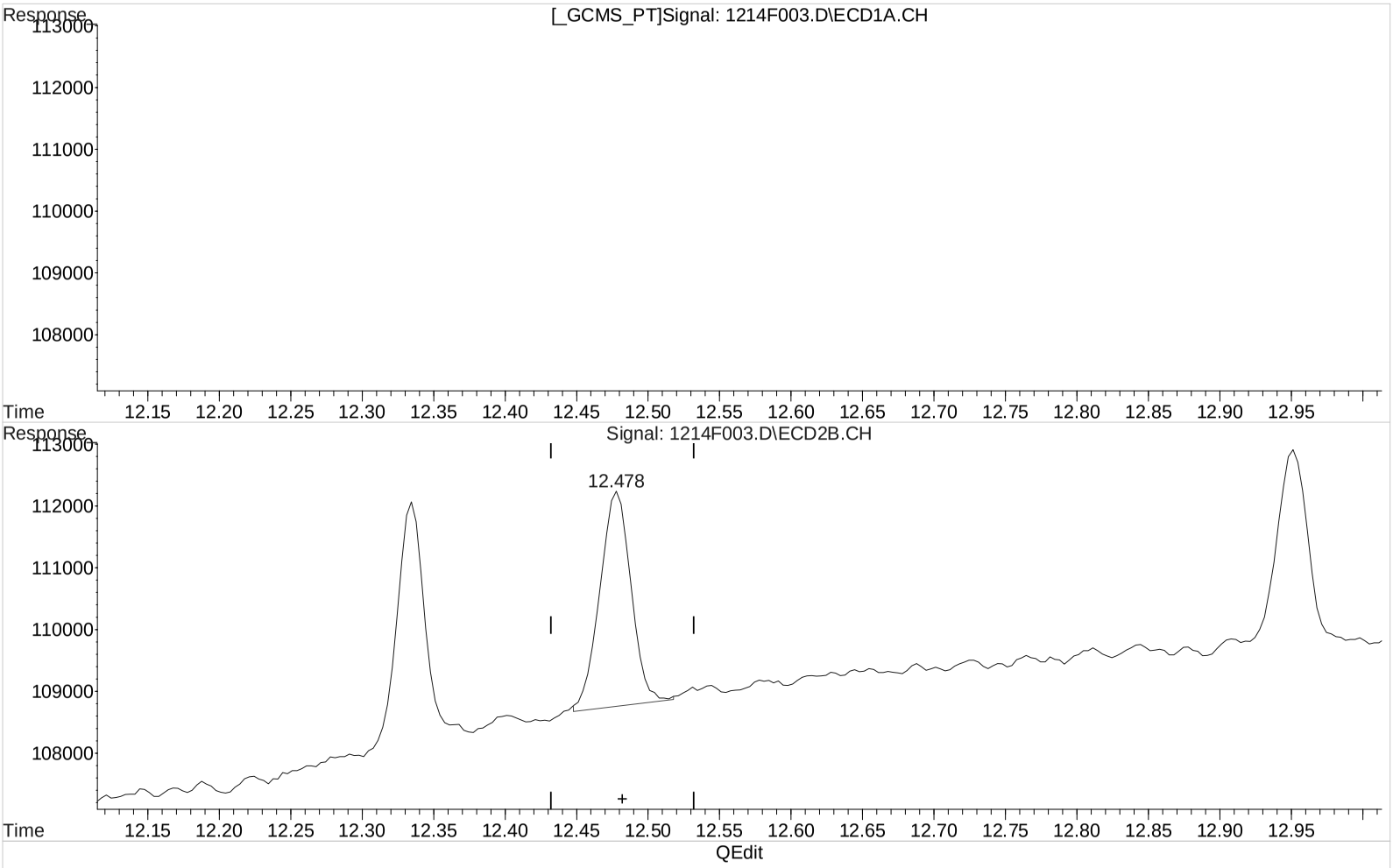
Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(15) Dieldrin

13.786min 0.148 ug/L

response 2065

Manual Integration:

After

Baseline/Shoulder

12/16/18

(15) Dieldrin #2

12.478min 0.192 ug/L m

response 5286

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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Volume Inj. :
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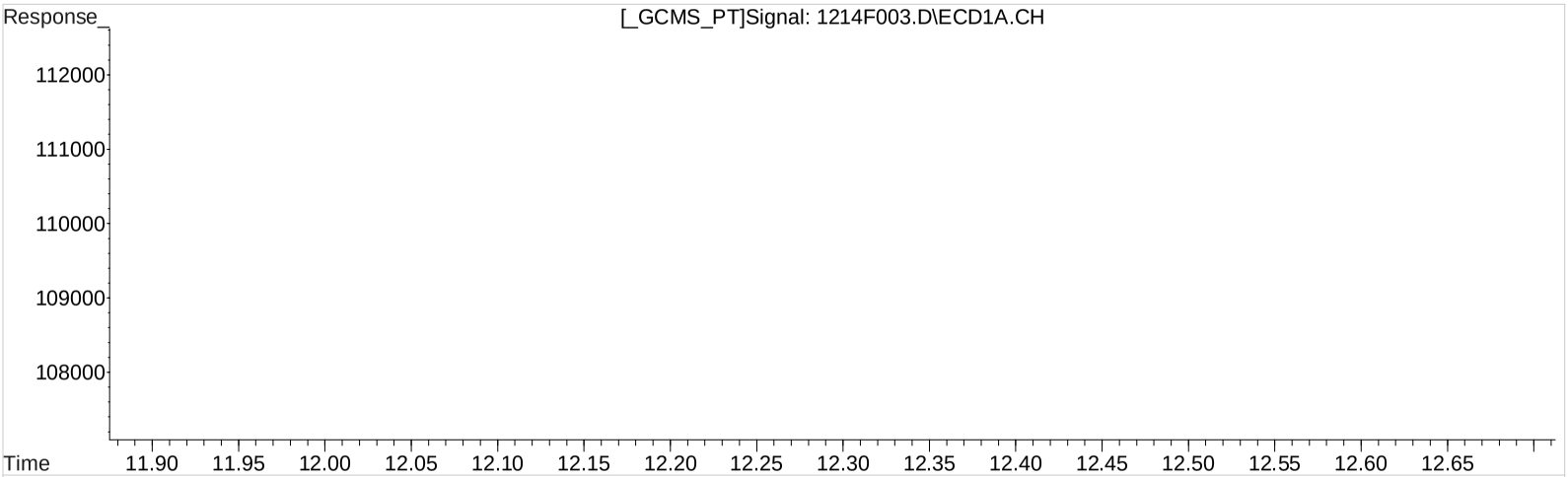
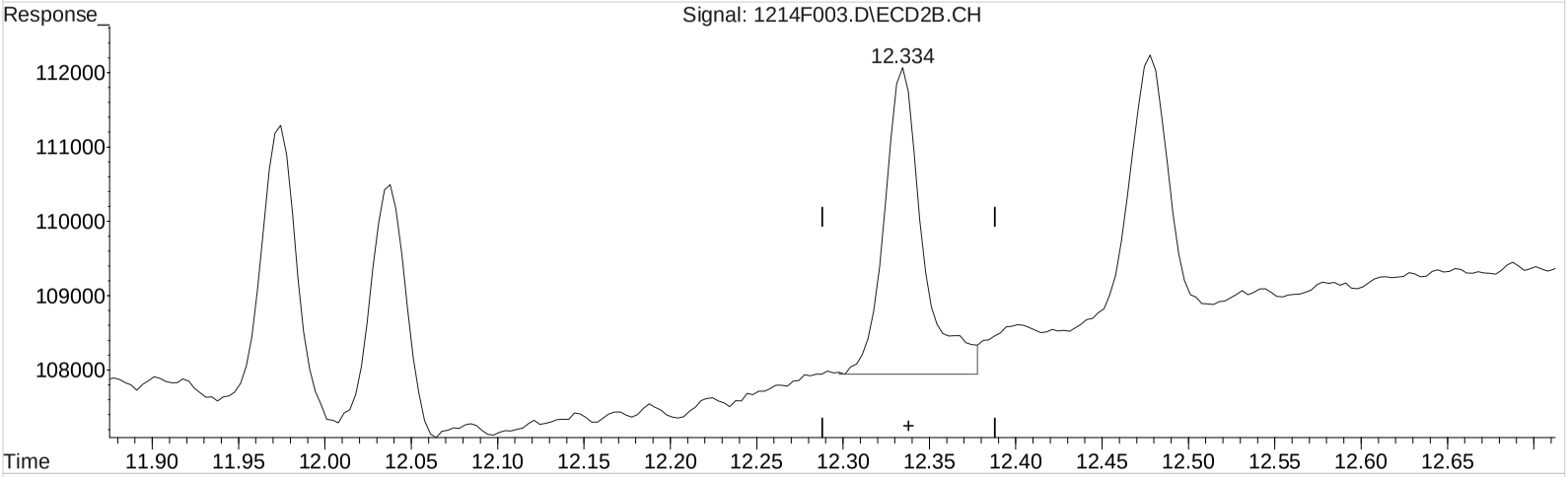
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(16) 4,4'-DDE

13.596min 0.155 ug/L

response 2398

Manual Integration:

Before

12/16/18

(16) 4,4'-DDE #2

12.334min 0.214 ug/L

response 6368

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
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Volume Inj. :
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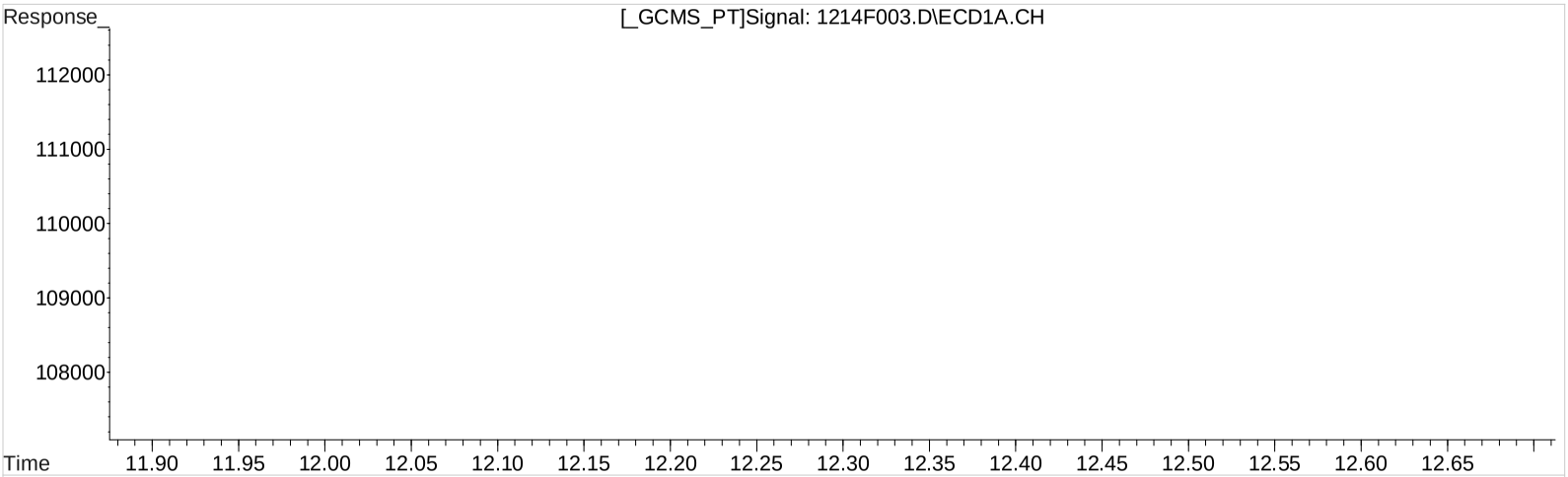
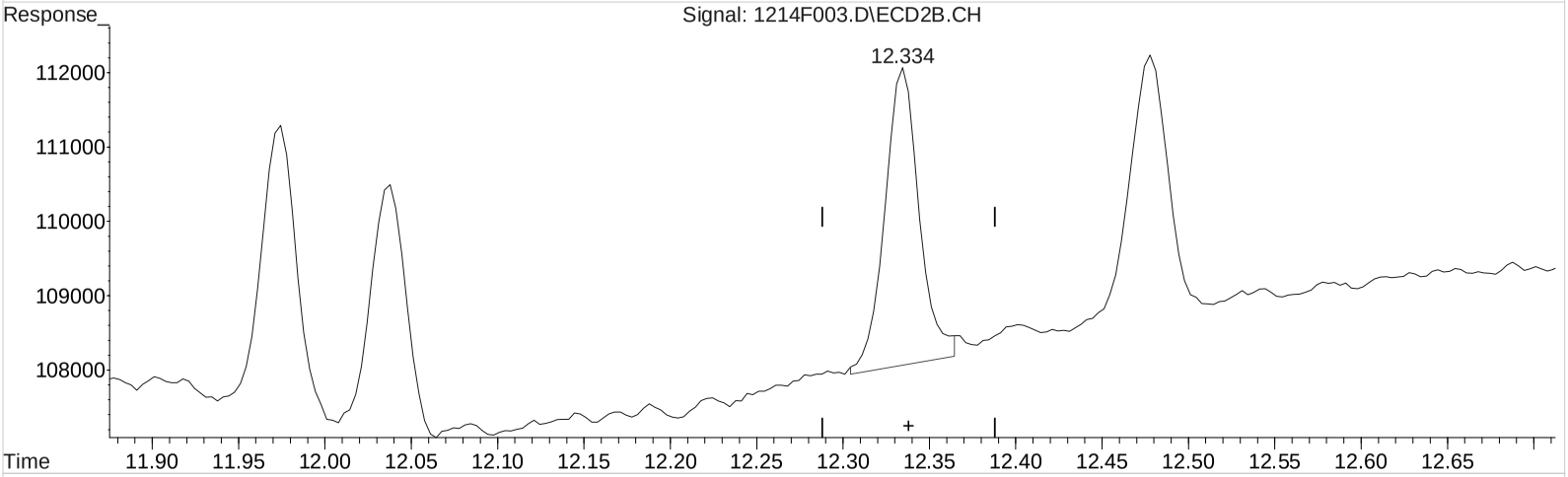
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(16) 4,4'-DDE

13.596min 0.155 ug/L

response 2398

Manual Integration:

After

Baseline/Shoulder

12/16/18

(16) 4,4'-DDE #2

12.334min 0.187 ug/L m

response 5568

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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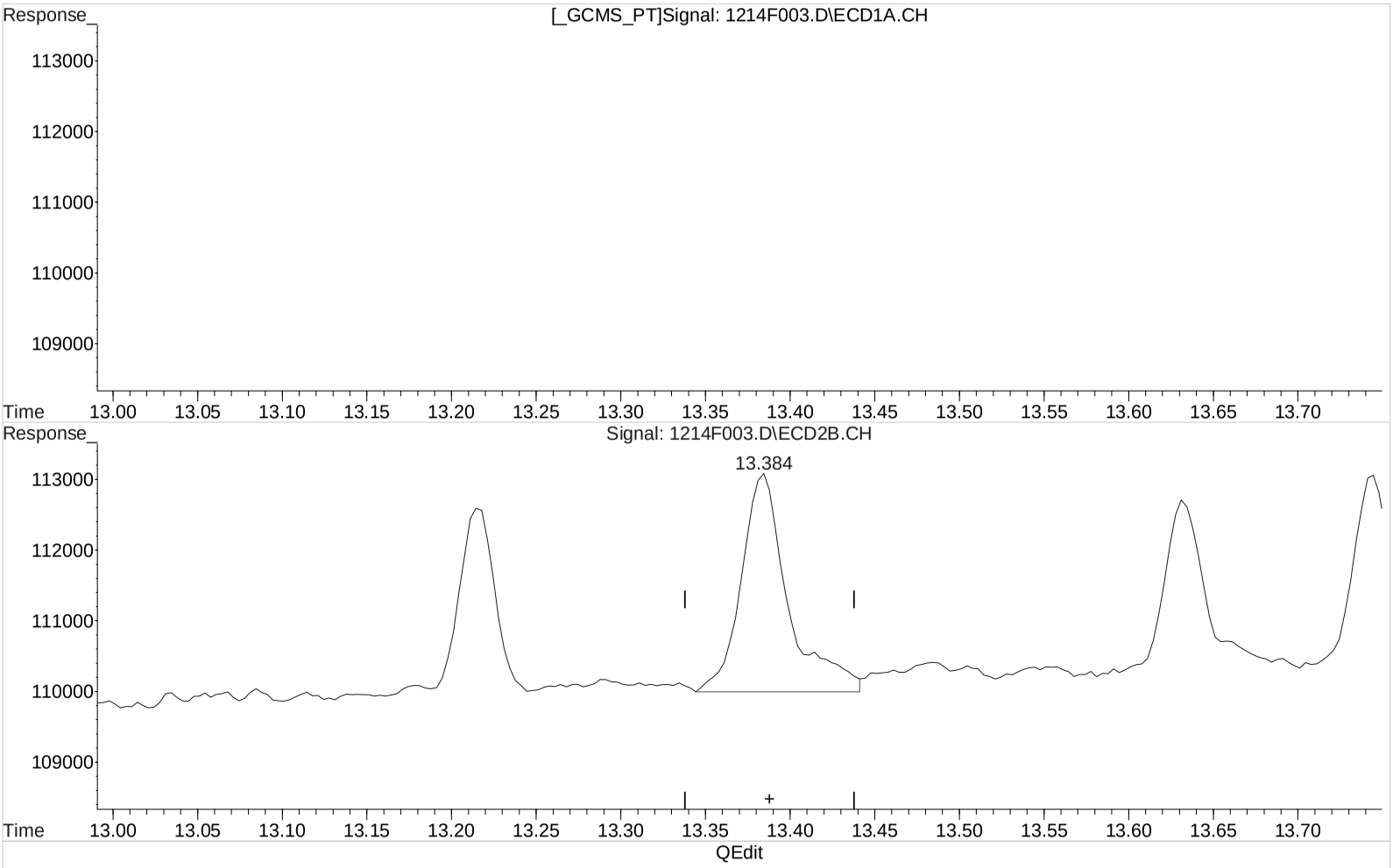
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(18) Endosulfan II

14.600min 0.068 ug/L

response 2422

Manual Integration:

Before

12/16/18

(18) Endosulfan II #2

13.384min 0.236 ug/L

response 5944

(+) = Expected Retention Time

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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Volume Inj. :
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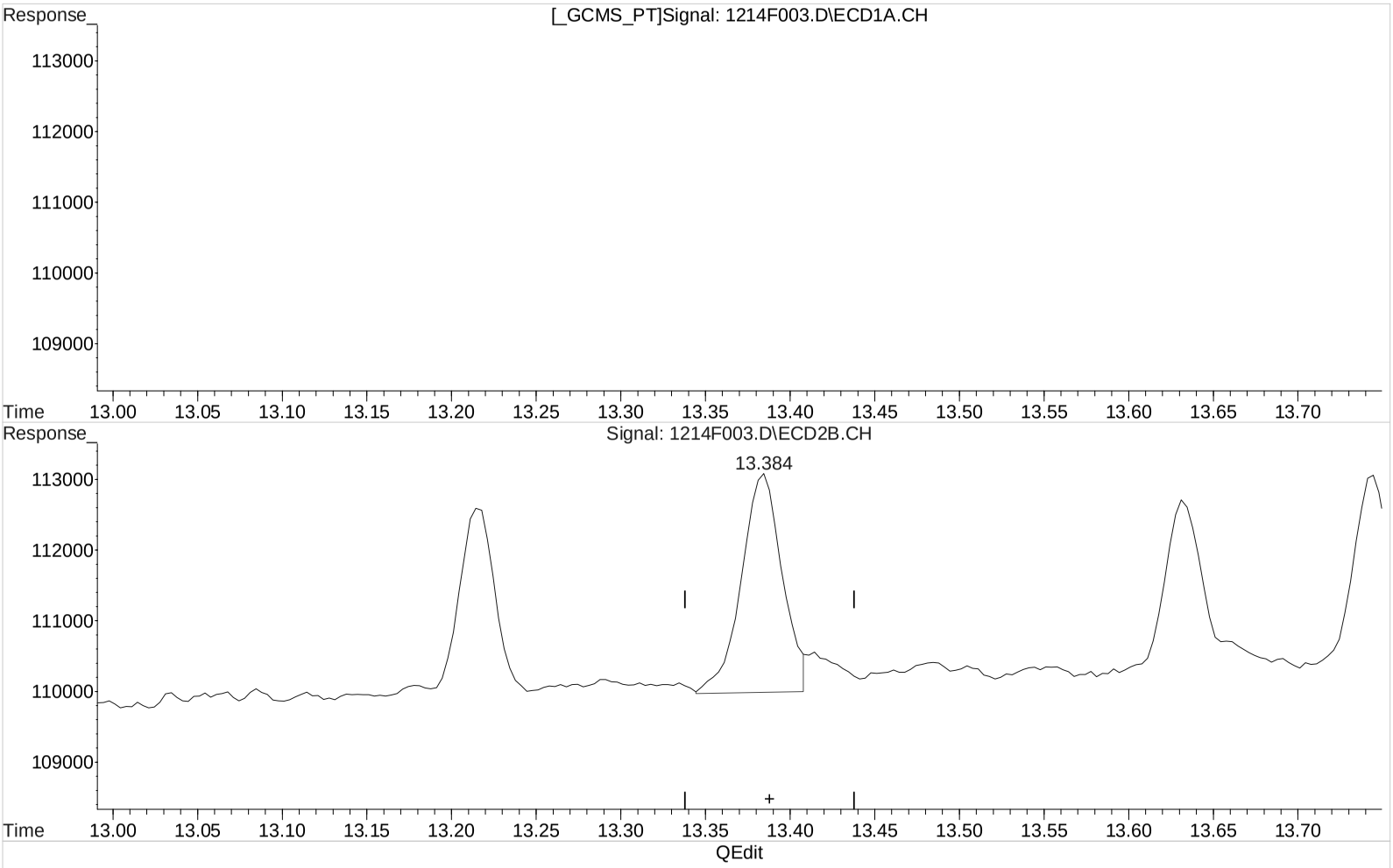
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(18) Endosulfan II

14.600min 0.068 ug/L

response 2422

Manual Integration:

After

Baseline/Shoulder

12/16/18

(18) Endosulfan II #2

13.384min 0.207 ug/L m

response 5210

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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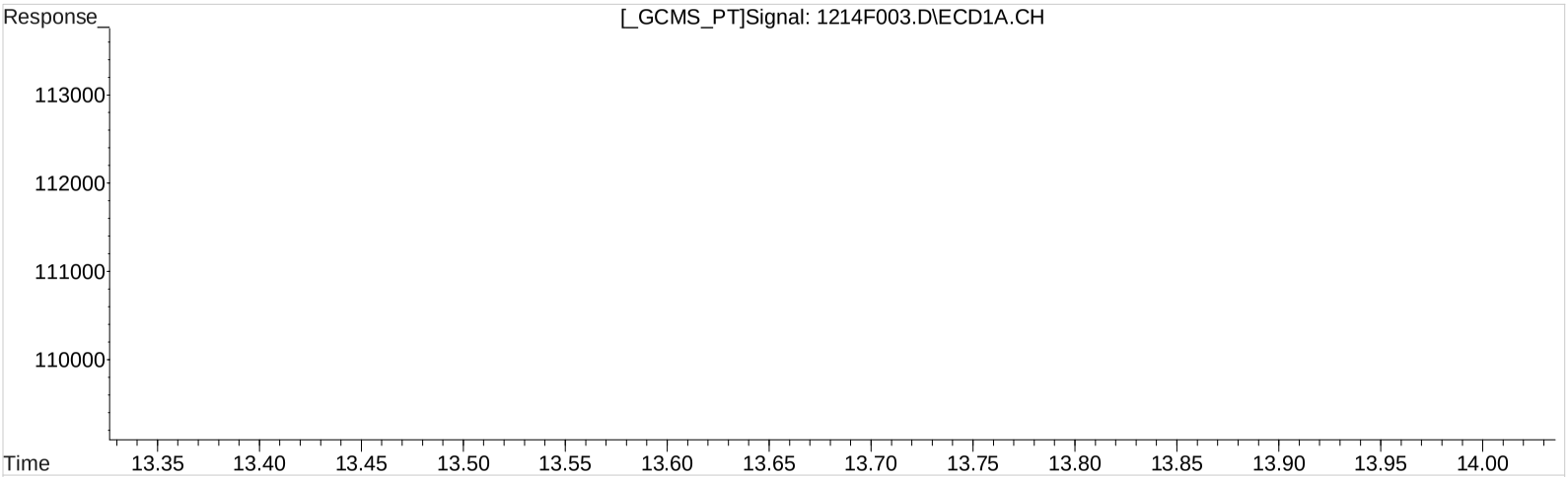
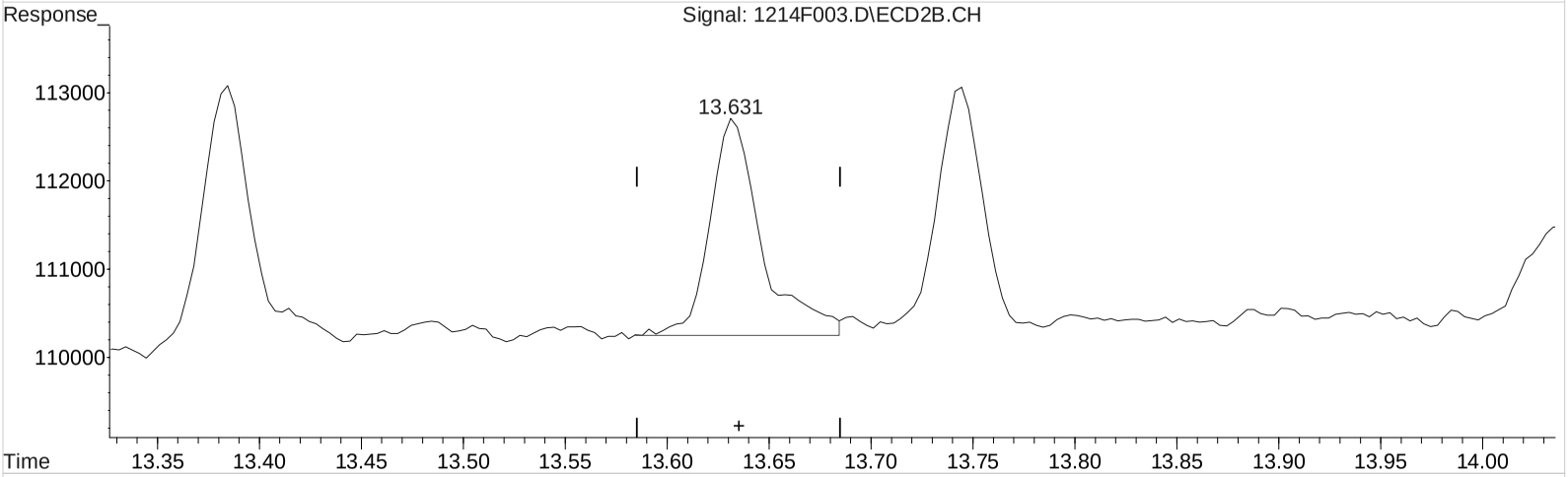
Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(22) 4,4'-DDT

14.930min 0.123 ug/L

response 1119

Manual Integration:

Before

12/16/18

(22) 4,4'-DDT #2

13.631min 0.107 ug/L

response 4355

(+) = Expected Retention Time

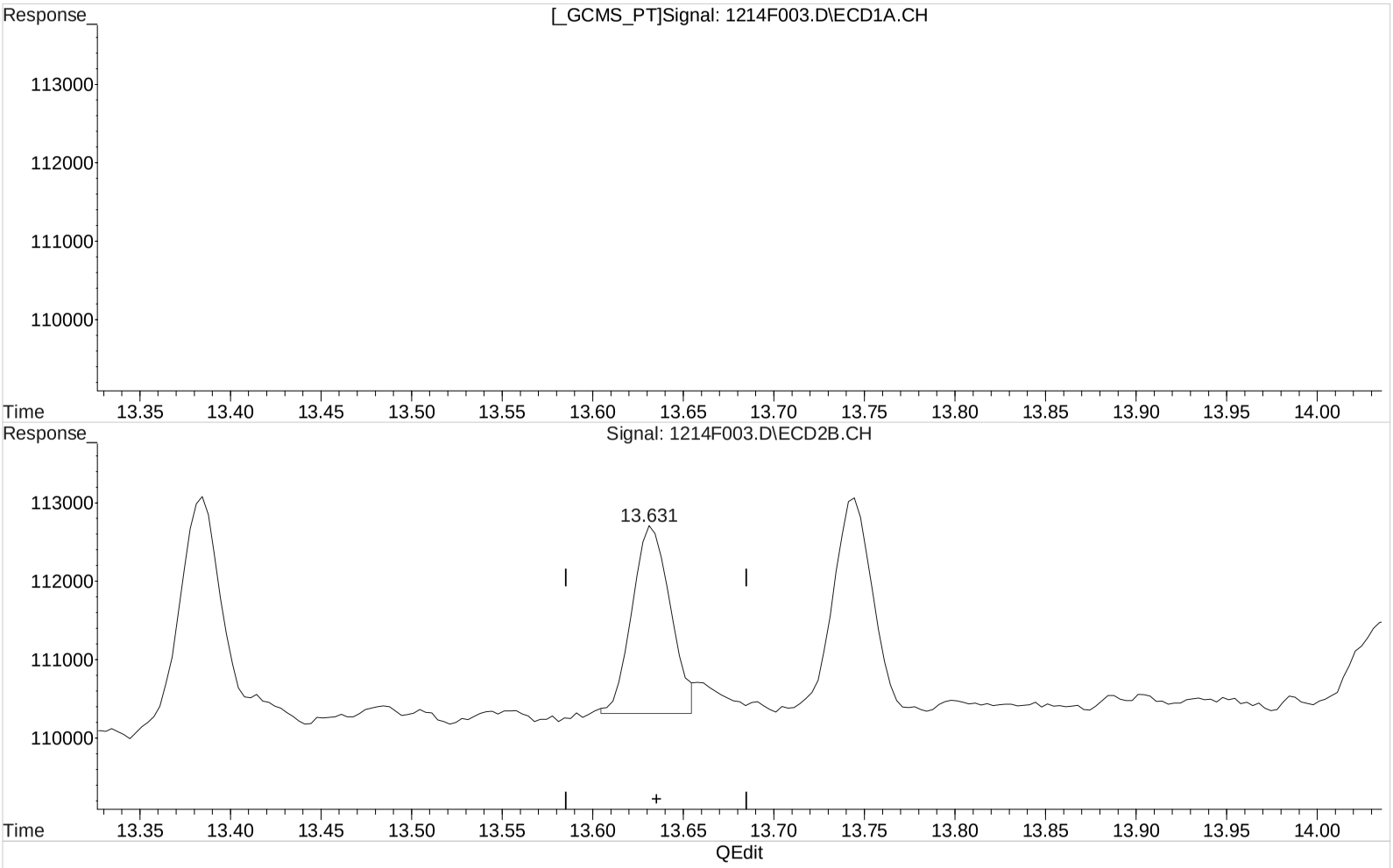
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(22) 4,4'-DDT

14.930min 0.123 ug/L

response 1119

Manual Integration:

After

Baseline/Shoulder

12/16/18

(22) 4,4'-DDT #2

13.631min 0.066 ug/L m

response 3527

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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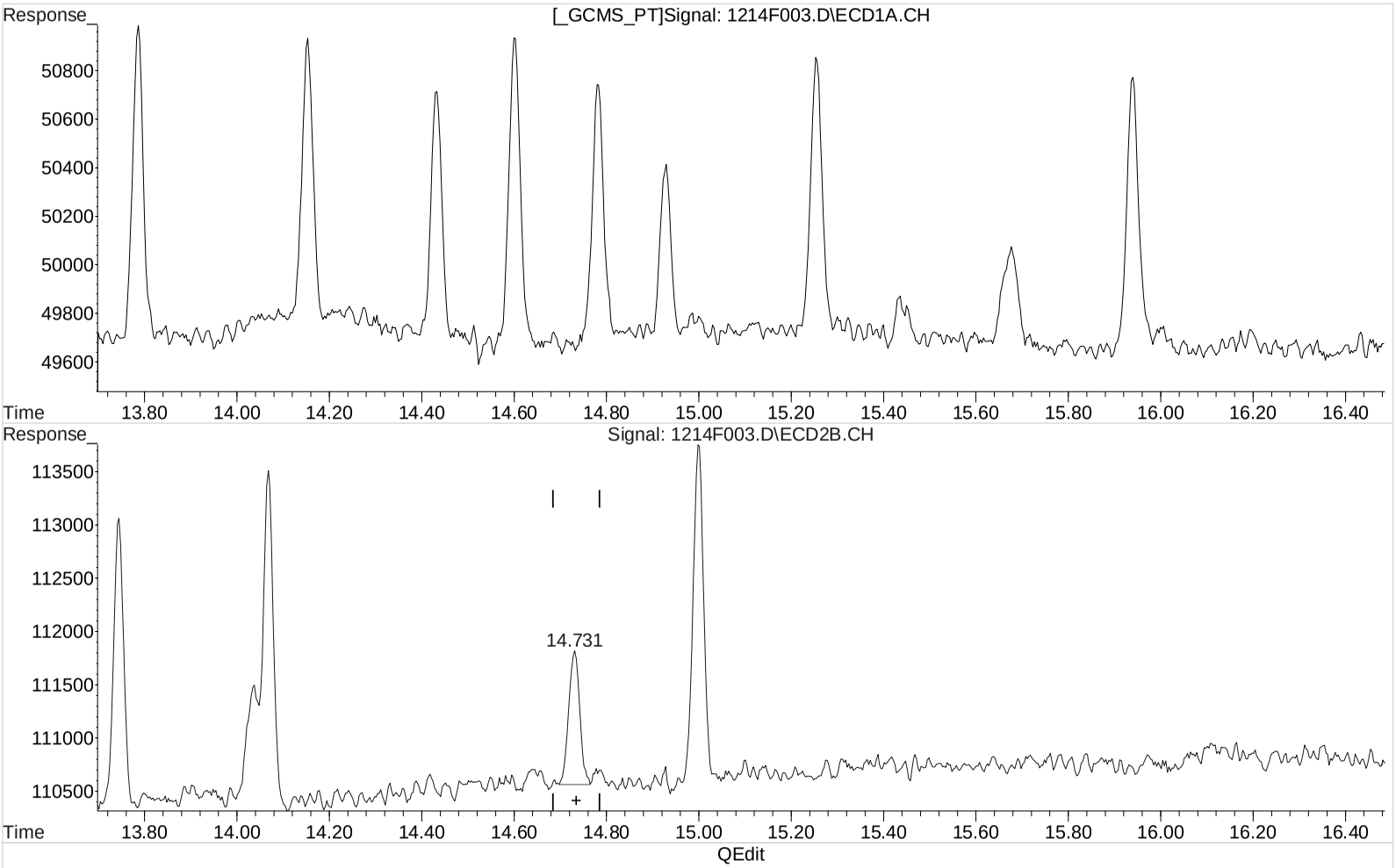
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(24) Methoxychlor

0.000min 0.000 ug/L

response 0

Manual Integration:

Before

12/16/18

(24) Methoxychlor #2

14.731min 0.166 ug/L

response 2087

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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Quant Time: Dec 16 12:55:16 2018
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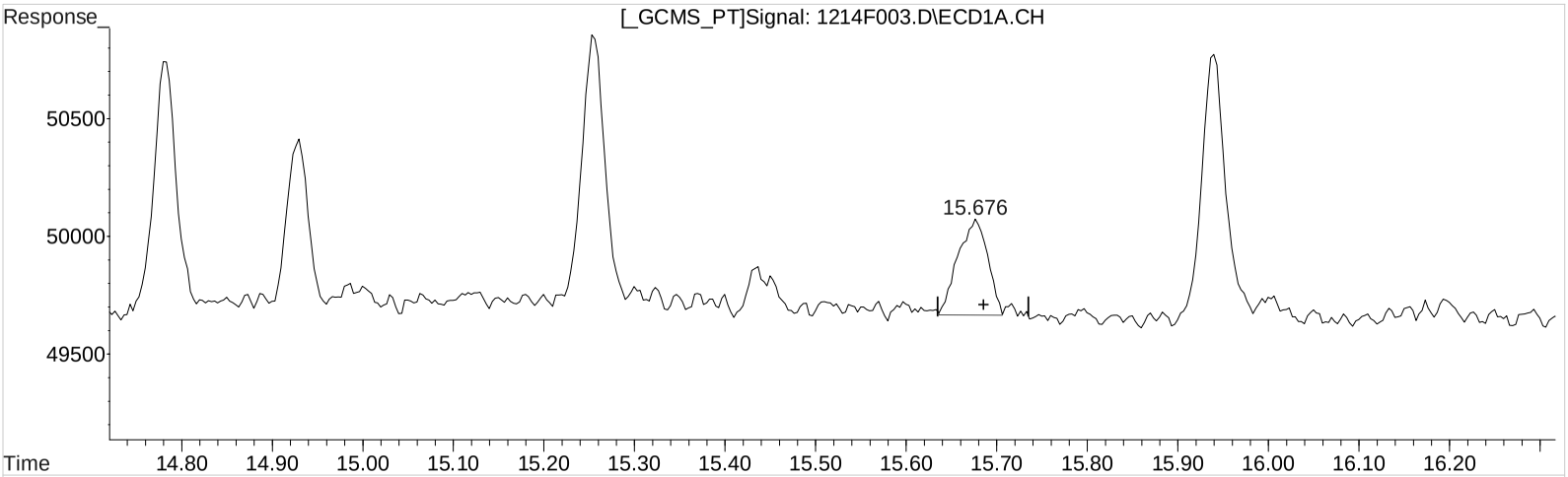
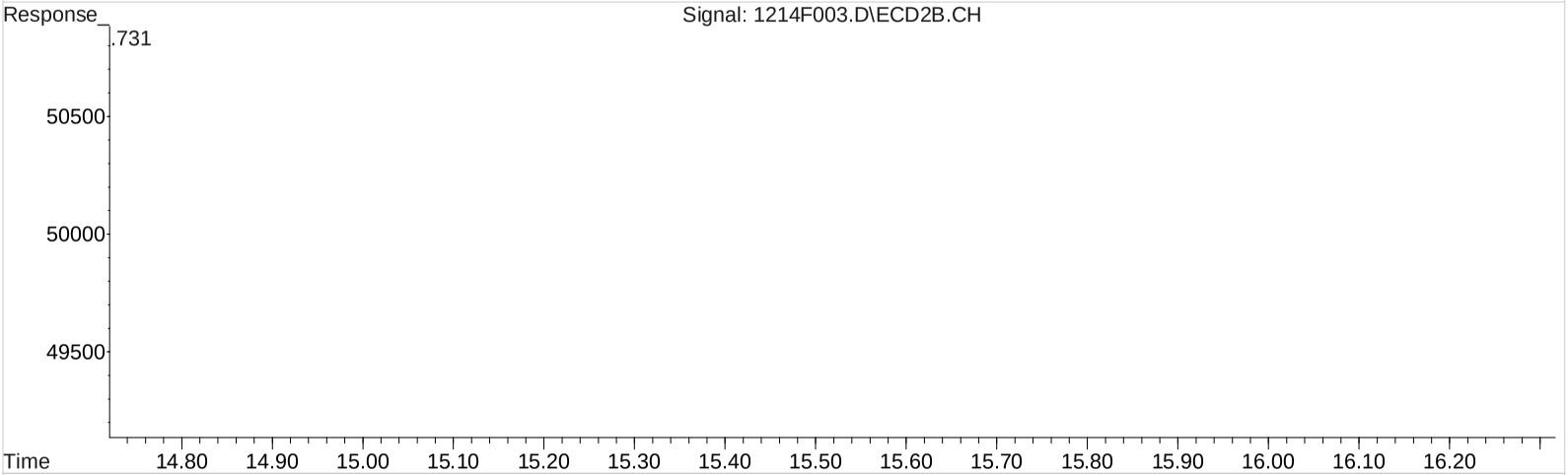
Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(24) Methoxychlor

15.676min -0.099 ug/L m

response 928

Manual Integration:

After

Missed Peak

12/16/18

(24) Methoxychlor #2

14.731min 0.166 ug/L

response 2087

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
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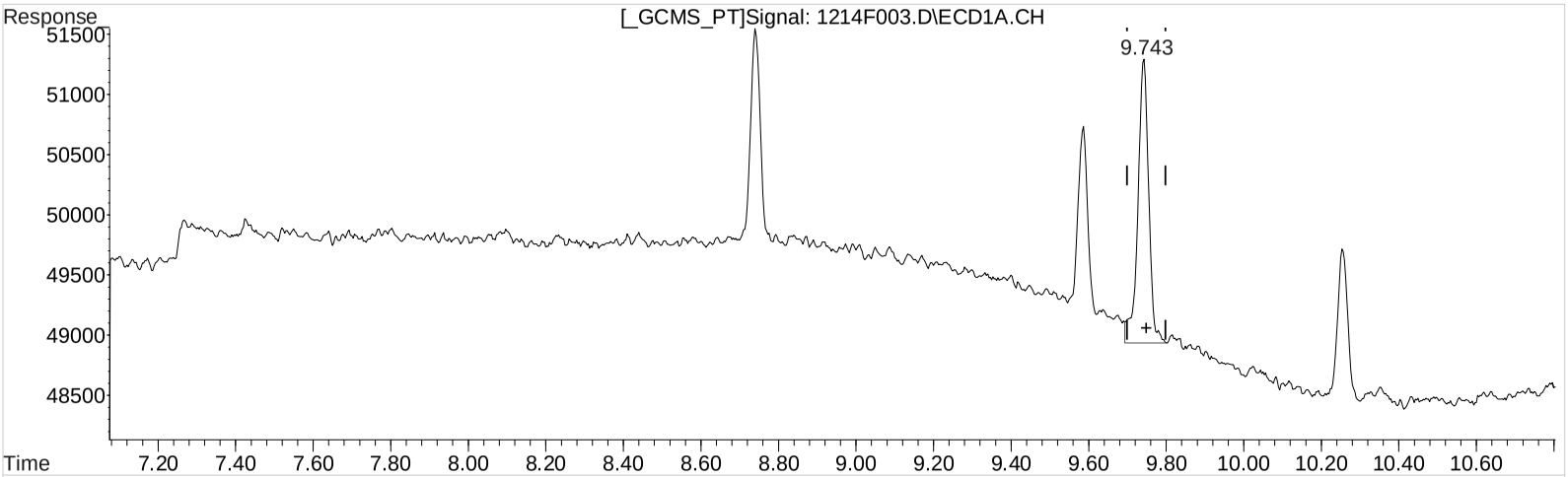
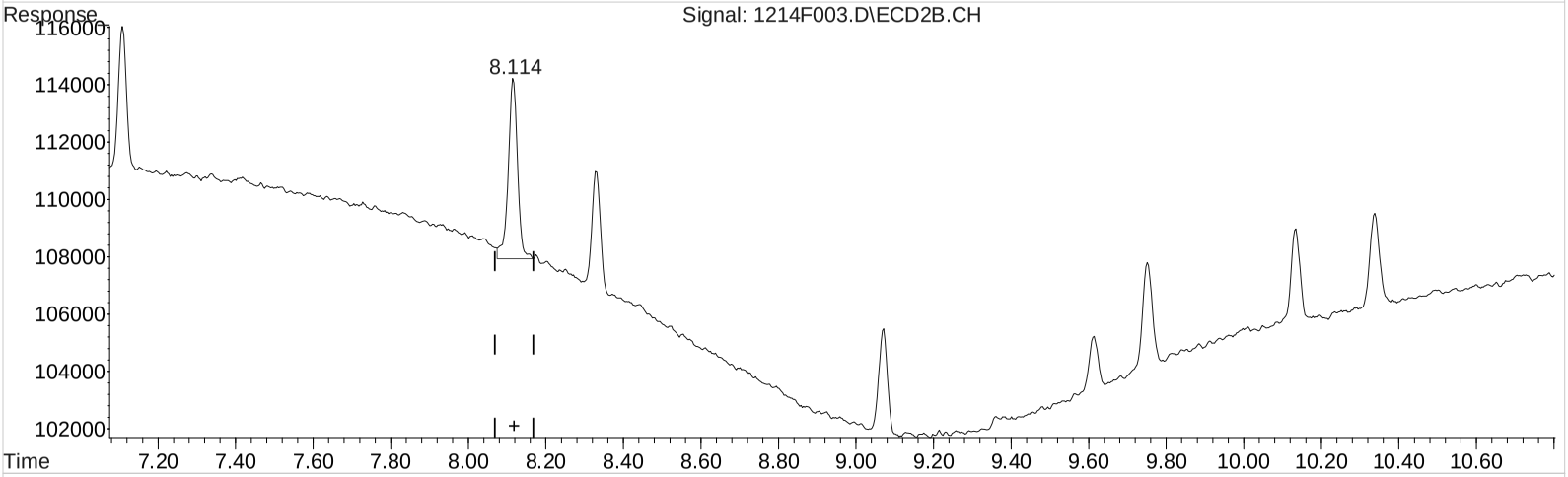
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.743min 0.036 ug/L

response 4573

Manual Integration:

Before

12/16/18

(4) Hexachlorobenzene #2

8.114min 0.225 ug/L

response 10416

(+) = Expected Retention Time

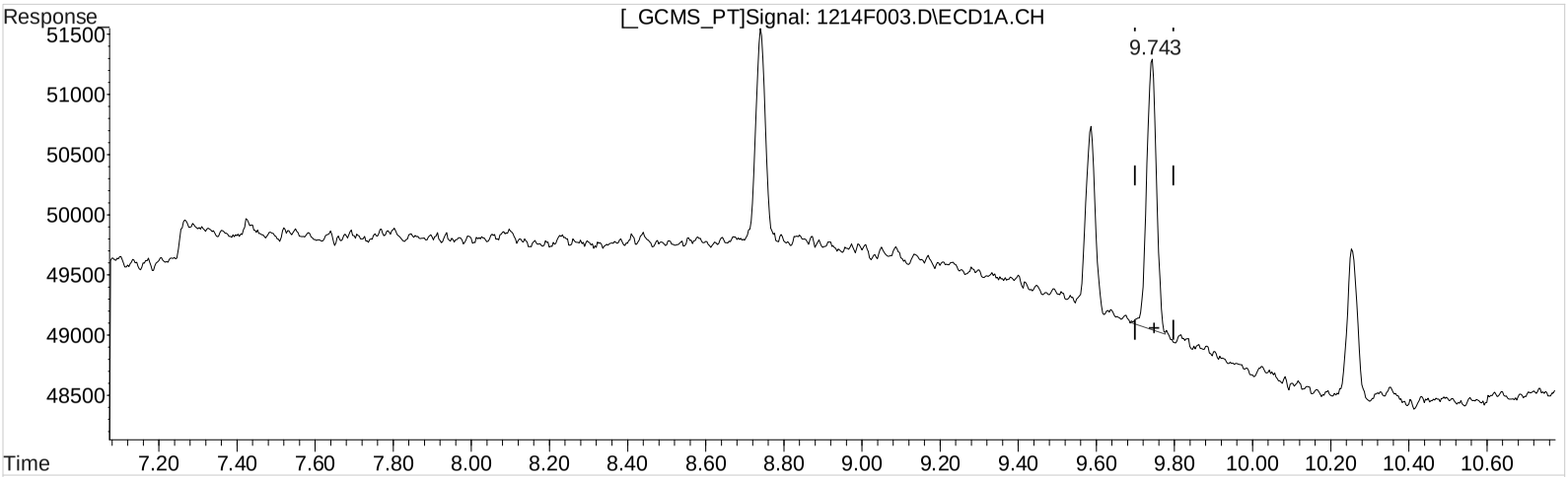
Quantitation Report (Qedit)

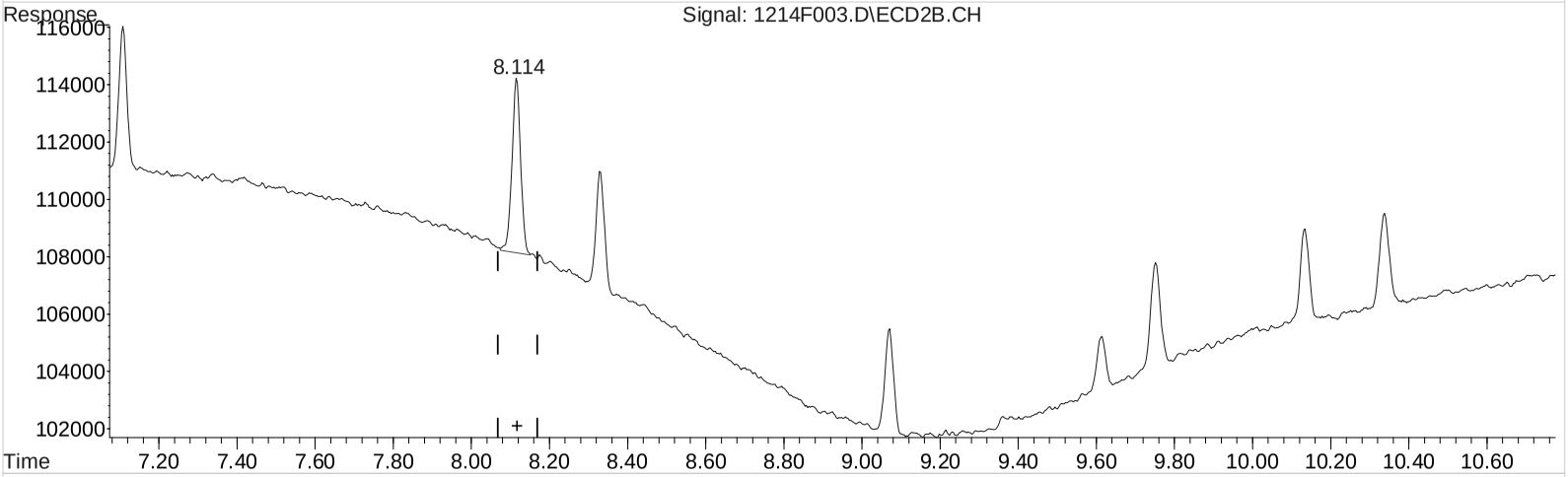
1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.743min 0.006 ug/L m

response 3921

Manual Integration:

After

Baseline/Shoulder

12/16/18

(4) Hexachlorobenzene #2

8.114min 0.202 ug/L m

response 9344

(+) = Expected Retention Time

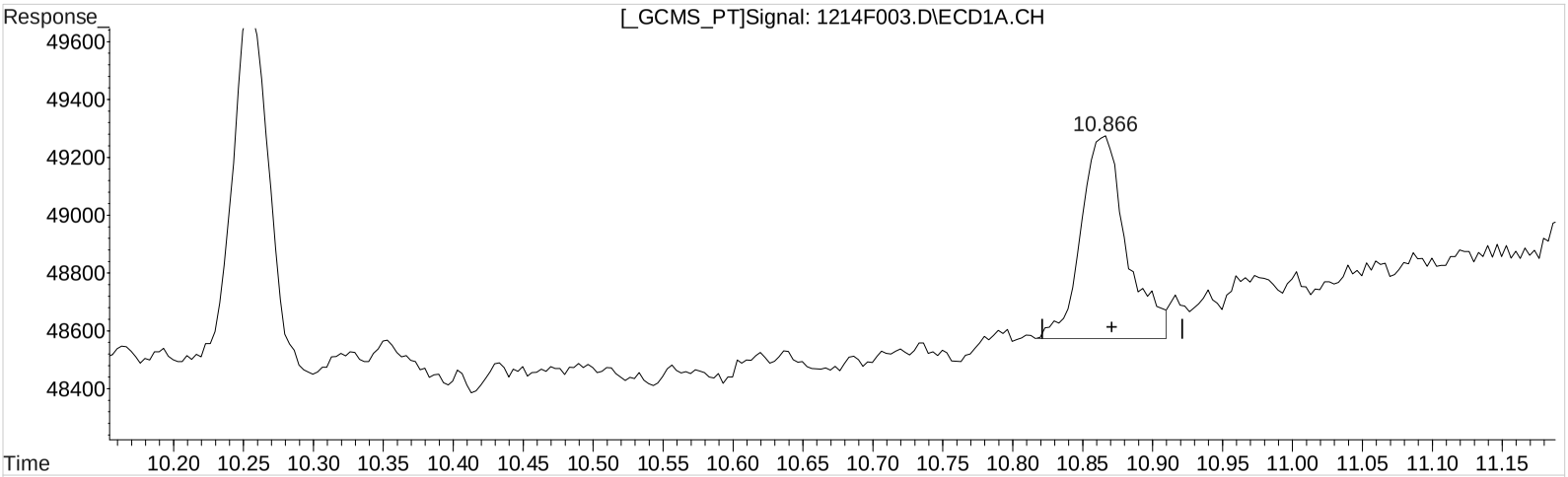
Quantitation Report (Qedit)

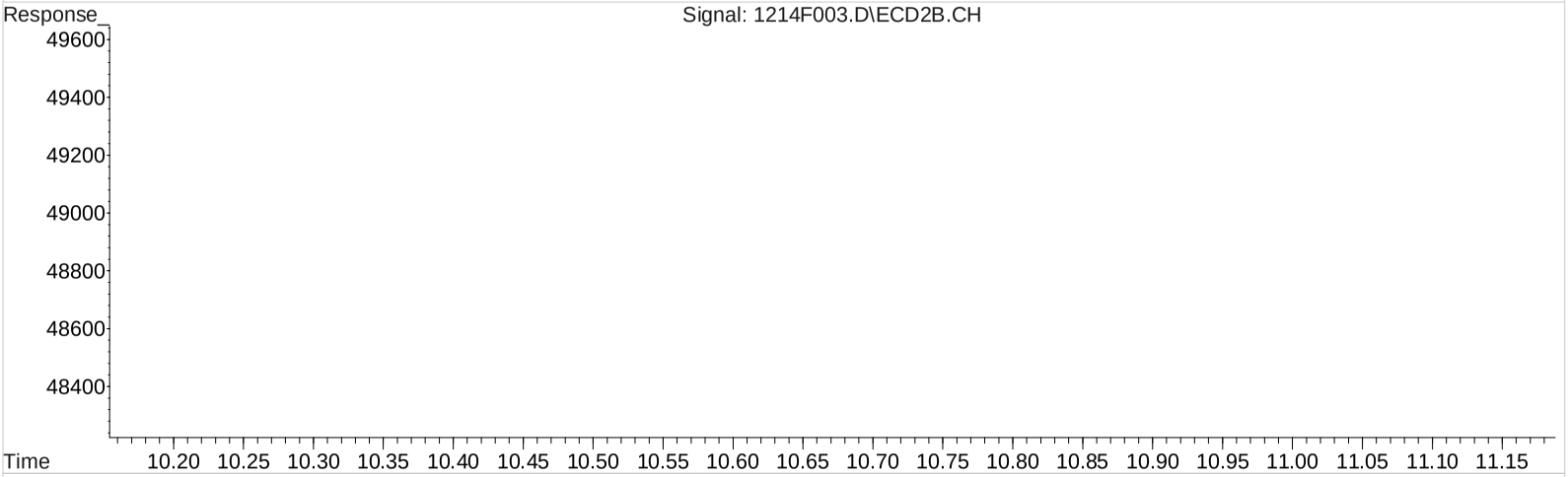
1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.866min 0.212 ug/L

response 1588

Manual Integration:

Before

12/16/18

(5) beta-BHC #2

9.614min 0.223 ug/L

response 3685

(+) = Expected Retention Time

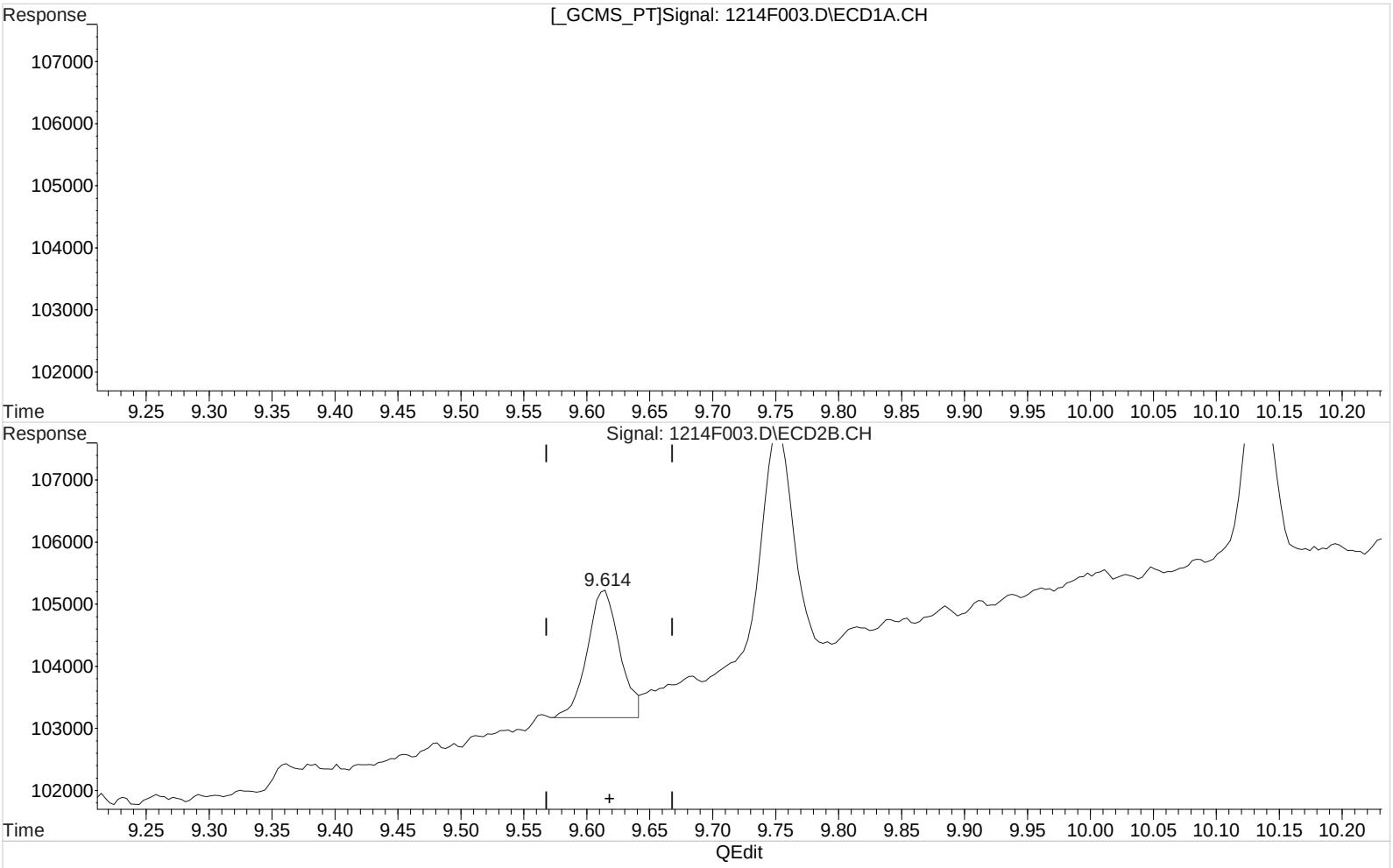
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(5) beta-BHC

10.866min 0.181 ug/L m

response 1356

Manual Integration:

Before

12/16/18

(5) beta-BHC #2

9.614min 0.223 ug/L

response 3685

(+) = Expected Retention Time

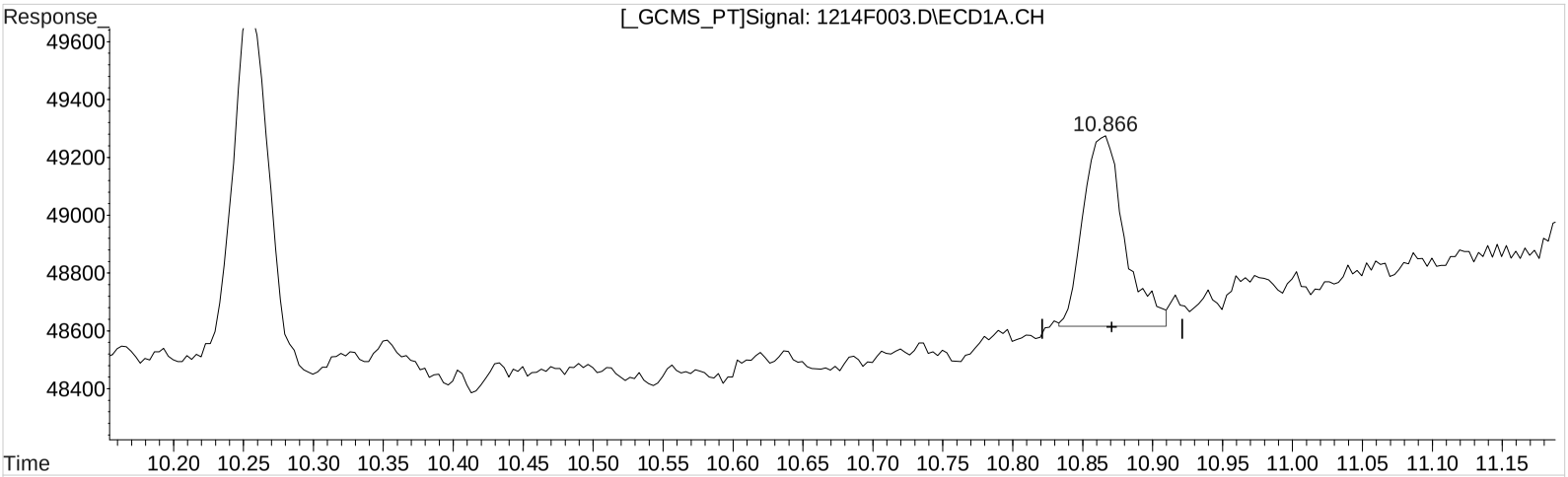
Quantitation Report (Qedit)

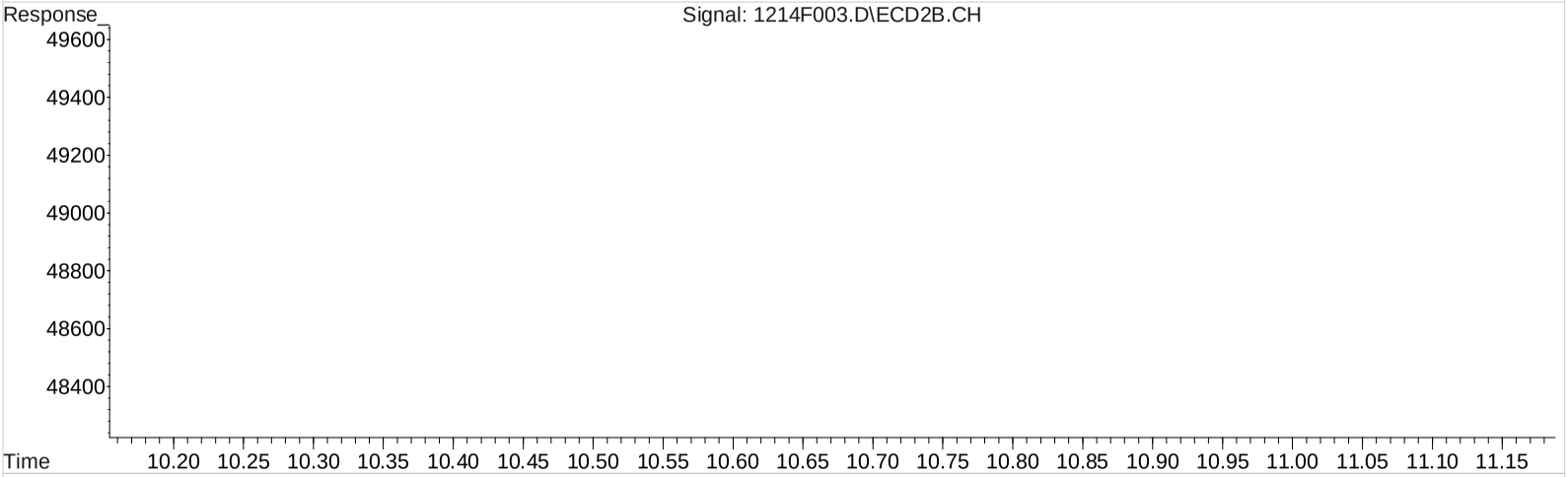
1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.866min 0.181 ug/L m

response 1356

Manual Integration:

After

Baseline/Shoulder

12/16/18

(5) beta-BHC #2

9.614min 0.223 ug/L

response 3685

(+) = Expected Retention Time

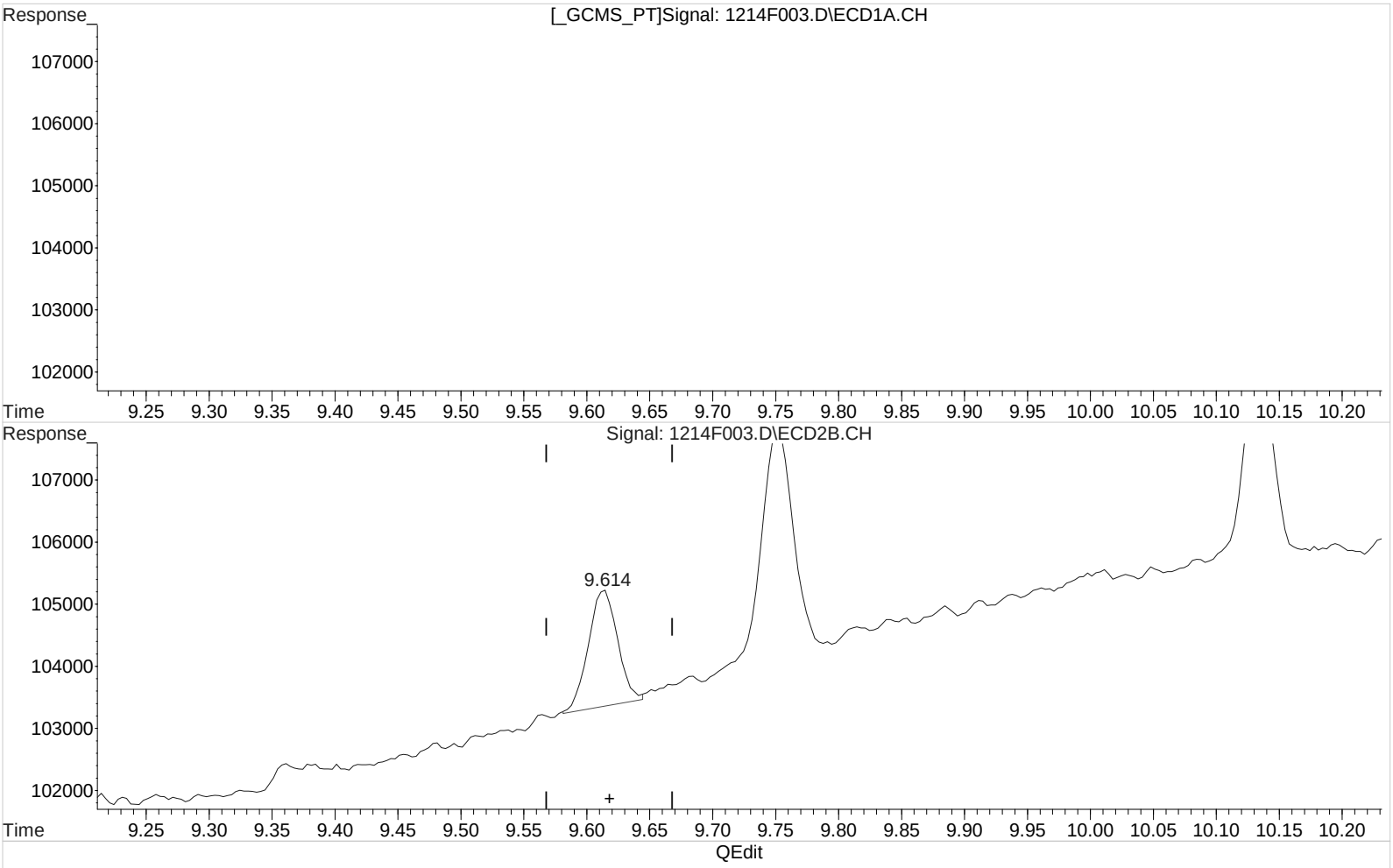
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(5) beta-BHC

10.866min 0.181 ug/L m

response 1356

Manual Integration:

After

Baseline/Shoulder

12/16/18

(5) beta-BHC #2

9.614min 0.185 ug/L m

response 3048

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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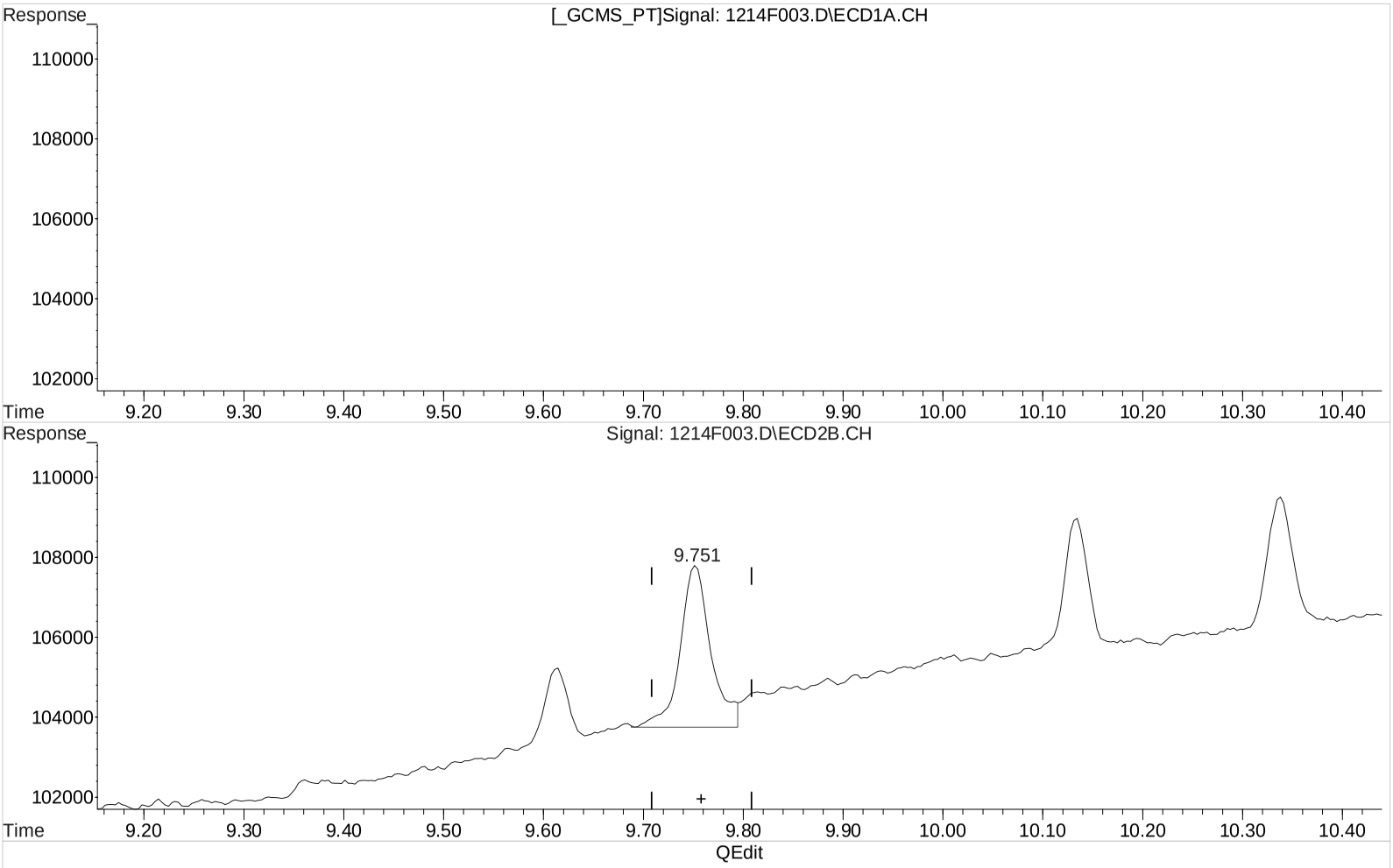
Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(8) Heptachlor

11.446min -1.000 ug/L

response 2183

Manual Integration:

Before

12/16/18

(8) Heptachlor #2

9.751min 0.263 ug/L

response 8649

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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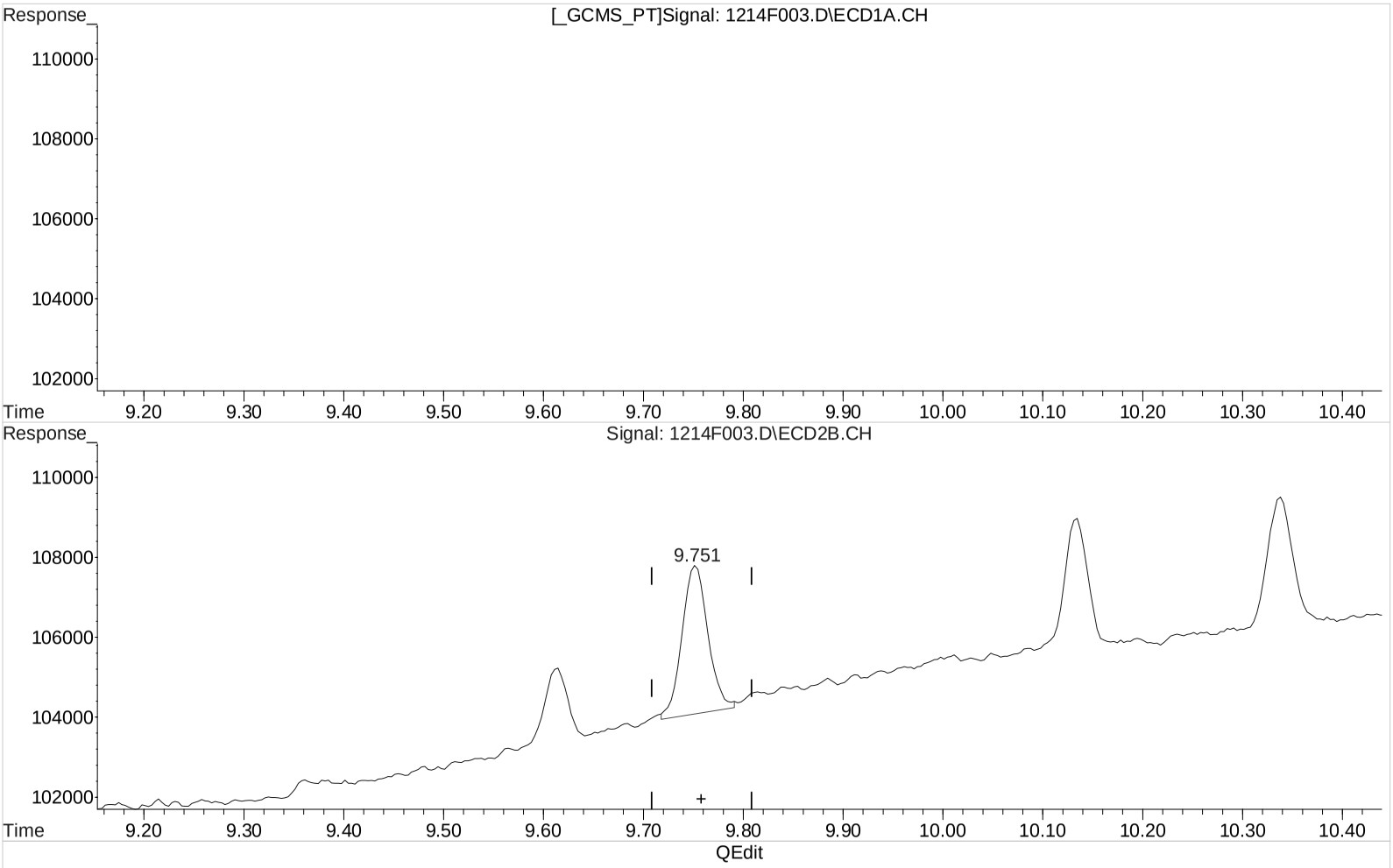
Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(8) Heptachlor

11.446min -1.000 ug/L

response 2183

Manual Integration:

After

Baseline/Shoulder

12/16/18

(8) Heptachlor #2

9.751min 0.204 ug/L m

response 6719

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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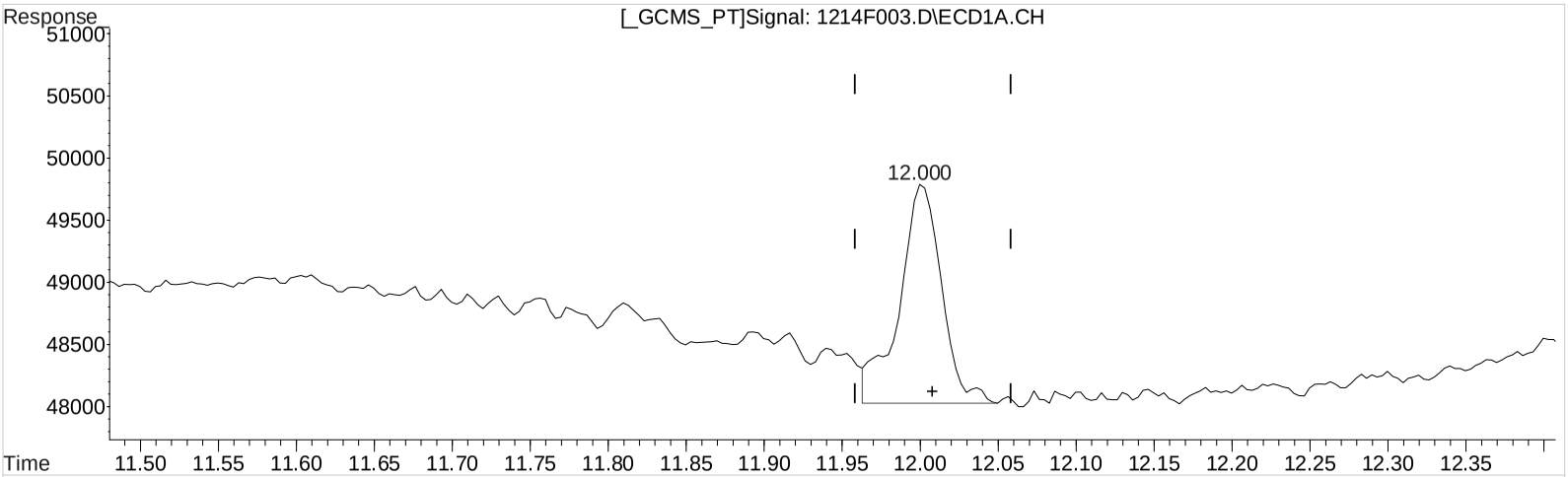
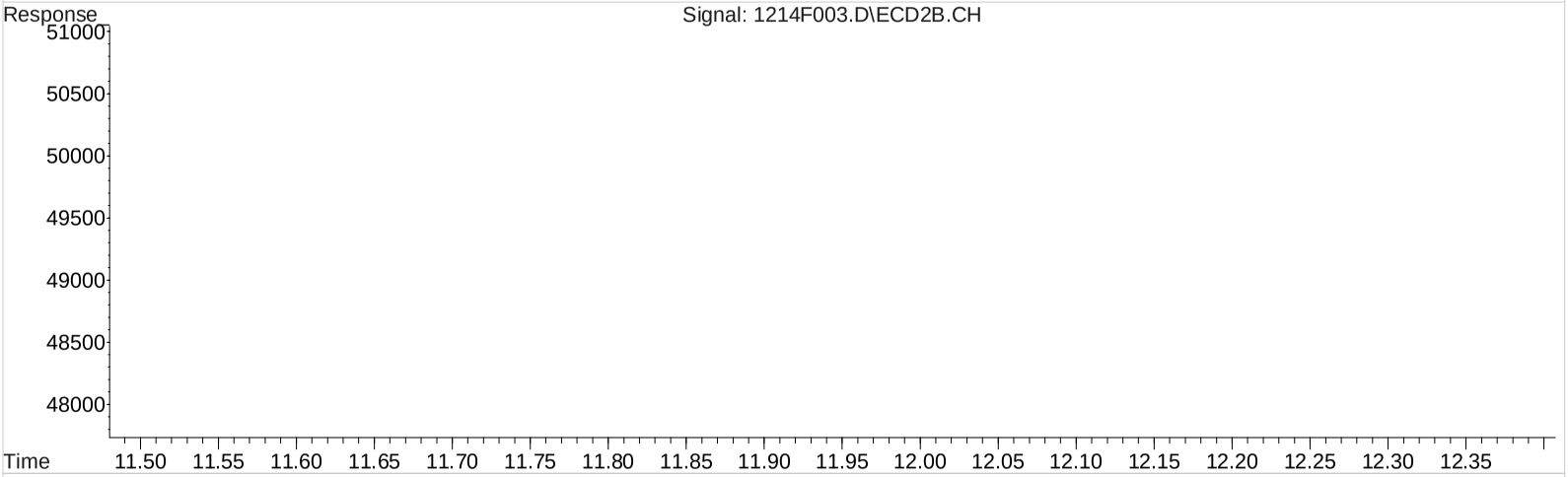
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(9) Aldrin

12.000min 0.222 ug/L

response 3304

Manual Integration:

Before

12/16/18

(9) Aldrin #2

10.338min 0.200 ug/L

response 6183

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
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Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
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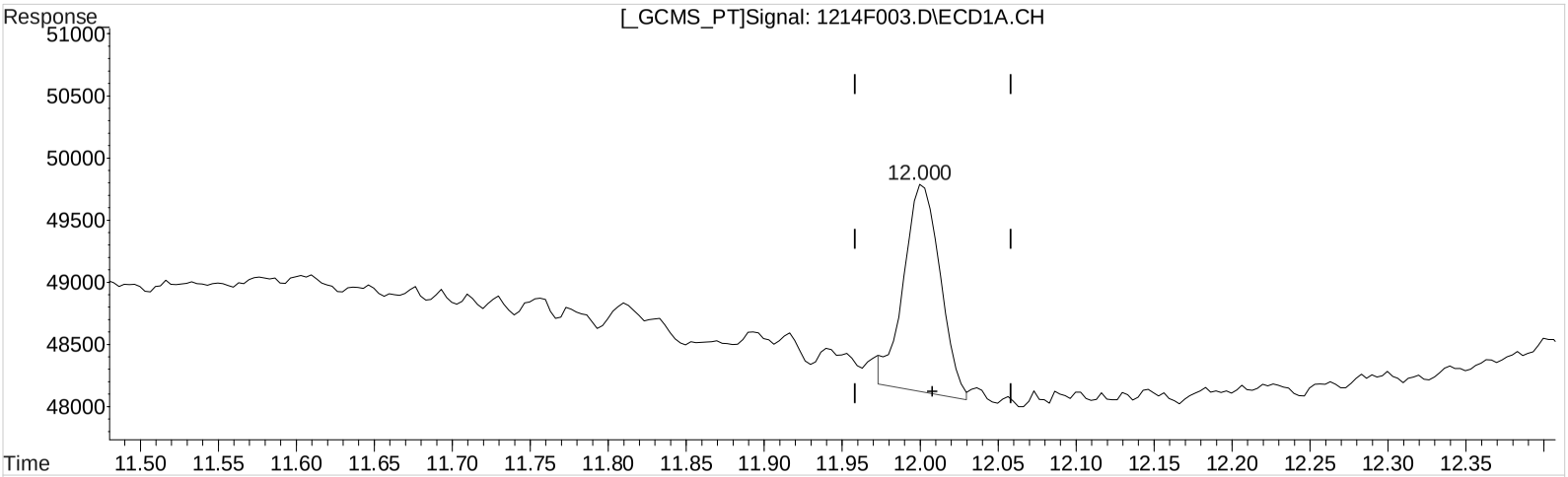
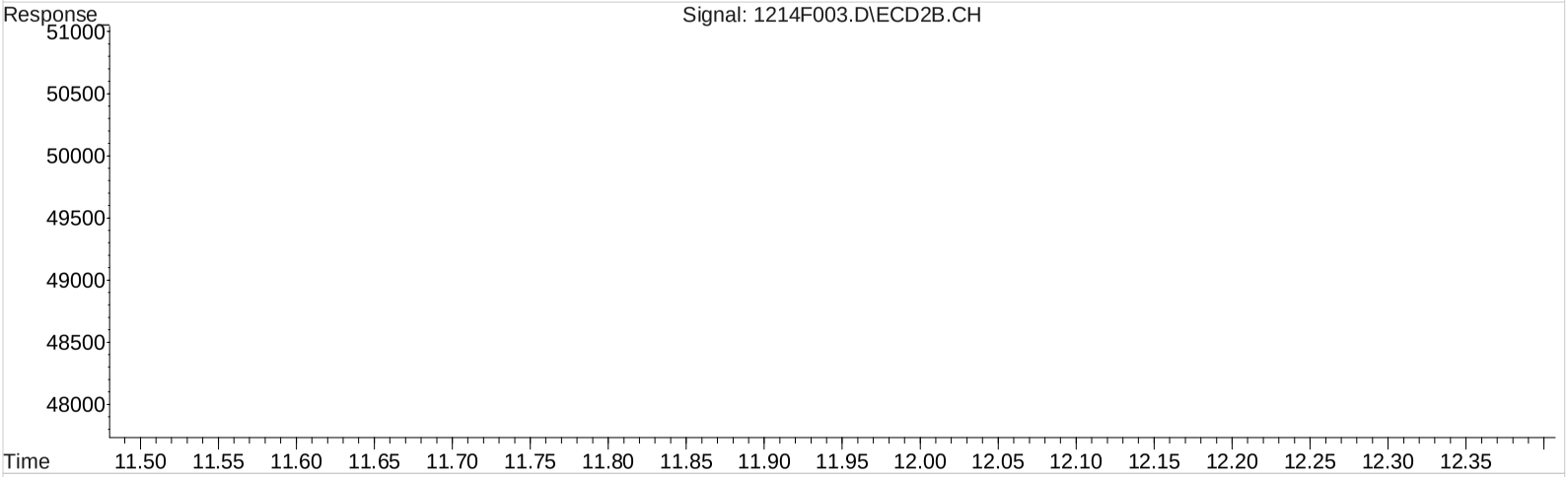
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(9) Aldrin

12.000min 0.182 ug/L m

response 2702

Manual Integration:

After

Baseline/Shoulder

12/16/18

(9) Aldrin #2

10.338min 0.200 ug/L

response 6183

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 13:00:37 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.012	5.344	906313	2535786	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.739	7.107	8060	19207	0.325	0.462 #
28) s	Decachlor...	18.432	16.877	7709	16445	0.375	0.472 #
	Target Compounds						
3)	alpha-BHC	9.586	8.331	6975	17088	0.434	0.482
4)	Hexachlor...	9.742	8.114	10396	23224	0.281	0.473 #
5)	beta-BHC	10.862	9.611	3451	8202	0.437	0.468
6)	gamma-BHC...	10.256	9.071	5874	15013	0.425	0.461
7)	delta-BHC	11.362	10.134	5756	13829	0.403	0.443
8)	Heptachlor	11.449	9.751	5933	15322	0.267	0.439m#
9)	Aldrin	12.002	10.337	7067	14740	0.451	0.450m
10)	Isodrin	12.532	11.131	5271	12374	0.402	0.435m
11)	Heptachlo...	12.726	11.417	6200	13519	0.436	0.432
12)	gamma-Chl...	13.242	11.831	5845	13342	0.405	0.435m
13)	Endosulfan I	13.366	12.037	5257	12386	0.363	0.432
14)	alpha-Chl...	13.316	11.974	6044	13799	0.389	0.447
15)	Dieldrin	13.786	12.481	5807	13517	0.394	0.462m
16)	4,4'-DDE	13.599	12.334	5859	13264	0.359	0.420m
17)	Endrin	14.156	12.951	5312	12348	0.384	0.428
18)	Endosulfa...	14.606	13.384	5342	11511	0.306	0.430 #
19)	4,4'-DDD	14.432	13.217	4196	9855	0.380	0.422m
20)	Endrin Al...	14.782	13.747	4804	10589	0.385	0.435
21)	Endosulfa...	15.259	14.067	5268	11613	0.400	0.434m
22)	4,4'-DDT	14.932	13.634	3253	9349	0.340	0.328
23)	Endrin Ke...	15.942	15.001	4992	13184	0.383	0.446
24)	Methoxychlor	15.679	14.731	1844	5320	0.076	0.399 #
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

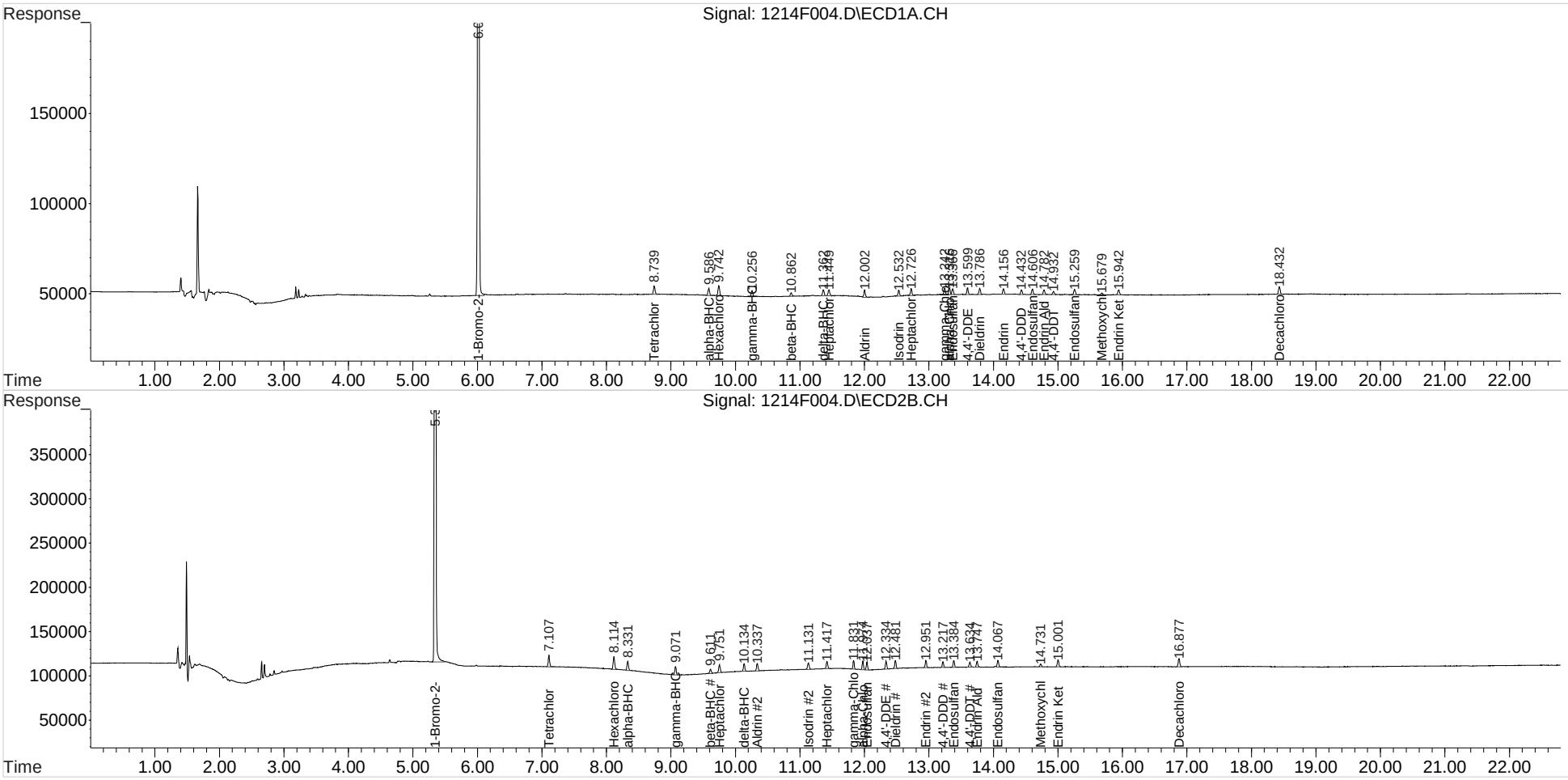
1st SM 12/18/18
2nd UA 12/19/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 13:00:37 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



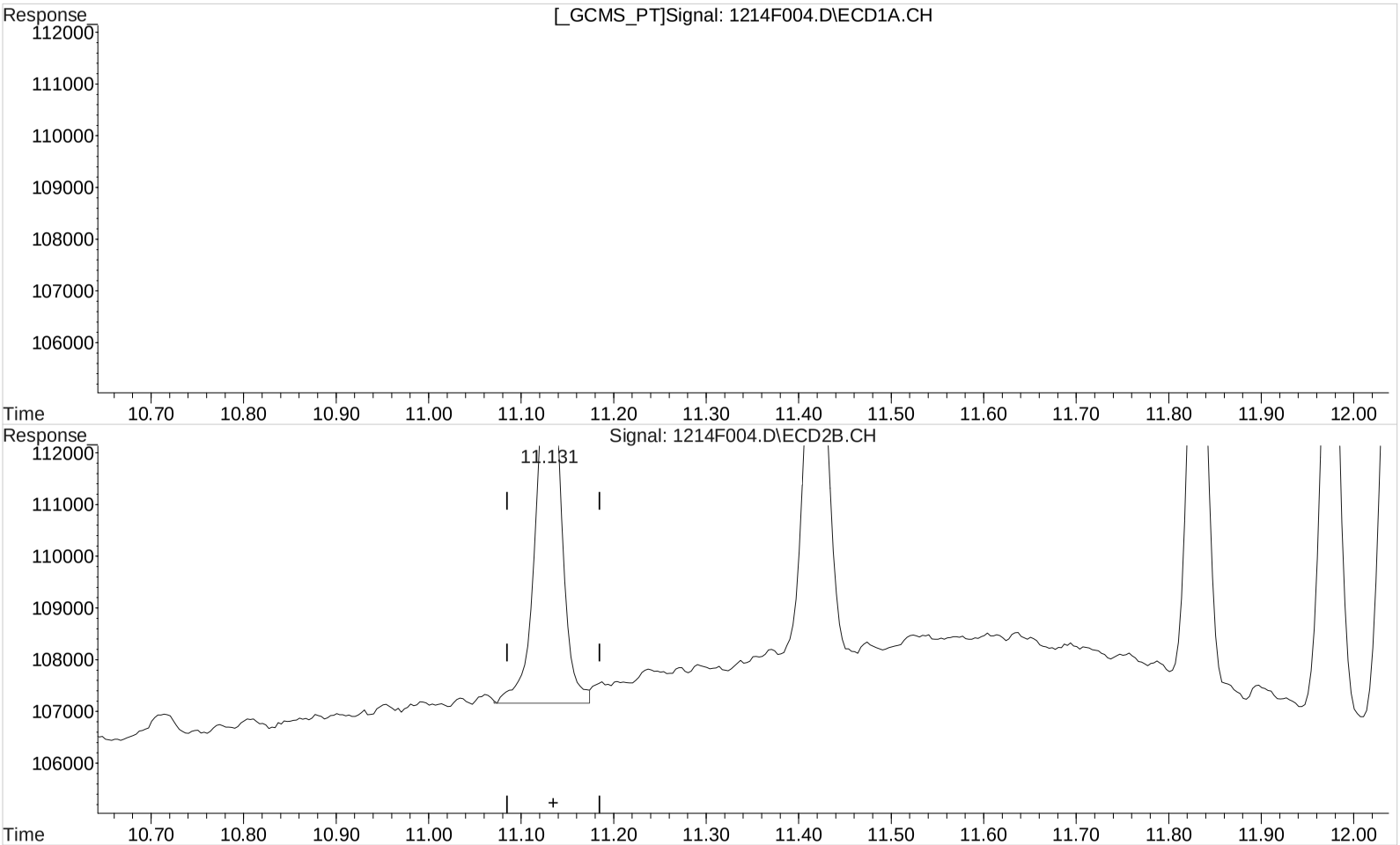
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(10) Isodrin

12.532min 0.402 ug/L

response 5271

Manual Integration:

Before

12/16/18

(10) Isodrin #2

11.131min 0.476 ug/L

response 13561

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
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Integration File signal 2: RTEINT2.P
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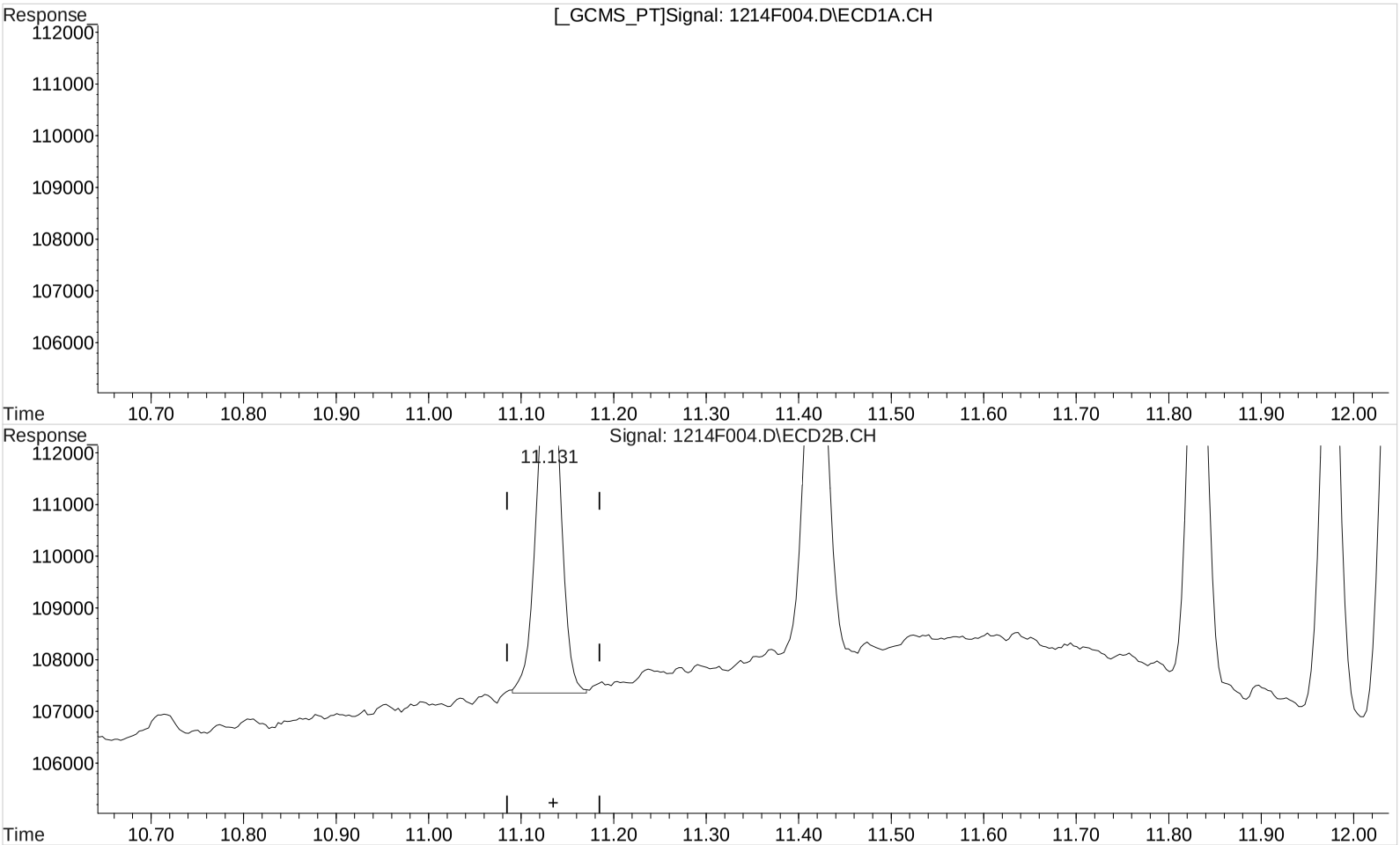
Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(10) Isodrin

12.532min 0.402 ug/L

response 5271

Manual Integration:

After

Baseline/Shoulder

12/16/18

(10) Isodrin #2

11.131min 0.435 ug/L m

response 12374

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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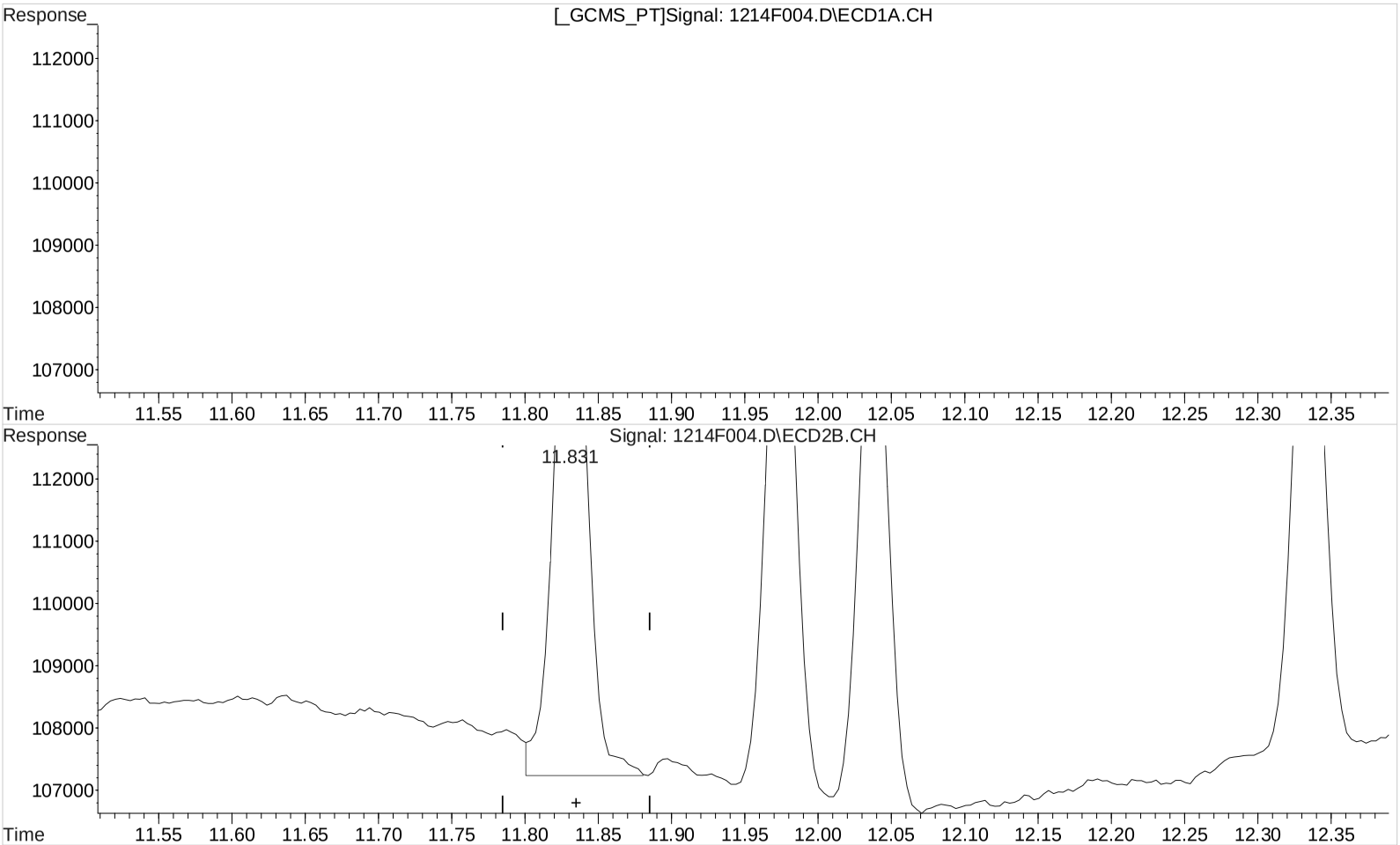
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(12) gamma-Chlordane

13.242min 0.405 ug/L

response 5845

Manual Integration:

Before

12/16/18

(12) gamma-Chlordane #2

11.831min 0.479 ug/L

response 14703

(+) = Expected Retention Time

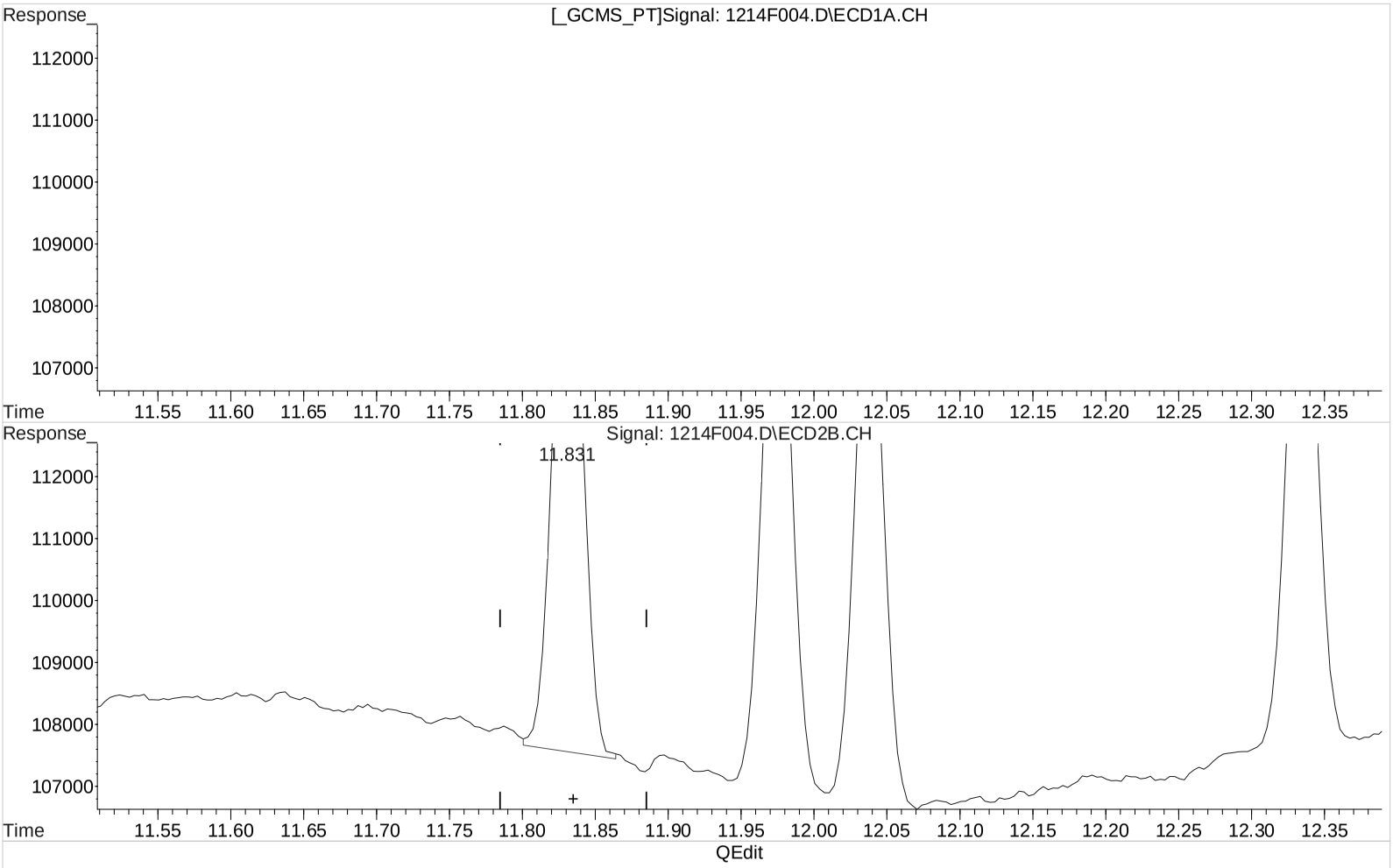
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(12) gamma-Chlordane

13.242min 0.405 ug/L

response 5845

Manual Integration:

After

Baseline/Shoulder

12/16/18

(12) gamma-Chlordane #2

11.831min 0.435 ug/L m

response 13342

(+) = Expected Retention Time

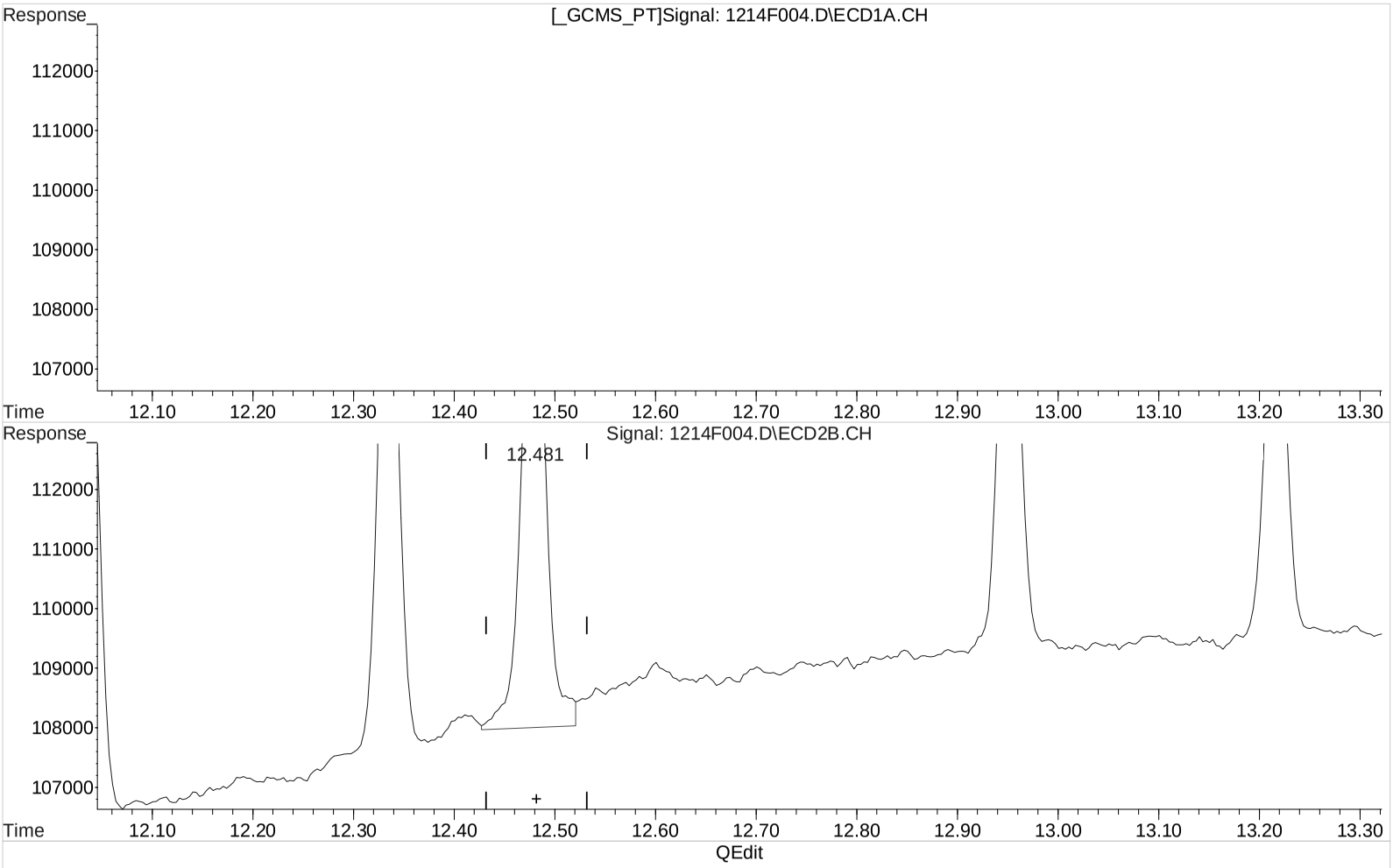
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(15) Dieldrin

13.786min 0.394 ug/L

response 5807

Manual Integration:

Before

12/16/18

(15) Dieldrin #2

12.481min 0.502 ug/L

response 14688

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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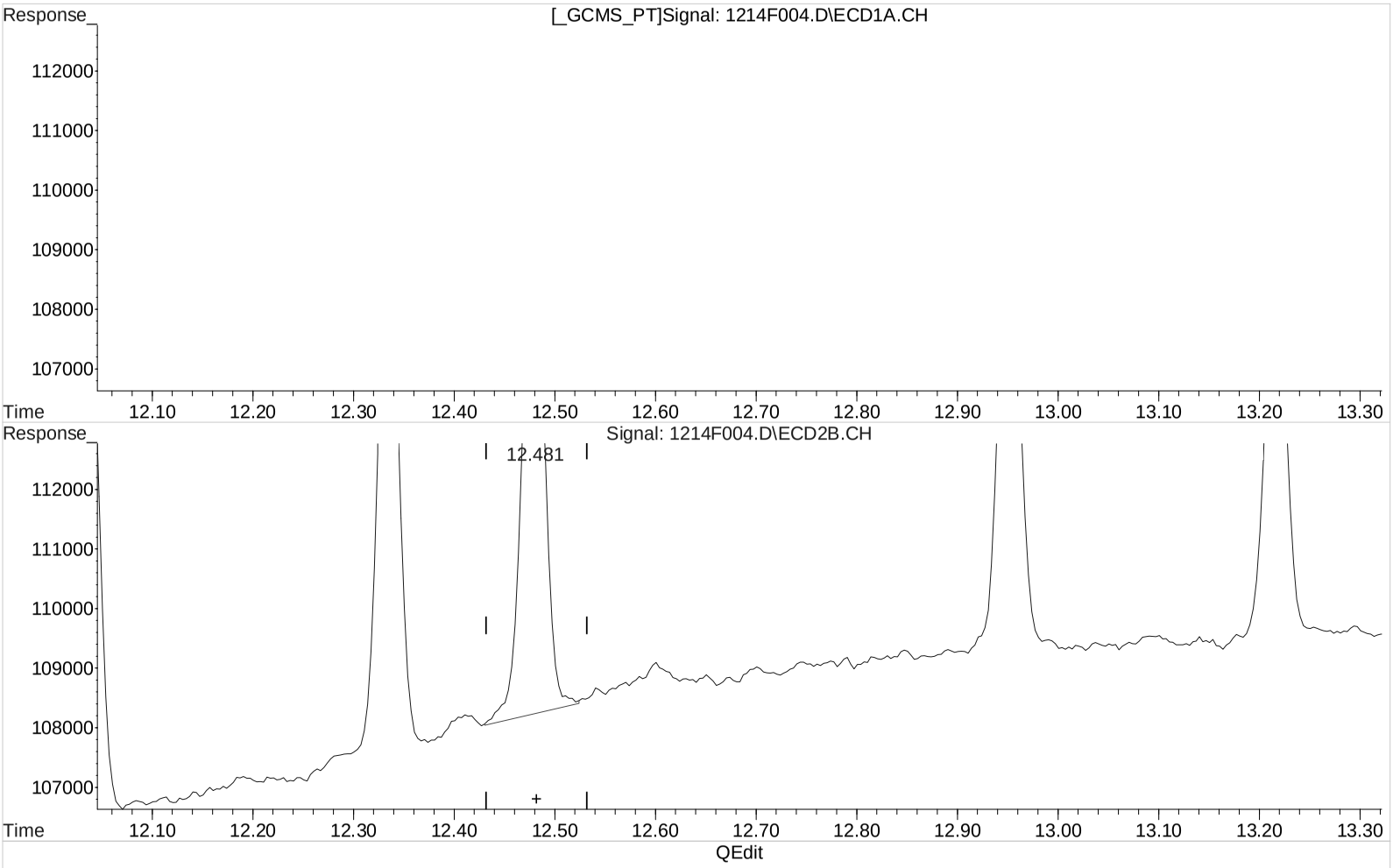
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(15) Dieldrin

13.786min 0.394 ug/L

response 5807

Manual Integration:

After

Baseline/Shoulder

12/16/18

(15) Dieldrin #2

12.481min 0.462 ug/L m

response 13517

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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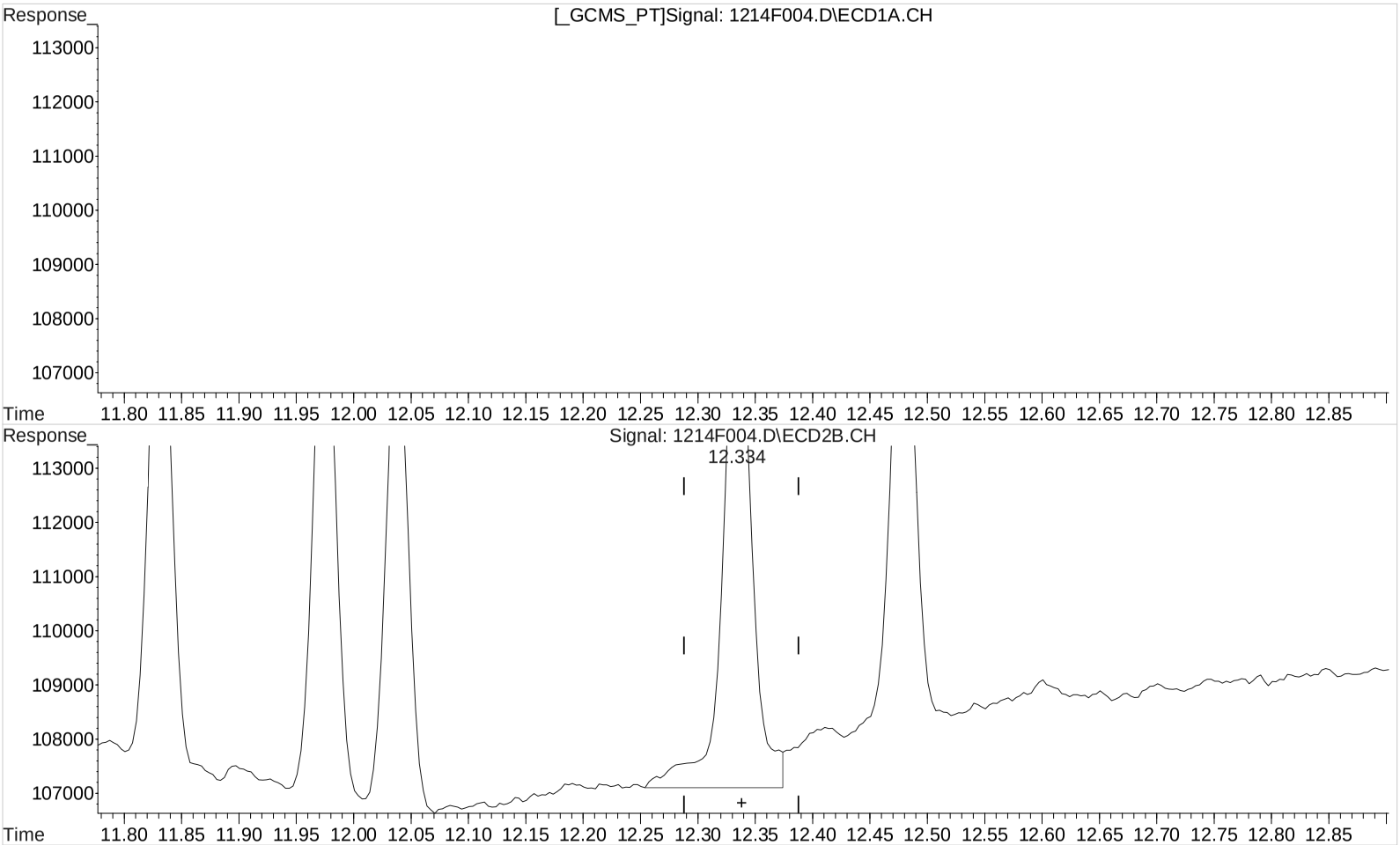
Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(16) 4,4'-DDE

13.599min 0.359 ug/L

response 5859

Manual Integration:

Before

12/16/18

(16) 4,4'-DDE #2

12.334min 0.526 ug/L

response 16604

(+) = Expected Retention Time

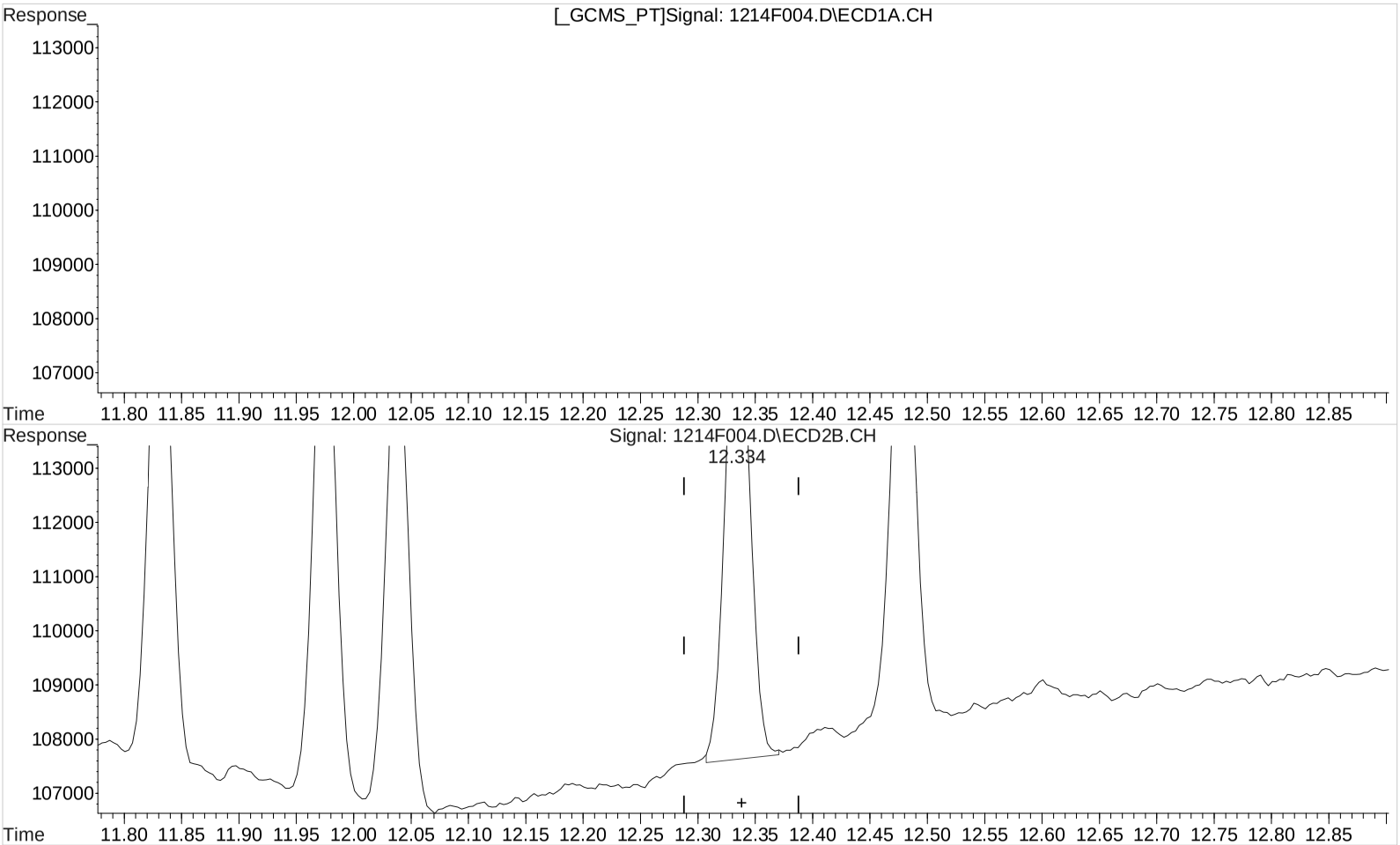
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(16) 4,4'-DDE

13.599min 0.359 ug/L

response 5859

Manual Integration:

After

Baseline/Shoulder

12/16/18

(16) 4,4'-DDE #2

12.334min 0.420 ug/L m

response 13264

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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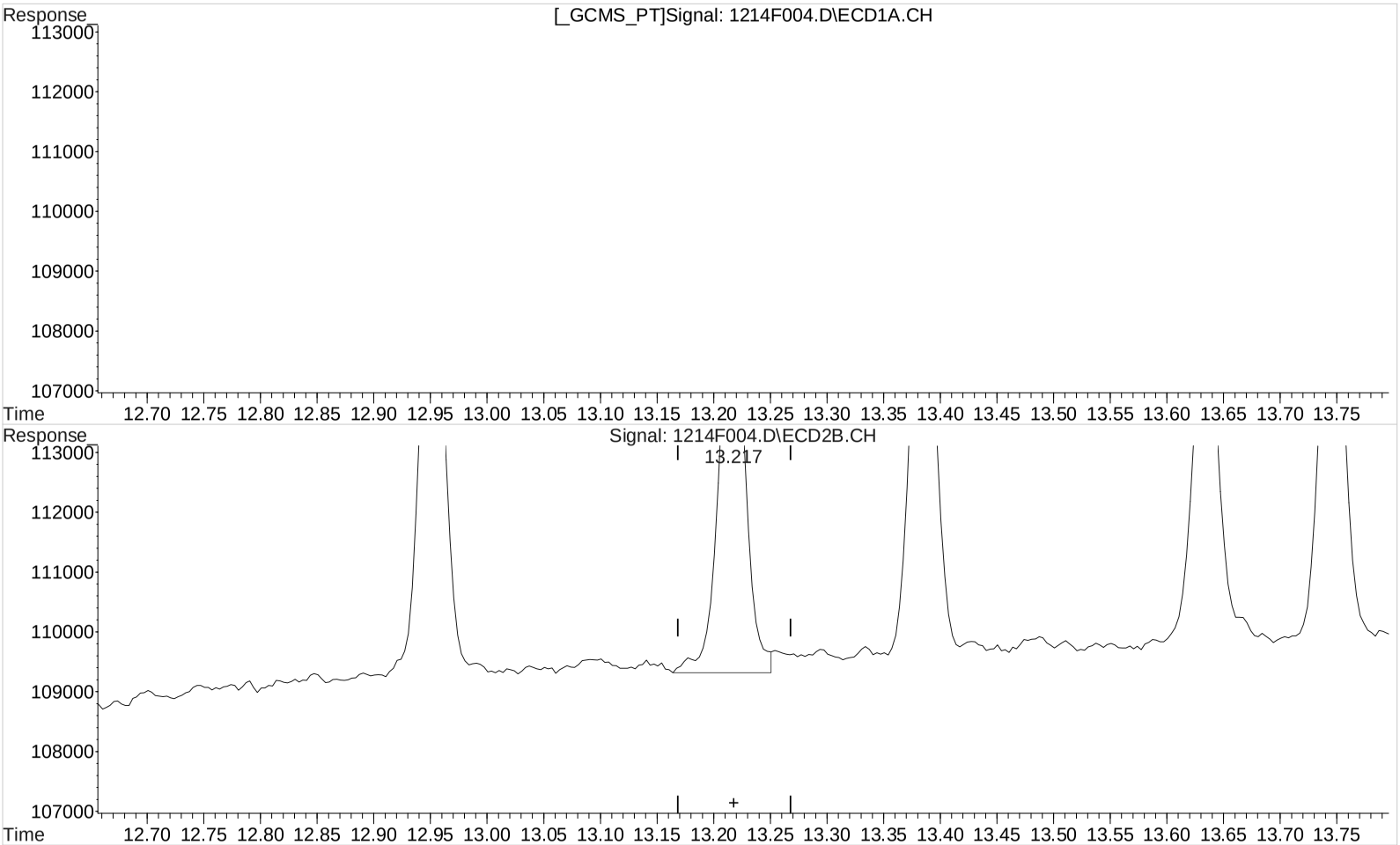
Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(19) 4,4'-DDD

14.432min 0.380 ug/L

response 4196

Manual Integration:

Before

12/16/18

(19) 4,4'-DDD #2

13.217min 0.461 ug/L

response 10779

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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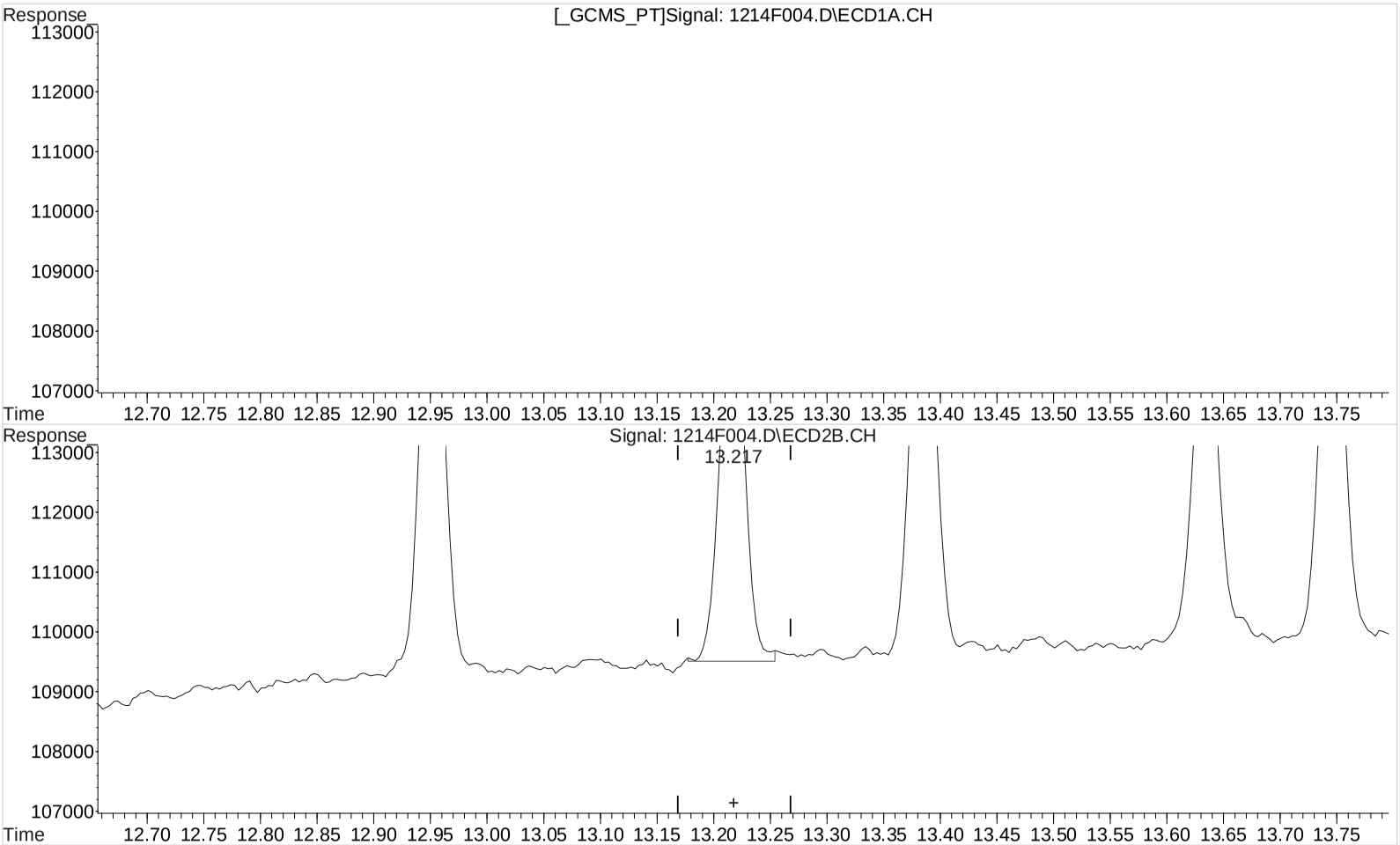
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(19) 4,4'-DDD

14.432min 0.380 ug/L

response 4196

Manual Integration:

After

Baseline/Shoulder

12/16/18

(19) 4,4'-DDD #2

13.217min 0.422 ug/L m

response 9855

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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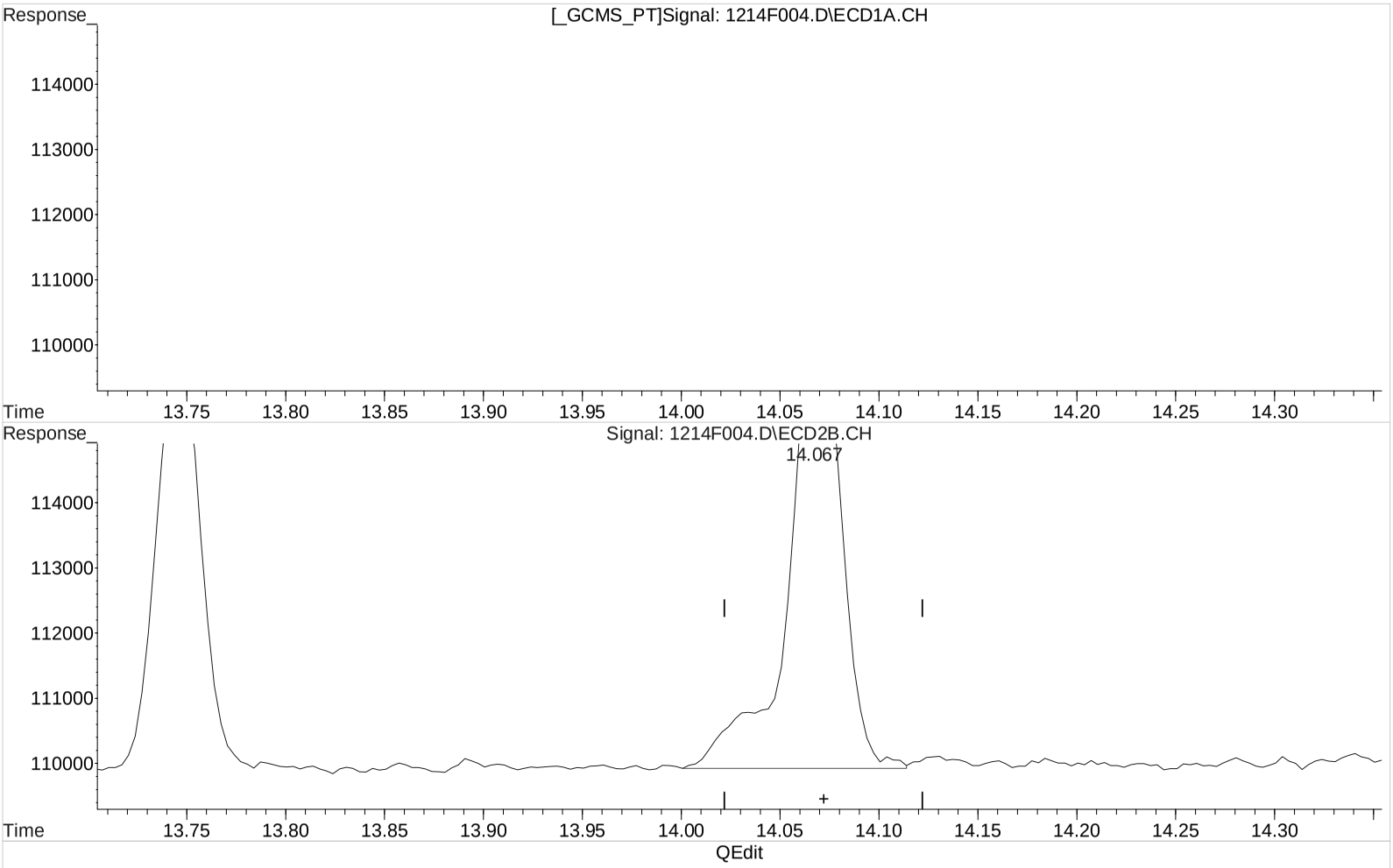
Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(21) Endosulfan Sulfate

15.259min 0.400 ug/L

response 5268

Manual Integration:

Before

12/16/18

(21) Endosulfan Sulfate #2

14.067min 0.497 ug/L

response 13306

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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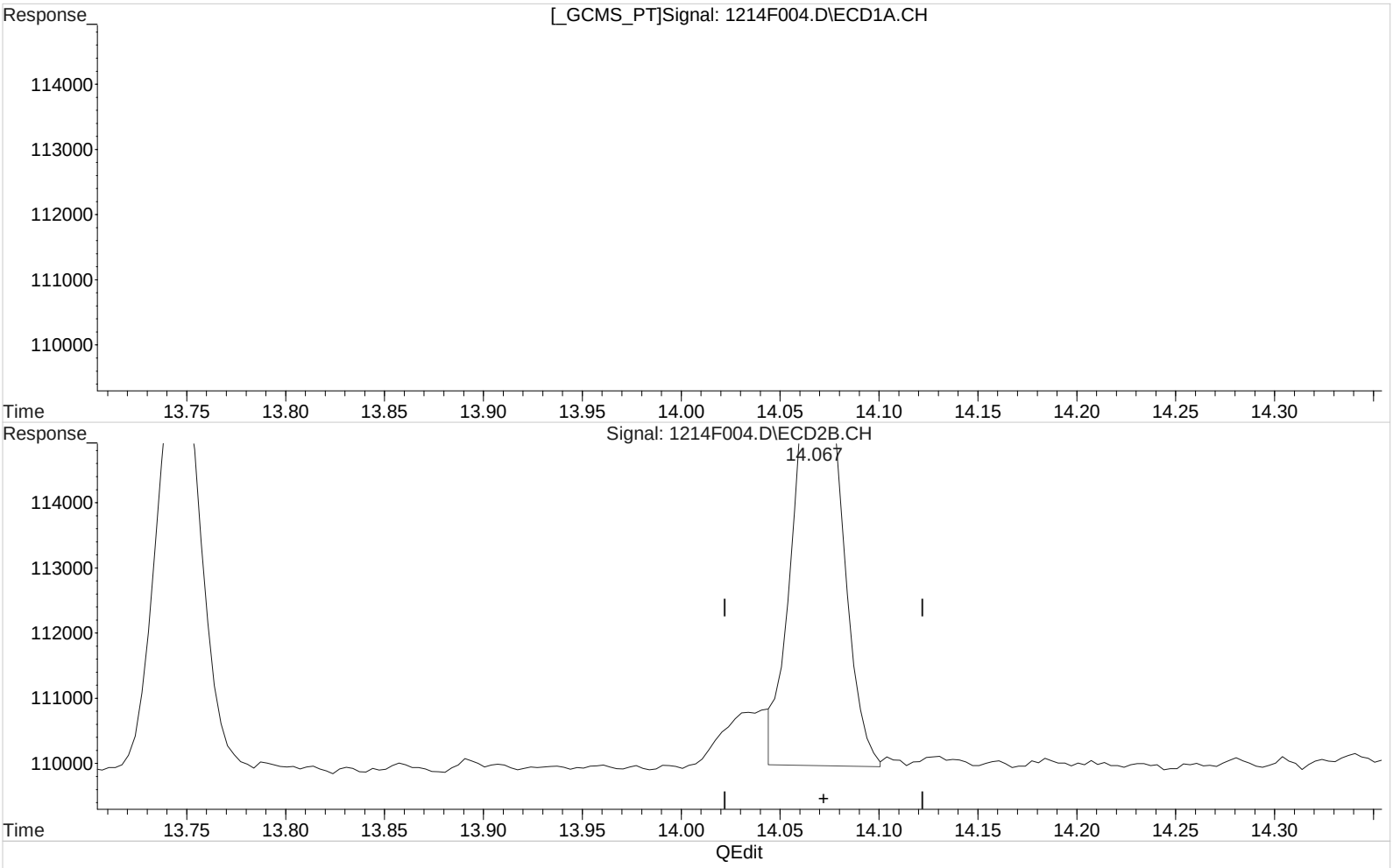
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(21) Endosulfan Sulfate

15.259min 0.400 ug/L

response 5268

Manual Integration:

After

Baseline/Shoulder

12/16/18

(21) Endosulfan Sulfate #2

14.067min 0.434 ug/L m

response 11613

(+) = Expected Retention Time

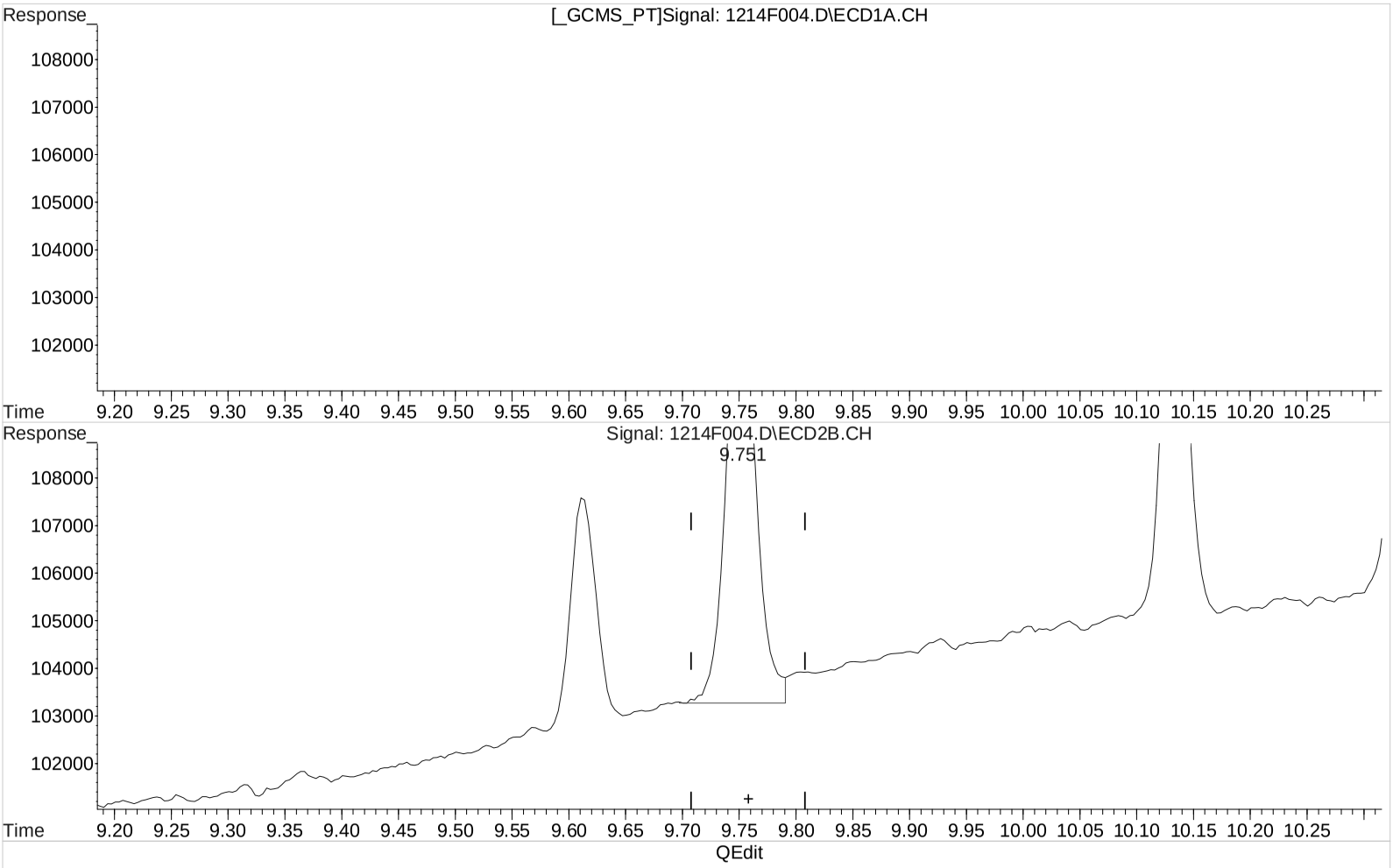
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(8) Heptachlor

11.449min 0.267 ug/L

response 5933

Manual Integration:

Before

12/16/18

(8) Heptachlor #2

9.751min 0.472 ug/L

response 16473

(+) = Expected Retention Time

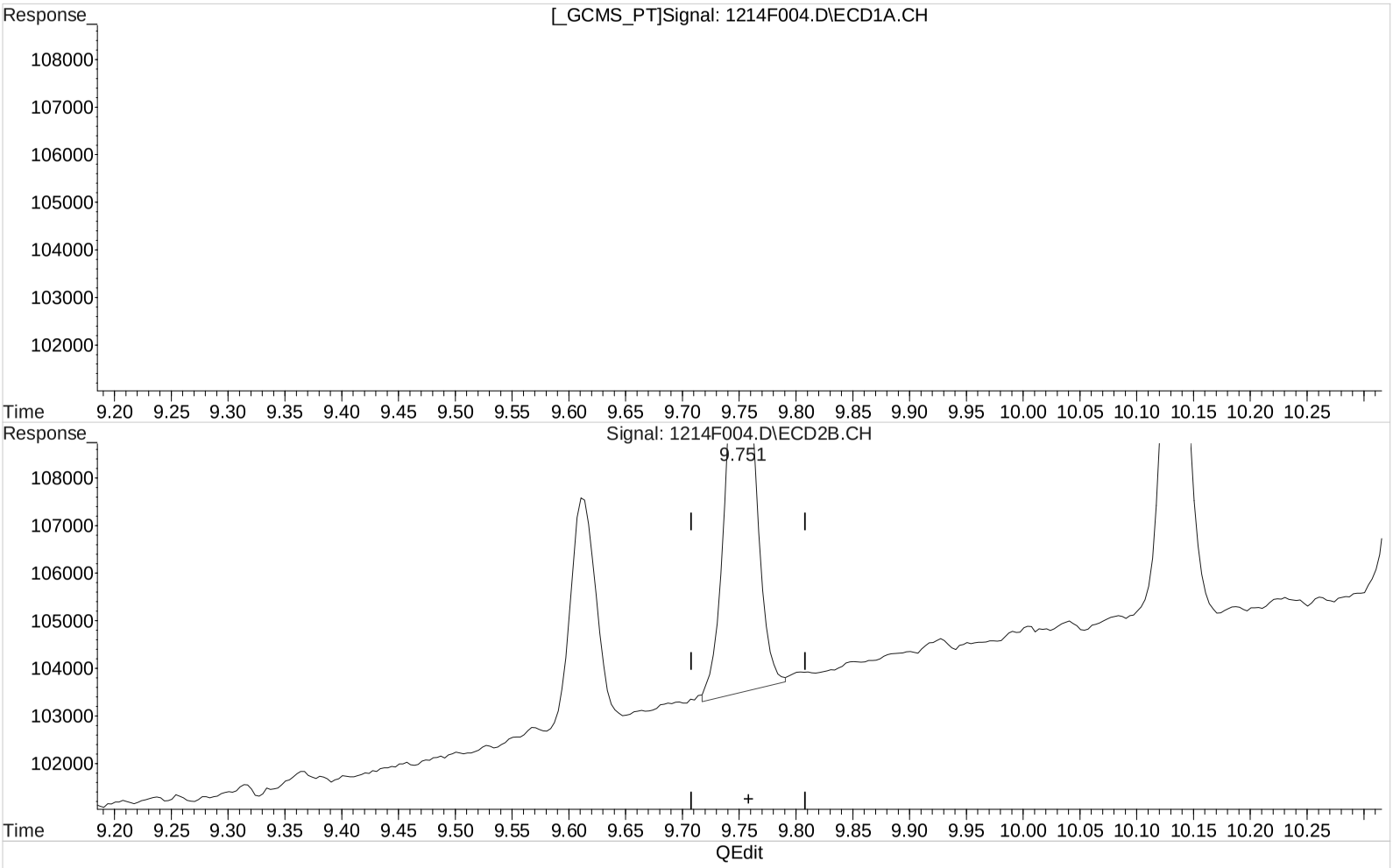
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(8) Heptachlor

11.449min 0.267 ug/L

response 5933

Manual Integration:

After

Baseline/Shoulder

12/16/18

(8) Heptachlor #2

9.751min 0.439 ug/L m

response 15322

(+) = Expected Retention Time

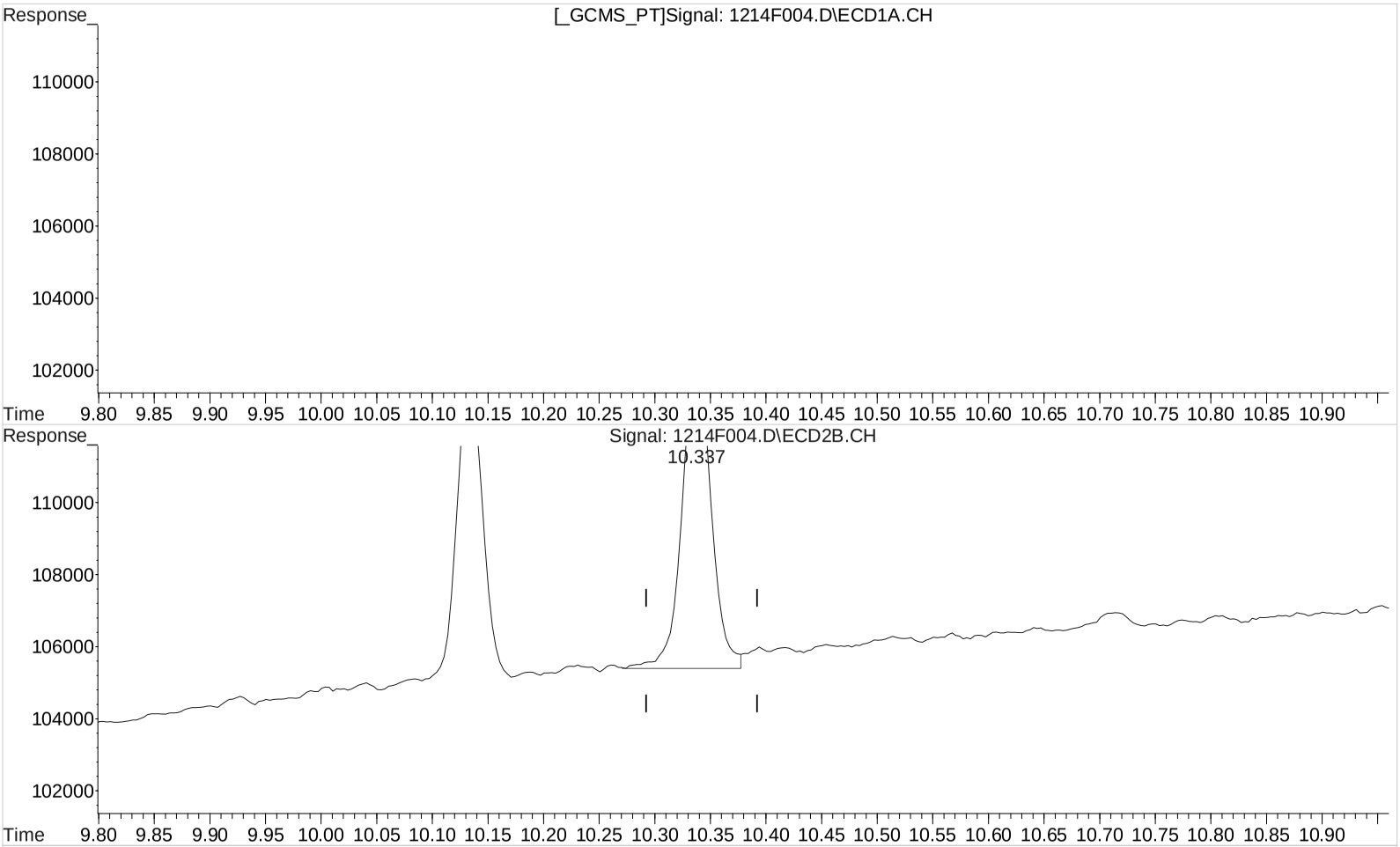
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(9) Aldrin

12.002min 0.451 ug/L

response 7067

Manual Integration:

Before

12/16/18

(9) Aldrin #2

10.337min 0.477 ug/L

response 15636

(+) = Expected Retention Time

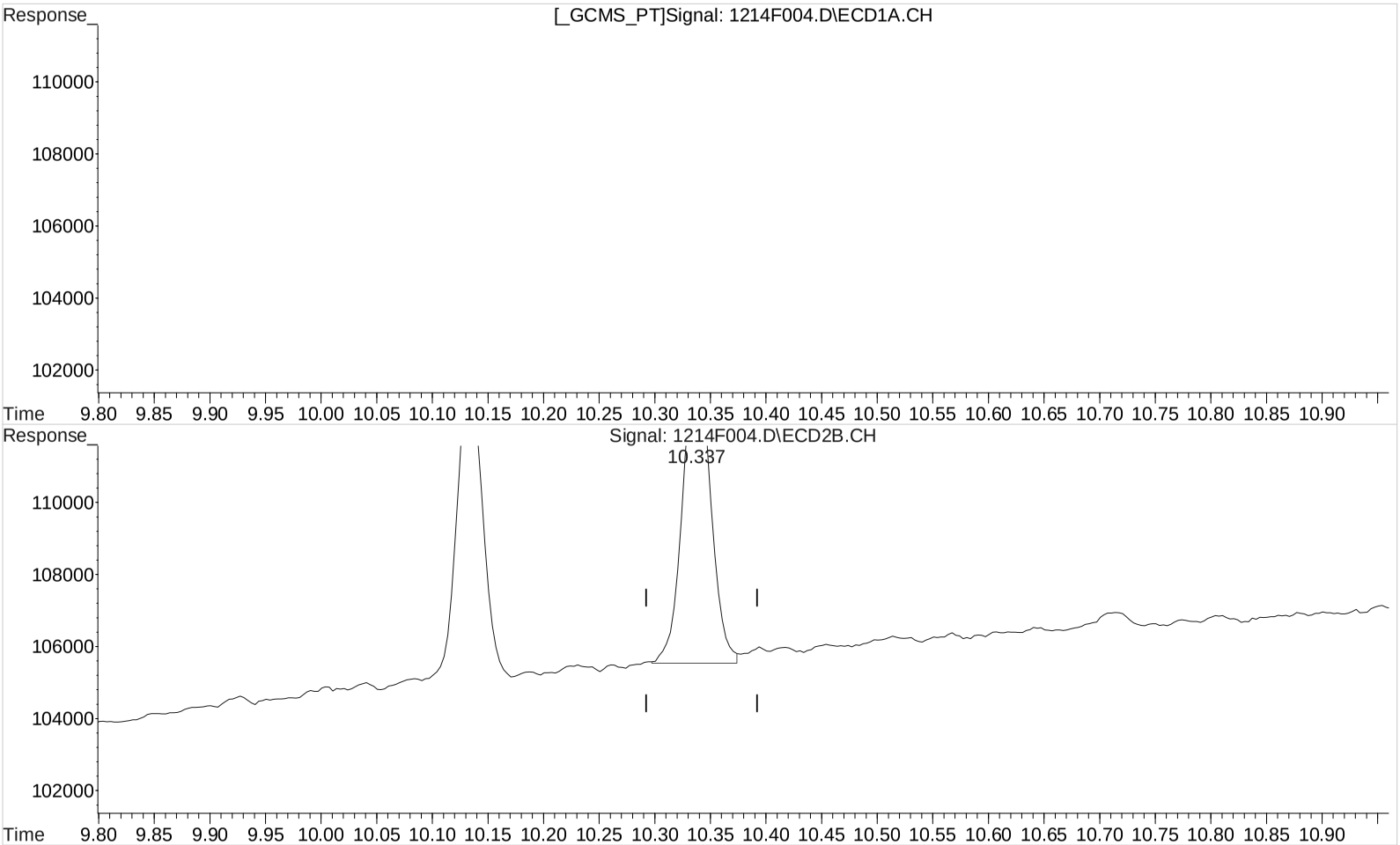
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(9) Aldrin

12.002min 0.451 ug/L

response 7067

Manual Integration:

After

Baseline/Shoulder

12/16/18

(9) Aldrin #2

10.337min 0.450 ug/L m

response 14740

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 13:01:39 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.015	5.343	857138	2460118	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.742	7.110	14342	34677	0.677	0.860 #
28) s	Decachlor...	18.435	16.877	15051	30118	0.774	0.892
	Target Compounds						
3)	alpha-BHC	9.585	8.330	13050	29990	0.858	0.872m
4)	Hexachlor...	9.742	8.117	18355	41878	0.679	0.879m#
5)	beta-BHC	10.865	9.613	6110	14609	0.818m	0.859
6)	gamma-BHC...	10.255	9.070	11190	27573	0.856	0.873
7)	delta-BHC	11.365	10.137	10750	25030	0.795	0.827m
8)	Heptachlor	11.449	9.753	10796	27952	0.686	0.825m
9)	Aldrin	12.002	10.340	11993	27846	0.810	0.876
10)	Isodrin	12.532	11.133	10125	23339	0.816	0.845
11)	Heptachlo...	12.725	11.420	11235	26643	0.836	0.879
12)	gamma-Chl...	13.245	11.830	11228	26644	0.822	0.895
13)	Endosulfan I	13.369	12.037	9893	22872	0.723	0.823
14)	alpha-Chl...	13.319	11.973	11584	26000	0.789	0.868
15)	Dieldrin	13.789	12.480	10815	24338	0.777	0.857m
16)	4,4'-DDE	13.599	12.337	11396	25116	0.738	0.820
17)	Endrin	14.155	12.953	9684	23171	0.741	0.828
18)	Endosulfa...	14.602	13.387	9565	21856	0.714	0.843
19)	4,4'-DDD	14.435	13.217	8116	19299	0.777	0.851
20)	Endrin Al...	14.785	13.747	8594	19354	0.727	0.819
21)	Endosulfa...	15.259	14.070	9715	22786	0.780	0.878
22)	4,4'-DDT	14.932	13.637	5594	17271	0.618	0.723
23)	Endrin Ke...	15.942	15.003	10282	24766	0.834	0.863
24)	Methoxychlor	15.682	14.733	3310	9967	0.409	0.770 #
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

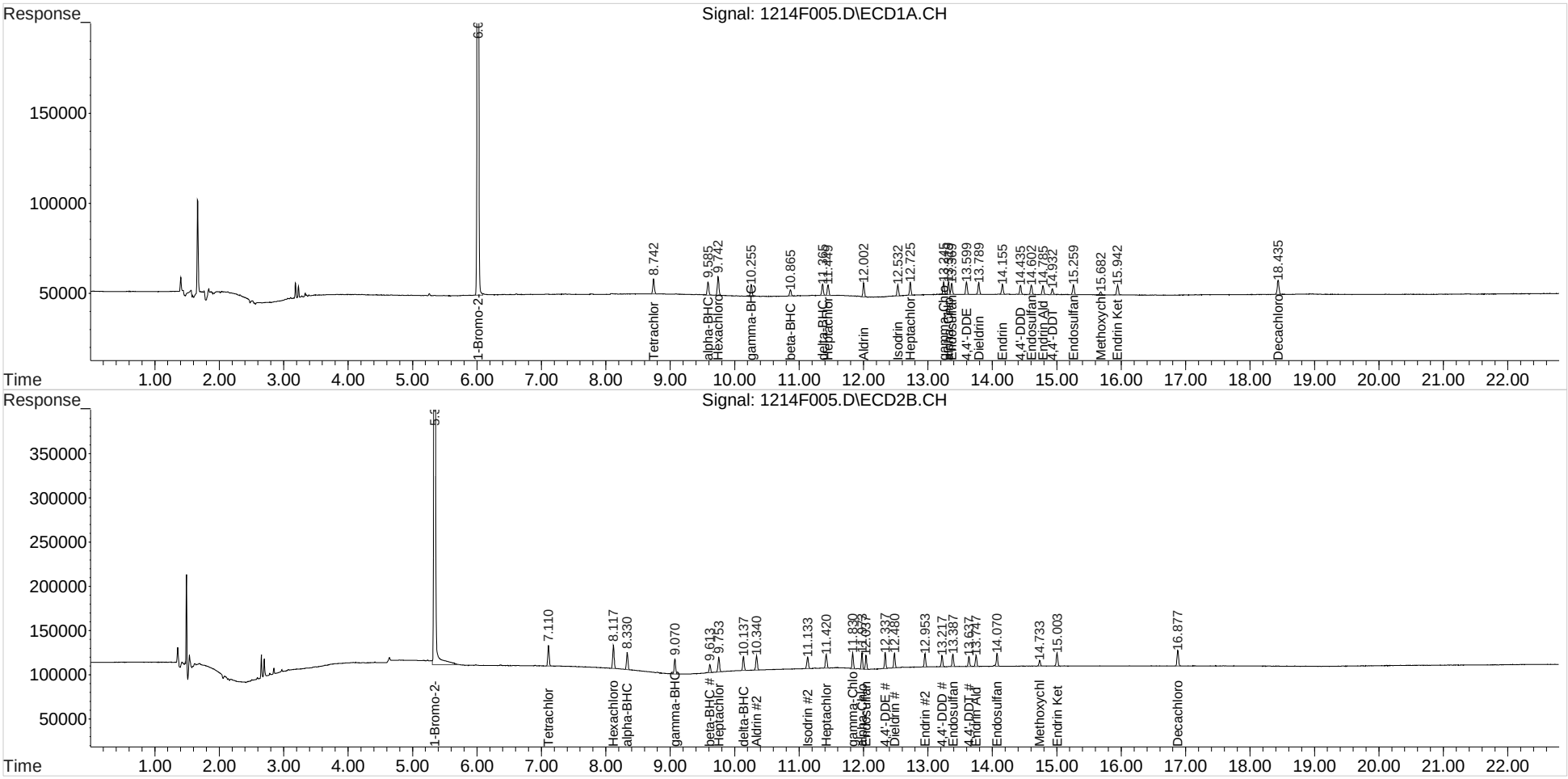
1st SM 12/18/18
2nd UA 12/19/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 13:01:39 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



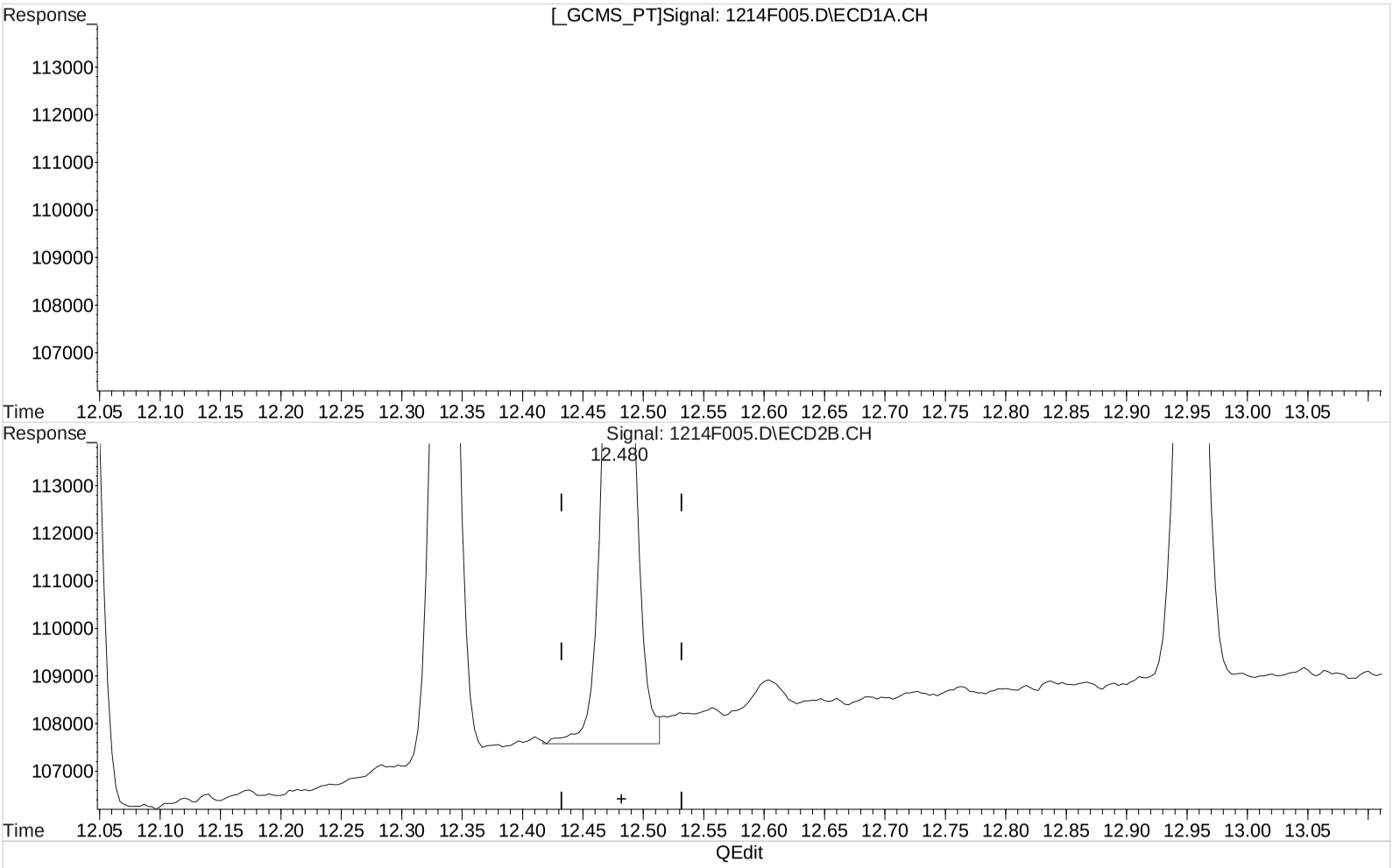
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:23 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(15) Dieldrin

13.789min 0.777 ug/L

response 10815

Manual Integration:

Before

12/16/18

(15) Dieldrin #2

12.480min 0.909 ug/L

response 25819

(+) = Expected Retention Time

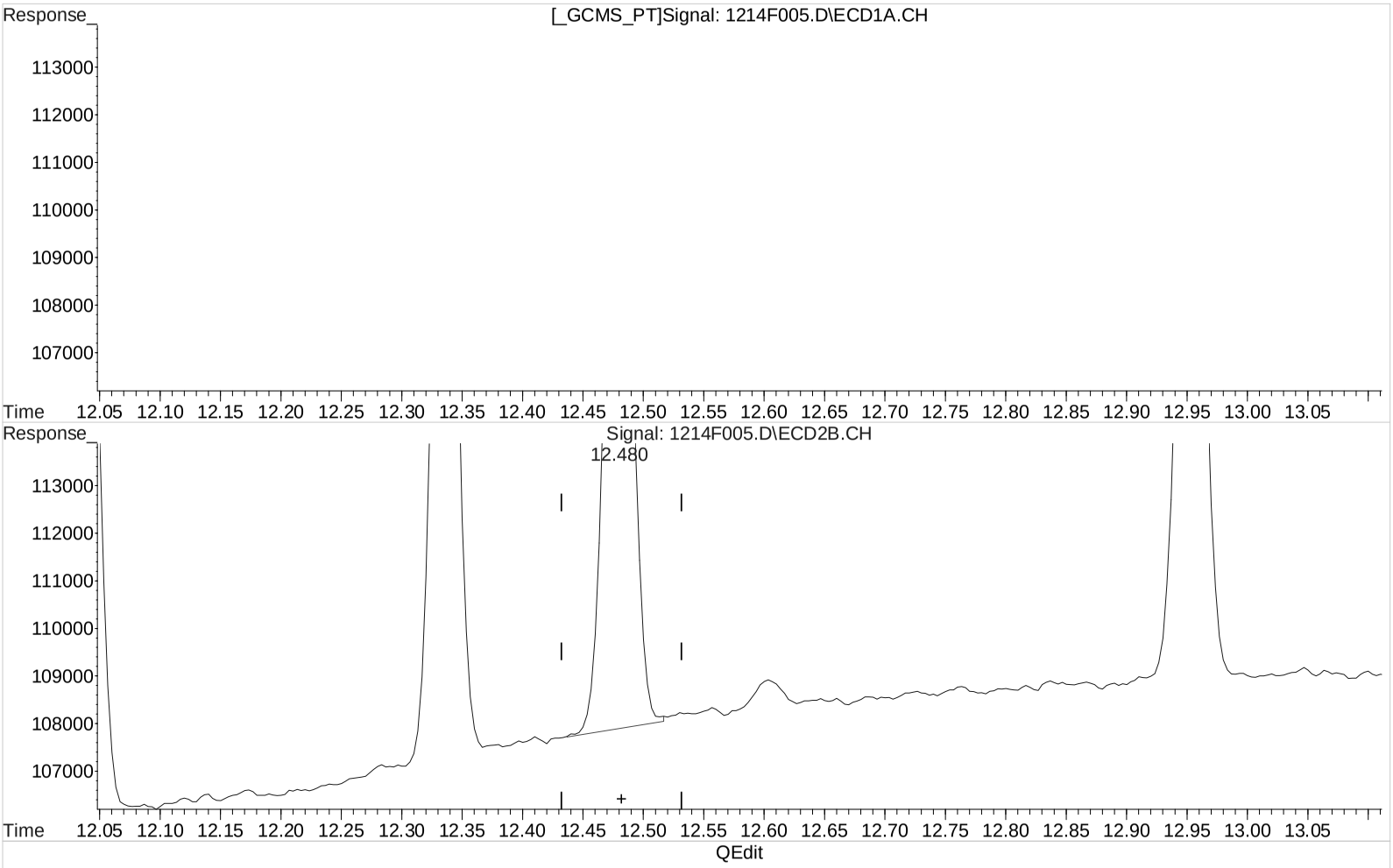
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:23 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(15) Dieldrin

13.789min 0.777 ug/L

response 10815

Manual Integration:

After

Baseline/Shoulder

12/16/18

(15) Dieldrin #2

12.480min 0.857 ug/L m

response 24338

(+) = Expected Retention Time

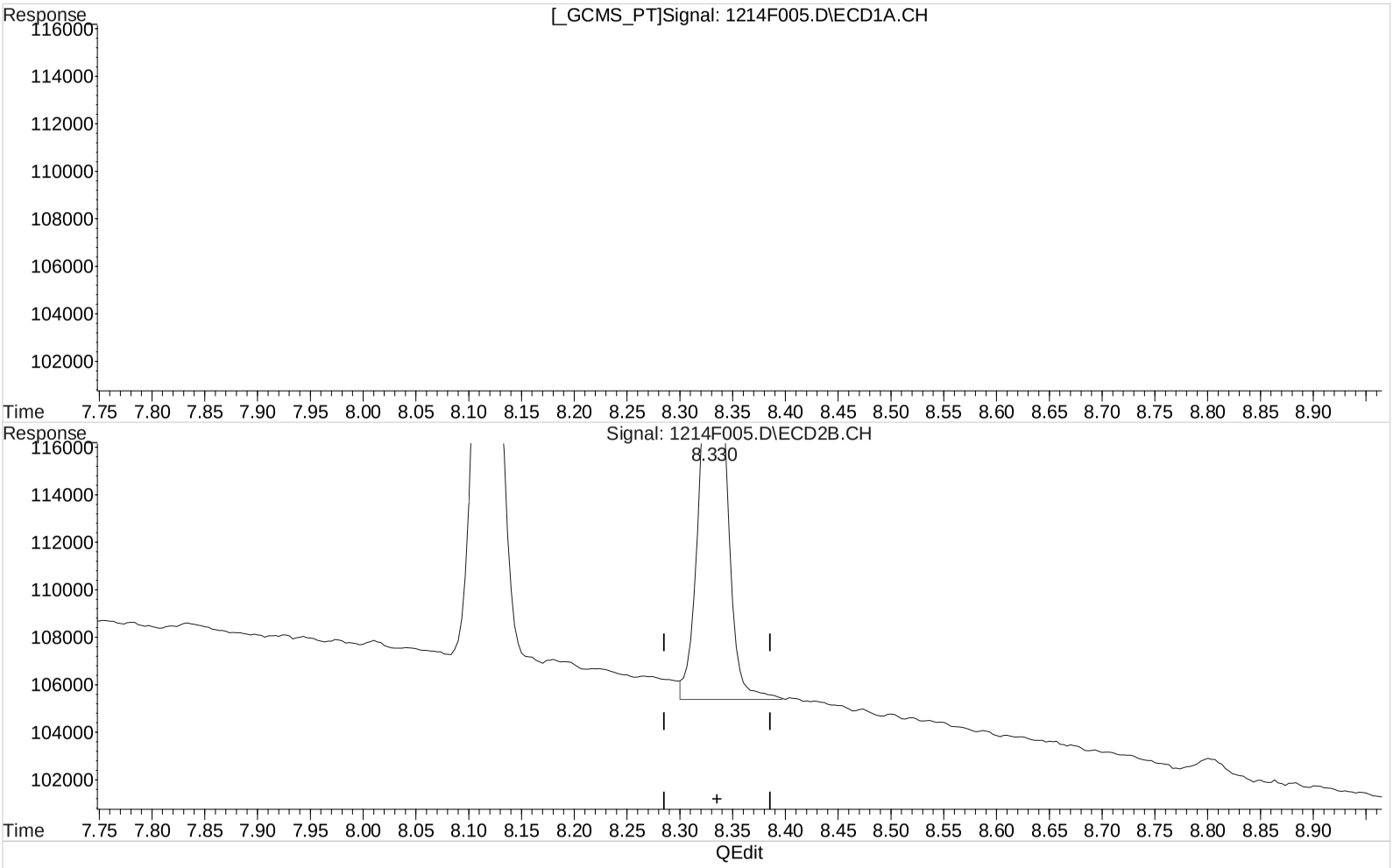
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:23 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(3) alpha-BHC

9.585min 0.858 ug/L

response 13050

Manual Integration:

Before

12/16/18

(3) alpha-BHC #2

8.330min 0.926 ug/L

response 31852

(+) = Expected Retention Time

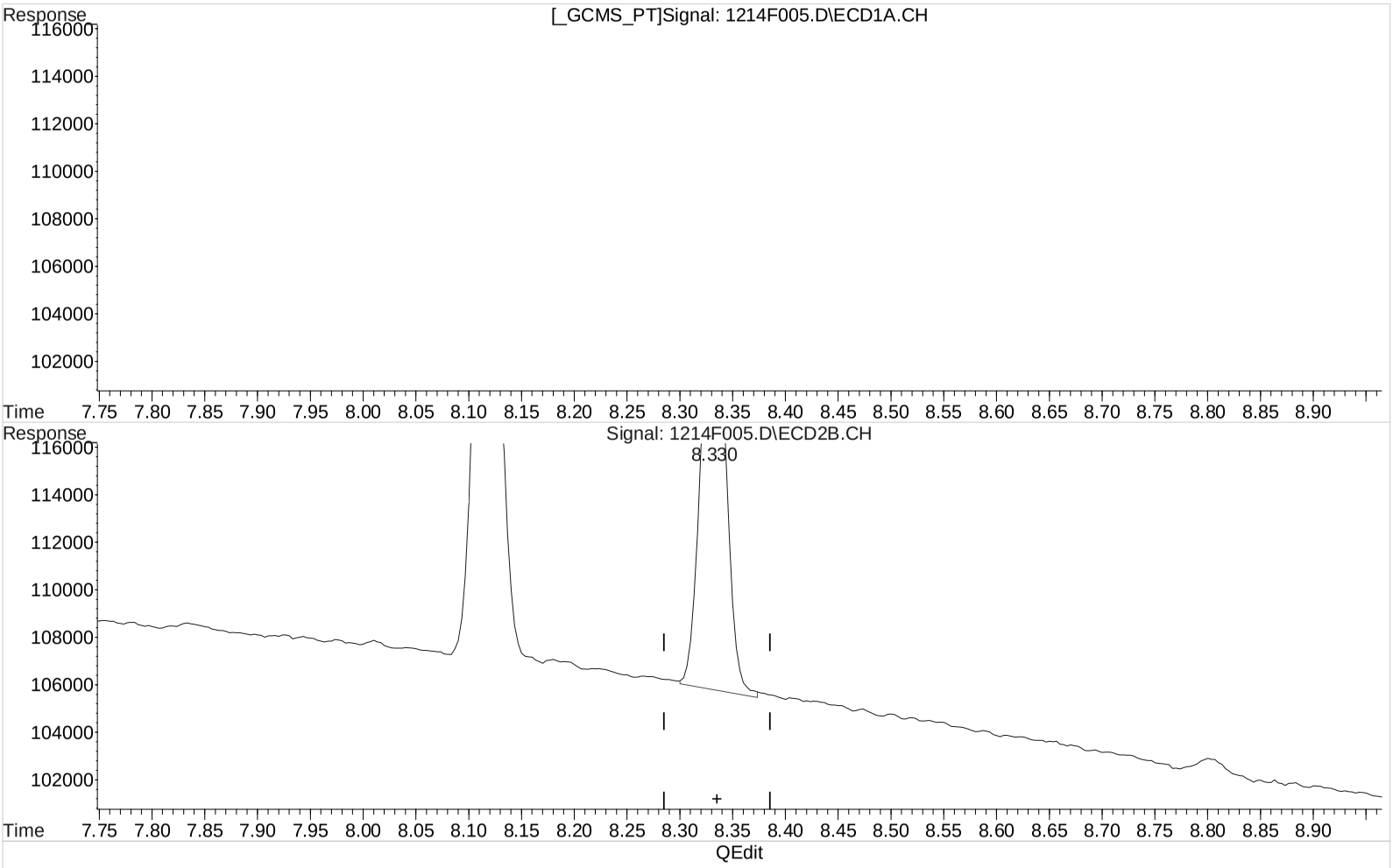
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:23 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(3) alpha-BHC

9.585min 0.858 ug/L

response 13050

Manual Integration:

After

Baseline/Shoulder

12/16/18

(3) alpha-BHC #2

8.330min 0.872 ug/L m

response 29990

(+) = Expected Retention Time

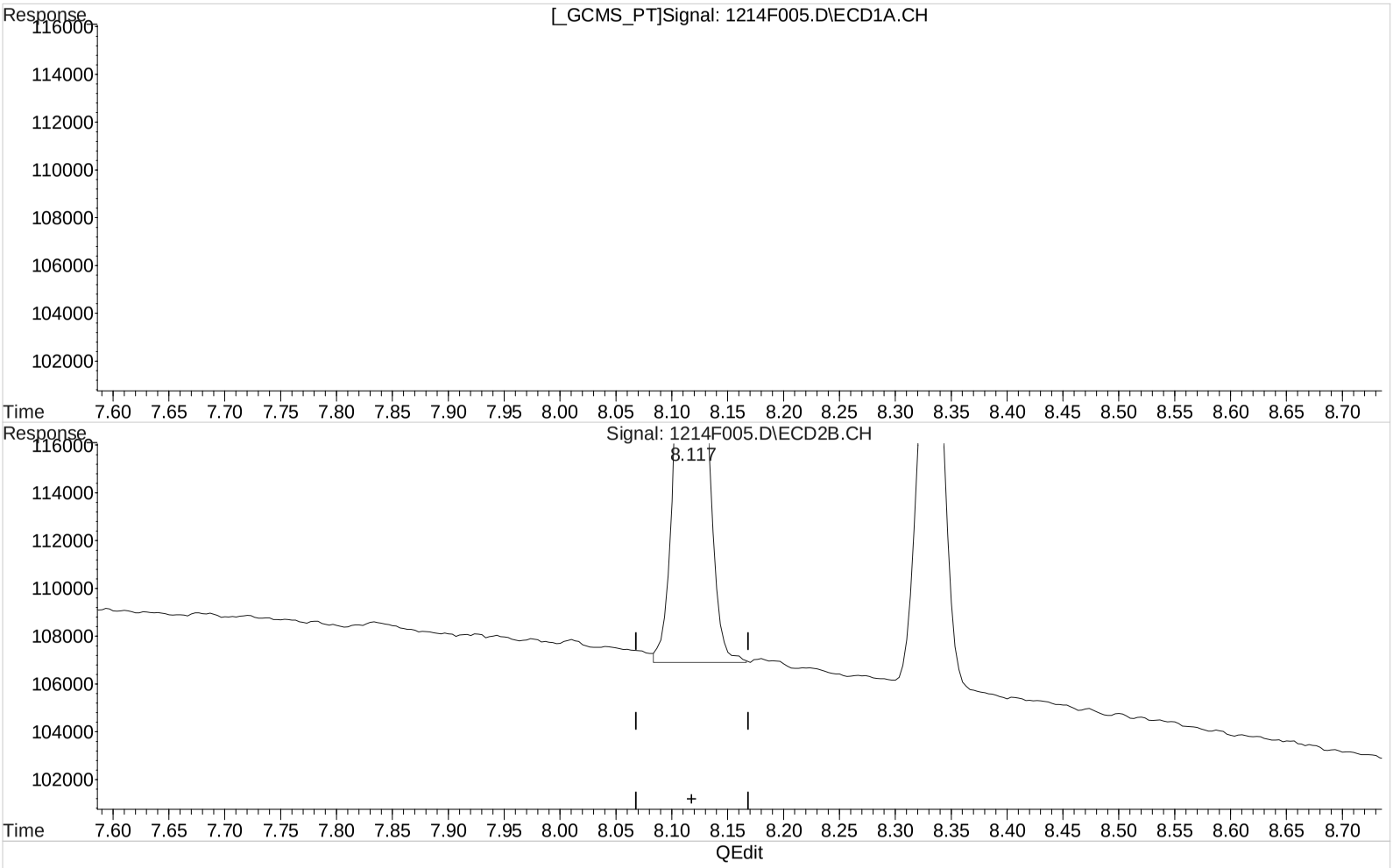
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:23 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(4) Hexachlorobenzene

9.742min 0.679 ug/L

response 18355

Manual Integration:

Before

12/16/18

(4) Hexachlorobenzene #2

8.117min 0.902 ug/L

response 42972

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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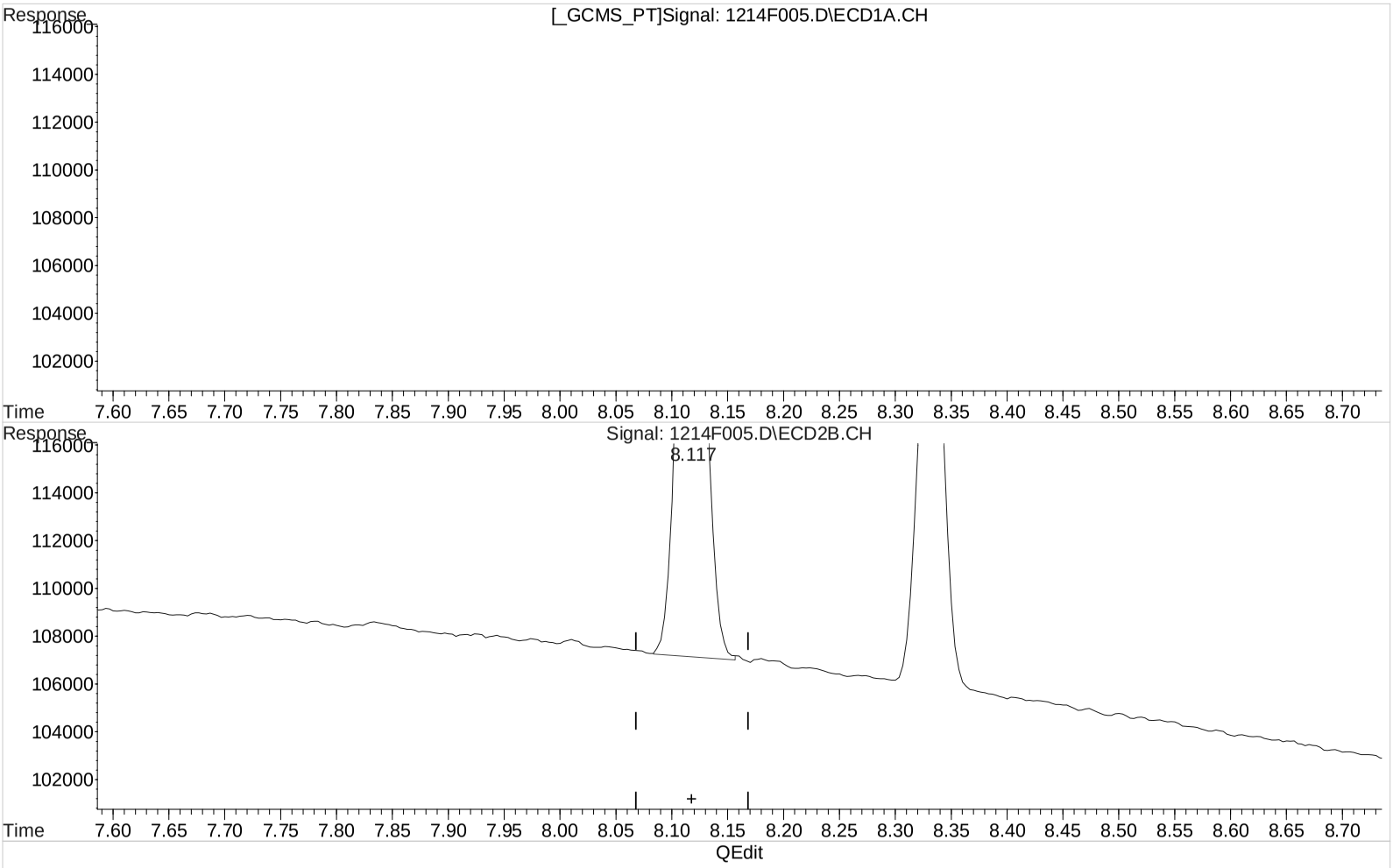
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(4) Hexachlorobenzene

9.742min 0.679 ug/L

response 18355

Manual Integration:

After

Baseline/Shoulder

12/16/18

(4) Hexachlorobenzene #2

8.117min 0.879 ug/L m

response 41878

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
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Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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Quant Time: Dec 16 12:55:23 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
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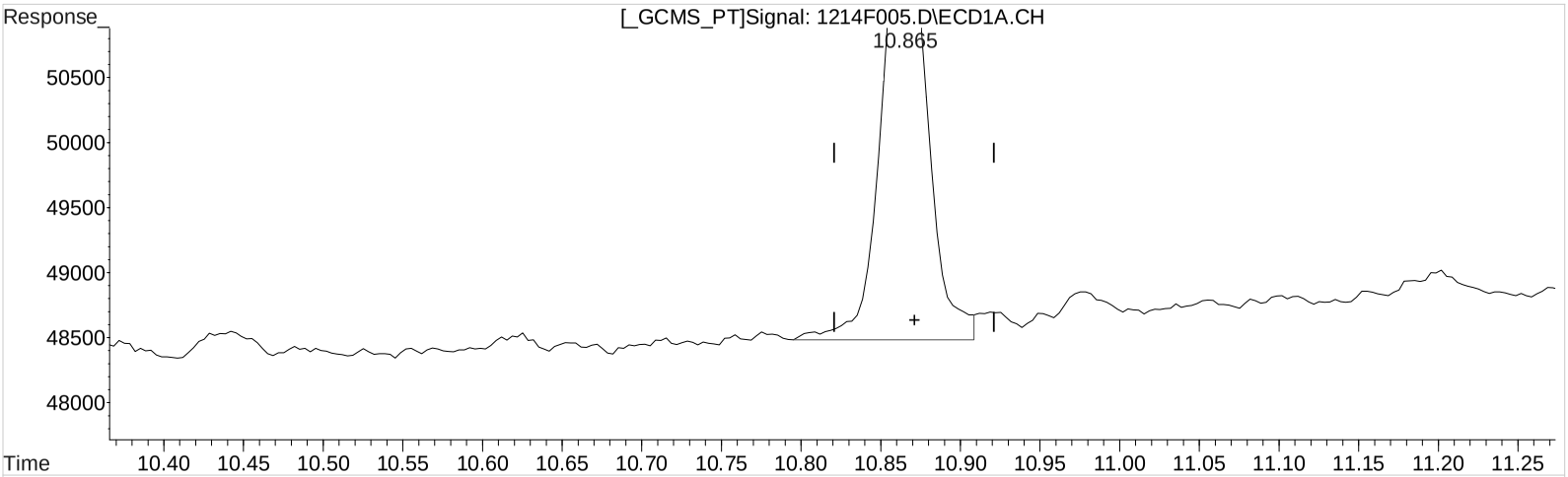
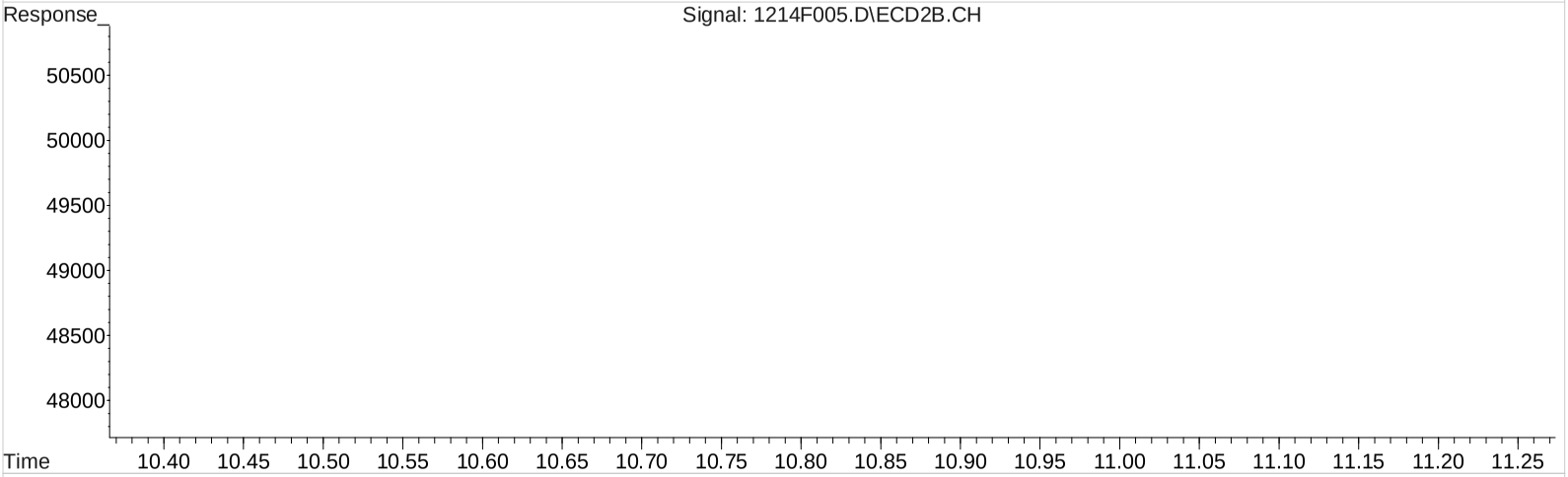
Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.865min 0.903 ug/L

response 6745

Manual Integration:

Before

12/16/18

(5) beta-BHC #2

9.613min 0.859 ug/L

response 14609

(+) = Expected Retention Time

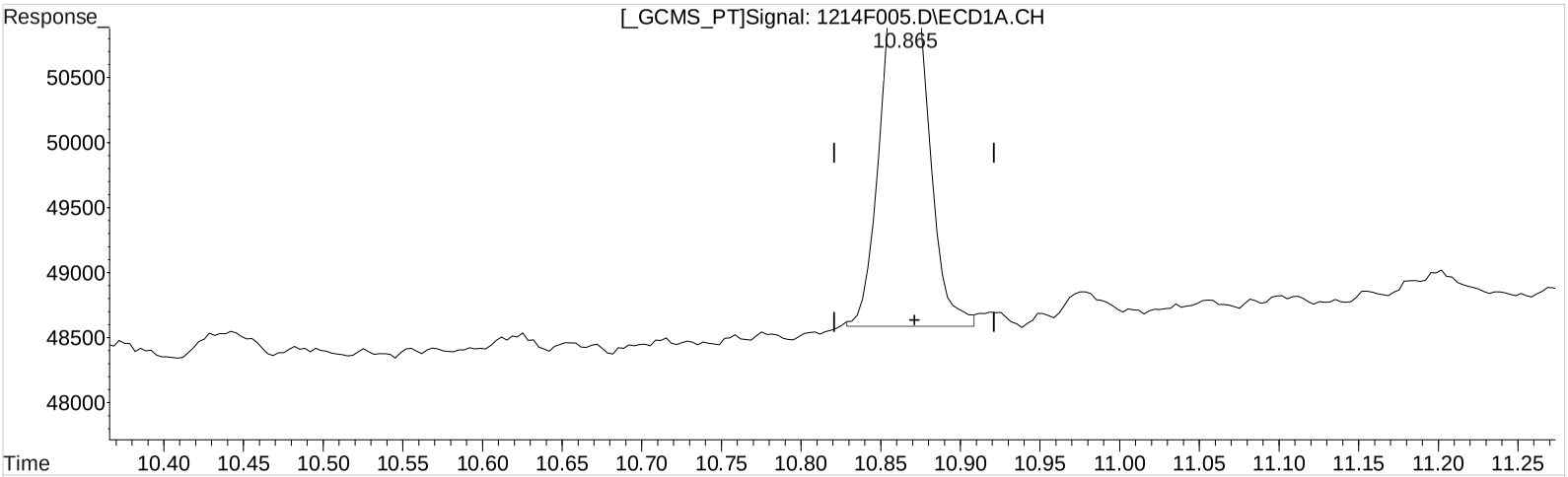
Quantitation Report (Qedit)

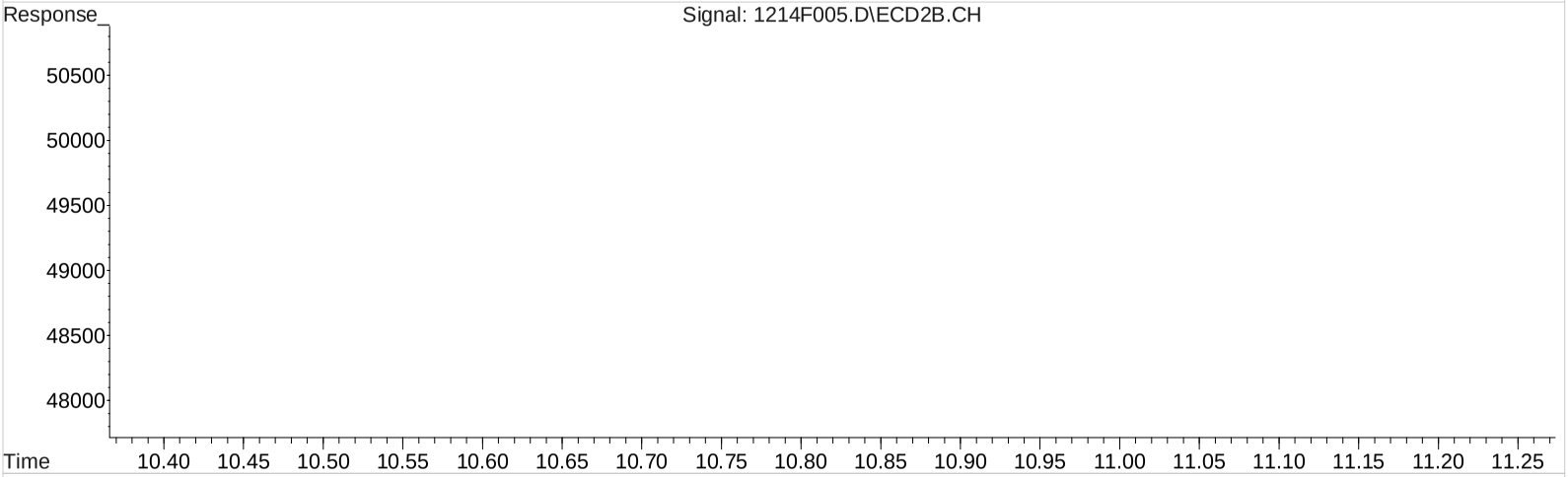
1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:23 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.865min 0.818 ug/L m

response 6110

Manual Integration:

After

Baseline/Shoulder

12/16/18

(5) beta-BHC #2

9.613min 0.859 ug/L

response 14609

(+) = Expected Retention Time

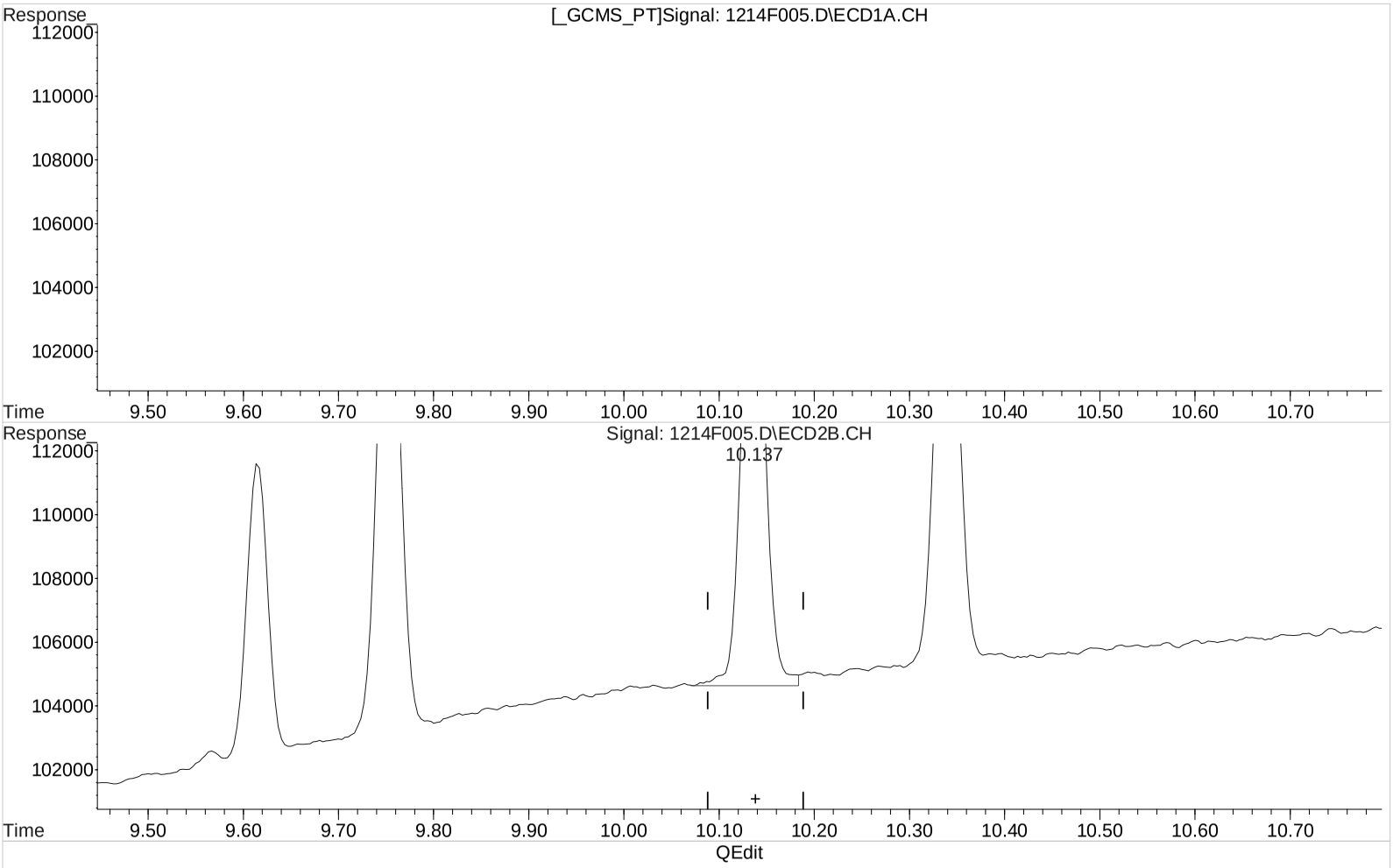
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:23 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(7) delta-BHC

11.365min 0.795 ug/L

response 10750

Manual Integration:

Before

12/16/18

(7) delta-BHC #2

10.137min 0.881 ug/L

response 26676

(+) = Expected Retention Time

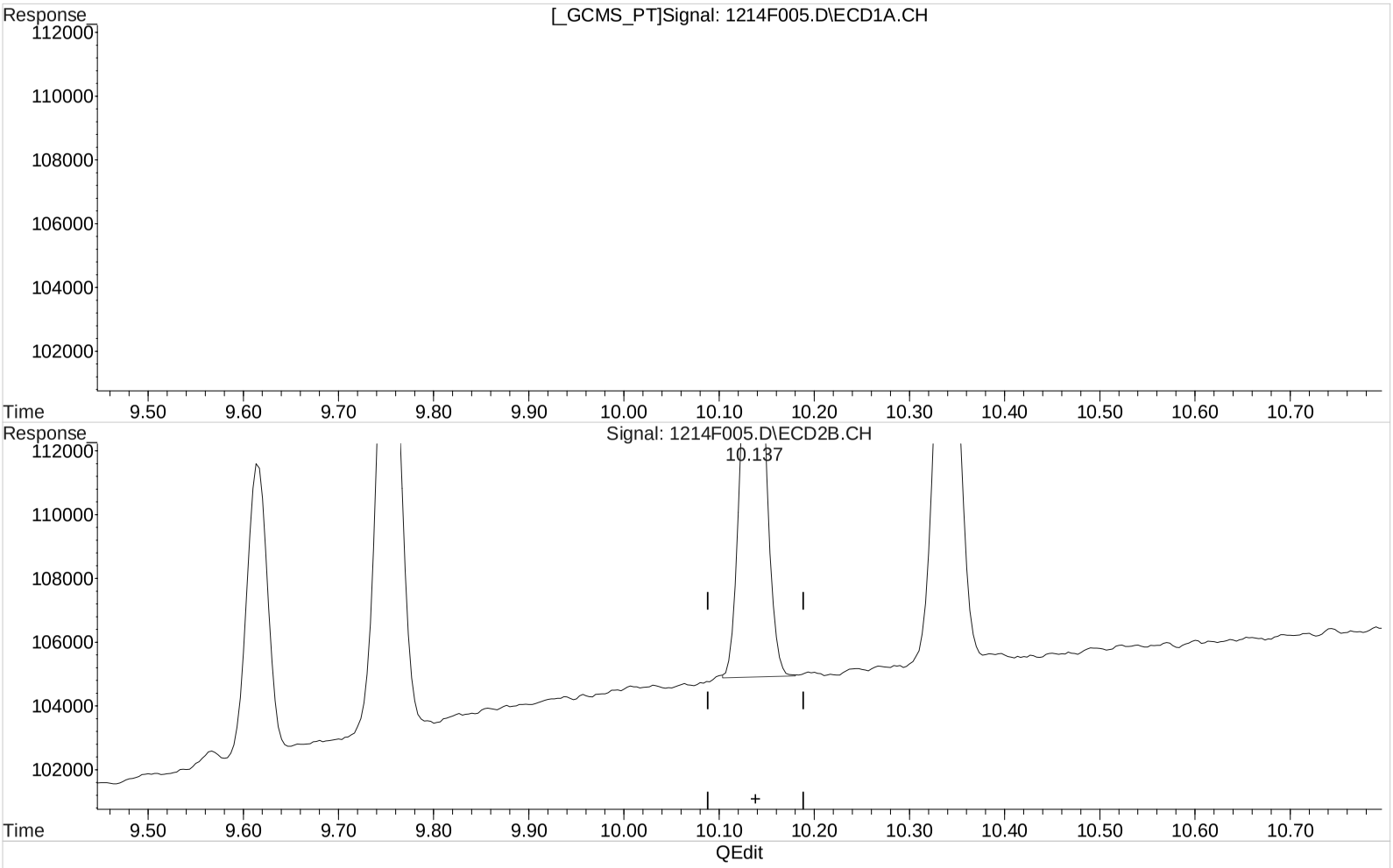
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:23 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(7) delta-BHC

11.365min 0.795 ug/L

response 10750

Manual Integration:

After

Baseline/Shoulder

12/16/18

(7) delta-BHC #2

10.137min 0.827 ug/L m

response 25030

(+) = Expected Retention Time

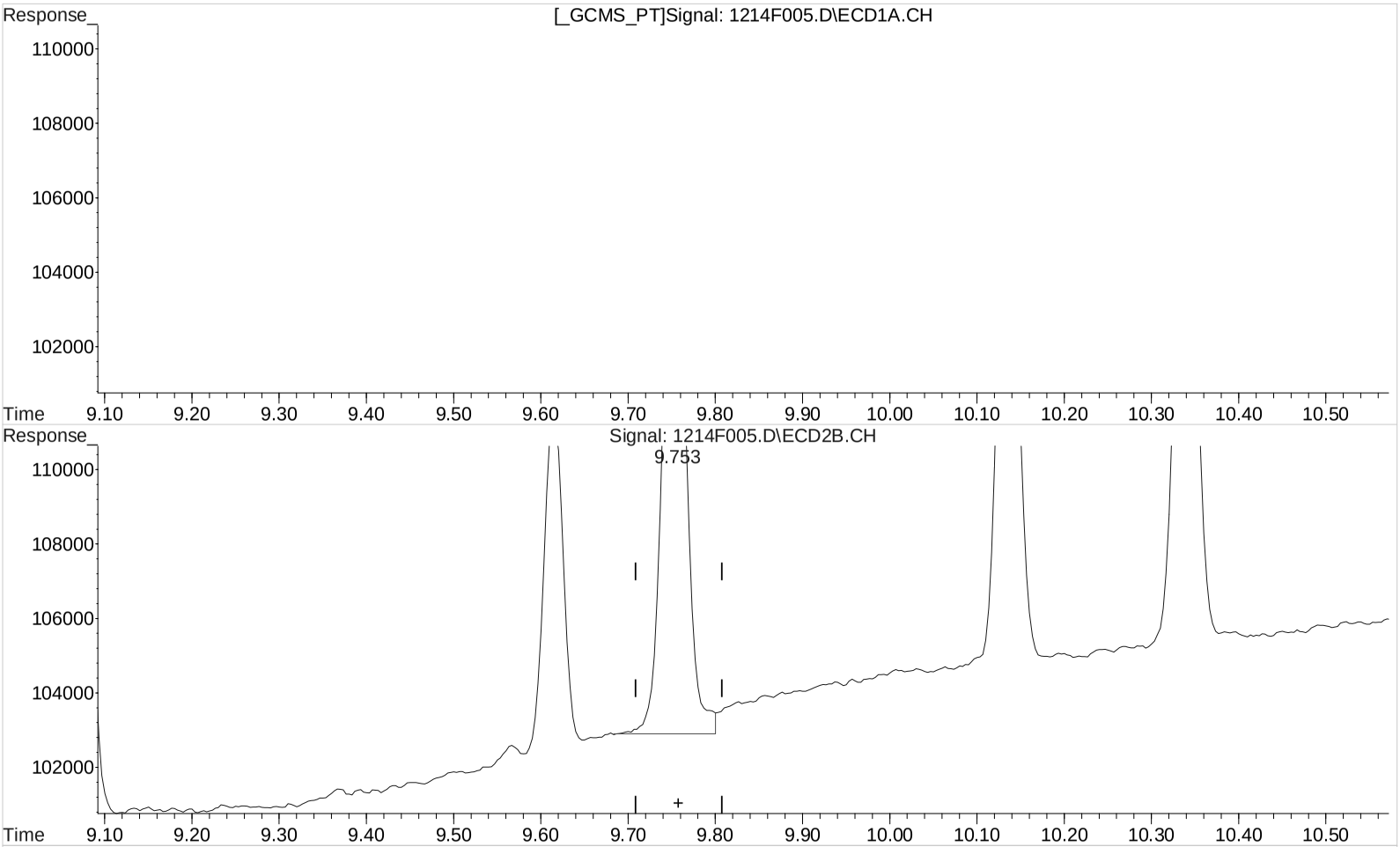
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:23 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(8) Heptachlor

11.449min 0.686 ug/L

response 10796

Manual Integration:

Before

12/16/18

(8) Heptachlor #2

9.753min 0.877 ug/L

response 29699

(+) = Expected Retention Time

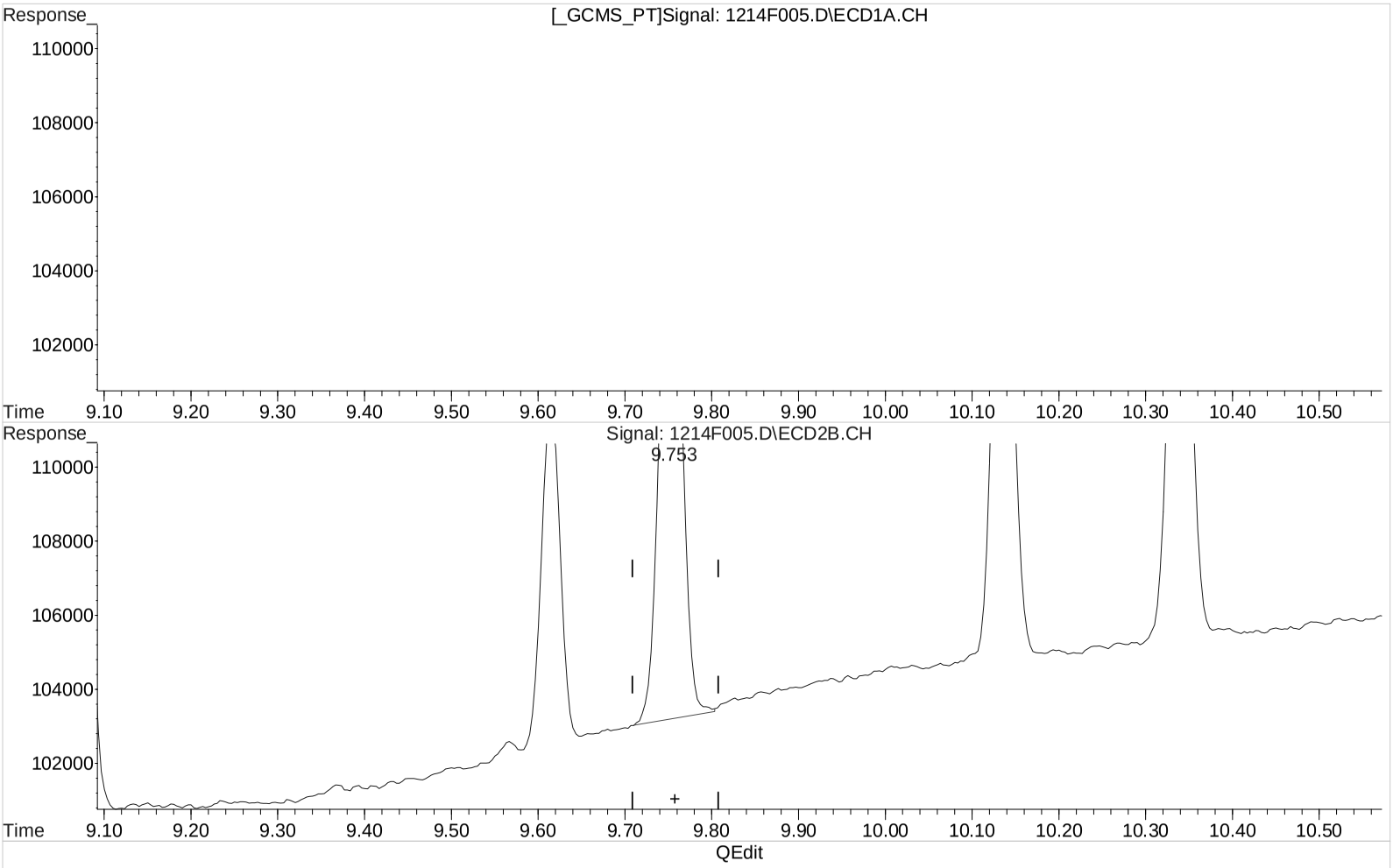
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:23 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(8) Heptachlor

11.449min 0.686 ug/L

response 10796

Manual Integration:

After

Baseline/Shoulder

12/16/18

(8) Heptachlor #2

9.753min 0.825 ug/L m

response 27952

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F006.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 4:20 pm Operator: MC
Sample : 81 2.0PPB GCPS8-50D Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 13:01:57 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.020	5.348	795528	2145410	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	8.747	7.115	28021	67232	1.529	1.913	#
28) s	Decachlor...	18.433	16.878	28944	58281	1.603	1.979	
	Target Compounds							
3)	alpha-BHC	9.590	8.335	24769	58664	1.754	1.956	
4)	Hexachlor...	9.747	8.121	35208	81677	1.616	1.967	m
5)	beta-BHC	10.870	9.618	12454	27690	1.796	1.868	
6)	gamma-BHC...	10.260	9.075	22243	52994	1.834	1.923	
7)	delta-BHC	11.367	10.138	21432	50374	1.708	1.908	
8)	Heptachlor	11.453	9.755	20766	55145	1.641	1.867	
9)	Aldrin	12.007	10.341	23575	52633	1.715	1.900	
10)	Isodrin	12.533	11.135	19993	45102	1.736	1.873	
11)	Heptachlo...	12.727	11.425	22054	49530	1.769	1.873	
12)	gamma-Chl...	13.247	11.835	22140	49546	1.747	1.909	
13)	Endosulfan I	13.370	12.041	19880	44258	1.564	1.826	
14)	alpha-Chl...	13.320	11.978	22595	49172	1.658	1.882	
15)	Dieldrin	13.790	12.481	21371	48067	1.654	1.941	
16)	4,4'-DDE	13.600	12.338	22567	49682	1.575	1.859	
17)	Endrin	14.157	12.955	19144	43469	1.579	1.781	
18)	Endosulfa...	14.607	13.388	19313	43183	1.740	1.909	
19)	4,4'-DDD	14.437	13.221	16210	36324	1.672	1.836	
20)	Endrin Al...	14.787	13.748	17408	37934	1.587	1.840	
21)	Endosulfa...	15.257	14.071	19059	43401	1.648	1.918	
22)	4,4'-DDT	14.930	13.638	11252	34834	1.339	1.819	#
23)	Endrin Ke...	15.943	15.005	19260	47766	1.682	1.909	
24)	Methoxychlor	15.683	14.735	6269	19884	1.142	1.761	#

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

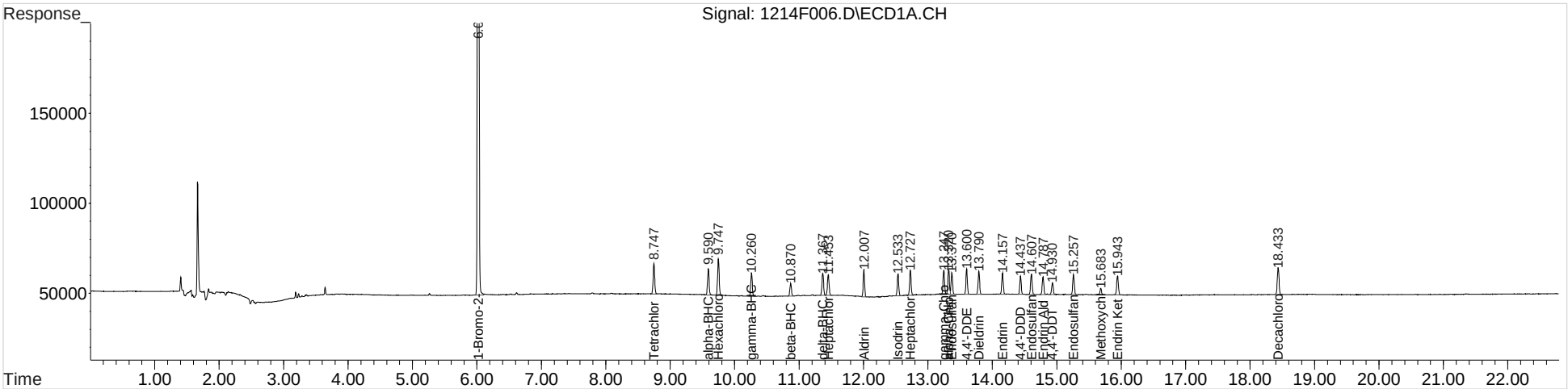
1st SM 12/18/18
2nd UA 12/19/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121418CAL\1214F006.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 4:20 pm Operator: MC
Sample : 81 2.0PPB GCPS8-50D Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 13:01:57 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



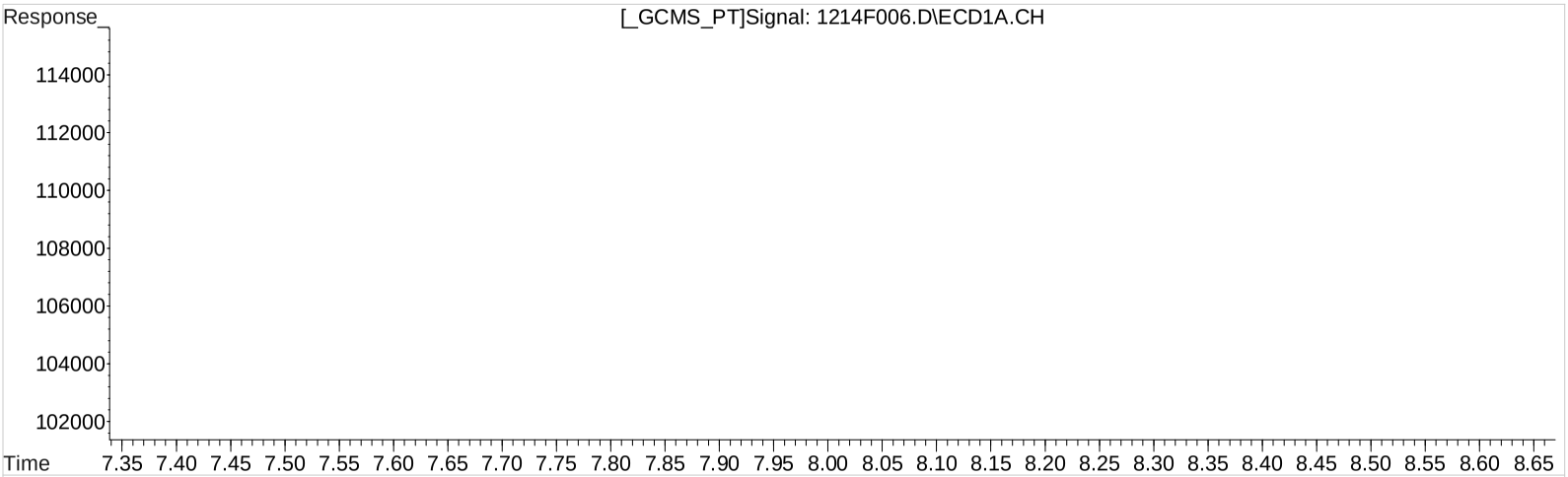
Quantitation Report (Qedit)

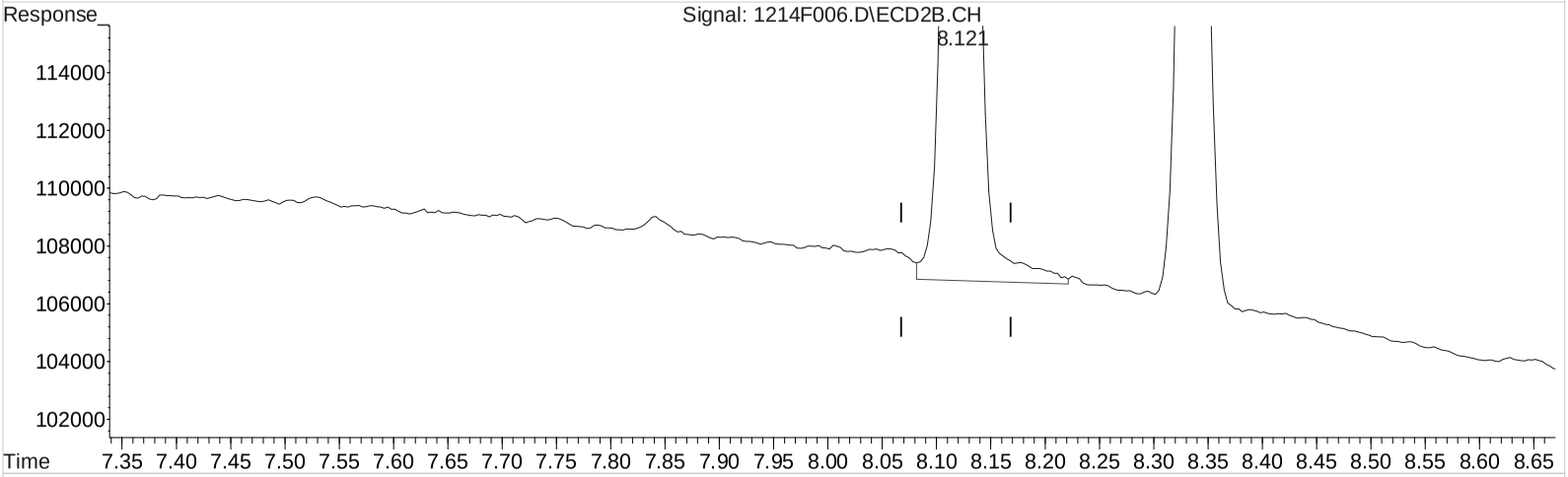
1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F006.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 4:20 pm Operator: MC
Sample : 81 2.0PPB GCPS8-50D Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:02 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.747min 1.616 ug/L

response 35208

Manual Integration:

Before

12/16/18

(4) Hexachlorobenzene #2

8.121min 2.048 ug/L

response 85070

(+) = Expected Retention Time

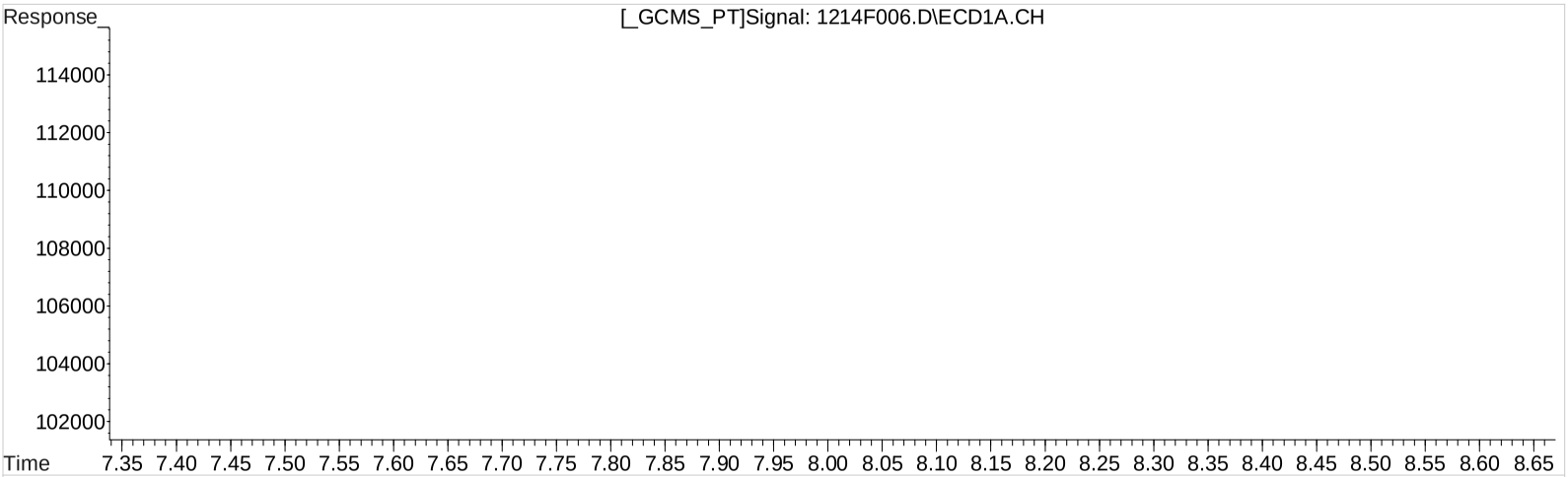
Quantitation Report (Qedit)

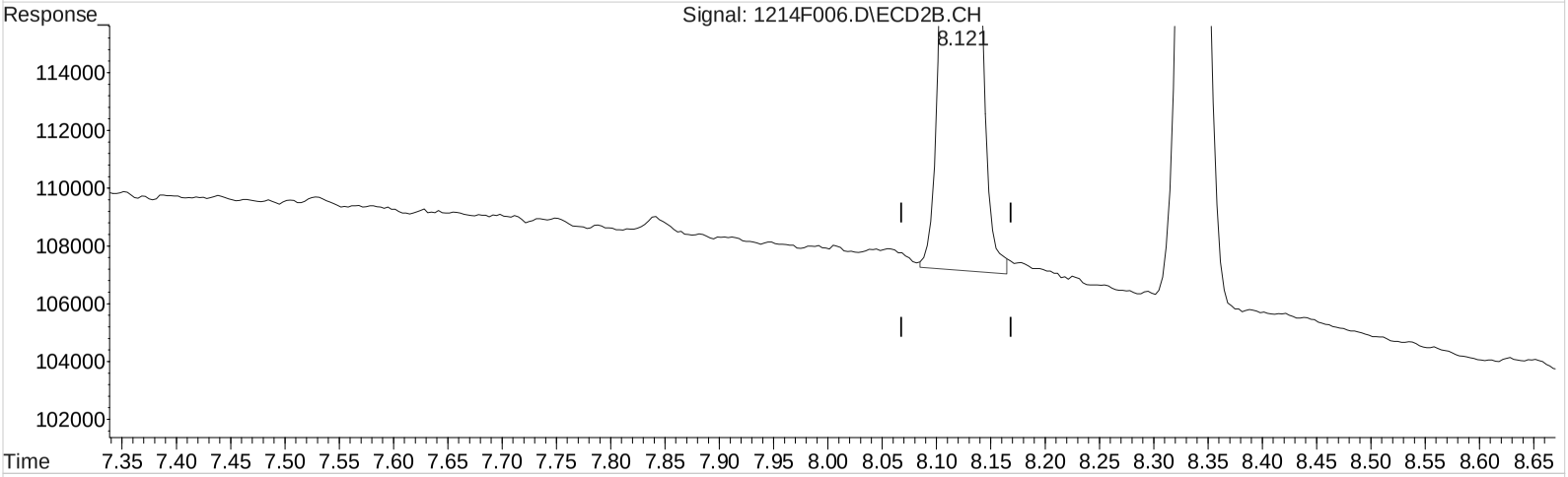
1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F006.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 4:20 pm Operator: MC
Sample : 81 2.0PPB GCPS8-50D Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:02 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.747min 1.616 ug/L

response 35208

Manual Integration:

After

Baseline/Shoulder

12/16/18

(4) Hexachlorobenzene #2

8.121min 1.967 ug/L m

response 81677

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F007.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 4:51 pm Operator: MC
Sample : 81 5.0PPB GCPS8-49E @4X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 13:02:33 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.020	5.345	855606	2377740	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	8.746	7.111	62031	150462	3.347	3.862	
28) s	Decachlor...	18.440	16.881	64122	128353	3.303	3.932	
	Target Compounds							
3)	alpha-BHC	9.593	8.335	57215	134072	3.767	4.034m	
4)	Hexachlor...	9.750	8.121	75956	181171	3.534	3.936	
5)	beta-BHC	10.870	9.618	27834	62013	3.732	3.774	
6)	gamma-BHC...	10.263	9.075	51376	120908	3.939	3.959	
7)	delta-BHC	11.370	10.138	49269	117065	3.651	4.000	
8)	Heptachlor	11.453	9.755	47228	123270	3.789	3.766	
9)	Aldrin	12.006	10.345	53609	120063	3.626	3.910	
10)	Isodrin	12.536	11.135	44693	103195	3.608	3.866	
11)	Heptachlo...	12.730	11.425	49374	112829	3.682	3.849	
12)	gamma-Chl...	13.246	11.835	50231	111840	3.685	3.889	
13)	Endosulfan I	13.373	12.041	45620	100737	3.338	3.751	
14)	alpha-Chl...	13.323	11.978	50740	111563	3.461	3.853	
15)	Dieldrin	13.793	12.481	48775	108403	3.509	3.951	
16)	4,4'-DDE	13.603	12.338	50456	111527	3.274	3.766	
17)	Endrin	14.160	12.958	43218	100588	3.314	3.719	
18)	Endosulfa...	14.610	13.388	43158	97814	3.830	3.901	
19)	4,4'-DDD	14.440	13.221	37616	82683	3.608	3.771	
20)	Endrin Al...	14.790	13.751	39036	86000	3.310	3.765	
21)	Endosulfa...	15.263	14.075	43533	97671	3.499	3.894	
22)	4,4'-DDT	14.936	13.638	26606	77890	2.943	3.793	#
23)	Endrin Ke...	15.946	15.008	45421	108910	3.689	3.928	
24)	Methoxychlor	15.686	14.738	14746	45651	2.849	3.649	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

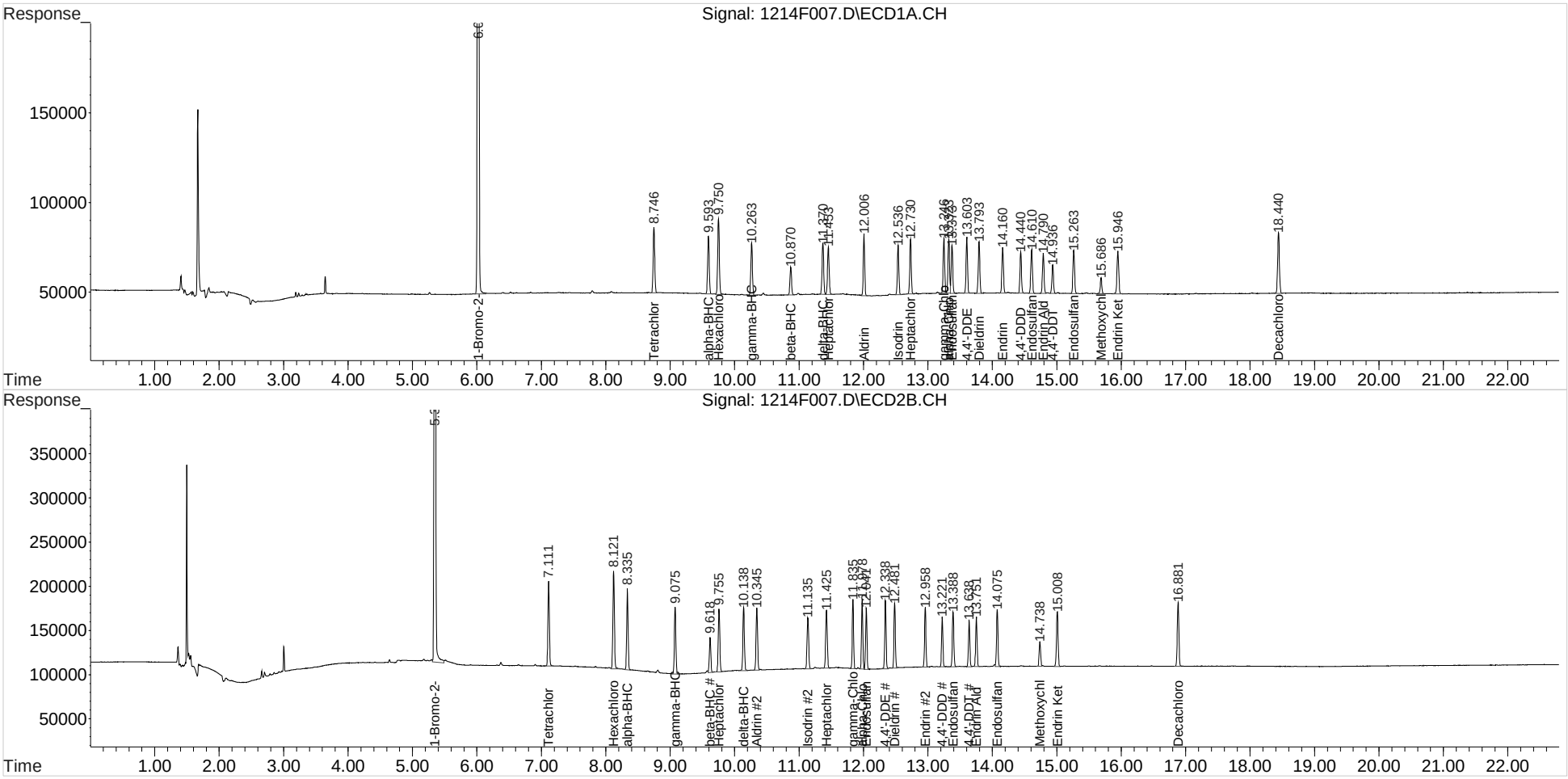
1st SM 12/18/18
2nd UA 12/19/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121418CAL\1214F007.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 4:51 pm Operator: MC
Sample : 81 5.0PPB GCPS8-49E @4X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 13:02:33 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



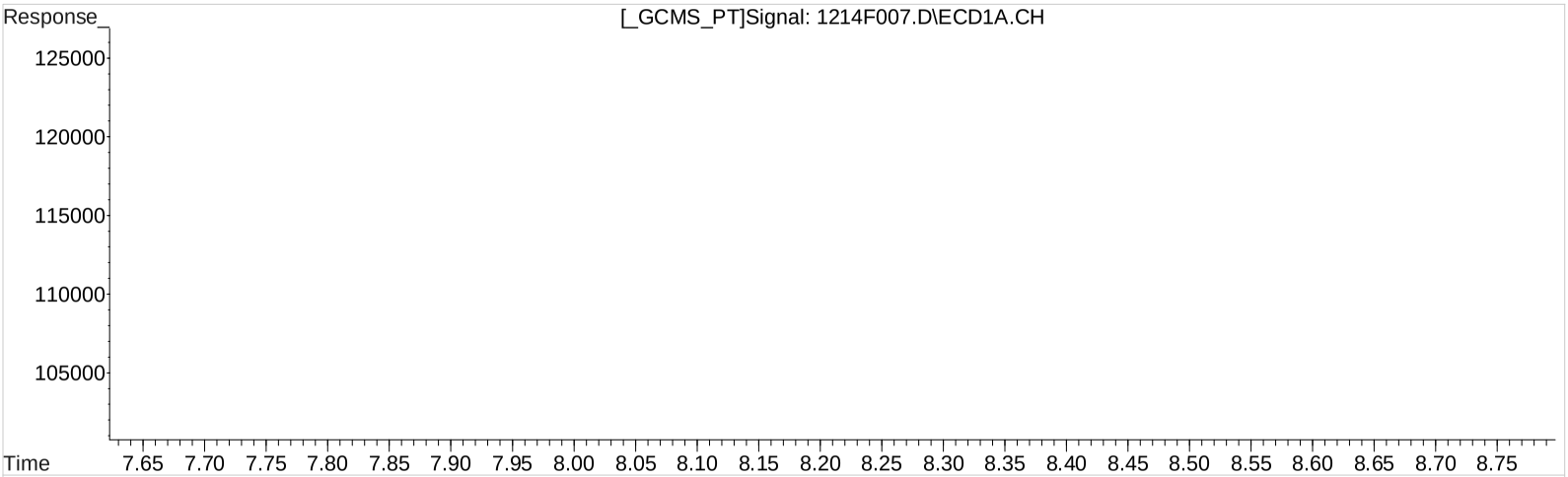
Quantitation Report (Qedit)

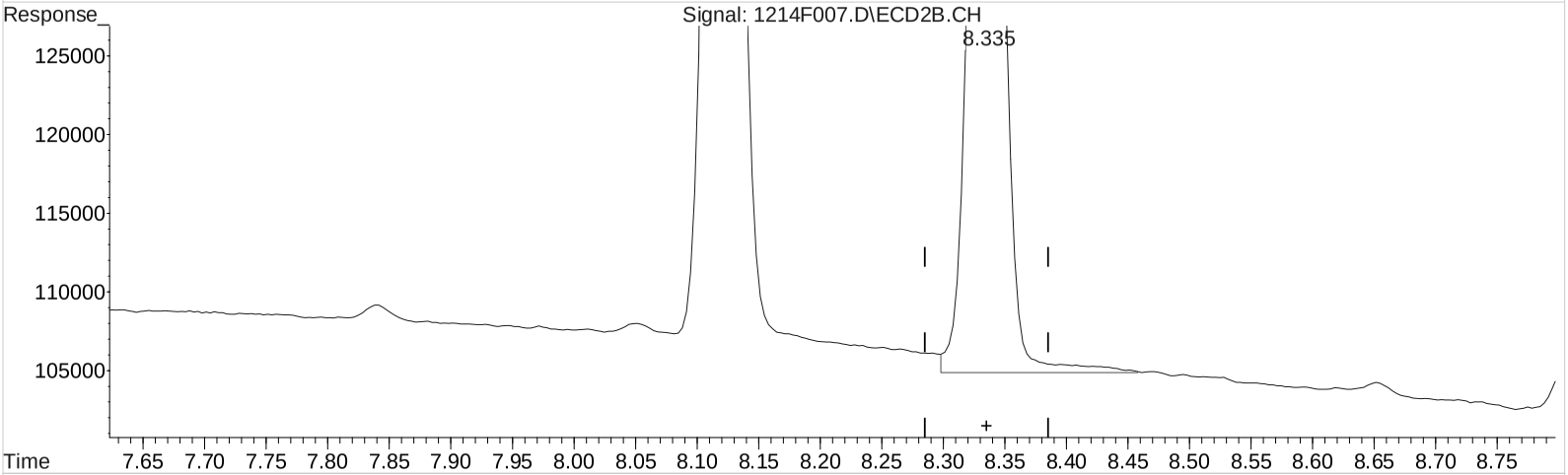
1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F007.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 4:51 pm Operator: MC
Sample : 81 5.0PPB GCPS8-49E @4X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:27 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(3) alpha-BHC

9.593min 3.767 ug/L

response 57215

Manual Integration:

Before

12/16/18

(3) alpha-BHC #2

8.335min 4.171 ug/L

response 138647

(+) = Expected Retention Time

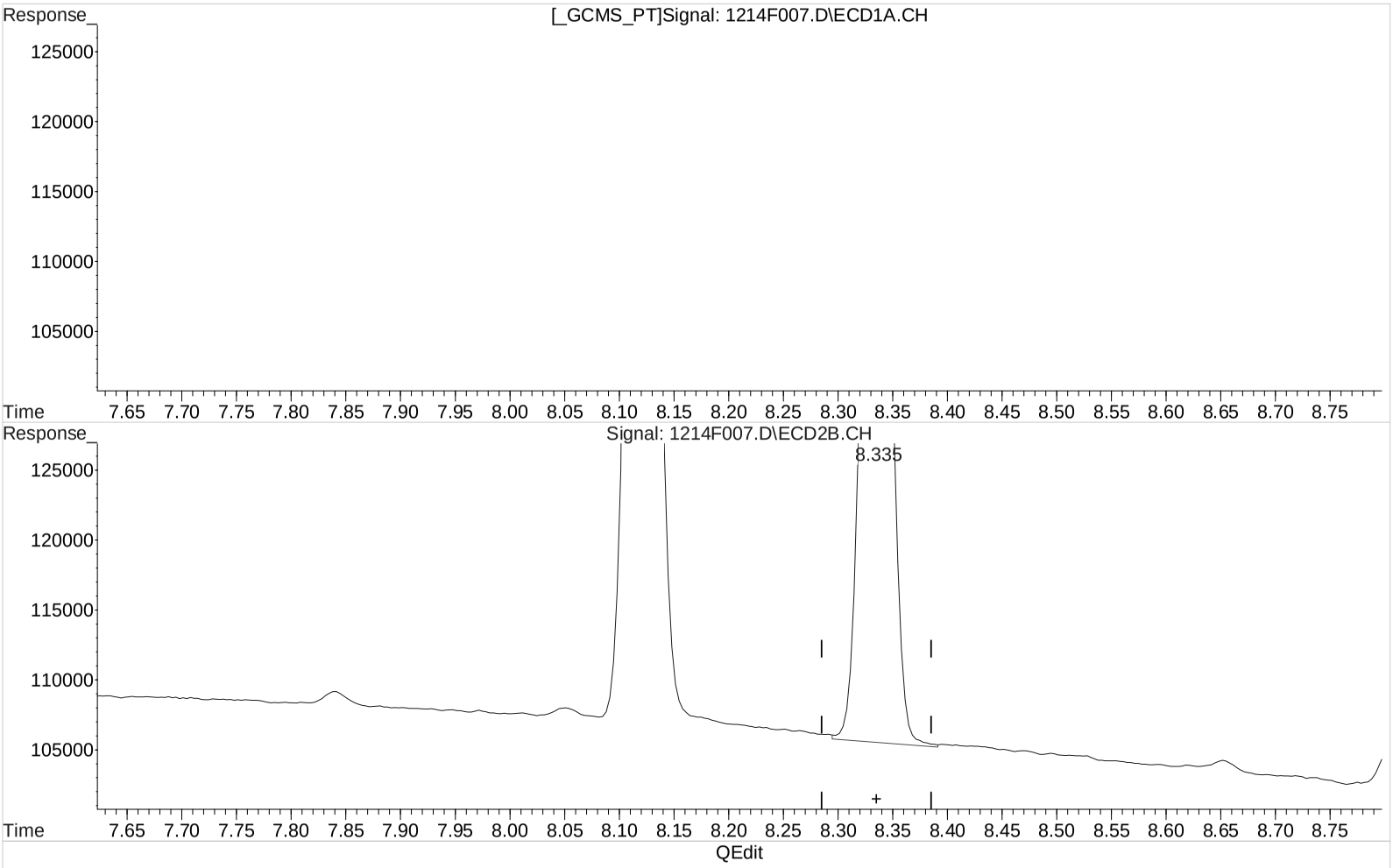
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F007.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 4:51 pm Operator: MC
Sample : 81 5.0PPB GCPS8-49E @4X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:27 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(3) alpha-BHC

9.593min 3.767 ug/L

response 57215

Manual Integration:

After

Baseline/Shoulder

12/16/18

(3) alpha-BHC #2

8.335min 4.034 ug/L m

response 134072

(+) = Expected Retention Time

1st STM 12/18/18
2nd UA 12/19/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121418CAL\1214F008.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 5:21 pm Operator: MC
Sample : 81 10PPB GCPS8-49E @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 13:03:01 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.021	5.346	814176	2161433	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	8.748	7.113	119954	291031	7.555	8.218	
28) s	Decachlor...	18.438	16.876	120807	239887	6.539	8.084	
	Target Compounds							
3)	alpha-BHC	9.595	8.336	114347	270908	7.911	8.966	
4)	Hexachlor...	9.748	8.123	141891	339155	7.671	8.106	
5)	beta-BHC	10.871	9.620	53013	119806	7.470	8.022	
6)	gamma-BHC...	10.265	9.076	101232	239375	8.157	8.623	
7)	delta-BHC	11.371	10.143	97871	232096	7.621	8.725	
8)	Heptachlor	11.455	9.760	91408	238229	8.464	8.007	
9)	Aldrin	12.008	10.346	106093	235757	7.541	8.446	
10)	Isodrin	12.535	11.136	86229	199814	7.315	8.235	
11)	Heptachlo...	12.728	11.426	96059	217184	7.527	8.151	
12)	gamma-Chl...	13.248	11.836	96858	217209	7.467	8.309	
13)	Endosulfan I	13.371	12.043	86810	194212	6.675	7.954	
14)	alpha-Chl...	13.321	11.980	98328	215226	7.049	8.178	
15)	Dieldrin	13.791	12.483	93988	208770	7.106	8.370	
16)	4,4'-DDE	13.601	12.340	98747	214235	6.734	7.958	
17)	Endrin	14.158	12.956	84035	195880	6.771	7.966	
18)	Endosulfa...	14.608	13.390	82372	186736	8.064	8.193	
19)	4,4'-DDD	14.438	13.220	72679	160636	7.326	8.060	
20)	Endrin Al...	14.788	13.750	74368	164135	6.626	7.904	
21)	Endosulfa...	15.261	14.073	82635	187088	6.981	8.206	
22)	4,4'-DDT	14.931	13.640	51761	152124	6.017	8.338	#
23)	Endrin Ke...	15.945	15.006	86406	208040	7.375	8.255	
24)	Methoxychlor	15.685	14.733	29242	87633	6.257	7.705	
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

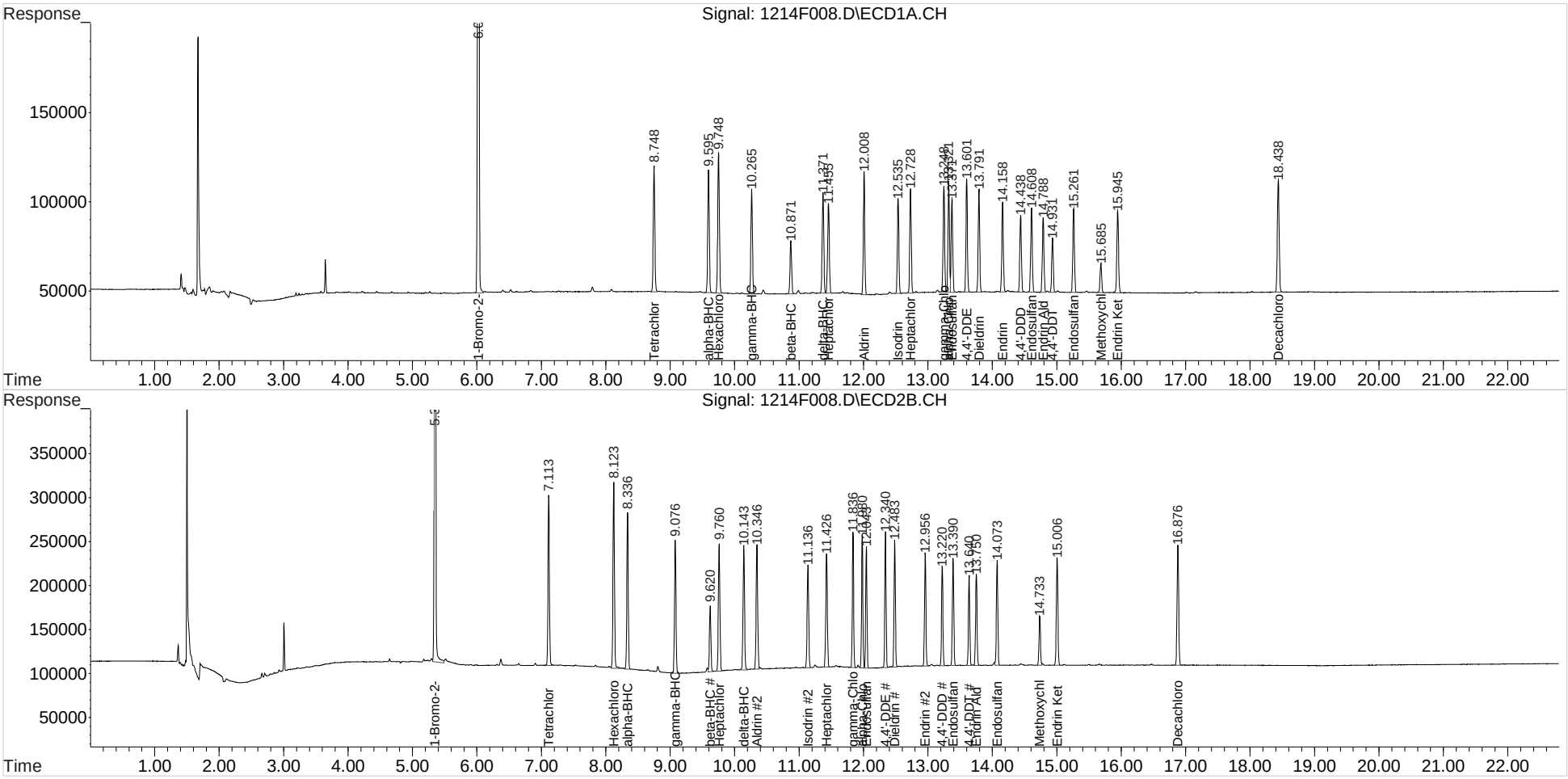
1st SM 12/18/18
2nd UA 12/19/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121418CAL\1214F008.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 5:21 pm Operator: MC
Sample : 81 10PPB GCPS8-49E @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 13:03:01 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



1st MC 12/18/18
2nd UA 12/19/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121718CAL\1217F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17 Dec 2018 1:18 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 17 13:51:17 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Sun Dec 16 13:04:03 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.011	5.342	609109	2308119	100.000	100.000
	System Monitoring Compounds						
	Target Compounds						
3)	alpha-BHC	9.581	8.329	22004	61351	2.422	2.052
4)	Hexachlor...	9.738	8.116	30755	80951	2.435	2.007m
5)	beta-BHC	10.858	9.609	11022	28787	2.498	2.079
6)	gamma-BHC...	10.251	9.069	19156	55415	2.410	2.065
7)	delta-BHC	11.358	10.132	18940	50871	2.470	2.035m
8)	Heptachlor	11.444	9.749	17205	56535	2.300	2.048
9)	Aldrin	11.998	10.336	21676	54263	2.493	2.040
10)	Isodrin	12.528	11.126	19086	52426	2.672	2.322
11)	Heptachlo...	12.718	11.416	17828	49511	2.209	2.024
12)	gamma-Chl...	13.238	11.829	19331	51839	2.471	2.092
13)	Endosulfan I	13.361	12.032	18038	46968	2.561	2.132
14)	alpha-Chl...	13.311	11.969	19559	52366	2.413	2.096
15)	Dieldrin	13.781	12.472	17468	47779	2.332	2.017
16)	4,4'-DDE	13.591	12.329	19632	50238	2.471	2.067
17)	Endrin	14.148	12.946	16485	45347	2.434	2.092
18)	Endosulfa...	14.594	13.379	16839	45029	2.392	2.098
19)	4,4'-DDD	14.428	13.212	13855	36764	2.420	2.073
20)	Endrin Al...	14.774	13.739	15328	39763	2.451	2.123
21)	Endosulfa...	15.248	14.062	15882	44003	2.322	2.063m
22)	4,4'-DDT	14.921	13.626	7796	33995	1.927	2.032
23)	Endrin Ke...	15.931	14.992	14541	46090	2.067	1.961
24)	Methoxychlor	15.668	14.726	5382	19300	2.182	1.996
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

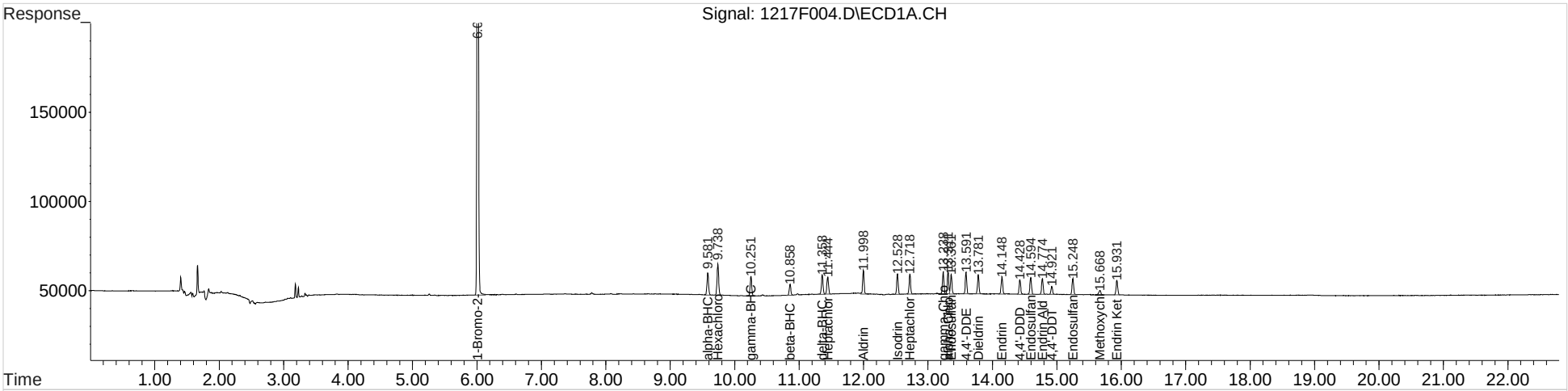
1st MC 12/18/18
2nd UA 12/19/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121718CAL\1217F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17 Dec 2018 1:18 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 17 13:51:17 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Sun Dec 16 13:04:03 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



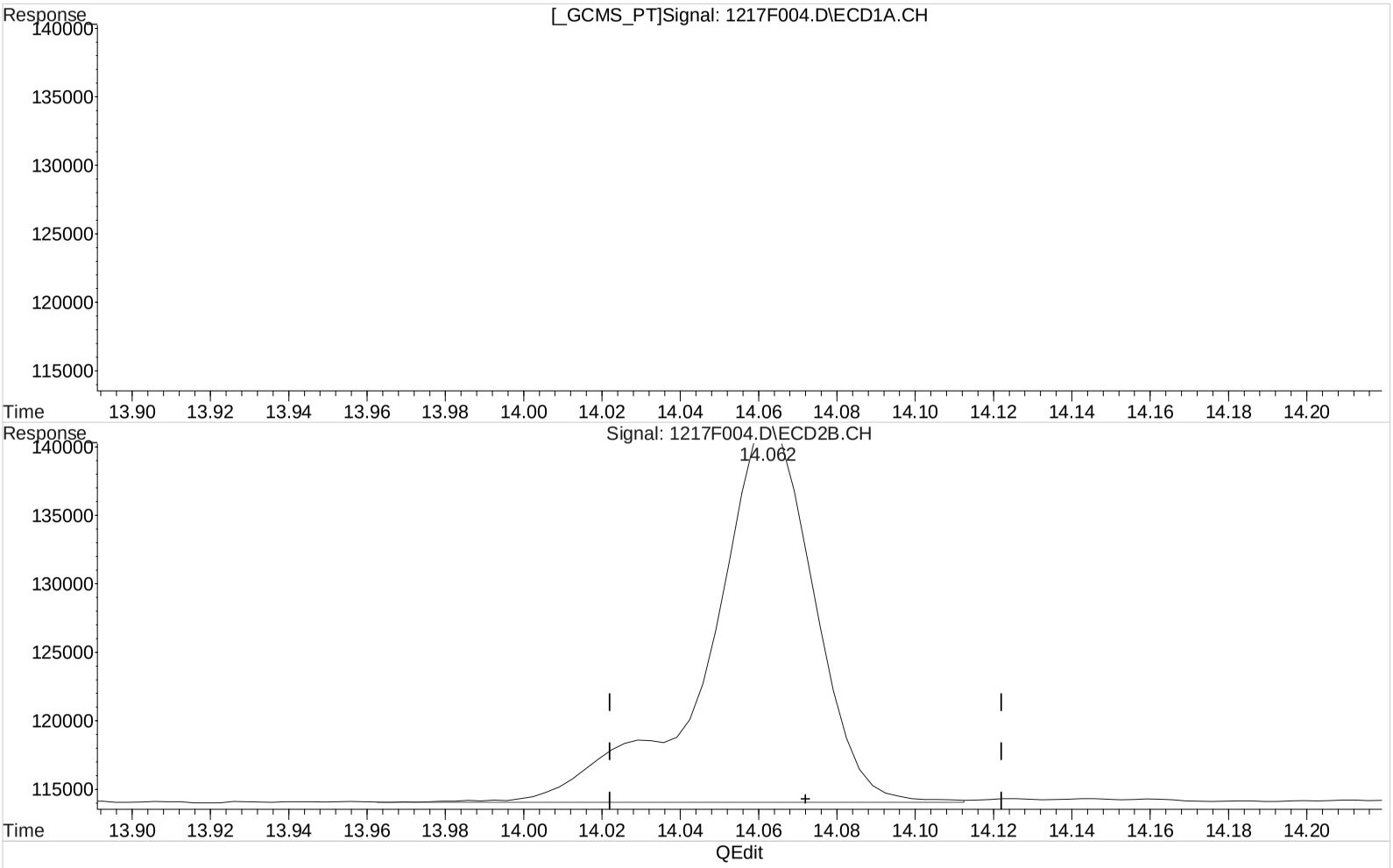
Quantitation Report (Qedit)

1st MC 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121718CAL\1217F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17 Dec 2018 1:18 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 17 13:49:46 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Sun Dec 16 13:04:03 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(21) Endosulfan Sulfate

15.248min 2.322 ug/L

response 15882

Manual Integration:

Before

12/17/18

(21) Endosulfan Sulfate #2

14.062min 2.412 ug/L

response 51450

(+) = Expected Retention Time

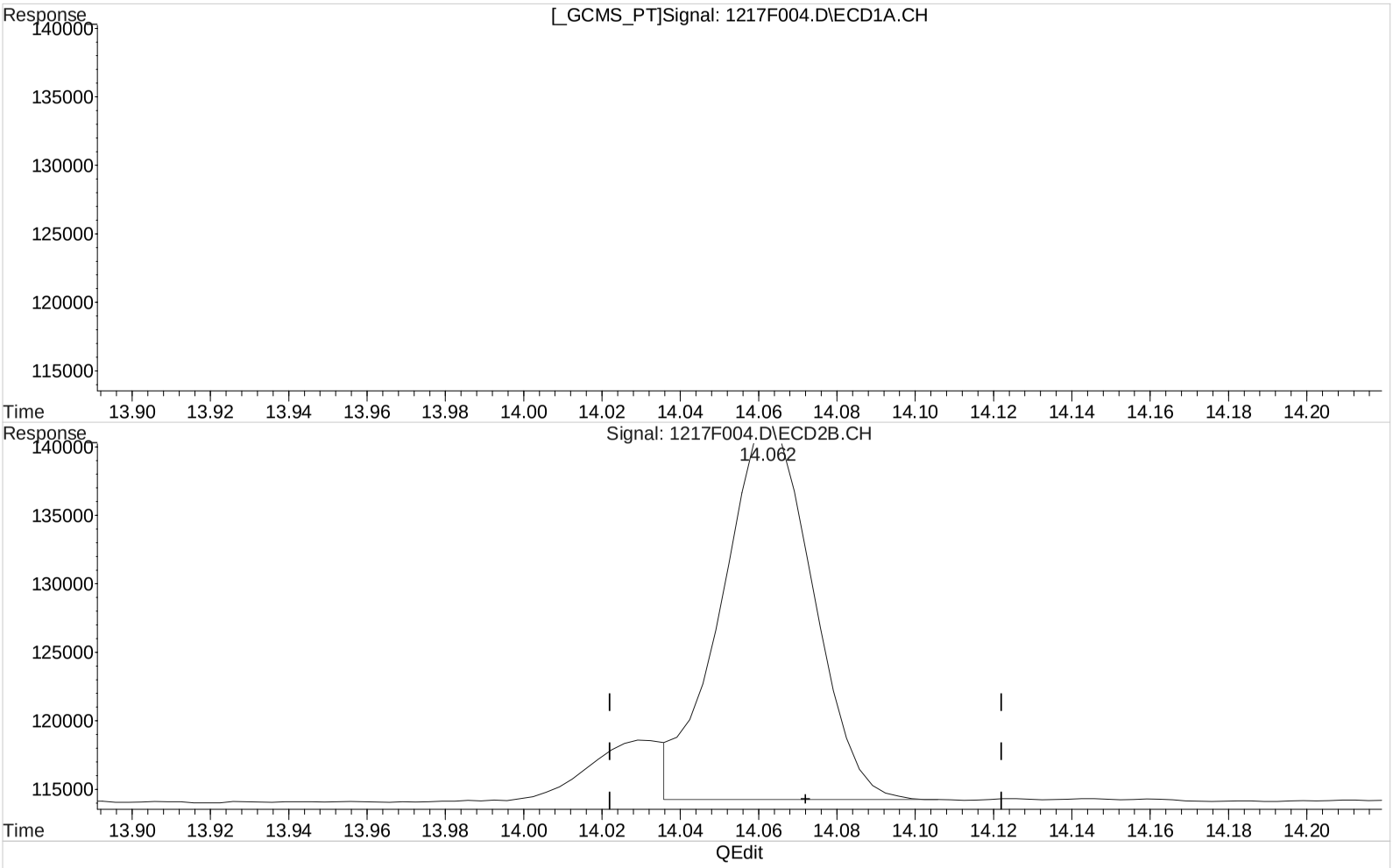
Quantitation Report (Qedit)

1st MC 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121718CAL\1217F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17 Dec 2018 1:18 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 17 13:49:46 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Sun Dec 16 13:04:03 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(21) Endosulfan Sulfate

15.248min 2.322 ug/L

response 15882

Manual Integration:

After

Baseline/Shoulder

12/17/18

(21) Endosulfan Sulfate #2

14.062min 2.063 ug/L m

response 44003

(+) = Expected Retention Time

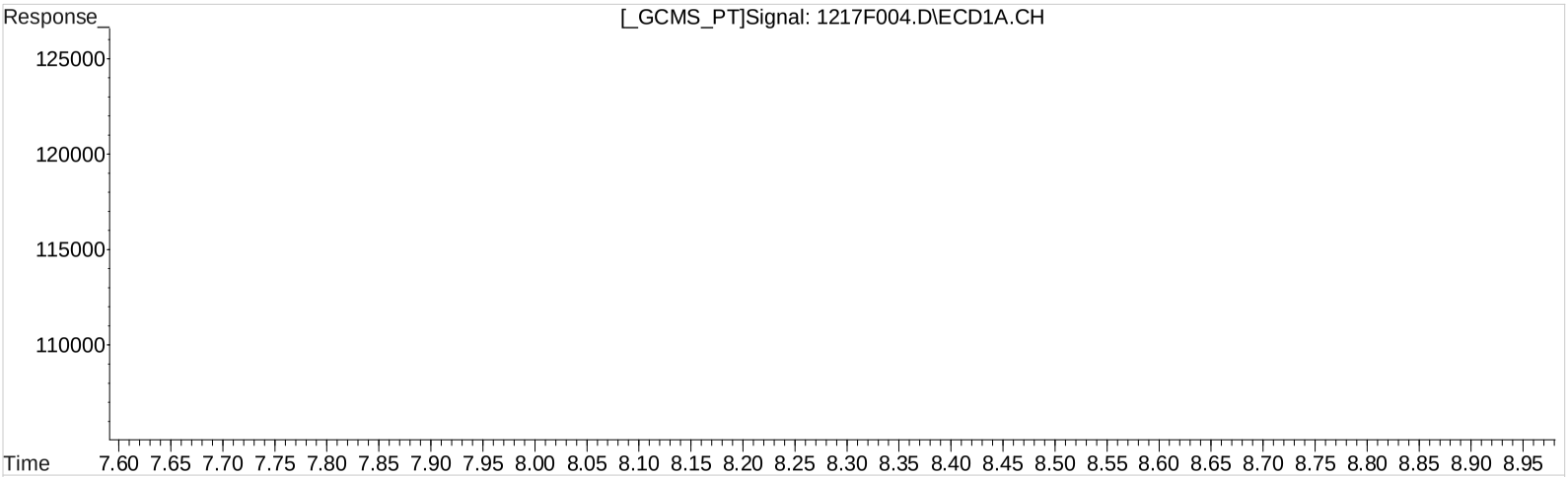
Quantitation Report (Qedit)

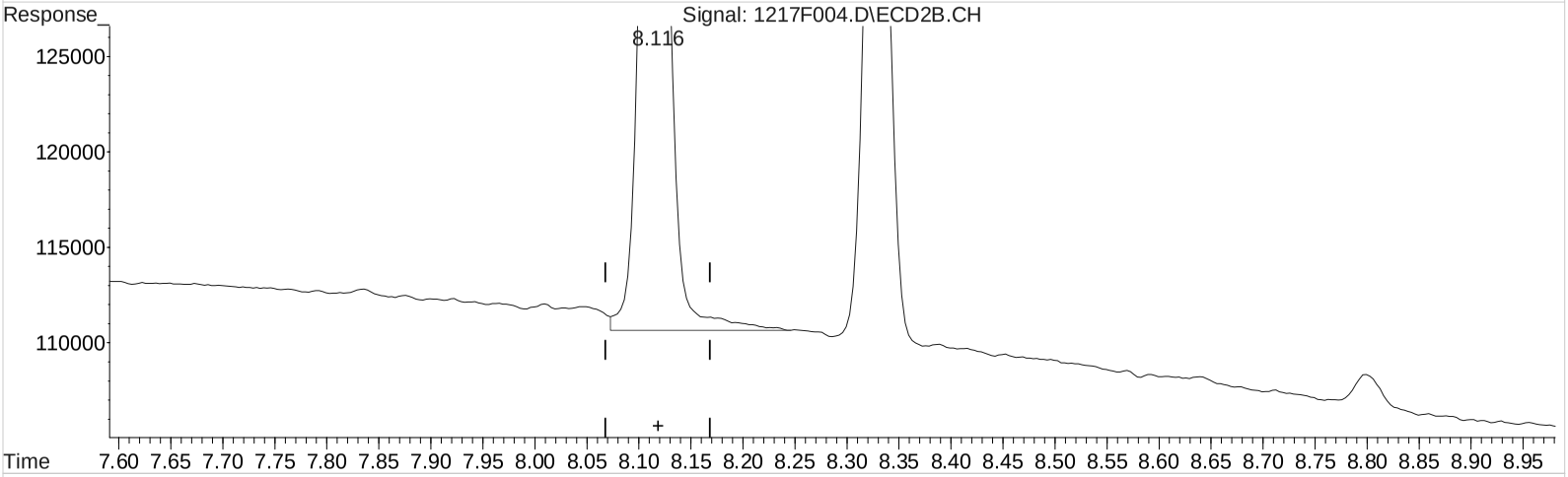
1st MC 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121718CAL\1217F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17 Dec 2018 1:18 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 17 13:45:17 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Sun Dec 16 13:04:03 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.738min 2.435 ug/L

response 30755

Manual Integration:

Before

12/17/18

(4) Hexachlorobenzene #2

8.116min 2.139 ug/L

response 86270

(+) = Expected Retention Time

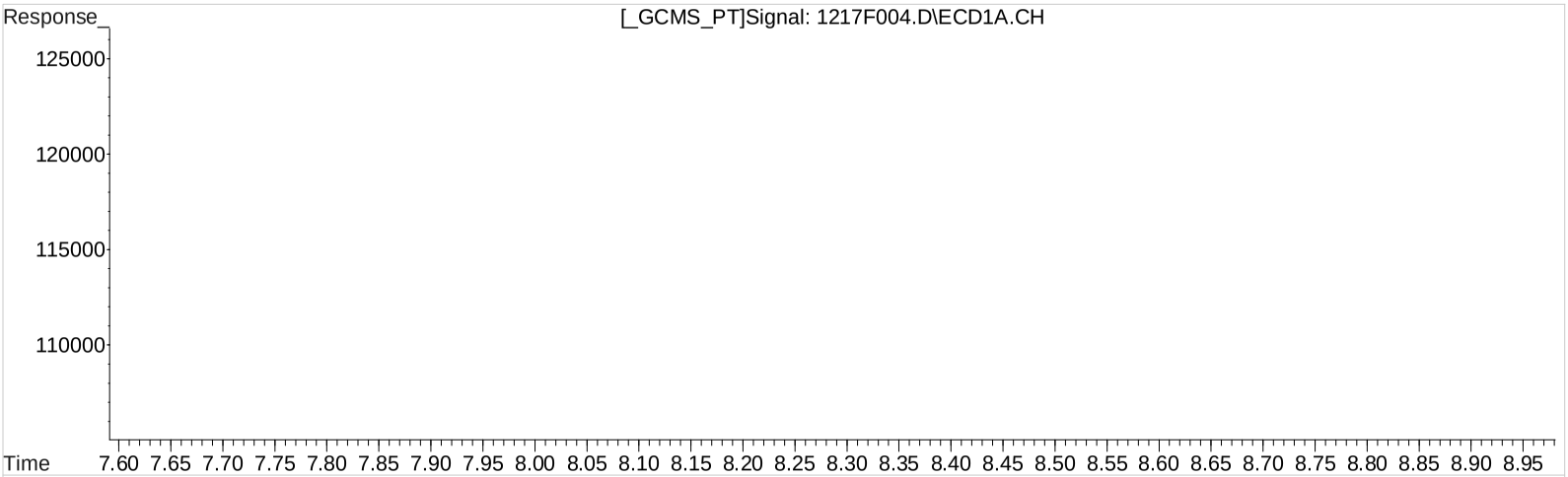
Quantitation Report (Qedit)

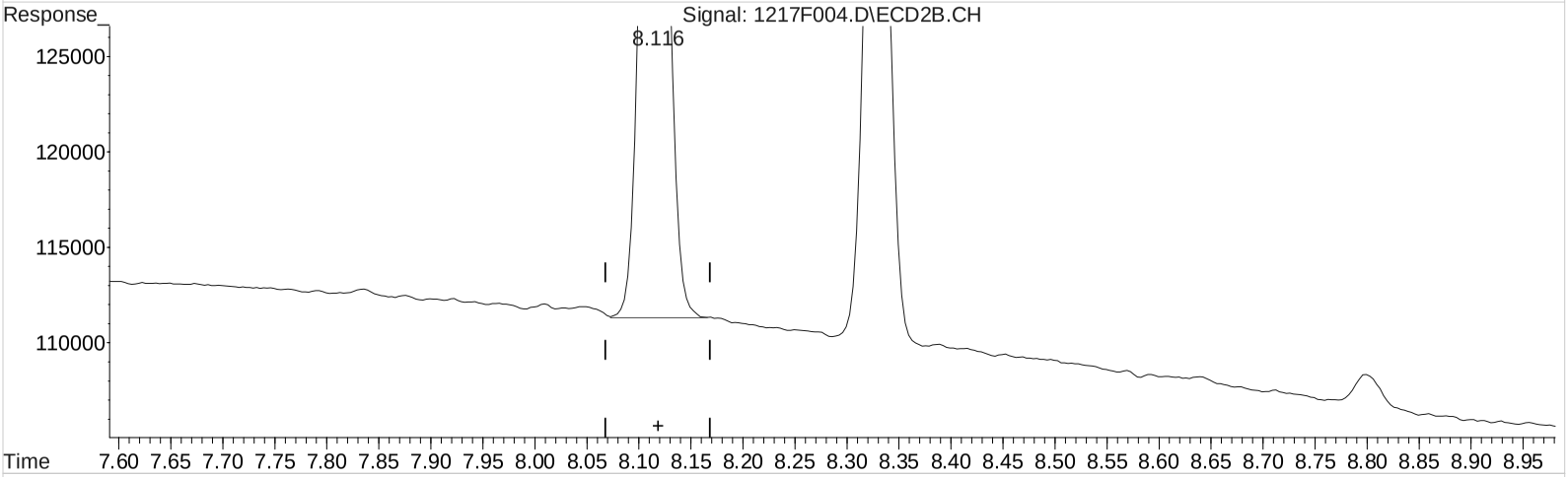
1st MC 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121718CAL\1217F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17 Dec 2018 1:18 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 17 13:45:17 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Sun Dec 16 13:04:03 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.738min 2.435 ug/L

response 30755

Manual Integration:

After

Baseline/Shoulder

12/17/18

(4) Hexachlorobenzene #2

8.116min 2.007 ug/L m

response 80951

(+) = Expected Retention Time

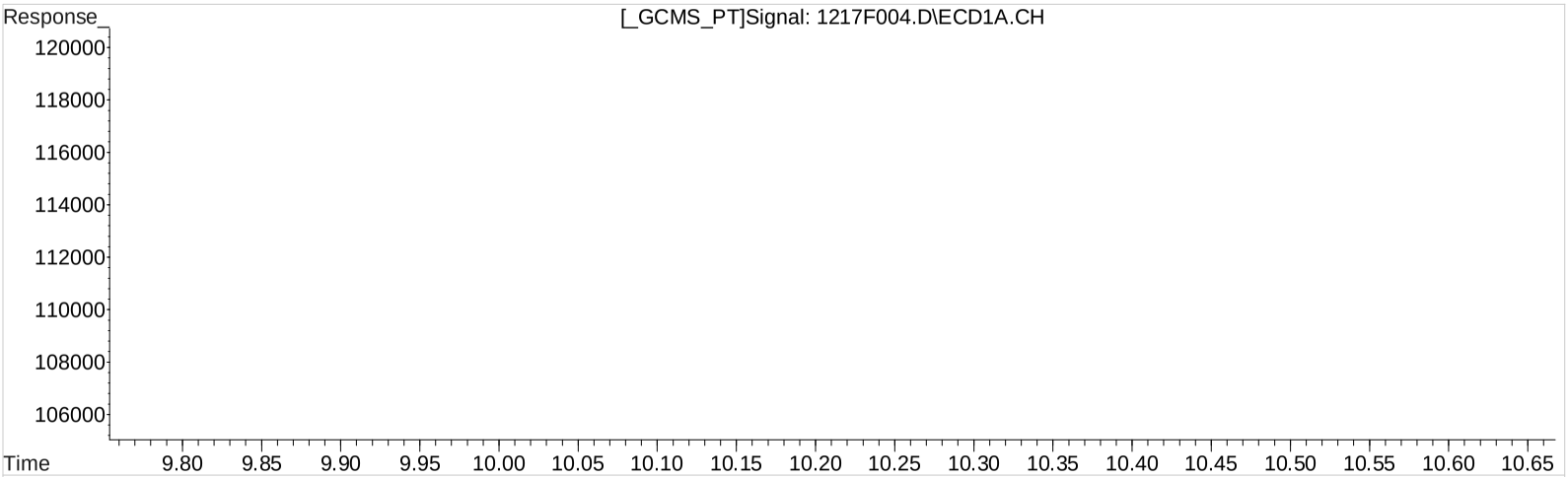
Quantitation Report (Qedit)

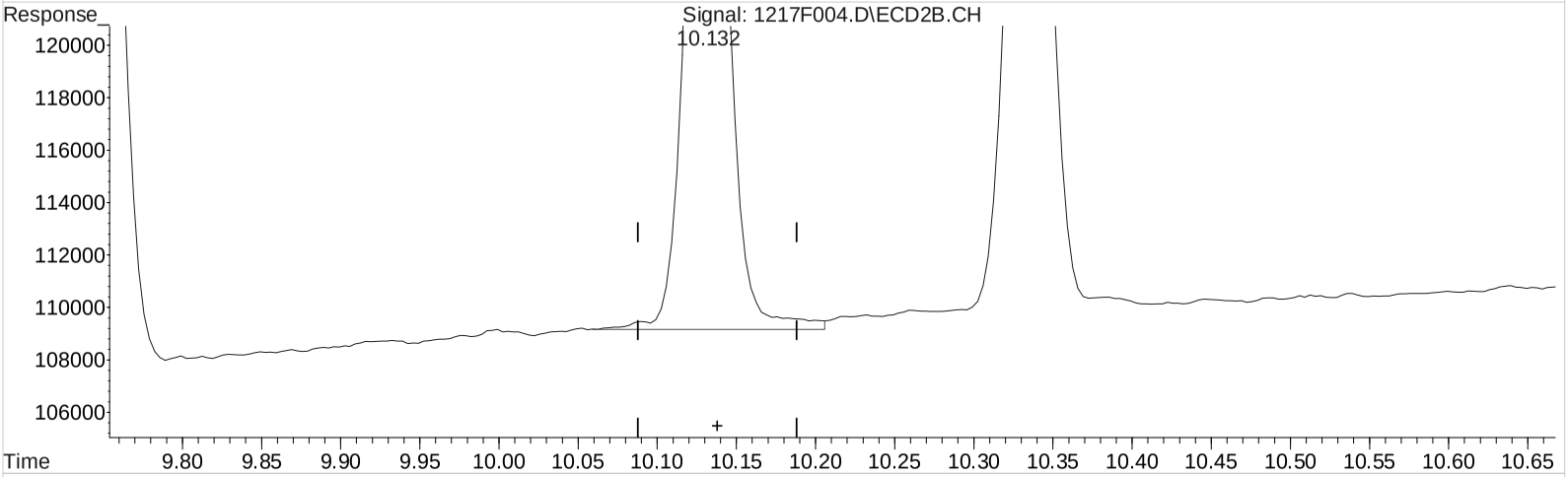
1st MC 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121718CAL\1217F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17 Dec 2018 1:18 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 17 13:45:17 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Sun Dec 16 13:04:03 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(7) delta-BHC

11.358min 2.470 ug/L

response 18940

(7) delta-BHC #2

10.132min 2.130 ug/L

response 53238

Manual Integration:

Before

12/17/18

(+) = Expected Retention Time

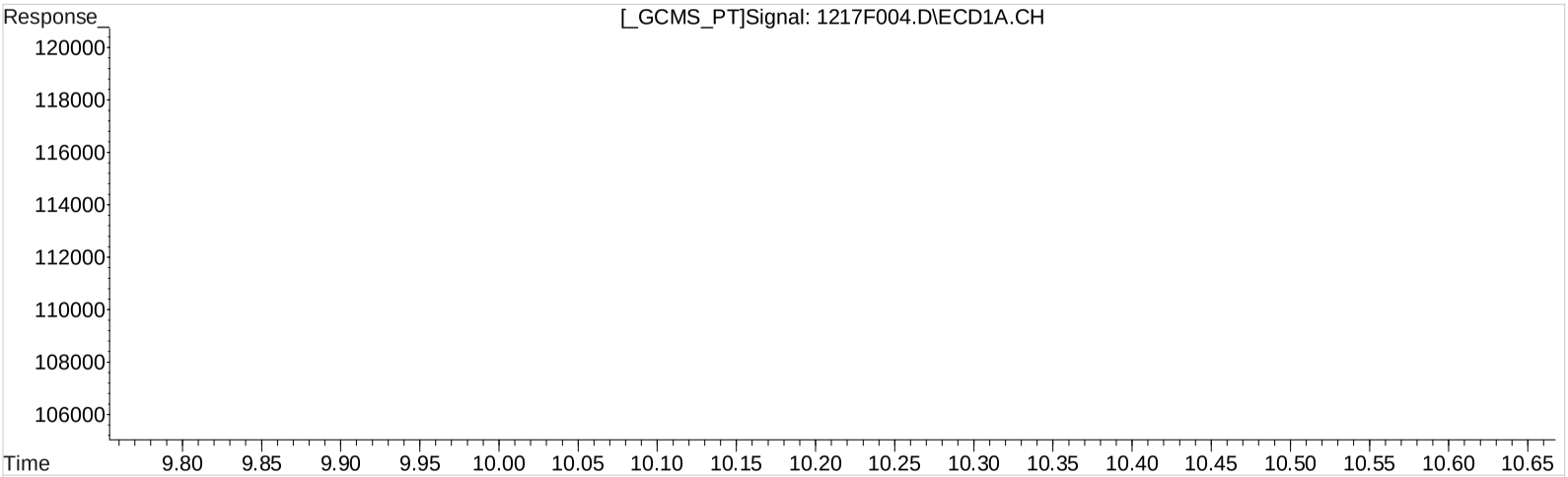
Quantitation Report (Qedit)

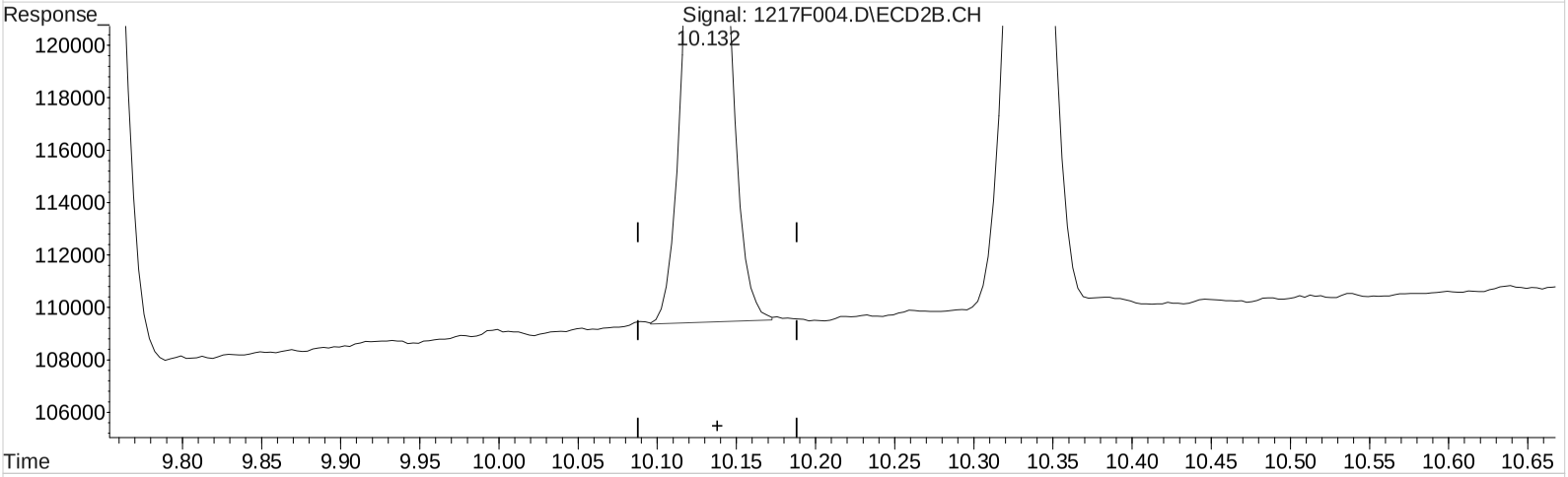
1st MC 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121718CAL\1217F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17 Dec 2018 1:18 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 17 13:45:17 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Sun Dec 16 13:04:03 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(7) delta-BHC

11.358min 2.470 ug/L

response 18940

Manual Integration:

After

Baseline/Shoulder

12/17/18

(7) delta-BHC #2

10.132min 2.035 ug/L m

response 50871

(+) = Expected Retention Time

Preparation Information

Group ID:	KWG1806665	**Prep Method:**	EPA 3511	**Prep Date:**	12/21/18 14:40
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.
K1812382-001	SL0594	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806665-1	Lab Control Sample	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806665-2	Duplicate Lab Control Sampl	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806665-3	Lab Control Sample	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806665-4	Duplicate Lab Control Sampl	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806665-5	Method Blank	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806665-6	Method Blank	8081B Pest OC TCLP	SOIL	100ml	5ml

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1812382-001	1707454					
KWG1806665-1	1707455					
KWG1806665-2	1707456					
KWG1806665-3	1707457					
KWG1806665-4	1707458					
KWG1806665-5	1707459					
KWG1806665-6	1707460					

1/11

Comments: 81, T/C

Started By: TAndrews Assisted By: —— Training Yes No

Completed By: TAndrews Assisted By: —— Yes No

Reviewed By: [signature] Date: 1/19 Storage: Dark knight J1-7

Chain of Custody

Relinquished By: [signature] Date: 12.21.18 Extracts Examined

Received By: [signature] Date: 12/28/18 Yes No

Preparation Information

Group ID:	KWG1806665	**Prep Method:**	EPA 3511	**Prep Date:**	12/21/18 00:00
Department:	Semivoa GC				

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext.	pH	Int. Vol.	Final Vol. MC	Surr. Added	Spike Added
1	K1812382-001	SL0594	.06	/	8081B Pest OC TCLP	SOIL	100	7	/	5	50	–
2	KWG1806665-1	Lab Control Sample 81	–		8081B Pest OC TCLP	SOIL	100	5		5	|	50
3	KWG1806665-2	Duplicate Lab Control Sample	–		8081B Pest OC TCLP	SOIL	100	5		5	|	|
4	KWG1806665-3	Lab Control Sample T/C	–		8081B Pest OC TCLP	SOIL	100	5		5	|	50/50
5	KWG1806665-4	Duplicate Lab Control Sample	–		8081B Pest OC TCLP	SOIL	100	5		5	|	|
6	KWG1806665-5	Method Blank LB			8081B Pest OC TCLP	SOIL	100	5		5	|	–
7	KWG1806665-6	Method Blank	–		8081B Pest OC TCLP	SOIL	100	5	/	5	_	–

Prep Run: 328786

Comments: Instrument Volume for QC 12-21-18 TA

Surrogate ID: PCB7-52G 0.5ppm xp 5.8.19 50uL 4I

Spike ID: GCPS8-49G 0.5ppm xp 12.29.18 50uL 4F / GCPS8-48L 20ppm xp 5.19.19 50uL / GCPS8-43B 10ppm xp 2.16.19

Witness: D.Madden 12.21.18

Started By: TAndrews Assisted By: —

Completed By: TAndrews Assisted By: —

Pest/PCB/PAH by 3511

Service Request # K1812382 **Work Group # Pest:** KWG1806665
PCB: ~~_____~~
PAH: ~~_____~~

Solvent Lot # 209663

Extraction Start (time/date/initial): 1440 122118 TK

Extraction Stop (time/date/initial): 1511 122118 TK

NaCL Lot# 171429208
Sulfate Lot # ~~_____~~

Carbon Clean-up (Ext-Car)(time/date/initial): ~~_____~~ Carbon Lot # ~~_____~~
Hexane Lot # ~~_____~~

Florisil Clean-up (Ext-Flor)(time/date/initial): ~~_____~~ Florisil Lot # ~~_____~~
Hexane Lot # ~~_____~~

Sulfuric Acid Clean-up (3665) (time/date/initial): ~~_____~~ Acid Lot # ~~_____~~

Other Clean-up: ~~_____~~ ☐ all samples ☐ some samples: ~~_____~~

Pipette (2 mL) Lot # ~~_____~~ Pipette (1 mL) Lot # 20717645

Pest Vial: Yellow Vial Storage: Dark Knight U1-7
PCB Vial: ~~_____~~ Vial Storage: ~~_____~~
PAH Vial: ~~_____~~ Vial Storage: ~~_____~~

Archived Extract Storage: Berry Pie

Additional Comments: _____

_____

☑ Hold times met (if no, reason: _____)
☑ Prep date, time, method, department, product code correct in stealth
☑ Spike information and Q.C. correct (insufficient volume or mass recorded if no Q.C.)
☑ Weights/Volumes and units correct on raw and final bench sheets
☑ Sample IDs have been checked - bottle numbers appended if required
☑ Names present for: started by, completed by, relinquished by, and witnessed by. Training circled.
☑ Extract storage recorded
☑ Additional prep sheet completely filled out (NA or line out blanks)
☑ All clean-ups have been noted on additional prep sheet
☑ Signed service request with Form V, if applicable, has been attached

TCLP Extraction Worksheet

Service Request Number(s): K1812382

Method : TCLP 1311 [X] SPLP 1312 [ ] Wet Ext. [ ] MEP [ ] If Autofluff sample is used please place an X in this box [ ] Prep Run# : 328582

Note: 1 Blank needed per every 20 extracts.

Sample Number	Teflon Extraction Vessel #	Sample Description (Solid, Liquid, Multiphasic)	Partical Size < 1cm ?	Solution Determination Weight (g)	Initial pH	Aliquot of 1N HCl (mL)	Final pH	Solution To Be Used	Extraction Weight (g)	Extraction Solution Volume (mL)	Post-Extraction pH
K1812382-1	26	S	Y	5.19	2.68	3.5	5.65	2	100.24	2000	5.69
MB	36	L	-	-	-	-	-	↓	-	↓	-
					CCL 12/R						

pH Meter Calibrated at pH4 & pH7 Today? [X] 12/19/18 12/20/18 pH Meter I.D. K-pH-08 Balance I.D. 57 Date Balance Checked: 12/19/18

Extraction Solution Prep date: 12/6/18 Tumbler # 1 Thermometer# 664244 Hot Plate Temp °C(50°C): 50

Today's Solution pH: 2.86 12/19/18 Extraction Solution I.D. MET-0G-73-I Filter Lot # 180145 HCl I.D. RE1-48-A

Extraction Started Time: 1430 Date: 12/19/18 Disposable Extraction Vessel Lot #: -

Extraction Finished Time: 815 Date: 12/20/18

Tumbler Rotational Speed (28 - 32 rpm): 29.6

Room Temperature at the Beginning of Extraction (Temp. Range 21° C - 25°C): 21.83

Analyst: [signature] Date: 12/19/18 Reviewer: [signature] Date: 12/21/18

r:\icp\misc\digforms TCLP Extraction Benchsheet 10-10-171

Pre-Prep Information Benchsheet

Prep Run #: 328582 **Prep Method:** **Team:** **Container Lot No:** **Prep Due Date:** Dec-28-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1812382-001	.01	TCLP	100.24g		PrepComments:~~SSPAIN K~~-Balance-51 CLVKKEN
2	K1812382-001 DUP KQ1818459-01	.01	TCLP	5.19g		PrepComments:~~SSPAIN K~~-Balance-51 [illegible]

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature]	12/19/18 11:17	[signature]	12/19/18 11:27

Sequence Name: C:\GC23\SEQUENCE\123118.S
Comment: OC PESTICIDES VIA 8081B
Operator: MCHAPPELLE
Data Path: C:\GC23\DATA\123118\
Pre-Seq Cmd:
Post-Seq Cmd:

CPL: 15919
RVW: 620816

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name	
1	IB	100	1231F001	PESTCLIP	HEX	
2	PEM	1	1231F002	PESTCLIP	PEM GCPS8-49H	
3	CCV	2	1231F003	PESTCLIP	81 2PPB GCPS8-50K	
4	CCV	3	1231F004	PESTCLIP	MISC 2PPB GCPS8-47M	
5	CCV	5	1231F005	PESTCLIP	TOX 100PPB GCPS8-50H	
6	CCV	6	1231F006	PESTCLIP	CHLOR 20PPB GCPS8-50F	
7	IB	7	1231F007	PESTCLIP	IB	
8	MB	8	1231F008	PESTCLIP	KWG1806233-MB	] IPR
9	LCS	9	1231F009	PESTCLIP	KWG1806233-LCS 81/M	
10	LCS	10	1231F010	PESTCLIP	KWG1806233-LCS 2 81/M	
11	LCS	11	1231F011	PESTCLIP	KWG1806233-LCS 3 81/M	
12	LCS	12	1231F012	PESTCLIP	KWG1806233-LCS 4 81/M	
13	SMPL	13	1231F013	PESTCLIP	K1811285-001 @5X	
14	MB	14	1231F014	PESTCLIP	KWG1806665-5 LB	
15	MB	15	1231F015	PESTCLIP	KWG1806665-6 MB	
16	LCS	16	1231F016	PESTCLIP	KWG1806665-LCS 81	
17	DLCS	17	1231F017	PESTCLIP	KWG1806665-DLCS 81	
18	LCS	18	1231F018	PESTCLIP	KWG1806665-LCS T/C	
19	DLCS	19	1231F019	PESTCLIP	KWG1806665-DLCS T/C	
20	SMPL	20	1231F020	PESTCLIP	K1812382-001	
21	PEM	1	1231F021	PESTCLIP	PEM GCPS8-49H	
22	CCV	2	1231F022	PESTCLIP	81 2PPB GCPS8-50K	
23	CCV	5	1231F023	PESTCLIP	TOX 100PPB GCPS8-50H	
24	CCV	6	1231F024	PESTCLIP	CHLOR 20PPB GCPS8-50F	
25	IB	7	1231F025	PESTCLIP	IB	
26	MB	21	1231F026	PESTCLIP	KWG1806580-MB	
27	LCS	22	1231F027	PESTCLIP	KWG1806580-LCS 81	
28	LCS	23	1231F028	PESTCLIP	KWG1806580-LCS T/C	
29	SMPL	24	1231F029	PESTCLIP	K1812326-001 - also 10X & RR000	
30	MS	25	1231F030	PESTCLIP	K1812326-001MS 81	
31	DMS	26	1231F031	PESTCLIP	K1812326-001DMS 81	
32	MS	27	1231F032	PESTCLIP	K1812326-001MS T/C	
33	DMS	28	1231F033	PESTCLIP	K1812326-001DMS T/C	
34	SMPL	29	1231F034	PESTCLIP	K1812326-002 ~ also RR000	
35	PEM	1	1231F035	PESTCLIP	PEM GCPS8-49H	
36	CCV	91	1231F036	PESTCLIP	81 2PPB GCPS8-50K - Surr ↓ T, ↑	
37	CCV	3	1231F037	PESTCLIP	MISC 2PPB GCPS8-47M	
38	CCV	4	1231F038	PESTCLIP	24 2PPB GCPS8-49K	
39	CCV	5	1231F039	PESTCLIP	TOX 100PPB GCPS8-50H	
40	CCV	6	1231F040	PESTCLIP	CHLOR 20PPB GCPS8-50F	
41	IB	97	1231F041	PESTCLIP	IB	
42	MB	30	1231F042	PESTCLIP	KWG1806523-MB	
43	LCS	31	1231F043	PESTCLIP	KWG1806523-LCS 81/M	

Sequence Name: C:\GC23\SEQUENCE\123118.S

Line	Type	Vial	DataFile	Method	Sample Name
44	DLCS	32	1231F044	PESTCLIP	KWG1806523-DLCS 81/M
45	LCS	33	1231F045	PESTCLIP	KWG1806523-LCS 24
46	DLCS	34	1231F046	PESTCLIP	KWG1806523-DLCS 24
47	LCS	35	1231F047	PESTCLIP	KWG1806523-LCS T/C
48	DLCS	36	1231F048	PESTCLIP	KWG1806523-DLCS T/C
49	SMPL	37	1231F049	PESTCLIP	K1812087-001
50	PEM	~~90~~ 1	1231F050	PESTCLIP	PEM GCPS8-49H
51	CCV	91 2	1231F051	PESTCLIP	81 2PPB GCPS8-50K — all ↑, ↑
52	CCV	3	1231F052	PESTCLIP	MISC 2PPB GCPS8-47M
53	CCV	4	1231F053	PESTCLIP	24 2PPB GCPS8-49K
54	CCV	95 ~~5~~	1231F054	PESTCLIP	TOX 100PPB GCPS8-50H
55	CCV	96 ~~6~~	1231F055	PESTCLIP	CHLOR 20PPB GCPS8-50F
56	IB	97	1231F056	PESTCLIP	IB
57	MB	38	1231F057	PESTCLIP	KWG1806546-MB
58	LCS	39	1231F058	PESTCLIP	KWG1806546-LCS 81/M
59	DLCS	40	1231F059	PESTCLIP	KWG1806546-DLCS 81/M
60	LCS	41	1231F060	PESTCLIP	KWG1806546-LCS 24
61	DLCS	42	1231F061	PESTCLIP	KWG1806546-DLCS 24
62	LCS	43	1231F062	PESTCLIP	KWG1806546-LCS T/C
63	DLCS	44	1231F063	PESTCLIP	KWG1806546-DLCS T/C
64	SMPL	45	1231F064	PESTCLIP	K1812084-001
65	PEM	90	1231F065	PESTCLIP	PEM GCPS8-49H
66	CCV	91	1231F066	PESTCLIP	81 2PPB GCPS8-50K all ↑ ↑
67	CCV	92	1231F067	PESTCLIP	MISC 2PPB GCPS8-47M
68	CCV	94	1231F068	PESTCLIP	24 2PPB GCPS8-49K
69	IB	97	1231F069	PESTCLIP	IB
70	MB	46	1231F070	PESTCLIP	KWG1806483-MB
71	LCS	47	1231F071	PESTCLIP	KWG1806483-LCS 81/M 24
72	LCS	48	1231F072	PESTCLIP	KWG1806483-LCS 24 81/M
73	SMPL	49	1231F073	PESTCLIP	K1811637-001
74	MS	50	1231F074	PESTCLIP	K1811637-001MS 81/M
75	DMS	51	1231F075	PESTCLIP	K1811637-001DMS
76	MS	52	1231F076	PESTCLIP	K1811637-001MS 24
77	DMS	53	1231F077	PESTCLIP	K1811637-001DMS 24
78	SMPL	54	1231F078	PESTCLIP	K1811637-002
79	SMPL	55	1231F079	PESTCLIP	K1811637-003
80	SMPL	56	1231F080	PESTCLIP	K1811637-004
81	SMPL	57	1231F081	PESTCLIP	K1811671-001
82	SMPL	58	1231F082	PESTCLIP	K1811671-002
83	SMPL	59	1231F083	PESTCLIP	KWG1806483-8 SRM @5X
84	SMPL	60	1231F084	PESTCLIP	KWG1806483-8 SRM

NR

TCMX, DCB ↑↑

DILUTION LOG

LAB ID	ALIQUOT	FINAL VOLUME	DILUTION FACTOR	DATE	ANALYST	SOLVENT LOT	COMMENTS
K1811285-1	100 µL	500 µL	5X	12/31/18	MC	Hex. 2516063	Endosulfan sulfate
KWG1806483-8	↓	↓	5X	↓	↓	↓	SRM

Comment: OC PESTICIDES VIA 8081B
Operator: MC
Data Path: C:\GC23\DATA\121418CAL\
Pre-Seq Cmd:
Post-Seq Cmd:

cal: 15919

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	PEM	1	1214F001	PESTCLIP	PEM GCPS8-49H
2	IB	2	1214F002	PESTCLIP	IB
3	ICAL	3	1214F003	PESTCLIP	81 0.2PPB GCPS8-50D @10X
4	ICAL	4	1214F004	PESTCLIP	81 0.5PPB GCPS8-49C @2X
5	ICAL	5	1214F005	PESTCLIP	81 1.0PPB GCPS8-49C
6	ICAL	6	1214F006	PESTCLIP	81 2.0PPB GCPS8-50D
7	ICAL	7	1214F007	PESTCLIP	81 5.0PPB GCPS8-49E @4X
8	ICAL	8	1214F008	PESTCLIP	81 10PPB GCPS8-49E @2X
9	ICV	9	1214F009	PESTCLIP	81 ICV 2PPB GCPS8-49A - NR
10	IB	2	1214F010	PESTCLIP	RUN STOP PRIMER
11	ICV	10	1214F011	PESTCLIP	81 ICV 2PPB GCPS8-49A - NR

Last Modified: Sun Dec 16 13:11:11 2018 Page: 1

Sequence Name: C:\GC23\SEQUENCE\121718CAL.S
Comment: OC PESTICIDES VIA 8081B
Operator: MC
Data Path: C:\GC23\DATA\121718CAL\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	IB	99	1217F001	PESTCLIP	HEX
2	PEM	11	1217F002	PESTCLIP	PEM GCPS8-49H
3	IB	12	1217F003	PESTCLIP	IB
4	ICV	13	1217F004	PESTCLIP	81 ICV 2PPB GCPS8-49A

Initial Calibration - Summary Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
Tetrachloro-m-xylene	SURR	AverageRF		1.652	20	9.2			NA	
alpha-BHC	MS	AverageRF		1.492	20	6.6			OK	
Hexachlorobenzene	MS	AverageRF		2.074	20	12.0			OK	
beta-BHC	MS	AverageRF		0.724	20	8.7			OK	
gamma-BHC (Lindane)	MS	AverageRF		1.305	20	5.9			OK	
delta-BHC	MS	AverageRF		1.259	20	5.9			OK	
Heptachlor	MS	AverageRF		1.228	20	7.4			OK	
Aldrin	MS	AverageRF		1.428	20	9.2			OK	
Isodrin	MS	AverageRF		1.173	20	9.5			OK	
Heptachlor Epoxide	MS	AverageRF		1.325	20	11.0			OK	
gamma-Chlordane	MS	AverageRF		1.285	20	6.8			OK	
Endosulfan I	MS	AverageRF		1.156	20	6.9			OK	
alpha-Chlordane	MS	AverageRF		1.331	20	8.8			OK	
Dieldrin	MS	AverageRF		1.230	20	6.4			OK	
4,4'-DDE	MS	AverageRF		1.304	20	7.3			OK	
Endrin	MS	AverageRF		1.112	20	6.9			OK	
Endosulfan II	MS	AverageRF		1.156	20	12.9			OK	
4,4'-DDD	MS	AverageRF		0.940	20	5.6			OK	
Endrin Aldehyde	MS	AverageRF		1.027	20	10.2			OK	
Endosulfan Sulfate	MS	AverageRF		1.123	20	7.7			OK	
4,4'-DDT	MS	AverageRF		0.664	20	5.9			OK	
Endrin Ketone	MS	AverageRF		1.155	20	8.2			OK	
Methoxychlor	MS	AverageRF		0.405	20	17.1			OK	
2,4'-DDE	MS	AverageRF		1.005	20	14.9			OK	
2,4'-DDD	MS	AverageRF		0.909	20	17.8			OK	
2,4'-DDT	MS	AverageRF		0.902	20	5.6			OK	
Decachlorobiphenyl	SURR	AverageRF		1.672	20	8.7			NA	
Toxaphene {1}	MULTI	AverageRF		0.023	20	6.4			OK	
Toxaphene {2}	MULTI	Quadratic		0.012			0.990	0.9983	OK	0.94
Toxaphene {3}	MULTI	AverageRF		0.017	20	13.9			OK	
Toxaphene {4}	MULTI	AverageRF		0.007	20	14.6			OK	
Toxaphene {5}	MULTI	AverageRF		0.009	20	13.8			OK	
Toxaphene {6}	MULTI	AverageRF		0.026	20	4.4			OK	
Chlordane {1}	MULTI	AverageRF		0.057	20	10.9			OK	
Chlordane {2}	MULTI	AverageRF		0.072	20	13.3			OK	
Chlordane {3}	MULTI	AverageRF		0.049	20	9.9			OK	
Chlordane {4}	MULTI	AverageRF		0.144	20	8.4			OK	
Chlordane {5}	MULTI	AverageRF		0.122	20	9.0			OK	
Chlordane {6}	MULTI	AverageRF		0.090	20	11.2			OK	
Chlorpyrifos	MS	AverageRF		0.661	20	3.2			OK	
Oxychlordane	MS	AverageRF		1.334	20	10.6			OK	
cis-Nonachlor	MS	AverageRF		1.515	20	8.6			OK	
trans-Nonachlor	MS	AverageRF		1.452	20	10.6			OK	
Mirex	MS	AverageRF		1.171	20	7.3			OK	
Hexachloroethane	MS	AverageRF		2.176	20	8.8			OK	
Hexachlorobutadiene	MS	AverageRF		1.813	20	11.6			OK	
Perthane	MS	AverageRF		0.035	20	8.5			OK	

Initial Calibration - Summary Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
Tetrachloro-m-xylene	SURR	AverageRF		1.439	20	8.2			NA	
alpha-BHC	MS	AverageRF		1.295	20	9.1			OK	
Hexachlorobenzene	MS	AverageRF		1.748	20	10.2			OK	
beta-BHC	MS	AverageRF		0.600	20	8.8			OK	
gamma-BHC (Lindane)	MS	AverageRF		1.163	20	9.0			OK	
delta-BHC	MS	AverageRF		1.083	20	6.9			OK	
Heptachlor	MS	AverageRF		1.196	20	11.2			OK	
Aldrin	MS	AverageRF		1.153	20	8.7			OK	
Isodrin	MS	AverageRF		0.978	20	8.7			OK	
Heptachlor Epoxide	MS	AverageRF		1.060	20	6.9			OK	
gamma-Chlordane	MS	AverageRF		1.074	20	9.0			OK	
Endosulfan I	MS	AverageRF		0.954	20	8.0			OK	
alpha-Chlordane	MS	AverageRF		1.082	20	10.8			OK	
Dieldrin	MS	AverageRF		1.027	20	8.1			OK	
4,4'-DDE	MS	AverageRF		1.053	20	8.7			OK	
Endrin	MS	AverageRF		0.939	20	6.1			OK	
Endosulfan II	MS	AverageRF		0.930	20	10.7			OK	
4,4'-DDD	MS	AverageRF		0.768	20	6.5			OK	
Endrin Aldehyde	MS	AverageRF		0.812	20	8.1			OK	
Endosulfan Sulfate	MS	AverageRF		0.924	20	8.1			OK	
4,4'-DDT	MS	AverageRF		0.725	20	7.2			OK	
Endrin Ketone	MS	AverageRF		1.018	20	7.1			OK	
Methoxychlor	MS	AverageRF		0.419	20	6.7			OK	
2,4'-DDE	MS	AverageRF		0.810	20	13.9			OK	
2,4'-DDD	MS	AverageRF		0.706	20	8.3			OK	
2,4'-DDT	MS	AverageRF		0.849	20	17.2			OK	
Decachlorobiphenyl	SURR	AverageRF		1.238	20	9.9			NA	
Toxaphene {1}	MULTI	AverageRF		0.017	20	9.5			OK	
Toxaphene {2}	MULTI	AverageRF		0.006	20	10.8			OK	
Toxaphene {3}	MULTI	AverageRF		0.006	20	13.5			OK	
Toxaphene {4}	MULTI	AverageRF		0.010	20	7.3			OK	
Toxaphene {5}	MULTI	AverageRF		0.020	20	11.1			OK	
Toxaphene {6}	MULTI	AverageRF		0.016	20	7.2			OK	
Chlordane {1}	MULTI	AverageRF		0.043	20	11.0			OK	
Chlordane {2}	MULTI	AverageRF		0.028	20	7.3			OK	
Chlordane {3}	MULTI	AverageRF		0.109	20	6.2			OK	
Chlordane {4}	MULTI	AverageRF		0.067	20	12.7			OK	
Chlordane {5}	MULTI	AverageRF		0.032	20	7.7			OK	
Chlordane {6}	MULTI	AverageRF		0.098	20	7.5			OK	
Chlorpyrifos	MS	AverageRF		0.656	20	10.3			OK	
Oxychlordane	MS	AverageRF		1.275	20	14.1			OK	
cis-Nonachlor	MS	AverageRF		1.429	20	10.9			OK	
trans-Nonachlor	MS	AverageRF		1.335	20	11.5			OK	
Mirex	MS	AverageRF		1.177	20	12.7			OK	
Hexachloroethane	MS	AverageRF		1.887	20	9.0			OK	
Hexachlorobutadiene	MS	AverageRF		1.536	20	11.1			OK	
Perthane	MS	AverageRF		0.035	20	13.4			OK	

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	284598	J:\GC23\data\100918CAL\1009F023.D	10/09/2018 19:20	10/10/2018 08:16	12/17/2018 15:26
2	284600	J:\GC23\data\100918CAL\1009F024.D	10/09/2018 19:49	10/10/2018 08:22	12/17/2018 15:26
3	284602	J:\GC23\data\100918CAL\1009F025.D	10/09/2018 20:19	10/10/2018 08:24	12/17/2018 15:26
4	284604	J:\GC23\data\100918CAL\1009F026.D	10/09/2018 20:49	10/10/2018 08:38	12/17/2018 15:27
5	284606	J:\GC23\data\100918CAL\1009F027.D	10/09/2018 21:20	10/10/2018 08:42	12/17/2018 15:27
6	284608	J:\GC23\data\100918CAL\1009F028.D	10/09/2018 21:50	10/10/2018 08:45	12/17/2018 15:27
7	284614	J:\GC23\data\100918CAL\1009F031.D	10/09/2018 23:19	10/10/2018 09:00	12/17/2018 15:27
8	284616	J:\GC23\data\100918CAL\1009F032.D	10/09/2018 23:49	10/10/2018 09:02	12/17/2018 15:27
9	284618	J:\GC23\data\100918CAL\1009F033.D	10/10/2018 00:19	10/10/2018 09:04	12/17/2018 15:27
10	284620	J:\GC23\data\100918CAL\1009F034.D	10/10/2018 00:50	10/10/2018 09:06	12/17/2018 15:27
11	284622	J:\GC23\data\100918CAL\1009F035.D	10/10/2018 01:20	10/10/2018 09:08	12/17/2018 15:27
12	284624	J:\GC23\data\100918CAL\1009F036.D	10/10/2018 01:50	10/10/2018 09:11	12/17/2018 15:27
13	284626	J:\GC23\data\100918CAL\1009F039.D	10/10/2018 03:19	10/10/2018 09:22	12/17/2018 15:27
14	284628	J:\GC23\data\100918CAL\1009F040.D	10/10/2018 03:49	10/10/2018 09:23	12/17/2018 15:27
15	284630	J:\GC23\data\100918CAL\1009F041.D	10/10/2018 04:19	10/10/2018 09:26	12/17/2018 15:27
16	284632	J:\GC23\data\100918CAL\1009F042.D	10/10/2018 04:49	10/10/2018 09:29	12/17/2018 15:27
17	284634	J:\GC23\data\100918CAL\1009F043.D	10/10/2018 05:19	10/10/2018 09:32	12/17/2018 15:28
18	284636	J:\GC23\data\100918CAL\1009F044.D	10/10/2018 05:49	10/10/2018 09:34	12/17/2018 15:28
19	284640	J:\GC23\data\101018CAL\1010F006.D	10/10/2018 12:29	10/10/2018 12:56	12/17/2018 15:28
20	284744	J:\GC23\data\101518CAL\1015F013.D	10/15/2018 19:37	10/16/2018 09:02	12/17/2018 15:28
21	284746	J:\GC23\data\101518CAL\1015F015.D	10/15/2018 20:36	10/16/2018 09:03	12/17/2018 15:28
22	284748	J:\GC23\data\101518CAL\1015F016.D	10/15/2018 21:06	10/16/2018 09:04	12/17/2018 15:28
23	284750	J:\GC23\data\101518CAL\1016F007.D	10/16/2018 12:59	10/16/2018 13:50	12/17/2018 15:28
24	284752	J:\GC23\data\101518CAL\1016F010.D	10/16/2018 14:27	10/16/2018 15:21	12/17/2018 15:28
25	284754	J:\GC23\data\101518CAL\1016F013.D	10/16/2018 15:57	10/16/2018 16:22	12/17/2018 15:28
26	285724	J:\GC23\data\121418CAL\1214F003.D	12/14/2018 14:52	12/16/2018 12:59	12/17/2018 15:28
27	285726	J:\GC23\data\121418CAL\1214F004.D	12/14/2018 15:21	12/16/2018 13:00	12/17/2018 15:29
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29	285730	J:\GC23\data\121418CAL\1214F006.D	12/14/2018 16:20	12/16/2018 13:01	12/17/2018 15:29
30	285732	J:\GC23\data\121418CAL\1214F007.D	12/14/2018 16:51	12/16/2018 13:02	12/17/2018 15:29
31	285734	J:\GC23\data\121418CAL\1214F008.D	12/14/2018 17:21	12/16/2018 13:03	12/17/2018 15:29

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Tetrachloro-m-xylene													1.652	9.2
			26	1.773	27	1.779	28	1.673	29	1.761	30	1.450		
	31	1.473												
alpha-BHC													1.492	6.6
			26	1.591	27	1.539	28	1.523	29	1.557	30	1.337		
	31	1.404												

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Hexachlorobenzene													2.074	12.0
	31	1.743	26	2.276	27	2.294	28	2.141	29	2.213	30	1.775		
beta-BHC													0.724	8.7
	31	0.651	26	0.787	27	0.762	28	0.713	29	0.783	30	0.651		
gamma-BHC (Lindane)													1.305	5.9
	31	1.243	26	1.386	27	1.296	28	1.306	29	1.398	30	1.201		
delta-BHC													1.259	5.9
	31	1.202	26	1.329	27	1.270	28	1.254	29	1.347	30	1.152		
Heptachlor													1.228	7.4
	31	1.123	26	1.267	27	1.309	28	1.260	29	1.305	30	1.104		
Aldrin													1.428	9.2
	31	1.303	26	1.569	27	1.560	28	1.399	29	1.482	30	1.253		
Isodrin													1.173	9.5
	31	1.059	26	1.331	27	1.163	28	1.181	29	1.257	30	1.045		
Heptachlor Epoxide													1.325	11.0
	31	1.180	26	1.550	27	1.368	28	1.311	29	1.386	30	1.154		

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
gamma-Chlordane													1.285	6.8
			26	1.352	27	1.290	28	1.310	29	1.392	30	1.174		
	31	1.190												
Endosulfan I													1.156	6.9
			26	1.242	27	1.160	28	1.154	29	1.249	30	1.066		
	31	1.066												
alpha-Chlordane													1.331	8.8
			26	1.484	27	1.334	28	1.351	29	1.420	30	1.186		
	31	1.208												
Dieldrin													1.230	6.4
			26	1.199	27	1.281	28	1.262	29	1.343	30	1.140		
	31	1.154												
4,4'-DDE													1.304	7.3
			26	1.392	27	1.293	28	1.330	29	1.418	30	1.179		
	31	1.213												
Endrin													1.112	6.9
			26	1.124	27	1.172	28	1.130	29	1.203	30	1.010		
	31	1.032												
Endosulfan II													1.156	12.9
			26	1.406	27	1.179	28	1.116	29	1.214	30	1.009		
	31	1.012												
4,4'-DDD													0.940	5.6
			26	0.976	27	0.926	28	0.947	29	1.019	30	0.879		
	31	0.893												

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Endrin Aldehyde							1.027	10.2
		26 1.178	27 1.060	28 1.003	29 1.094	30 0.912		
	31 0.913							
Endosulfan Sulfate							1.123	7.7
		26 1.211	27 1.163	28 1.133	29 1.198	30 1.018		
	31 1.015							
4,4'-DDT							0.664	5.9
		26 0.650	27 0.718	28 0.653	29 0.707	30 0.622		
	31 0.636							
Endrin Ketone							1.155	8.2
		26 1.293	27 1.102	28 1.200	29 1.211	30 1.062		
	31 1.061							
Methoxychlor							0.405	17.1
		26 0.539	27 0.407	28 0.386	29 0.394	30 0.345		
	31 0.359							
2,4'-DDE							1.005	14.9
		20 1.001	21 0.925	22 0.840	23 0.985	24 1.283		
	25 0.994							
2,4'-DDD							0.909	17.8
		20 0.914	21 0.843	22 0.733	23 0.866	24 1.214		
	25 0.885							
2,4'-DDT							0.902	5.6
		20 0.951	21 0.911	22 0.810	23 0.888	24 0.941		
	25 0.914							

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Decachlorobiphenyl													1.672	8.7
			26	1.774	27	1.701	28	1.756	29	1.819	30	1.499		
	31	1.484												
Toxaphene {1}													0.023	6.4
	7	0.022	8	0.024	9	0.025	10	0.023	11	0.022	12	0.021		
Toxaphene {2}													0.012	22.7#
	7	0.015	8	0.013	9	0.012	10	0.011	11	0.009	12	0.009		
Toxaphene {3}													0.017	13.9
	7	0.021	8	0.018	9	0.018	10	0.016	11	0.015	12	0.015		
Toxaphene {4}													0.007	14.6
	7	0.009	8	0.007	9	0.007	10	0.007	11	0.006	12	0.006		
Toxaphene {5}													0.009	13.8
	7	0.011	8	0.010	9	0.009	10	0.009	11	0.008	12	0.008		
Toxaphene {6}													0.026	4.4
	7	0.025	8	0.027	9	0.027	10	0.026	11	0.025	12	0.025		
Chlordane {1}													0.057	10.9
	13	0.066	14	0.056	15	0.061	16	0.057	17	0.054	18	0.046		
	19	0.059												

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Chlordane {2}							0.072	13.3
	13 0.072 19 0.090	14 0.072	15 0.074	16 0.071	17 0.067	18 0.058		
Chlordane {3}							0.049	9.9
	13 0.052 19 0.054	14 0.049	15 0.052	16 0.051	17 0.047	18 0.040		
Chlordane {4}							0.144	8.4
	13 0.152 19 0.153	14 0.148	15 0.155	16 0.141	17 0.138	18 0.121		
Chlordane {5}							0.122	9.0
	13 0.130 19 0.131	14 0.123	15 0.131	16 0.122	17 0.117	18 0.100		
Chlordane {6}							0.090	11.2
	13 0.088 19 0.103	14 0.094	15 0.098	16 0.088	17 0.085	18 0.072		
Chlorpyrifos	1 0.649	2 0.673	3 0.633	4 0.664	5 0.653	6 0.695	0.661	3.2
Oxychlordane	1 1.555	2 1.405	3 1.337	4 1.329	5 1.142	6 1.236	1.334	10.6
cis-Nonachlor	1 1.719	2 1.574	3 1.507	4 1.517	5 1.332	6 1.439	1.515	8.6

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
trans-Nonachlor	1	1.685	2	1.544	3	1.460	4	1.435	5	1.243	6	1.345	1.452	10.6
Mirex	1	1.276	2	1.212	3	1.170	4	1.220	5	1.040	6	1.106	1.171	7.3
Hexachloroethane	1	2.440	2	2.292	3	2.184	4	2.098	5	1.867	6	2.175	2.176	8.8
Hexachlorobutadiene	1	2.136	2	1.944	3	1.809	4	1.762	5	1.520	6	1.707	1.813	11.6
Perthane			2	0.031	3	0.039	4	0.033	5	0.035	6	0.036	0.035	8.5

 # RSD Not Applicable. Compound being quantitated from curve. Included in Average RF summary for Average %RSD calculation.

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	Quadratic

FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
284598	J:\GC23\data\100918CAL\1009F023.D	10/09/2018 19:20	10/10/2018 08:16	12/17/2018 15:26
284600	J:\GC23\data\100918CAL\1009F024.D	10/09/2018 19:49	10/10/2018 08:22	12/17/2018 15:26
284602	J:\GC23\data\100918CAL\1009F025.D	10/09/2018 20:19	10/10/2018 08:24	12/17/2018 15:26
284604	J:\GC23\data\100918CAL\1009F026.D	10/09/2018 20:49	10/10/2018 08:38	12/17/2018 15:27
284606	J:\GC23\data\100918CAL\1009F027.D	10/09/2018 21:20	10/10/2018 08:42	12/17/2018 15:27
284608	J:\GC23\data\100918CAL\1009F028.D	10/09/2018 21:50	10/10/2018 08:45	12/17/2018 15:27
284614	J:\GC23\data\100918CAL\1009F031.D	10/09/2018 23:19	10/10/2018 09:00	12/17/2018 15:27
284616	J:\GC23\data\100918CAL\1009F032.D	10/09/2018 23:49	10/10/2018 09:02	12/17/2018 15:27
284618	J:\GC23\data\100918CAL\1009F033.D	10/10/2018 00:19	10/10/2018 09:04	12/17/2018 15:27
284620	J:\GC23\data\100918CAL\1009F034.D	10/10/2018 00:50	10/10/2018 09:06	12/17/2018 15:27
284622	J:\GC23\data\100918CAL\1009F035.D	10/10/2018 01:20	10/10/2018 09:08	12/17/2018 15:27
284624	J:\GC23\data\100918CAL\1009F036.D	10/10/2018 01:50	10/10/2018 09:11	12/17/2018 15:27
284626	J:\GC23\data\100918CAL\1009F039.D	10/10/2018 03:19	10/10/2018 09:22	12/17/2018 15:27
284628	J:\GC23\data\100918CAL\1009F040.D	10/10/2018 03:49	10/10/2018 09:23	12/17/2018 15:27
284630	J:\GC23\data\100918CAL\1009F041.D	10/10/2018 04:19	10/10/2018 09:26	12/17/2018 15:27
284632	J:\GC23\data\100918CAL\1009F042.D	10/10/2018 04:49	10/10/2018 09:29	12/17/2018 15:27
284634	J:\GC23\data\100918CAL\1009F043.D	10/10/2018 05:19	10/10/2018 09:32	12/17/2018 15:28
284636	J:\GC23\data\100918CAL\1009F044.D	10/10/2018 05:49	10/10/2018 09:34	12/17/2018 15:28
284640	J:\GC23\data\101018CAL\1010F006.D	10/10/2018 12:29	10/10/2018 12:56	12/17/2018 15:28
284744	J:\GC23\data\101518CAL\1015F013.D	10/15/2018 19:37	10/16/2018 09:02	12/17/2018 15:28
284746	J:\GC23\data\101518CAL\1015F015.D	10/15/2018 20:36	10/16/2018 09:03	12/17/2018 15:28
284748	J:\GC23\data\101518CAL\1015F016.D	10/15/2018 21:06	10/16/2018 09:04	12/17/2018 15:28
284750	J:\GC23\data\101518CAL\1016F007.D	10/16/2018 12:59	10/16/2018 13:50	12/17/2018 15:28
284752	J:\GC23\data\101518CAL\1016F010.D	10/16/2018 14:27	10/16/2018 15:21	12/17/2018 15:28
284754	J:\GC23\data\101518CAL\1016F013.D	10/16/2018 15:57	10/16/2018 16:22	12/17/2018 15:28
285724	J:\GC23\data\121418CAL\1214F003.D	12/14/2018 14:52	12/16/2018 12:59	12/17/2018 15:28
285726	J:\GC23\data\121418CAL\1214F004.D	12/14/2018 15:21	12/16/2018 13:00	12/17/2018 15:29
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285734	J:\GC23\data\121418CAL\1214F008.D	12/14/2018 17:21	12/16/2018 13:03	12/17/2018 15:29

Parameter Name	CoefX2	CoefX	Y-intercept	COD	Mean RF
Toxaphene {2}		0.010	0.001	0.9983	0.012

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	284598	J:\GC23\data\100918CAL\1009F023.D	10/09/2018 19:20	10/10/2018 08:16	12/17/2018 15:26
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7	284614	J:\GC23\data\100918CAL\1009F031.D	10/09/2018 23:19	10/10/2018 09:00	12/17/2018 15:27
8	284616	J:\GC23\data\100918CAL\1009F032.D	10/09/2018 23:49	10/10/2018 09:02	12/17/2018 15:27
9	284618	J:\GC23\data\100918CAL\1009F033.D	10/10/2018 00:19	10/10/2018 09:04	12/17/2018 15:27
10	284620	J:\GC23\data\100918CAL\1009F034.D	10/10/2018 00:50	10/10/2018 09:06	12/17/2018 15:27
11	284622	J:\GC23\data\100918CAL\1009F035.D	10/10/2018 01:20	10/10/2018 09:08	12/17/2018 15:27
12	284624	J:\GC23\data\100918CAL\1009F036.D	10/10/2018 01:50	10/10/2018 09:11	12/17/2018 15:27
13	284626	J:\GC23\data\100918CAL\1009F039.D	10/10/2018 03:19	10/10/2018 09:22	12/17/2018 15:27
14	284628	J:\GC23\data\100918CAL\1009F040.D	10/10/2018 03:49	10/10/2018 09:23	12/17/2018 15:27
15	284630	J:\GC23\data\100918CAL\1009F041.D	10/10/2018 04:19	10/10/2018 09:26	12/17/2018 15:27
16	284632	J:\GC23\data\100918CAL\1009F042.D	10/10/2018 04:49	10/10/2018 09:29	12/17/2018 15:27
17	284634	J:\GC23\data\100918CAL\1009F043.D	10/10/2018 05:19	10/10/2018 09:32	12/17/2018 15:28
18	284636	J:\GC23\data\100918CAL\1009F044.D	10/10/2018 05:49	10/10/2018 09:34	12/17/2018 15:28
19	284640	J:\GC23\data\101018CAL\1010F006.D	10/10/2018 12:29	10/10/2018 12:56	12/17/2018 15:28
20	284744	J:\GC23\data\101518CAL\1015F013.D	10/15/2018 19:37	10/16/2018 09:02	12/17/2018 15:28
21	284746	J:\GC23\data\101518CAL\1015F015.D	10/15/2018 20:36	10/16/2018 09:03	12/17/2018 15:28
22	284748	J:\GC23\data\101518CAL\1015F016.D	10/15/2018 21:06	10/16/2018 09:04	12/17/2018 15:28
23	284750	J:\GC23\data\101518CAL\1016F007.D	10/16/2018 12:59	10/16/2018 13:50	12/17/2018 15:28
24	284752	J:\GC23\data\101518CAL\1016F010.D	10/16/2018 14:27	10/16/2018 15:21	12/17/2018 15:28
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28	285728	J:\GC23\data\121418CAL\1214F005.D	12/14/2018 15:51	12/16/2018 13:01	12/17/2018 15:29
29	285730	J:\GC23\data\121418CAL\1214F006.D	12/14/2018 16:20	12/16/2018 13:01	12/17/2018 15:29
30	285732	J:\GC23\data\121418CAL\1214F007.D	12/14/2018 16:51	12/16/2018 13:02	12/17/2018 15:29
31	285734	J:\GC23\data\121418CAL\1214F008.D	12/14/2018 17:21	12/16/2018 13:03	12/17/2018 15:29

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Tetrachloro-m-xylene												
					26	0.2	0.2147	7.3	27	0.5	0.5385	7.7
	28	1	1.013	1.3	29	2	2.133	6.6	30	5	4.390	-12.2
	31	10	8.921	-10.8								

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
alpha-BHC												
					26	0.2	0.2132	6.6	27	0.5	0.5159	3.2
	28	1	1.021	2.1	29	2	2.087	4.4	30	5	4.482	-10.4
	31	10	9.414	-5.9								
Hexachlorobenzene												
					26	0.2	0.2195	9.8	27	0.5	0.5531	10.6
	28	1	1.033	3.3	29	2	2.134	6.7	30	5	4.281	-14.4
	31	10	8.404	-16.0								
beta-BHC												
					26	0.2	0.2173	8.7	27	0.5	0.5257	5.1
	28	1	0.9841	-1.6	29	2	2.161	8.1	30	5	4.491	-10.2
	31	10	8.989	-10.1								
gamma-BHC (Lindane)												
					26	0.2	0.2124	6.2	27	0.5	0.4967	-0.7
	28	1	1.000	0.0	29	2	2.143	7.1	30	5	4.601	-8.0
	31	10	9.528	-4.7								

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
delta-BHC												
					26	0.2	0.2111	5.5	27	0.5	0.5045	0.9
	28	1	0.9962	-0.4	29	2	2.140	7.0	30	5	4.574	-8.5
	31	10	9.548	-4.5								
Heptachlor												
					26	0.2	0.2064	3.2	27	0.5	0.5331	6.6
	28	1	1.026	2.6	29	2	2.126	6.3	30	5	4.495	-10.1
	31	10	9.143	-8.6								
Aldrin												
					26	0.2	0.2198	9.9	27	0.5	0.5462	9.2
	28	1	0.9801	-2.0	29	2	2.076	3.8	30	5	4.389	-12.2
	31	10	9.128	-8.7								
Isodrin												
					26	0.2	0.2269	13.5	27	0.5	0.4960	-0.8
	28	1	1.007	0.7	29	2	2.143	7.2	30	5	4.455	-10.9
	31	10	9.032	-9.7								

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Heptachlor Epoxide												
					26	0.2	0.2340	17.0	27	0.5	0.5164	3.3
	28	1	0.9894	-1.1	29	2	2.093	4.6	30	5	4.356	-12.9
	31	10	8.906	-10.9								
gamma-Chlordane												
					26	0.2	0.2105	5.3	27	0.5	0.5021	0.4
	28	1	1.020	2.0	29	2	2.167	8.3	30	5	4.570	-8.6
	31	10	9.261	-7.4								
Endosulfan I												
					26	0.2	0.2148	7.4	27	0.5	0.5016	0.3
	28	1	0.9980	-0.2	29	2	2.161	8.0	30	5	4.611	-7.8
	31	10	9.220	-7.8								
alpha-Chlordane												
					26	0.2	0.2231	11.6	27	0.5	0.5012	0.2
	28	1	1.016	1.6	29	2	2.135	6.7	30	5	4.457	-10.9
	31	10	9.076	-9.2								

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Dieldrin												
					26	0.2	0.1949	-2.5	27	0.5	0.5209	4.2
	28	1	1.026	2.6	29	2	2.184	9.2	30	5	4.635	-7.3
	31	10	9.386	-6.1								
4,4'-DDE												
					26	0.2	0.2135	6.7	27	0.5	0.4957	-0.9
	28	1	1.019	1.9	29	2	2.175	8.8	30	5	4.522	-9.6
	31	10	9.300	-7.0								
Endrin												
					26	0.2	0.2022	1.1	27	0.5	0.5271	5.4
	28	1	1.016	1.6	29	2	2.164	8.2	30	5	4.542	-9.2
	31	10	9.282	-7.2								
Endosulfan II												
					26	0.2	0.2433	21.6	27	0.5	0.5099	2.0
	28	1	0.9654	-3.5	29	2	2.100	5.0	30	5	4.364	-12.7
	31	10	8.753	-12.5								

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
4,4'-DDD												
					26	0.2	0.2076	3.8	27	0.5	0.4926	-1.5
	28	1	1.007	0.7	29	2	2.168	8.4	30	5	4.678	-6.4
	31	10	9.497	-5.0								
Endrin Aldehyde												
					26	0.2	0.2295	14.8	27	0.5	0.5162	3.2
	28	1	0.9764	-2.4	29	2	2.131	6.5	30	5	4.443	-11.1
	31	10	8.895	-11.0								
Endosulfan Sulfate												
					26	0.2	0.2157	7.8	27	0.5	0.5176	3.5
	28	1	1.009	0.9	29	2	2.134	6.7	30	5	4.531	-9.4
	31	10	9.039	-9.6								
4,4'-DDT												
					26	0.2	0.1956	-2.2	27	0.5	0.5404	8.1
	28	1	0.9827	-1.7	29	2	2.130	6.5	30	5	4.682	-6.4
	31	10	9.572	-4.3								

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Endrin Ketone												
					26	0.2	0.2240	12.0	27	0.5	0.4770	-4.6
	28	1	1.039	3.9	29	2	2.097	4.8	30	5	4.597	-8.1
	31	10	9.191	-8.1								
Methoxychlor												
					26	0.2	0.2661	**33.0**	27	0.5	0.5024	0.5
	28	1	0.9536	-4.6	29	2	1.946	-2.7	30	5	4.256	-14.9
	31	10	8.869	-11.3								
2,4'-DDE												
					20	1	0.9964	-0.4	21	5	4.601	-8.0
	22	10	8.362	-16.4	23	2	1.960	-2.0	24	0.2	0.2555	27.7
	25	0.5	0.4948	-1.0								
2,4'-DDD												
					20	1	1.006	0.6	21	5	4.634	-7.3
	22	10	8.059	-19.4	23	2	1.905	-4.8	24	0.2	0.2671	**33.6**
	25	0.5	0.4869	-2.6								

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
2,4'-DDT												
					20	1	1.054	5.4	21	5	5.047	0.9
	22	10	8.971	-10.3	23	2	1.968	-1.6	24	0.2	0.2086	4.3
	25	0.5	0.5062	1.2								
Decachlorobiphenyl												
					26	0.2	0.2122	6.1	27	0.5	0.5087	1.7
	28	1	1.050	5.0	29	2	2.176	8.8	30	5	4.482	-10.4
	31	10	8.873	-11.3								
Toxaphene {1}												
	7	10	9.676	-3.2	8	25	25.93	3.7	9	50	55.23	10.5
	10	100	100.8	0.8	11	250	235.6	-5.8	12	500	470.2	-6.0
Toxaphene {2}												
	7	10	8.601	-14.0	8	25	26.93	7.7	9	50	54.07	8.1
	10	100	102.1	2.1	11	250	236.8	-5.3	12	500	507.0	1.4

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Toxaphene {3}												
	7	10	12.34	23.4	8	25	26.01	4.0	9	50	52.48	5.0
	10	100	93.35	-6.7	11	250	216.5	-13.4	12	500	438.1	-12.4
Toxaphene {4}												
	7	10	12.81	28.1	8	25	24.43	-2.3	9	50	49.42	-1.2
	10	100	98.07	-1.9	11	250	226.6	-9.3	12	500	433.0	-13.4
Toxaphene {5}												
	7	10	12.48	24.8	8	25	26.55	6.2	9	50	48.52	-3.0
	10	100	94.68	-5.3	11	250	222.6	-11.0	12	500	441.1	-11.8
Toxaphene {6}												
	7	10	9.736	-2.6	8	25	26.20	4.8	9	50	52.97	5.9
	10	100	99.75	-0.3	11	250	243.1	-2.8	12	500	474.6	-5.1

Initial Calibration - Detailed Report

Calibration ID: CAL15919
Method ID: MJ1647
Instrument ID: GC23
Column Name: DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {1}												
	13	5	5.782	15.6	14	10	9.857	-1.4	15	20	21.45	7.3
	16	50	49.56	-0.9	17	100	95.15	-4.9	18	200	161.5	-19.3
	19	2	2.070	3.5								
Chlordane {2}												
	13	5	5.021	0.4	14	10	9.950	-0.5	15	20	20.57	2.9
	16	50	49.05	-1.9	17	100	93.40	-6.6	18	200	161.1	-19.5
	19	2	2.503	25.2								
Chlordane {3}												
	13	5	5.314	6.3	14	10	10.04	0.4	15	20	20.92	4.6
	16	50	51.73	3.5	17	100	95.02	-5.0	18	200	160.4	-19.8
	19	2	2.201	10.0								
Chlordane {4}												
	13	5	5.277	5.5	14	10	10.27	2.7	15	20	21.59	7.9
	16	50	49.06	-1.9	17	100	95.76	-4.2	18	200	167.6	-16.2
	19	2	2.124	6.2								

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {5}												
	13	5	5.316	6.3	14	10	10.10	1.0	15	20	21.49	7.4
	16	50	49.89	-0.2	17	100	95.74	-4.3	18	200	164.4	-17.8
	19	2	2.150	7.5								
Chlordane {6}												
	13	5	4.921	-1.6	14	10	10.46	4.6	15	20	21.92	9.6
	16	50	49.15	-1.7	17	100	94.58	-5.4	18	200	160.0	-20.0
	19	2	2.290	14.5								
Chlorpyrifos	1	0.2	0.1964	-1.8	2	0.5	0.5086	1.7	3	1	0.9579	-4.2
	4	2	2.009	0.4	5	5	4.939	-1.2	6	10	10.51	5.1
Oxychlordane	1	0.2	0.2331	16.6	2	0.5	0.5267	5.3	3	1	1.002	0.2
	4	2	1.992	-0.4	5	5	4.279	-14.4	6	10	9.266	-7.3

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
cis-Nonachlor	1	0.2	0.2270	13.5	2	0.5	0.5195	3.9	3	1	0.9947	-0.5
	4	2	2.003	0.2	5	5	4.398	-12.0	6	10	9.500	-5.0
trans-Nonachlor	1	0.2	0.2320	16.0	2	0.5	0.5318	6.4	3	1	1.005	0.5
	4	2	1.977	-1.1	5	5	4.280	-14.4	6	10	9.264	-7.4
Mirex	1	0.2	0.2180	9.0	2	0.5	0.5177	3.5	3	1	0.9996	0.0
	4	2	2.084	4.2	5	5	4.442	-11.2	6	10	9.449	-5.5
Hexachloroethane	1	0.2	0.2242	12.1	2	0.5	0.5267	5.3	3	1	1.004	0.4
	4	2	1.928	-3.6	5	5	4.291	-14.2	6	10	9.995	-0.1

Initial Calibration - Detailed Report

Calibration ID: CAL15919
Method ID: MJ1647
Instrument ID: GC23
Column Name: DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Hexachlorobutadiene	1	0.2	0.2356	17.8	2	0.5	0.5361	7.2	3	1	0.9978	-0.2
	4	2	1.943	-2.8	5	5	4.193	-16.1	6	10	9.416	-5.8
Perthane					2	2.5	2.248	-10.1	3	5	5.636	12.7
	4	10	9.560	-4.4	5	25	24.89	-0.4	6	50	51.10	2.2

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	284599	J:\GC23\data\100918CAL\1009F023.D\1009F023c.d	10/09/2018 19:20	10/10/2018 08:16	12/17/2018 15:26
2	284601	J:\GC23\data\100918CAL\1009F024.D\1009F024c.d	10/09/2018 19:49	10/10/2018 08:22	12/17/2018 15:26
3	284603	J:\GC23\data\100918CAL\1009F025.D\1009F025c.d	10/09/2018 20:19	10/10/2018 08:24	12/17/2018 15:27
4	284605	J:\GC23\data\100918CAL\1009F026.D\1009F026c.d	10/09/2018 20:49	10/10/2018 08:38	12/17/2018 15:27
5	284607	J:\GC23\data\100918CAL\1009F027.D\1009F027c.d	10/09/2018 21:20	10/10/2018 08:42	12/17/2018 15:27
6	284609	J:\GC23\data\100918CAL\1009F028.D\1009F028c.d	10/09/2018 21:50	10/10/2018 08:45	12/17/2018 15:27
7	284615	J:\GC23\data\100918CAL\1009F031.D\1009F031c.d	10/09/2018 23:19	10/10/2018 09:00	12/17/2018 15:27
8	284617	J:\GC23\data\100918CAL\1009F032.D\1009F032c.d	10/09/2018 23:49	10/10/2018 09:02	12/17/2018 15:27
9	284619	J:\GC23\data\100918CAL\1009F033.D\1009F033c.d	10/10/2018 00:19	10/10/2018 09:04	12/17/2018 15:27
10	284621	J:\GC23\data\100918CAL\1009F034.D\1009F034c.d	10/10/2018 00:50	10/10/2018 09:06	12/17/2018 15:27
11	284623	J:\GC23\data\100918CAL\1009F035.D\1009F035c.d	10/10/2018 01:20	10/10/2018 09:08	12/17/2018 15:27
12	284625	J:\GC23\data\100918CAL\1009F036.D\1009F036c.d	10/10/2018 01:50	10/10/2018 09:11	12/17/2018 15:27
13	284627	J:\GC23\data\100918CAL\1009F039.D\1009F039c.d	10/10/2018 03:19	10/10/2018 09:22	12/17/2018 15:27
14	284629	J:\GC23\data\100918CAL\1009F040.D\1009F040c.d	10/10/2018 03:49	10/10/2018 09:23	12/17/2018 15:27
15	284631	J:\GC23\data\100918CAL\1009F041.D\1009F041c.d	10/10/2018 04:19	10/10/2018 09:26	12/17/2018 15:27
16	284633	J:\GC23\data\100918CAL\1009F042.D\1009F042c.d	10/10/2018 04:49	10/10/2018 09:29	12/17/2018 15:28
17	284635	J:\GC23\data\100918CAL\1009F043.D\1009F043c.d	10/10/2018 05:19	10/10/2018 09:32	12/17/2018 15:28
18	284637	J:\GC23\data\100918CAL\1009F044.D\1009F044c.d	10/10/2018 05:49	10/10/2018 09:34	12/17/2018 15:28
19	284641	J:\GC23\data\101018CAL\1010F006.D\1010F006c.d	10/10/2018 12:29	10/10/2018 12:56	12/17/2018 15:28
20	284745	J:\GC23\data\101518CAL\1015F013.D\1015F013c.d	10/15/2018 19:37	10/16/2018 09:02	12/17/2018 15:28
21	284747	J:\GC23\data\101518CAL\1015F015.D\1015F015c.d	10/15/2018 20:36	10/16/2018 09:03	12/17/2018 15:28
22	284749	J:\GC23\data\101518CAL\1015F016.D\1015F016c.d	10/15/2018 21:06	10/16/2018 09:04	12/17/2018 15:28
23	284751	J:\GC23\data\101518CAL\1016F007.D\1016F007c.d	10/16/2018 12:59	10/16/2018 13:50	12/17/2018 15:28
24	284753	J:\GC23\data\101518CAL\1016F010.D\1016F010c.d	10/16/2018 14:27	10/16/2018 15:21	12/17/2018 15:28
25	284755	J:\GC23\data\101518CAL\1016F013.D\1016F013c.d	10/16/2018 15:57	10/16/2018 16:22	12/17/2018 15:28
26	285725	J:\GC23\data\121418CAL\1214F003.D\1214F003c.d	12/14/2018 14:52	12/16/2018 12:59	12/17/2018 15:28
27	285727	J:\GC23\data\121418CAL\1214F004.D\1214F004c.d	12/14/2018 15:21	12/16/2018 13:00	12/17/2018 15:29
28	285729	J:\GC23\data\121418CAL\1214F005.D\1214F005c.d	12/14/2018 15:51	12/16/2018 13:01	12/17/2018 15:29
29	285731	J:\GC23\data\121418CAL\1214F006.D\1214F006c.d	12/14/2018 16:20	12/16/2018 13:01	12/17/2018 15:29
30	285733	J:\GC23\data\121418CAL\1214F007.D\1214F007c.d	12/14/2018 16:51	12/16/2018 13:02	12/17/2018 15:29
31	285735	J:\GC23\data\121418CAL\1214F008.D\1214F008c.d	12/14/2018 17:21	12/16/2018 13:03	12/17/2018 15:29

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Tetrachloro-m-xylene													1.439	8.2
			26	1.529	27	1.515	28	1.410	29	1.567	30	1.266		
	31	1.346												
alpha-BHC													1.295	9.1
			26	1.457	27	1.348	28	1.219	29	1.367	30	1.128		
	31	1.253												

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Hexachlorobenzene							1.748	10.2
		26 1.955	27 1.832	28 1.702	29 1.904	30 1.524		
	31 1.569							
beta-BHC							0.600	8.8
		26 0.638	27 0.647	28 0.594	29 0.645	30 0.522		
	31 0.554							
gamma-BHC (Lindane)							1.163	9.0
		26 1.312	27 1.184	28 1.121	29 1.235	30 1.017		
	31 1.107							
delta-BHC							1.083	6.9
		26 1.157	27 1.091	28 1.017	29 1.174	30 0.985		
	31 1.074							
Heptachlor							1.196	11.2
		26 1.406	27 1.208	28 1.136	29 1.285	30 1.037		
	31 1.102							
Aldrin							1.153	8.7
		26 1.293	27 1.163	28 1.132	29 1.227	30 1.010		
	31 1.091							
Isodrin							0.978	8.7
		26 1.100	27 0.976	28 0.949	29 1.051	30 0.868		
	31 0.924							
Heptachlor Epoxide							1.060	6.9
		26 1.101	27 1.066	28 1.083	29 1.154	30 0.949		
	31 1.005							

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
gamma-Chlordane													1.074	9.0
	31	1.005	26	1.206	27	1.052	28	1.083	29	1.155	30	0.941		
Endosulfan I													0.954	8.0
	31	0.899	26	1.042	27	0.977	28	0.930	29	1.031	30	0.847		
alpha-Chlordane													1.082	10.8
	31	0.996	26	1.269	27	1.088	28	1.057	29	1.146	30	0.938		
Dieldrin													1.027	8.1
	31	0.966	26	1.106	27	1.066	28	0.989	29	1.120	30	0.912		
4,4'-DDE													1.053	8.7
	31	0.991	26	1.165	27	1.046	28	1.021	29	1.158	30	0.938		
Endrin													0.939	6.1
	31	0.906	26	0.953	27	0.974	28	0.942	29	1.013	30	0.846		
Endosulfan II													0.930	10.7
	31	0.864	26	1.090	27	0.908	28	0.888	29	1.006	30	0.823		
4,4'-DDD													0.768	6.5
	31	0.743	26	0.763	27	0.777	28	0.784	29	0.847	30	0.695		

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Endrin Aldehyde							0.812	8.1
		26 0.881	27 0.835	28 0.787	29 0.884	30 0.723		
	31 0.759							
Endosulfan Sulfate							0.924	8.1
		26 1.004	27 0.916	28 0.926	29 1.011	30 0.822		
	31 0.866							
4,4'-DDT							0.725	7.2
		26 0.738	27 0.737	28 0.702	29 0.812	30 0.655		
	31 0.704							
Endrin Ketone							1.018	7.1
		26 1.071	27 1.040	28 1.007	29 1.113	30 0.916		
	31 0.963							
Methoxychlor							0.419	6.7
		26 0.437	27 0.420	28 0.405	29 0.463	30 0.384		
	31 0.405							
2,4'-DDE							0.810	13.9
		20 0.793	21 0.750	22 0.679	23 0.752	24 0.904		
	25 0.982							
2,4'-DDD							0.706	8.3
		20 0.754	21 0.690	22 0.616	23 0.689	24 0.786		
	25 0.704							
2,4'-DDT							0.849	17.2
		20 0.840	21 0.792	22 0.720	23 0.790	24 1.135		
	25 0.819							

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Decachlorobiphenyl													1.238	9.9
			26	1.360	27	1.297	28	1.224	29	1.358	30	1.080		
	31	1.110												
Toxaphene {1}													0.017	9.5
	7	0.020	8	0.017	9	0.018	10	0.017	11	0.016	12	0.016		
Toxaphene {2}													0.006	10.8
	7	0.007	8	0.006	9	0.007	10	0.006	11	0.006	12	0.006		
Toxaphene {3}													0.006	13.5
	7	0.006	8	0.006	9	0.006	10	0.005	11	0.005	12	0.005		
Toxaphene {4}													0.010	7.3
	7	0.011	8	0.011	9	0.011	10	0.010	11	0.009	12	0.010		
Toxaphene {5}													0.020	11.1
	7	0.024	8	0.019	9	0.021	10	0.019	11	0.019	12	0.019		
Toxaphene {6}													0.016	7.2
	7	0.017	8	0.017	9	0.017	10	0.016	11	0.014	12	0.015		
Chlordane {1}													0.043	11.0
	13	0.046	14	0.043	15	0.044	16	0.042	17	0.041	18	0.035		
	19	0.050												

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Chlordane {2}							0.028	7.3
	13 0.028	14 0.030	15 0.029	16 0.028	17 0.027	18 0.024		
	19 0.028							
Chlordane {3}							0.109	6.2
	13 0.113	14 0.111	15 0.110	16 0.110	17 0.105	18 0.097		
	19 0.118							
Chlordane {4}							0.067	12.7
	13 0.070	14 0.069	15 0.069	16 0.066	17 0.061	18 0.054		
	19 0.082							
Chlordane {5}							0.032	7.7
	13 0.031	14 0.032	15 0.035	16 0.034	17 0.032	18 0.028		
	19 0.031							
Chlordane {6}							0.098	7.5
	13 0.101	14 0.101	15 0.099	16 0.098	17 0.093	18 0.085		
	19 0.108							
Chlorpyrifos	1 0.743	2 0.741	3 0.628	4 0.610	5 0.612	6 0.601	0.656	10.3
Oxychlordane	1 1.511	2 1.489	3 1.226	4 1.191	5 1.107	6 1.125	1.275	14.1
cis-Nonachlor	1 1.611	2 1.640	3 1.383	4 1.354	5 1.283	6 1.303	1.429	10.9

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
trans-Nonachlor	1	1.551	2	1.507	3	1.285	4	1.247	5	1.199	6	1.219	1.335	11.5
Mirex	1	1.351	2	1.351	3	1.184	4	1.134	5	1.030	6	1.013	1.177	12.7
Hexachloroethane	1	2.068	2	2.052	3	1.781	4	1.758	5	1.672	6	1.987	1.887	9.0
Hexachlorobutadiene	1	1.805	2	1.660	3	1.482	4	1.433	5	1.328	6	1.509	1.536	11.1
Perthane			2	0.043	3	0.032	4	0.031	5	0.033	6	0.034	0.035	13.4

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	284599	J:\GC23\data\100918CAL\1009F023.D\1009F023c.d	10/09/2018 19:20	10/10/2018 08:16	12/17/2018 15:26
2	284601	J:\GC23\data\100918CAL\1009F024.D\1009F024c.d	10/09/2018 19:49	10/10/2018 08:22	12/17/2018 15:26
3	284603	J:\GC23\data\100918CAL\1009F025.D\1009F025c.d	10/09/2018 20:19	10/10/2018 08:24	12/17/2018 15:27
4	284605	J:\GC23\data\100918CAL\1009F026.D\1009F026c.d	10/09/2018 20:49	10/10/2018 08:38	12/17/2018 15:27
5	284607	J:\GC23\data\100918CAL\1009F027.D\1009F027c.d	10/09/2018 21:20	10/10/2018 08:42	12/17/2018 15:27
6	284609	J:\GC23\data\100918CAL\1009F028.D\1009F028c.d	10/09/2018 21:50	10/10/2018 08:45	12/17/2018 15:27
7	284615	J:\GC23\data\100918CAL\1009F031.D\1009F031c.d	10/09/2018 23:19	10/10/2018 09:00	12/17/2018 15:27
8	284617	J:\GC23\data\100918CAL\1009F032.D\1009F032c.d	10/09/2018 23:49	10/10/2018 09:02	12/17/2018 15:27
9	284619	J:\GC23\data\100918CAL\1009F033.D\1009F033c.d	10/10/2018 00:19	10/10/2018 09:04	12/17/2018 15:27
10	284621	J:\GC23\data\100918CAL\1009F034.D\1009F034c.d	10/10/2018 00:50	10/10/2018 09:06	12/17/2018 15:27
11	284623	J:\GC23\data\100918CAL\1009F035.D\1009F035c.d	10/10/2018 01:20	10/10/2018 09:08	12/17/2018 15:27
12	284625	J:\GC23\data\100918CAL\1009F036.D\1009F036c.d	10/10/2018 01:50	10/10/2018 09:11	12/17/2018 15:27
13	284627	J:\GC23\data\100918CAL\1009F039.D\1009F039c.d	10/10/2018 03:19	10/10/2018 09:22	12/17/2018 15:27
14	284629	J:\GC23\data\100918CAL\1009F040.D\1009F040c.d	10/10/2018 03:49	10/10/2018 09:23	12/17/2018 15:27
15	284631	J:\GC23\data\100918CAL\1009F041.D\1009F041c.d	10/10/2018 04:19	10/10/2018 09:26	12/17/2018 15:27
16	284633	J:\GC23\data\100918CAL\1009F042.D\1009F042c.d	10/10/2018 04:49	10/10/2018 09:29	12/17/2018 15:28
17	284635	J:\GC23\data\100918CAL\1009F043.D\1009F043c.d	10/10/2018 05:19	10/10/2018 09:32	12/17/2018 15:28
18	284637	J:\GC23\data\100918CAL\1009F044.D\1009F044c.d	10/10/2018 05:49	10/10/2018 09:34	12/17/2018 15:28
19	284641	J:\GC23\data\101018CAL\1010F006.D\1010F006c.d	10/10/2018 12:29	10/10/2018 12:56	12/17/2018 15:28
20	284745	J:\GC23\data\101518CAL\1015F013.D\1015F013c.d	10/15/2018 19:37	10/16/2018 09:02	12/17/2018 15:28
21	284747	J:\GC23\data\101518CAL\1015F015.D\1015F015c.d	10/15/2018 20:36	10/16/2018 09:03	12/17/2018 15:28
22	284749	J:\GC23\data\101518CAL\1015F016.D\1015F016c.d	10/15/2018 21:06	10/16/2018 09:04	12/17/2018 15:28
23	284751	J:\GC23\data\101518CAL\1016F007.D\1016F007c.d	10/16/2018 12:59	10/16/2018 13:50	12/17/2018 15:28
24	284753	J:\GC23\data\101518CAL\1016F010.D\1016F010c.d	10/16/2018 14:27	10/16/2018 15:21	12/17/2018 15:28
25	284755	J:\GC23\data\101518CAL\1016F013.D\1016F013c.d	10/16/2018 15:57	10/16/2018 16:22	12/17/2018 15:28
26	285725	J:\GC23\data\121418CAL\1214F003.D\1214F003c.d	12/14/2018 14:52	12/16/2018 12:59	12/17/2018 15:28
27	285727	J:\GC23\data\121418CAL\1214F004.D\1214F004c.d	12/14/2018 15:21	12/16/2018 13:00	12/17/2018 15:29
28	285729	J:\GC23\data\121418CAL\1214F005.D\1214F005c.d	12/14/2018 15:51	12/16/2018 13:01	12/17/2018 15:29
29	285731	J:\GC23\data\121418CAL\1214F006.D\1214F006c.d	12/14/2018 16:20	12/16/2018 13:01	12/17/2018 15:29
30	285733	J:\GC23\data\121418CAL\1214F007.D\1214F007c.d	12/14/2018 16:51	12/16/2018 13:02	12/17/2018 15:29
31	285735	J:\GC23\data\121418CAL\1214F008.D\1214F008c.d	12/14/2018 17:21	12/16/2018 13:03	12/17/2018 15:29

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Tetrachloro-m-xylene												
					26	0.2	0.2125	6.3	27	0.5	0.5265	5.3
	28	1	0.9798	-2.0	29	2	2.178	8.9	30	5	4.398	-12.0
	31	10	9.359	-6.4								

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
alpha-BHC												
					26	0.2	0.2250	12.5	27	0.5	0.5202	4.0
	28	1	0.9411	-5.9	29	2	2.111	5.5	30	5	4.353	-12.9
	31	10	9.676	-3.2								
Hexachlorobenzene												
					26	0.2	0.2237	11.9	27	0.5	0.5241	4.8
	28	1	0.9741	-2.6	29	2	2.179	8.9	30	5	4.360	-12.8
	31	10	8.979	-10.2								
beta-BHC												
					26	0.2	0.2126	6.3	27	0.5	0.5391	7.8
	28	1	0.9898	-1.0	29	2	2.151	7.6	30	5	4.347	-13.1
	31	10	9.239	-7.6								
gamma-BHC (Lindane)												
					26	0.2	0.2257	12.9	27	0.5	0.5091	1.8
	28	1	0.9639	-3.6	29	2	2.124	6.2	30	5	4.373	-12.5
	31	10	9.524	-4.8								

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
delta-BHC												
					26	0.2	0.2137	6.9	27	0.5	0.5036	0.7
	28	1	0.9395	-6.1	29	2	2.168	8.4	30	5	4.546	-9.1
	31	10	9.915	-0.8								
Heptachlor												
					26	0.2	0.2351	17.5	27	0.5	0.5053	1.1
	28	1	0.9502	-5.0	29	2	2.150	7.5	30	5	4.336	-13.3
	31	10	9.218	-7.8								
Aldrin												
					26	0.2	0.2245	12.2	27	0.5	0.5044	0.9
	28	1	0.9821	-1.8	29	2	2.129	6.4	30	5	4.381	-12.4
	31	10	9.464	-5.4								
Isodrin												
					26	0.2	0.2249	12.5	27	0.5	0.4989	-0.2
	28	1	0.9700	-3.0	29	2	2.149	7.5	30	5	4.438	-11.2
	31	10	9.452	-5.5								

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Heptachlor Epoxide												
					26	0.2	0.2078	3.9	27	0.5	0.5031	0.6
	28	1	1.022	2.2	29	2	2.179	8.9	30	5	4.478	-10.4
	31	10	9.482	-5.2								
gamma-Chlordane												
					26	0.2	0.2246	12.3	27	0.5	0.4901	-2.0
	28	1	1.009	0.9	29	2	2.151	7.6	30	5	4.381	-12.4
	31	10	9.361	-6.4								
Endosulfan I												
					26	0.2	0.2183	9.2	27	0.5	0.5119	2.4
	28	1	0.9743	-2.6	29	2	2.162	8.1	30	5	4.440	-11.2
	31	10	9.416	-5.8								
alpha-Chlordane												
					26	0.2	0.2345	17.3	27	0.5	0.5027	0.5
	28	1	0.9764	-2.4	29	2	2.117	5.9	30	5	4.335	-13.3
	31	10	9.199	-8.0								

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Dieldrin												
					26	0.2	0.2154	7.7	27	0.5	0.5193	3.9
	28	1	0.9637	-3.6	29	2	2.183	9.1	30	5	4.441	-11.2
	31	10	9.409	-5.9								
4,4'-DDE												
					26	0.2	0.2212	10.6	27	0.5	0.4967	-0.7
	28	1	0.9694	-3.1	29	2	2.199	9.9	30	5	4.454	-10.9
	31	10	9.411	-5.9								
Endrin												
					26	0.2	0.2030	1.5	27	0.5	0.5186	3.7
	28	1	1.003	0.3	29	2	2.158	7.9	30	5	4.505	-9.9
	31	10	9.651	-3.5								
Endosulfan II												
					26	0.2	0.2344	17.2	27	0.5	0.4882	-2.4
	28	1	0.9554	-4.5	29	2	2.165	8.2	30	5	4.424	-11.5
	31	10	9.291	-7.1								

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
4,4'-DDD												
					26	0.2	0.1986	-0.7	27	0.5	0.5058	1.2
	28	1	1.021	2.1	29	2	2.204	10.2	30	5	4.526	-9.5
	31	10	9.673	-3.3								
Endrin Aldehyde												
					26	0.2	0.2170	8.5	27	0.5	0.5145	2.9
	28	1	0.9694	-3.1	29	2	2.179	8.9	30	5	4.457	-10.9
	31	10	9.357	-6.4								
Endosulfan Sulfate												
					26	0.2	0.2173	8.7	27	0.5	0.4955	-0.9
	28	1	1.002	0.2	29	2	2.189	9.4	30	5	4.445	-11.1
	31	10	9.366	-6.3								
4,4'-DDT												
					26	0.2	0.2036	1.8	27	0.5	0.5088	1.8
	28	1	0.9688	-3.1	29	2	2.241	12.0	30	5	4.520	-9.6
	31	10	9.712	-2.9								

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Endrin Ketone												
					26	0.2	0.2103	5.2	27	0.5	0.5106	2.1
	28	1	0.9887	-1.1	29	2	2.187	9.3	30	5	4.499	-10.0
	31	10	9.453	-5.5								
Methoxychlor												
					26	0.2	0.2084	4.2	27	0.5	0.5007	0.1
	28	1	0.9669	-3.3	29	2	2.212	10.6	30	5	4.582	-8.4
	31	10	9.676	-3.2								
2,4'-DDE												
					20	1	0.9785	-2.2	21	5	4.630	-7.4
	22	10	8.385	-16.1	23	2	1.856	-7.2	24	0.2	0.2233	11.7
	25	0.5	0.6063	21.3								
2,4'-DDD												
					20	1	1.067	6.7	21	5	4.880	-2.4
	22	10	8.723	-12.8	23	2	1.950	-2.5	24	0.2	0.2224	11.2
	25	0.5	0.4986	-0.3								

Initial Calibration - Detailed Report

Calibration ID:	CAL15919	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
2,4'-DDT												
					20	1	0.9888	-1.1	21	5	4.665	-6.7
	22	10	8.473	-15.3	23	2	1.861	-7.0	24	0.2	0.2673	**33.7**
	25	0.5	0.4820	-3.6								
Decachlorobiphenyl												
					26	0.2	0.2196	9.8	27	0.5	0.5238	4.8
	28	1	0.9888	-1.1	29	2	2.194	9.7	30	5	4.360	-12.8
	31	10	8.964	-10.4								
Toxaphene {1}												
	7	10	11.61	16.1	8	25	24.73	-1.1	9	50	52.57	5.1
	10	100	97.53	-2.5	11	250	224.1	-10.4	12	500	463.4	-7.3
Toxaphene {2}												
	7	10	11.76	17.6	8	25	25.33	1.3	9	50	52.62	5.2
	10	100	97.84	-2.2	11	250	221.5	-11.4	12	500	446.9	-10.6

Initial Calibration - Detailed Report

Calibration ID: CAL15919
Method ID: MJ1647
Instrument ID: GC23
Column Name: DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Toxaphene {3}												
	7	10	11.72	17.2	8	25	28.13	12.5	9	50	52.45	4.9
	10	100	92.82	-7.2	11	250	216.4	-13.4	12	500	429.8	-14.0
Toxaphene {4}												
	7	10	11.09	10.9	8	25	26.13	4.5	9	50	51.30	2.6
	10	100	96.26	-3.7	11	250	229.2	-8.3	12	500	470.1	-6.0
Toxaphene {5}												
	7	10	12.06	20.6	8	25	23.17	-7.3	9	50	52.23	4.5
	10	100	96.74	-3.3	11	250	231.4	-7.5	12	500	465.0	-7.0
Toxaphene {6}												
	7	10	10.71	7.1	8	25	25.60	2.4	9	50	53.26	6.5
	10	100	100.2	0.2	11	250	220.2	-11.9	12	500	478.0	-4.4

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {1}												
	13	5	5.368	7.4	14	10	10.07	0.7	15	20	20.52	2.6
	16	50	49.20	-1.6	17	100	93.94	-6.1	18	200	161.6	-19.2
	19	2	2.325	16.2								
Chlordane {2}												
	13	5	5.056	1.1	14	10	10.73	7.3	15	20	21.13	5.7
	16	50	51.16	2.3	17	100	97.79	-2.2	18	200	170.3	-14.8
	19	2	2.013	0.6								
Chlordane {3}												
	13	5	5.164	3.3	14	10	10.19	1.9	15	20	20.07	0.3
	16	50	50.51	1.0	17	100	96.37	-3.6	18	200	177.2	-11.4
	19	2	2.169	8.5								
Chlordane {4}												
	13	5	5.238	4.8	14	10	10.20	2.0	15	20	20.39	2.0
	16	50	49.20	-1.6	17	100	90.72	-9.3	18	200	161.1	-19.5
	19	2	2.433	21.7								

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {5}												
	13	5	4.875	-2.5	14	10	9.934	-0.7	15	20	22.22	11.1
	16	50	53.46	6.9	17	100	99.96	0.0	18	200	173.1	-13.4
	19	2	1.973	-1.4								
Chlordane {6}												
	13	5	5.132	2.6	14	10	10.33	3.3	15	20	20.24	1.2
	16	50	50.26	0.5	17	100	94.91	-5.1	18	200	173.5	-13.3
	19	2	2.213	10.7								
Chlorpyrifos	1	0.2	0.2267	13.4	2	0.5	0.5650	13.0	3	1	0.9572	-4.3
	4	2	1.859	-7.0	5	5	4.667	-6.7	6	10	9.163	-8.4
Oxychlordane	1	0.2	0.2371	18.5	2	0.5	0.5840	16.8	3	1	0.9618	-3.8
	4	2	1.869	-6.5	5	5	4.340	-13.2	6	10	8.824	-11.8

Initial Calibration - Detailed Report

Calibration ID: CAL15919 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
cis-Nonachlor	1	0.2	0.2254	12.7	2	0.5	0.5739	14.8	3	1	0.9676	-3.2
	4	2	1.896	-5.2	5	5	4.490	-10.2	6	10	9.119	-8.8
trans-Nonachlor	1	0.2	0.2324	16.2	2	0.5	0.5647	12.9	3	1	0.9629	-3.7
	4	2	1.869	-6.6	5	5	4.491	-10.2	6	10	9.132	-8.7
Mirex	1	0.2	0.2295	14.8	2	0.5	0.5738	14.8	3	1	1.006	0.6
	4	2	1.927	-3.7	5	5	4.373	-12.5	6	10	8.608	-13.9
Hexachloroethane	1	0.2	0.2193	9.6	2	0.5	0.5439	8.8	3	1	0.9441	-5.6
	4	2	1.864	-6.8	5	5	4.430	-11.4	6	10	10.53	5.3

Initial Calibration - Detailed Report

Calibration ID: CAL15919
Method ID: MJ1647
Instrument ID: GC23
Column Name: DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Hexachlorobutadiene	1	0.2	0.2351	17.5	2	0.5	0.5402	8.0	3	1	0.9647	-3.5
	4	2	1.865	-6.7	5	5	4.323	-13.5	6	10	9.823	-1.8
Perthane					2	2.5	3.086	23.4	3	5	4.579	-8.4
	4	10	9.097	-9.0	5	25	24.07	-3.7	6	50	48.85	-2.3

Second Source Calibration Verification Summary

CalibrationID: CAL15919

Method ID: MJ1647

DataFile Location: J:\GC23\DATA\121718CAL\1217F004.D

Units: ug/L

Column: DB XLB

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
alpha-BHC	285736	AverageRF	20	1.492	1.806	21.1 *	2.00	2.4	
Hexachlorobenzene	285736	AverageRF	20	2.074	2.525	21.7 *	2.00	2.4	
beta-BHC	285736	AverageRF	20	0.724	0.905	24.9 *	2.00	2.5	
gamma-BHC (Lindane)	285736	AverageRF	20	1.305	1.572	20.5 *	2.00	2.4	
delta-BHC	285736	AverageRF	20	1.259	1.555	23.5 *	2.00	2.5	
Heptachlor	285736	AverageRF	20	1.228	1.412	15.0	2.00	2.3	
Aldrin	285736	AverageRF	20	1.428	1.779	24.6 *	2.00	2.5	
Isodrin	285736	AverageRF	20	1.173	1.567	33.6 *	2.00	2.7	
Heptachlor Epoxide	285736	AverageRF	20	1.325	1.463	10.5	2.00	2.2	
gamma-Chlordane	285736	AverageRF	20	1.285	1.587	23.5 *	2.00	2.5	
Endosulfan I	285736	AverageRF	20	1.156	1.481	28.0 *	2.00	2.6	
alpha-Chlordane	285736	AverageRF	20	1.331	1.606	20.7 *	2.00	2.4	
Dieldrin	285736	AverageRF	20	1.230	1.434	16.6	2.00	2.3	
4,4'-DDE	285736	AverageRF	20	1.304	1.612	23.6 *	2.00	2.5	
Endrin	285736	AverageRF	20	1.112	1.353	21.7 *	2.00	2.4	
Endosulfan II	285736	AverageRF	20	1.156	1.382	19.6	2.00	2.4	
4,4'-DDD	285736	AverageRF	20	0.940	1.137	21.0 *	2.00	2.4	
Endrin Aldehyde	285736	AverageRF	20	1.027	1.258	22.5 *	2.00	2.5	
Endosulfan Sulfate	285736	AverageRF	20	1.123	1.304	16.1	2.00	2.3	
4,4'-DDT	285736	AverageRF	20	0.664	0.640	-3.6	2.00	1.9	
Endrin Ketone	285736	AverageRF	20	1.155	1.194	3.4	2.00	2.1	
Methoxychlor	285736	AverageRF	20	0.405	0.442	9.1	2.00	2.2	
2,4'-DDE	284756	AverageRF	20	1.005	1.276	27.0 *	2.00	2.5	
2,4'-DDD	284756	AverageRF	20	0.909	1.077	18.4	2.00	2.4	
2,4'-DDT	284756	AverageRF	20	0.902	1.087	20.4 *	2.00	2.4	
Toxaphene	284644	NA	20				200.00	181.0	-9.5
Toxaphene {1}	284644	AverageRF	100	0.023	0.021	-8.8	200.00	182.4	
Toxaphene {2}	284644	Quadratic	100				200.00	185.0	-7.5
Toxaphene {3}	284644	AverageRF	100	0.017	0.016	-9.2	200.00	181.5	
Toxaphene {4}	284644	AverageRF	100	0.007	0.006	-8.6	200.00	182.8	
Toxaphene {5}	284644	AverageRF	100	0.009	0.008	-10.8	200.00	178.4	
Toxaphene {6}	284644	AverageRF	100	0.026	0.023	-12.2	200.00	175.6	
Chlordane	284642	NA	20				50.00	47.8	-4.4
Chlordane {1}	284642	AverageRF	100	0.057	0.046	-20.0	50.00	40.0	
Chlordane {2}	284642	AverageRF	100	0.072	0.050	-30.4	50.00	34.8	
Chlordane {3}	284642	AverageRF	100	0.049	0.062	24.9	50.00	62.4	
Chlordane {4}	284642	AverageRF	100	0.144	0.139	-3.4	50.00	48.3	
Chlordane {5}	284642	AverageRF	100	0.122	0.118	-2.9	50.00	48.6	
Chlordane {6}	284642	AverageRF	100	0.090	0.095	5.6	50.00	52.8	
Chlorpyrifos	284610	AverageRF	20	0.661	0.744	12.6	2.00	2.3	
Oxychlordane	284610	AverageRF	20	1.334	1.287	-3.6	2.00	1.9	
cis-Nonachlor	284610	AverageRF	20	1.515	1.575	4.0	2.00	2.1	
trans-Nonachlor	284610	AverageRF	20	1.452	1.501	3.4	2.00	2.1	
Mirex	284610	AverageRF	20	1.171	1.217	3.9	2.00	2.1	
Hexachloroethane	284610	AverageRF	20	2.176	2.020	-7.2	2.00	1.9	
Hexachlorobutadiene	284610	AverageRF	20	1.813	1.705	-6.0	2.00	1.9	
Perthane	284612	AverageRF	20	0.035	0.037	6.8	25.00	26.7	

16 compound out of 47 failed max individual %D criteria.

Second Source Calibration Verification Summary

CalibrationID: CAL15919
Method ID: MJ1647
DataFile Location: J:\GC23\DATA\100918CAL\1009F030.D

Units: ug/L
Column: DB XLB

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift

16 compound out of 47 failed max individual %D criteria.

Second Source Calibration Verification Summary

CalibrationID: CAL15919

Method ID: MJ1647

DataFile Location: J:\GC23\DATA\121718CAL\1217F004.D\1217F004C.D

Units: ug/L

Column: DB-35MS

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
alpha-BHC	285737	AverageRF	20	1.295	1.329	2.6	2.00	2.1	
Hexachlorobenzene	285737	AverageRF	20	1.748	1.754	0.3	2.00	2.0	
beta-BHC	285737	AverageRF	20	0.600	0.624	3.9	2.00	2.1	
gamma-BHC (Lindane)	285737	AverageRF	20	1.163	1.200	3.2	2.00	2.1	
delta-BHC	285737	AverageRF	20	1.083	1.102	1.8	2.00	2.0	
Heptachlor	285737	AverageRF	20	1.196	1.225	2.4	2.00	2.0	
Aldrin	285737	AverageRF	20	1.153	1.175	2.0	2.00	2.0	
Isodrin	285737	AverageRF	20	0.978	1.136	16.1	2.00	2.3	
Heptachlor Epoxide	285737	AverageRF	20	1.060	1.073	1.2	2.00	2.0	
gamma-Chlordane	285737	AverageRF	20	1.074	1.123	4.6	2.00	2.1	
Endosulfan I	285737	AverageRF	20	0.954	1.017	6.6	2.00	2.1	
alpha-Chlordane	285737	AverageRF	20	1.082	1.134	4.8	2.00	2.1	
Dieldrin	285737	AverageRF	20	1.027	1.035	0.8	2.00	2.0	
4,4'-DDE	285737	AverageRF	20	1.053	1.088	3.3	2.00	2.1	
Endrin	285737	AverageRF	20	0.939	0.982	4.6	2.00	2.1	
Endosulfan II	285737	AverageRF	20	0.930	0.975	4.9	2.00	2.1	
4,4'-DDD	285737	AverageRF	20	0.768	0.796	3.7	2.00	2.1	
Endrin Aldehyde	285737	AverageRF	20	0.812	0.861	6.1	2.00	2.1	
Endosulfan Sulfate	285737	AverageRF	20	0.924	0.953	3.1	2.00	2.1	
4,4'-DDT	285737	AverageRF	20	0.725	0.736	1.6	2.00	2.0	
Endrin Ketone	285737	AverageRF	20	1.018	0.998	-1.9	2.00	2.0	
Methoxychlor	285737	AverageRF	20	0.419	0.418	-0.2	2.00	2.0	
2,4'-DDE	284757	AverageRF	20	0.810	0.939	15.9	2.00	2.3	
2,4'-DDD	284757	AverageRF	20	0.706	0.840	18.9	2.00	2.4	
2,4'-DDT	284757	AverageRF	20	0.849	0.982	15.6	2.00	2.3	
Toxaphene	284645	NA	20				200.00	174.9	-12.6
Toxaphene {1}	284645	AverageRF	100	0.017	0.015	-16.0	200.00	168.1	
Toxaphene {2}	284645	AverageRF	100	0.006	0.005	-14.0	200.00	172.1	
Toxaphene {3}	284645	AverageRF	100	0.006	0.005	-14.7	200.00	170.5	
Toxaphene {4}	284645	AverageRF	100	0.010	0.009	-11.9	200.00	176.1	
Toxaphene {5}	284645	AverageRF	100	0.020	0.018	-9.2	200.00	181.6	
Toxaphene {6}	284645	AverageRF	100	0.016	0.015	-9.5	200.00	180.9	
Chlordane	284643	NA	20				50.00	49.7	-0.6
Chlordane {1}	284643	AverageRF	100	0.043	0.033	-24.1	50.00	37.9	
Chlordane {2}	284643	AverageRF	100	0.028	0.032	14.5	50.00	57.3	
Chlordane {3}	284643	AverageRF	100	0.109	0.102	-6.7	50.00	46.6	
Chlordane {4}	284643	AverageRF	100	0.067	0.069	3.0	50.00	51.5	
Chlordane {5}	284643	AverageRF	100	0.032	0.037	15.9	50.00	58.0	
Chlordane {6}	284643	AverageRF	100	0.098	0.092	-6.5	50.00	46.8	
Chlorpyrifos	284611	AverageRF	20	0.656	0.614	-6.4	2.00	1.9	
Oxychlordane	284611	AverageRF	20	1.275	1.055	-17.3	2.00	1.7	
cis-Nonachlor	284611	AverageRF	20	1.429	1.215	-15.0	2.00	1.7	
trans-Nonachlor	284611	AverageRF	20	1.335	1.197	-10.3	2.00	1.8	
Mirex	284611	AverageRF	20	1.177	1.037	-12.0	2.00	1.8	
Hexachloroethane	284611	AverageRF	20	1.887	1.624	-13.9	2.00	1.7	
Hexachlorobutadiene	284611	AverageRF	20	1.536	1.339	-12.8	2.00	1.7	
Perthane	284613	AverageRF	20	0.035	0.034	-1.9	25.00	24.5	

Second Source Calibration Verification Summary

CalibrationID: CAL15919

Method ID: MJ1647

DataFile Location: J:\GC23\DATA\100918CAL\1009F030.D\1009F030C.D

Units: ug/L

Column: DB-35MS

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift

Quantitation Report (QT Reviewed)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:59:06 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.013	5.341	861302	2390118	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.740	7.108	3054	7307	0.088	0.187 #
28) s	Decachlor...	18.433	16.874	3056	6499	0.156	0.198 #
	Target Compounds						
3)	alpha-BHC	9.586	8.328	2740	6966	0.179	0.208
4)	Hexachlor...	9.743	8.114	3921	9344	0.006m	0.202m#
5)	beta-BHC	10.866	9.614	1356	3048	0.181m	0.185m
6)	gamma-BHC...	10.253	9.071	2387	6274	0.182	0.204
7)	delta-BHC	11.363	10.134	2289	5532	0.168	0.188
9)	Aldrin	12.000	10.338	2702	6183	0.182m	0.200
10)	Isodrin	12.530	11.128	2292	5258	0.184	0.196
11)	Heptachlo...	12.723	11.418	2670	5262	0.198	0.179m
12)	gamma-Chl...	13.240	11.828	2329	5764	0.170	0.199m
13)	Endosulfan I	13.366	12.038	2140	4979	0.156	0.184
14)	alpha-Chl...	13.316	11.974	2557	6067	0.173	0.208
15)	Dieldrin	13.786	12.478	2065	5286	0.148	0.192m#
16)	4,4'-DDE	13.596	12.334	2398	5568	0.155	0.187m
17)	Endrin	14.153	12.951	1937	4556	0.148	0.168
18)	Endosulfa...	14.600	13.384	2422	5210	0.068	0.207m#
19)	4,4'-DDD	14.433	13.214	1681	3648	0.160	0.166
20)	Endrin Al...	14.780	13.744	2030	4210	0.171	0.183
21)	Endosulfa...	15.253	14.068	2086	4801	0.167	0.190
22)	4,4'-DDT	14.930	13.631	1119	3527	0.123	0.066m#
23)	Endrin Ke...	15.940	14.998	2228	5118	0.180	0.184
24)	Methoxychlor	15.676	14.731	928	2087	N.D. m	0.166
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

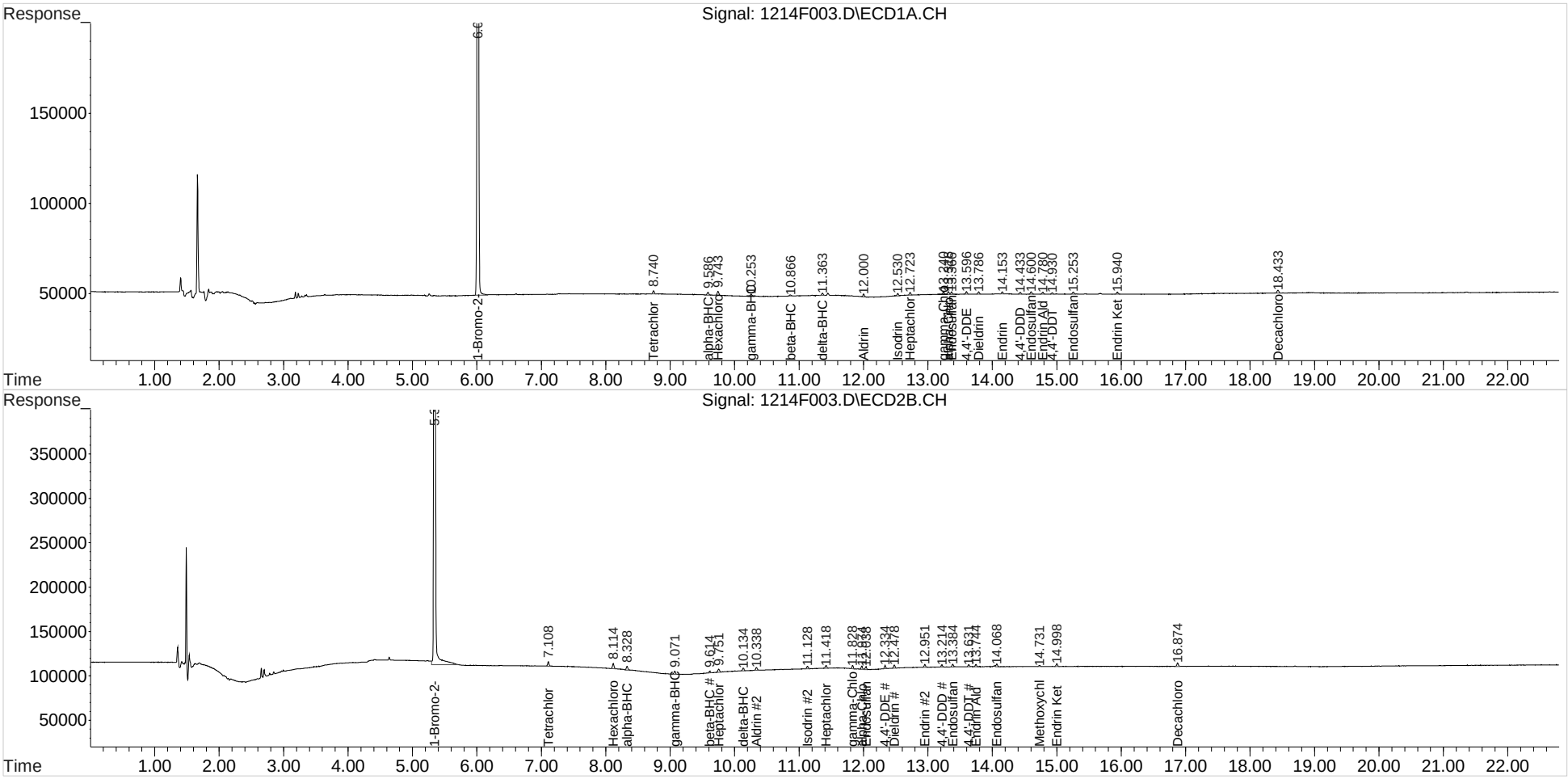
1st SM 12/18/18
2nd UA 12/19/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:59:06 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



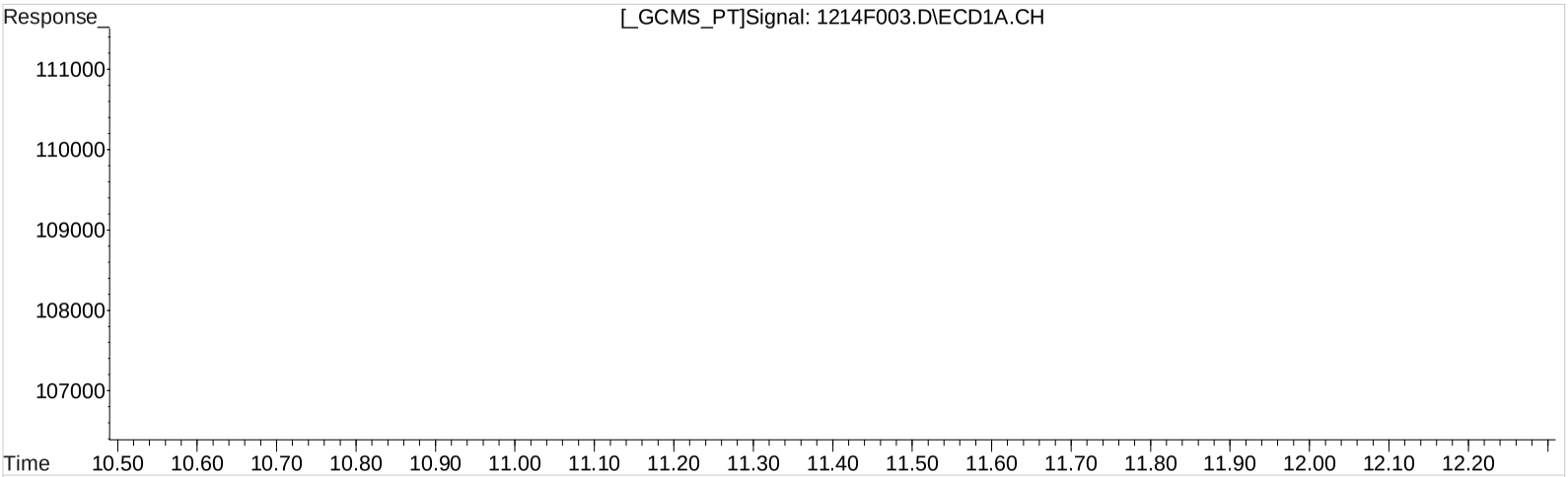
Quantitation Report (Qedit)

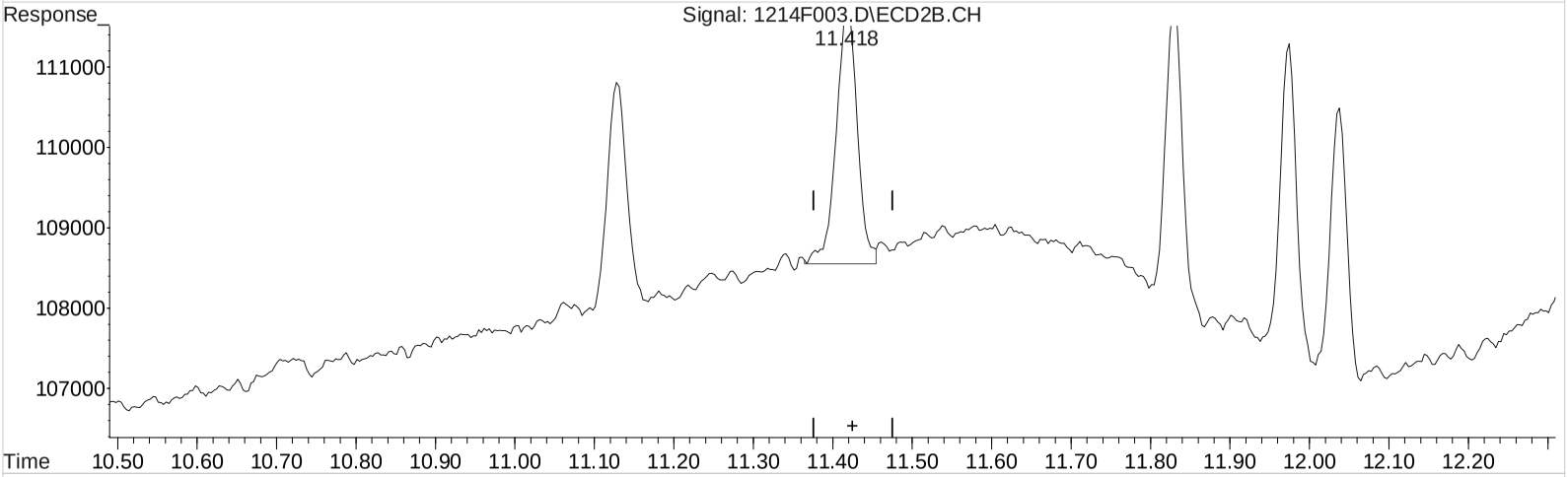
1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(11) Heptachlor Epoxide

12.723min 0.198 ug/L

response 2670

Manual Integration:

Before

12/16/18

(11) Heptachlor Epoxide #2

11.418min 0.200 ug/L

response 5900

(+) = Expected Retention Time

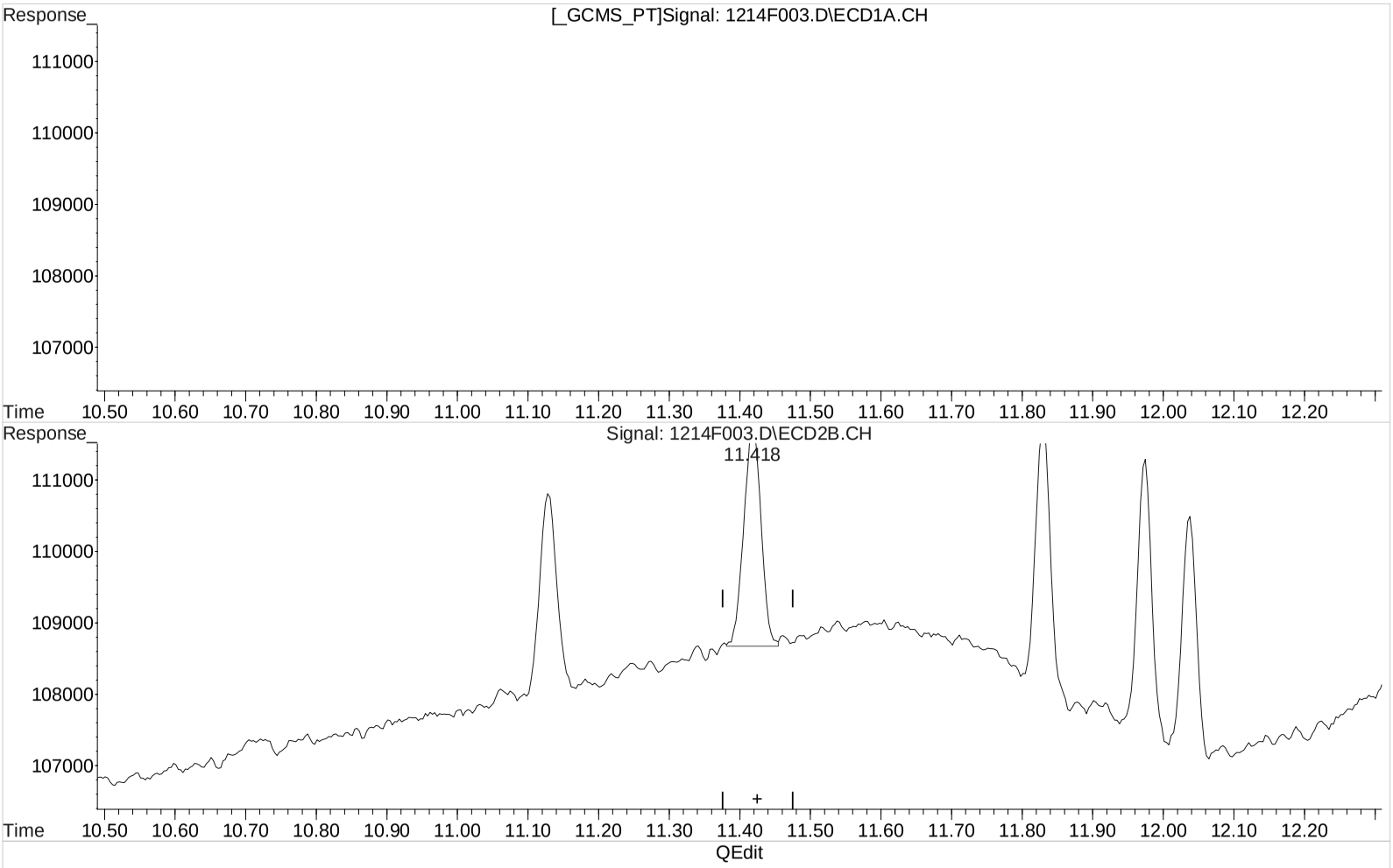
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(11) Heptachlor Epoxide

12.723min 0.198 ug/L

response 2670

Manual Integration:

After

Baseline/Shoulder

12/16/18

(11) Heptachlor Epoxide #2

11.418min 0.179 ug/L m

response 5262

(+) = Expected Retention Time

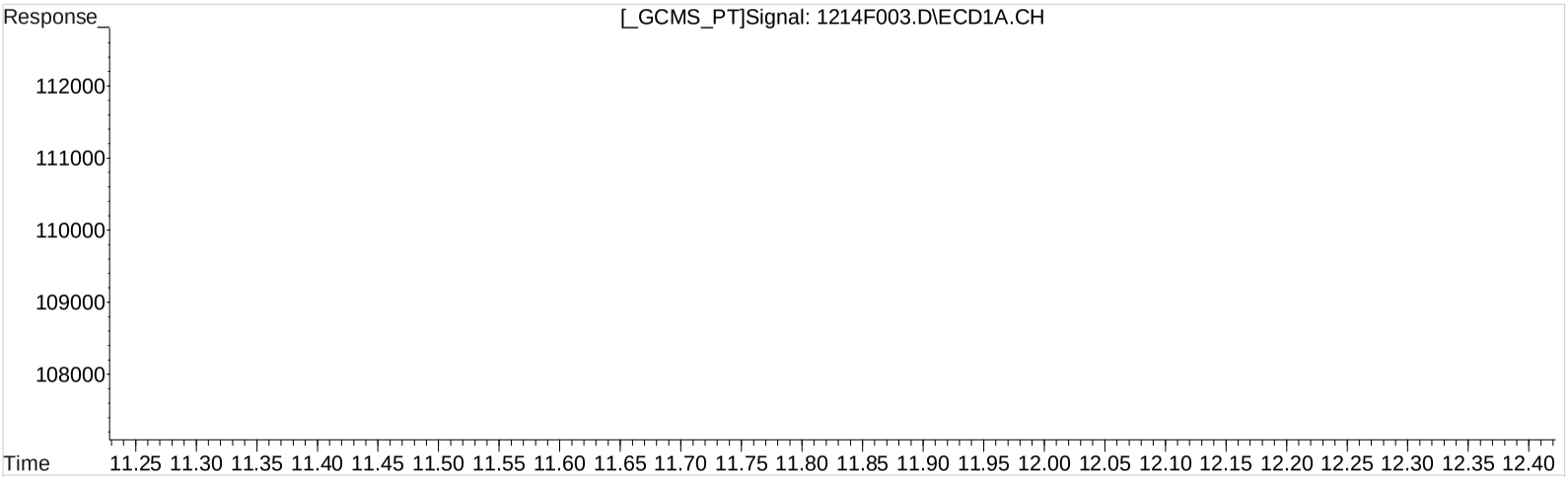
Quantitation Report (Qedit)

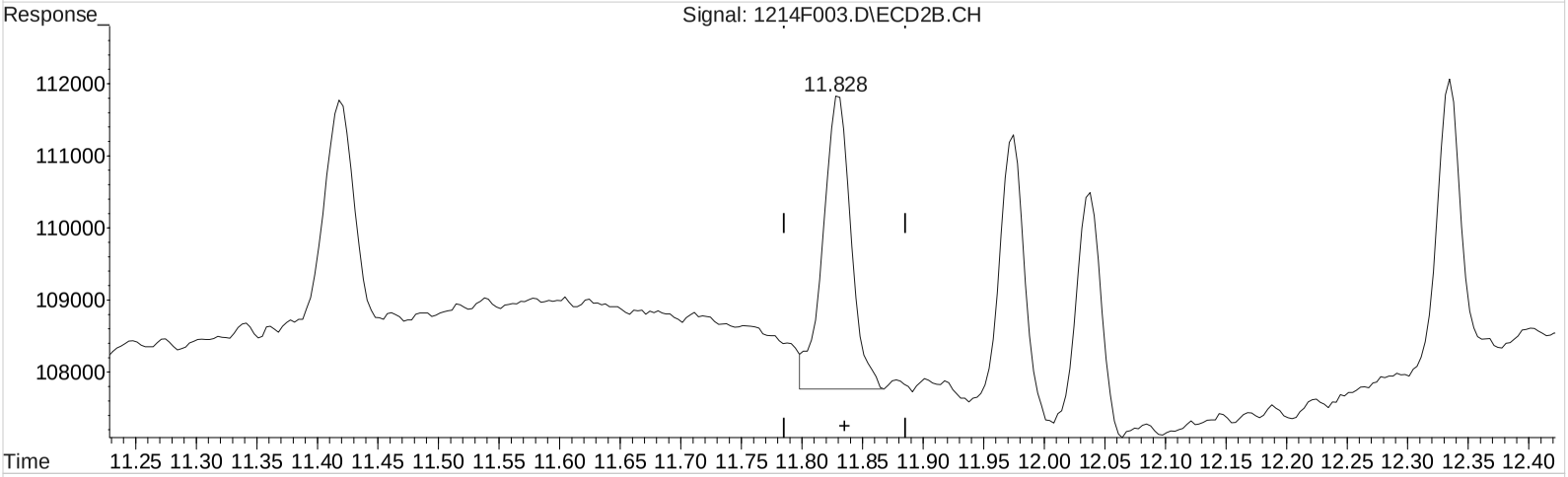
1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(12) gamma-Chlordane

13.240min 0.170 ug/L

response 2329

Manual Integration:

Before

12/16/18

(12) gamma-Chlordane #2

11.828min 0.227 ug/L

response 6553

(+) = Expected Retention Time

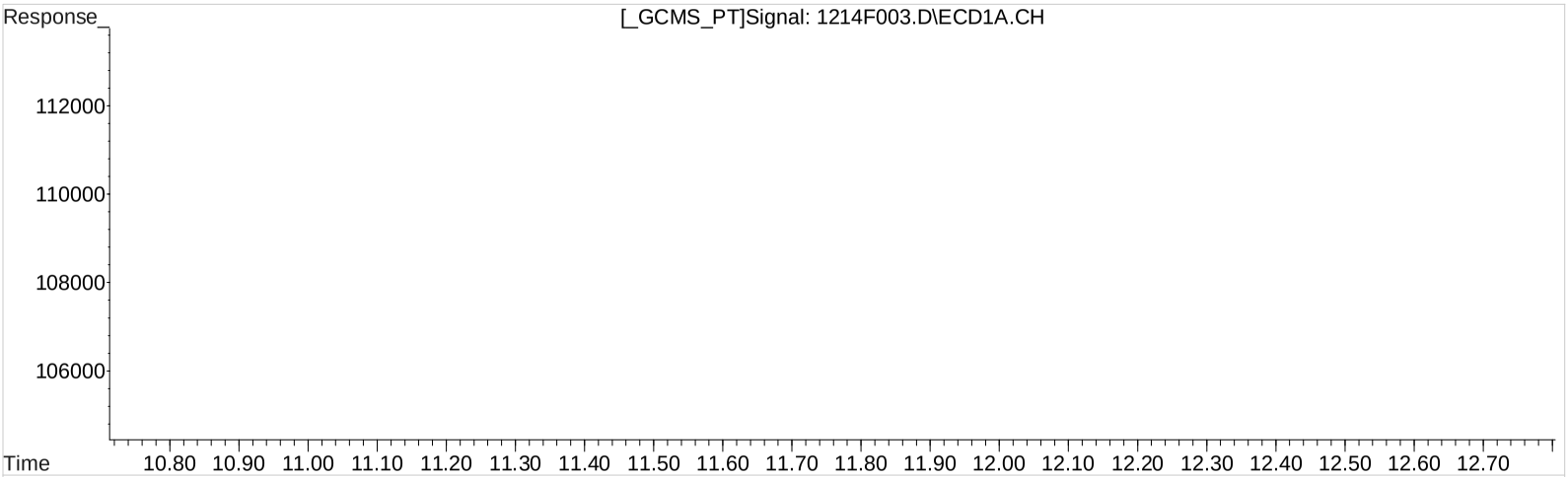
Quantitation Report (Qedit)

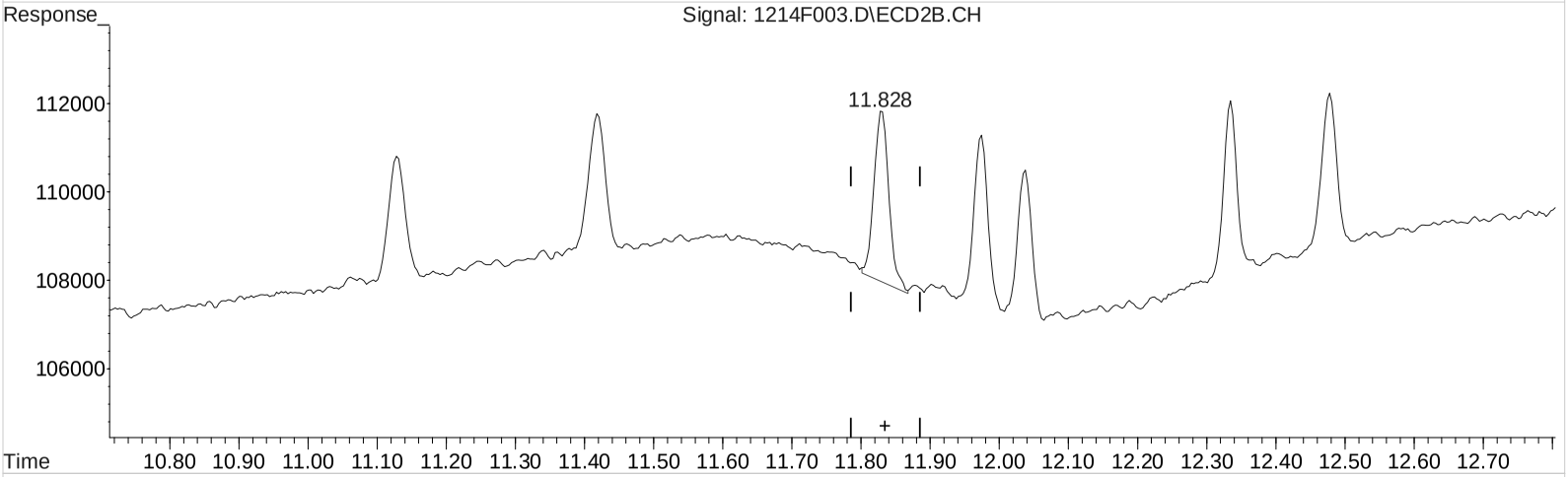
1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(12) gamma-Chlordane

13.240min 0.170 ug/L

response 2329

Manual Integration:

After

Baseline/Shoulder

12/16/18

(12) gamma-Chlordane #2

11.828min 0.199 ug/L m

response 5764

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:16 2018
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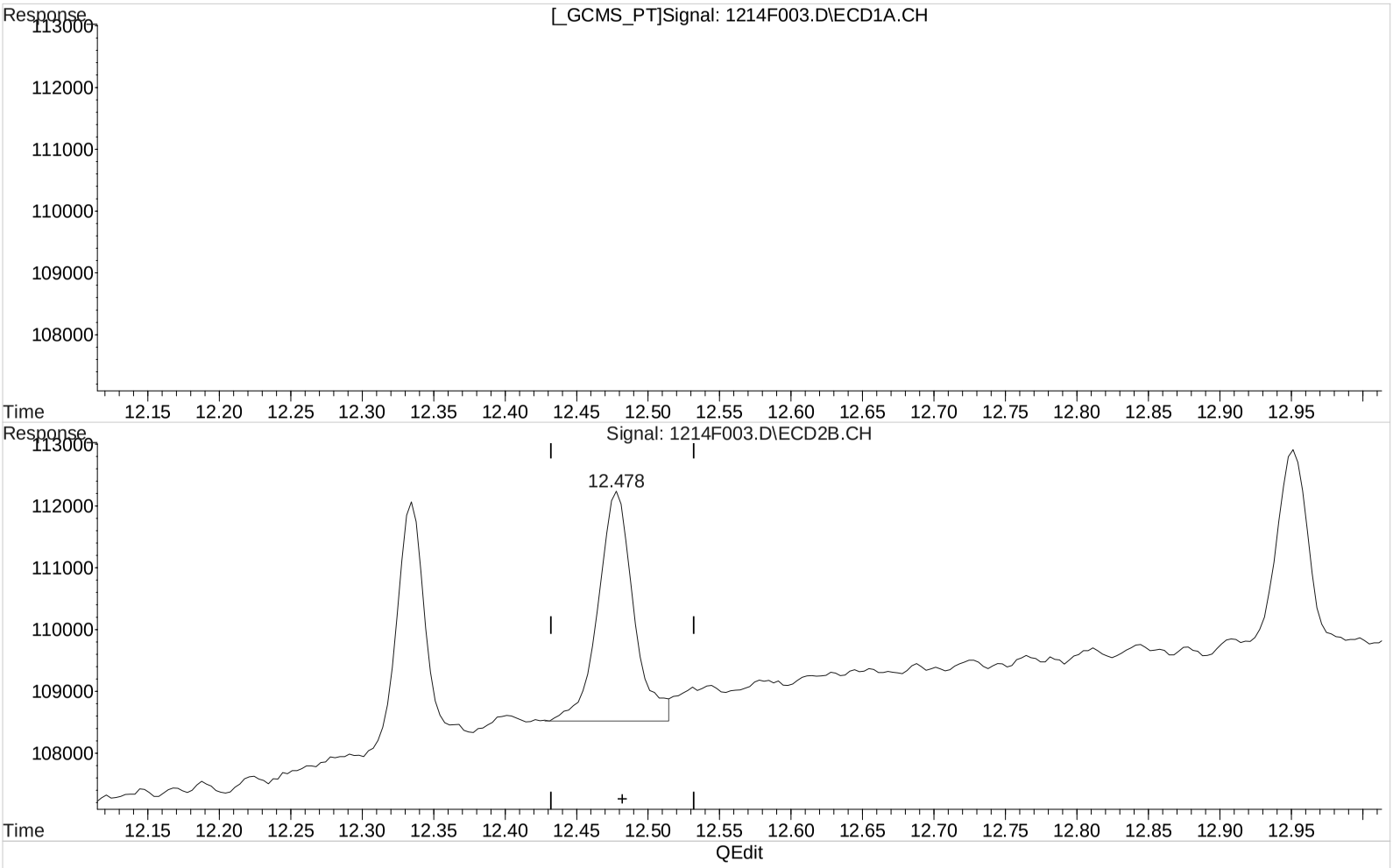
Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(15) Dieldrin

13.786min 0.148 ug/L

response 2065

Manual Integration:

Before

12/16/18

(15) Dieldrin #2

12.478min 0.232 ug/L

response 6410

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
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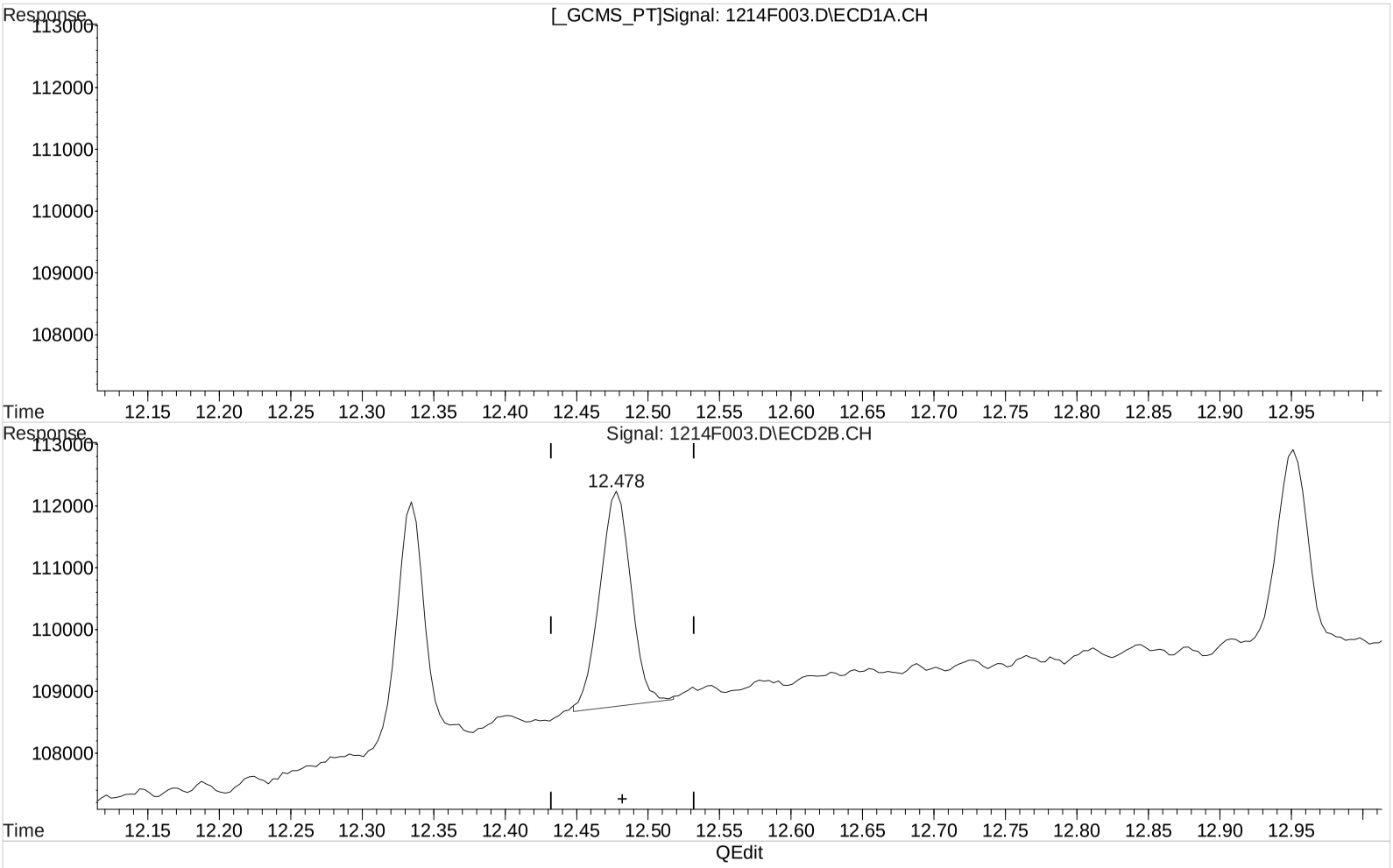
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(15) Dieldrin

13.786min 0.148 ug/L

response 2065

Manual Integration:

After

Baseline/Shoulder

12/16/18

(15) Dieldrin #2

12.478min 0.192 ug/L m

response 5286

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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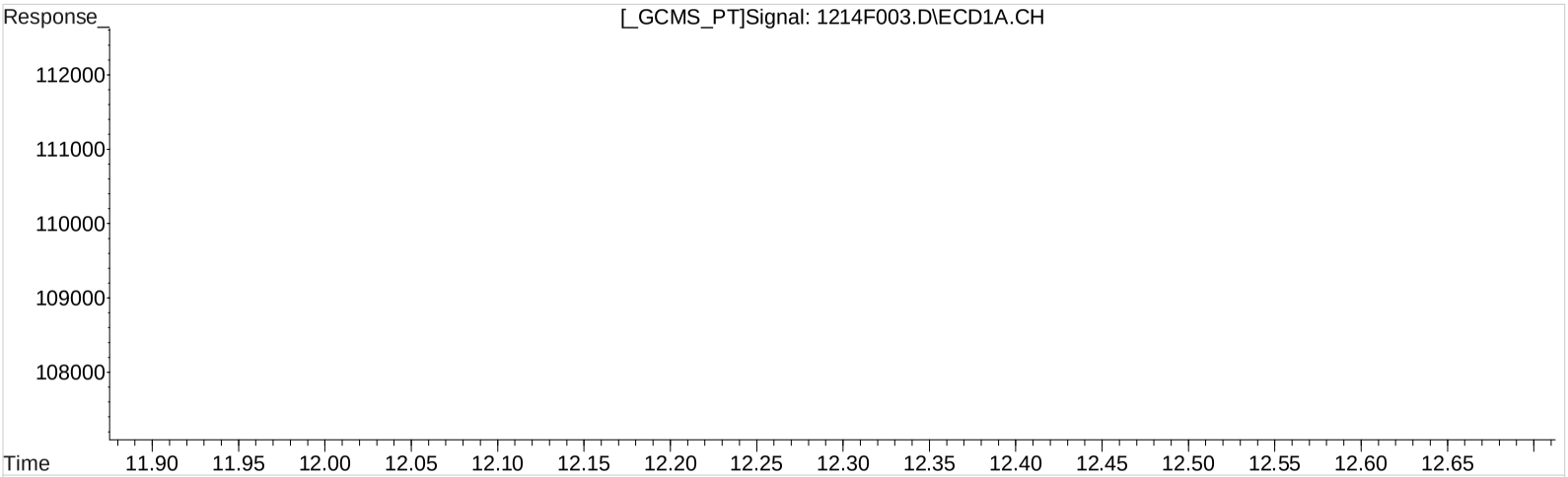
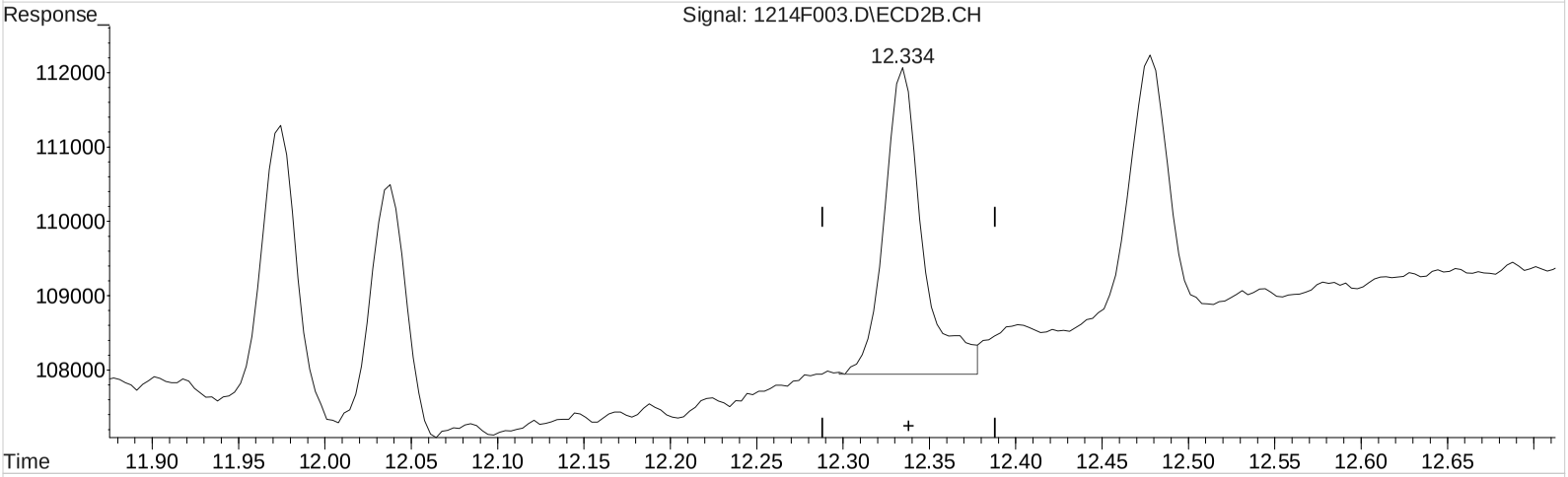
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(16) 4,4'-DDE

13.596min 0.155 ug/L

response 2398

Manual Integration:

Before

12/16/18

(16) 4,4'-DDE #2

12.334min 0.214 ug/L

response 6368

(+) = Expected Retention Time

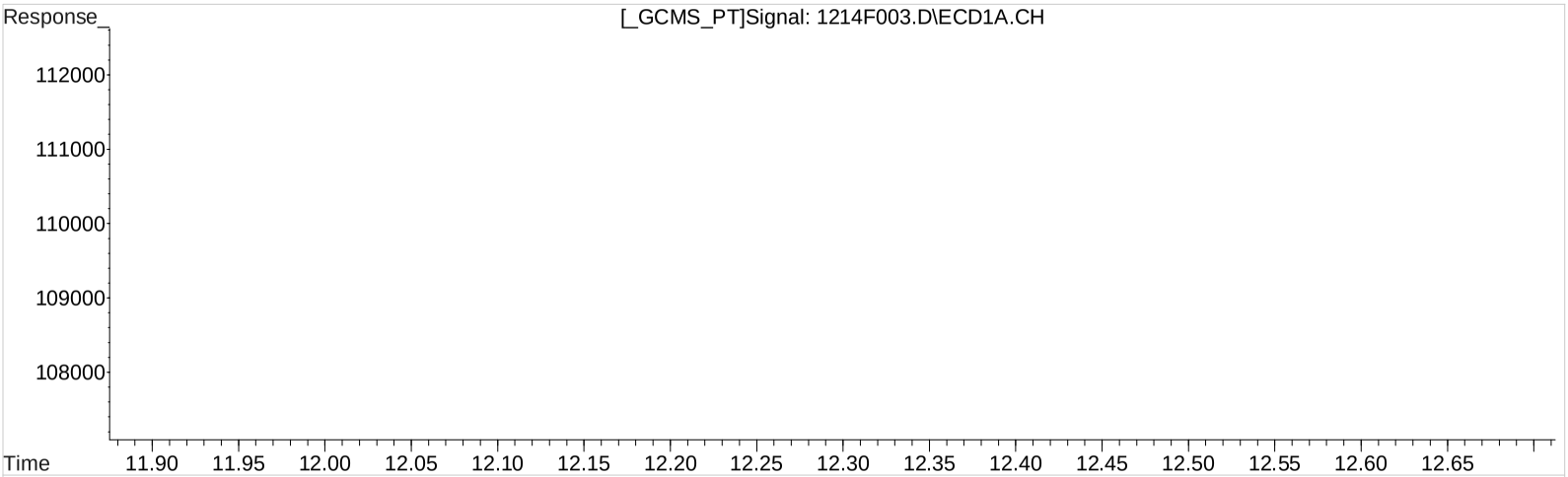
Quantitation Report (Qedit)

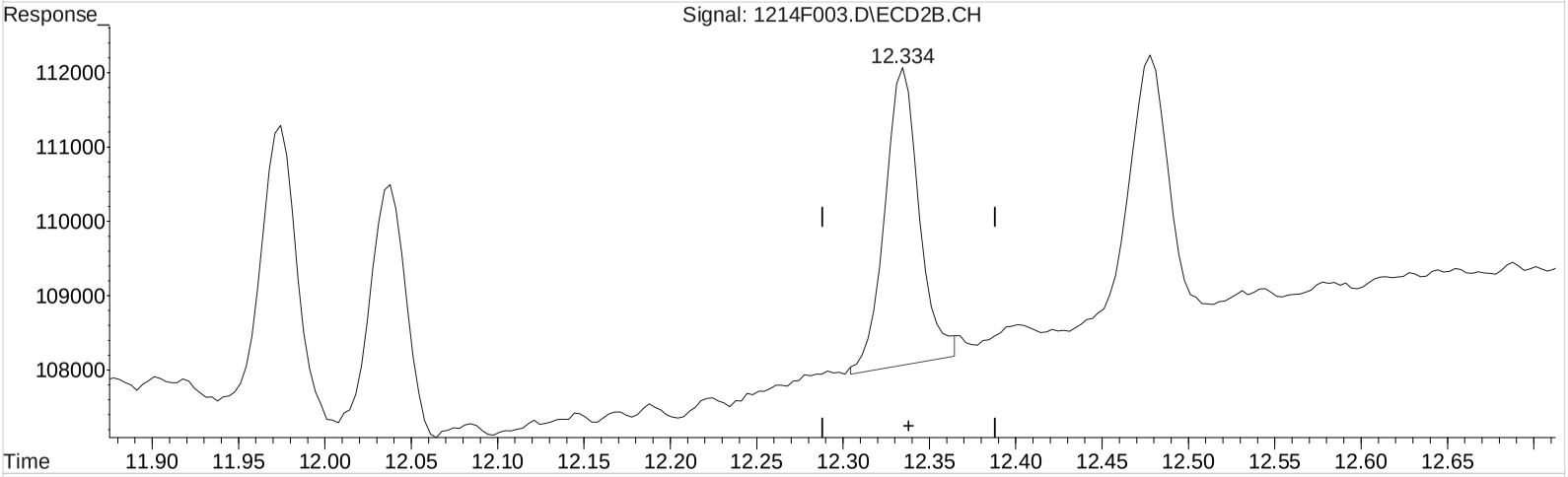
1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(16) 4,4'-DDE

13.596min 0.155 ug/L

response 2398

Manual Integration:

After

Baseline/Shoulder

12/16/18

(16) 4,4'-DDE #2

12.334min 0.187 ug/L m

response 5568

(+) = Expected Retention Time

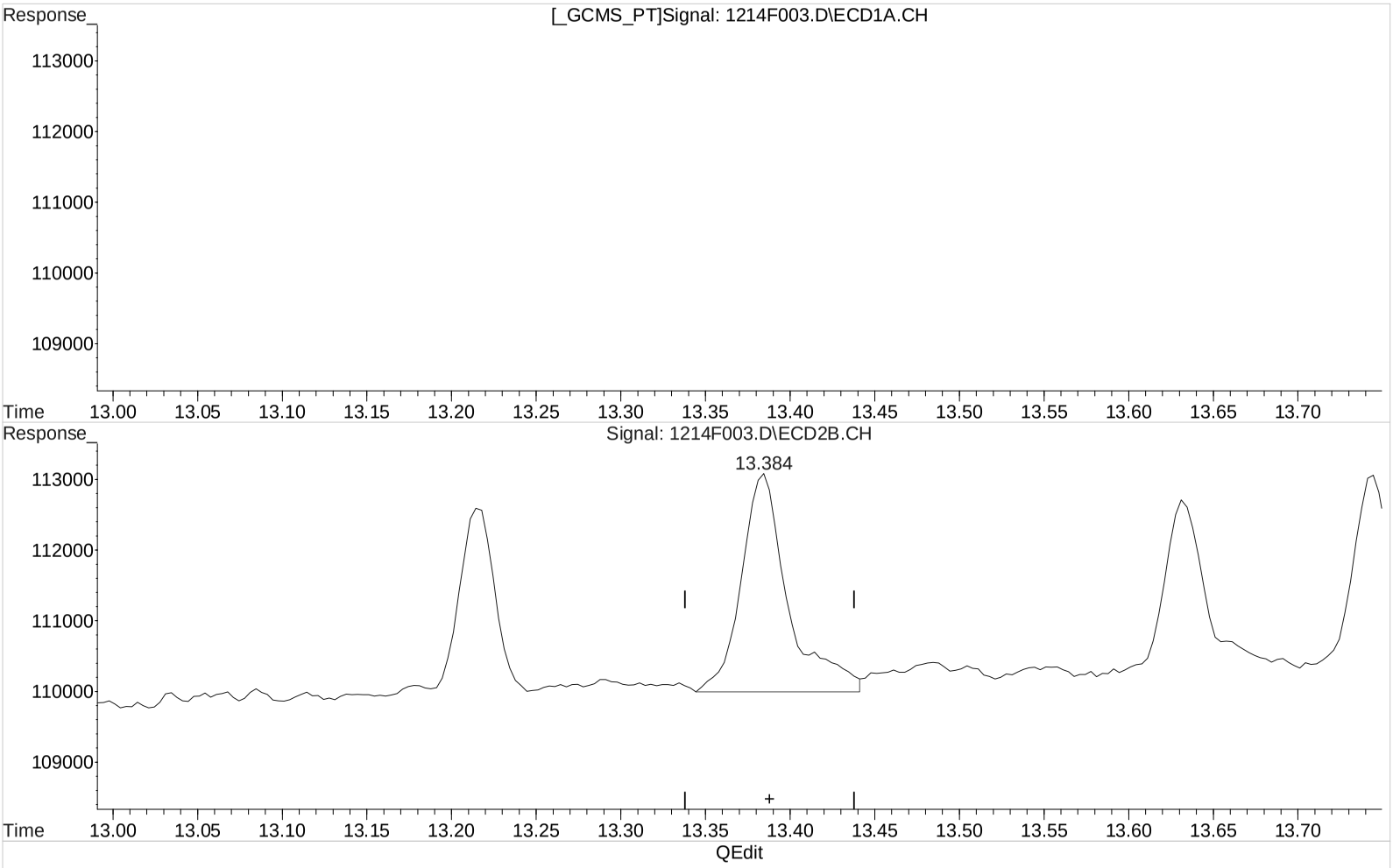
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(18) Endosulfan II

14.600min 0.068 ug/L

response 2422

Manual Integration:

Before

12/16/18

(18) Endosulfan II #2

13.384min 0.236 ug/L

response 5944

(+) = Expected Retention Time

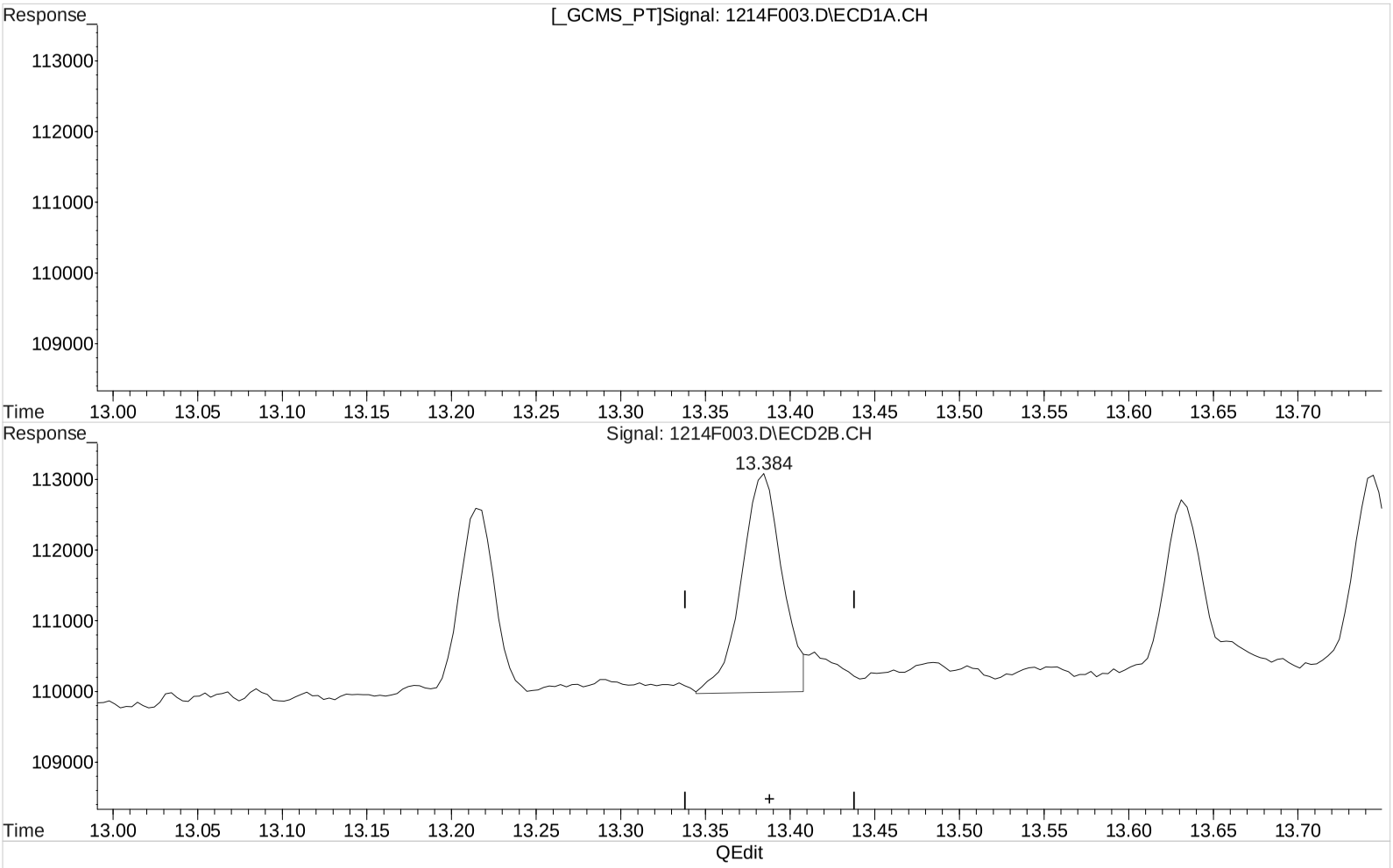
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(18) Endosulfan II

14.600min 0.068 ug/L

response 2422

Manual Integration:

After

Baseline/Shoulder

12/16/18

(18) Endosulfan II #2

13.384min 0.207 ug/L m

response 5210

(+) = Expected Retention Time

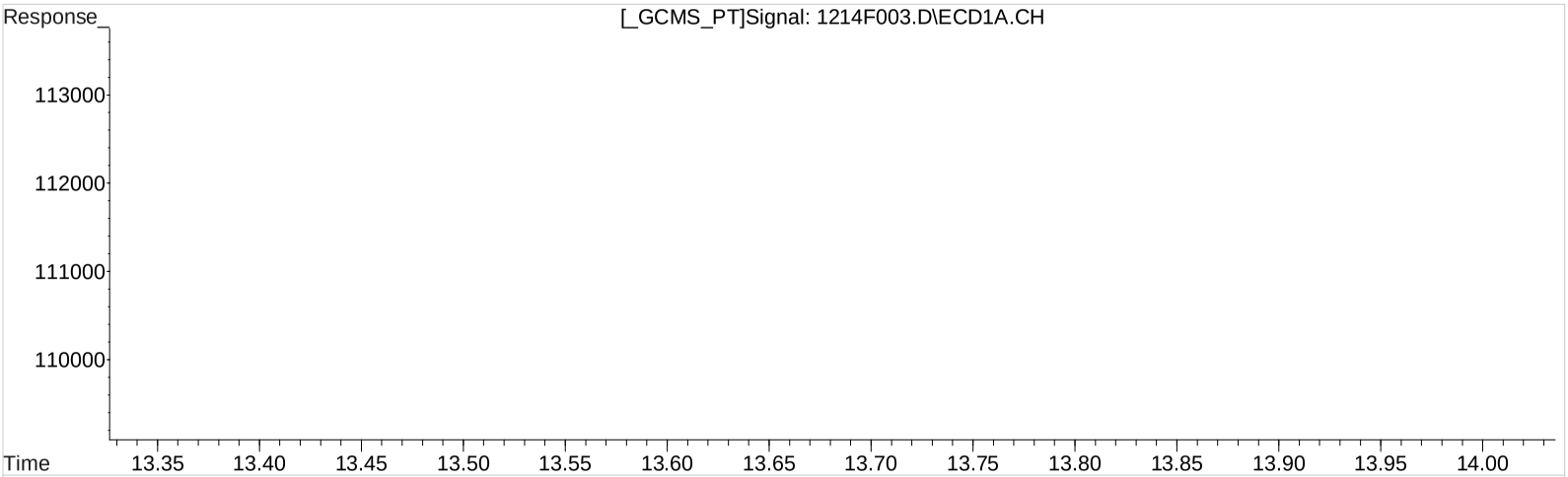
Quantitation Report (Qedit)

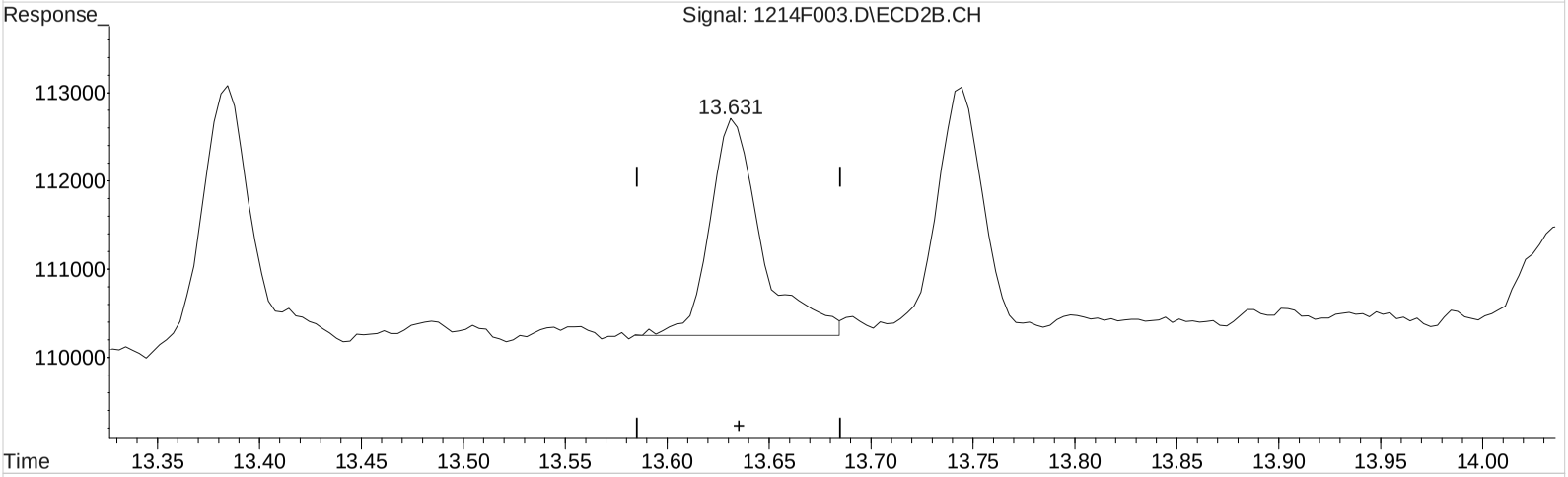
1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(22) 4,4'-DDT

14.930min 0.123 ug/L

response 1119

Manual Integration:

Before

12/16/18

(22) 4,4'-DDT #2

13.631min 0.107 ug/L

response 4355

(+) = Expected Retention Time

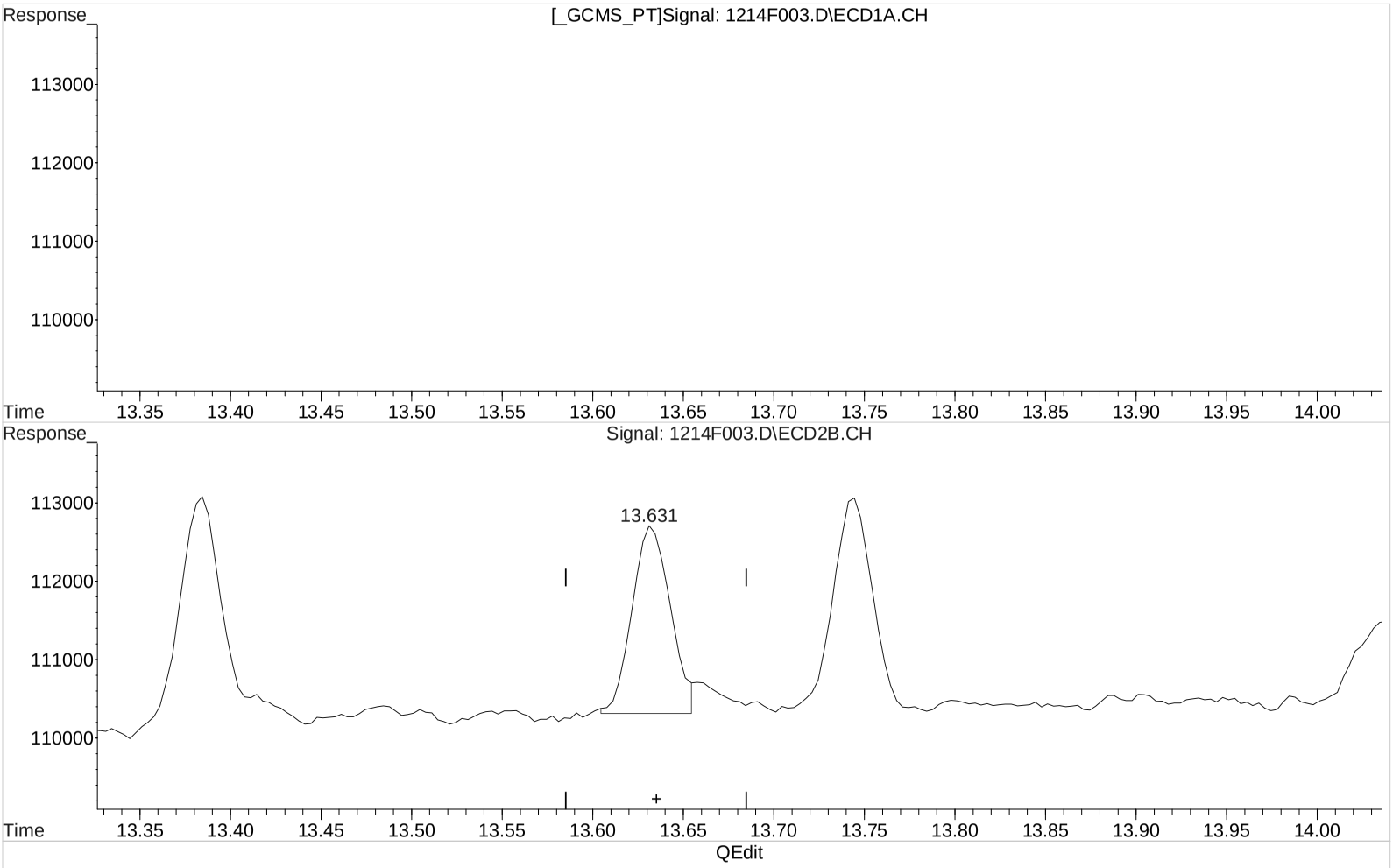
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(22) 4,4'-DDT

14.930min 0.123 ug/L

response 1119

Manual Integration:

After

Baseline/Shoulder

12/16/18

(22) 4,4'-DDT #2

13.631min 0.066 ug/L m

response 3527

(+) = Expected Retention Time

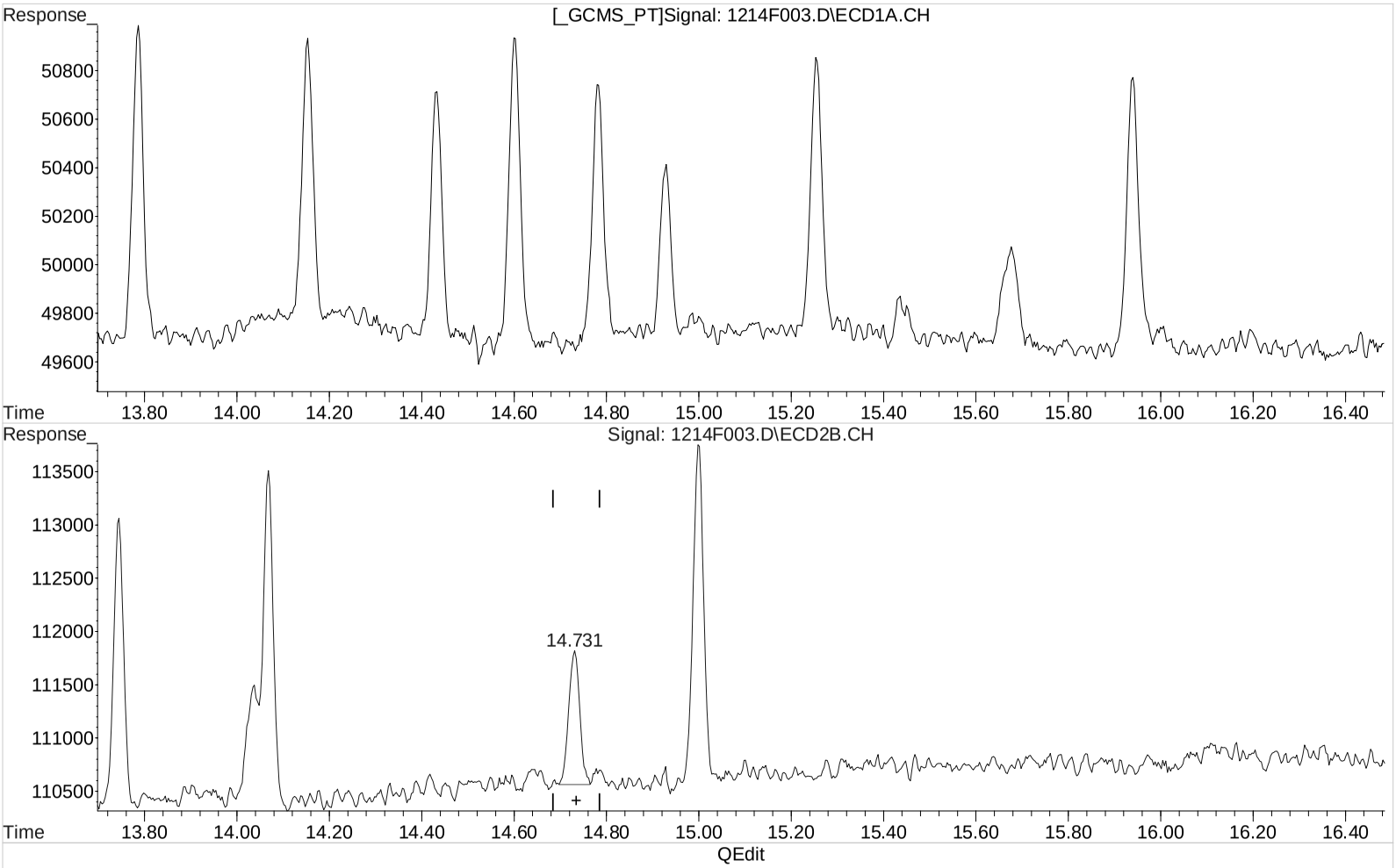
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(24) Methoxychlor

0.000min 0.000 ug/L

response 0

Manual Integration:

Before

12/16/18

(24) Methoxychlor #2

14.731min 0.166 ug/L

response 2087

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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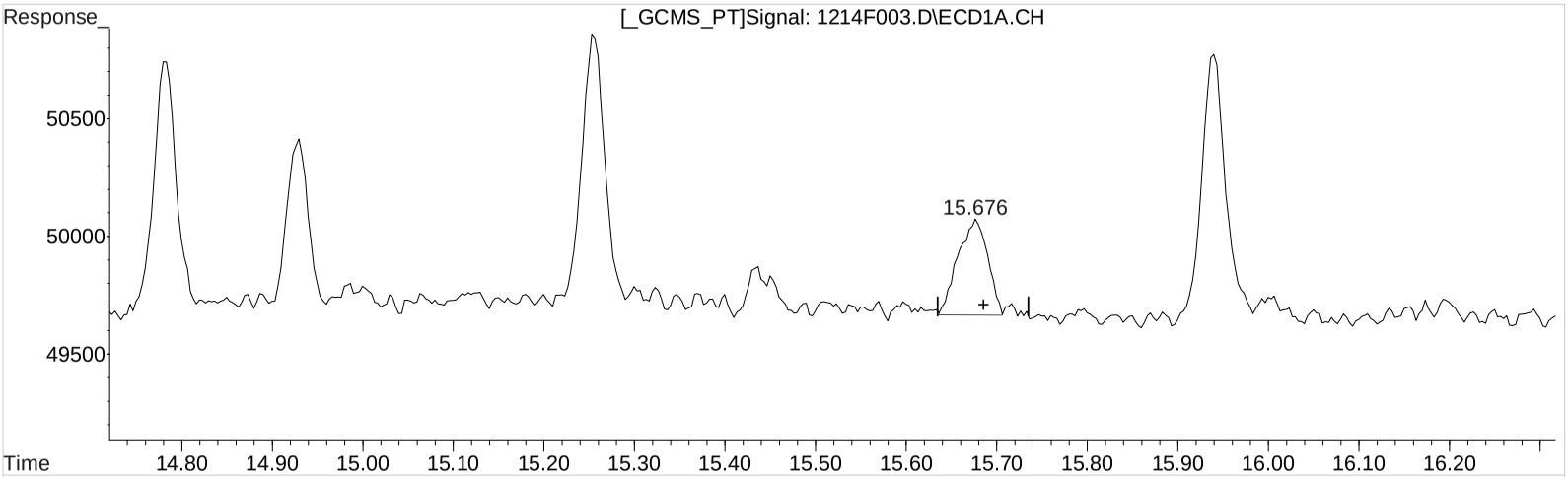
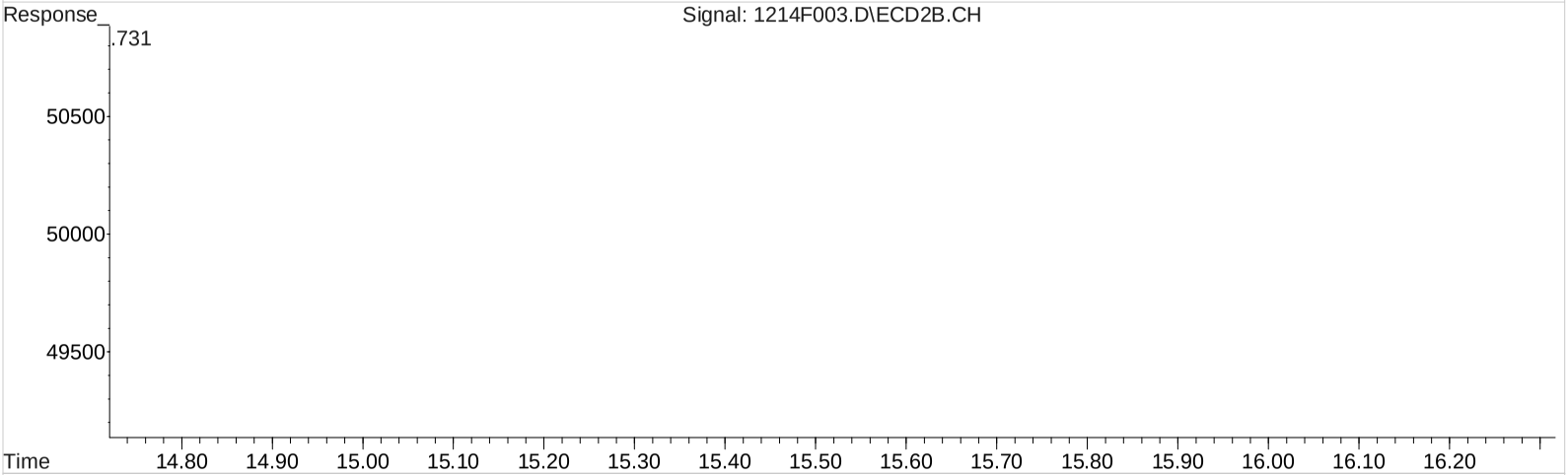
Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(24) Methoxychlor

15.676min -0.099 ug/L m

response 928

Manual Integration:

After

Missed Peak

12/16/18

(24) Methoxychlor #2

14.731min 0.166 ug/L

response 2087

(+) = Expected Retention Time

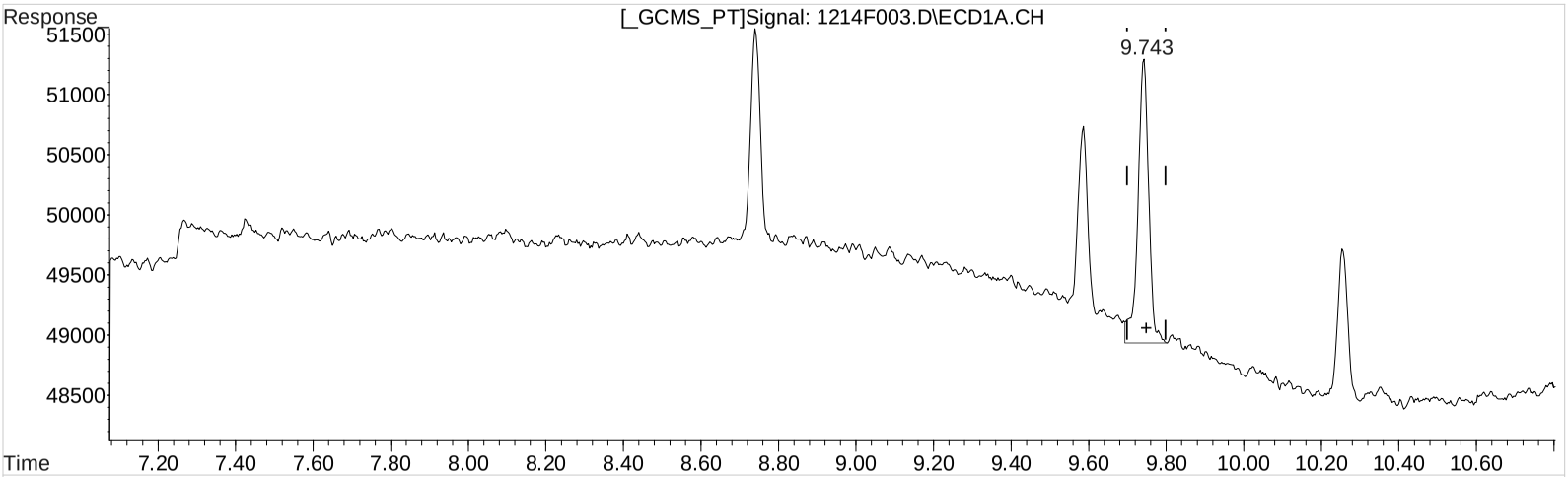
Quantitation Report (Qedit)

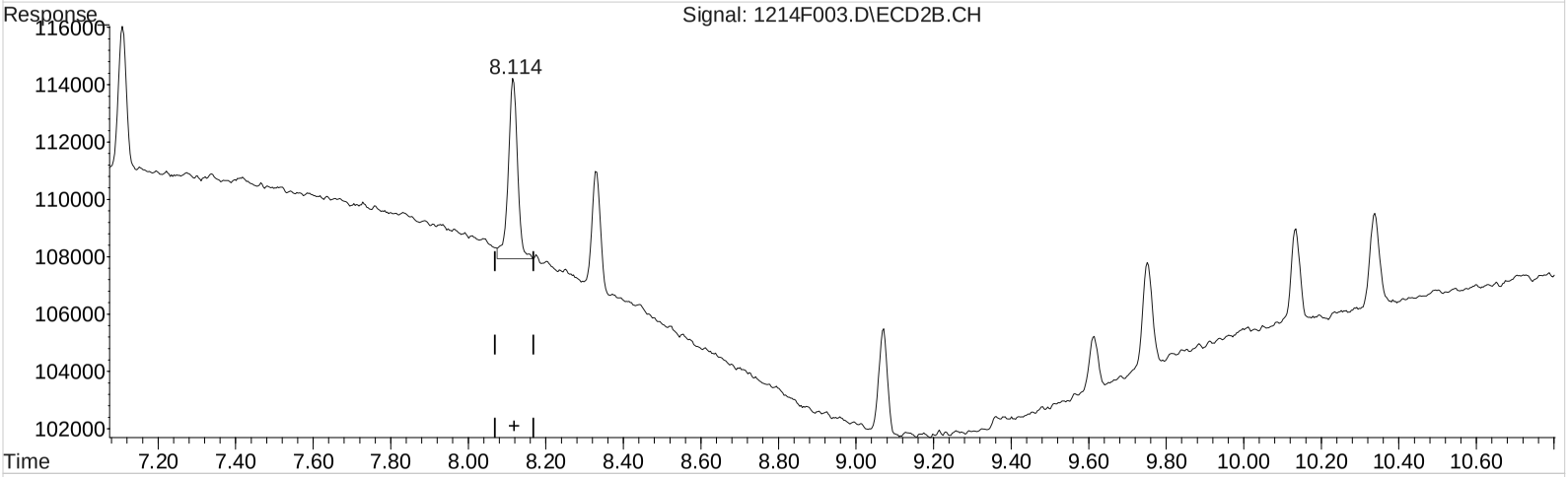
1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.743min 0.036 ug/L

response 4573

Manual Integration:

Before

12/16/18

(4) Hexachlorobenzene #2

8.114min 0.225 ug/L

response 10416

(+) = Expected Retention Time

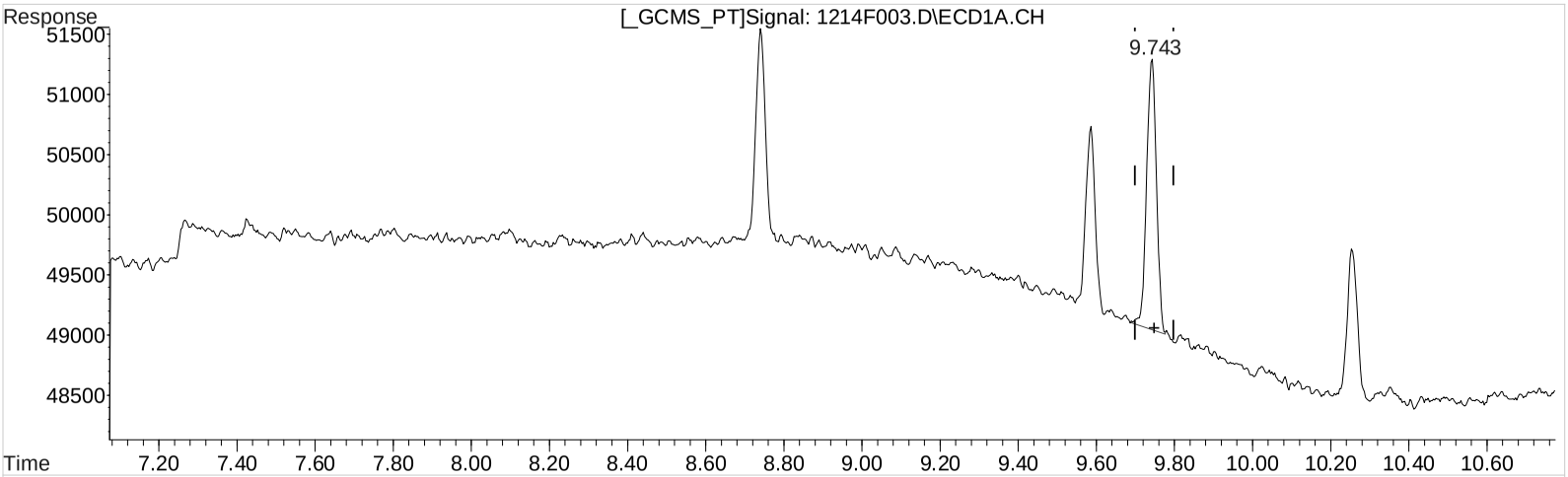
Quantitation Report (Qedit)

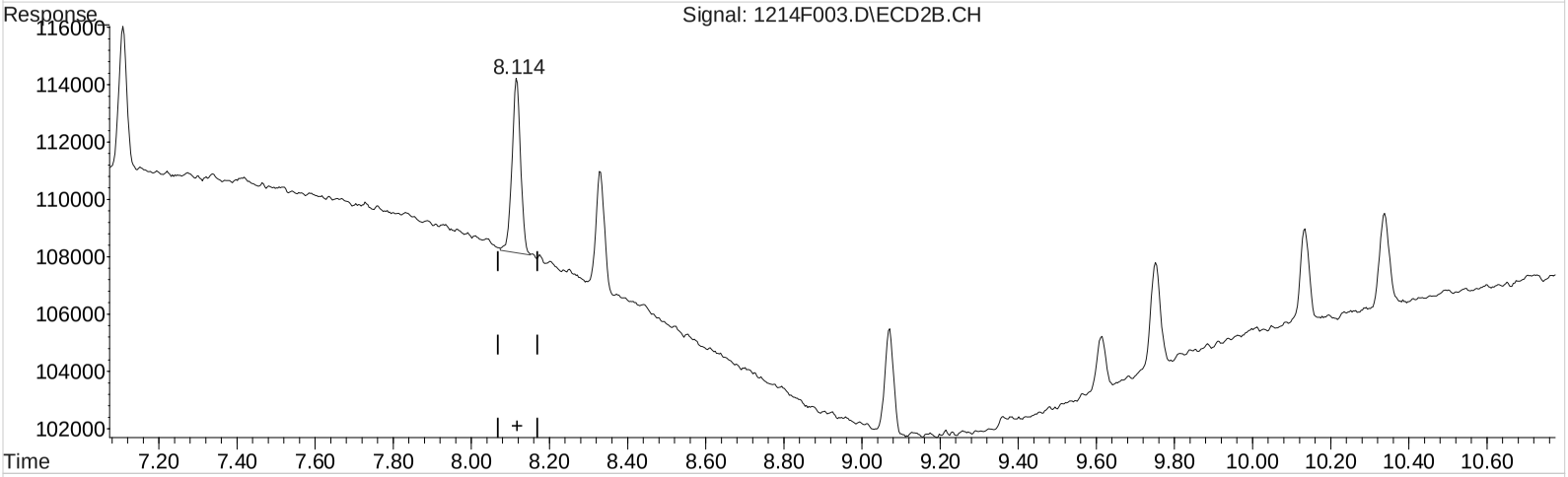
1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.743min 0.006 ug/L m

response 3921

Manual Integration:

After

Baseline/Shoulder

12/16/18

(4) Hexachlorobenzene #2

8.114min 0.202 ug/L m

response 9344

(+) = Expected Retention Time

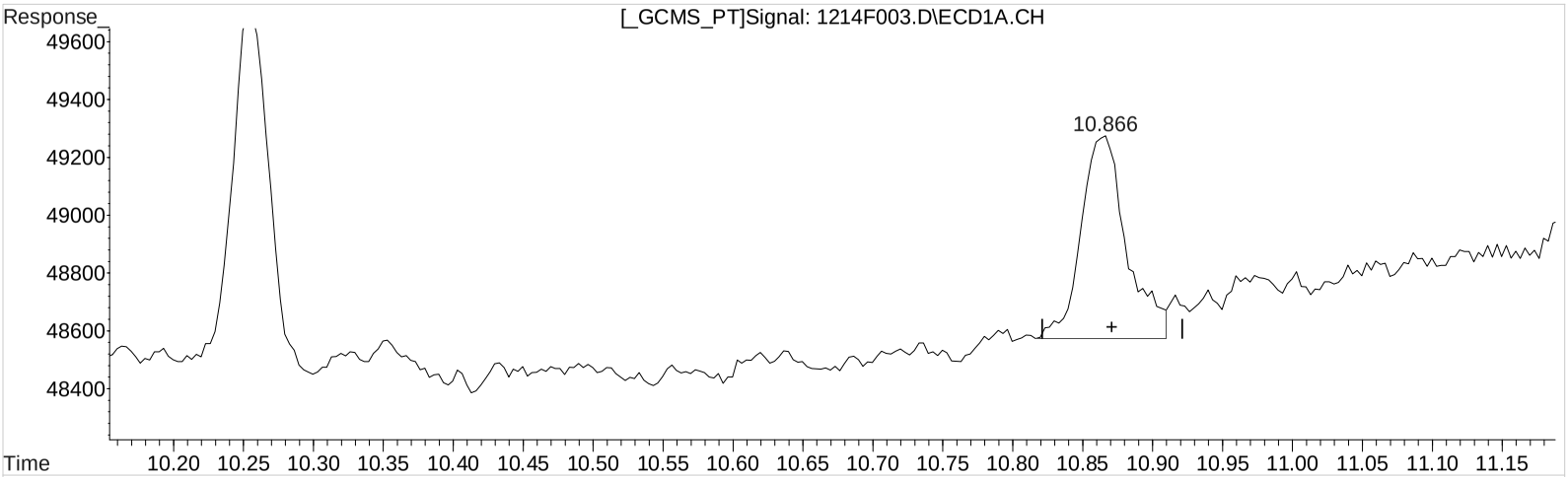
Quantitation Report (Qedit)

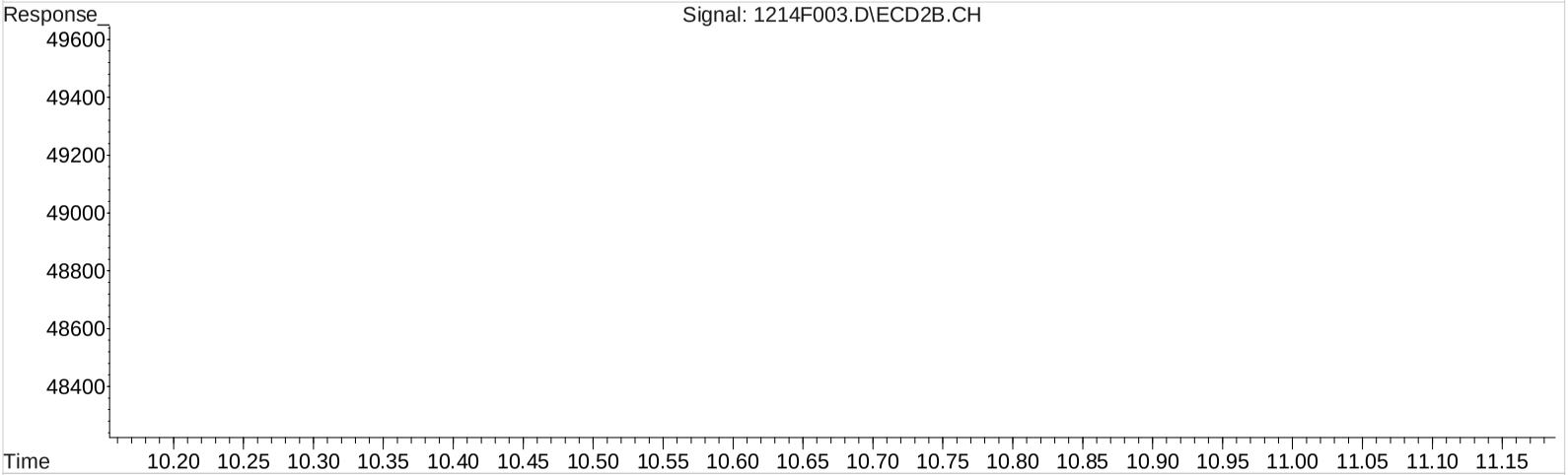
1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.866min 0.212 ug/L

response 1588

Manual Integration:

Before

12/16/18

(5) beta-BHC #2

9.614min 0.223 ug/L

response 3685

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
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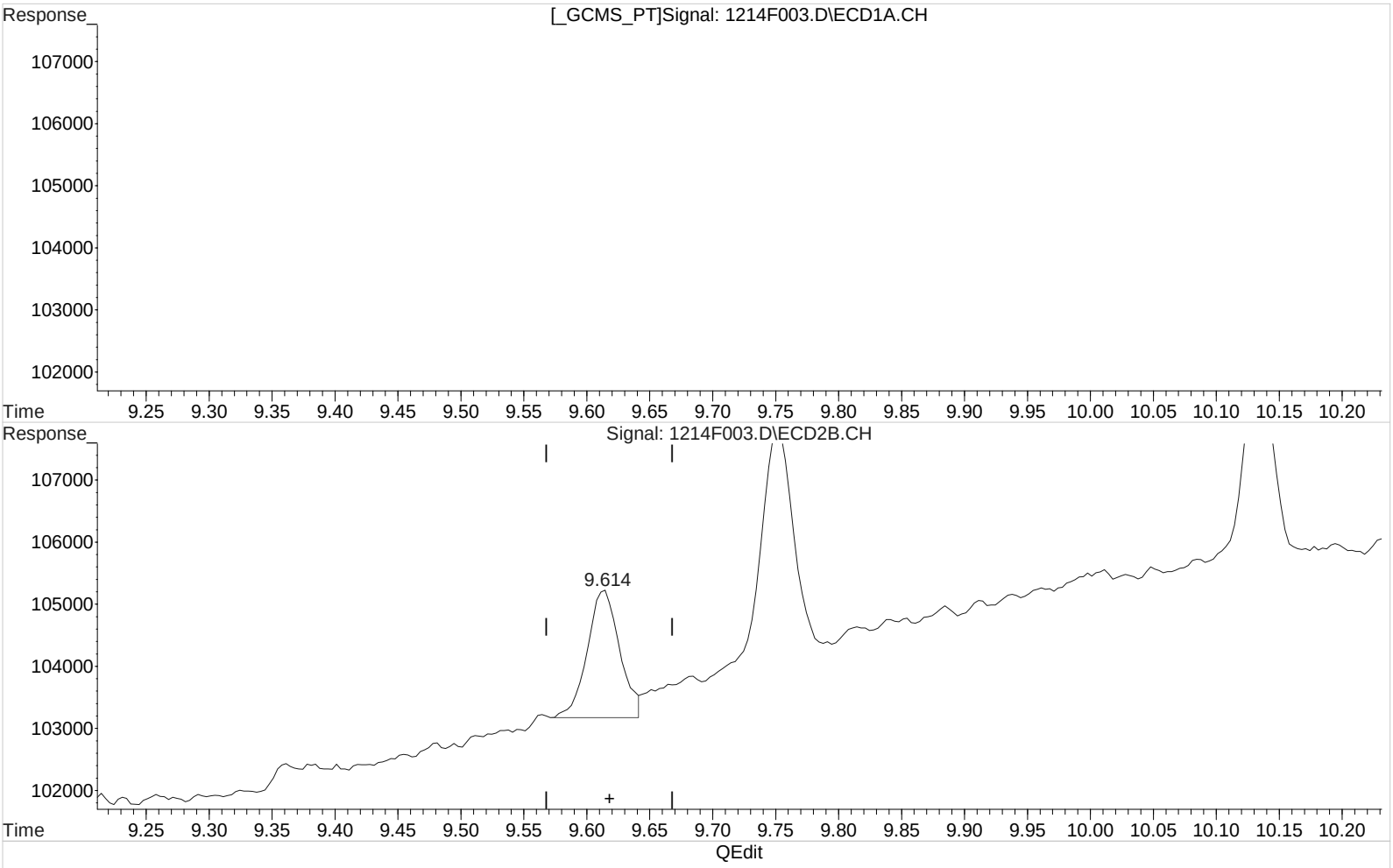
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(5) beta-BHC

10.866min 0.181 ug/L m

response 1356

Manual Integration:

Before

12/16/18

(5) beta-BHC #2

9.614min 0.223 ug/L

response 3685

(+) = Expected Retention Time

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
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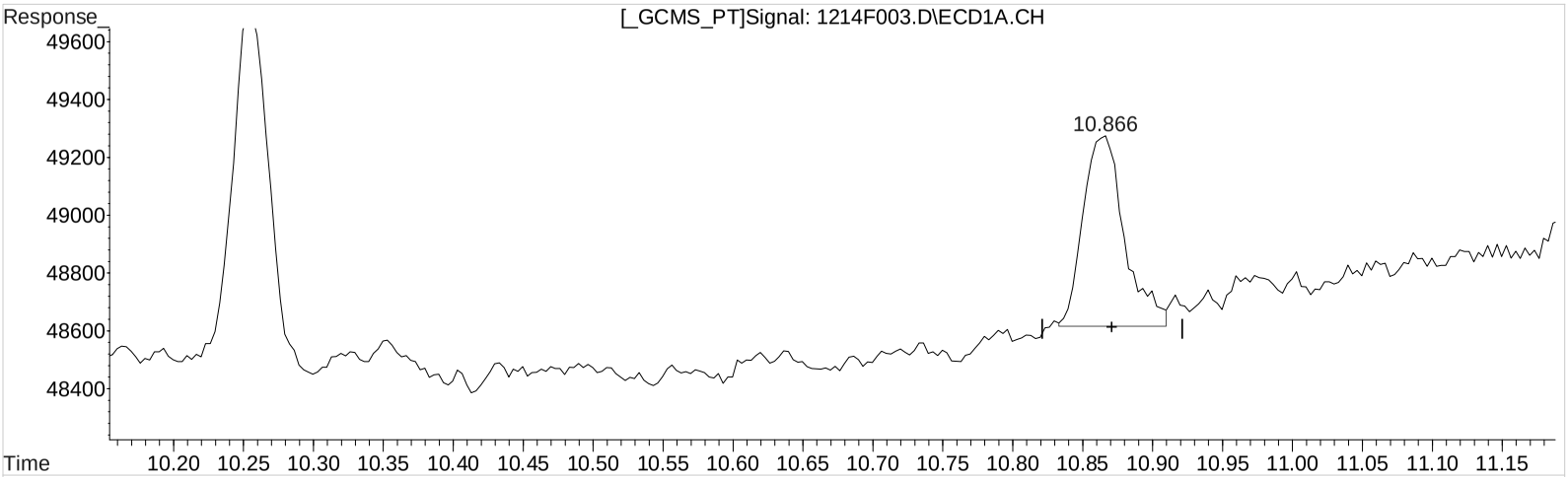

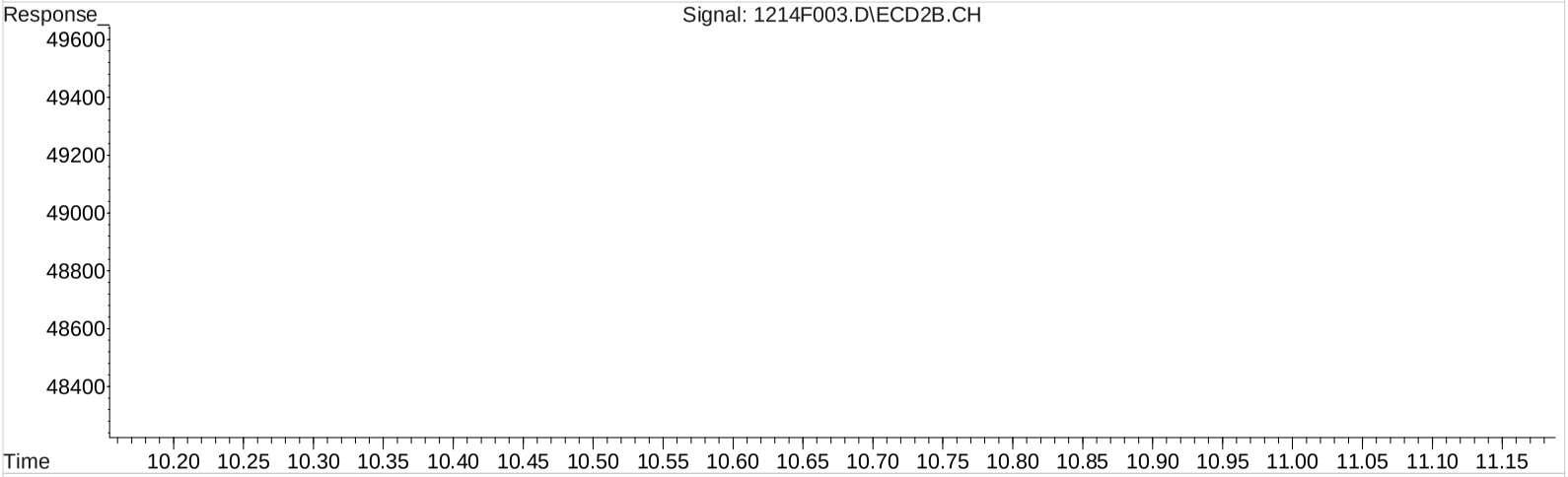

QEdit

(5) beta-BHC

10.866min 0.181 ug/L m

response 1356

Manual Integration:

After

Baseline/Shoulder

12/16/18

(5) beta-BHC #2

9.614min 0.223 ug/L

response 3685

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

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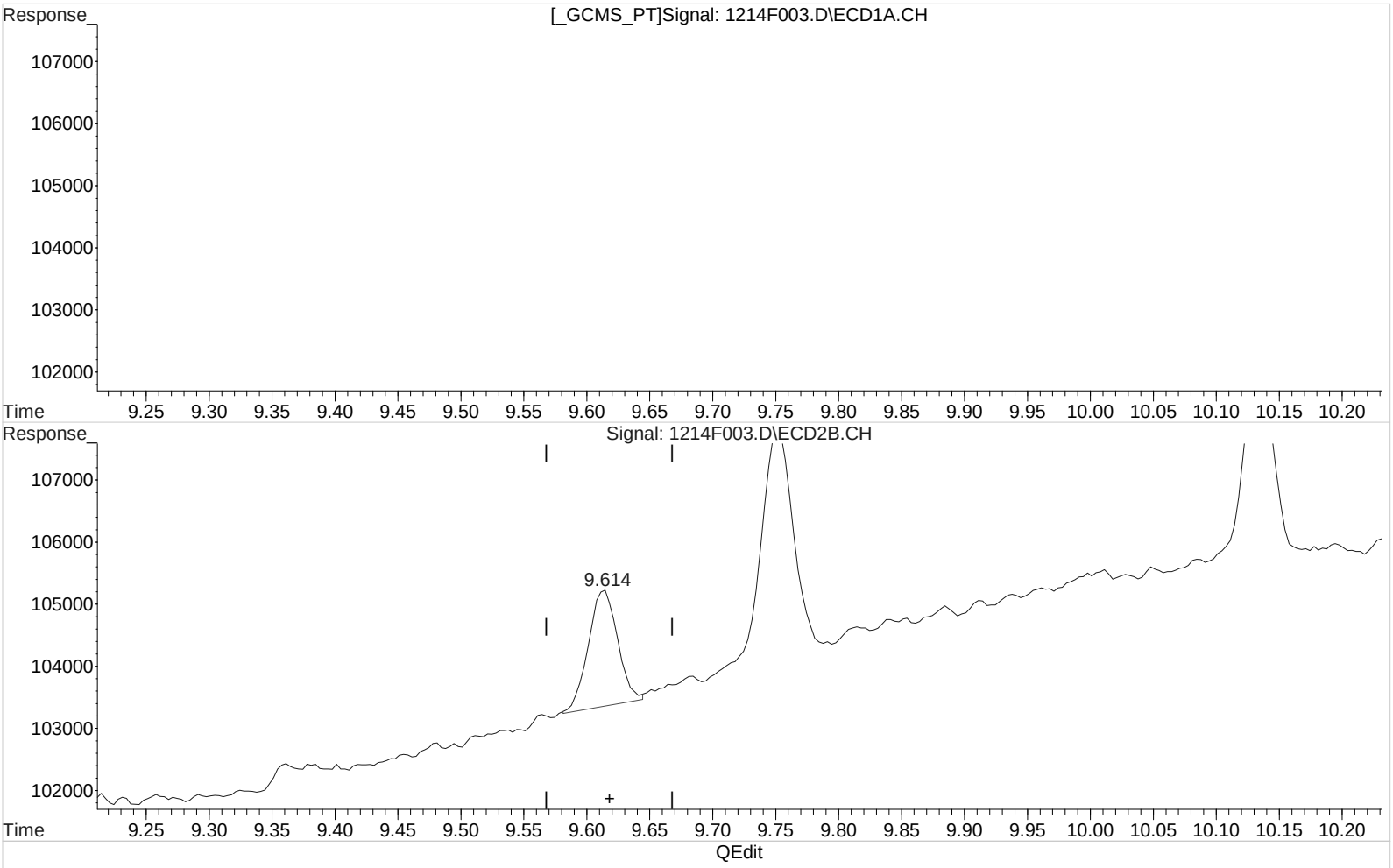

QEdit

(5) beta-BHC

10.866min 0.181 ug/L m

response 1356

Manual Integration:

After

Baseline/Shoulder

12/16/18

(5) beta-BHC #2

9.614min 0.185 ug/L m

response 3048

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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Volume Inj. :
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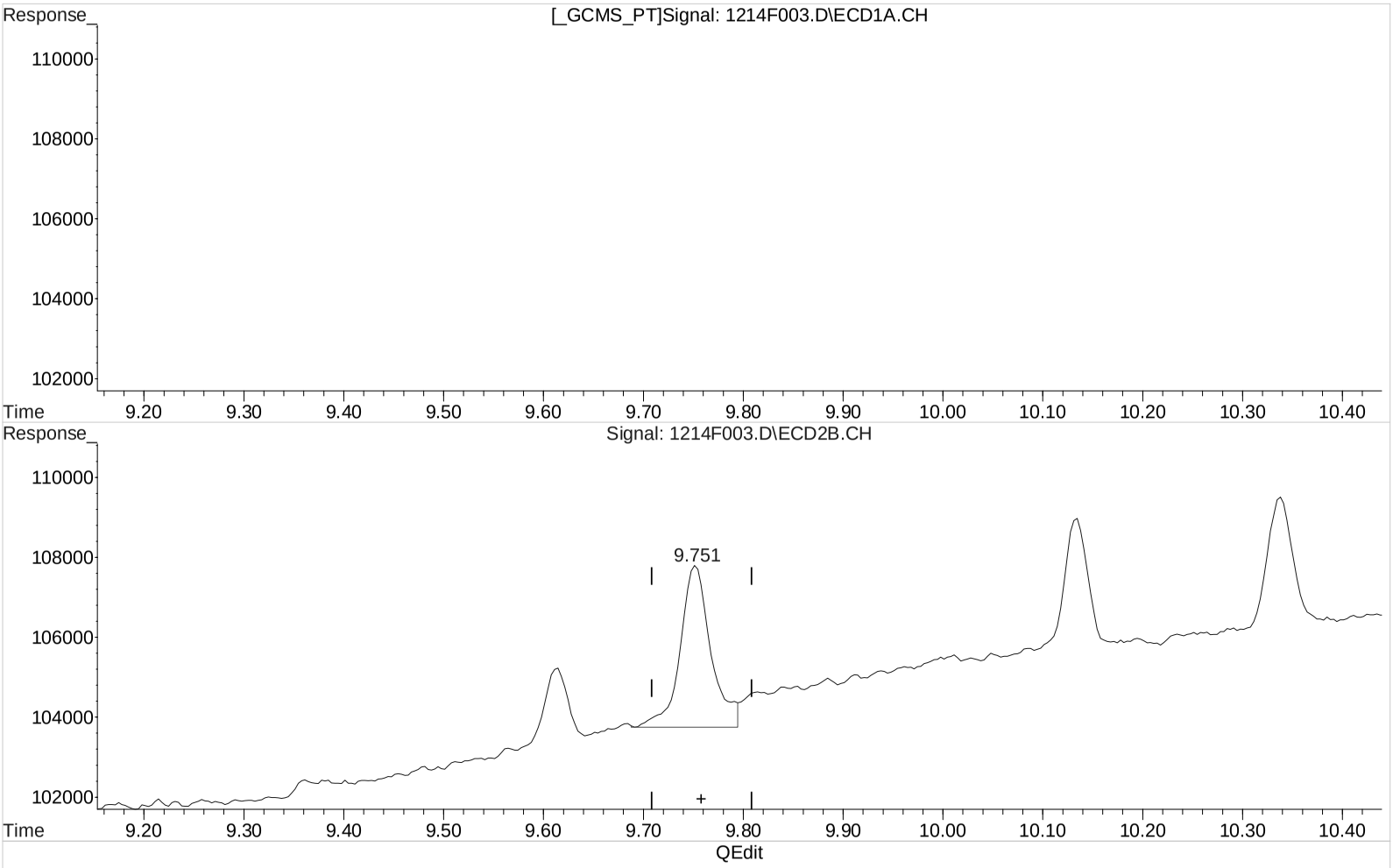
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(8) Heptachlor

11.446min -1.000 ug/L

response 2183

Manual Integration:

Before

12/16/18

(8) Heptachlor #2

9.751min 0.263 ug/L

response 8649

(+) = Expected Retention Time

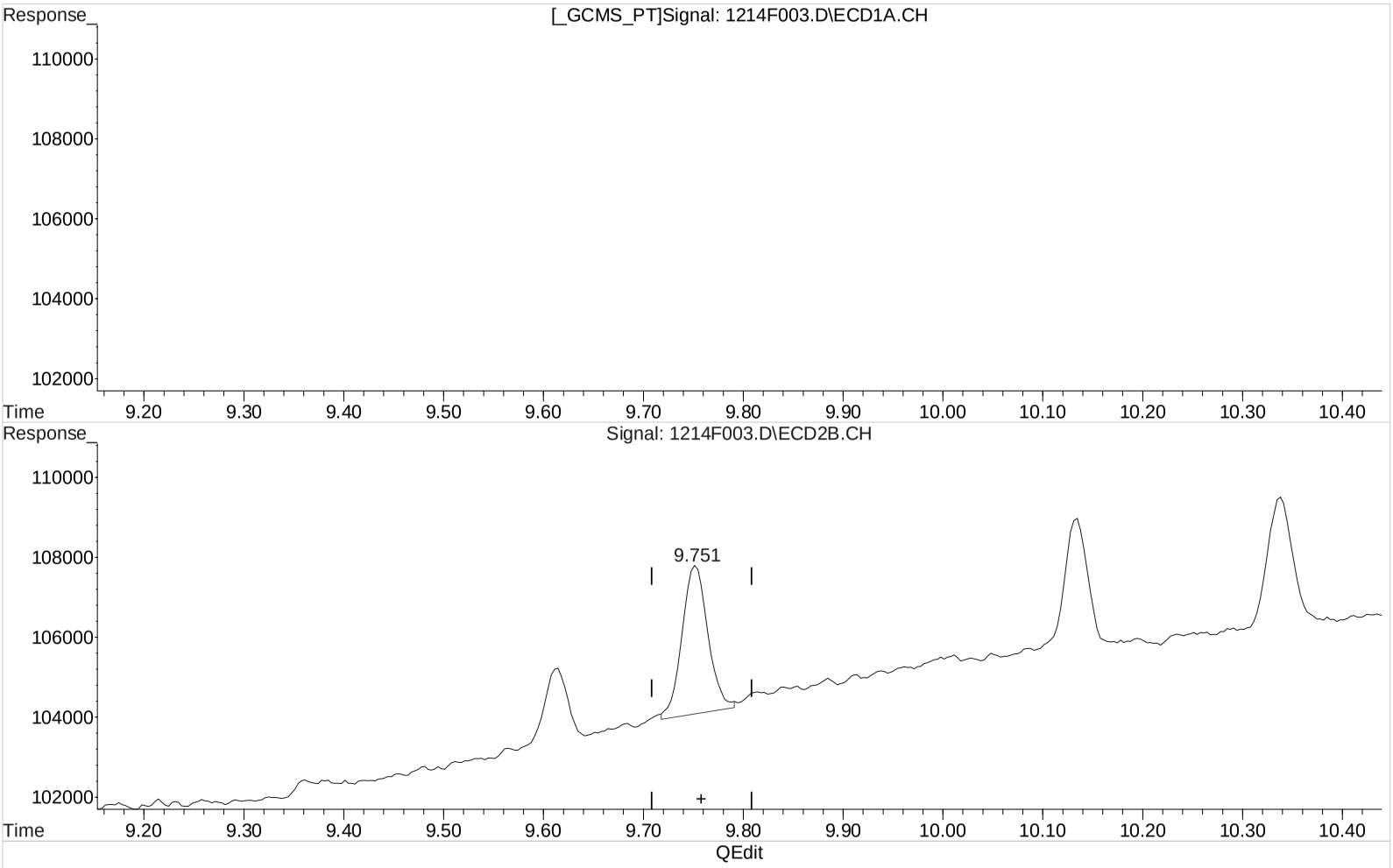
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(8) Heptachlor

11.446min -1.000 ug/L

response 2183

Manual Integration:

After

Baseline/Shoulder

12/16/18

(8) Heptachlor #2

9.751min 0.204 ug/L m

response 6719

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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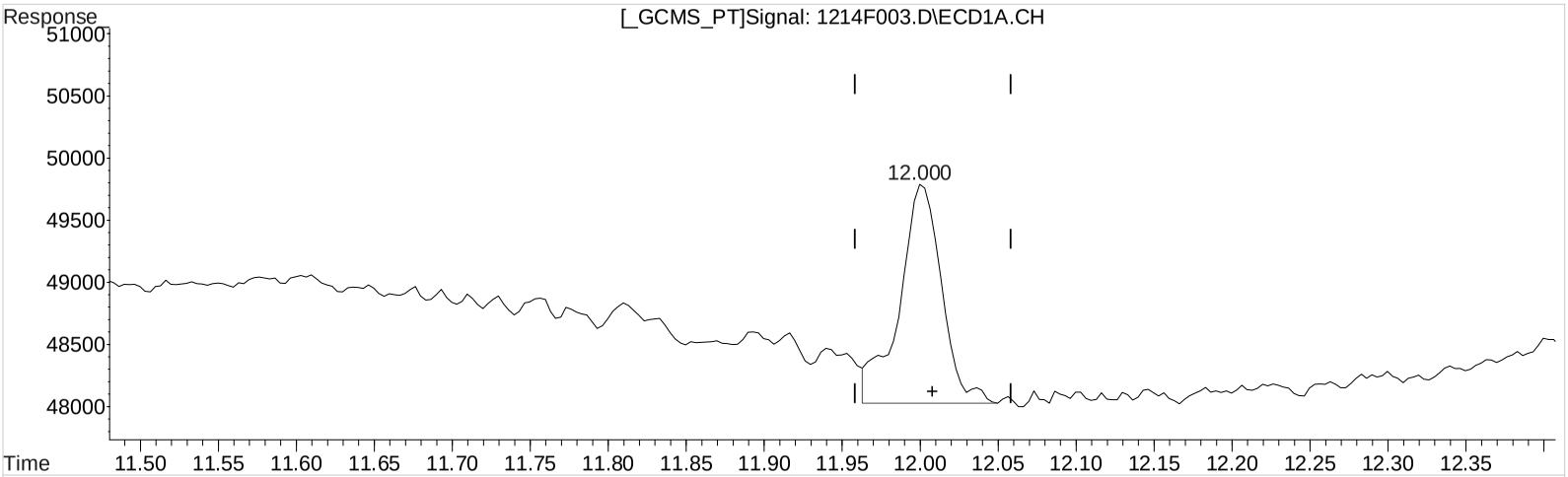
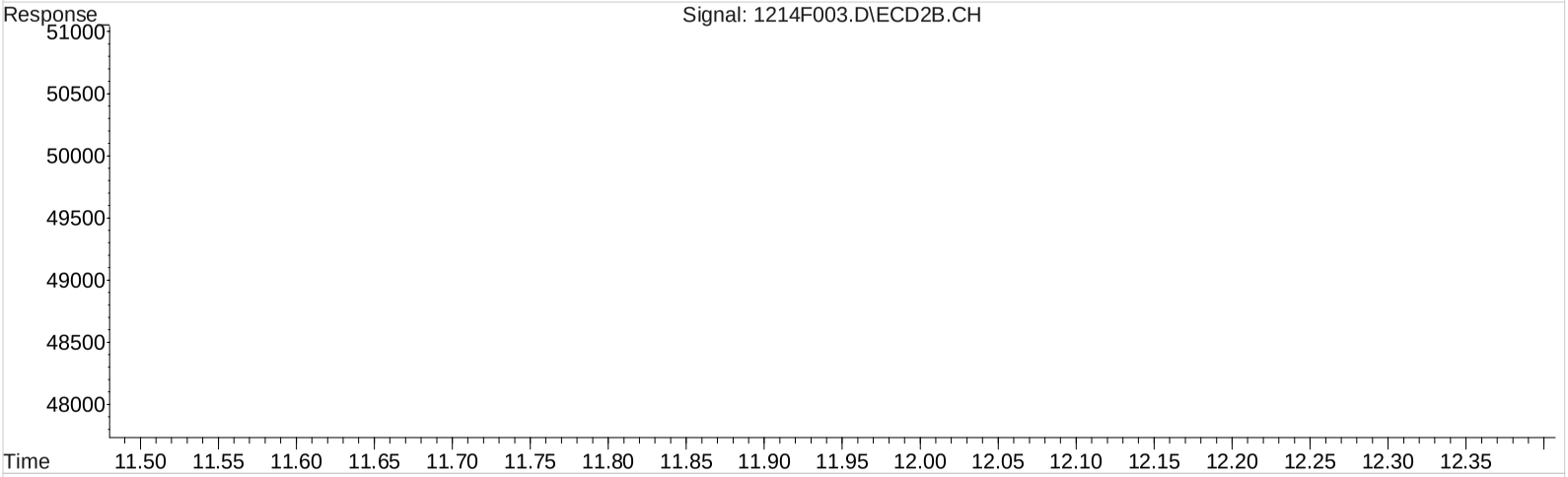
Quant Time: Dec 16 12:55:16 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(9) Aldrin

12.000min 0.222 ug/L

response 3304

Manual Integration:

Before

12/16/18

(9) Aldrin #2

10.338min 0.200 ug/L

response 6183

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 2:52 pm Operator: MC
Sample : 81 0.2PPB GCPS8-50D @10X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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QLast Update : Thu Dec 13 08:59:48 2018
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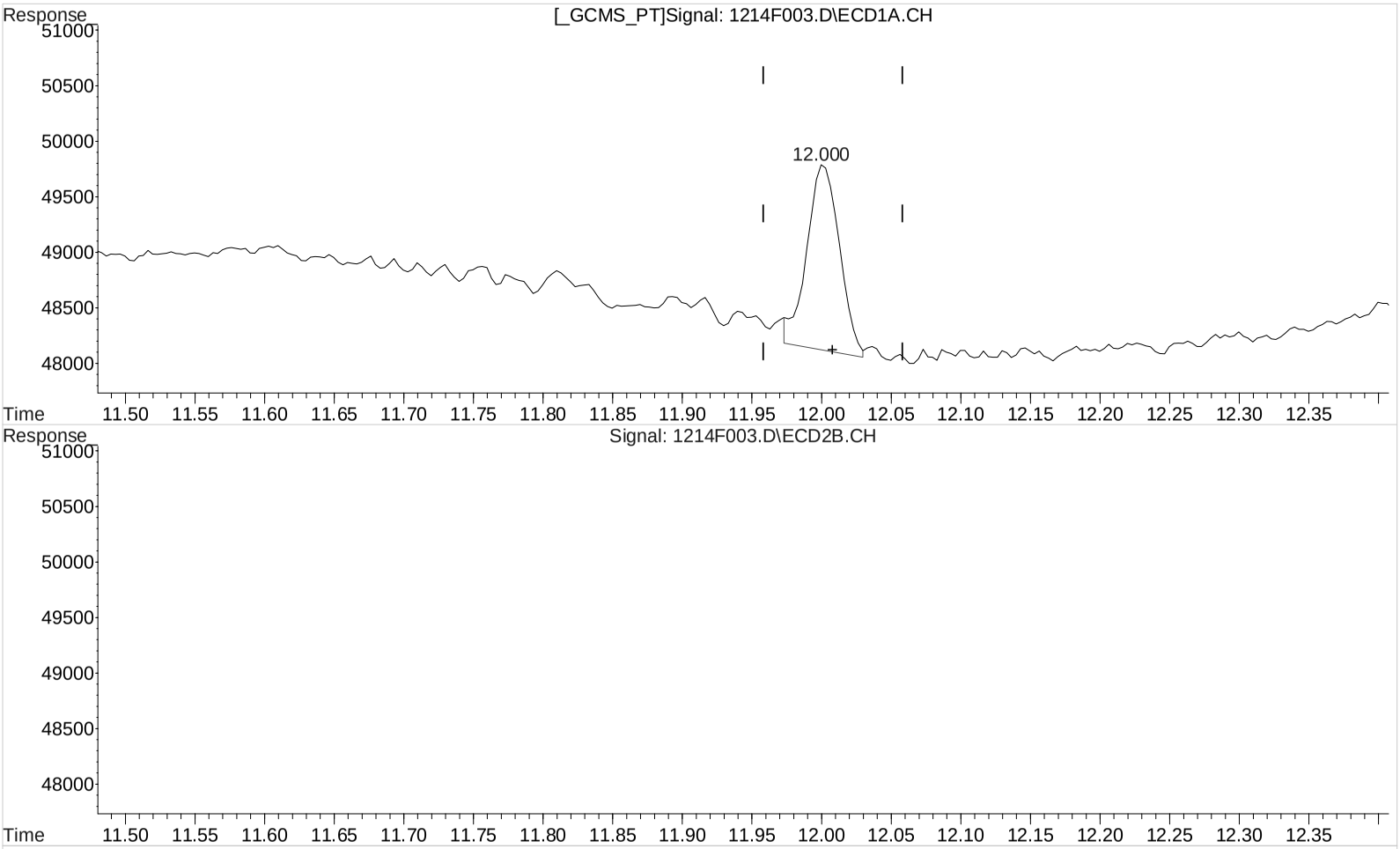
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(9) Aldrin

12.000min 0.182 ug/L m

response 2702

Manual Integration:

After

Baseline/Shoulder

12/16/18

(9) Aldrin #2

10.338min 0.200 ug/L

response 6183

(+) = Expected Retention Time

1st STM 12/18/18
2nd UA 12/19/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 13:00:37 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.012	5.344	906313	2535786	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.739	7.107	8060	19207	0.325	0.462 #
28) s	Decachlor...	18.432	16.877	7709	16445	0.375	0.472 #
	Target Compounds						
3)	alpha-BHC	9.586	8.331	6975	17088	0.434	0.482
4)	Hexachlor...	9.742	8.114	10396	23224	0.281	0.473 #
5)	beta-BHC	10.862	9.611	3451	8202	0.437	0.468
6)	gamma-BHC...	10.256	9.071	5874	15013	0.425	0.461
7)	delta-BHC	11.362	10.134	5756	13829	0.403	0.443
8)	Heptachlor	11.449	9.751	5933	15322	0.267	0.439m#
9)	Aldrin	12.002	10.337	7067	14740	0.451	0.450m
10)	Isodrin	12.532	11.131	5271	12374	0.402	0.435m
11)	Heptachlo...	12.726	11.417	6200	13519	0.436	0.432
12)	gamma-Chl...	13.242	11.831	5845	13342	0.405	0.435m
13)	Endosulfan I	13.366	12.037	5257	12386	0.363	0.432
14)	alpha-Chl...	13.316	11.974	6044	13799	0.389	0.447
15)	Dieldrin	13.786	12.481	5807	13517	0.394	0.462m
16)	4,4'-DDE	13.599	12.334	5859	13264	0.359	0.420m
17)	Endrin	14.156	12.951	5312	12348	0.384	0.428
18)	Endosulfa...	14.606	13.384	5342	11511	0.306	0.430 #
19)	4,4'-DDD	14.432	13.217	4196	9855	0.380	0.422m
20)	Endrin Al...	14.782	13.747	4804	10589	0.385	0.435
21)	Endosulfa...	15.259	14.067	5268	11613	0.400	0.434m
22)	4,4'-DDT	14.932	13.634	3253	9349	0.340	0.328
23)	Endrin Ke...	15.942	15.001	4992	13184	0.383	0.446
24)	Methoxychlor	15.679	14.731	1844	5320	0.076	0.399 #
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

1st SM 12/18/18
2nd UA 12/19/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 13:00:37 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
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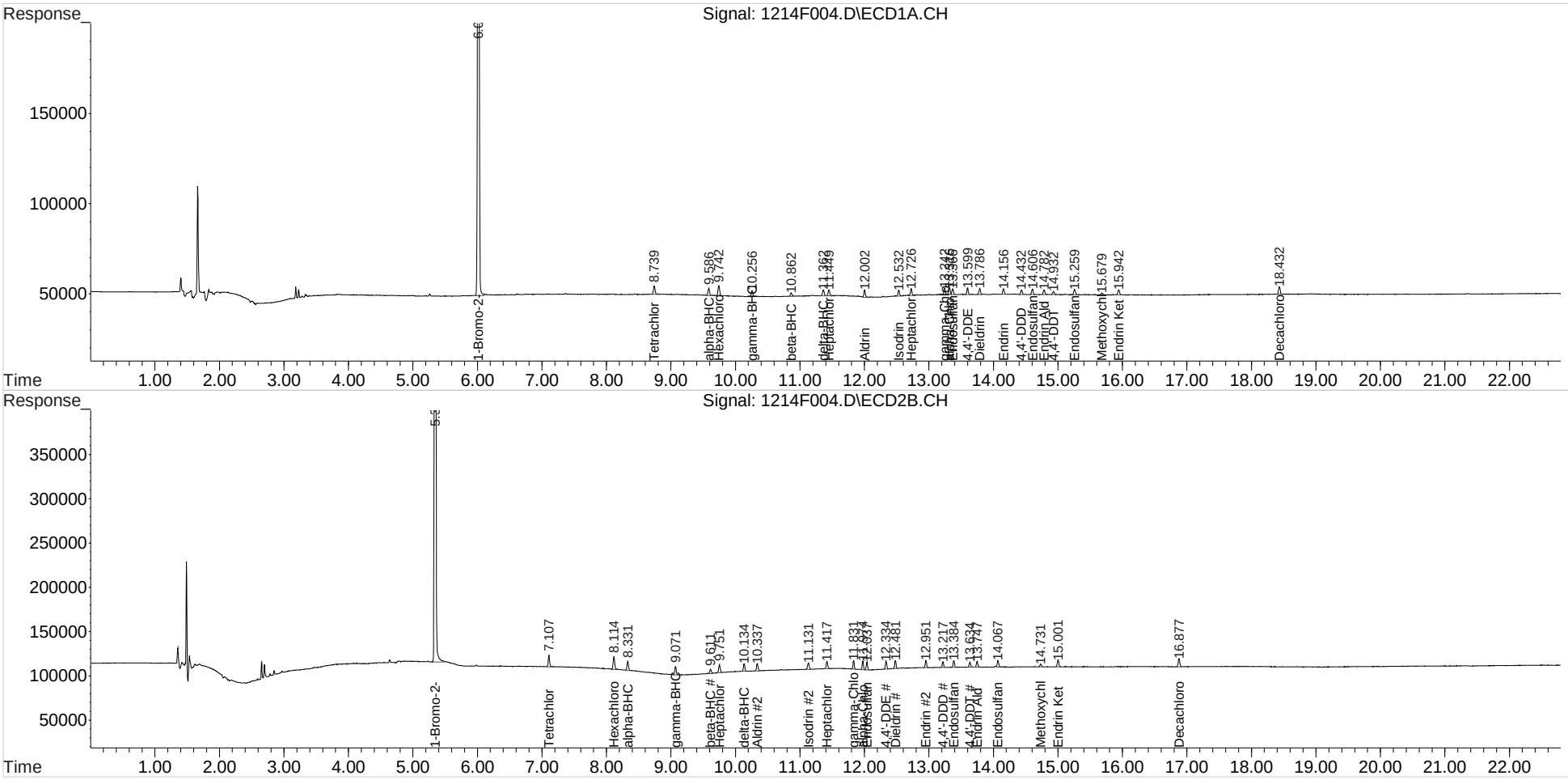
Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
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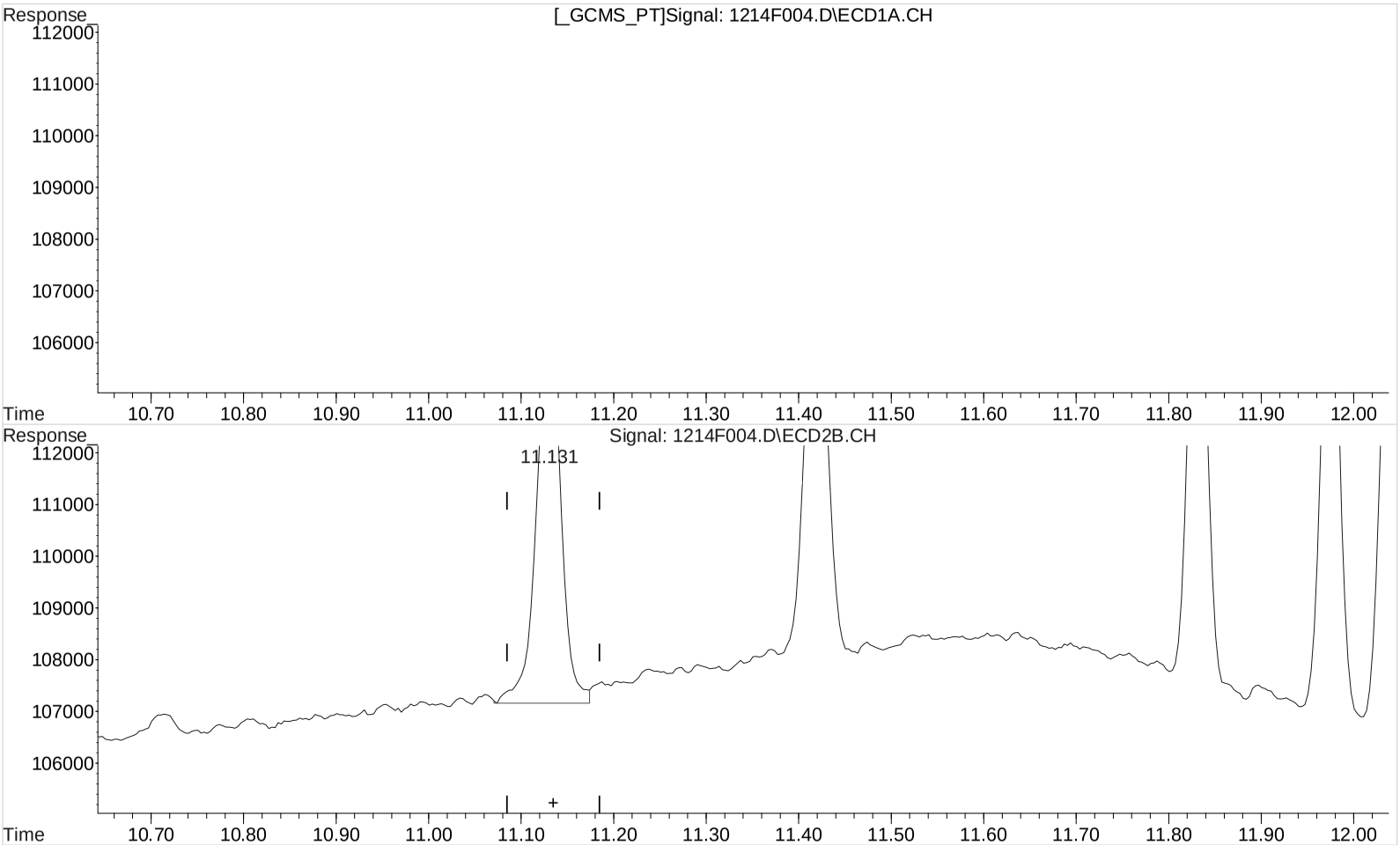
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(10) Isodrin

12.532min 0.402 ug/L

response 5271

(10) Isodrin #2

11.131min 0.476 ug/L

response 13561

Manual Integration:

Before

12/16/18

(+) = Expected Retention Time

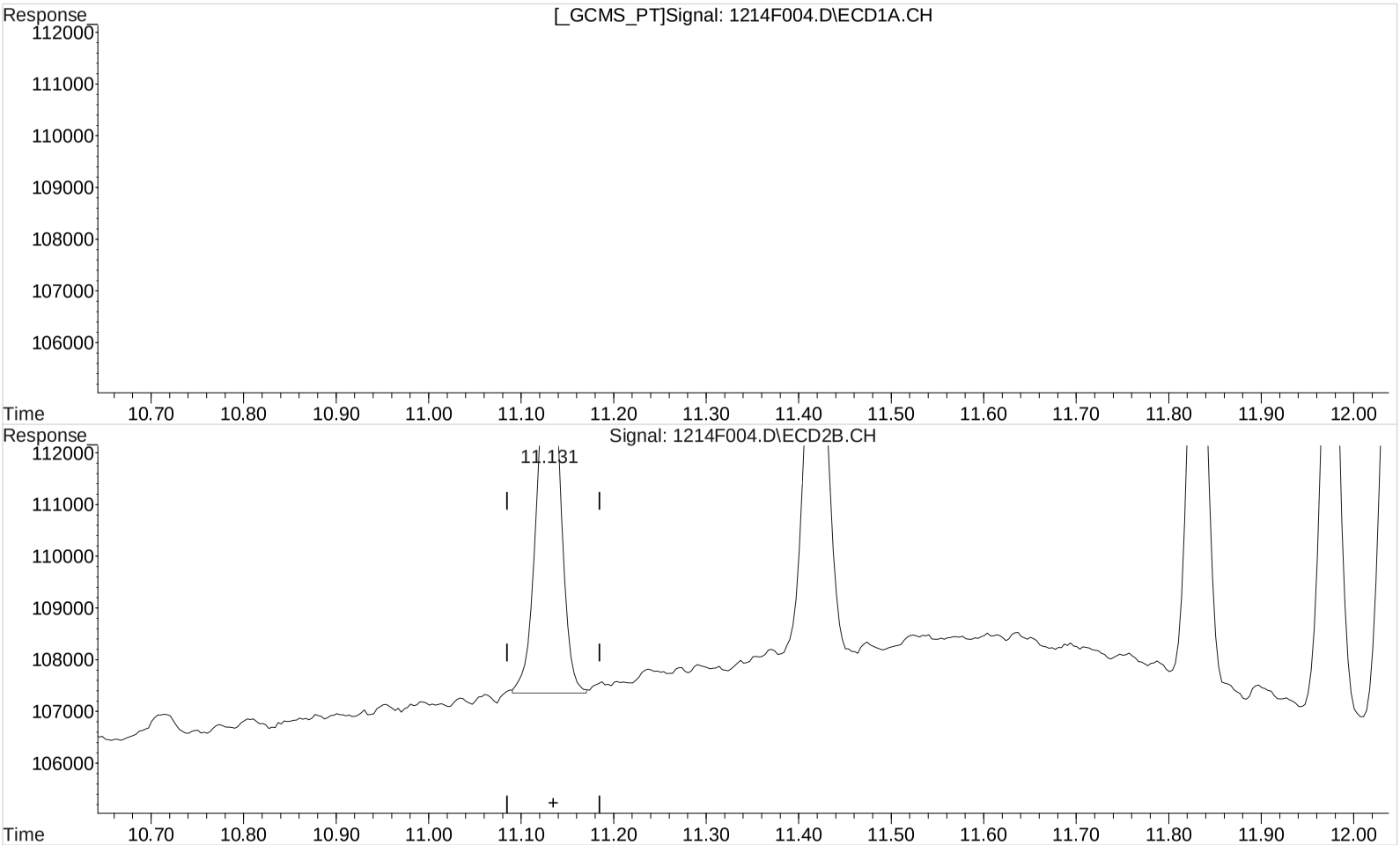
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(10) Isodrin

12.532min 0.402 ug/L

response 5271

Manual Integration:

After

Baseline/Shoulder

12/16/18

(10) Isodrin #2

11.131min 0.435 ug/L m

response 12374

(+) = Expected Retention Time

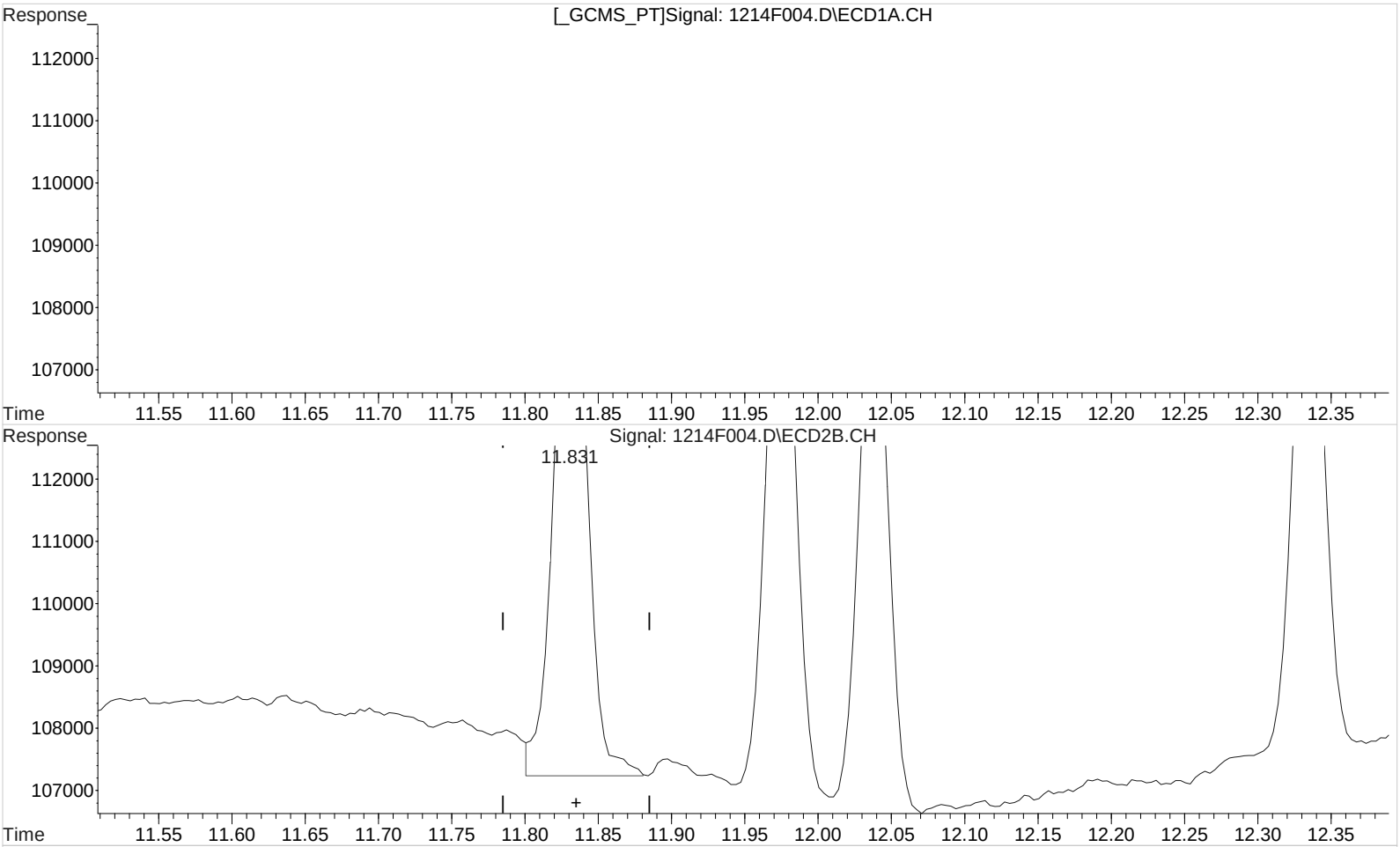
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(12) gamma-Chlordane

13.242min 0.405 ug/L

response 5845

Manual Integration:

Before

12/16/18

(12) gamma-Chlordane #2

11.831min 0.479 ug/L

response 14703

(+) = Expected Retention Time

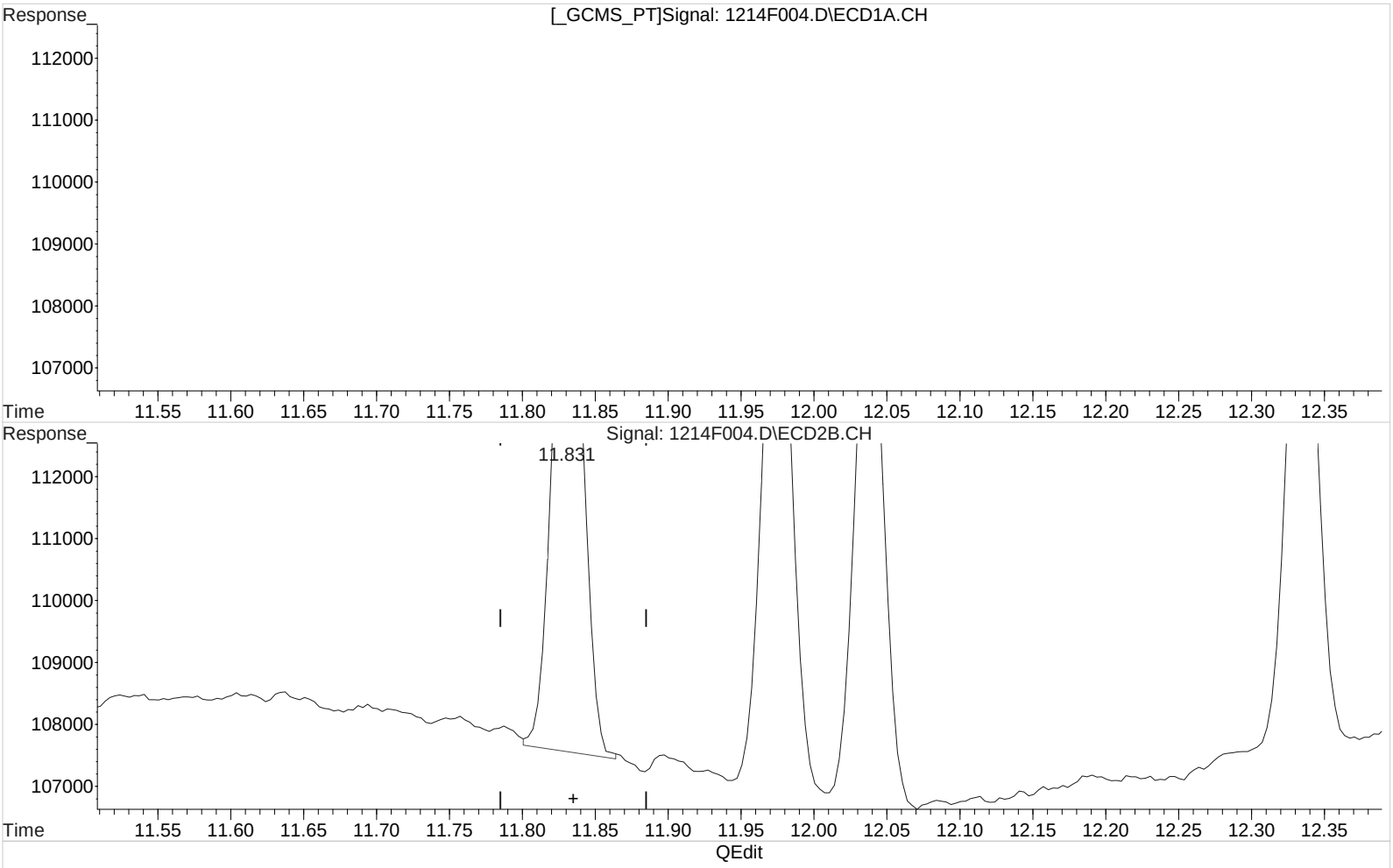
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(12) gamma-Chlordane

13.242min 0.405 ug/L

response 5845

Manual Integration:

After

Baseline/Shoulder

12/16/18

(12) gamma-Chlordane #2

11.831min 0.435 ug/L m

response 13342

(+) = Expected Retention Time

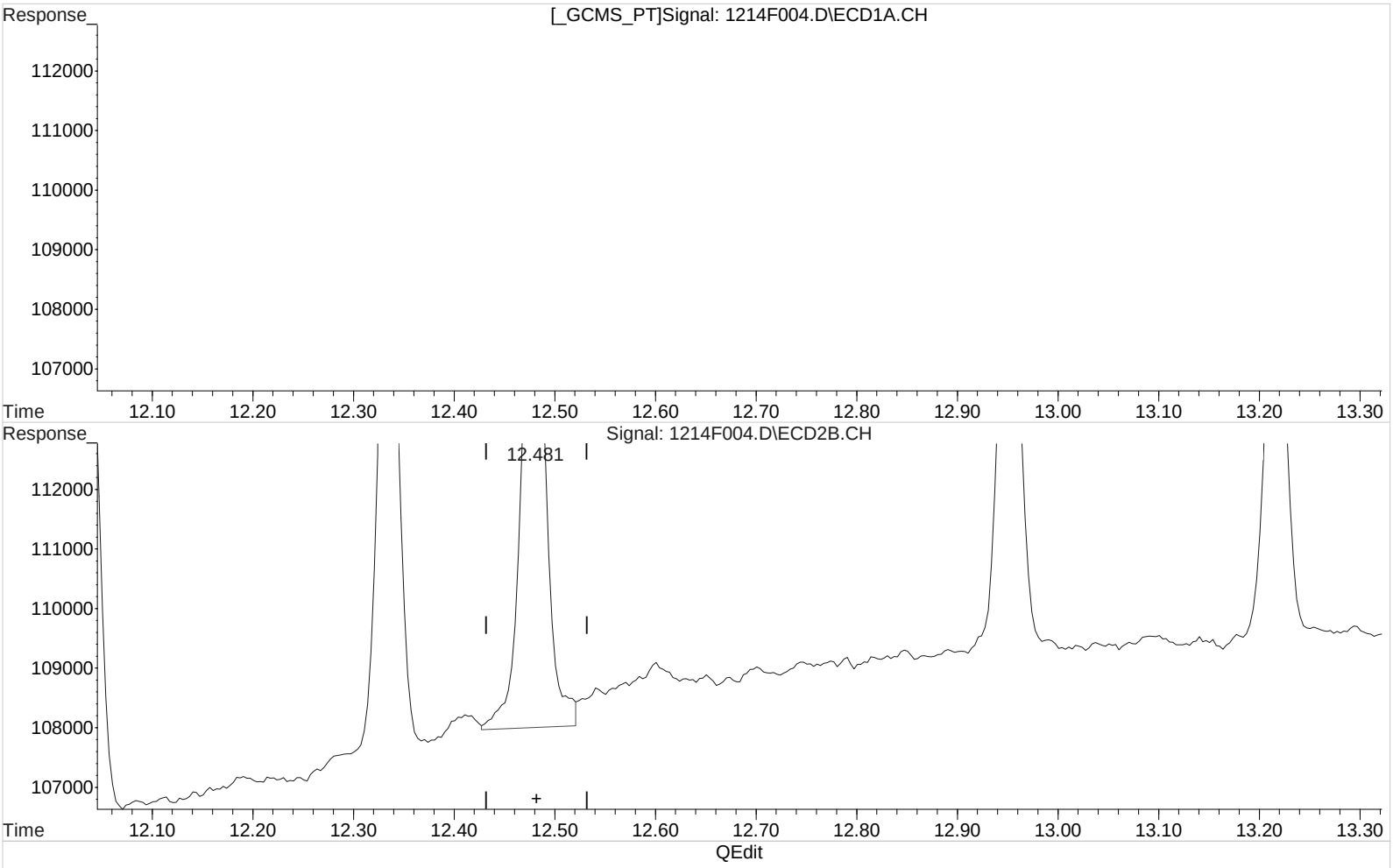
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(15) Dieldrin

13.786min 0.394 ug/L

response 5807

Manual Integration:

Before

12/16/18

(15) Dieldrin #2

12.481min 0.502 ug/L

response 14688

(+) = Expected Retention Time

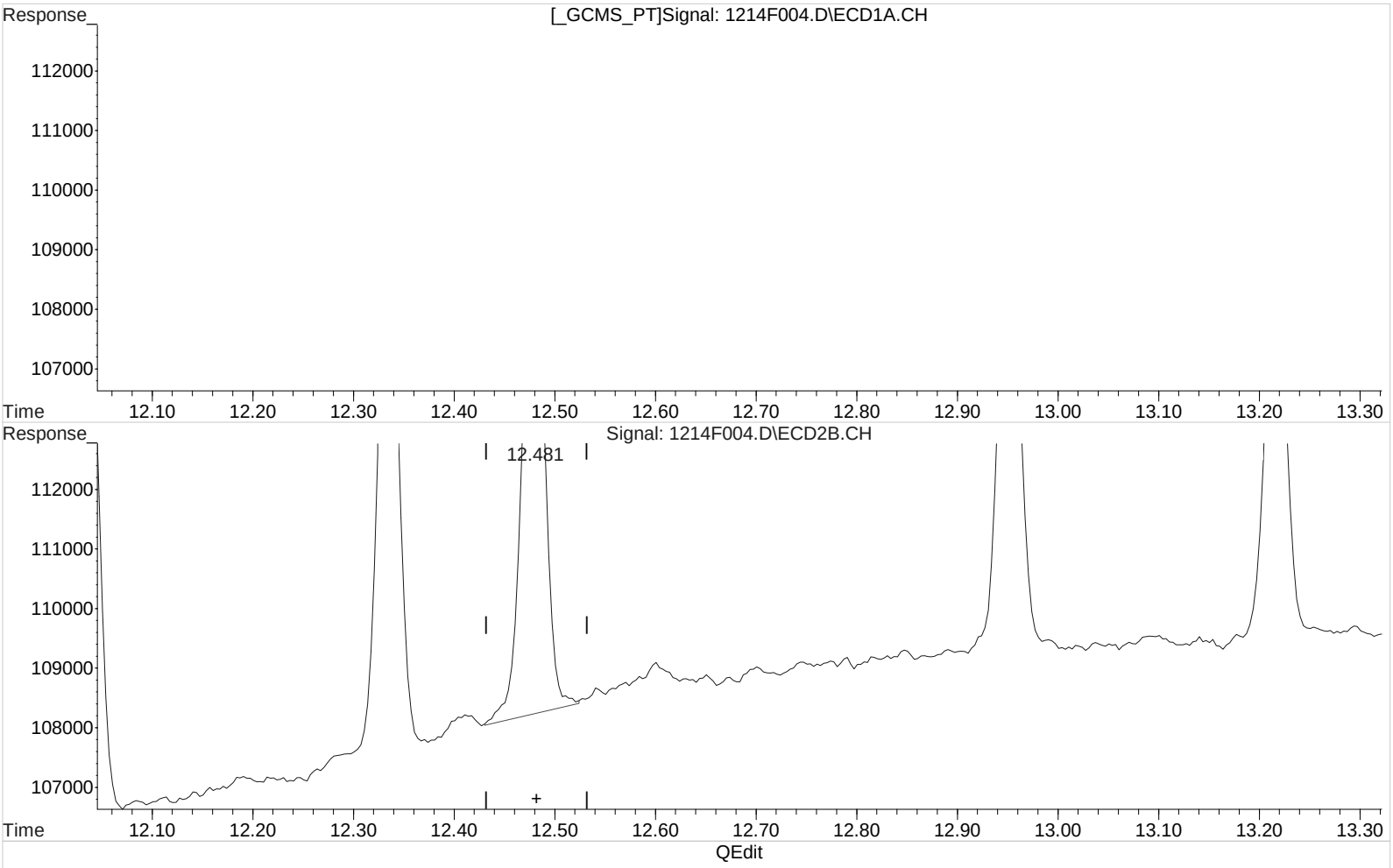
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(15) Dieldrin

13.786min 0.394 ug/L

response 5807

Manual Integration:

After

Baseline/Shoulder

12/16/18

(15) Dieldrin #2

12.481min 0.462 ug/L m

response 13517

(+) = Expected Retention Time

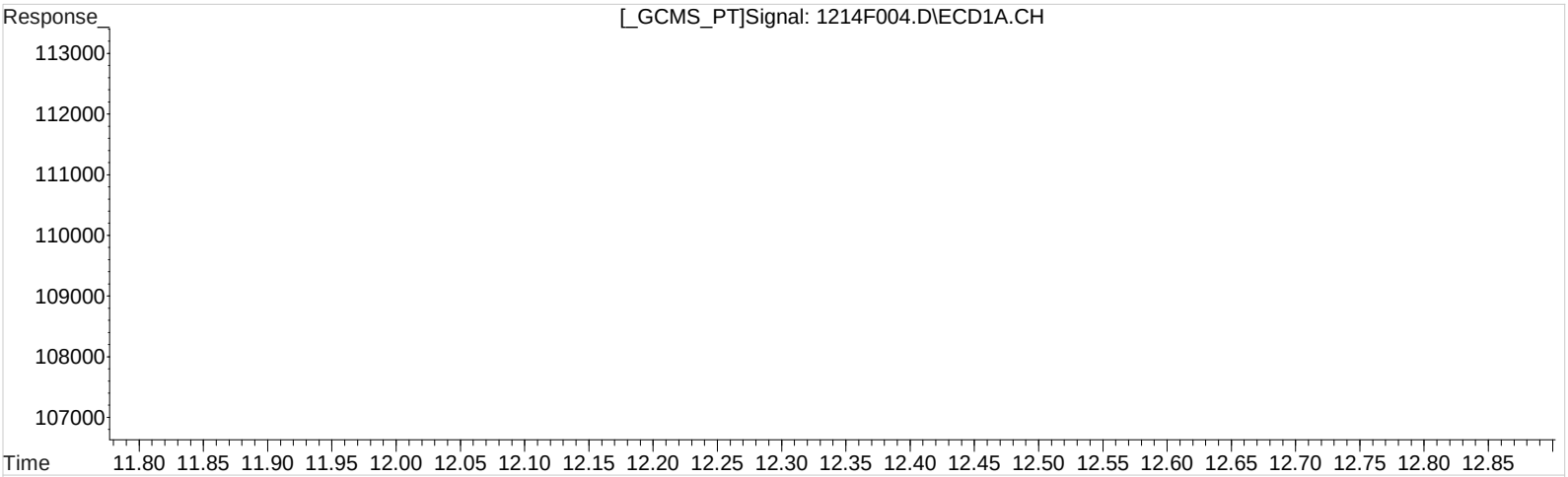
Quantitation Report (Qedit)

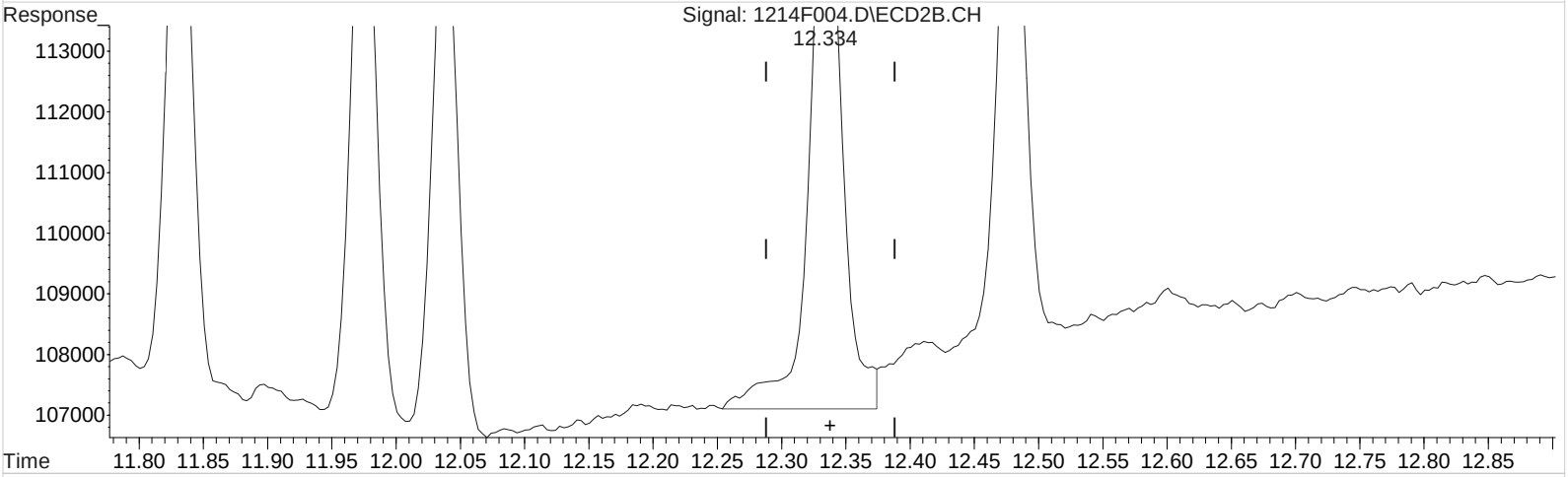
1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(16) 4,4'-DDE

13.599min 0.359 ug/L

response 5859

Manual Integration:

Before

12/16/18

(16) 4,4'-DDE #2

12.334min 0.526 ug/L

response 16604

(+) = Expected Retention Time

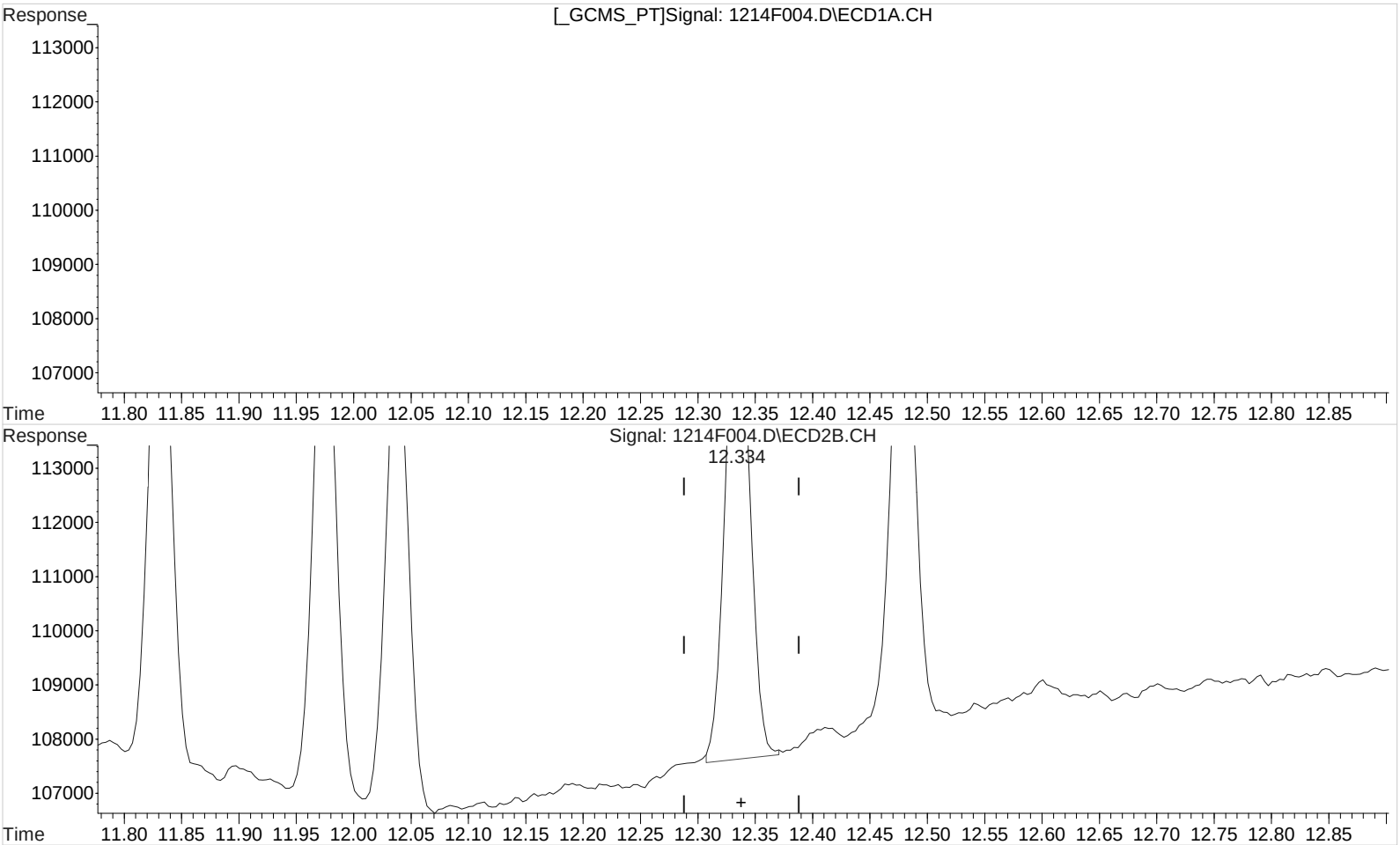
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(16) 4,4'-DDE

13.599min 0.359 ug/L

response 5859

Manual Integration:

After

Baseline/Shoulder

12/16/18

(16) 4,4'-DDE #2

12.334min 0.420 ug/L m

response 13264

(+) = Expected Retention Time

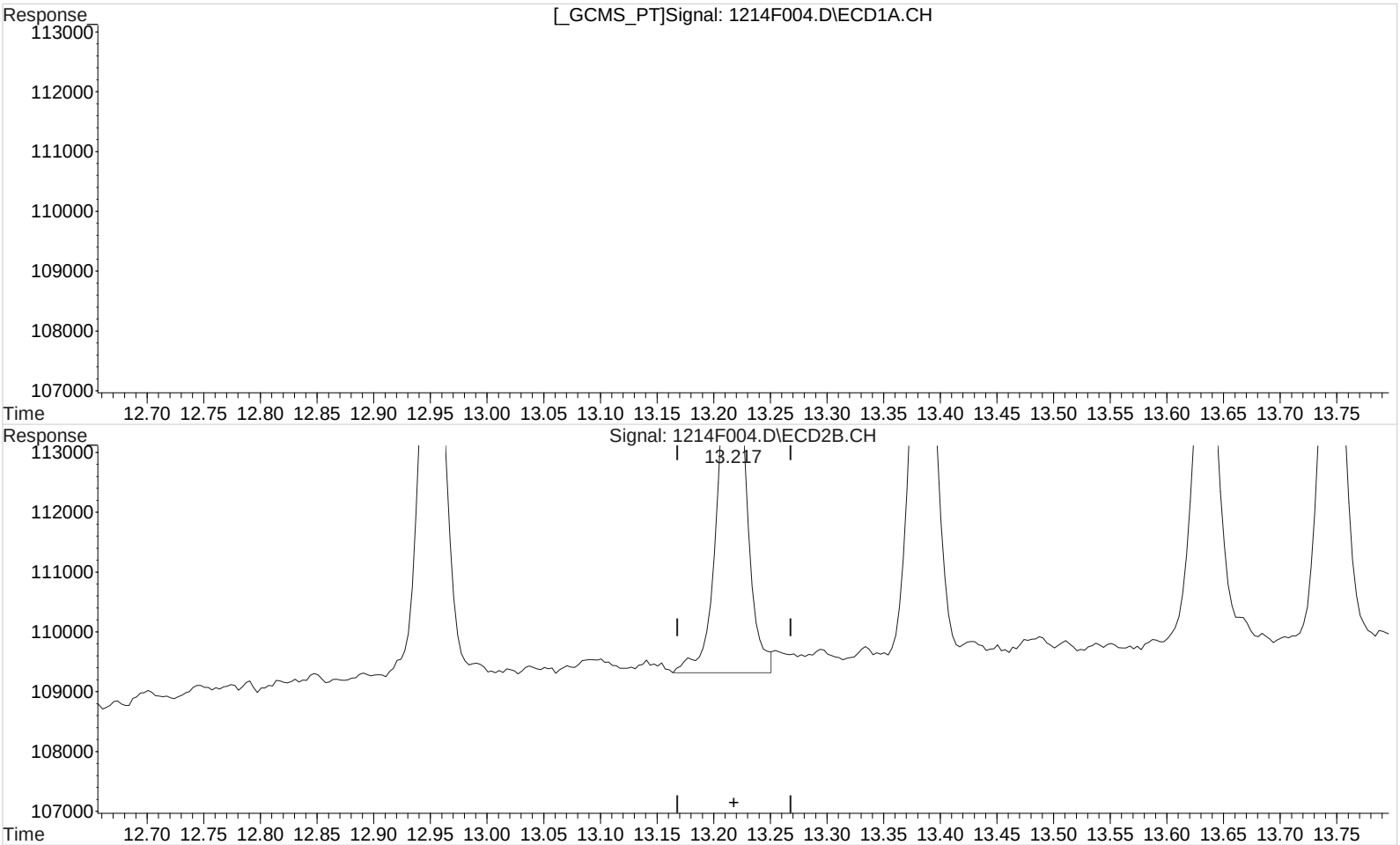
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(19) 4,4'-DDD

14.432min 0.380 ug/L

response 4196

Manual Integration:

Before

12/16/18

(19) 4,4'-DDD #2

13.217min 0.461 ug/L

response 10779

(+) = Expected Retention Time

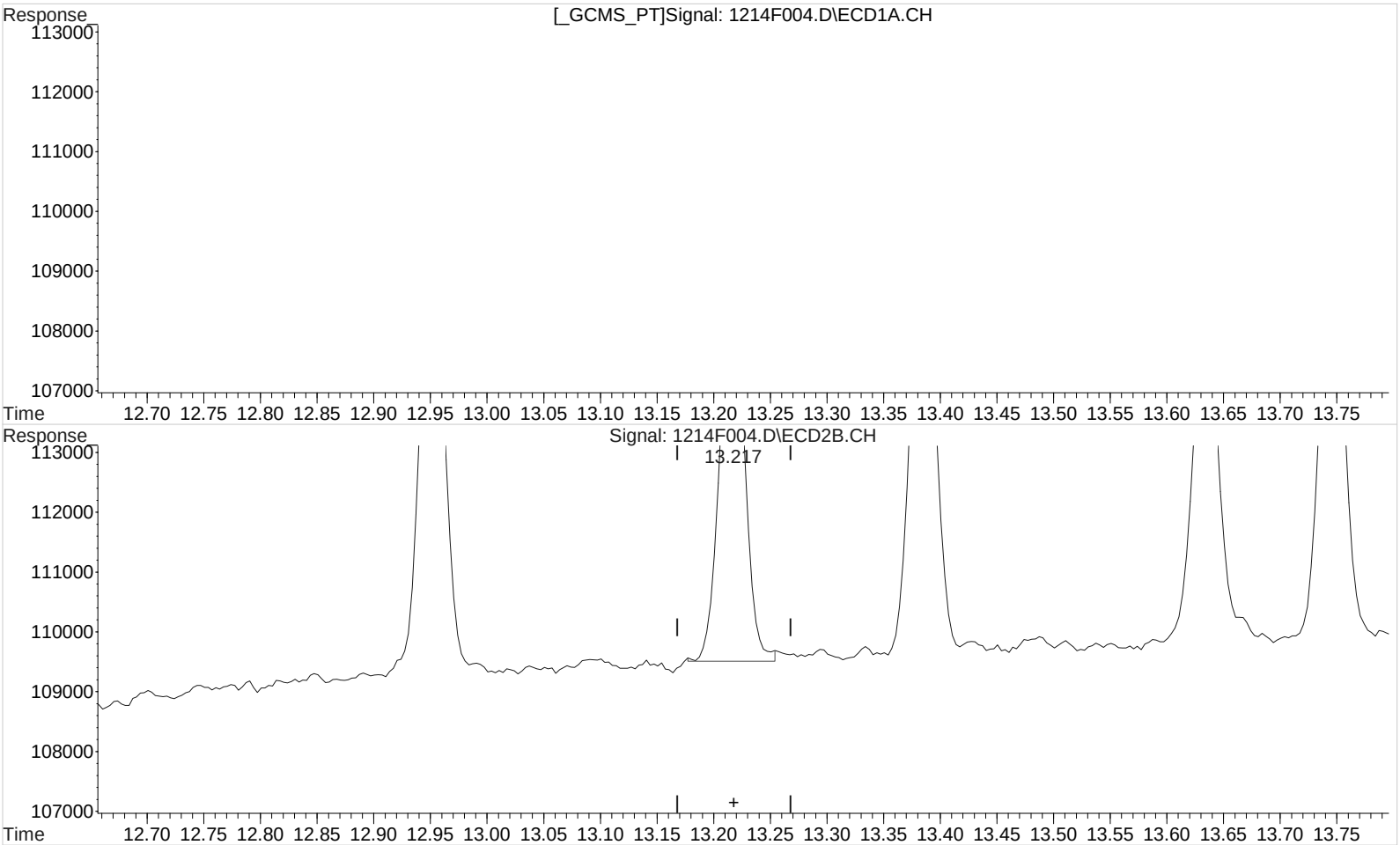
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(19) 4,4'-DDD

14.432min 0.380 ug/L

response 4196

Manual Integration:

After

Baseline/Shoulder

12/16/18

(19) 4,4'-DDD #2

13.217min 0.422 ug/L m

response 9855

(+) = Expected Retention Time

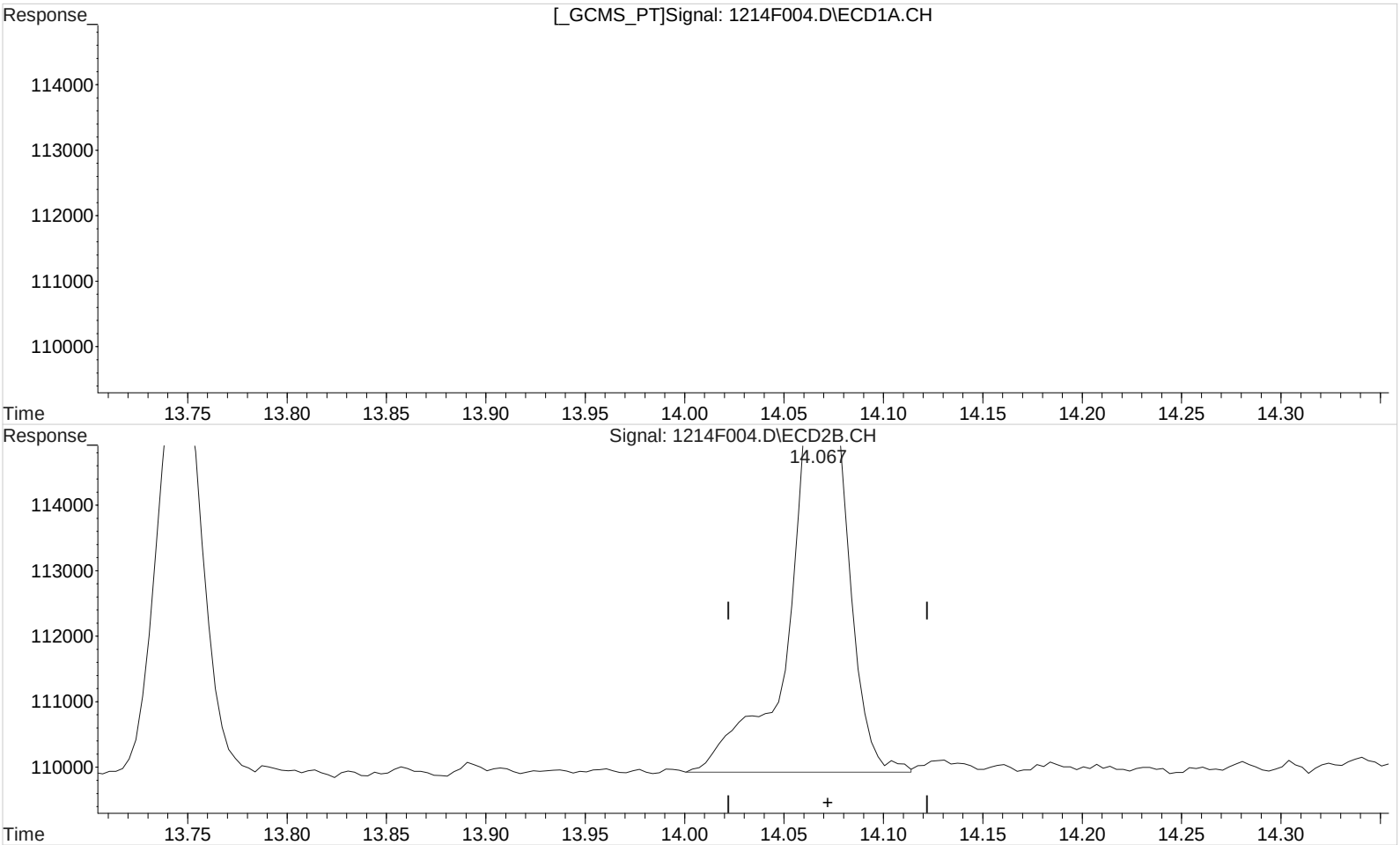
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(21) Endosulfan Sulfate

15.259min 0.400 ug/L

response 5268

Manual Integration:

Before

12/16/18

(21) Endosulfan Sulfate #2

14.067min 0.497 ug/L

response 13306

(+) = Expected Retention Time

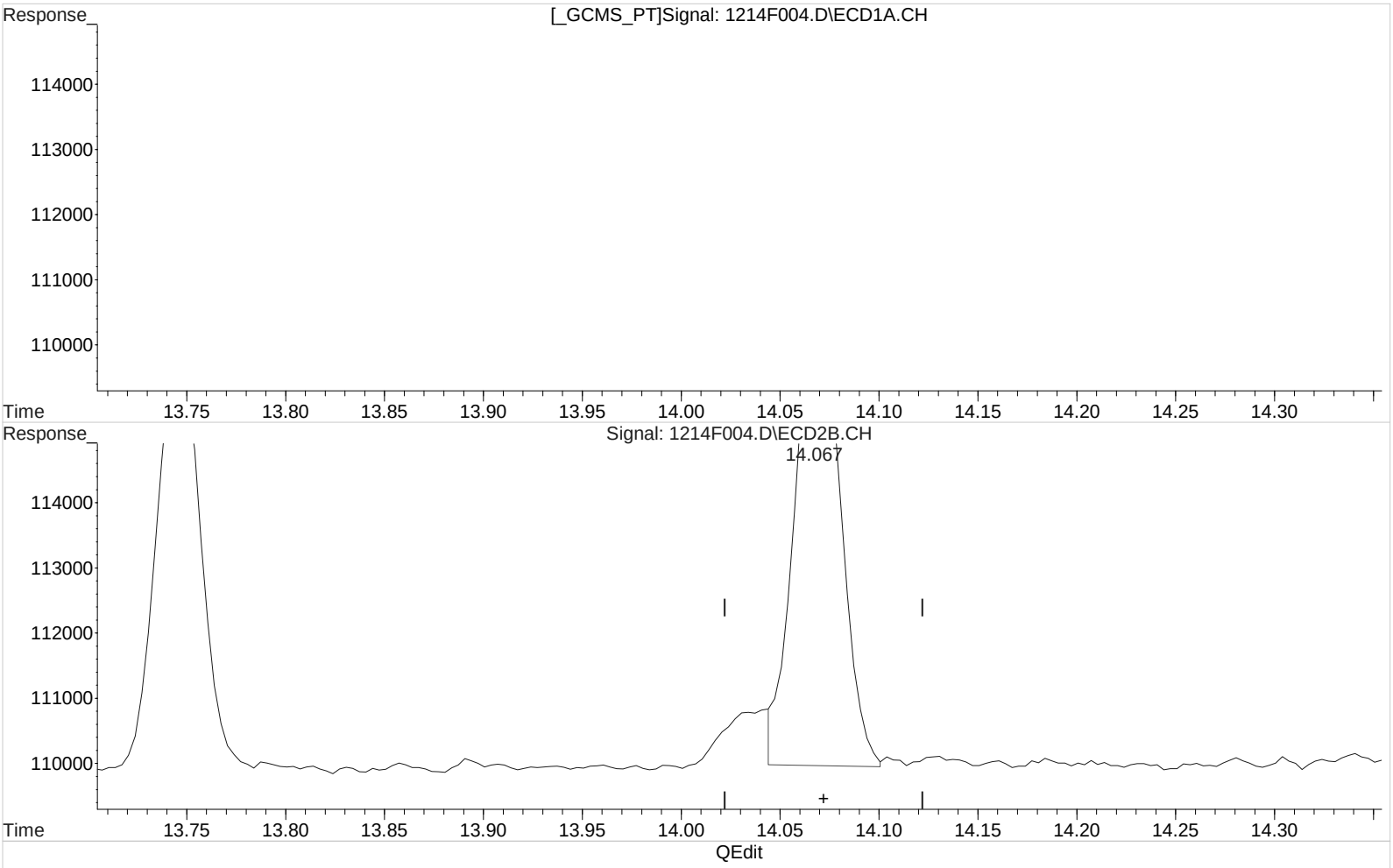
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(21) Endosulfan Sulfate

15.259min 0.400 ug/L

response 5268

Manual Integration:

After

Baseline/Shoulder

12/16/18

(21) Endosulfan Sulfate #2

14.067min 0.434 ug/L m

response 11613

(+) = Expected Retention Time

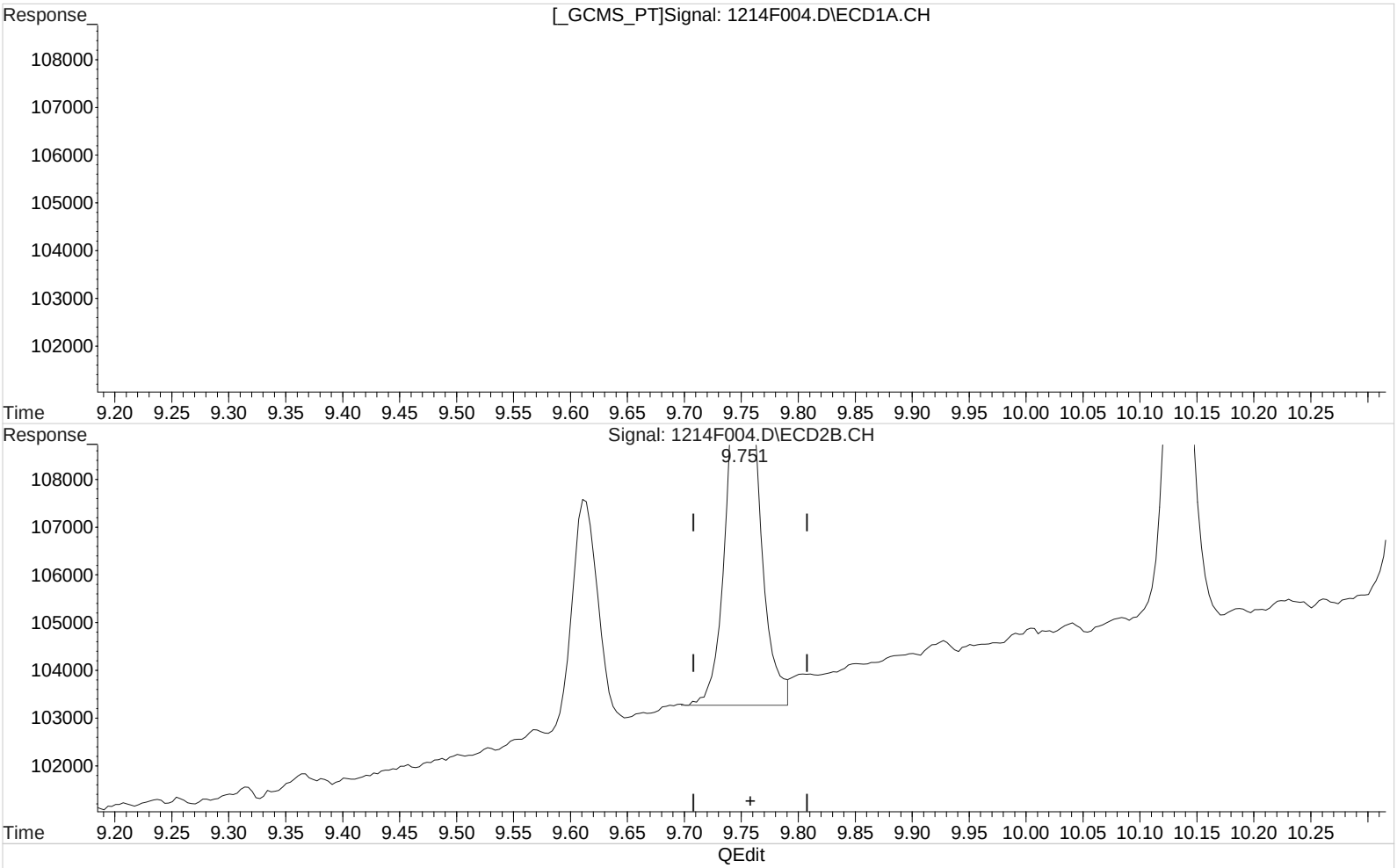
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(8) Heptachlor

11.449min 0.267 ug/L

response 5933

Manual Integration:

Before

12/16/18

(8) Heptachlor #2

9.751min 0.472 ug/L

response 16473

(+) = Expected Retention Time

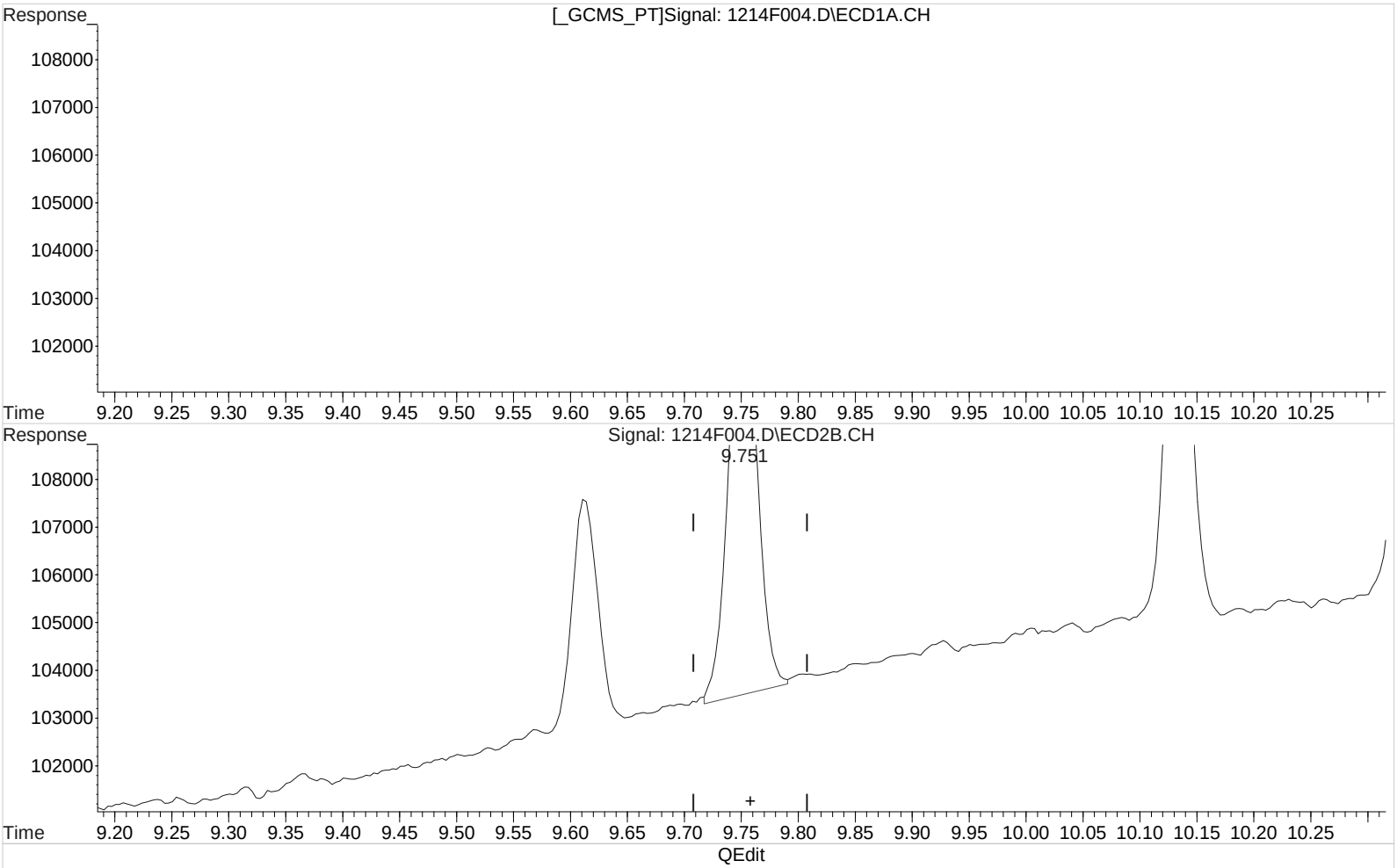
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(8) Heptachlor

11.449min 0.267 ug/L

response 5933

Manual Integration:

After

Baseline/Shoulder

12/16/18

(8) Heptachlor #2

9.751min 0.439 ug/L m

response 15322

(+) = Expected Retention Time

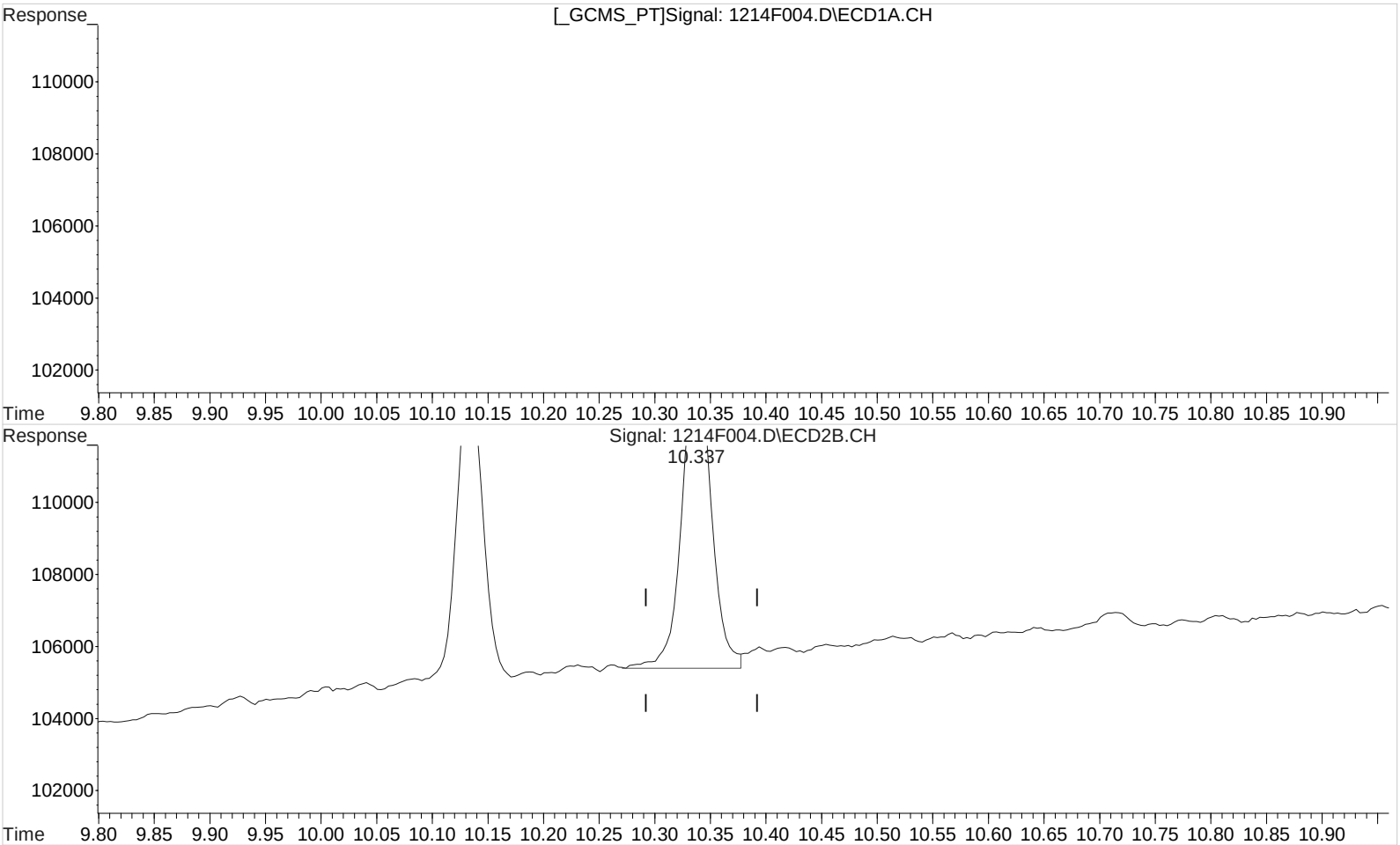
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(9) Aldrin

12.002min 0.451 ug/L

response 7067

Manual Integration:

Before

12/16/18

(9) Aldrin #2

10.337min 0.477 ug/L

response 15636

(+) = Expected Retention Time

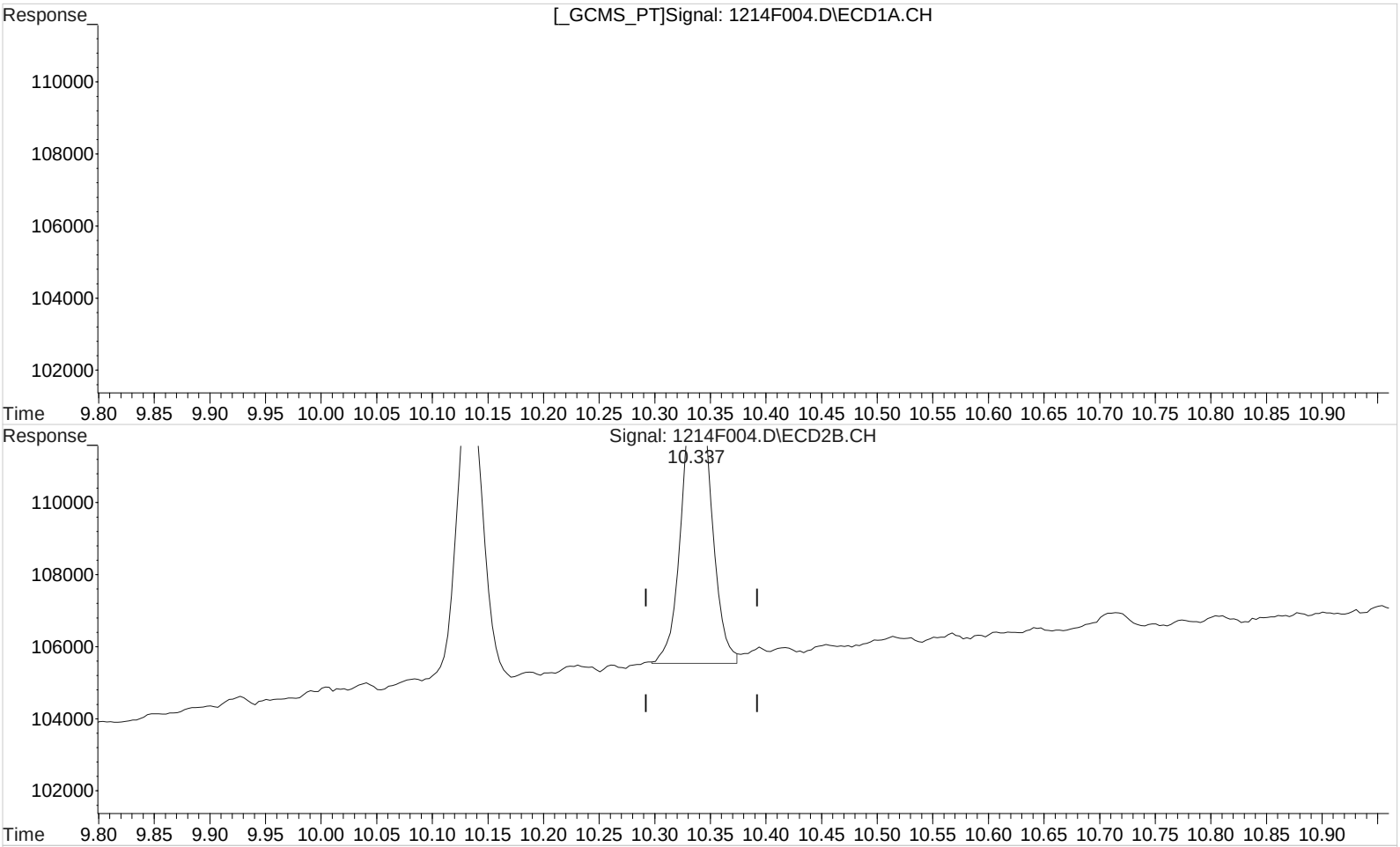
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F004.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:21 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:19 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(9) Aldrin

12.002min 0.451 ug/L

response 7067

Manual Integration:

After

Baseline/Shoulder

12/16/18

(9) Aldrin #2

10.337min 0.450 ug/L m

response 14740

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 13:01:39 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.015	5.343	857138	2460118	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.742	7.110	14342	34677	0.677	0.860 #
28) s	Decachlor...	18.435	16.877	15051	30118	0.774	0.892
	Target Compounds						
3)	alpha-BHC	9.585	8.330	13050	29990	0.858	0.872m
4)	Hexachlor...	9.742	8.117	18355	41878	0.679	0.879m#
5)	beta-BHC	10.865	9.613	6110	14609	0.818m	0.859
6)	gamma-BHC...	10.255	9.070	11190	27573	0.856	0.873
7)	delta-BHC	11.365	10.137	10750	25030	0.795	0.827m
8)	Heptachlor	11.449	9.753	10796	27952	0.686	0.825m
9)	Aldrin	12.002	10.340	11993	27846	0.810	0.876
10)	Isodrin	12.532	11.133	10125	23339	0.816	0.845
11)	Heptachlo...	12.725	11.420	11235	26643	0.836	0.879
12)	gamma-Chl...	13.245	11.830	11228	26644	0.822	0.895
13)	Endosulfan I	13.369	12.037	9893	22872	0.723	0.823
14)	alpha-Chl...	13.319	11.973	11584	26000	0.789	0.868
15)	Dieldrin	13.789	12.480	10815	24338	0.777	0.857m
16)	4,4'-DDE	13.599	12.337	11396	25116	0.738	0.820
17)	Endrin	14.155	12.953	9684	23171	0.741	0.828
18)	Endosulfa...	14.602	13.387	9565	21856	0.714	0.843
19)	4,4'-DDD	14.435	13.217	8116	19299	0.777	0.851
20)	Endrin Al...	14.785	13.747	8594	19354	0.727	0.819
21)	Endosulfa...	15.259	14.070	9715	22786	0.780	0.878
22)	4,4'-DDT	14.932	13.637	5594	17271	0.618	0.723
23)	Endrin Ke...	15.942	15.003	10282	24766	0.834	0.863
24)	Methoxychlor	15.682	14.733	3310	9967	0.409	0.770 #

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

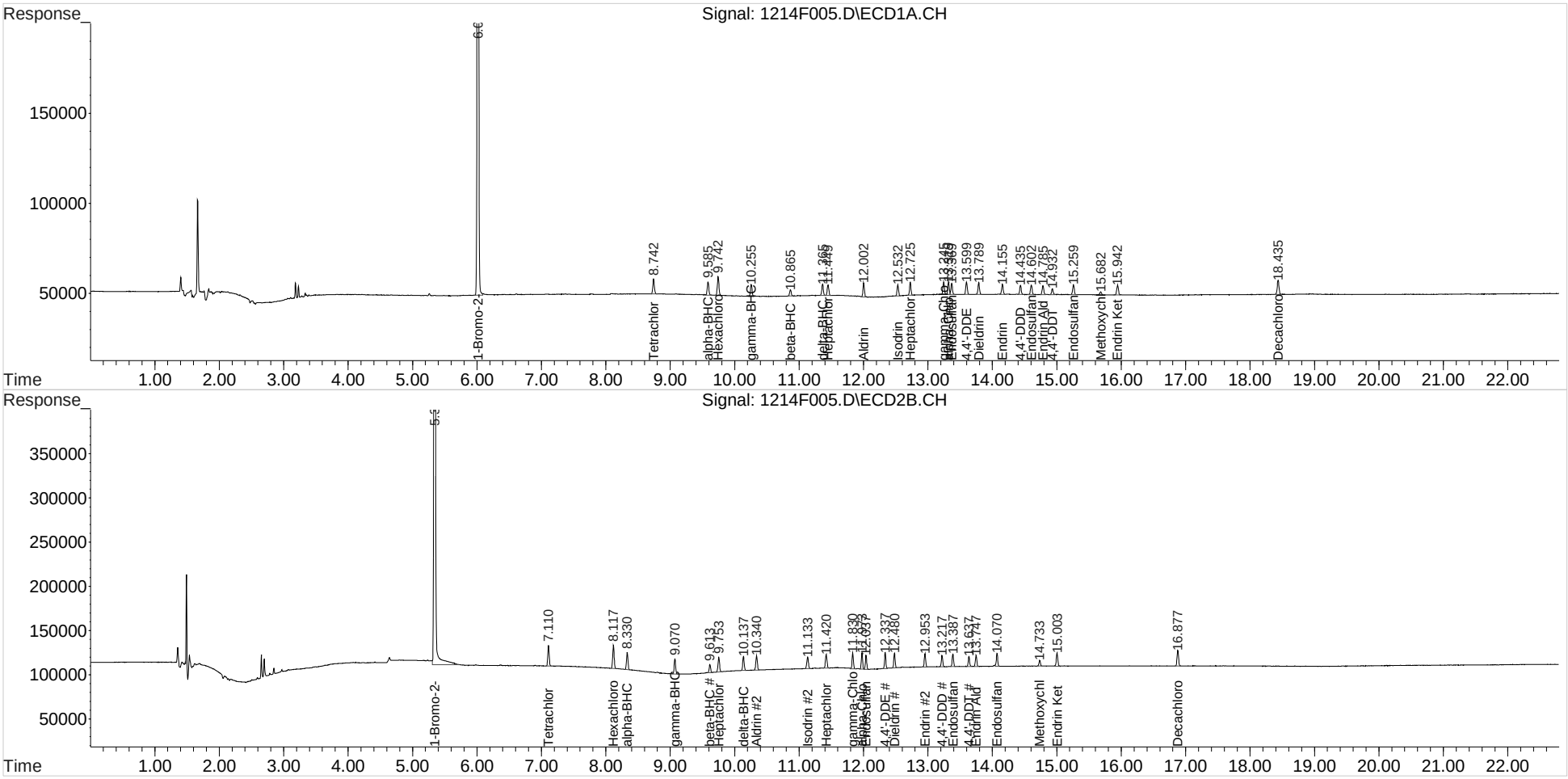
1st SM 12/18/18
2nd UA 12/19/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 13:01:39 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



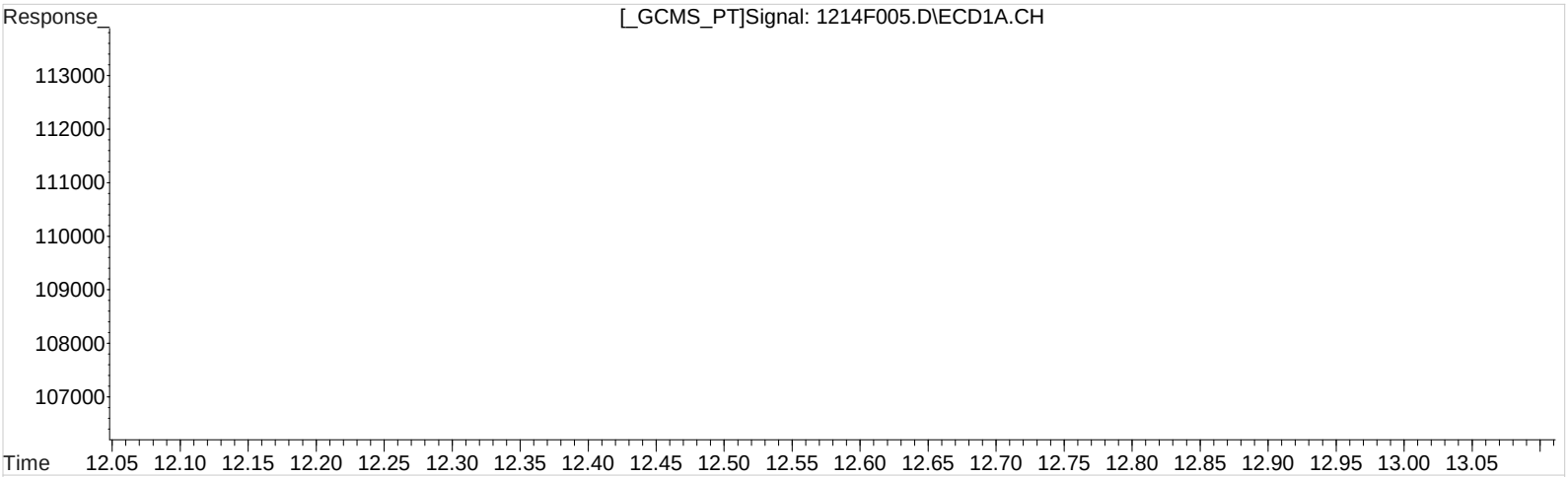
Quantitation Report (Qedit)

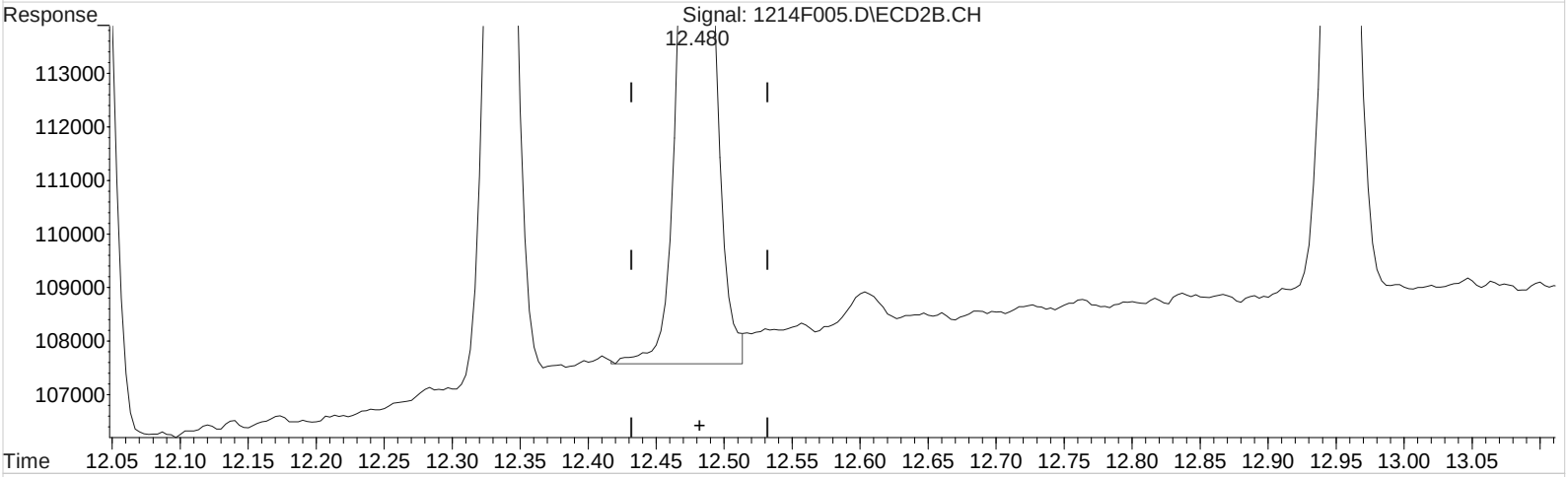
1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:23 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(15) Dieldrin

13.789min 0.777 ug/L

response 10815

Manual Integration:

Before

12/16/18

(15) Dieldrin #2

12.480min 0.909 ug/L

response 25819

(+) = Expected Retention Time

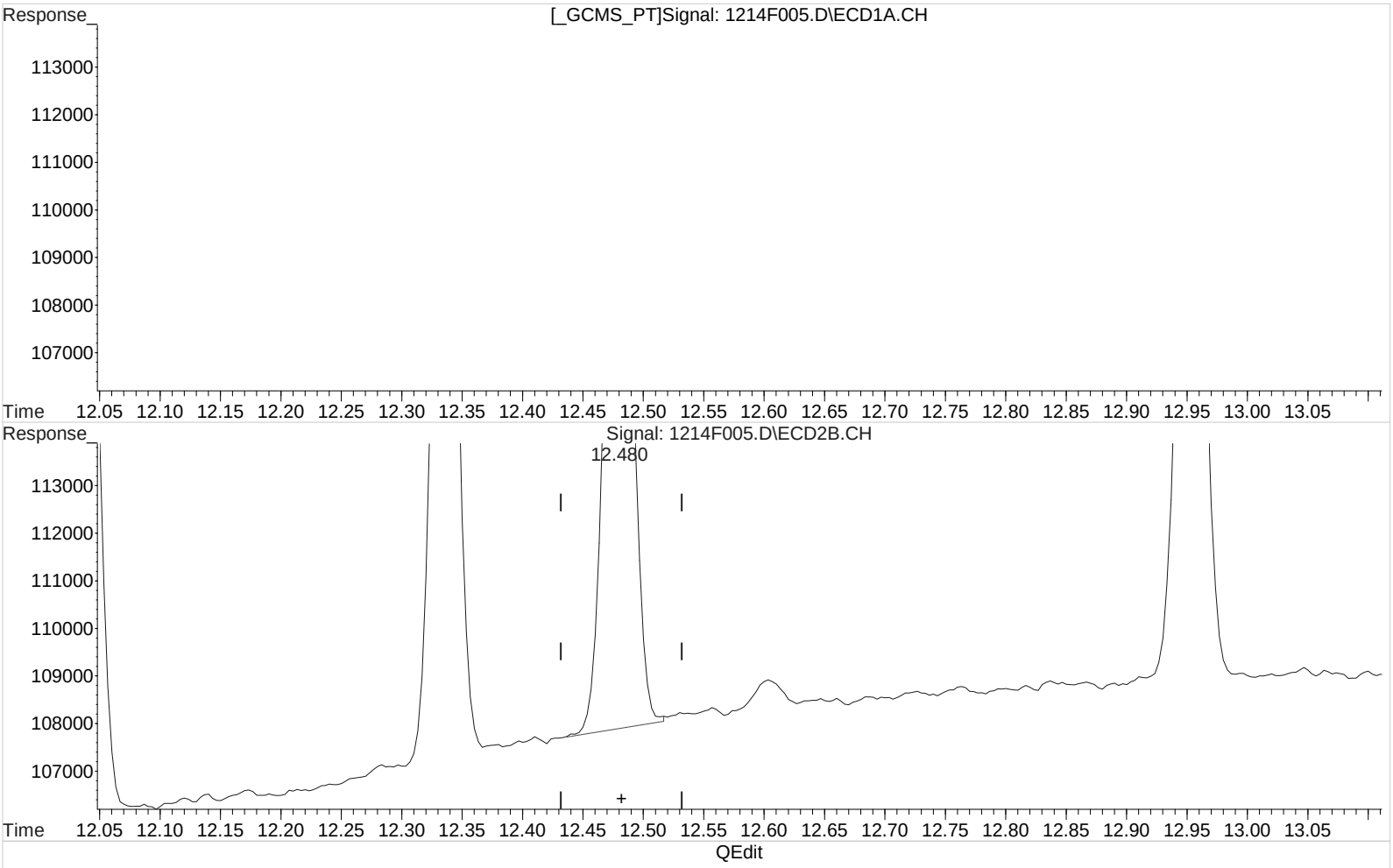
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:23 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(15) Dieldrin

13.789min 0.777 ug/L

response 10815

Manual Integration:

After

Baseline/Shoulder

12/16/18

(15) Dieldrin #2

12.480min 0.857 ug/L m

response 24338

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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Volume Inj. :
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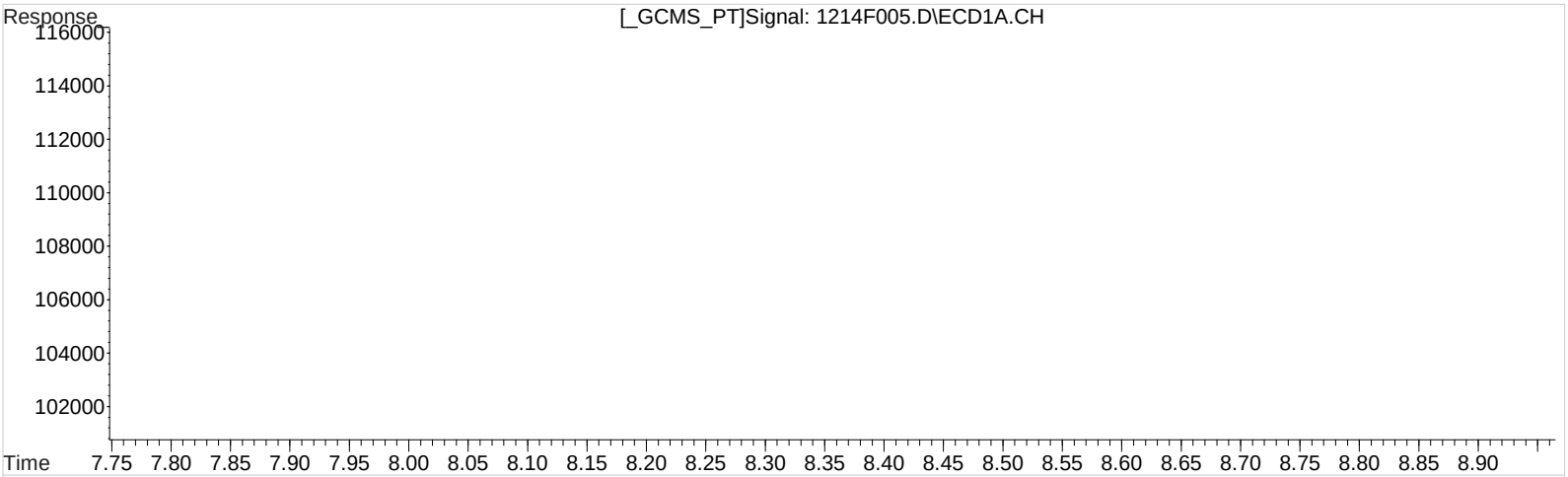
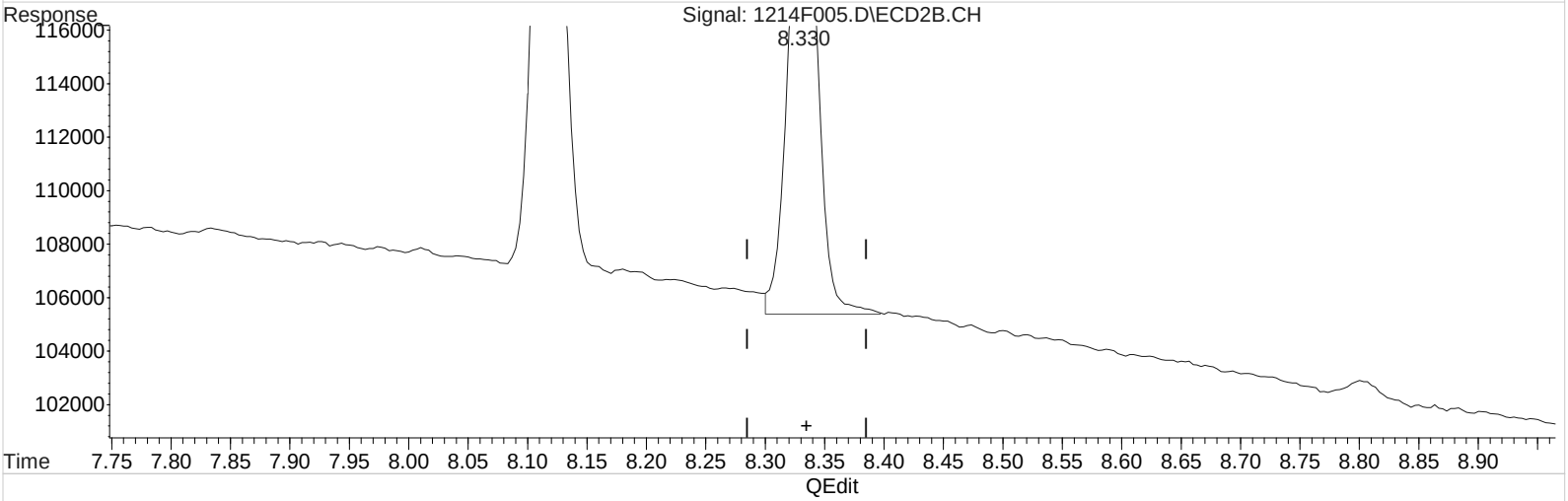
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(3) alpha-BHC

9.585min 0.858 ug/L

response 13050

Manual Integration:

Before

12/16/18

(3) alpha-BHC #2

8.330min 0.926 ug/L

response 31852

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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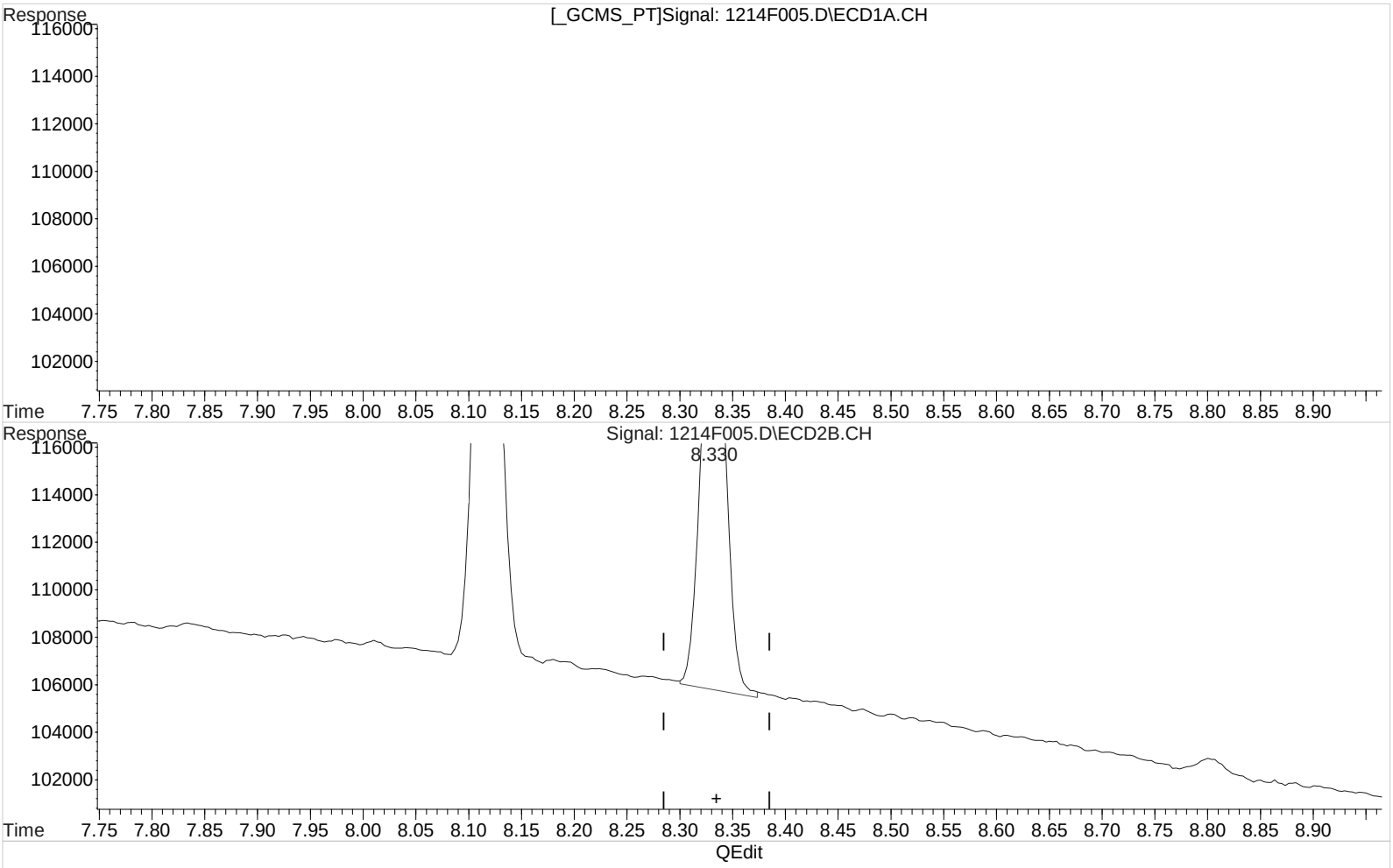
Quant Time: Dec 16 12:55:23 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(3) alpha-BHC

9.585min 0.858 ug/L

response 13050

(3) alpha-BHC #2

8.330min 0.872 ug/L m

response 29990

Manual Integration:

After

Baseline/Shoulder

12/16/18

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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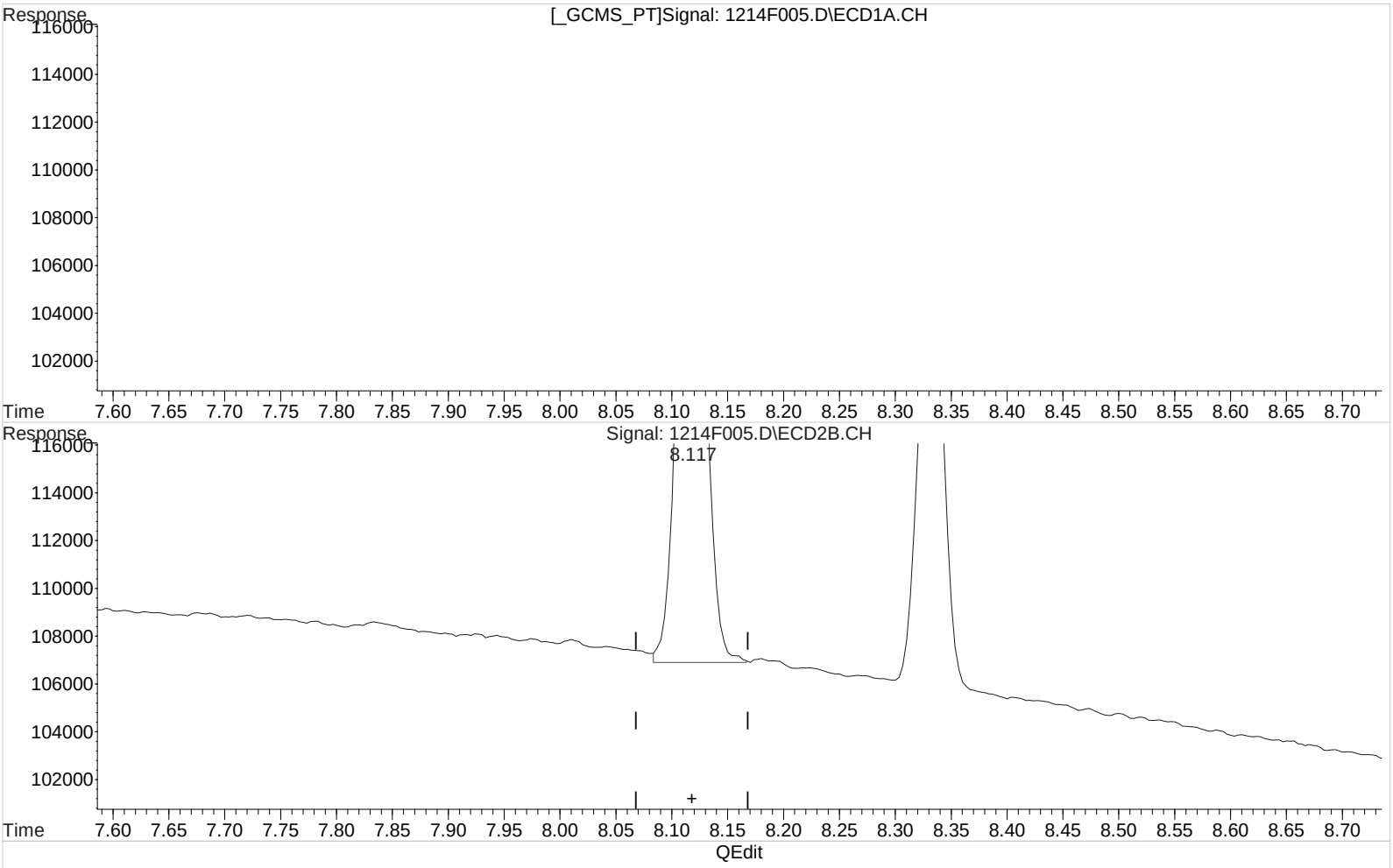
Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(4) Hexachlorobenzene

9.742min 0.679 ug/L

response 18355

Manual Integration:

Before

12/16/18

(4) Hexachlorobenzene #2

8.117min 0.902 ug/L

response 42972

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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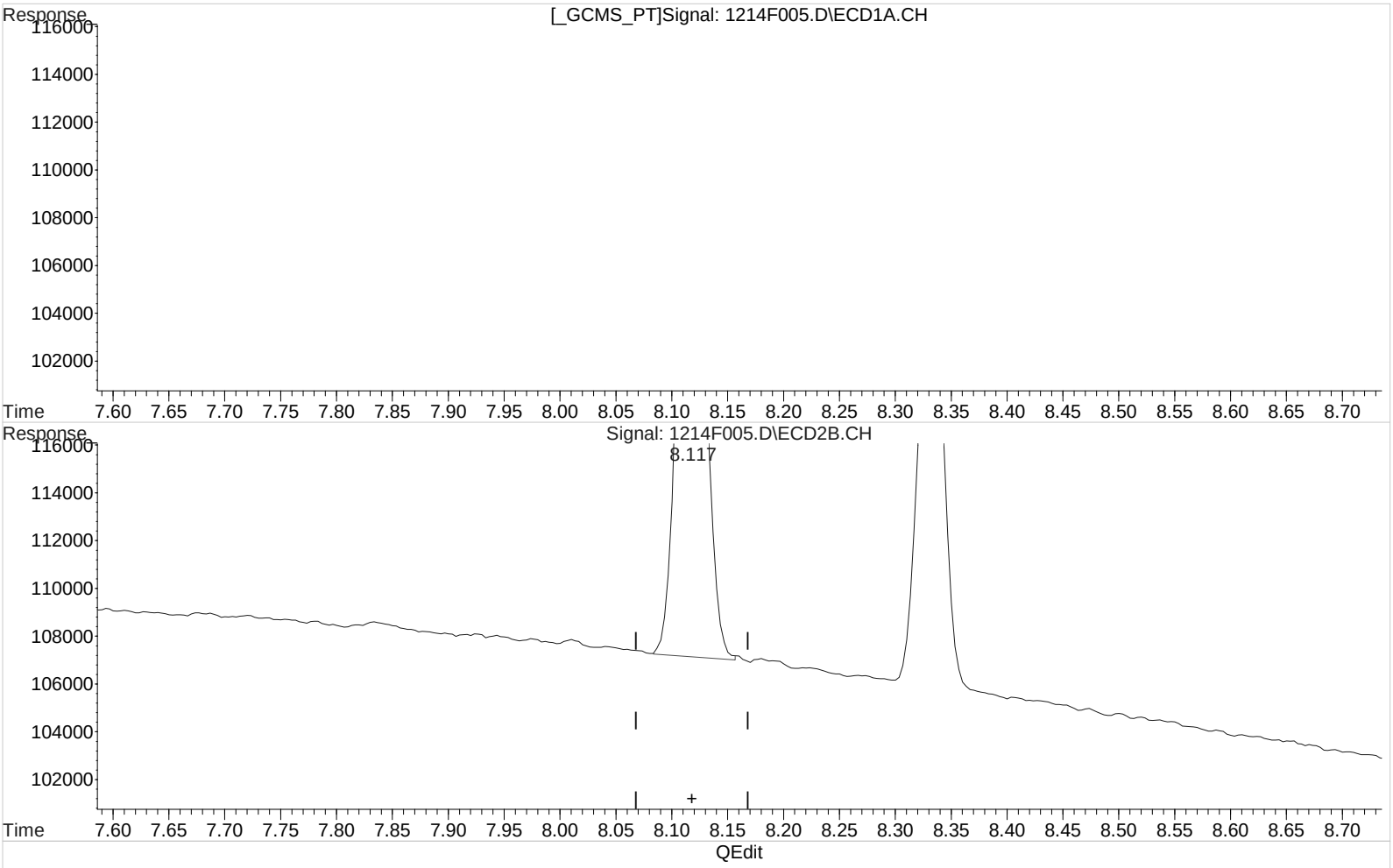
Quant Time: Dec 16 12:55:23 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(4) Hexachlorobenzene

9.742min 0.679 ug/L

response 18355

Manual Integration:

After

Baseline/Shoulder

12/16/18

(4) Hexachlorobenzene #2

8.117min 0.879 ug/L m

response 41878

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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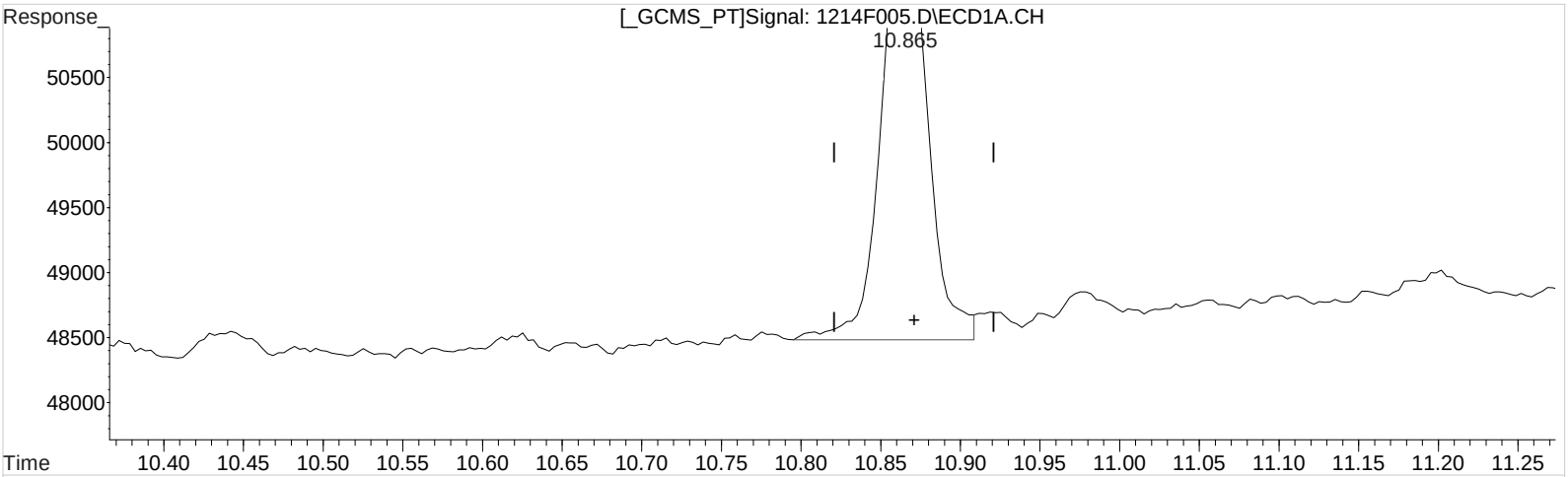
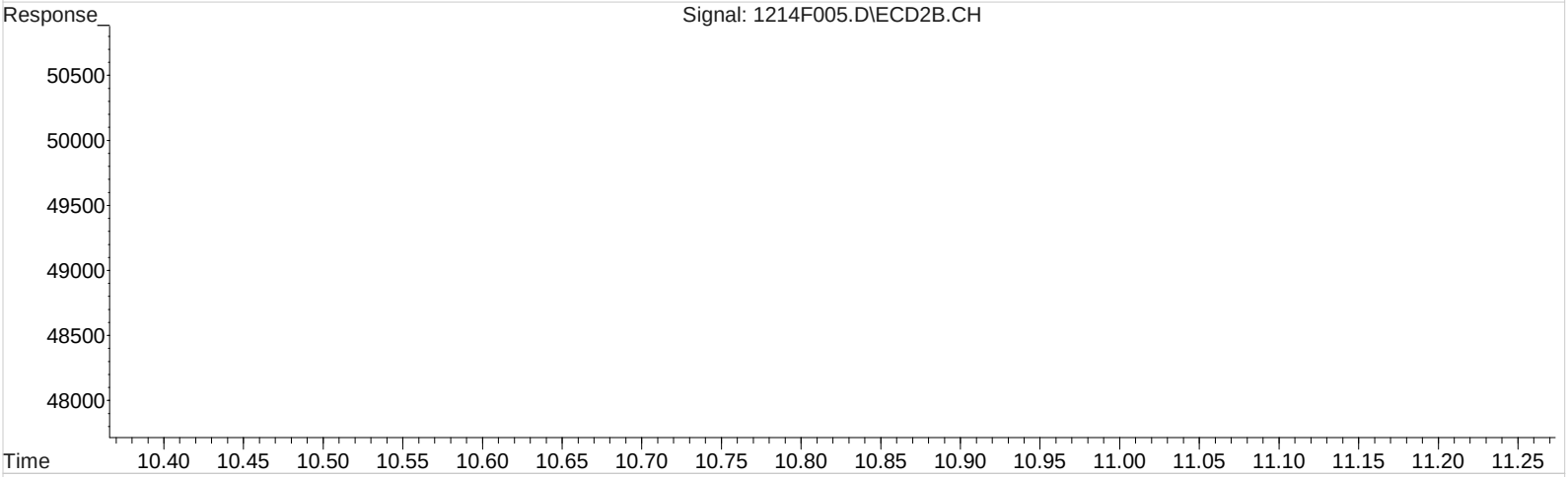
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.865min 0.903 ug/L

response 6745

Manual Integration:

Before

12/16/18

(5) beta-BHC #2

9.613min 0.859 ug/L

response 14609

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:23 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
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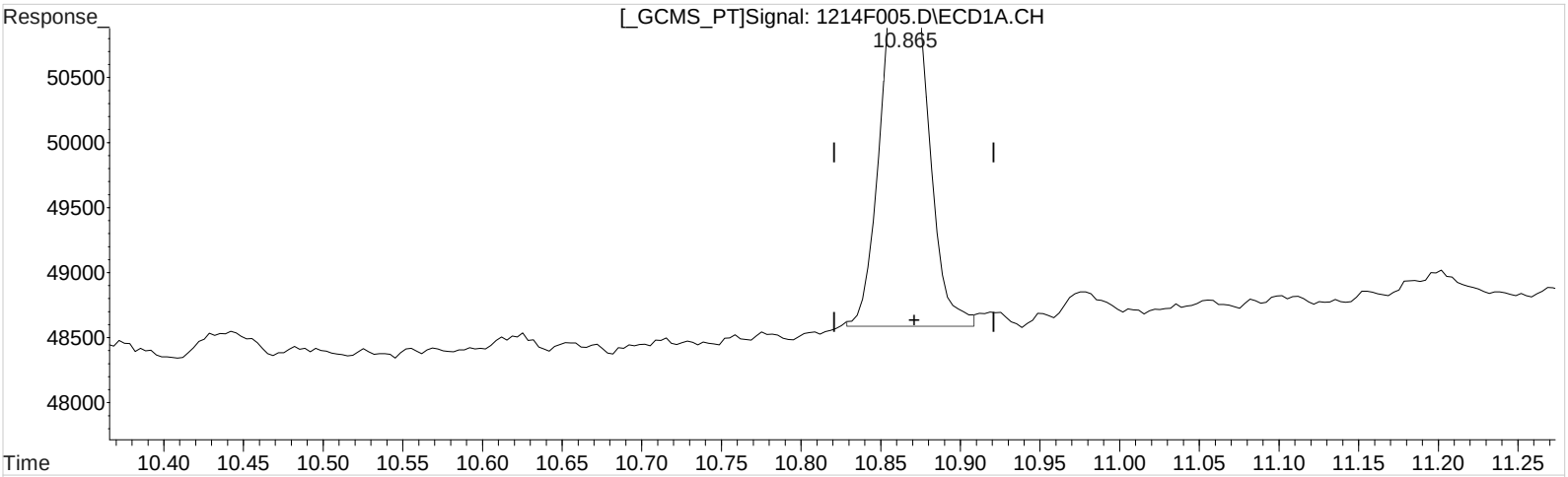
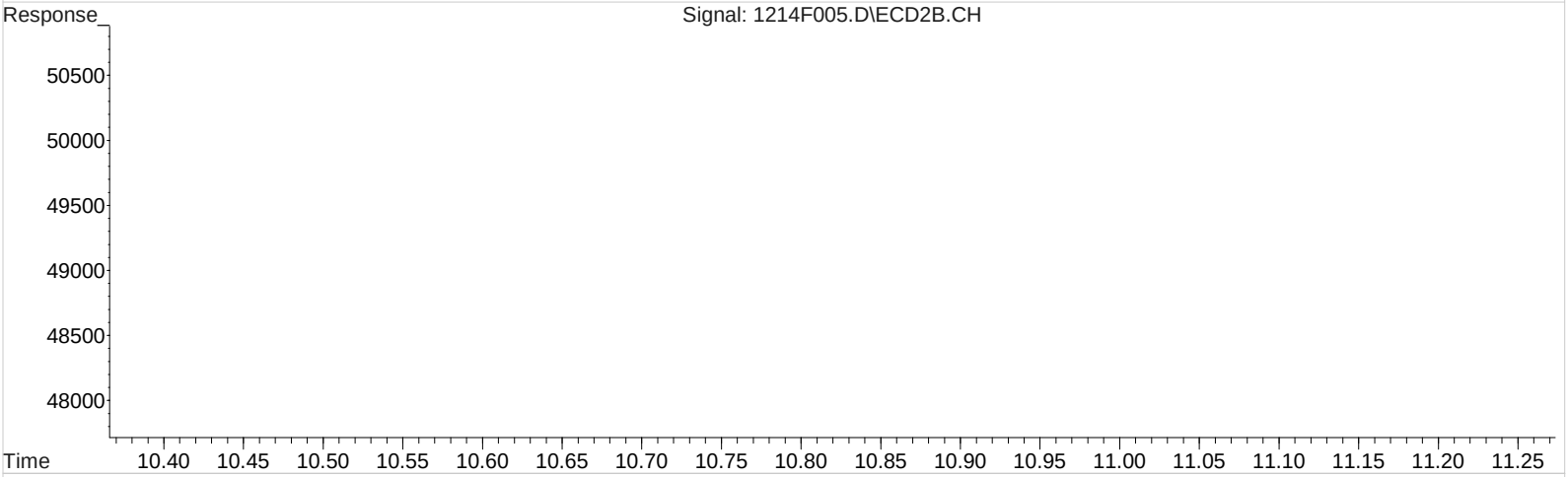
Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.865min 0.818 ug/L m

response 6110

Manual Integration:

After

Baseline/Shoulder

12/16/18

(5) beta-BHC #2

9.613min 0.859 ug/L

response 14609

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
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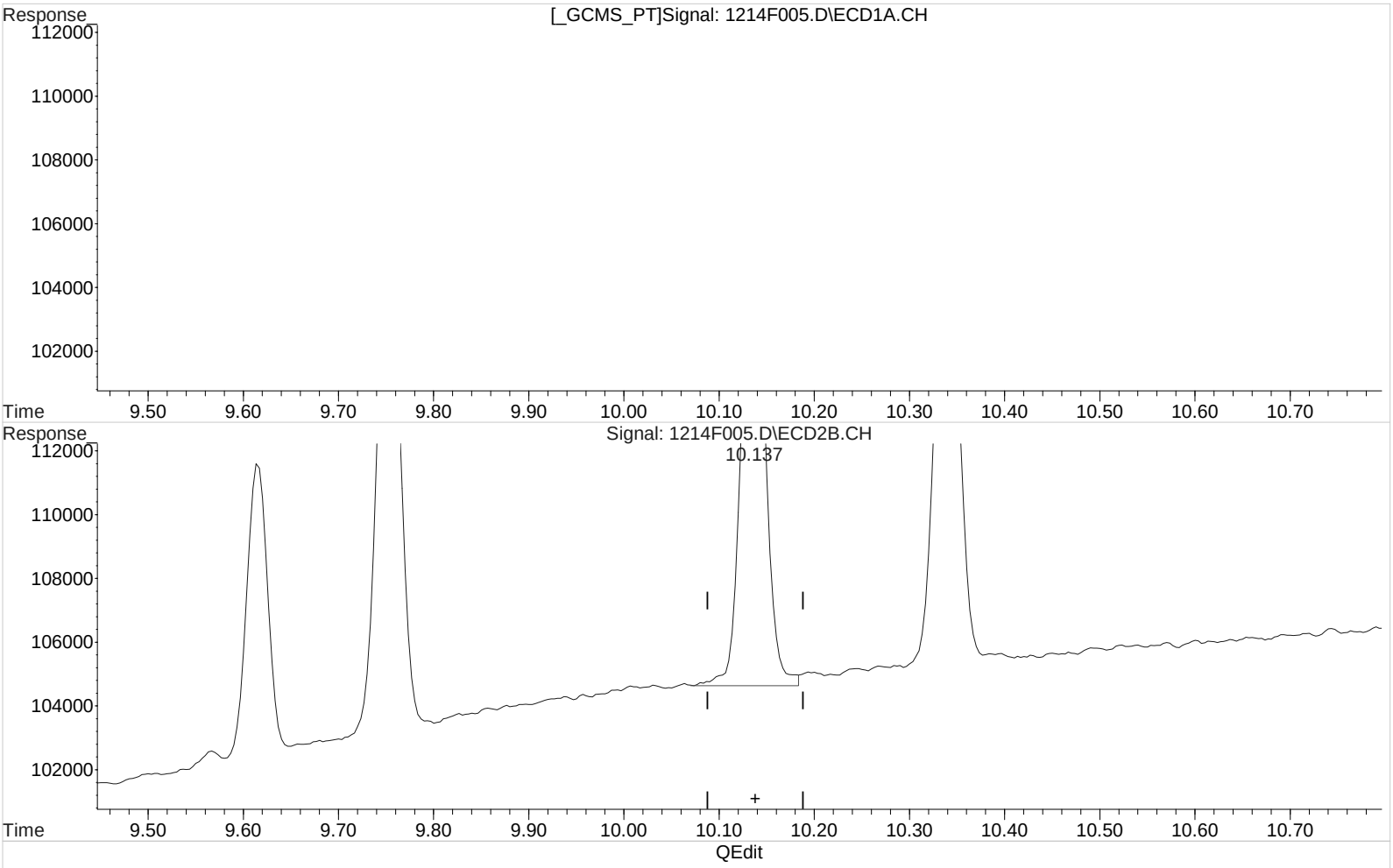
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(7) delta-BHC

11.365min 0.795 ug/L

response 10750

Manual Integration:

Before

12/16/18

(7) delta-BHC #2

10.137min 0.881 ug/L

response 26676

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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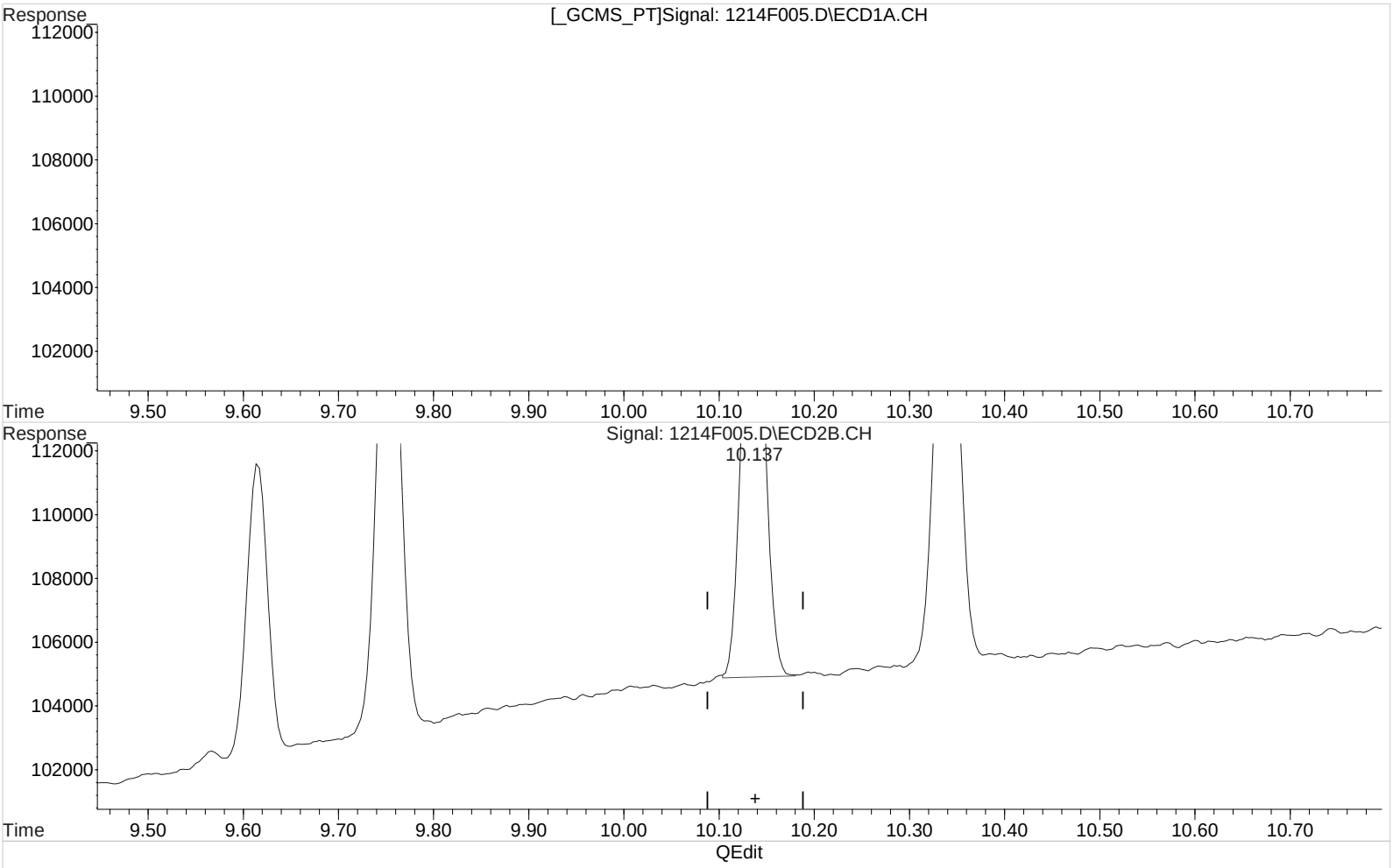
Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(7) delta-BHC

11.365min 0.795 ug/L

response 10750

Manual Integration:

After

Baseline/Shoulder

12/16/18

(7) delta-BHC #2

10.137min 0.827 ug/L m

response 25030

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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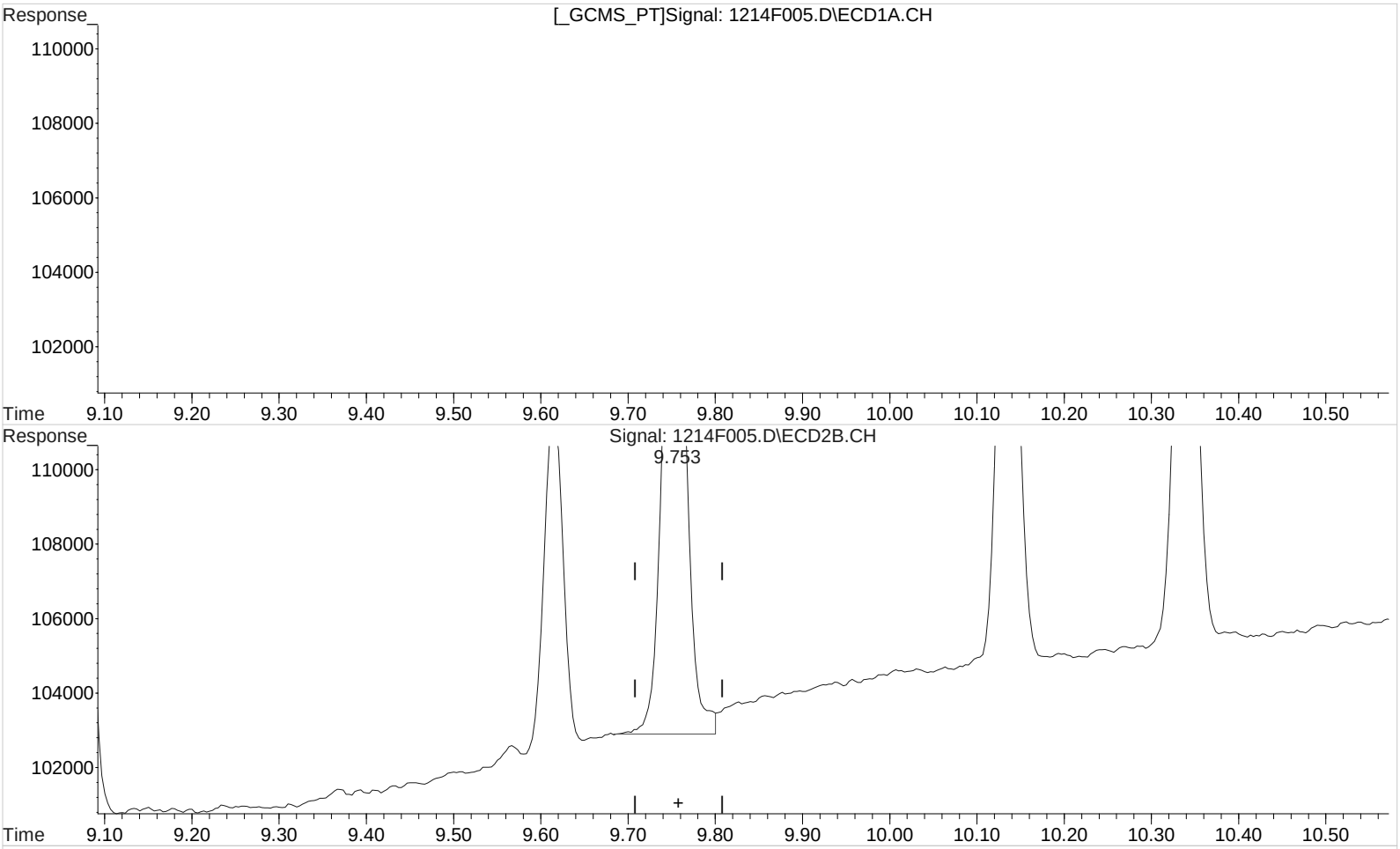
Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(8) Heptachlor

11.449min 0.686 ug/L

response 10796

Manual Integration:

Before

12/16/18

(8) Heptachlor #2

9.753min 0.877 ug/L

response 29699

(+) = Expected Retention Time

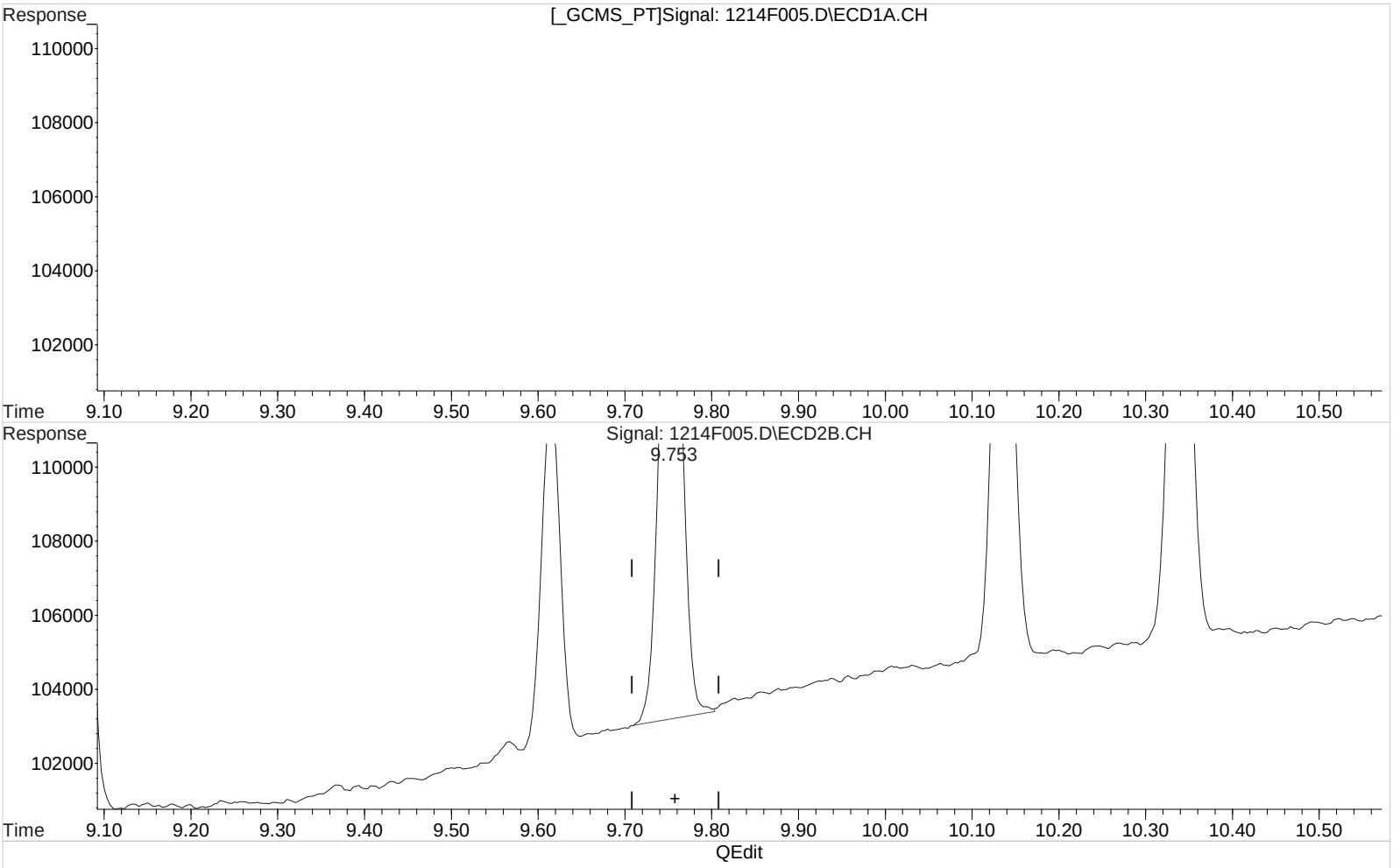
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F005.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 3:51 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:23 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(8) Heptachlor

11.449min 0.686 ug/L

response 10796

Manual Integration:

After

Baseline/Shoulder

12/16/18

(8) Heptachlor #2

9.753min 0.825 ug/L m

response 27952

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F006.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 4:20 pm Operator: MC
Sample : 81 2.0PPB GCPS8-50D Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 13:01:57 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.020	5.348	795528	2145410	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	8.747	7.115	28021	67232	1.529	1.913	#
28) s	Decachlor...	18.433	16.878	28944	58281	1.603	1.979	
	Target Compounds							
3)	alpha-BHC	9.590	8.335	24769	58664	1.754	1.956	
4)	Hexachlor...	9.747	8.121	35208	81677	1.616	1.967	m
5)	beta-BHC	10.870	9.618	12454	27690	1.796	1.868	
6)	gamma-BHC...	10.260	9.075	22243	52994	1.834	1.923	
7)	delta-BHC	11.367	10.138	21432	50374	1.708	1.908	
8)	Heptachlor	11.453	9.755	20766	55145	1.641	1.867	
9)	Aldrin	12.007	10.341	23575	52633	1.715	1.900	
10)	Isodrin	12.533	11.135	19993	45102	1.736	1.873	
11)	Heptachlo...	12.727	11.425	22054	49530	1.769	1.873	
12)	gamma-Chl...	13.247	11.835	22140	49546	1.747	1.909	
13)	Endosulfan I	13.370	12.041	19880	44258	1.564	1.826	
14)	alpha-Chl...	13.320	11.978	22595	49172	1.658	1.882	
15)	Dieldrin	13.790	12.481	21371	48067	1.654	1.941	
16)	4,4'-DDE	13.600	12.338	22567	49682	1.575	1.859	
17)	Endrin	14.157	12.955	19144	43469	1.579	1.781	
18)	Endosulfa...	14.607	13.388	19313	43183	1.740	1.909	
19)	4,4'-DDD	14.437	13.221	16210	36324	1.672	1.836	
20)	Endrin Al...	14.787	13.748	17408	37934	1.587	1.840	
21)	Endosulfa...	15.257	14.071	19059	43401	1.648	1.918	
22)	4,4'-DDT	14.930	13.638	11252	34834	1.339	1.819	#
23)	Endrin Ke...	15.943	15.005	19260	47766	1.682	1.909	
24)	Methoxychlor	15.683	14.735	6269	19884	1.142	1.761	#

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

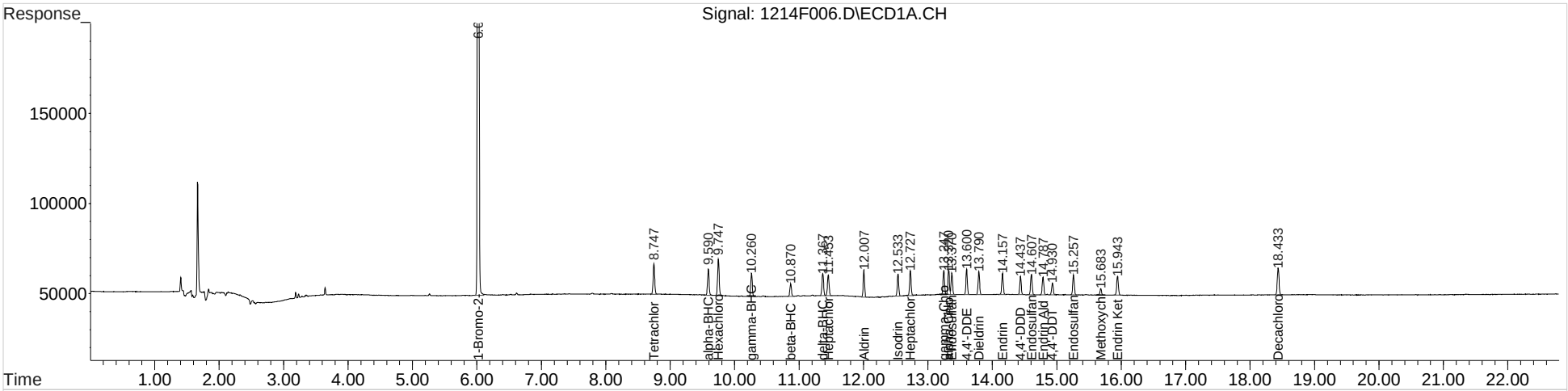
1st SM 12/18/18
2nd UA 12/19/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121418CAL\1214F006.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 4:20 pm Operator: MC
Sample : 81 2.0PPB GCPS8-50D Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 13:01:57 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



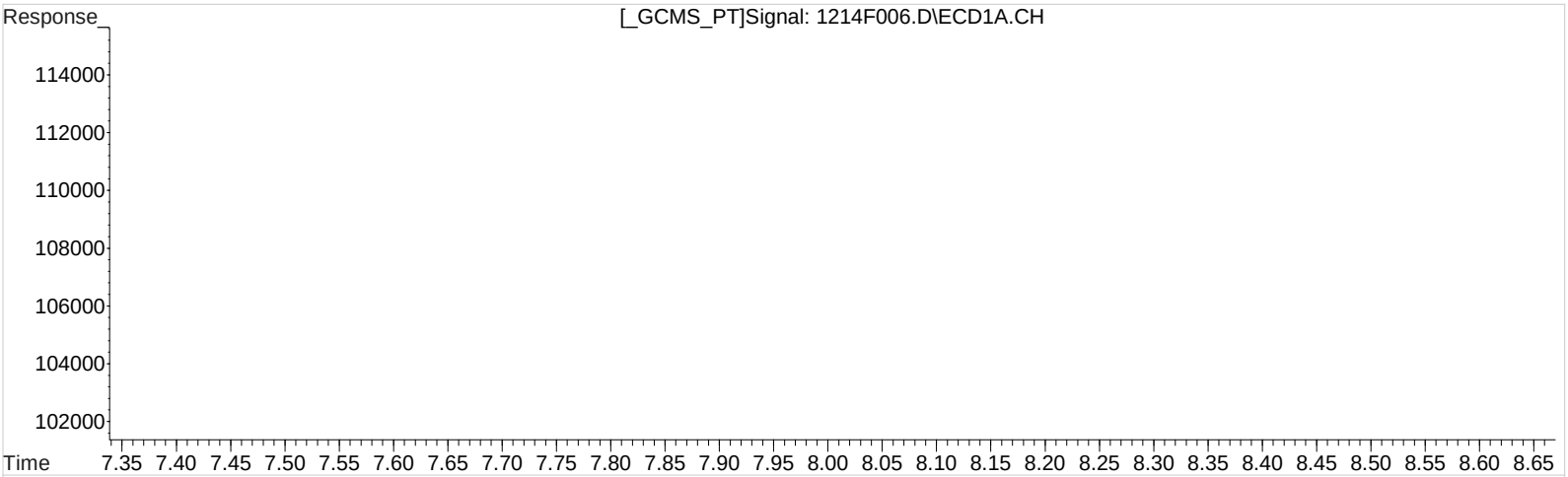
Quantitation Report (Qedit)

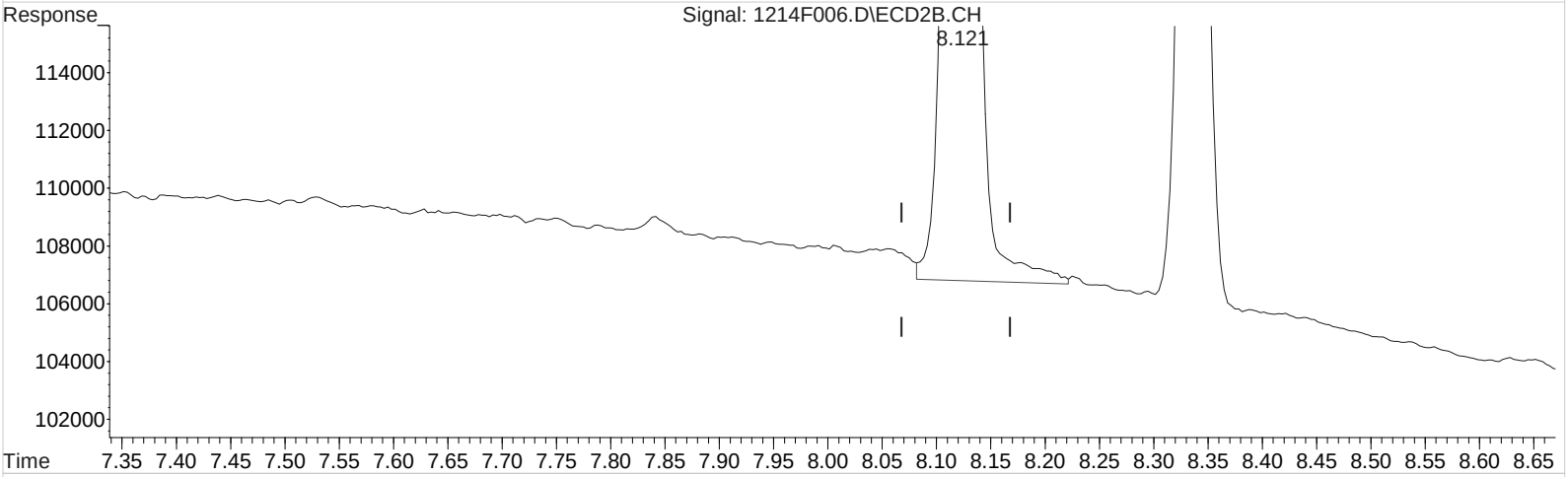
1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F006.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 4:20 pm Operator: MC
Sample : 81 2.0PPB GCPS8-50D Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:02 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.747min 1.616 ug/L

response 35208

Manual Integration:

Before

12/16/18

(4) Hexachlorobenzene #2

8.121min 2.048 ug/L

response 85070

(+) = Expected Retention Time

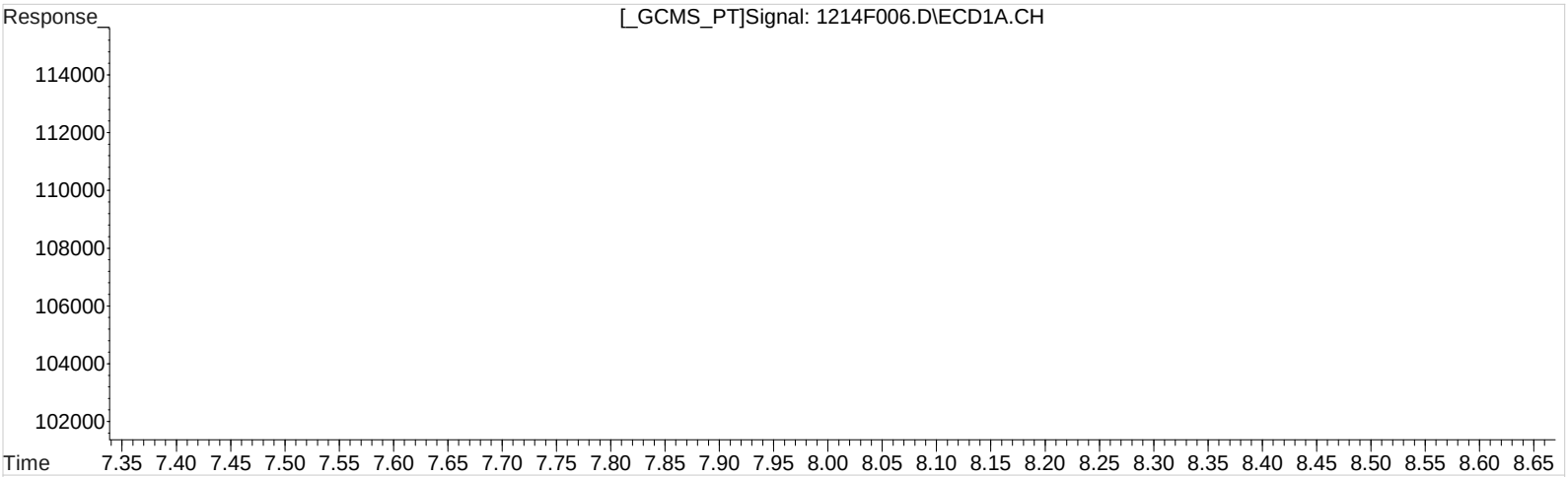
Quantitation Report (Qedit)

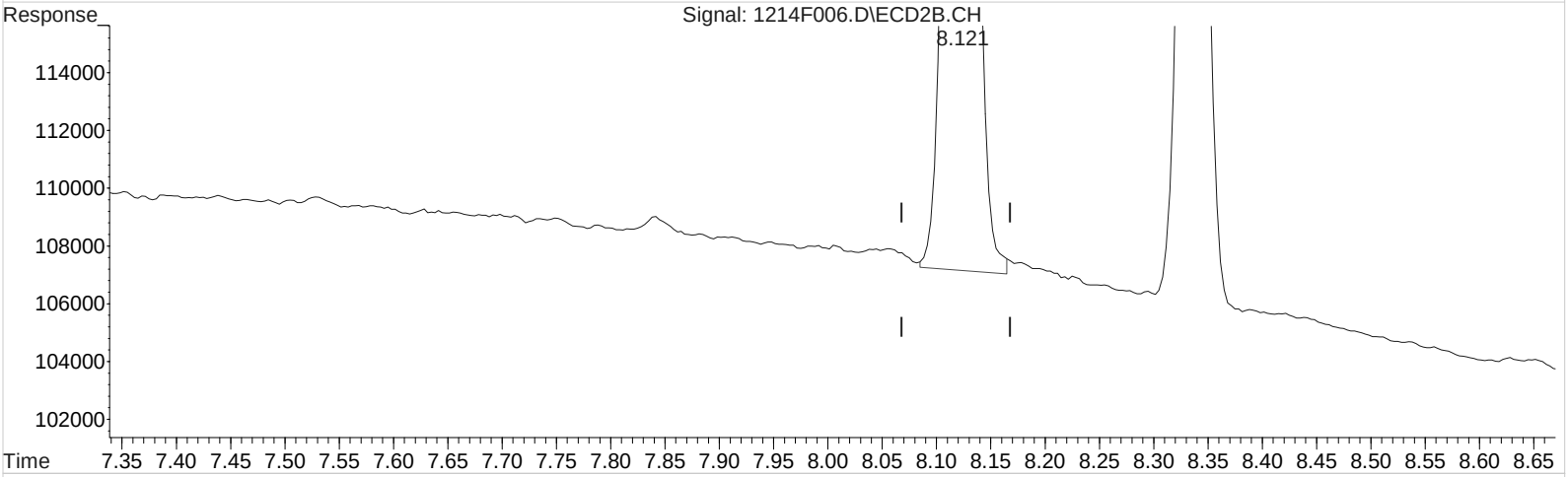
1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F006.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 4:20 pm Operator: MC
Sample : 81 2.0PPB GCPS8-50D Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:02 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.747min 1.616 ug/L

response 35208

Manual Integration:

After

Baseline/Shoulder

12/16/18

(4) Hexachlorobenzene #2

8.121min 1.967 ug/L m

response 81677

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F007.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 4:51 pm Operator: MC
Sample : 81 5.0PPB GCPS8-49E @4X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 13:02:33 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.020	5.345	855606	2377740	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	8.746	7.111	62031	150462	3.347	3.862	
28) s	Decachlor...	18.440	16.881	64122	128353	3.303	3.932	
	Target Compounds							
3)	alpha-BHC	9.593	8.335	57215	134072	3.767	4.034m	
4)	Hexachlor...	9.750	8.121	75956	181171	3.534	3.936	
5)	beta-BHC	10.870	9.618	27834	62013	3.732	3.774	
6)	gamma-BHC...	10.263	9.075	51376	120908	3.939	3.959	
7)	delta-BHC	11.370	10.138	49269	117065	3.651	4.000	
8)	Heptachlor	11.453	9.755	47228	123270	3.789	3.766	
9)	Aldrin	12.006	10.345	53609	120063	3.626	3.910	
10)	Isodrin	12.536	11.135	44693	103195	3.608	3.866	
11)	Heptachlo...	12.730	11.425	49374	112829	3.682	3.849	
12)	gamma-Chl...	13.246	11.835	50231	111840	3.685	3.889	
13)	Endosulfan I	13.373	12.041	45620	100737	3.338	3.751	
14)	alpha-Chl...	13.323	11.978	50740	111563	3.461	3.853	
15)	Dieldrin	13.793	12.481	48775	108403	3.509	3.951	
16)	4,4'-DDE	13.603	12.338	50456	111527	3.274	3.766	
17)	Endrin	14.160	12.958	43218	100588	3.314	3.719	
18)	Endosulfa...	14.610	13.388	43158	97814	3.830	3.901	
19)	4,4'-DDD	14.440	13.221	37616	82683	3.608	3.771	
20)	Endrin Al...	14.790	13.751	39036	86000	3.310	3.765	
21)	Endosulfa...	15.263	14.075	43533	97671	3.499	3.894	
22)	4,4'-DDT	14.936	13.638	26606	77890	2.943	3.793	#
23)	Endrin Ke...	15.946	15.008	45421	108910	3.689	3.928	
24)	Methoxychlor	15.686	14.738	14746	45651	2.849	3.649	#

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

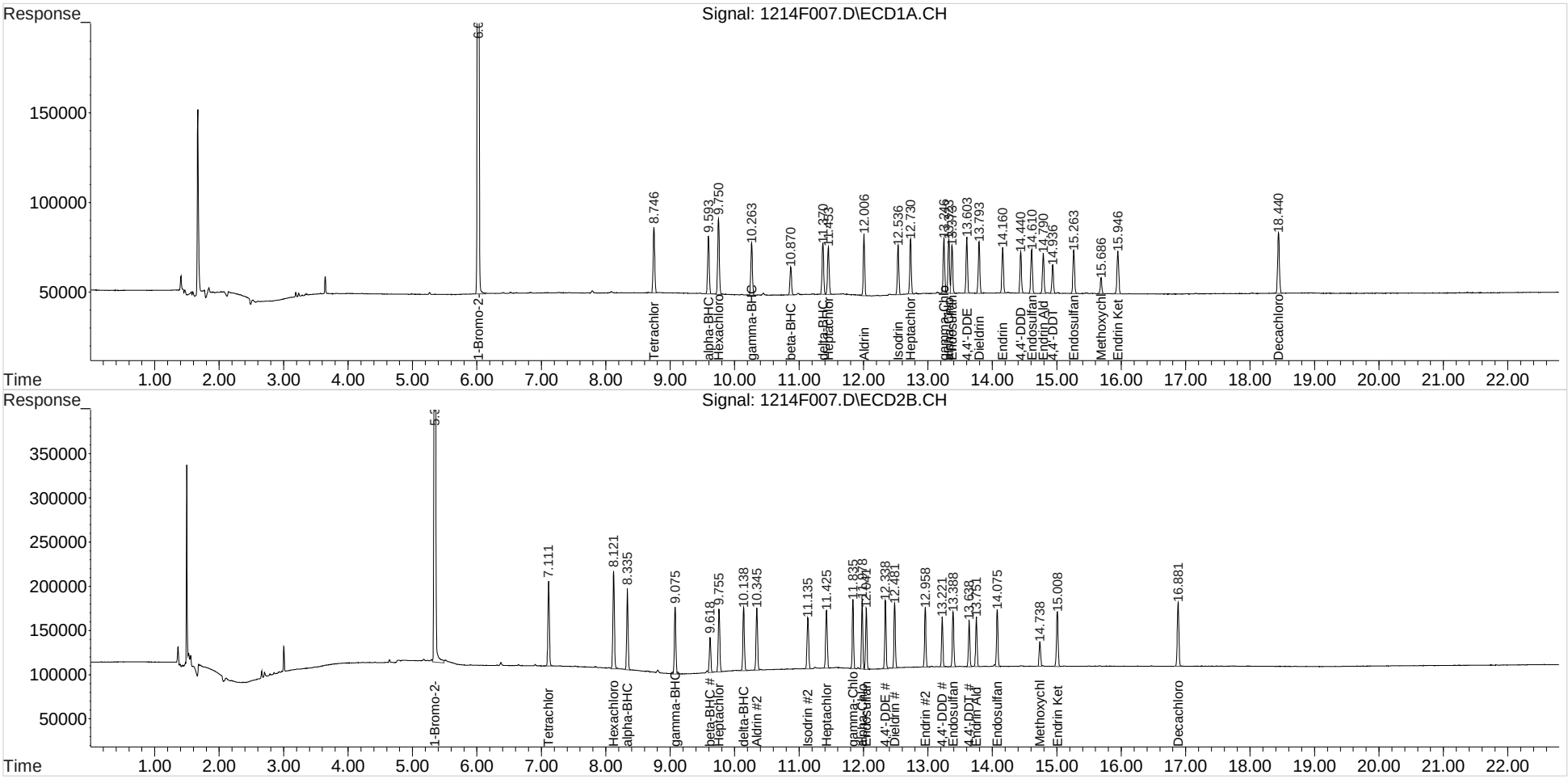
1st SM 12/18/18
2nd UA 12/19/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121418CAL\1214F007.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 4:51 pm Operator: MC
Sample : 81 5.0PPB GCPS8-49E @4X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 13:02:33 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



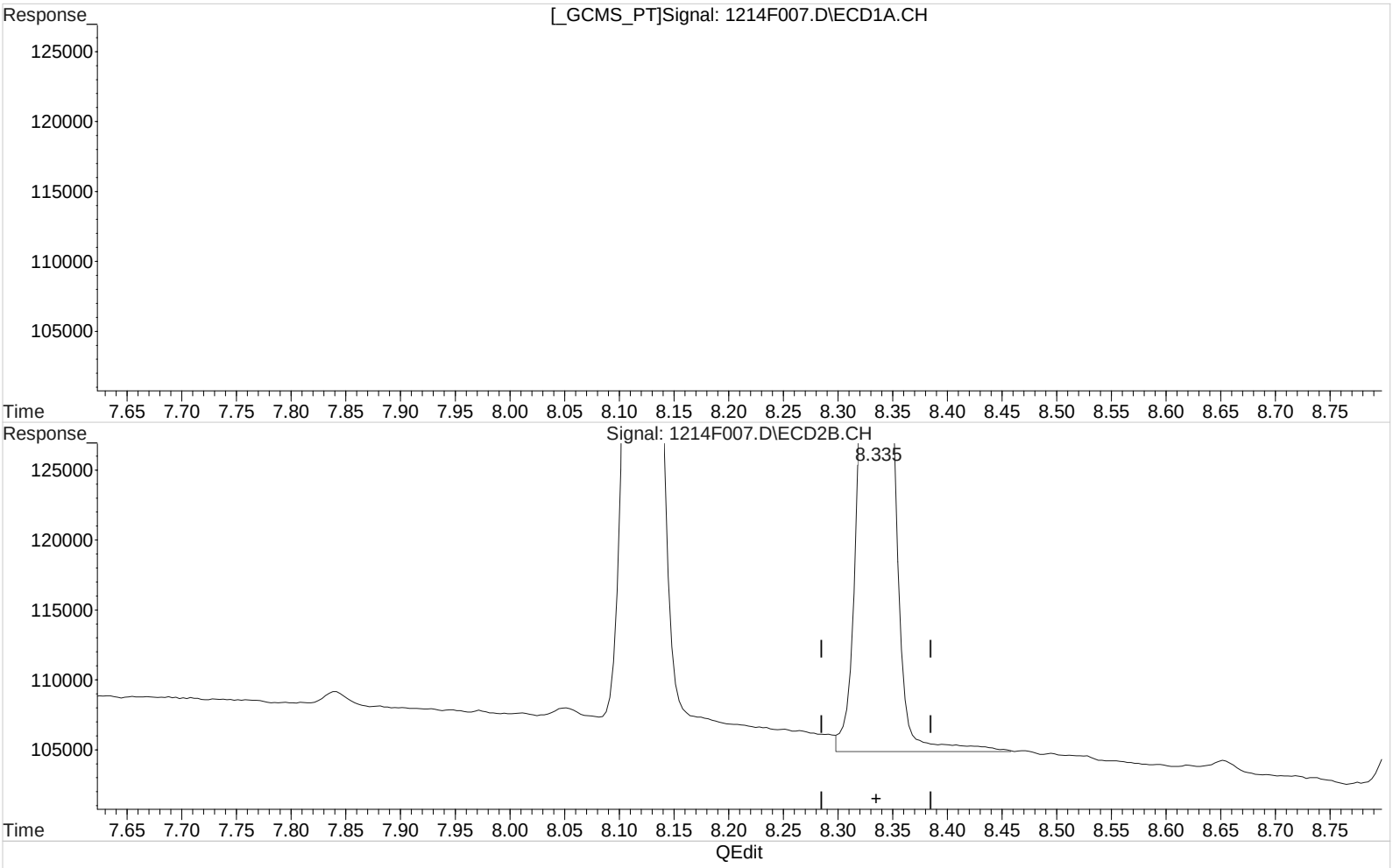
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F007.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 4:51 pm Operator: MC
Sample : 81 5.0PPB GCPS8-49E @4X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:27 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(3) alpha-BHC

9.593min 3.767 ug/L

response 57215

Manual Integration:

Before

12/16/18

(3) alpha-BHC #2

8.335min 4.171 ug/L

response 138647

(+) = Expected Retention Time

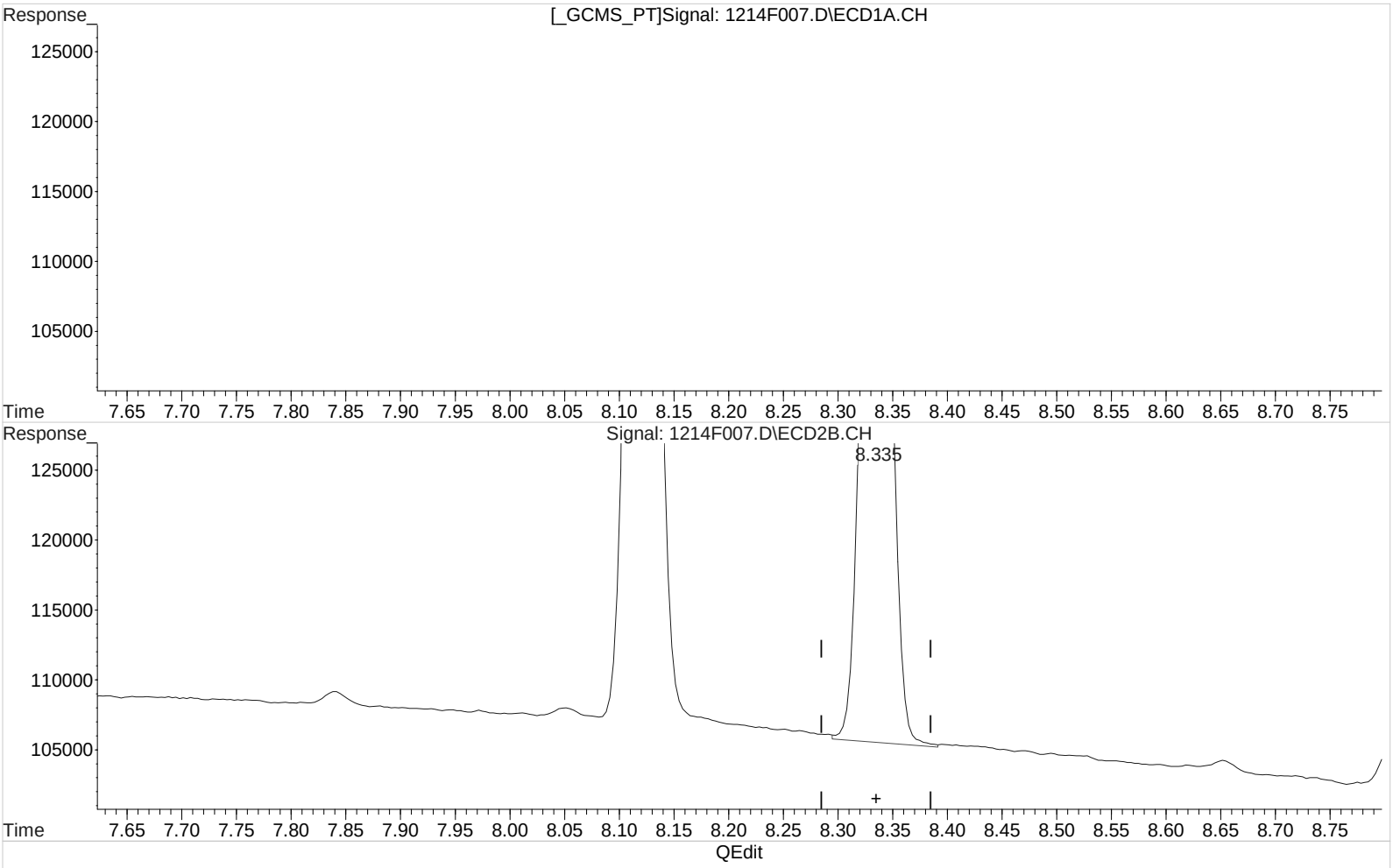
Quantitation Report (Qedit)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F007.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 4:51 pm Operator: MC
Sample : 81 5.0PPB GCPS8-49E @4X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 12:55:27 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(3) alpha-BHC

9.593min 3.767 ug/L

response 57215

Manual Integration:

After

Baseline/Shoulder

12/16/18

(3) alpha-BHC #2

8.335min 4.034 ug/L m

response 134072

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st STM 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121418CAL\1214F008.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 5:21 pm Operator: MC
Sample : 81 10PPB GCPS8-49E @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 13:03:01 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.021	5.346	814176	2161433	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	8.748	7.113	119954	291031	7.555	8.218	
28) s	Decachlor...	18.438	16.876	120807	239887	6.539	8.084	
	Target Compounds							
3)	alpha-BHC	9.595	8.336	114347	270908	7.911	8.966	
4)	Hexachlor...	9.748	8.123	141891	339155	7.671	8.106	
5)	beta-BHC	10.871	9.620	53013	119806	7.470	8.022	
6)	gamma-BHC...	10.265	9.076	101232	239375	8.157	8.623	
7)	delta-BHC	11.371	10.143	97871	232096	7.621	8.725	
8)	Heptachlor	11.455	9.760	91408	238229	8.464	8.007	
9)	Aldrin	12.008	10.346	106093	235757	7.541	8.446	
10)	Isodrin	12.535	11.136	86229	199814	7.315	8.235	
11)	Heptachlo...	12.728	11.426	96059	217184	7.527	8.151	
12)	gamma-Chl...	13.248	11.836	96858	217209	7.467	8.309	
13)	Endosulfan I	13.371	12.043	86810	194212	6.675	7.954	
14)	alpha-Chl...	13.321	11.980	98328	215226	7.049	8.178	
15)	Dieldrin	13.791	12.483	93988	208770	7.106	8.370	
16)	4,4'-DDE	13.601	12.340	98747	214235	6.734	7.958	
17)	Endrin	14.158	12.956	84035	195880	6.771	7.966	
18)	Endosulfa...	14.608	13.390	82372	186736	8.064	8.193	
19)	4,4'-DDD	14.438	13.220	72679	160636	7.326	8.060	
20)	Endrin Al...	14.788	13.750	74368	164135	6.626	7.904	
21)	Endosulfa...	15.261	14.073	82635	187088	6.981	8.206	
22)	4,4'-DDT	14.931	13.640	51761	152124	6.017	8.338	#
23)	Endrin Ke...	15.945	15.006	86406	208040	7.375	8.255	
24)	Methoxychlor	15.685	14.733	29242	87633	6.257	7.705	
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

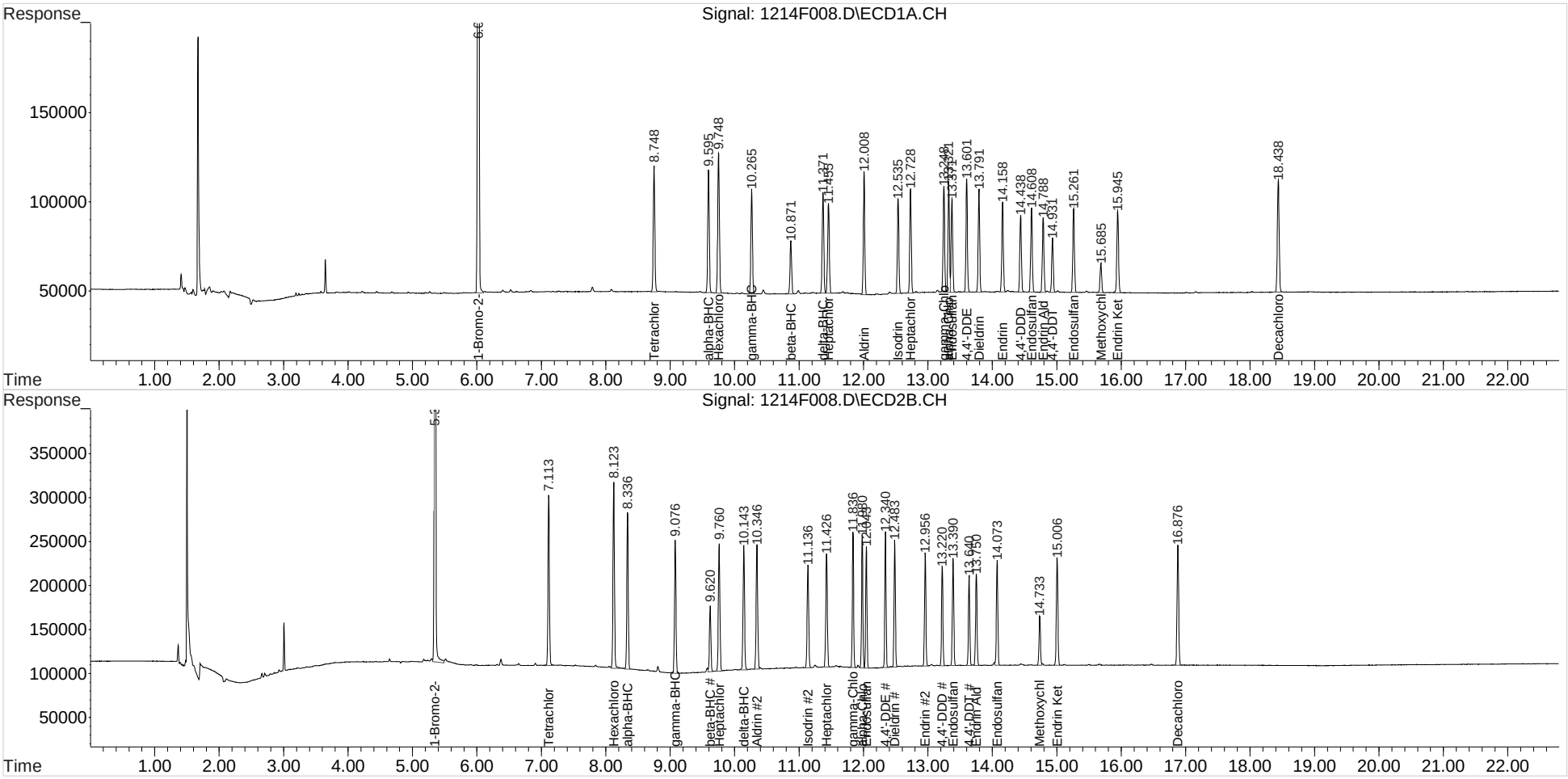
1st SM 12/18/18
2nd UA 12/19/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121418CAL\1214F008.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14 Dec 2018 5:21 pm Operator: MC
Sample : 81 10PPB GCPS8-49E @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 16 13:03:01 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Thu Dec 13 08:59:48 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Quantitation Report (QT Reviewed)

1st MC 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121718CAL\1217F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17 Dec 2018 1:18 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 17 13:51:17 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Sun Dec 16 13:04:03 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.011	5.342	609109	2308119	100.000	100.000
	System Monitoring Compounds						
	Target Compounds						
3)	alpha-BHC	9.581	8.329	22004	61351	2.422	2.052
4)	Hexachlor...	9.738	8.116	30755	80951	2.435	2.007m
5)	beta-BHC	10.858	9.609	11022	28787	2.498	2.079
6)	gamma-BHC...	10.251	9.069	19156	55415	2.410	2.065
7)	delta-BHC	11.358	10.132	18940	50871	2.470	2.035m
8)	Heptachlor	11.444	9.749	17205	56535	2.300	2.048
9)	Aldrin	11.998	10.336	21676	54263	2.493	2.040
10)	Isodrin	12.528	11.126	19086	52426	2.672	2.322
11)	Heptachlo...	12.718	11.416	17828	49511	2.209	2.024
12)	gamma-Chl...	13.238	11.829	19331	51839	2.471	2.092
13)	Endosulfan I	13.361	12.032	18038	46968	2.561	2.132
14)	alpha-Chl...	13.311	11.969	19559	52366	2.413	2.096
15)	Dieldrin	13.781	12.472	17468	47779	2.332	2.017
16)	4,4'-DDE	13.591	12.329	19632	50238	2.471	2.067
17)	Endrin	14.148	12.946	16485	45347	2.434	2.092
18)	Endosulfa...	14.594	13.379	16839	45029	2.392	2.098
19)	4,4'-DDD	14.428	13.212	13855	36764	2.420	2.073
20)	Endrin Al...	14.774	13.739	15328	39763	2.451	2.123
21)	Endosulfa...	15.248	14.062	15882	44003	2.322	2.063m
22)	4,4'-DDT	14.921	13.626	7796	33995	1.927	2.032
23)	Endrin Ke...	15.931	14.992	14541	46090	2.067	1.961
24)	Methoxychlor	15.668	14.726	5382	19300	2.182	1.996
	SemiQuant Compounds - Not Calibrated on this Instrument						

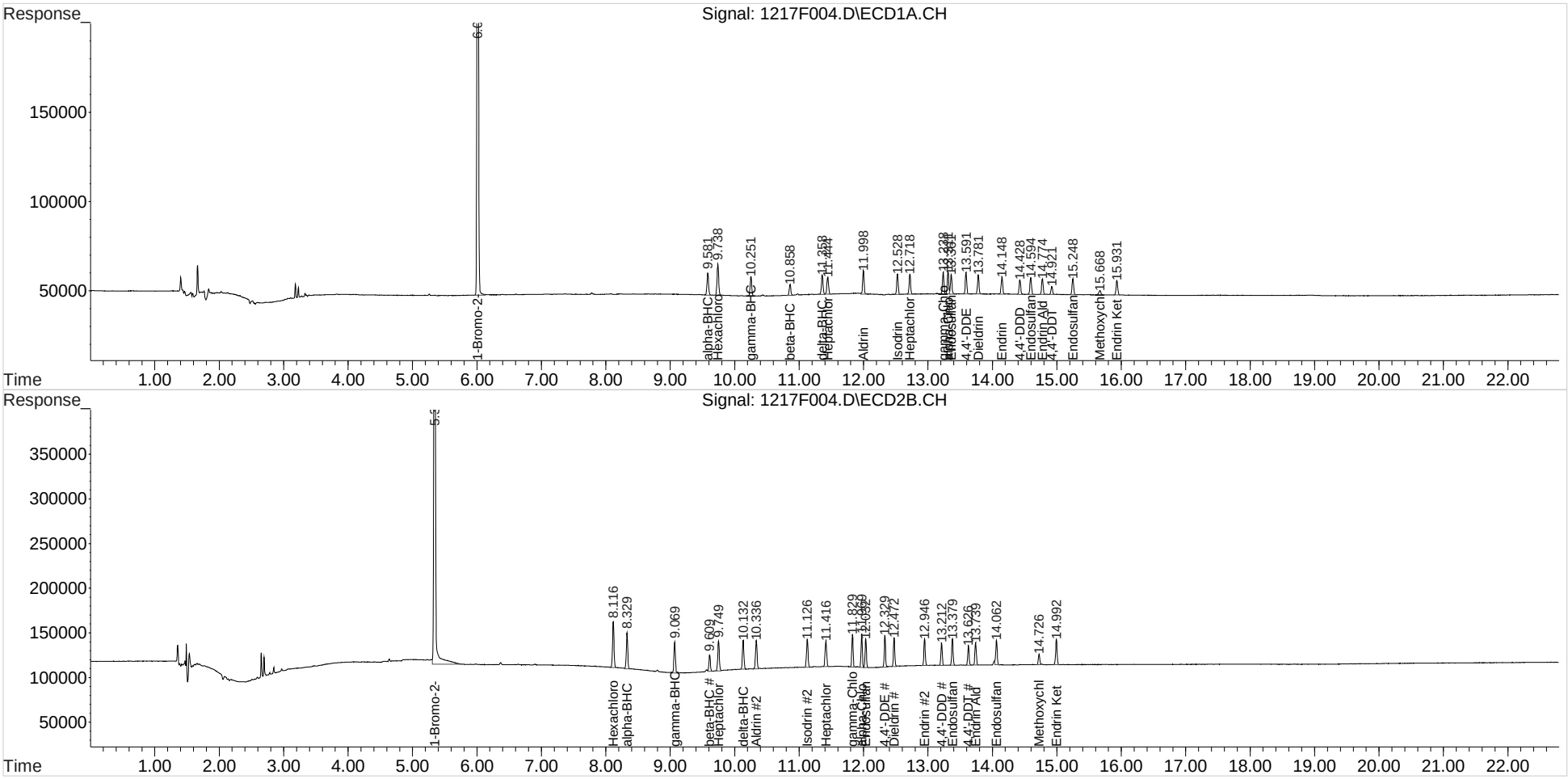
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121718CAL\1217F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17 Dec 2018 1:18 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 17 13:51:17 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Sun Dec 16 13:04:03 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



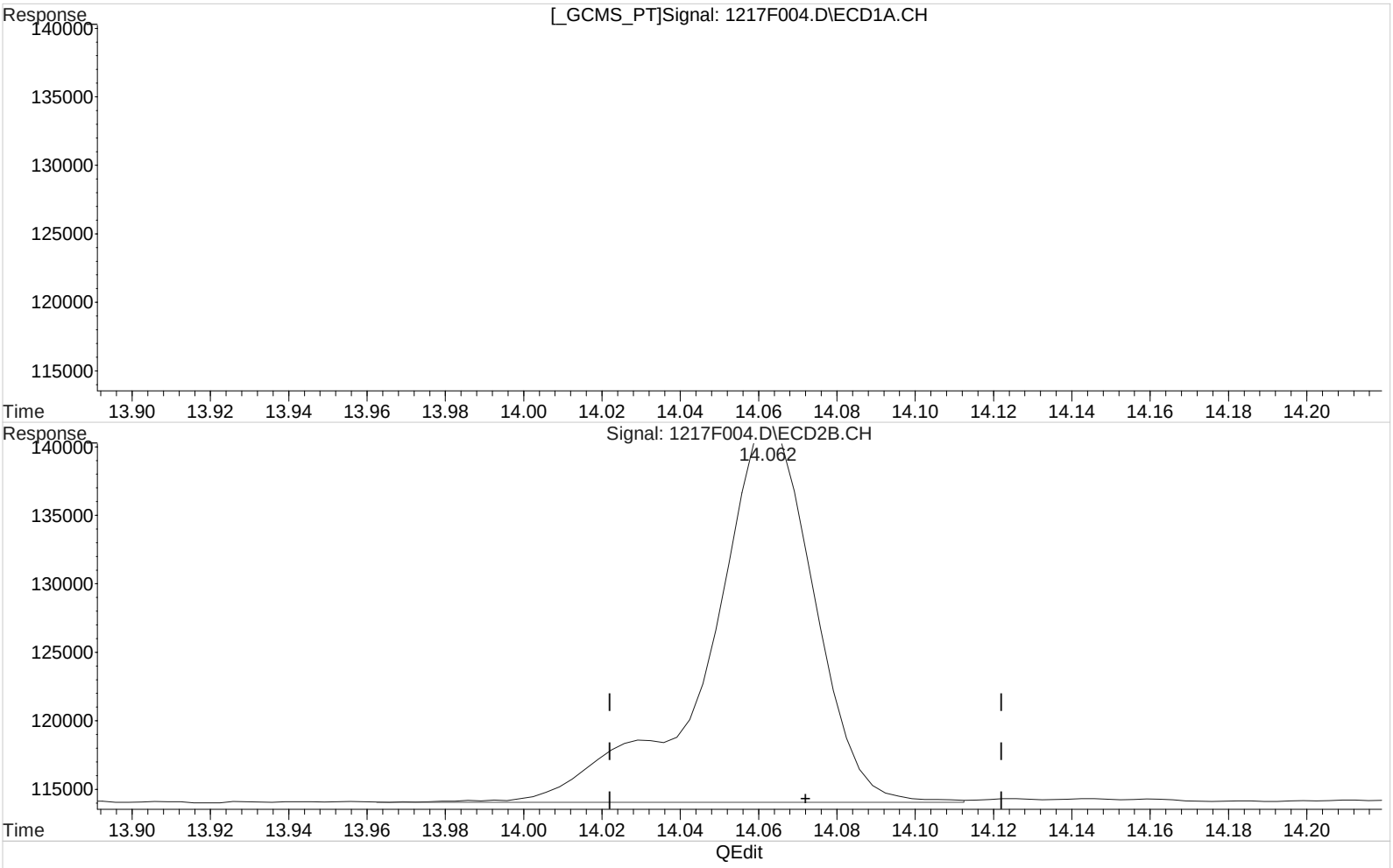
Quantitation Report (Qedit)

1st MC 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121718CAL\1217F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17 Dec 2018 1:18 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 17 13:49:46 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Sun Dec 16 13:04:03 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(21) Endosulfan Sulfate

15.248min 2.322 ug/L

response 15882

Manual Integration:

Before

12/17/18

(21) Endosulfan Sulfate #2

14.062min 2.412 ug/L

response 51450

(+) = Expected Retention Time

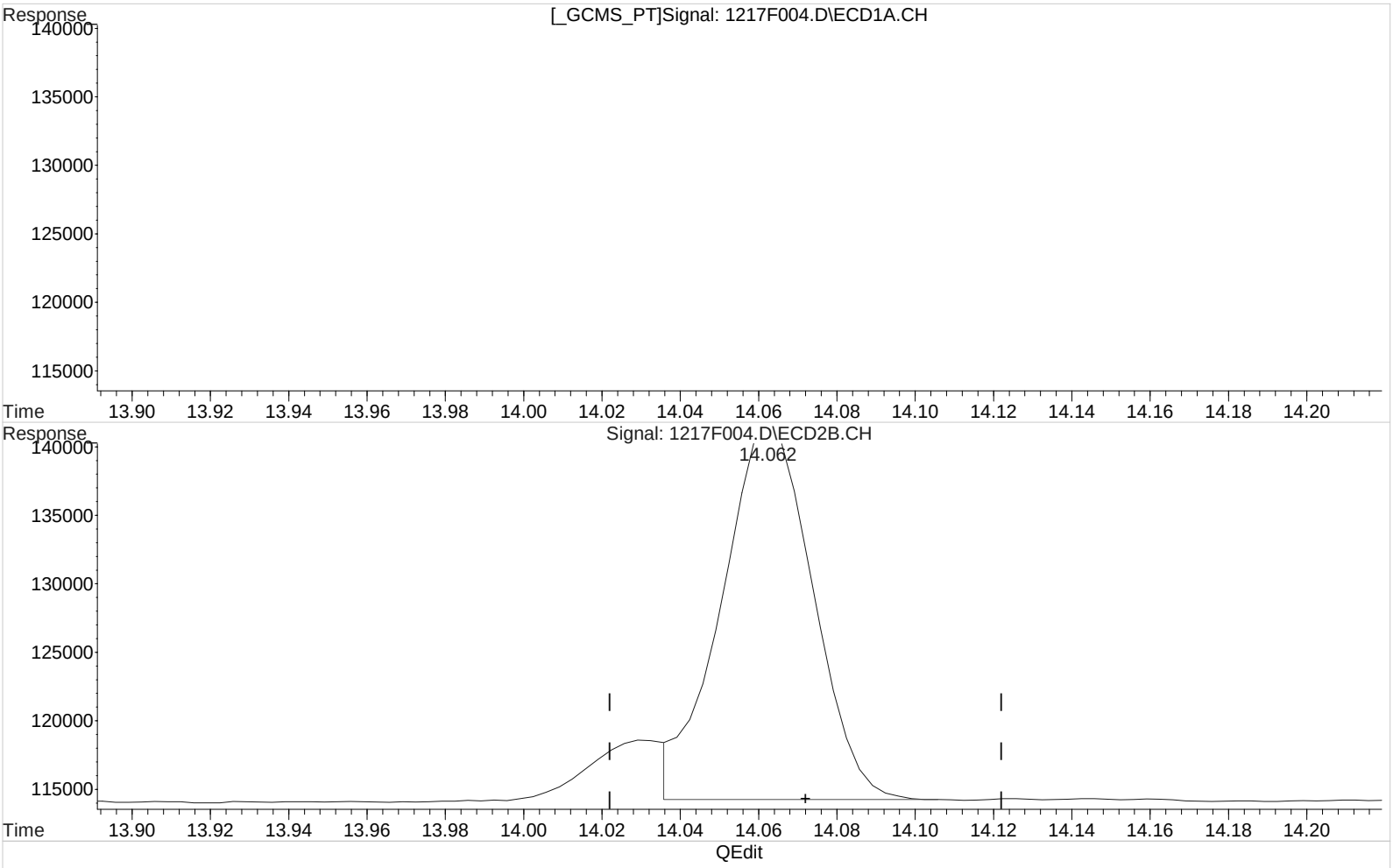
Quantitation Report (Qedit)

1st MC 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121718CAL\1217F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17 Dec 2018 1:18 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 17 13:49:46 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Sun Dec 16 13:04:03 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(21) Endosulfan Sulfate

15.248min 2.322 ug/L

response 15882

Manual Integration:

After

Baseline/Shoulder

12/17/18

(21) Endosulfan Sulfate #2

14.062min 2.063 ug/L m

response 44003

(+) = Expected Retention Time

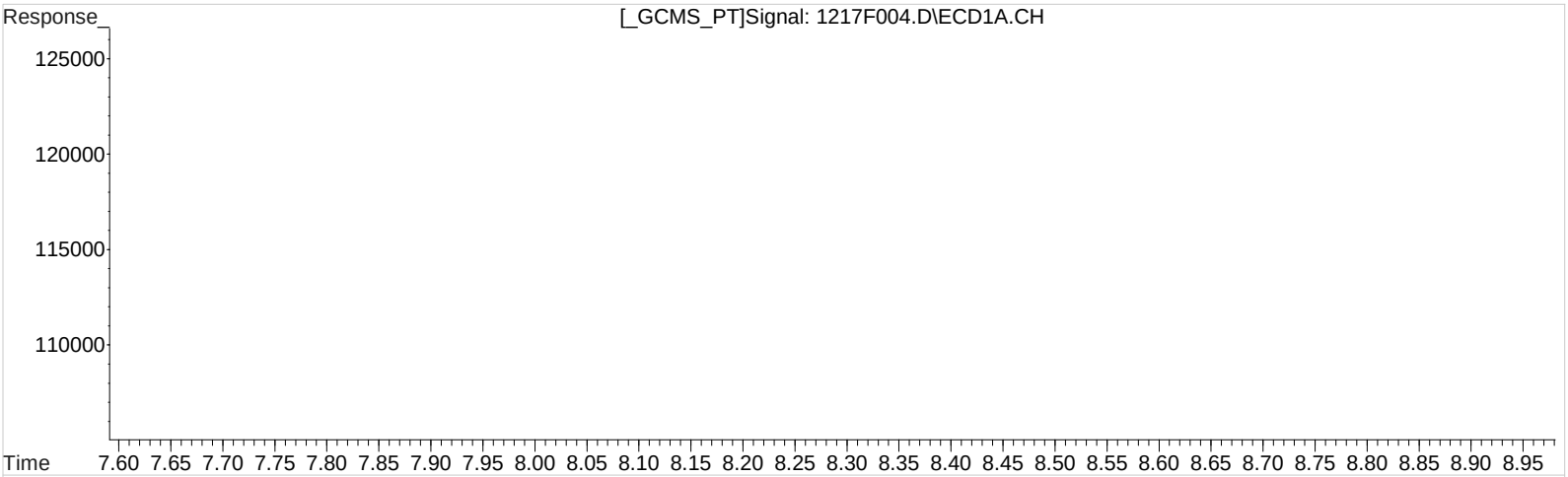
Quantitation Report (Qedit)

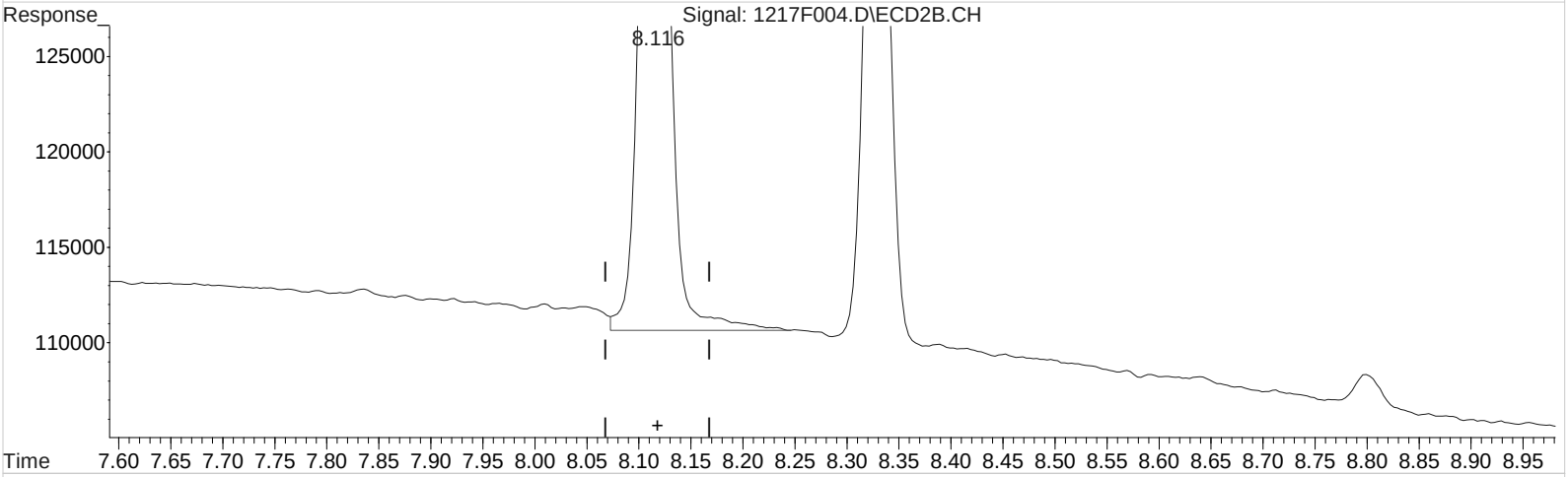
1st MC 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121718CAL\1217F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17 Dec 2018 1:18 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 17 13:45:17 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Sun Dec 16 13:04:03 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.738min 2.435 ug/L

response 30755

Manual Integration:

Before

12/17/18

(4) Hexachlorobenzene #2

8.116min 2.139 ug/L

response 86270

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st MC 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121718CAL\1217F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17 Dec 2018 1:18 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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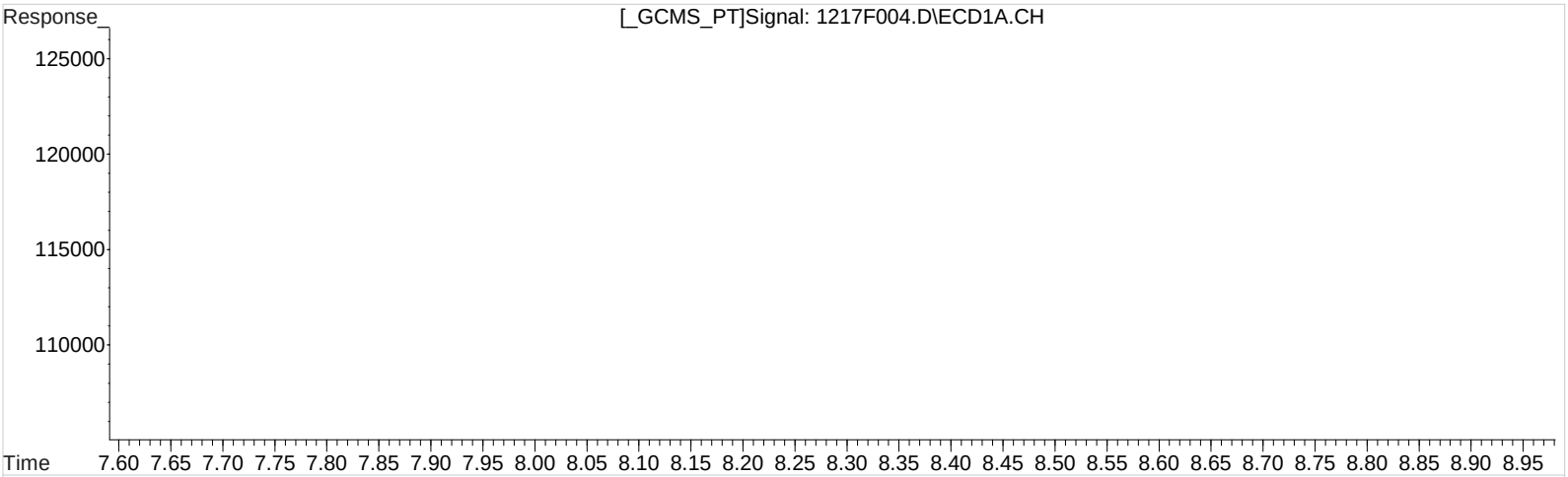
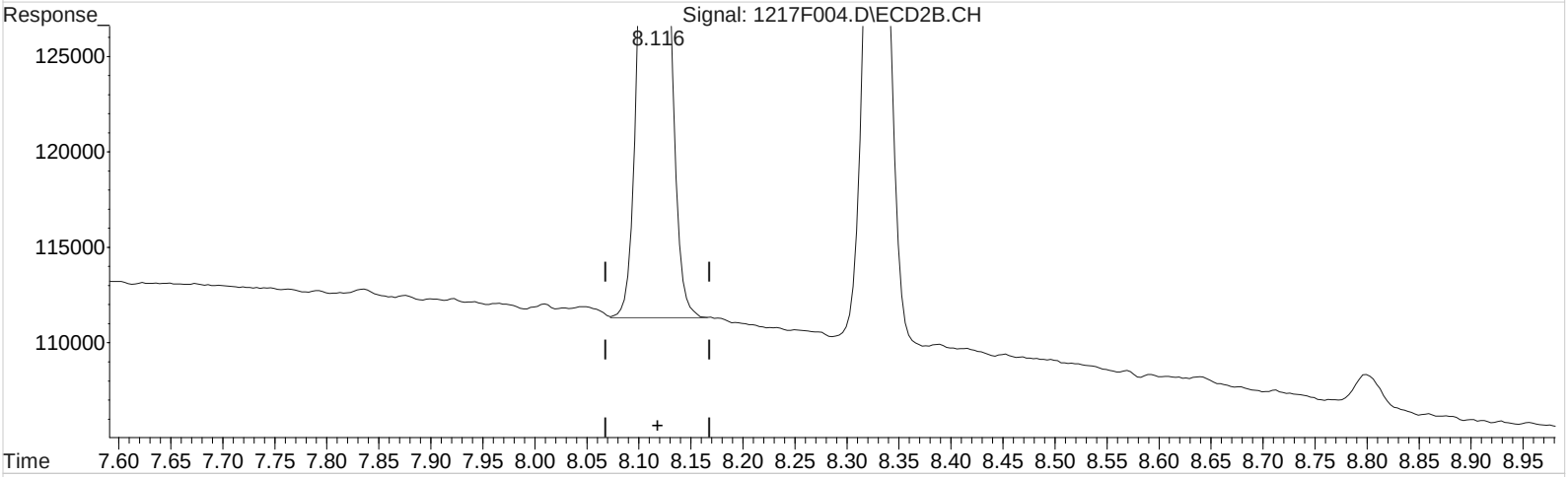
Quant Title : CAL15743 XP-05-2-19
QLast Update : Sun Dec 16 13:04:03 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.738min 2.435 ug/L

response 30755

Manual Integration:

After

Baseline/Shoulder

12/17/18

(4) Hexachlorobenzene #2

8.116min 2.007 ug/L m

response 80951

(+) = Expected Retention Time

Quantitation Report (Qedit)

1st MC 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121718CAL\1217F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17 Dec 2018 1:18 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 17 13:45:17 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Sun Dec 16 13:04:03 2018
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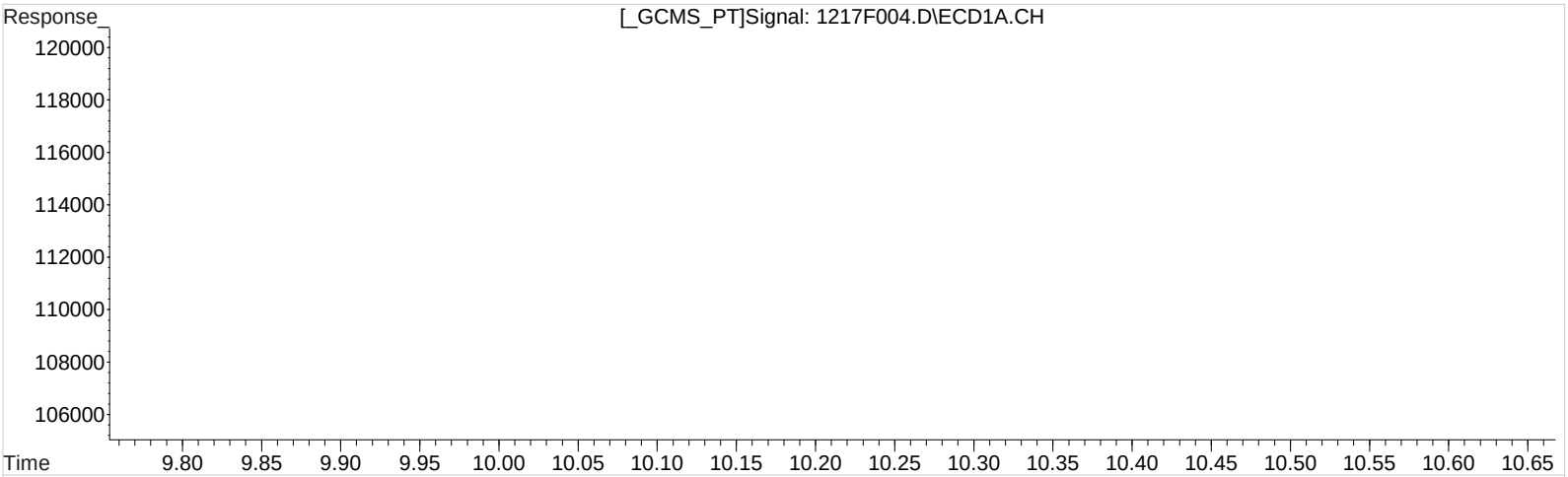
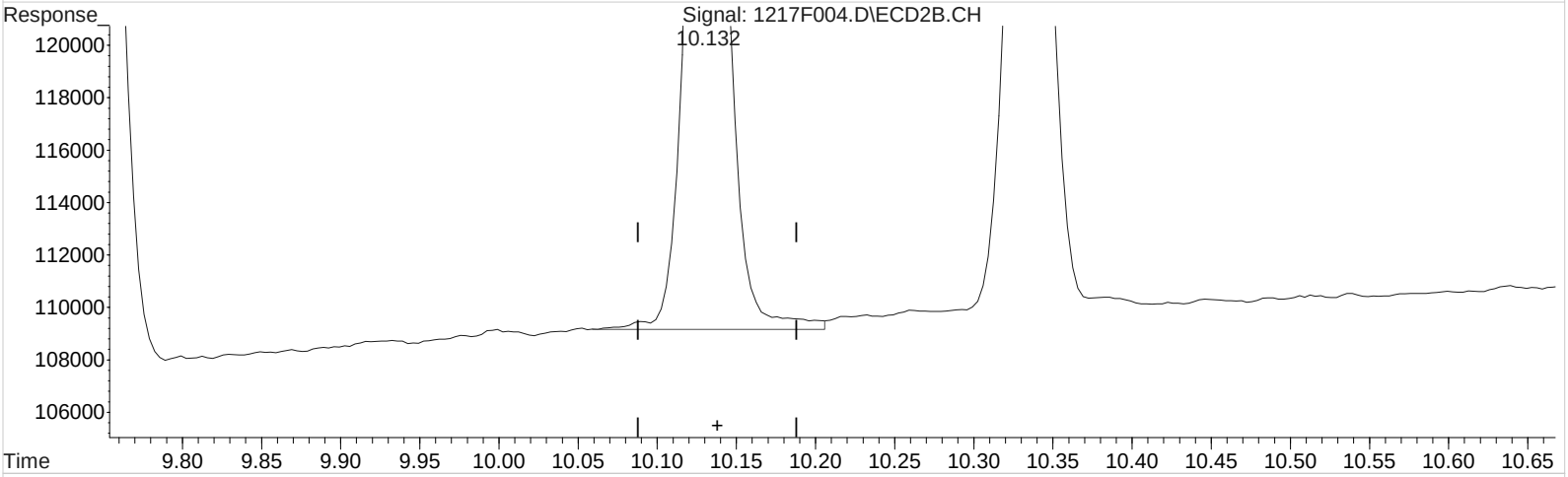
Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(7) delta-BHC

11.358min 2.470 ug/L

response 18940

Manual Integration:

Before

12/17/18

(7) delta-BHC #2

10.132min 2.130 ug/L

response 53238

(+) = Expected Retention Time

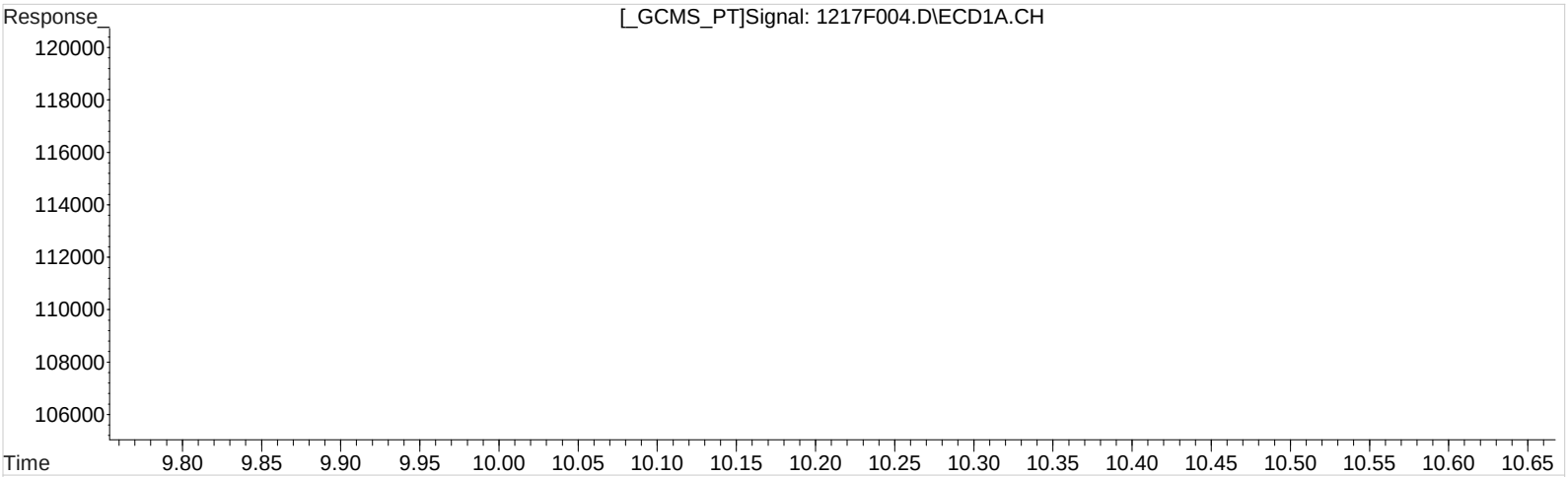
Quantitation Report (Qedit)

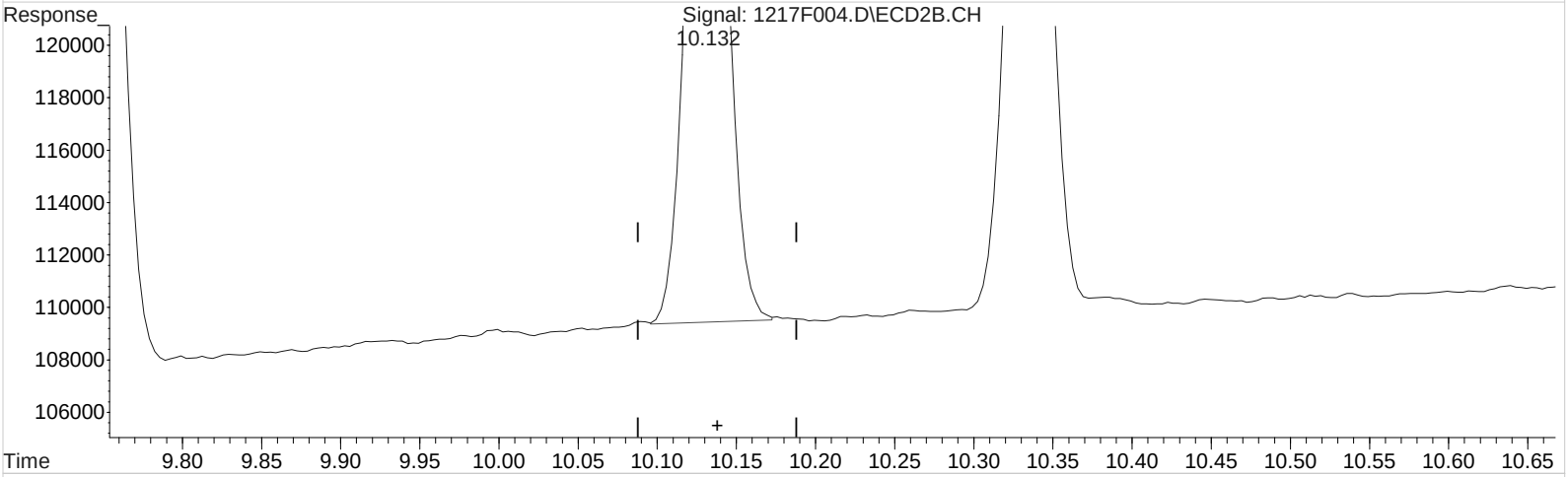
1st MC 12/18/18
2nd UA 12/19/18

Data File : J:\GC23\data\121718CAL\1217F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17 Dec 2018 1:18 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 17 13:45:17 2018
Quant Results File: GC23-121418-8081.RES

Quant Method : J:\GC23\METHODS\GC23-121418-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Sun Dec 16 13:04:03 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(7) delta-BHC

11.358min 2.470 ug/L

response 18940

Manual Integration:

After

Baseline/Shoulder

12/17/18

(7) delta-BHC #2

10.132min 2.035 ug/L m

response 50871

(+) = Expected Retention Time

Preparation Information

Group ID:	KWG1806665	**Prep Method:**	EPA 3511	**Prep Date:**	12/21/18 14:40
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.
K1812382-001	SL0594	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806665-1	Lab Control Sample	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806665-2	Duplicate Lab Control Sampl	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806665-3	Lab Control Sample	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806665-4	Duplicate Lab Control Sampl	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806665-5	Method Blank	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806665-6	Method Blank	8081B Pest OC TCLP	SOIL	100ml	5ml

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1812382-001	1707454					
KWG1806665-1	1707455					
KWG1806665-2	1707456					
KWG1806665-3	1707457					
KWG1806665-4	1707458					
KWG1806665-5	1707459					
KWG1806665-6	1707460					

1/11

Comments: 8l, TIC

Started By: TAndrews Assisted By: _____ Training

Completed By: TAndrews Assisted By: _____ Yes / No

Reviewed By: _____ Date: 1/19 Storage: Park knight J1-7 Yes / No

Chain of Custody

Relinquished By: _____ Date: 12.21.18

Received By: _____ Date: 12/28/18 Extracts Examined: Yes / No

Preparation Information

Group ID: KWG1806665 **Prep Method:** EPA 3511 [redacted] **Prep Date:** 12/21/18 00:00
Department: Semivoa GC

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext.	pH	Int. Vol.	Final Vol. MC	Surr. Added	Spike Added
1	K1812382-001	SL0594	.06	/	8081B Pest OC TCLP	SOIL	100	7	/	5	50	-
2	KWG1806665-1	Lab Control Sample 81			8081B Pest OC TCLP	SOIL	100	5		5		50
3	KWG1806665-2	Duplicate Lab Control Sample			8081B Pest OC TCLP	SOIL	100	5		5		"
4	KWG1806665-3	Lab Control Sample T/C			8081B Pest OC TCLP	SOIL	100	5		5		50/50
5	KWG1806665-4	Duplicate Lab Control Sample			8081B Pest OC TCLP	SOIL	100	5		5		"
6	KWG1806665-5	Method Blank LB			8081B Pest OC TCLP	SOIL	100	5		5		-
7	KWG1806665-6	Method Blank			8081B Pest OC TCLP	SOIL	100	5	/	5		-

Prep Run: 328786

Comments: Instrument Volume for QC 12-21-18 TA

Surrogate ID: PCB7-52G 0.5ppm xp 5-8-19 50uL 4I

Spike ID: GCPS8-49G 0.5ppm xp 12-29-18 50uL 4F / GCPS8-48L 20ppm xp 5-19-19 50uL / GCPS8-43B 10ppm xp 2-16-19

Witness: D Madden 12.21.18

Started By: TAndrews Assisted By: —

Completed By: TAndrews Assisted By: —

Pest/PCB/PAH by 3511

Service Request # K1812382 **Work Group # Pest:** KWG1806665
PCB: ~~
PAH: ~~

Solvent Lot # 209663

Extraction Start (time/date/initial): 1440 122118 TA

Extraction Stop (time/date/initial): 1511 122118 TA

NaCL Lot# 171129 5208
Sulfate Lot # ~~

Carbon Clean-up (Ext-Car)(time/date/initial): ~~ Carbon Lot # ~~
Hexane Lot # ~~

Florisil Clean-up (Ext-Flor)(time/date/initial): ~~ Florisil Lot # ~~
Hexane Lot # ~~

Sulfuric Acid Clean-up (3665) (time/date/initial): ~~ Acid Lot # ~~

Other Clean-up: ~~ ☐ all samples ☐ some samples: ~~

Pipette (2 mL) Lot # ~~ Pipette (1 mL) Lot # 20717645

Pest Vial: Yellow Vial Storage: Dark Knight U1-7
PCB Vial: ~~ Vial Storage: ~~
PAH Vial: ~~ Vial Storage: ~~

Archived Extract Storage: Berry Pie

Additional Comments: ~~

~~

☑ Hold times met (if no, reason: ~~)
☑ Prep date, time, method, department, product code correct in stealth
☑ Spike information and Q.C. correct (insufficient volume or mass recorded if no Q.C.)
☑ Weights/Volumes and units correct on raw and final bench sheets
☑ Sample IDs have been checked - bottle numbers appended if required
☑ Names present for: started by, completed by, relinquished by, and witnessed by. Training circled.
☑ Extract storage recorded
☑ Additional prep sheet completely filled out (NA or line out blanks)
☑ All clean-ups have been noted on additional prep sheet
☑ Signed service request with Form V, if applicable, has been attached

TCLP Extraction Worksheet

Service Request Number(s): K1812382

Method : TCLP 1311 [X] SPLP 1312 [ ] Wet Ext. [ ] MEP [ ] If Autofluff sample is used please place an X in this box [ ] Prep Run# : 328582

Note: 1 Blank needed per every 20 extracts.

Sample Number	Teflon Extraction Vessel #	Sample Description (Solid, Liquid, Multiphasic)	Partical Size < 1cm ?	Solution Determination Weight (g)	Initial pH	Aliquot of 1N HCl (mL)	Final pH	Solution To Be Used	Extraction Weight (g)	Extraction Solution Volume (mL)	Post-Extraction pH
K1812382-1	26	S	Y	5.19	2.68	3.5	5.65	2	100.24	2000	5.69
MB	36	L	-	-	-	-	-	↓	-	↓	-
					CCL 12/R						

pH Meter Calibrated at pH4 & pH7 Today? [X] 12/19/18 12/20/18 pH Meter I.D. K-pH-08 Balance I.D. 57 Date Balance Checked: 12/19/18

Extraction Solution Prep date: 12/6/18 Tumbler # 1 Thermometer# 664244 Hot Plate Temp °C(50°C): 50

Today's Solution pH: 2.86 12/19/18 Extraction Solution I.D. MET-0G-73-I Filter Lot # 180145 HCl I.D. RE1-48-A

Extraction Started Time: 1430 Date: 12/19/18 Disposable Extraction Vessel Lot #: -

Extraction Finished Time: 815 Date: 12/20/18

Tumbler Rotational Speed (28 - 32 rpm): 29.6

Room Temperature at the Beginning of Extraction (Temp. Range 21° C - 25°C): 21.83

Analyst: [signature] Date: 12/19/18 Reviewer: [signature] Date: 12/21/18

r:\icp\misc\digforms TCLP Extraction Benchsheet 10-10-171

Pre-Prep Information Benchsheet

Prep Run #: 328582 **Prep Method:** **Team:** **Container Lot No:** **Prep Due Date:** Dec-28-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1812382-001	.01	TCLP	100.24g		PrepComments:~~SSPAIN K~~-Balance-51 CLUKKEN
2	K1812382-001 DUP KQ1818459-01	.01	TCLP	5.19g		PrepComments:~~SSPAIN K~~-Balance-51 CCL 12/19

Relinquished By: Cody Lillo	Date/Time: 12/19/18 11:17	Received By: Cody Lillo	Date/Time: 12/19/18 11:27

Chlorinated Herbicides

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 328735 **Prep WorkFlow:** OrgHerbLP **Status:** Prepped
Team: Semivoa GC/CWILLIAMS **Prep Method:** Method **Prep Date/Time:** 12/21/18 11:00 AM
Number of Copies to make: 1

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	K1812382-001	SL0594	.06	8151A/HERB_TCLP		Soil	10.00mL	20.00mL	
2	KQ1818602-01	K1812382-001 MS	.06	8151A/HERB_TCLP		Solid	10.00mL	20.00mL	
3	KQ1818602-02	K1812382-001 DMS	.06	8151A/HERB_TCLP		Solid	10.00mL	20.00mL	
4	KQ1818602-03	LCS		8151A/HERB_TCLP		Solid	10.00mL	20.00mL	
5	KQ1818602-04	MB		8151A/HERB_TCLP		Solid	10.00mL	20.00mL	
6	KQ1818602-05	MB		8151A/HERB_TCLP		Solid	10.00mL	20.00mL	

Spiking Solutions

Name: 8151A 5-500ppm Herbicides matrix spike Inventory ID 195340 Logbook Ref: penta01-94I Expires On: 05/29/2019

KQ1818602-01 500.00µL KQ1818602-02 500.00µL KQ1818602-03 500.00µL

Name: 8151A 5ppm Herbicide surrogate Inventory ID 195341 Logbook Ref: Penta01-94H Expires On: 05/29/2019

K1812382-001 500.00µL KQ1818602-01 500.00µL KQ1818602-02 500.00µL KQ1818602-03 500.00µL KQ1818602-04 500.00µL KQ1818602-05 500.00µL

Preparation Steps

Step:	Extraction	Step:	Final Volume
Started:	12/21/18 11:00	Started:	12/28/18 10:35
Finished:	12/21/18 13:05	Finished:	12/28/18 11:13
By:	CWILLIAMS	By:	WVANDERHOFF
Comments		Comments	

Comments: _____

Reviewed By: _____ Date: 1/3/19

Chain of Custody

Relinquished By: _____ Date: 12-28-18

Received By: _____ Date: 12/28/18

Extracts Examined (Yes) No

Preparation Information Benchsheet

Due 12-28/1-11

rep Run#: 328735
eam: Semivoa GC/CWILLIAMS
Number of Copies to make: 1

Prep WorkFlow: OrgHerbLP
Prep Method: Method

Status: Draft
Prep Date/Time: 12/21/18 08:57 AM

#	Lab Code	Client ID	B#	√	Method /Test	Matrix	Amt. Ext. mL	pH	Int. Vol mL	Final Vol mL	Surr Amt µl	Spike Amt µl
1	**K1812382-001**	SL0594	.06	✓	8151A / HERB_TCLP	Soil	10		10	20	500	—
2	**KQ1818602-01**	K1812382-001 MS	.06	✓	8151A / HERB_TCLP	Solid	10		10	20	"	500
3	**KQ1818602-02**	K1812382-001 DMS	.06	✓	8151A / HERB_TCLP	Solid	10		10	20	"	"
4	**KQ1818602-03**	LCS	—	—	8151A / HERB_TCLP	Solid	10		10	20	"	—
5	**KQ1818602-04**	MB LB	—	—	8151A / HERB_TCLP	Solid	10		10	20	"	—
6	**KQ1818602-05**	MB	—	—	8151A / HERB_TCLP	Solid	10		10	20	"	—

Comments:

Surrogate ID: Penta-01-94H Exp 5/29/19 5 ppm 500 µl (Epp 3B)

Spike ID: Penta-01-94I Exp 5/29/19 5-500 ppm 500 µl (EPA 3

Witnessed By: DMadden 12.21.18

Analyst: CWilliams

Assisted By: —

Additional Prep Information for EPA 8151A
TCLP Herbicides

Service Request # K1812382 **Work Group #** KQ1818602

Pre-Prep Method: TCLP 1311	Pre-Prep Method:	Pre-Prep Method:
SR # K1812382	SR #	SR #
Pre-Prep (date/time)	Pre-Prep (date/time)	Pre-Prep (date/time)
Start: 12/19/18 14:30	Start:	Start:
Stop: 12/20/18 18:15	Stop:	Stop:

37% KOH Lot # 0203-307 N-Evap Thermometer ID: X-SUM-003

Temp as measured: 60 °C Correction factor: 0.0 °C Adjusted temp: 60 °C

Saponification Start (time/date/initial): 11:00 12/21/18 CW

Saponification Stop (time/date/initial): 12:00 12/21/18 CW

25% Sulfuric Acid Lot # 0203-317 Ethyl Ether Lot # OU407-US

Extraction Start (time/date/initial): 12:27 12/21/18 CW

Extraction Stop (time/date/initial): 12:55 12/21/18 CW

Acidified Sulfate Lot # 0203-28H

Pipette (5 mL) Lot # 24316647

Diazomethane Lot # DZ03-40A

Derivatization Start (time/date/initial): 10:35 12-28-18 WS

Derivatization Stop (time/date/initial): 11:13 12-28-18 WS

Solvent Exchange to Iso-Octane (time/date/initial): 11:13 12-28-18 WS

Iso-Octane Lot # DM 121 N-Evap Thermometer ID: DNB-012

Temp as measured: 22 °C Correction factor: 0.0 °C Adjusted temp: 22 °C

Pipette (2 mL) Lot # 31416646

Vial: red Vial Storage: Hufflepuff A1-6

Archive Storage:

Additional Comments:

Bench Sheet Review Check List	
☑	Hold times met (if no, reason:)
☑	Prep date, time, method, department, product code correct in stealth
☑	Spike information and Q.C. correct (insufficient volume or mass recorded if no Q.C.)
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked - bottle numbers appended if required
☑	Names present for: started by, completed by, relinquished by, and witnessed by. Training circled.
☐	Extract storage recorded
☑	Additional prep sheet completely filled out (NA or line out blanks)
☑	All clean-ups have been noted on additional prep sheet
☑	Signed service request with Form V, if applicable, has been attached

TCLP Extraction Worksheet

Service Request Number(s): K1812382

Method : TCLP 1311 [X] SPLP 1312 [ ] Wet Ext. [ ] MEP [ ] If Autofluff sample is used please place an X in this box [ ] Prep Run# : 328582

Note: 1 Blank needed per every 20 extracts.

Sample Number	Teflon Extraction Vessel #	Sample Description (Solid, Liquid, Multiphasic)	Partical Size < 1cm ?	Solution Determination Weight (g)	Initial pH	Aliquot of 1N HCl (mL)	Final pH	Solution To Be Used	Extraction Weight (g)	Extraction Solution Volume (mL)	Post-Extraction pH
K1812382-1	26	S	Y	5.19	8.68	3.5	5.65	2	100.24	2000	5.69
MB	36	L	-	-	-	-	-	↓	-	↓	-

CEL 12/18

pH Meter Calibrated at pH4 & pH7 Today? [X] 12/19/18 12/20/18 pH Meter I.D. K-pH-08 Balance I.D. 57 Date Balance Checked: 12/19/18

Extraction Solution Prep date: 11/6/18 Tumbler # 1 Thermometer# 664244 Hot Plate Temp °C(50°C): 50

Today's Solution pH: 2.86 12/19/18 Extraction Solution I.D. MET-06-73-I Filter Lot # 180145 HCl I.D. RE1-48-A

Extraction Started Time: 1430 Date: 12/19/18 Disposable Extraction Vessel Lot #: -

Extraction Finished Time: 815 Date: 12/20/18

Tumbler Rotational Speed (28 - 32 rpm): 29.6

Room Temperature at the Beginning of Extraction (Temp. Range 21° C - 25°C): 21.83

Analyst: [signature] Date: 12/19/18 Reviewer: [signature] Date: 12/21/18

Pre-Prep Information Benchsheet

Prep Run #: 328582 **Prep Method:** **Team:** **Container Lot No:** **Prep Due Date:** Dec-28-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1812382-001	.01	TCLP	100.24g		PrepComments:~~SSPAIN K~~-Balance-51 CLVRKEN
2	K1812382-001 DUP KQ1818459-01	.01	TCLP	5.19g		PrepComments:~~SSPAIN K~~-Balance-51 5cL 12/19

Relinquished By:	Date/Time:	Received By:	Date/Time:
Cody Lilla	12/19/18 11:17	Cody Lilla	12/19/18 11:27

Table 7
Waste Characterization Sample Containers, Preservation, and Holding Time Requirements

Parameter	Matrix	Container [a]		Laboratory	Preservation	Holding Time	Sample Size [b]
		Type	Size				
Soil							
Flashpoint	Soil	WMG	4 oz	ALS-Kelso	4±2°C	None	2 g
pH	Soil	WMG	4 oz	ALS-Kelso	4±2°C	Analyze immediately	10 g
Reactive cyanide	Soil	WMG	4 oz	ALS-Holland	4±2°C	28 days	10 g
Reactive sulfide	Soil	WMG	4 oz	ALS-Kelso	Zinc acetate	14 days	10 g
Total sulfur [c]	Soil	WMG	4 oz	ALS-Kelso	4±2°C	None	5 g
Total sulfate [c]	Soil	WMG	4 oz	ALS-Kelso	4±2°C	28 days	2.5 g
TPH - GRO	Soil	WMG	4 oz	ALS-Kelso	4±2°C, methanol	14 days	5 g
TPH - DRO/RRO	Soil	WMG	4 oz	ALS-Kelso	4±2°C	14 days / 40 days [d]	50 g
PCB Aroclors	Soil	WMG	4 oz	ALS-Kelso	4±2°C	14 days / 40 days [d]	50 g
Asbestos	Soil	WMG	8 oz	ALS-Cincinnati	--	180 days	TBD
TCLP Extraction	Soil	WMG	16 oz	ALS-Kelso	4±2°C; no headspace	14 days [e]	200 g
TCLP Leachate							
TCLP Metals	Water	HDPE	125 mL	ALS-Kelso	4±2°C	180/180 days [f]	10 mL
TCLP Mercury	Water	HDPE	125 mL	ALS-Kelso	4±2°C	28/28 days [f]	10 mL
TCLP VOCs	Water	Glass	40 mL	ALS-Kelso	4±2°C; no headspace	14/14 days [f]	40 mL
TCLP SVOCs	Water	AG	1 L	ALS-Kelso	4±2°C	7/40 days [f]	1 L
TCLP Pesticides	Water	AG	125 mL	ALS-Kelso	4±2°C	7/40 days [f]	125 mL
TCLP Herbicides	Water	AG	1 L	ALS-Kelso	4±2°C	7/40 days [f]	1 L

Notes:
a. The size and number of containers may be modified by the analytical laboratory.
b. Sample sizes are estimated.
c. Total sulfur and total sulfate will only be performed on samples with detections for reactive sulfide.
d. From sample collection, and from collection to analysis.
e. From sample collection to preparation of TCLP leachate.
f. From preparation of TCLP leachate to extraction, and from extraction to analysis.

AG: amber glass
DRO: diesel range organics
GRO: gasoline range organics
HDPE: high density polyethylene
PCB: polychlorinated biphenyl
RRO: residual range organics
TBD: to be determined
TCLP: toxicity characteristic leaching procedure
TPH: total petroleum hydrocarbons
WMG: wide mouth glass

Table 8
Laboratory Methods for Waste Characterization Samples

Parameter	Laboratory	Sample Preparation		Quantitative Analysis	
		Protocol	Procedure	Protocol	Procedure
Soil					
Flashpoint	ALS-Kelso	NA	NA	EPA 1020B	Setaflash, closed cup
pH	ALS-Kelso	NA	NA	EPA 9045D	Electrode
Reactive cyanide	ALS-Kelso	EPA 7.3.3.2	Distillation	EPA 9014	Titration / Spectrophotometry
Reactive sulfide	ALS-Holland	EPA 9030M	Distillation	EPA 9030M	Titration
Total sulfur [a]	Soil	EPA 9056A	Extraction	EPA 9056A	Ion chromatography
Total sulfate [a]	Soil	EPA 300.0M	Extraction	EPA 300.0M	Ion chromatography
TPH - GRO	Soil	EPA 5035	Purge and trap	EPA 8015C	GC/FID
TPH - DRO/RRO	Soil	EPA 3550C	Ultrasonic extraction	EPA 8015C	GC/FID
PCB Aroclors	Soil	EPA 3540C / EPA 3665A	Soxhlet extraction / sulfuric acid/permanganate cleanup	EPA 8082A	GC/ECD
Asbestos	ALS-Cincinnati	EPA Method 600/R-93-116	--	EPA Method 600/R-93-116	Microscopy
TCLP Extraction	ALS-Kelso	EPA 1311	Leaching procedure	NA	NA
TCLP Leachate					
TCLP Metals	ALS-Kelso	EPA 3010	Strong acid digestion	EPA 6010B/6020	ICP/ICP-MS
TCLP Mercury	ALS-Kelso	EPA 7470A	Acid digestion/oxidation	EPA 7470A	CVAA
TCLP VOCs	ALS-Kelso	EPA 5030B	Purge and trap	EPA 8260C	GC/MS
TCLP SVOCs	ALS-Kelso	EPA 3510C/3520C	Separatory funnel/continuous liquid-liquid extraction	EPA 8270D	GC/MS
TCLP Pesticides	ALS-Kelso	EPA 3510C/3520C	Separatory funnel/continuous liquid-liquid/	EPA 8081B	GC/ECD
TCLP Herbicides	ALS-Kelso	EPA 8151A	Extraction/esterification	EPA 8151A	GC/ECD

Notes:
a. Total sulfur and total sulfate will only be performed on samples with detections for reactive sulfide.

CVAA: cold vapor atomic absorption
DRO: diesel range organics
EPA: U.S. Environmental Protection Agency
GC/ECD: gas chromatography with electron capture detector
GC/FID: gas chromatography with flame ionization detector
GRO: gasoline range organics
ICP: inductively coupled plasma
ICP/MS: inductively coupled plasma mass spectrometry
NA: not applicable
PCB: polychlorinated biphenyl
RRO: residual range organics
SVOC: semivolatile organic compound
TBD: to be determined
TCLP: toxicity characteristic leaching procedure
TPH: total petroleum hydrocarbons
VOC: volatile organic compound

Table 9
Analytes, Method Reporting Limits, and Method Detection Limits for Waste Characterization Samples

Analyte	CAS Number	TCLP Regulatory Levels [a]	Method Detection Limit [b]	Method Reporting Limit
Soil				
Flashpoint	NA	NA	NA	NA
pH	12408-02-5	NA	NA	NA
Reactive cyanide (mg/kg)	57-12-5	NA	17.4	100
Reactive sulfide (mg/kg)	18496-25-8	NA	0.2	0.5
Total sulfur (mg/kg)	14808-79-8	NA	0.46	2.0
Total sulfate (mg/kg)	14808-79-8	NA	0.48	2.0
TPH - GRO (mg/kg)	8006-61-9	NA	0.62	5
TPH - DRO (mg/kg)	68334-30-5	NA	0.79	25
TPH - RRO (mg/kg)	NA	NA	2.9	100
PCB Aroclors (µg/kg-dry wt)				
Aroclor 1016	12674-11-2	NA	2.1	10
Aroclor 1221	11104-28-2	NA	2.1	20
Aroclor 1232	11141-16-5	NA	2.1	10
Aroclor 1242	53469-21-9	NA	2.1	10
Aroclor 1248	12672-29-6	NA	2.1	10
Aroclor 1254	11097-69-1	NA	2.1	10
Aroclor 1260	11096-82-5	NA	2.1	10
Aroclor 1262	37324-23-5	NA	2.1	10
Aroclor 1268	11100-14-4	NA	2.1	10
Asbestos	1332-21-4	NA	TBD	TBD
TCLP Metals (mg/L)				
Arsenic	7440-38-2	5.0	0.005	0.01
Barium	7440-39-3	100.0	0.0006	0.004
Cadmium	7440-43-9	1.0	0.0005	0.001
Chromium	7440-47-3	5.0	0.0009	0.004
Lead	7439-92-1	5.0	0.005	0.01
Mercury	7439-97-6	0.2	0.00002	0.0002
Selenium	7782-49-2	1.0	0.009	0.02
Silver	7440-22-4	5.0	0.002	0.004
TCLP VOCs (mg/L)				
Benzene	71-43-2	0.5	0.000062	0.0005
Carbon tetrachloride	56-23-5	0.5	0.000096	0.0005
Chlorobenzene	108-90-7	100.0	0.00011	0.0005
Chloroform	67-66-3	6.0	0.000072	0.0005
1,2-Dichloroethane	107-06-2	0.5	0.00008	0.0005
1,1-Dichloroethene	75-35-4	0.7	0.00008	0.005
2-Butanone (Methyl ethyl ketone)	78-93-3	200.0	0.0019	0.02
Tetrachloroethene	127-18-4	0.7	0.000099	0.0005
Trichloroethene	79-01-6	0.5	0.0001	0.0005
Vinyl chloride	75-01-4	0.2	0.000075	0.0005
TCLP SVOCs (mg/L)				
2-Methylphenol (o-Cresol)	95-48-7	200.0	0.00033	0.01
3-Methylphenol (m-Cresol)	108-39-4	200.0	--	--
4-Methylphenol (p-Cresol)	106-44-5	200.0	0.00048	0.01
Cresol	1319-77-3	200.0	--	--
1,4-Dichlorobenzene	106-46-7	7.5	0.00032	0.01
2,4-Dinitrotoluene	121-14-2	0.13	0.00027	0.01
Hexachlorobenzene	118-74-1	0.13	0.00063	0.01
Hexachlorobutadiene	87-68-3	0.5	0.00029	0.01
Hexachloroethane	67-72-1	3.0	0.00029	0.01
Nitrobenzene	98-95-3	2.0	0.00057	0.01
Petachlorophenol	87-86-5	100.0	0.0024	0.025
Pyridine	110-86-1	5.0	0.0075	0.025
2,4,5-Trichlorophenol	95-95-4	400.0	0.000018	0.00033
2,4,6-Trichlorophenol	88-06-2	2.0	0.000014	0.00033

Table 9
Analytes, Method Reporting Limits, and Method Detection Limits for Waste Characterization Samples

Analyte	CAS Number	TCLP Regulatory Levels [a]	Method Detection Limit [b]	Method Reporting Limit
TCLP Pesticides (mg/L)				
Chlordane	57-74-9	0.03	0.0001	0.0002
Endrin	72-20-8	0.02	0.00000069	0.00001
Heptachlor	76-44-8	0.008	0.00000036	0.00001
Heptachlor epoxide	1024-57-3	0.04	0.00000068	0.00001
gamma-BHC (Lindane)	58-89-9	0.4	0.00000084	0.00001
Methoxychlor	72-43-5	10.0	0.000001	0.00001
Toxaphene	8001-35-2	0.5	0.0002	0.0005
TCLP Herbicides (mg/L)				
2,4-D	94-75-7	10.0	0.000036	0.0004
2,4,5-TP (Silvex)	93-72-1	1.0	0.000045	0.0002

Notes:

a. From Guidelines for the Classification and Coding of Industrial and Hazardous Wastes, Texas Commission of Environmental Quality, November, 2014.

b. Method detction limits and reporting limits are periodically updated by laboratories. The limits in effect at the time of analysis will be used.

--: not available

DRO: diesel range organics
GRO: gasoline range organics
NA: not applicable
PCB: polychlorinated biphenyl
RRO: residual range organics
SVOC: semivolatile organic compound
TBD: to be determined
TCLP: toxicity characteristic leaching procedure
TPH: total petroleum hydrocarbons
VOC: volatile organic compound

1st UA 01/14/19
2nd TP 01/14/19

Validation Report

Data File: J:\gc24\data\011019\01100009.D\
Lab ID: K1812382-001
RunType: N/A
Matrix: Soil

Date Acquired: 1/10/19 15:39:00
Batch ID: 621714
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st UA 01/14/19
2nd TP 01/14/19

Quantitation Report

Data File:	J:\gc24\data\011019\01100009.D\	**Instrument:**	K-GC-24
Acqu Date:	1/10/19 15:39:00	**Vial:**	5
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1812382-001	**Raw Units:**	ppb

Bottle ID:	K1812382-001.06	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	12/9/18	**Receive Date:**	12/18/18

Analysis Lot:	621714	**Prep Lot:**	328735	**Report Group:**	K1812382
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	12/21/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18934

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	8.28	9.91	1638058	1604607	100.019	109.805	80	88	80	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.58 -0.04	11.28 -0.07	7946	14187	0.440	0.879	0.88U	1.8U	100 U	Y
2,4,5-TP (Silvex), TCLP	10.59 +0.01	12.65 +0.08	1960	25866	0.028	0.412	0.056U	0.82U	20 U	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Printed: 1/11/19 10:12
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Quantitation Report (QT Reviewed)

1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100009.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 3:39 pm Operator: UA
Sample : K1812382-001 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:53:51 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	8.277	9.908	1638058	1604607	100.019	109.805	
	Target Compounds							
1) m	Dalapon	3.234f	3.851	2073006	15168	100.494	0.971	#
3) m	Dicamba	8.471	10.074	20305	18012	0.406	0.399	
4) m	MCPP	8.604	10.234	19664	2263	50363.842	86854.129	#
5) m	MCPA	8.861	10.531	11937	8598	50208.717	83569.409	#
6) m	Dichloroprop	9.287	0.000	21040	0	901.171	N.D.	#
7) m	2,4-D	9.581	11.278f	7946	14187	0.440	0.879	#
8) m	2,4,5-TP ...	10.591	12.651f	1960	25866	0.028	0.412	#
9) m	2,4,5-T	11.044	12.944f	60975	16826	1.005	0.311	#
10) m	2,4-DB	11.577	13.658	3513	27356	0.453	1.550	#
11) m	Dinoseb	11.991	13.884	36948	28473	0.797	0.690	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

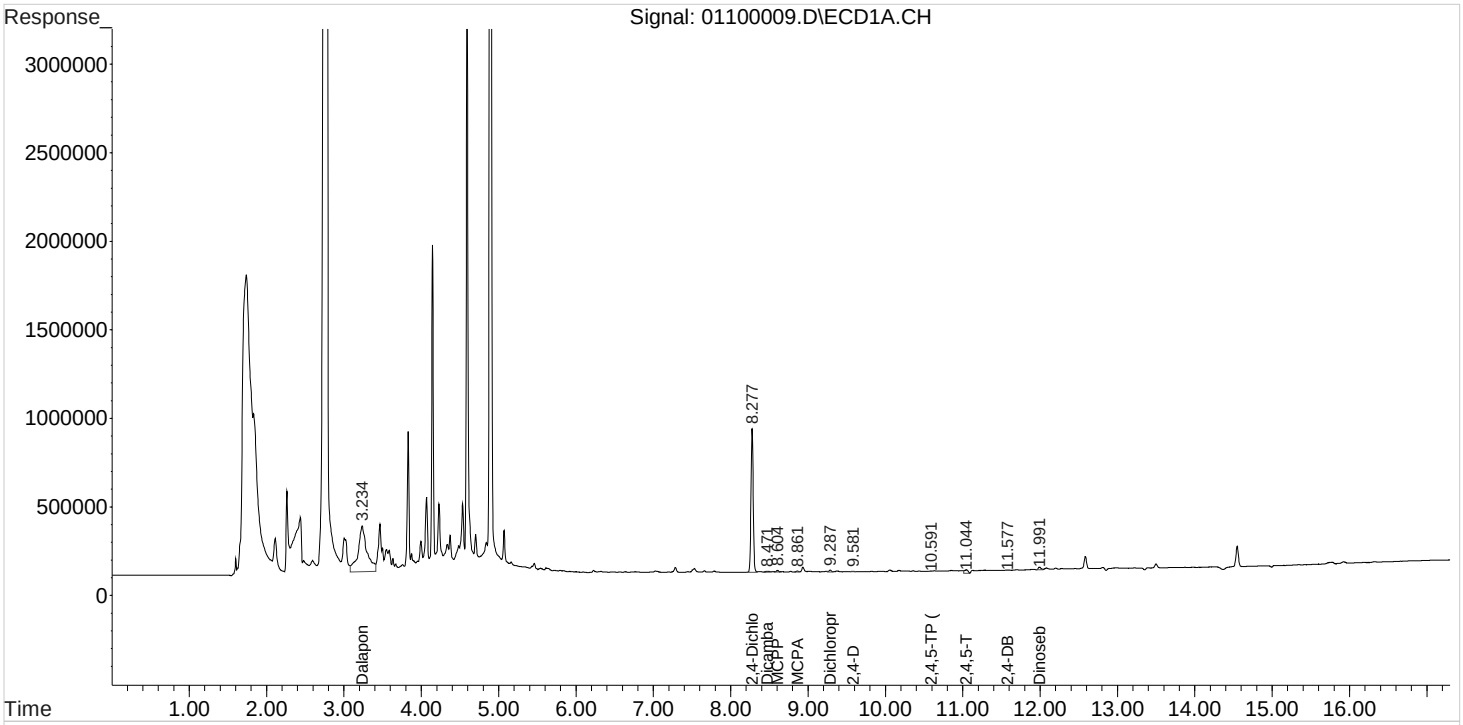
Quantitation Report (QT Reviewed)

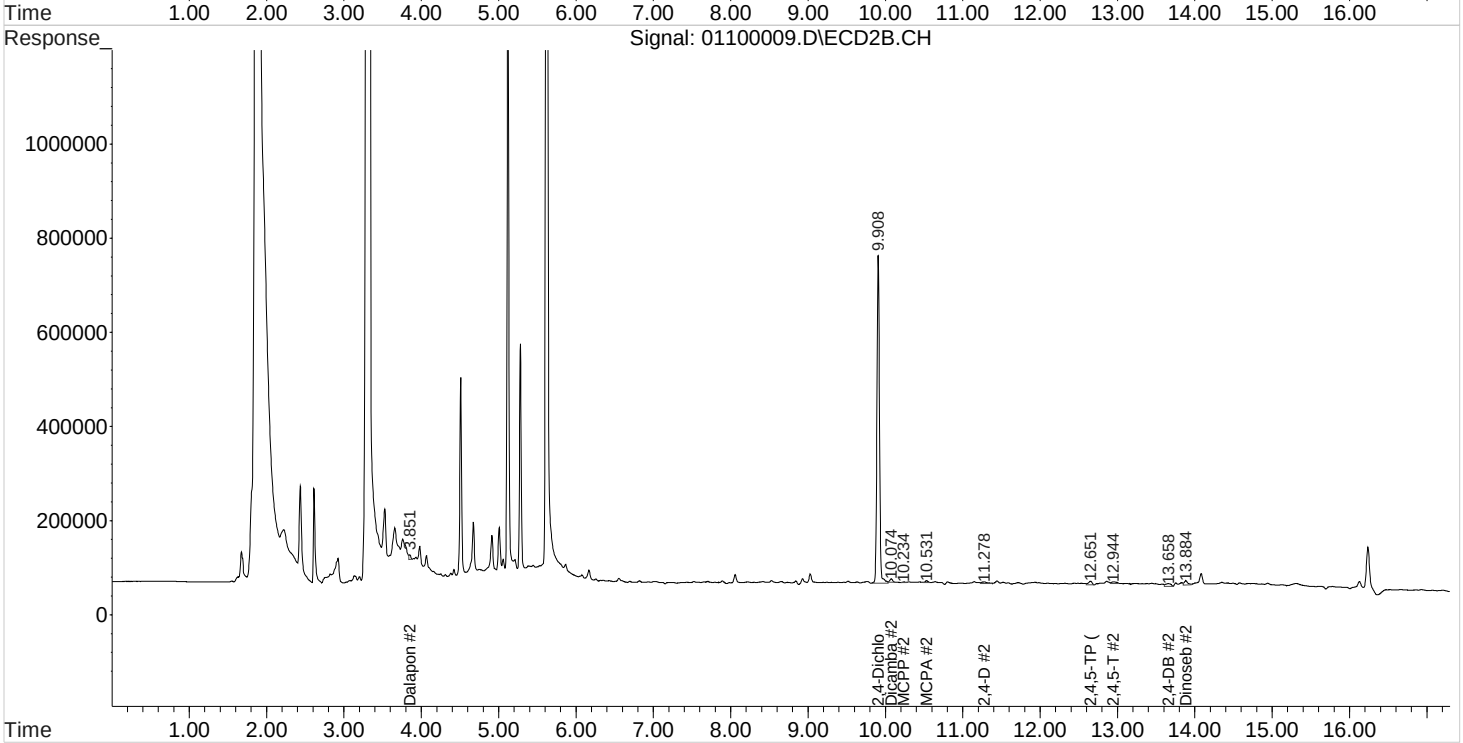
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100009.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 3:39 pm Operator: UA
Sample : K1812382-001 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:53:51 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st UA 01/14/19
2nd TP 01/14/19

Validation Report

Data File: J:\gc24\data\011019\01100010.D\
Lab ID: KQ1818602-04
RunType: MB
Matrix: Soil

Date Acquired: 1/10/19 17:36:00
Batch ID: 621714
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st UA 01/14/19
2nd TP 01/14/19

Quantitation Report

Data File:	J:\gc24\data\011019\01100010.D\	**Instrument:**	K-GC-24
Acqu Date:	1/10/19 17:36:00	**Vial:**	9
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1818602-04	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	12/9/18	**Receive Date:**	12/18/18

Analysis Lot:	621714	**Prep Lot:**	328735	**Report Group:**	KQ1818602
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	12/21/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18934

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	8.25 -0.03	9.88 -0.03	1747167	1630628	106.681	111.586	85	89	85	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.64 +0.02	11.42 +0.07	1140	12863	0.063	0.797	0.13U	1.6U	100 U	Y
2,4,5-TP (Silvex), TCLP	10.58	12.64 +0.07	1912	33245	0.027	0.530	0.054U	1.1U	20 U	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100010.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 5:36 pm Operator: UA
Sample : KQ1818602-004LB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:56:43 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	8.252f	9.875f	1747167	1630628	106.681	111.586m	
	Target Compounds							
1) m	Dalapon	3.239f	3.869	555701	34904	26.939	2.235	#
3) m	Dicamba	8.525	0.000	6886	0	0.138	N.D.	#
4) m	MCPP	8.589	10.285	3744	2638	50477.206	86847.316	#
5) m	MCPA	8.842	10.502	7636	7509	50234.175	83582.409	#
6) m	Dichloroprop	9.269	0.000	18151	0	901.353	N.D.	d#
7) m	2,4-D	9.635	11.419f	1140	12863	0.063	0.797	#
8) m	2,4,5-TP ...	10.579	12.635f	1912	33245	0.027	0.530	#
9) m	2,4,5-T	11.039	13.039	52283	2213	0.862	0.041	#
10) m	2,4-DB	11.552f	13.649	1730	10243	0.223	1542.294	#
11) m	Dinoseb	11.982	13.872	26424	16537	0.570	0.401	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

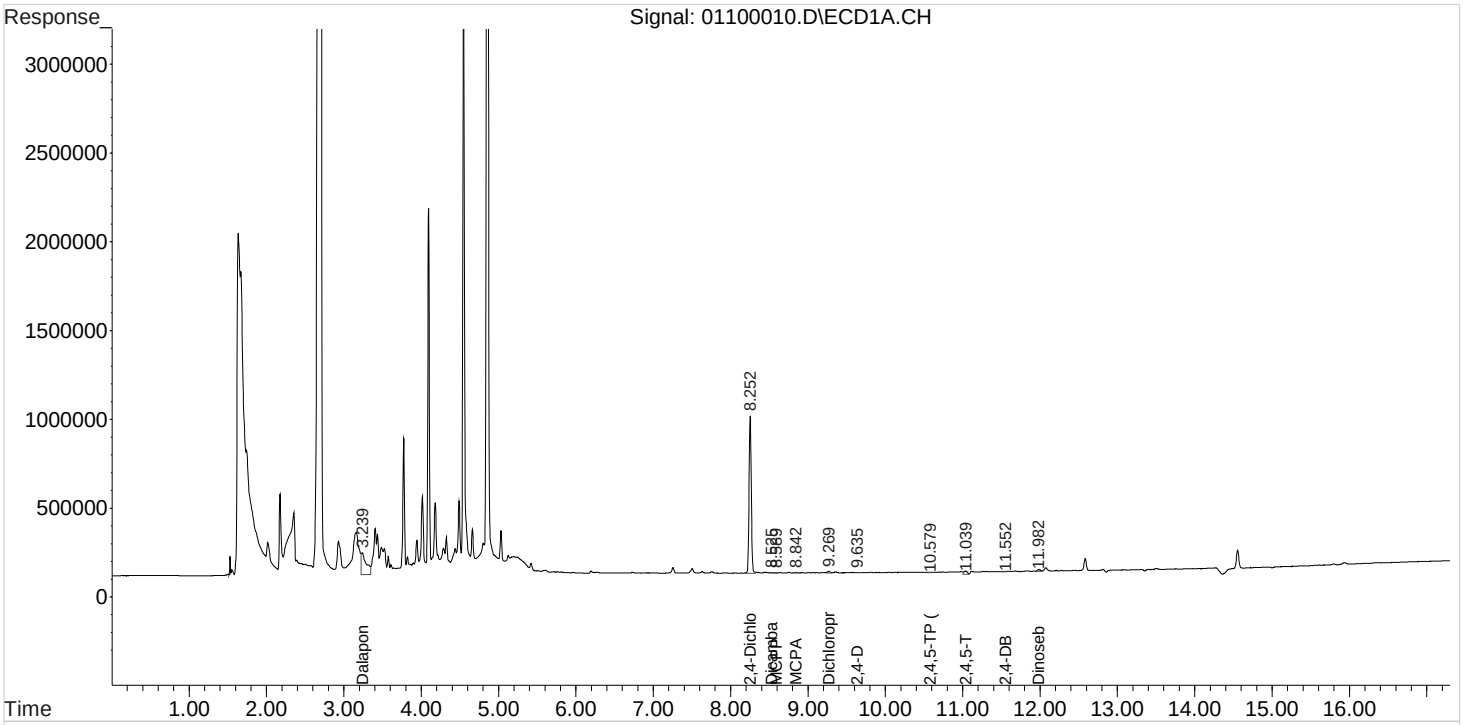
Quantitation Report (QT Reviewed)

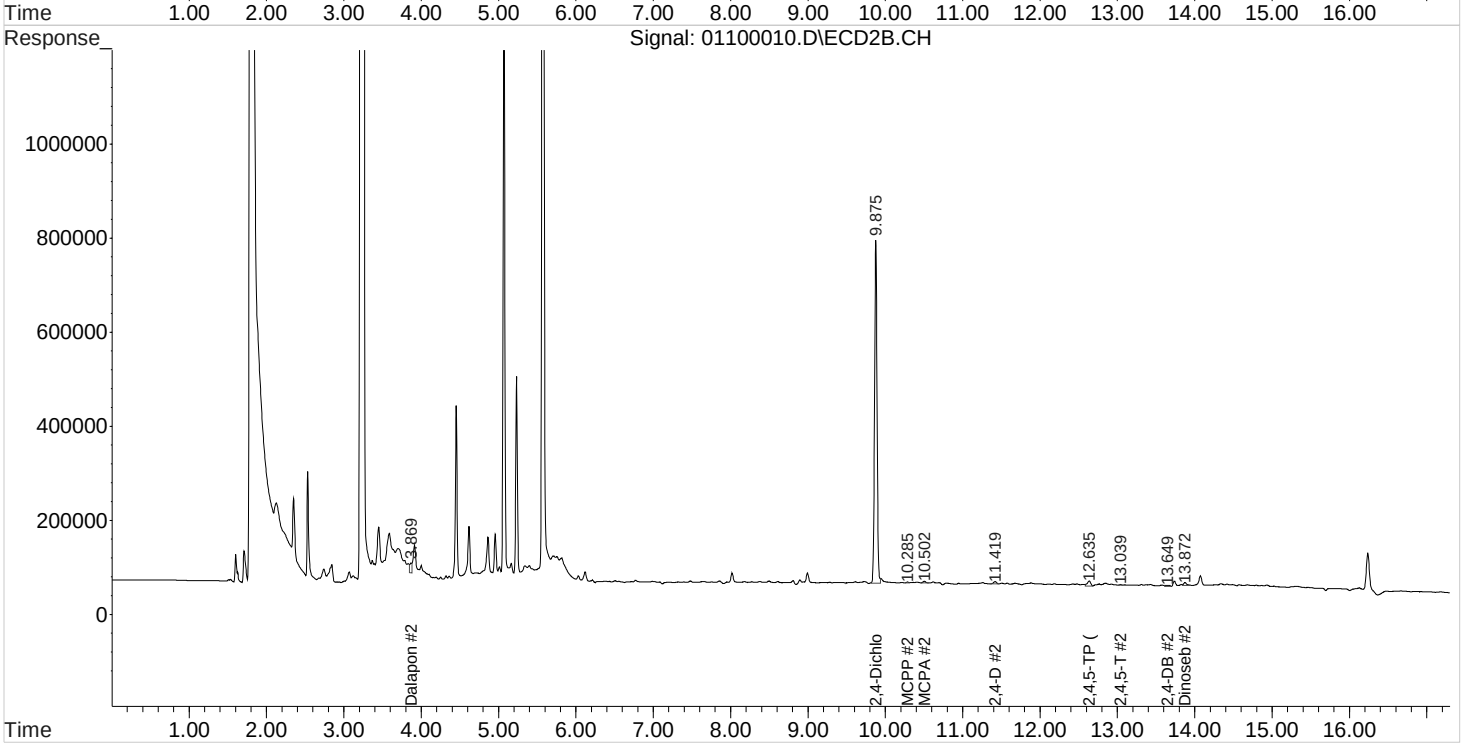
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100010.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 5:36 pm Operator: UA
Sample : KQ1818602-004LB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:56:43 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





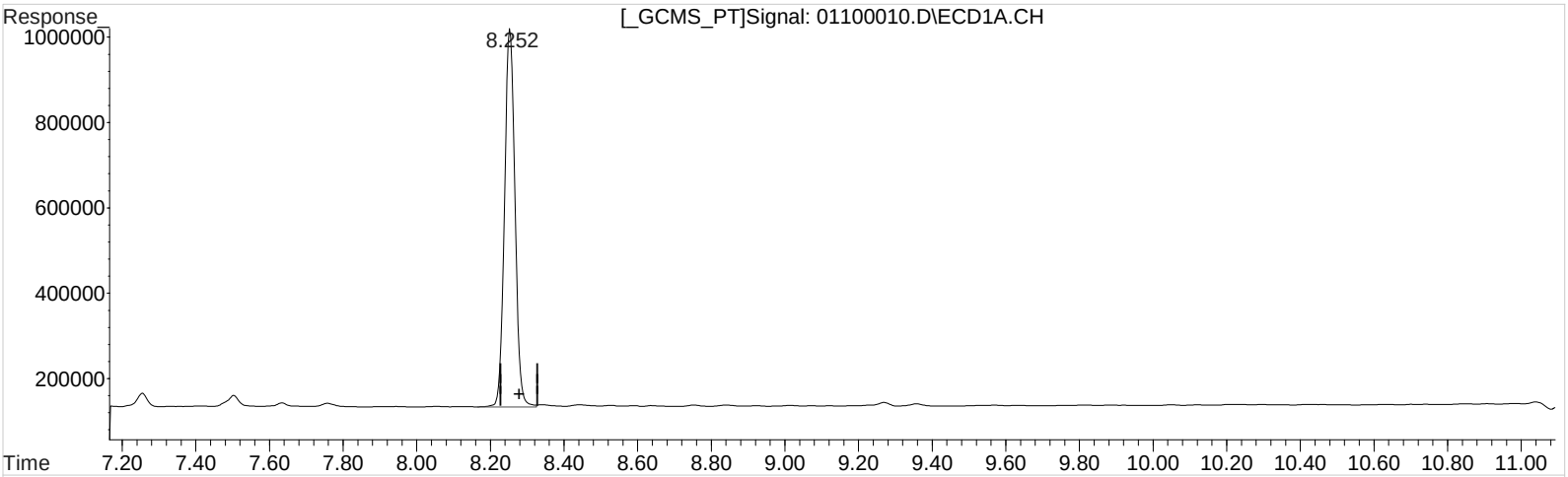
Quantitation Report (Qedit)

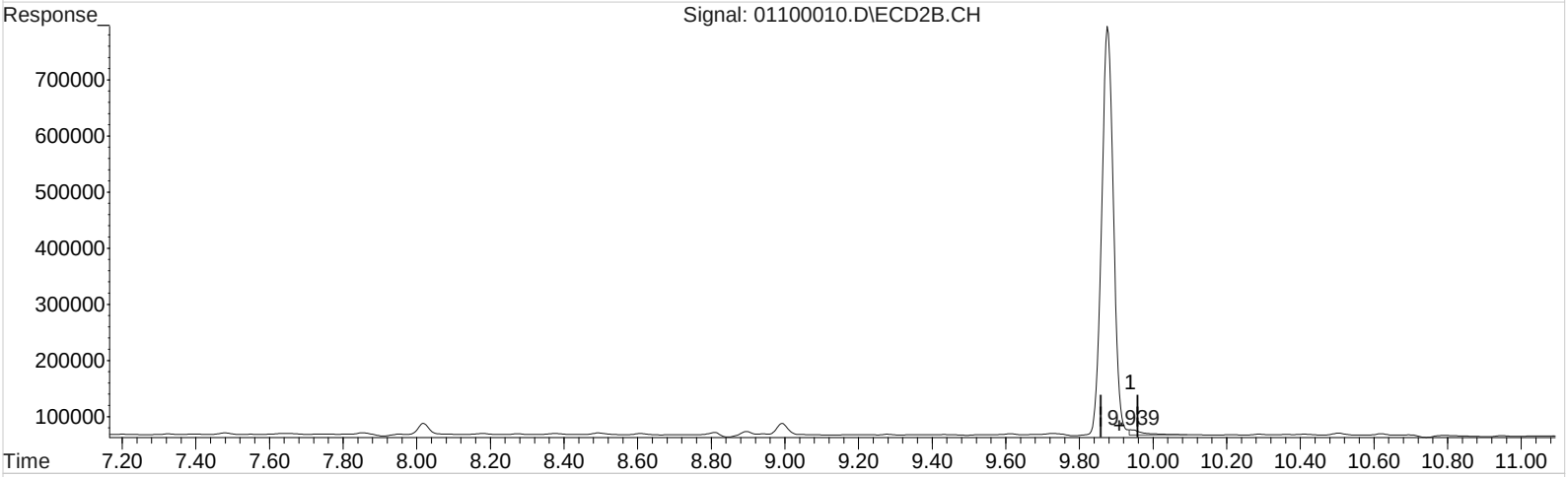
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100010.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 5:36 pm Operator: UA
Sample : KQ1818602-004LB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:56:09 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





QEdit

(2) 2,4-Dichlorophenylacetic Acid (s)

8.252min 106.681 ppb

response 1747167

Manual Integration:

Before

01/11/19

(2) 2,4-Dichlorophenylacetic Acid #2 (s)

9.939min 1.771 ppb

response 25873

(+) = Expected Retention Time

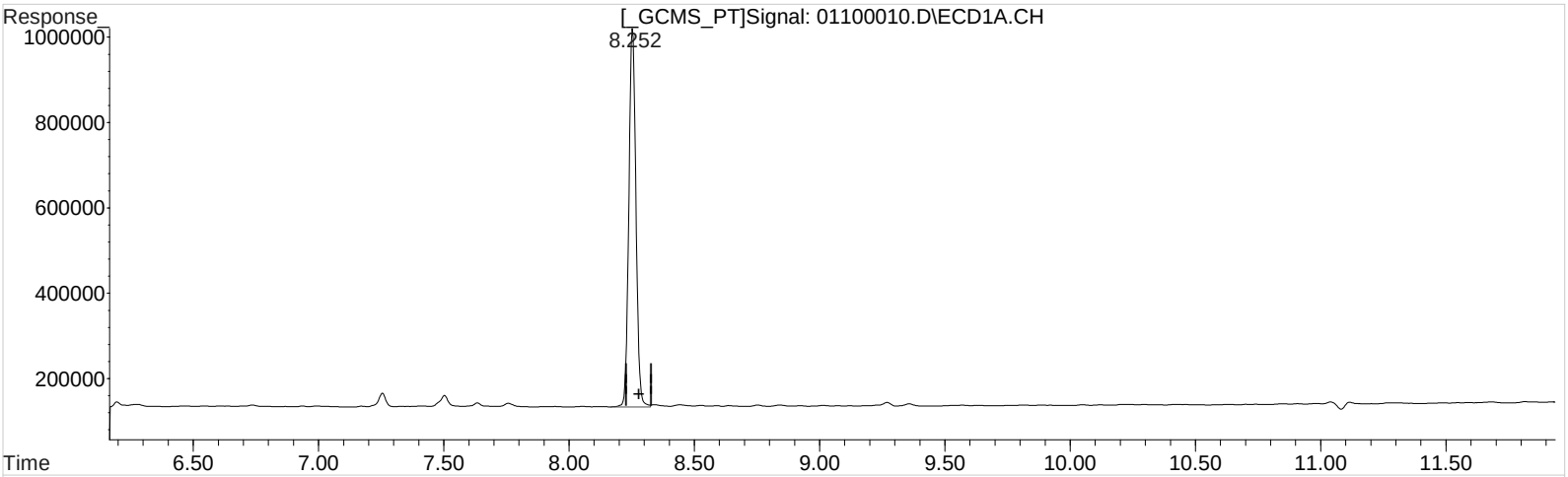
Quantitation Report (Qedit)

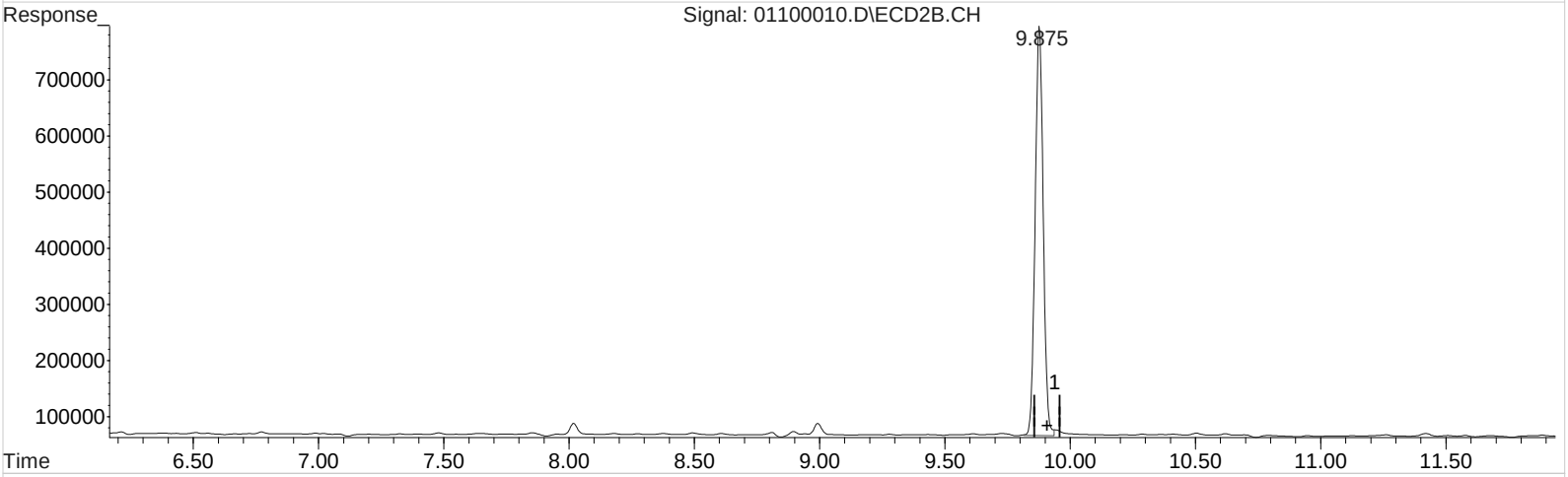
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100010.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 5:36 pm Operator: UA
Sample : KQ1818602-004LB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:56:09 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





QEdit

(2) 2,4-Dichlorophenylacetic Acid (s)

8.252min 106.681 ppb

response 1747167

Manual Integration:

After

Missed Peak

01/11/19

(2) 2,4-Dichlorophenylacetic Acid #2 (s)

9.875min 111.586 ppb m

response 1630628

(+) = Expected Retention Time

1st UA 01/14/19
2nd TP 01/14/19

Validation Report

Data File: J:\gc24\data\011019\01100005.D\
Lab ID: KQ1818602-05
RunType: MB
Matrix: Soil

Date Acquired: 1/10/19 14:02:00
Batch ID: 621714
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st UA 01/14/19
2nd TP 01/14/19

Quantitation Report

Data File:	J:\gc24\data\011019\01100005.D\	**Instrument:**	K-GC-24
Acqu Date:	1/10/19 14:02:00	**Vial:**	10
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1818602-05	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	12/9/18	**Receive Date:**	12/18/18

Analysis Lot:	621714	**Prep Lot:**	328735	**Report Group:**	KQ1818602
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	12/21/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18934

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	8.29 +0.01	9.92 +0.01	1432807	1421722	87.486	97.290	70	78	70	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.65 +0.03	11.28 -0.07	4111	6937	0.228	0.430	0.46U	0.86U	100 U	Y
2,4,5-TP (Silvex), TCLP	10.59 +0.01	12.50 -0.07	7493	2563	0.107	0.041	0.21U	0.082U	20 U	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100005.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 2:02 pm Operator: UA
Sample : KQ1818602-005MB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:51:21 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	8.286	9.916	1432807	1421722	87.486	97.290	
	Target Compounds							
1) m	Dalapon	3.269	3.863	476854	80032	23.117	5.125	#
3) m	Dicamba	8.489	0.000	12245	0	0.245	N.D.	#
4) m	MCPP	8.616	10.243	2173	4029	50488.366	86822.036	#
5) m	MCPA	8.869	10.539	7941	112321	50232.371	722.660	#
6) m	Dichloroprop	9.296	0.000	19467	0	901.270	N.D.	#
7) m	2,4-D	9.653	11.283f	4111	6937	0.228	0.430	#
8) m	2,4,5-TP ...	10.593	12.496f	7493	2563	0.107	0.041	#
9) m	2,4,5-T	10.993	0.000	1725	0	0.028	N.D.	#
10) m	2,4-DB	11.606	13.669	3049	17546	0.393	0.315	
11) m	Dinoseb	11.996	13.843	23217	7130	0.501	0.173	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

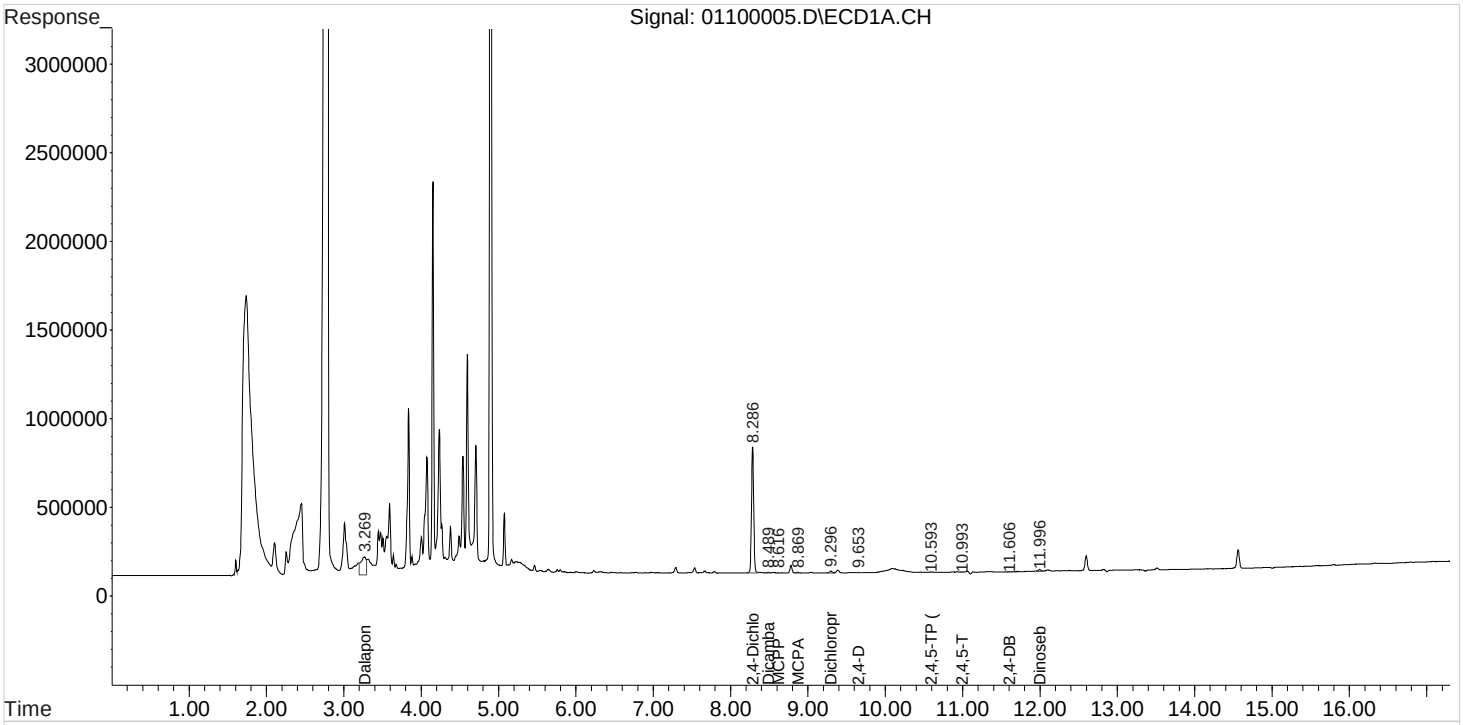
Quantitation Report (QT Reviewed)

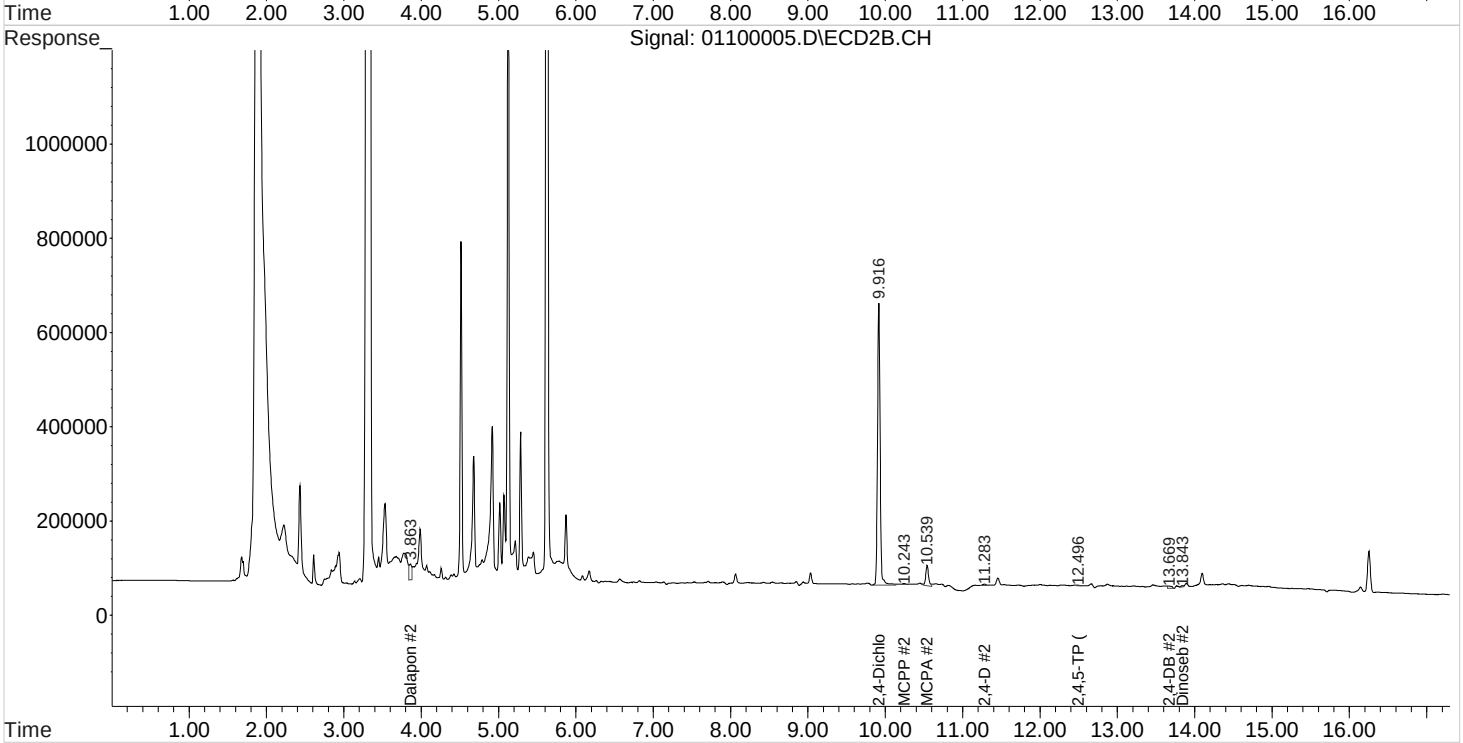
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100005.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 2:02 pm Operator: UA
Sample : KQ1818602-005MB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:51:21 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st UA 01/14/19
2nd TP 01/14/19

Validation Report

Data File: J:\gc24\data\011019\01100006.D\
Lab ID: KQ1818602-03
RunType: LCS
Matrix: Soil

Date Acquired: 1/10/19 14:26:00
Batch ID: 621714
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st UA 01/14/19
2nd TP 01/14/19

Quantitation Report

Data File:	J:\gc24\data\011019\01100006.D\	**Instrument:**	K-GC-24
Acqu Date:	1/10/19 14:26:00	**Vial:**	8
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1818602-03	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	12/9/18	**Receive Date:**	12/18/18

Analysis Lot:	621714	**Prep Lot:**	328735	**Report Group:**	KQ1818602
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	12/21/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18934

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	8.27 -0.01	9.90 -0.01	1727766	1600207	105.496	109.504	84	88	84	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.61 -0.01	11.34 -0.01	2101438	1971487	116.406	122.209	233	244	**233**	Y
2,4,5-TP (Silvex), TCLP	10.57 -0.01	12.56 -0.01	8365129	8036263	119.138	128.097	238	256	**238**	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100006.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 2:26 pm Operator: UA
Sample : KQ1818602-003LCS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:52:32 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.270	9.904	1727766	1600207	105.496	109.504
	Target Compounds						
1) m	Dalapon	3.230f	3.814f	3106791	2470533	150.609m	158.215
3) m	Dicamba	8.500	10.050	5444705	5400225	108.764	119.555
4) m	MCPP	8.584	10.230	1407033	619444	12650.221	12727.987
5) m	MCPA	8.850	10.514	1659033	928511	12038.925	12455.607
6) m	Dichloroprop	9.257	11.000	1668262	1525733	118.798	121.719
7) m	2,4-D	9.614	11.340	2101438	1971487	116.406	122.209
8) m	2,4,5-TP ...	10.567	12.564	8365129	8036263	119.138	128.097
9) m	2,4,5-T	11.014	12.994	8342545	7890579	137.507	145.659
10) m	2,4-DB	11.600	13.680	1101842	1090900	141.938	149.896
11) m	Dinoseb	12.004	13.854	2033036	1719486	43.834m	41.656

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

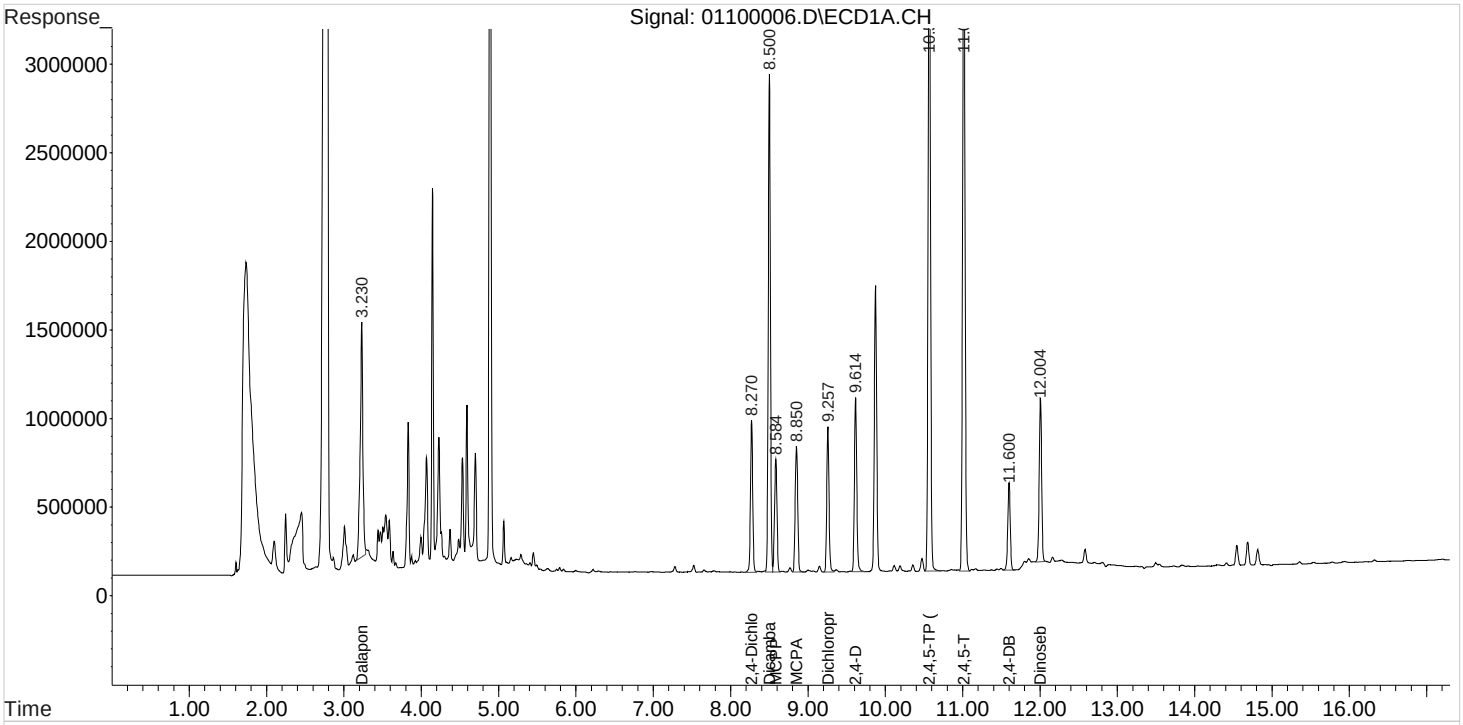
Quantitation Report (QT Reviewed)

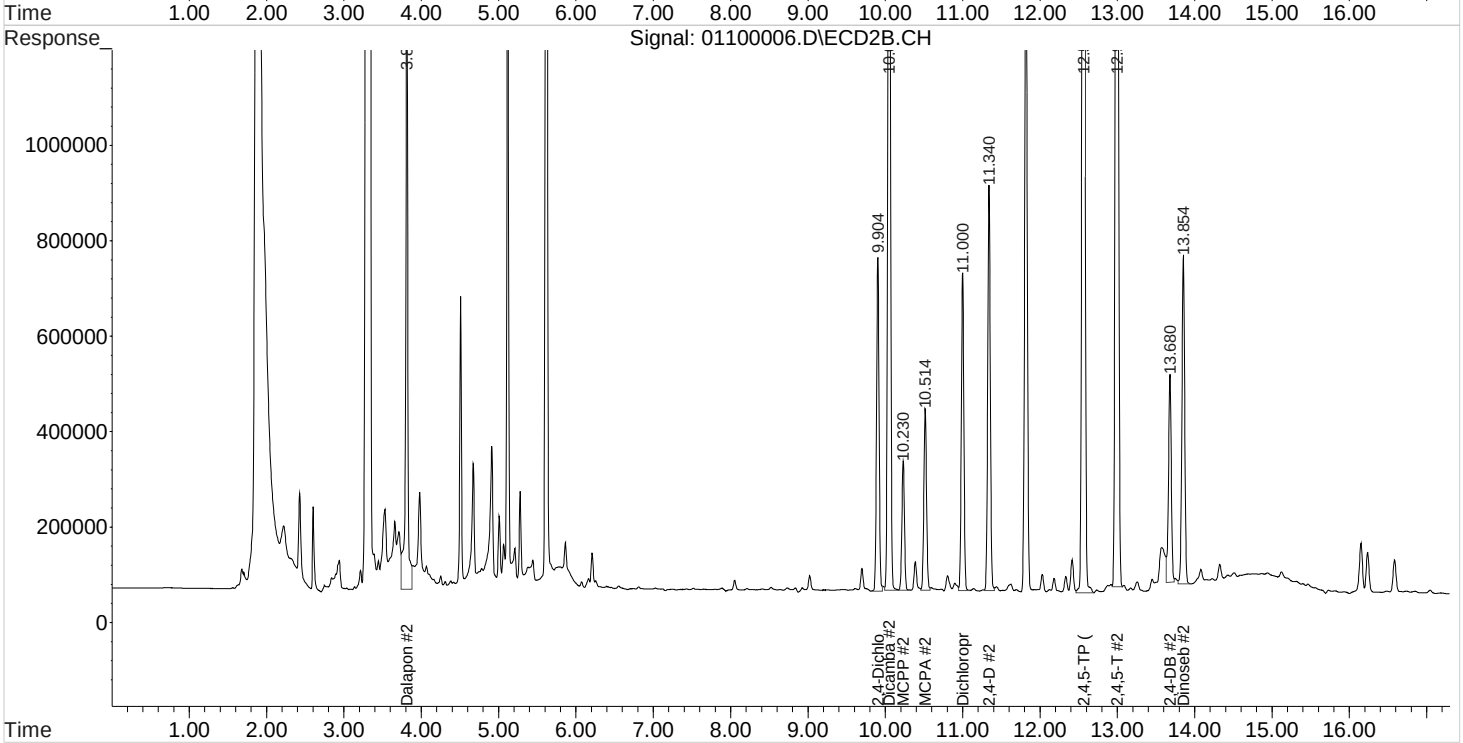
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100006.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 2:26 pm Operator: UA
Sample : KQ1818602-003LCS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:52:32 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm



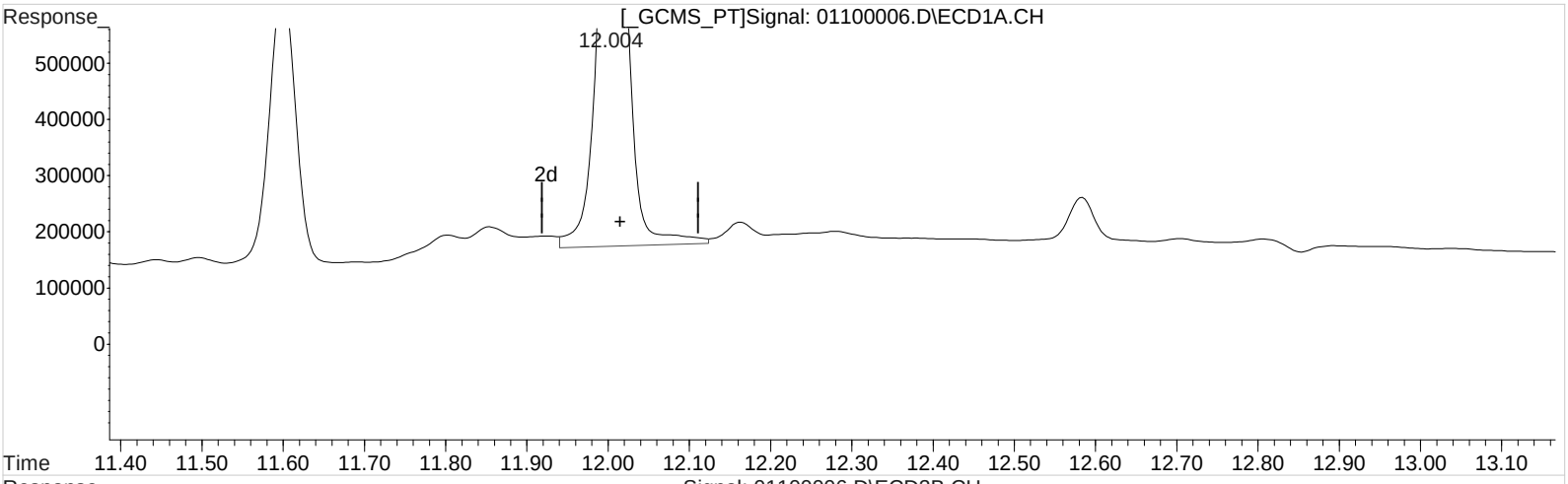


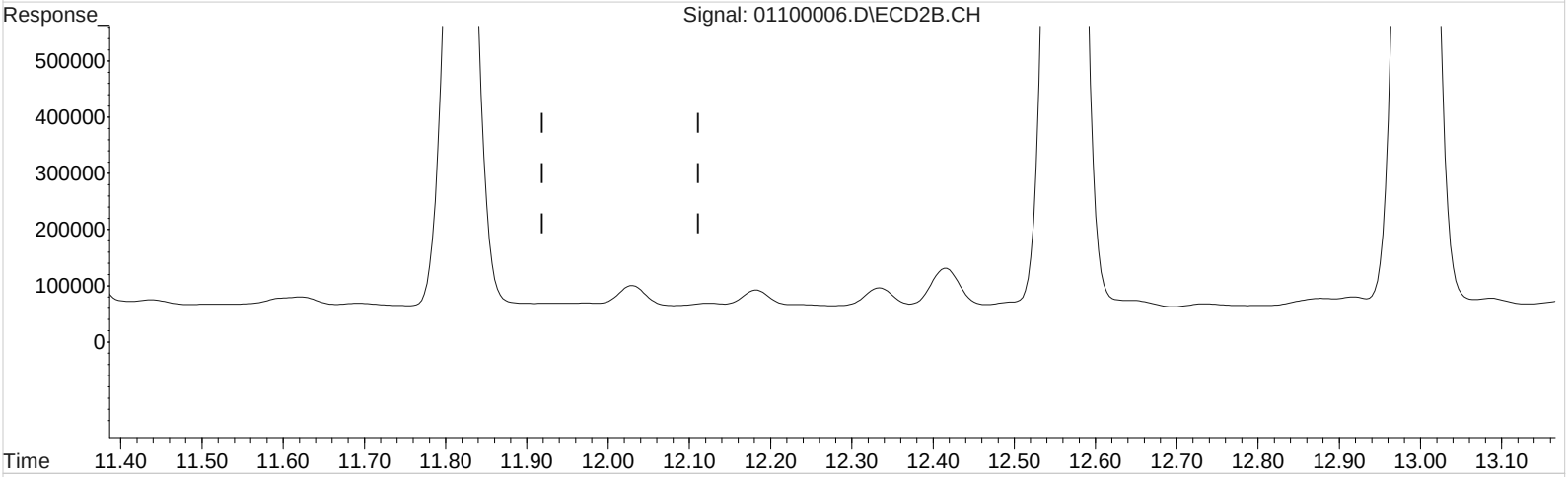
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100006.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 2:26 pm Operator: UA
Sample : KQ1818602-003LCS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:51:48 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





QEdit

(11) Dinoseb (m)

12.004min 47.672 ppb

response 2211062

Manual Integration:

Before

01/11/19

(11) Dinoseb #2 (m)

13.854min 41.656 ppb

response 1719486

(+) = Expected Retention Time

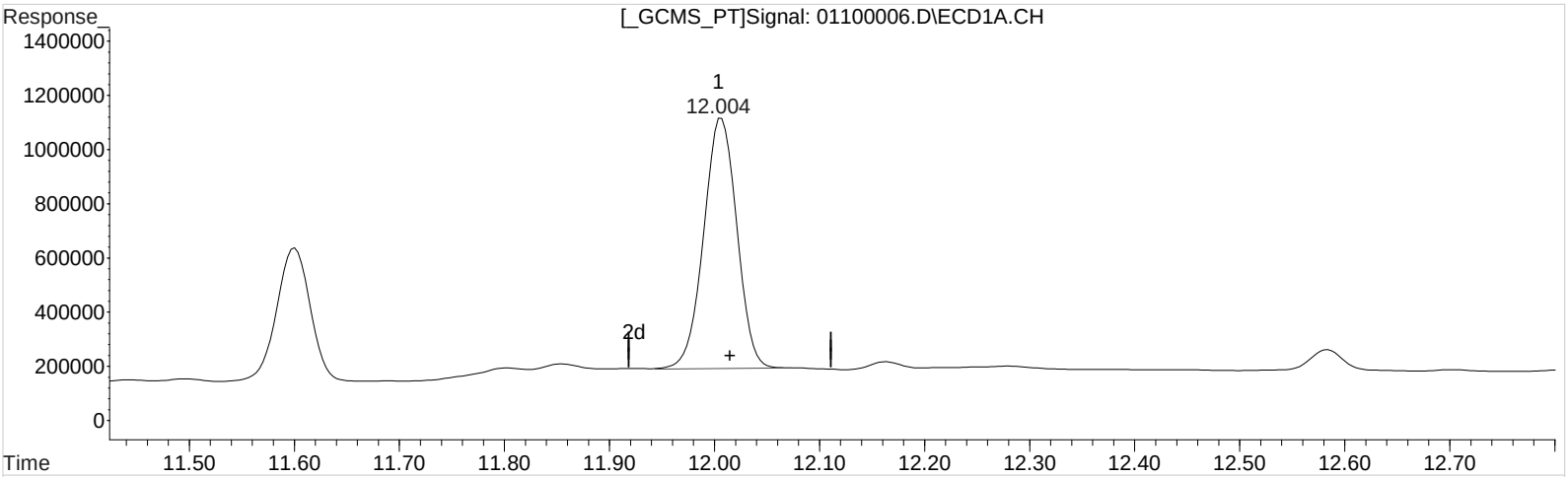
Quantitation Report (Qedit)

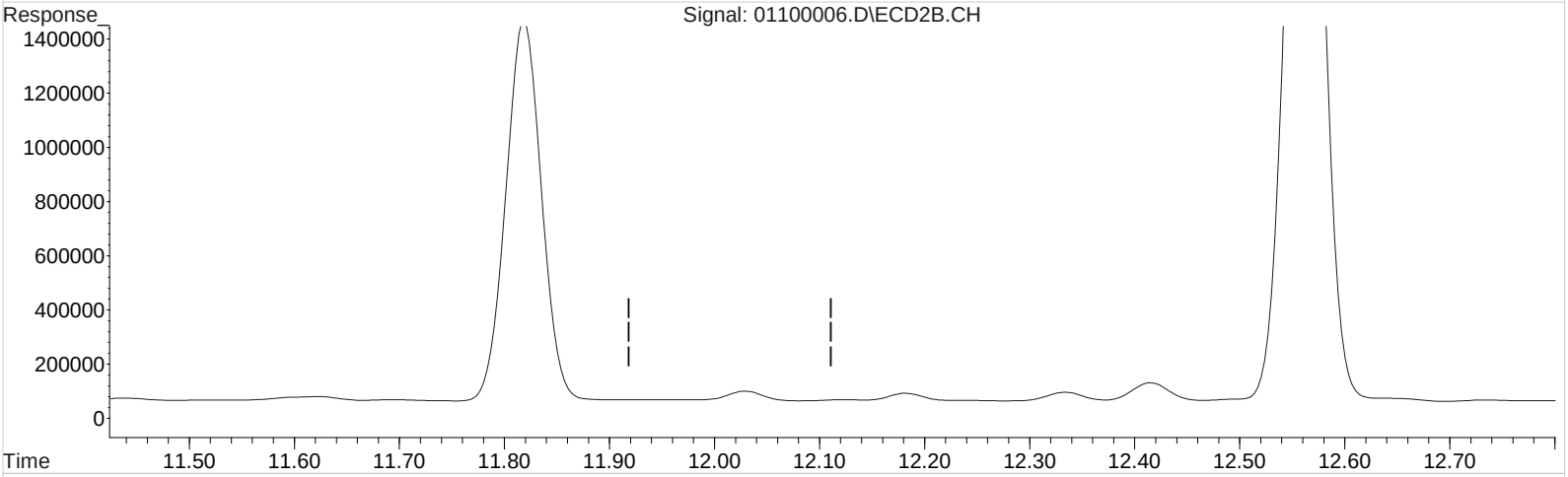
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100006.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 2:26 pm Operator: UA
Sample : KQ1818602-003LCS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:51:48 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





QEdit

(11) Dinoseb (m)

12.004min 43.834 ppb m

response 2033036

Manual Integration:

After

Baseline/Shoulder

01/11/19

(11) Dinoseb #2 (m)

13.854min 41.656 ppb

response 1719486

(+) = Expected Retention Time

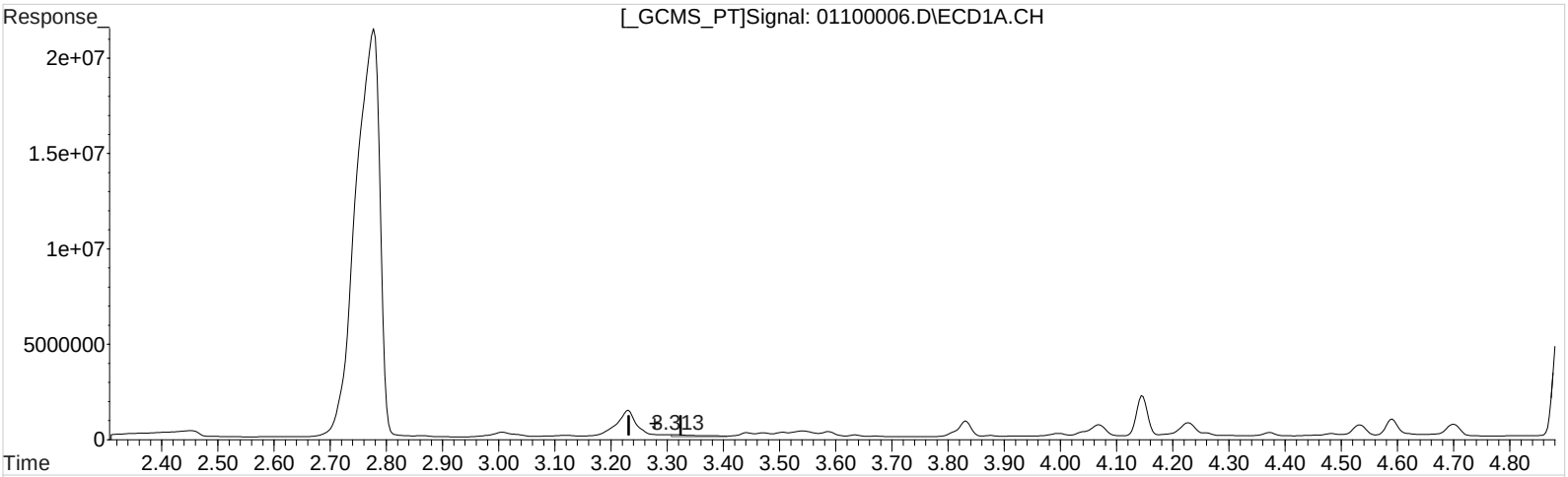
Quantitation Report (Qedit)

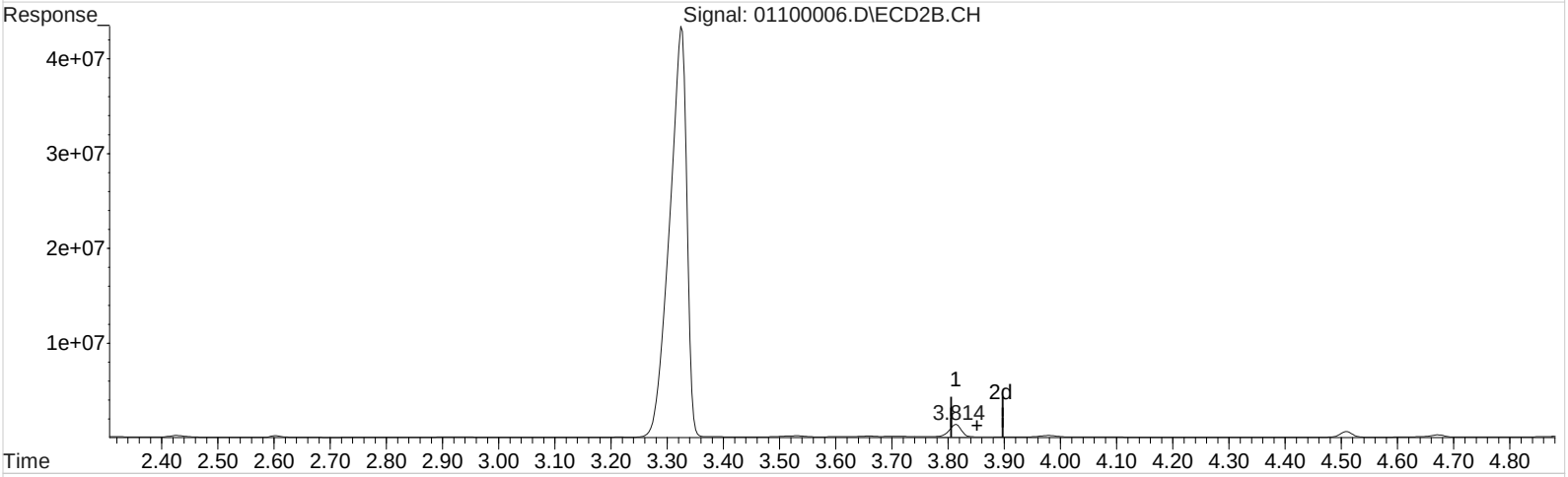
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100006.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 2:26 pm Operator: UA
Sample : KQ1818602-003LCS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:51:48 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





QEdit

(1) Dalapon (m)

3.313min 16.539 ppb

response 341171

Manual Integration:

Before

01/11/19

(1) Dalapon #2 (m)

3.814min 158.215 ppb

response 2470533

(+) = Expected Retention Time

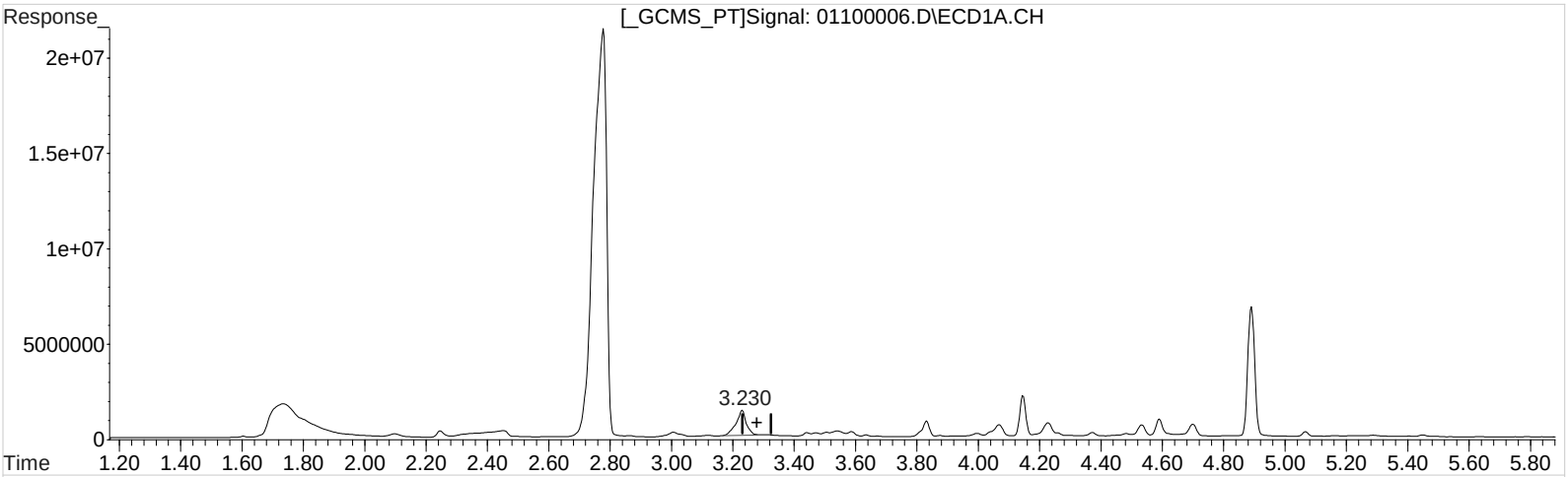
Quantitation Report (Qedit)

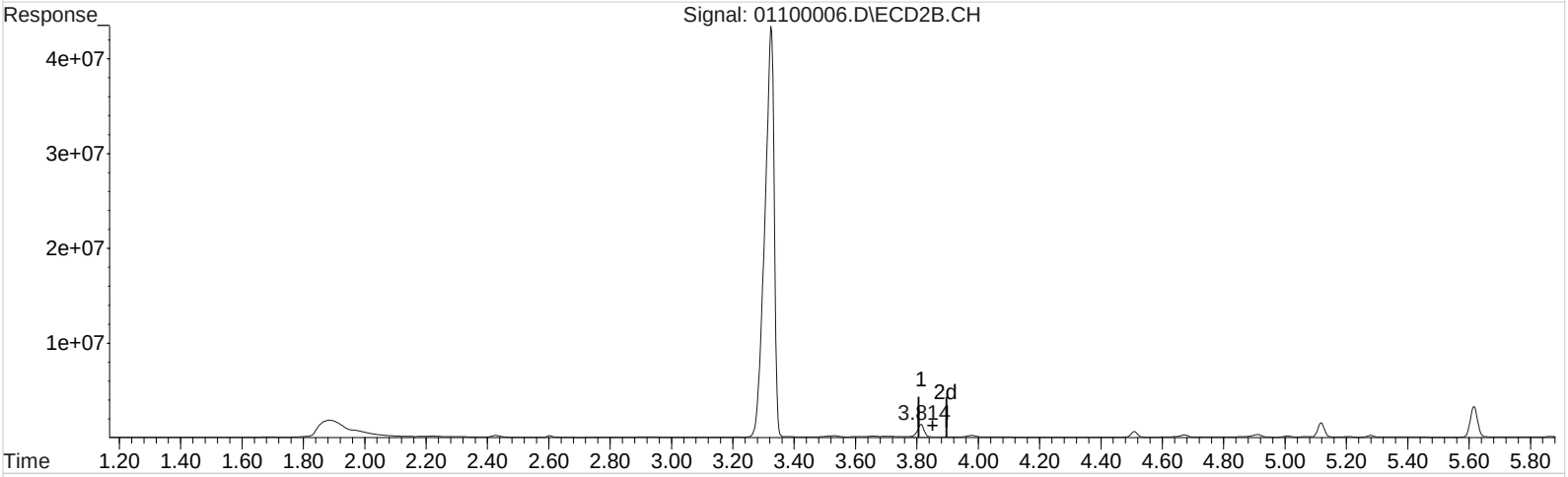
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100006.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 2:26 pm Operator: UA
Sample : KQ1818602-003LCS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:51:48 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





QEdit

(1) Dalapon (m)

3.230min 150.609 ppb m

response 3106791

(1) Dalapon #2 (m)

3.814min 158.215 ppb

response 2470533

Manual Integration:

After

Wrong Peak

01/11/19

(+) = Expected Retention Time

1st UA 01/14/19
2nd TP 01/14/19

Validation Report

Data File: J:\gc24\data\011019\01100008.D\
Lab ID: KQ1818602-01
RunType: MS
Matrix: Soil

Date Acquired: 1/10/19 15:14:00
Batch ID: 621714
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st UA 01/14/19
2nd TP 01/14/19

Quantitation Report

Data File:	J:\gc24\data\011019\01100008.D\	**Instrument:**	K-GC-24
Acqu Date:	1/10/19 15:14:00	**Vial:**	6
Run Type:	MS	**Dilution:**	1
Lab ID:	KQ1818602-01	**Raw Units:**	ppb

Bottle ID:	K1812382-001.06	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	12/9/18	**Receive Date:**	12/18/18

Analysis Lot:	621714	**Prep Lot:**	328735	**Report Group:**	KQ1818602
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	12/21/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18934

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	8.28	9.91	1570833	1459496	95.914	99.875	77	80	77	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.62	11.34 -0.01	1850046	1732929	102.481	107.421	205	215	**205**	Y
2,4,5-TP (Silvex), TCLP	10.57 -0.01	12.56 -0.01	7231623	6933608	102.995	110.520	206	221	**206**	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Printed: 1/11/19 10:12
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Quantitation Report (QT Reviewed)

1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100008.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 3:14 pm Operator: UA
Sample : KQ1818602-001MS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:53:26 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.278	9.908	1570833	1459496	95.914	99.875
	Target Compounds						
1) m	Dalapon	3.228f	3.811f	2155787	1757425	104.507m	112.547
3) m	Dicamba	8.505	10.055	4764827	4714169	95.183	104.366
4) m	MCPP	8.588	10.235	1265335	533335	10680.672	10562.263
5) m	MCPA	8.855	10.518	1510853	809132	10356.856	10461.500
6) m	Dichloroprop	9.261	11.001	1455384	1343218	101.033	105.313
7) m	2,4-D	9.621	11.345	1850046	1732929	102.481	107.421
8) m	2,4,5-TP ...	10.571	12.565	7231623	6933608	102.995	110.520
9) m	2,4,5-T	11.018	12.995	7231661	6923284	119.196	127.803
10) m	2,4-DB	11.601	13.681	1090369	1085634	140.460	149.074
11) m	Dinoseb	12.008	13.855	3373136	2863066	72.727	69.361

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

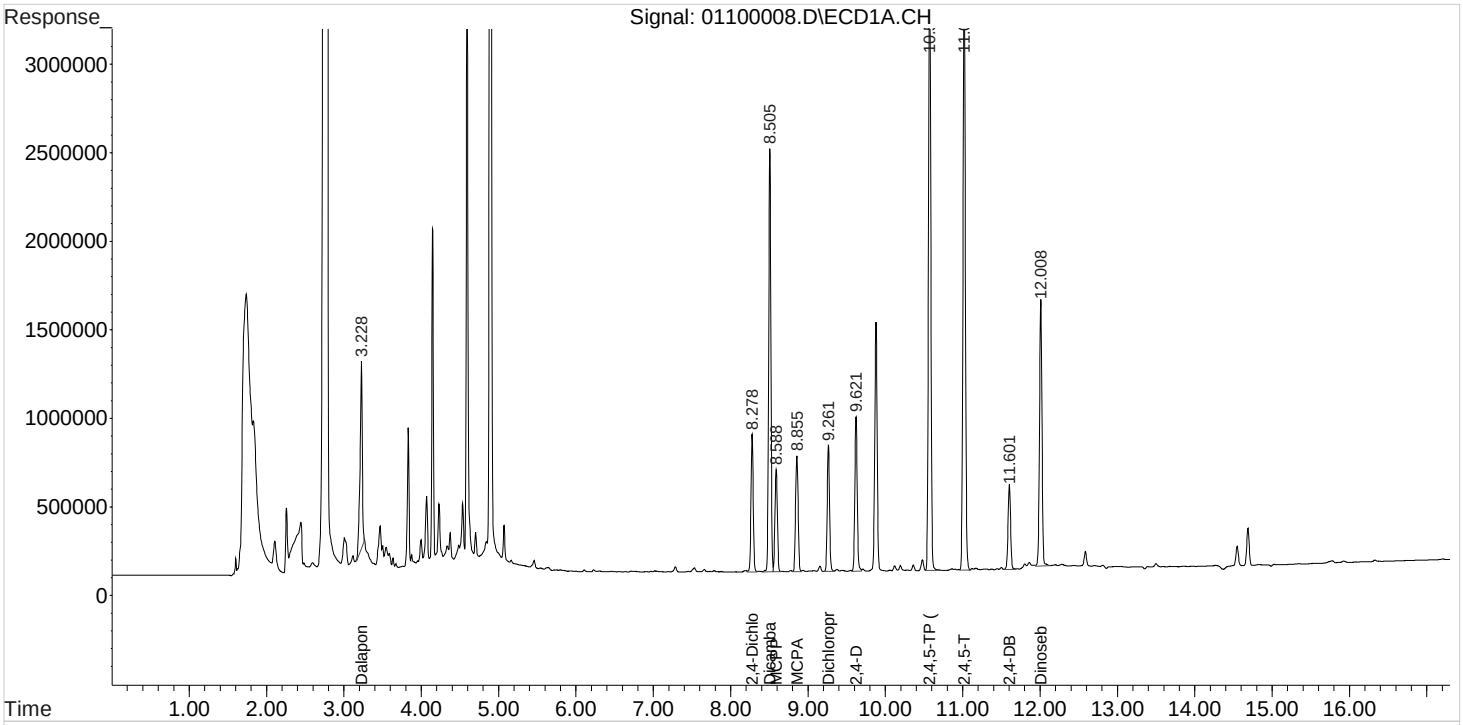
Quantitation Report (QT Reviewed)

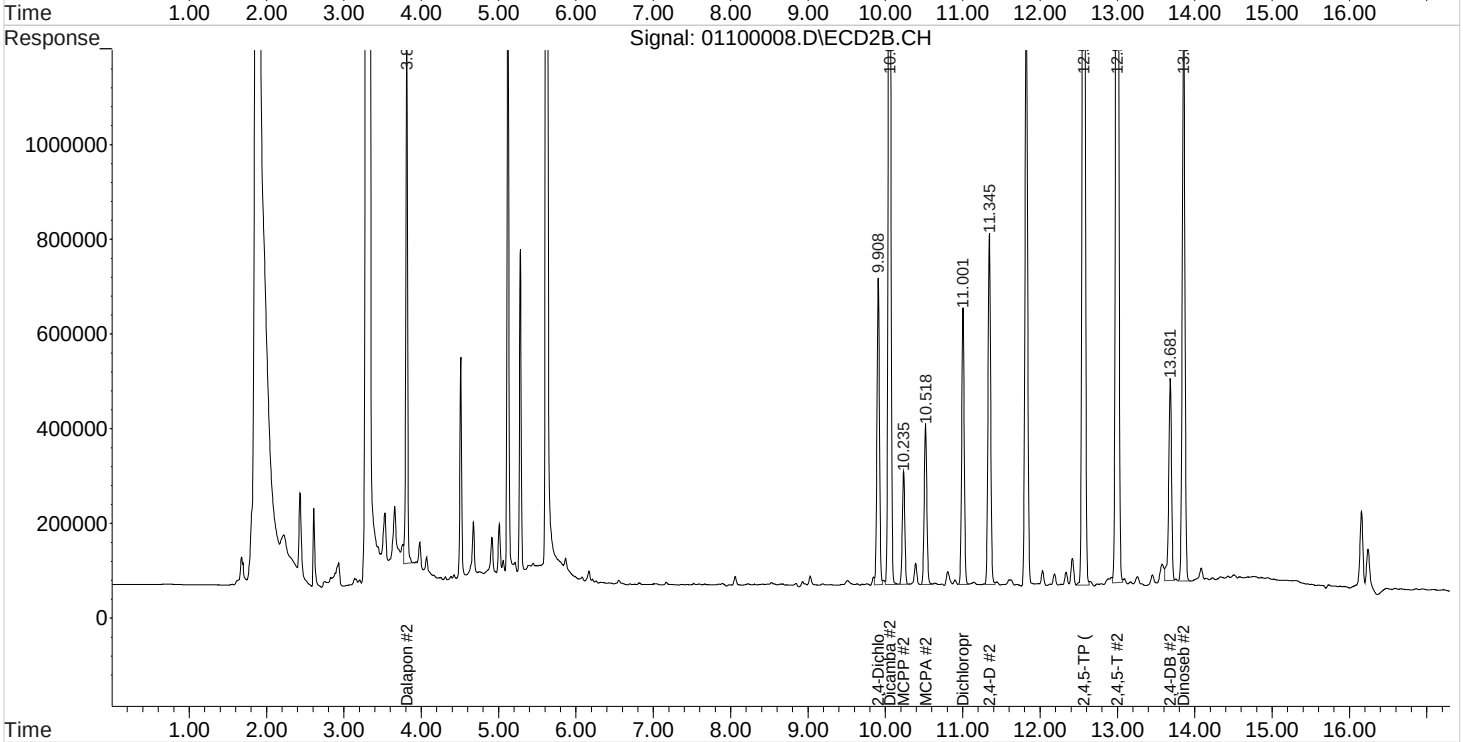
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100008.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 3:14 pm Operator: UA
Sample : KQ1818602-001MS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:53:26 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





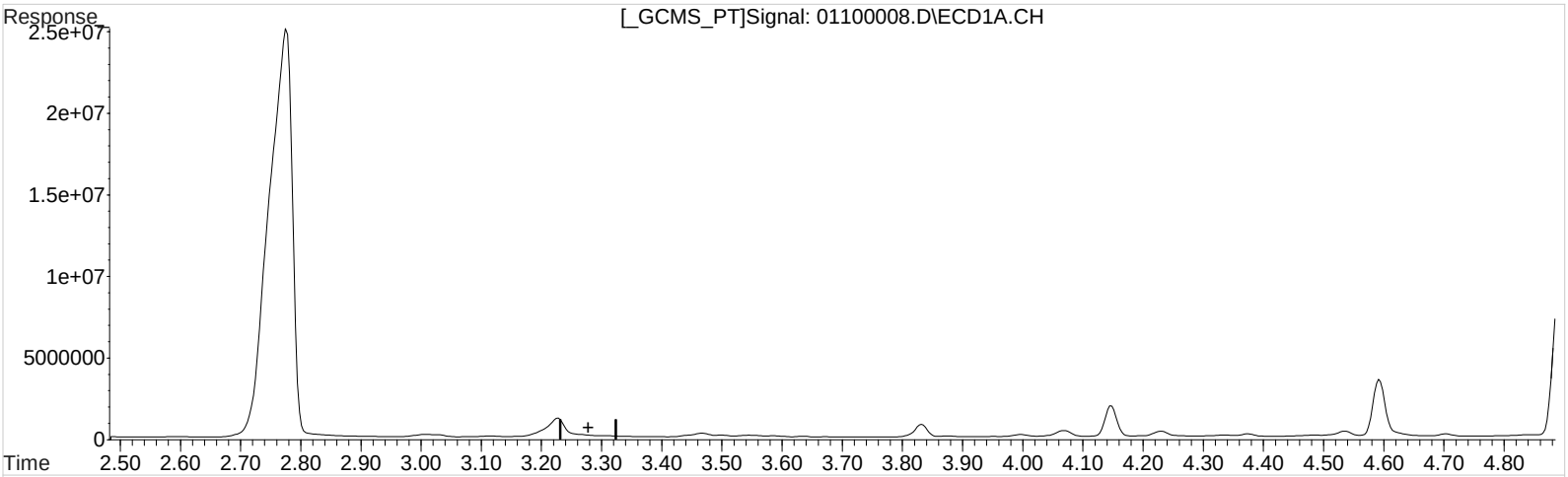
Quantitation Report (Qedit)

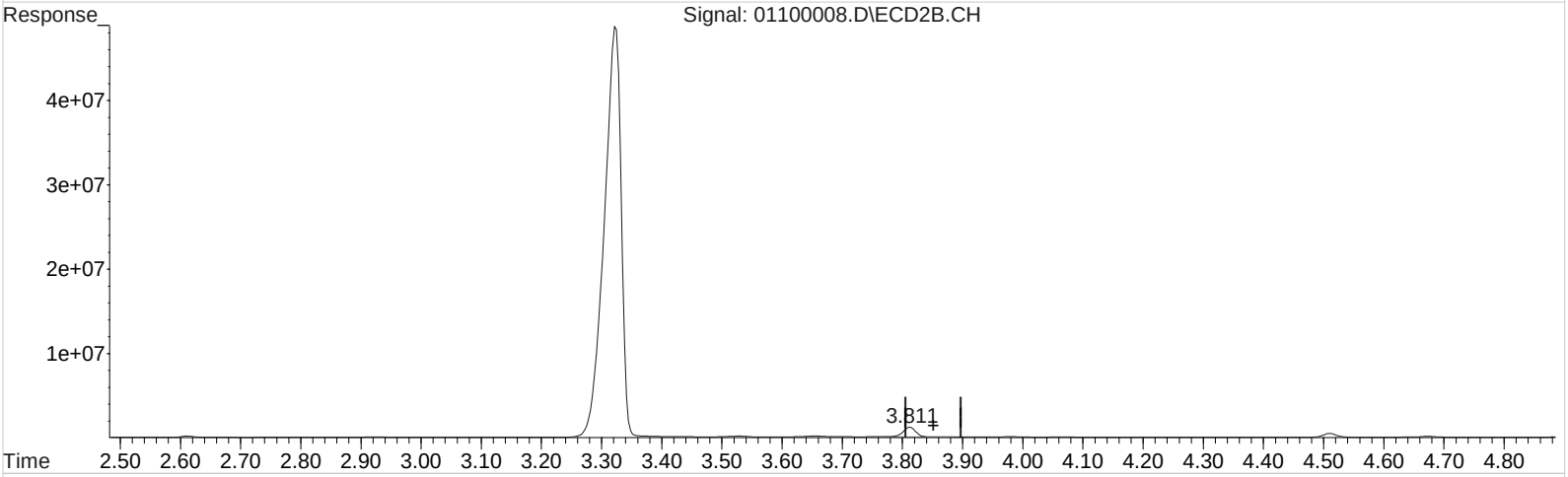
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100008.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 3:14 pm Operator: UA
Sample : KQ1818602-001MS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:53:15 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





QEdit

(1) Dalapon (m)

0.000min 0.000 ppb

response 0

(1) Dalapon #2 (m)

3.811min 112.547 ppb

response 1757425

Manual Integration:

Before

01/11/19

(+) = Expected Retention Time

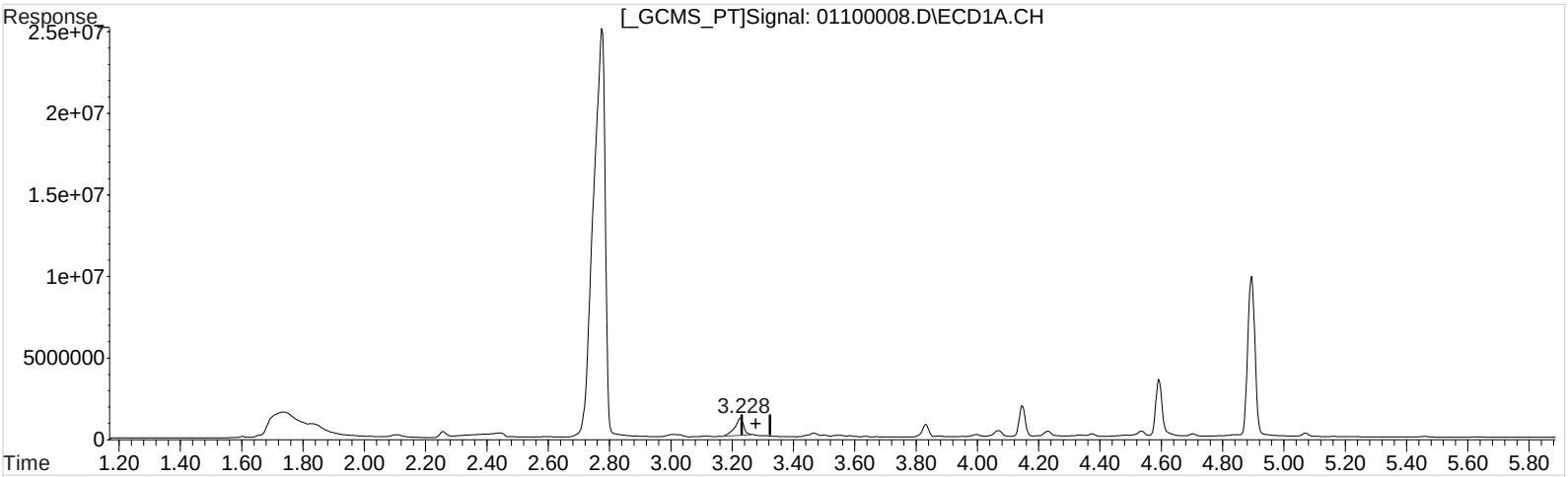
Quantitation Report (Qedit)

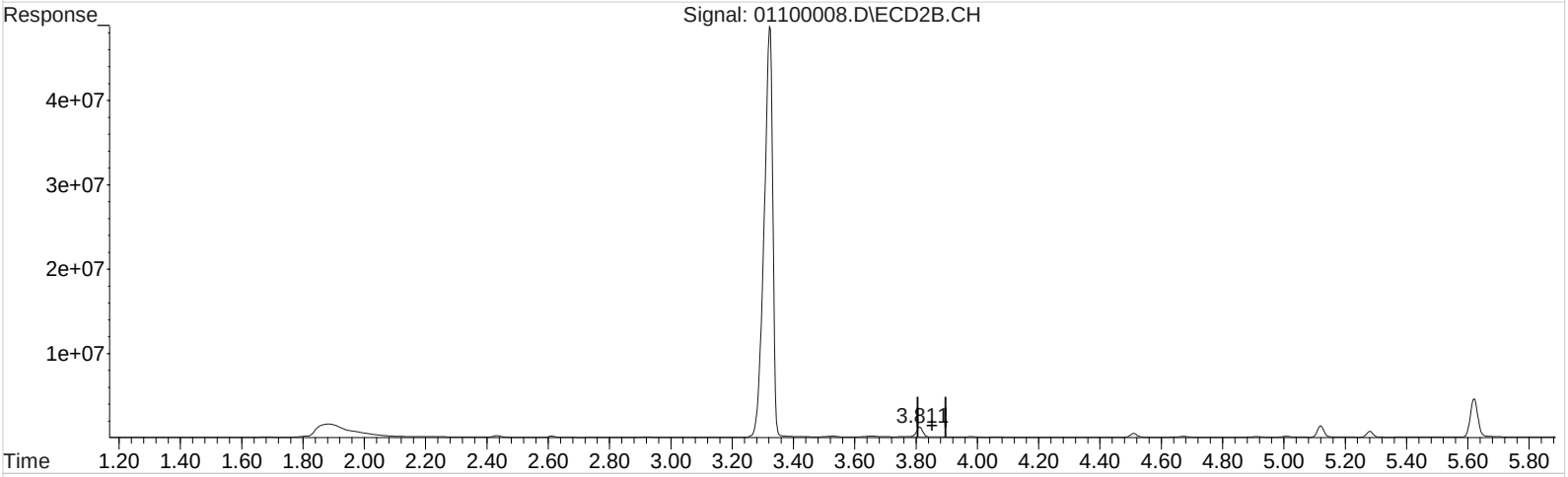
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100008.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 3:14 pm Operator: UA
Sample : KQ1818602-001MS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:53:15 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





QEdit

(1) Dalapon (m)

3.228min 104.507 ppb m

response 2155787

(1) Dalapon #2 (m)

3.811min 112.547 ppb

response 1757425

Manual Integration:

After

Missed Peak

01/11/19

(+) = Expected Retention Time

1st UA 01/14/19
2nd TP 01/14/19

Validation Report

Data File: J:\gc24\data\011019\01100007.D\
Lab ID: KQ1818602-02
RunType: DMS
Matrix: Soil

Date Acquired: 1/10/19 14:50:00
Batch ID: 621714
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st UA 01/14/19
2nd TP 01/14/19

Quantitation Report

Data File:	J:\gc24\data\011019\01100007.D\	**Instrument:**	K-GC-24
Acqu Date:	1/10/19 14:50:00	**Vial:**	7
Run Type:	DMS	**Dilution:**	1
Lab ID:	KQ1818602-02	**Raw Units:**	ppb

Bottle ID:	K1812382-001.06	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	12/9/18	**Receive Date:**	12/18/18

Analysis Lot:	621714	**Prep Lot:**	328735	**Report Group:**	KQ1818602
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	12/21/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18934

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	8.28	9.91	1757525	1586716	107.313	108.581	86	87	86	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.62	11.34 -0.01	2089959	1974722	115.771	122.409	232	245	**232**	Y
2,4,5-TP (Silvex), TCLP	10.57 -0.01	12.56 -0.01	8288672	7881654	118.049	125.632	236	251	**236**	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100007.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 2:50 pm Operator: UA
Sample : KQ1818602-002DMS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:52:52 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.278	9.908	1757525	1586716	107.313	108.581
	Target Compounds						
1) m	Dalapon	3.231f	3.815f	2565248	2496674	124.356m	159.889 #
3) m	Dicamba	8.505	10.055	5442457	5374631	108.719	118.988
4) m	MCPP	8.588	10.235	1386461	602057	12344.928	12278.458
5) m	MCPA	8.855	10.518	1644330	908048	11862.072	12104.191
6) m	Dichloroprop	9.265	11.005	1661919	1513202	118.255	120.578
7) m	2,4-D	9.621	11.345	2089959	1974722	115.771	122.409
8) m	2,4,5-TP ...	10.575	12.565	8288672	7881654	118.049	125.632
9) m	2,4,5-T	11.018	12.998	8311151	7907239	136.989	145.966
10) m	2,4-DB	11.601	13.685	1240965	1253651	159.860	175.851
11) m	Dinoseb	12.011	13.855	3172398	2737416	68.399	66.317

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

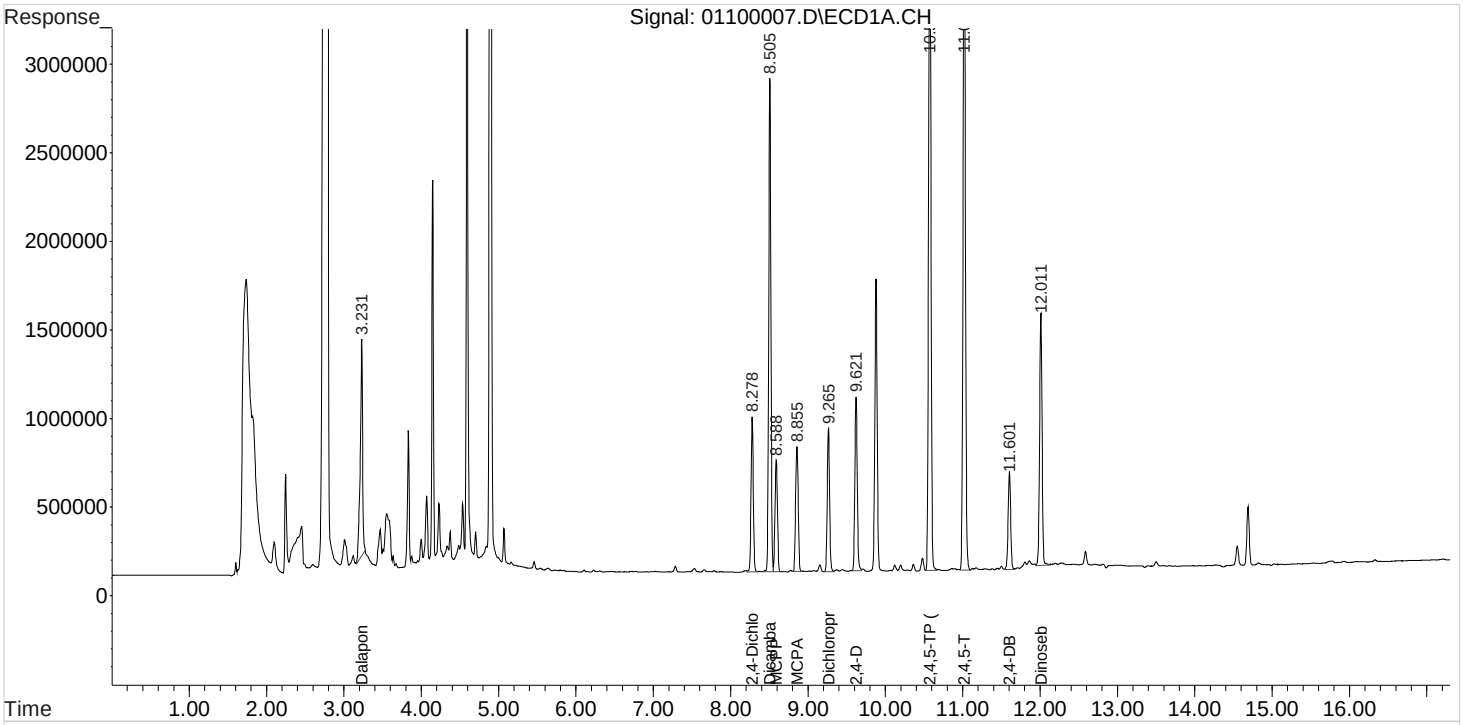
Quantitation Report (QT Reviewed)

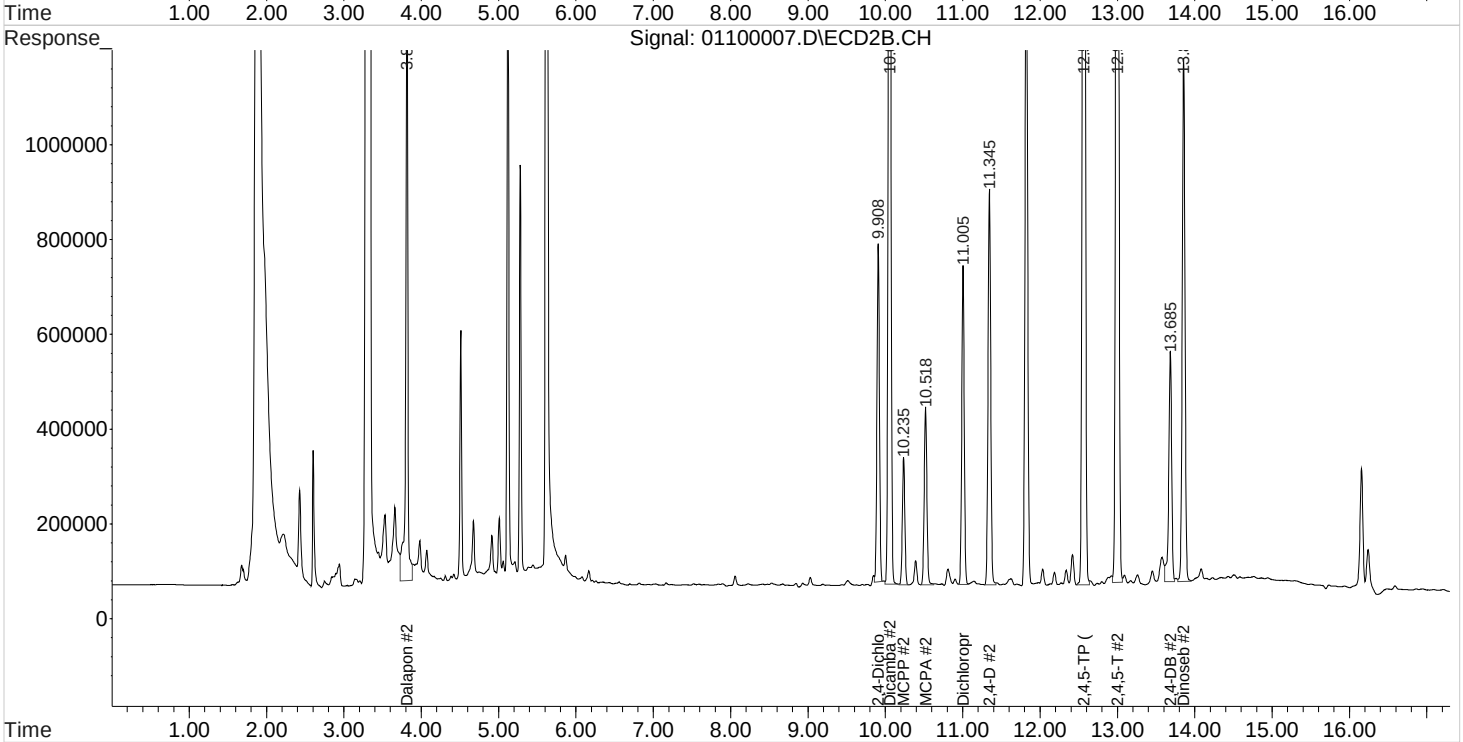
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100007.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 2:50 pm Operator: UA
Sample : KQ1818602-002DMS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:52:52 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





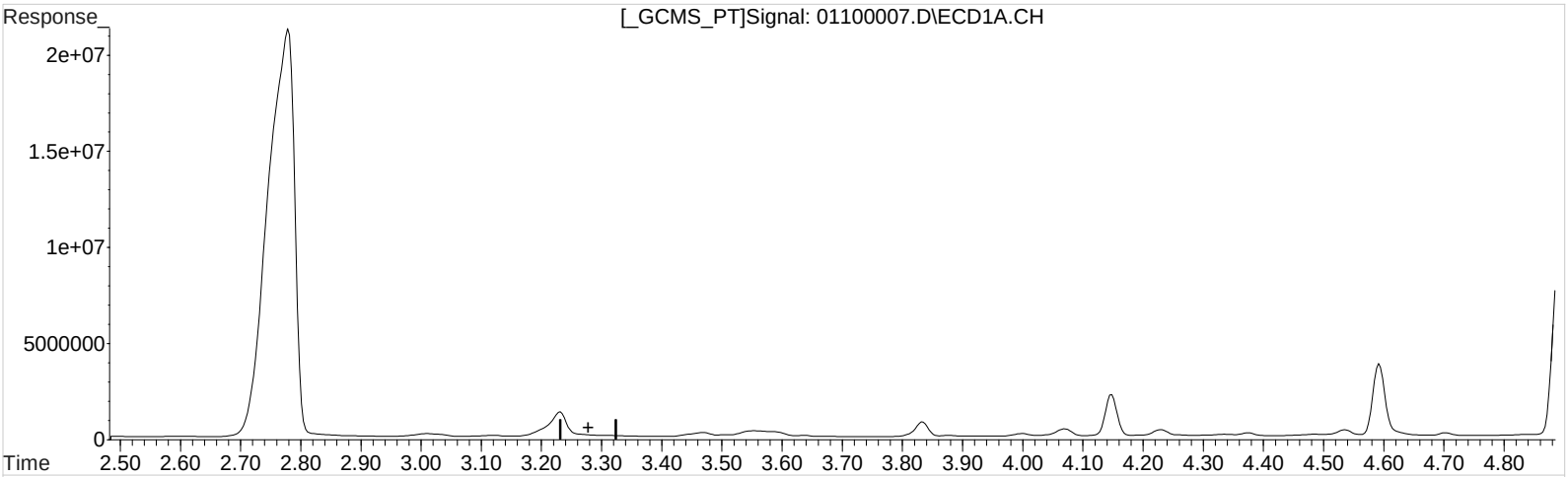
Quantitation Report (Qedit)

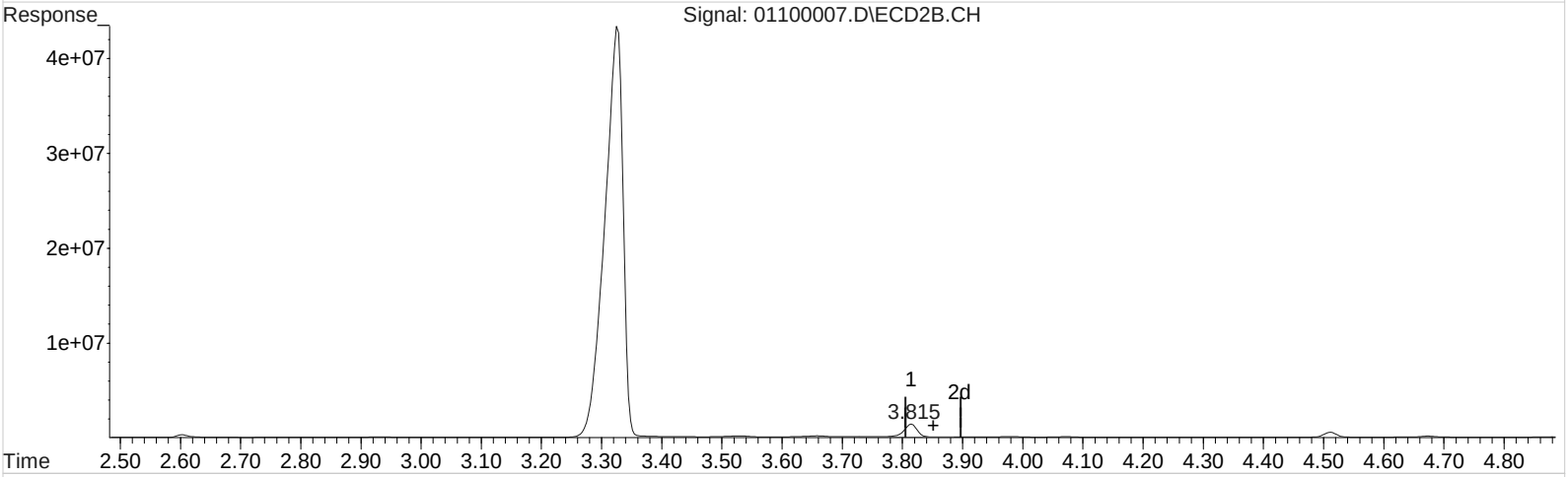
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100007.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 2:50 pm Operator: UA
Sample : KQ1818602-002DMS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 10 15:28:37 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





QEdit

(1) Dalapon (m)

0.000min 0.000 ppb

response 0

Manual Integration:

Before

01/11/19

(1) Dalapon #2 (m)

3.815min 159.889 ppb

response 2496674

(+) = Expected Retention Time

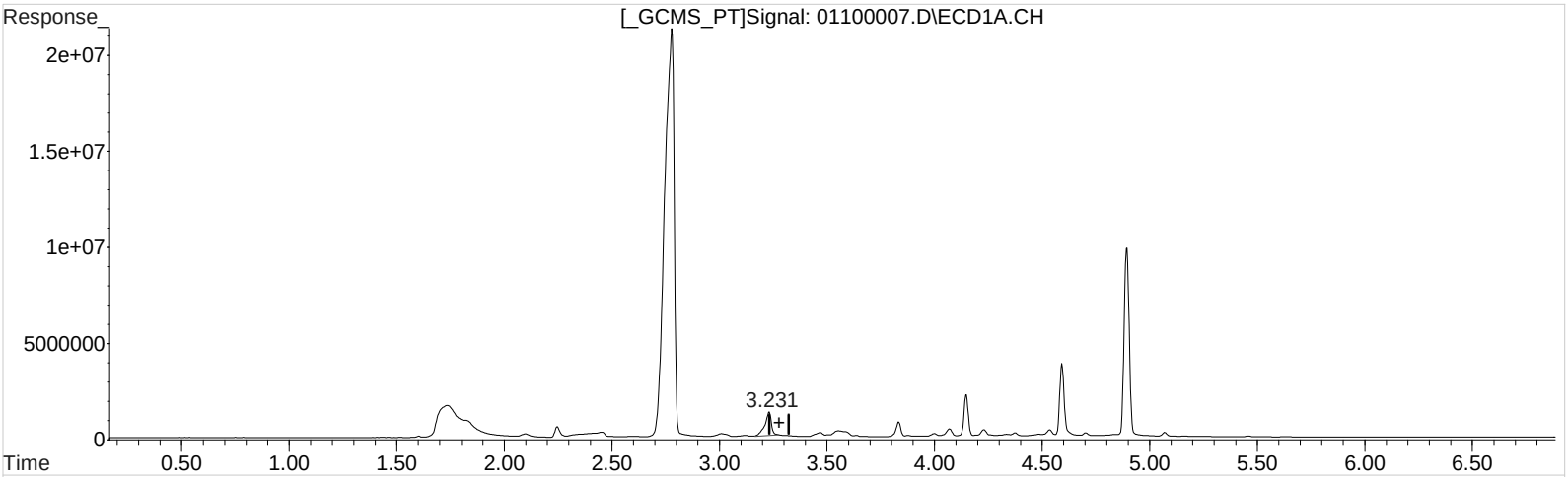
Quantitation Report (Qedit)

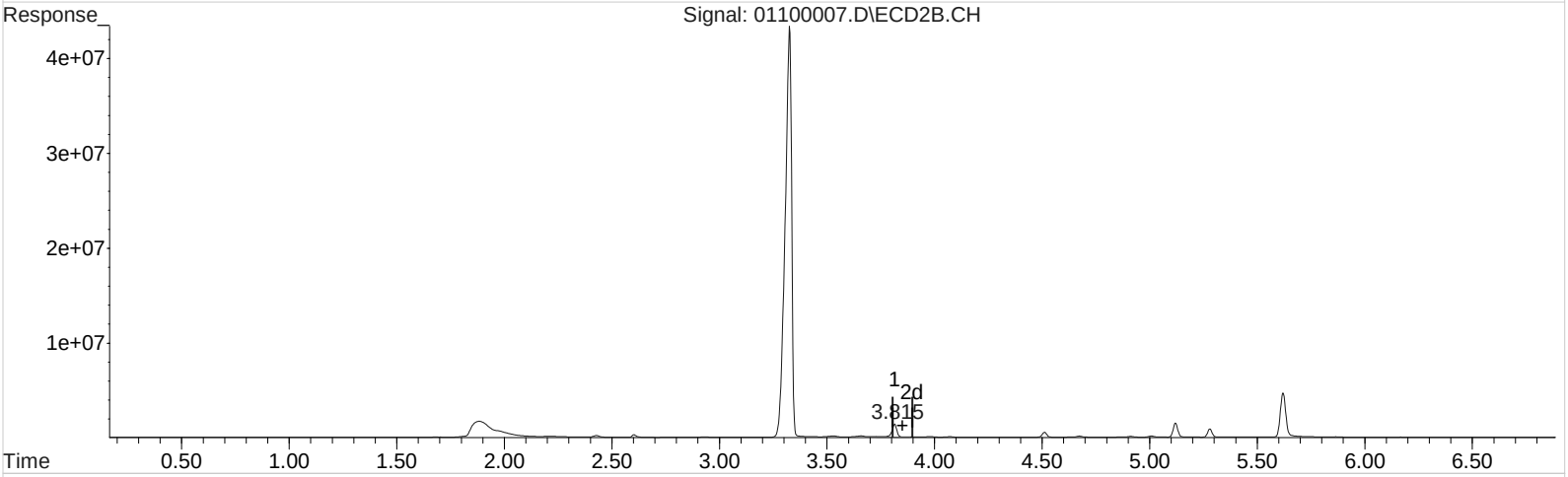
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100007.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 2:50 pm Operator: UA
Sample : KQ1818602-002DMS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 10 15:28:37 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





QEdit

(1) Dalapon (m)

3.231min 124.356 ppb m

response 2565248

Manual Integration:

After

Missed Peak

01/11/19

(1) Dalapon #2 (m)

3.815min 159.889 ppb

response 2496674

(+) = Expected Retention Time

1st UA 01/14/19
2nd TP 01/14/19

Validation Report

Data File: J:\gc24\data\011019\01100004.D\
Lab ID: KQ1900468-02
RunType: CCB
Matrix: Soil

Date Acquired: 1/10/19 13:38:00
Batch ID: 621714
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st UA 01/14/19
2nd TP 01/14/19

Quantitation Report

Data File:	J:\gc24\data\011019\01100004.D\	**Instrument:**	K-GC-24
Acqu Date:	1/10/19 13:38:00	**Vial:**	2
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1900468-02	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	12/9/18	**Receive Date:**	12/18/18

Analysis Lot:	621714	**Prep Lot:**		**Report Group:**	KQ1900468
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18934

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	8.25 -0.03	0.00	3393	0	0.207	0.000				17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	0.00	11.29 -0.06	0	14682	0.000	0.910	0U	1.8U	100 U	Y
2,4,5-TP (Silvex), TCLP	10.58	12.64 +0.07	1472	22994	0.021	0.367	0.042U	0.73U	20 U	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100004.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 1:38 pm Operator: UA
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:50:49 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	8.246f	0.000	3393	0	0.207	N.D.	#
	Target Compounds							
1) m	Dalapon	3.282	0.000	9876	0	0.479	N.D.	#
3) m	Dicamba	8.496	9.983f	5569	10762	0.111	0.238	#
4) m	MCPP	8.602	10.316f	1930	47304	50490.092	344.090	#
5) m	MCPA	8.872	0.000	2133	0	50266.712	N.D.	#
6) m	Dichloroprop	9.242	10.969	5398	6297	902.155	1362.699	#
7) m	2,4-D	0.000	11.293f	0	14682	N.D.	0.910	#
8) m	2,4,5-TP ...	10.576	12.639f	1472	22994	0.021	0.367	#
9) m	2,4,5-T	10.996	13.059f	6006	5437	0.099	0.100	
10) m	2,4-DB	11.592	0.000	8030	0	1.034	N.D.	#
11) m	Dinoseb	11.979	13.846	3888	6755	0.084	0.164	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

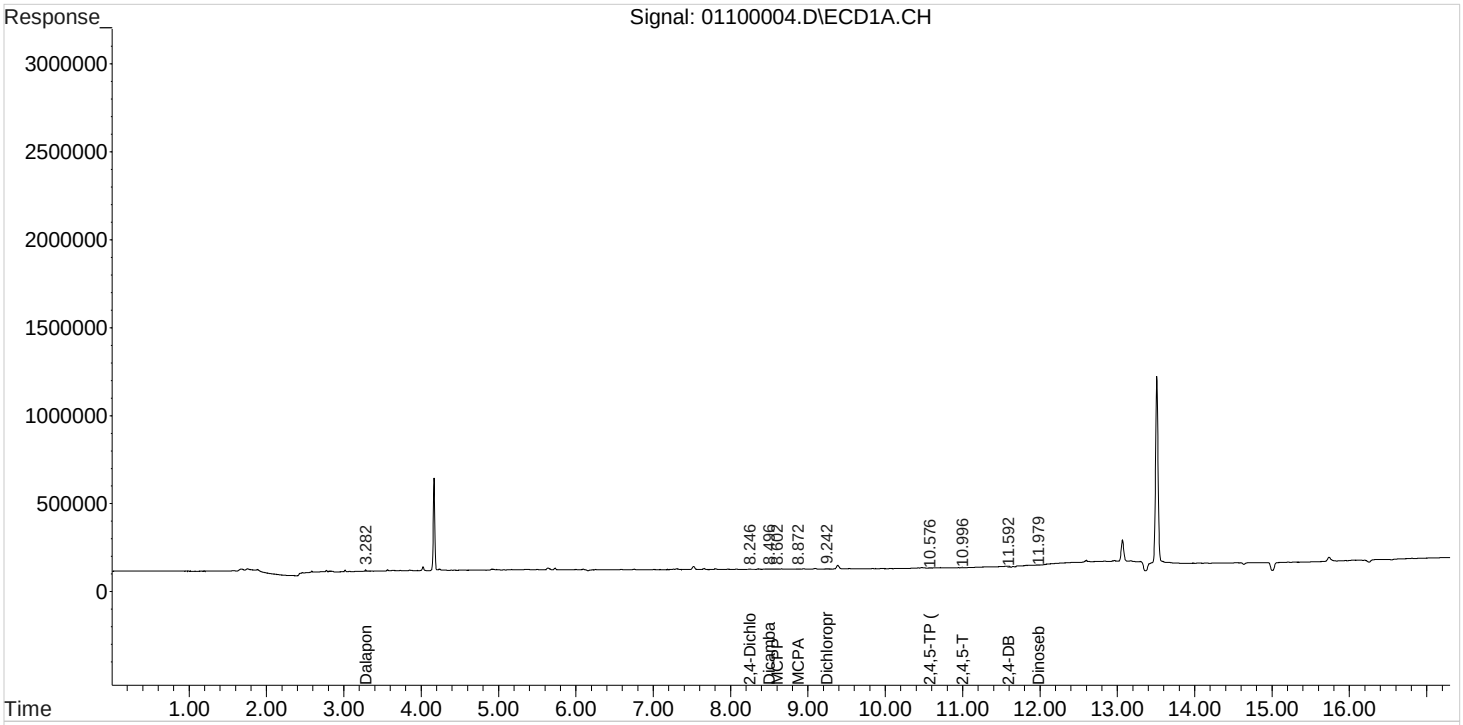
Quantitation Report (QT Reviewed)

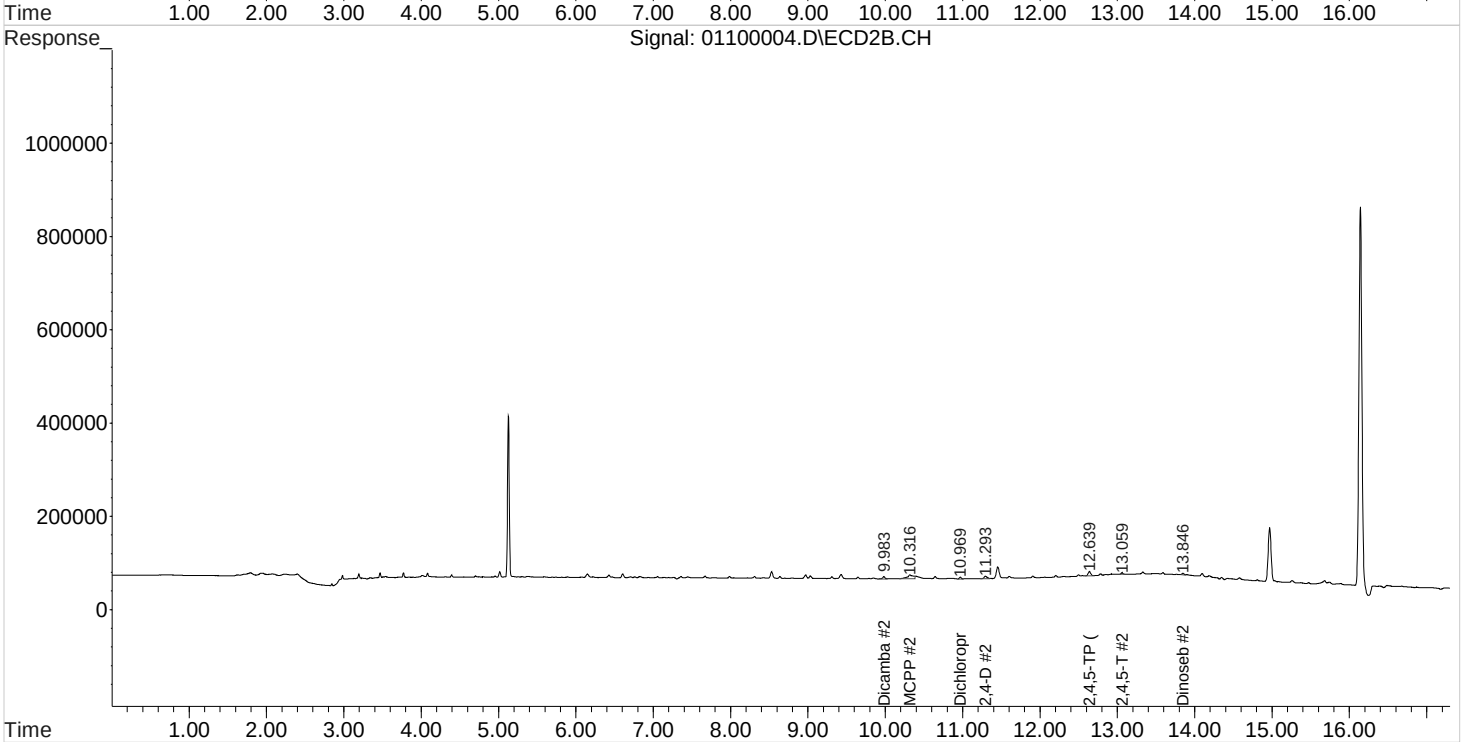
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100004.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 1:38 pm Operator: UA
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:50:49 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st UA 01/14/19
2nd TP 01/14/19

Validation Report

Data File: J:\gc24\data\011019\01100012.D\
Lab ID: KQ1900468-04
RunType: CCB
Matrix: Soil

Date Acquired: 1/10/19 18:24:00
Batch ID: 621714
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Surrogates	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st UA 01/14/19
2nd TP 01/14/19

Quantitation Report

Data File:	J:\gc24\data\011019\01100012.D\	**Instrument:**	K-GC-24
Acqu Date:	1/10/19 18:24:00	**Vial:**	4
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1900468-04	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	12/9/18	**Receive Date:**	12/18/18

Analysis Lot:	621714	**Prep Lot:**		**Report Group:**	KQ1900468
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18934

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	8.33 +0.07	0.00	1156	0	0.071	0.000				17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	0.00	11.29 -0.04	0	8859	0.000	0.549	0U	1.1U	100 U	Y
2,4,5-TP (Silvex), TCLP	10.57 +0.01	12.63 +0.08	3069	14303	0.044	0.228	0.088U	0.46U	20 U	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100012.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 6:24 pm Operator: UA
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:57:20 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.326f	0.000	1156	0	0.071	N.D. #
	Target Compounds						
1) m	Dalapon	3.273	0.000	9357	0	0.454	N.D. #
3) m	Dicamba	8.490	9.963f	4550	3433	0.091	0.076
4) m	MCPP	8.593	10.270	4071	26744	50474.883	86407.113 #
5) m	MCPA	8.860	0.000	2538	0	50264.319	N.D. #
6) m	Dichloroprop	9.276	10.960	1558	3139	902.396	1362.934 #
7) m	2,4-D	0.000	11.293f	0	8859	N.D.	0.549 #
8) m	2,4,5-TP ...	10.570	12.627f	3069	14303	0.044	0.228 #
9) m	2,4,5-T	11.013	12.913f	1318	3728	0.022	0.069 #
10) m	2,4-DB	11.583	0.000	22127	0	2.850	N.D. #
11) m	Dinoseb	11.973	0.000	3682	0	0.079	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

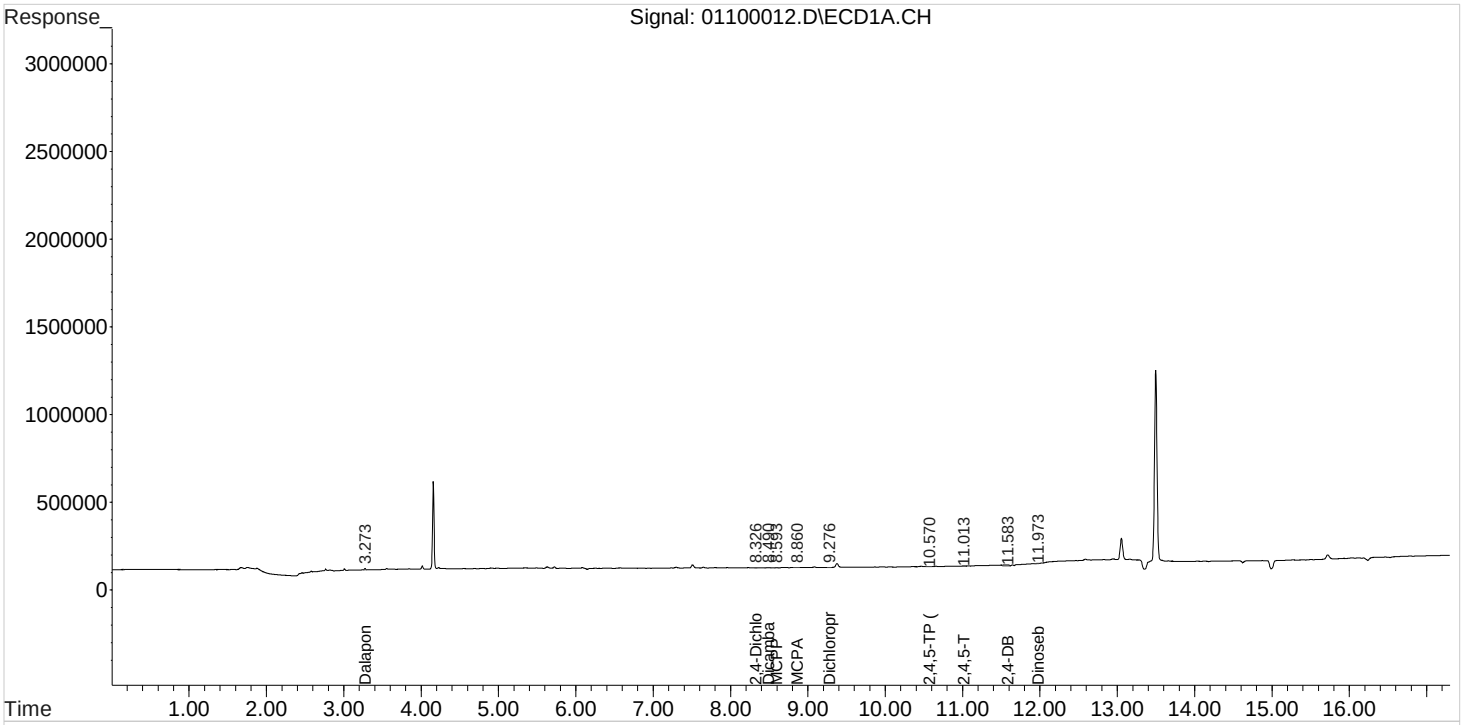
Quantitation Report (QT Reviewed)

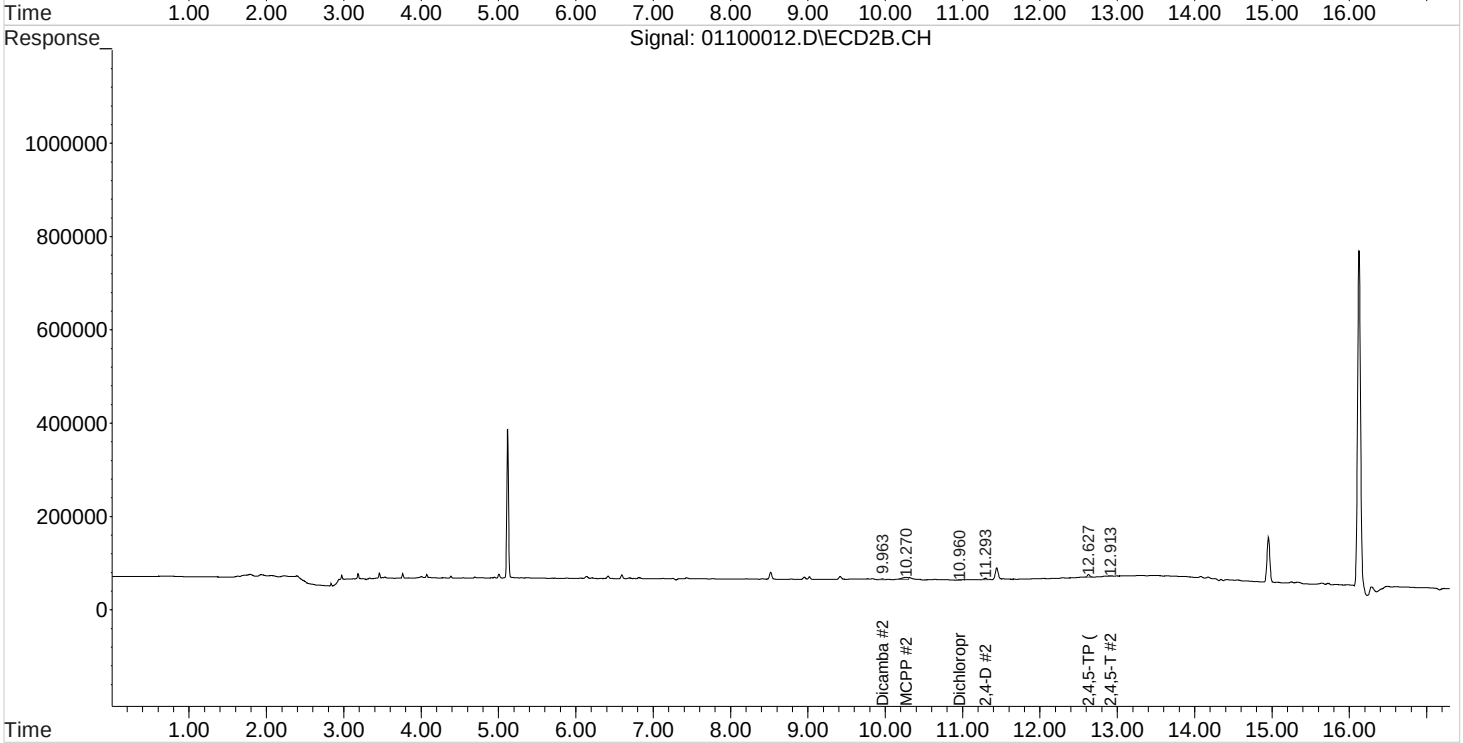
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100012.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 6:24 pm Operator: UA
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:57:20 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st UA 01/14/19
2nd TP 01/14/19

Validation Report

Data File: J:\gc24\data\011019\01100003.D\
Lab ID: KQ1900468-01
RunType: CCV
Matrix: Soil

Date Acquired: 1/10/19 13:13:00
Batch ID: 621714
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st UA 01/14/19
2nd TP 01/14/19

Quantitation Report

Data File:	J:\gc24\data\011019\01100003.D\	**Instrument:**	K-GC-24
Acqu Date:	1/10/19 13:13:00	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1900468-01	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	12/9/18	**Receive Date:**	12/18/18

Analysis Lot:	621714	**Prep Lot:**		**Report Group:**	KQ1900468
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18934

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
DCAA	8.28	9.91	1482112	1412266	90.497	96.643			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
2,4-D, TCLP	9.62	11.35	1815608	1710559	100.573	106.034	101	106	Y
2,4,5-TP (Silvex), TCLP	10.58	12.57	7131607	6785096	101.570	108.153	102	108	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100003.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 1:13 pm Operator: UA
Sample : PENTA01-94F Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:50:26 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.278	9.908	1482112	1412266	90.497	96.643
	Target Compounds						
1) m	Dalapon	3.278	3.852	1729429	1438746	83.838	92.138
3) m	Dicamba	8.505	10.055	4516204	4471055	90.216	98.984
4) m	MCPP	8.588	10.238	1164734	529319	9434.905	10464.755
5) m	MCPA	8.858	10.522	1453456	804308	9756.535	10383.604
6) m	Dichloroprop	9.265	11.008	1407429	1217142	97.154	94.249
7) m	2,4-D	9.625	11.348	1815608	1710559	100.573	106.034
8) m	2,4,5-TP ...	10.578	12.572	7131607	6785096	101.570	108.153
9) m	2,4,5-T	11.021	13.005	6796729	6489251	112.028	119.791
10) m	2,4-DB	11.608	13.692	921789	1017584	118.744m	138.552
11) m	Dinoseb	12.015	13.862	5024767	4645827	108.338	112.550

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

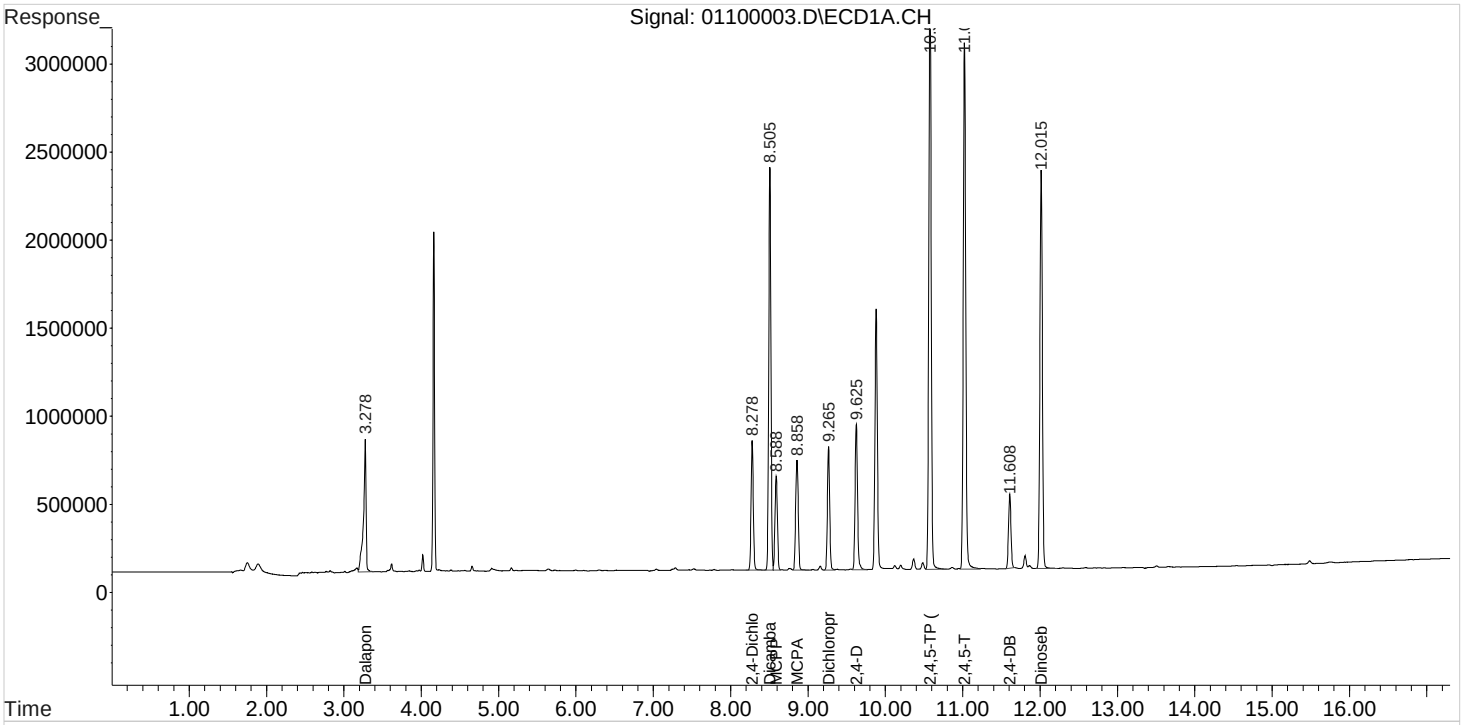
Quantitation Report (QT Reviewed)

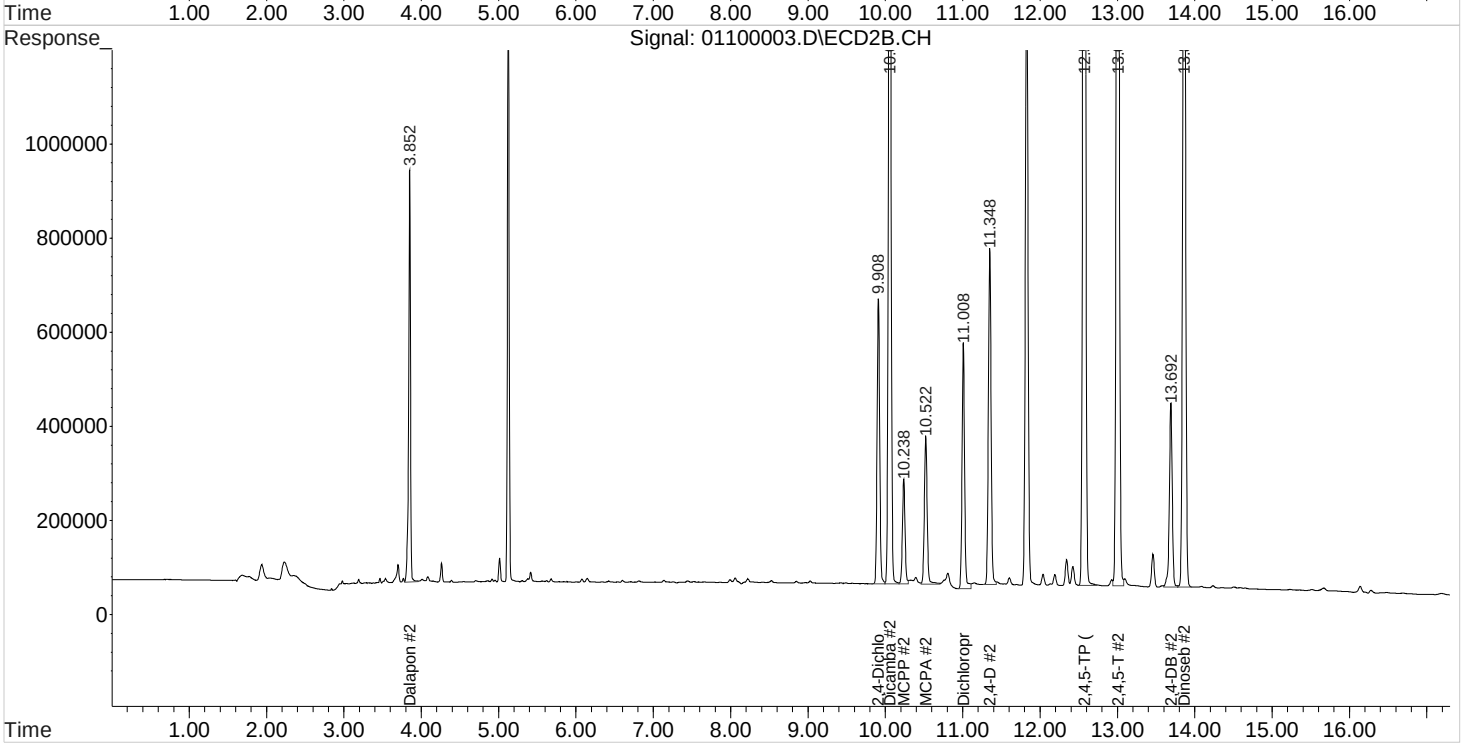
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100003.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 1:13 pm Operator: UA
Sample : PENTA01-94F Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:50:26 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





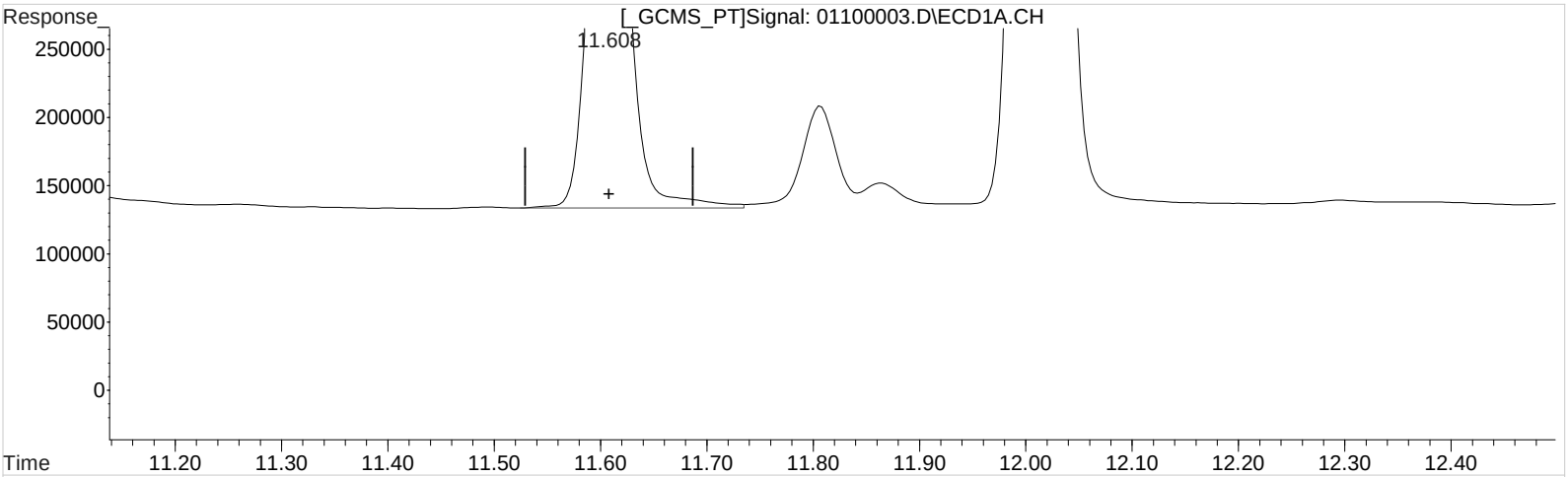
Quantitation Report (Qedit)

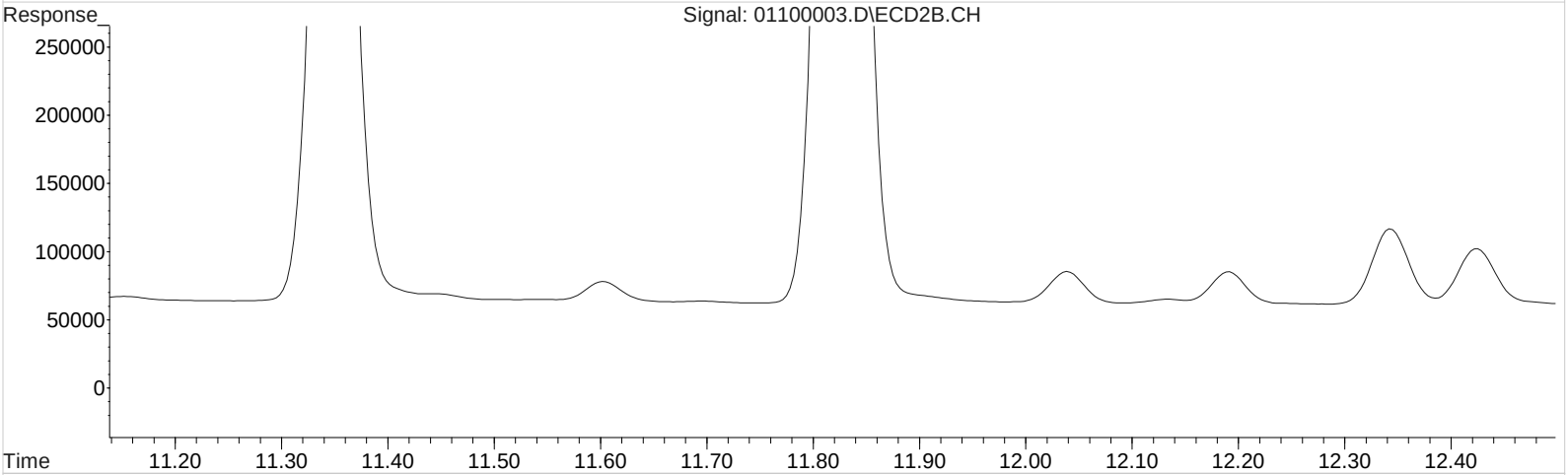
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100003.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 1:13 pm Operator: UA
Sample : PENTA01-94F Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 10 13:36:21 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





QEdit

(10) 2,4-DB (m)

11.608min 124.962 ppb

response 970058

Manual Integration:

Before

01/11/19

(10) 2,4-DB #2 (m)

13.692min 138.552 ppb

response 1017584

(+) = Expected Retention Time

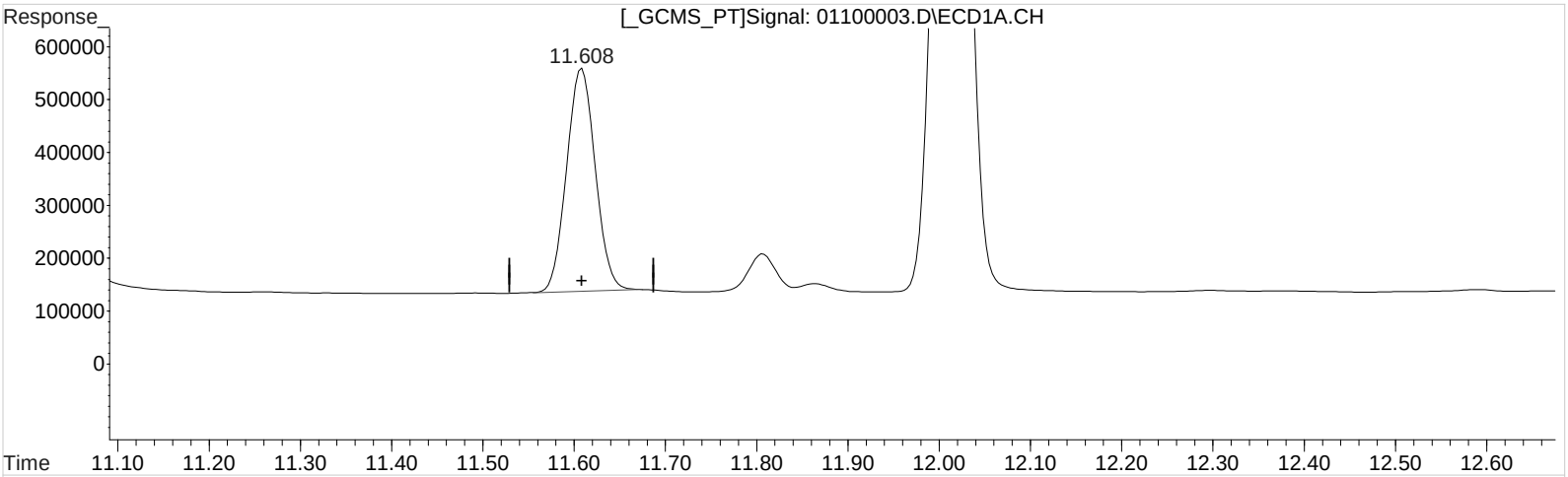
Quantitation Report (Qedit)

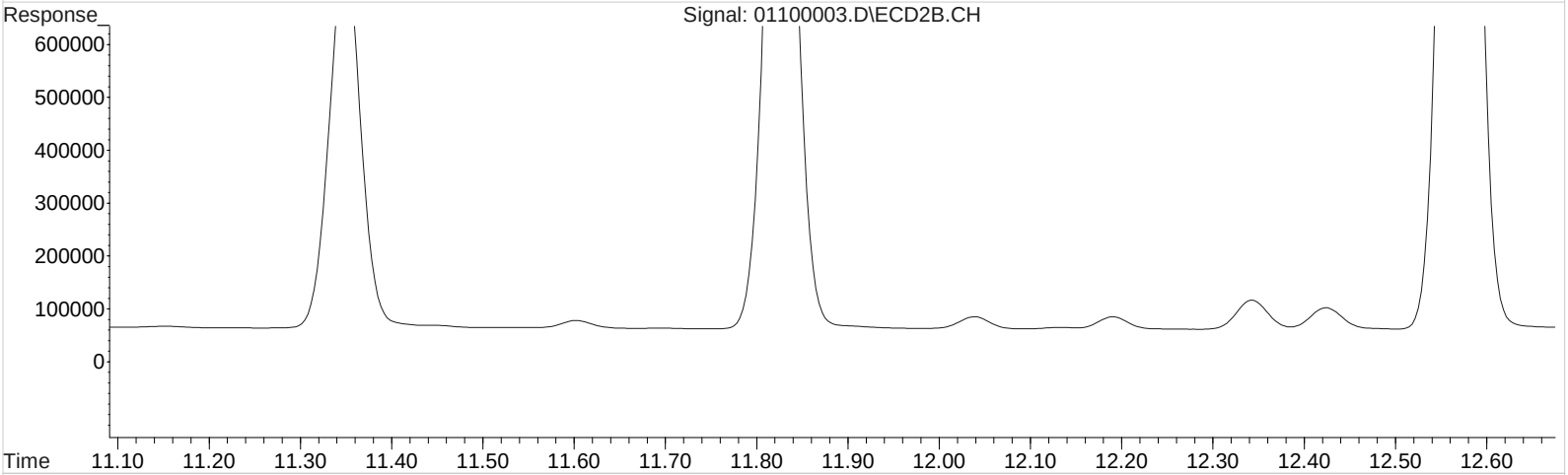
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100003.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 1:13 pm Operator: UA
Sample : PENTA01-94F Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 10 13:36:21 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





QEdit

(10) 2,4-DB (m)

11.608min 118.744 ppb m

response 921789

Manual Integration:

After

Baseline/Shoulder

01/11/19

(10) 2,4-DB #2 (m)

13.692min 138.552 ppb

response 1017584

(+) = Expected Retention Time

1st UA 01/14/19
2nd TP 01/14/19

Validation Report

Data File: J:\gc24\data\011019\01100011.D\
Lab ID: KQ1900468-03
RunType: CCV
Matrix: Soil

Date Acquired: 1/10/19 18:00:00
Batch ID: 621714
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st UA 01/14/19
2nd TP 01/14/19

Quantitation Report

Data File:	J:\gc24\data\011019\01100011.D\	**Instrument:**	K-GC-24
Acqu Date:	1/10/19 18:00:00	**Vial:**	3
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1900468-03	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	12/9/18	**Receive Date:**	12/18/18

Analysis Lot:	621714	**Prep Lot:**		**Report Group:**	KQ1900468
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18934

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
DCAA	8.26	9.89	1506372	1366416	91.978	93.506			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
2,4-D, TCLP	9.61	11.33	1837556	1671624	101.789	103.621	102	104	Y
2,4,5-TP (Silvex), TCLP	10.56	12.55	7267956	6617598	103.512	105.483	104	105	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100011.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 6:00 pm Operator: UA
Sample : PENTA01-94F Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:28:55 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.261	9.888	1506372	1366416	91.978	93.506
	Target Compounds						
1) m	Dalapon	3.261	3.835	1806881	1412074	87.593	90.430
3) m	Dicamba	8.491	10.035	4592399	4335688	91.738	95.987
4) m	MCPP	8.571	10.218	1183320	493033	9657.337	9596.566
5) m	MCPA	8.841	10.501	1474098	755987	9969.589	9613.835
6) m	Dichloroprop	9.248	10.988	1433132	1295046	99.228	101.061
7) m	2,4-D	9.608	11.328	1837556	1671624	101.789	103.621
8) m	2,4,5-TP ...	10.561	12.548	7267956	6617598	103.512	105.483
9) m	2,4,5-T	11.008	12.981	6911765	6326115	113.924	116.779
10) m	2,4-DB	11.591	13.668	979226	981367	126.143	133.022
11) m	Dinoseb	11.998	13.841	5104998	4483355	110.067	108.614

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

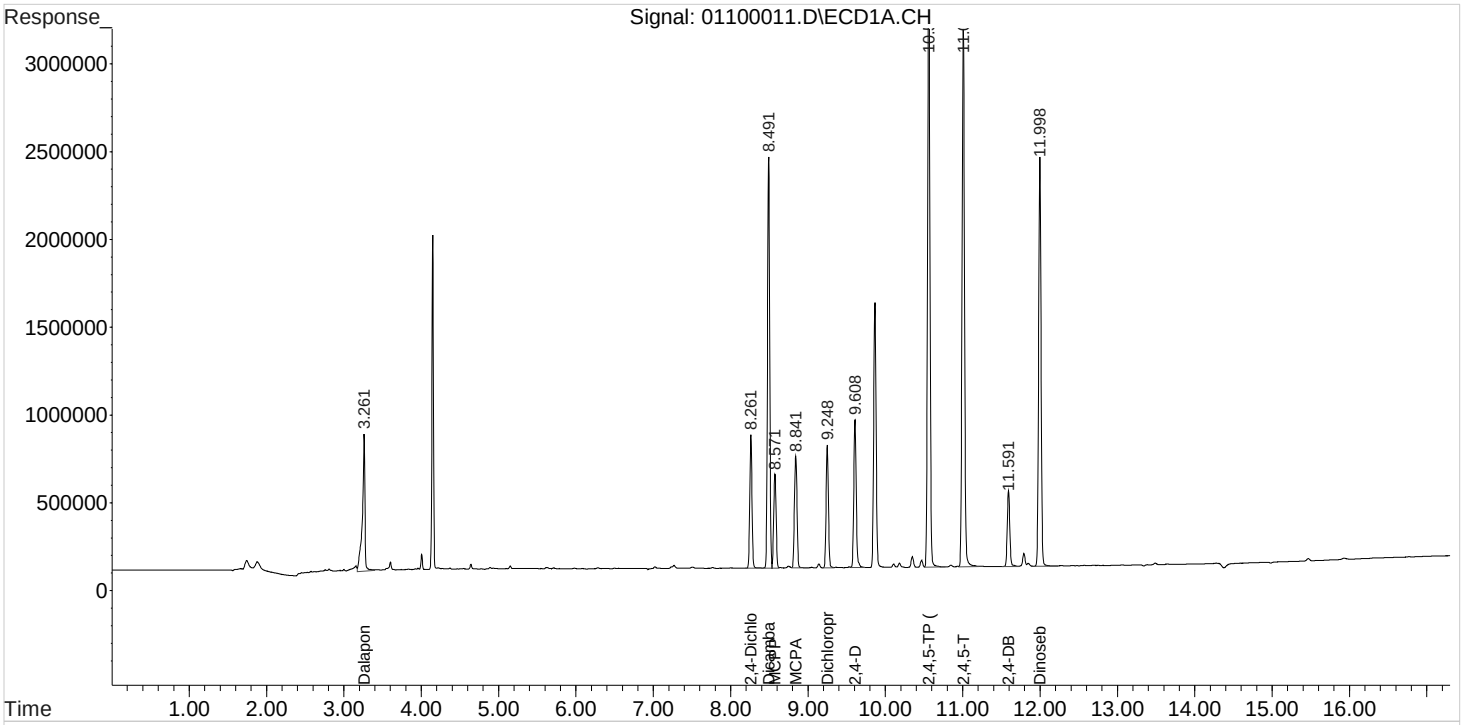
Quantitation Report (QT Reviewed)

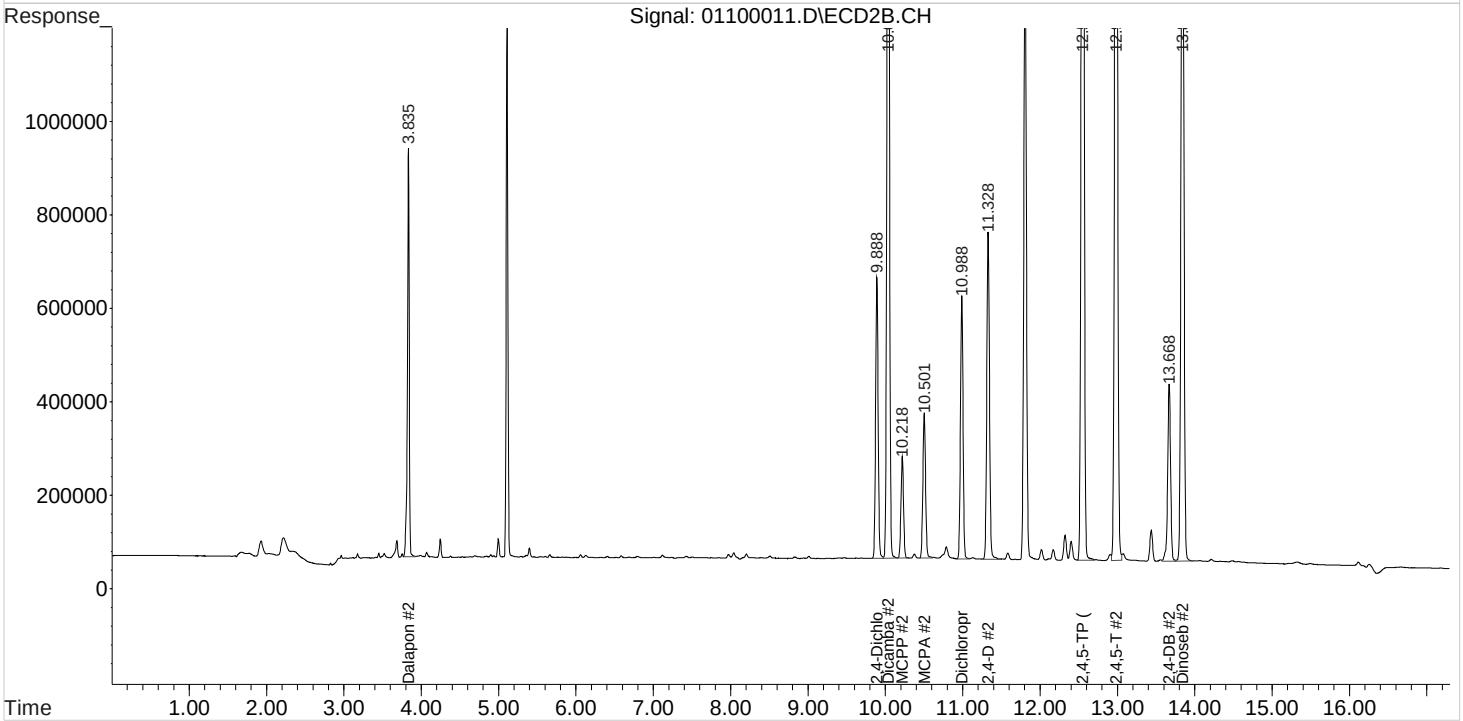
1st UA 01/14/19
2nd TP 01/14/19

Data File : J:\gc24\data\011019\01100011.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Jan 2019 6:00 pm Operator: UA
Sample : PENTA01-94F Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Jan 11 09:28:55 2019
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Jan 10 13:36:00 2019
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 100	PRIMER	8151A-17	1	Sample		
2	Vial 100	PRIMER	8151A-17	1	Sample		
3	Vial 1	IB	8151A-17	1	Sample		
4	Vial 2	HERB ICAL 10	8151A-17	1	Sample		
5	Vial 3	HERB ICAL 25	8151A-17	1	Sample		
6	Vial 4	HERB ICAL 75	8151A-17	1	Sample	rerun 110118	
7	Vial 5	HERB ICAL 100	8151A-17	1	Sample		
8	Vial 6	HERB ICAL 125	8151A-17	1	Sample		
9	Vial 7	HERB ICAL 150	8151A-17	1	Sample		110118-8151.m
10	Vial 8	HERB ICAL 175	8151A-17	1	Sample		
11	Vial 9	HERB ICAL 200	8151A-17	1	Sample		KC1800499
12	Vial 10	HERB ICV 100	8151A-17	1	Sample		
13	Vial 1	IB	8151A-17	1	Sample		
14	none	STANBY	STANDBY	1	Sample		mr 110118

Sequence Table (Back Injector):

No entries - empty table!

Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 100	PRIMER	8151A-17	1	Sample		
2	Vial 1	IB	8151A-17	1	Sample		
3	Vial 4	HERB ICAL 75	8151A-17	1	Sample		
4	Vial 10	HERB ICV 100	8151A-17	1	Sample		
5	Vial 1	IB	8151A-17	1	Sample		
6	Vial 2	PENTA01-93O	8151A-17	1	Sample		
7	Vial 1	IB	8151A-17	1	Sample		
8	Vial 16	KQ1815094-05 LCS	8151A-17	1	Sample		
9	Vial 17	KQ1815094-10 MB	8151A-17	1	Sample		
10	Vial 18	KQ1815094-09 MB	8151A-17	1	Sample		
11	Vial 19	KQ1815094-08 MB	8151A-17	1	Sample		
12	Vial 20	K1809357-009	8151A-17	1	Sample		
13	Vial 21	K1809357-009 MS	8151A-17	1	Sample		
14	Vial 22	K1809357-009 DMS	8151A-17	1	Sample		
15	Vial 23	K1809357-010	8151A-17	1	Sample		
16	Vial 24	K1809357-011	8151A-17	1	Sample		
17	Vial 25	K1809357-012	8151A-17	1	Sample		
18	Vial 26	K1809357-013	8151A-17	1	Sample		
19	Vial 27	K1809357-014	8151A-17	1	Sample		
20	Vial 28	K1809357-015	8151A-17	1	Sample		
21	Vial 29	K1809357-016	8151A-17	1	Sample		
22	Vial 2	PENTA01-93O	8151A-17	1	Sample		
23	Vial 1	IB	8151A-17	1	Sample		
24	Vial 30	K1809387-006	8151A-17	1	Sample		
25	Vial 31	K1809387-006 MS	8151A-17	1	Sample		
26	Vial 32	K1809387-006 DMS	8151A-17	1	Sample		
27	Vial 33	K1809387-007	8151A-17	1	Sample		
28	Vial 34	K1809387-008	8151A-17	1	Sample		
29	Vial 35	K1809387-009	8151A-17	1	Sample		
30	Vial 36	KWG1805111-1 LCS	8151A-17	1	Sample		
31	Vial 37	KWG1805111-2 DLC	8151A-17	1	Sample		
32	Vial 38	KWG1805111-3 MB	8151A-17	1	Sample		
33	Vial 39	K1809809-001 5X	8151A-17	1	Sample		
34	Vial 40	K1809810-001 5X	8151A-17	1	Sample		
35	Vial 2	PENTA01-93O	8151A-17	1	Sample		
36	Vial 1	IB	8151A-17	1	Sample		
37	none	STANBY	STANDBY	1	Sample		

110118_857.m

KC1800499

MR 110118

Sequence Table (Back Injector):

No entries - empty table!

Initial Calibration - Detailed Report

Calibration ID: KC1800499 **Instrument ID:** K-GC-24
Column Name: RTX-CLP2

#	Lab Code	Sample Name	File Location	Aquisition Date
01	KC1800499-01	HERB ICAL 10	J:\gc24\data\103118\10310103.D	10/31/2018 16:27
02	KC1800499-02	HERB ICAL 25	J:\gc24\data\103118\10310104.D	10/31/2018 16:51
03	KC1800499-03	HERB ICAL 100	J:\gc24\data\103118\10310106.D	10/31/2018 17:40
04	KC1800499-04	HERB ICAL 125	J:\gc24\data\103118\10310107.D	10/31/2018 18:05
05	KC1800499-05	HERB ICAL 150	J:\gc24\data\103118\10310108.D	10/31/2018 18:29
06	KC1800499-06	HERB ICAL 175	J:\gc24\data\103118\10310109.D	10/31/2018 18:54
07	KC1800499-07	HERB ICAL 200	J:\gc24\data\103118\10310110.D	10/31/2018 19:18
08	KC1800499-08	HERB ICAL 75	J:\gc24\data\110118\11010003.D	11/01/2018 10:58

Analyte **Curve Fit** **Weighting**

2,4,5-T

Average RF **RSD = 5.838** **Average RF = 6.067E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.480	6.704E4	02	23.700	6.353E4	03	94.800	6.106E4	04	118.490	6.007E4
05	142.190	5.728E4	06	165.890	5.723E4	07	189.590	5.705E4	08	71.100	6.209E4

2,4,5-TP

Average RF **RSD = 8.655** **Average RF = 7.021E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.510	8.153E4	02	23.760	7.593E4	03	95.100	6.98E4	04	118.820	6.871E4
05	142.580	6.525E4	06	166.340	6.468E4	07	190.100	6.407E4	08	71.300	7.174E4

2,4-D

Average RF **RSD = 11.86** **Average RF = 1.805E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.400	2.227E4	02	23.510	1.997E4	03	94.000	1.781E4	04	117.540	1.735E4
05	141.050	1.651E4	06	164.560	1.627E4	07	188.060	1.594E4	08	70.500	1.83E4

2,4-DB

Average RF **RSD = 5.551** **Average RF = 7.763E3**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.470	8.423E3	02	23.670	8.155E3	03	94.700	7.878E3	04	118.330	7.63E3
05	142.000	7.277E3	06	165.670	7.335E3	07	189.340	7.346E3	08	71.000	8.057E3

Dalapon

Average RF **RSD = 13.72** **Average RF = 2.063E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.110	2.67E4	02	22.770	2.272E4	03	91.100	1.972E4	04	113.830	1.957E4
05	136.600	1.877E4	06	159.360	1.884E4	07	182.130	1.813E4	08	68.300	2.057E4

Dicamba

Average RF **RSD = 12.02** **Average RF = 5.006E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.400	6.204E4	02	23.510	5.573E4	03	94.000	4.889E4	04	117.540	4.813E4
05	141.050	4.593E4	06	164.560	4.523E4	07	188.060	4.436E4	08	70.500	5.018E4

Dichlorprop

Quadratic **1/X** **COD = 0.9996** **Y= -17.61 X² + 1.585E4 X + 3.339E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.440	1.905E4	02	23.590	1.704E4	03	94.400	1.456E4	04	117.960	1.415E4
05	141.550	1.34E4	06	165.140	1.309E4	07	188.730	1.282E4	08	70.800	1.51E4

Dinoseb

Average RF **RSD = 6.42** **Average RF = 4.638E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.450	5.178E4	02	23.620	4.891E4	03	94.500	4.633E4	04	118.100	4.575E4
05	141.720	4.359E4	06	165.340	4.37E4	07	188.960	4.33E4	08	70.900	4.768E4

Initial Calibration - Detailed Report

Calibration ID: KC1800499 **Instrument ID:** K-GC-24
Column Name: RTX-CLP2

MCPA

Quadratic | Equal | COD = 0.9979 | Y= -0.003293 X² + 161.9 X + 1.878E5

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	934.770	318.7	02	2336.600	249.6	03	9346.000	151.4	04	11683.010	138.5
05	14019.610	126.8	06	16356.210	119.3	07	18692.820	111.4	08	7010.000	169.5

MCPP

Quadratic | Equal | COD = 0.9980 | Y= -0.00274 X² + 135.9 X + 1.267E5

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	938.770	237.1	02	2346.620	193.7	03	9386.000	124.6	04	11733.100	113.4
05	14079.720	104.6	06	16426.340	97.81	07	18772.960	92.39	08	7040.000	138

2,4-Dichlorophenylacetic Acid

Average RF | RSD = 14.45 | Average RF = 1.638E4

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.020	2.092E4	02	22.550	1.879E4	03	90.200	1.594E4	04	112.730	1.556E4
05	135.280	1.47E4	06	157.830	1.446E4	07	180.370	1.405E4	08	67.600	1.66E4

Analyte

2,4,5-T

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.480	10.5	10.5	02	23.700	24.8	4.7	03	94.800	95.4	0.6
04	118.490	117	-1.0	05	142.190	134	-5.6	06	165.890	156	-5.7
07	189.590	178	-6.0	08	71.100	72.8	2.3				

2,4,5-TP

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.510	11.0	16.1	02	23.760	25.7	8.1	03	95.100	94.5	-0.6
04	118.820	116	-2.1	05	142.580	132	-7.1	06	166.340	153	-7.9
07	190.100	173	-8.8	08	71.300	72.9	2.2				

2,4-D

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.400	11.6	23.3	02	23.510	26.0	10.6	03	94.000	92.8	-1.3
04	117.540	113	-3.9	05	141.050	129	-8.5	06	164.560	148	-9.9
07	188.060	166	-11.7	08	70.500	71.5	1.4				

2,4-DB

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.470	10.3	8.5	02	23.670	24.9	5.1	03	94.700	96.1	1.5
04	118.330	116	-1.7	05	142.000	133	-6.3	06	165.670	157	-5.5
07	189.340	179	-5.4	08	71.000	73.7	3.8				

Dalapon

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.110	11.8	29.4	02	22.770	25.1	10.2	03	91.100	87.1	-4.4
04	113.830	108	-5.1	05	136.600	124	-9.0	06	159.360	146	-8.7
07	182.130	160	-12.1	08	68.300	68.1	-0.3				

Dicamba

Initial Calibration - Detailed Report

Calibration ID: KC1800499 **Instrument ID:** K-GC-24
Column Name: RTX-CLP2

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.400	11.6	23.9	02	23.510	26.2	11.3	03	94.000	91.8	-2.3
04	117.540	113	-3.8	05	141.050	129	-8.3	06	164.560	149	-9.7
07	188.060	167	-11.4	08	70.500	70.7	0.2				

Dichlorprop

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.440	9.34	-1.1	02	23.590	23.9	1.2	03	94.400	94.5	0.1
04	117.960	119	0.8	05	141.550	139	-1.8	06	165.140	164	-0.6
07	188.730	191	1.2	08	70.800	70.9	0.2				

Dinoseb

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.450	10.5	11.6	02	23.620	24.9	5.5	03	94.500	94.4	-0.1
04	118.100	116	-1.4	05	141.720	133	-6.0	06	165.340	156	-5.8
07	188.960	176	-6.6	08	70.900	72.9	2.8				

MCPA

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	934.770	690	-26.2	02	2336.600	2580	10.3	03	9346.000	9360	0.2
04	11683.010	11600	-1.1	05	14019.610	13600	-3.3	06	16356.210	16300	-0.4
07	18692.820	19200	2.9	08	7010.000	7250	3.5				

MCPP

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	938.770	716	-23.7	02	2346.620	2540	8.4	03	9386.000	9490	1.1
04	11733.100	11600	-1.5	05	14079.720	13700	-2.9	06	16426.340	16200	-1.6
07	18772.960	19500	3.9	08	7040.000	7290	3.5				

2,4-Dichlorophenylacetic Acid

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.020	11.5	27.7	02	22.550	25.9	14.7	03	90.200	87.8	-2.7
04	112.730	107	-5.0	05	135.280	121	-10.3	06	157.830	139	-11.7
07	180.370	155	-14.2	08	67.600	68.5	1.4				

Calibration ID: KC1800499 **Instrument ID:** K-GC-24
Column Name: ZB-XLB-HT

Initial Calibration - Detailed Report

Calibration ID: KC1800499 **Instrument ID:** K-GC-24
Column Name: ZB-XLB-HT

#	Lab Code	Sample Name	File Location	Aquisition Date
01	KC1800499-01	HERB ICAL 10	J:\gc24\data\103118\10310103.D\10310103c.d	10/31/2018 16:27
02	KC1800499-02	HERB ICAL 25	J:\gc24\data\103118\10310104.D\10310104c.d	10/31/2018 16:51
03	KC1800499-03	HERB ICAL 100	J:\gc24\data\103118\10310106.D\10310106c.d	10/31/2018 17:40
04	KC1800499-04	HERB ICAL 125	J:\gc24\data\103118\10310107.D\10310107c.d	10/31/2018 18:05
05	KC1800499-05	HERB ICAL 150	J:\gc24\data\103118\10310108.D\10310108c.d	10/31/2018 18:29
06	KC1800499-06	HERB ICAL 175	J:\gc24\data\103118\10310109.D\10310109c.d	10/31/2018 18:54
07	KC1800499-07	HERB ICAL 200	J:\gc24\data\103118\10310110.D\10310110c.d	10/31/2018 19:18
08	KC1800499-08	HERB ICAL 75	J:\gc24\data\110118\11010003.D\11010003c.d	11/01/2018 10:58

Analyte **Curve Fit** **Weighting**

2,4,5-T

Average RF **RSD = 3.96** **Average RF = 5.417E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.480	5.868E4	02	23.700	5.477E4	03	94.800	5.349E4	04	118.490	5.356E4
05	142.190	5.198E4	06	165.890	5.384E4	07	189.590	5.196E4	08	71.100	5.51E4

2,4,5-TP

Average RF **RSD = 5.485** **Average RF = 6.274E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.510	7.003E4	02	23.760	6.444E4	03	95.100	6.156E4	04	118.820	6.158E4
05	142.580	6E4	06	166.340	6.189E4	07	190.100	5.884E4	08	71.300	6.354E4

2,4-D

Average RF **RSD = 12.87** **Average RF = 1.613E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.400	2.057E4	02	23.510	1.77E4	03	94.000	1.539E4	04	117.540	1.519E4
05	141.050	1.477E4	06	164.560	1.514E4	07	188.060	1.419E4	08	70.500	1.61E4

2,4-DB

Quadratic **1/X** **COD = 0.9986** **Y= -5.157 X² + 7.95E3 X + 1.505E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.470	9.446E3	02	23.670	8.431E3	03	94.700	7.581E3	04	118.330	7.445E3
05	142.000	7.094E3	06	165.670	7.268E3	07	189.340	7.107E3	08	71.000	8.031E3

Dalapon

Average RF **RSD = 10.16** **Average RF = 1.562E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.110	1.913E4	02	22.770	1.665E4	03	91.100	1.531E4	04	113.830	1.513E4
05	136.600	1.459E4	06	159.360	1.47E4	07	182.130	1.43E4	08	68.300	1.511E4

Dicamba

Average RF **RSD = 7.464** **Average RF = 4.517E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.400	5.255E4	02	23.510	4.703E4	03	94.000	4.402E4	04	117.540	4.396E4
05	141.050	4.277E4	06	164.560	4.401E4	07	188.060	4.174E4	08	70.500	4.528E4

Dichlorprop

Quadratic **1/X** **COD = 0.9986** **Y= -9.821 X² + 1.335E4 X + 4.572E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.440	1.798E4	02	23.590	1.519E4	03	94.400	1.272E4	04	117.960	1.253E4
05	141.550	1.215E4	06	165.140	1.234E4	07	188.730	1.161E4	08	70.800	1.348E4

Dinoseb

Average RF **RSD = 8.778** **Average RF = 4.128E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.450	4.908E4	02	23.620	4.343E4	03	94.500	3.981E4	04	118.100	3.973E4
05	141.720	3.845E4	06	165.340	3.971E4	07	188.960	3.798E4	08	70.900	4.203E4

Initial Calibration - Detailed Report

Calibration ID: KC1800499 **Instrument ID:** K-GC-24
Column Name: ZB-XLB-HT

MCPA Quadratic 1/X **COD = 0.9985** **Y= -0.0009958 X² + 82.69 X + 5.309E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	934.770	136.1	02	2336.600	105.8	03	9346.000	76.97	04	11683.010	75.03
05	14019.610	71.63	06	16356.210	71.18	07	18692.820	66.66	08	7010.000	85.32

MCPP Quadratic 1/X **COD = 0.9986** **Y= -0.0006303 X² + 54.44 X + 2.865E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	938.770	83.14	02	2346.620	66.25	03	9386.000	50.17	04	11733.100	48.99
05	14079.720	47	06	16426.340	46.63	07	18772.960	44.13	08	7040.000	55.92

2,4-Dichlorophenylacetic Acid **Average RF** **RSD = 16.25** **Average RF = 1.461E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.020	1.961E4	02	22.550	1.67E4	03	90.200	1.383E4	04	112.730	1.356E4
05	135.280	1.31E4	06	157.830	1.335E4	07	180.370	1.251E4	08	67.600	1.425E4

Analyte

2,4,5-T

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.480	10.3	8.3	02	23.700	24.0	1.1	03	94.800	93.6	-1.3
04	118.490	117	-1.1	05	142.190	136	-4.0	06	165.890	165	-0.6
07	189.590	182	-4.1	08	71.100	72.3	1.7				

2,4,5-TP

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.510	10.6	11.6	02	23.760	24.4	2.7	03	95.100	93.3	-1.9
04	118.820	117	-1.8	05	142.580	136	-4.4	06	166.340	164	-1.3
07	190.100	178	-6.2	08	71.300	72.2	1.3				

2,4-D

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.400	12.0	27.5	02	23.510	25.8	9.7	03	94.000	89.7	-4.6
04	117.540	111	-5.8	05	141.050	129	-8.4	06	164.560	154	-6.2
07	188.060	165	-12.0	08	70.500	70.4	-0.2				

2,4-DB

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.470	9.42	-0.6	02	23.670	23.6	-0.4	03	94.700	94.2	-0.6
04	118.330	118	-0.3	05	142.000	137	-3.5	06	165.670	168	1.3
07	189.340	191	0.9	08	71.000	73.3	3.3				

Dalapon

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.110	11.2	22.5	02	22.770	24.3	6.6	03	91.100	89.3	-1.9
04	113.830	110	-3.1	05	136.600	128	-6.6	06	159.360	150	-5.8
07	182.130	167	-8.4	08	68.300	66.1	-3.2				

Dicamba

Initial Calibration - Detailed Report

Calibration ID: KC1800499 **Instrument ID:** K-GC-24
Column Name: ZB-XLB-HT

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.400	10.9	16.3	02	23.510	24.5	4.1	03	94.000	91.6	-2.5
04	117.540	114	-2.7	05	141.050	134	-5.3	06	164.560	160	-2.6
07	188.060	174	-7.6	08	70.500	70.7	0.2				

Dichlorprop

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.440	9.35	-0.9	02	23.590	23.8	1.0	03	94.400	92.9	-1.6
04	117.960	117	-0.5	05	141.550	140	-1.3	06	165.140	171	3.3
07	188.730	186	-1.4	08	70.800	71.8	1.4				

Dinoseb

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.450	11.2	18.9	02	23.620	24.9	5.2	03	94.500	91.2	-3.5
04	118.100	114	-3.7	05	141.720	132	-6.8	06	165.340	159	-3.8
07	188.960	174	-8.0	08	70.900	72.2	1.8				

MCPA

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	934.770	906	-3.0	02	2336.600	2420	3.4	03	9346.000	9040	-3.3
04	11683.010	11600	-1.0	05	14019.610	13800	-1.6	06	16356.210	16900	3.1
07	18692.820	18600	-0.6	08	7010.000	7220	3.0				

MCPP

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	938.770	917	-2.3	02	2346.620	2400	2.1	03	9386.000	9080	-3.3
04	11733.100	11600	-1.3	05	14079.720	13800	-1.6	06	16426.340	16800	2.4
07	18772.960	18800	-0.0	08	7040.000	7330	4.1				

2,4-Dichlorophenylacetic Acid

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	9.020	12.1	**34.2**	02	22.550	25.8	14.3	03	90.200	85.4	-5.4
04	112.730	105	-7.2	05	135.280	121	-10.4	06	157.830	144	-8.7
07	180.370	154	-14.4	08	67.600	65.9	-2.5				

Initial Calibration Verification Summary Report

Calibration ID:	KC1800499	**Instrument ID:**	K-GC-24
Datafile ID:	J:\gc24\data\110118\11010004.D	**Column Name:**	ZB-XLB-HT

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
2,4,5-T	KC1800499-09	T	Average RF	94.80	106.808	ppb	12.7	<= 20
2,4,5-TP	KC1800499-09	T	Average RF	95.10	101.702	ppb	6.9	<= 20
2,4-D	KC1800499-09	T	Average RF	94	90.774	ppb	-3.4	<= 20
2,4-DB	KC1800499-09	T	Quadratic	94.70	106.747	ppb	12.7	<= 20
Dalapon	KC1800499-09	T	Average RF	91.10	86.542	ppb	-5.0	<= 20
Dicamba	KC1800499-09	T	Average RF	94	107.183	ppb	14.0	<= 20
Dichlorprop	KC1800499-09	T	Quadratic	94.40	97.189	ppb	3.0	<= 20
Dinoseb	KC1800499-09	T	Average RF	94.50	104.567	ppb	10.7	<= 20
MCPA	KC1800499-09	T	Quadratic	9346	10218.223	ppb	9.3	<= 20
MCPP	KC1800499-09	T	Quadratic	9386	10102.451	ppb	7.6	<= 20

Calibration ID:	KC1800499	**Instrument ID:**	K-GC-24
Datafile ID:	J:\gc24\data\110118\11010004.D	**Column Name:**	RTX-CLP2

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
2,4,5-T	KC1800499-09	T	Average RF	94.80	107.130	ppb	13.0	<= 20
2,4,5-TP	KC1800499-09	T	Average RF	95.10	102.425	ppb	7.7	<= 20
2,4-D	KC1800499-09	T	Average RF	94	93.979	ppb	0.0	<= 20
2,4-DB	KC1800499-09	T	Average RF	94.70	107.553	ppb	13.6	<= 20
Dalapon	KC1800499-09	T	Average RF	91.10	87.784	ppb	-3.6	<= 20
Dicamba	KC1800499-09	T	Average RF	94	105.876	ppb	12.6	<= 20
Dichlorprop	KC1800499-09	T	Quadratic	94.40	100.377	ppb	6.3	<= 20
Dinoseb	KC1800499-09	T	Average RF	94.50	107.080	ppb	13.3	<= 20
MCPA	KC1800499-09	T	Quadratic	9346	10533.294	ppb	12.7	<= 20
MCPP	KC1800499-09	T	Quadratic	9386	10574.863	ppb	12.7	<= 20

Method Path : J:\gc24\Methods\
Method File : 110118_8151.M
Title : 103118_8151.m MJ215 CAL_KC1800
Last Update : Thu Nov 01 14:26:19 2018
Response Via : Initial Calibration

Calibration Files
1 =10310103.D 2 =10310104.D =
4 =11010003.D 5 =10310106.D 6 =10310107.D

		Compound	1	2	4	5	6	Avg		%RSD
1)	m	Dalapon	2.670	2.272	2.057	1.972	1.957	1.877	2.063 E4	13.72
2)	s	2,4-Dichlorop...	2.092	1.879	1.660	1.594	1.556	1.470	1.638 E4	14.45
3)	m	Dicamba	6.204	5.573	5.018	4.889	4.813	4.593	5.006 E4	12.02
4)	m	MCPP	2.371	1.937	1.380	1.246	1.134	1.046	1.377 E2	37.36
5)	m	MCPA	3.187	2.496	1.695	1.514	1.385	1.268	1.731 E2	42.32
6)	m	Dichloroprop	1.905	1.704	1.510	1.456	1.415	1.340	1.490 E4	14.44
7)	m	2,4-D	2.227	1.997	1.830	1.781	1.735	1.651	1.805 E4	11.86
8)	m	2,4,5-TP (Sil...	8.153	7.593	7.174	6.980	6.871	6.525	7.021 E4	8.66
9)	m	2,4,5-T	6.704	6.353	6.209	6.106	6.007	5.728	6.067 E4	5.84
10)	m	2,4-DB	8.423	8.155	8.057	7.878	7.630	7.277	7.763 E3	5.55
11)	m	Dinoseb	5.178	4.891	4.768	4.633	4.575	4.359	4.638 E4	6.42

Signal #2 Calibration Files
1 =10310103.D 2 =10310104.D =
4 =11010003.D 5 =10310106.D 6 =10310107.D

		Compound	1	2	4	5	6	Avg		%RSD
1)	m	Dalapon	1.913	1.665	1.511	1.531	1.513	1.459	1.562 E4	10.16
2)	s	2,4-Dichlorop...	1.961	1.670	1.425	1.383	1.356	1.310	1.461 E4	16.25
3)	m	Dicamba	5.255	4.703	4.528	4.402	4.396	4.277	4.517 E4	7.46
4)	m	MCPP	8.314	6.625	5.592	5.017	4.899	4.700	5.528 E1	23.98
5)	m	MCPA	1.361	1.058	0.853	0.770	0.750	0.716	0.861 E2	27.43
6)	m	Dichloroprop	1.798	1.519	1.348	1.272	1.253	1.215	1.350 E4	15.65
7)	m	2,4-D	2.057	1.770	1.610	1.539	1.519	1.477	1.613 E4	12.87
8)	m	2,4,5-TP (Sil...	7.003	6.444	6.354	6.156	6.158	6.000	6.274 E4	5.48
9)	m	2,4,5-T	5.868	5.477	5.510	5.349	5.356	5.198	5.417 E4	3.96
10)	m	2,4-DB	9.446	8.431	8.031	7.581	7.445	7.094	7.800 E3	10.39
11)	m	Dinoseb	4.908	4.343	4.203	3.981	3.973	3.845	4.128 E4	8.78

(#) = Out of Range ### Number of calibration levels exceeded format ###

110118_8151.M Thu Nov 01 16:48:15 2018

DATA ANALYSIS PARAMETERS

Method Name: J:\gc24\Methods\110118_8151.M

Percent Report Settings

Sort By: Signal

Output Destination
    Screen: No
    Printer: Yes
    File: No

Integration Events: Meth Default

Generate Report During Run Method: No

Signal Correlation Window: 0.020

Quantitative Report Settings

Report Type: Summary

Output Destination
    Screen: No
    Printer: Yes
    File: No

Generate Report During Run Method: No

103118_8151.m MJ215 CAL_KC1800
Calibration Last Updated: Thu Nov 01 12:15:57 2018

Reference Window: 2.00 Minutes
Non-Reference Window: 1.00 Minutes
Correlation Window: 0.10 minutes
Default Multiplier: 1.00
Default Sample Concentration: 0.00

Compound Information

---

1) Dalapon ( )
Ret. Time 3.125 min., Extract & Integrate from 3.079 to 3.171 min.

Lvl	ID	Conc (ppb)	Response
1		9.110	243208
2		22.770	517439
4		68.300	1405063
5		91.100	1796749
6		113.830	2227595
7		136.600	2563650
8		159.360	3002153
9		182.130	3302689

Curve Fit: Avg. RF

MC 11/0/18

2) 2,4-Dichlorophenylacetic Acid ( )
Ret. Time 8.068 min., Extract & Integrate from 8.018 to 8.118 min.

Lvl	ID	Conc (ppb)	Response
1		9.020	188657
2		22.550	423626
4		67.600	1122191
5		90.200	1438016
6		112.730	1754616
7		135.280	1988242
8		157.830	2282290
9		180.370	2534816

Curve Fit: Avg. RF

---

3) Dicamba ( )
Ret. Time 8.295 min., Extract & Integrate from 8.208 to 8.382 min.

Lvl	ID	Conc (ppb)	Response
1		9.400	583152
2		23.510	1310164
4		70.500	3537442
5		94.000	4595258
6		117.540	5657580
7		141.050	6477940
8		164.560	7442697
9		188.060	8342861

Curve Fit: Avg. RF

---

4) MCPP ( )
Ret. Time 8.378 min., Extract & Integrate from 8.291 to 8.465 min.

Lvl	ID	Conc (ppb)	Response
1		938.770	222600
2		2346.620	454576
4		7040.000	971205
5		9386.000	1169510
6		11733.100	1330592
7		14079.720	1472079
8		16426.340	1606646
9		18772.960	1734448

Curve Fit: Quadratic

---

5) MCPA ( )
Ret. Time 8.645 min., Extract & Integrate from 8.566 to 8.724 min.

Lvl	ID	Conc (ppb)	Response
1		934.770	297920
2		2336.600	583152
4		7010.000	1188470
5		9346.000	1414607
6		11683.010	1618337
7		14019.610	1777241
8		16356.210	1950677
9		18692.820	2082776

Curve Fit: Quadratic

---

6) Dichloroprop ( )
Ret. Time 9.045 min., Extract & Integrate from 8.958 to 9.132 min.

Lvl	ID	Conc (ppb)	Response
1		9.440	179862
2		23.590	401964

MR 11/0/18

5	94.400	1374560
6	117.960	1669282
7	141.550	1897289
8	165.140	2161436
9	188.730	2418837

Curve Fit: Quadratic

---

7) 2,4-D ( )

Ret. Time 9.401 min., Extract & Integrate from 9.314 to 9.488 min.

Lvl	ID	Conc (ppb)	Response
1		9.400	209292
2		23.510	469594
4		70.500	1290227
5		94.000	1674507
6		117.540	2039313
7		141.050	2329231
8		164.560	2676975
9		188.060	2996827

Curve Fit: Avg. RF

---

8) 2,4,5-TP (Silvex) ( )

Ret. Time 10.348 min., Extract & Integrate from 10.252 to 10.444 min.

Lvl	ID	Conc (ppb)	Response
1		9.510	775306
2		23.760	1804204
4		71.300	5115098
5		95.100	6638265
6		118.820	8164589
7		142.580	9302756
8		166.340	10758488
9		190.100	12179428

Curve Fit: Avg. RF

---

9) 2,4,5-T ( )

Ret. Time 10.791 min., Extract & Integrate from 10.687 to 10.895 min.

Lvl	ID	Conc (ppb)	Response
1		9.480	635566
2		23.700	1505750
4		71.100	4414904
5		94.800	5788640
6		118.490	7118206
7		142.190	8144428
8		165.890	9493402
9		189.590	10815821

Curve Fit: Avg. RF

---

10) 2,4-DB ( )

Ret. Time 11.375 min., Extract & Integrate from 11.296 to 11.454 min.

Lvl	ID	Conc (ppb)	Response
1		9.470	79769
2		23.670	193029
4		71.000	572053
5		94.700	746077
6		118.330	902899
7		142.000	1033326
8		165.670	1215232
9		189.340	1390960

MC 11/01/18

Curve Fit: Avg. RF

---

11) Dinoseb ( )

Ret. Time 11.775 min., Extract & Integrate from 11.679 to 11.871 min.

Lvl	ID	Conc (ppb)	Response
1		9.450	489284
2		23.620	1155340
4		70.900	3380533
5		94.500	4378544
6		118.100	5402663
7		141.720	6177639
8		165.340	7225706
9		188.960	8182446

Curve Fit: Avg. RF

---

12) Signal #2 ( )

Ret. Time 0.010 min., Extract & Integrate from 0.010 to 0.010 min.

Lvl	ID	Conc (ppb)	Response
1		not used for this compound	
2		not used for this compound	
4		not used for this compound	
5		not used for this compound	
6		not used for this compound	
7		not used for this compound	
8		not used for this compound	
9		not used for this compound	

Curve Fit: Avg. RF

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13) Dalapon #2 ( )

Ret. Time 3.688 min., Extract & Integrate from 3.642 to 3.734 min.

Lvl	ID	Conc (ppb)	Response
1		9.110	174264
2		22.770	379093
4		68.300	1031995
5		91.100	1395182
6		113.830	1721893
7		136.600	1992531
8		159.360	2342946
9		182.130	2604929

Curve Fit: Avg. RF

---

14) 2,4-Dichlorophenylacetic Acid #2 ( )

Ret. Time 9.668 min., Extract & Integrate from 9.618 to 9.718 min.

Lvl	ID	Conc (ppb)	Response
1		9.020	178774
2		22.550	376584
4		67.600	963579
5		90.200	1247394
6		112.730	1528689
7		135.280	1771518
8		157.830	2106532
9		180.370	2256686

Curve Fit: Avg. RF

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15) Dicamba #2 ( )

Ret. Time 9.815 min., Extract & Integrate from 9.711 to 9.919 min.

mc 11018

Lvl	ID	Conc (ppb)	Response
1		9.400	493932
2		23.510	1105755
4		70.500	3192250
5		94.000	4137891
6		117.540	5167059
7		141.050	6032568
8		164.560	7242313
9		188.060	7849089

Curve Fit: Avg. RF

---

16) MCPP #2 ( )

Ret. Time 9.998 min., Extract & Integrate from 9.894 to 10.102 min.

Lvl	ID	Conc (ppb)	Response
1		938.770	78051
2		2346.620	155456
4		7040.000	393680
5		9386.000	470912
6		11733.100	574776
7		14079.720	661711
8		16426.340	765936
9		18772.960	828494

Curve Fit: Quadratic

---

17) MCPA #2 ( )

Ret. Time 10.278 min., Extract & Integrate from 10.182 to 10.374 min.

Lvl	ID	Conc (ppb)	Response
1		934.770	127221
2		2336.600	247098
4		7010.000	598127
5		9346.000	719342
6		11683.010	876556
7		14019.610	1004166
8		16356.210	1164155
9		18692.820	1246094

Curve Fit: Quadratic

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18) Dichloroprop #2 ( )

Ret. Time 10.758 min., Extract & Integrate from 10.654 to 10.862 min.

Lvl	ID	Conc (ppb)	Response
1		9.440	169748
2		23.590	358436
4		70.800	954161
5		94.400	1201183
6		117.960	1478426
7		141.550	1719582
8		165.140	2037389
9		188.730	2191423

Curve Fit: Quadratic

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19) 2,4-D #2 ( )

Ret. Time 11.095 min., Extract & Integrate from 10.999 to 11.191 min.

Lvl	ID	Conc (ppb)	Response
1		9.400	193385
2		23.510	416033
4		70.500	1135185
5		94.000	1446639
6		117.540	1785618
7		141.050	2084010

MC 110118

8	164.500	2490657
9	188.060	2669247

Curve Fit: Avg. RF

---

20) 2,4,5-TP (Silvex) #2 ( )
Ret. Time 12.311 min., Extract & Integrate from 12.215 to 12.407 min.

Lvl	ID	Conc (ppb)	Response
1		9.510	666006
2		23.760	1531153
4		71.300	4530516
5		95.100	5854506
6		118.820	7316402
7		142.580	8554591
8		166.340	10295087
9		190.100	11186238

Curve Fit: Avg. RF

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21) 2,4,5-T #2 ( )
Ret. Time 12.741 min., Extract & Integrate from 12.645 to 12.837 min.

Lvl	ID	Conc (ppb)	Response
1		9.480	556284
2		23.700	1298153
4		71.100	3917429
5		94.800	5070725
6		118.490	6346223
7		142.190	7391196
8		165.890	8931115
9		189.590	9850168

Curve Fit: Avg. RF

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22) 2,4-DB #2 ( )
Ret. Time 13.425 min., Extract & Integrate from 13.329 to 13.521 min.

Lvl	ID	Conc (ppb)	Response
1		9.470	89451
2		23.670	199559
4		71.000	570168
5		94.700	717945
6		118.330	881015
7		142.000	1007405
8		165.670	1204065
9		189.340	1345562

Curve Fit: Quadratic

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23) Dinoseb #2 ( )
Ret. Time 13.595 min., Extract & Integrate from 13.481 to 13.709 min.

Lvl	ID	Conc (ppb)	Response
1		9.450	463780
2		23.620	1025824
4		70.900	2980049
5		94.500	3762512
6		118.100	4692269
7		141.720	5449526
8		165.340	6564903
9		188.960	7176429

Curve Fit: Avg. RF

MK 110118

END OF DATA ANALYSIS PARAMETERS

Thu Nov 01 13:04:37 2018

Quantitation Report (QT Reviewed)

1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\110118\11010002.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01 Nov 2018 10:34 am Operator: MRICHARDS
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:16:45 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	8.074	9.627f	156682	59251	9.567	4.047	#
	Target Compounds							
1) m	Dalapon	3.150f	3.707	36940	2201	1.791	0.141	#
3) m	Dicamba	8.370f	0.000	512733	0	10.242	N.D.	#
4) m	MCPP	8.370	0.000	512733	0	3025.698	N.D.	#
5) m	MCPA	8.607	0.000	174073	0	49229.836	N.D.	#
6) m	Dichloroprop	8.987f	0.000	99187	0	4.169	N.D.	#
7) m	2,4-D	0.000	11.170f	0	9307	N.D.	0.577	#
8) m	2,4,5-TP ...	10.337	12.300	1930	3023	0.027	0.048	#
9) m	2,4,5-T	10.784	12.734	1553	2076	0.026	0.038	#
10) m	2,4-DB	11.354	0.000	6270	0	0.808	N.D.	#
11) m	Dinoseb	0.000	0.000	0	0	N.D.	N.D.	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

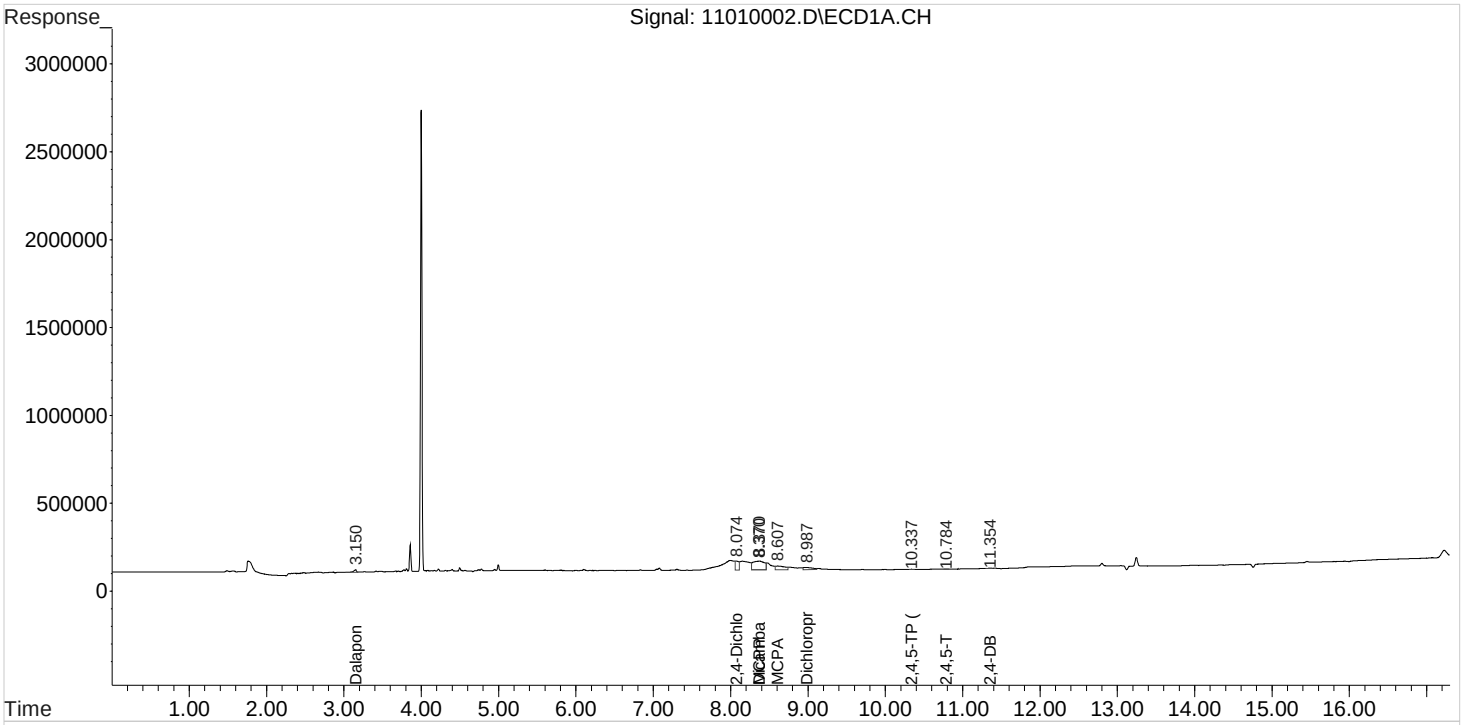
Quantitation Report (QT Reviewed)

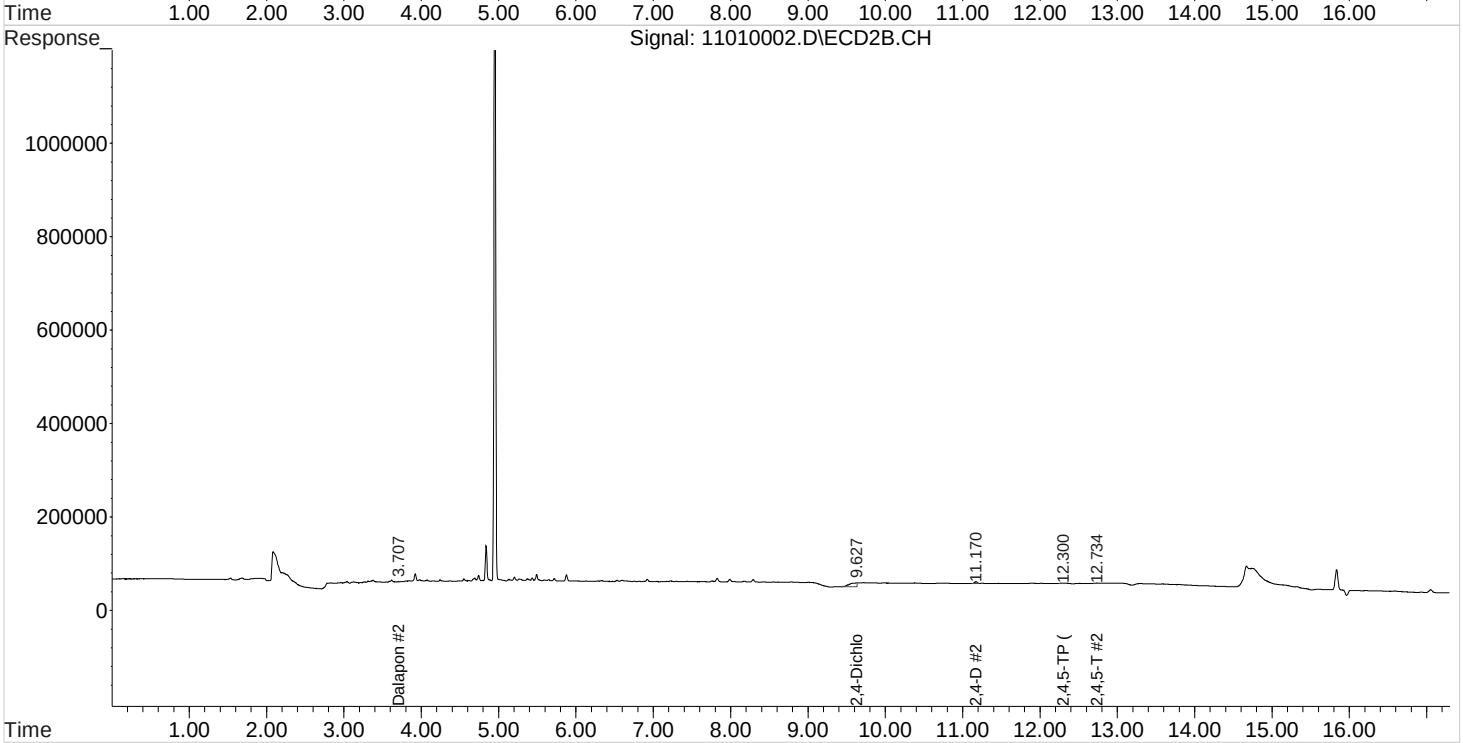
1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\110118\11010002.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01 Nov 2018 10:34 am Operator: MRICHARDS
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:16:45 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Quantitation Report (QT Reviewed)

1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\110118\11010003.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01 Nov 2018 10:58 am Operator: MRICHARDS
Sample : HERB ICAL 75 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:15:54 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:52 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
2)	s	2,4-Dichl...	8.068	9.668	1122191	963579	56.531	52.770	
		Target Compounds							
1)	m	Dalapon	3.124	3.688	1405063	1031995	56.860	57.689	
3)	m	Dicamba	8.291	9.811	3537442	3192250	60.076	64.115	
4)	m	MCPP	8.378	9.994	971205	393680	NoCal	NoCal	
5)	m	MCPA	8.641	10.278	1188470	598127	NoCal	NoCal	
6)	m	Dichloroprop	9.044	10.754	1069104	954161	NoCal	NoCal	
7)	m	2,4-D	9.401	11.094	1290227	1135185	61.091	59.327	
8)	m	2,4,5-TP ...	10.348	12.308	5115098	4530516	64.970	67.381	
9)	m	2,4,5-T	10.791	12.738	4414904	3917429	67.622	69.057	
10)	m	2,4-DB	11.371	13.424	572053	570168	69.012	NoCal	#
11)	m	Dinoseb	11.774	13.591	3380533	2980049	67.148	64.428	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

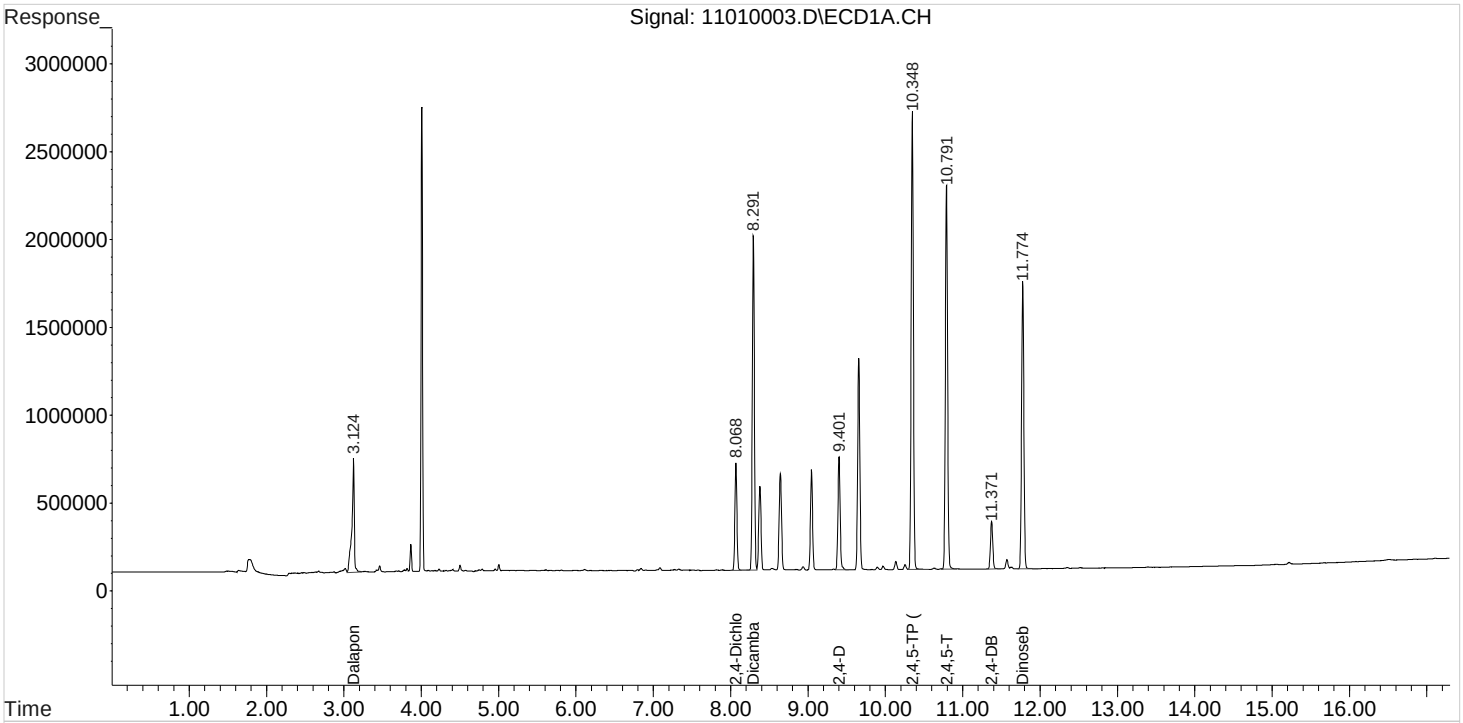
Quantitation Report (QT Reviewed)

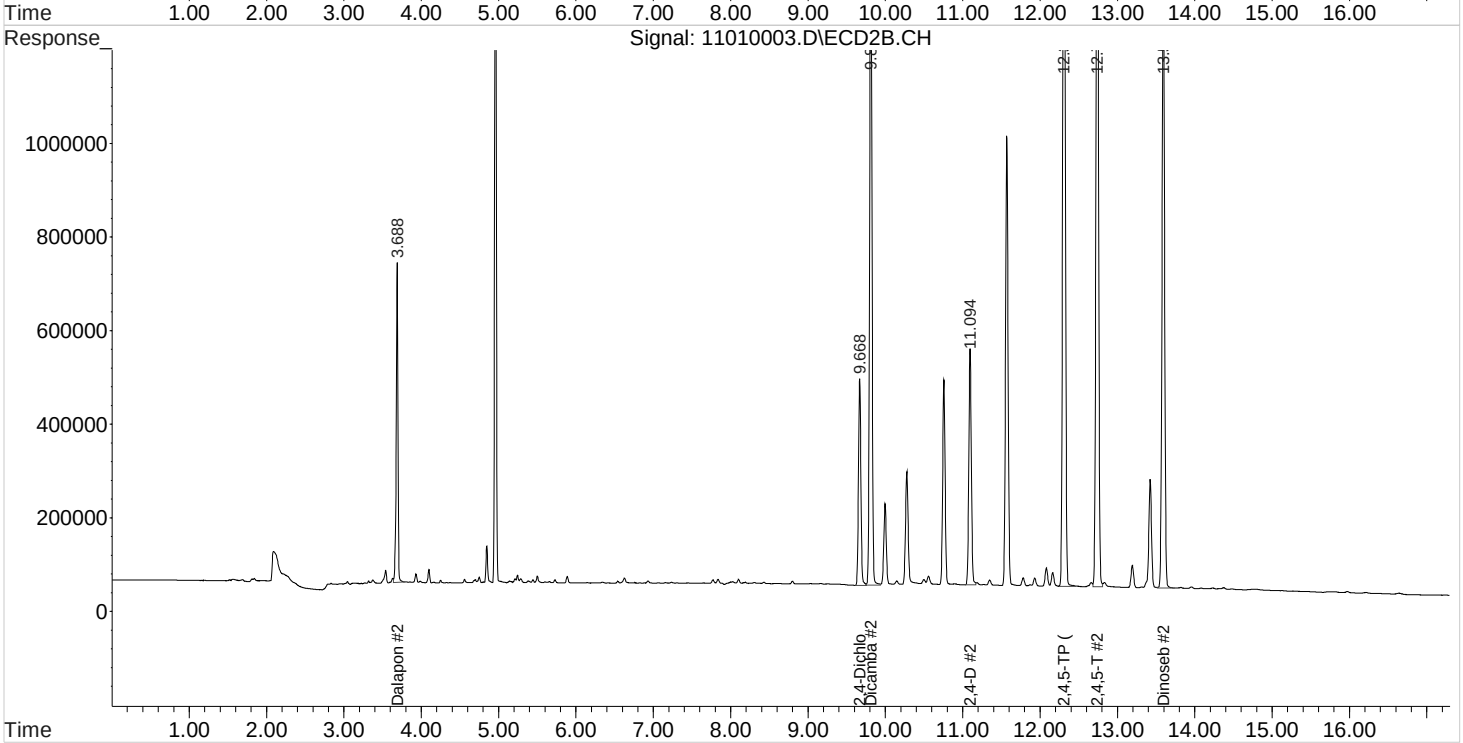
1st 11/01/18
2nd 11/08/18

Data File : J:\gc24\data\110118\11010003.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01 Nov 2018 10:58 am Operator: MRICHARDS
Sample : HERB ICAL 75 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:15:54 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:52 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Quantitation Report (QT Reviewed)

1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\110118\11010004.D Vial: 10
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01 Nov 2018 11:23 am Operator: MRICHARDS
Sample : HERB ICV 100 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:16:48 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.089	9.679	6034	18050	0.368	1.233 #
	Target Compounds						
1) m	Dalapon	3.126	3.689	1810837	1351358	87.784	86.542
3) m	Dicamba	8.296	9.813	5300120	4841389	105.876	107.183
4) m	MCPP	8.379	9.996	1257121	514292	10574.863	10102.451
5) m	MCPA	8.646	10.276	1527271	794026	10533.294	10218.223
6) m	Dichloroprop	9.046	10.756	1447308	1250874	100.377	97.189
7) m	2,4-D	9.403	11.096	1696569	1464372	93.979	90.774
8) m	2,4,5-TP ...	10.346	12.309	7191667	6380400	102.425	101.702
9) m	2,4,5-T	10.789	12.739	6499616	5785960	107.130	106.808
10) m	2,4-DB	11.373	13.423	834918	804960	107.553	106.747
11) m	Dinoseb	11.776	13.593	4966428	4316295	107.080	104.567

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

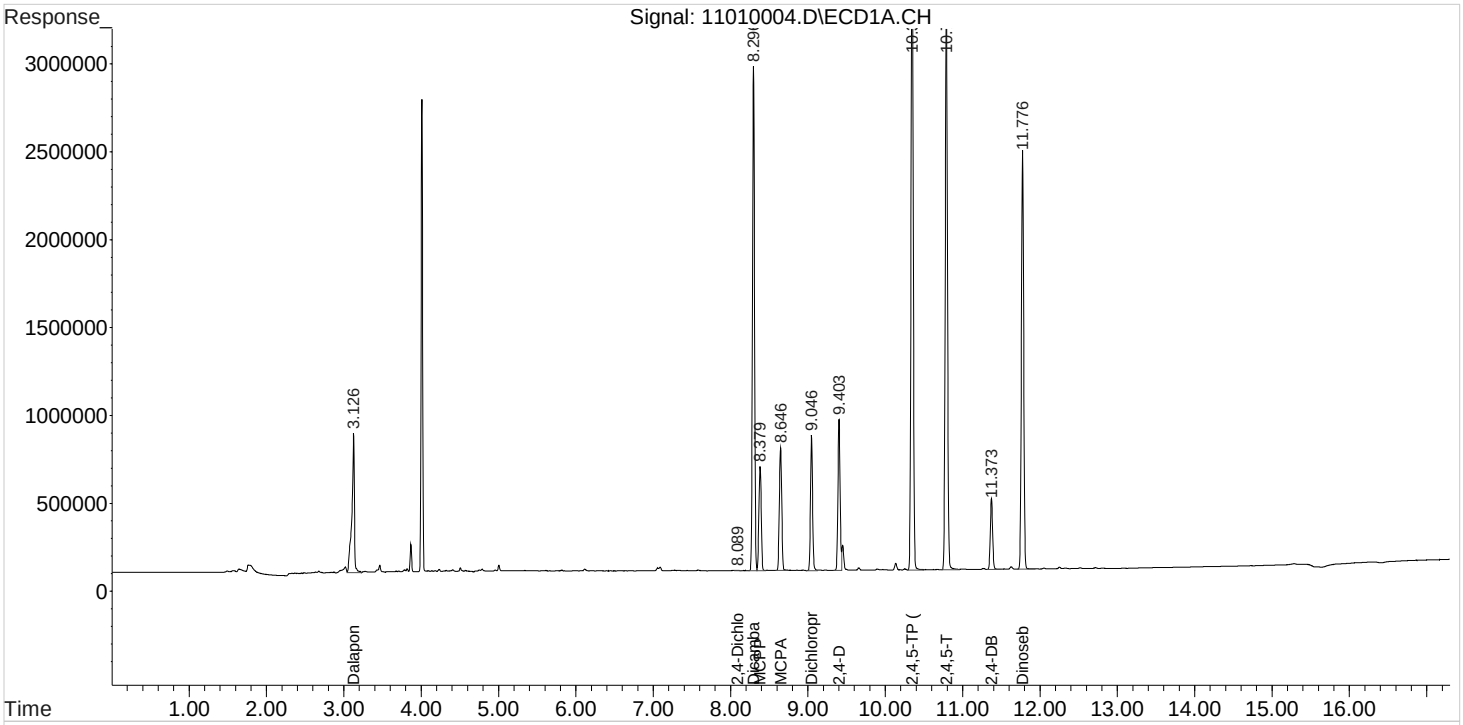
Quantitation Report (QT Reviewed)

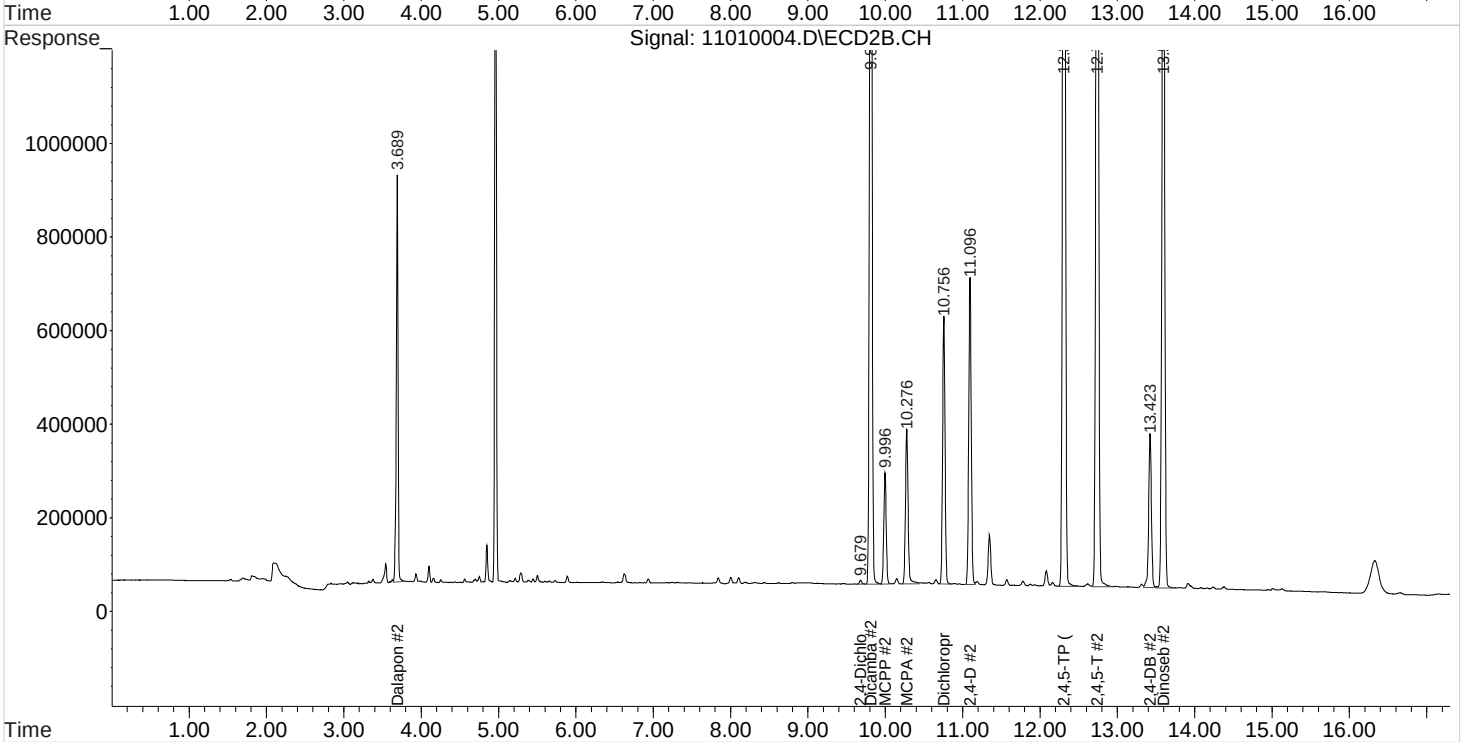
1st 11/01/18
2nd 11/08/18

Data File : J:\gc24\data\110118\11010004.D Vial: 10
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01 Nov 2018 11:23 am Operator: MRICHARDS
Sample : HERB ICV 100 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:16:48 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Quantitation Report (QT Reviewed)

1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\103118\10310103.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 4:27 pm Operator: MRICHARDS
Sample : HERB ICAL 10 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 14:22:26 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	8.069	9.669	188657	176865	11.519	12.081m	
	Target Compounds							
1) m	Dalapon	3.129	3.692	243208	174264	11.790	11.160	
3) m	Dicamba	8.292	9.812	583152	493932	11.649	10.935	
4) m	MCPP	8.379	9.995	222600	78051	716.058	917.252	#
5) m	MCPA	8.642	10.275	297920	127221	689.775	906.464	#
6) m	Dichloroprop	9.046	10.756	179862	169748	9.336	9.351	
7) m	2,4-D	9.402	11.095	209292	193385	11.593	11.988	
8) m	2,4,5-TP ...	10.349	12.309	775306	666006	11.042	10.616	
9) m	2,4,5-T	10.789	12.739	635566	556284	10.476	10.269	
10) m	2,4-DB	11.372	13.426	79769	89451	10.276	9.416	
11) m	Dinoseb	11.775	13.592	489284	463780	10.549	11.236	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

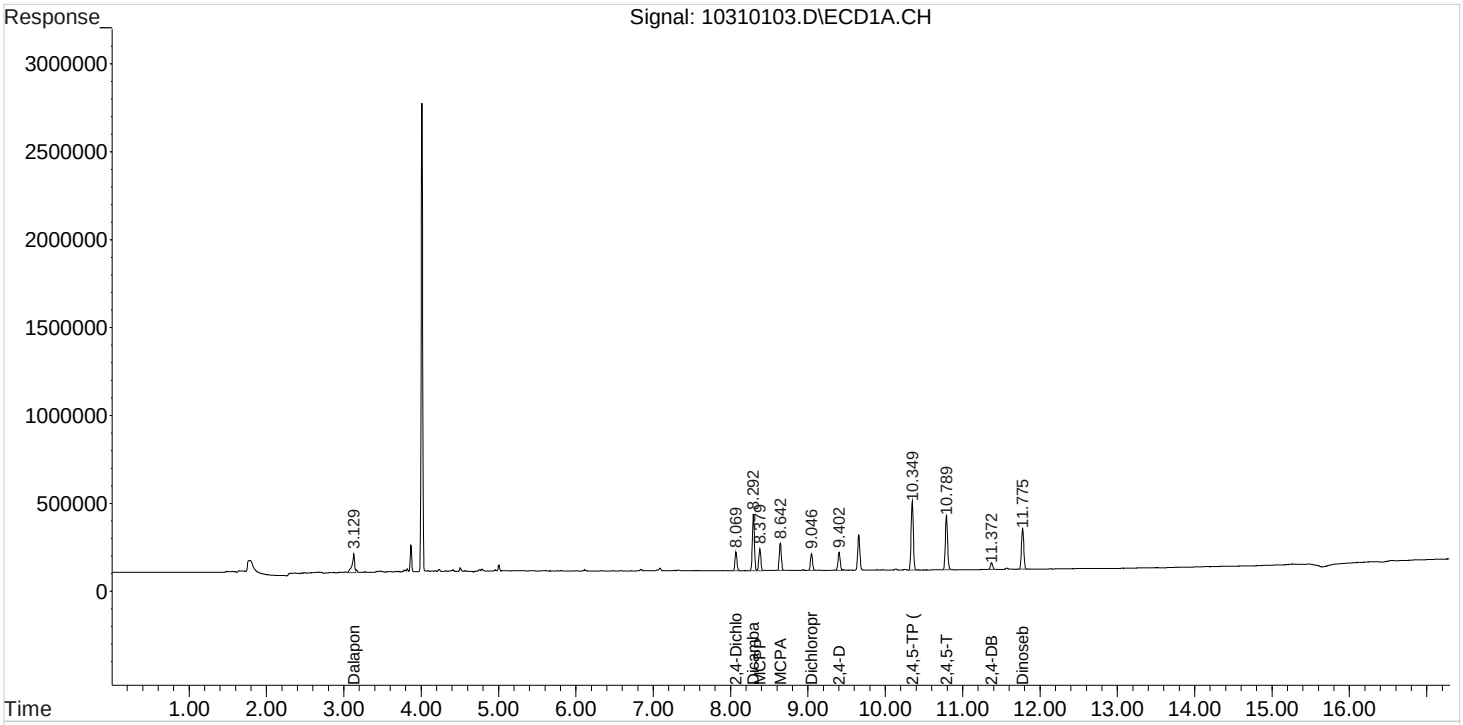
Quantitation Report (QT Reviewed)

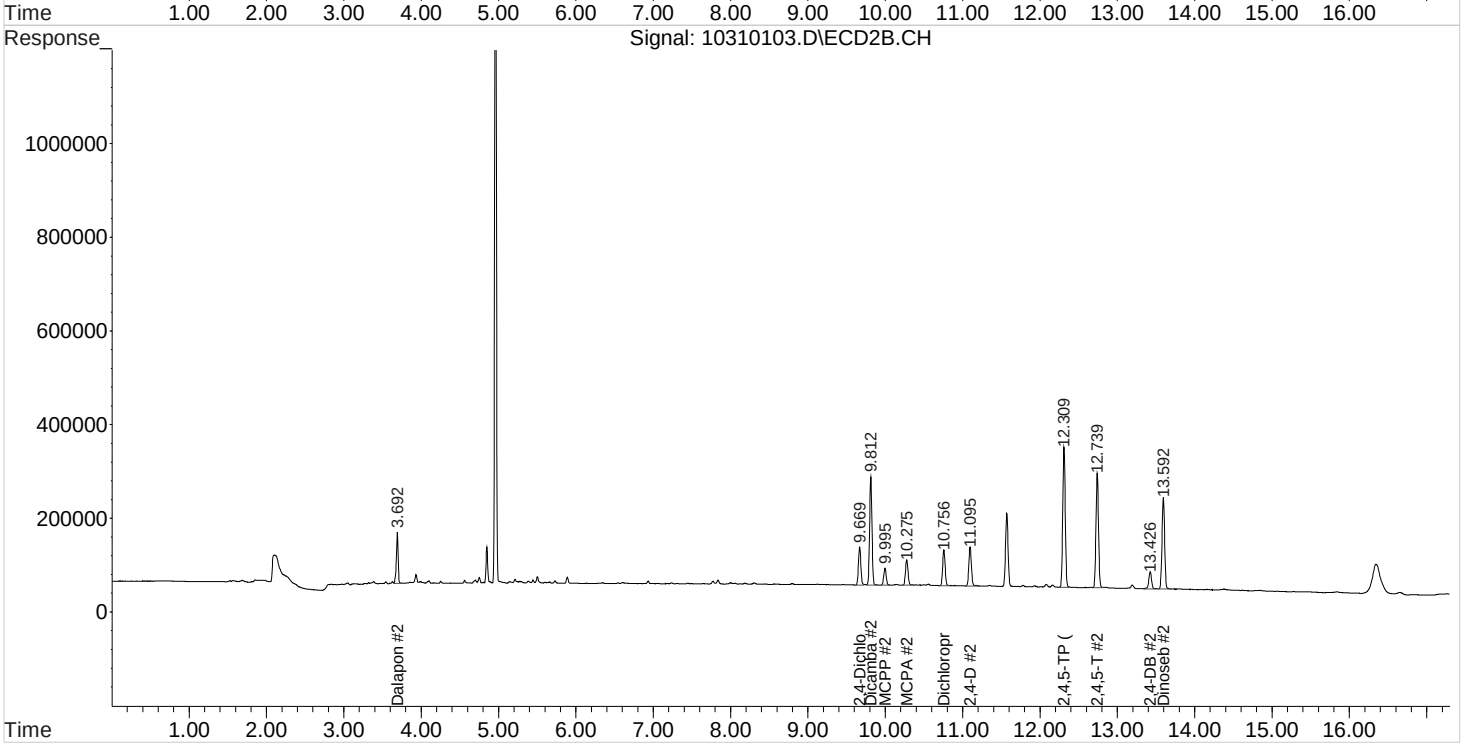
1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\103118\10310103.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 4:27 pm Operator: MRICHARDS
Sample : HERB ICAL 10 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 14:22:26 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm



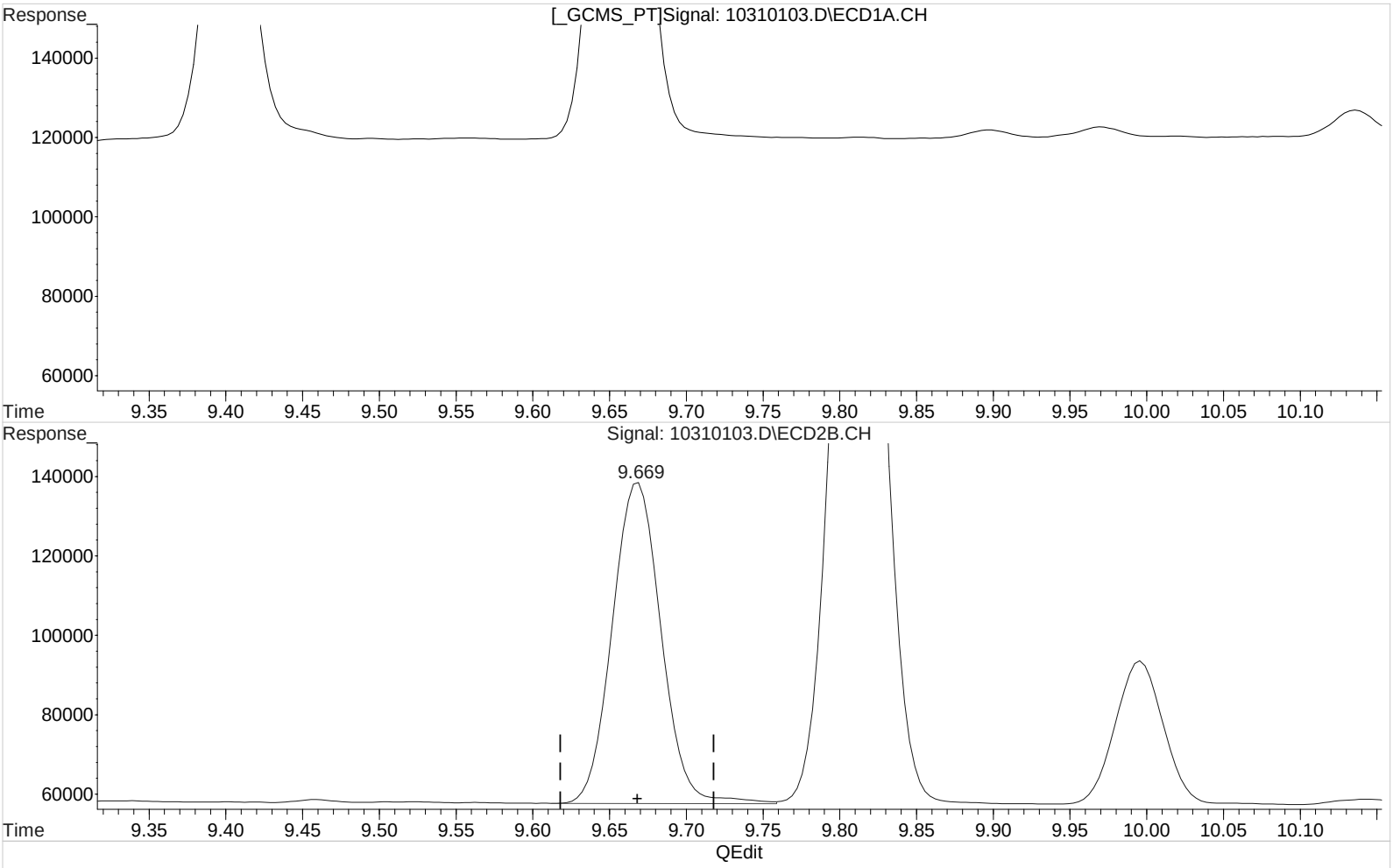


1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\103118\10310103.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 4:27 pm Operator: MRICHARDS
Sample : HERB ICAL 10 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:27 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm



QEdit

(2) 2,4-Dichlorophenylacetic Acid (s)

8.069min 11.519 ppb

response 188657

Manual Integration:

Before

11/01/18

(2) 2,4-Dichlorophenylacetic Acid #2 (s)

9.669min 12.212 ppb

response 178774

(+) = Expected Retention Time

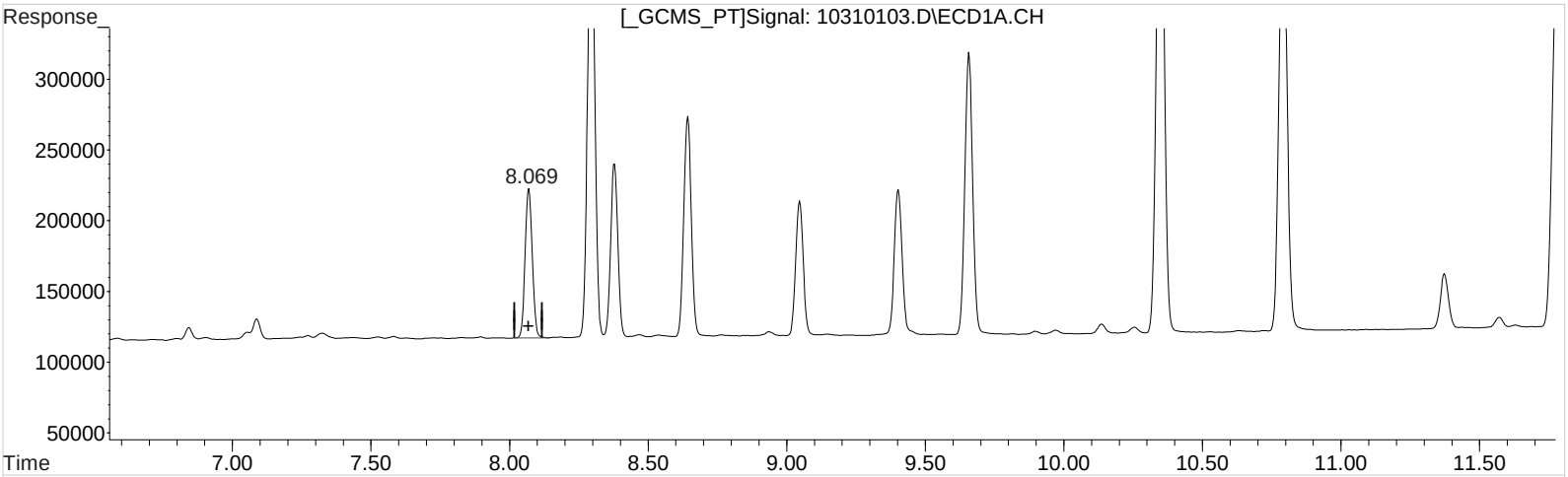
Quantitation Report (Qedit)

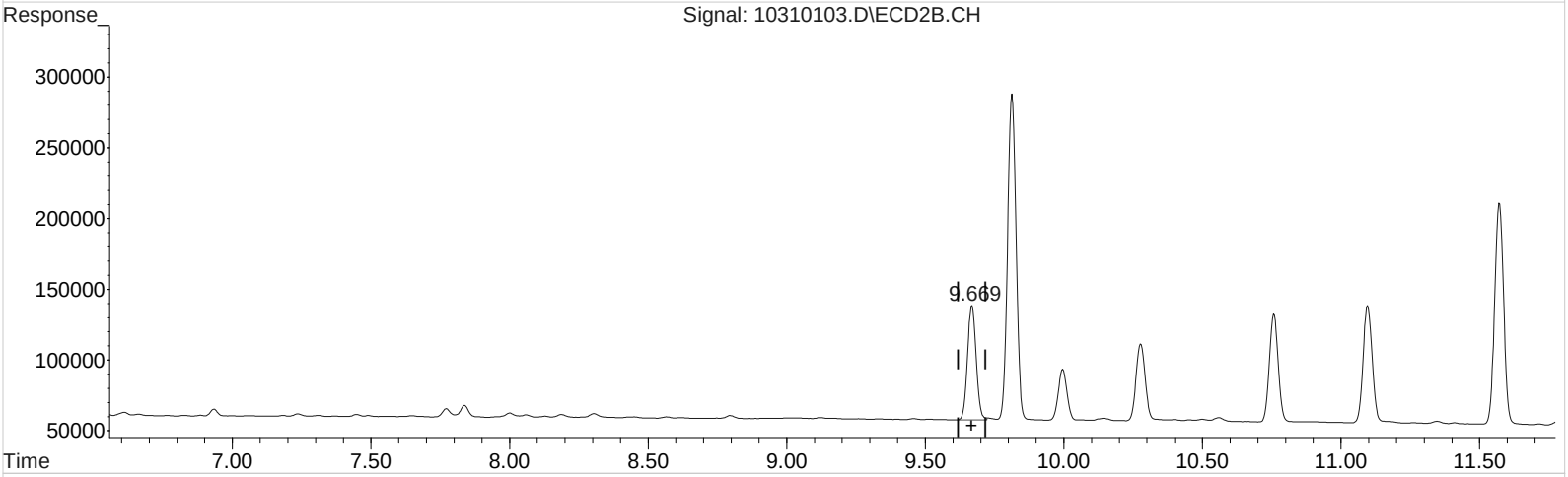
1st MR 11/06/18
2nd UA 11/08/18

Data File : J:\gc24\data\103118\10310103.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 4:27 pm Operator: MRICHARDS
Sample : HERB ICAL 10 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 13:03:42 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





QEdit

(2) 2,4-Dichlorophenylacetic Acid (s)

8.069min 11.519 ppb

response 188657

(2) 2,4-Dichlorophenylacetic Acid #2 (s)

9.669min 12.081 ppb m

response 176865

Manual Integration:

After

Baseline/Shoulder

11/01/18

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\103118\10310104.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 4:51 pm Operator: MRICHARDS
Sample : HERB ICAL 25 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:30 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.069	9.669	423626	376584	25.866	25.724
	Target Compounds						
1) m	Dalapon	3.125	3.689	517439	379093	25.084	24.277
3) m	Dicamba	8.292	9.812	1310164	1105755	26.172	24.480
4) m	MCPP	8.379	9.995	454576	155456	2543.512	2395.821
5) m	MCPA	8.642	10.275	583152	247098	2577.601	2416.672
6) m	Dichloroprop	9.045	10.759	401964	358436	23.882	23.834
7) m	2,4-D	9.402	11.095	469594	416033	26.013	25.789
8) m	2,4,5-TP ...	10.349	12.309	1804204	1531153	25.696	24.406
9) m	2,4,5-T	10.792	12.739	1505750	1298153	24.819	23.964
10) m	2,4-DB	11.372	13.422	193029	199559	24.866	23.569
11) m	Dinoseb	11.775	13.592	1155340	1025824	24.910	24.852

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

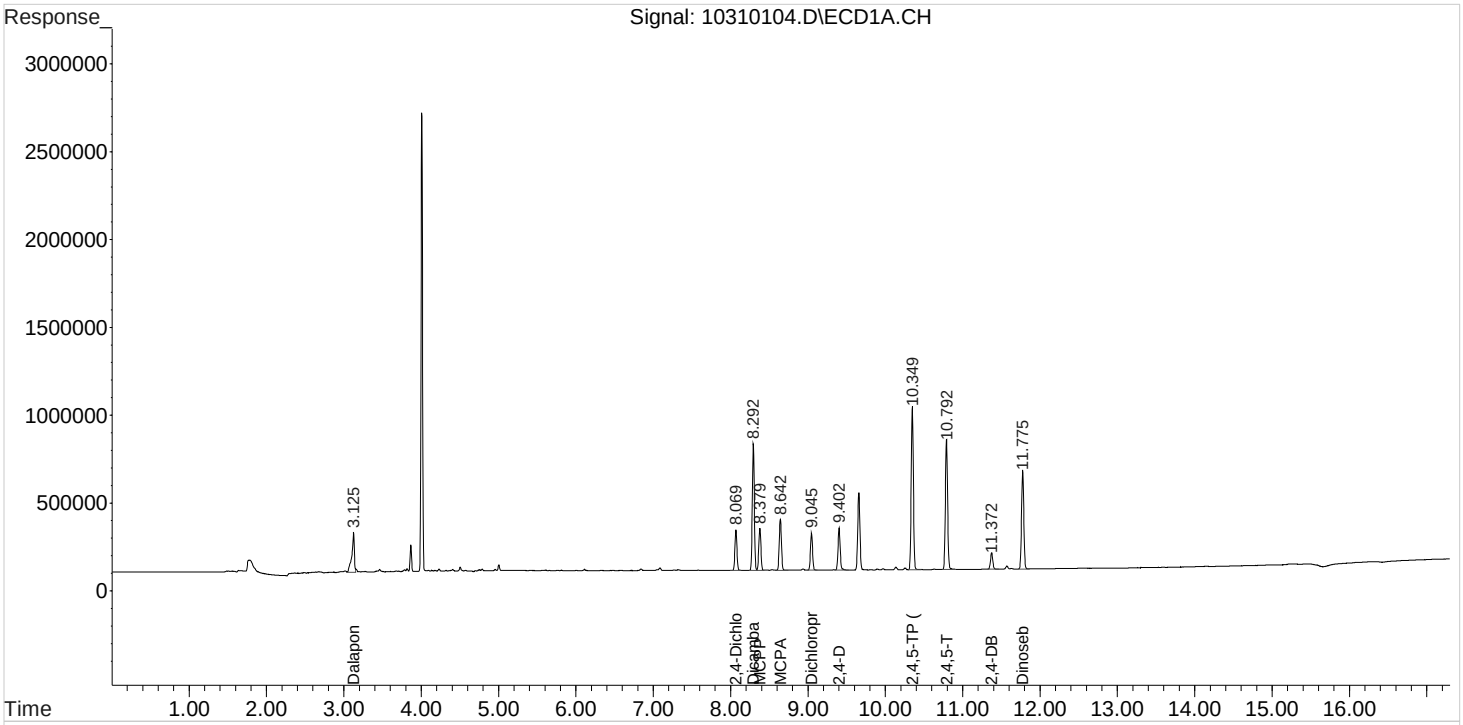
Quantitation Report (QT Reviewed)

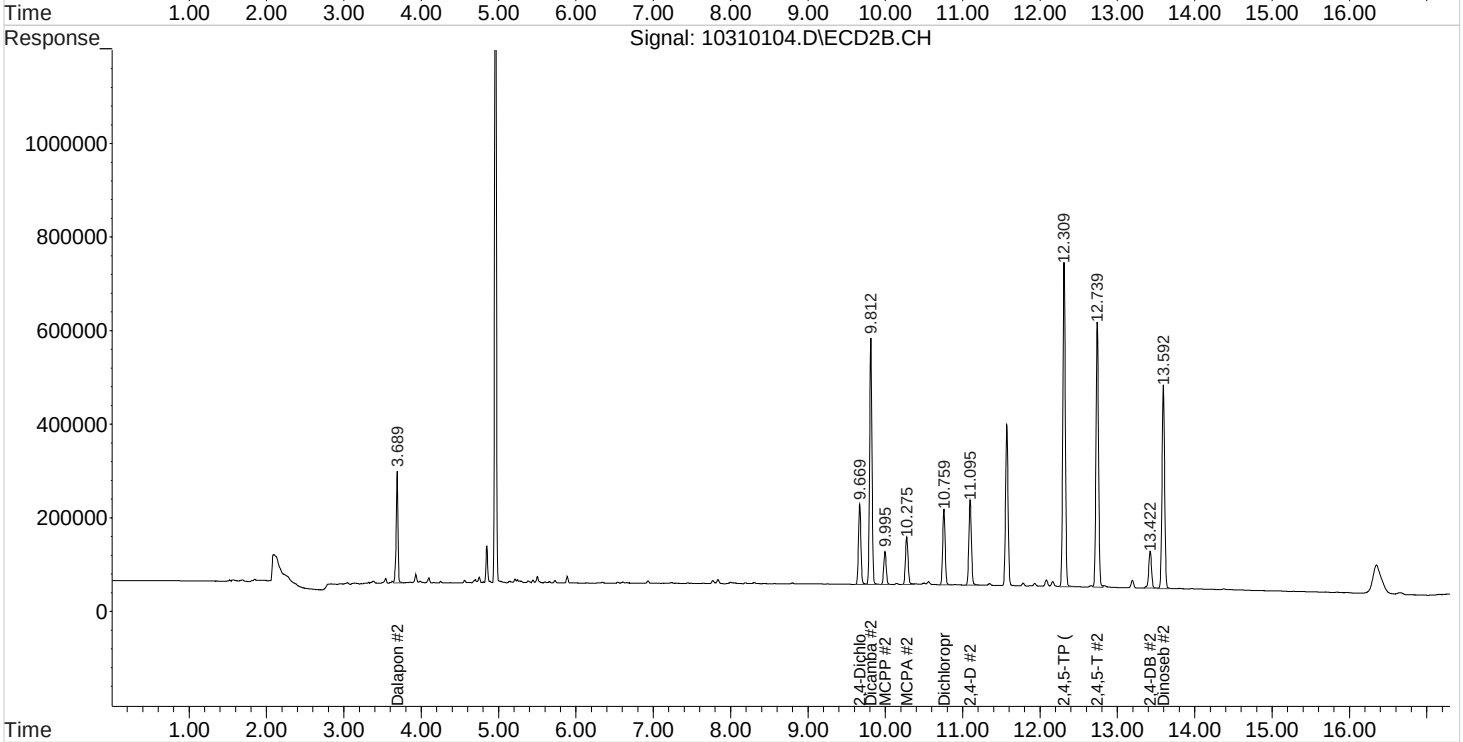
1st 11/01/18
2nd 11/08/18

Data File : J:\gc24\data\103118\10310104.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 4:51 pm Operator: MRICHARDS
Sample : HERB ICAL 25 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:30 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Quantitation Report (QT Reviewed)

1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\103118\10310106.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 5:40 pm Operator: MRICHARDS
Sample : HERB ICAL 100 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:33 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.068	9.668	1438016	1247394	87.804	85.207
	Target Compounds						
1) m	Dalapon	3.125	3.688	1796749	1395182	87.102	89.348
3) m	Dicamba	8.295	9.815	4595258	4137891	91.795	91.608
4) m	MCPP	8.378	9.998	1169510	470912	9491.754	9078.134
5) m	MCPA	8.645	10.278	1414607	719342	9363.650	9042.231
6) m	Dichloroprop	9.045	10.758	1374560	1201183	94.520	92.863
7) m	2,4-D	9.401	11.095	1674507	1446639	92.757	89.674
8) m	2,4,5-TP ...	10.348	12.311	6638265	5854506	94.544	93.320
9) m	2,4,5-T	10.791	12.741	5788640	5070725	95.412	93.605
10) m	2,4-DB	11.375	13.425	746077	717945	96.109	94.163
11) m	Dinoseb	11.775	13.595	4378544	3762512	94.404	91.151

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

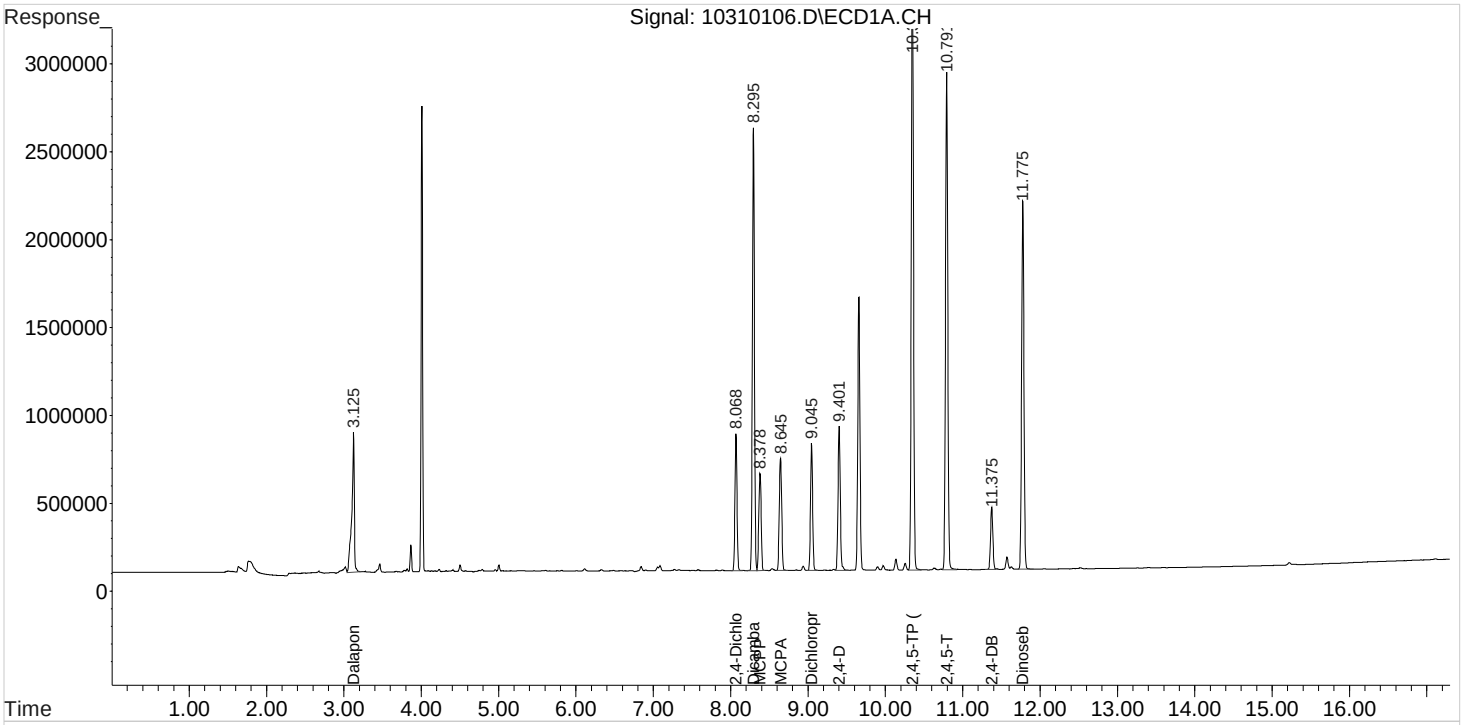
Quantitation Report (QT Reviewed)

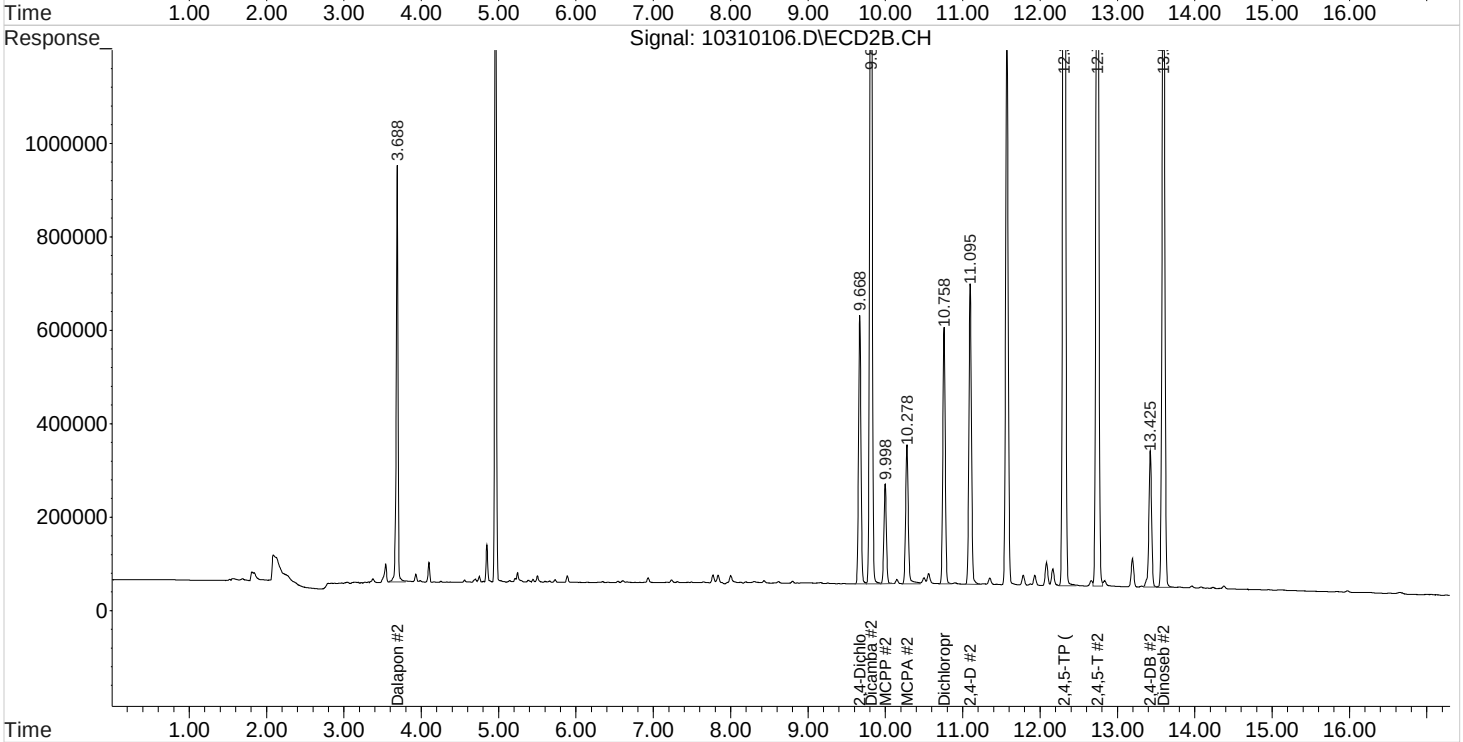
1st 11/01/18
2nd 11/08/18

Data File : J:\gc24\data\103118\10310106.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 5:40 pm Operator: MRICHARDS
Sample : HERB ICAL 100 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:33 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Quantitation Report (QT Reviewed)

1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\103118\10310107.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 6:05 pm Operator: MRICHARDS
Sample : HERB ICAL 125 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:35 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.069	9.669	1754616	1528689	107.135	104.421
	Target Compounds						
1) m	Dalapon	3.126	3.689	2227595	1721893	107.988	110.271
3) m	Dicamba	8.296	9.813	5657580	5167059	113.017	114.393
4) m	MCPP	8.379	9.996	1330592	574776	11551.282	11586.011
5) m	MCPA	8.646	10.279	1618337	876556	11555.295	11571.426
6) m	Dichloroprop	9.046	10.759	1669282	1478426	118.885	117.421
7) m	2,4-D	9.403	11.096	2039313	1785618	112.965	110.687
8) m	2,4,5-TP ...	10.349	12.309	8164589	7316402	116.282	116.622
9) m	2,4,5-T	10.793	12.739	7118206	6346223	117.326	117.150
10) m	2,4-DB	11.373	13.423	902899	881015	116.311	117.946
11) m	Dinoseb	11.776	13.593	5402663	4692269	116.485	113.675

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

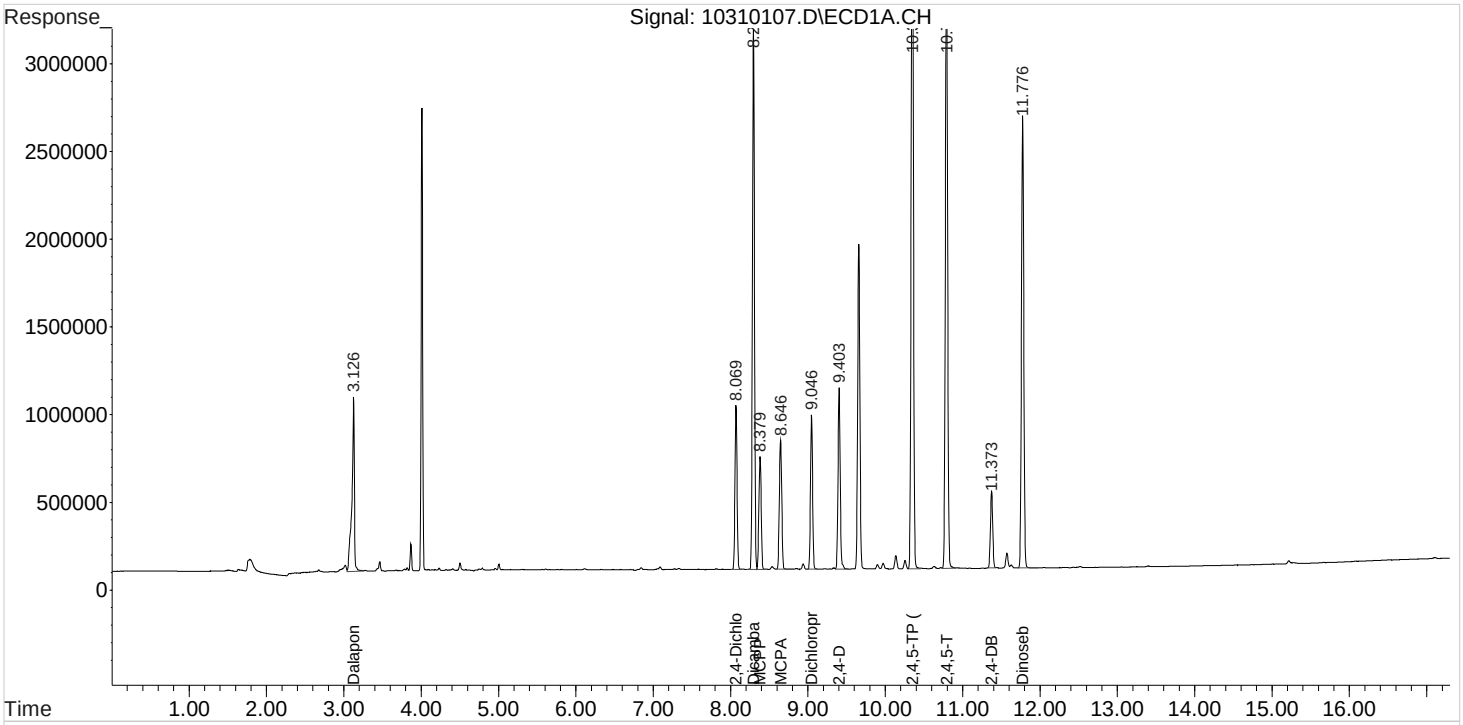
Quantitation Report (QT Reviewed)

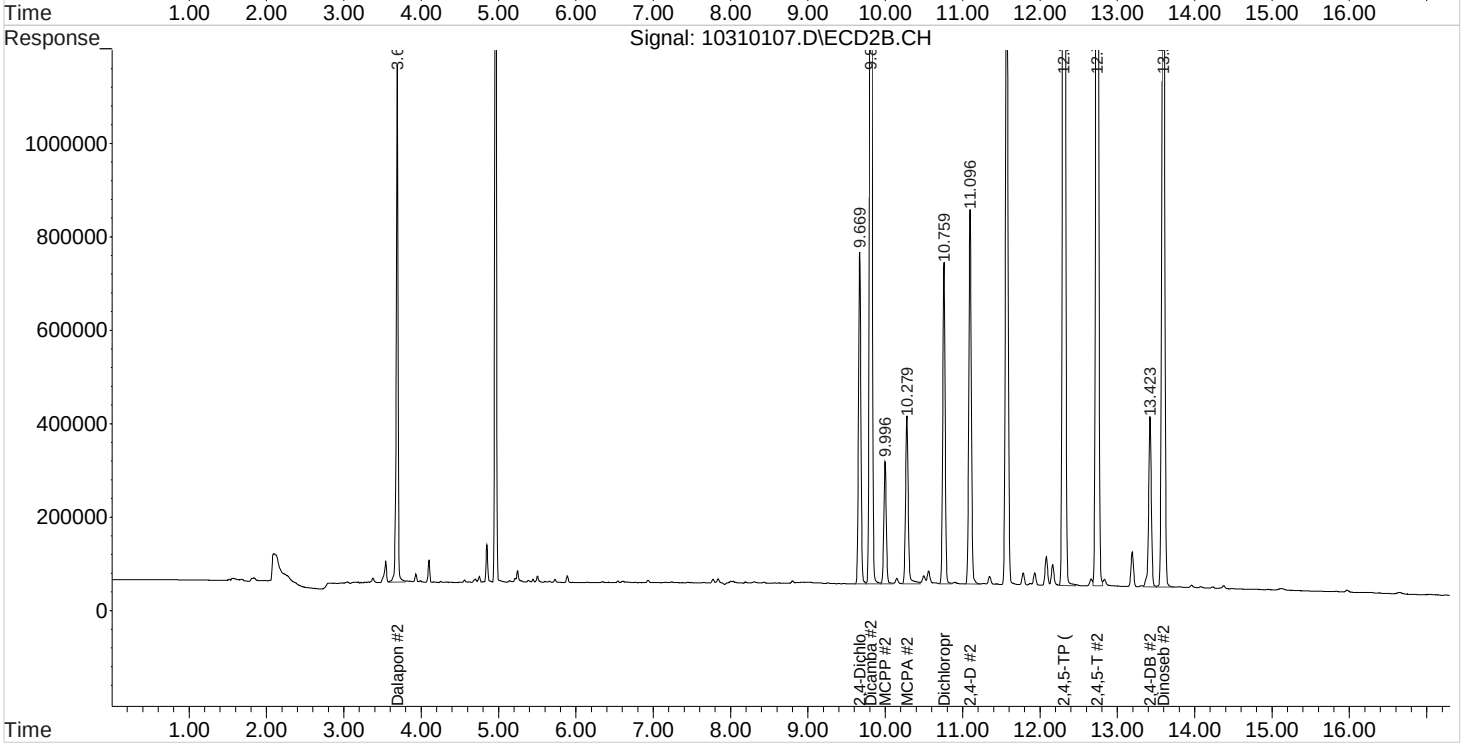
1st 11/01/18
2nd 11/08/18

Data File : J:\gc24\data\103118\10310107.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 6:05 pm Operator: MRICHARDS
Sample : HERB ICAL 125 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:35 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Quantitation Report (QT Reviewed)

1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\103118\10310108.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 6:29 pm Operator: MRICHARDS
Sample : HERB ICAL 150 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:39 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.071	9.667	1988242	1771518	121.401	121.008
	Target Compounds						
1) m	Dalapon	3.127	3.691	2563650	1992531	124.279	127.603
3) m	Dicamba	8.297	9.814	6477940	6032568	129.404	133.554
4) m	MCPP	8.381	9.997	1472079	661711	13670.515	13849.485
5) m	MCPA	8.647	10.277	1777241	1004166	13563.537	13793.501
6) m	Dichloroprop	9.047	10.757	1897289	1719582	139.041	139.689
7) m	2,4-D	9.401	11.094	2329231	2084010	129.025	129.184
8) m	2,4,5-TP ...	10.351	12.311	9302756	8554591	132.492	136.359
9) m	2,4,5-T	10.791	12.737	8144428	7391196	134.241	136.440
10) m	2,4-DB	11.374	13.421	1033326	1007405	133.112	136.993
11) m	Dinoseb	11.774	13.594	6177639	5449526	133.194	132.021

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

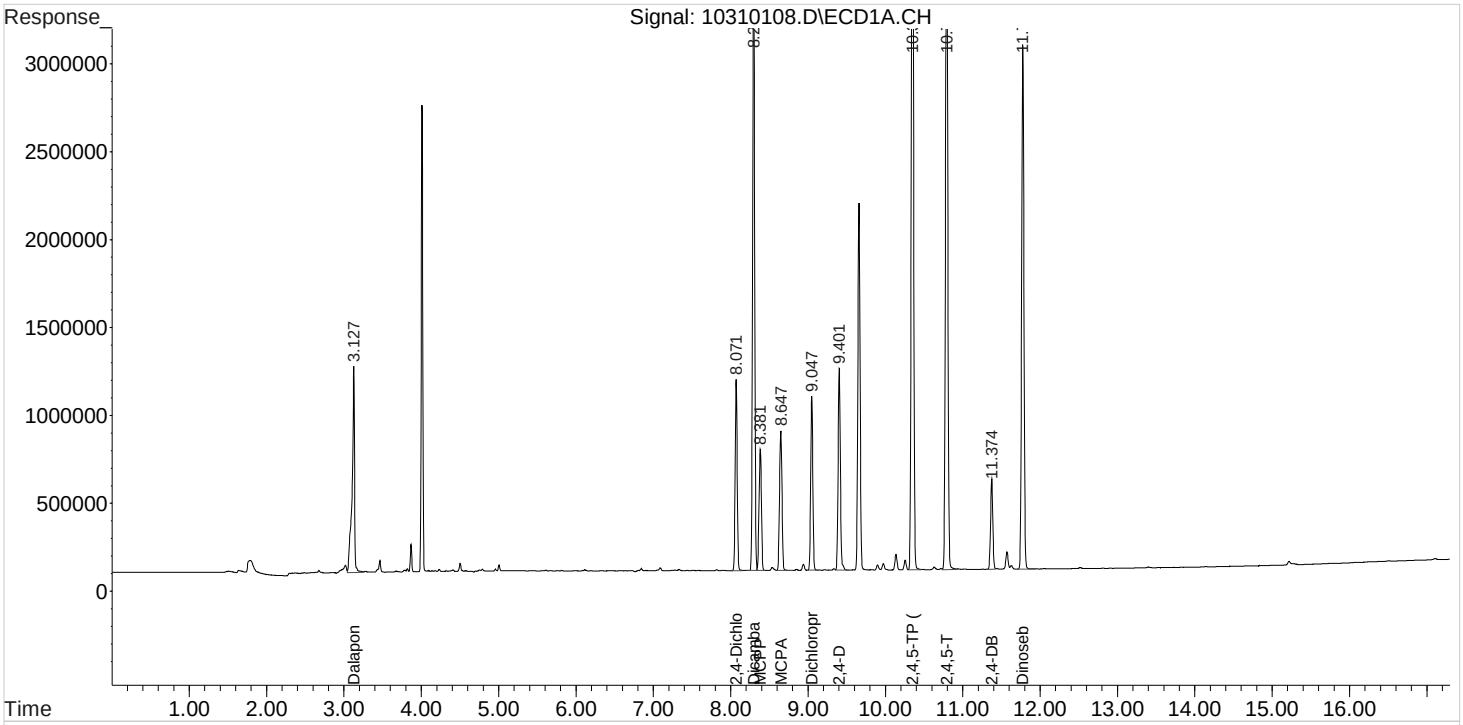
Quantitation Report (QT Reviewed)

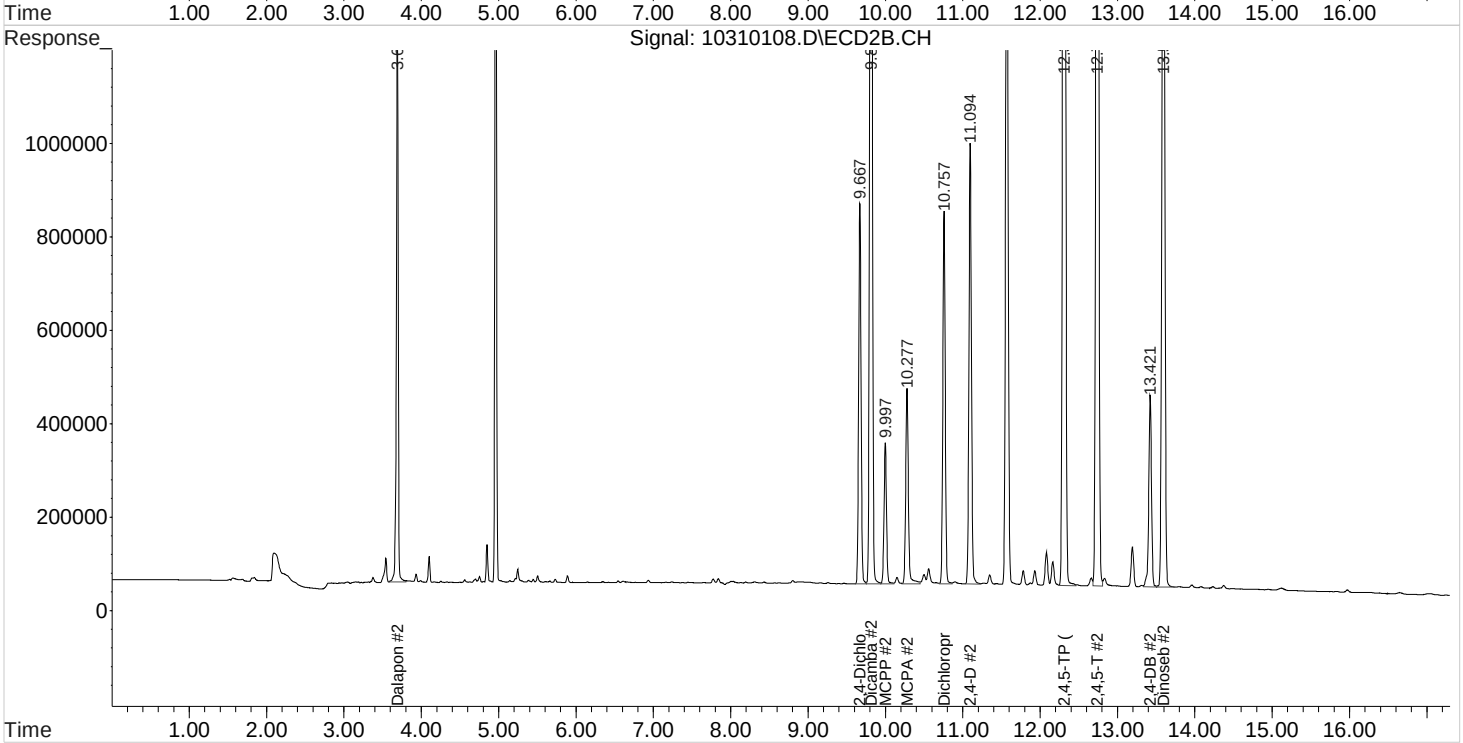
1st 11/01/18
2nd 11/08/18

Data File : J:\gc24\data\103118\10310108.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 6:29 pm Operator: MRICHARDS
Sample : HERB ICAL 150 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:39 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Quantitation Report (QT Reviewed)

1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\103118\10310109.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 6:54 pm Operator: MRICHARDS
Sample : HERB ICAL 175 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:42 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.069	9.669	2282290	2106532	139.355	143.892
	Target Compounds						
1) m	Dalapon	3.129	3.692	3002153	2342946	145.536	150.044
3) m	Dicamba	8.295	9.812	7442697	7242313	148.676	160.336
4) m	MCPP	8.382	9.999	1606646	765936	16155.721	16818.003
5) m	MCPA	8.645	10.279	1950677	1164155	16293.957	16860.704
6) m	Dichloroprop	9.049	10.759	2161436	2037389	164.163	170.521
7) m	2,4-D	9.402	11.095	2676975	2490857	148.288	154.403
8) m	2,4,5-TP ...	10.349	12.309	10758488	10295087	153.225	164.102
9) m	2,4,5-T	10.792	12.739	9493402	8931115	156.476	164.867
10) m	2,4-DB	11.372	13.422	1215232	1204065	156.545	167.825
11) m	Dinoseb	11.775	13.592	7225706	6564903	155.791	159.042

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

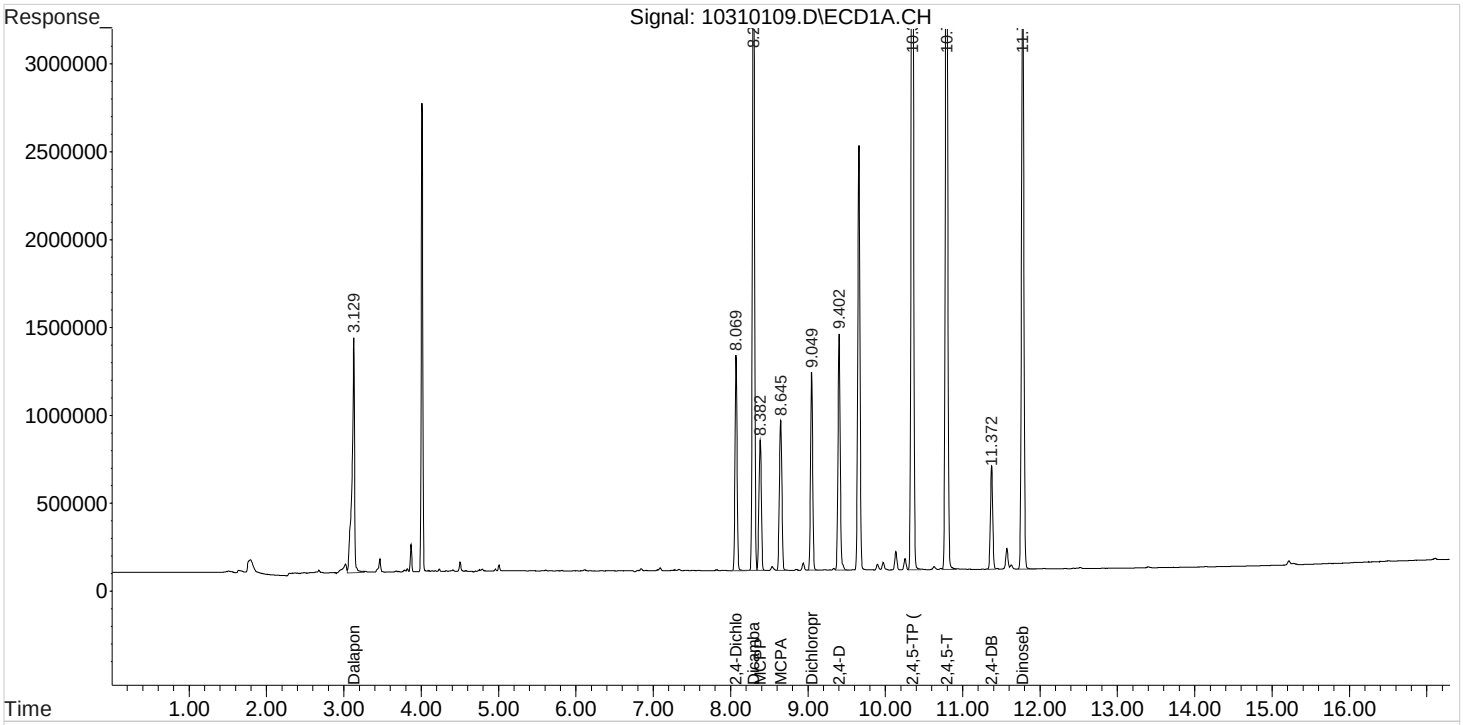
Quantitation Report (QT Reviewed)

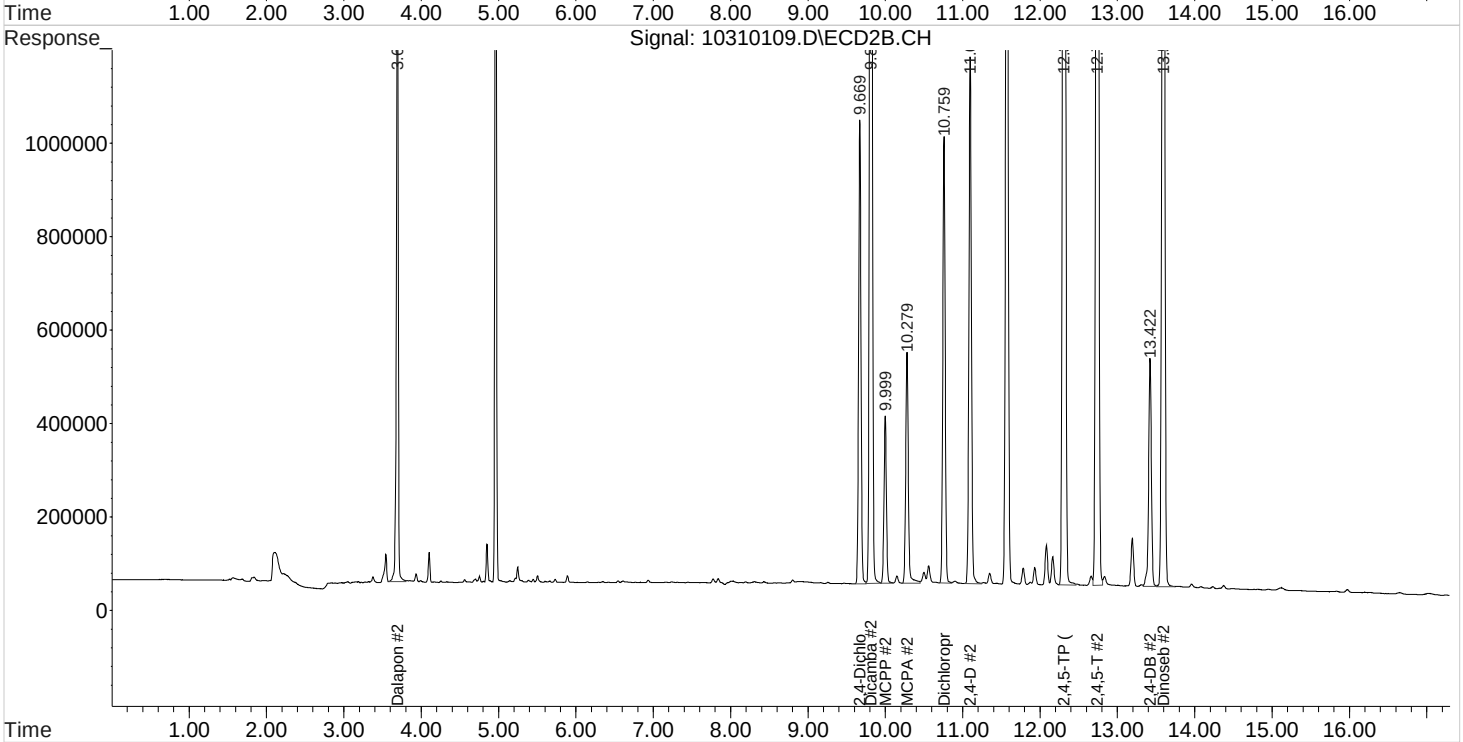
1st 11/01/18
2nd 11/08/18

Data File : J:\gc24\data\103118\10310109.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 6:54 pm Operator: MRICHARDS
Sample : HERB ICAL 175 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:42 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Quantitation Report (QT Reviewed)

1st MR 11/01/18
2nd UA 11/08/18

Data File : J:\gc24\data\103118\10310110.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 7:18 pm Operator: MRICHARDS
Sample : HERB ICAL 200 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:44 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	8.070	9.666	2534816	2256686	154.774	154.149
	Target Compounds						
1) m	Dalapon	3.127	3.690	3302689	2604929	160.105	166.822
3) m	Dicamba	8.293	9.810	8342861	7849089	166.658	173.770
4) m	MCPP	8.380	9.996	1734448	828494	19504.682	18772.502
5) m	MCPA	8.646	10.280	2082776	1246094	19241.181	18589.927
6) m	Dichloroprop	9.047	10.757	2418837	2191423	190.974	186.156
7) m	2,4-D	9.400	11.093	2996827	2669247	166.005	165.461
8) m	2,4,5-TP ...	10.347	12.310	12179428	11186238	173.462	178.307
9) m	2,4,5-T	10.790	12.736	10815821	9850168	178.273	181.833
10) m	2,4-DB	11.373	13.420	1390960	1345562	179.182	191.022
11) m	Dinoseb	11.773	13.593	8182446	7176429	176.419	173.857

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

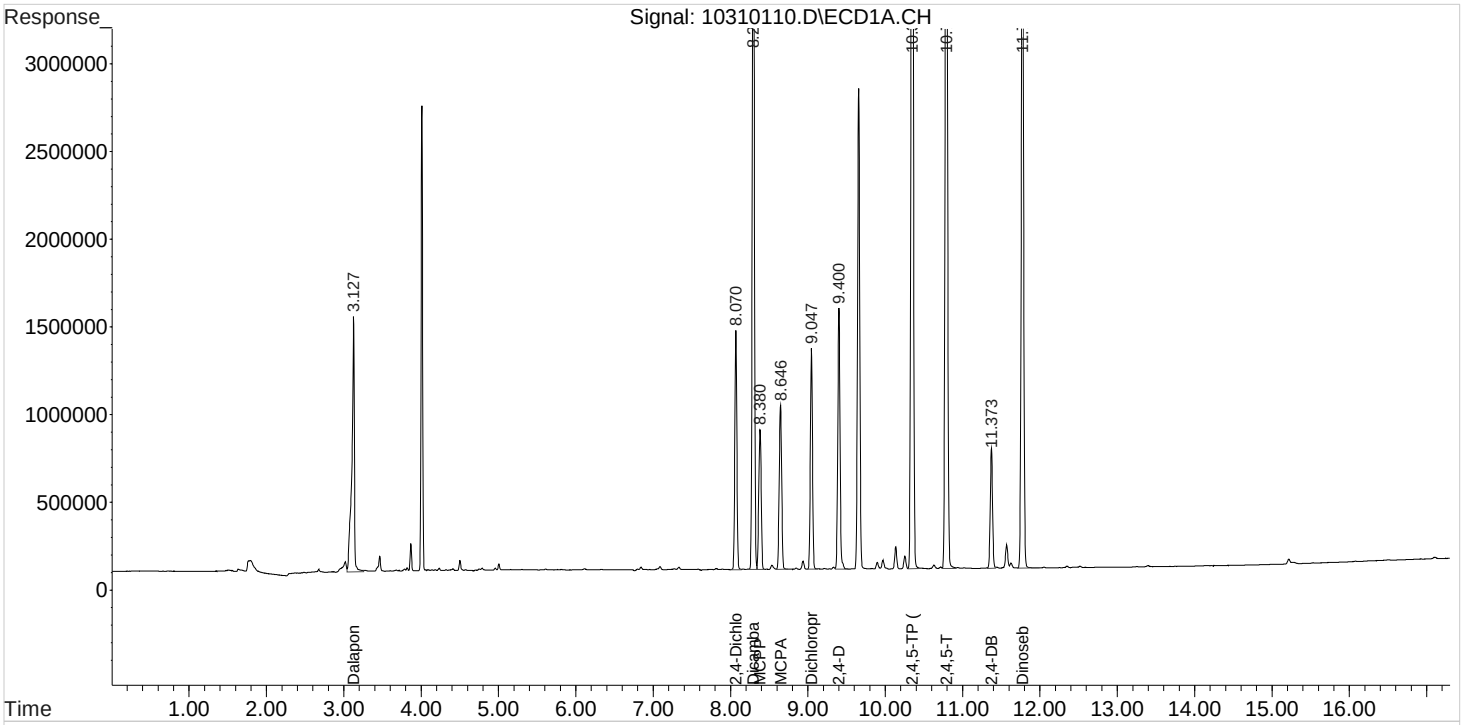
Quantitation Report (QT Reviewed)

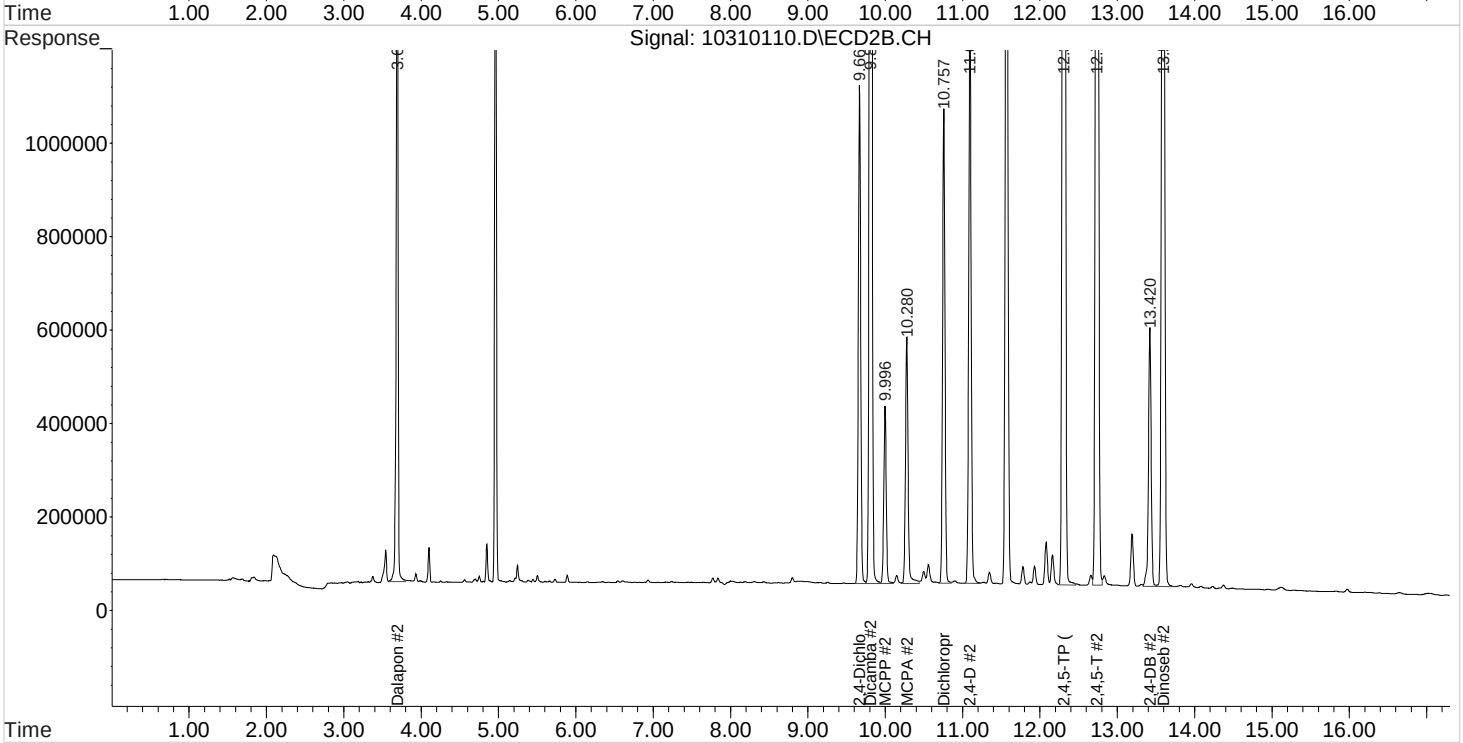
1st 11/01/18
2nd 11/08/18

Data File : J:\gc24\data\103118\10310110.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 31 Oct 2018 7:18 pm Operator: MRICHARDS
Sample : HERB ICAL 200 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Nov 01 12:53:44 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Thu Nov 01 12:15:57 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Partial Sequence: [illegible]

Sel	Run	Location	Method	Datafile	SeqTable	Calib:RF:RT	Sample Name
No	1	Vial 100	8151A-17	01100001	F:01:01		PRIMER
No	2	Vial 100	8151A-17	01100002	F:02:01		PRIMER
No	3	Vial 2	8151A-17	01100003	F:03:01		PENTA01-94F
No	4	Vial 1	8151A-17	01100004	F:04:01		IB
No	5	Vial 3	8151A-17	01100005	F:05:01		KQ1818602-005MB
No	6	Vial 5	8151A-17	01100006	F:06:01		KQ1818602-003LCS
No	7	Vial 6	8151A-17	01100007	F:07:01		KQ1818602-002DMS
No	8	Vial 7	8151A-17	01100008	F:08:01		KQ1818602-001MS
No	9	Vial 8	8151A-17	01100009	F:09:01		K1812382-001
No	10	Vial 9	8151A-17	01100010	F:10:01		KQ1818602-004LB
No	11	Vial 2	8151A-17	01100011	F:11:01		PENTA01-94F
No	12	Vial 1	8151A-17	01100012	F:12:01		IB
No	13	none	STANDBY	01100013	F:13:01		STANBY

ICAL: KC1800499

Run #: 621714

Volatile Organic Compounds

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

1st LM 01/07/19
2nd 01/10/19

Exception Report

Data File: J:\MS46\DATA\123118\1231F019.D
Lab ID: K1812382-001
RunType: SMPL
Matrix: SOIL

Date Acquired: 12/31/2018 18:59
Date Quantitated: 01/07/2019 11:42
Batch ID: KWG1806757
Analysis Method: 8260C
ListJoinID: LJ1012

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st LM 01/07/19
2nd 01/10/19

Quantitation Report

Data File:	J:\MS46\DATA\123118\1231F019.D			**Instrument:**	MS46
Acqu Date:	12/31/2018 18:59	**Quant Date:**	01/07/2019 11:42	**Vial:**	16
Run Type:	SMPL	**ListJoinID:**	LJ1012	**Dilution:**	1.0
Lab ID:	K1812382-001			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8260C VOC TCLP	**Collect Date:**	12/09/2018	**Receive Date:**	12/18/2018

Analysis Lot:	KWG1806757	**Prep Lot:**	KWG1900204	**Report Group:**	K1812382
Analysis Method:	8260C	**Prep Method:**	EPA 5030B	**Pre-Prep Meth:**	EPA 1311
Prep Ref:	1708394	**Prep Date:**	12/31/2018	**Pre-Prep Date:**	12/21/2018

Quant Method:	J:\MS46\METHODS\111918MS46_8	**Calibration ID:**	CAL15902
Title:	Volatile Organic Compounds	**Report List ID:**	LJ1012
Tune Ref:	J:\MS46\DATA\123118\1231F002.D	**Method ID:**	MJ181
MB Ref:	J:\MS46\DATA\123118\1231F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.54	0.01	96	153939	10.00	OK
2	Chlorobenzene-d5	10.01	0.00	82	60121	10.00	OK
3	1,4-Dichlorobenzene-d4	12.58	0.00	152	67817	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.74	0.00	0.00	113	39809	11.49	115	73-122	OK	
1	Toluene-d8	8.37	0.00	0.00	98	148791	12.14	121	65-144	OK	
2	4-Bromofluorobenzene	11.32	0.00	0.00	95	57657	11.31	113	68-117	OK	

Target Compounds

Final Conc. Units: mg/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Vinyl Chloride				62	0		0.030	U	
1	1,1-Dichloroethene				96	0		0.032	U	
1	2-Butanone (MEK)				72	0		0.76	U	
1	Chloroform				83	0		0.029	U	
1	Carbon Tetrachloride				117	0		0.039	U	
1	Benzene				78	0		0.025	U	
1	1,2-Dichloroethane (EDC)				62	0		0.032	U	
1	Trichloroethene (TCE)				95	0		0.040	U	
2	Tetrachloroethene (PCE)				164	0		0.040	U	
2	Chlorobenzene				112	0		0.044	U	
3	1,4-Dichlorobenzene				146	0		0.048	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st LM 01/07/19
2nd 01/10/19

Data File:	J:\MS46\DATA\123118\1231F019.D			**Instrument:**	MS46
Acqu Date:	12/31/2018 18:59	**Quant Date:**	01/07/2019 11:42	**Vial:**	16
Run Type:	SMPL	**ListJoinID:**	LJ1012	**Dilution:**	1.0
Lab ID:	K1812382-001			**Soln Conc. Units:**	PPB

Prep Amount:	125 uL	**Dilution:**	1.0
Prep Final Vol:	50 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st LM 01/07/19
2nd 01/10/19

Data File : J:\MS46\DATA\123118\1231F019.D Vial: 16
Acq On : 31 Dec 2018 06:59 pm Operator: LM
Sample : 400X K12382-001 Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jan 07 10:58:31 2019 Quant Results File: 111918MS46_8260.RES

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.54	96	153939	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	60121	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	67817	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	39809	11.49	PPB	0.00
Spiked Amount 10.000			Recovery =	114.90%		
46) 1,2-Dichloroethane-d4	6.19	65	33480	11.21	PPB	0.00
Spiked Amount 10.000			Recovery =	112.10%		
61) Toluene-d8	8.37	98	148791	12.14	PPB	0.00
Spiked Amount 10.000			Recovery =	121.40%		
83) 4-Bromofluorobenzene	11.32	95	57657	11.31	PPB	0.00
Spiked Amount 10.000			Recovery =	113.10%		
Target Compounds						Qvalue
13) Acetone	2.65	43	1406	3.56	PPB	94
18) Methyl Acetate	3.02	43	1033	0.72	PPB	87

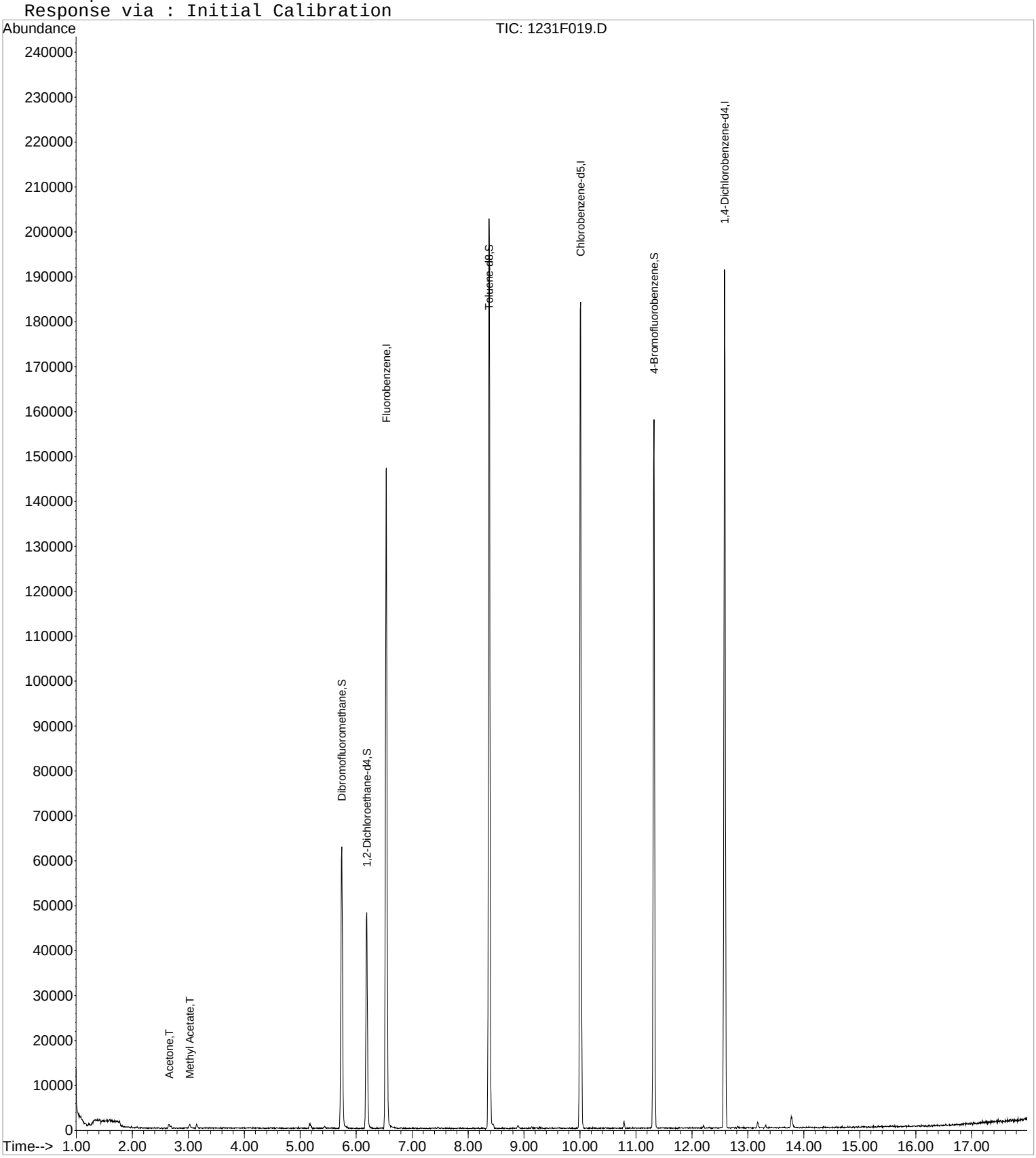
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

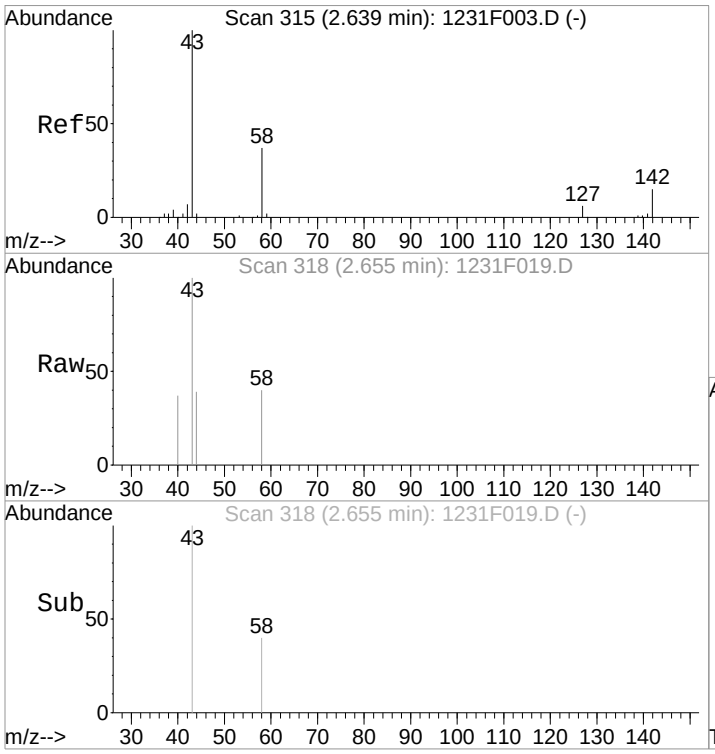
1st LM 01/07/19
2nd 01/10/19

Data File : J:\MS46\DATA\123118\1231F019.D Vial: 16
Acq On : 31 Dec 2018 06:59 pm Operator: LM
Sample : 400X K12382-001 Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jan 7 11:42 2019 Quant Results File: 111918MS46_8260.RES

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration



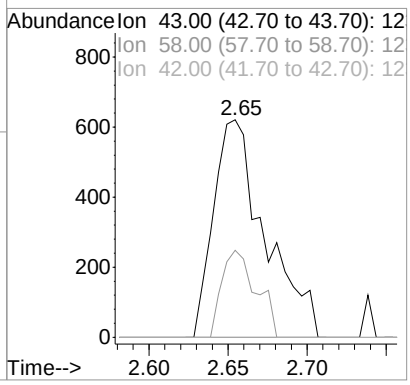
1st 01/07/19
2nd 01/10/19

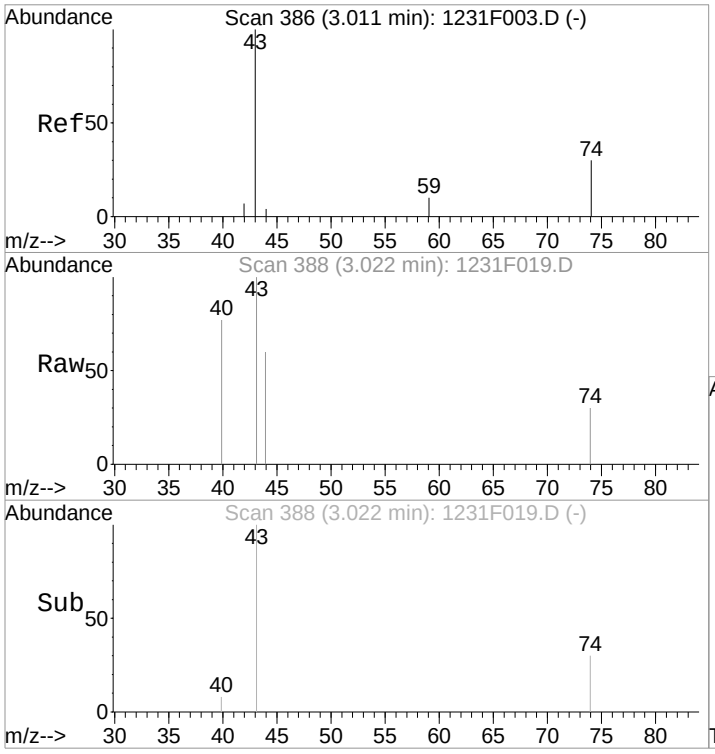


#13
Acetone
Concen: 3.56 PPB
RT: 2.65 min Scan# 318
Delta R.T. 0.01 min
Lab File: 1231F019.D
Acq: 31 Dec 2018 06:59 pm

Tgt Ion: 43 Resp: 1406

Ion	Ratio	Lower	Upper
43	100		
58	39.9	11.9	71.9
42	0.0	0.0	37.0

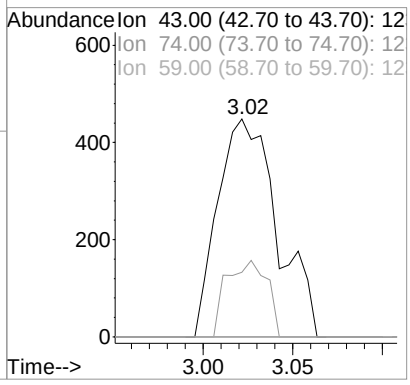




#18
Methyl Acetate
Concen: 0.72 PPB
RT: 3.02 min Scan# 388
Delta R.T. 0.00 min
Lab File: 1231F019.D
Acq: 31 Dec 2018 06:59 pm

Tgt Ion: 43 Resp: 1033

Ion	Ratio	Lower	Upper
43	100		
74	29.7	4.6	64.6
59	0.0	0.0	39.9



1st LM 01/07/19
2nd 01/10/19

Exception Report

Data File: J:\MS46\DATA\123118\1231F015.D
Lab ID: KWG1900204-3
RunType: MB
Matrix: SOIL

Date Acquired: 12/31/2018 17:16
Date Quantitated: 01/07/2019 11:40
Batch ID: KWG1806757
Analysis Method: 8260C
MethodJoinID: MJ181

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail	
Tune Window	NA	NA	NA	x		
Analytical Holding Time	NA	NA	NA	x		
ICAL Pass/Fail	NA	NA	NA	x		
ICAL Analyte Recovery	NA	NA	NA	x		
Initial Calibration Minimum RF	NA	NA	NA		x	
Initial Calibration SPCC/CCC	NA	NA	NA	x		
Second Source ICAL Verification	NA	NA	NA		x	
Calibration Verification Pass/Fail	NA	NA	NA	x		
Continuing Calibration Recovery	NA	NA	NA		x	
Continuing Calibration Minimum RF	NA	NA	NA		x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x		
Internal Standards	NA	NA	NA	x		
Surrogates	NA	NA	NA	x		
Analyte Co-elution	NA	NA	NA	x		
Retention Time	NA	NA	NA	x		
Relative Retention Time	NA	NA	NA	x		
Below Lowest ICAL Level	NA	NA	NA	x		
Std MRL Unsupported by ICAL	NA	NA	NA		x	NT
Above Highest ICAL Level	NA	NA	NA	x		
Enviroquant/Stealth Calibration Check	NA	NA	NA	x		
Overdiluted Analysis	NA	NA	NA	x		

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	Acetonitrile	0.0056	0.01	NA	NT
	Isobutyl Alcohol	0.0032	0.01	NA	
	1,4-Dioxane	0.0009	0.01	NA	
Second Source ICAL Verification	Carbon Disulfide	-34.8	NA	30	
Continuing Calibration Recovery	Iodomethane	-34.3	NA	20	
	Vinyl Acetate	-26.9	NA	20	
Continuing Calibration Minimum RF	Acetonitrile	0.0058	0.01	NA	
	Isobutyl Alcohol	0.0033	0.01	NA	
	1,4-Dioxane	0.0009	0.01	NA	
Std MRL Unsupported by ICAL	n-Hexane	0.080	0.036	NA	
	Ethyl Acetate	0.80	0.23	NA	

Primary Review: _____

Secondary Review: _____

1st LM 01/07/19
2nd 01/10/19

Quantitation Report

Data File:	J:\MS46\DATA\123118\1231F015.D			**Instrument:**	MS46
Acqu Date:	12/31/2018 17:16	**Quant Date:**	01/07/2019 11:40	**Vial:**	12
Run Type:	MB	**MethodJoinID:**	MJ181	**Dilution:**	1.0
Lab ID:	KWG1900204-3			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8260C VOC TCLP	**Collect Date:**		**Receive Date:**	01/07/2019

Analysis Lot:	KWG1806757	**Prep Lot:**	KWG1900204	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030B	**Pre-Prep Meth:**	EPA 1311
Prep Ref:	1708397	**Prep Date:**	12/31/2018	**Pre-Prep Date:**	12/21/2018

Quant Method:	J:\MS46\METHODS\111918MS46_8	**Calibration ID:**	CAL15902
Title:			
Tune Ref:	J:\MS46\DATA\123118\1231F002.D	**Method ID:**	MJ181
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.54	0.01	96	158496	10.00	OK
2	Chlorobenzene-d5	10.01	0.00	82	61890	10.00	OK
3	1,4-Dichlorobenzene-d4	12.58	0.00	152	68561	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.74	0.00	0.00	113	40321	11.30	113	73-122	OK	
1	1,2-Dichloroethane-d4	6.19	0.01	0.00	65	33449	10.87	109	59-127	OK	
1	Toluene-d8	8.38	0.01	0.00	98	151707	12.02	120	65-144	OK	
2	4-Bromofluorobenzene	11.32	0.00	0.00	95	58228	11.10	111	68-117	OK	

Target Compounds

Final Conc. Units: mg/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane				85	0		0.052	U	
1	Chloromethane				50	0		0.028	U	
1	Vinyl Chloride				62	0		0.030	U	
1	Bromomethane				96	0		0.064	U	
1	Chloroethane				64	0		0.064	U	
1	Dichlorofluoromethane (CFC 21)				67	0		0.026	U	
1	Trichlorofluoromethane				101	0		0.048	U	
1	Ethyl Ether				59	0		0.030	U	
1	Acrolein				56	0		0.48	U	
1	Trichlorotrifluoroethane				151	0		0.052	U	
1	1,1-Dichloroethene				96	0		0.032	U	
1	Acetone	2.66	0.02	0.00	43	1169	2.87	1.4	U	
1	Iodomethane				142	0		0.048	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS46\DATA\123118\1231F015.D			**Instrument:**	MS46
Acqu Date:	12/31/2018 17:16	**Quant Date:**	01/07/2019 11:40	**Vial:**	12
Run Type:	MB	**MethodJoinID:**	MJ181	**Dilution:**	1.0
Lab ID:	KWG1900204-3			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: mg/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Carbon Disulfide				76	0**d**		0.028	U	
1	3-Chloro-1-propene				76	0**d**		0.038	U	
1	Acetonitrile				40	0		5.2	U	
1	Methylene Chloride				84	0		0.040	U	
1	Acrylonitrile				53	0		0.22	U	
1	Methyl tert-Butyl Ether				73	0		0.044	U	
1	trans-1,2-Dichloroethene				96	0		0.029	U	
1	n-Hexane				57	0		0.036	U	
1	1,1-Dichloroethane				63	0		0.031	U	
1	Vinyl Acetate				86	0		0.18	U	
1	Chloroprene				53	0		1.5	U	
1	2,2-Dichloropropane				77	0		0.026	U	
1	cis-1,2-Dichloroethene				96	0		0.027	U	
1	2-Butanone (MEK)				72	0		0.76	U	
1	Ethyl Acetate				61	0		0.23	U	
1	Propionitrile				54	0		0.44	U	
1	Methacrylonitrile				67	0		0.14	U	
1	Bromochloromethane				128	0		0.064	U	
1	Tetrahydrofuran				71	0		0.038	U	
1	Chloroform				83	0		0.029	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.030	U	
1	Carbon Tetrachloride				117	0		0.039	U	
1	1,1-Dichloropropene				75	0		0.036	U	
1	Isobutyl Alcohol				43	0		2.8	U	
1	Benzene				78	0		0.025	U	
1	1,2-Dichloroethane (EDC)				62	0		0.032	U	
1	Trichloroethene (TCE)				95	0		0.040	U	
1	1,2-Dichloropropane				63	0		0.038	U	
1	Dibromomethane				93	0		0.060	U	
1	Methyl Methacrylate				69	0		0.052	U	
1	1,4-Dioxane				88	0		5.6	U	
1	Bromodichloromethane				83	0		0.037	U	
1	2-Nitropropane				41	0		0.39	U	
1	2-Chloroethyl Vinyl Ether				63	0		0.064	U	
1	cis-1,3-Dichloropropene				75	0		0.072	U	
1	4-Methyl-2-pentanone (MIBK)				58	0**d**		1.1	U	
1	Toluene				92	0		0.022	U	
2	trans-1,3-Dichloropropene				75	0		0.028	U	
2	Ethyl Methacrylate				69	0		0.060	U	
2	1,1,2-Trichloroethane				83	0		0.056	U	
2	Tetrachloroethene (PCE)				164	0		0.040	U	
2	2-Hexanone				57	0		1.1	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
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E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
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*: Result fails acceptance criteria
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?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st LM 01/07/19
2nd 01/10/19

Data File:	J:\MS46\DATA\123118\1231F015.D			**Instrument:**	MS46
Acqu Date:	12/31/2018 17:16	**Quant Date:**	01/07/2019 11:40	**Vial:**	12
Run Type:	MB	**MethodJoinID:**	MJ181	**Dilution:**	1.0
Lab ID:	KWG1900204-3			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: mg/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	1,3-Dichloropropane				76	0		0.056	U	
2	Dibromochloromethane				129	0		0.056	U	
2	1,2-Dibromoethane (EDB)				107	0		0.040	U	
2	1-Chlorohexane				91	0		0.024	U	
2	Chlorobenzene				112	0		0.044	U	
2	Ethylbenzene				106	0		0.020	U	
2	1,1,1,2-Tetrachloroethane				131	0		0.044	U	
2	m,p-Xylenes				106	0		0.044	U	
2	o-Xylene				106	0		0.030	U	
2	Styrene				103	0		0.036	U	
2	Bromoform				173	0		0.064	U	
2	Isopropylbenzene				105	0		0.021	U	
2	cis-1,4-Dichloro-2-butene				89	0		0.56	U	
3	1,1,2,2-Tetrachloroethane				83	0		0.064	U	
3	trans-1,4-Dichloro-2-butene				53	0		0.14	U	
3	Bromobenzene				156	0		0.048	U	
3	n-Propylbenzene				91	0		0.022	U	
3	1,2,3-Trichloropropane				110	0		0.080	U	
3	2-Chlorotoluene				91	0		0.040	U	
3	1,3,5-Trimethylbenzene				105	0		0.036	U	
3	4-Chlorotoluene				91	0		0.052	U	
3	tert-Butylbenzene				119	0		0.024	U	
3	1,2,4-Trimethylbenzene				105	0		0.028	U	
3	sec-Butylbenzene				105	0		0.025	U	
3	4-Isopropyltoluene				119	0		0.024	U	
3	1,3-Dichlorobenzene				146	0		0.040	U	
3	1,4-Dichlorobenzene				146	0		0.048	U	
3	n-Butylbenzene				91	0		0.022	U	
3	1,2-Dichlorobenzene				146	0		0.048	U	
3	1,2-Dibromo-3-chloropropane				155	0		0.088	U	
3	1,3,5-Trichlorobenzene				180	0		0.040	U	
3	1,2,4-Trichlorobenzene				180	0		0.039	U	
3	Hexachlorobutadiene				225	0		0.044	U	
3	Naphthalene				128	0		0.036	U	
3	1,2,3-Trichlorobenzene				180	0		0.044	U	

Prep Amount:	125 uL	**Dilution:**	1.0
Prep Final Vol:	50 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st LM 01/07/19
2nd 01/10/19

Data File : J:\MS46\DATA\123118\1231F015.D Vial: 12
Acq On : 31 Dec 2018 05:16 pm Operator: LM
Sample : 400X K12382 MB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jan 07 10:58:27 2019 Quant Results File: 111918MS46_8260.RES

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.54	96	158496	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	61890	10.00	PPB	0.01
84) 1,4-Dichlorobenzene-d4	12.58	152	68561	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	40321	11.30	PPB	0.00
Spiked Amount 10.000			Recovery =	113.00%		
46) 1,2-Dichloroethane-d4	6.19	65	33449	10.87	PPB	0.00
Spiked Amount 10.000			Recovery =	108.70%		
61) Toluene-d8	8.38	98	151707	12.02	PPB	0.00
Spiked Amount 10.000			Recovery =	120.20%		
83) 4-Bromofluorobenzene	11.32	95	58228	11.10	PPB	0.00
Spiked Amount 10.000			Recovery =	111.00%		
Target Compounds						Qvalue
13) Acetone	2.66	43	1169	2.87	PPB	70
18) Methyl Acetate	3.02	43	1036	0.70	PPB	79

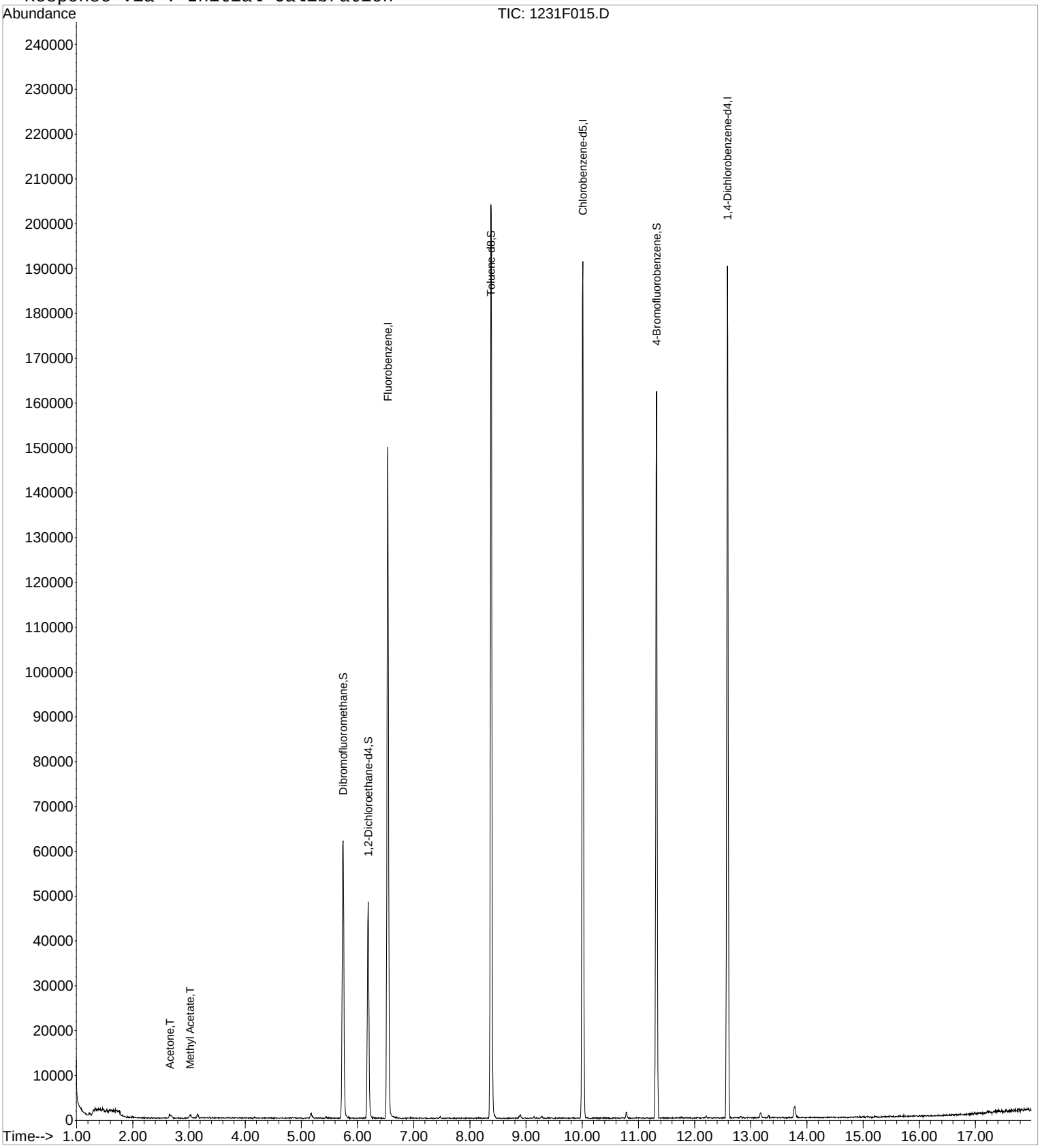
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

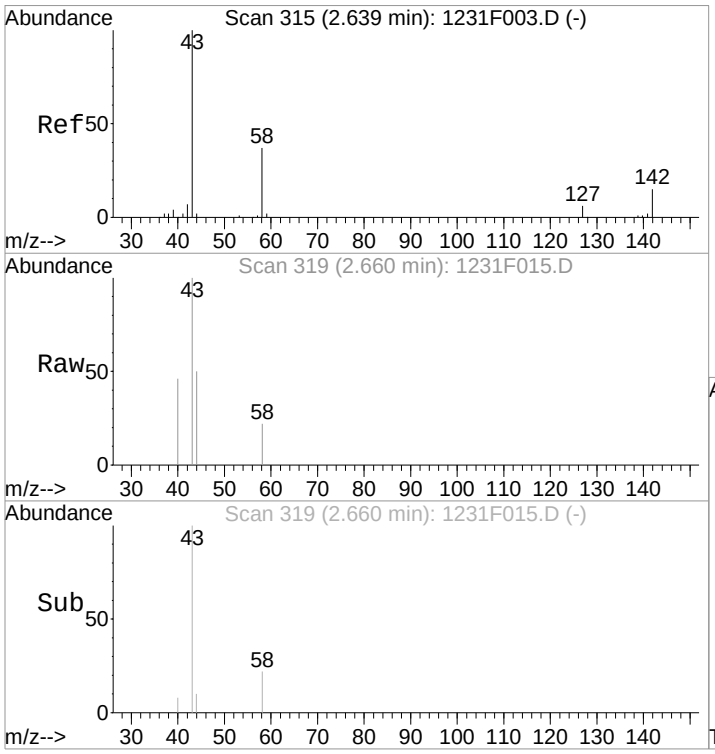
1st LM 01/07/19
2nd 01/10/19

Data File : J:\MS46\DATA\123118\1231F015.D Vial: 12
Acq On : 31 Dec 2018 05:16 pm Operator: LM
Sample : 400X K12382 MB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jan 7 11:40 2019 Quant Results File: 111918MS46_8260.RES

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration



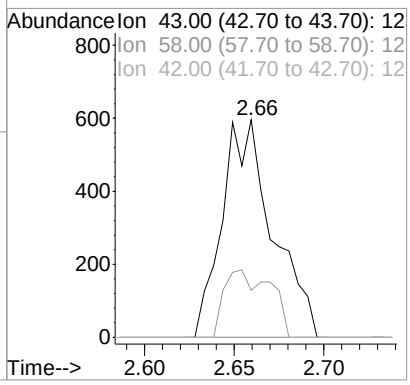
1st 01/07/19
2nd 01/10/19

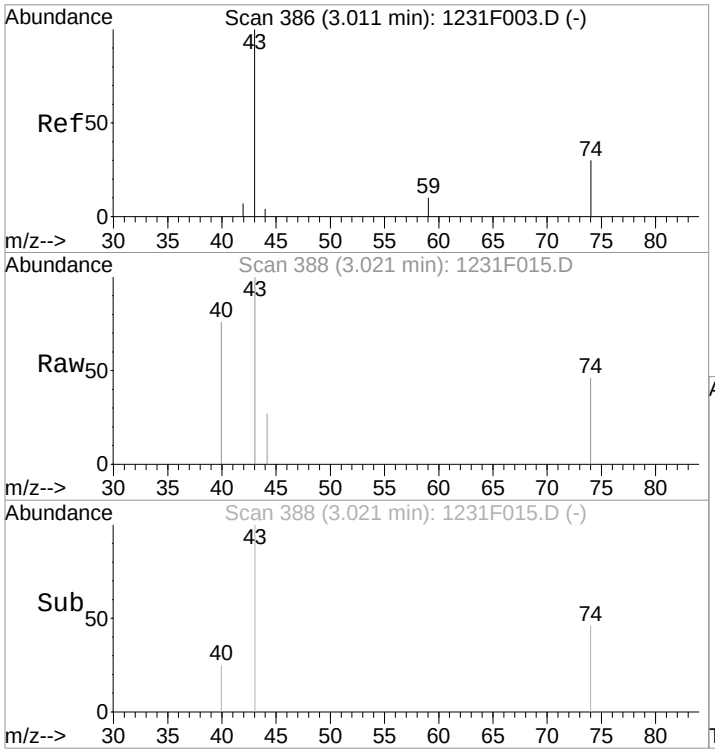


#13
Acetone
Concen: 2.87 PPB
RT: 2.66 min Scan# 319
Delta R.T. 0.02 min
Lab File: 1231F015.D
Acq: 31 Dec 2018 05:16 pm

Tgt Ion: 43 Resp: 1169

Ion	Ratio	Lower	Upper
43	100		
58	21.6	11.9	71.9
42	0.0	0.0	37.0

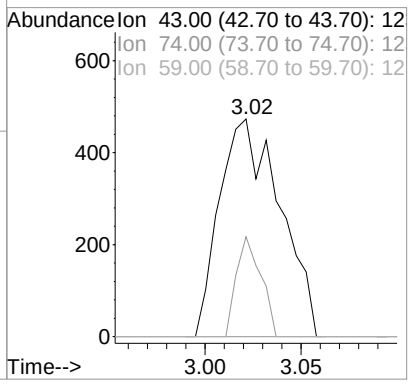




#18
Methyl Acetate
Concen: 0.70 PPB
RT: 3.02 min Scan# 388
Delta R.T. 0.00 min
Lab File: 1231F015.D
Acq: 31 Dec 2018 05:16 pm

Tgt Ion: 43 Resp: 1036

Ion	Ratio	Lower	Upper
43	100		
74	45.9	4.6	64.6
59	0.0	0.0	39.9



1st LM 01/07/19
2nd 01/10/19

Exception Report

Data File: J:\MS46\DATA\123118\1231F008.D
Lab ID: KWG1900204-1 -- K1812382-001MS
RunType: MS
Matrix: SOIL

Date Acquired: 12/31/2018 14:13
Date Quantitated: 01/07/2019 11:15
Batch ID: KWG1806757
Analysis Method: 8260C
MethodJoinID: MJ181

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail	
Tune Window	NA	NA	NA	x		
Analytical Holding Time	NA	NA	NA	x		
ICAL Pass/Fail	NA	NA	NA	x		
ICAL Analyte Recovery	NA	NA	NA	x		
Initial Calibration Minimum RF	NA	NA	NA		x	
Initial Calibration SPCC/CCC	NA	NA	NA	x		
Second Source ICAL Verification	NA	NA	NA		x	
Calibration Verification Pass/Fail	NA	NA	NA	x		
Continuing Calibration Recovery	NA	NA	NA		x	
Continuing Calibration Minimum RF	NA	NA	NA		x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x		
Internal Standards	NA	NA	NA	x		
Surrogates	NA	NA	NA	x		
Analyte Co-elution	NA	NA	NA	x		
Retention Time	NA	NA	NA	x		
Relative Retention Time	NA	NA	NA	x		
Below Lowest ICAL Level	NA	NA	NA	x		
Std MRL Unsupported by ICAL	NA	NA	NA		x	NT
Above Highest ICAL Level	NA	NA	NA	x		
Enviroquant/Stealth Calibration Check	NA	NA	NA	x		
Overdiluted Analysis	NA	NA	NA	x		

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	Acetonitrile	0.0056	0.01	NA	NT
	Isobutyl Alcohol	0.0032	0.01	NA	
	1,4-Dioxane	0.0009	0.01	NA	
Second Source ICAL Verification	Carbon Disulfide	-34.8	NA	30	
Continuing Calibration Recovery	Iodomethane	-34.3	NA	20	
	Vinyl Acetate	-26.9	NA	20	
Continuing Calibration Minimum RF	Acetonitrile	0.0058	0.01	NA	
	Isobutyl Alcohol	0.0033	0.01	NA	
	1,4-Dioxane	0.0009	0.01	NA	
Std MRL Unsupported by ICAL	n-Hexane	0.080	0.036	NA	
	Ethyl Acetate	0.80	0.23	NA	

Primary Review: _____

Secondary Review: _____

1st LM 01/07/19
2nd 01/10/19

Quantitation Report

Data File:	J:\MS46\DATA\123118\1231F008.D			**Instrument:**	MS46
Acqu Date:	12/31/2018 14:13	**Quant Date:**	01/07/2019 11:15	**Vial:**	6
Run Type:	MS	**MethodJoinID:**	MJ181	**Dilution:**	1.0
Lab ID:	KWG1900204-1 -- K1812382-001MS			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8260C VOC TCLP	**Collect Date:**		**Receive Date:**	01/07/2019

Analysis Lot:	KWG1806757	**Prep Lot:**	KWG1900204	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030B	**Pre-Prep Meth:**	EPA 1311
Prep Ref:	1708395	**Prep Date:**	12/31/2018	**Pre-Prep Date:**	12/21/2018

Quant Method:	J:\MS46\METHODS\111918MS46_8	**Calibration ID:**	CAL15902
Title:			
Tune Ref:	J:\MS46\DATA\123118\1231F002.D	**Method ID:**	MJ181
MB Ref:	J:\MS46\DATA\123118\1231F015.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.54	0.01	96	160785	10.00	OK
2	Chlorobenzene-d5	10.01	0.00	82	62447	10.00	OK
3	1,4-Dichlorobenzene-d4	12.58	0.00	152	70179	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.74	0.00	0.00	113	40873	11.30	113	73-122	OK	
1	1,2-Dichloroethane-d4	6.19	0.01	0.00	65	34128	10.94	109	59-127	OK	
1	Toluene-d8	8.37	0.00	0.00	98	156724	12.24	122	65-144	OK	
2	4-Bromofluorobenzene	11.32	0.00	0.00	95	59076	11.16	112	68-117	OK	

Target Compounds

Final Conc. Units: mg/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.10		0.00	85	34603	10.41	4.16		
1	Chloromethane	1.28		0.00	50	27184	9.55	3.82		
1	Vinyl Chloride	1.35		0.00	62	36828	10.73	4.29		
1	Bromomethane	1.64		0.00	96	13548	4.11	1.64		
1	Chloroethane	1.74		0.00	64	23709	10.98	4.39		
1	Dichlorofluoromethane (CFC 21)				67	0		0.026	U	
1	Trichlorofluoromethane	1.94		0.00	101	52201	9.91	3.96		
1	Ethyl Ether	2.26	0.01	0.00	59	23602	12.52	5.01		
1	Acrolein				56	0		0.48	U	
1	Trichlorotrifluoroethane	2.47	0.01	0.00	151	42123	11.58	4.63		
1	1,1-Dichloroethene	2.49	0.01	0.00	96	37735	11.39	4.56		
1	Acetone	2.64		0.00	43	20571	49.83	19.9		
1	Iodomethane	2.67	0.01	0.00	142	9641	2.01	0.804	J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS46\DATA\123118\1231F008.D			**Instrument:**	MS46
Acqu Date:	12/31/2018 14:13	**Quant Date:**	01/07/2019 11:15	**Vial:**	6
Run Type:	MS	**MethodJoinID:**	MJ181	**Dilution:**	1.0
Lab ID:	KWG1900204-1 -- K1812382-001MS			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: mg/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Carbon Disulfide	2.69		0.00	76	203021	19.81	7.92		
1	3-Chloro-1-propene				76	0**d**		0.038	U	
1	Acetonitrile				40	0**d**		5.2	U	
1	Methylene Chloride	3.15		0.00	84	39192	10.24	4.10		
1	Acrylonitrile	3.61		0.00	53	8333	11.51	4.60	J	
1	Methyl tert-Butyl Ether	3.44		0.00	73	87695	10.07	4.03		
1	trans-1,2-Dichloroethene	3.45		0.00	96	44221	10.89	4.36		
1	n-Hexane				57	0**d**		0.036	U	
1	1,1-Dichloroethane	4.17		0.00	63	64103	11.34	4.54		
1	Vinyl Acetate	4.30		0.00	86	15834	19.98	7.99		
1	Chloroprene				53	0		1.5	U	
1	2,2-Dichloropropane	5.00	0.01	0.00	77	59845	11.03	4.41		
1	cis-1,2-Dichloroethene	5.07	0.01	0.00	96	46484	10.08	4.03		
1	2-Butanone (MEK)	5.15	0.01	0.00	72	13114	50.69	20.3		
1	Ethyl Acetate				61	0**d**		0.23	U	
1	Propionitrile				54	0		0.44	U	
1	Methacrylonitrile				67	0		0.14	U	
1	Bromochloromethane	5.40	0.01	0.00	128	23813	11.24	4.50		
1	Tetrahydrofuran				71	0		0.038	U	
1	Chloroform	5.52		0.00	83	69493	10.24	4.10		
1	1,1,1-Trichloroethane (TCA)	5.66		0.00	97	64296	10.55	4.22		
1	Carbon Tetrachloride	5.82		0.00	117	61505	10.93	4.37		
1	1,1-Dichloropropene	5.88		0.00	75	57543	11.38	4.55		
1	Isobutyl Alcohol				43	0		2.8	U	
1	Benzene	6.14		0.00	78	168341	10.65	4.26		
1	1,2-Dichloroethane (EDC)	6.29	0.01	0.00	62	41645	10.58	4.23		
1	Trichloroethene (TCE)	6.96		0.00	95	46014	10.36	4.14		
1	1,2-Dichloropropane	7.29	0.01	0.00	63	37436	10.51	4.20		
1	Dibromomethane	7.43		0.00	93	22730	9.69	3.88		
1	Methyl Methacrylate				69	0		0.052	U	
1	1,4-Dioxane				88	0		5.6	U	
1	Bromodichloromethane	7.62		0.00	83	52797	9.78	3.91		
1	2-Nitropropane				41	0**d**		0.39	U	
1	2-Chloroethyl Vinyl Ether				63	0		0.064	U	
1	cis-1,3-Dichloropropene	8.15		0.00	75	64603	9.91	3.96		
1	4-Methyl-2-pentanone (MIBK)	8.34		0.00	58	46921	53.42	21.4		
1	Toluene	8.45		0.00	92	115097	10.05	4.02		
2	trans-1,3-Dichloropropene	8.81		0.00	75	54603	8.84	3.54		
2	Ethyl Methacrylate				69	0		0.060	U	
2	1,1,2-Trichloroethane	9.01		0.00	83	28615	9.46	3.78		
2	Tetrachloroethene (PCE)	9.02		0.00	164	50774	10.23	4.09		
2	2-Hexanone	9.28		0.00	57	14296	50.05	20.0		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS46\DATA\123118\1231F008.D			**Instrument:**	MS46
Acqu Date:	12/31/2018 14:13	**Quant Date:**	01/07/2019 11:15	**Vial:**	6
Run Type:	MS	**MethodJoinID:**	MJ181	**Dilution:**	1.0
Lab ID:	KWG1900204-1 -- K1812382-001MS			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: mg/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	1,3-Dichloropropane	9.19		0.00	76	58792	9.73	3.89		
2	Dibromochloromethane	9.40		0.00	129	45521	8.84	3.54		
2	1,2-Dibromoethane (EDB)	9.52		0.00	107	36210	9.31	3.72		
2	1-Chlorohexane	10.01		0.00	91	70923	11.10	4.44		
2	Chlorobenzene	10.04		0.00	112	138031	9.96	3.98		
2	Ethylbenzene	10.14		0.00	106	75718	10.32	4.13		
2	1,1,1,2-Tetrachloroethane	10.15		0.00	131	48941	9.52	3.81		
2	m,p-Xylenes	10.27		0.00	106	182900	20.55	8.22		
2	o-Xylene	10.71		0.00	106	85925	9.98	3.99		
2	Styrene	10.74		0.00	103	76573	10.39	4.16		
2	Bromoform	10.96		0.00	173	30850	8.93	3.57		
2	Isopropylbenzene	11.10		0.00	105	226165	10.36	4.14		
2	cis-1,4-Dichloro-2-butene				89	0**d**		0.56	U	
3	1,1,2,2-Tetrachloroethane	11.53		0.00	83	38788	9.80	3.92		
3	trans-1,4-Dichloro-2-butene				53	0**d**		0.14	U	
3	Bromobenzene	11.47		0.00	156	62658	9.62	3.85		
3	n-Propylbenzene	11.55		0.00	91	250531	10.25	4.10		
3	1,2,3-Trichloropropane	11.58		0.00	110	13499	10.20	4.08		
3	2-Chlorotoluene	11.67		0.00	91	143472	9.97	3.99		
3	1,3,5-Trimethylbenzene	11.76		0.00	105	178339	10.06	4.02		
3	4-Chlorotoluene	11.80		0.00	91	147677	9.69	3.88		
3	tert-Butylbenzene	12.10		0.00	119	165059	10.27	4.11		
3	1,2,4-Trimethylbenzene	12.17		0.00	105	178340	10.12	4.05		
3	sec-Butylbenzene	12.34		0.00	105	228430	10.36	4.14		
3	4-Isopropyltoluene	12.51		0.00	119	200083	10.50	4.20		
3	1,3-Dichlorobenzene	12.50		0.00	146	111765	9.74	3.90		
3	1,4-Dichlorobenzene	12.61		0.00	146	112285	9.55	3.82		
3	n-Butylbenzene	12.96		0.00	91	152544	10.48	4.19		
3	1,2-Dichlorobenzene	13.03		0.00	146	100163	9.62	3.85		
3	1,2-Dibromo-3-chloropropane	13.92		0.00	155	6506	8.81	3.52		
3	1,3,5-Trichlorobenzene	14.07	-0.01	0.00	180	74934	10.16	4.06		
3	1,2,4-Trichlorobenzene	14.78		0.00	180	64089	9.29	3.72		
3	Hexachlorobutadiene	14.91		0.00	225	29481	9.35	3.74		
3	Naphthalene	15.06		0.00	128	117280	9.38	3.75		
3	1,2,3-Trichlorobenzene	15.33		0.00	180	53471	9.31	3.72		

Prep Amount:	125 uL	**Dilution:**	1.0
Prep Final Vol:	50 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st LM 01/07/19
2nd 01/10/19

Data File : J:\MS46\DATA\123118\1231F008.D Vial: 6
Acq On : 31 Dec 2018 02:13 pm Operator: LM
Sample : 400X K12382-001 MS Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jan 07 10:58:20 2019 Quant Results File: 111918MS46_8260.RES

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.54	96	160785	10.00	PPB		0.00
63) Chlorobenzene-d5	10.01	82	62447	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	70179	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	5.74	113	40873	11.30	PPB		0.00
Spiked Amount 10.000			Recovery = 113.00%				
46) 1,2-Dichloroethane-d4	6.19	65	34128	10.94	PPB		0.00
Spiked Amount 10.000			Recovery = 109.40%				
61) Toluene-d8	8.37	98	156724	12.24	PPB		0.00
Spiked Amount 10.000			Recovery = 122.40%				
83) 4-Bromofluorobenzene	11.32	95	59076	11.16	PPB		0.00
Spiked Amount 10.000			Recovery = 111.60%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.10	85	34603	10.41	PPB		96
3) Chloromethane	1.28	50	27184	9.55	PPB		99
4) Vinyl Chloride	1.35	62	36828	10.73	PPB		97
5) Bromomethane	1.64	96	13548	4.11	PPB		86
6) Chloroethane	1.74	64	23709	10.98	PPB		99
8) Trichlorofluoromethane	1.94	101	52201	9.91	PPB		98
9) Ethyl Ether	2.26	59	23602	12.52	PPB		97
11) Trichlorotrifluoroethane	2.47	151	42123	11.58	PPB		92
12) 1,1-Dichloroethene	2.49	96	37735	11.39	PPB		97
13) Acetone	2.64	43	20571	49.83	PPB		94
14) Iodomethane	2.67	142	9641	2.01	PPB		94
15) Carbon Disulfide	2.69	76	203021	19.81	PPB		100
20) Methylene Chloride	3.15	84	39192	10.24	PPB		95
21) tert-Butyl Alcohol	3.45	59	1447	10.88	PPB	#	1
22) Acrylonitrile	3.61	53	8333	11.51	PPB		98
23) Methyl tert-Butyl Ether	3.44	73	87695	10.07	PPB		99
24) trans-1,2-Dichloroethene	3.45	96	44221	10.89	PPB		97
27) 1,1-Dichloroethane	4.17	63	64103	11.34	PPB		97
28) Vinyl Acetate	4.30	86	15834	19.98	PPB	#	78
31) 2,2-Dichloropropane	5.00	77	59845	11.03	PPB		99
32) cis-1,2-Dichloroethene	5.07	96	46484	10.08	PPB		96
33) 2-Butanone	5.15	72	13114	50.69	PPB		99
37) Bromochloromethane	5.40	128	23813	11.24	PPB		95
39) Chloroform	5.52	83	69493	10.24	PPB		97
41) 1,1,1-Trichloroethane	5.66	97	64296	10.55	PPB		95
43) Carbon Tetrachloride	5.82	117	61505	10.93	PPB		97
44) 1,1-Dichloropropene	5.88	75	57543	11.38	PPB		99
47) Benzene	6.14	78	168341	10.65	PPB		99
48) 1,2-Dichloroethane	6.29	62	41645	10.58	PPB		99
50) Trichloroethene	6.96	95	46014	10.36	PPB		91
52) 1,2-Dichloropropane	7.29	63	37436	10.51	PPB		96
53) Dibromomethane	7.43	93	22730	9.69	PPB		94
56) Bromodichloromethane	7.62	83	52797	9.78	PPB		96
59) cis-1,3-Dichloropropene	8.15	75	64603	9.91	PPB		97
60) 4-Methyl-2-pentanone (MIBK	8.34	58	46921	53.42	PPB		97
62) Toluene	8.45	92	115097	10.05	PPB		97
65) trans-1,3-Dichloropropene	8.81	75	54603	8.84	PPB		97
67) 1,1,2-Trichloroethane	9.01	83	28615	9.46	PPB		97
68) Tetrachloroethene	9.02	164	50774	10.23	PPB		98
69) 2-Hexanone	9.28	57	14296	50.05	PPB		96
70) 1,3-Dichloropropane	9.19	76	58792	9.73	PPB		96
71) Dibromochloromethane	9.40	129	45521	8.84	PPB		100
72) 1,2-Dibromoethane (EDB)	9.52	107	36210	9.31	PPB		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st LM 01/07/19
2nd 01/10/19

Data File : J:\MS46\DATA\123118\1231F008.D Vial: 6
Acq On : 31 Dec 2018 02:13 pm Operator: LM
Sample : 400X K12382-001 MS Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jan 07 10:58:20 2019 Quant Results File: 111918MS46_8260.RES

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

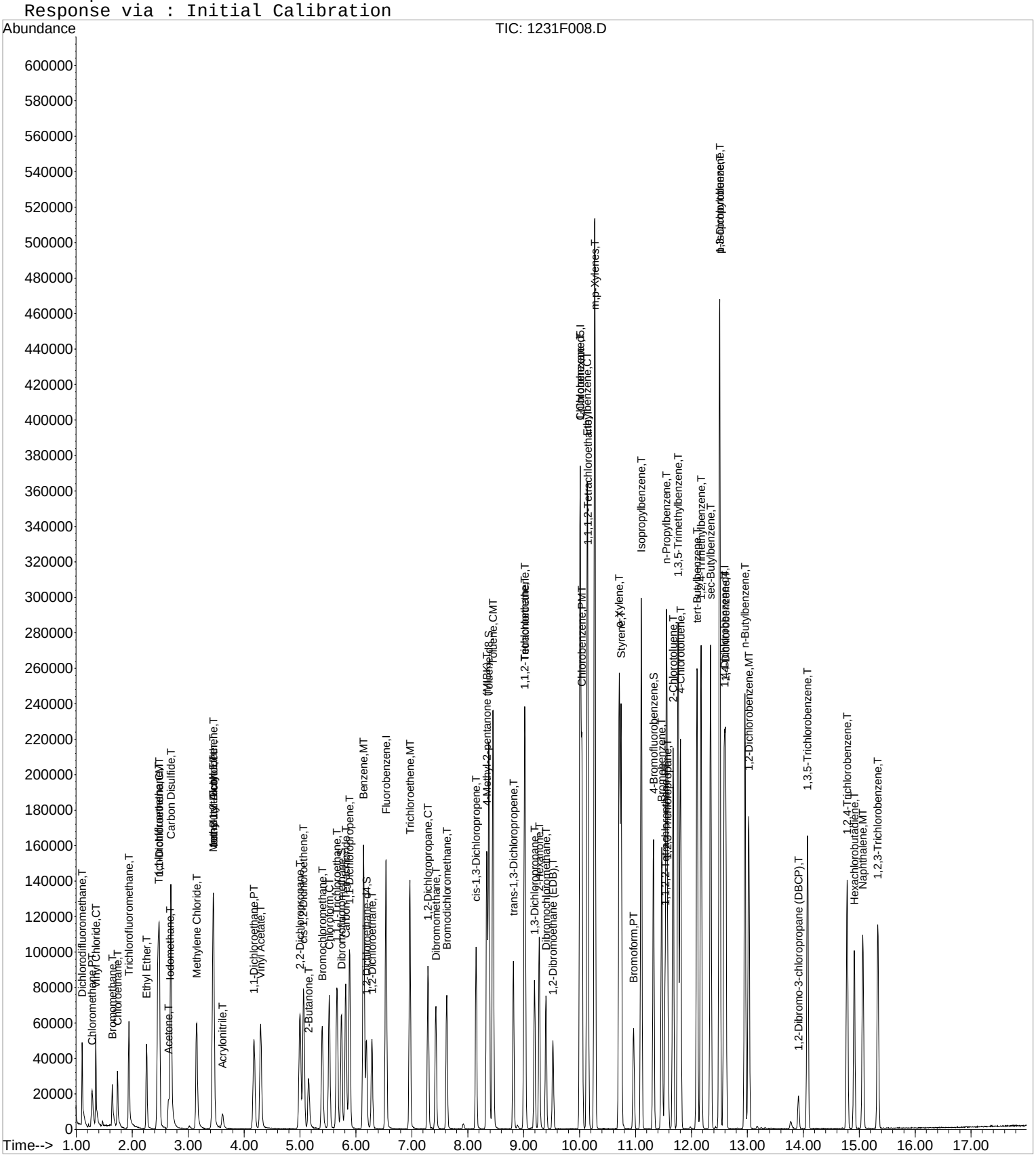
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	1-Chlorohexane	10.01	91	70923	11.10	PPB	96
74)	Chlorobenzene	10.04	112	138031	9.96	PPB	96
75)	Ethylbenzene	10.14	106	75718	10.32	PPB	97
76)	1,1,1,2-Tetrachloroethane	10.15	131	48941	9.52	PPB	99
77)	m,p-Xylenes	10.27	106	182900	20.55	PPB	97
78)	o-Xylene	10.71	106	85925	9.98	PPB	100
79)	Styrene	10.74	103	76573	10.39	PPB	97
80)	Bromoform	10.96	173	30850	8.93	PPB	97
81)	Isopropylbenzene	11.10	105	226165	10.36	PPB	99
85)	1,1,2,2-Tetrachloroethane	11.53	83	38788	9.80	PPB	97
87)	Bromobenzene	11.47	156	62658	9.62	PPB	94
88)	n-Propylbenzene	11.55	91	250531	10.25	PPB	99
89)	1,2,3-Trichloropropane	11.58	110	13499	10.20	PPB	93
90)	2-Chlorotoluene	11.67	91	143472	9.97	PPB	98
91)	1,3,5-Trimethylbenzene	11.76	105	178339	10.06	PPB	99
92)	4-Chlorotoluene	11.80	91	147677	9.69	PPB	100
93)	tert-Butylbenzene	12.10	119	165059	10.27	PPB	97
94)	1,2,4-Trimethylbenzene	12.17	105	178340	10.12	PPB	98
95)	sec-Butylbenzene	12.34	105	228430	10.36	PPB	99
96)	p-Isopropyltoluene	12.51	119	200083	10.50	PPB	99
97)	1,3-Dichlorobenzene	12.50	146	111765	9.74	PPB	98
98)	1,4-Dichlorobenzene	12.61	146	112285	9.55	PPB	96
99)	n-Butylbenzene	12.96	91	152544	10.48	PPB	99
100)	1,2-Dichlorobenzene	13.03	146	100163	9.62	PPB	93
101)	1,2-Dibromo-3-chloropropan	13.92	155	6506	8.81	PPB	97
102)	1,3,5-Trichlorobenzene	14.07	180	74934	10.16	PPB	99
103)	1,2,4-Trichlorobenzene	14.78	180	64089	9.29	PPB	96
104)	Hexachlorobutadiene	14.91	225	29481	9.35	PPB	97
105)	Naphthalene	15.06	128	117280	9.38	PPB	98
106)	1,2,3-Trichlorobenzene	15.33	180	53471	9.31	PPB	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\123118\1231F008.D Vial: 6
Acq On : 31 Dec 2018 02:13 pm Operator: LM
Sample : 400X K12382-001 MS Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jan 7 11:15 2019 Quant Results File: 111918MS46_8260.RES

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration



1st LM 01/07/19
2nd 01/10/19

Exception Report

Data File: J:\MS46\DATA\123118\1231F006.D
Lab ID: KWG1900204-2
RunType: LCS
Matrix: SOIL

Date Acquired: 12/31/2018 13:21
Date Quantitated: 01/07/2019 11:05
Batch ID: KWG1806757
Analysis Method: 8260C
MethodJoinID: MJ181

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail	
Tune Window	NA	NA	NA	x		
Analytical Holding Time	NA	NA	NA	x		
ICAL Pass/Fail	NA	NA	NA	x		
ICAL Analyte Recovery	NA	NA	NA	x		
Initial Calibration Minimum RF	NA	NA	NA		x	
Initial Calibration SPCC/CCC	NA	NA	NA	x		
Second Source ICAL Verification	NA	NA	NA		x	
Calibration Verification Pass/Fail	NA	NA	NA	x		
Continuing Calibration Recovery	NA	NA	NA		x	
Continuing Calibration Minimum RF	NA	NA	NA		x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x		
Internal Standards	NA	NA	NA	x		
Surrogates	NA	NA	NA	x		
Analyte Co-elution	NA	NA	NA	x		
Retention Time	NA	NA	NA	x		
Relative Retention Time	NA	NA	NA	x		
Below Lowest ICAL Level	NA	NA	NA	x		
Std MRL Unsupported by ICAL	NA	NA	NA		x	NT
Above Highest ICAL Level	NA	NA	NA	x		
Enviroquant/Stealth Calibration Check	NA	NA	NA	x		
Overdiluted Analysis	NA	NA	NA	x		

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	Acetonitrile	0.0056	0.01	NA	NT
	Isobutyl Alcohol	0.0032	0.01	NA	
	1,4-Dioxane	0.0009	0.01	NA	
Second Source ICAL Verification	Carbon Disulfide	-34.8	NA	30	
Continuing Calibration Recovery	Iodomethane	-34.3	NA	20	
	Vinyl Acetate	-26.9	NA	20	
Continuing Calibration Minimum RF	Acetonitrile	0.0058	0.01	NA	
	Isobutyl Alcohol	0.0033	0.01	NA	
	1,4-Dioxane	0.0009	0.01	NA	
Std MRL Unsupported by ICAL	n-Hexane	0.080	0.036	NA	
	Ethyl Acetate	0.80	0.23	NA	

Primary Review: _____

Secondary Review: _____

1st LM 01/07/19
2nd 01/10/19

Quantitation Report

Data File:	J:\MS46\DATA\123118\1231F006.D			**Instrument:**	MS46
Acqu Date:	12/31/2018 13:21	**Quant Date:**	01/07/2019 11:05	**Vial:**	4
Run Type:	LCS	**MethodJoinID:**	MJ181	**Dilution:**	1.0
Lab ID:	KWG1900204-2			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8260C VOC TCLP	**Collect Date:**		**Receive Date:**	01/07/2019

Analysis Lot:	KWG1806757	**Prep Lot:**	KWG1900204	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030B	**Pre-Prep Meth:**	EPA 1311
Prep Ref:	1708396	**Prep Date:**	12/31/2018	**Pre-Prep Date:**	12/21/2018

Quant Method:	J:\MS46\METHODS\111918MS46_8	**Calibration ID:**	CAL15902
Title:			
Tune Ref:	J:\MS46\DATA\123118\1231F002.D	**Method ID:**	MJ181
MB Ref:	J:\MS46\DATA\123118\1231F015.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.53	0.00	96	158563	10.00	OK
2	Chlorobenzene-d5	10.01	0.00	82	61791	10.00	OK
3	1,4-Dichlorobenzene-d4	12.58	0.00	152	67634	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.74	0.00	0.00	113	39950	11.20	112	73-122	OK	
1	1,2-Dichloroethane-d4	6.19	0.01	0.00	65	33059	10.74	107	59-127	OK	
1	Toluene-d8	8.37	0.00	0.00	98	155307	12.30	123	65-144	OK	
2	4-Bromofluorobenzene	11.32	0.00	0.00	95	57837	11.04	110	68-117	OK	

Target Compounds

Final Conc. Units: mg/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.10		0.00	85	34289	10.46	4.18		
1	Chloromethane	1.28		0.00	50	27104	9.65	3.86		
1	Vinyl Chloride	1.35		0.00	62	36469	10.77	4.31		
1	Bromomethane	1.64		0.00	96	11515	3.51	1.40		
1	Chloroethane	1.74		0.00	64	22851	10.73	4.29		
1	Dichlorofluoromethane (CFC 21)				67	0		0.026	U	
1	Trichlorofluoromethane	1.94		0.00	101	49371	9.50	3.80		
1	Ethyl Ether	2.26	0.01	0.00	59	22885	12.31	4.92		
1	Acrolein				56	0		0.48	U	
1	Trichlorotrifluoroethane	2.46		0.00	151	41056	11.45	4.58		
1	1,1-Dichloroethene	2.48		0.00	96	36974	11.32	4.53		
1	Acetone	2.65	0.01	0.00	43	20478	50.30	20.1		
1	Iodomethane	2.67	0.01	0.00	142	12256	2.59	1.04	J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS46\DATA\123118\1231F006.D			**Instrument:**	MS46
Acqu Date:	12/31/2018 13:21	**Quant Date:**	01/07/2019 11:05	**Vial:**	4
Run Type:	LCS	**MethodJoinID:**	MJ181	**Dilution:**	1.0
Lab ID:	KWG1900204-2			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: mg/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Carbon Disulfide	2.69		0.00	76	200104	19.80	7.92		
1	3-Chloro-1-propene				76	0**d**		0.038	U	
1	Acetonitrile				40	0**d**		5.2	U	
1	Methylene Chloride	3.15		0.00	84	38051	10.08	4.03		
1	Acrylonitrile	3.61		0.00	53	8143	11.40	4.56	J	
1	Methyl tert-Butyl Ether	3.45	0.01	0.00	73	84611	9.85	3.94		
1	trans-1,2-Dichloroethene	3.45		0.00	96	41992	10.49	4.20		
1	n-Hexane				57	0**d**		0.036	U	
1	1,1-Dichloroethane	4.18	0.01	0.00	63	61573	11.05	4.42		
1	Vinyl Acetate	4.30		0.00	86	15303	19.58	7.83		
1	Chloroprene				53	0		1.5	U	
1	2,2-Dichloropropane	5.00	0.01	0.00	77	57897	10.82	4.33		
1	cis-1,2-Dichloroethene	5.07	0.01	0.00	96	45666	10.04	4.02		
1	2-Butanone (MEK)	5.16	0.02	0.00	72	12301	48.21	19.3		
1	Ethyl Acetate				61	0**d**		0.23	U	
1	Propionitrile				54	0		0.44	U	
1	Methacrylonitrile				67	0		0.14	U	
1	Bromochloromethane	5.40	0.01	0.00	128	21736	10.41	4.16		
1	Tetrahydrofuran				71	0		0.038	U	
1	Chloroform	5.52		0.00	83	65733	9.82	3.93		
1	1,1,1-Trichloroethane (TCA)	5.66		0.00	97	61902	10.30	4.12		
1	Carbon Tetrachloride	5.82		0.00	117	58110	10.47	4.19		
1	1,1-Dichloropropene	5.88		0.00	75	54983	11.03	4.41		
1	Isobutyl Alcohol				43	0		2.8	U	
1	Benzene	6.14		0.00	78	162138	10.41	4.16		
1	1,2-Dichloroethane (EDC)	6.28		0.00	62	39384	10.14	4.06		
1	Trichloroethene (TCE)	6.96		0.00	95	45465	10.38	4.15		
1	1,2-Dichloropropane	7.29	0.01	0.00	63	36615	10.42	4.17		
1	Dibromomethane	7.43		0.00	93	22566	9.76	3.90		
1	Methyl Methacrylate				69	0		0.052	U	
1	1,4-Dioxane				88	0**d**		5.6	U	
1	Bromodichloromethane	7.62		0.00	83	53038	9.97	3.99		
1	2-Nitropropane				41	0**d**		0.39	U	
1	2-Chloroethyl Vinyl Ether				63	0		0.064	U	
1	cis-1,3-Dichloropropene	8.15		0.00	75	63835	9.93	3.97		
1	4-Methyl-2-pentanone (MIBK)	8.34		0.00	58	45103	52.07	20.8		
1	Toluene	8.45		0.00	92	114323	10.12	4.05		
2	trans-1,3-Dichloropropene	8.82	0.01	0.00	75	54673	8.94	3.58		
2	Ethyl Methacrylate				69	0		0.060	U	
2	1,1,2-Trichloroethane	9.00	-0.01	0.00	83	28908	9.66	3.86		
2	Tetrachloroethene (PCE)	9.02		0.00	164	50727	10.33	4.13		
2	2-Hexanone	9.28		0.00	57	13521	47.84	19.1		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS46\DATA\123118\1231F006.D			**Instrument:**	MS46
Acqu Date:	12/31/2018 13:21	**Quant Date:**	01/07/2019 11:05	**Vial:**	4
Run Type:	LCS	**MethodJoinID:**	MJ181	**Dilution:**	1.0
Lab ID:	KWG1900204-2			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: mg/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	1,3-Dichloropropane	9.19		0.00	76	56845	9.51	3.80		
2	Dibromochloromethane	9.40		0.00	129	45281	8.89	3.56		
2	1,2-Dibromoethane (EDB)	9.52		0.00	107	35768	9.30	3.72		
2	1-Chlorohexane	10.01		0.00	91	68406	10.82	4.33		
2	Chlorobenzene	10.04		0.00	112	130932	9.55	3.82		
2	Ethylbenzene	10.14		0.00	106	71924	9.91	3.96		
2	1,1,1,2-Tetrachloroethane	10.15		0.00	131	47074	9.25	3.70		
2	m,p-Xylenes	10.27		0.00	106	176248	20.01	8.00		
2	o-Xylene	10.71		0.00	106	83352	9.79	3.92		
2	Styrene	10.74		0.00	103	72759	9.98	3.99		
2	Bromoform	10.96		0.00	173	29646	8.67	3.47		
2	Isopropylbenzene	11.10		0.00	105	216254	10.02	4.01		
2	cis-1,4-Dichloro-2-butene				89	0**d**		0.56	U	
3	1,1,2,2-Tetrachloroethane	11.53		0.00	83	36123	9.47	3.79		
3	trans-1,4-Dichloro-2-butene				53	0**d**		0.14	U	
3	Bromobenzene	11.47		0.00	156	59017	9.41	3.76		
3	n-Propylbenzene	11.55		0.00	91	239508	10.16	4.06		
3	1,2,3-Trichloropropane	11.58		0.00	110	12727	9.97	3.99		
3	2-Chlorotoluene	11.67		0.00	91	137200	9.90	3.96		
3	1,3,5-Trimethylbenzene	11.76		0.00	105	170172	9.97	3.99		
3	4-Chlorotoluene	11.80		0.00	91	142623	9.71	3.88		
3	tert-Butylbenzene	12.10		0.00	119	155954	10.07	4.03		
3	1,2,4-Trimethylbenzene	12.17		0.00	105	170243	10.03	4.01		
3	sec-Butylbenzene	12.34		0.00	105	215643	10.15	4.06		
3	4-Isopropyltoluene	12.51		0.00	119	189597	10.32	4.13		
3	1,3-Dichlorobenzene	12.50		0.00	146	105698	9.56	3.82		
3	1,4-Dichlorobenzene	12.61		0.00	146	106029	9.36	3.74		
3	n-Butylbenzene	12.96		0.00	91	144668	10.32	4.13		
3	1,2-Dichlorobenzene	13.03		0.00	146	94147	9.39	3.76		
3	1,2-Dibromo-3-chloropropane	13.91	-0.01	0.00	155	6697	9.41	3.76		
3	1,3,5-Trichlorobenzene	14.07	-0.01	0.00	180	73496	10.34	4.14		
3	1,2,4-Trichlorobenzene	14.78		0.00	180	62295	9.37	3.75		
3	Hexachlorobutadiene	14.91		0.00	225	29361	9.66	3.86		
3	Naphthalene	15.06		0.00	128	112609	9.35	3.74		
3	1,2,3-Trichlorobenzene	15.33		0.00	180	51524	9.31	3.72		

Prep Amount:	125 uL	**Dilution:**	1.0
Prep Final Vol:	50 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
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E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
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NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st LM 01/07/19
2nd 01/10/19

Data File : J:\MS46\DATA\123118\1231F006.D Vial: 4
Acq On : 31 Dec 2018 01:21 pm Operator: LM
Sample : 400X K12382 LCS Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jan 07 10:58:18 2019 Quant Results File: 111918MS46_8260.RES

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.53	96	158563	10.00	PPB		0.00
63) Chlorobenzene-d5	10.01	82	61791	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	67634	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	5.74	113	39950	11.20	PPB		0.00
Spiked Amount 10.000			Recovery =	112.00%			
46) 1,2-Dichloroethane-d4	6.19	65	33059	10.74	PPB		0.00
Spiked Amount 10.000			Recovery =	107.40%			
61) Toluene-d8	8.37	98	155307	12.30	PPB		0.00
Spiked Amount 10.000			Recovery =	123.00%			
83) 4-Bromofluorobenzene	11.32	95	57837	11.04	PPB		0.00
Spiked Amount 10.000			Recovery =	110.40%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.10	85	34289	10.46	PPB		95
3) Chloromethane	1.28	50	27104	9.65	PPB		98
4) Vinyl Chloride	1.35	62	36469	10.77	PPB		99
5) Bromomethane	1.64	96	11515	3.51	PPB		96
6) Chloroethane	1.74	64	22851	10.73	PPB		96
8) Trichlorofluoromethane	1.94	101	49371	9.50	PPB		97
9) Ethyl Ether	2.26	59	22885	12.31	PPB		96
11) Trichlorotrifluoroethane	2.46	151	41056	11.45	PPB		95
12) 1,1-Dichloroethene	2.48	96	36974	11.32	PPB		97
13) Acetone	2.65	43	20478	50.30	PPB		92
14) Iodomethane	2.67	142	12256	2.59	PPB		96
15) Carbon Disulfide	2.69	76	200104	19.80	PPB		100
20) Methylene Chloride	3.15	84	38051	10.08	PPB		97
22) Acrylonitrile	3.61	53	8143	11.40	PPB		98
23) Methyl tert-Butyl Ether	3.45	73	84611	9.85	PPB		98
24) trans-1,2-Dichloroethene	3.45	96	41992	10.49	PPB		98
27) 1,1-Dichloroethane	4.18	63	61573	11.05	PPB		94
28) Vinyl Acetate	4.30	86	15303	19.58	PPB	#	75
31) 2,2-Dichloropropane	5.00	77	57897	10.82	PPB		100
32) cis-1,2-Dichloroethene	5.07	96	45666	10.04	PPB		94
33) 2-Butanone	5.16	72	12301	48.21	PPB		89
37) Bromochloromethane	5.40	128	21736	10.41	PPB		99
39) Chloroform	5.52	83	65733	9.82	PPB		98
41) 1,1,1-Trichloroethane	5.66	97	61902	10.30	PPB		97
43) Carbon Tetrachloride	5.82	117	58110	10.47	PPB		97
44) 1,1-Dichloropropene	5.88	75	54983	11.03	PPB		97
47) Benzene	6.14	78	162138	10.41	PPB		100
48) 1,2-Dichloroethane	6.28	62	39384	10.14	PPB		97
50) Trichloroethene	6.96	95	45465	10.38	PPB		92
52) 1,2-Dichloropropane	7.29	63	36615	10.42	PPB		98
53) Dibromomethane	7.43	93	22566	9.76	PPB		96
56) Bromodichloromethane	7.62	83	53038	9.97	PPB		94
59) cis-1,3-Dichloropropene	8.15	75	63835	9.93	PPB		97
60) 4-Methyl-2-pentanone (MIBK	8.34	58	45103	52.07	PPB		97
62) Toluene	8.45	92	114323	10.12	PPB		97
65) trans-1,3-Dichloropropene	8.82	75	54673	8.94	PPB		97
67) 1,1,2-Trichloroethane	9.00	83	28908	9.66	PPB		94
68) Tetrachloroethene	9.02	164	50727	10.33	PPB		98
69) 2-Hexanone	9.28	57	13521	47.84	PPB		92
70) 1,3-Dichloropropane	9.19	76	56845	9.51	PPB		97
71) Dibromochloromethane	9.40	129	45281	8.89	PPB		97
72) 1,2-Dibromoethane (EDB)	9.52	107	35768	9.30	PPB		99
73) 1-Chlorohexane	10.01	91	68406	10.82	PPB		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st LM 01/07/19
2nd 01/10/19

Data File : J:\MS46\DATA\123118\1231F006.D Vial: 4
Acq On : 31 Dec 2018 01:21 pm Operator: LM
Sample : 400X K12382 LCS Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jan 07 10:58:18 2019 Quant Results File: 111918MS46_8260.RES

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

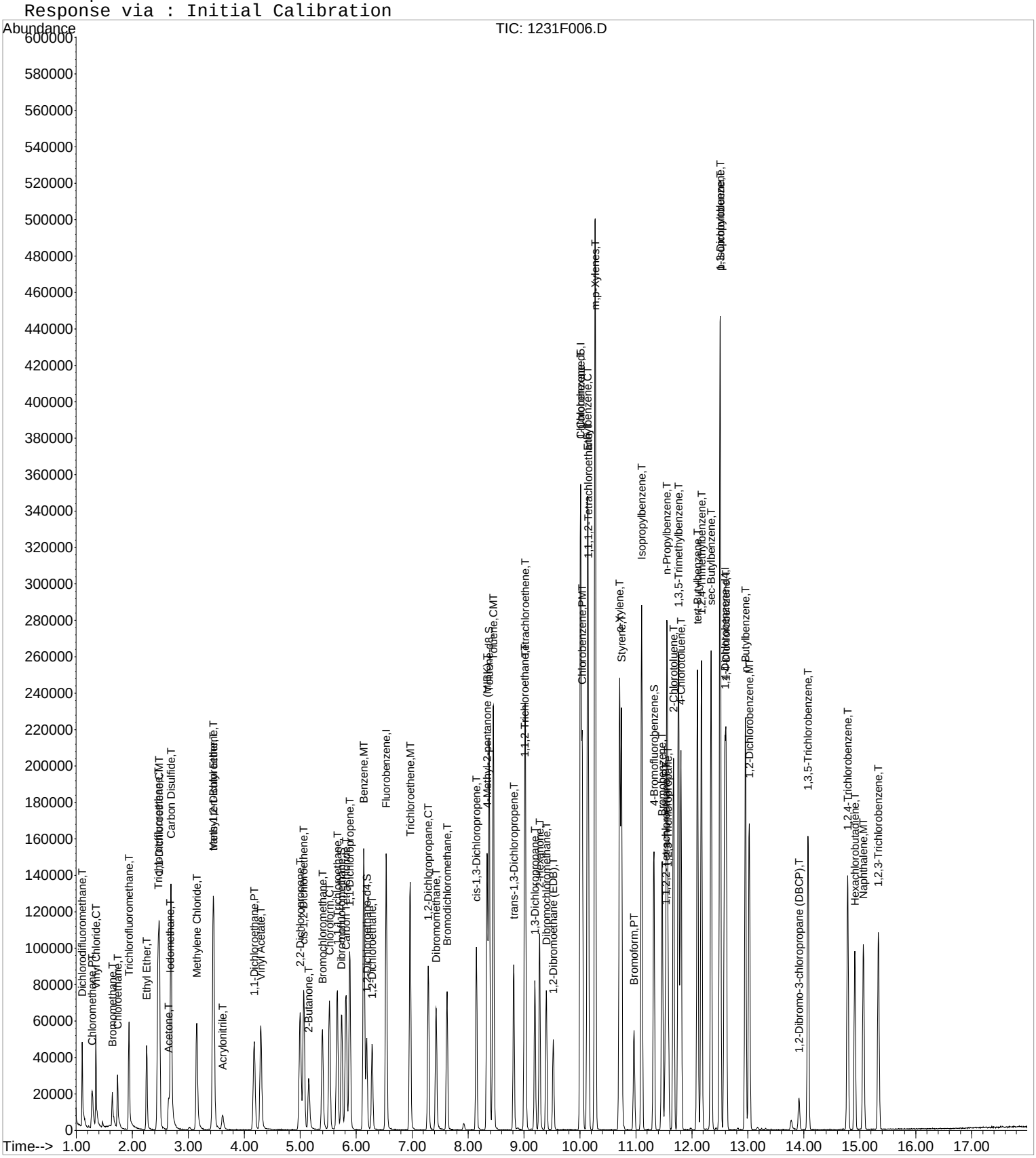
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	10.04	112	130932	9.55	PPB	98
75)	Ethylbenzene	10.14	106	71924	9.91	PPB	99
76)	1,1,1,2-Tetrachloroethane	10.15	131	47074	9.25	PPB	96
77)	m,p-Xylenes	10.27	106	176248	20.01	PPB	94
78)	o-Xylene	10.71	106	83352	9.79	PPB	96
79)	Styrene	10.74	103	72759	9.98	PPB	94
80)	Bromoform	10.96	173	29646	8.67	PPB	97
81)	Isopropylbenzene	11.10	105	216254	10.02	PPB	100
85)	1,1,2,2-Tetrachloroethane	11.53	83	36123	9.47	PPB	93
87)	Bromobenzene	11.47	156	59017	9.41	PPB	99
88)	n-Propylbenzene	11.55	91	239508	10.16	PPB	98
89)	1,2,3-Trichloropropane	11.58	110	12727	9.97	PPB	98
90)	2-Chlorotoluene	11.67	91	137200	9.90	PPB	99
91)	1,3,5-Trimethylbenzene	11.76	105	170172	9.97	PPB	98
92)	4-Chlorotoluene	11.80	91	142623	9.71	PPB	99
93)	tert-Butylbenzene	12.10	119	155954	10.07	PPB	97
94)	1,2,4-Trimethylbenzene	12.17	105	170243	10.03	PPB	99
95)	sec-Butylbenzene	12.34	105	215643	10.15	PPB	99
96)	p-Isopropyltoluene	12.51	119	189597	10.32	PPB	99
97)	1,3-Dichlorobenzene	12.50	146	105698	9.56	PPB	98
98)	1,4-Dichlorobenzene	12.61	146	106029	9.36	PPB	98
99)	n-Butylbenzene	12.96	91	144668	10.32	PPB	98
100)	1,2-Dichlorobenzene	13.03	146	94147	9.39	PPB	98
101)	1,2-Dibromo-3-chloropropan	13.91	155	6697	9.41	PPB	94
102)	1,3,5-Trichlorobenzene	14.07	180	73496	10.34	PPB	97
103)	1,2,4-Trichlorobenzene	14.78	180	62295	9.37	PPB	96
104)	Hexachlorobutadiene	14.91	225	29361	9.66	PPB	98
105)	Naphthalene	15.06	128	112609	9.35	PPB	99
106)	1,2,3-Trichlorobenzene	15.33	180	51524	9.31	PPB	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\123118\1231F006.D Vial: 4
Acq On : 31 Dec 2018 01:21 pm Operator: LM
Sample : 400X K12382 LCS Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jan 7 11:05 2019 Quant Results File: 111918MS46_8260.RES

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration



1st LM 01/07/19
2nd 01/10/19

Exception Report

Data File: J:\MS46\DATA\123118\1231F002.D
Lab ID: KWG1806757-1
RunType: BFB
Matrix: WATER

Date Acquired: 12/31/2018 11:37
Date Quantitated:
Batch ID: KWG1806757
Analysis Method: BFB
ListJoinID: LJ774

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st LM 01/07/19
2nd 01/10/19

Quantitation Report

Data File:	J:\MS46\DATA\123118\1231F002.D			**Instrument:**	GCMS46
Acqu Date:	12/31/2018 11:37	**Quant Date:**		**Vial:**	1
Run Type:	BFB	**ListJoinID:**	LJ774	**Dilution:**	1.0
Lab ID:	KWG1806757-1			**Soln Conc. Units:**	

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260B	**Collect Date:**		**Receive Date:**	12/31/2018

Analysis Lot:	KWG1806757	**Prep Lot:**		**Report Group:**	
Analysis Method:	BFB	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS46\METHODS\111918MS46_8	**Calibration ID:**	CAL15902
Title:	GC/MS Tuning Evaluation	**Report List ID:**	LJ774
Tune Ref:		**Method ID:**	MJ159
MB Ref:		**Quant based on Report List**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	16.5	3568	Pass
75	95	30	60	46.5	10021	Pass
95	95	100	100	100.0	21568	Pass
96	95	5	9	5.7	1238	Pass
173	174	0	2	0.7	124	Pass
174	95	50	120	79.1	17065	Pass
175	174	5	9	7.4	1265	Pass
176	174	95	101	98.6	16824	Pass
177	176	5	9	6.2	1049	Pass

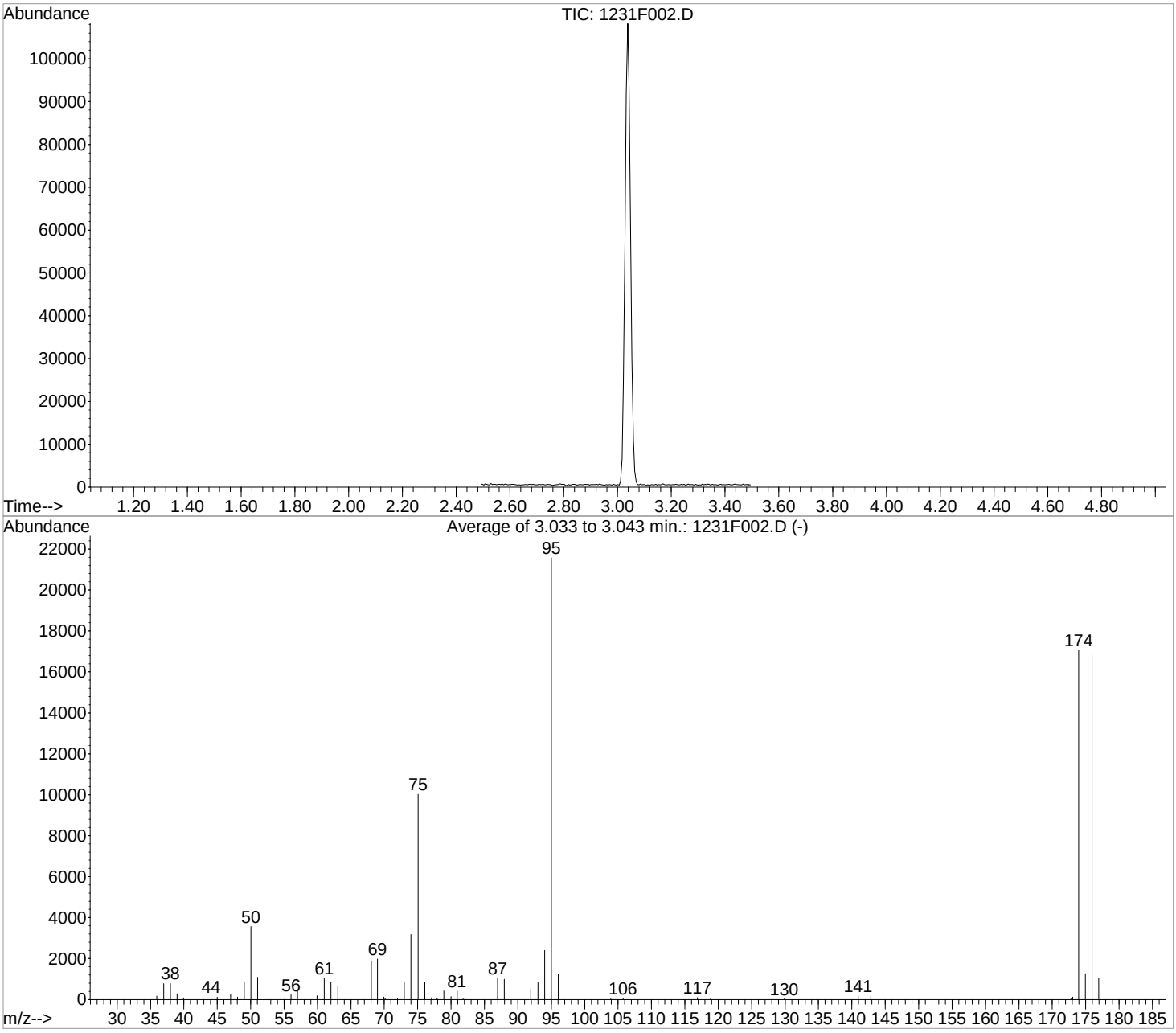
U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st LM 01/07/19
2nd 01/10/19

Data File : J:\MS46\DATA\123118\1231F002.D Vial: 1
Acq On : 31 Dec 2018 11:37 am Operator: LM
Sample : BFB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B



AutoFind: Scans 104, 105, 106; Background Corrected with Scan 97

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.5	3568	PASS
75	95	30	60	46.5	10021	PASS
95	95	100	100	100.0	21568	PASS
96	95	5	9	5.7	1238	PASS
173	174	0.00	2	0.7	124	PASS
174	95	50	120	79.1	17065	PASS
175	174	5	9	7.4	1265	PASS
176	174	95	101	98.6	16824	PASS
177	176	5	9	6.2	1049	PASS

1st 01/07/19
2nd 01/10/19

Average of 3.033 to 3.043 min.: 1231F002.D
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.95	173	51.05	1088	70.15	44	81.80	34
37.00	770	55.10	75	72.00	37	82.10	35
38.00	781	56.05	233	73.00	864	86.95	1044
39.00	284	57.00	490	74.00	3178	87.95	984
39.95	77	59.95	181	75.05	10021	91.95	510
44.05	130	61.00	1035	76.05	840	93.00	820
45.00	119	62.00	842	77.05	87	94.00	2390
47.00	266	63.05	665	77.90	65	95.00	21568
48.05	118	68.05	1887	78.90	416	96.05	1238
49.05	838	69.00	1976	80.00	144	103.90	33
50.05	3568	69.95	114	80.90	411	105.75	45

Average of 3.033 to 3.043 min.: 1231F002.D
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
116.90	96						
118.85	45						
129.90	36						
140.95	174						
142.85	172						
172.80	35						
173.05	124						
173.95	17065						
174.95	1265						
175.95	16824						
176.95	1049						

1st LM 01/07/19
2nd 01/10/19

Exception Report

Data File: J:\MS46\DATA\123118\1231F003.D
Lab ID: KWG1806757-2
RunType: CCV
Matrix: WATER

Date Acquired: 12/31/2018 11:55
Date Quantitated: 12/31/2018 12:14
Batch ID: KWG1806757
Analysis Method: 8260C
MethodJoinID: MJ119

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	2-Propanol	0.0037	0.01	NA	NT
	Methyl Acetate	0.0935	0.100	NA	
	Acetonitrile	0.0056	0.01	NA	
	tert-Butyl Alcohol	0.0083	0.01	NA	
	Isobutyl Alcohol	0.0032	0.01	NA	
	1,4-Dioxane	0.0009	0.01	NA	
Second Source ICAL Verification	Carbon Disulfide	-34.8	NA	30	

Primary Review: _____

Secondary Review: _____

1st LM 01/07/19
2nd 01/10/19

Quantitation Report

Data File:	J:\MS46\DATA\123118\1231F003.D			**Instrument:**	MS46
Acqu Date:	12/31/2018 11:55	**Quant Date:**	12/31/2018 12:14	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ119	**Dilution:**	1.0
Lab ID:	KWG1806757-2			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260B	**Collect Date:**		**Receive Date:**	12/31/2018

Analysis Lot:	KWG1806757	**Prep Lot:**		**Report Group:**	
Analysis Method:	8260C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS46\METHODS\111918MS46_8	**Calibration ID:**	CAL15902
Title:			
Tune Ref:	J:\MS46\DATA\123118\1231F002.D	**Method ID:**	MJ119
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.53	0.00	96	159067	10.00	OK
2	Chlorobenzene-d5	10.01	0.00	82	58908	10.00	OK
3	1,4-Dichlorobenzene-d4	12.58	0.00	152	68009	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.74			113	39952	11.16		73-122	NA	
1	1,2-Dichloroethane-d4	6.18			65	31647	10.25		59-127	NA	
1	Toluene-d8	8.37			98	150233	11.86		65-144	NA	
2	4-Bromofluorobenzene	11.32			95	57373	11.49		68-117	NA	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.10			85	36182	10.99			
1	Chloromethane	1.28			50	30286	10.75			
1	Vinyl Chloride	1.35			62	39088	11.51			
1	Bromomethane	1.64			96	29293	9.24			
1	Chloroethane	1.74			64	23963	11.22			
1	Dichlorofluoromethane (CFC 21)	1.95			67	55348	10.18			
1	Trichlorofluoromethane	1.94			101	59034	11.33			
1	Ethyl Ether	2.25			59	18887	10.12			
1	Acrolein	2.46			56	58146	179.73			
1	Trichlorotrifluoroethane	2.46			151	34801	9.70			
1	1,1-Dichloroethene	2.48			96	37301	11.38			
1	Acetone	2.64			43	73101	179.00			
1	Iodomethane	2.66			142	125000	26.30			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS46\DATA\123118\1231F003.D			**Instrument:**	MS46
Acqu Date:	12/31/2018 11:55	**Quant Date:**	12/31/2018 12:14	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ119	**Dilution:**	1.0
Lab ID:	KWG1806757-2			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Carbon Disulfide	2.69			76	96683	9.53			
1	2-Propanol	2.83			45	33208	562.16			
1	3-Chloro-1-propene	2.95			76	19652	10.70			
1	Methyl Acetate	3.01			43	15485	10.41			
1	Acetonitrile	3.07			40	36658	413.61			
1	Methylene Chloride	3.15			84	39788	10.50			
1	tert-Butyl Alcohol	3.36			59	8774	66.66			
1	Acrylonitrile	3.61			53	28953	40.41			
1	Methyl tert-Butyl Ether	3.44			73	148826	17.28			
1	trans-1,2-Dichloroethene	3.45			96	41836	10.41			
1	n-Hexane	3.75			57	50333	10.96			
1	Diisopropyl Ether	4.21			45	78822	9.49			
1	1,1-Dichloroethane	4.17			63	60223	10.77			
1	Vinyl Acetate	4.30			86	11467	14.63			
1	Chloroprene	4.25			53	184338	40.57			
1	tert-Butyl Ethyl Ether	4.77			59	81559	8.96			
1	2,2-Dichloropropane	4.99			77	59072	11.00			
1	cis-1,2-Dichloroethene	5.06			96	48094	10.54			
1	2-Butanone (MEK)	5.14			72	45686	178.48			
1	Ethyl Acetate	5.20			61	6629	20.66			
1	Propionitrile	5.33			54	10236	40.62			
1	Methacrylonitrile	5.48			67	42764	39.86			
1	Bromochloromethane	5.39			128	23011	10.98			
1	Tetrahydrofuran	5.41			71	2740	8.98			
1	Chloroform	5.52			83	69386	10.33			
1	Cyclohexane	5.61			56	60502	10.76			
1	1,1,1-Trichloroethane (TCA)	5.66			97	64669	10.73			
1	Carbon Tetrachloride	5.82			117	60087	10.79			
1	1,1-Dichloropropene	5.88			75	55609	11.12			
1	Isobutyl Alcohol	6.24			43	20813	407.53			
1	Benzene	6.14			78	167101	10.69			
1	1,2-Dichloroethane (EDC)	6.28			62	41410	10.63			
1	tert-Amyl Methyl Ether	6.29			55	17324	9.17			
1	Trichloroethene (TCE)	6.96			95	45778	10.42			
1	Methylcyclohexane	7.08			83	75328	11.19			
1	1,2-Dichloropropane	7.28			63	38048	10.79			
1	Dibromomethane	7.43			93	23083	9.95			
1	Methyl Methacrylate	7.45			69	18361	9.48			
1	1,4-Dioxane	7.46			88	5734	401.38			
1	Bromodichloromethane	7.62			83	53904	10.10			
1	2-Nitropropane	7.99			41	23075	47.51			
1	2-Chloroethyl Vinyl Ether	8.02			63	18162	9.61			

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N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS46\DATA\123118\1231F003.D			**Instrument:**	MS46
Acqu Date:	12/31/2018 11:55	**Quant Date:**	12/31/2018 12:14	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ119	**Dilution:**	1.0
Lab ID:	KWG1806757-2			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	cis-1,3-Dichloropropene	8.15			75	65204	10.11			
1	4-Methyl-2-pentanone (MIBK)	8.34			58	156713	180.34			
1	Toluene	8.45			92	113995	10.06			
2	n-Octane	8.53			85	28396	11.47			
2	trans-1,3-Dichloropropene	8.81			75	55749	9.57			
2	Ethyl Methacrylate	8.87			69	37590	9.88			
2	1,1,2-Trichloroethane	9.01			83	28125	9.85			
2	Tetrachloroethene (PCE)	9.02			164	49219	10.51			
2	2-Hexanone	9.28			57	48386	179.58			
2	1,3-Dichloropropane	9.19			76	57299	10.05			
2	Dibromochloromethane	9.40			129	46053	9.48			
2	1,2-Dibromoethane (EDB)	9.52			107	35948	9.80			
2	1-Chlorohexane	10.01			91	64123	10.64			
2	Chlorobenzene	10.04			112	132852	10.17			
2	Ethylbenzene	10.14			106	72392	10.46			
2	1,1,1,2-Tetrachloroethane	10.15			131	48488	10.00			
2	m,p-Xylenes	10.27			106	178797	21.30			
2	o-Xylene	10.71			106	84527	10.41			
2	Styrene	10.74			103	76194	10.96			
2	Bromoform	10.96			173	31844	9.77			
2	Isopropylbenzene	11.10			105	227058	11.03			
2	cis-1,4-Dichloro-2-butene	11.27			89	18502	32.76			
3	1,1,2,2-Tetrachloroethane	11.53			83	36163	9.43			
3	trans-1,4-Dichloro-2-butene	11.60			53	7666	8.80			
3	Bromobenzene	11.47			156	63170	10.01			
3	n-Propylbenzene	11.55			91	252483	10.66			
3	1,2,3-Trichloropropane	11.58			110	12755	9.94			
3	2-Chlorotoluene	11.67			91	144085	10.34			
3	1,3,5-Trimethylbenzene	11.76			105	179457	10.45			
3	4-Chlorotoluene	11.80			91	149481	10.13			
3	tert-Butylbenzene	12.10			119	164449	10.56			
3	1,2,4-Trimethylbenzene	12.17			105	178691	10.47			
3	sec-Butylbenzene	12.34			105	226593	10.61			
3	4-Isopropyltoluene	12.51			119	197323	10.69			
3	1,3-Dichlorobenzene	12.50			146	113226	10.18			
3	1,4-Dichlorobenzene	12.61			146	113025	9.92			
3	n-Butylbenzene	12.96			91	153620	10.89			
3	1,2-Dichlorobenzene	13.03			146	100998	10.01			
3	1,2-Dibromo-3-chloropropane	13.92			155	6216	8.68			
3	1,3,5-Trichlorobenzene	14.08			180	74099	10.37			
3	1,2,4-Trichlorobenzene	14.78			180	65188	9.75			
3	Hexachlorobutadiene	14.91			225	31663	10.36			

U: Undetected at or above MDL
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B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS46\DATA\123118\1231F003.D			**Instrument:**	MS46
Acqu Date:	12/31/2018 11:55	**Quant Date:**	12/31/2018 12:14	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ119	**Dilution:**	1.0
Lab ID:	KWG1806757-2			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Naphthalene	15.06			128	106545	8.79			
3	1,2,3-Trichlorobenzene	15.33			180	51305	9.22			

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N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st LM 01/07/19
2nd 01/10/19

Quantitation Report

Data File:	J:\MS46\DATA\123118\1231F003.D			**Instrument:**	MS46
Acqu Date:	12/31/2018 11:55	**Quant Date:**	12/31/2018 12:14	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ181	**Dilution:**	1.0
Lab ID:	KWG1806757-2			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260B	**Collect Date:**		**Receive Date:**	12/31/2018

Analysis Lot:	KWG1806757	**Prep Lot:**		**Report Group:**	
Analysis Method:	8260C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS46\METHODS\111918MS46_8	**Calibration ID:**	CAL15902
Title:			
Tune Ref:	J:\MS46\DATA\123118\1231F002.D	**Method ID:**	MJ181
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.53	0.00	96	159067	10.00	OK
2	Chlorobenzene-d5	10.01	0.00	82	58908	10.00	OK
3	1,4-Dichlorobenzene-d4	12.58	0.00	152	68009	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.74			113	39952	11.16		73-122	NA	
1	1,2-Dichloroethane-d4	6.18			65	31647	10.25		59-127	NA	
1	Toluene-d8	8.37			98	150233	11.86		65-144	NA	
2	4-Bromofluorobenzene	11.32			95	57373	11.49		68-117	NA	

Target Compounds

Final Conc. Units: mg/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.10			85	36182	10.99			
1	Chloromethane	1.28			50	30286	10.75			
1	Vinyl Chloride	1.35			62	39088	11.51			
1	Bromomethane	1.64			96	29293	9.24			
1	Chloroethane	1.74			64	23963	11.22			
1	Dichlorofluoromethane (CFC 21)	1.95			67	55348	10.18			
1	Trichlorofluoromethane	1.94			101	59034	11.33			
1	Ethyl Ether	2.25			59	18887	10.12			
1	Acrolein	2.46			56	58146	179.73			
1	Trichlorotrifluoroethane	2.46			151	34801	9.70			
1	1,1-Dichloroethene	2.48			96	37301	11.38			
1	Acetone	2.64			43	73101	179.00			
1	Iodomethane	2.66			142	125000	26.30			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS46\DATA\123118\1231F003.D			**Instrument:**	MS46
Acqu Date:	12/31/2018 11:55	**Quant Date:**	12/31/2018 12:14	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ181	**Dilution:**	1.0
Lab ID:	KWG1806757-2			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: mg/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Carbon Disulfide	2.69			76	96683	9.53			
1	3-Chloro-1-propene	2.95			76	19652	10.70			
1	Acetonitrile	3.07			40	36658	413.61			
1	Methylene Chloride	3.15			84	39788	10.50			
1	Acrylonitrile	3.61			53	28953	40.41			
1	Methyl tert-Butyl Ether	3.44			73	148826	17.28			
1	trans-1,2-Dichloroethene	3.45			96	41836	10.41			
1	n-Hexane	3.75			57	50333	10.96			
1	1,1-Dichloroethane	4.17			63	60223	10.77			
1	Vinyl Acetate	4.30			86	11467	14.63			
1	Chloroprene	4.25			53	184338	40.57			
1	2,2-Dichloropropane	4.99			77	59072	11.00			
1	cis-1,2-Dichloroethene	5.06			96	48094	10.54			
1	2-Butanone (MEK)	5.14			72	45686	178.48			
1	Ethyl Acetate	5.20			61	6629	20.66			
1	Propionitrile	5.33			54	10236	40.62			
1	Methacrylonitrile	5.48			67	42764	39.86			
1	Bromochloromethane	5.39			128	23011	10.98			
1	Tetrahydrofuran	5.41			71	2740	8.98			
1	Chloroform	5.52			83	69386	10.33			
1	1,1,1-Trichloroethane (TCA)	5.66			97	64669	10.73			
1	Carbon Tetrachloride	5.82			117	60087	10.79			
1	1,1-Dichloropropene	5.88			75	55609	11.12			
1	Isobutyl Alcohol	6.24			43	20813	407.53			
1	Benzene	6.14			78	167101	10.69			
1	1,2-Dichloroethane (EDC)	6.28			62	41410	10.63			
1	Trichloroethene (TCE)	6.96			95	45778	10.42			
1	1,2-Dichloropropane	7.28			63	38048	10.79			
1	Dibromomethane	7.43			93	23083	9.95			
1	Methyl Methacrylate	7.45			69	18361	9.48			
1	1,4-Dioxane	7.46			88	5734	401.38			
1	Bromodichloromethane	7.62			83	53904	10.10			
1	2-Nitropropane	7.99			41	23075	47.51			
1	2-Chloroethyl Vinyl Ether	8.02			63	18162	9.61			
1	cis-1,3-Dichloropropene	8.15			75	65204	10.11			
1	4-Methyl-2-pentanone (MIBK)	8.34			58	156713	180.34			
1	Toluene	8.45			92	113995	10.06			
2	trans-1,3-Dichloropropene	8.81			75	55749	9.57			
2	Ethyl Methacrylate	8.87			69	37590	9.88			
2	1,1,2-Trichloroethane	9.01			83	28125	9.85			
2	Tetrachloroethene (PCE)	9.02			164	49219	10.51			
2	2-Hexanone	9.28			57	48386	179.58			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS46\DATA\123118\1231F003.D			**Instrument:**	MS46
Acqu Date:	12/31/2018 11:55	**Quant Date:**	12/31/2018 12:14	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ181	**Dilution:**	1.0
Lab ID:	KWG1806757-2			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: mg/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	1,3-Dichloropropane	9.19			76	57299	10.05			
2	Dibromochloromethane	9.40			129	46053	9.48			
2	1,2-Dibromoethane (EDB)	9.52			107	35948	9.80			
2	1-Chlorohexane	10.01			91	64123	10.64			
2	Chlorobenzene	10.04			112	132852	10.17			
2	Ethylbenzene	10.14			106	72392	10.46			
2	1,1,1,2-Tetrachloroethane	10.15			131	48488	10.00			
2	m,p-Xylenes	10.27			106	178797	21.30			
2	o-Xylene	10.71			106	84527	10.41			
2	Styrene	10.74			103	76194	10.96			
2	Bromoform	10.96			173	31844	9.77			
2	Isopropylbenzene	11.10			105	227058	11.03			
2	cis-1,4-Dichloro-2-butene	11.27			89	18502	32.76			
3	1,1,2,2-Tetrachloroethane	11.53			83	36163	9.43			
3	trans-1,4-Dichloro-2-butene	11.60			53	7666	8.80			
3	Bromobenzene	11.47			156	63170	10.01			
3	n-Propylbenzene	11.55			91	252483	10.66			
3	1,2,3-Trichloropropane	11.58			110	12755	9.94			
3	2-Chlorotoluene	11.67			91	144085	10.34			
3	1,3,5-Trimethylbenzene	11.76			105	179457	10.45			
3	4-Chlorotoluene	11.80			91	149481	10.13			
3	tert-Butylbenzene	12.10			119	164449	10.56			
3	1,2,4-Trimethylbenzene	12.17			105	178691	10.47			
3	sec-Butylbenzene	12.34			105	226593	10.61			
3	4-Isopropyltoluene	12.51			119	197323	10.69			
3	1,3-Dichlorobenzene	12.50			146	113226	10.18			
3	1,4-Dichlorobenzene	12.61			146	113025	9.92			
3	n-Butylbenzene	12.96			91	153620	10.89			
3	1,2-Dichlorobenzene	13.03			146	100998	10.01			
3	1,2-Dibromo-3-chloropropane	13.92			155	6216	8.68			
3	1,3,5-Trichlorobenzene	14.08			180	74099	10.37			
3	1,2,4-Trichlorobenzene	14.78			180	65188	9.75			
3	Hexachlorobutadiene	14.91			225	31663	10.36			
3	Naphthalene	15.06			128	106545	8.79			
3	1,2,3-Trichlorobenzene	15.33			180	51305	9.22			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st LM 01/07/19
2nd 01/10/19

Data File : J:\MS46\DATA\123118\1231F003.D Vial: 2
Acq On : 31 Dec 2018 11:55 am Operator: LM
Sample : CCV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 31 12:14:20 2018 Quant Results File: 111918MS46_8260.RES

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.53	96	159067	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	58908	10.00	PPB	0.01
84) 1,4-Dichlorobenzene-d4	12.58	152	68009	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	39952	11.16	PPB	0.00
Spiked Amount 10.000			Recovery =	111.60%		
46) 1,2-Dichloroethane-d4	6.18	65	31647	10.25	PPB	0.00
Spiked Amount 10.000			Recovery =	102.50%		
61) Toluene-d8	8.37	98	150233	11.86	PPB	0.00
Spiked Amount 10.000			Recovery =	118.60%		
83) 4-Bromofluorobenzene	11.32	95	57373	11.49	PPB	0.00
Spiked Amount 10.000			Recovery =	114.90%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.10	85	36182	10.99	PPB	96
3) Chloromethane	1.28	50	30286	10.75	PPB	97
4) Vinyl Chloride	1.35	62	39088	11.51	PPB	98
5) Bromomethane	1.64	96	29293	9.24	PPB	93
6) Chloroethane	1.74	64	23963	11.22	PPB	97
7) Dichlorofluoromethane	1.95	67	55348	10.18	PPB	98
8) Trichlorofluoromethane	1.94	101	59034	11.33	PPB	96
9) Ethyl Ether	2.25	59	18887	10.12	PPB	93
10) Acrolein	2.46	56	58146	179.73	PPB	98
11) Trichlorotrifluoroethane	2.46	151	34801	9.70	PPB	96
12) 1,1-Dichloroethene	2.48	96	37301	11.38	PPB	95
13) Acetone	2.64	43	73101	179.00	PPB	94
14) Iodomethane	2.66	142	125000	26.30	PPB	99
15) Carbon Disulfide	2.69	76	96683	9.53	PPB	99
16) 2-Propanol (Isopropyl Alco	2.83	45	33208	562.16	PPB	98
17) 3-Chloro-1-propene	2.95	76	19652	10.70	PPB	89
18) Methyl Acetate	3.01	43	15485	10.41	PPB	93
19) Acetonitrile	3.07	40	36658	413.61	PPB	97
20) Methylene Chloride	3.15	84	39788	10.50	PPB	97
21) tert-Butyl Alcohol	3.36	59	8774	66.66	PPB	100
22) Acrylonitrile	3.61	53	28953	40.41	PPB	96
23) Methyl tert-Butyl Ether	3.44	73	148826	17.28	PPB	100
24) trans-1,2-Dichloroethene	3.45	96	41836	10.41	PPB	97
25) Hexane	3.75	57	50333	10.96	PPB	98
26) Diisopropyl Ether	4.21	45	78822	9.49	PPB	98
27) 1,1-Dichloroethane	4.17	63	60223	10.77	PPB	97
28) Vinyl Acetate	4.30	86	11467	14.63	PPB	100
29) Chloroprene	4.25	53	184338	40.57	PPB	96
30) tert-Butyl Ethyl Ether	4.77	59	81559	8.96	PPB	100
31) 2,2-Dichloropropane	4.99	77	59072	11.00	PPB	97
32) cis-1,2-Dichloroethene	5.06	96	48094	10.54	PPB	94
33) 2-Butanone	5.14	72	45686	178.48	PPB	99
34) Ethyl Acetate	5.20	61	6629	20.66	PPB	93
35) Propionitrile	5.33	54	10236	40.62	PPB	92
36) Methacrylonitrile	5.48	67	42764	39.86	PPB	96
37) Bromochloromethane	5.39	128	23011	10.98	PPB	94
38) Tetrahydrofuran	5.41	71	2740	8.98	PPB	89
39) Chloroform	5.52	83	69386	10.33	PPB	97
40) Cyclohexane	5.61	56	60502	10.76	PPB	94
41) 1,1,1-Trichloroethane	5.66	97	64669	10.73	PPB	100
43) Carbon Tetrachloride	5.82	117	60087	10.79	PPB	98
44) 1,1-Dichloropropene	5.88	75	55609	11.12	PPB	99
45) Isobutyl Alcohol	6.24	43	20813	407.53	PPB	92

(#) = qualifier out of range (m) = manual integration

1st LM 01/07/19
2nd 01/10/19

Data File : J:\MS46\DATA\123118\1231F003.D Vial: 2
Acq On : 31 Dec 2018 11:55 am Operator: LM
Sample : CCV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 31 12:14:20 2018 Quant Results File: 111918MS46_8260.RES

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

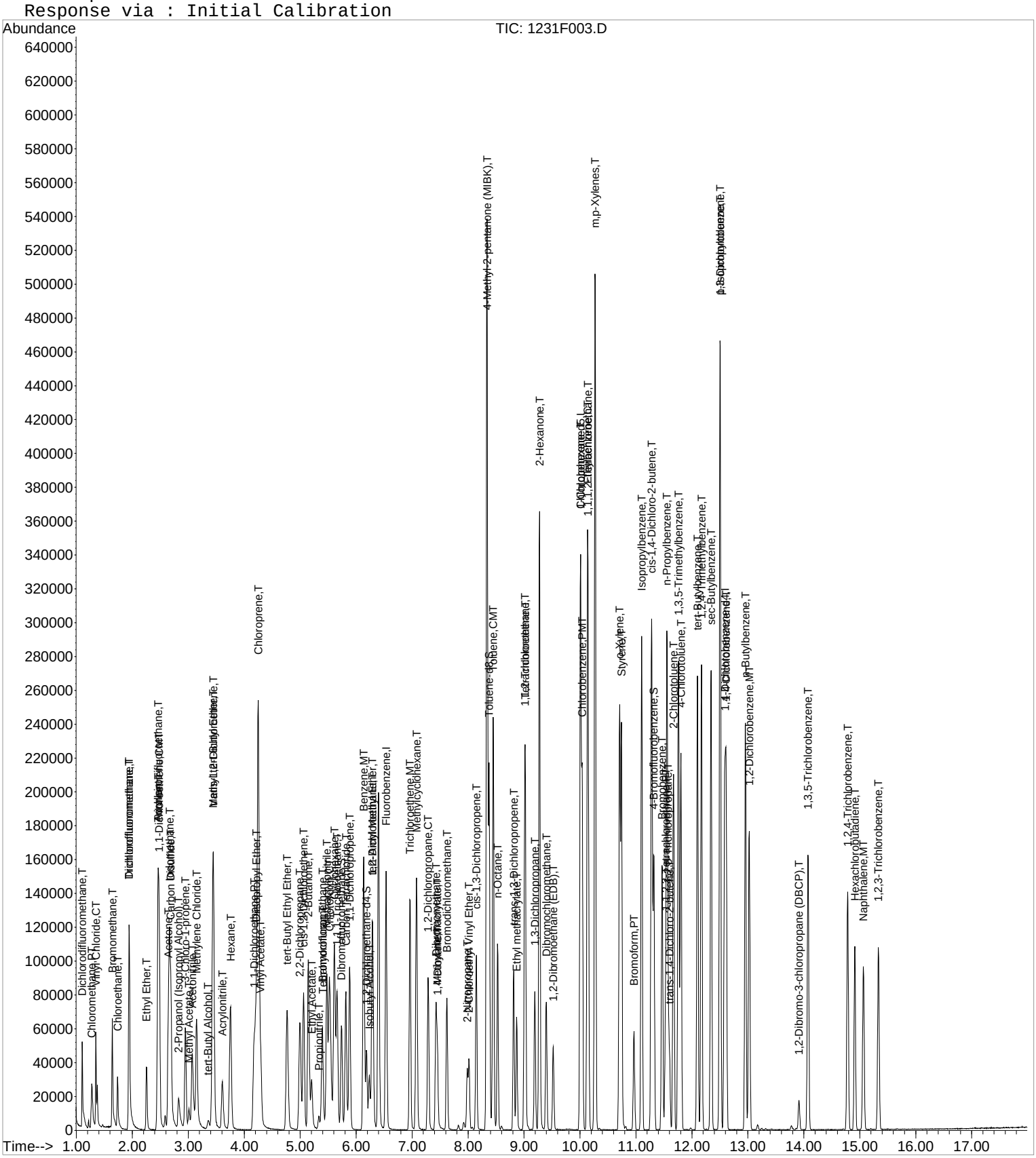
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
47)	Benzene	6.14	78	167101	10.69	PPB	100
48)	1,2-Dichloroethane	6.28	62	41410	10.63	PPB	99
49)	tert-Amyl Methyl Ether	6.29	55	17324	9.17	PPB	96
50)	Trichloroethene	6.96	95	45778	10.42	PPB	94
51)	Methylcyclohexane	7.08	83	75328	11.19	PPB	99
52)	1,2-Dichloropropane	7.28	63	38048	10.79	PPB	95
53)	Dibromomethane	7.43	93	23083	9.95	PPB	92
54)	Methyl methacrylate	7.45	69	18361	9.48	PPB	96
55)	1,4-Dioxane	7.46	88	5734	401.38	PPB	90
56)	Bromodichloromethane	7.62	83	53904	10.10	PPB	94
57)	2-Nitropropane	7.99	41	23075	47.51	PPB	97
58)	2-Chloroethyl Vinyl Ether	8.02	63	18162	9.61	PPB	99
59)	cis-1,3-Dichloropropene	8.15	75	65204	10.11	PPB	96
60)	4-Methyl-2-pentanone (MIBK	8.34	58	156713	180.34	PPB	99
62)	Toluene	8.45	92	113995	10.06	PPB	98
64)	n-Octane	8.53	85	28396	11.47	PPB	96
65)	trans-1,3-Dichloropropene	8.81	75	55749	9.57	PPB	96
66)	Ethyl methacrylate	8.87	69	37590	9.88	PPB	98
67)	1,1,2-Trichloroethane	9.01	83	28125	9.85	PPB	95
68)	Tetrachloroethene	9.02	164	49219	10.51	PPB	98
69)	2-Hexanone	9.28	57	48386	179.58	PPB	93
70)	1,3-Dichloropropane	9.19	76	57299	10.05	PPB	98
71)	Dibromochloromethane	9.40	129	46053	9.48	PPB	98
72)	1,2-Dibromoethane (EDB)	9.52	107	35948	9.80	PPB	96
73)	1-Chlorohexane	10.01	91	64123	10.64	PPB	97
74)	Chlorobenzene	10.04	112	132852	10.17	PPB	99
75)	Ethylbenzene	10.14	106	72392	10.46	PPB	97
76)	1,1,1,2-Tetrachloroethane	10.15	131	48488	10.00	PPB	97
77)	m,p-Xylenes	10.27	106	178797	21.30	PPB	95
78)	o-Xylene	10.71	106	84527	10.41	PPB	97
79)	Styrene	10.74	103	76194	10.96	PPB	97
80)	Bromoform	10.96	173	31844	9.77	PPB	98
81)	Isopropylbenzene	11.10	105	227058	11.03	PPB	98
82)	cis-1,4-Dichloro-2-butene	11.27	89	18502	32.76	PPB	99
85)	1,1,2,2-Tetrachloroethane	11.53	83	36163	9.43	PPB	96
86)	trans-1,4-Dichloro-2-buten	11.60	53	7666	8.80	PPB	88
87)	Bromobenzene	11.47	156	63170	10.01	PPB	97
88)	n-Propylbenzene	11.55	91	252483	10.66	PPB	99
89)	1,2,3-Trichloropropane	11.58	110	12755	9.94	PPB	93
90)	2-Chlorotoluene	11.67	91	144085	10.34	PPB	99
91)	1,3,5-Trimethylbenzene	11.76	105	179457	10.45	PPB	98
92)	4-Chlorotoluene	11.80	91	149481	10.13	PPB	99
93)	tert-Butylbenzene	12.10	119	164449	10.56	PPB	99
94)	1,2,4-Trimethylbenzene	12.17	105	178691	10.47	PPB	98
95)	sec-Butylbenzene	12.34	105	226593	10.61	PPB	98
96)	p-Isopropyltoluene	12.51	119	197323	10.69	PPB	98
97)	1,3-Dichlorobenzene	12.50	146	113226	10.18	PPB	98
98)	1,4-Dichlorobenzene	12.61	146	113025	9.92	PPB	97
99)	n-Butylbenzene	12.96	91	153620	10.89	PPB	100
100)	1,2-Dichlorobenzene	13.03	146	100998	10.01	PPB	98
101)	1,2-Dibromo-3-chloropropan	13.92	155	6216	8.68	PPB	93
102)	1,3,5-Trichlorobenzene	14.08	180	74099	10.37	PPB	98
103)	1,2,4-Trichlorobenzene	14.78	180	65188	9.75	PPB	99
104)	Hexachlorobutadiene	14.91	225	31663	10.36	PPB	95
105)	Naphthalene	15.06	128	106545	8.79	PPB	100
106)	1,2,3-Trichlorobenzene	15.33	180	51305	9.22	PPB	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\123118\1231F003.D Vial: 2
Acq On : 31 Dec 2018 11:55 am Operator: LM
Sample : CCV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 31 12:14 2018 Quant Results File: 111918MS46_8260.RES

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration



11/19/18 ICAL

Date: 11-19-18

By: LM

IS/SS Std. ID: 8VOA-81D XP 12-15-18

CCV Std ID:

MS/DMS/LCS/ICV Std ID:

BFB Std. ID: 8VOA-76A XP 12-05-18

ALS Environmental
Injection Log
MS46 - Agilent 5977A

Tune File: BFB

New Tune: NO

ICAL Date: new cal - 15902

Second RV: 11/19/18

LIMS ID: VWG180622

	Sample Name	File Name	Method	Dilution	pH<2	Comments
1	BFB	1119F004	BFB	1µL DI		
2	IB	5	8260			
3	ICAL 0.1 PPB	6		see prep sheet		
4	ICAL 0.2 PPB	7				
5	ICAL 0.5 PPB	8				
6	ICAL 1.0 PPB	9				
7	ICAL 2.0 PPB	10				
8	ICAL 5.0 PPB	11				
9	ICAL 10 PPB	12				
10	ICAL 20 PPB	13				
11	ICAL 40 PPB	14				
12	ICAL 60 PPB	15				
13	ICAL 80 PPB	16		✓		
14	IB	17				
15	IB	18				
16	8260 ICV	19		see prep sheet		
17	8260 ICV	20				
18	CLP ICV ✓	21				
19	CLP ICV	22				
20						
21						
22						
23						
24						
25						
26						
27						

INTIAL CALIBRATION CURVE

Date 11-19-18 Analysis: 8260

Prepared By LM Instrument: MS 46

Matrix: Water

Stock Solution #1 90V0A-86A (XP 11-26-18) Analytes: Surrogate Init. Concentration: 100ppm

Stock Solution #2 90V0A-85D (XP 11-26-18) Analytes: Low 8260 Init. Concentration: 5/10/20/100/200ppm

Stock Solution #3 90V0A-85C (XP 11-26-18) Analytes: 8260 Init. Concentration: 50/100/200/1000/2000ppm

Stock Solution #4 90V0A-86 (XP 12-8-18) Analytes: Low Ketones Init. Concentration: 200ppm

Stock Solution #5 90V0A-75D (XP 1-3-19) Analytes: Ketones Init. Concentration: 2000ppm

Aliquot of Stock Solution #1 (µL)	Final Conc. of #1 (µg/L)	Aliquot of Stock Solution #2 (µL)	Final Conc. of #2 (µg/L)	Aliquot of Stock Solution #3 (µL)	Final Conc. of #3 (µg/L)	Aliquot of Stock Solution #4 (µL)	Final Conc. of #4 (µg/L)	Aliquot of Stock Solution #5 (µL)	Final Conc. of #5 (µg/L)	Final Volume (mL)
		1	0.1			1	4			50
		2	0.2			2	8			50
		5.0	0.5			5	20			50
2.0	4	10	1			10	40			50
3.0	6			2.0	2			2	80	50
4.0	8			5.0	5			2.5	100	50
5.0	10			10	10			5.0	200	50
6	12			20	20			10	400	50
7	14			40	40			20	800	50
8	16			60	60			40	1600	50
10	20			80	80			50	2000	50

8260 ICV: 10uL of 50/250ppm Accustd ICV (90V0A-83C XP 11-23-18) + 50uL of 100ppm Acrolein (90V0A-80B XP 11-22-18) +

5uL of 100ppm Dichlorofluoromethane (90V0A-80C XP 11-22-18) + 5uL of 200ppm n-Octane/TBF/Tetrahydrafuran (90V0A-77B XP 12-8-18)

5uL of 100ppm Oxygenates (90V0A-80D XP 11-22-18) + 7.5uL of Appendix ICV mix(90V0A-80A XP 11-22-18) + 25uL of 1000ppm 2-Propanol(90V0A-76T XP 01-08-19)

5uL of 100ppm CLP (90V0A-86E XP 11-26-18)

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F005.D Vial: 2
Acq On : 19 Nov 2018 03:52 pm Operator: LM
Sample : IB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 05 08:17:38 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Dec 04 17:01:39 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

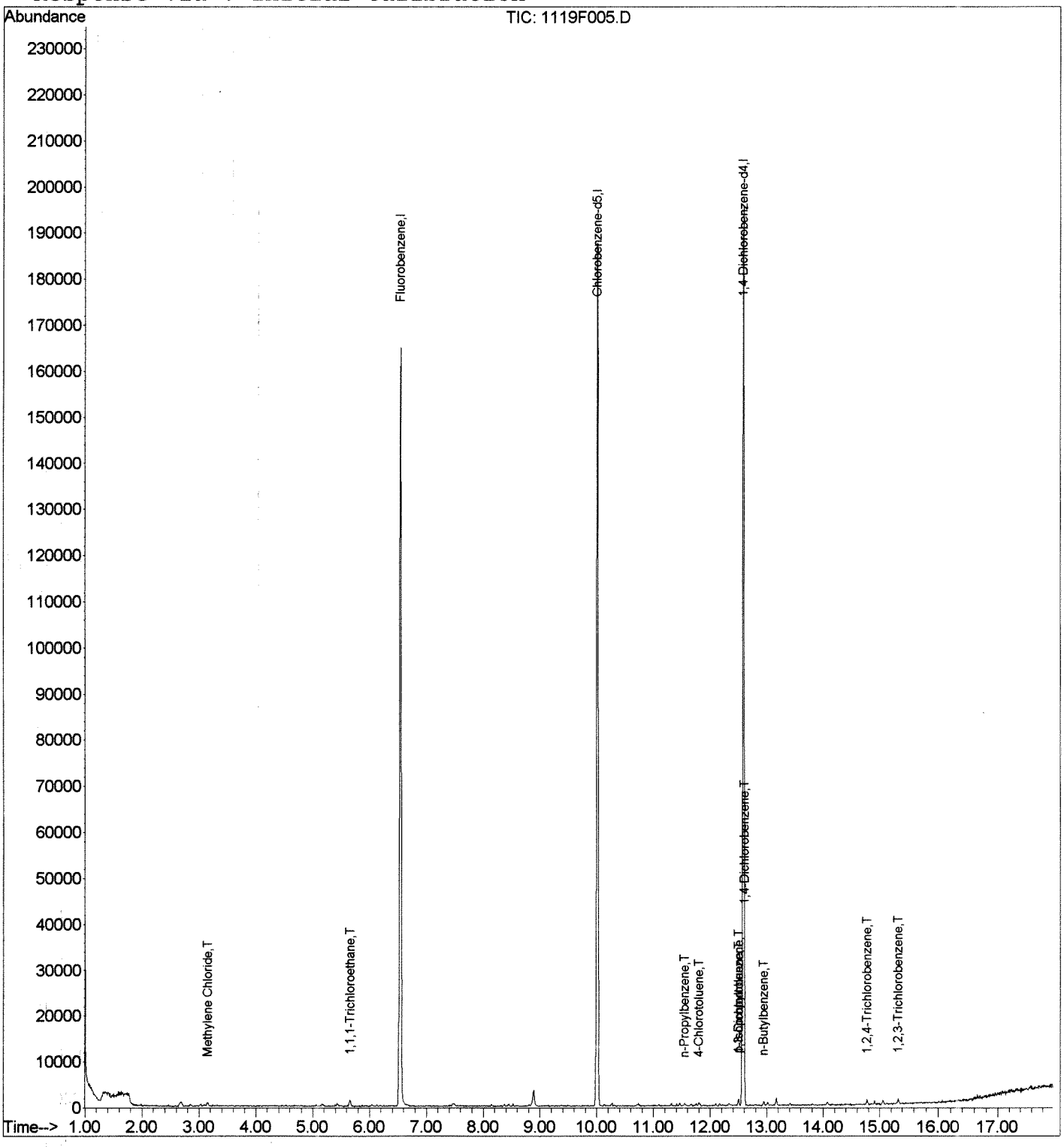
LM 12-05-18

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.53	96	172357	10.00	PPB		0.00
63) Chlorobenzene-d5	10.00	82	61690	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	68562	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	0.00	113	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
46) 1,2-Dichloroethane-d4	0.00	65	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
61) Toluene-d8	0.00	98	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
83) 4-Bromofluorobenzene	0.00	95	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
Target Compounds							Qvalue
20) Methylene Chloride	3.15	84	507	0.12	PPB		79
41) 1,1,1-Trichloroethane	5.65	97	1351	0.20	PPB		91
88) n-Propylbenzene	11.55	91	583	0.02	PPB		90
92) 4-Chlorotoluene	11.80	91	569	0.04	PPB		77
96) p-Isopropyltoluene	12.50	119	600	0.03	PPB		85
97) 1,3-Dichlorobenzene	12.50	146	672	0.06	PPB		97
98) 1,4-Dichlorobenzene	12.61	146	853	0.07	PPB		86
99) n-Butylbenzene	12.94	91	706	0.05	PPB		86
103) 1,2,4-Trichlorobenzene	14.77	180	654	0.10	PPB	#	73
106) 1,2,3-Trichlorobenzene	15.33	180	565	0.10	PPB		83

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS46\DATA\111918\1119F005.D Vial: 2
Acq On : 19 Nov 2018 03:52 pm Operator: LM
Sample : IB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 5 8:20 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Dec 04 17:01:39 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:05 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.53	96	168506	10.00	PPB		0.00
63) Chlorobenzene-d5	10.01	82	62006	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	68733	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	0.00	113	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
46) 1,2-Dichloroethane-d4	0.00	65	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
61) Toluene-d8	0.00	98	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
83) 4-Bromofluorobenzene	0.00	95	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.10	85	234m	0.07	PPB		
3) Chloromethane	1.28	50	293m	0.10	PPB		
4) Vinyl Chloride	1.35	62	287m	0.08	PPB		
5) Bromomethane	1.64	96	729	0.22	PPB		88
6) Chloroethane	1.74	64	254m	0.11	PPB		
7) Dichlorofluoromethane	1.95	67	611	0.11	PPB		86
8) Trichlorofluoromethane	1.95	101	608	0.12	PPB		84
9) Ethyl Ether	2.26	59	182m	0.09	PPB		
10) Acrolein	2.47	56	691	1.85	PPB		77
11) Trichlorotrifluoroethane	2.46	151	373m	0.11	PPB		
12) 1,1-Dichloroethene	2.49	96	312m	0.09	PPB		
13) Acetone	2.66	43	1927	4.66	PPB		91
14) Iodomethane	2.66	142	1926	0.37	PPB		95
15) Carbon Disulfide	2.70	76	1360	0.14	PPB		86
16) 2-Propanol (Isopropyl Alco	2.86	45	72m	1.25	PPB		
17) 3-Chloro-1-propene	2.96	76	162m	0.08	PPB		
18) Methyl Acetate	3.04	43	253m	0.17	PPB		
20) Methylene Chloride	3.15	84	528	0.13	PPB		80
22) Acrylonitrile	3.61	53	181m	0.23	PPB		
23) Methyl tert-Butyl Ether	3.46	73	1798	0.20	PPB		96
24) trans-1,2-Dichloroethene	3.45	96	397m	0.10	PPB		
25) Hexane	3.77	57	632	0.14	PPB		93
26) Diisopropyl Ether	4.23	45	732	0.08	PPB		76
27) 1,1-Dichloroethane	4.19	63	500	0.08	PPB	#	50
29) Chloroprene	4.25	53	1999	0.43	PPB		90
30) tert-Butyl Ethyl Ether	4.78	59	867	0.09	PPB		77
31) 2,2-Dichloropropane	5.00	77	607	0.11	PPB	#	46

(#) = qualifier out of range (m) = manual integration
1119F006.D 111918MS46_8260.M Wed Nov 21 11:04:17 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:05 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
32)	cis-1,2-Dichloroethene	5.07	96	491m	0.10	PPB		
33)	2-Butanone	5.17	72	899	3.25	PPB		87
36)	Methacrylonitrile	5.49	67	280m	0.24	PPB		
37)	Bromochloromethane	5.40	128	151m	0.06	PPB		
39)	Chloroform	5.51	83	712	0.10	PPB		83
40)	Cyclohexane	5.61	56	685	0.13	PPB		86
41)	1,1,1-Trichloroethane	5.65	97	760	0.13	PPB	#	75
43)	Carbon Tetrachloride	5.82	117	599	0.11	PPB	#	84
44)	1,1-Dichloropropene	5.89	75	513	0.10	PPB		69
47)	Benzene	6.14	78	1727	0.11	PPB		97
48)	1,2-Dichloroethane	6.28	62	365m	0.09	PPB		
50)	Trichloroethene	6.96	95	509	0.12	PPB	#	73
51)	Methylcyclohexane	7.08	83	696	0.10	PPB		86
52)	1,2-Dichloropropane	7.28	63	276m	0.07	PPB		
56)	Bromodichloromethane	7.62	83	549	0.10	PPB		84
57)	2-Nitropropane	7.98	41	297m	0.59	PPB		
58)	2-Chloroethyl Vinyl Ether	8.02	63	109m	0.05	PPB		
59)	cis-1,3-Dichloropropene	8.14	75	623	0.09	PPB		90
60)	4-Methyl-2-pentanone (MIBK	8.34	58	3349	3.55	PPB		97
62)	Toluene	8.45	92	1310	0.11	PPB		95
64)	n-Octane	8.53	85	265m	0.11	PPB		
65)	trans-1,3-Dichloropropene	8.81	75	664	0.11	PPB		87
66)	Ethyl methacrylate	8.87	69	334m	0.08	PPB		
68)	Tetrachloroethene	9.02	164	397m	0.08	PPB		
69)	2-Hexanone	9.28	57	1064	3.73	PPB	#	81
70)	1,3-Dichloropropane	9.19	76	539	0.09	PPB	#	48
72)	1,2-Dibromoethane (EDB)	9.52	107	351m	0.09	PPB		
73)	1-Chlorohexane	10.01	91	920	0.15	PPB		78
74)	Chlorobenzene	10.04	112	1457	0.11	PPB		95
75)	Ethylbenzene	10.13	106	767	0.11	PPB		88
77)	m,p-Xylenes	10.26	106	1845	0.21	PPB		94
78)	o-Xylene	10.70	106	885	0.10	PPB	#	77
79)	Styrene	10.74	103	584	0.08	PPB		84
80)	Bromoform	10.95	173	274m	0.08	PPB		
81)	Isopropylbenzene	11.10	105	2284	0.11	PPB		92
82)	cis-1,4-Dichloro-2-butene	11.27	89	176m	0.29	PPB		
85)	1,1,2,2-Tetrachloroethane	11.53	83	416m	0.11	PPB		
87)	Bromobenzene	11.46	156	686	0.11	PPB		88
88)	n-Propylbenzene	11.55	91	2637	0.11	PPB		95
90)	2-Chlorotoluene	11.66	91	1486	0.11	PPB		84
91)	1,3,5-Trimethylbenzene	11.76	105	1759	0.10	PPB		96

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:05 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

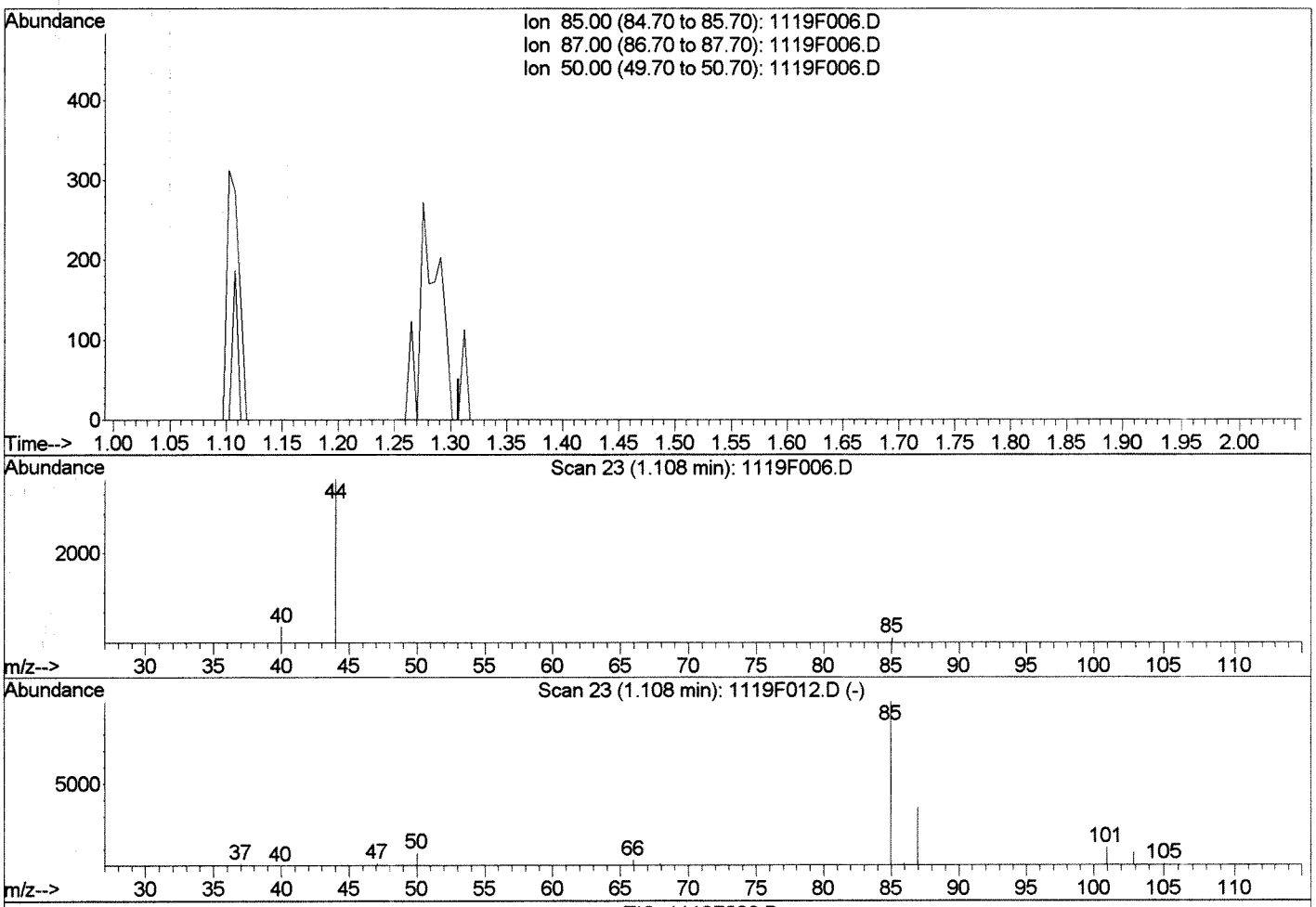
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
92)	4-Chlorotoluene	11.80	91	1877	0.13	PPB	95
93)	tert-Butylbenzene	12.09	119	1649	0.11	PPB	79
94)	1,2,4-Trimethylbenzene	12.16	105	1758	0.10	PPB	95
95)	sec-Butylbenzene	12.33	105	2256	0.11	PPB	89
96)	p-Isopropyltoluene	12.50	119	1975	0.11	PPB	98
97)	1,3-Dichlorobenzene	12.50	146	1160	0.10	PPB	86
98)	1,4-Dichlorobenzene	12.61	146	1323	0.12	PPB	90
99)	n-Butylbenzene	12.95	91	1420	0.10	PPB	82
100)	1,2-Dichlorobenzene	13.02	146	1033	0.10	PPB	88
102)	1,3,5-Trichlorobenzene	14.07	180	760	0.11	PPB	78
103)	1,2,4-Trichlorobenzene	14.78	180	725	0.11	PPB	84
104)	Hexachlorobutadiene	14.90	225	341m	0.12	PPB	
105)	Naphthalene	15.05	128	1201	0.10	PPB	74
106)	1,2,3-Trichlorobenzene	15.33	180	521	0.09	PPB	82

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:08 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(2) Dichlorodifluoromethane (T)

1.11min 0.00PPB

response 0

Ion	Exp%	Act%
85.00	100	0.00
87.00	35.20	0.00#
50.00	7.60	0.00
0.00	0.00	0.00

Manual Integration:

Before

LM

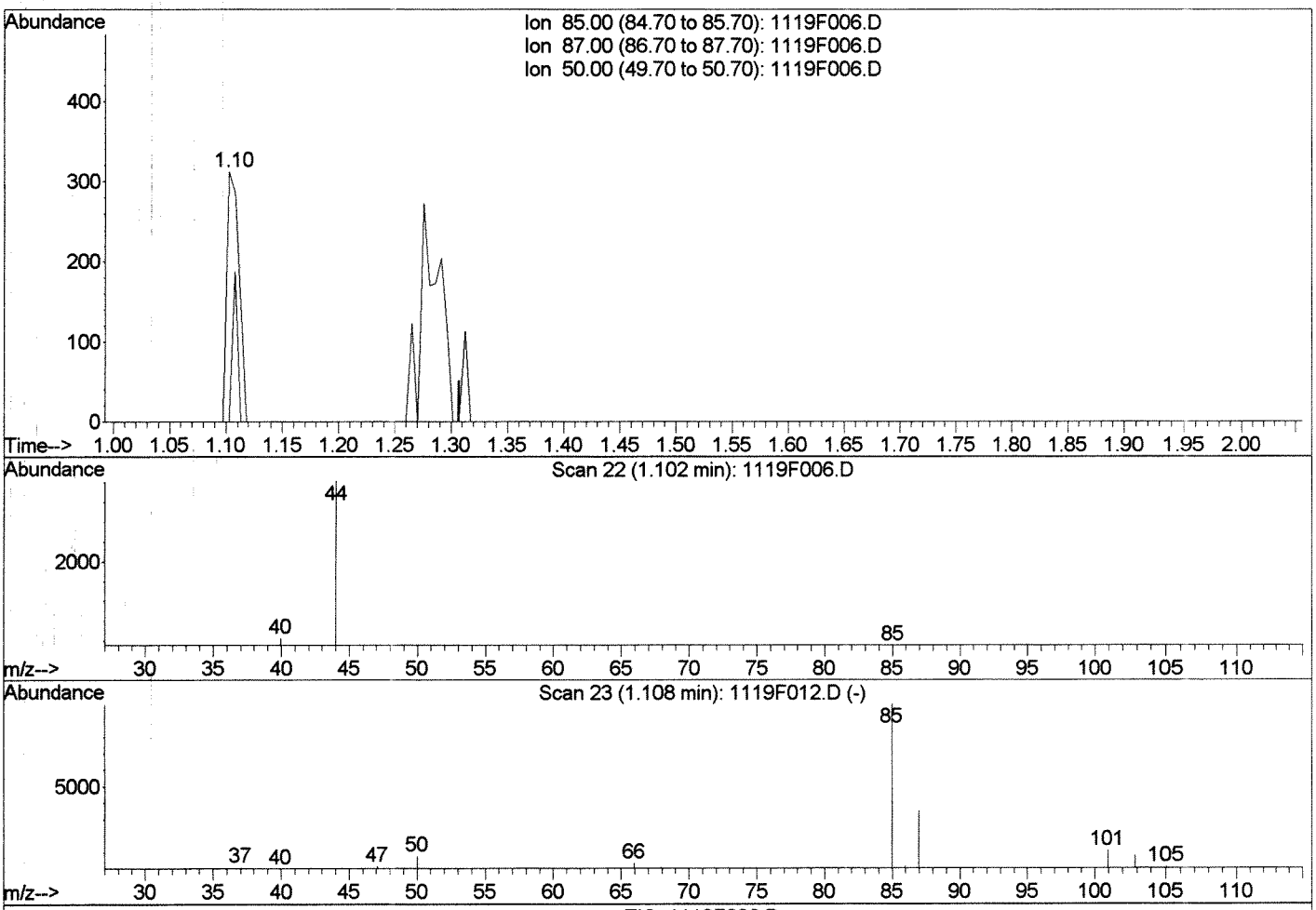
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:09:01 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:09 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(2) Dichlorodifluoromethane (T)

1.10min 0.07PPB m

response 234

Ion	Exp%	Act%
85.00	100	100
87.00	35.20	0.00#
50.00	7.60	0.00
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

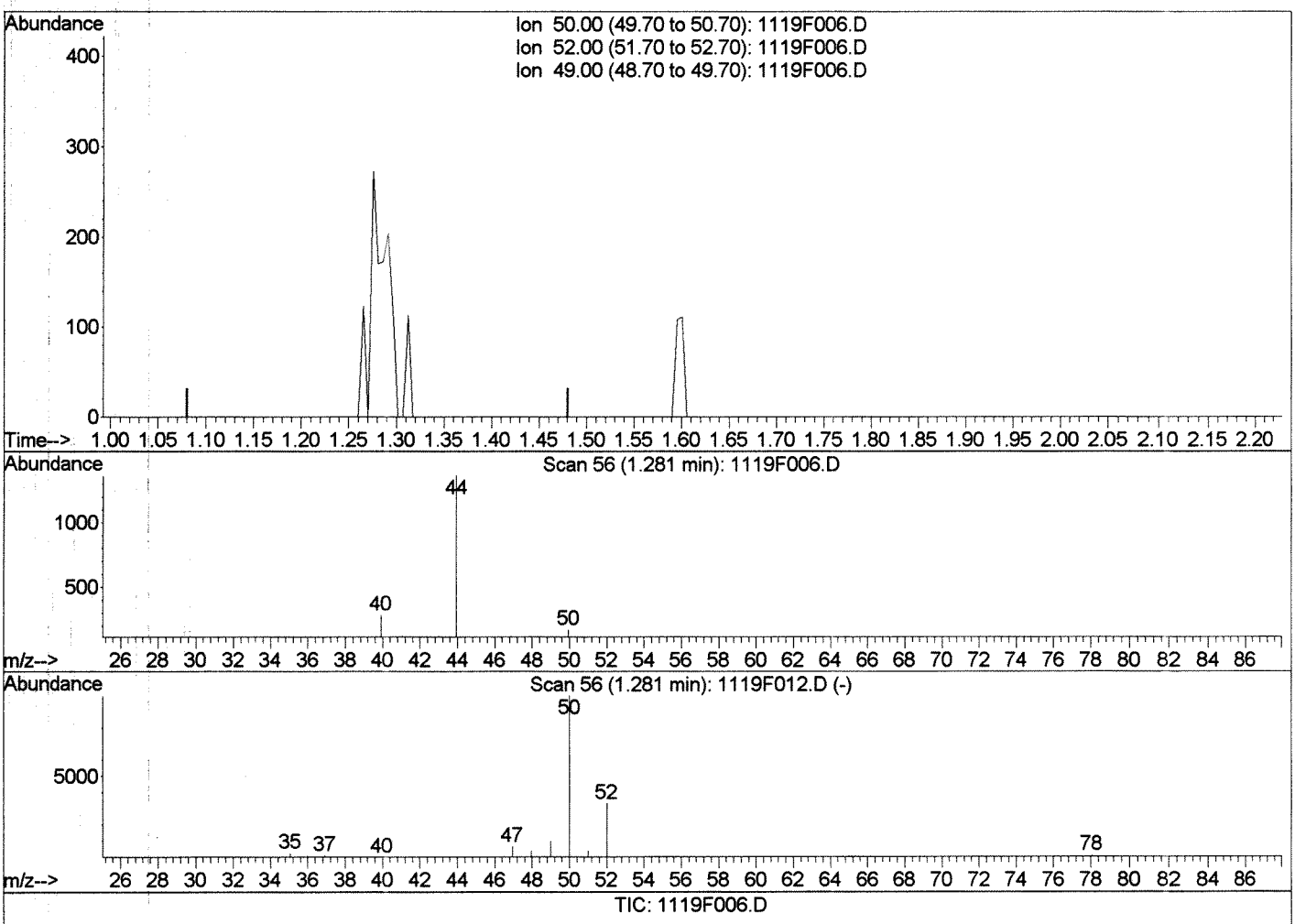
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:09:25 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:09 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(3) Chloromethane (PT)

1.28min 0.00PPB

response 0

Ion	Exp%	Act%
50.00	100	0.00
52.00	33.10	0.00#
49.00	9.80	0.00
0.00	0.00	0.00

Manual Integration:

Before LM

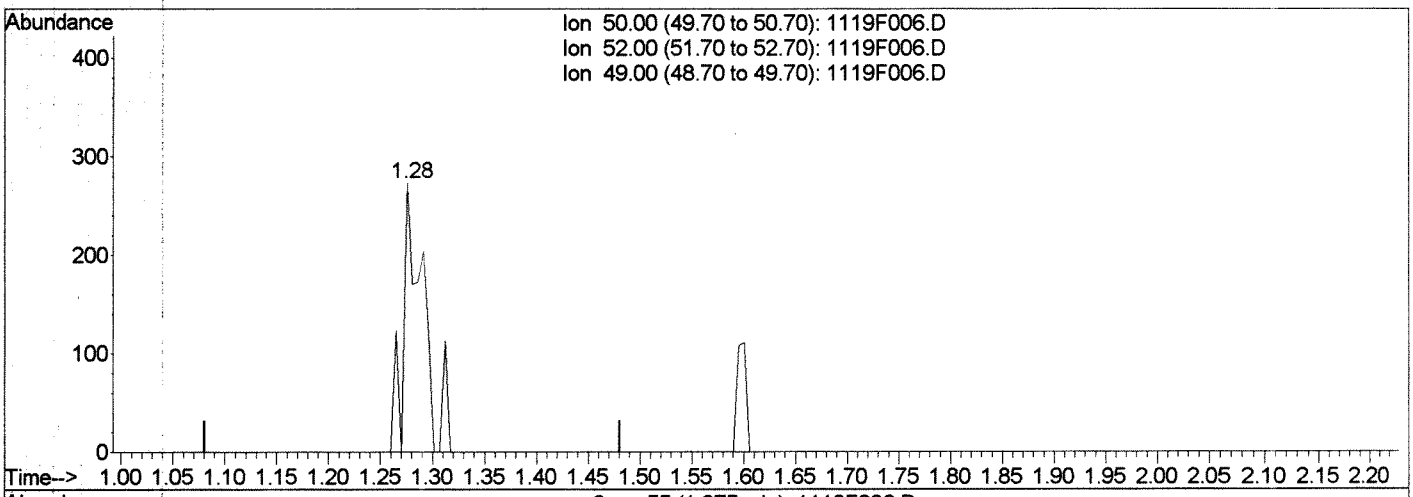
11/21/18 ✓

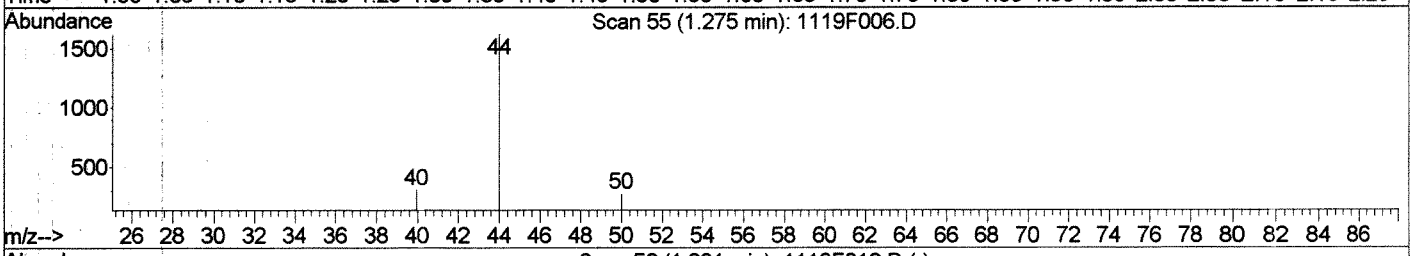
1119F006.D 111918MS46_8260.M Wed Nov 21 09:09:30 2018

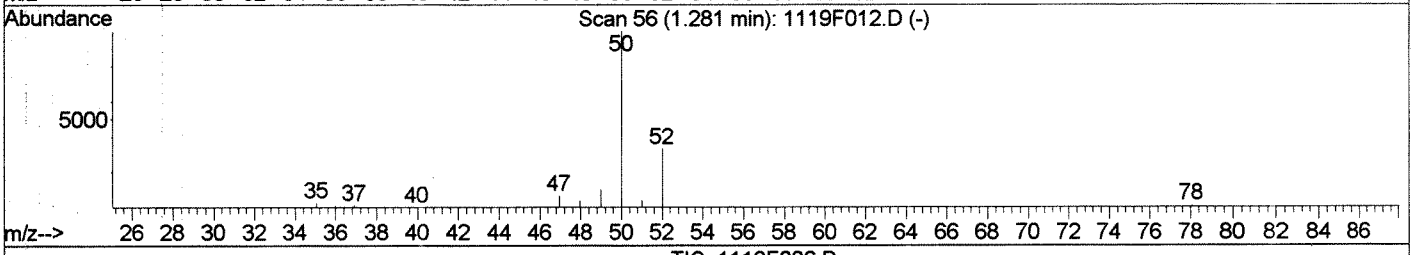
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:09 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(3) Chloromethane (PT)

1.28min 0.10PPB m

response 293

Ion	Exp%	Act%
50.00	100	100
52.00	33.10	0.00#
49.00	9.80	0.00
0.00	0.00	0.00

Manual Integration:

After

Missed peak

11/21/18

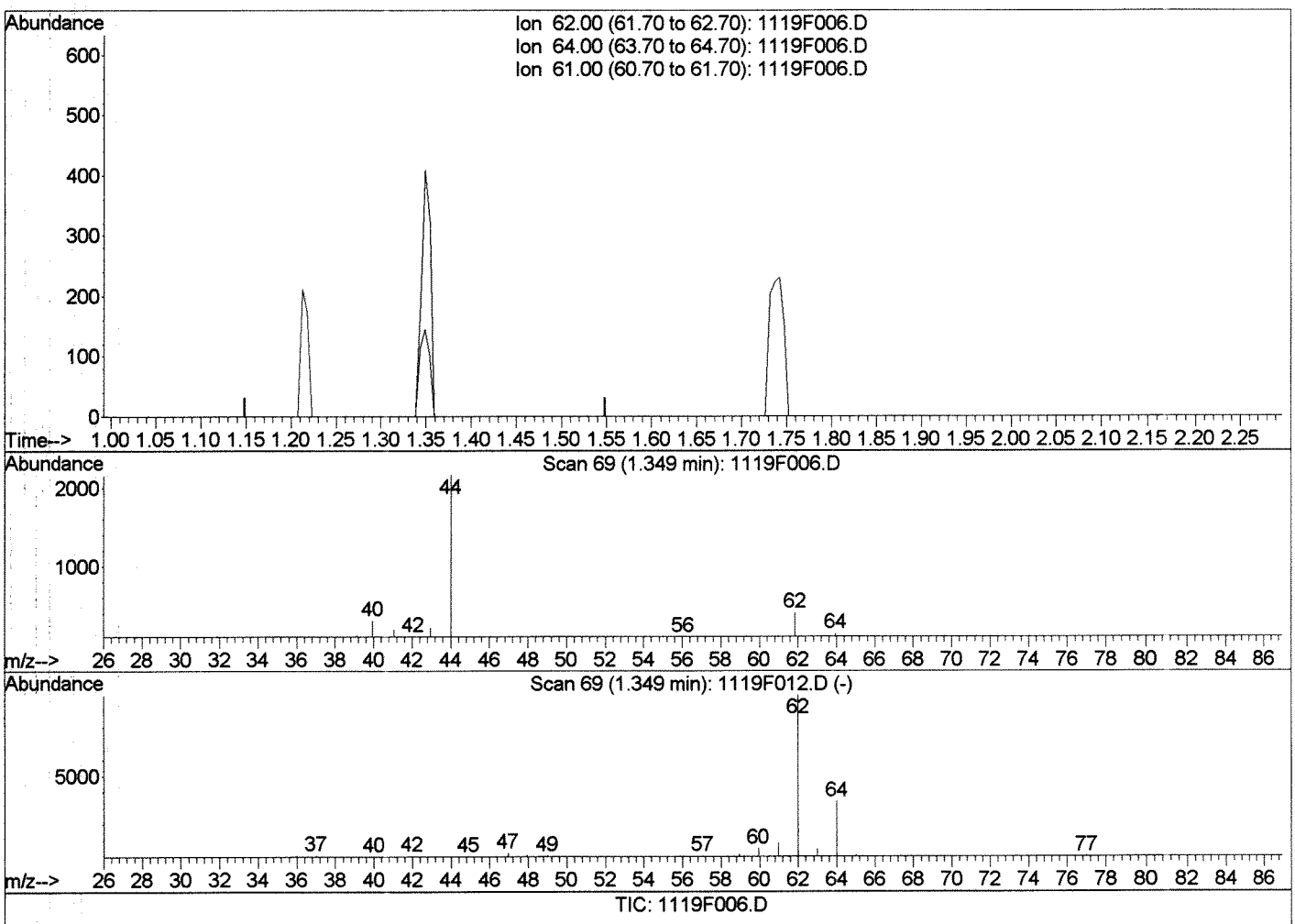
LM

1119F006.D 111918MS46_8260.M Wed Nov 21 09:09:40 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:09 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



(4) Vinyl Chloride (CT)

1.35min 0.00PPB

response 0

Ion	Exp%	Act%
62.00	100	0.00
64.00	34.00	0.00#
61.00	8.70	0.00
0.00	0.00	0.00

Manual Integration:

Before

LM

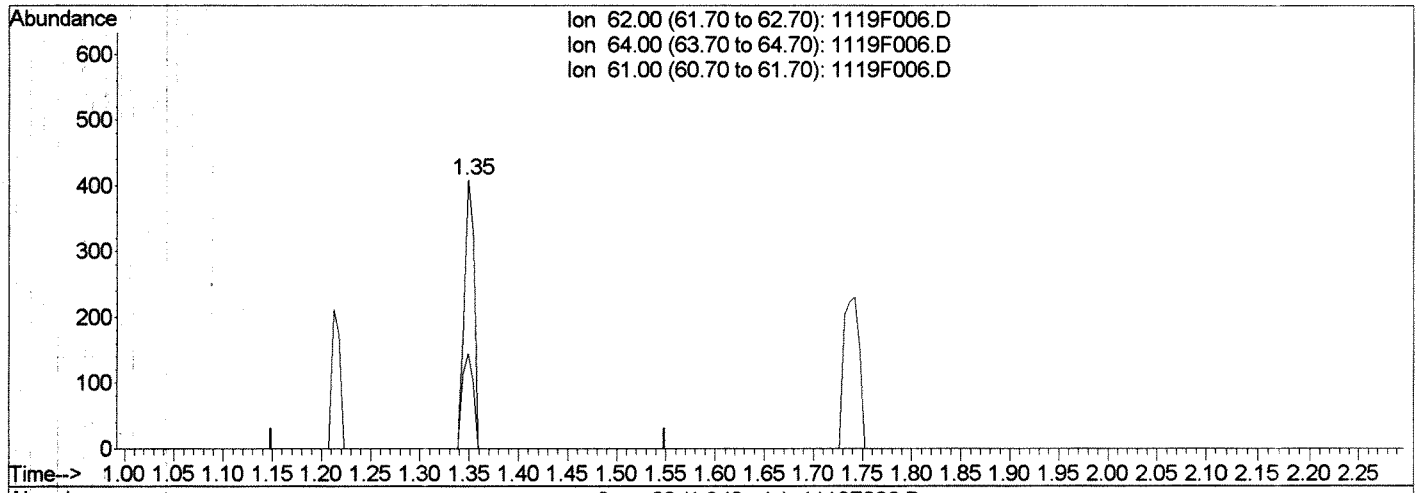
11/21/18

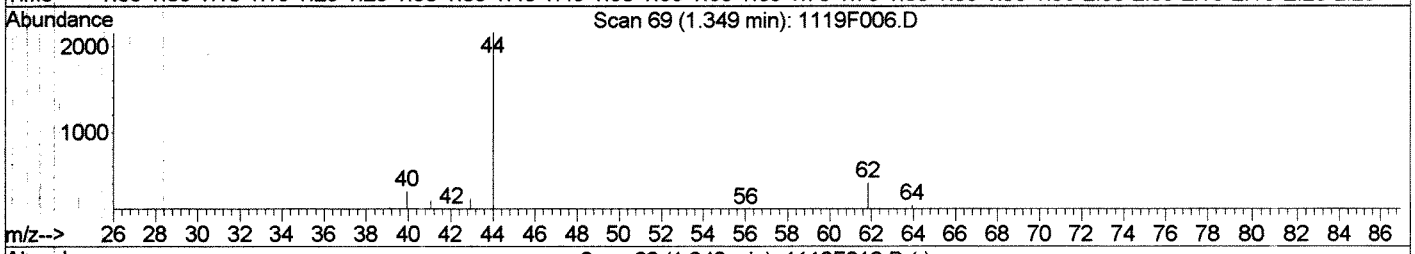
1119F006.D 111918MS46_8260.M Wed Nov 21 09:09:44 2018

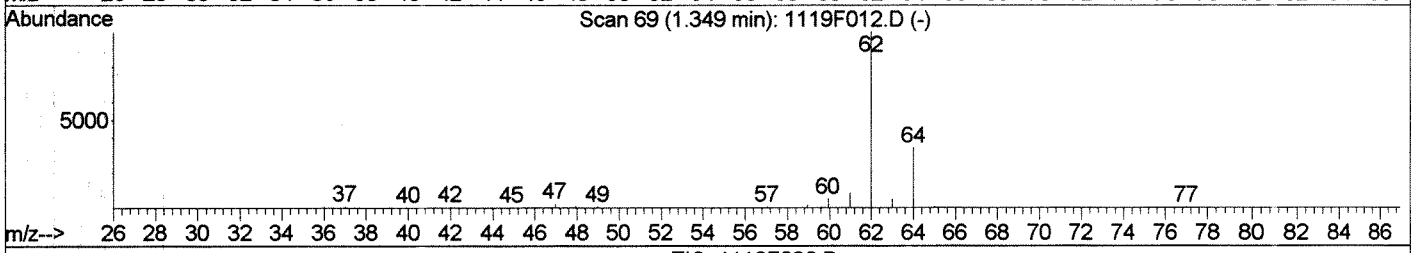
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:09 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(4) Vinyl Chloride (CT)

1.35min 0.08PPB m

response 287

Ion	Exp%	Act%
62.00	100	100
64.00	34.00	35.45
61.00	8.70	0.00
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak ✓

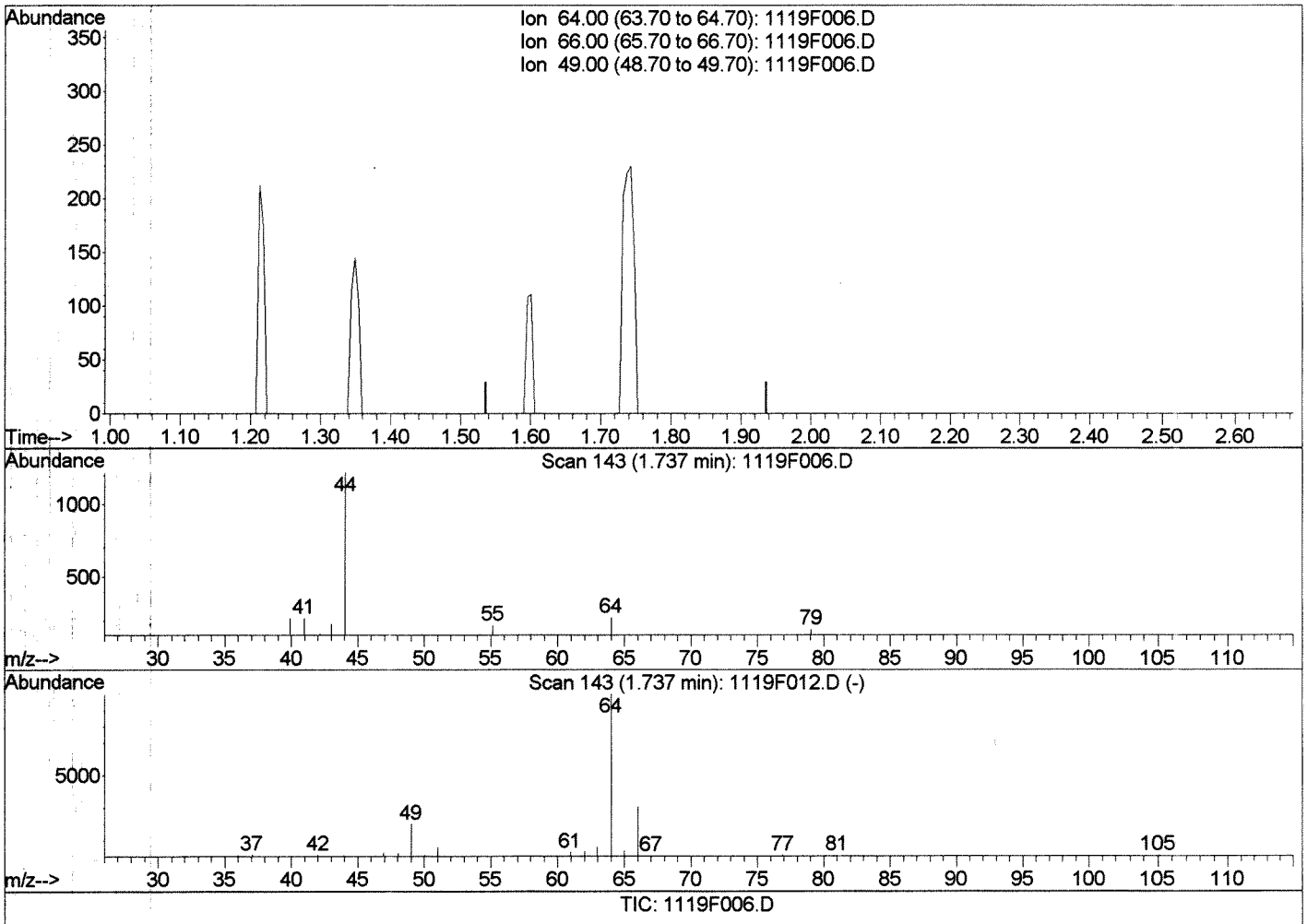
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:09:59 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:09 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(6) Chloroethane (T)

1.74min 0.00PPB

response 0

Ion	Exp%	Act%
64.00	100	0.00
66.00	30.90	0.00#
49.00	20.10	0.00
0.00	0.00	0.00

Manual Integration:

Before

LM

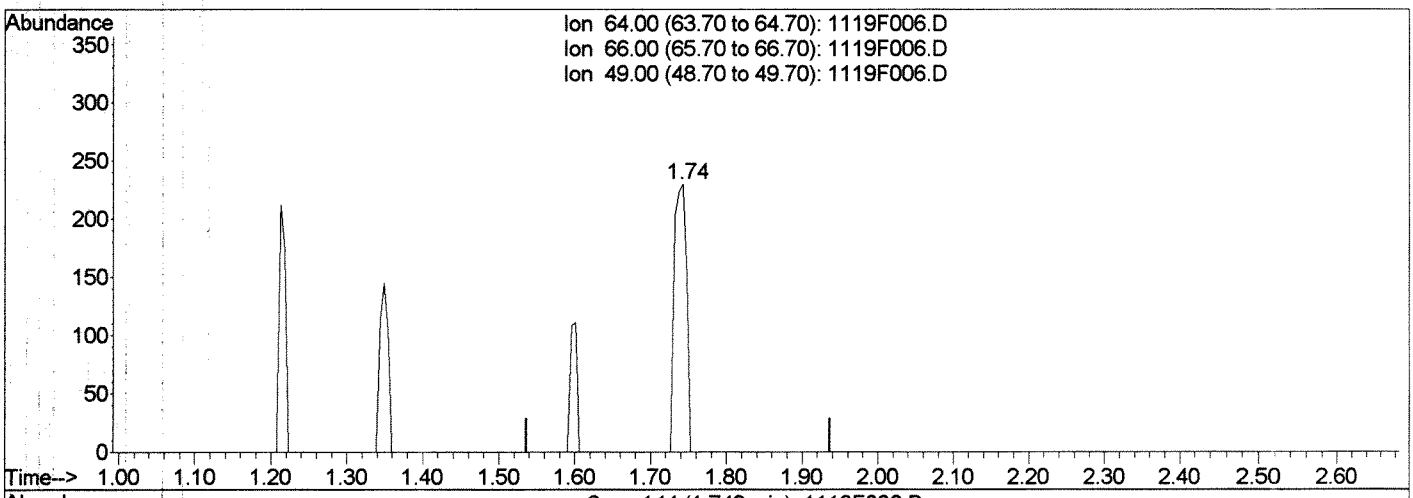
11/21/18

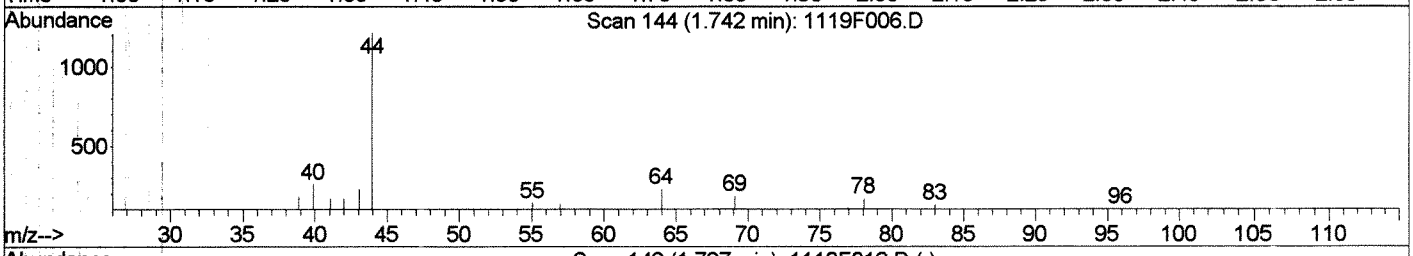
1119F006.D 111918MS46_8260.M Wed Nov 21 09:10:12 2018

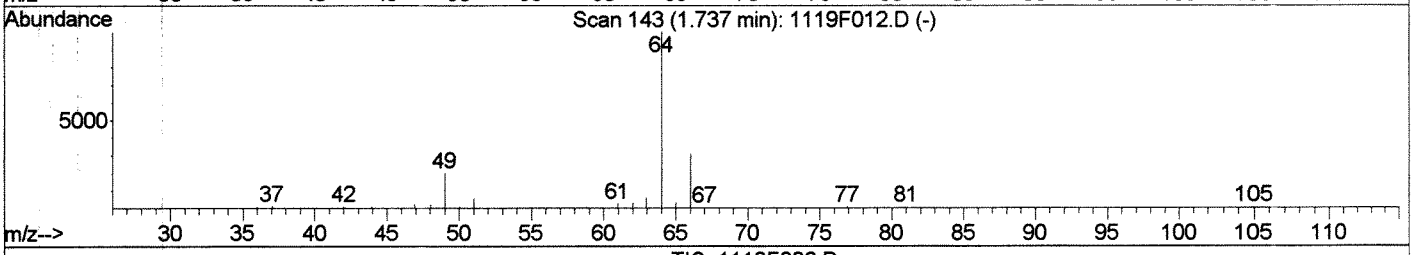
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:10 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(6) Chloroethane (T)

1.74min 0.11PPB m

response 254

Ion	Exp%	Act%
64.00	100	100
66.00	30.90	0.00#
49.00	20.10	0.00
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

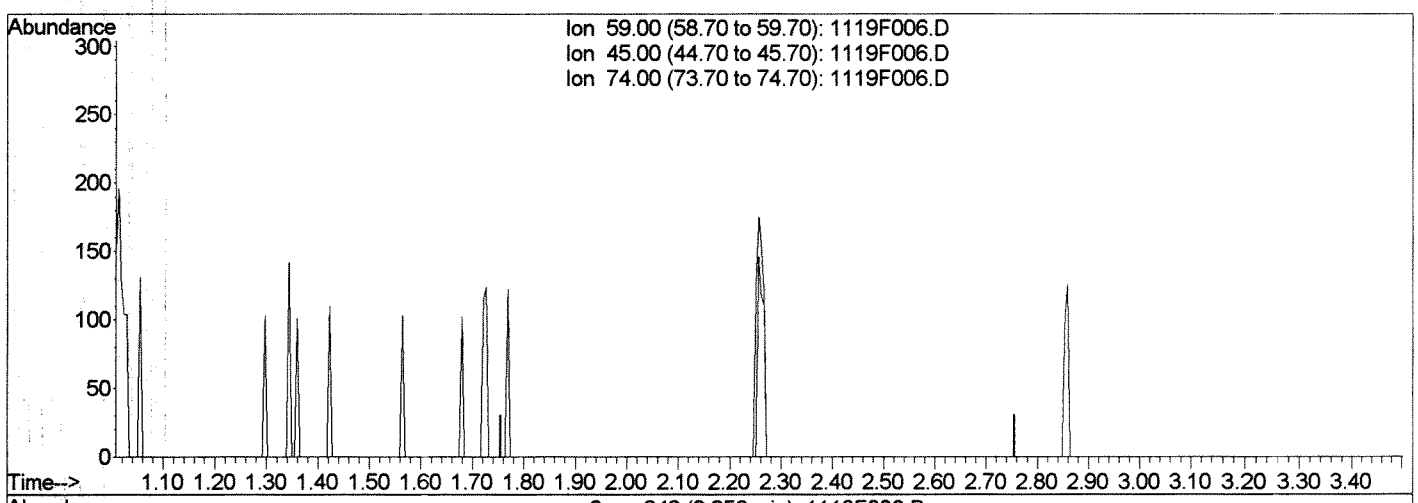
11/21/18

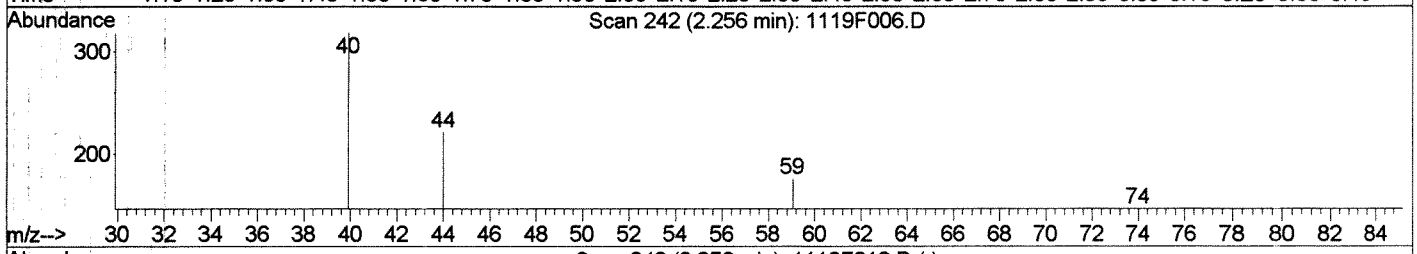
1119F006.D 111918MS46_8260.M Wed Nov 21 09:10:17 2018

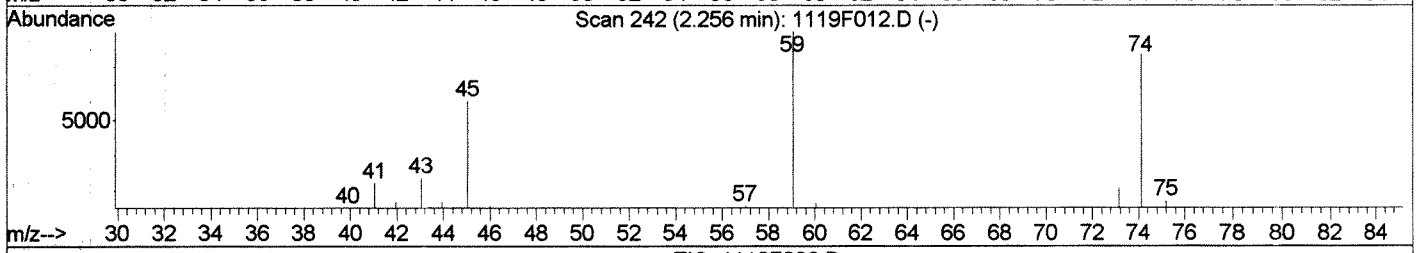
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:10 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(9) Ethyl Ether (T)

2.26min 0.00PPB

response 0

Ion	Exp%	Act%
59.00	100	0.00
45.00	60.70	0.00#
74.00	87.50	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

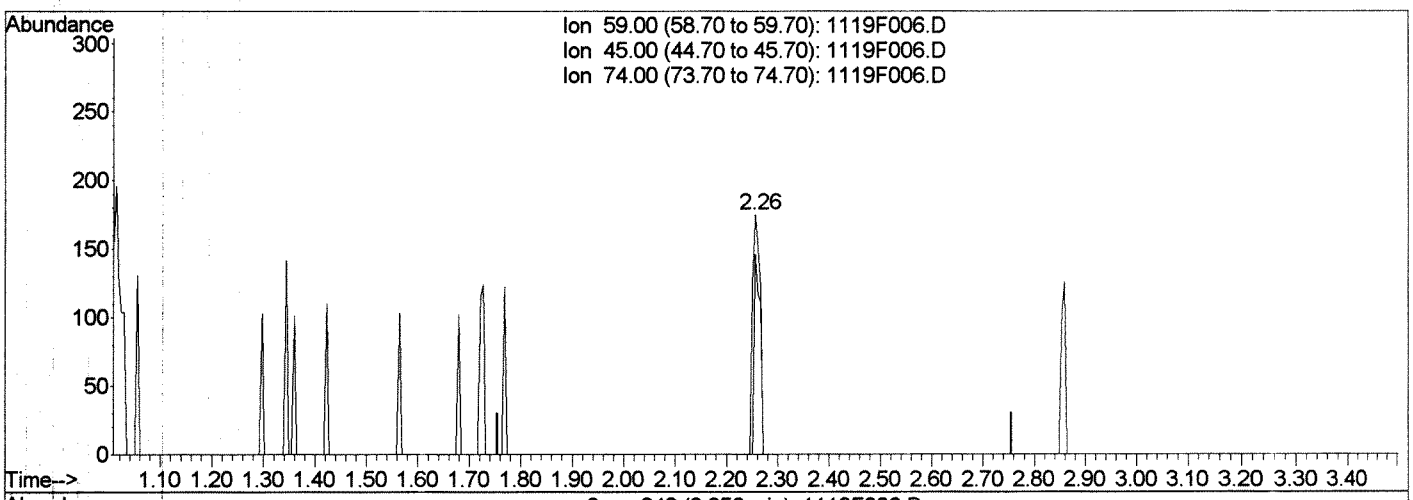
11/21/18

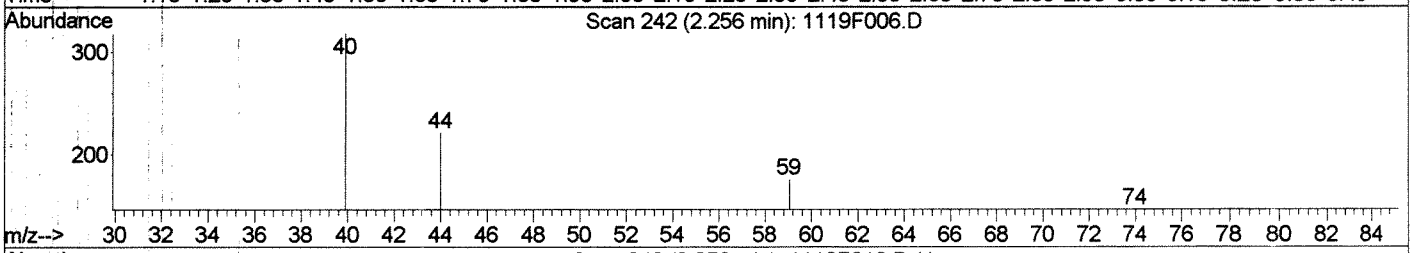
1119F006.D 111918MS46_8260.M Wed Nov 21 09:10:28 2018

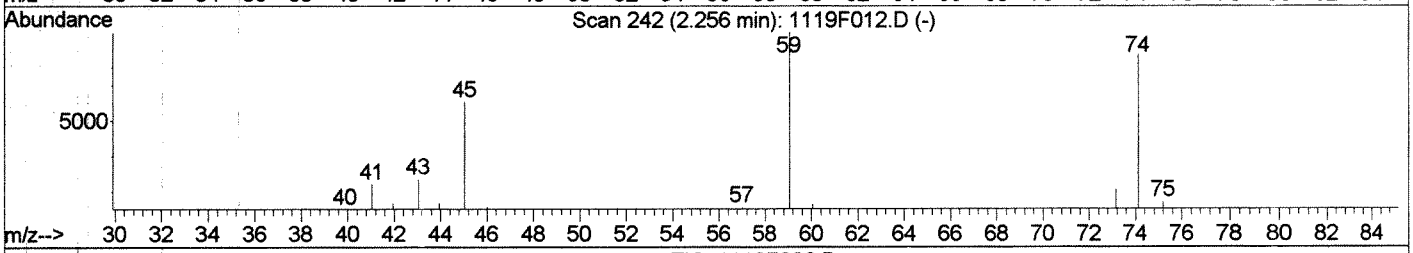
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:10 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(9) Ethyl Ether (T)

2.26min 0.09PPB m

response 182

Ion	Exp%	Act%
59.00	100	100
45.00	60.70	0.00#
74.00	87.50	83.43
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

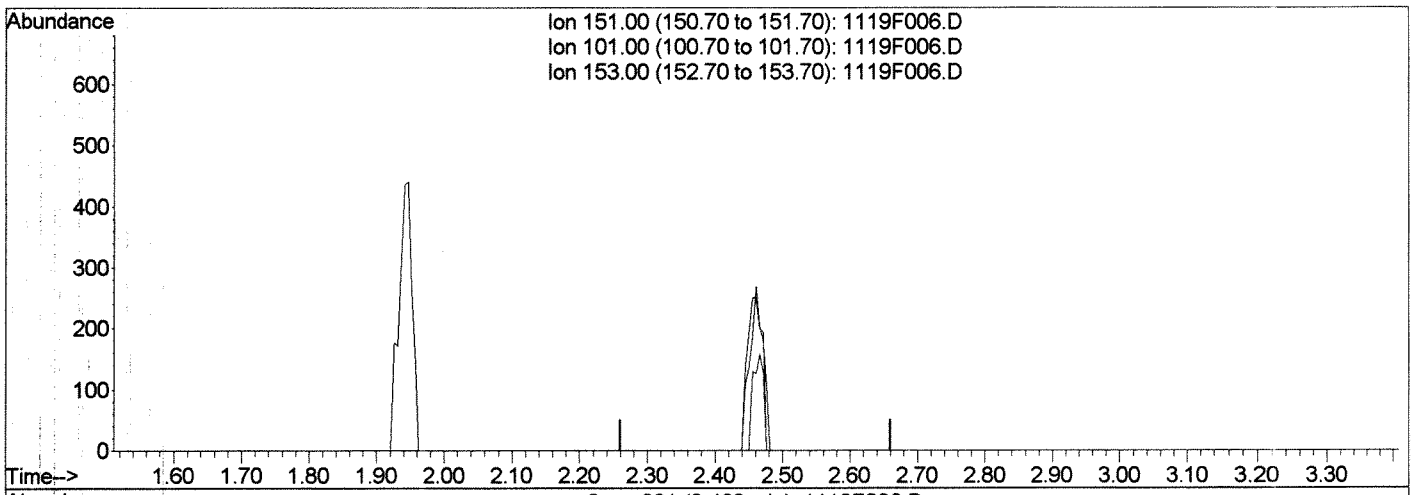
11/21/18

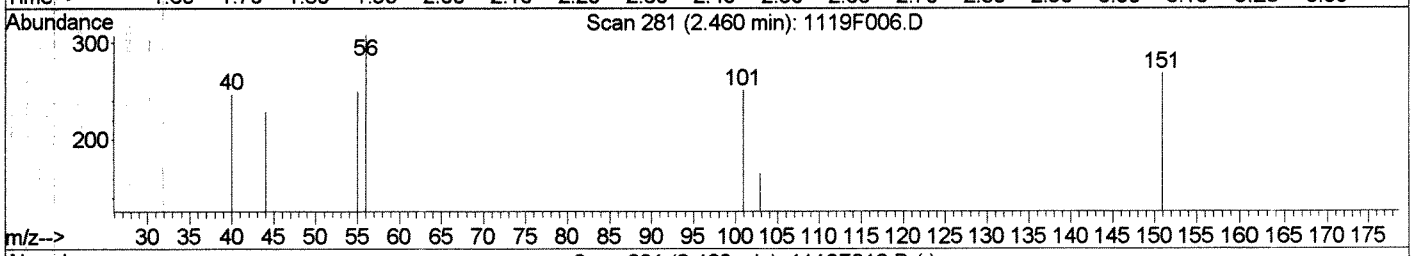
1119F006.D 111918MS46_8260.M Wed Nov 21 09:10:41 2018

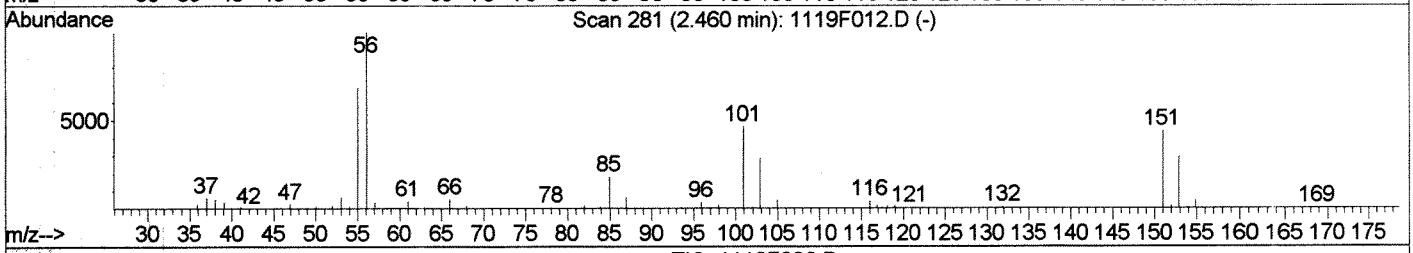
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:10 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(11) Trichlorotrifluoroethane (T)

2.46min 0.00PPB

response 0

Ion	Exp%	Act%
151.00	100	0.00
101.00	105.30	0.00#
153.00	66.70	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

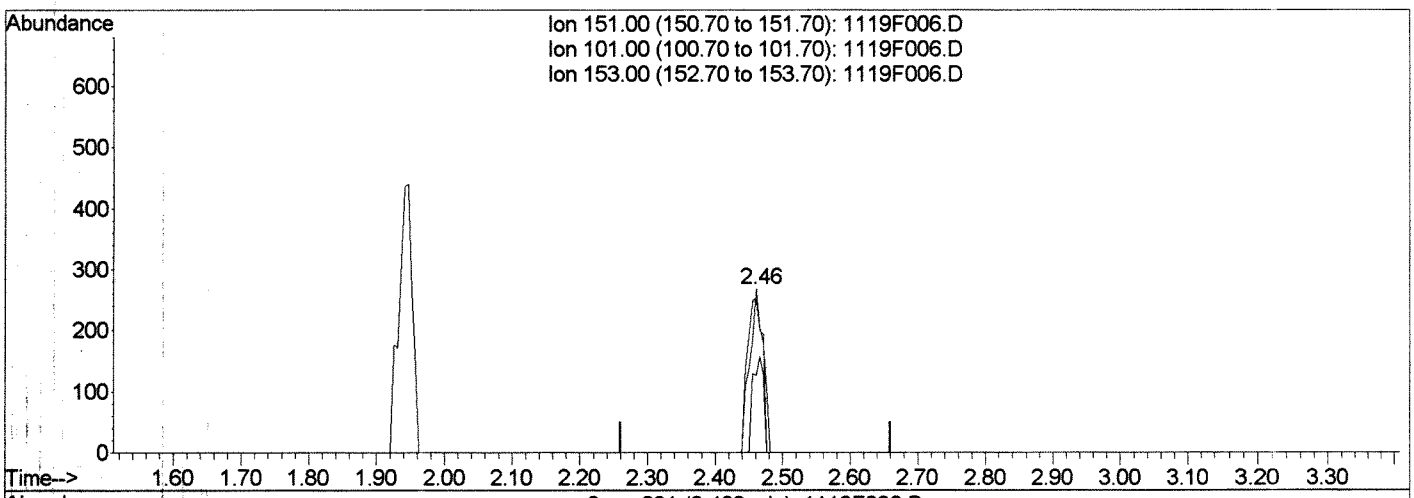
11/21/18

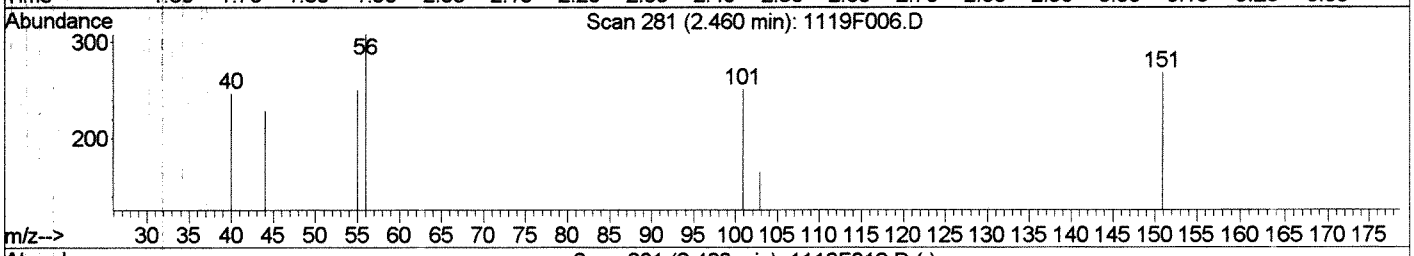
1119F006.D 111918MS46_8260.M Wed Nov 21 09:10:50 2018

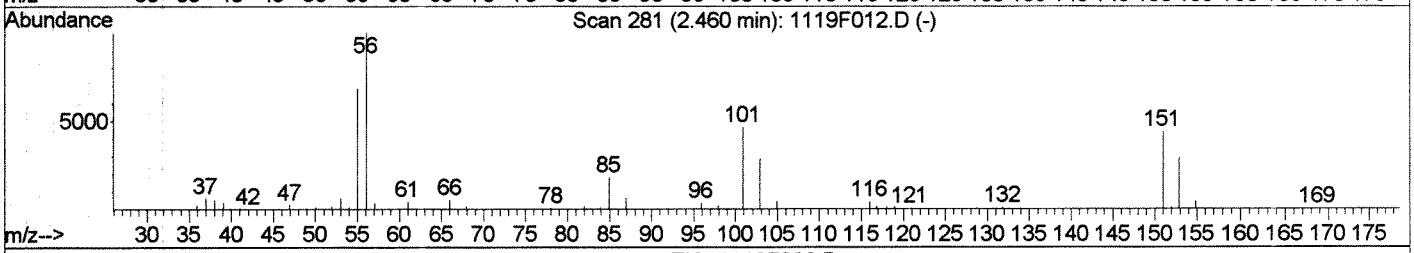
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:10 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(11) Trichlorotrifluoroethane (T)

2.46min 0.11PPB m

response 373

Ion	Exp%	Act%
151.00	100	100
101.00	105.30	93.66
153.00	66.70	47.01
0.00	0.00	0.00

Manual Integration:

After LIN

Missed peak ✓

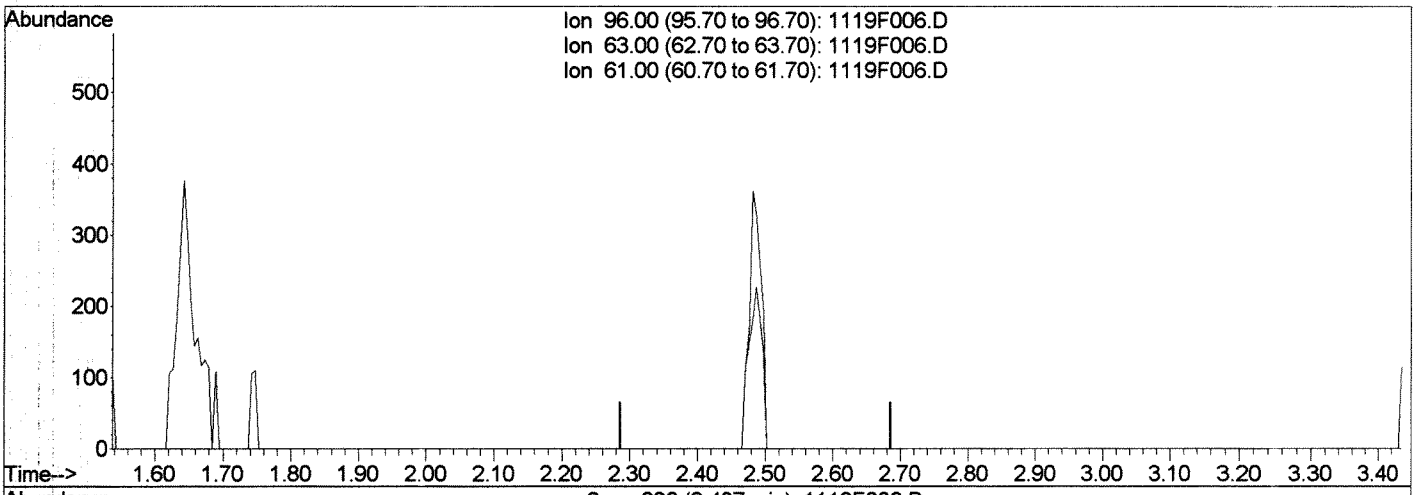
11/21/18

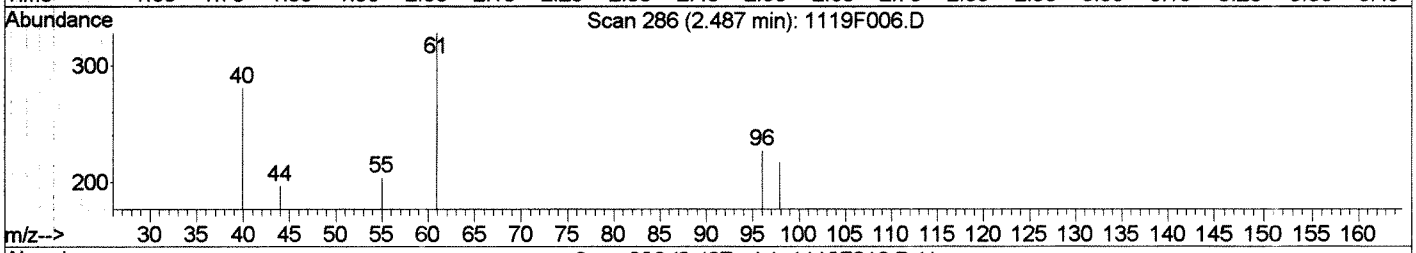
1119F006.D 111918MS46_8260.M Wed Nov 21 09:10:57 2018

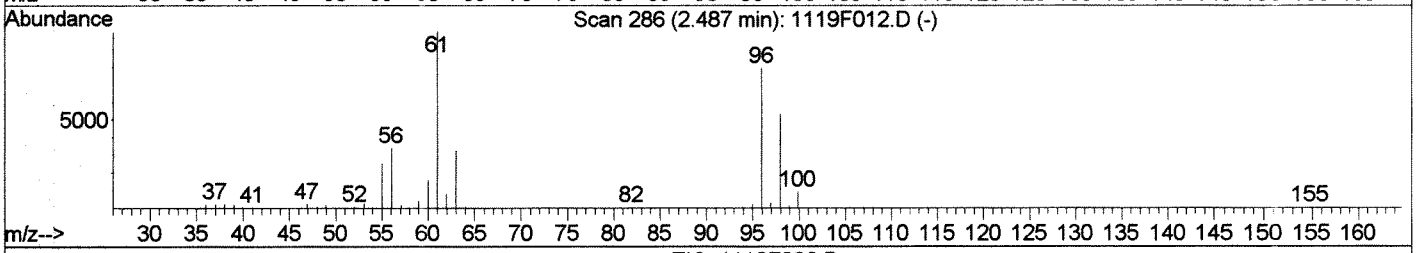
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:10 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(12) 1,1-Dichloroethene (CMT)

2.49min 0.00PPB

response 0

Ion	Exp%	Act%
96.00	100	0.00
63.00	41.10	0.00#
61.00	125.90	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

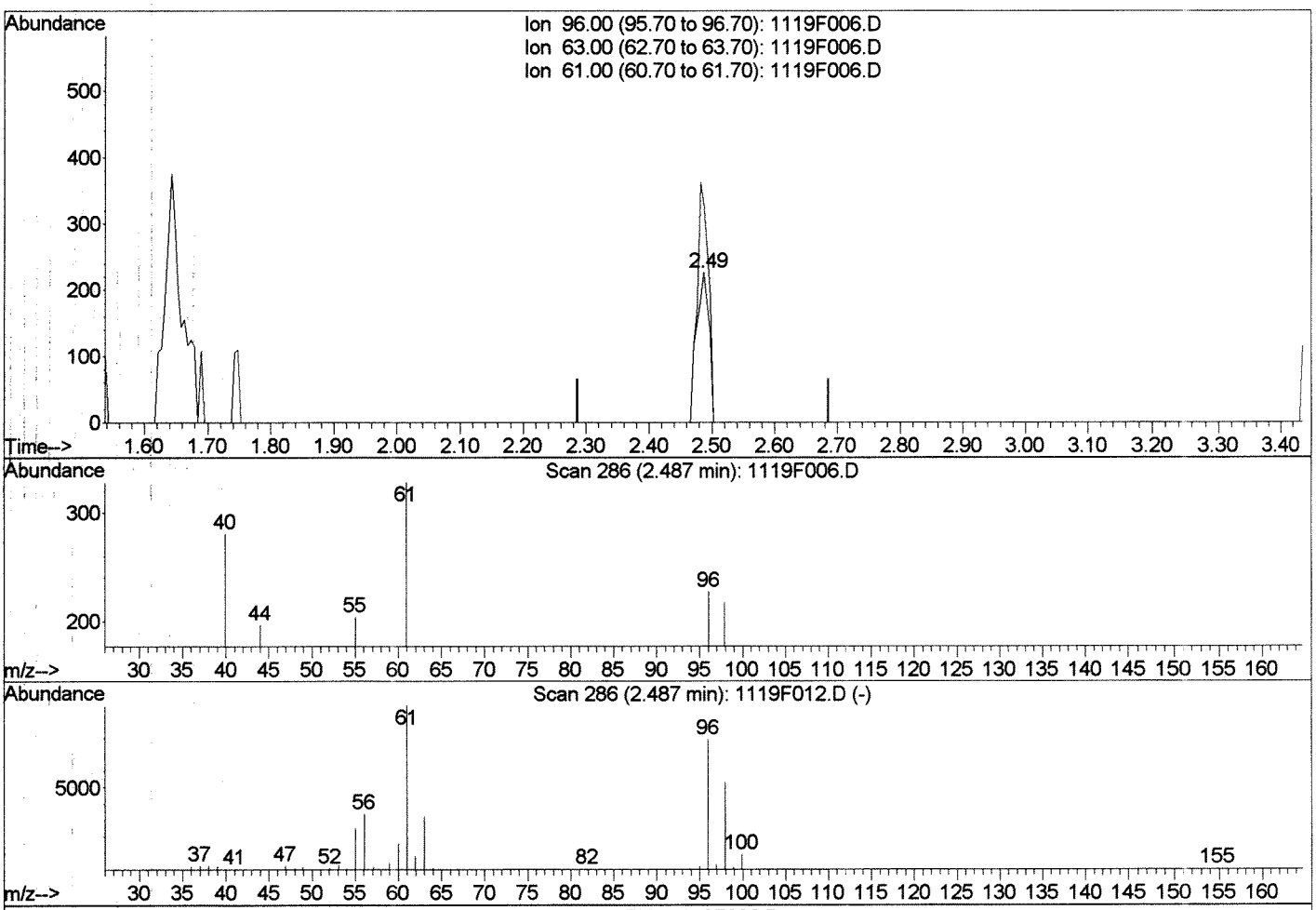
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:11:02 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:11 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(12) 1,1-Dichloroethene (CMT)

2.49min 0.09PPB m

response 312

Ion	Exp%	Act%
96.00	100	100
63.00	41.10	0.00#
61.00	125.90	144.49
0.00	0.00	0.00

Manual Integration:

After

Missed peak

11/21/18

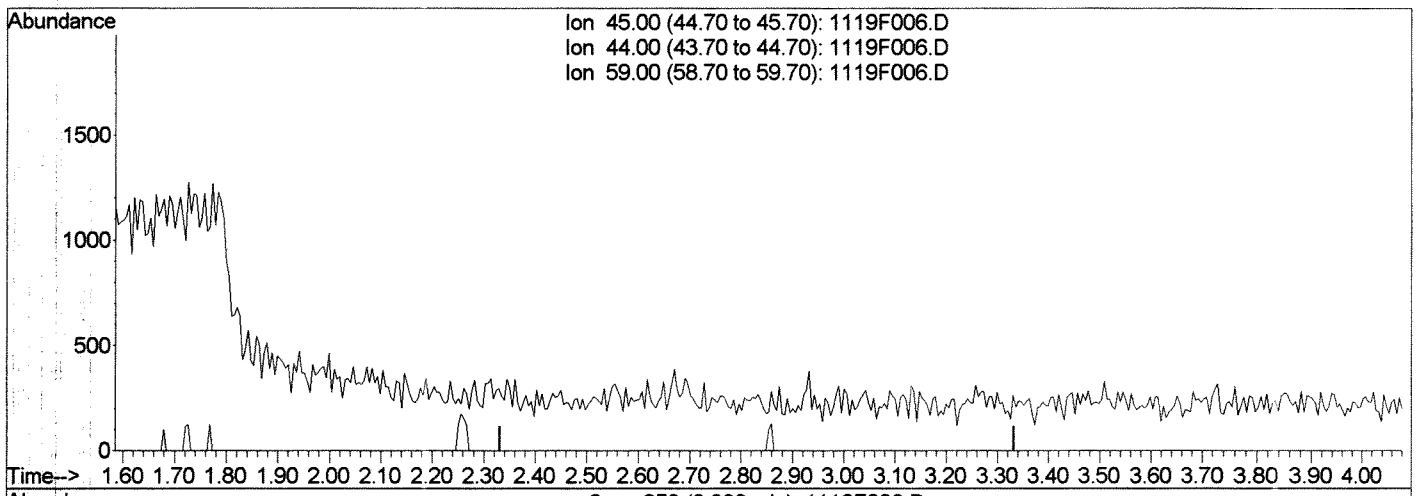
LM

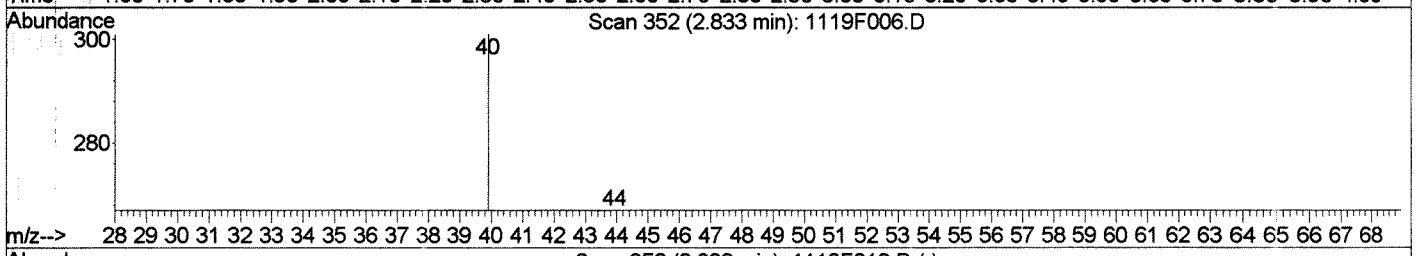
1119F006.D 111918MS46_8260.M Wed Nov 21 09:11:12 2018

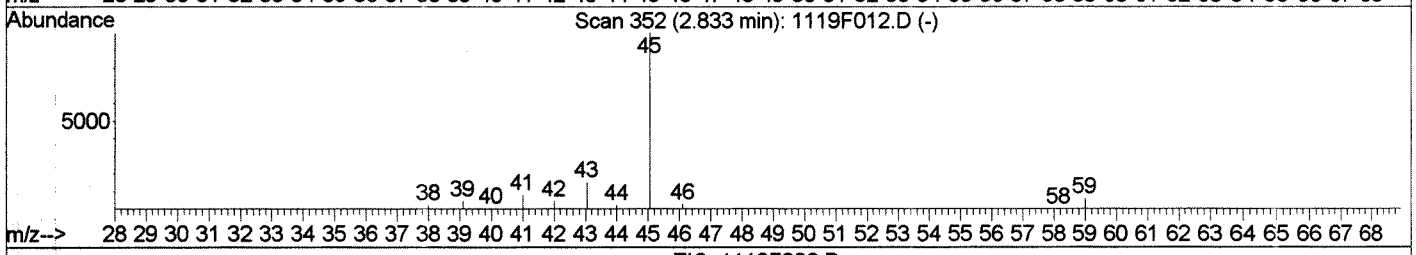
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:11 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(16) 2-Propanol (Isopropyl Alcohol) (T)

2.83min 0.00PPB

response 0

Ion	Exp%	Act%
45.00	100	0.00
44.00	3.90	0.00
59.00	5.70	0.00
0.00	0.00	0.00

Manual Integration:

Before

LM

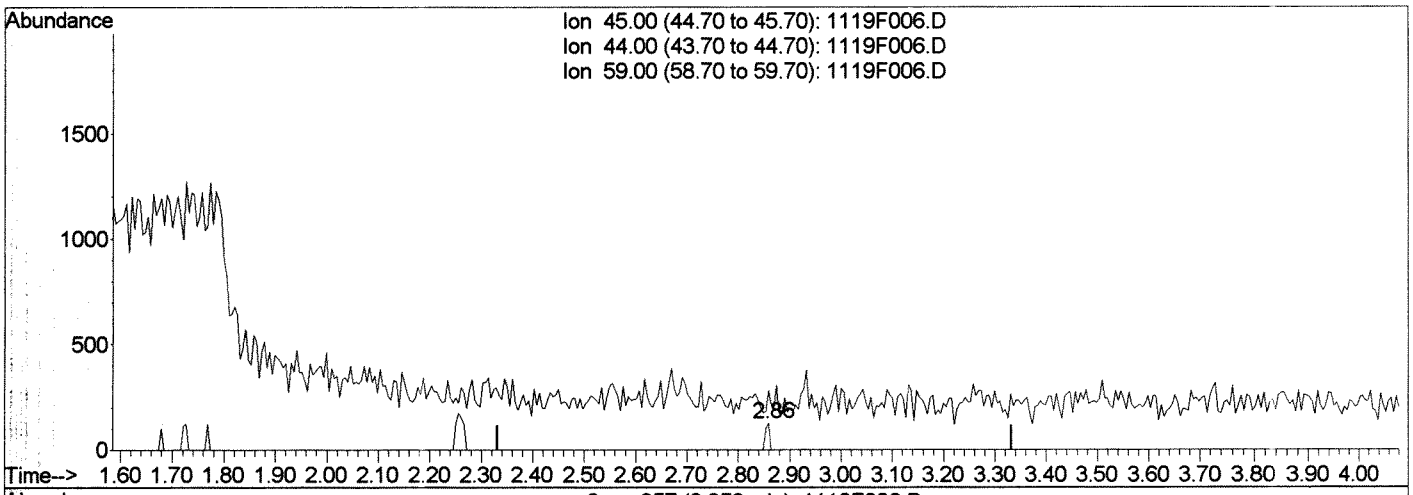
11/21/18

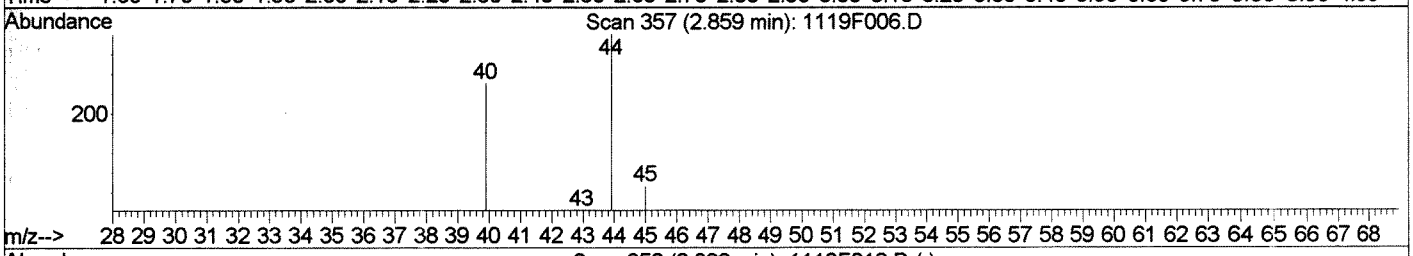
1119F006.D 111918MS46_8260.M Wed Nov 21 09:11:32 2018

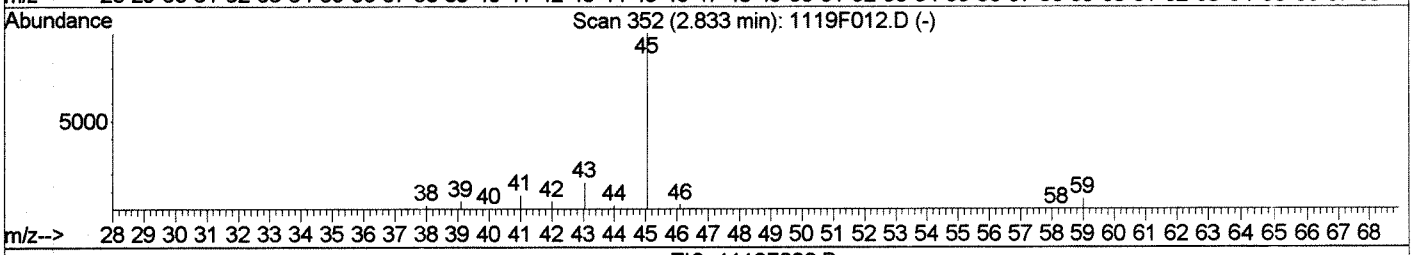
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:11 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(16) 2-Propanol (Isopropyl Alcohol) (T)

2.86min 1.25PPB m

response 72

Ion	Exp%	Act%
45.00	100	100
44.00	3.90	222.22#
59.00	5.70	0.00
0.00	0.00	0.00

Manual Integration:

After

Missed peak

11/21/18

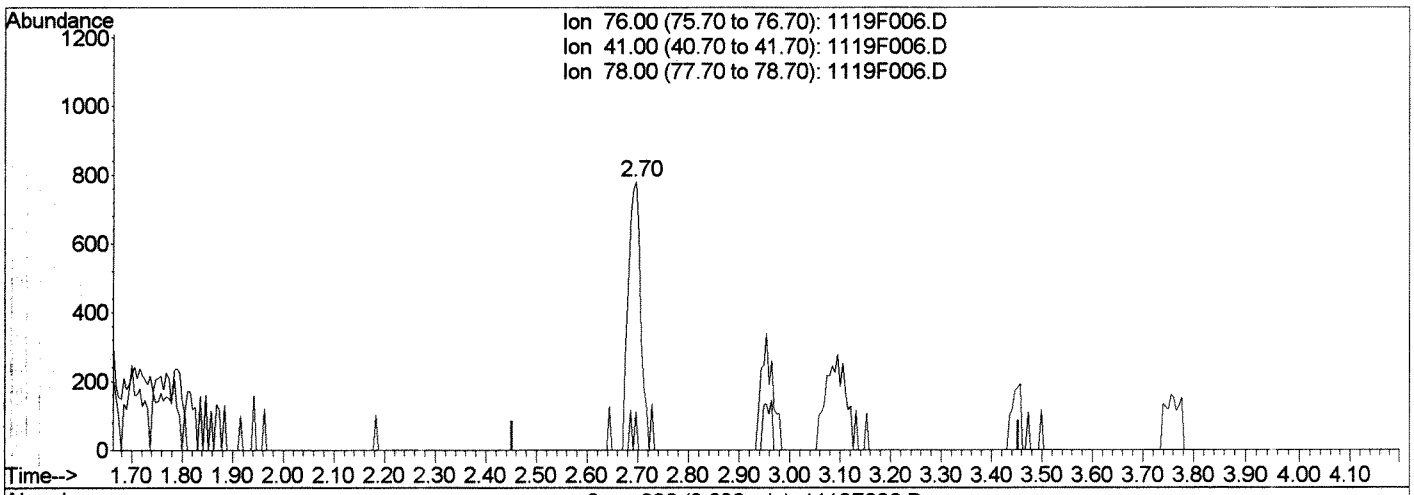
LM

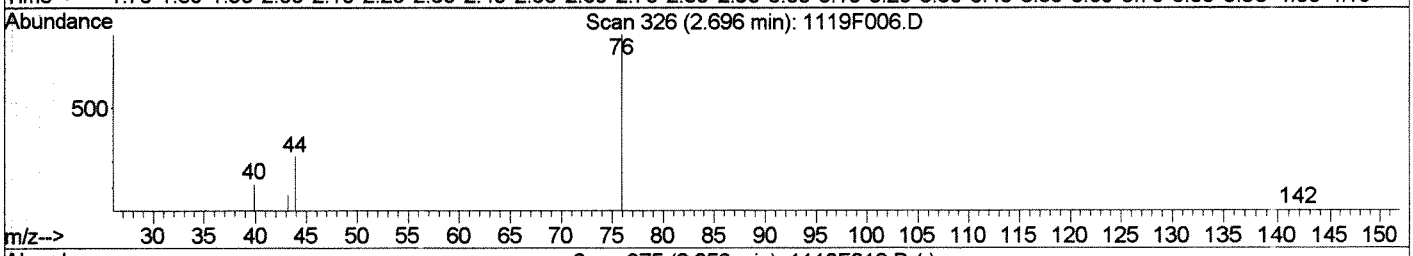
1119F006.D 111918MS46_8260.M Wed Nov 21 09:11:47 2018

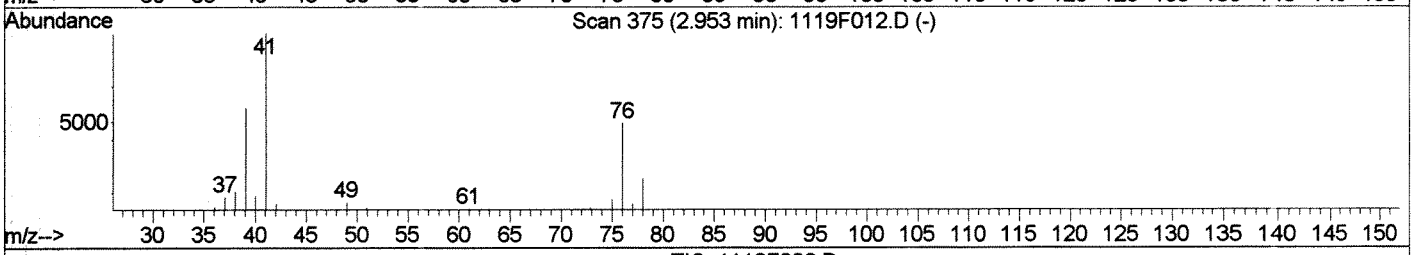
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:11 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(17) 3-Chloro-1-propene (T)

2.70min 0.70PPB

response 1360

Ion	Exp%	Act%
76.00	100	100
41.00	202.80	0.00#
78.00	36.10	14.34
0.00	0.00	0.00

Manual Integration:

Before

LM

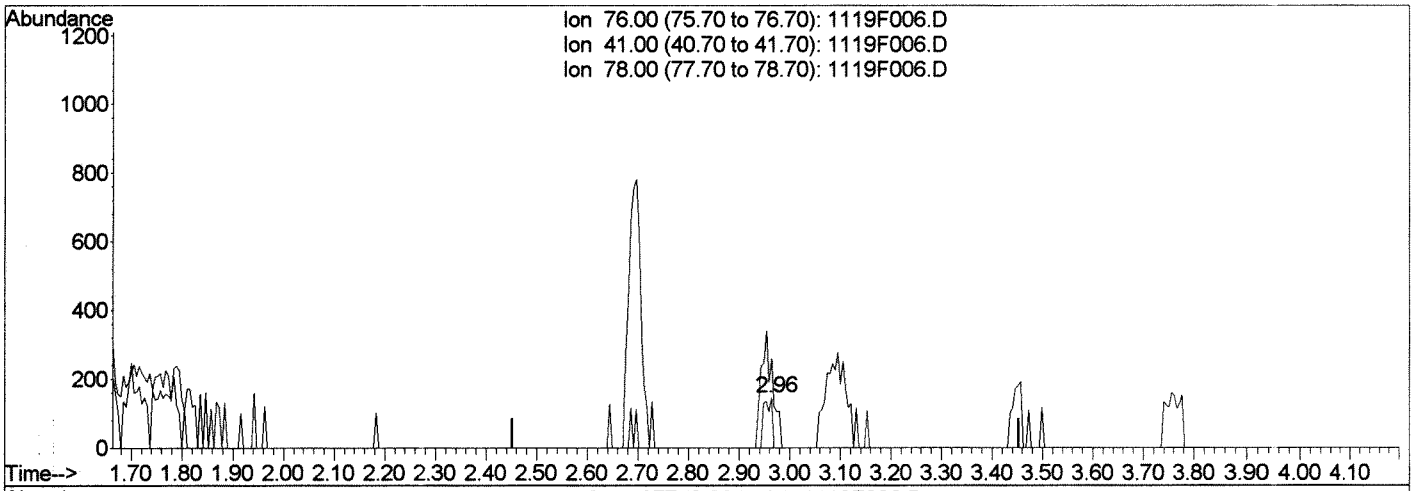
11/21/18

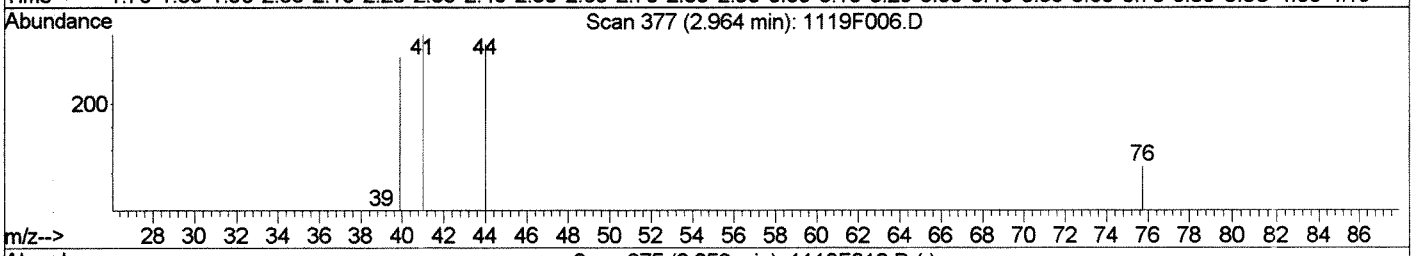
1119F006.D 111918MS46_8260.M Wed Nov 21 09:11:59 2018

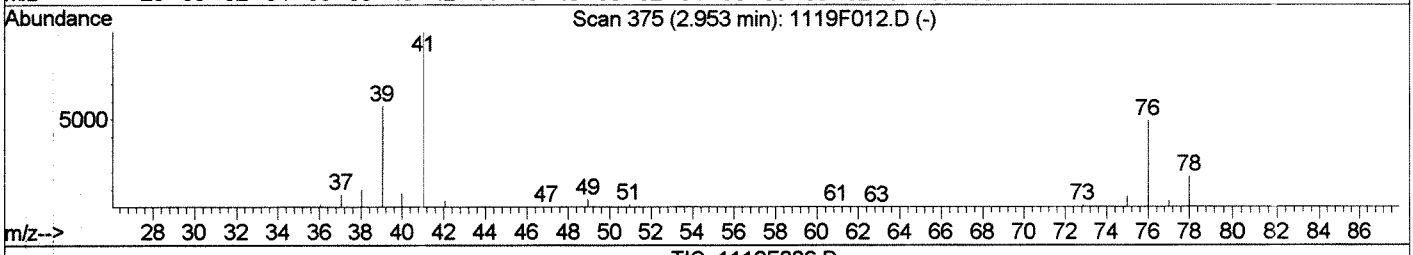
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:12 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(17) 3-Chloro-1-propene (T)

2.96min 0.08PPB m

response 162

Ion	Exp%	Act%
76.00	100	100
41.00	202.80	178.08
78.00	36.10	0.00#
0.00	0.00	0.00

Manual Integration:

After LM

Baseline correction

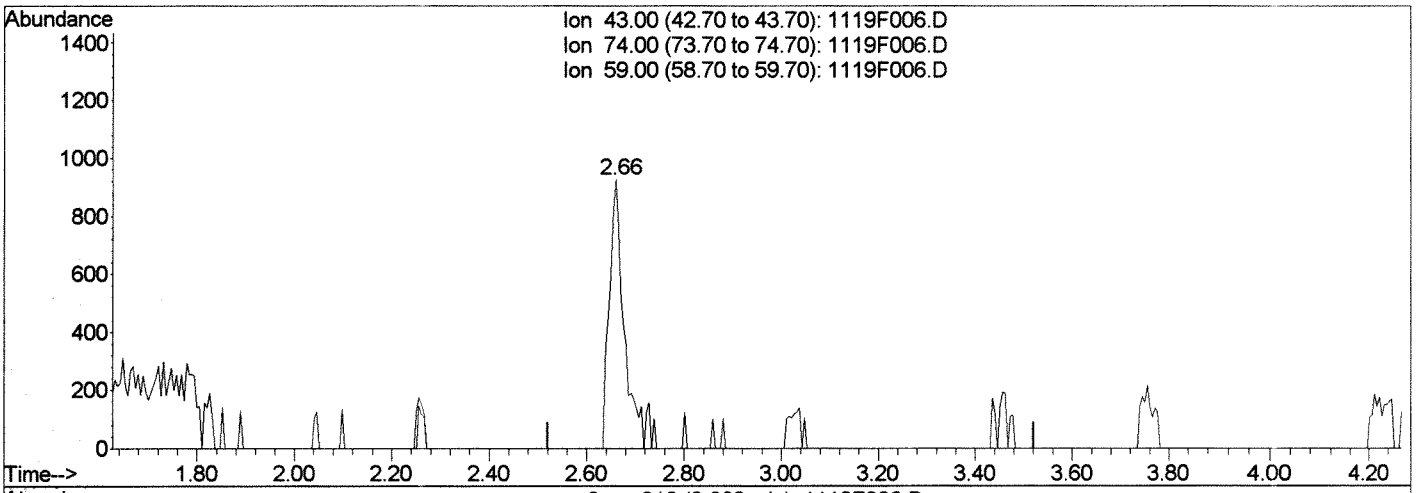
11/21/18

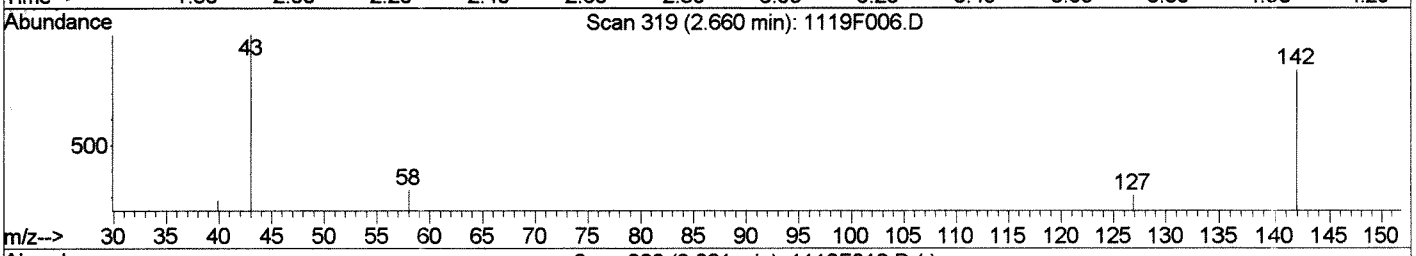
1119F006.D 111918MS46_8260.M Wed Nov 21 09:12:15 2018

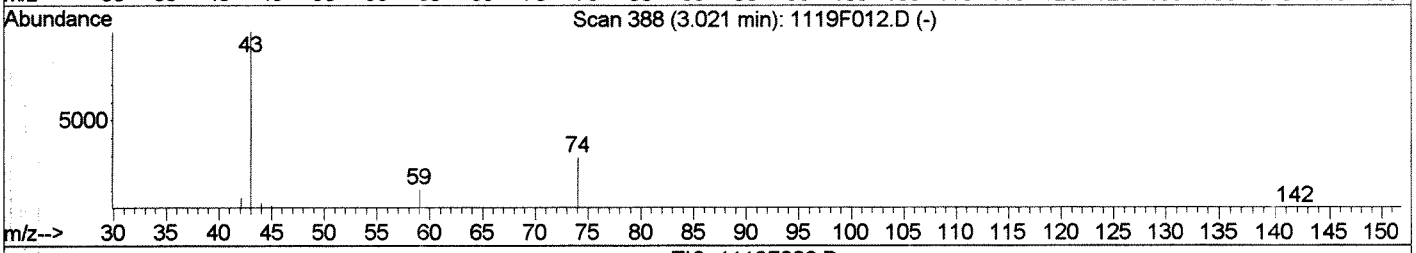
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:12 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(18) Methyl Acetate (T)

2.66min 1.27PPB

response 1927

Ion	Exp%	Act%
43.00	100	100
74.00	29.00	0.00
59.00	10.90	0.00
0.00	0.00	0.00

Manual Integration:

Before LM

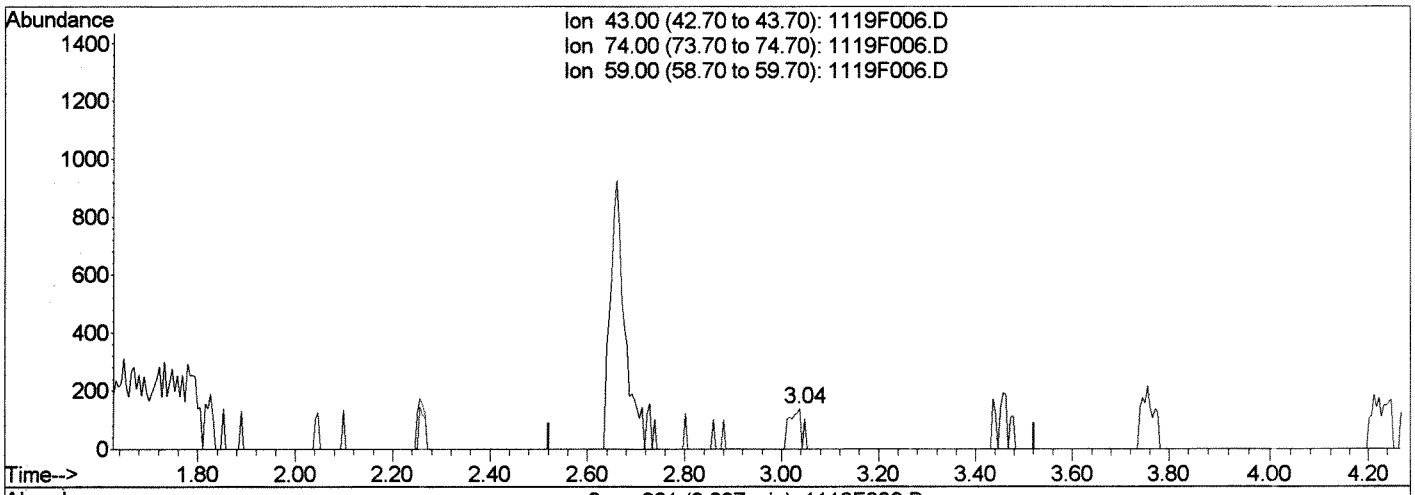
11/21/18

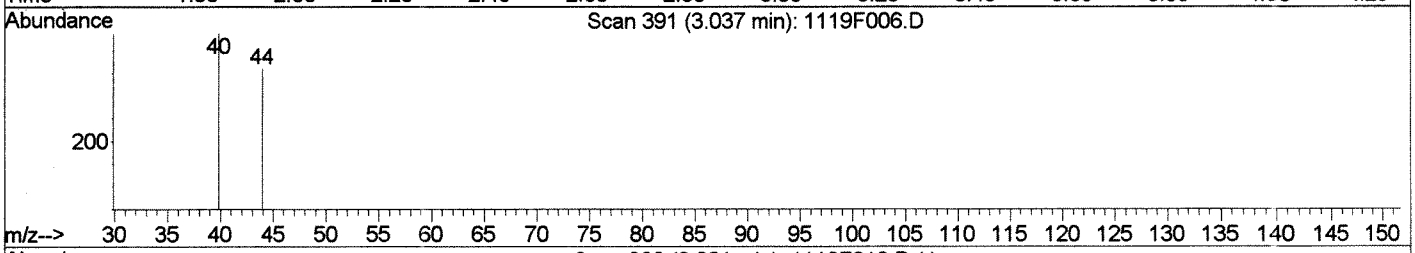
1119F006.D 111918MS46_8260.M Wed Nov 21 09:12:29 2018

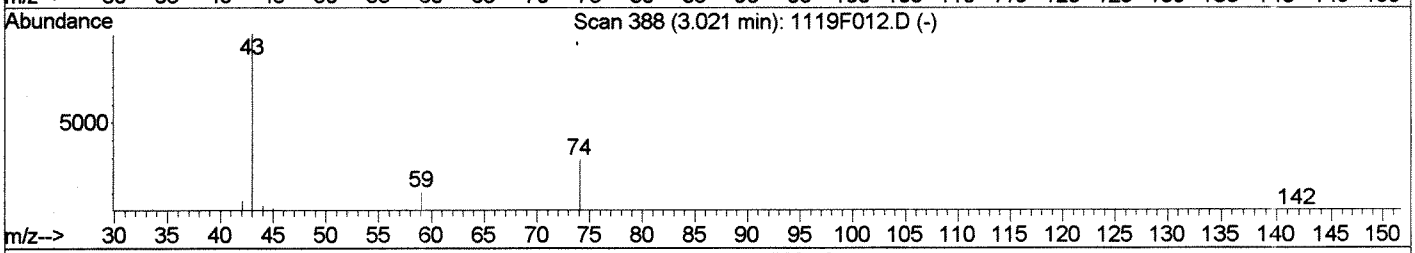
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:12 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(18) Methyl Acetate (T)

3.04min 0.17PPB m

response 253

Ion	Exp%	Act%
43.00	100	100
74.00	29.00	0.00
59.00	10.90	0.00
0.00	0.00	0.00

Manual Integration:

After LM

Baseline correction

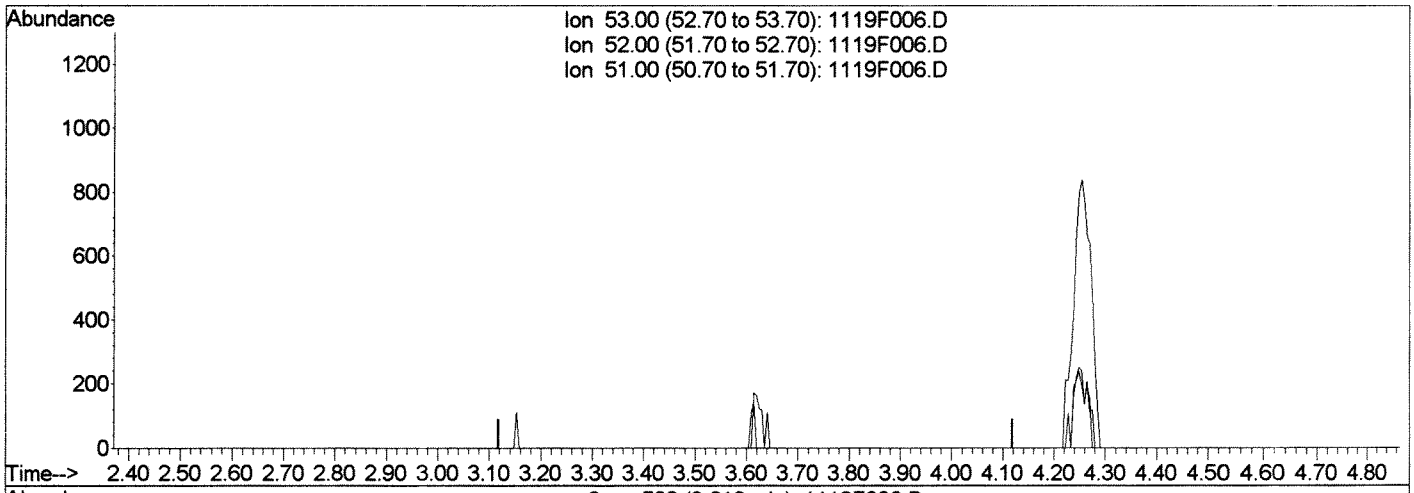
11/21/18

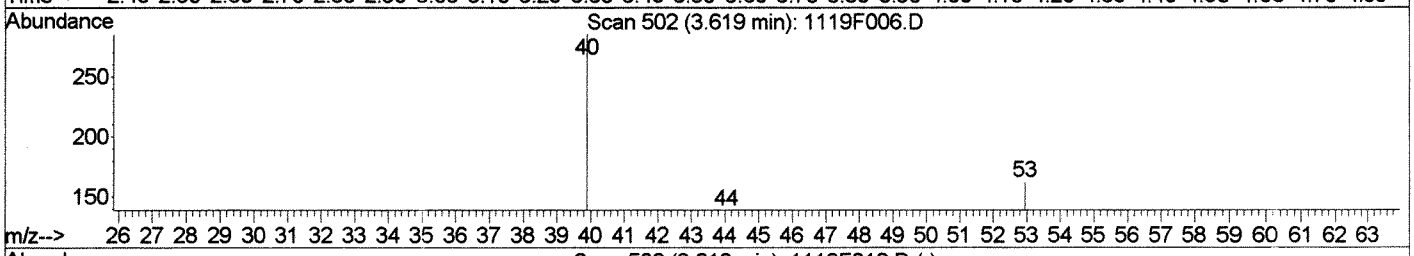
1119F006.D 111918MS46_8260.M Wed Nov 21 09:12:45 2018

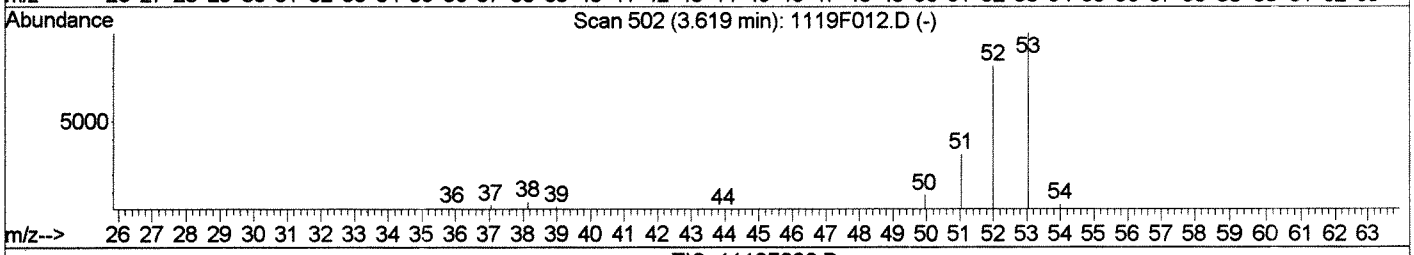
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:12 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(22) Acrylonitrile (T)

3.62min 0.00PPB

response 0

Ion	Exp%	Act%
53.00	100	0.00
52.00	81.20	0.00#
51.00	31.50	0.00#
0.00	0.00	0.00

Manual Integration:

Before LM

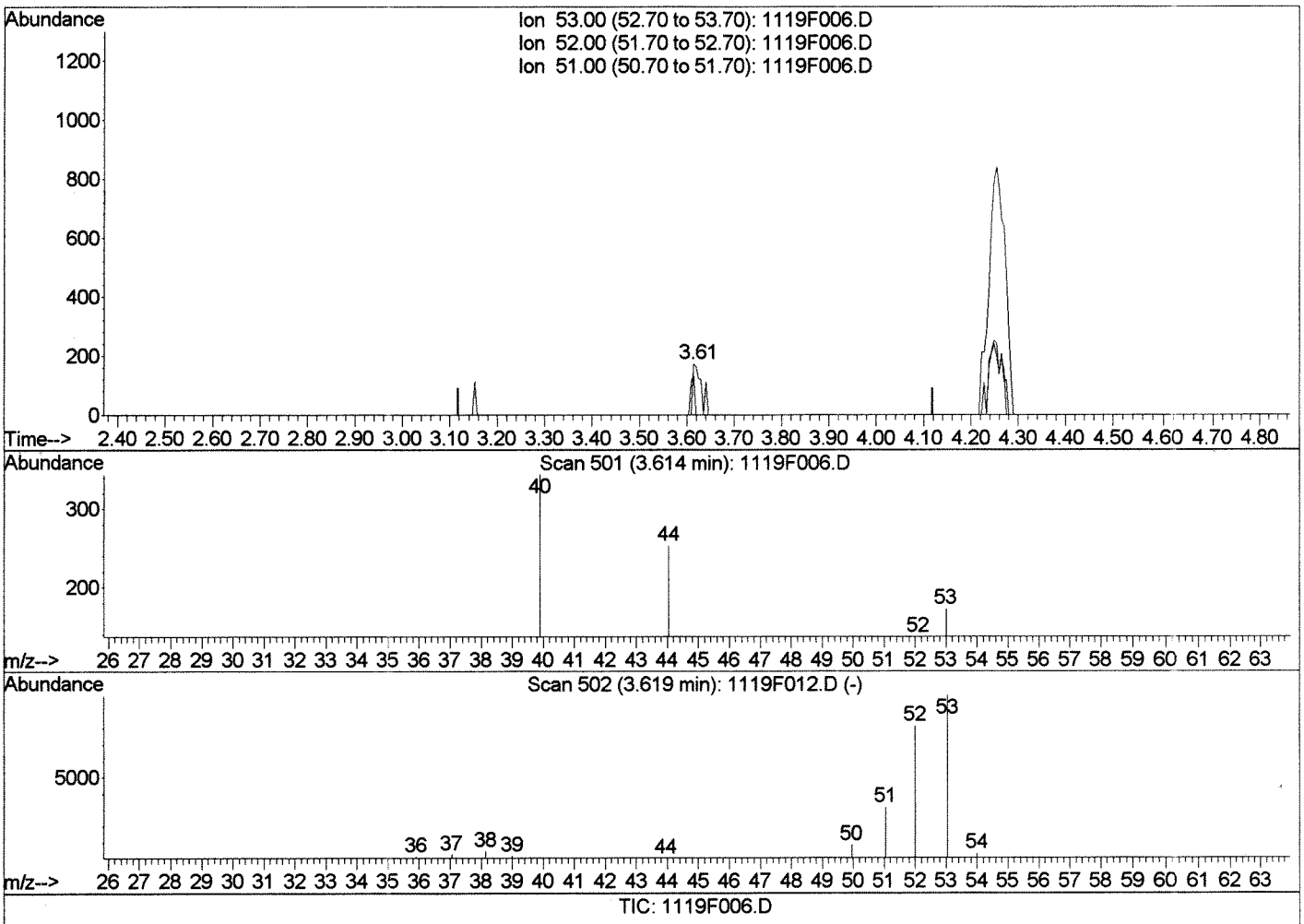
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:15:48 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:15 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(22) Acrylonitrile (T)

3.61min 0.23PPB m

response 181

Ion	Exp%	Act%
53.00	100	100
52.00	81.20	79.65
51.00	31.50	0.00#
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

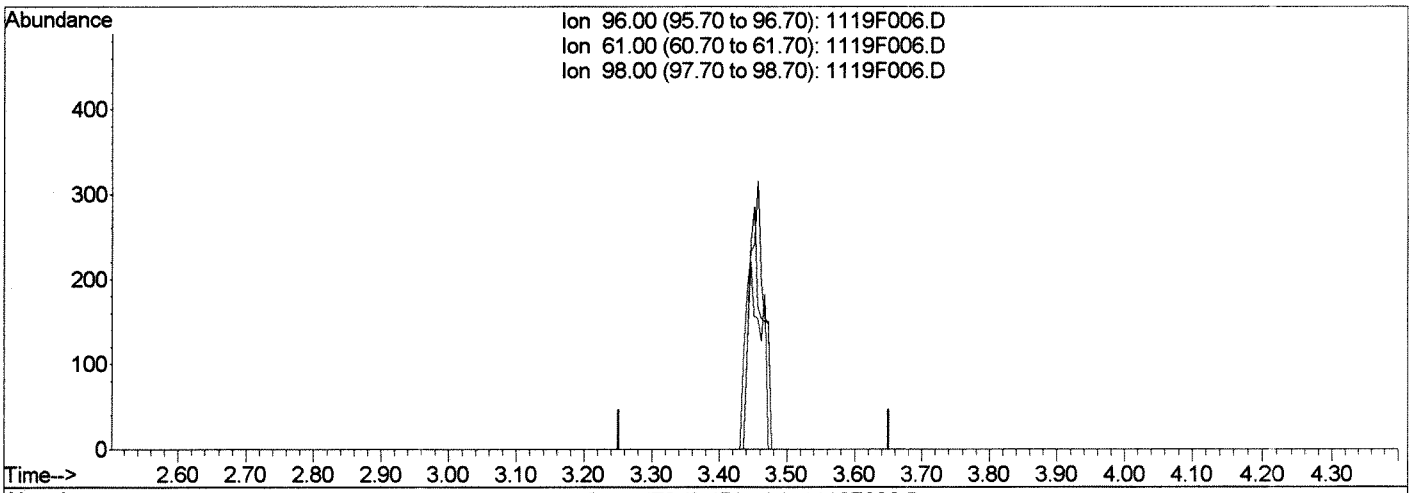
11/21/18

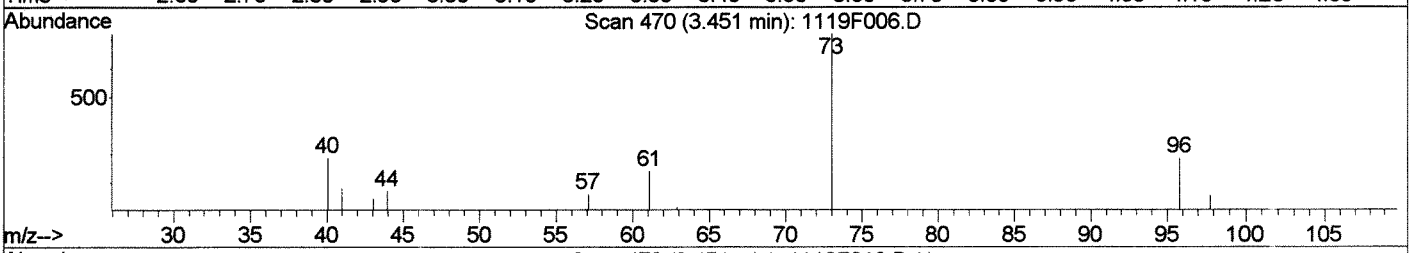
1119F006.D 111918MS46_8260.M Wed Nov 21 09:16:00 2018

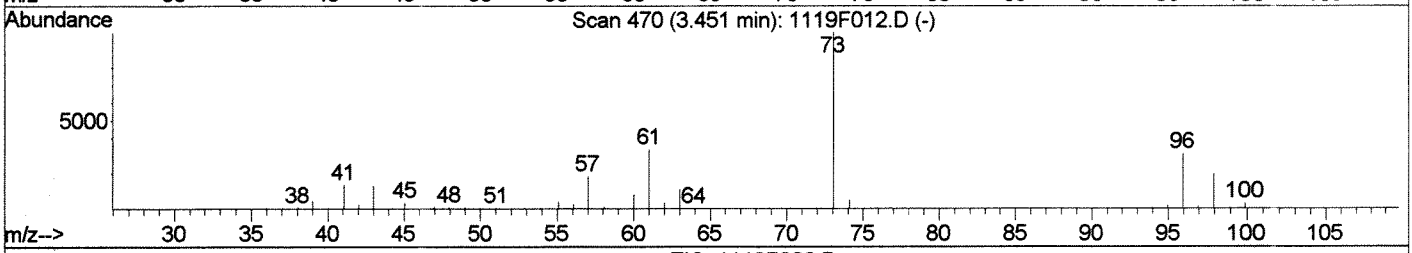
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:15 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(24) trans-1,2-Dichloroethene (T)

3.45min 0.00PPB

response 0

Ion	Exp%	Act%
96.00	100	0.00
61.00	107.70	0.00#
98.00	63.30	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

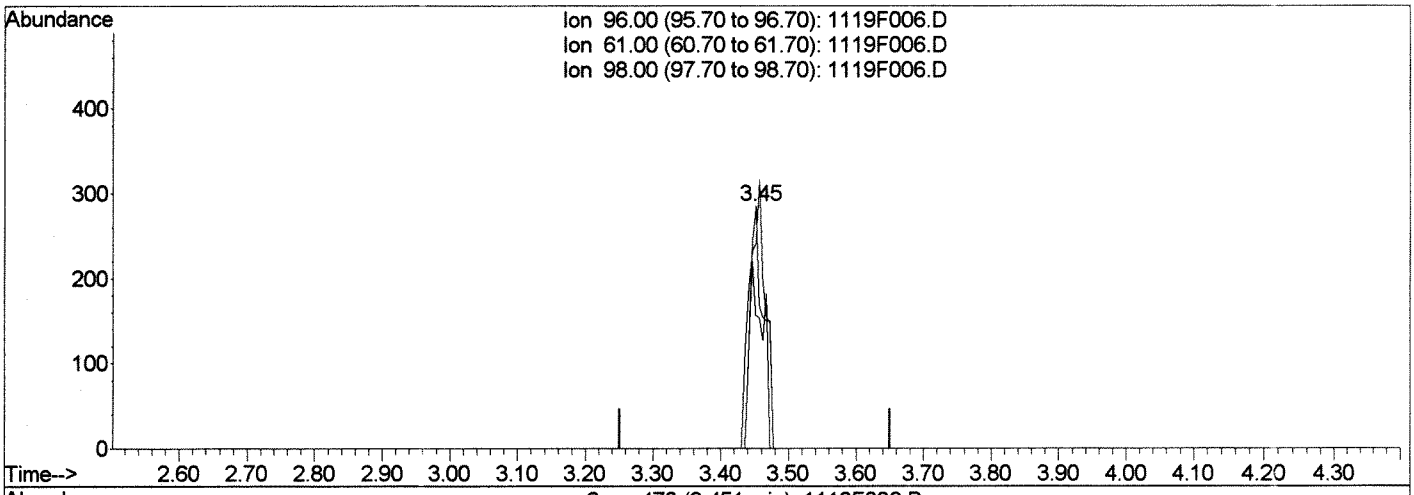
11/21/18

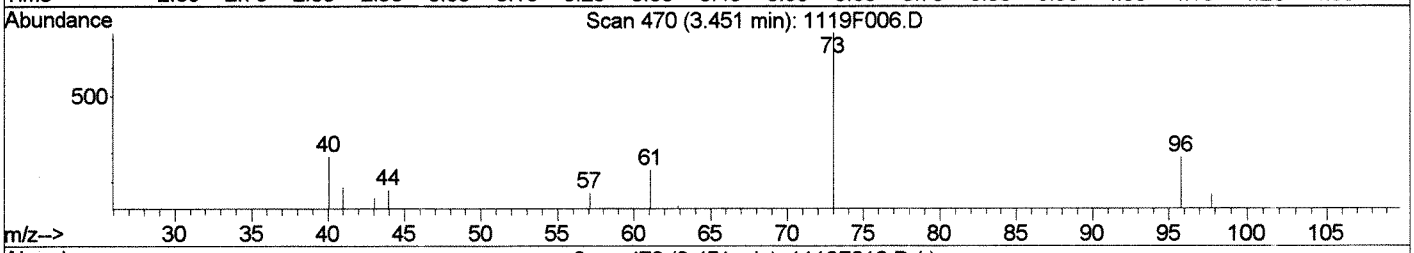
1119F006.D 111918MS46_8260.M Wed Nov 21 09:16:08 2018

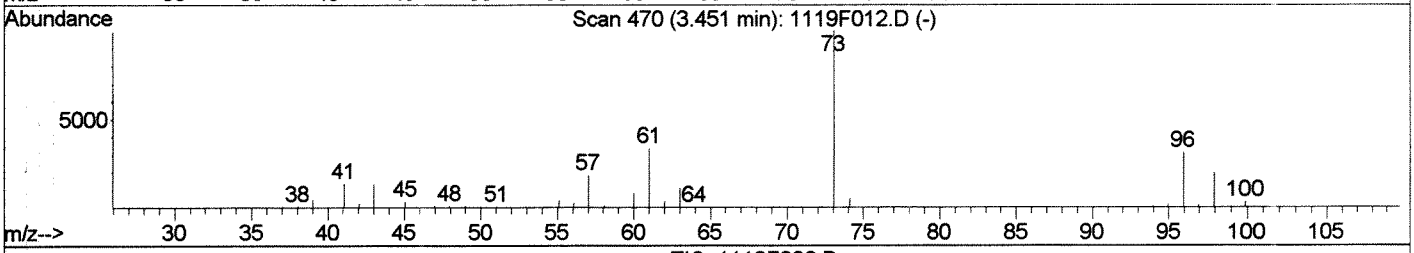
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:16 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(24) trans-1,2-Dichloroethene (T)

3.45min 0.10PPB m

response 397

Ion	Exp%	Act%
96.00	100	100
61.00	107.70	84.56
98.00	63.30	54.74
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

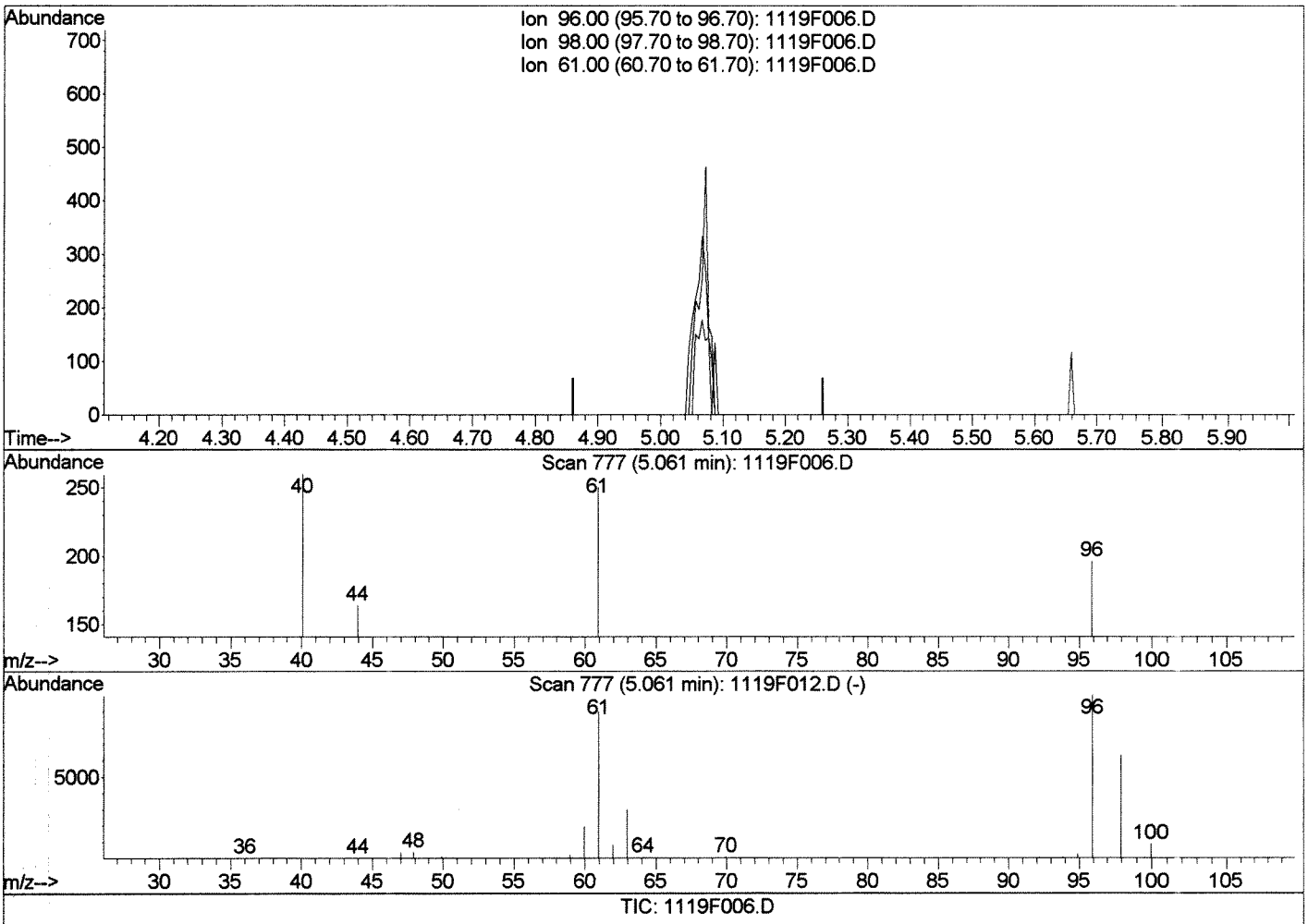
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:16:14 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:16 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(32) cis-1,2-Dichloroethene (T)

5.06min 0.00PPB

response 0

Ion	Exp%	Act%
96.00	100	0.00
98.00	63.00	0.00#
61.00	97.70	0.00#
0.00	0.00	0.00

Manual Integration:

Before LM

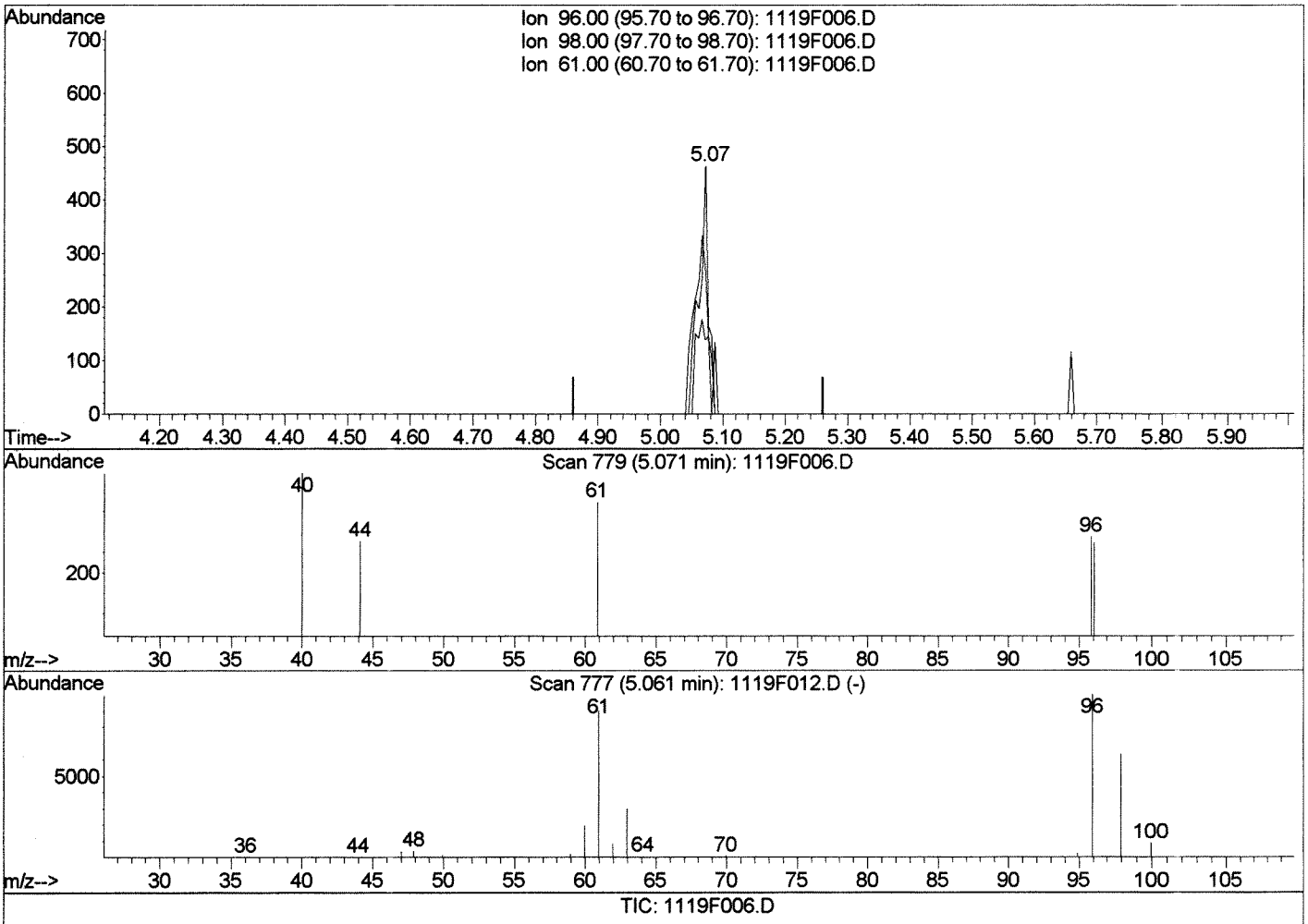
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:16:58 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:16 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(32) cis-1,2-Dichloroethene (T)

5.07min 0.10PPB m

response 491

Ion	Exp%	Act%
96.00	100	100
98.00	63.00	58.72
61.00	97.70	114.47
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak ✓

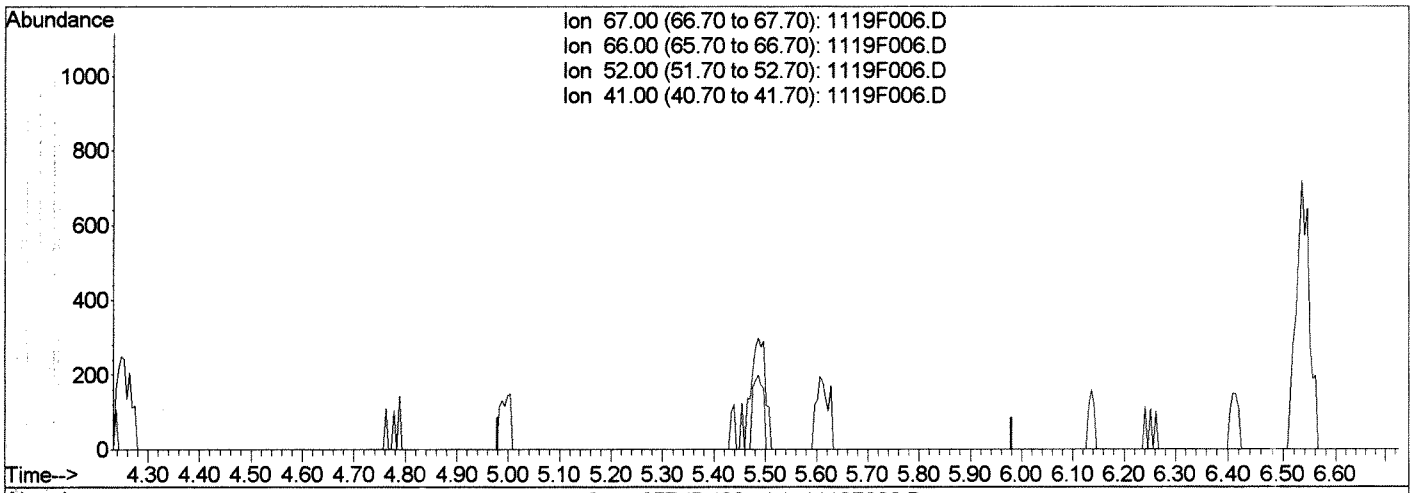
11/21/18

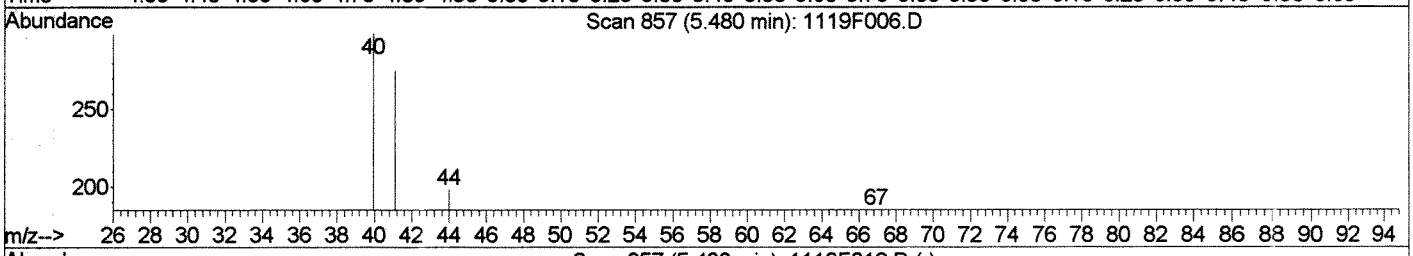
1119F006.D 111918MS46_8260.M Wed Nov 21 09:17:04 2018

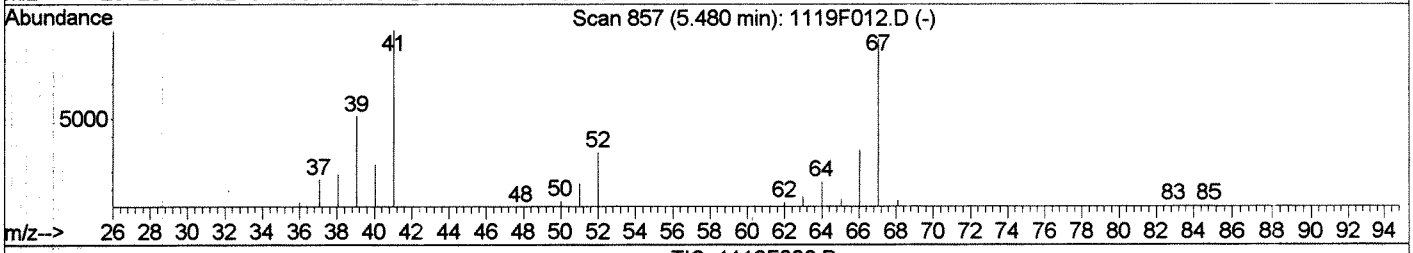
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:17 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(36) Methacrylonitrile (T)

5.48min 0.00PPB

response 0

Ion	Exp%	Act%
67.00	100	0.00
66.00	34.20	0.00#
52.00	32.70	0.00#
41.00	105.20	0.00#

Manual Integration:

Before

LM

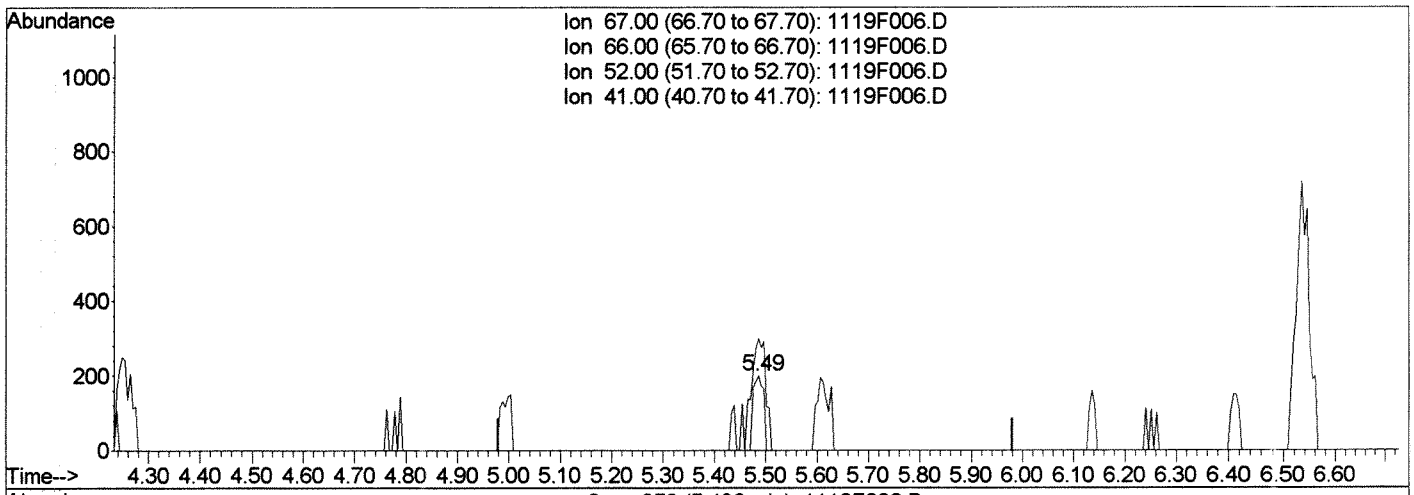
11/21/18

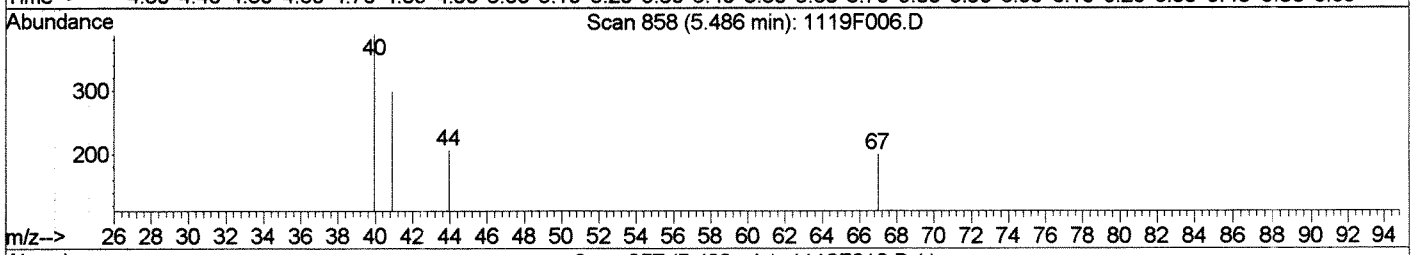
1119F006.D 111918MS46_8260.M Wed Nov 21 09:18:01 2018

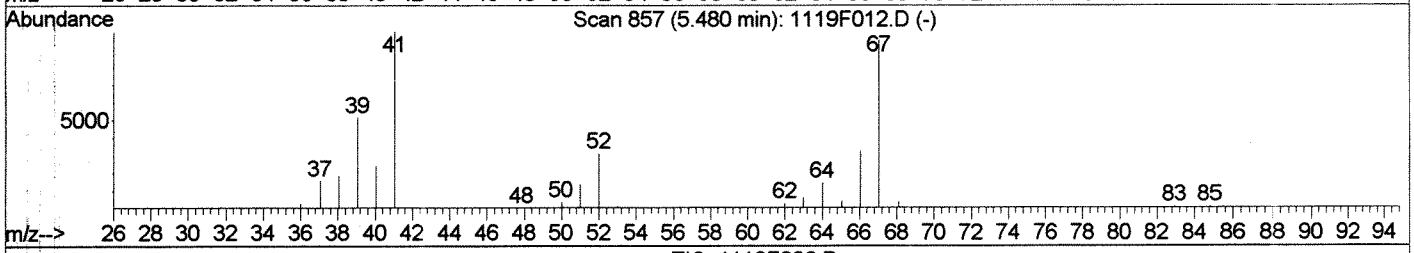
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:18 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(36) Methacrylonitrile (T)

5.49min 0.24PPB m

response 280

Ion	Exp%	Act%
67.00	100	100
66.00	34.20	0.00#
52.00	32.70	0.00#
41.00	105.20	149.50#

Manual Integration:

After LM

Missed peak

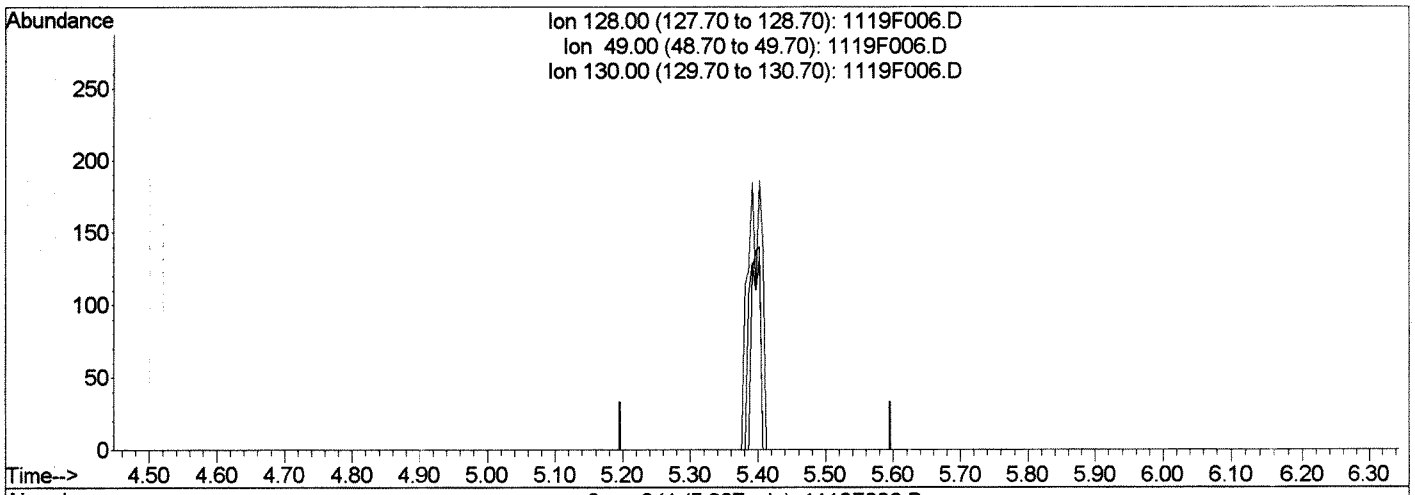
11/21/18

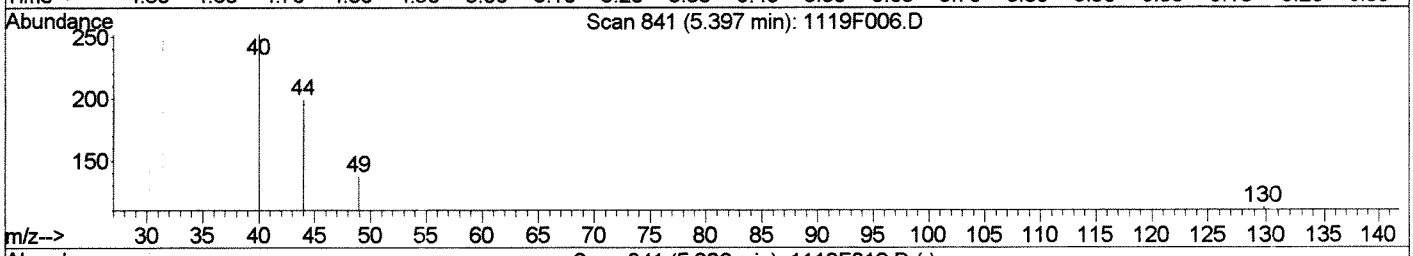
1119F006.D 111918MS46_8260.M Wed Nov 21 09:18:11 2018

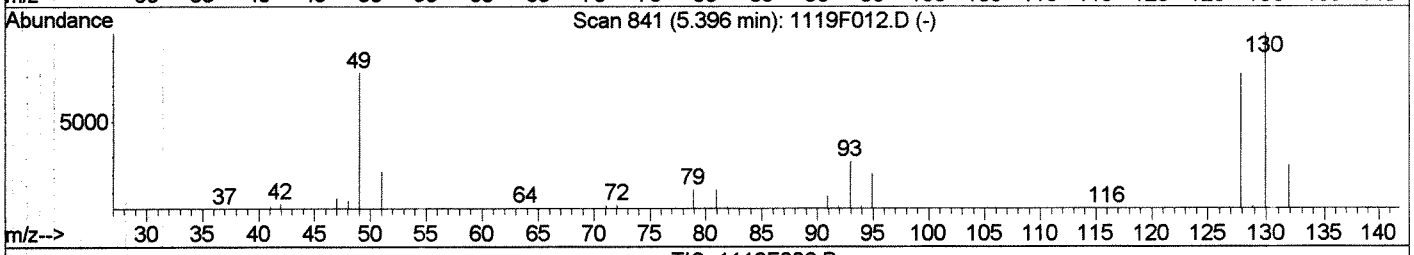
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:18 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(37) Bromochloromethane (T)

5.40min 0.00PPB

response 0

Ion	Exp%	Act%
128.00	100	0.00
49.00	100.70	0.00#
130.00	130.00	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

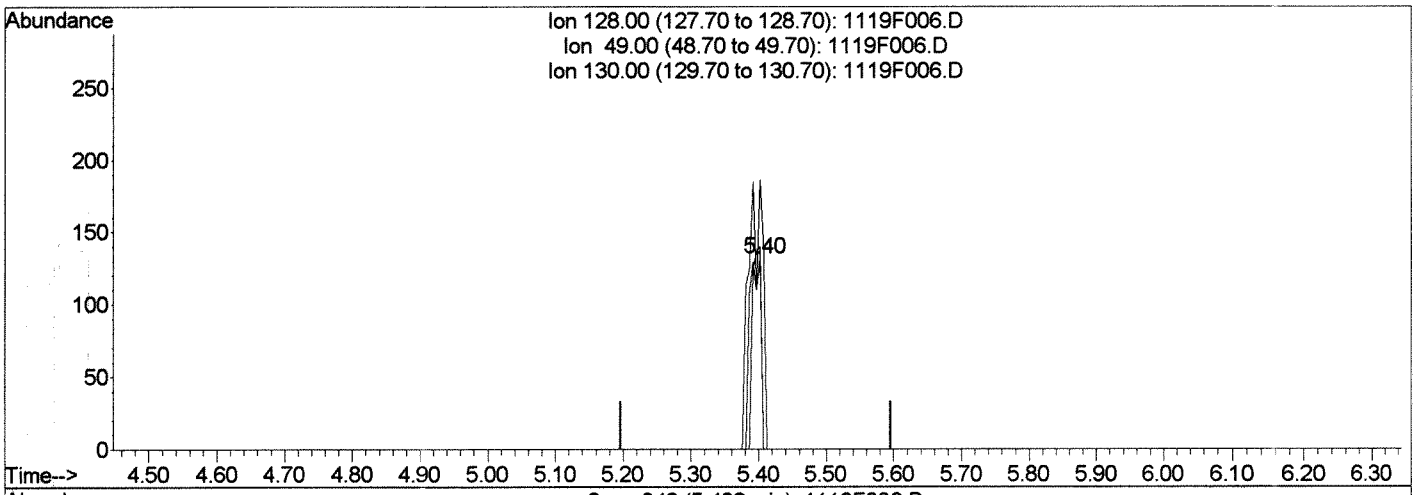
11/21/18

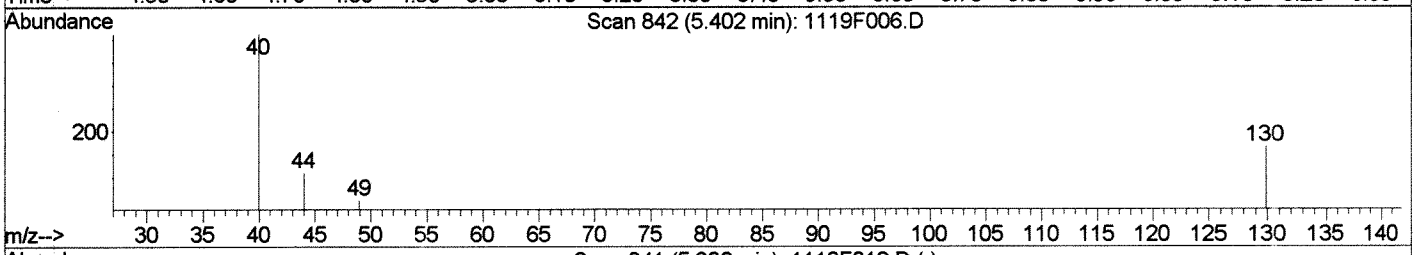
1119F006.D 111918MS46_8260.M Wed Nov 21 09:18:21 2018

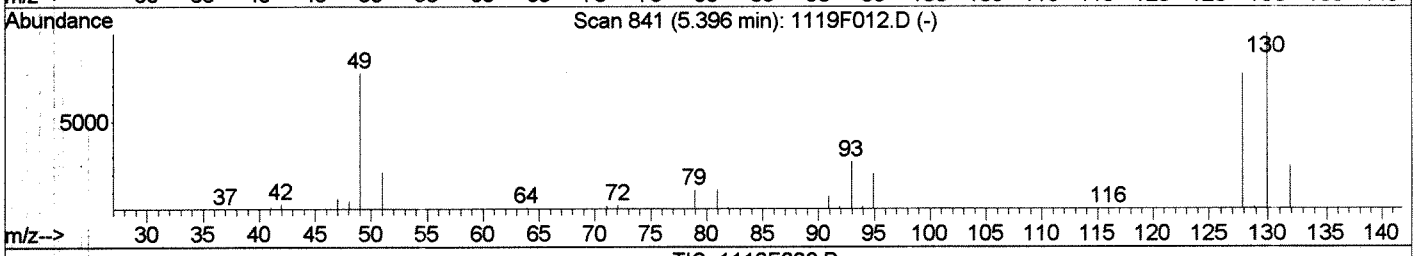
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:18 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(37) Bromochloromethane (T)

5.40min 0.06PPB m

response 151

Ion	Exp%	Act%
128.00	100	100
49.00	100.70	106.06
130.00	130.00	140.91
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak ✓

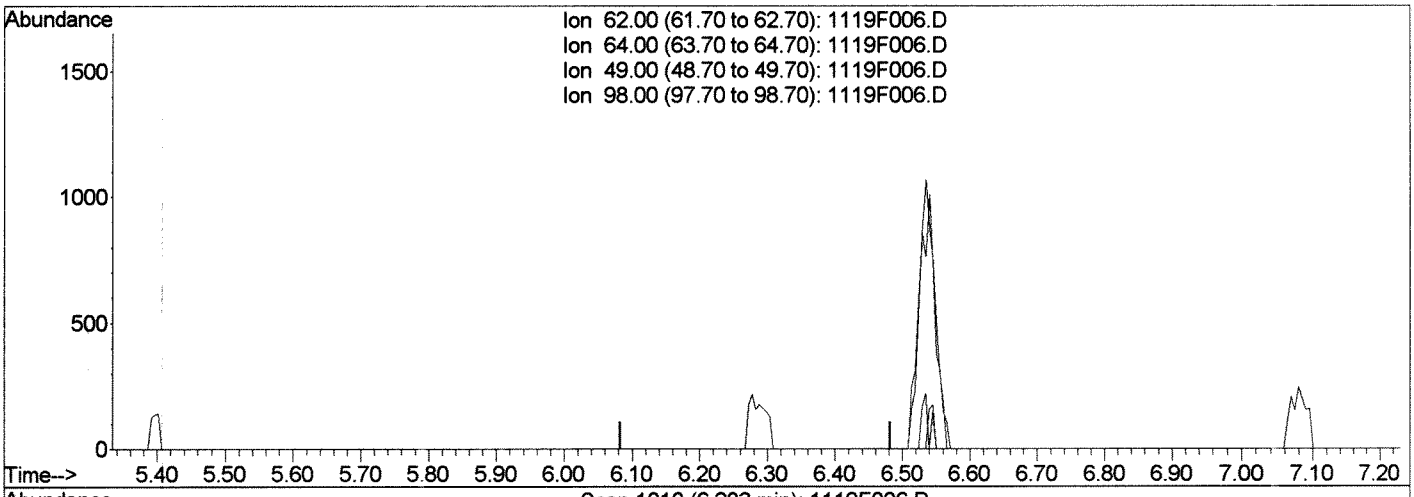
11/21/18

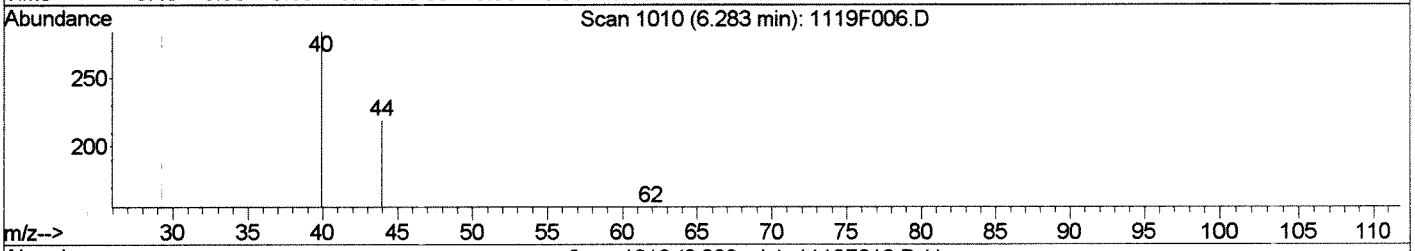
1119F006.D 111918MS46_8260.M Wed Nov 21 09:18:33 2018

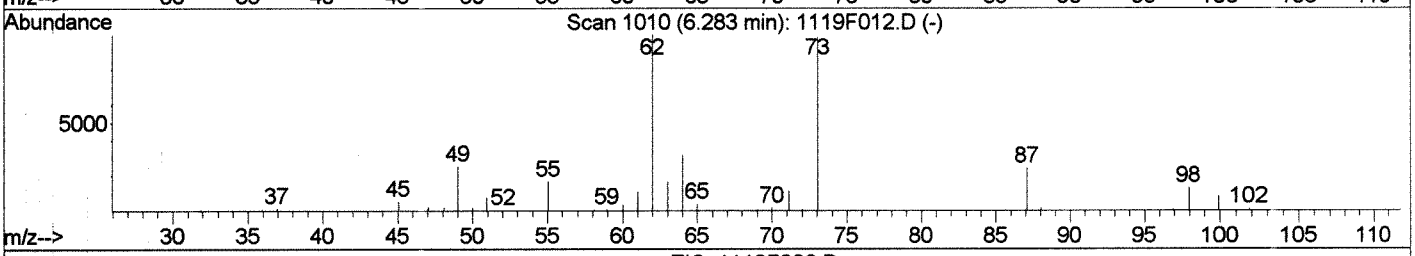
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:18 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(48) 1,2-Dichloroethane (T)

6.28min 0.00PPB

response 0

Ion	Exp%	Act%
62.00	100	0.00
64.00	31.60	0.00#
49.00	25.20	0.00
98.00	12.90	0.00

Manual Integration:

Before LM

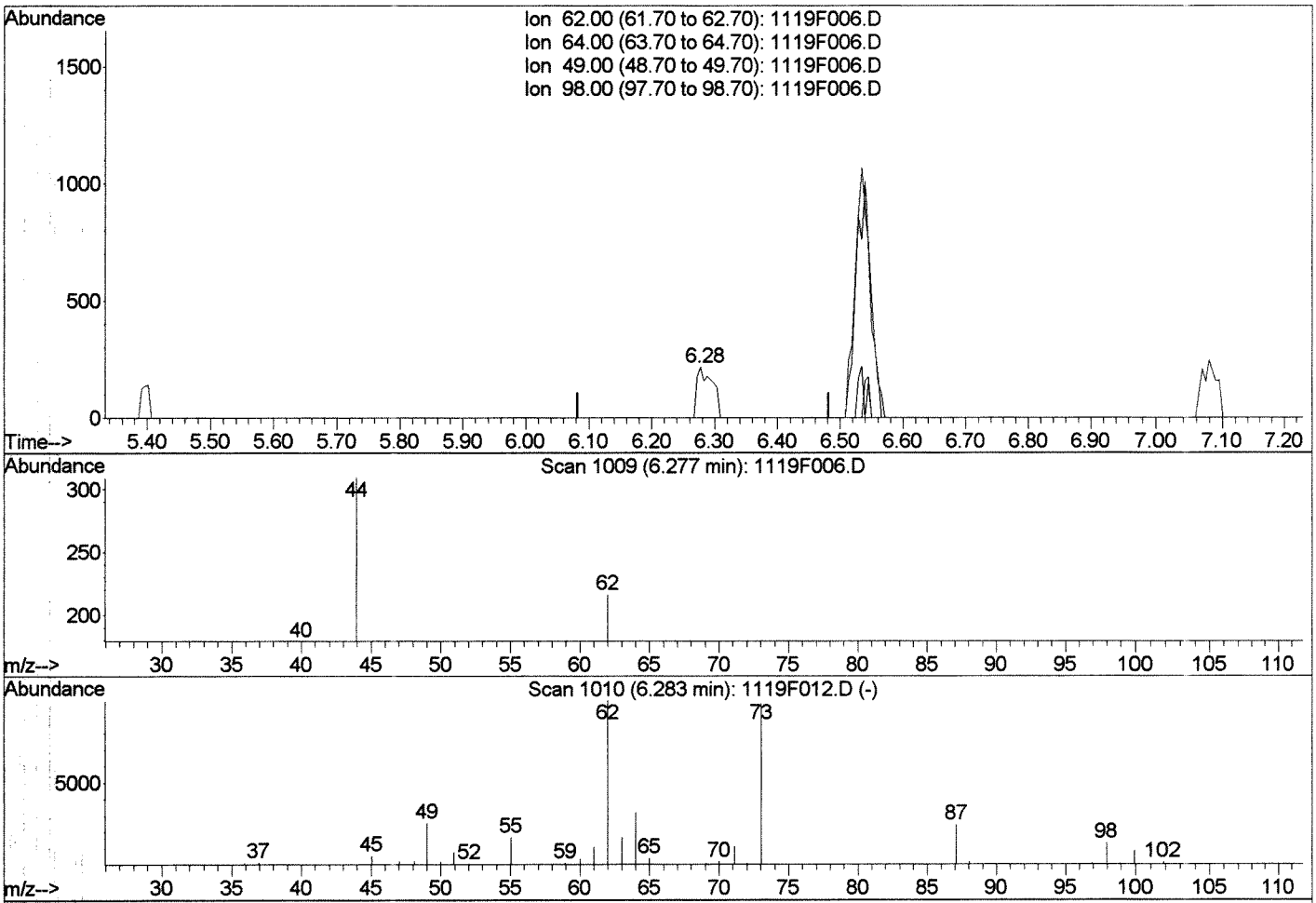
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:19:27 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:19 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(48) 1,2-Dichloroethane (T)

6.28min 0.09PPB m

response 365

Ion	Exp%	Act%
62.00	100	100
64.00	31.60	0.00#
49.00	25.20	0.00
98.00	12.90	0.00

Manual Integration:

After LM

Missed peak

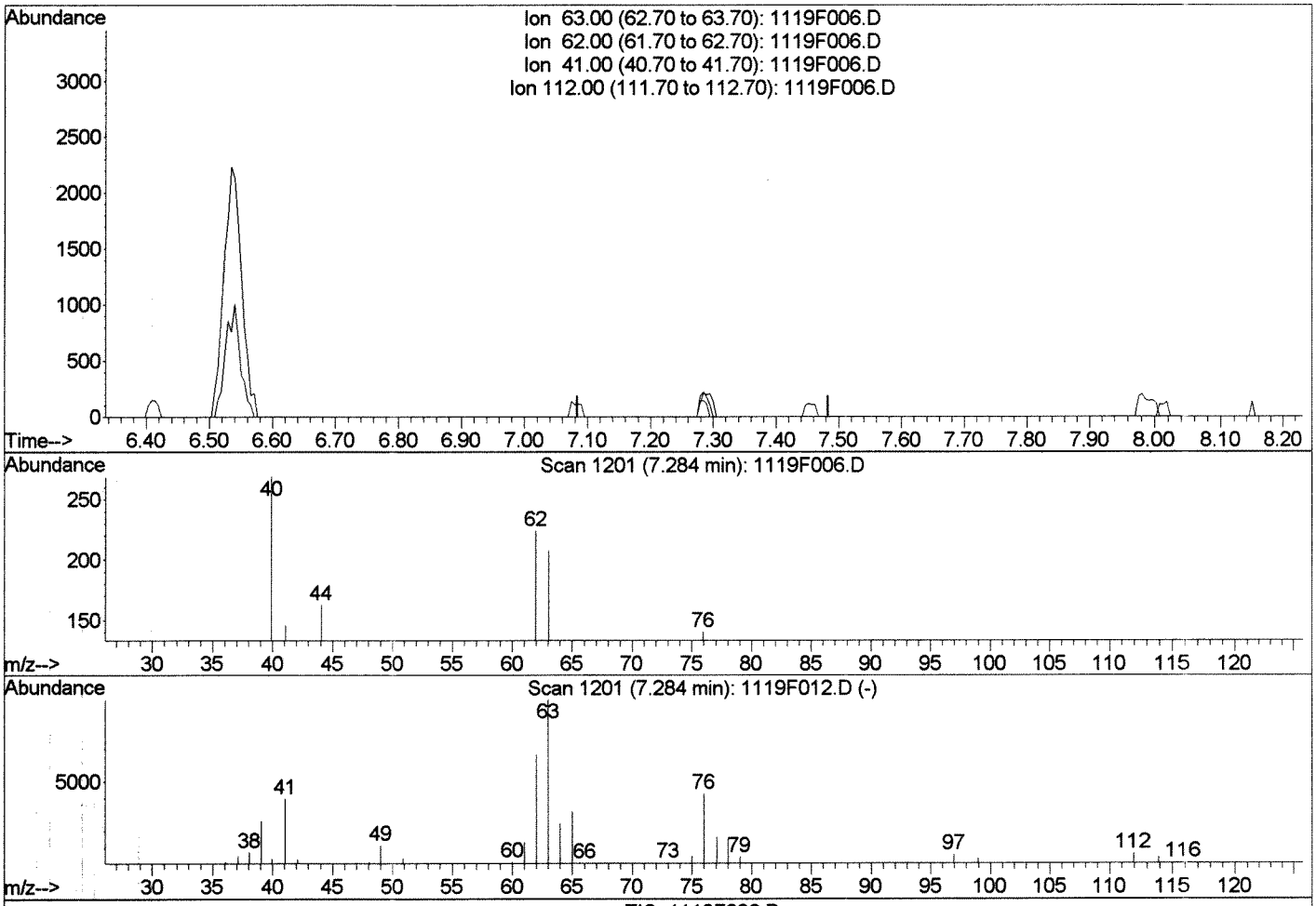
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:19:45 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:19 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(52) 1,2-Dichloropropane (CT)

7.28min 0.00PPB

response 0

Ion	Exp%	Act%
63.00	100	0.00
62.00	66.50	0.00#
41.00	39.60	0.00#
112.00	6.50	0.00

Manual Integration:

Before

LM

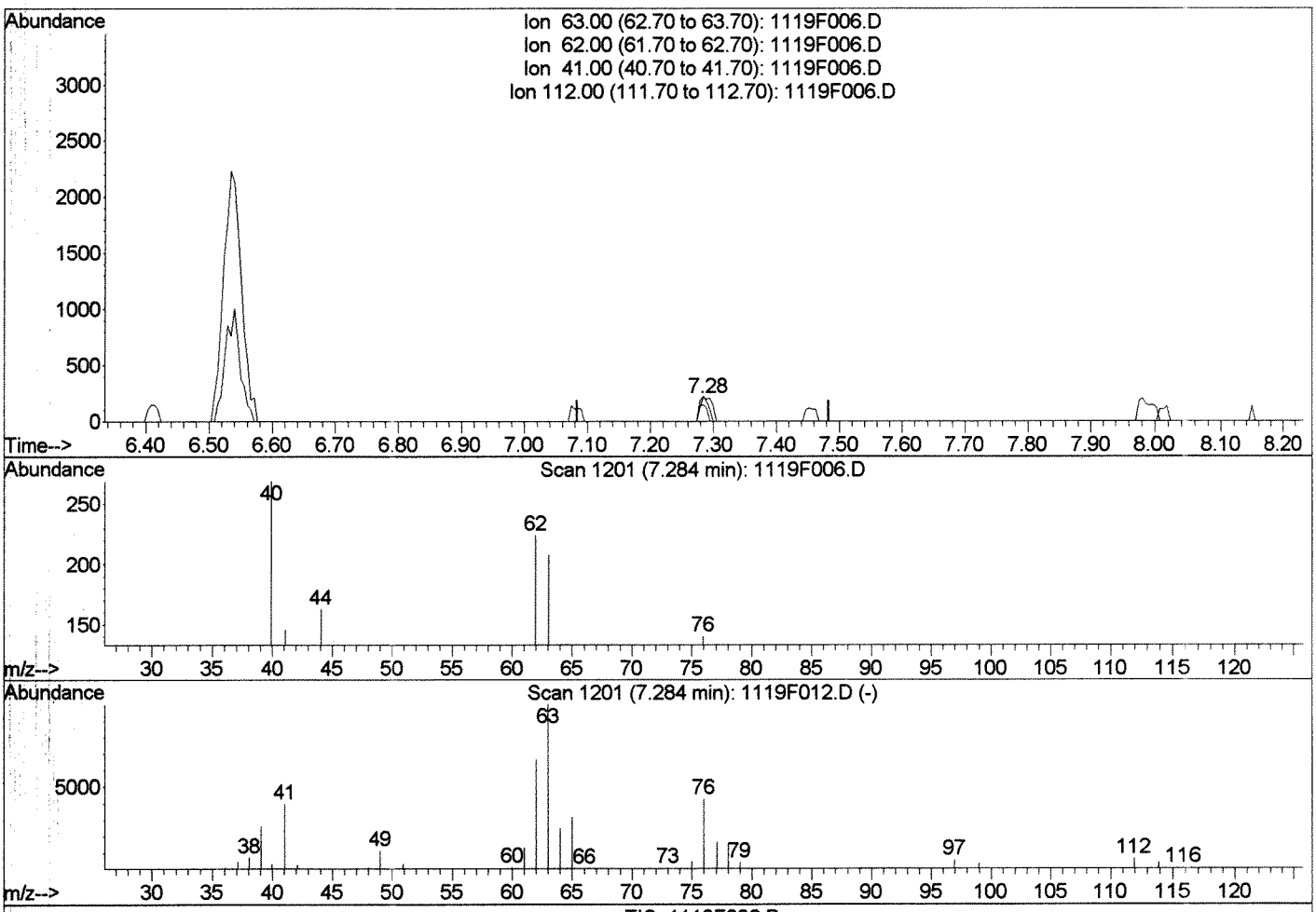
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:20:06 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:20 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(52) 1,2-Dichloropropane (CT)

7.28min 0.07PPB m

response 276

Ion	Exp%	Act%
63.00	100	100
62.00	66.50	107.69#
41.00	39.60	70.19#
112.00	6.50	0.00

Manual Integration:

After LM

Missed peak

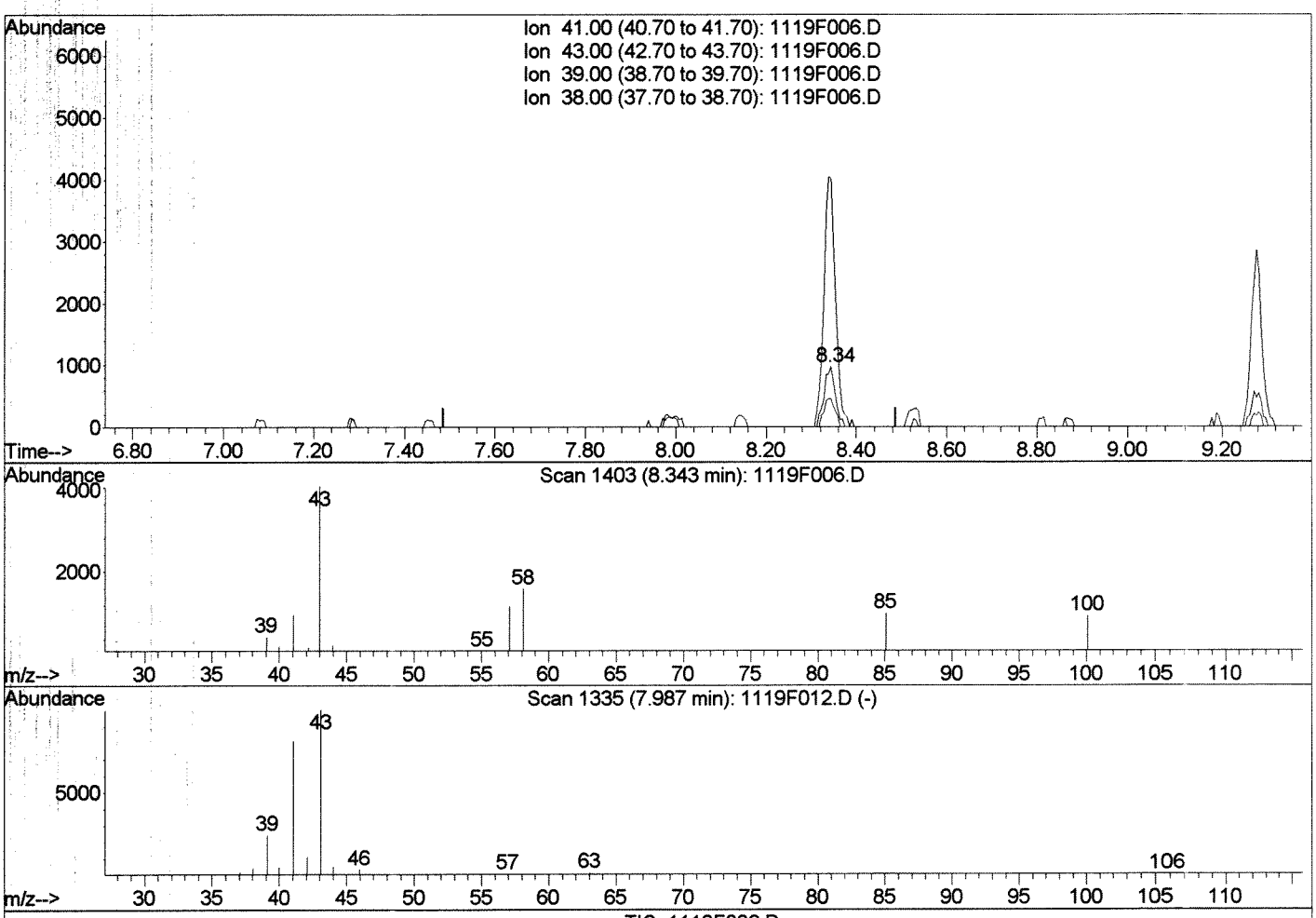
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:20:14 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:20 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(57) 2-Nitropropane (T)

8.34min 3.36PPB

response 1696

Ion	Exp%	Act%
41.00	100	100
43.00	122.90	411.81#
39.00	29.70	47.02
38.00	5.70	0.00

Manual Integration:

Before

LM

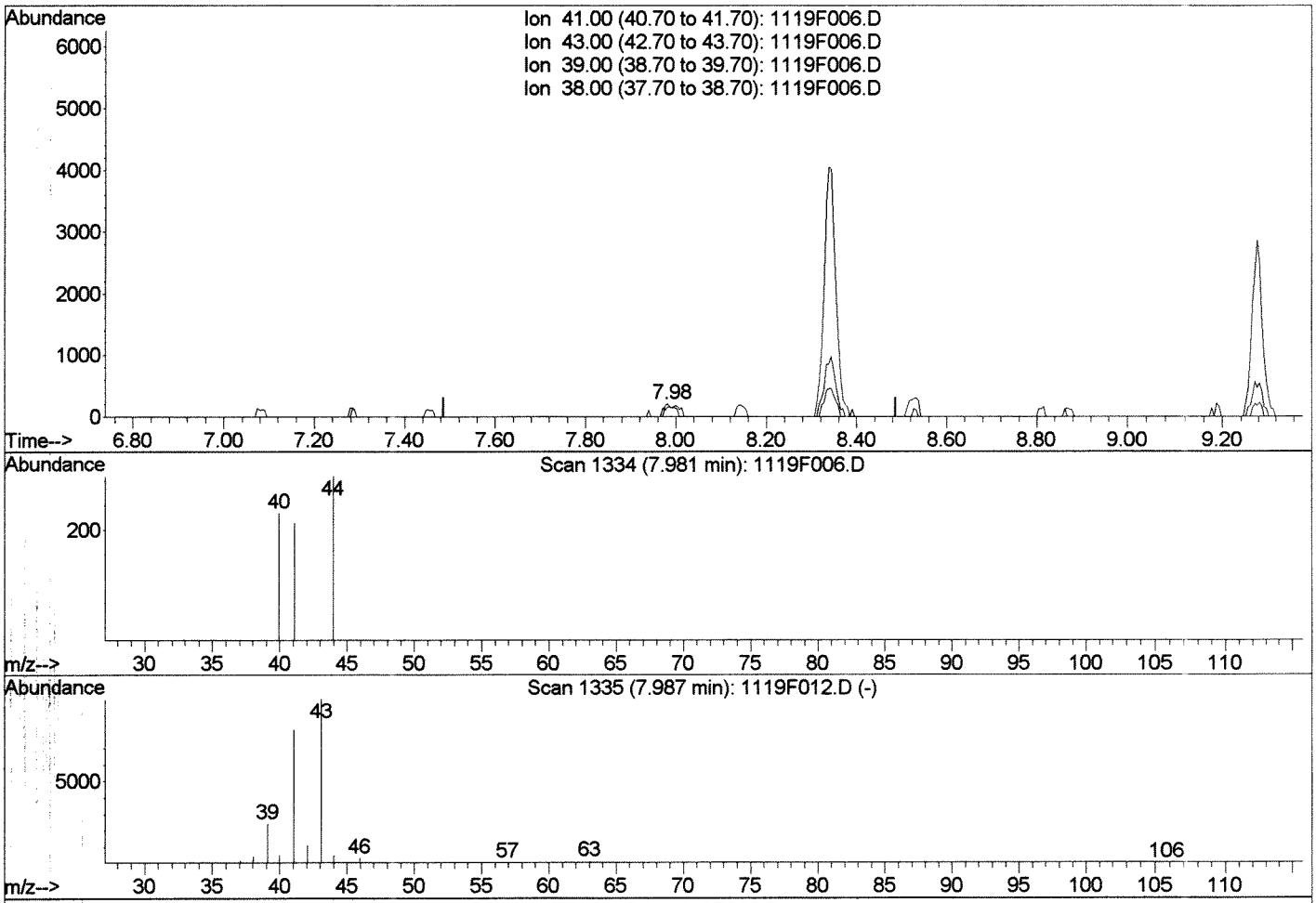
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:20:46 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:20 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(57) 2-Nitropropane (T)

7.98min 0.59PPB m

response 297

Ion	Exp%	Act%
41.00	100	100
43.00	122.90	76.35#
39.00	29.70	0.00
38.00	5.70	0.00

Manual Integration:

After LM

Baseline correction

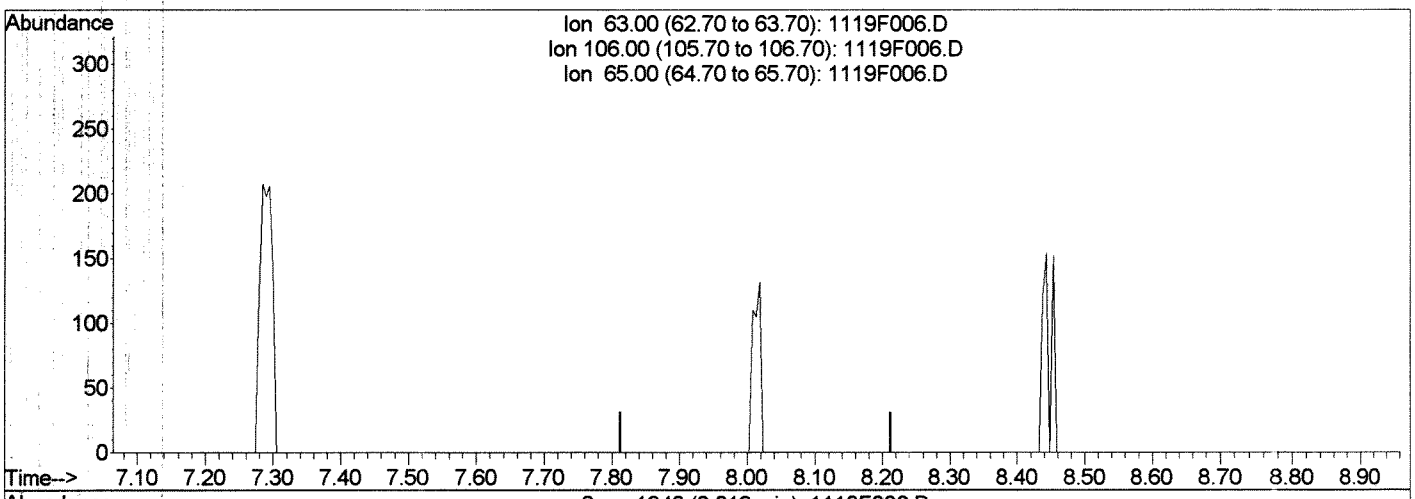
11/21/18

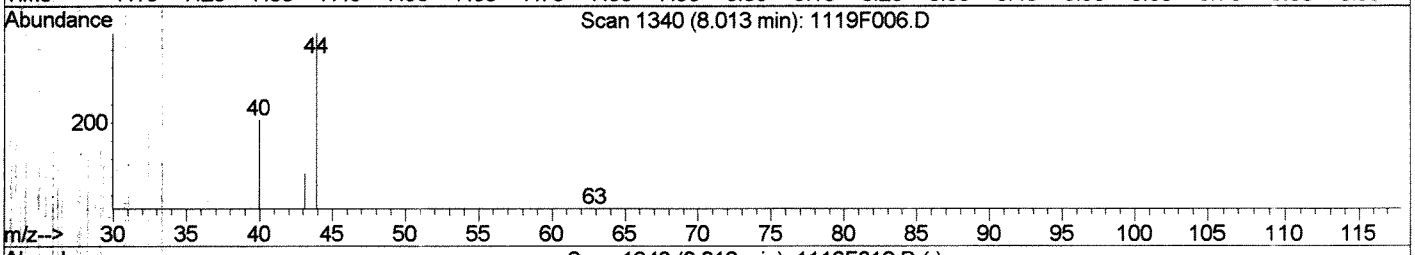
1119F006.D 111918MS46_8260.M Wed Nov 21 09:21:10 2018

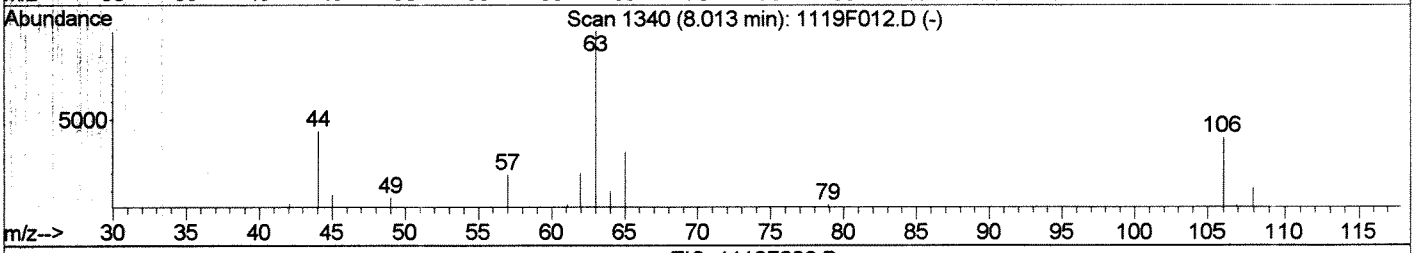
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:20 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(58) 2-Chloroethyl Vinyl Ether (T)

8.01min 0.00PPB

response 0

Ion	Exp%	Act%
63.00	100	0.00
106.00	39.90	0.00#
65.00	32.10	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

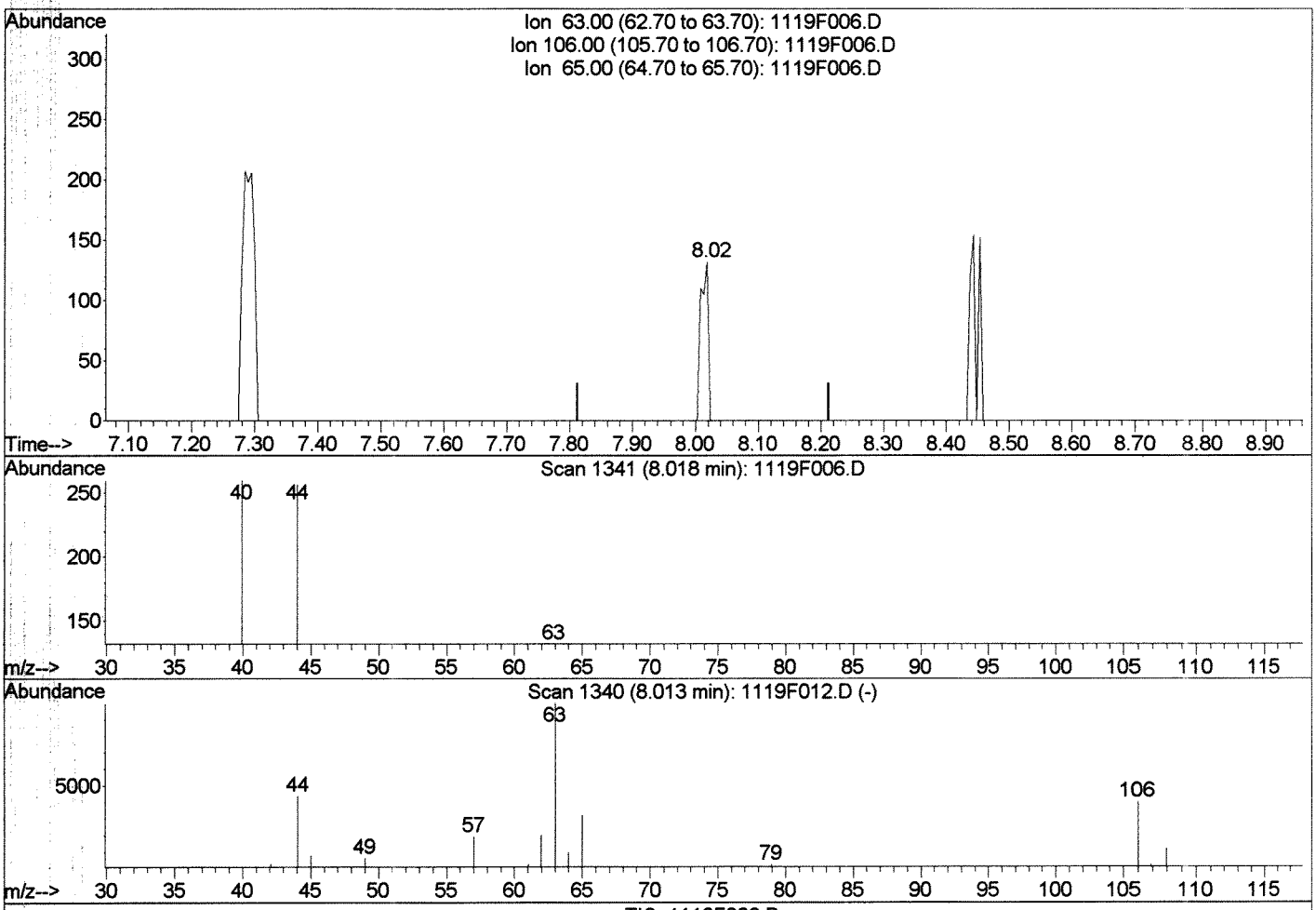
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:21:16 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:21 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(58) 2-Chloroethyl Vinyl Ether (T)

8.02min 0.05PPB m

response 109

Ion	Exp%	Act%
63.00	100	100
106.00	39.90	0.00#
65.00	32.10	0.00#
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

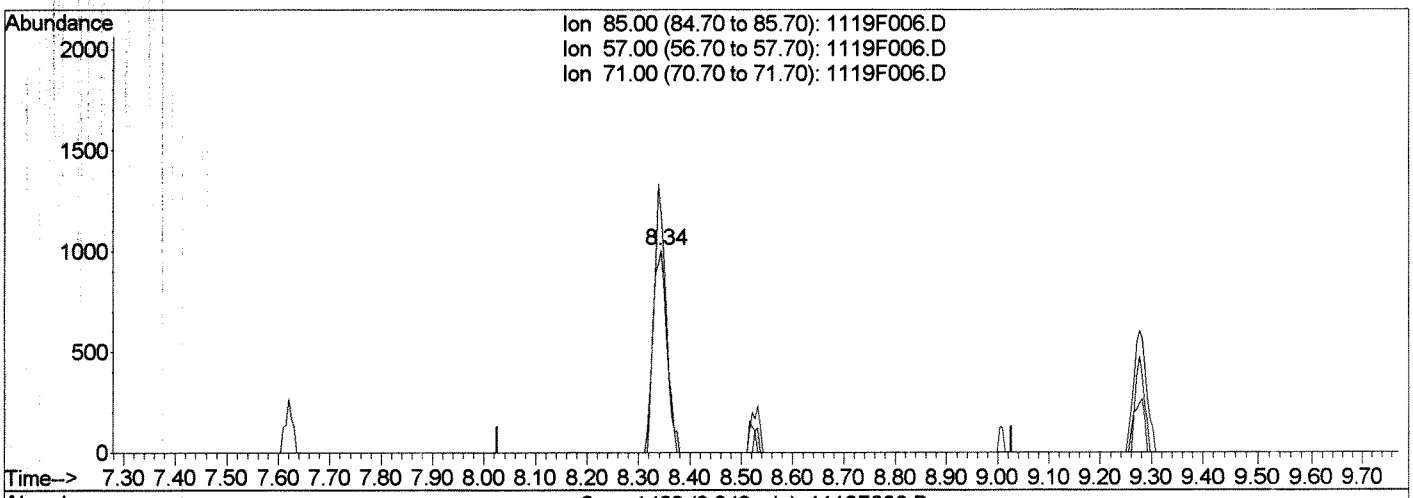
11/21/18

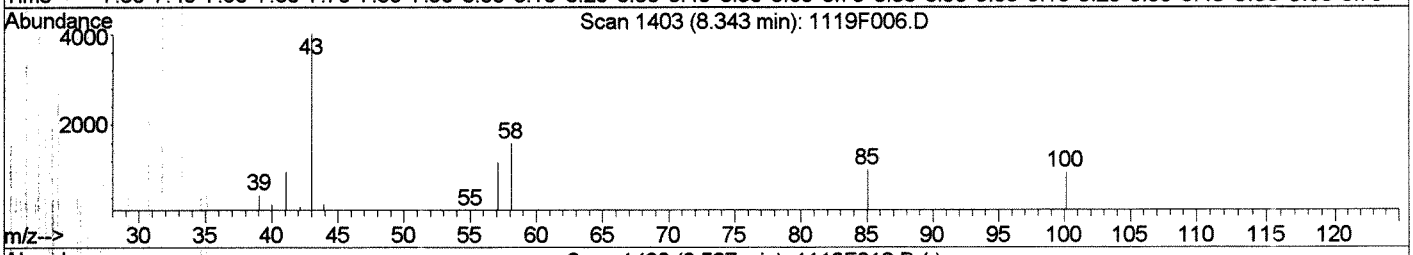
1119F006.D 111918MS46_8260.M Wed Nov 21 09:21:22 2018

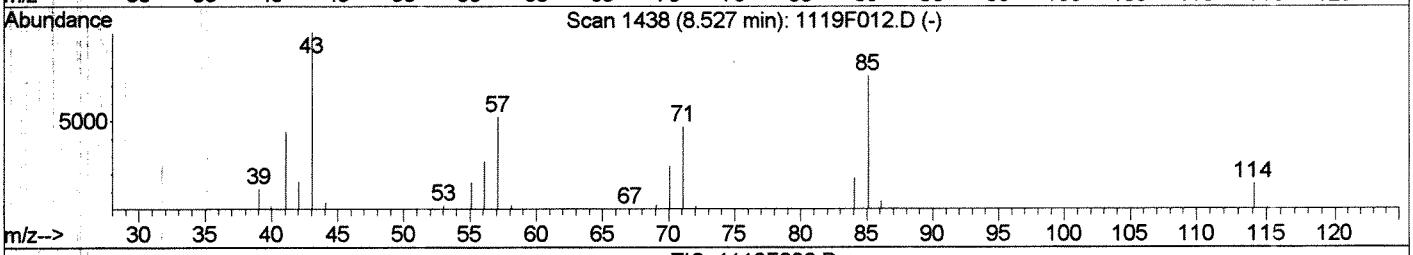
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:21 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(64) n-Octane (T)

8.34min 0.74PPB

response 1835

Ion	Exp%	Act%
85.00	100	100
57.00	69.30	117.18#
71.00	61.90	0.00#
0.00	0.00	0.00

Manual Integration:

Before LM

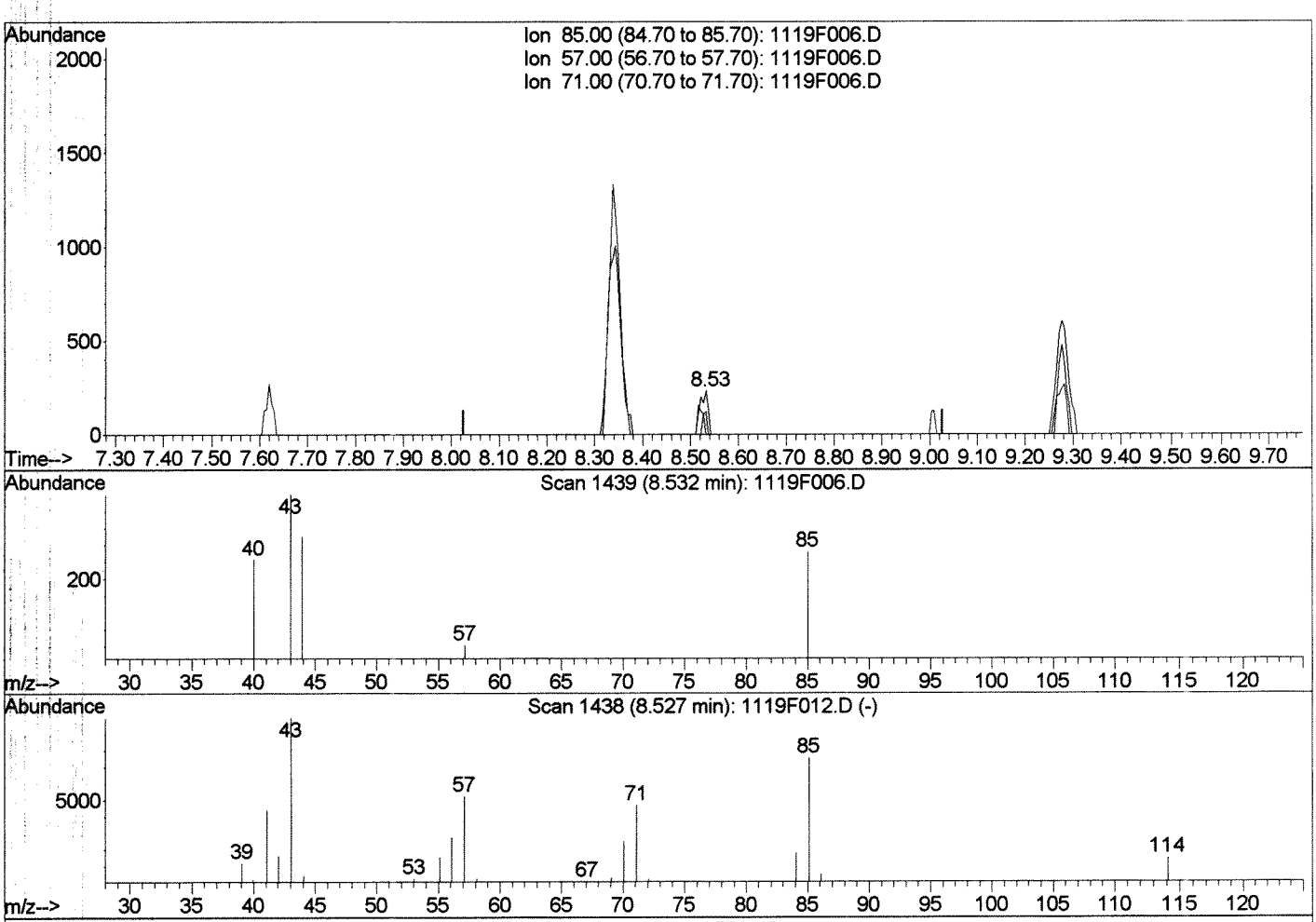
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:21:51 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:21 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(64) n-Octane (T)

8.53min 0.11PPB m

response 265

Ion	Exp%	Act%
85.00	100	100
57.00	69.30	52.59
71.00	61.90	0.00#
0.00	0.00	0.00

Manual Integration:

After LM

Baseline correction

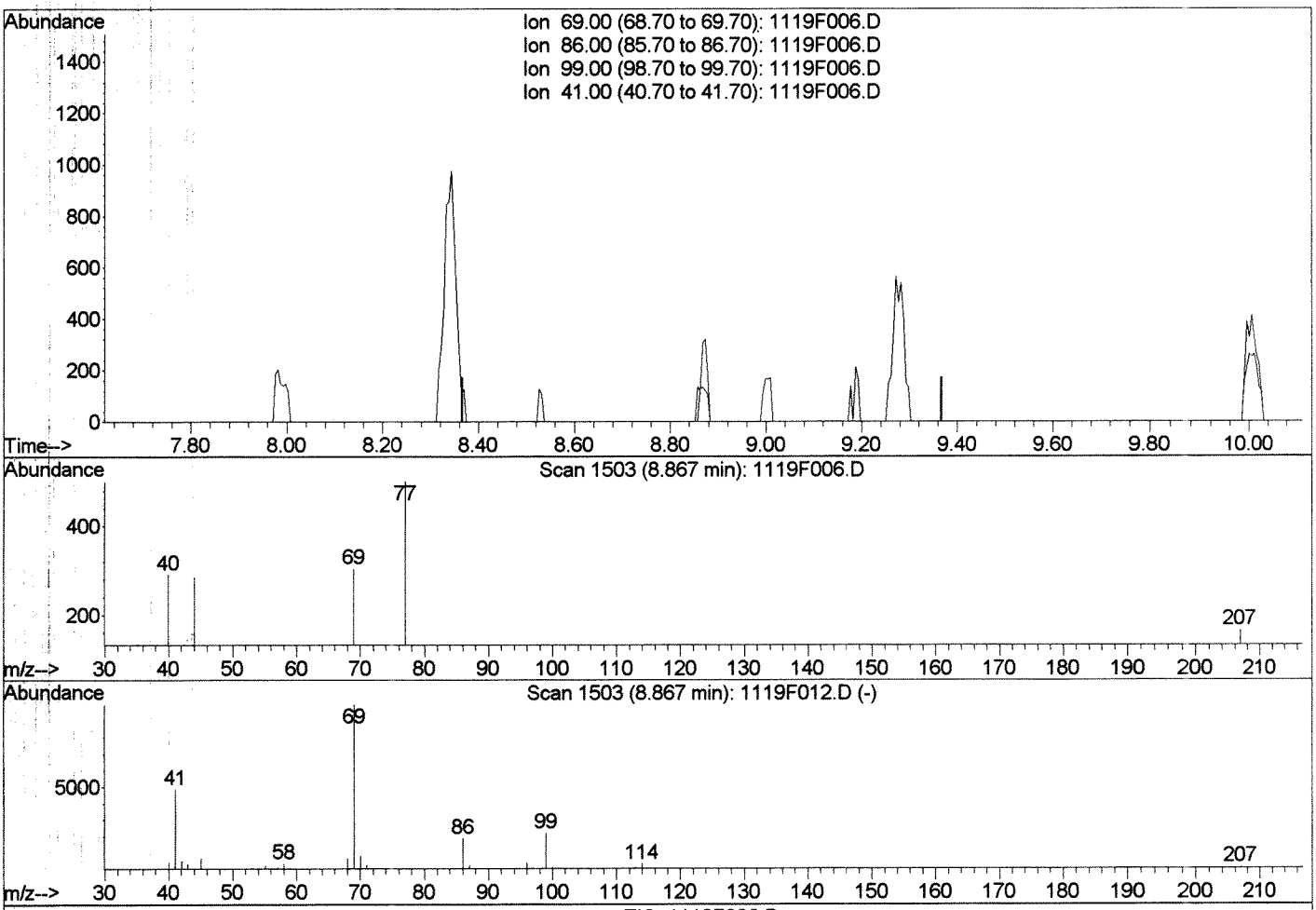
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:22:01 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:21 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(66) Ethyl methacrylate (T)

8.87min 0.00PPB

response 0

Ion	Exp%	Act%
69.00	100	0.00
86.00	18.90	0.00
99.00	21.80	0.00
41.00	48.70	0.00#

Manual Integration:

Before

LM

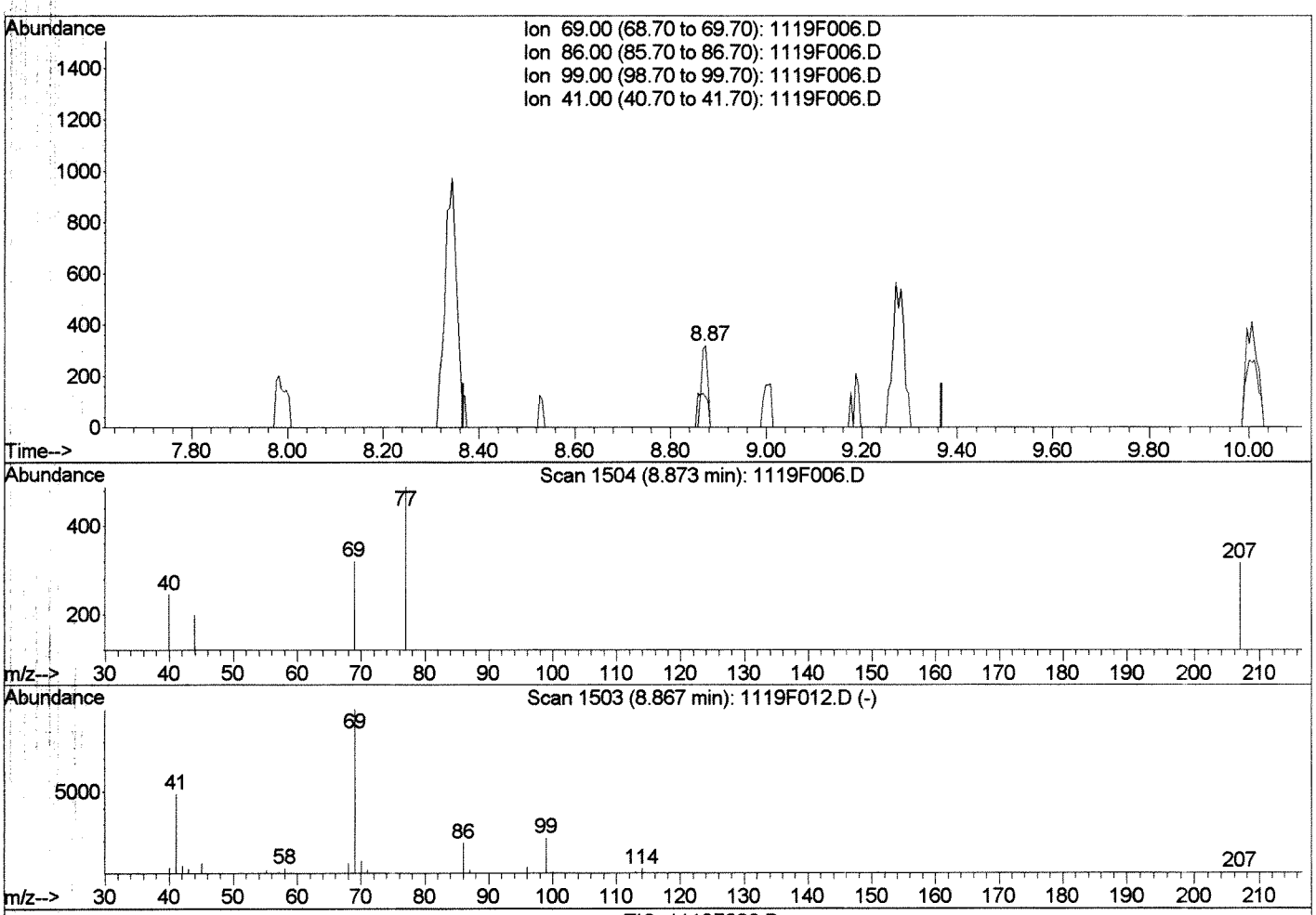
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:22:19 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:22 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(66) Ethyl methacrylate (T)

8.87min 0.08PPB m

response 334

Ion	Exp%	Act%
69.00	100	100
86.00	18.90	0.00
99.00	21.80	0.00
41.00	48.70	37.50

Manual Integration:

After LM

Baseline correction

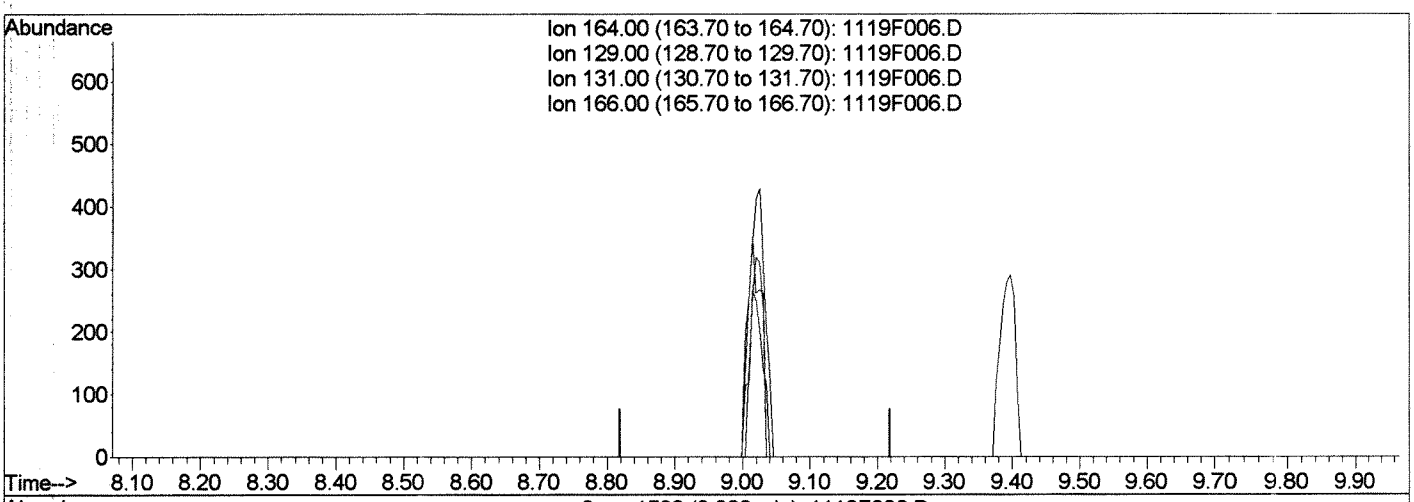
11/21/18

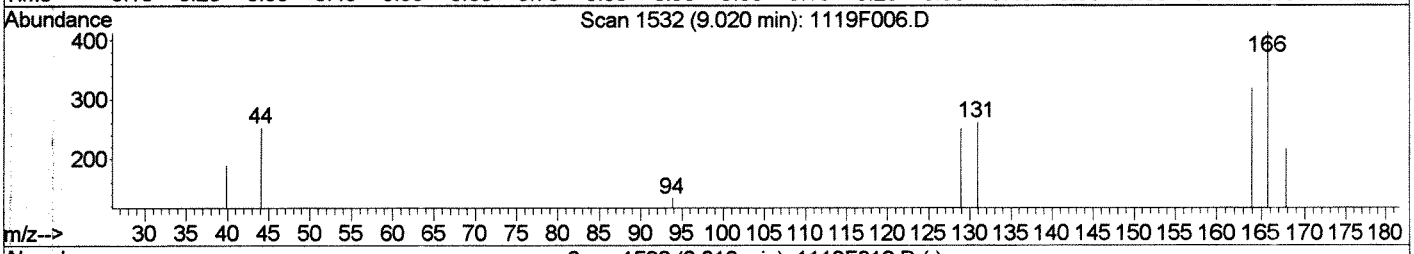
1119F006.D 111918MS46_8260.M Wed Nov 21 09:22:30 2018

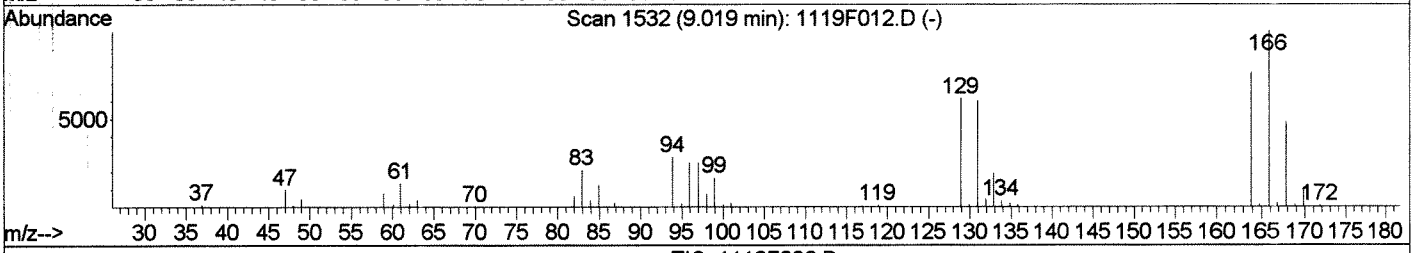
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:25 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(68) Tetrachloroethene (T)

9.02min 0.00PPB

response 0

Ion	Exp%	Act%
164.00	100	0.00
129.00	80.50	0.00#
131.00	78.80	0.00#
166.00	131.20	0.00#

Manual Integration:

Before LM

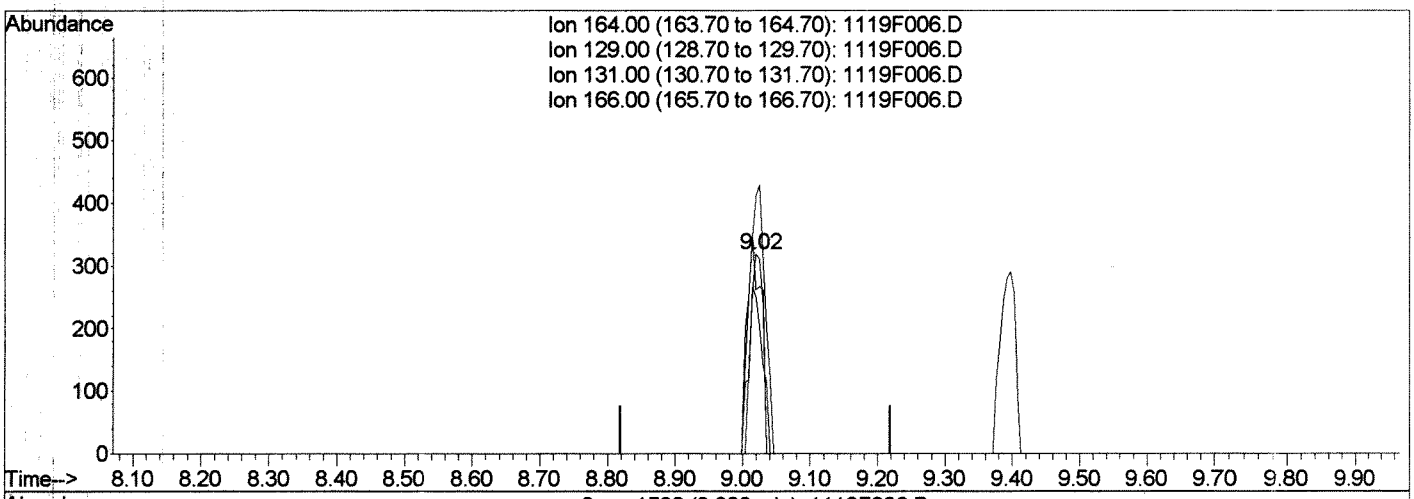
11/21/18

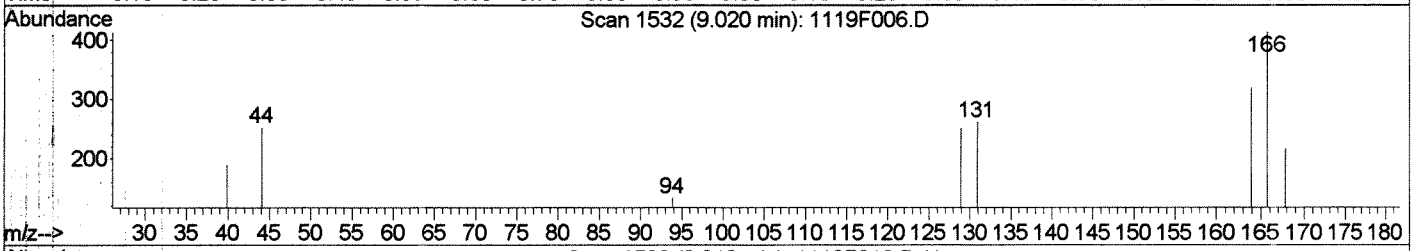
1119F006.D 111918MS46_8260.M Wed Nov 21 09:25:22 2018

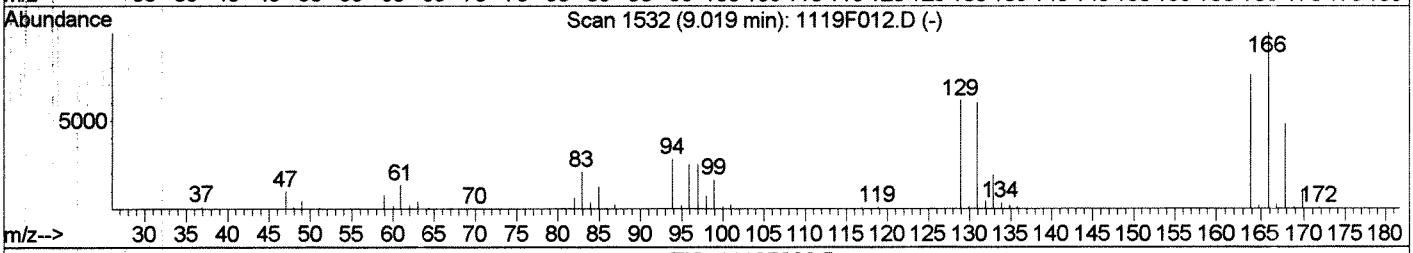
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:25 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(68) Tetrachloroethene (T)

9.02min 0.08PPB m

response 397

Ion	Exp%	Act%
164.00	100	100
129.00	80.50	78.37
131.00	78.80	81.82
166.00	131.20	129.47

Manual Integration:

After (LM)

Missed peak

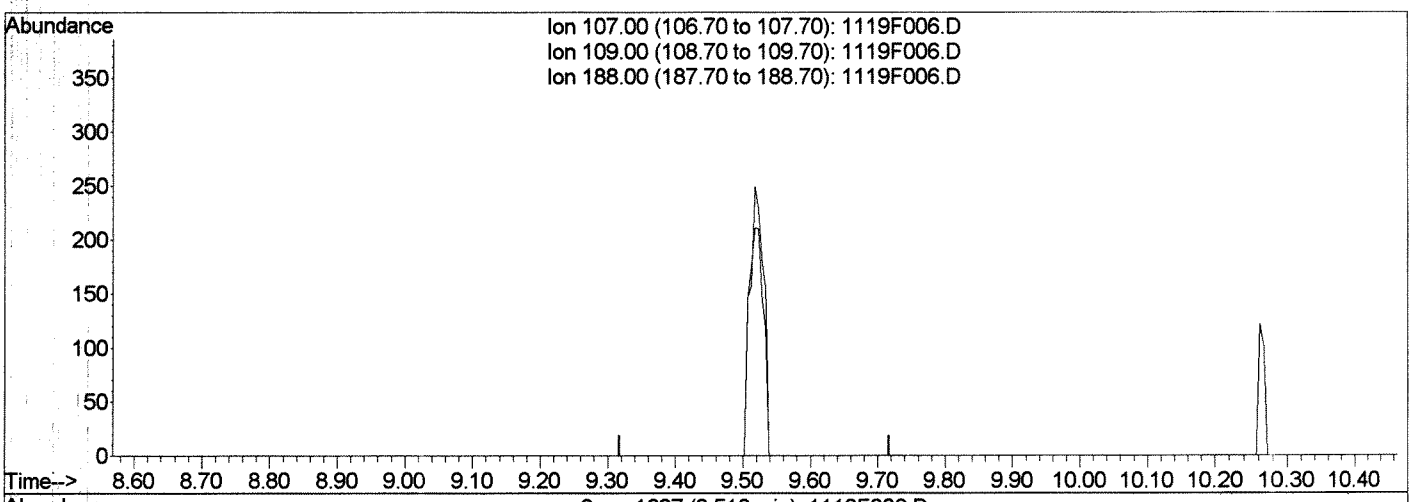
11/21/18

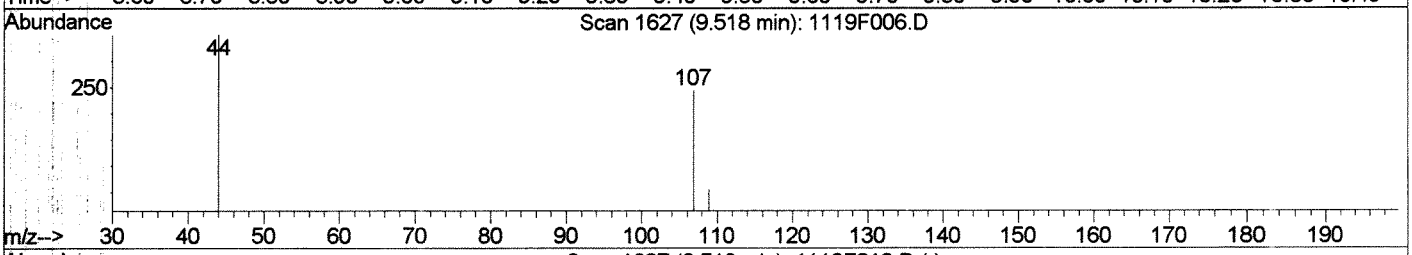
1119F006.D 111918MS46_8260.M Wed Nov 21 09:25:29 2018

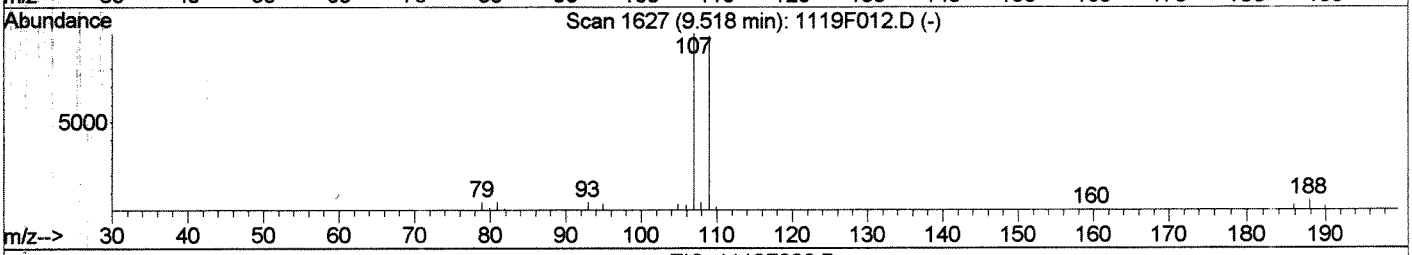
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:25 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(72) 1,2-Dibromoethane (EDB) (T)

9.52min 0.00PPB

response 0

Ion	Exp%	Act%
107.00	100	0.00
109.00	98.70	0.00#
188.00	6.10	0.00
0.00	0.00	0.00

Manual Integration:

Before

LM

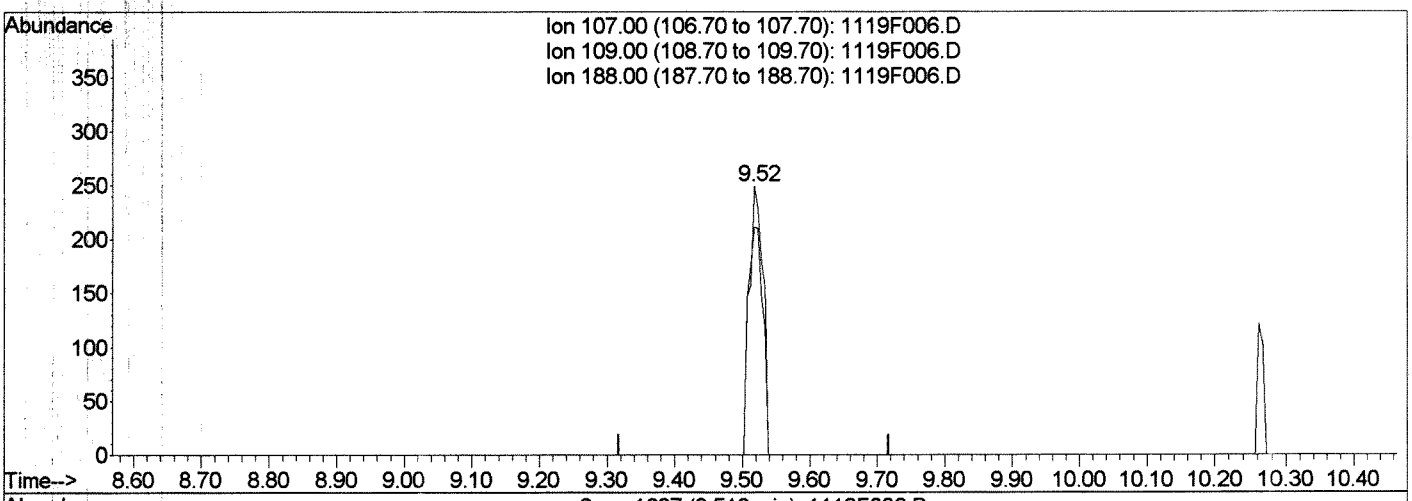
11/21/18

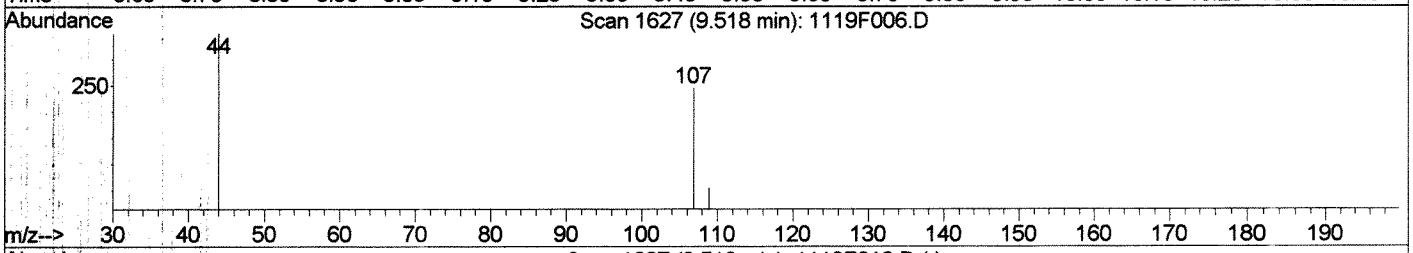
1119F006.D 111918MS46_8260.M Wed Nov 21 09:25:46 2018

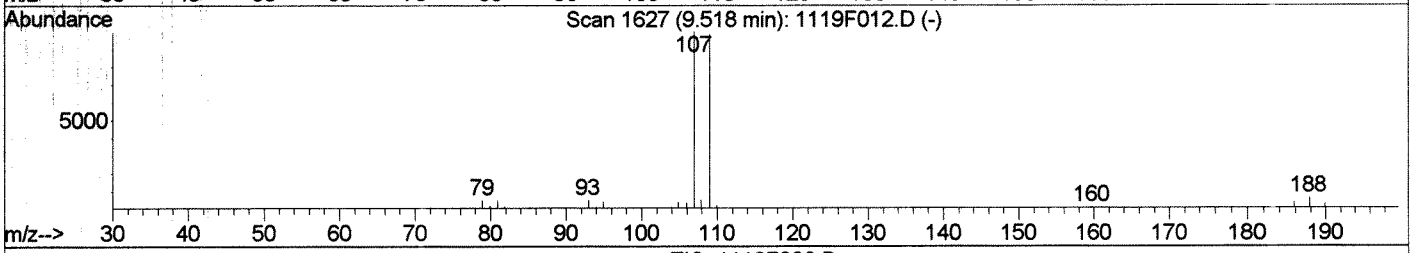
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:25 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(72) 1,2-Dibromoethane (EDB) (T)

9.52min 0.09PPB m

response 351

Ion	Exp%	Act%
107.00	100	100
109.00	98.70	84.74
188.00	6.10	0.00
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak ✓

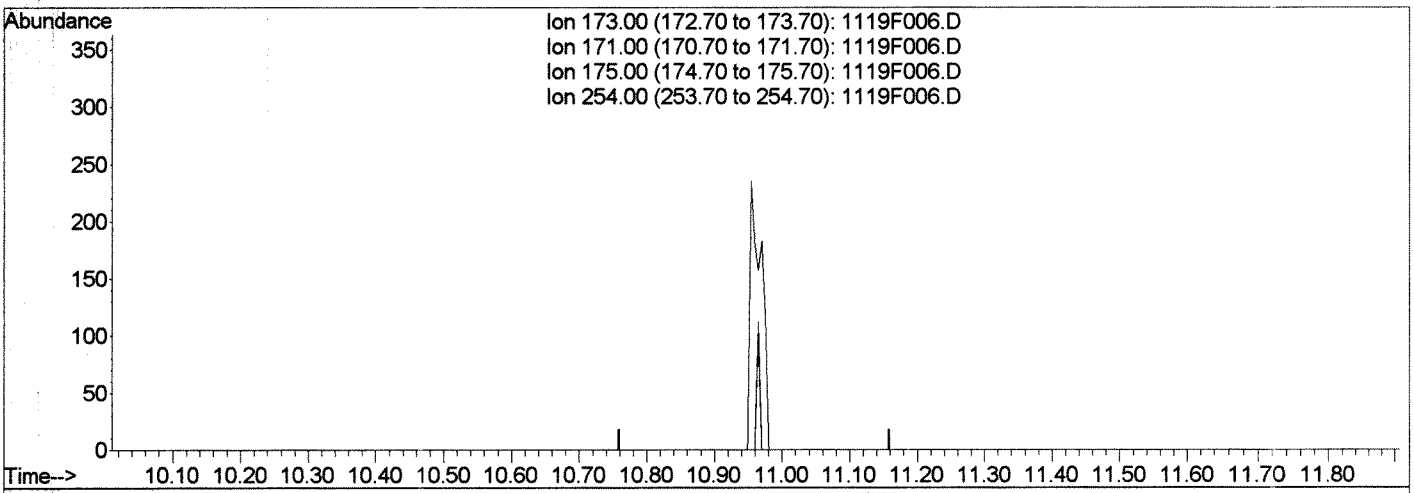
11/21/18

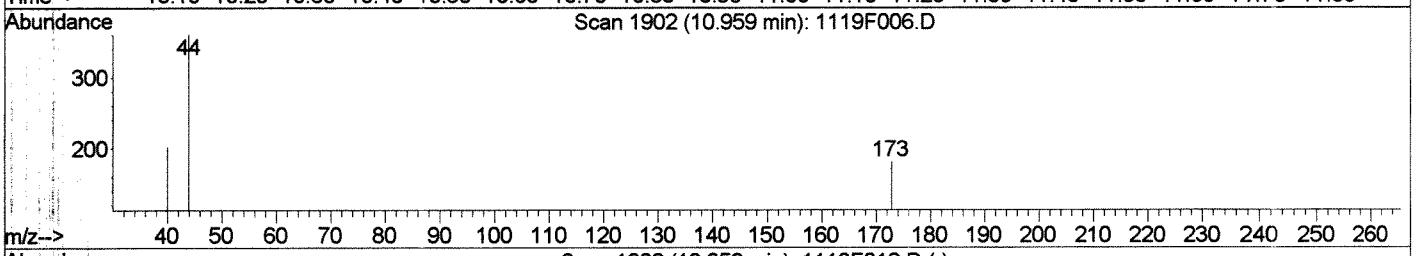
1119F006.D 111918MS46_8260.M Wed Nov 21 09:25:52 2018

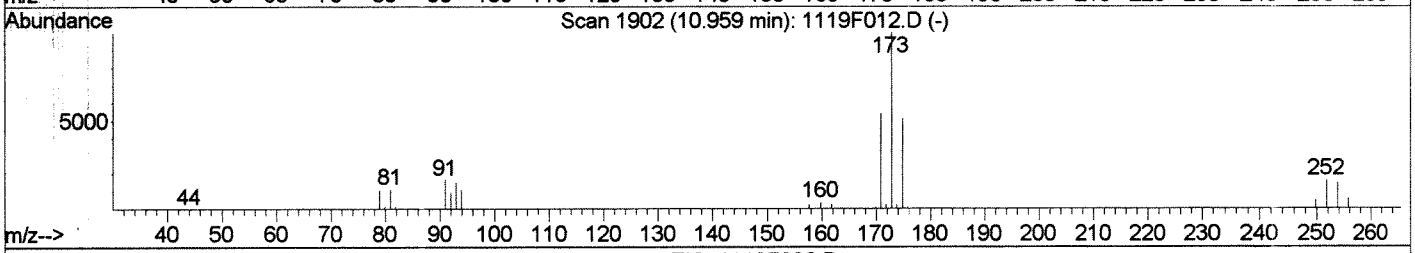
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:25 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(80) Bromoform (PT)

10.96min 0.00PPB

response 0

Ion	Exp%	Act%
173.00	100	0.00
171.00	53.90	0.00#
175.00	51.00	0.00#
254.00	14.40	0.00

Manual Integration:

Before

LM

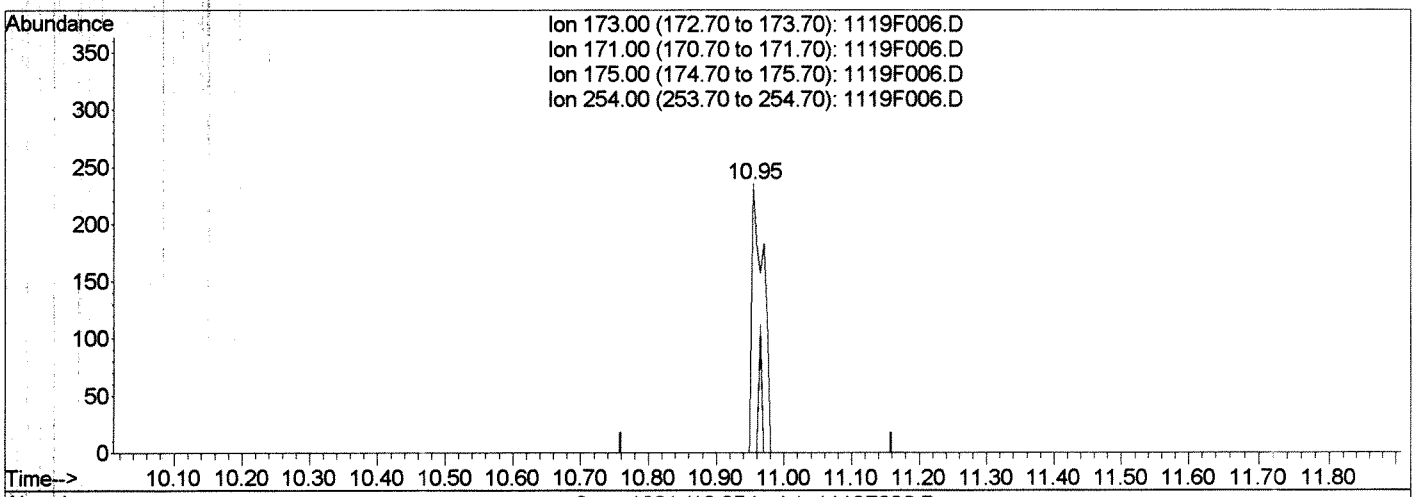
11/21/18

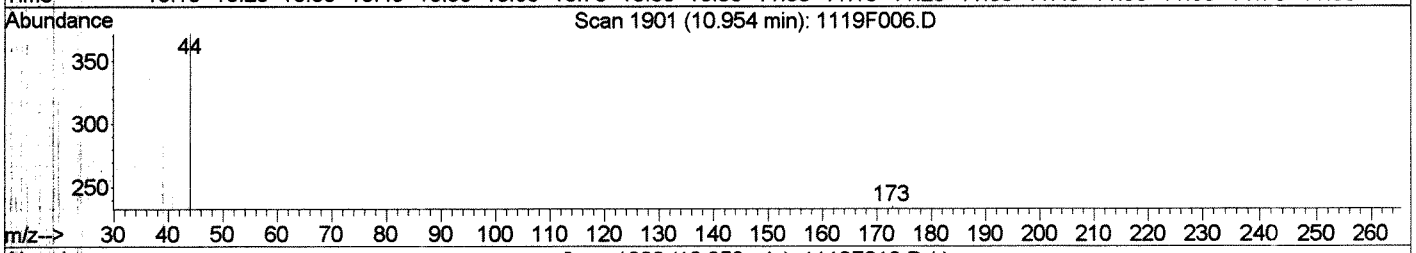
1119F006.D 111918MS46_8260.M Wed Nov 21 09:26:24 2018

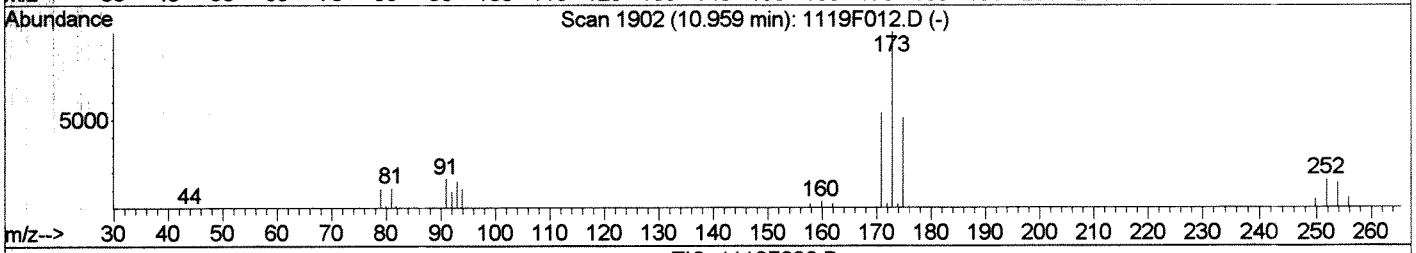
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:26 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(80) Bromoform (PT)

10.95min 0.08PPB m

response 274

Ion	Exp%	Act%
173.00	100	100
171.00	53.90	0.00#
175.00	51.00	0.00#
254.00	14.40	0.00

Manual Integration:

After LM

Missed peak

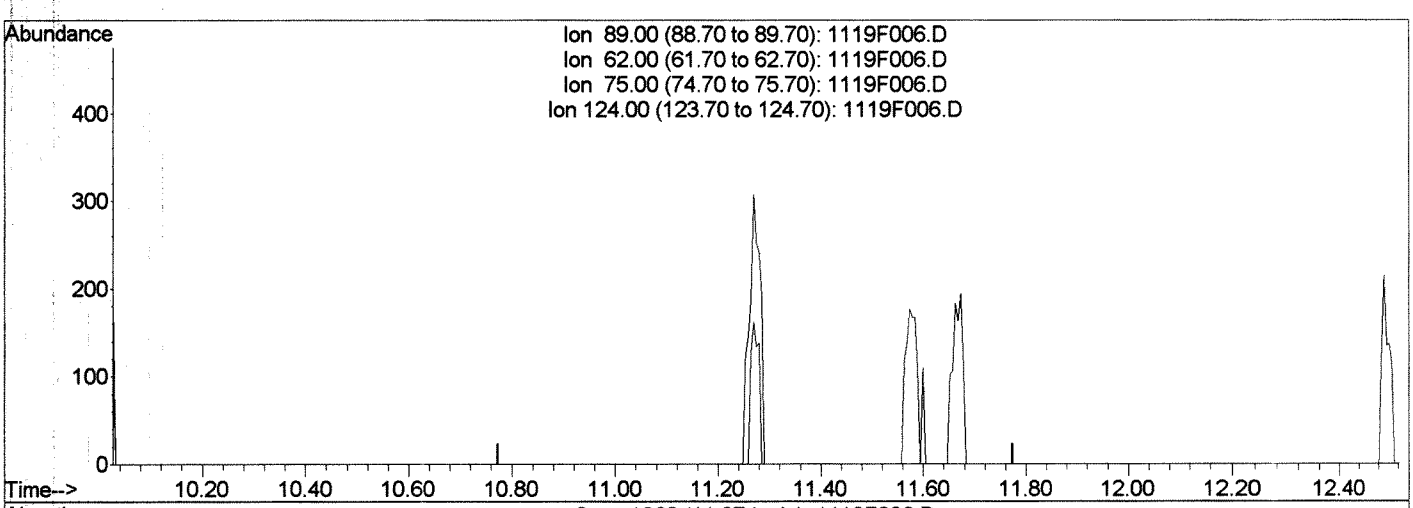
11/21/18

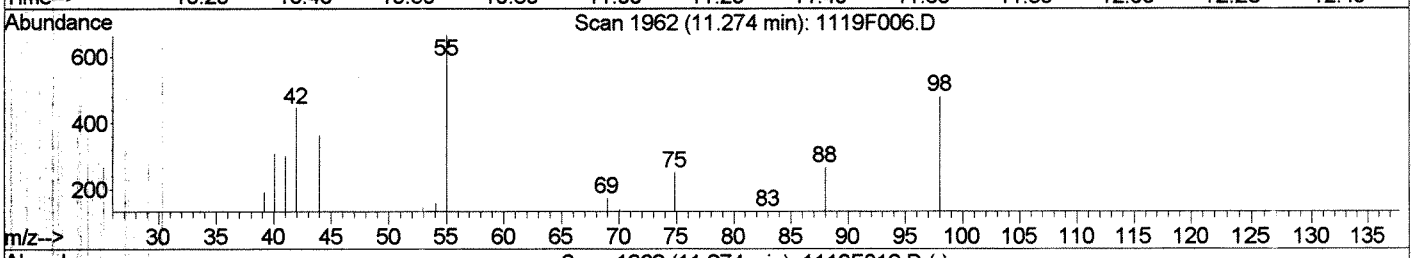
1119F006.D 111918MS46_8260.M Wed Nov 21 09:26:29 2018

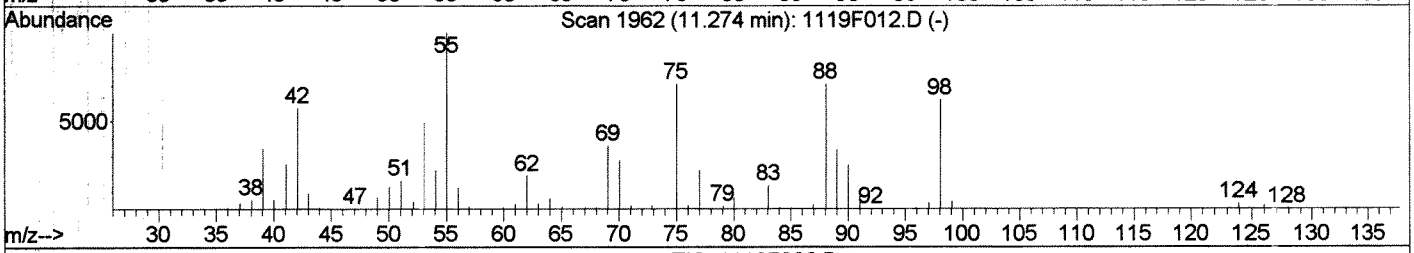
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:26 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(82) cis-1,4-Dichloro-2-butene (T)

11.27min 0.00PPB

response 0

Ion	Exp%	Act%
89.00	100	0.00
62.00	56.40	0.00#
75.00	209.10	0.00#
124.00	9.70	0.00

Manual Integration:

Before LM

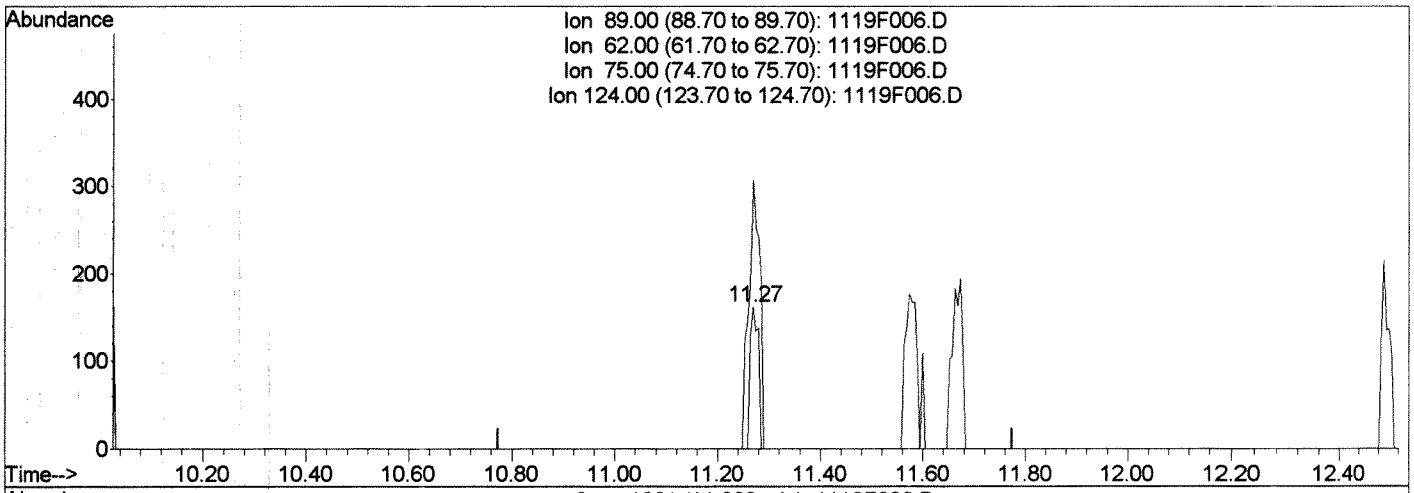
11/21/18 ✓

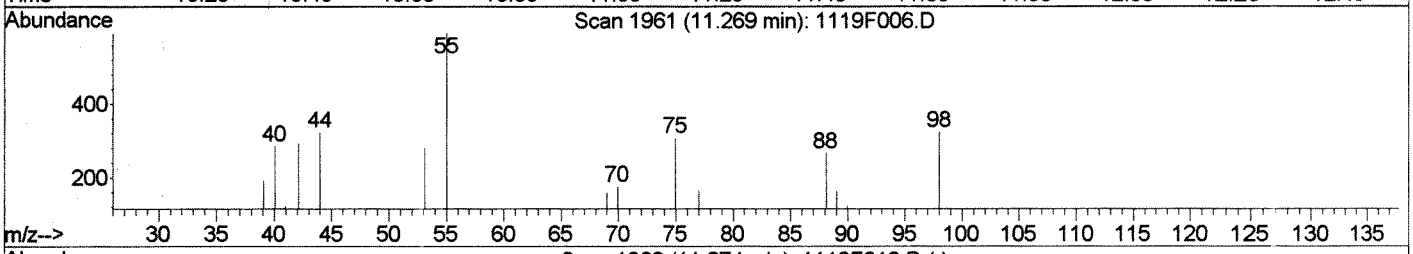
1119F006.D 111918MS46_8260.M Wed Nov 21 09:26:39 2018

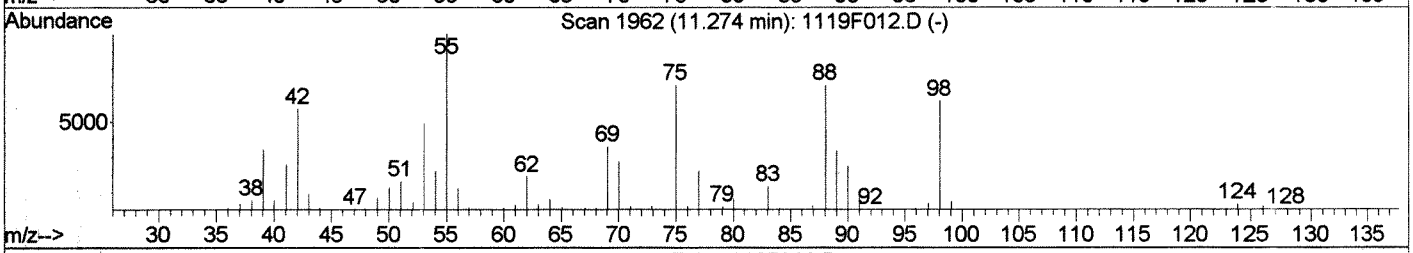
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:26 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(82) cis-1,4-Dichloro-2-butene (T)

11.27min 0.29PPB m

response 176

Ion	Exp%	Act%
89.00	100	100
62.00	56.40	0.00#
75.00	209.10	189.51
124.00	9.70	0.00

Manual Integration:

After

Missed peak

11/21/18

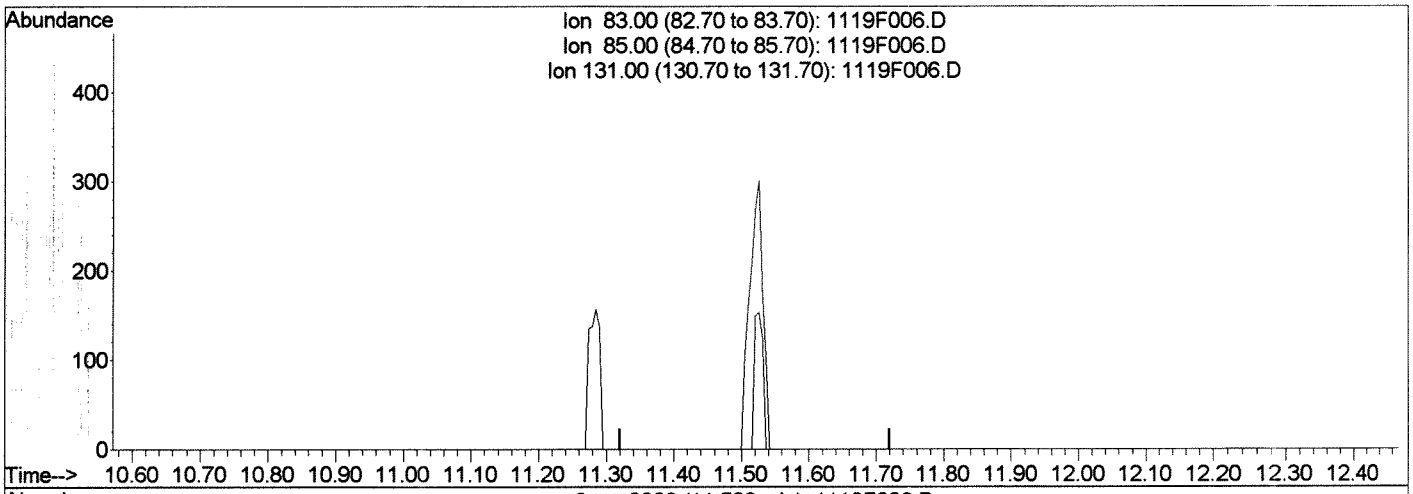
LM

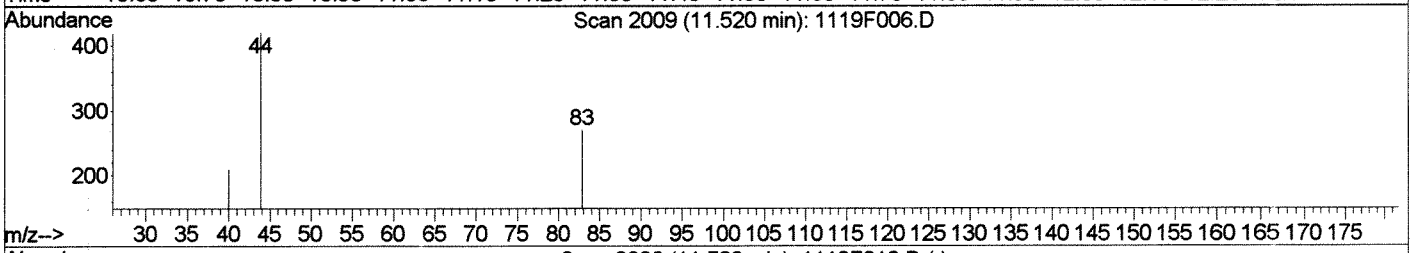
1119F006.D 111918MS46_8260.M Wed Nov 21 09:26:47 2018

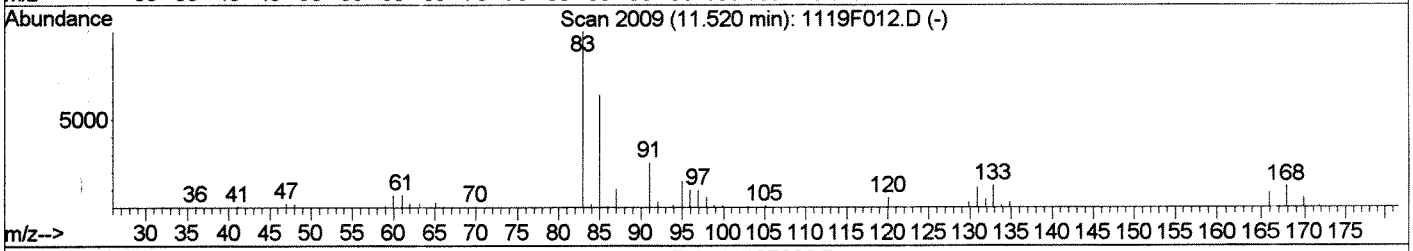
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:26 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(85) 1,1,2,2-Tetrachloroethane (PT)

11.52min 0.00PPB

response 0

Ion	Exp%	Act%
83.00	100	0.00
85.00	63.70	0.00#
131.00	12.10	0.00
0.00	0.00	0.00

Manual Integration:

Before

LM

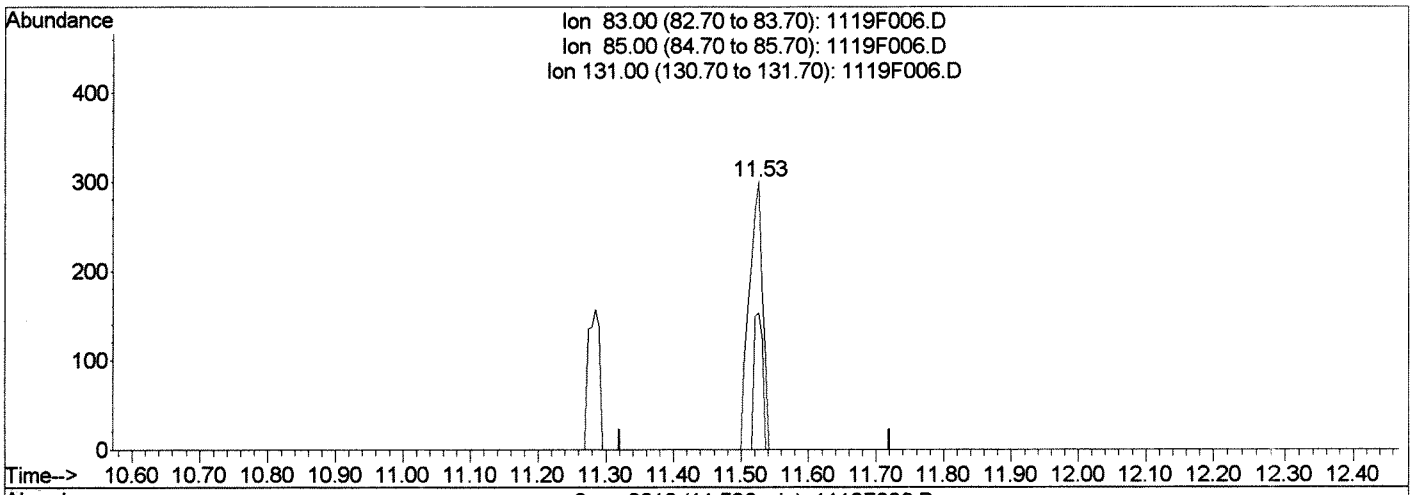
11/21/18

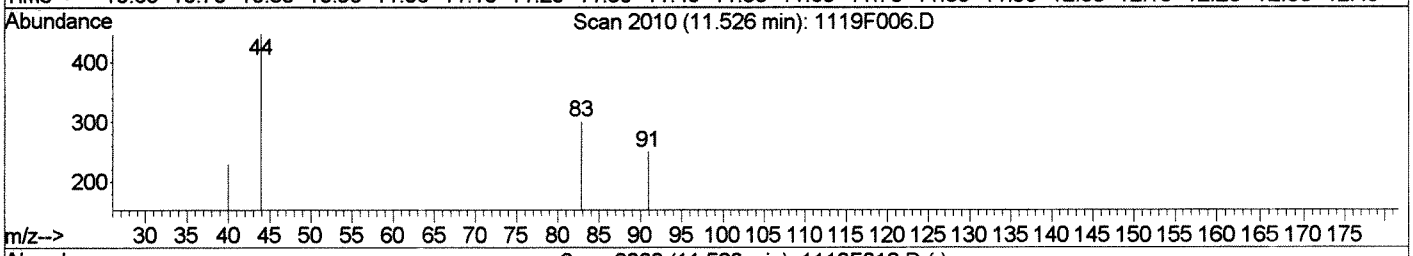
1119F006.D 111918MS46_8260.M Wed Nov 21 09:28:35 2018

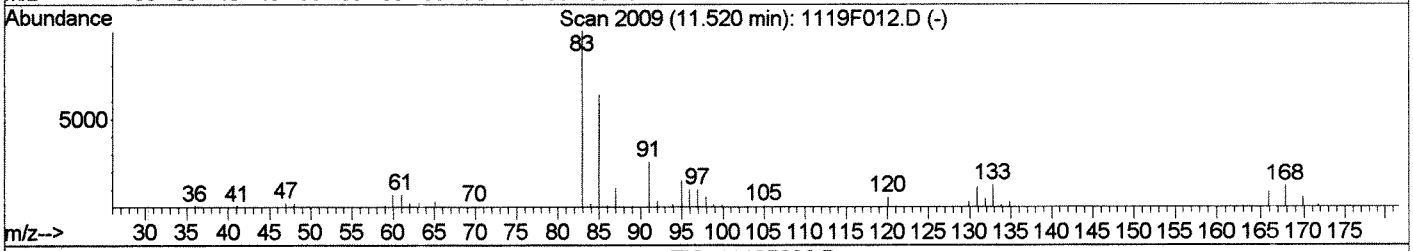
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:28 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(85) 1,1,2,2-Tetrachloroethane (PT)

11.53min 0.11PPB m

response 416

Ion	Exp%	Act%
83.00	100	100
85.00	63.70	50.83
131.00	12.10	0.00
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

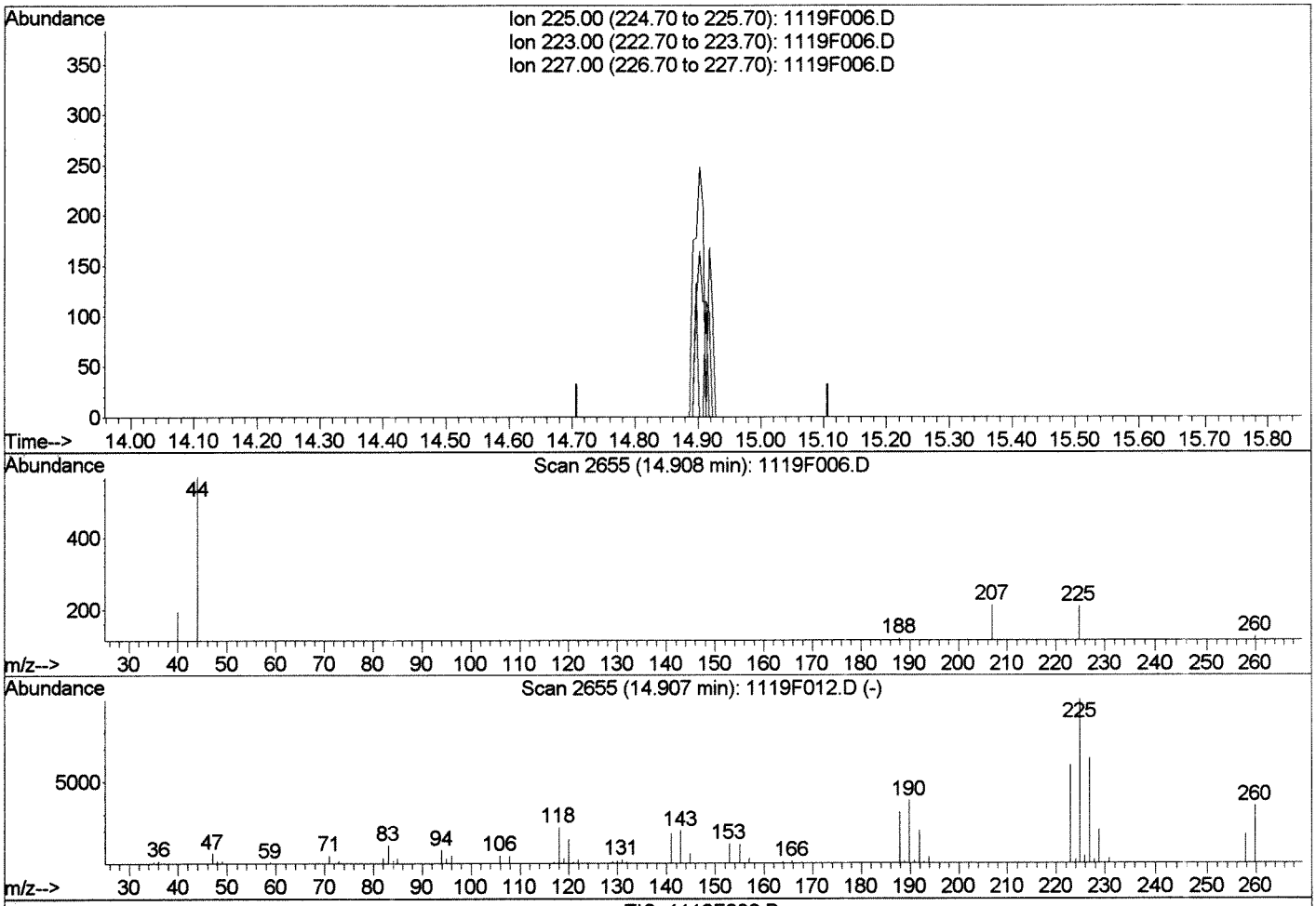
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:28:42 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:29 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(104) Hexachlorobutadiene (T)

14.91min 0.00PPB

response 0

Ion	Exp%	Act%
225.00	100	0.00
223.00	59.80	0.00#
227.00	64.00	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

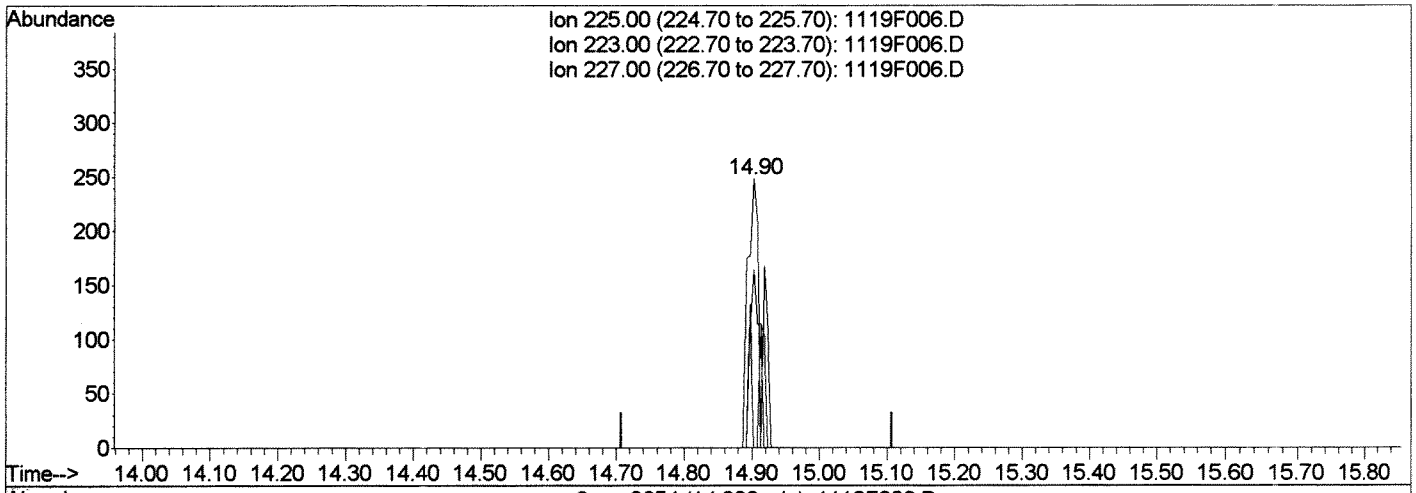
11/21/18

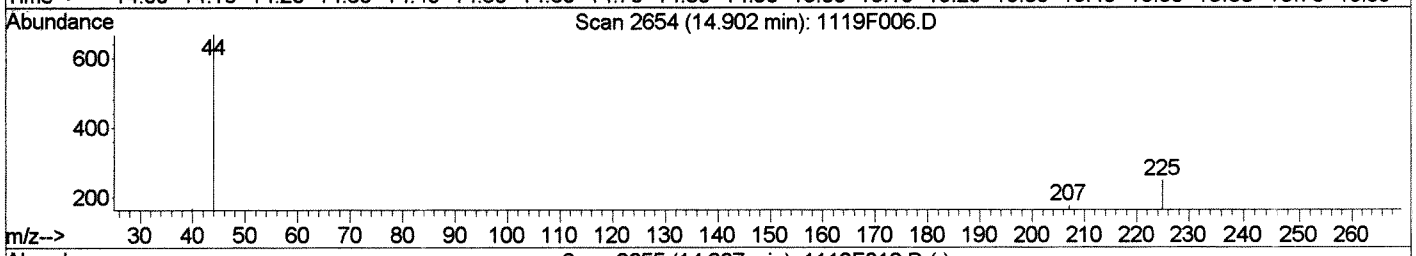
1119F006.D 111918MS46_8260.M Wed Nov 21 09:30:24 2018

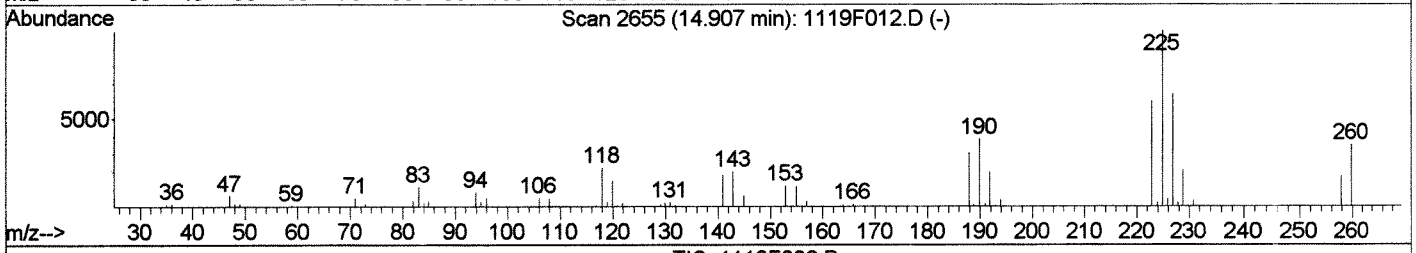
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:30 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(104) Hexachlorobutadiene (T)

14.90min 0.12PPB m

response 341

Ion	Exp%	Act%
225.00	100	100
223.00	59.80	66.13
227.00	64.00	0.00#
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

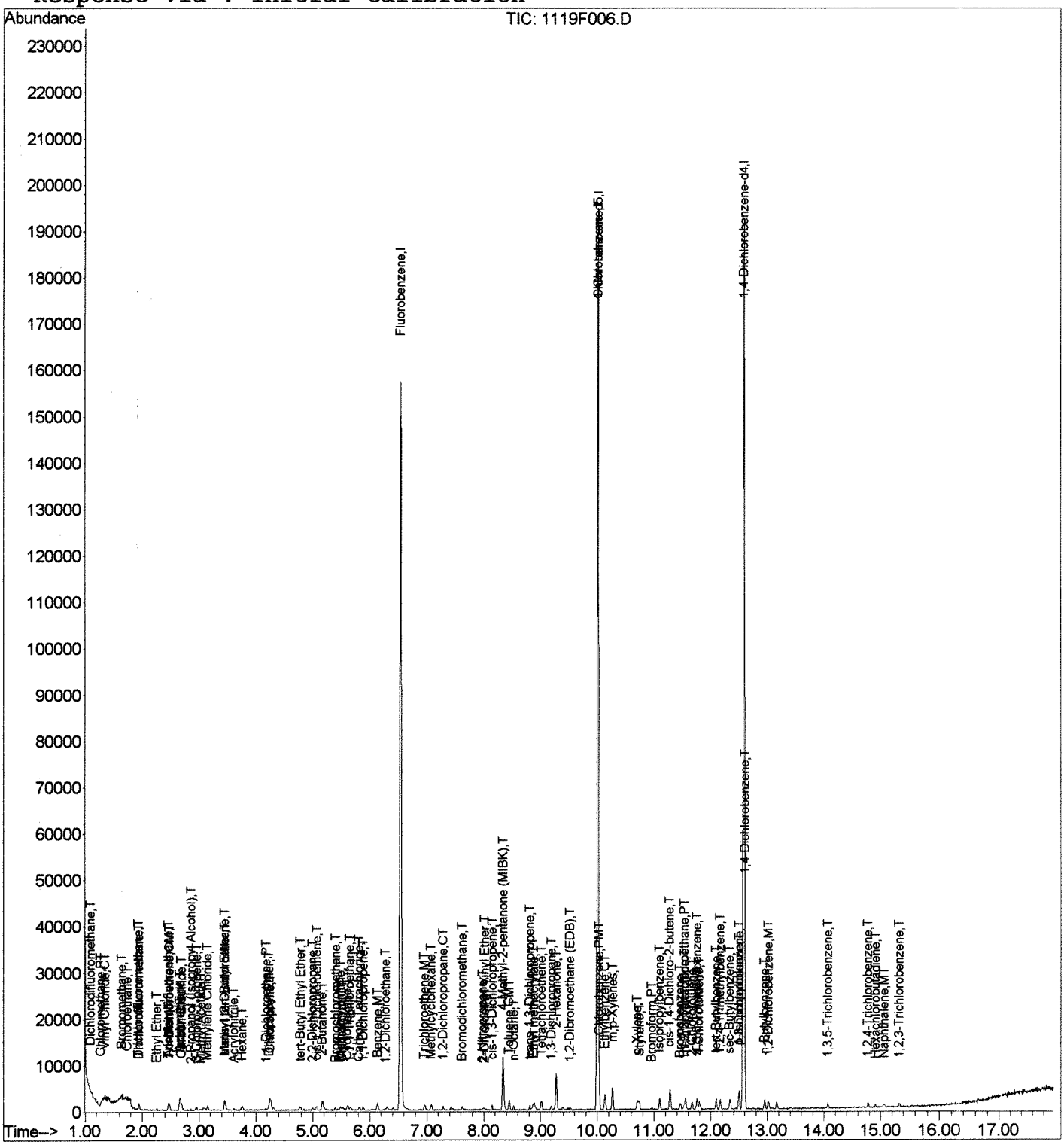
11/21/18 ✓

1119F006.D 111918MS46_8260.M Wed Nov 21 09:30:37 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:30 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:06 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.53	96	166190	10.00	PPB		0.00
63) Chlorobenzene-d5	10.01	82	61425	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	67554	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	0.00	113	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
46) 1,2-Dichloroethane-d4	0.00	65	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
61) Toluene-d8	0.00	98	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
83) 4-Bromofluorobenzene	0.00	95	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.10	85	431m	0.14	PPB		
3) Chloromethane	1.28	50	688	0.25	PPB		83
4) Vinyl Chloride	1.35	62	720	0.21	PPB		87
5) Bromomethane	1.64	96	1059	0.32	PPB		91
6) Chloroethane	1.74	64	365m	0.16	PPB		
7) Dichlorofluoromethane	1.95	67	1039	0.19	PPB		92
8) Trichlorofluoromethane	1.94	101	1044	0.20	PPB		73
9) Ethyl Ether	2.26	59	287m	0.14	PPB		
10) Acrolein	2.48	56	1699	4.61	PPB		85
11) Trichlorotrifluoroethane	2.47	151	823	0.24	PPB	#	79
12) 1,1-Dichloroethene	2.48	96	757	0.23	PPB	#	56
13) Acetone	2.65	43	3719	9.12	PPB		93
14) Iodomethane	2.66	142	3608	0.70	PPB		94
15) Carbon Disulfide	2.69	76	2455	0.25	PPB		96
16) 2-Propanol (Isopropyl Alco	2.85	45	501	8.83	PPB		61
17) 3-Chloro-1-propene	2.95	76	375m	0.19	PPB		
19) Acetonitrile	3.09	40	662	7.45	PPB	#	67
20) Methylene Chloride	3.15	84	861	0.22	PPB		76
22) Acrylonitrile	3.62	53	608	0.78	PPB	#	63
23) Methyl tert-Butyl Ether	3.45	73	3673	0.40	PPB		95
24) trans-1,2-Dichloroethene	3.46	96	951	0.24	PPB		79
25) Hexane	3.77	57	1100	0.24	PPB		95
26) Diisopropyl Ether	4.23	45	1581	0.17	PPB		84
27) 1,1-Dichloroethane	4.17	63	1197	0.20	PPB		71
28) Vinyl Acetate	4.31	86	80m	0.10	PPB		
29) Chloroprene	4.26	53	4237	0.93	PPB		97
30) tert-Butyl Ethyl Ether	4.78	59	1875	0.19	PPB		87

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:06 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
31)	2,2-Dichloropropane	5.00	77	1274	0.24	PPB		88
32)	cis-1,2-Dichloroethene	5.07	96	1000	0.21	PPB		94
33)	2-Butanone	5.16	72	2106	7.72	PPB	#	79
36)	Methacrylonitrile	5.49	67	981	0.85	PPB		89
37)	Bromochloromethane	5.40	128	401m	0.17	PPB		
39)	Chloroform	5.52	83	1553	0.22	PPB		92
40)	Cyclohexane	5.61	56	1394	0.26	PPB		93
41)	1,1,1-Trichloroethane	5.66	97	1452	0.24	PPB		88
43)	Carbon Tetrachloride	5.82	117	1213	0.22	PPB	#	72
44)	1,1-Dichloropropene	5.88	75	1094	0.22	PPB		96
45)	Isobutyl Alcohol	6.27	43	579m	11.78	PPB		
47)	Benzene	6.14	78	3345	0.21	PPB		98
48)	1,2-Dichloroethane	6.28	62	841	0.20	PPB		90
49)	tert-Amyl Methyl Ether	6.30	55	349m	0.17	PPB		
50)	Trichloroethene	6.96	95	933	0.21	PPB	#	83
51)	Methylcyclohexane	7.07	83	1401	0.21	PPB		84
52)	1,2-Dichloropropane	7.29	63	757	0.20	PPB		74
54)	Methyl methacrylate	7.45	69	358m	0.18	PPB		
56)	Bromodichloromethane	7.62	83	1131	0.20	PPB		95
57)	2-Nitropropane	7.99	41	494m	0.99	PPB		
58)	2-Chloroethyl Vinyl Ether	8.01	63	339m	0.17	PPB		
59)	cis-1,3-Dichloropropene	8.14	75	1361	0.20	PPB		89
60)	4-Methyl-2-pentanone (MIBK	8.34	58	7037	7.56	PPB		92
62)	Toluene	8.45	92	2594	0.23	PPB		83
64)	n-Octane	8.52	85	464m	0.19	PPB		
65)	trans-1,3-Dichloropropene	8.82	75	1297	0.21	PPB		85
66)	Ethyl methacrylate	8.86	69	743	0.18	PPB		63
67)	1,1,2-Trichloroethane	9.01	83	589	0.19	PPB		80
68)	Tetrachloroethene	9.02	164	1106	0.23	PPB		82
69)	2-Hexanone	9.27	57	2324	8.21	PPB		97
70)	1,3-Dichloropropane	9.19	76	1182	0.20	PPB		75
71)	Dibromochloromethane	9.40	129	1047	0.20	PPB		81
72)	1,2-Dibromoethane (EDB)	9.52	107	764	0.20	PPB	#	70
73)	1-Chlorohexane	10.01	91	1584	0.27	PPB		86
74)	Chlorobenzene	10.04	112	3024	0.23	PPB		95
75)	Ethylbenzene	10.13	106	1390	0.19	PPB		97
76)	1,1,1,2-Tetrachloroethane	10.15	131	993	0.19	PPB		92
77)	m,p-Xylenes	10.26	106	3636	0.42	PPB		92
78)	o-Xylene	10.70	106	1766	0.21	PPB		83
79)	Styrene	10.74	103	1418	0.19	PPB		86
80)	Bromoform	10.95	173	681	0.19	PPB		88

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:06 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

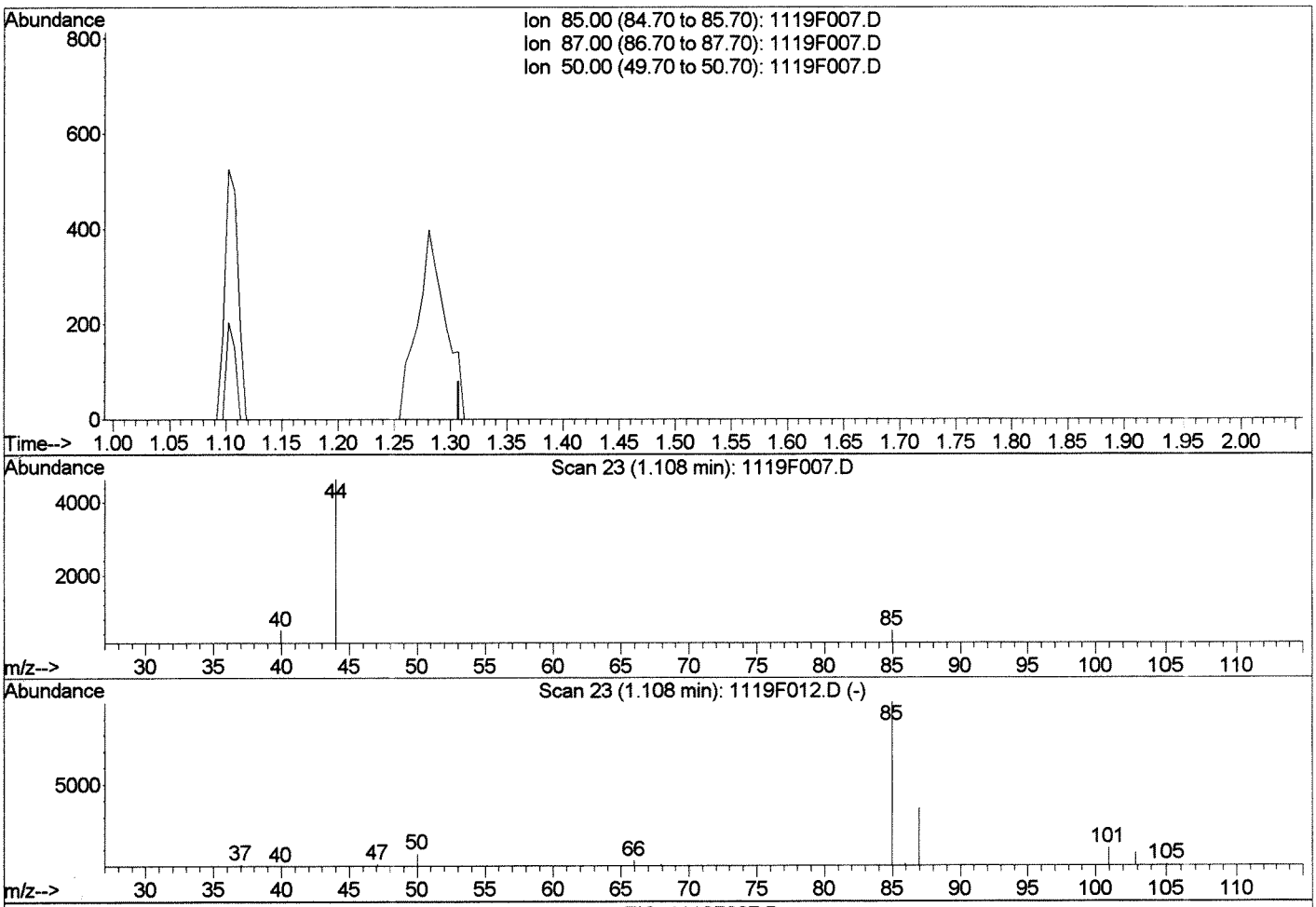
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
81)	Isopropylbenzene	11.10	105	4426	0.21	PPB	94
82)	cis-1,4-Dichloro-2-butene	11.27	89	449m	0.74	PPB	
85)	1,1,2,2-Tetrachloroethane	11.53	83	781	0.20	PPB	94
86)	trans-1,4-Dichloro-2-buten	11.59	53	38m	0.04	PPB	
87)	Bromobenzene	11.46	156	1307	0.21	PPB	95
88)	n-Propylbenzene	11.55	91	4804	0.21	PPB	97
89)	1,2,3-Trichloropropane	11.57	110	160m	0.12	PPB	
90)	2-Chlorotoluene	11.67	91	2836	0.21	PPB	89
91)	1,3,5-Trimethylbenzene	11.76	105	3579	0.21	PPB	92
92)	4-Chlorotoluene	11.79	91	2738	0.19	PPB	89
93)	tert-Butylbenzene	12.09	119	3166	0.21	PPB	91
94)	1,2,4-Trimethylbenzene	12.17	105	3503	0.21	PPB	93
95)	sec-Butylbenzene	12.34	105	4537	0.22	PPB	94
96)	p-Isopropyltoluene	12.50	119	3679	0.20	PPB	99
97)	1,3-Dichlorobenzene	12.50	146	2309	0.21	PPB	85
98)	1,4-Dichlorobenzene	12.61	146	2467	0.23	PPB	90
99)	n-Butylbenzene	12.95	91	2823	0.20	PPB	98
100)	1,2-Dichlorobenzene	13.02	146	1980	0.20	PPB	97
102)	1,3,5-Trichlorobenzene	14.07	180	1430	0.21	PPB	84
103)	1,2,4-Trichlorobenzene	14.78	180	1270	0.19	PPB	91
104)	Hexachlorobutadiene	14.90	225	606	0.21	PPB	93
105)	Naphthalene	15.06	128	2380	0.20	PPB	83
106)	1,2,3-Trichlorobenzene	15.33	180	1065	0.20	PPB	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:08 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(2) Dichlorodifluoromethane (T)

1.11min 0.00PPB

response 0

Ion	Exp%	Act%
85.00	100	0.00
87.00	35.20	0.00#
50.00	7.60	0.00
0.00	0.00	0.00

Manual Integration:

Before

LM

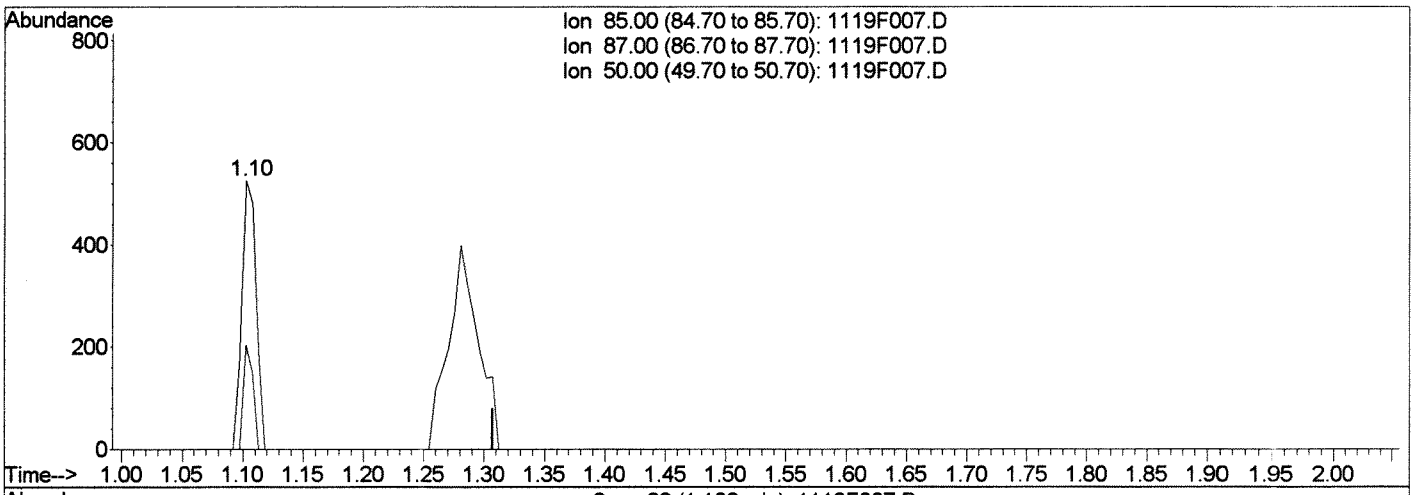
11/21/18

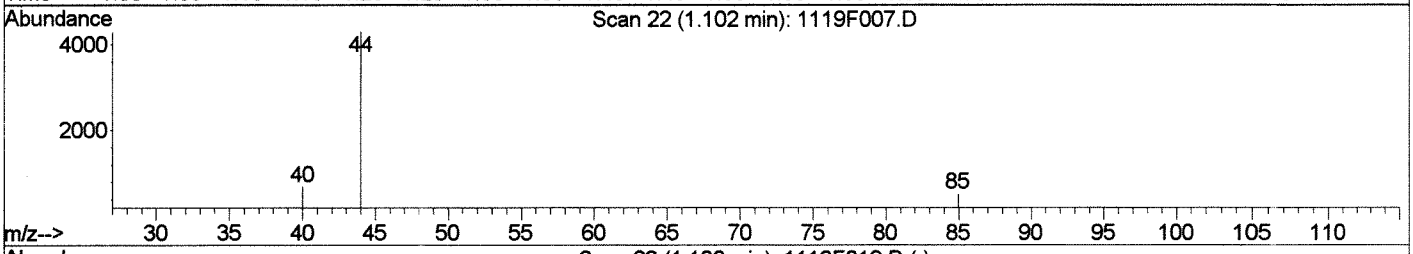
1119F007.D 111918MS46_8260.M Wed Nov 21 09:31:15 2018

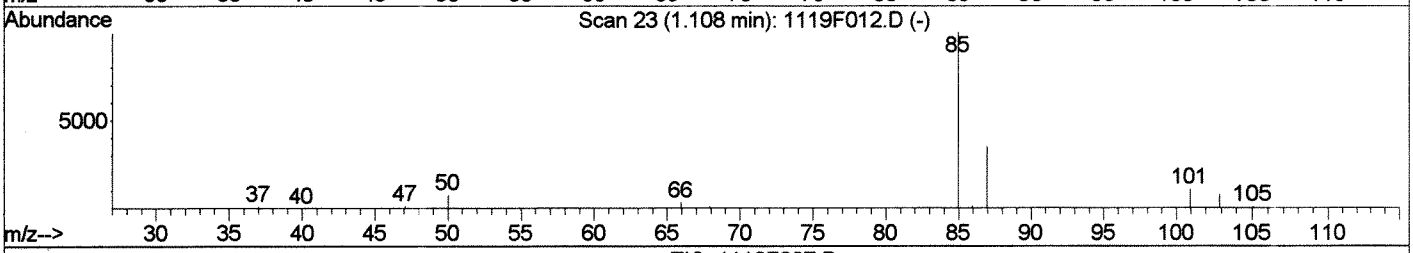
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:31 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(2) Dichlorodifluoromethane (T)

1.10min 0.14PPB m

response 431

Ion	Exp%	Act%
85.00	100	100
87.00	35.20	38.86
50.00	7.60	0.00
0.00	0.00	0.00

Manual Integration:

After LM

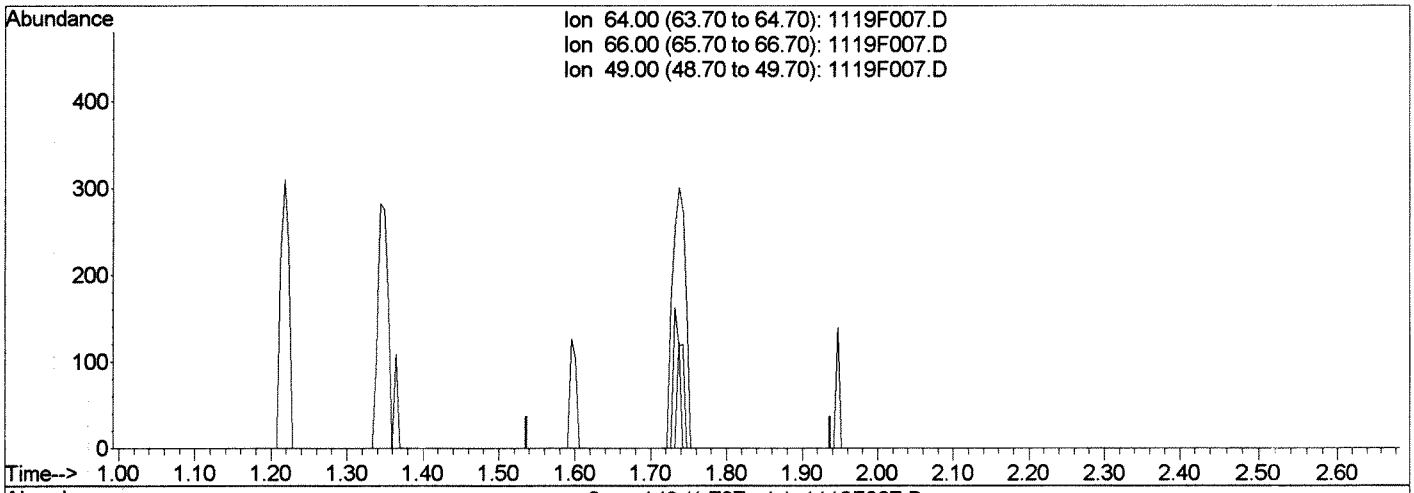
Missed peak

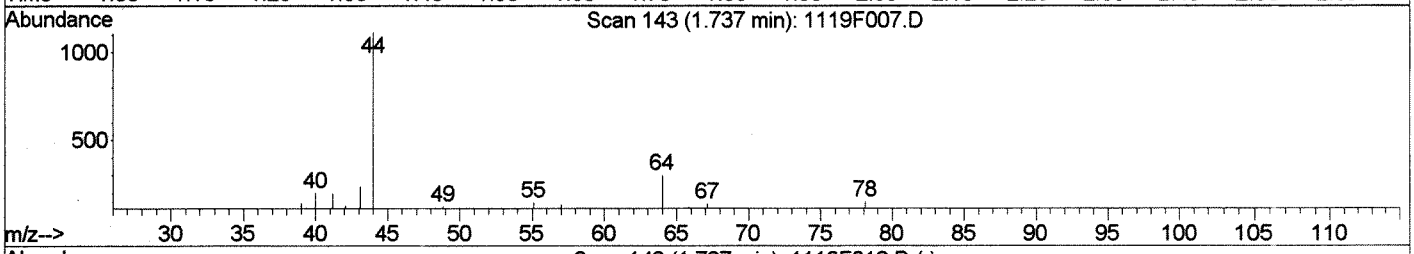
11/21/18

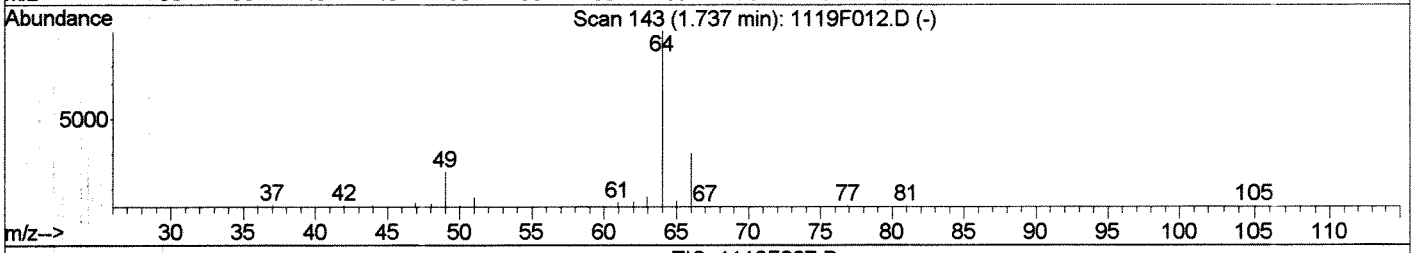
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:31 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(6) Chloroethane (T)

1.74min 0.00PPB

response 0

Ion	Exp%	Act%
64.00	100	0.00
66.00	30.90	0.00#
49.00	20.10	0.00
0.00	0.00	0.00

Manual Integration:

Before

LM

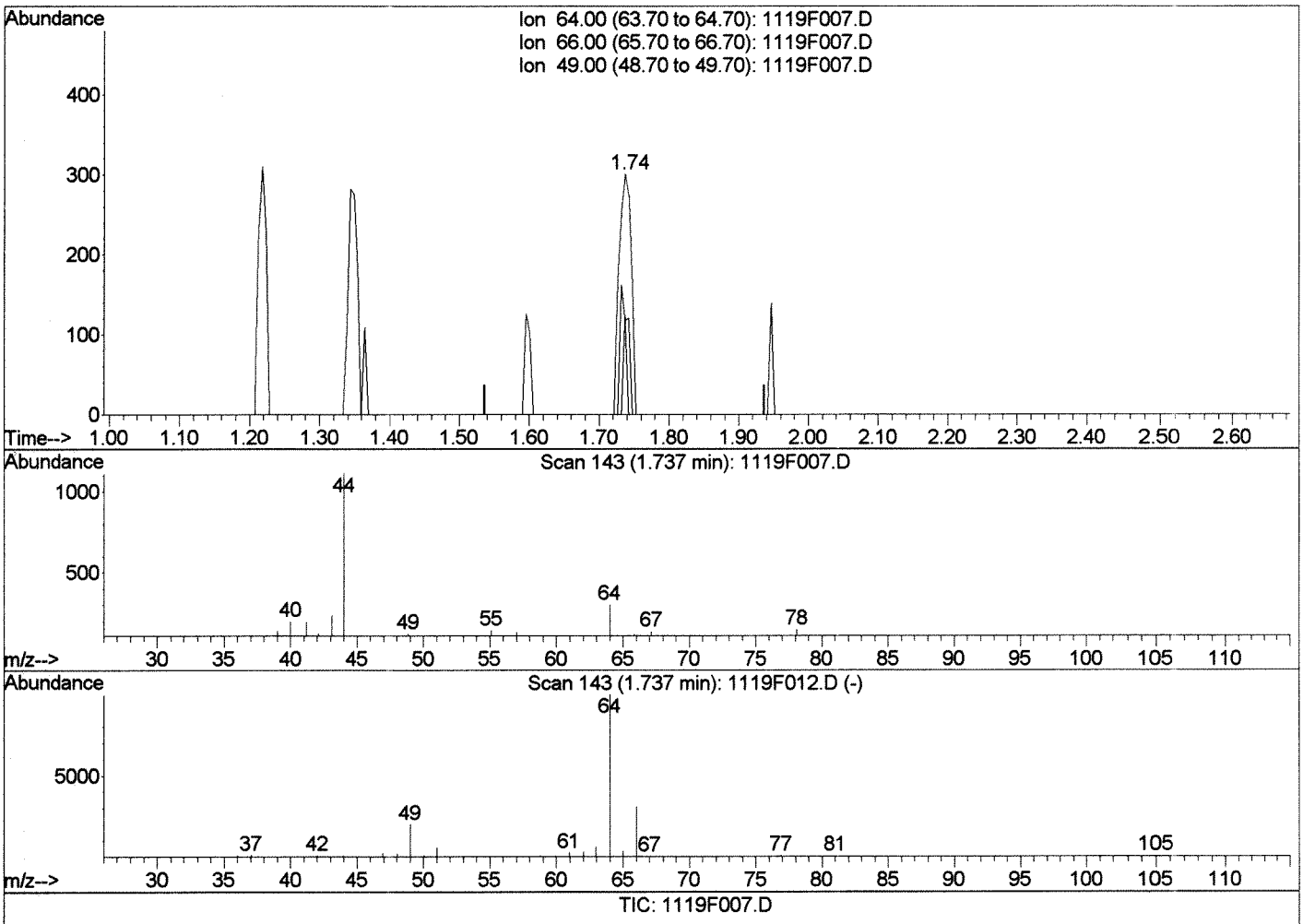
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:31:39 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:31 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(6) Chloroethane (T)

1.74min 0.16PPB m

response 365

Ion	Exp%	Act%
64.00	100	100
66.00	30.90	39.20
49.00	20.10	41.20
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

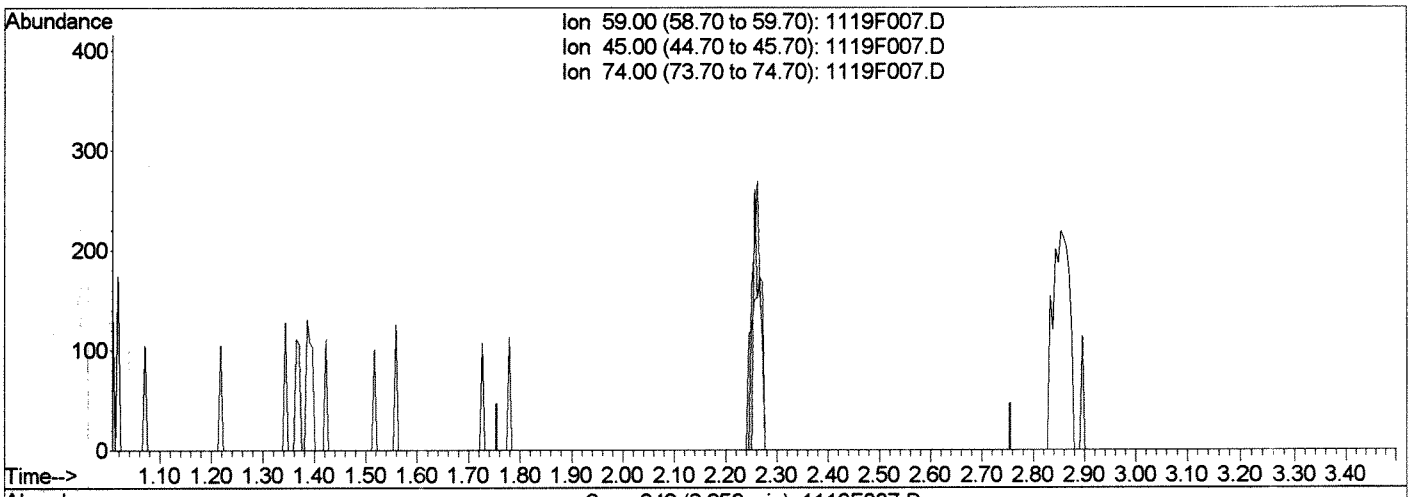
11/21/18

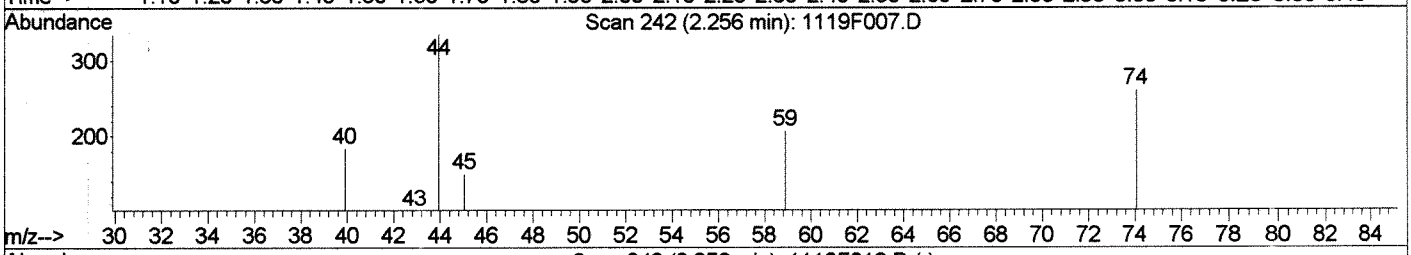
1119F007.D 111918MS46_8260.M Wed Nov 21 09:31:47 2018

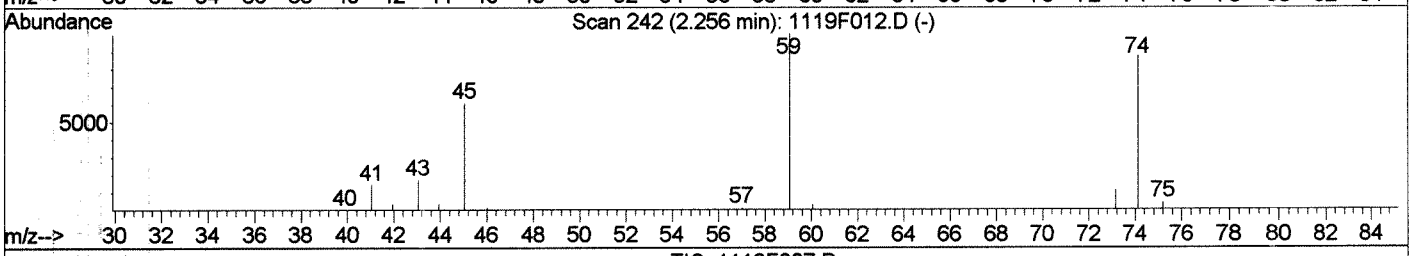
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:31 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(9) Ethyl Ether (T)

2.26min 0.00PPB

response 0

Ion	Exp%	Act%
59.00	100	0.00
45.00	60.70	0.00#
74.00	87.50	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

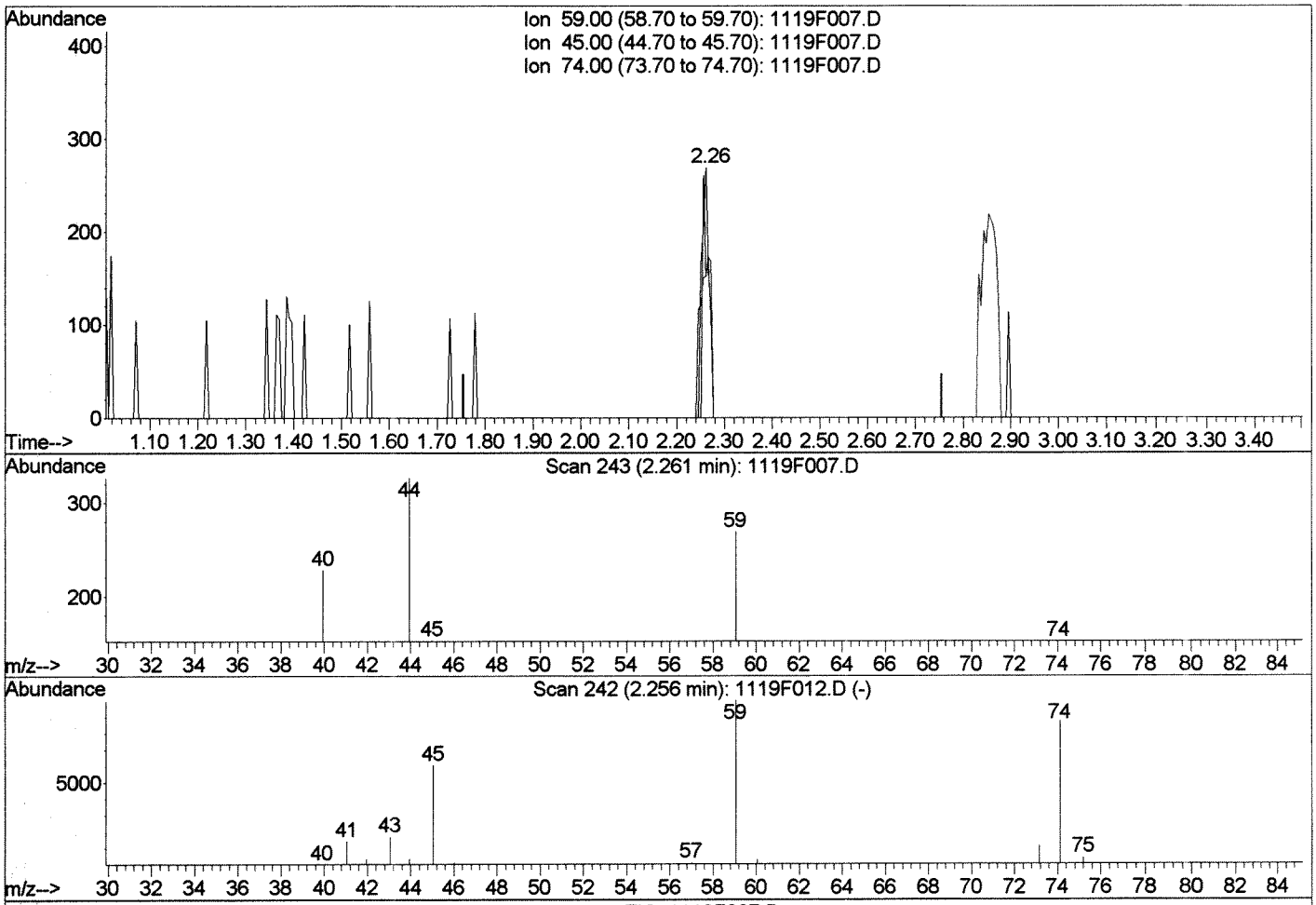
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:31:58 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:32 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(9) Ethyl Ether (T)

2.26min 0.14PPB m

response 287

Ion	Exp%	Act%
59.00	100	100
45.00	60.70	56.88
74.00	87.50	56.51#
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

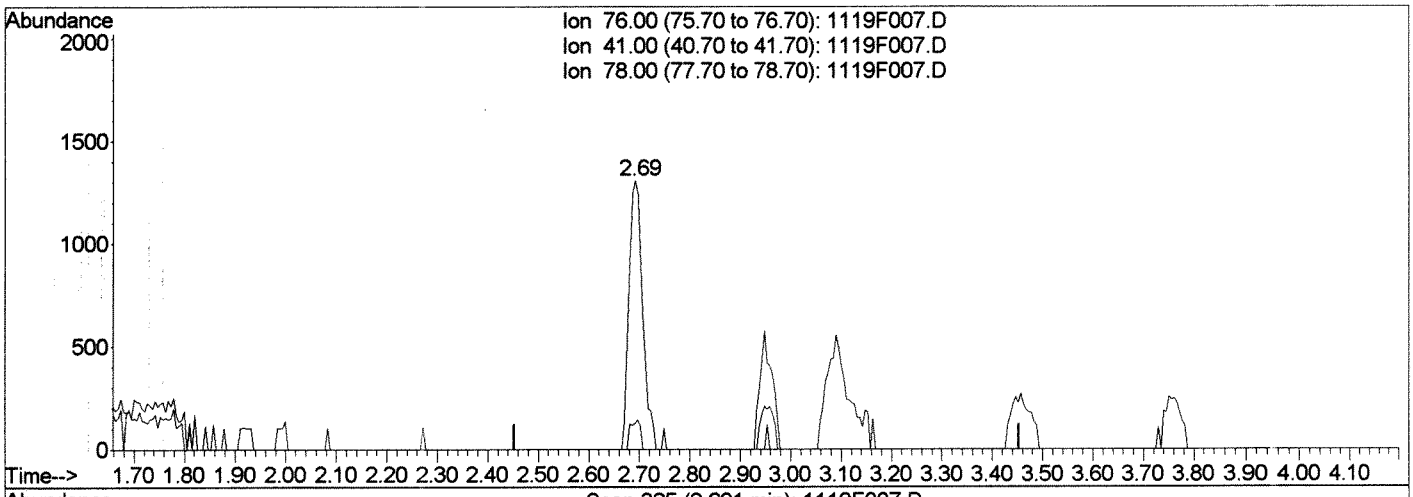
11/21/18 ✓

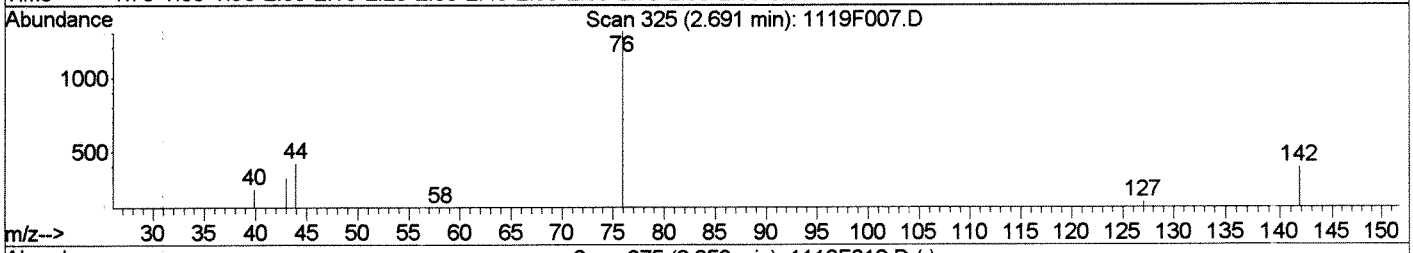
1119F007.D 111918MS46_8260.M Wed Nov 21 09:32:04 2018

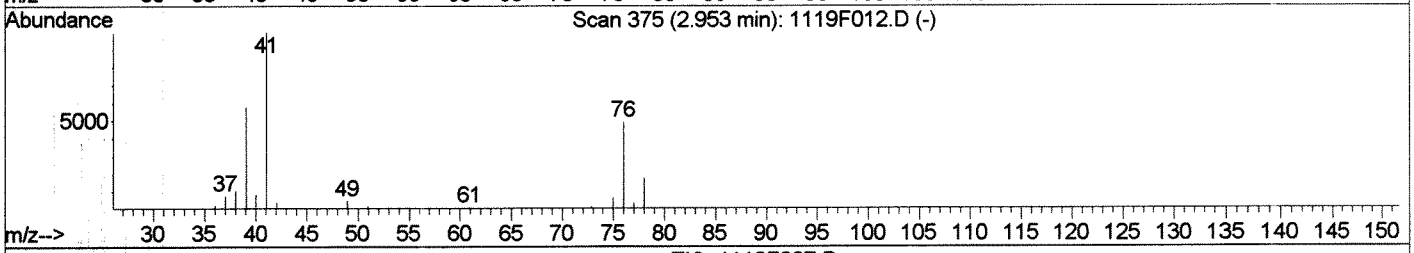
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:32 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(17) 3-Chloro-1-propene (T)

2.69min 1.27PPB

response 2455

Ion	Exp%	Act%
76.00	100	100
41.00	202.80	0.00#
78.00	36.10	9.63
0.00	0.00	0.00

Manual Integration:

Before

LM

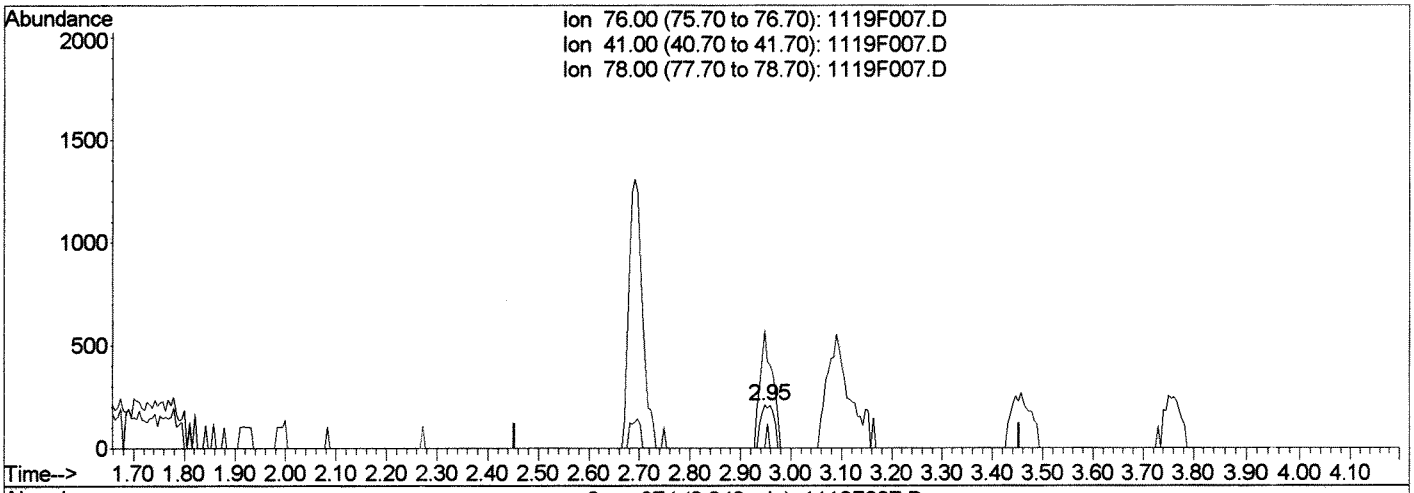
11/21/18

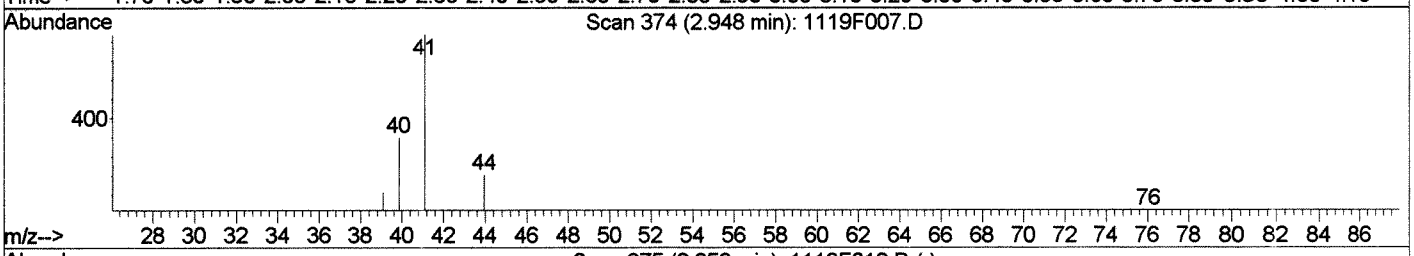
1119F007.D 111918MS46_8260.M Wed Nov 21 09:33:26 2018

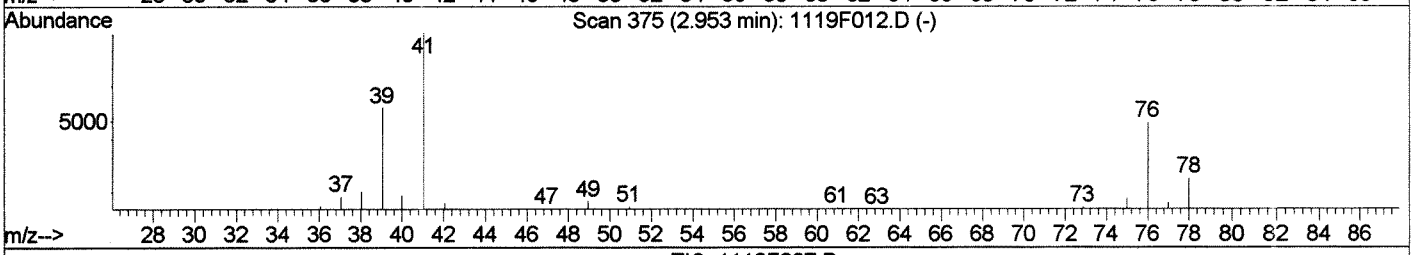
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:33 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(17) 3-Chloro-1-propene (T)

2.95min 0.19PPB m

response 375

Ion	Exp%	Act%
76.00	100	100
41.00	202.80	276.44#
78.00	36.10	0.00#
0.00	0.00	0.00

Manual Integration:

After LM

Baseline correction

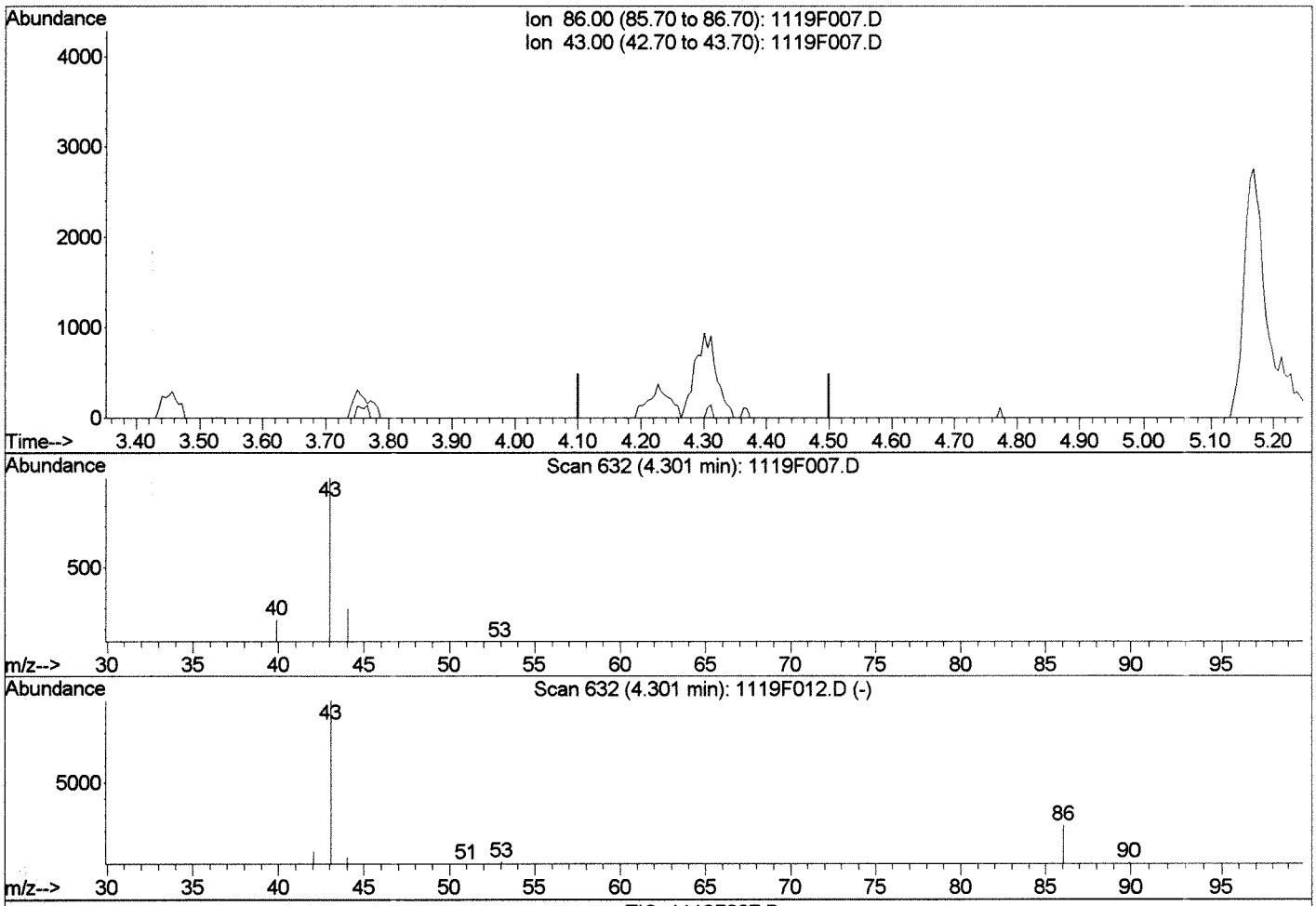
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:33:37 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:34 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(28) Vinyl Acetate (T)

4.30min 0.00PPB

response 0

Ion	Exp%	Act%
86.00	100	0.00
43.00	608.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before LM

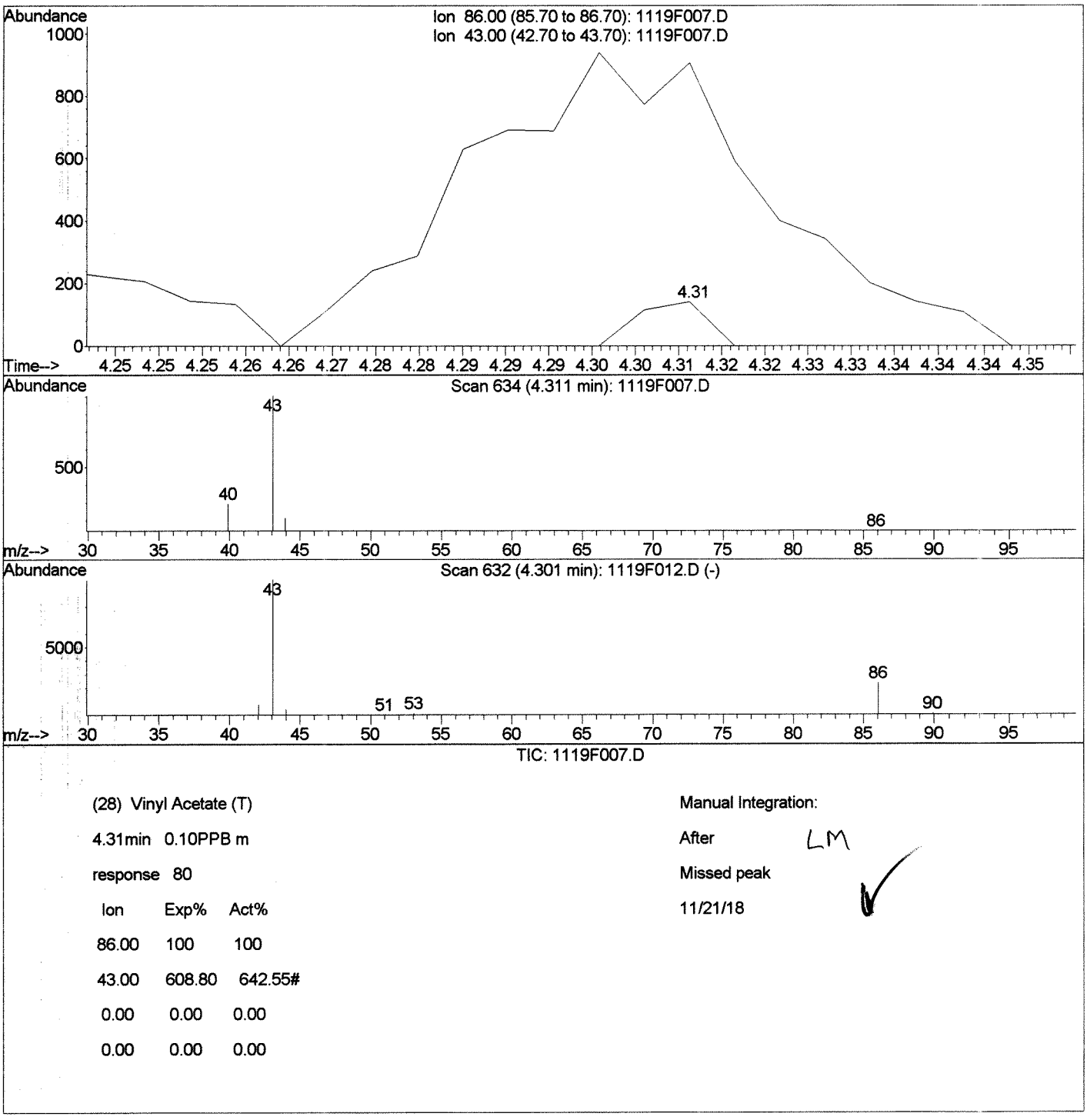
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:35:04 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:35 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



(28) Vinyl Acetate (T)

4.31min 0.10PPB m

response 80

Ion	Exp%	Act%
86.00	100	100
43.00	608.80	642.55#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

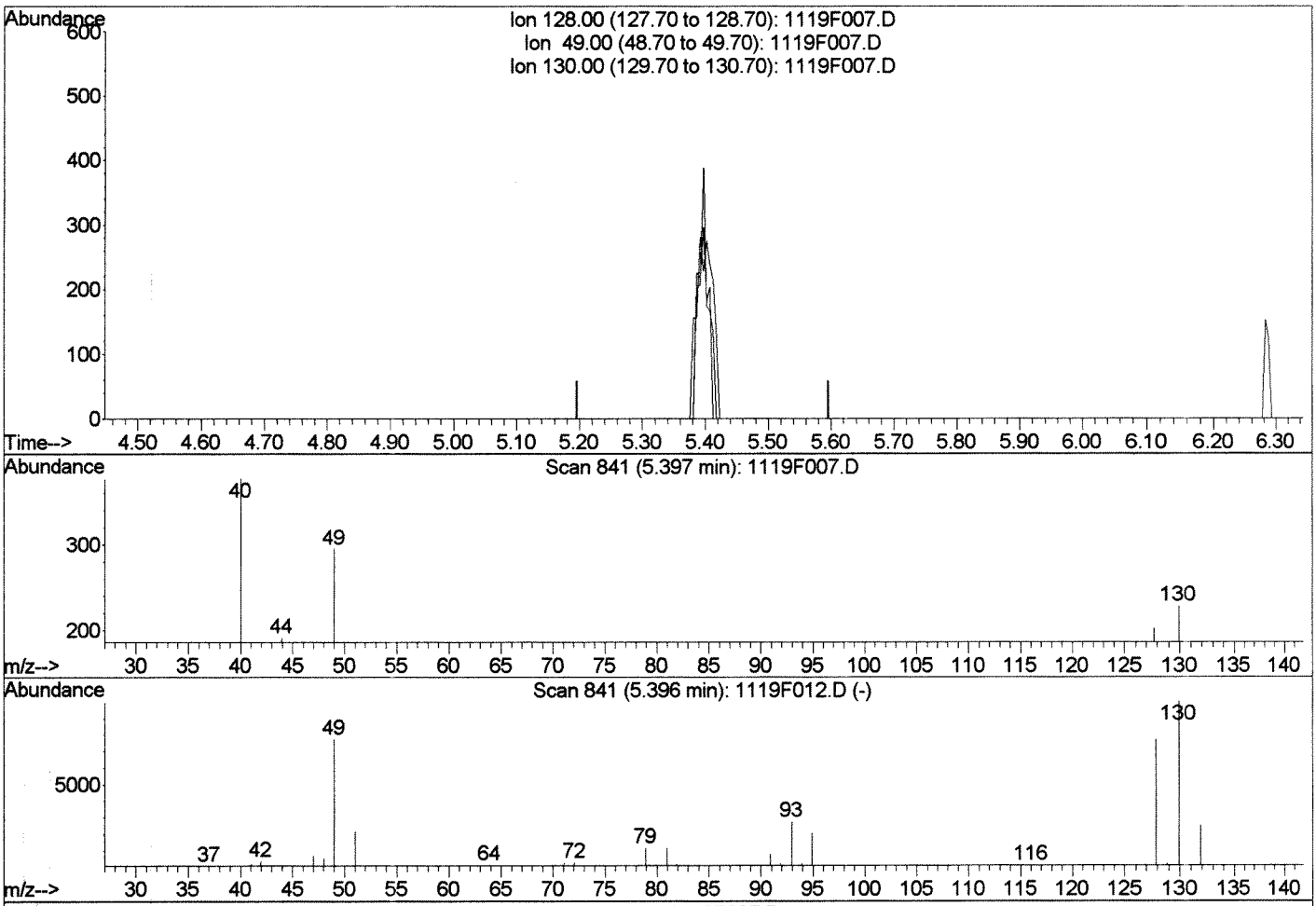
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:35:17 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:35 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(37) Bromochloromethane (T)

5.40min 0.00PPB

response 0

Ion	Exp%	Act%
128.00	100	0.00
49.00	100.70	0.00#
130.00	130.00	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

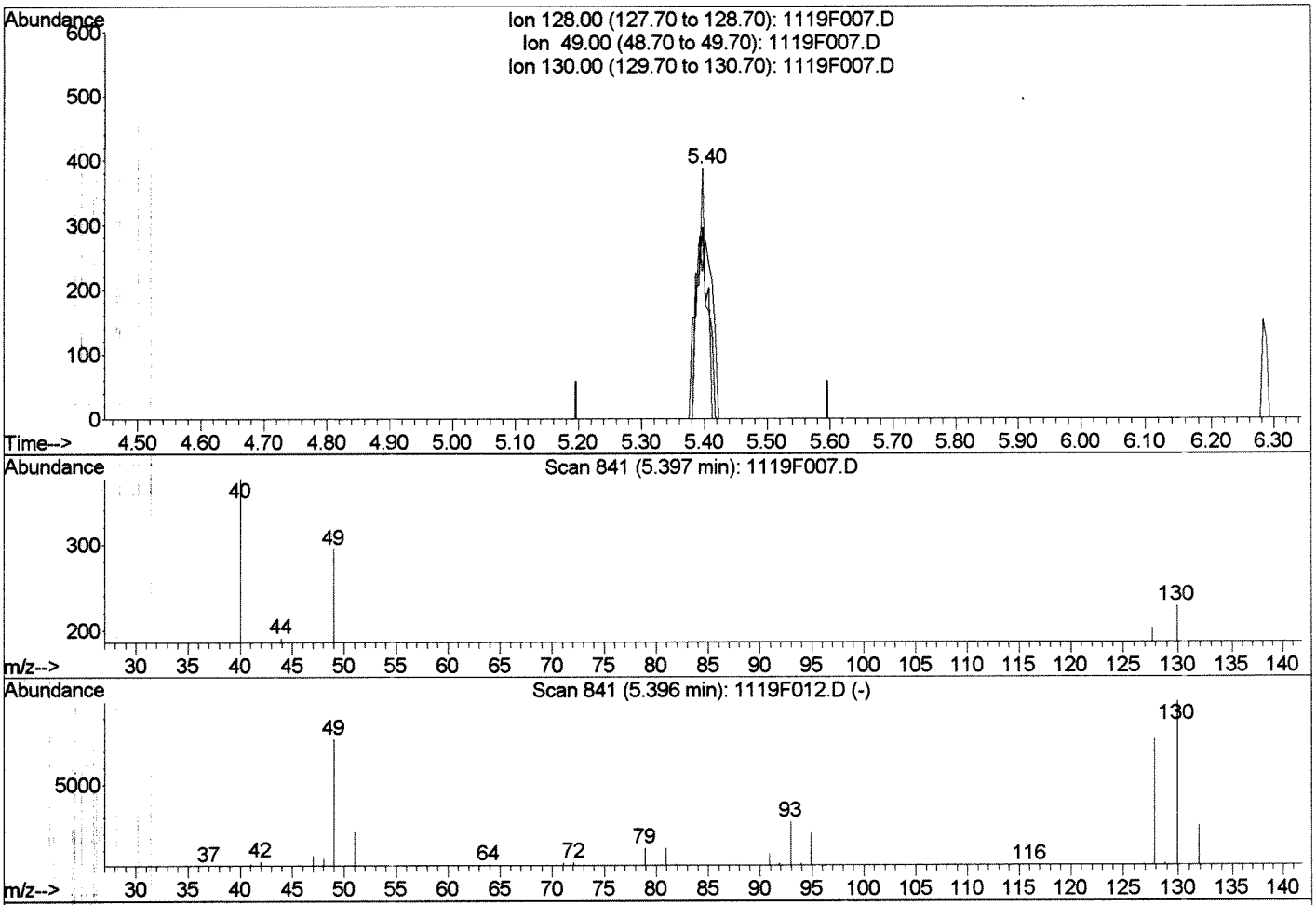
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:36:26 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:36 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(37) Bromochloromethane (T)

5.40min 0.17PPB m

response 401

Ion	Exp%	Act%
128.00	100	100
49.00	100.70	146.04#
130.00	130.00	112.87
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

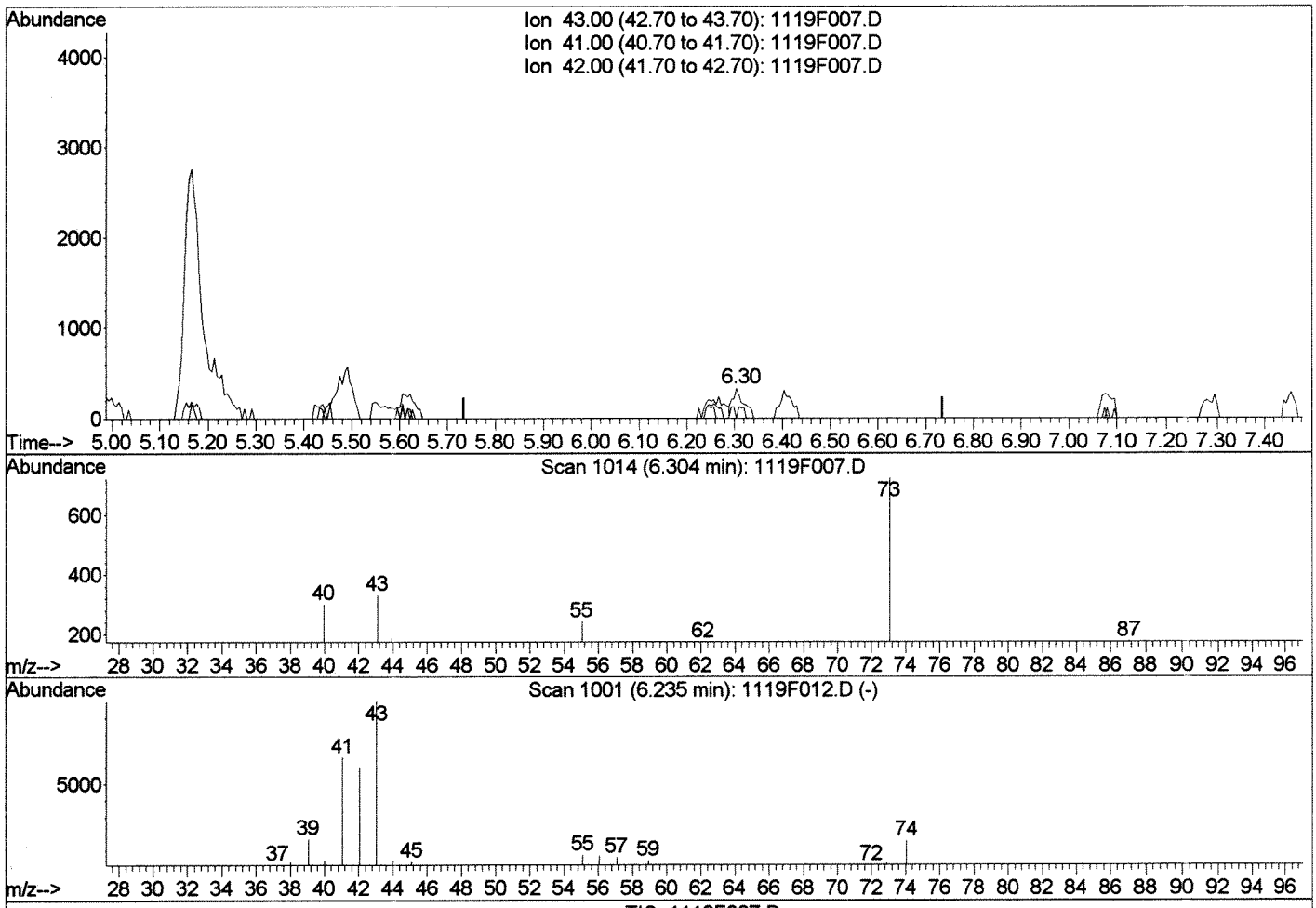
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:36:33 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:36 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(45) Isobutyl Alcohol (T)

6.30min 10.93PPB

response 537

Ion	Exp%	Act%
43.00	100	100
41.00	66.10	0.00#
42.00	60.10	0.00#
0.00	0.00	0.00

Manual Integration:

Before LM

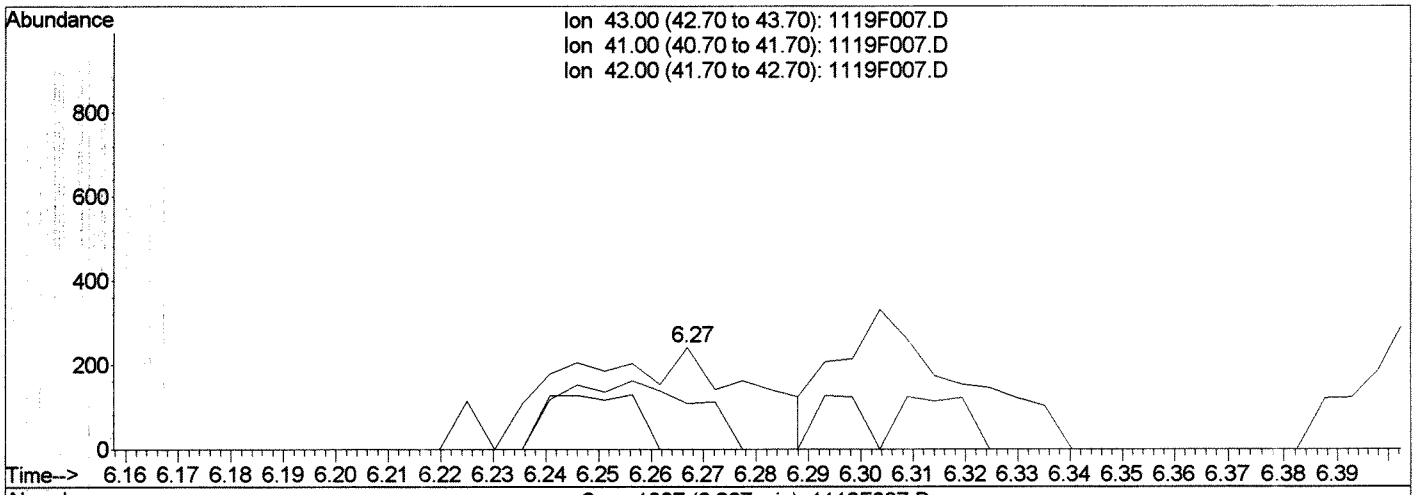
11/21/18

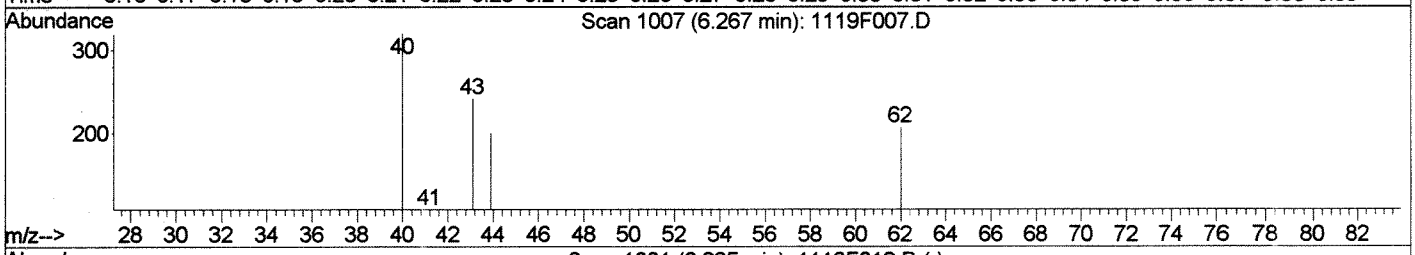
1119F007.D 111918MS46_8260.M Wed Nov 21 09:36:51 2018

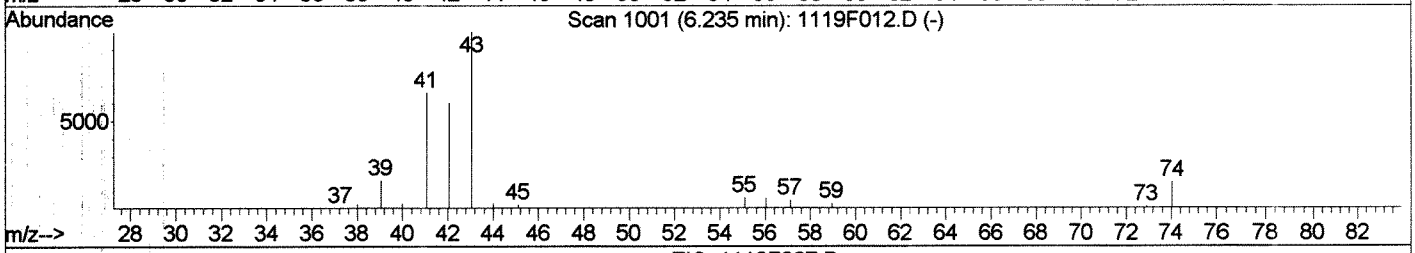
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:36 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(45) Isobutyl Alcohol (T)

6.27min 11.78PPB m

response 579

Ion	Exp%	Act%
43.00	100	100
41.00	66.10	44.81
42.00	60.10	0.00#
0.00	0.00	0.00

Manual Integration:

After LM

Baseline correction ✓

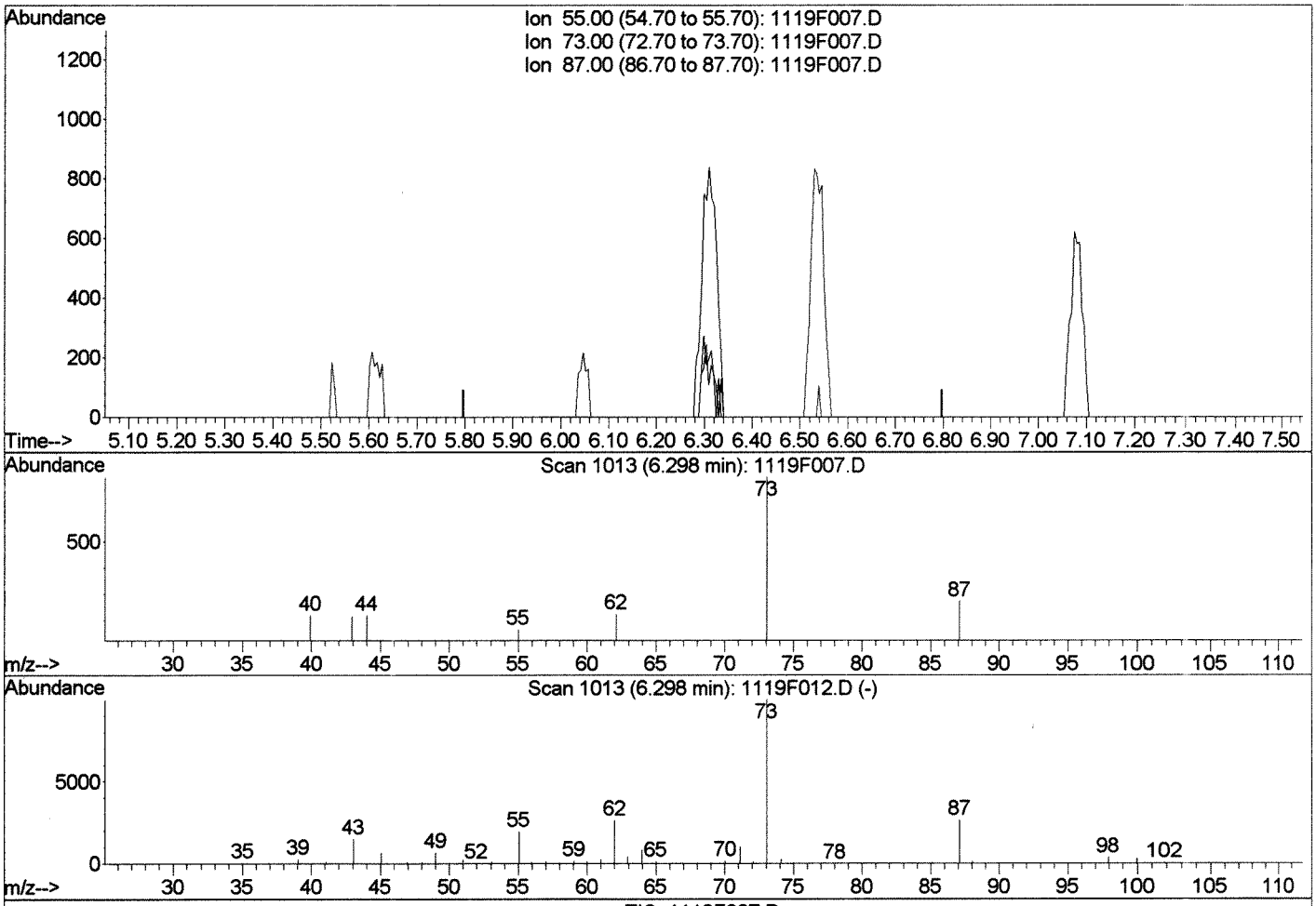
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:37:16 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:36 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(49) tert-Amyl Methyl Ether (T)

6.30min 0.00PPB

response 0

Ion	Exp%	Act%
55.00	100	0.00
73.00	501.10	0.00#
87.00	131.30	0.00#
0.00	0.00	0.00

Manual Integration:

Before LM

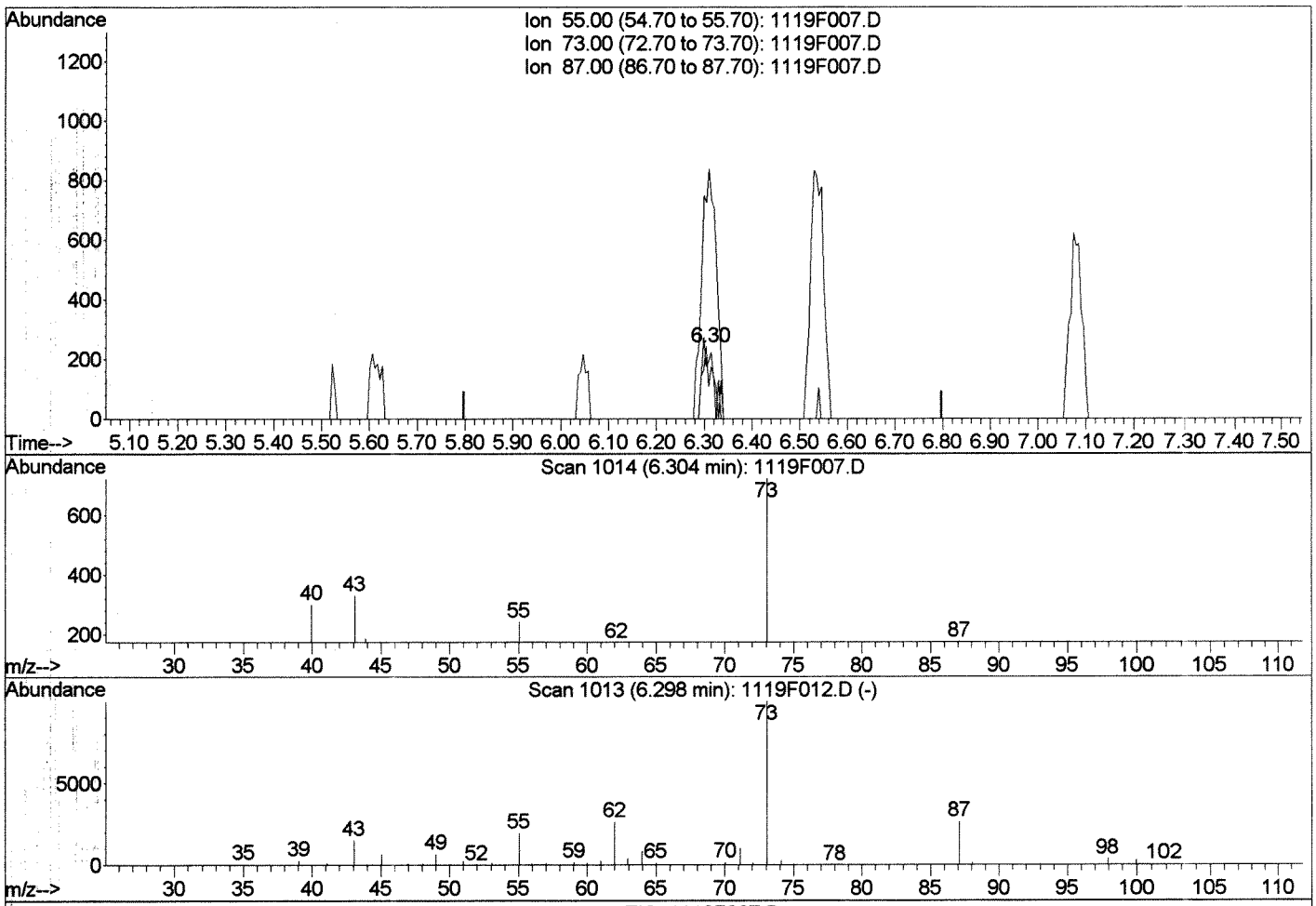
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:37:33 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:37 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(49) tert-Amyl Methyl Ether (T)

6.30min 0.17PPB m

response 349

Ion	Exp%	Act%
55.00	100	100
73.00	501.10	299.59#
87.00	131.30	72.73#
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

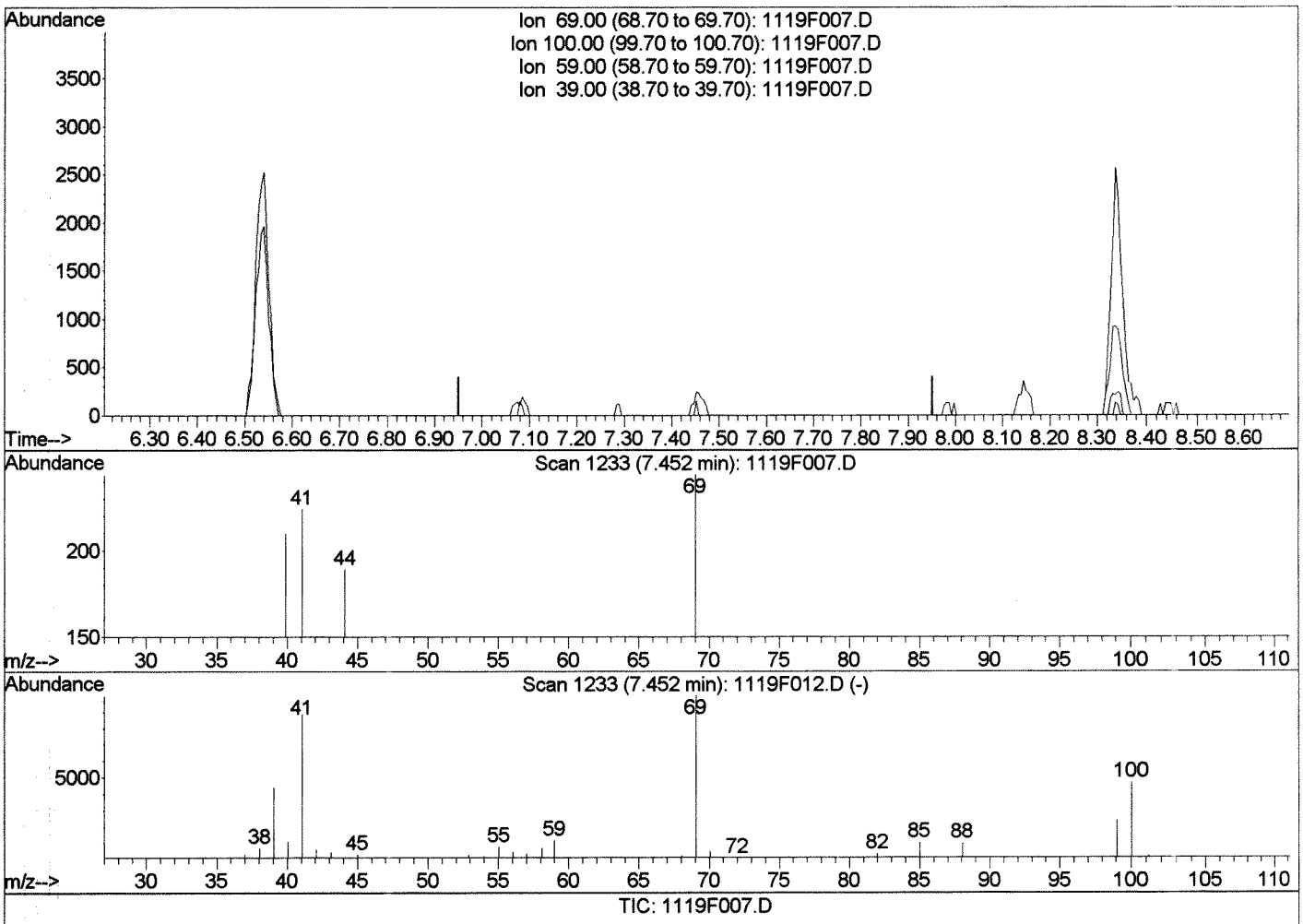
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:37:41 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:37 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(54) Methyl methacrylate (T)

7.45min 0.00PPB

response 0

Ion	Exp%	Act%
69.00	100	0.00
100.00	46.80	0.00#
59.00	11.90	0.00
39.00	44.10	0.00#

Manual Integration:

Before LM

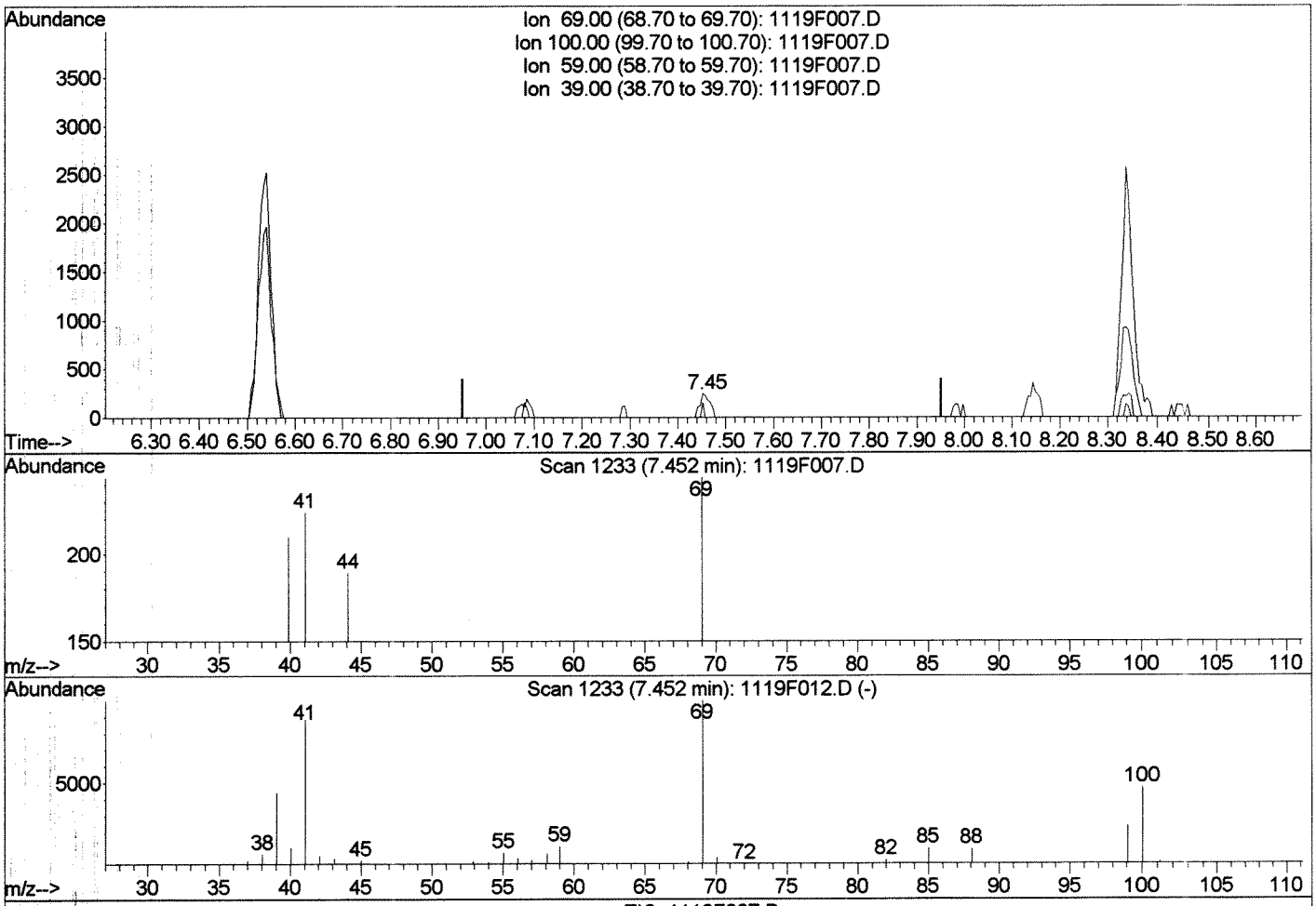
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:38:15 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:38 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(54) Methyl methacrylate (T)

7.45min 0.18PPB m

response 358

Ion	Exp%	Act%
69.00	100	100
100.00	46.80	0.00#
59.00	11.90	0.00
39.00	44.10	61.48

Manual Integration:

After LM

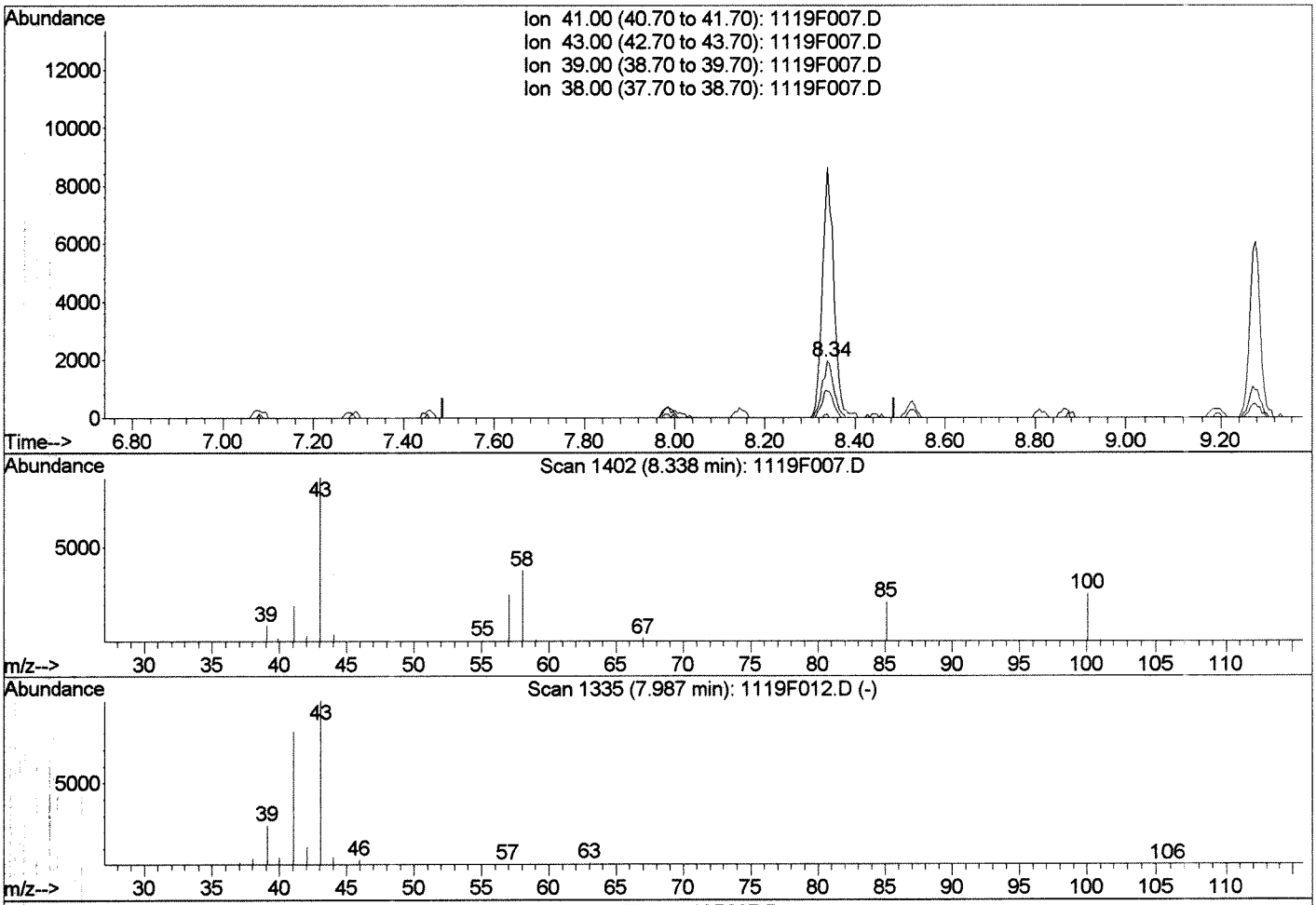
Missed peak

11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:38:21 2018

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:38 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(57) 2-Nitropropane (T)

8.34min 6.98PPB

response 3482

Ion	Exp%	Act%
41.00	100	100
43.00	122.90	442.07#
39.00	29.70	47.19
38.00	5.70	6.24

Manual Integration:

Before LM

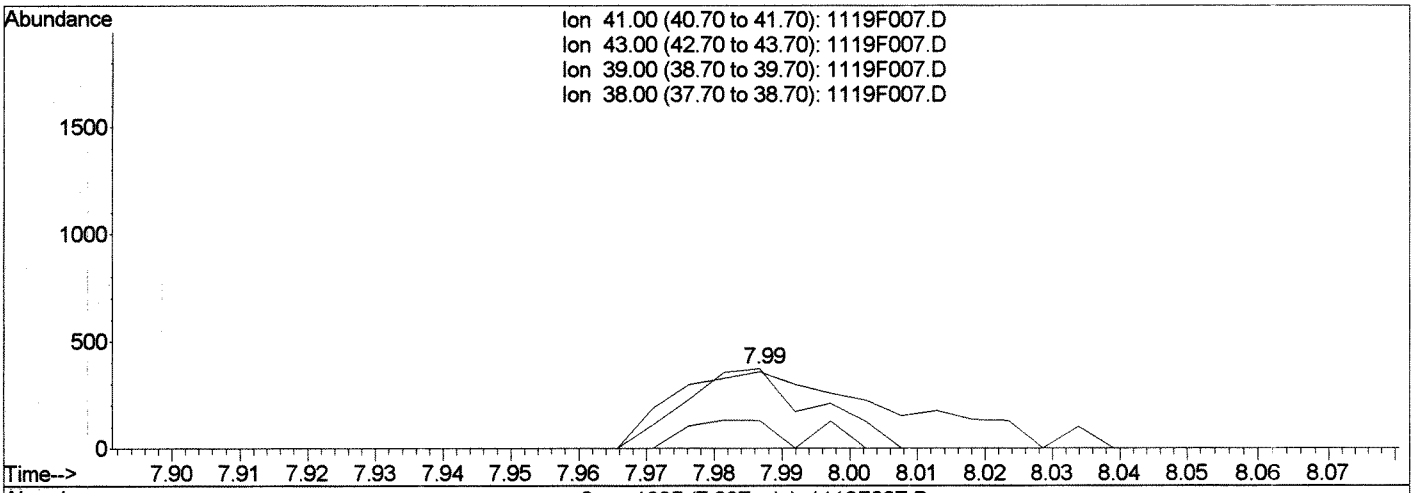
11/21/18

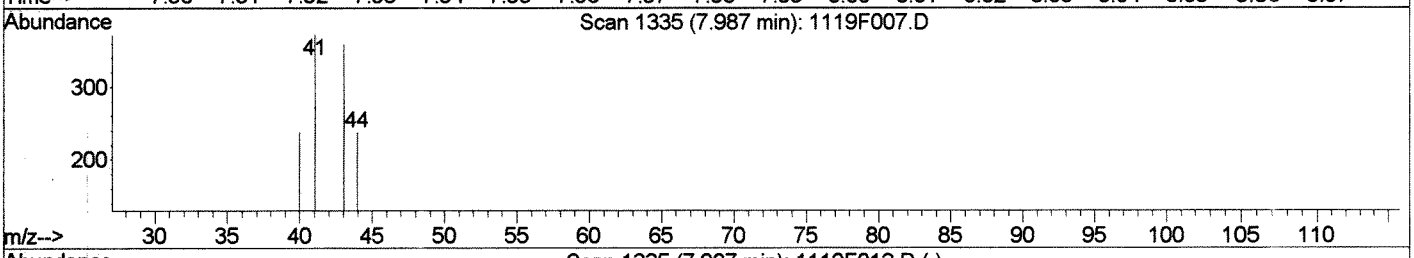
1119F007.D 111918MS46_8260.M Wed Nov 21 09:38:35 2018

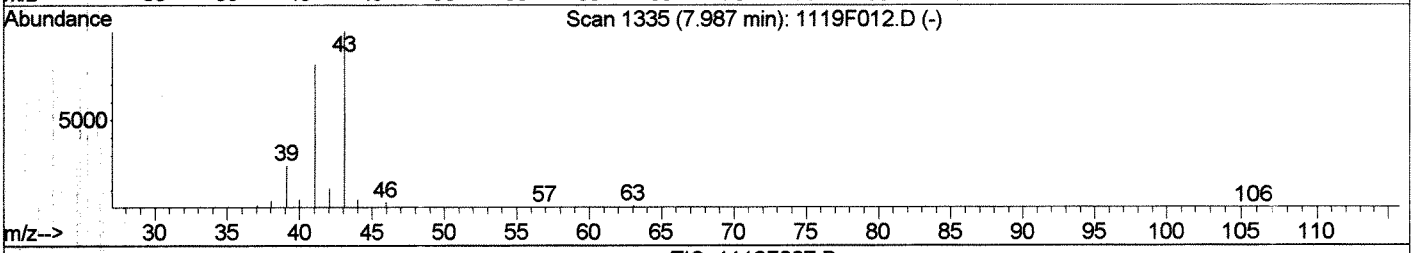
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:38 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(57) 2-Nitropropane (T)

7.99min 0.99PPB m

response 494

Ion	Exp%	Act%
41.00	100	100
43.00	122.90	96.24
39.00	29.70	34.95
38.00	5.70	0.00

Manual Integration:

After LM

Baseline correction

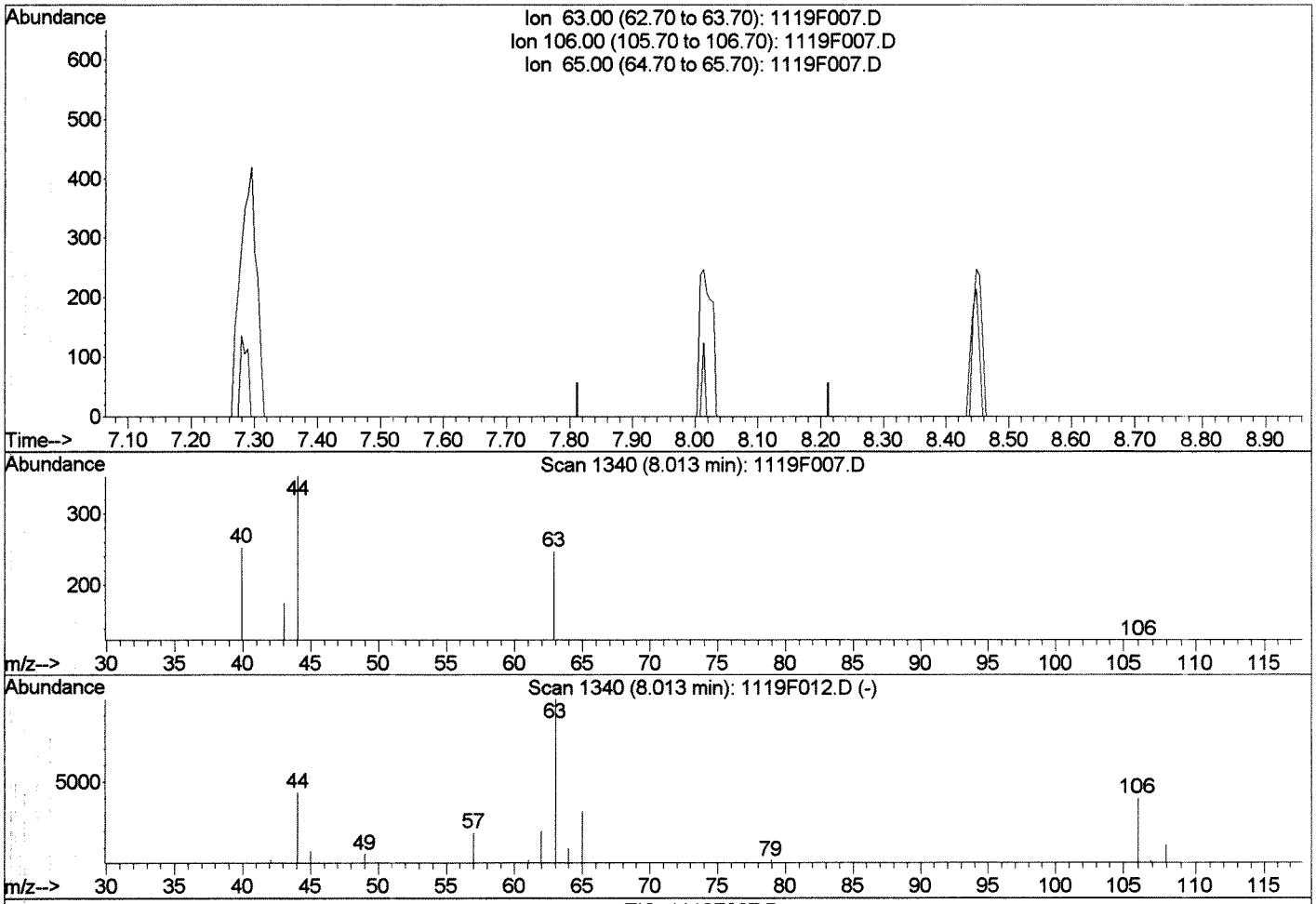
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:38:47 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:38 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(58) 2-Chloroethyl Vinyl Ether (T)

8.01min 0.00PPB

response 0

Ion	Exp%	Act%
63.00	100	0.00
106.00	39.90	0.00#
65.00	32.10	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

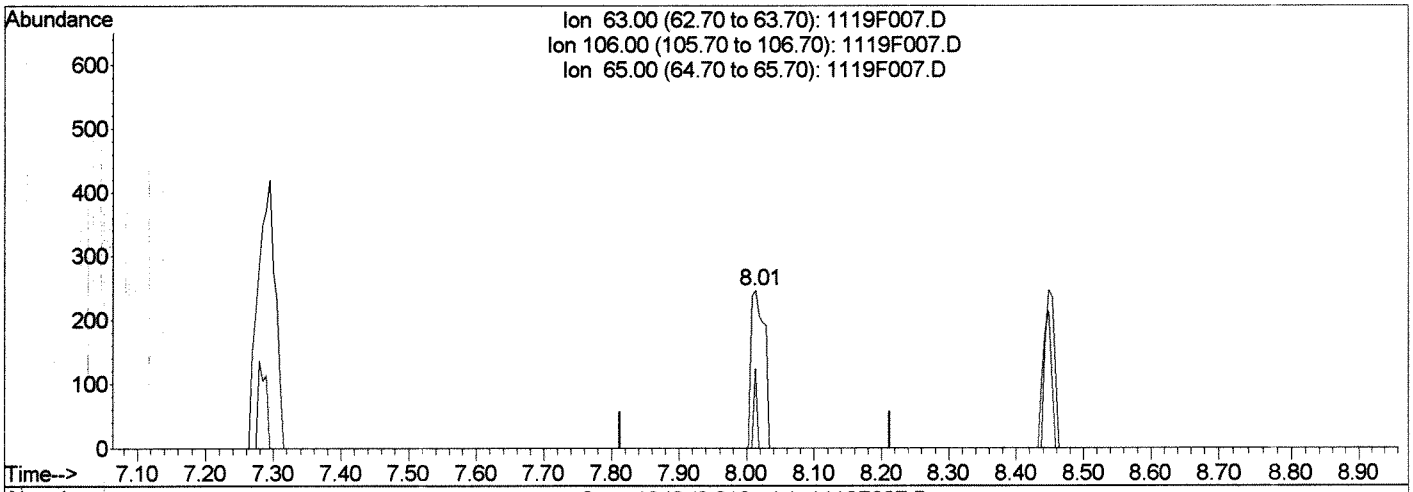
11/21/18

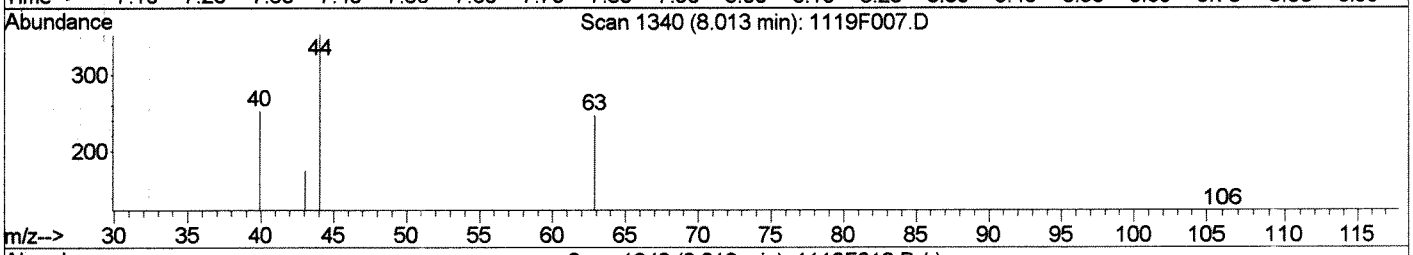
1119F007.D 111918MS46_8260.M Wed Nov 21 09:38:54 2018

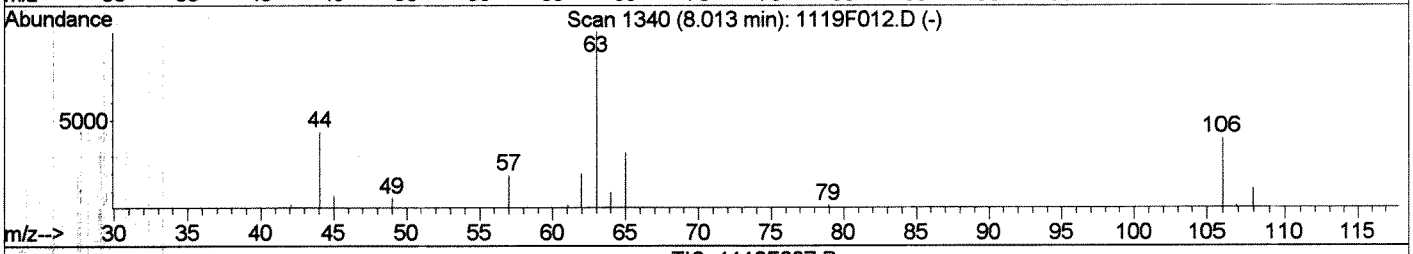
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:38 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(58) 2-Chloroethyl Vinyl Ether (T)

8.01min 0.17PPB m

response 339

Ion	Exp%	Act%
63.00	100	100
106.00	39.90	50.20
65.00	32.10	0.00#
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

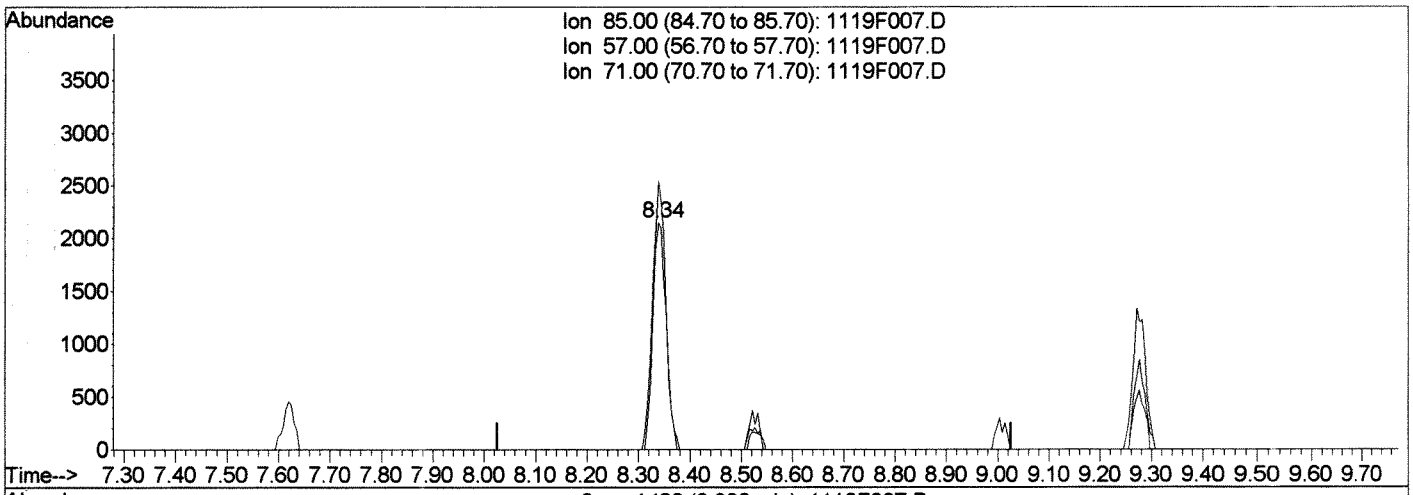
11/21/18

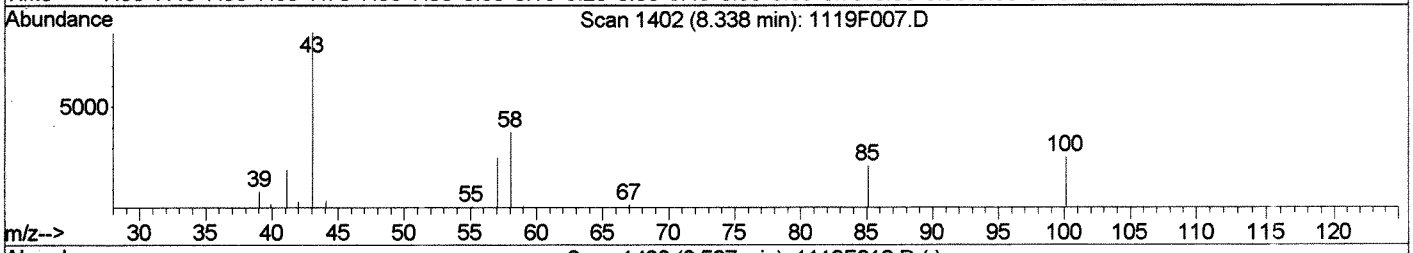
1119F007.D 111918MS46_8260.M Wed Nov 21 09:39:02 2018

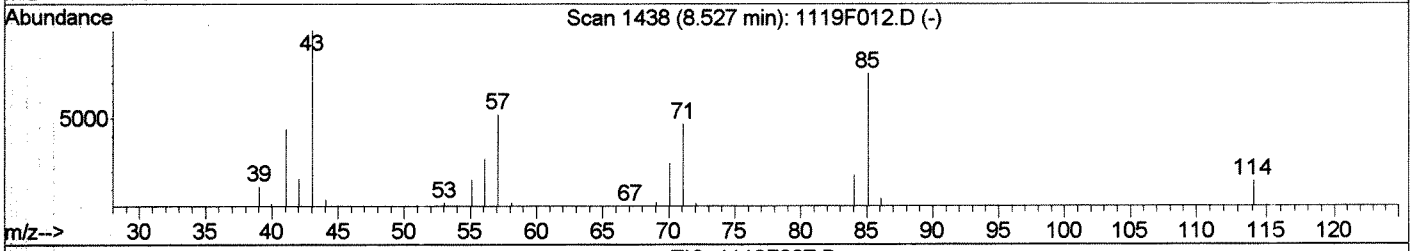
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:38 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(64) n-Octane (T)

8.34min 1.58PPB

response 3909

Ion	Exp%	Act%
85.00	100	100
57.00	69.30	118.26#
71.00	61.90	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

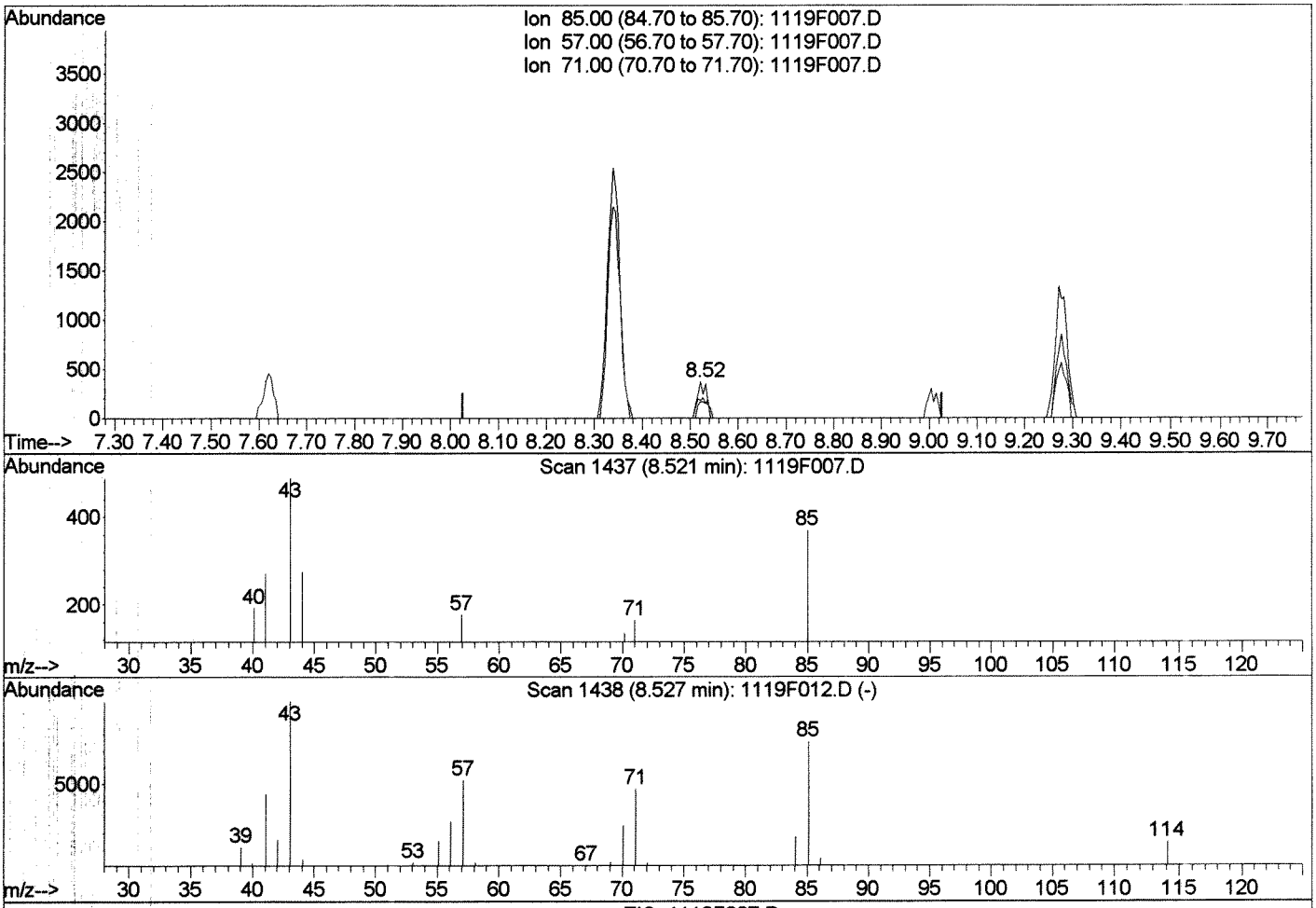
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:39:14 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:39 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(64) n-Octane (T)

8.52min 0.19PPB m

response 464

Ion	Exp%	Act%
85.00	100	100
57.00	69.30	47.84
71.00	61.90	44.59
0.00	0.00	0.00

Manual Integration:

After LM

Baseline correction

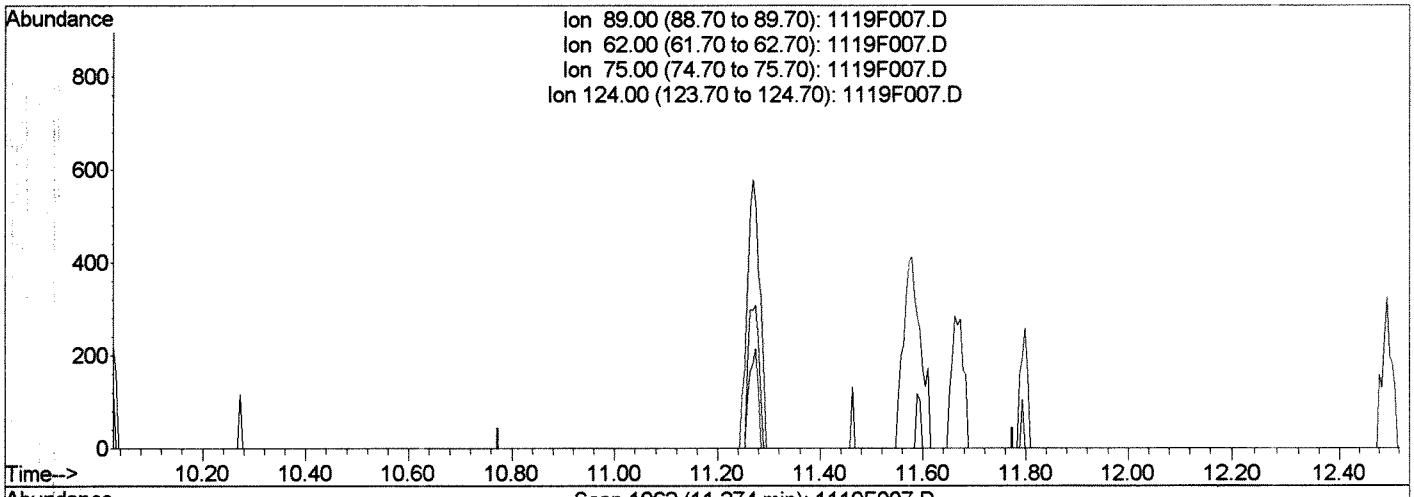
11/21/18

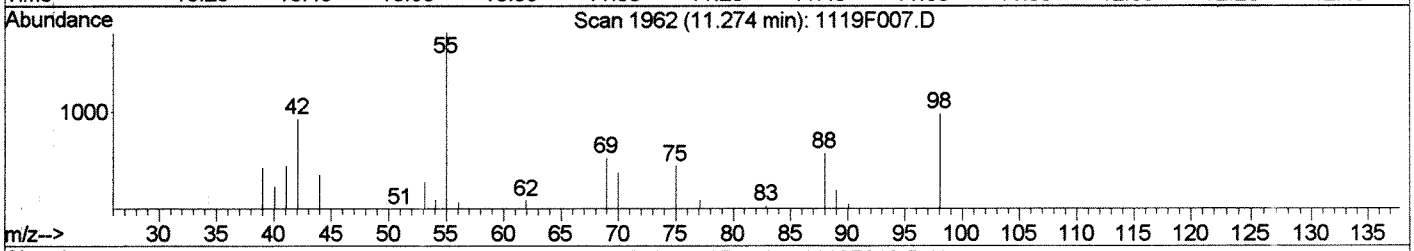
1119F007.D 111918MS46_8260.M Wed Nov 21 09:39:27 2018

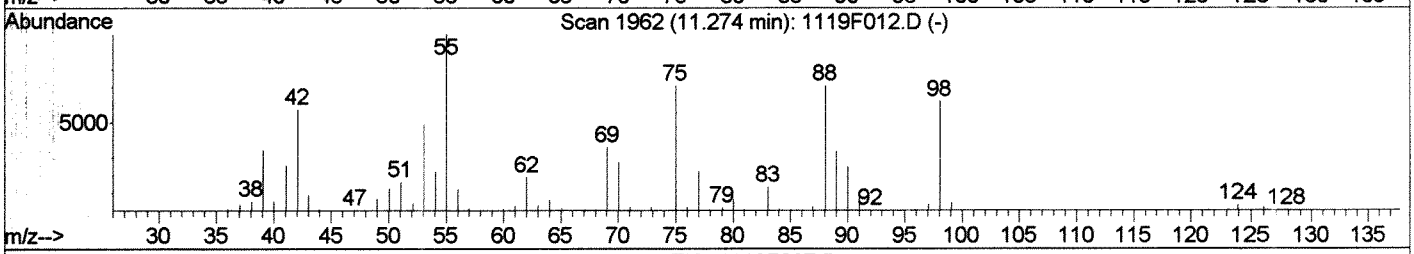
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:39 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(82) cis-1,4-Dichloro-2-butene (T)

11.27min 0.00PPB

response 0

Ion	Exp%	Act%
89.00	100	0.00
62.00	56.40	0.00#
75.00	209.10	0.00#
124.00	9.70	0.00

Manual Integration:

Before LM

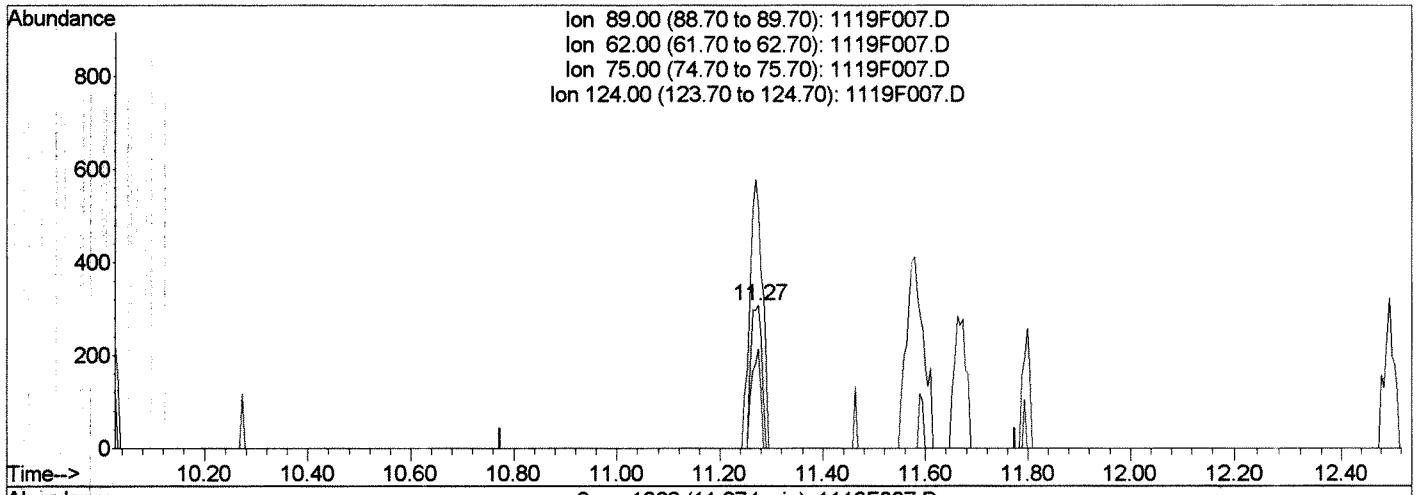
11/21/18

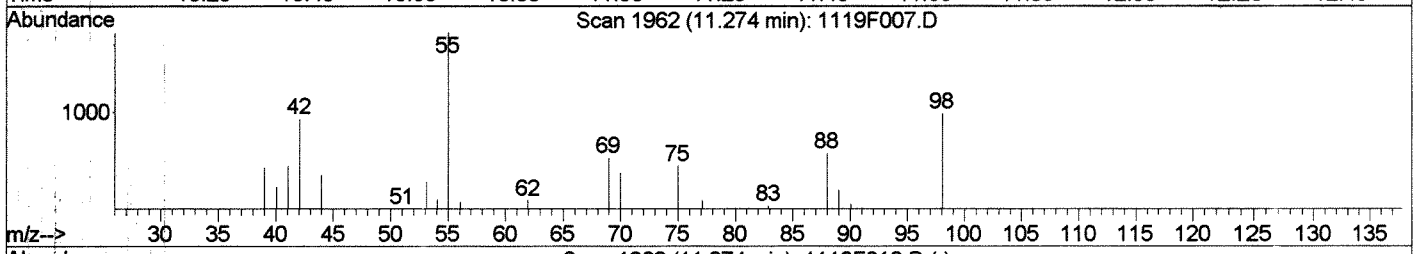
1119F007.D 111918MS46_8260.M Wed Nov 21 09:40:25 2018

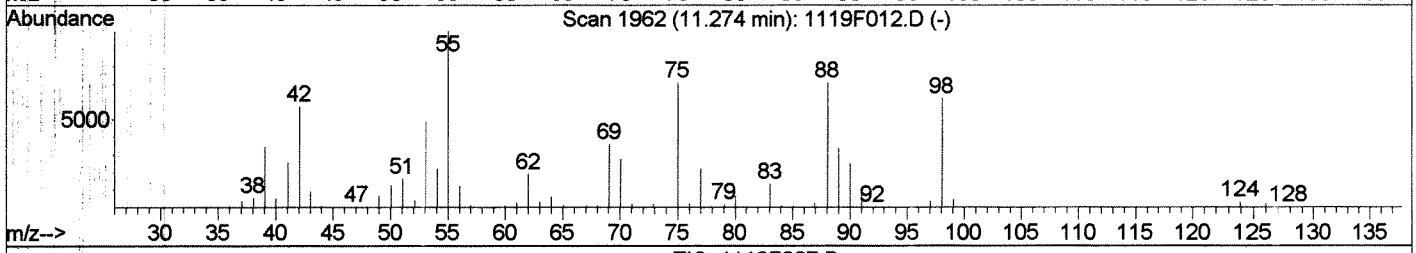
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:40 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(82) cis-1,4-Dichloro-2-butene (T)

11.27min 0.74PPB m

response 449

Ion	Exp%	Act%
89.00	100	100
62.00	56.40	69.48
75.00	209.10	169.48#
124.00	9.70	0.00

Manual Integration:

After LM

Missed peak

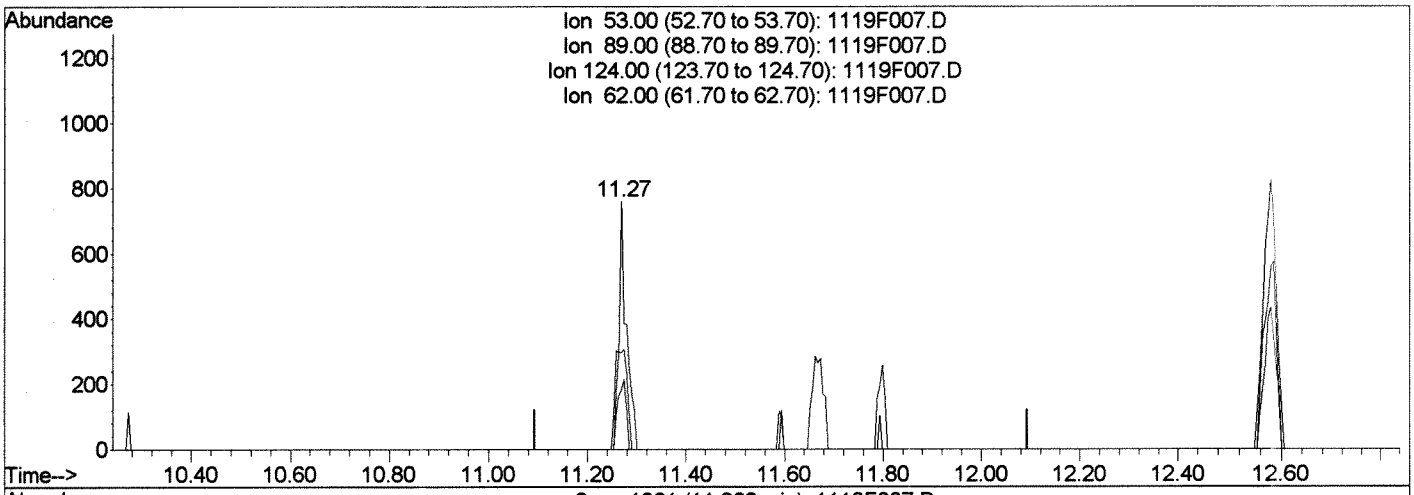
11/21/18

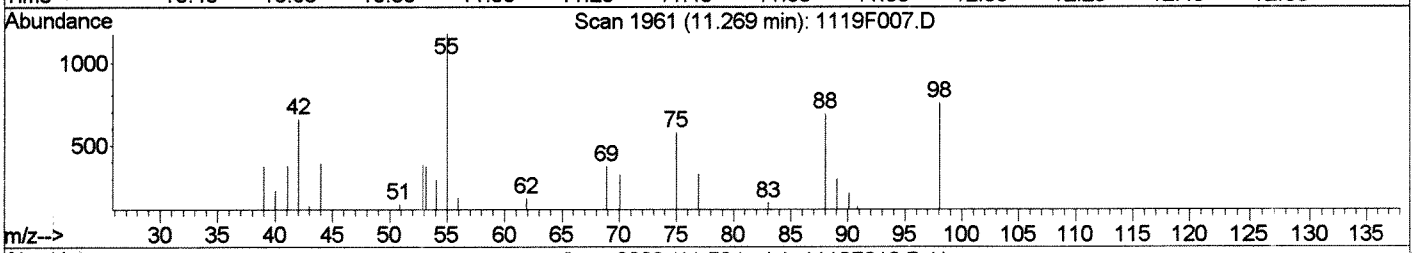
1119F007.D 111918MS46_8260.M Wed Nov 21 09:40:32 2018

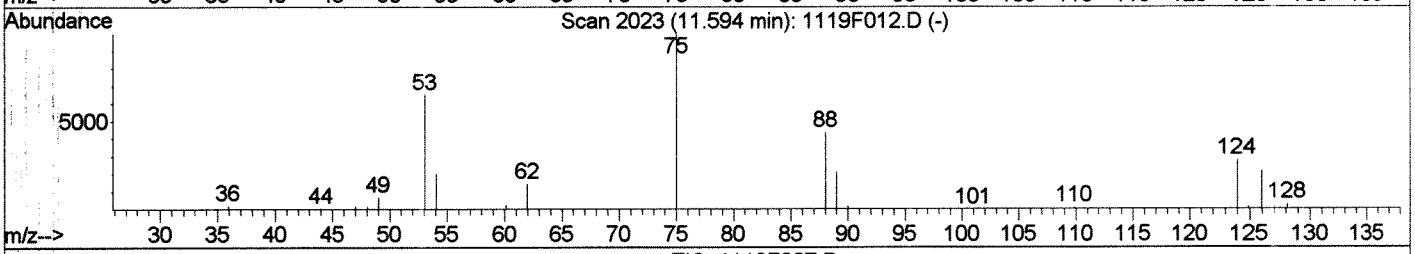
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:40 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(86) trans-1,4-Dichloro-2-butene (T)

11.27min 0.98PPB

response 877

Ion	Exp%	Act%
53.00	100	100
89.00	81.90	39.08#
124.00	40.70	0.00#
62.00	43.60	23.82

Manual Integration:

Before LM

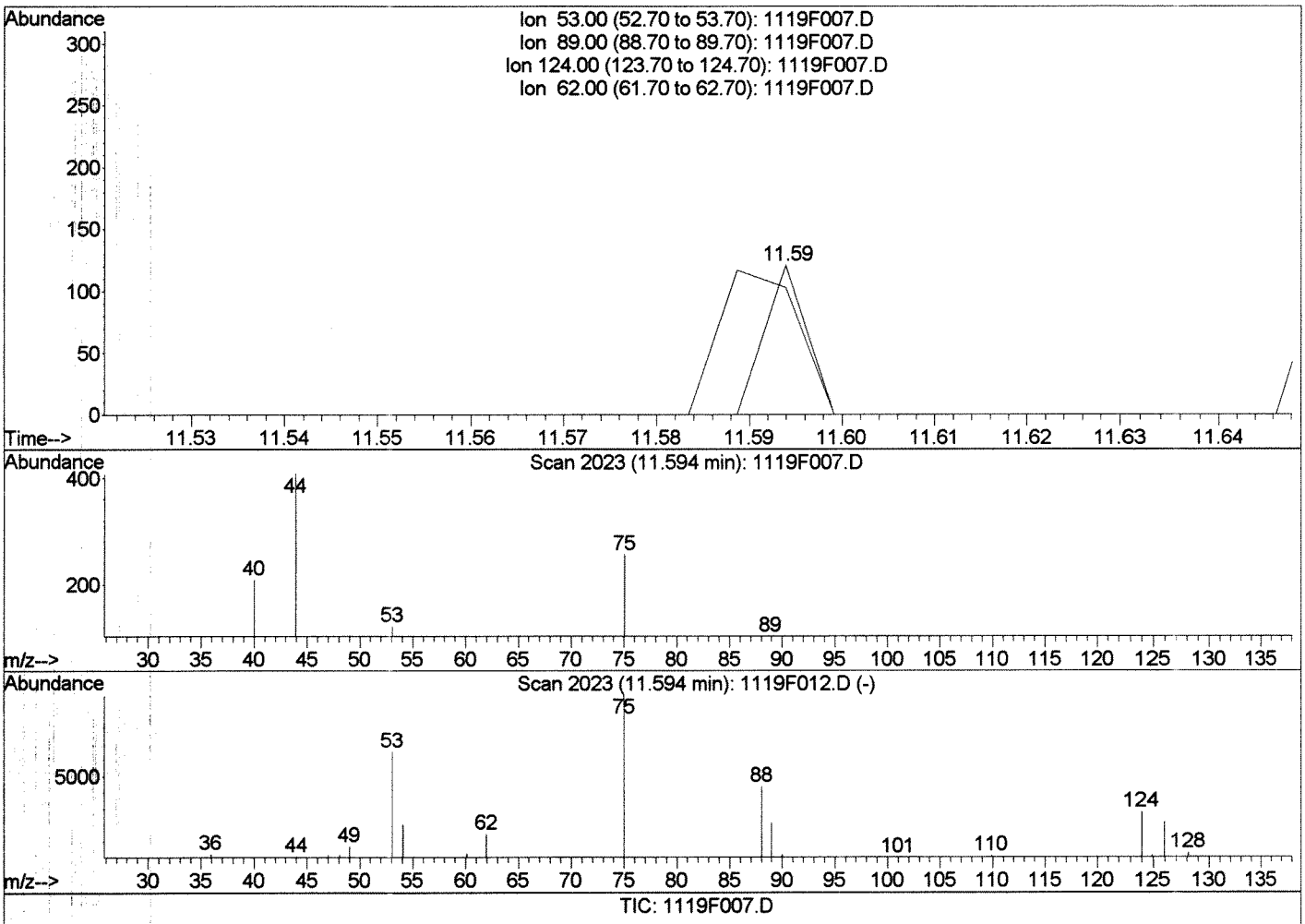
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:40:46 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:40 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(86) trans-1,4-Dichloro-2-butene (T)

11.59min 0.04PPB m

response 38

Ion	Exp%	Act%
53.00	100	100
89.00	81.90	85.12
124.00	40.70	0.00#
62.00	43.60	0.00#

Manual Integration:

After LM

Missed peak

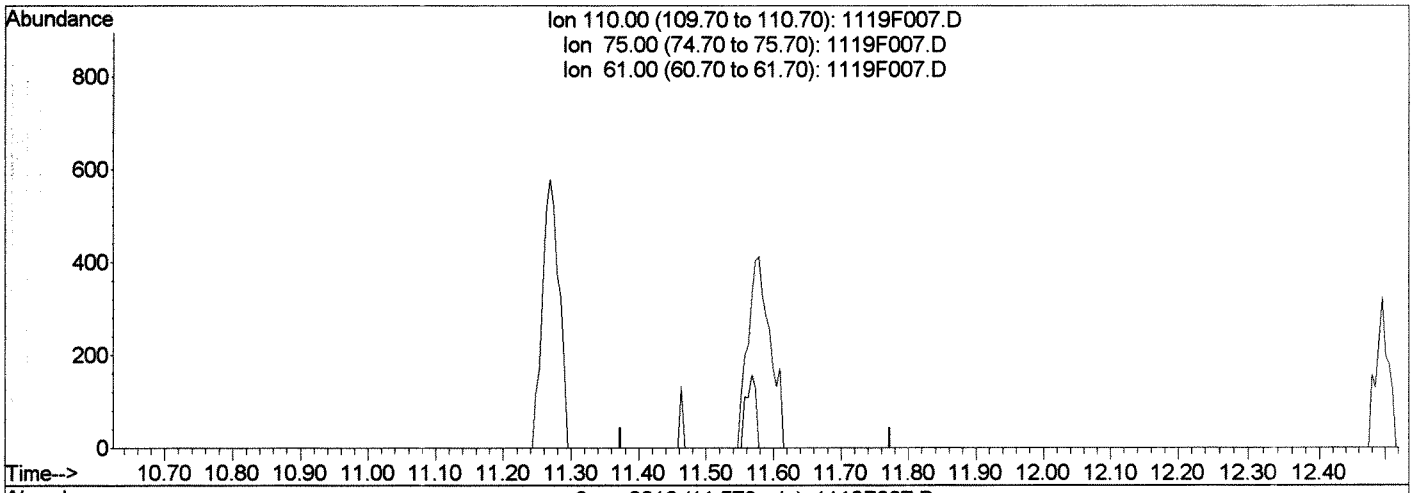
11/21/18

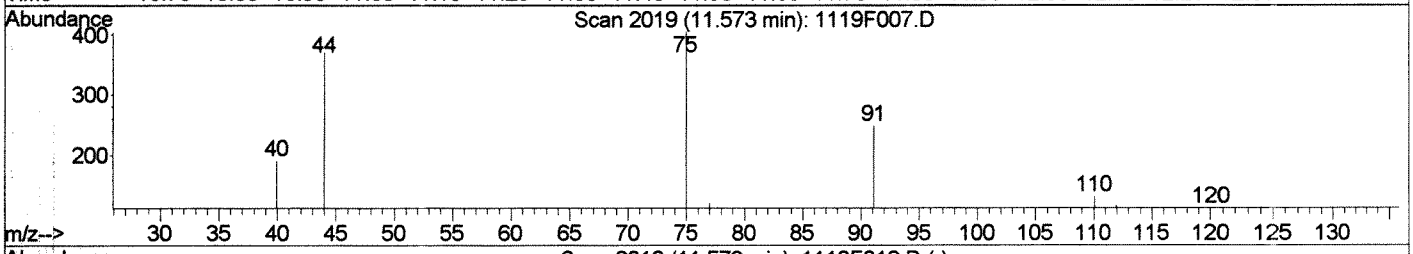
1119F007.D 111918MS46_8260.M Wed Nov 21 09:41:00 2018

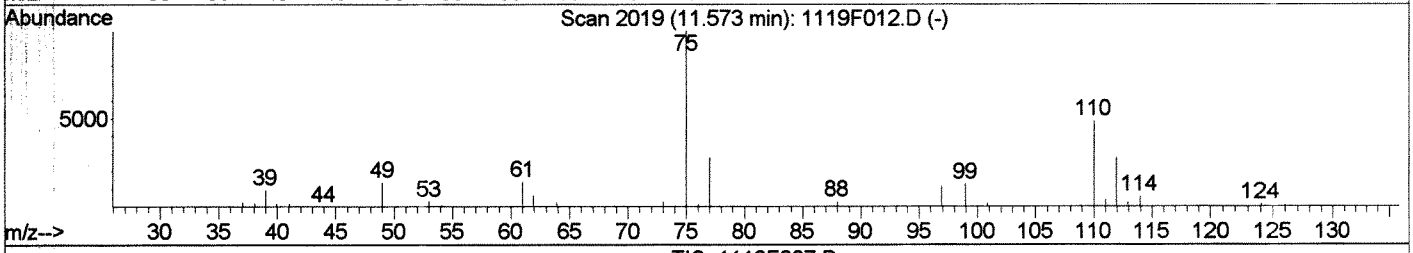
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:40 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(89) 1,2,3-Trichloropropane (T)

11.57min 0.00PPB

response 0

Ion	Exp%	Act%
110.00	100	0.00
75.00	205.90	0.00#
61.00	42.90	0.00#
0.00	0.00	0.00

Manual Integration:

Before LM

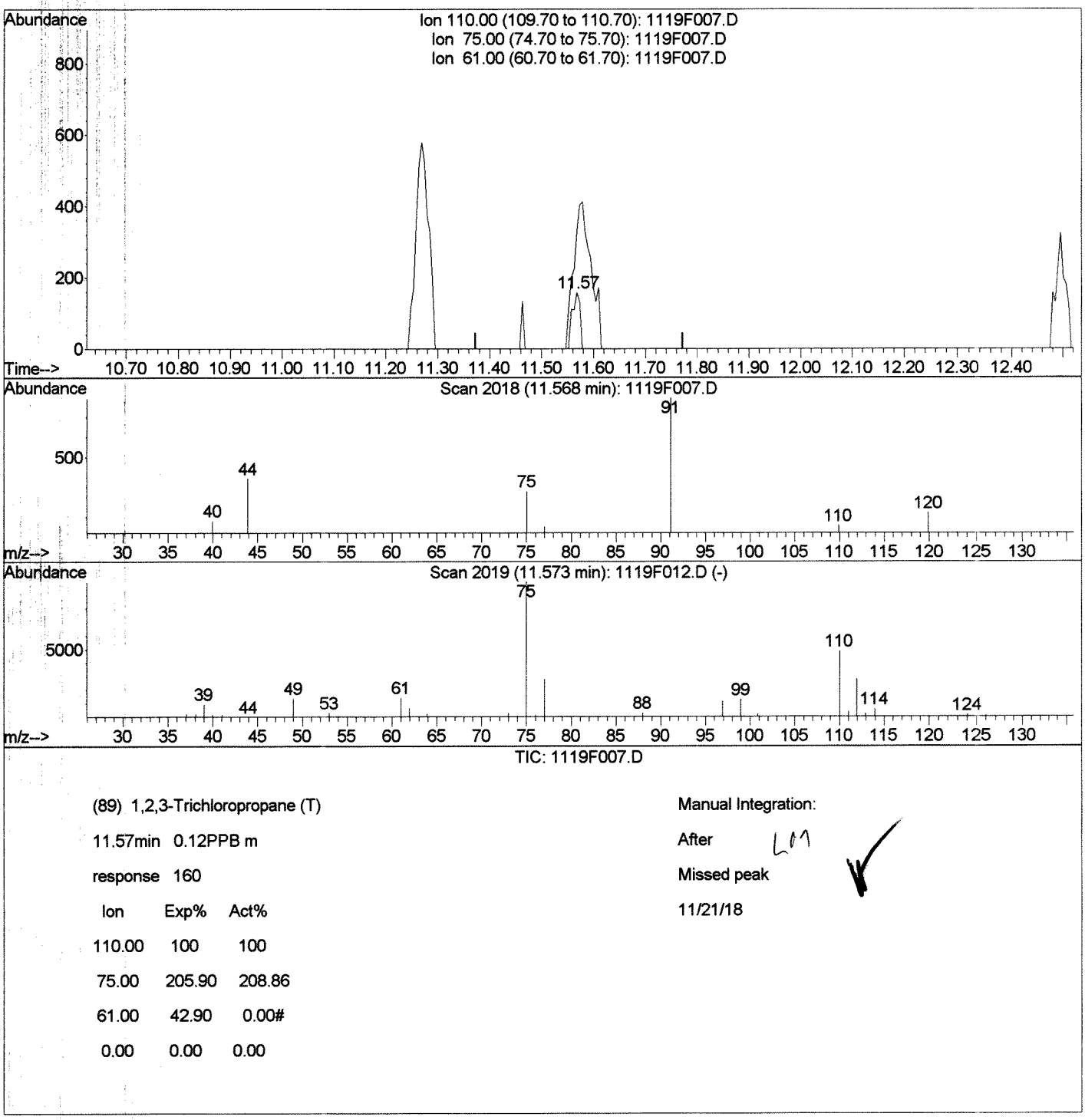
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:41:14 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:41 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(89) 1,2,3-Trichloropropane (T)

11.57min 0.12PPB m

response 160

Ion	Exp%	Act%
110.00	100	100
75.00	205.90	208.86
61.00	42.90	0.00#
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

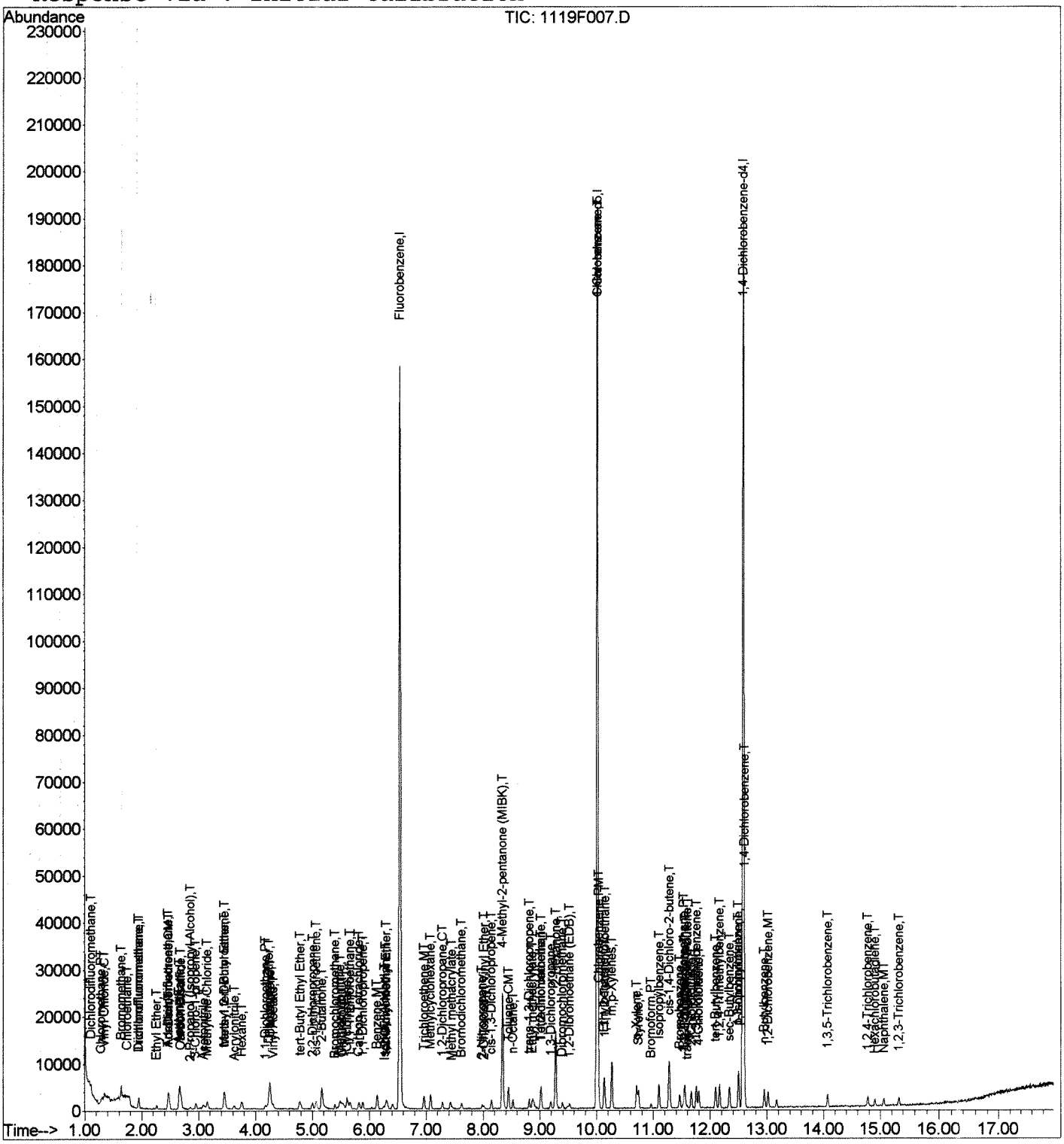
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:41:24 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:41 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:07 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.53	96	165837	10.00	PPB		0.00
63) Chlorobenzene-d5	10.01	82	62390	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	68355	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	0.00	113	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
46) 1,2-Dichloroethane-d4	0.00	65	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
61) Toluene-d8	0.00	98	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
83) 4-Bromofluorobenzene	0.00	95	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.10	85	1574	0.51	PPB		92
3) Chloromethane	1.29	50	1548	0.56	PPB		72
4) Vinyl Chloride	1.35	62	1907	0.55	PPB		93
5) Bromomethane	1.64	96	2472	0.75	PPB		97
6) Chloroethane	1.73	64	1168	0.52	PPB		95
7) Dichlorofluoromethane	1.95	67	3132	0.57	PPB		100
8) Trichlorofluoromethane	1.94	101	3109	0.61	PPB		94
9) Ethyl Ether	2.26	59	929	0.45	PPB		80
10) Acrolein	2.47	56	3859	10.49	PPB		82
11) Trichlorotrifluoroethane	2.47	151	1914	0.55	PPB		86
12) 1,1-Dichloroethene	2.49	96	1908	0.58	PPB		85
13) Acetone	2.65	43	9054	22.25	PPB		92
14) Iodomethane	2.66	142	8937	1.75	PPB		98
15) Carbon Disulfide	2.69	76	5685	0.59	PPB		97
16) 2-Propanol (Isopropyl Alco	2.85	45	1644	29.04	PPB		85
17) 3-Chloro-1-propene	2.95	76	947	0.49	PPB		96
18) Methyl Acetate	3.03	43	803	0.54	PPB		85
19) Acetonitrile	3.08	40	1827	20.62	PPB		99
20) Methylene Chloride	3.15	84	2019	0.51	PPB		91
22) Acrylonitrile	3.61	53	1661	2.12	PPB		91
23) Methyl tert-Butyl Ether	3.46	73	8957	0.99	PPB		93
24) trans-1,2-Dichloroethene	3.45	96	2220	0.55	PPB		89
25) Hexane	3.76	57	2669	0.59	PPB		90
26) Diisopropyl Ether	4.23	45	4433	0.49	PPB		93
27) 1,1-Dichloroethane	4.17	63	3177	0.54	PPB		97
28) Vinyl Acetate	4.30	86	707	0.84	PPB	#	48
29) Chloroprene	4.25	53	10153	2.24	PPB		96

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:07 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
30)	tert-Butyl Ethyl Ether	4.78	59	4531	0.46	PPB		92
31)	2,2-Dichloropropane	5.00	77	3104	0.58	PPB		97
32)	cis-1,2-Dichloroethene	5.07	96	2370	0.51	PPB		93
33)	2-Butanone	5.16	72	5497	20.20	PPB		97
34)	Ethyl Acetate	5.21	61	58m	0.16	PPB		
35)	Propionitrile	5.34	54	342m	1.31	PPB		
36)	Methacrylonitrile	5.48	67	2291	1.99	PPB	#	77
37)	Bromochloromethane	5.40	128	1093	0.47	PPB		92
38)	Tetrahydrofuran	5.45	71	110m	0.39	PPB		
39)	Chloroform	5.52	83	3812	0.53	PPB		98
40)	Cyclohexane	5.61	56	3300	0.63	PPB		76
41)	1,1,1-Trichloroethane	5.66	97	3544	0.59	PPB		89
43)	Carbon Tetrachloride	5.82	117	3098	0.56	PPB		87
44)	1,1-Dichloropropene	5.89	75	2864	0.57	PPB		98
45)	Isobutyl Alcohol	6.25	43	1131	23.06	PPB		84
47)	Benzene	6.14	78	8528	0.54	PPB		96
48)	1,2-Dichloroethane	6.28	62	1914	0.45	PPB		95
49)	tert-Amyl Methyl Ether	6.30	55	1056	0.52	PPB	#	79
50)	Trichloroethene	6.96	95	2378	0.55	PPB		96
51)	Methylcyclohexane	7.08	83	3860	0.57	PPB		95
52)	1,2-Dichloropropane	7.28	63	1849	0.49	PPB		78
53)	Dibromomethane	7.43	93	1177	0.49	PPB		92
54)	Methyl methacrylate	7.46	69	951	0.47	PPB		71
56)	Bromodichloromethane	7.62	83	2796	0.51	PPB		85
57)	2-Nitropropane	7.99	41	1362	2.74	PPB		95
58)	2-Chloroethyl Vinyl Ether	8.02	63	873	0.44	PPB		89
59)	cis-1,3-Dichloropropene	8.15	75	3406	0.49	PPB		94
60)	4-Methyl-2-pentanone (MIBK	8.34	58	18150	19.53	PPB		98
62)	Toluene	8.45	92	6251	0.54	PPB		100
64)	n-Octane	8.53	85	1305	0.52	PPB		90
65)	trans-1,3-Dichloropropene	8.82	75	3107	0.51	PPB		97
66)	Ethyl methacrylate	8.87	69	1964	0.47	PPB		91
67)	1,1,2-Trichloroethane	9.00	83	1440	0.46	PPB		88
68)	Tetrachloroethene	9.02	164	2625	0.54	PPB		91
69)	2-Hexanone	9.28	57	5728	19.93	PPB		93
70)	1,3-Dichloropropane	9.19	76	3059	0.50	PPB		96
71)	Dibromochloromethane	9.39	129	2440	0.47	PPB		96
72)	1,2-Dibromoethane (EDB)	9.52	107	1845	0.46	PPB		83
73)	1-Chlorohexane	10.01	91	3268	0.55	PPB		91
74)	Chlorobenzene	10.04	112	6758	0.50	PPB		97
75)	Ethylbenzene	10.13	106	3987	0.55	PPB		85

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:07 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

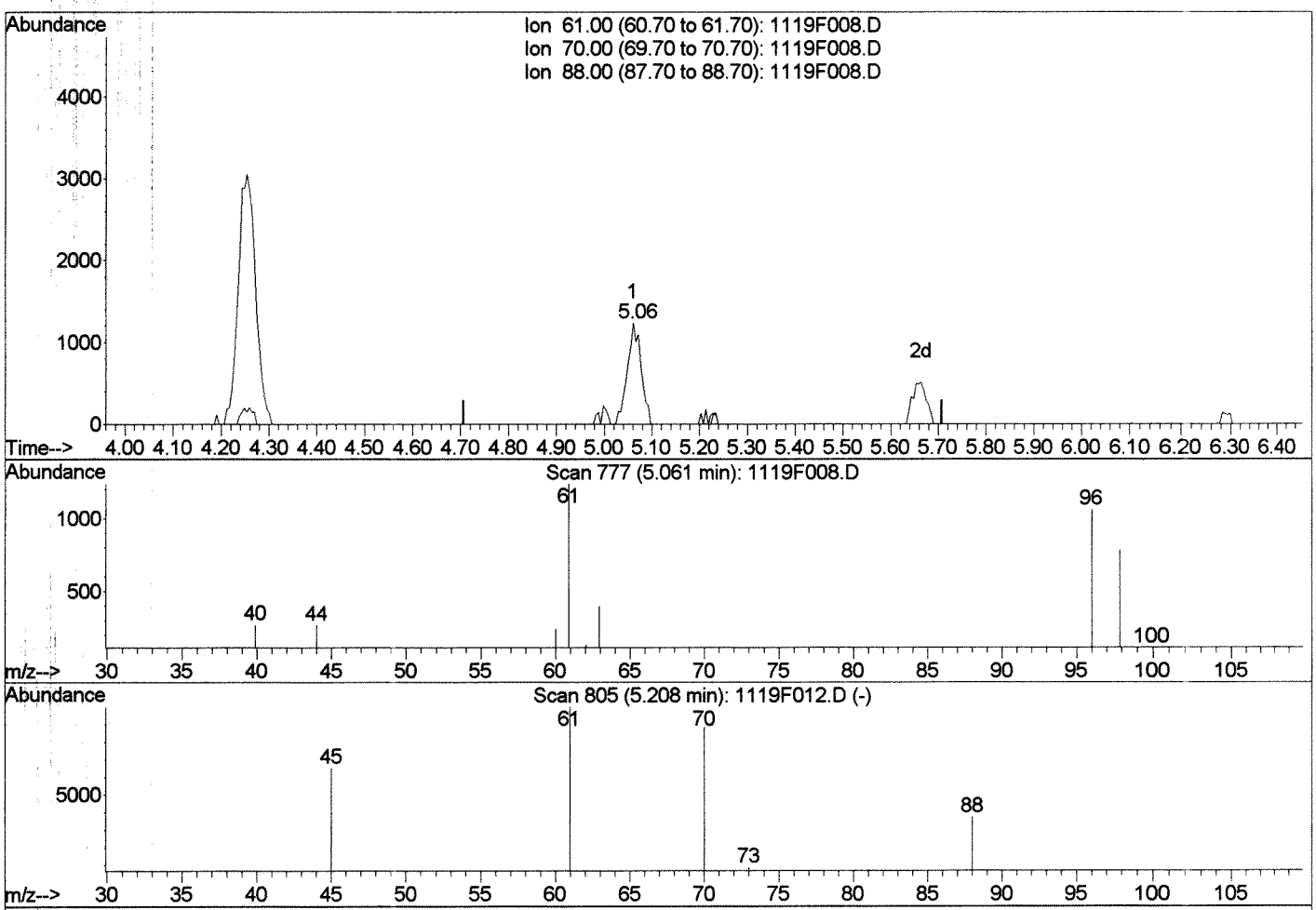
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
76)	1,1,1,2-Tetrachloroethane	10.15	131	2554	0.49	PPB		94
77)	m,p-Xylenes	10.26	106	9032	1.03	PPB		96
78)	o-Xylene	10.70	106	4511	0.53	PPB		90
79)	Styrene	10.73	103	3592	0.47	PPB		93
80)	Bromoform	10.96	173	1696	0.47	PPB		91
81)	Isopropylbenzene	11.10	105	11224	0.52	PPB		96
82)	cis-1,4-Dichloro-2-butene	11.27	89	1193	1.94	PPB		82
85)	1,1,2,2-Tetrachloroethane	11.52	83	1867	0.48	PPB		92
86)	trans-1,4-Dichloro-2-buten	11.60	53	355m	0.39	PPB		
87)	Bromobenzene	11.46	156	3261	0.52	PPB		93
88)	n-Propylbenzene	11.55	91	12243	0.52	PPB		96
89)	1,2,3-Trichloropropane	11.57	110	691	0.50	PPB	#	68
90)	2-Chlorotoluene	11.67	91	7470	0.54	PPB		92
91)	1,3,5-Trimethylbenzene	11.75	105	8939	0.52	PPB		95
92)	4-Chlorotoluene	11.80	91	7622	0.53	PPB		94
93)	tert-Butylbenzene	12.10	119	8482	0.55	PPB		96
94)	1,2,4-Trimethylbenzene	12.17	105	8540	0.50	PPB		93
95)	sec-Butylbenzene	12.33	105	11237	0.54	PPB		94
96)	p-Isopropyltoluene	12.50	119	9632	0.53	PPB		98
97)	1,3-Dichlorobenzene	12.50	146	5625	0.51	PPB		93
98)	1,4-Dichlorobenzene	12.61	146	5793	0.52	PPB		94
99)	n-Butylbenzene	12.95	91	7110	0.51	PPB		97
100)	1,2-Dichlorobenzene	13.02	146	5211	0.52	PPB		95
101)	1,2-Dibromo-3-chloropropan	13.91	155	318m	0.46	PPB		
102)	1,3,5-Trichlorobenzene	14.07	180	3561	0.51	PPB		95
103)	1,2,4-Trichlorobenzene	14.78	180	3172	0.48	PPB		97
104)	Hexachlorobutadiene	14.91	225	1551	0.54	PPB		87
105)	Naphthalene	15.06	128	5735	0.48	PPB		96
106)	1,2,3-Trichlorobenzene	15.33	180	2658	0.48	PPB		88

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:44 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F008.D

(34) Ethyl Acetate (T)

5.06min 6.81PPB

response 2485

Ion	Exp%	Act%
61.00	100	100
70.00	84.80	0.00#
88.00	35.50	0.00#
0.00	0.00	0.00

Manual Integration:

Before LM ✓

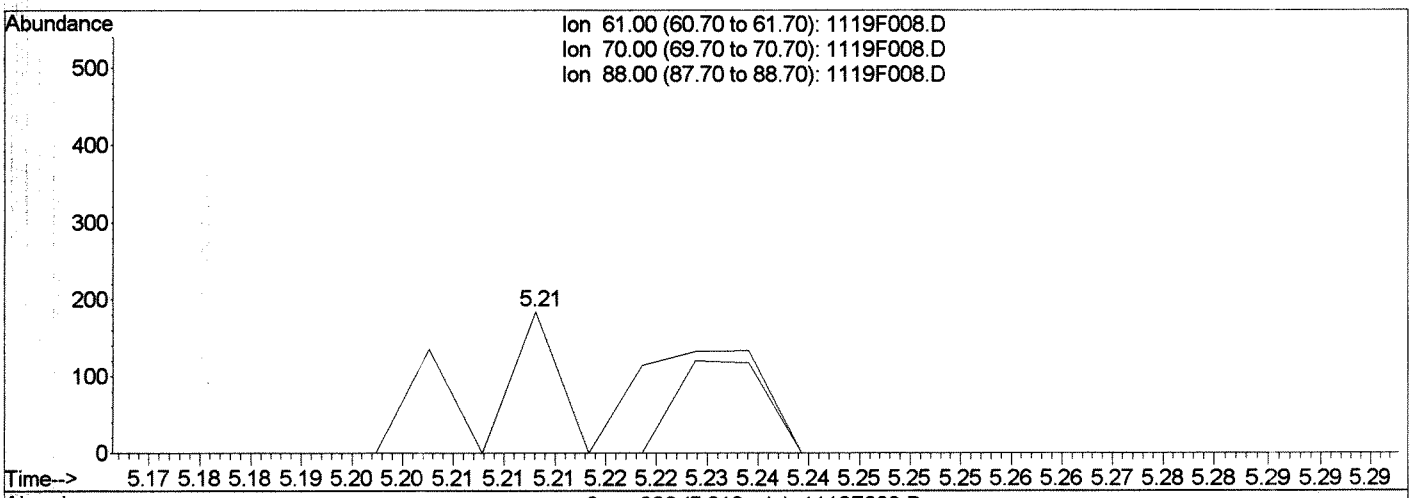
11/21/18

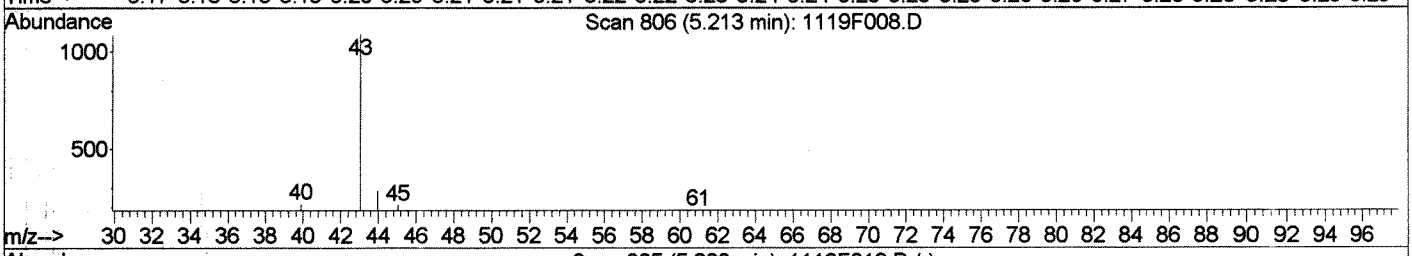
1119F008.D 111918MS46_8260.M Wed Nov 21 09:44:55 2018

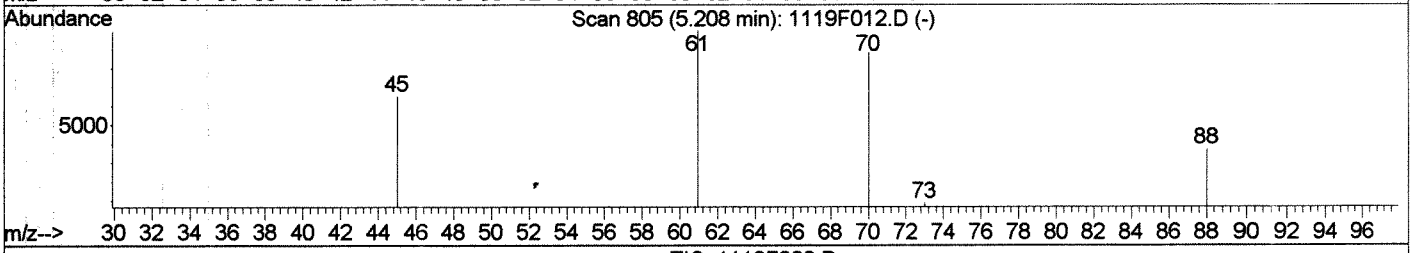
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:45 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F008.D

(34) Ethyl Acetate (T)

5.21min 0.16PPB m

response 58

Ion	Exp%	Act%
61.00	100	100
70.00	84.80	0.00#
88.00	35.50	0.00#
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

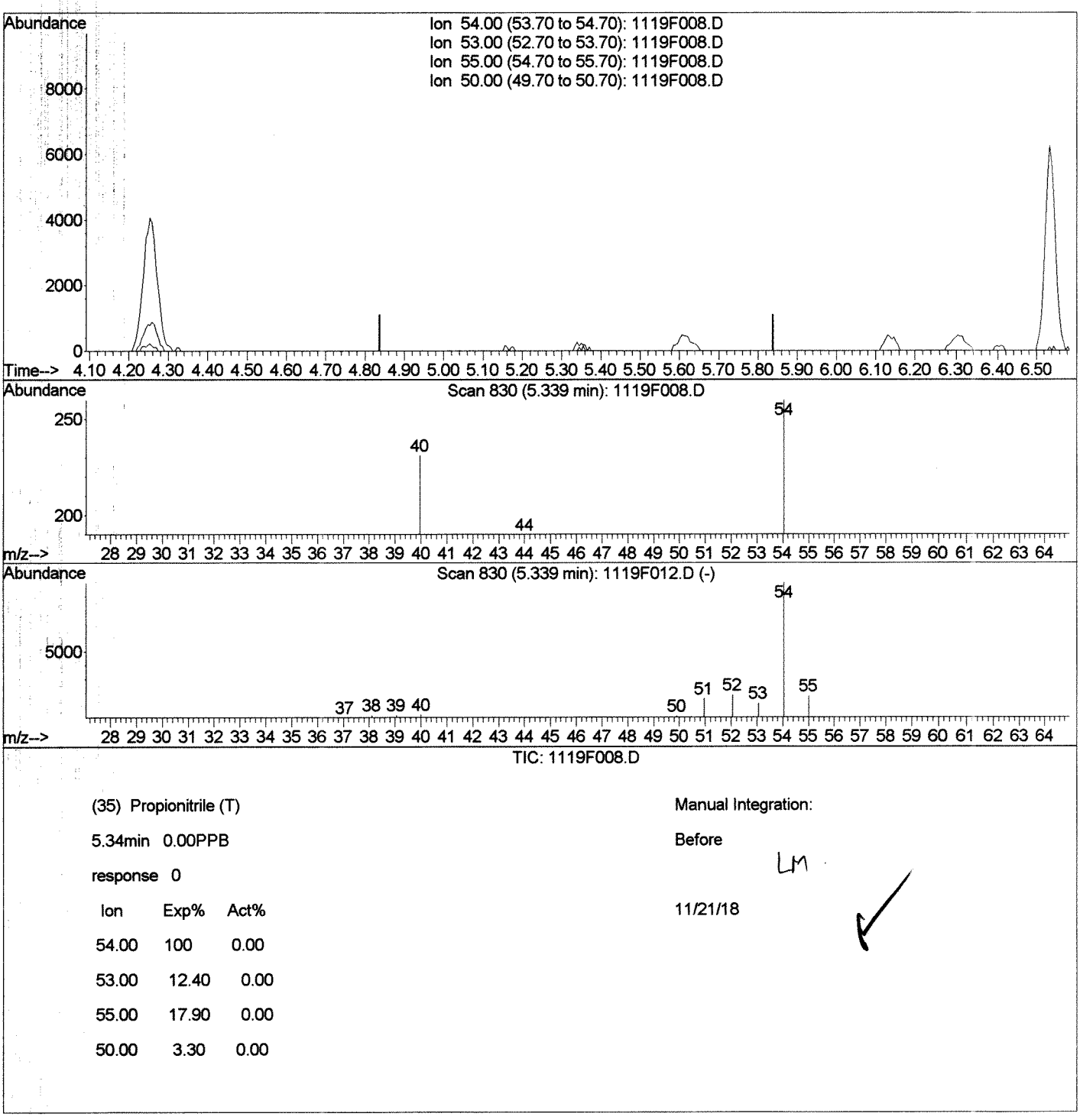
11/21/18

1119F008.D 111918MS46_8260.M Wed Nov 21 09:45:08 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:45 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



(35) Propionitrile (T)

5.34min 0.00PPB

response 0

Ion	Exp%	Act%
54.00	100	0.00
53.00	12.40	0.00
55.00	17.90	0.00
50.00	3.30	0.00

Manual Integration:

Before

LM

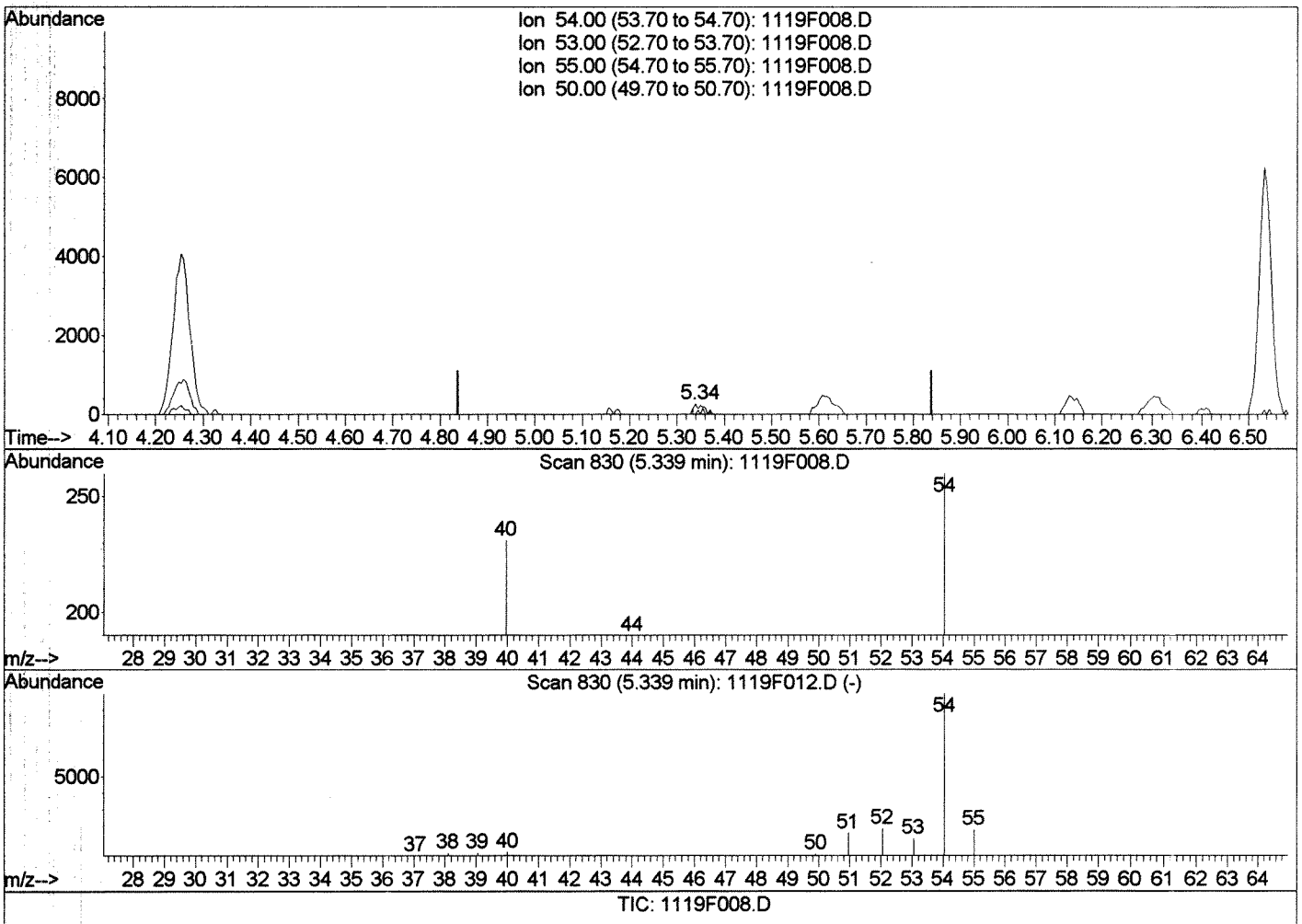
11/21/18

1119F008.D 111918MS46_8260.M Wed Nov 21 09:45:16 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:45 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



(35) Propionitrile (T)

5.34min 1.31PPB m

response 342

Ion	Exp%	Act%
54.00	100	100
53.00	12.40	0.00
55.00	17.90	0.00
50.00	3.30	0.00

Manual Integration:

After LM

Missed peak

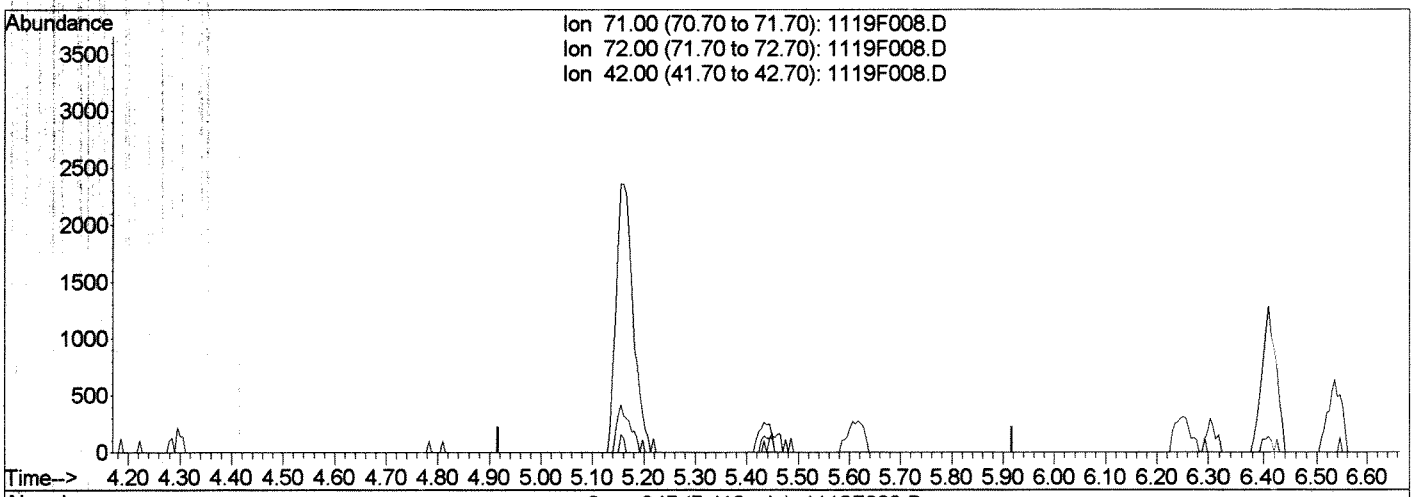
11/21/18

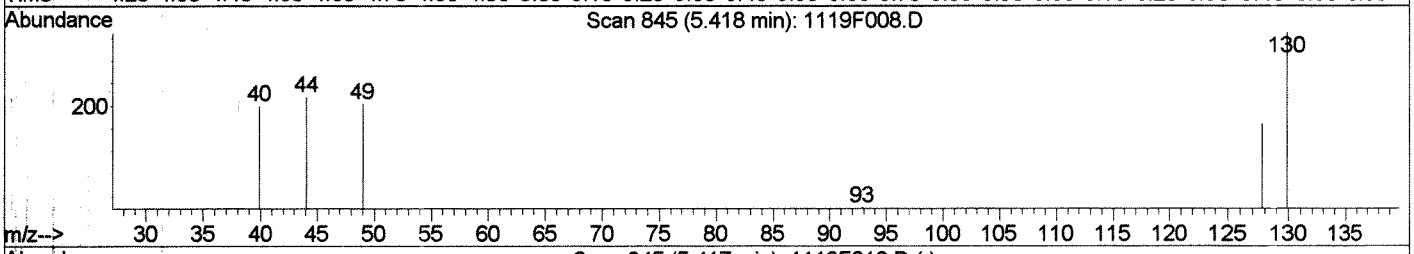
1119F008.D 111918MS46_8260.M Wed Nov 21 09:45:23 2018

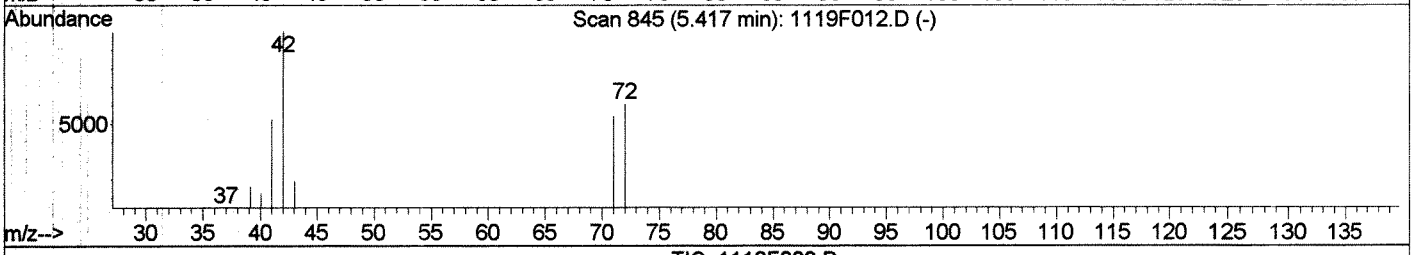
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:45 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F008.D

(38) Tetrahydrofuran (T)

5.42min 0.00PPB

response 0

Ion	Exp%	Act%
71.00	100	0.00
72.00	111.90	0.00#
42.00	184.70	0.00#
0.00	0.00	0.00

Manual Integration:

Before LM

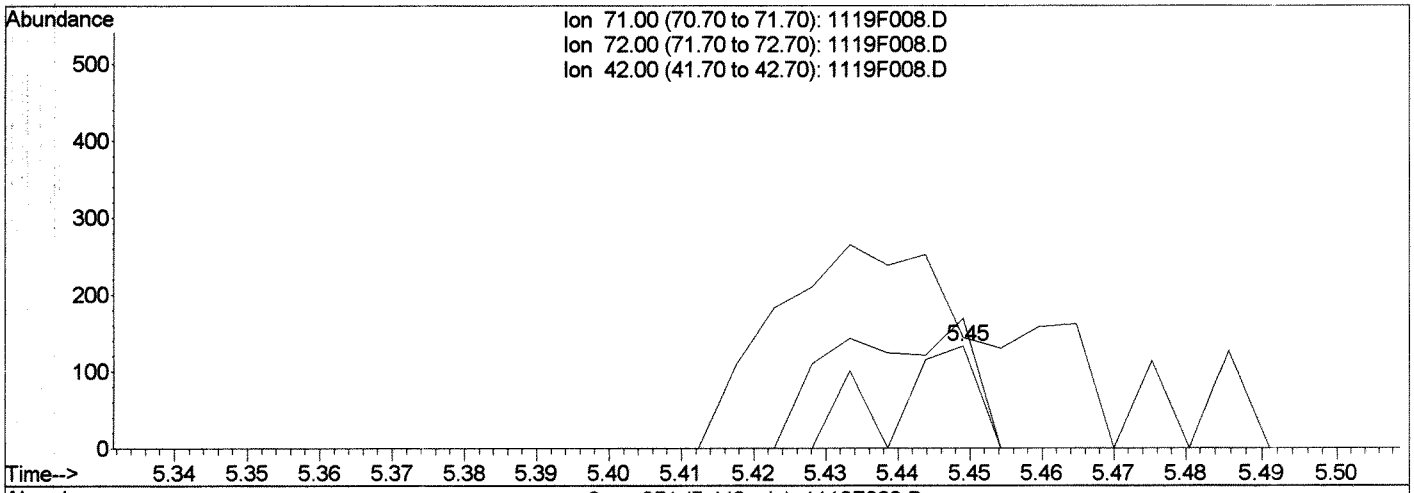
11/21/18

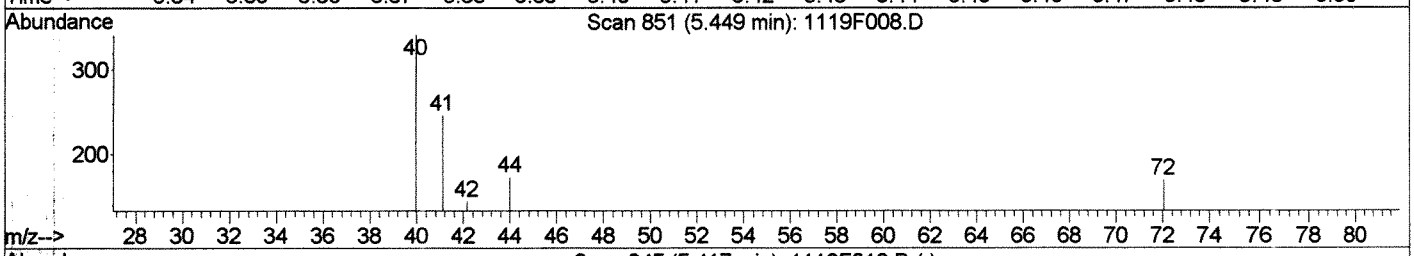
1119F008.D 111918MS46_8260.M Wed Nov 21 09:45:36 2018

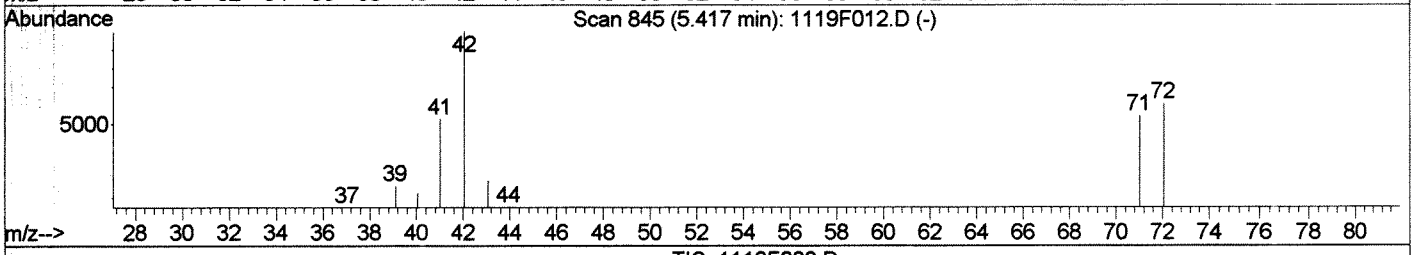
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:46 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F008.D

(38) Tetrahydrofuran (T)

5.45min 0.39PPB m

response 110

Ion	Exp%	Act%
71.00	100	100
72.00	111.90	127.07
42.00	184.70	108.27#
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

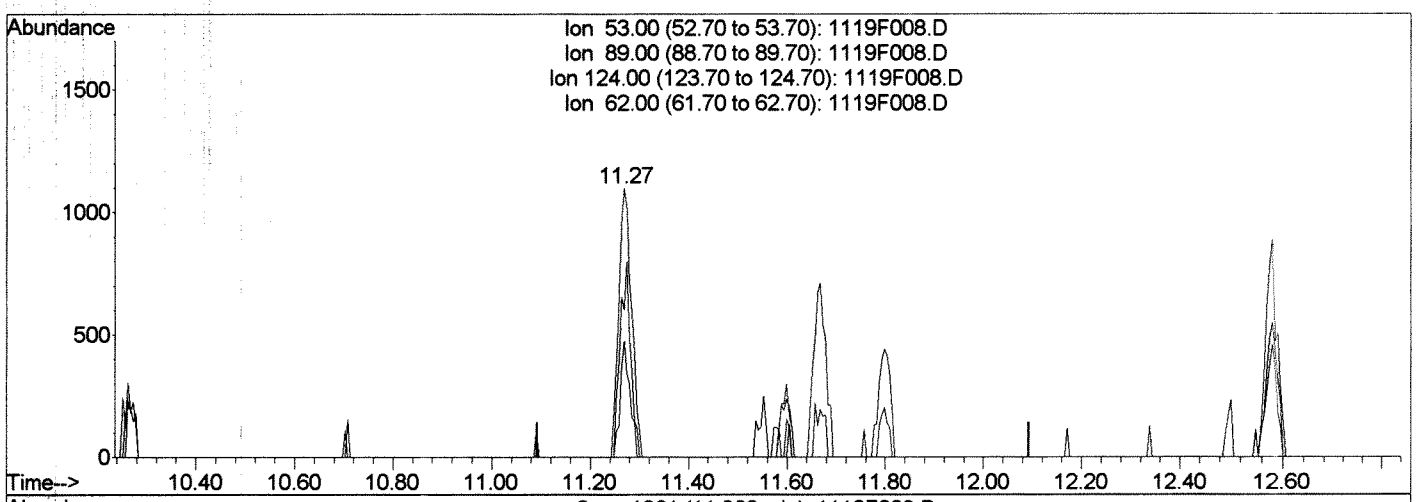
11/21/18

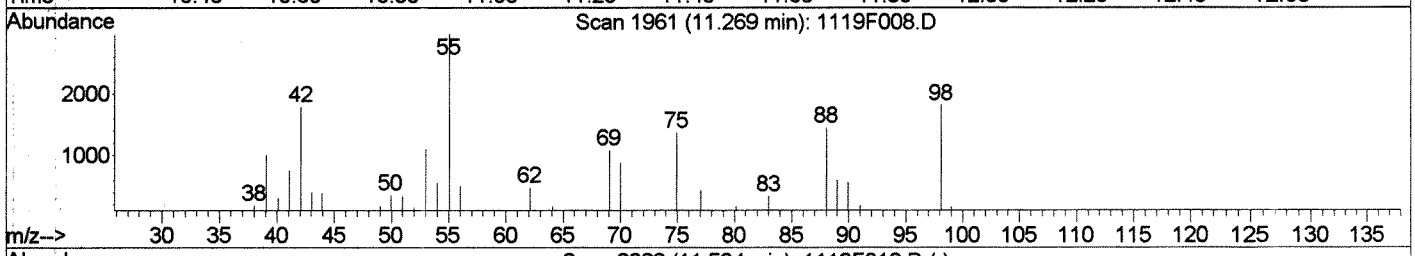
1119F008.D 111918MS46_8260.M Wed Nov 21 09:46:56 2018

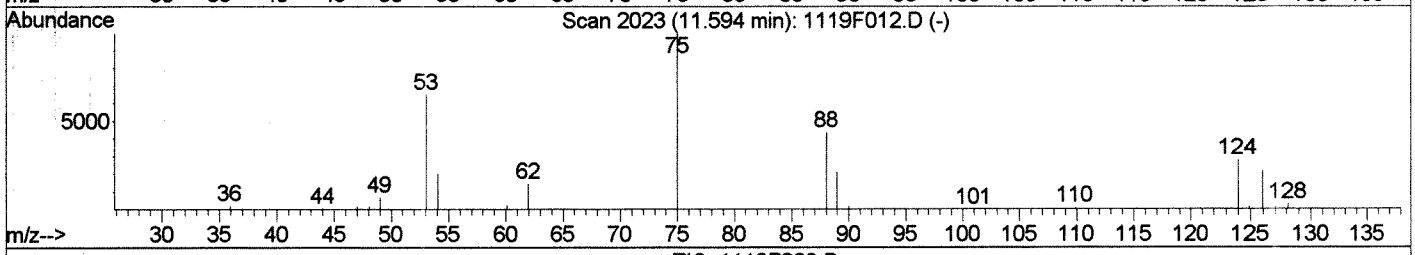
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:46 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F008.D

(86) trans-1,4-Dichloro-2-butene (T)

11.27min 2.21PPB

response 1993

Ion	Exp%	Act%
53.00	100	100
89.00	81.90	54.74
124.00	40.70	0.00#
62.00	43.60	43.17

Manual Integration:

Before LM

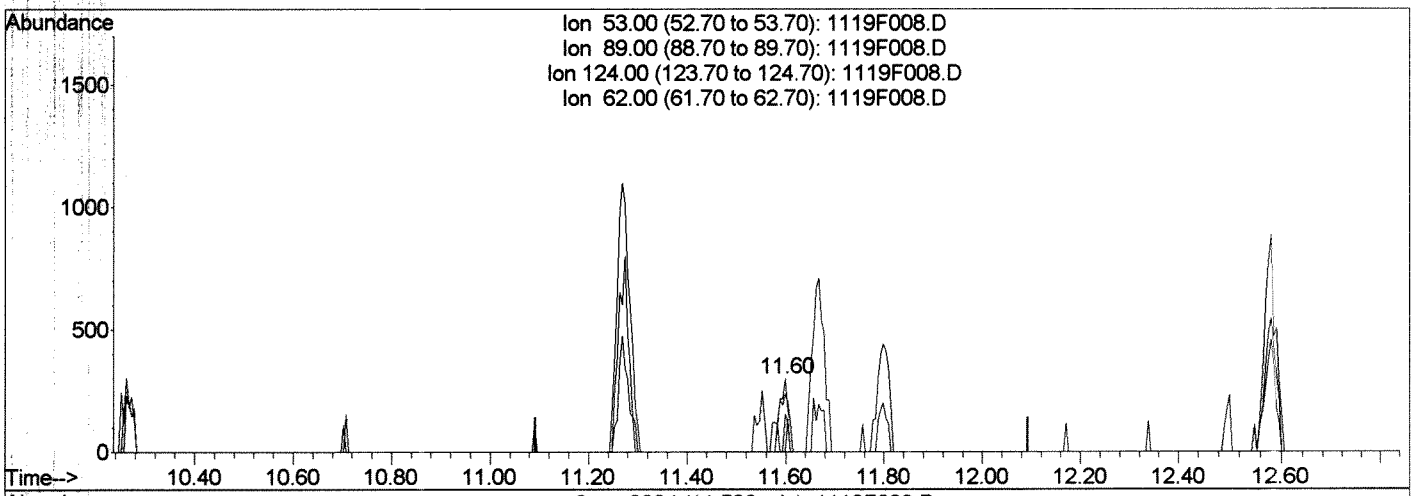
11/21/18

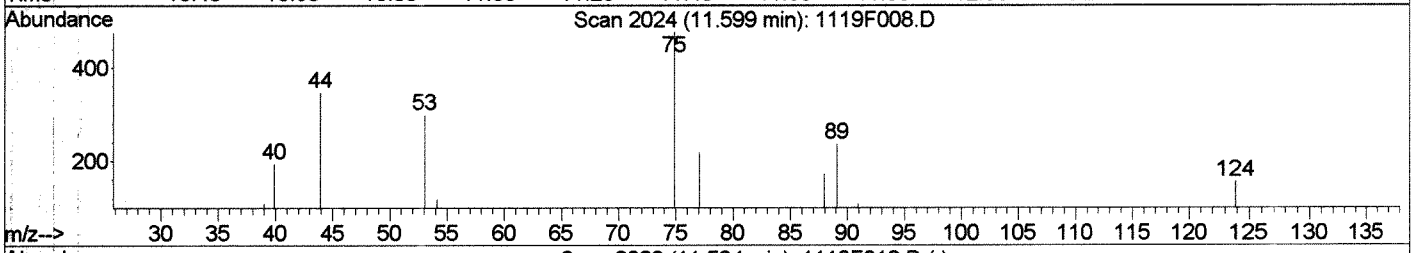
1119F008.D 111918MS46_8260.M Wed Nov 21 09:49:20 2018

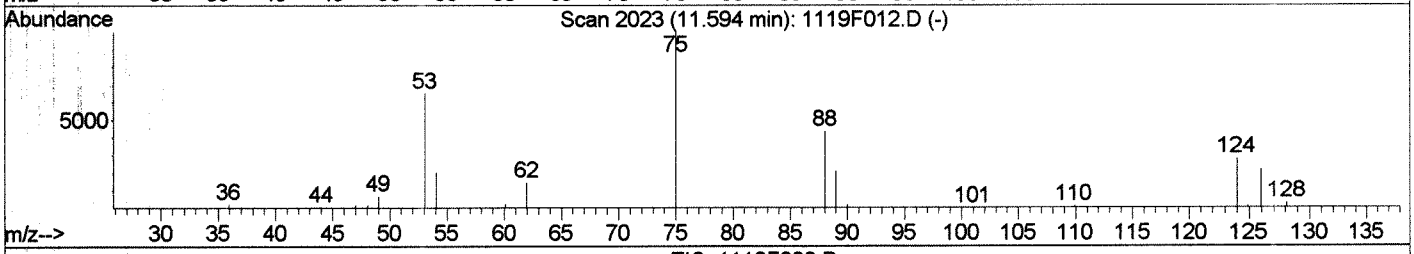
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:49 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F008.D

(86) trans-1,4-Dichloro-2-butene (T)

11.60min 0.39PPB m

response 355

Ion	Exp%	Act%
53.00	100	100
89.00	81.90	78.93
124.00	40.70	52.17
62.00	43.60	0.00#

Manual Integration:

After LM

WRT

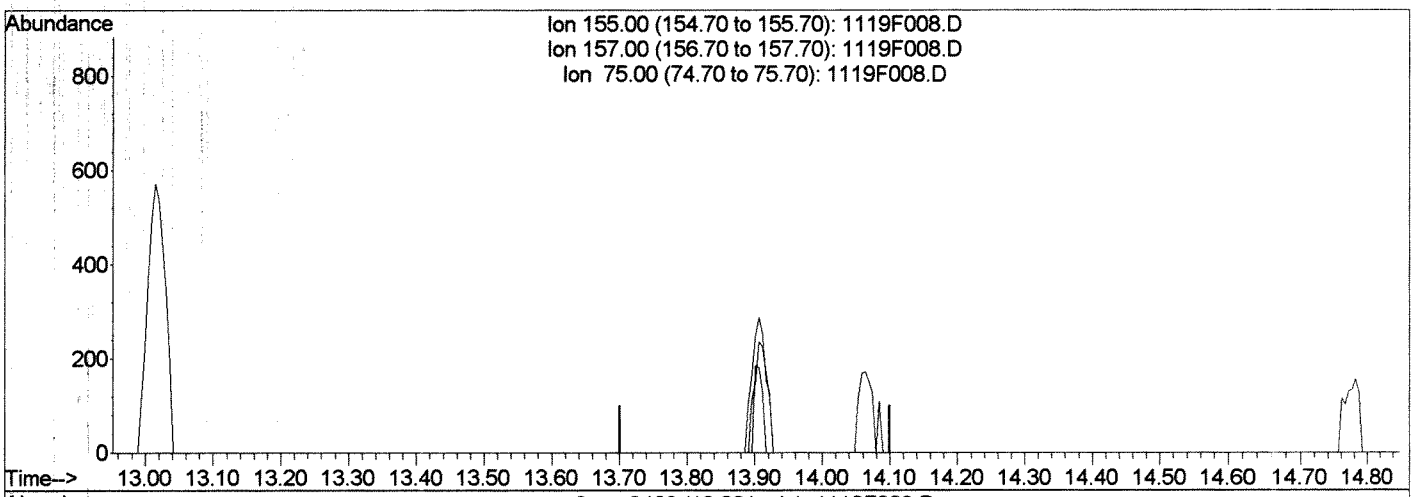
11/21/18 ✓

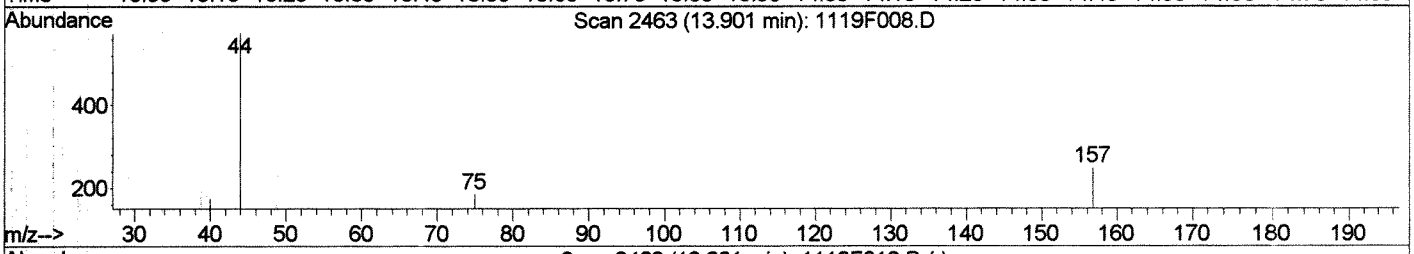
1119F008.D 111918MS46_8260.M Wed Nov 21 09:49:29 2018

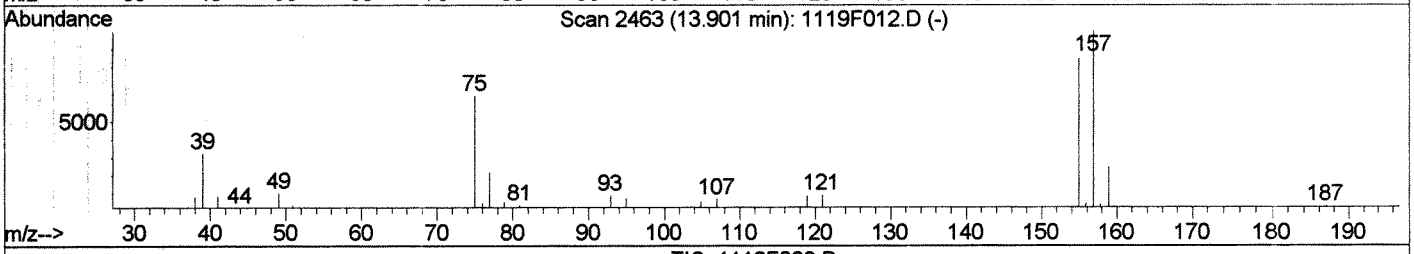
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:49 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F008.D

(101) 1,2-Dibromo-3-chloropropane (DBCP) (T)

13.90min 0.00PPB

response 0

Ion	Exp%	Act%
155.00	100	0.00
157.00	117.90	0.00#
75.00	75.70	0.00#
0.00	0.00	0.00

Manual Integration:

Before LM ✓

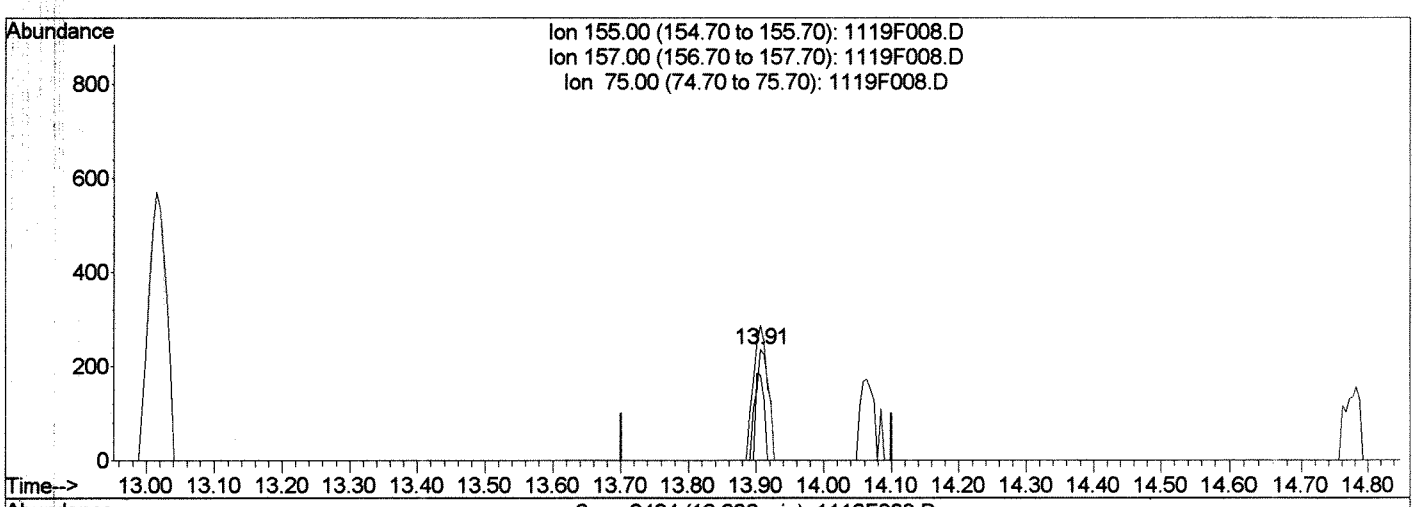
11/21/18

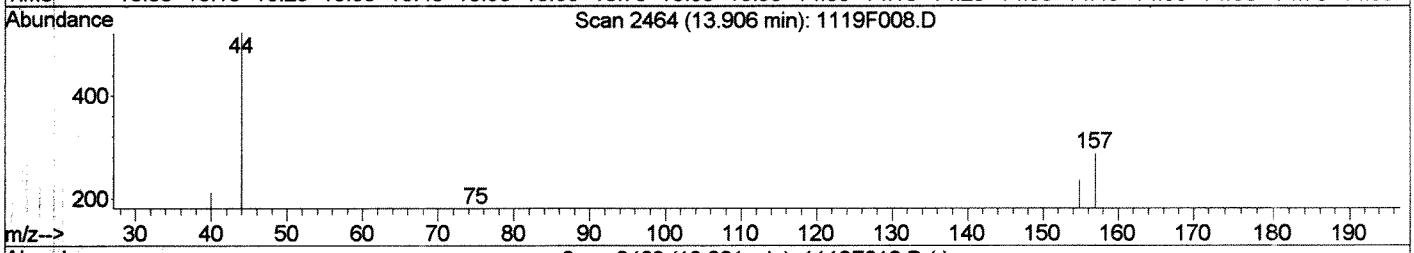
1119F008.D 111918MS46_8260.M Wed Nov 21 09:52:29 2018

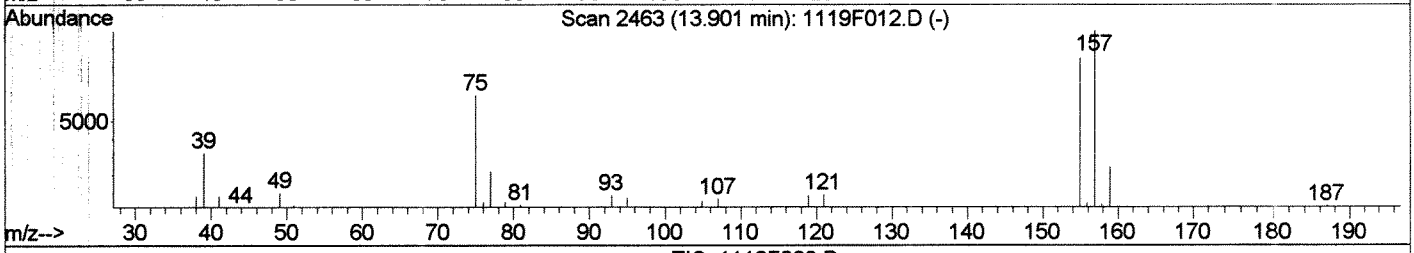
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:52 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F008.D

(101) 1,2-Dibromo-3-chloropropane (DBCP) (T)

13.91min 0.46PPB m

response 318

Ion	Exp%	Act%
155.00	100	100
157.00	117.90	121.61
75.00	75.70	76.69
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak ✓

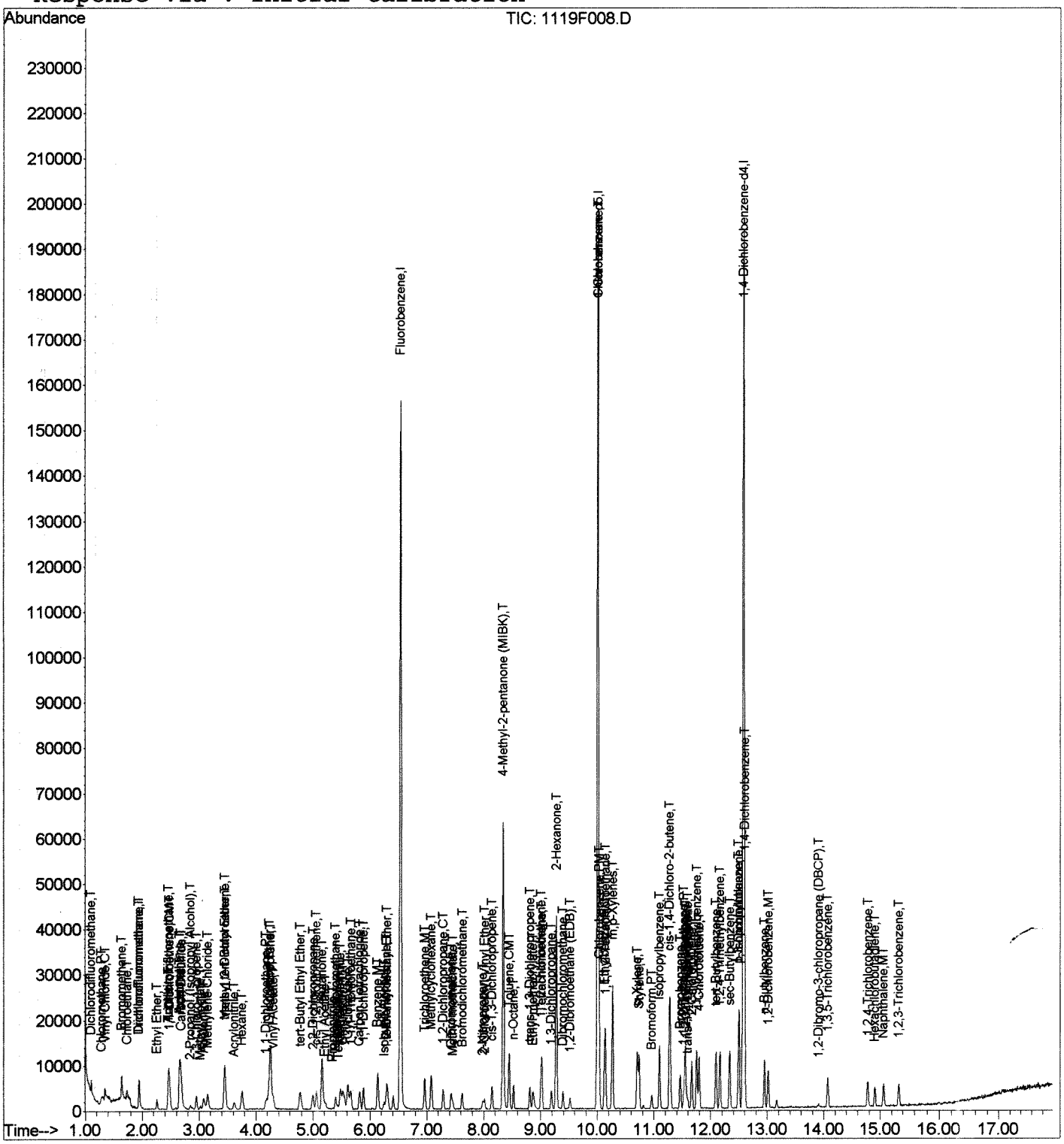
11/21/18

1119F008.D 111918MS46_8260.M Wed Nov 21 09:52:37 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:52 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F009.D Vial: 6
Acq On : 19 Nov 2018 05:36 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:08 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.54	96	171560	10.00	PPB		0.00
63) Chlorobenzene-d5	10.01	82	61999	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	67612	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	5.74	113	14367	3.53	PPB		0.00
Spiked Amount 10.000			Recovery =	35.30%			
46) 1,2-Dichloroethane-d4	6.19	65	13261	3.90	PPB		0.00
Spiked Amount 10.000			Recovery =	39.00%			
61) Toluene-d8	8.37	98	48771	3.11	PPB		0.00
Spiked Amount 10.000			Recovery =	31.10%			
83) 4-Bromofluorobenzene	11.32	95	20395	3.66	PPB		0.00
Spiked Amount 10.000			Recovery =	36.60%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.10	85	2199	0.68	PPB		93
3) Chloromethane	1.28	50	2620	0.92	PPB		91
4) Vinyl Chloride	1.35	62	2960	0.83	PPB		96
5) Bromomethane	1.64	96	3754	1.11	PPB		93
6) Chloroethane	1.74	64	1913	0.82	PPB		96
7) Dichlorofluoromethane	1.95	67	5118	0.90	PPB		98
8) Trichlorofluoromethane	1.94	101	3861	0.73	PPB		95
9) Ethyl Ether	2.26	59	2050	0.96	PPB		96
10) Acrolein	2.47	56	7721	20.28	PPB		97
11) Trichlorotrifluoroethane	2.47	151	2863	0.80	PPB	#	75
12) 1,1-Dichloroethene	2.49	96	2716	0.79	PPB		95
13) Acetone	2.65	43	18167	43.15	PPB		100
14) Iodomethane	2.66	142	15845	2.99	PPB		97
15) Carbon Disulfide	2.69	76	8335	0.84	PPB		95
16) 2-Propanol (Isopropyl Alco	2.85	45	3040	51.91	PPB		83
17) 3-Chloro-1-propene	2.95	76	1828	0.92	PPB		88
18) Methyl Acetate	3.02	43	1606	1.04	PPB		92
19) Acetonitrile	3.08	40	4298	46.88	PPB		97
20) Methylene Chloride	3.16	84	3895	0.95	PPB		82
21) tert-Butyl Alcohol	3.38	59	680	5.03	PPB		65
22) Acrylonitrile	3.61	53	2992	3.70	PPB		86
23) Methyl tert-Butyl Ether	3.45	73	17785	1.90	PPB		99
24) trans-1,2-Dichloroethene	3.46	96	3671	0.88	PPB		90
25) Hexane	3.76	57	3107	0.66	PPB		87
26) Diisopropyl Ether	4.22	45	8713	0.93	PPB		89
27) 1,1-Dichloroethane	4.17	63	5615	0.93	PPB		99
28) Vinyl Acetate	4.30	86	1572	1.81	PPB	#	71

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS46\DATA\111918\1119F009.D Vial: 6
Acq On : 19 Nov 2018 05:36 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:08 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroprene	4.25	53	14762	3.15	PPB	96
30)	tert-Butyl Ethyl Ether	4.78	59	9330	0.92	PPB	91
31)	2,2-Dichloropropane	5.00	77	4657	0.85	PPB	96
32)	cis-1,2-Dichloroethene	5.06	96	4519	0.93	PPB	99
33)	2-Butanone	5.16	72	11381	40.43	PPB	98
34)	Ethyl Acetate	5.22	61	530	1.40	PPB	83
35)	Propionitrile	5.35	54	993	3.67	PPB	66
36)	Methacrylonitrile	5.48	67	4826	4.05	PPB	83
37)	Bromochloromethane	5.40	128	2128	0.88	PPB	90
38)	Tetrahydrofuran	5.44	71	420m	1.44	PPB	
39)	Chloroform	5.52	83	6367	0.86	PPB	97
40)	Cyclohexane	5.62	56	4362	0.80	PPB	91
41)	1,1,1-Trichloroethane	5.66	97	5120	0.83	PPB	95
43)	Carbon Tetrachloride	5.82	117	4608	0.81	PPB	81
44)	1,1-Dichloropropene	5.88	75	4254	0.82	PPB	95
45)	Isobutyl Alcohol	6.24	43	2150	42.38	PPB	87
47)	Benzene	6.14	78	15072	0.92	PPB	100
48)	1,2-Dichloroethane	6.29	62	4108	0.94	PPB	96
49)	tert-Amyl Methyl Ether	6.30	55	2038	0.98	PPB	96
50)	Trichloroethene	6.96	95	4060	0.90	PPB	93
51)	Methylcyclohexane	7.07	83	5071	0.72	PPB	94
52)	1,2-Dichloropropane	7.29	63	3738	0.96	PPB	91
53)	Dibromomethane	7.43	93	2540	1.01	PPB	92
54)	Methyl methacrylate	7.45	69	2117	1.00	PPB	99
56)	Bromodichloromethane	7.62	83	5540	0.97	PPB	93
57)	2-Nitropropane	7.99	41	2577	5.01	PPB	88
58)	2-Chloroethyl Vinyl Ether	8.02	63	1982	0.96	PPB	95
59)	cis-1,3-Dichloropropene	8.14	75	6492	0.90	PPB	94
60)	4-Methyl-2-pentanone (MIBK	8.34	58	38652	40.21	PPB	99
62)	Toluene	8.45	92	10755	0.90	PPB	98
64)	n-Octane	8.53	85	1893	0.76	PPB	79
65)	trans-1,3-Dichloropropene	8.81	75	6107	1.00	PPB	95
66)	Ethyl methacrylate	8.87	69	3894	0.93	PPB	98
67)	1,1,2-Trichloroethane	9.00	83	3004	0.98	PPB	95
68)	Tetrachloroethene	9.02	164	4011	0.83	PPB	98
69)	2-Hexanone	9.28	57	12104	42.39	PPB	95
70)	1,3-Dichloropropane	9.19	76	6248	1.03	PPB	97
71)	Dibromochloromethane	9.40	129	5078	0.98	PPB	94
72)	1,2-Dibromoethane (EDB)	9.52	107	3986	1.01	PPB	97
73)	1-Chlorohexane	10.01	91	4996	0.84	PPB	96
74)	Chlorobenzene	10.04	112	12617	0.93	PPB	95

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS46\DATA\111918\1119F009.D Vial: 6
Acq On : 19 Nov 2018 05:36 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:08 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

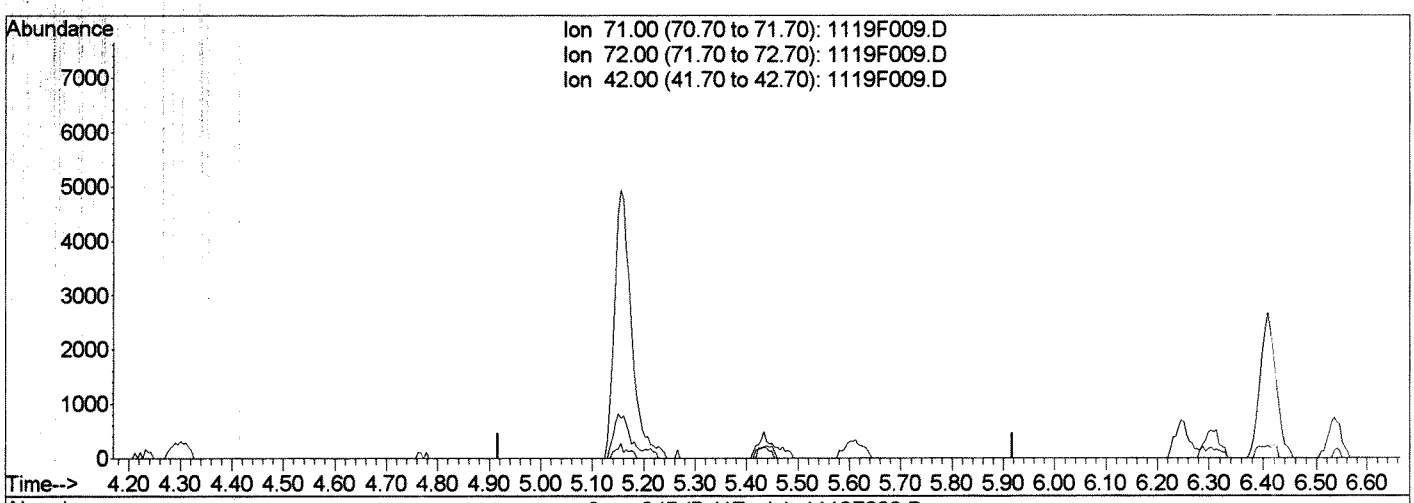
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
75)	Ethylbenzene	10.13	106	6298	0.87	PPB	90
76)	1,1,1,2-Tetrachloroethane	10.15	131	4865	0.94	PPB	98
77)	m,p-Xylenes	10.27	106	15560	1.78	PPB	98
78)	o-Xylene	10.70	106	7757	0.91	PPB	94
79)	Styrene	10.74	103	7012	0.92	PPB	95
80)	Bromoform	10.96	173	3342	0.94	PPB	90
81)	Isopropylbenzene	11.10	105	18386	0.86	PPB	98
82)	cis-1,4-Dichloro-2-butene	11.27	89	2158	3.54	PPB	86
85)	1,1,2,2-Tetrachloroethane	11.53	83	3757	0.98	PPB	96
86)	trans-1,4-Dichloro-2-buten	11.59	53	899	1.01	PPB	89
87)	Bromobenzene	11.46	156	6218	1.00	PPB	97
88)	n-Propylbenzene	11.55	91	19819	0.85	PPB	98
89)	1,2,3-Trichloropropane	11.57	110	1192	0.87	PPB	85
90)	2-Chlorotoluene	11.67	91	12906	0.95	PPB	94
91)	1,3,5-Trimethylbenzene	11.76	105	15010	0.88	PPB	100
92)	4-Chlorotoluene	11.80	91	13563	0.95	PPB	98
93)	tert-Butylbenzene	12.09	119	12882	0.84	PPB	97
94)	1,2,4-Trimethylbenzene	12.17	105	15231	0.89	PPB	97
95)	sec-Butylbenzene	12.34	105	16935	0.82	PPB	97
96)	p-Isopropyltoluene	12.50	119	14902	0.83	PPB	99
97)	1,3-Dichlorobenzene	12.50	146	11099	1.02	PPB	97
98)	1,4-Dichlorobenzene	12.61	146	10903	1.00	PPB	99
99)	n-Butylbenzene	12.95	91	10898	0.79	PPB	99
100)	1,2-Dichlorobenzene	13.02	146	10037	1.02	PPB	98
101)	1,2-Dibromo-3-chloropropan	13.91	155	657	0.95	PPB	92
102)	1,3,5-Trichlorobenzene	14.07	180	6429	0.93	PPB	96
103)	1,2,4-Trichlorobenzene	14.77	180	6430	0.98	PPB	90
104)	Hexachlorobutadiene	14.90	225	2339	0.82	PPB	90
105)	Naphthalene	15.06	128	11244	0.95	PPB	99
106)	1,2,3-Trichlorobenzene	15.33	180	5251	0.97	PPB	97

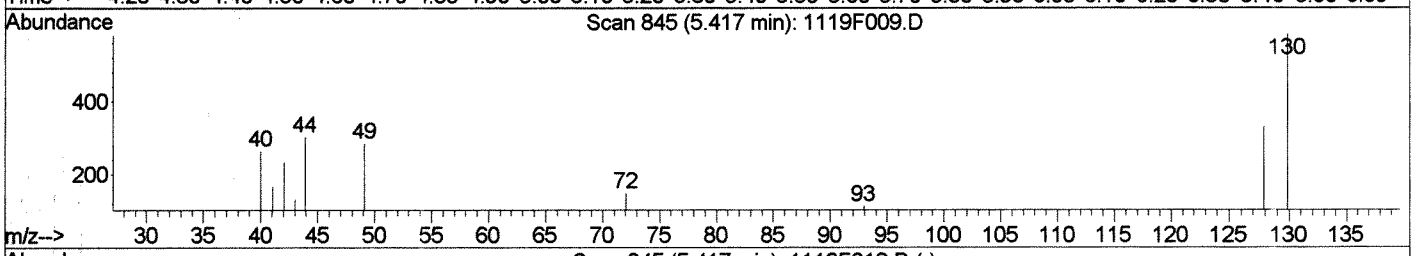
(#) = qualifier out of range (m) = manual integration

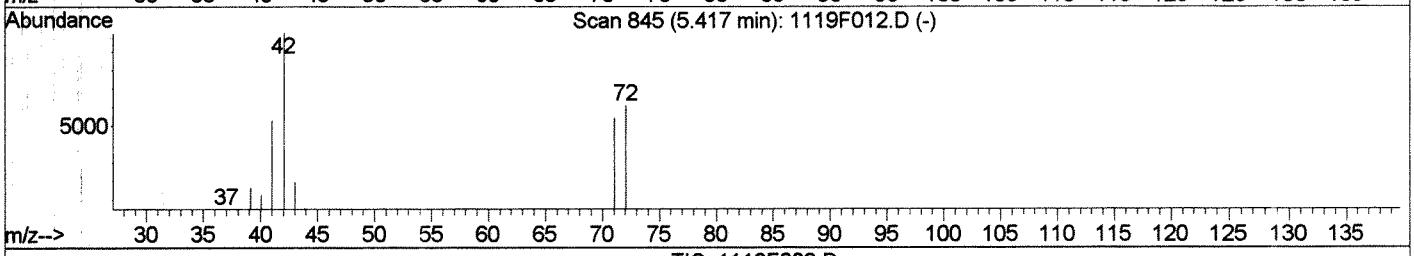
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F009.D Vial: 6
Acq On : 19 Nov 2018 05:36 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:08 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F009.D

(38) Tetrahydrofuran (T)

5.42min 0.00PPB

response 0

Ion	Exp%	Act%
71.00	100	0.00
72.00	111.90	0.00#
42.00	184.70	0.00#
0.00	0.00	0.00

Manual Integration:

Before LM ✓

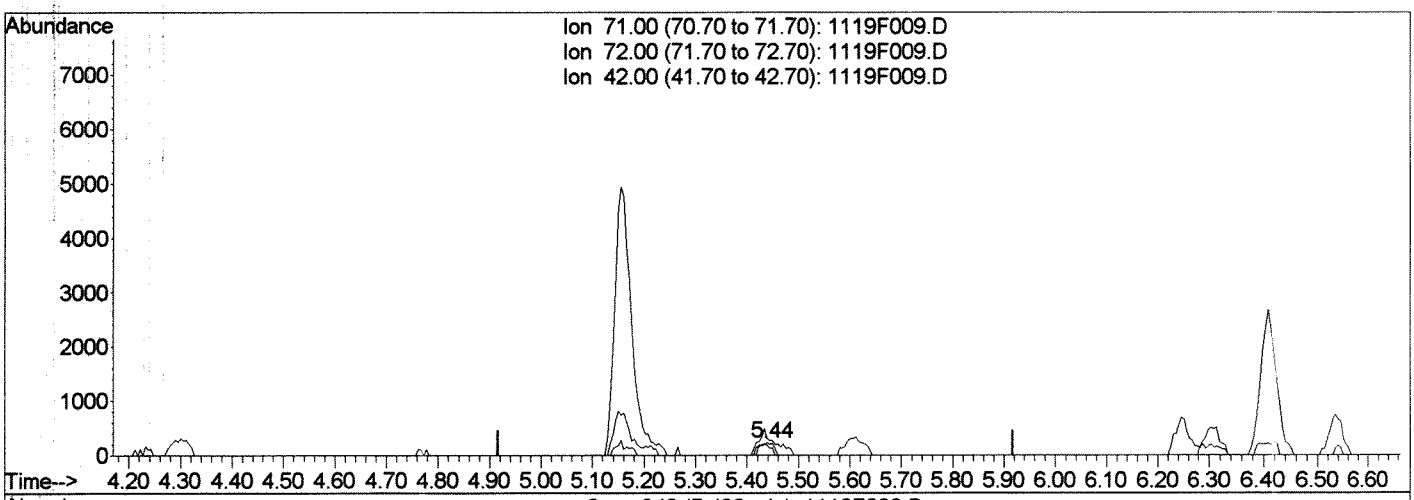
11/21/18

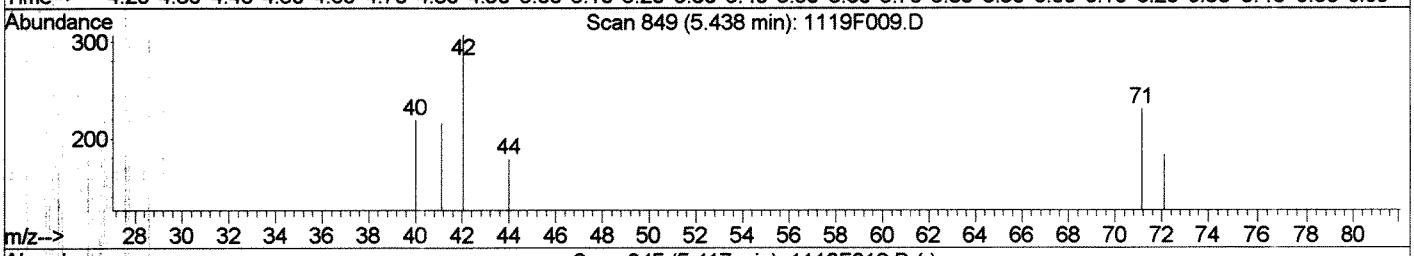
1119F009.D 111918MS46_8260.M Wed Nov 21 09:54:06 2018

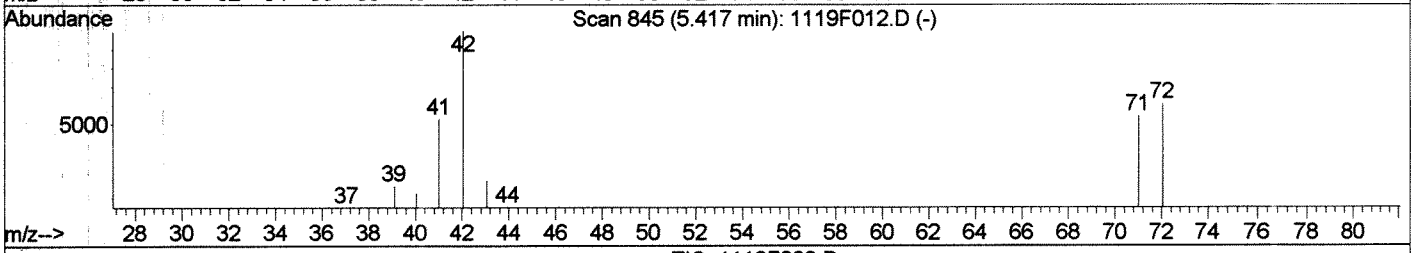
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F009.D Vial: 6
Acq On : 19 Nov 2018 05:36 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:54 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F009.D

(38) Tetrahydrofuran (T)

5.44min 1.44PPB m

response 420

Ion	Exp%	Act%
71.00	100	100
72.00	111.90	79.57#
42.00	184.70	133.48#
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

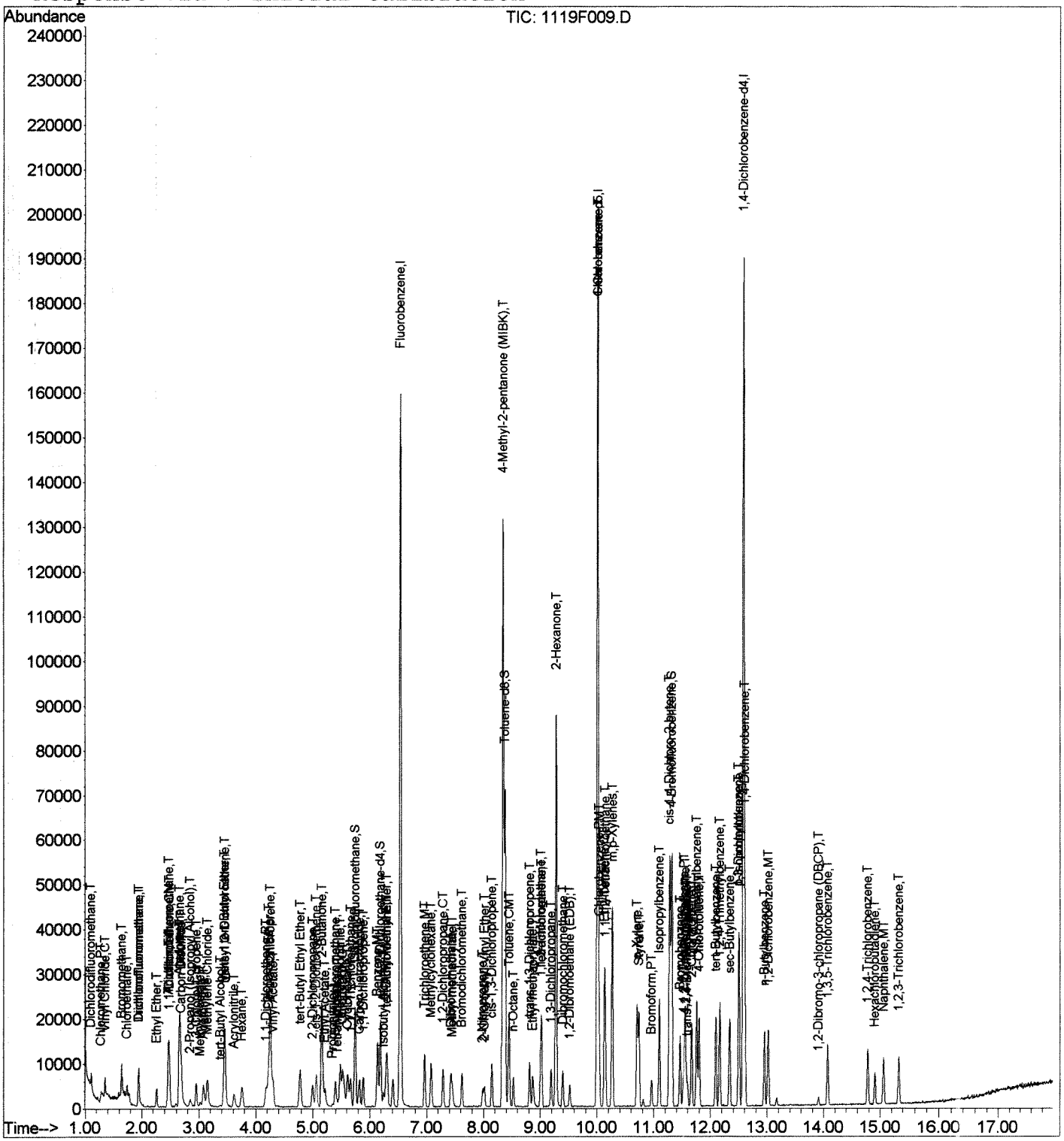
11/21/18

1119F009.D 111918MS46_8260.M Wed Nov 21 09:54:15 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F009.D Vial: 6
Acq On : 19 Nov 2018 05:36 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:54 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F010.D Vial: 7
Acq On : 19 Nov 2018 06:02 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:08 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018 LM 12-04-19
Response via : Initial Calibration
DataAcq Meth : 8260.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.53	96	171560	10.00	PPB		0.00
63) Chlorobenzene-d5	10.01	82	61789	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	71874	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	5.74	113	23072	5.68	PPB		0.00
Spiked Amount 10.000			Recovery =	56.80%			
46) 1,2-Dichloroethane-d4	6.19	65	19720	5.81	PPB		0.00
Spiked Amount 10.000			Recovery =	58.10%			
61) Toluene-d8	8.37	98	83927	5.36	PPB		0.00
Spiked Amount 10.000			Recovery =	53.60%			
83) 4-Bromofluorobenzene	11.32	95	32179	5.80	PPB		0.00
Spiked Amount 10.000			Recovery =	58.00%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.10	85	7483	2.33	PPB		92
3) Chloromethane	1.28	50	6258	2.20	PPB		97
4) Vinyl Chloride	1.35	62	8031	2.26	PPB		98
5) Bromomethane	1.64	96	7858	2.32	PPB		85
6) Chloroethane	1.74	64	4640	1.98	PPB		87
7) Dichlorofluoromethane	1.95	67	11834	2.07	PPB		99
8) Trichlorofluoromethane	1.94	101	11513	2.17	PPB		96
9) Ethyl Ether	2.26	59	4022	1.88	PPB		91
10) Acrolein	2.47	56	14438	37.93	PPB		99
11) Trichlorotrifluoroethane	2.46	151	7779	2.17	PPB		95
12) 1,1-Dichloroethene	2.49	96	7357	2.14	PPB		89
13) Acetone	2.64	43	34284	81.42	PPB		99
14) Iodomethane	2.66	142	36879	6.96	PPB		99
15) Carbon Disulfide	2.69	76	21494	2.16	PPB		98
16) 2-Propanol (Isopropyl Alco	2.84	45	6521	111.34	PPB		96
17) 3-Chloro-1-propene	2.95	76	4140	2.08	PPB	#	72
18) Methyl Acetate	3.02	43	3450	2.23	PPB		98
19) Acetonitrile	3.08	40	7360	80.28	PPB	#	80
20) Methylene Chloride	3.15	84	7833	1.91	PPB		96
21) tert-Butyl Alcohol	3.37	59	1484	10.98	PPB		89
22) Acrylonitrile	3.61	53	6519	8.06	PPB		93
23) Methyl tert-Butyl Ether	3.45	73	34874	3.72	PPB		93
24) trans-1,2-Dichloroethene	3.45	96	8431	2.02	PPB		96
25) Hexane	3.76	57	10446	2.21	PPB		98
26) Diisopropyl Ether	4.22	45	17771	1.90	PPB		95
27) 1,1-Dichloroethane	4.17	63	12235	2.02	PPB		98
28) Vinyl Acetate	4.30	86	3415	3.94	PPB	#	75

(#) = qualifier out of range (m) = manual integration
1119F010.D 111918MS46_8260.M Wed Nov 21 11:04:23 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F010.D Vial: 7
Acq On : 19 Nov 2018 06:02 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:08 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
29)	Chloroprene	4.25	53	38888	8.30	PPB		99
30)	tert-Butyl Ethyl Ether	4.77	59	19615	1.94	PPB		98
31)	2,2-Dichloropropane	5.00	77	11588	2.11	PPB		100
32)	cis-1,2-Dichloroethene	5.06	96	9943	2.05	PPB		96
33)	2-Butanone	5.16	72	22403	79.58	PPB		98
34)	Ethyl Acetate	5.21	61	1239	3.28	PPB		93
35)	Propionitrile	5.35	54	2205	8.14	PPB		84
36)	Methacrylonitrile	5.48	67	9497	7.97	PPB		90
37)	Bromochloromethane	5.40	128	4560	1.90	PPB		89
38)	Tetrahydrofuran	5.43	71	724	2.47	PPB		80
39)	Chloroform	5.52	83	14325	1.94	PPB		97
40)	Cyclohexane	5.62	56	12566	2.31	PPB		99
41)	1,1,1-Trichloroethane	5.66	97	13358	2.16	PPB		95
43)	Carbon Tetrachloride	5.82	117	12552	2.20	PPB		95
44)	1,1-Dichloropropene	5.88	75	11043	2.12	PPB		96
45)	Isobutyl Alcohol	6.24	43	3972	78.30	PPB		98
47)	Benzene	6.14	78	33755	2.07	PPB		96
48)	1,2-Dichloroethane	6.28	62	8475	1.95	PPB		98
49)	tert-Amyl Methyl Ether	6.30	55	4090	1.96	PPB	#	86
50)	Trichloroethene	6.96	95	9530	2.12	PPB		99
51)	Methylcyclohexane	7.08	83	15146	2.16	PPB		98
52)	1,2-Dichloropropane	7.29	63	7517	1.92	PPB		100
53)	Dibromomethane	7.43	93	4829	1.93	PPB		96
54)	Methyl methacrylate	7.45	69	3980	1.89	PPB		98
55)	1,4-Dioxane	7.46	88	752	51.93	PPB		73
56)	Bromodichloromethane	7.62	83	10996	1.93	PPB		92
57)	2-Nitropropane	7.98	41	5209	10.12	PPB		90
58)	2-Chloroethyl Vinyl Ether	8.01	63	4012	1.94	PPB		94
59)	cis-1,3-Dichloropropene	8.15	75	13487	1.88	PPB		99
60)	4-Methyl-2-pentanone (MIBK	8.34	58	73078	76.02	PPB		96
62)	Toluene	8.45	92	23639	1.99	PPB		95
64)	n-Octane	8.53	85	5514	2.22	PPB		97
65)	trans-1,3-Dichloropropene	8.81	75	11762	1.94	PPB		97
66)	Ethyl methacrylate	8.87	69	7927	1.90	PPB		93
67)	1,1,2-Trichloroethane	9.00	83	6021	1.96	PPB		96
68)	Tetrachloroethene	9.02	164	10220	2.12	PPB		94
69)	2-Hexanone	9.27	57	23268	81.76	PPB		95
70)	1,3-Dichloropropane	9.19	76	12058	2.00	PPB		98
71)	Dibromochloromethane	9.40	129	9775	1.89	PPB		96
72)	1,2-Dibromoethane (EDB)	9.52	107	7672	1.95	PPB		89
73)	1-Chlorohexane	10.01	91	12968	2.19	PPB		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F010.D Vial: 7
Acq On : 19 Nov 2018 06:02 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:08 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

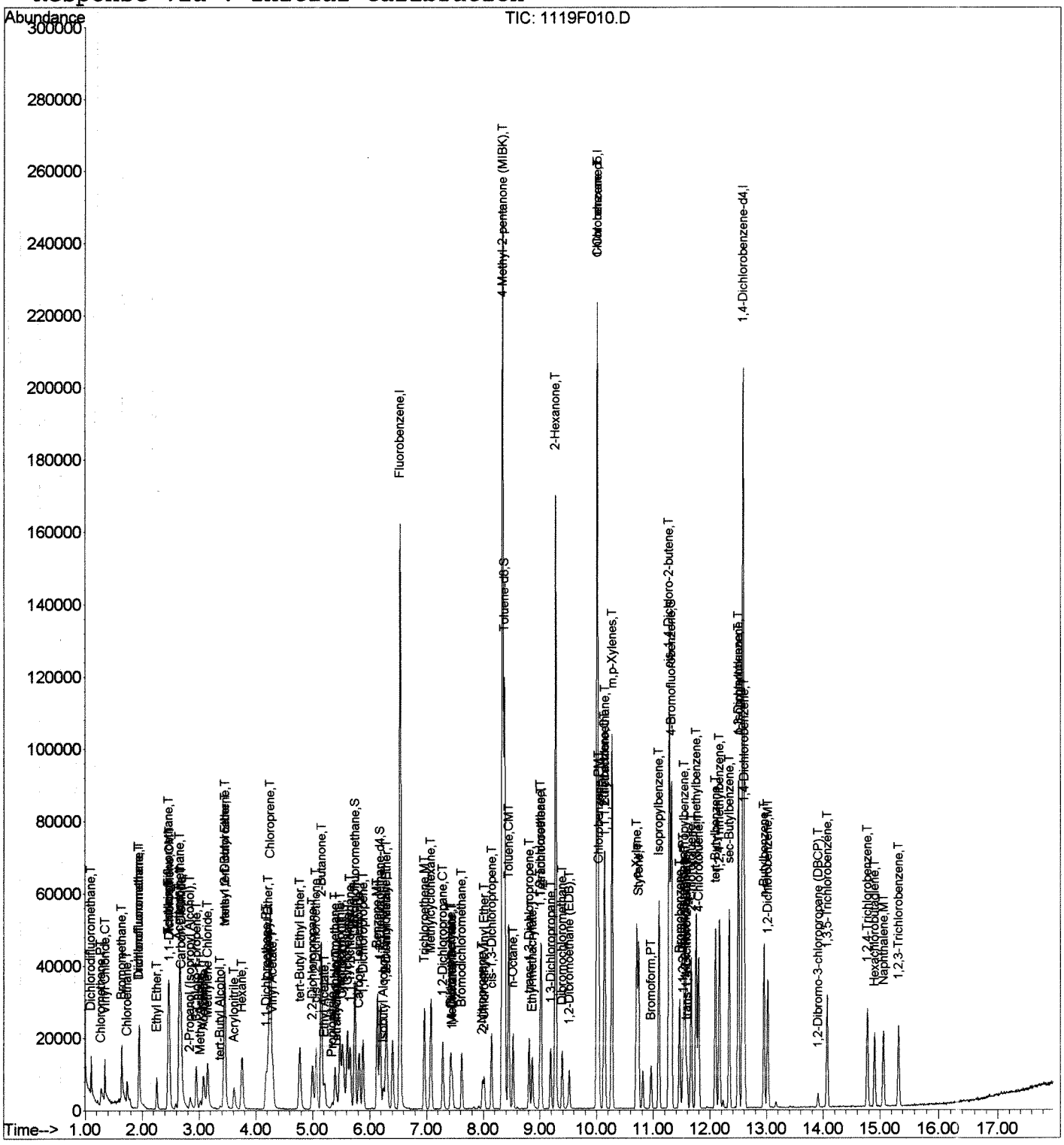
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	10.04	112	26930	1.99	PPB	93
75)	Ethylbenzene	10.13	106	14837	2.05	PPB	96
76)	1,1,1,2-Tetrachloroethane	10.15	131	9902	1.92	PPB	95
77)	m,p-Xylenes	10.27	106	35706	4.10	PPB	97
78)	o-Xylene	10.70	106	16688	1.97	PPB	99
79)	Styrene	10.73	103	14442	1.90	PPB	95
80)	Bromoform	10.96	173	6715	1.90	PPB	97
81)	Isopropylbenzene	11.10	105	44200	2.07	PPB	98
82)	cis-1,4-Dichloro-2-butene	11.27	89	4636	7.63	PPB	93
85)	1,1,2,2-Tetrachloroethane	11.52	83	7554	1.85	PPB	99
86)	trans-1,4-Dichloro-2-buten	11.59	53	1953	2.06	PPB	85
87)	Bromobenzene	11.46	156	12240	1.85	PPB	97
88)	n-Propylbenzene	11.55	91	47359	1.91	PPB	99
89)	1,2,3-Trichloropropane	11.57	110	2697	1.85	PPB	97
90)	2-Chlorotoluene	11.67	91	28147	1.94	PPB	98
91)	1,3,5-Trimethylbenzene	11.76	105	34491	1.91	PPB	96
92)	4-Chlorotoluene	11.80	91	29420	1.94	PPB	99
93)	tert-Butylbenzene	12.10	119	31615	1.95	PPB	97
94)	1,2,4-Trimethylbenzene	12.17	105	35404	1.95	PPB	99
95)	sec-Butylbenzene	12.34	105	44935	2.05	PPB	99
96)	p-Isopropyltoluene	12.50	119	38388	2.00	PPB	96
97)	1,3-Dichlorobenzene	12.50	146	22785	1.97	PPB	98
98)	1,4-Dichlorobenzene	12.61	146	22732	1.95	PPB	94
99)	n-Butylbenzene	12.95	91	28611	1.94	PPB	98
100)	1,2-Dichlorobenzene	13.01	146	20504	1.95	PPB	96
101)	1,2-Dibromo-3-chloropropan	13.91	155	1327	1.81	PPB	98
102)	1,3,5-Trichlorobenzene	14.07	180	14256	1.95	PPB	99
103)	1,2,4-Trichlorobenzene	14.78	180	12876	1.85	PPB	98
104)	Hexachlorobutadiene	14.91	225	6052	2.00	PPB	91
105)	Naphthalene	15.06	128	23199	1.84	PPB	96
106)	1,2,3-Trichlorobenzene	15.32	180	11084	1.92	PPB	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F010.D Vial: 7
Acq On : 19 Nov 2018 06:02 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:08 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F011.D Vial: 8
Acq On : 19 Nov 2018 06:28 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:09 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.54	96	168644	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	63111	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	70230	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	28658	7.17	PPB	0.00
Spiked Amount 10.000			Recovery =	71.70%		
46) 1,2-Dichloroethane-d4	6.19	65	25730	7.71	PPB	0.00
Spiked Amount 10.000			Recovery =	77.10%		
61) Toluene-d8	8.37	98	95630	6.21	PPB	0.00
Spiked Amount 10.000			Recovery =	62.10%		
83) 4-Bromofluorobenzene	11.32	95	40479	7.15	PPB	0.00
Spiked Amount 10.000			Recovery =	71.50%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.10	85	15257	4.83	PPB	92
3) Chloromethane	1.28	50	14273	5.11	PPB	98
4) Vinyl Chloride	1.35	62	17372	4.97	PPB	96
5) Bromomethane	1.64	96	17718	5.31	PPB	97
6) Chloroethane	1.74	64	11236	4.89	PPB	93
7) Dichlorofluoromethane	1.95	67	27412	4.89	PPB	98
8) Trichlorofluoromethane	1.94	101	24571	4.72	PPB	97
9) Ethyl Ether	2.26	59	10302	4.89	PPB	93
10) Acrolein	2.47	56	38810	103.73	PPB	97
11) Trichlorotrifluoroethane	2.46	151	16870	4.78	PPB	98
12) 1,1-Dichloroethene	2.49	96	16500	4.89	PPB	98
13) Acetone	2.65	43	43084	104.09	PPB	96
14) Iodomethane	2.66	142	98335	18.88	PPB	100
15) Carbon Disulfide	2.69	76	48266	4.93	PPB	99
16) 2-Propanol (Isopropyl Alco	2.84	45	15793	274.31	PPB	96
17) 3-Chloro-1-propene	2.95	76	10238	5.23	PPB	85
18) Methyl Acetate	3.02	43	8327	5.47	PPB	97
19) Acetonitrile	3.08	40	19354	214.76	PPB	99
20) Methylene Chloride	3.15	84	19931	4.94	PPB	98
21) tert-Butyl Alcohol	3.38	59	3590	27.01	PPB	98
22) Acrylonitrile	3.62	53	16347	20.56	PPB	99
23) Methyl tert-Butyl Ether	3.45	73	93165	10.10	PPB	98
24) trans-1,2-Dichloroethene	3.45	96	20392	4.98	PPB	98
25) Hexane	3.76	57	22907	4.94	PPB	96
26) Diisopropyl Ether	4.22	45	44249	4.82	PPB	96
27) 1,1-Dichloroethane	4.18	63	29001	4.87	PPB	95
28) Vinyl Acetate	4.30	86	8753	10.27	PPB	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F011.D Vial: 8
Acq On : 19 Nov 2018 06:28 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:09 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroprene	4.25	53	89758	19.48	PPB	97
30)	tert-Butyl Ethyl Ether	4.77	59	49701	5.01	PPB	98
31)	2,2-Dichloropropane	5.00	77	26320	4.87	PPB	99
32)	cis-1,2-Dichloroethene	5.07	96	24028	5.04	PPB	96
33)	2-Butanone	5.16	72	27562	99.60	PPB	97
34)	Ethyl Acetate	5.21	61	3612	9.74	PPB	97
35)	Propionitrile	5.34	54	5393	20.26	PPB	95
36)	Methacrylonitrile	5.48	67	24293	20.74	PPB	98
37)	Bromochloromethane	5.40	128	11628	4.92	PPB	97
38)	Tetrahydrofuran	5.43	71	1726	6.00	PPB	93
39)	Chloroform	5.52	83	34122	4.70	PPB	97
40)	Cyclohexane	5.61	56	26254	4.90	PPB	93
41)	1,1,1-Trichloroethane	5.66	97	29128	4.79	PPB	97
43)	Carbon Tetrachloride	5.82	117	26862	4.79	PPB	97
44)	1,1-Dichloropropene	5.88	75	24773	4.85	PPB	98
45)	Isobutyl Alcohol	6.24	43	10375	208.05	PPB	95
47)	Benzene	6.14	78	80130	5.00	PPB	99
48)	1,2-Dichloroethane	6.29	62	21430	5.01	PPB	98
49)	tert-Amyl Methyl Ether	6.30	55	10285	5.02	PPB	97
50)	Trichloroethene	6.96	95	22820	5.16	PPB	96
51)	Methylcyclohexane	7.08	83	33997	4.93	PPB	98
52)	1,2-Dichloropropane	7.29	63	19610	5.10	PPB	96
53)	Dibromomethane	7.43	93	12789	5.19	PPB	97
54)	Methyl methacrylate	7.45	69	10725	5.17	PPB	97
55)	1,4-Dioxane	7.47	88	2487	174.73	PPB	93
56)	Bromodichloromethane	7.62	83	28243	5.04	PPB	99
57)	2-Nitropropane	7.98	41	13297	26.28	PPB	98
58)	2-Chloroethyl Vinyl Ether	8.01	63	10533	5.18	PPB	93
59)	cis-1,3-Dichloropropene	8.14	75	35377	5.01	PPB	98
60)	4-Methyl-2-pentanone (MIBK	8.34	58	94611	100.13	PPB	97
62)	Toluene	8.45	92	57894	4.95	PPB	98
64)	n-Octane	8.53	85	12937	5.09	PPB	91
65)	trans-1,3-Dichloropropene	8.81	75	30380	4.90	PPB	98
66)	Ethyl methacrylate	8.87	69	20972	4.91	PPB	94
67)	1,1,2-Trichloroethane	9.01	83	15569	4.97	PPB	95
68)	Tetrachloroethene	9.02	164	23756	4.83	PPB	97
69)	2-Hexanone	9.27	57	29035	99.89	PPB	96
70)	1,3-Dichloropropane	9.19	76	31164	5.05	PPB	97
71)	Dibromochloromethane	9.40	129	25949	4.92	PPB	97
72)	1,2-Dibromoethane (EDB)	9.52	107	20128	5.01	PPB	96
73)	1-Chlorohexane	10.01	91	29392	4.86	PPB	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F011.D Vial: 8
Acq On : 19 Nov 2018 06:28 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:09 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

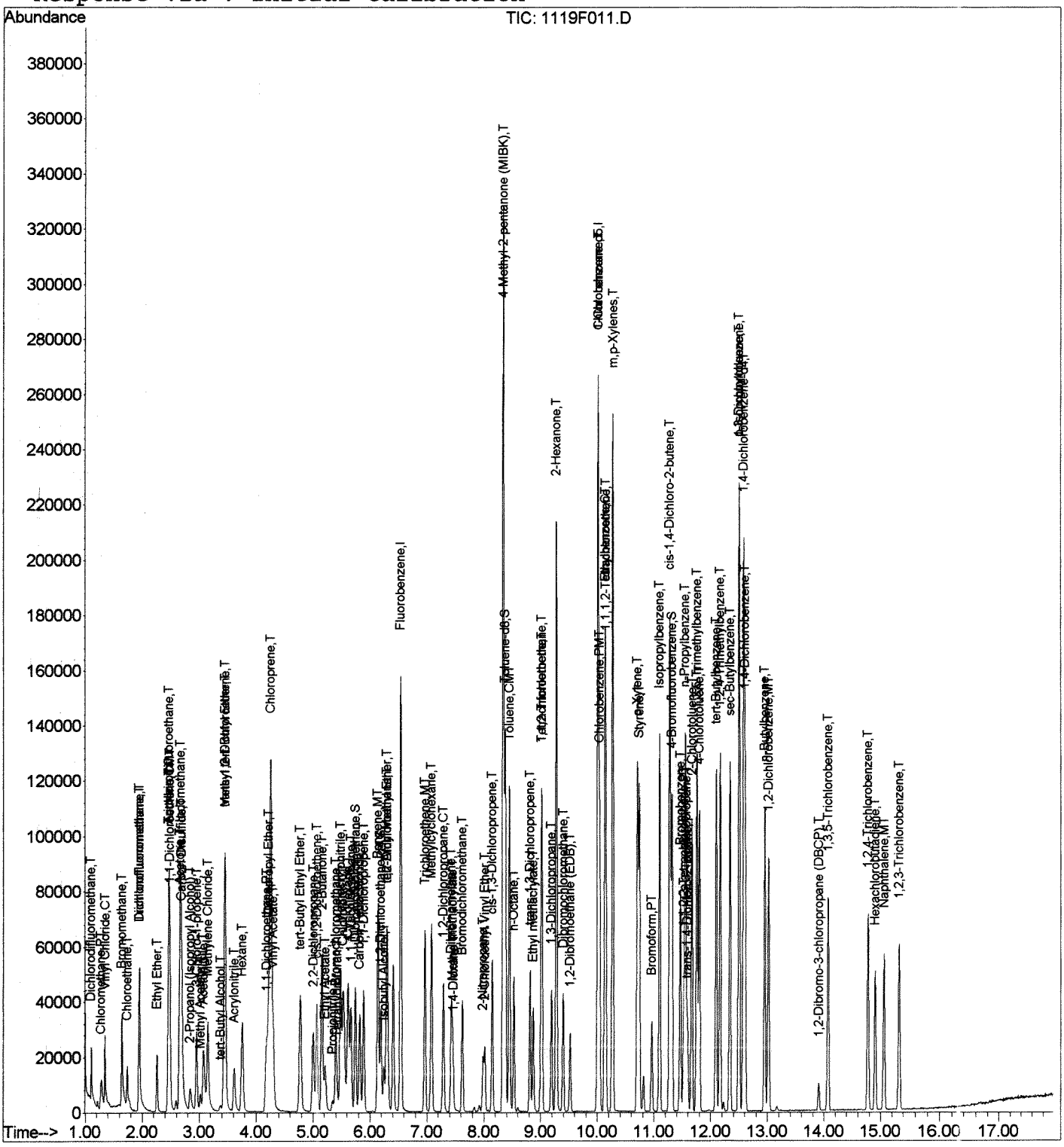
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	10.04	112	68628	4.97	PPB	98
75)	Ethylbenzene	10.13	106	35388	4.79	PPB	95
76)	1,1,1,2-Tetrachloroethane	10.15	131	26002	4.94	PPB	96
77)	m,p-Xylenes	10.27	106	86107	9.69	PPB	98
78)	o-Xylene	10.70	106	42159	4.87	PPB	97
79)	Styrene	10.73	103	38115	4.90	PPB	93
80)	Bromoform	10.96	173	17943	4.96	PPB	98
81)	Isopropylbenzene	11.10	105	105406	4.83	PPB	99
82)	cis-1,4-Dichloro-2-butene	11.27	89	12531	20.18	PPB	98
85)	1,1,2,2-Tetrachloroethane	11.52	83	19481	4.88	PPB	97
86)	trans-1,4-Dichloro-2-buten	11.59	53	4703	5.08	PPB	91
87)	Bromobenzene	11.46	156	31791	4.92	PPB	95
88)	n-Propylbenzene	11.55	91	116073	4.80	PPB	99
89)	1,2,3-Trichloropropane	11.57	110	7107	4.98	PPB	88
90)	2-Chlorotoluene	11.67	91	69740	4.92	PPB	99
91)	1,3,5-Trimethylbenzene	11.75	105	85717	4.87	PPB	99
92)	4-Chlorotoluene	11.80	91	75097	5.08	PPB	98
93)	tert-Butylbenzene	12.10	119	76852	4.85	PPB	98
94)	1,2,4-Trimethylbenzene	12.17	105	86004	4.85	PPB	98
95)	sec-Butylbenzene	12.34	105	104182	4.86	PPB	99
96)	p-Isopropyltoluene	12.50	119	91588	4.89	PPB	98
97)	1,3-Dichlorobenzene	12.50	146	55769	4.93	PPB	96
98)	1,4-Dichlorobenzene	12.61	146	56652	4.98	PPB	97
99)	n-Butylbenzene	12.95	91	69246	4.80	PPB	97
100)	1,2-Dichlorobenzene	13.02	146	51809	5.04	PPB	99
101)	1,2-Dibromo-3-chloropropan	13.91	155	3840	5.36	PPB	95
102)	1,3,5-Trichlorobenzene	14.07	180	34704	4.86	PPB	98
103)	1,2,4-Trichlorobenzene	14.78	180	32409	4.78	PPB	96
104)	Hexachlorobutadiene	14.90	225	14959	5.06	PPB	96
105)	Naphthalene	15.06	128	61289	4.97	PPB	98
106)	1,2,3-Trichlorobenzene	15.33	180	28277	5.01	PPB	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F011.D Vial: 8
Acq On : 19 Nov 2018 06:28 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:08 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F012.D Vial: 9
Acq On : 19 Nov 2018 06:54 pm Operator: LM
Sample : ICAL 10 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:10 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.53	96	166468	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	62501	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	69473	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	39440	10.00	PPB	0.00
Spiked Amount 10.000			Recovery =	100.00%		
46) 1,2-Dichloroethane-d4	6.19	65	32956	10.00	PPB	0.00
Spiked Amount 10.000			Recovery =	100.00%		
61) Toluene-d8	8.37	98	152037	10.00	PPB	0.00
Spiked Amount 10.000			Recovery =	100.00%		
83) 4-Bromofluorobenzene	11.32	95	56100	10.00	PPB	0.00
Spiked Amount 10.000			Recovery =	100.00%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.11	85	31163	10.00	PPB	100
3) Chloromethane	1.28	50	27598	10.00	PPB	100
4) Vinyl Chloride	1.35	62	34517	10.00	PPB	100
5) Bromomethane	1.64	96	32920	10.00	PPB	100
6) Chloroethane	1.74	64	22701	10.00	PPB	100
7) Dichlorofluoromethane	1.95	67	55364	10.00	PPB	100
8) Trichlorofluoromethane	1.94	101	51414	10.00	PPB	100
9) Ethyl Ether	2.26	59	20779	10.00	PPB	100
10) Acrolein	2.47	56	73866	200.00	PPB	100
11) Trichlorotrifluoroethane	2.46	151	34854	10.00	PPB	100
12) 1,1-Dichloroethene	2.49	96	33300	10.00	PPB	100
13) Acetone	2.64	43	81711	200.00	PPB	100
14) Iodomethane	2.66	142	205618	40.00	PPB	100
15) Carbon Disulfide	2.69	76	96556	10.00	PPB	100
16) 2-Propanol (Isopropyl Alco	2.83	45	28415	500.00	PPB	100
17) 3-Chloro-1-propene	2.95	76	19324	10.00	PPB	100
18) Methyl Acetate	3.02	43	15023	10.00	PPB	100
19) Acetonitrile	3.07	40	35582	400.00	PPB	100
20) Methylene Chloride	3.15	84	39827	10.00	PPB	100
21) tert-Butyl Alcohol	3.37	59	6560	50.00	PPB	100
22) Acrylonitrile	3.62	53	31399	40.00	PPB	100
23) Methyl tert-Butyl Ether	3.45	73	182083	20.00	PPB	100
24) trans-1,2-Dichloroethene	3.45	96	40423	10.00	PPB	100
25) Hexane	3.76	57	45763	10.00	PPB	100
26) Diisopropyl Ether	4.22	45	90577	10.00	PPB	100
27) 1,1-Dichloroethane	4.18	63	58836	10.00	PPB	100
28) Vinyl Acetate	4.30	86	16819	20.00	PPB	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F012.D Vial: 9
Acq On : 19 Nov 2018 06:54 pm Operator: LM
Sample : ICAL 10 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:10 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroprene	4.25	53	181915	40.00	PPB	100
30)	tert-Butyl Ethyl Ether	4.77	59	97991	10.00	PPB	100
31)	2,2-Dichloropropane	5.00	77	53335	10.00	PPB	100
32)	cis-1,2-Dichloroethene	5.06	96	47064	10.00	PPB	100
33)	2-Butanone	5.15	72	54630	200.00	PPB	100
34)	Ethyl Acetate	5.21	61	7322	20.00	PPB	100
35)	Propionitrile	5.34	54	10510	40.00	PPB	100
36)	Methacrylonitrile	5.48	67	46244	40.00	PPB	100
37)	Bromochloromethane	5.40	128	23336	10.00	PPB	100
38)	Tetrahydrofuran	5.42	71	2839	10.00	PPB	100
39)	Chloroform	5.52	83	71611	10.00	PPB	100
40)	Cyclohexane	5.61	56	52885	10.00	PPB	100
41)	1,1,1-Trichloroethane	5.66	97	59981	10.00	PPB	100
43)	Carbon Tetrachloride	5.82	117	55321	10.00	PPB	100
44)	1,1-Dichloropropene	5.88	75	50467	10.00	PPB	100
45)	Isobutyl Alcohol	6.24	43	19690	400.00	PPB	100
47)	Benzene	6.14	78	158121	10.00	PPB	100
48)	1,2-Dichloroethane	6.28	62	42258	10.00	PPB	100
49)	tert-Amyl Methyl Ether	6.30	55	20214	10.00	PPB	100
50)	Trichloroethene	6.96	95	43665	10.00	PPB	100
51)	Methylcyclohexane	7.08	83	68041	10.00	PPB	100
52)	1,2-Dichloropropane	7.28	63	37948	10.00	PPB	100
53)	Dibromomethane	7.43	93	24305	10.00	PPB	100
54)	Methyl methacrylate	7.45	69	20485	10.00	PPB	100
55)	1,4-Dioxane	7.47	88	5620	400.00	PPB	100
56)	Bromodichloromethane	7.62	83	55312	10.00	PPB	100
57)	2-Nitropropane	7.99	41	24968	50.00	PPB	100
58)	2-Chloroethyl Vinyl Ether	8.01	63	20075	10.00	PPB	100
59)	cis-1,3-Dichloropropene	8.14	75	69682	10.00	PPB	100
60)	4-Methyl-2-pentanone (MIBK	8.34	58	186546	200.00	PPB	100
62)	Toluene	8.45	92	115435	10.00	PPB	100
64)	n-Octane	8.53	85	25147	10.00	PPB	100
65)	trans-1,3-Dichloropropene	8.81	75	61430	10.00	PPB	100
66)	Ethyl methacrylate	8.87	69	42269	10.00	PPB	100
67)	1,1,2-Trichloroethane	9.00	83	31032	10.00	PPB	100
68)	Tetrachloroethene	9.02	164	48735	10.00	PPB	100
69)	2-Hexanone	9.27	57	57572	200.00	PPB	100
70)	1,3-Dichloropropane	9.19	76	61076	10.00	PPB	100
71)	Dibromochloromethane	9.39	129	52183	10.00	PPB	100
72)	1,2-Dibromoethane (EDB)	9.52	107	39826	10.00	PPB	100
73)	1-Chlorohexane	10.01	91	59910	10.00	PPB	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F012.D Vial: 9
Acq On : 19 Nov 2018 06:54 pm Operator: LM
Sample : ICAL 10 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:10 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

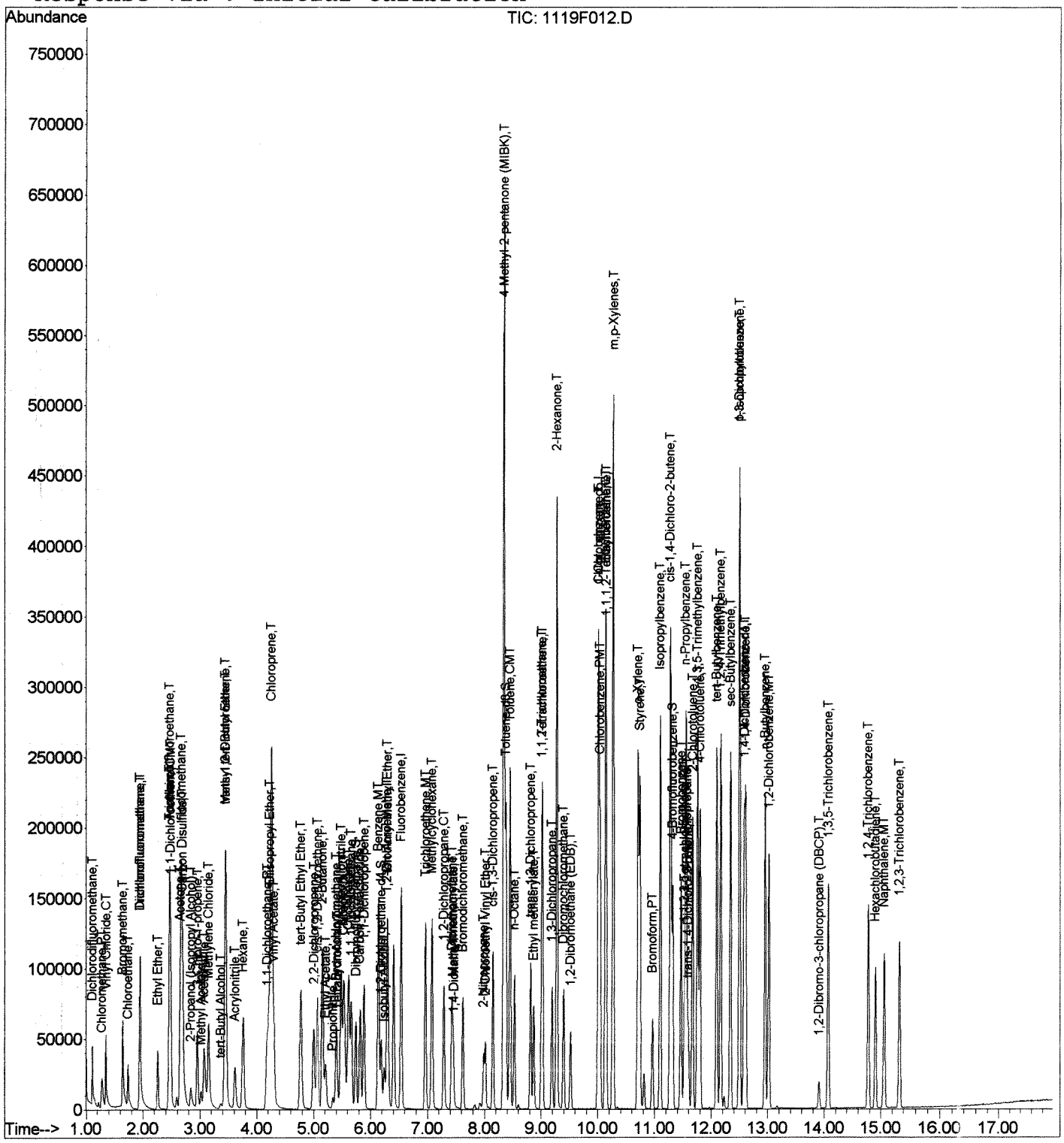
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	10.04	112	136685	10.00	PPB	100
75)	Ethylbenzene	10.13	106	73104	10.00	PPB	100
76)	1,1,1,2-Tetrachloroethane	10.15	131	52176	10.00	PPB	100
77)	m,p-Xylenes	10.27	106	176040	20.00	PPB	100
78)	o-Xylene	10.70	106	85647	10.00	PPB	100
79)	Styrene	10.73	103	77012	10.00	PPB	100
80)	Bromoform	10.96	173	35807	10.00	PPB	100
81)	Isopropylbenzene	11.10	105	216082	10.00	PPB	100
82)	cis-1,4-Dichloro-2-butene	11.27	89	24599	40.00	PPB	100
85)	1,1,2,2-Tetrachloroethane	11.52	83	39470	10.00	PPB	100
86)	trans-1,4-Dichloro-2-buten	11.59	53	9161	10.00	PPB	100
87)	Bromobenzene	11.46	156	63908	10.00	PPB	100
88)	n-Propylbenzene	11.55	91	239287	10.00	PPB	100
89)	1,2,3-Trichloropropane	11.57	110	14107	10.00	PPB	100
90)	2-Chlorotoluene	11.67	91	140204	10.00	PPB	100
91)	1,3,5-Trimethylbenzene	11.76	105	174283	10.00	PPB	100
92)	4-Chlorotoluene	11.80	91	146303	10.00	PPB	100
93)	tert-Butylbenzene	12.09	119	156882	10.00	PPB	100
94)	1,2,4-Trimethylbenzene	12.17	105	175331	10.00	PPB	100
95)	sec-Butylbenzene	12.34	105	212213	10.00	PPB	100
96)	p-Isopropyltoluene	12.50	119	185328	10.00	PPB	100
97)	1,3-Dichlorobenzene	12.50	146	111975	10.00	PPB	100
98)	1,4-Dichlorobenzene	12.61	146	112458	10.00	PPB	100
99)	n-Butylbenzene	12.95	91	142595	10.00	PPB	100
100)	1,2-Dichlorobenzene	13.02	146	101600	10.00	PPB	100
101)	1,2-Dibromo-3-chloropropan	13.90	155	7090	10.00	PPB	100
102)	1,3,5-Trichlorobenzene	14.07	180	70690	10.00	PPB	100
103)	1,2,4-Trichlorobenzene	14.78	180	67129	10.00	PPB	100
104)	Hexachlorobutadiene	14.91	225	29238	10.00	PPB	100
105)	Naphthalene	15.05	128	121927	10.00	PPB	100
106)	1,2,3-Trichlorobenzene	15.33	180	55849	10.00	PPB	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F012.D Vial: 9
Acq On : 19 Nov 2018 06:54 pm Operator: LM
Sample : ICAL 10 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:08 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F013.D Vial: 10
Acq On : 19 Nov 2018 07:20 pm Operator: LM
Sample : ICAL 20 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:11 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.54	96	161402	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	61216	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	66434	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	45437	11.88	PPB	0.00
Spiked Amount 10.000			Recovery =	118.80%		
46) 1,2-Dichloroethane-d4	6.19	65	38165	11.94	PPB	0.00
Spiked Amount 10.000			Recovery =	119.40%		
61) Toluene-d8	8.37	98	163198	11.07	PPB	0.00
Spiked Amount 10.000			Recovery =	110.70%		
83) 4-Bromofluorobenzene	11.32	95	64120	11.67	PPB	0.00
Spiked Amount 10.000			Recovery =	116.70%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.10	85	59627	19.73	PPB	97
3) Chloromethane	1.28	50	53809	20.11	PPB	99
4) Vinyl Chloride	1.35	62	66938	20.00	PPB	99
5) Bromomethane	1.64	96	62780	19.67	PPB	96
6) Chloroethane	1.74	64	43014	19.54	PPB	98
7) Dichlorofluoromethane	1.95	67	108142	20.15	PPB	99
8) Trichlorofluoromethane	1.94	101	102092	20.48	PPB	97
9) Ethyl Ether	2.26	59	41191	20.45	PPB	96
10) Acrolein	2.47	56	143888	401.82	PPB	100
11) Trichlorotrifluoroethane	2.46	151	66153	19.58	PPB	98
12) 1,1-Dichloroethene	2.49	96	62465	19.35	PPB	94
13) Acetone	2.64	43	163285	412.21	PPB	99
14) Iodomethane	2.66	142	420829	84.44	PPB	98
15) Carbon Disulfide	2.69	76	184341	19.69	PPB	99
16) 2-Propanol (Isopropyl Alco	2.83	45	64666	1173.60	PPB	98
17) 3-Chloro-1-propene	2.95	76	38778	20.70	PPB	89
18) Methyl Acetate	3.02	43	28667	19.68	PPB	96
19) Acetonitrile	3.07	40	74863	868.00	PPB	97
20) Methylene Chloride	3.15	84	77474	20.06	PPB	98
21) tert-Butyl Alcohol	3.36	59	14152	111.25	PPB	91
22) Acrylonitrile	3.61	53	61729	81.11	PPB	99
23) Methyl tert-Butyl Ether	3.44	73	360363	40.82	PPB	100
24) trans-1,2-Dichloroethene	3.45	96	79487	20.28	PPB	97
25) Hexane	3.76	57	90141	20.32	PPB	99
26) Diisopropyl Ether	4.22	45	181485	20.67	PPB	97
27) 1,1-Dichloroethane	4.18	63	115023	20.16	PPB	99
28) Vinyl Acetate	4.30	86	33374	40.93	PPB	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F013.D Vial: 10
Acq On : 19 Nov 2018 07:20 pm Operator: LM
Sample : ICAL 20 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:11 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroprene	4.25	53	349357	79.23	PPB	99
30)	tert-Butyl Ethyl Ether	4.77	59	194544	20.48	PPB	99
31)	2,2-Dichloropropane	5.00	77	102023	19.73	PPB	98
32)	cis-1,2-Dichloroethene	5.06	96	91840	20.13	PPB	100
33)	2-Butanone	5.15	72	107277	405.07	PPB	96
34)	Ethyl Acetate	5.21	61	13542	38.15	PPB	98
35)	Propionitrile	5.34	54	21193	83.19	PPB	97
36)	Methacrylonitrile	5.48	67	90138	80.41	PPB	98
37)	Bromochloromethane	5.40	128	45803	20.24	PPB	94
38)	Tetrahydrofuran	5.41	71	5939	21.58	PPB	95
39)	Chloroform	5.52	83	134182	19.33	PPB	97
40)	Cyclohexane	5.61	56	101978	19.89	PPB	96
41)	1,1,1-Trichloroethane	5.66	97	115000	19.77	PPB	98
43)	Carbon Tetrachloride	5.82	117	106615	19.88	PPB	98
44)	1,1-Dichloropropene	5.88	75	95786	19.58	PPB	97
45)	Isobutyl Alcohol	6.24	43	42321	886.73	PPB	98
47)	Benzene	6.14	78	312079	20.36	PPB	99
48)	1,2-Dichloroethane	6.28	62	82311	20.09	PPB	98
49)	tert-Amyl Methyl Ether	6.30	55	39021	19.91	PPB	96
50)	Trichloroethene	6.96	95	84896	20.05	PPB	99
51)	Methylcyclohexane	7.08	83	134613	20.41	PPB	96
52)	1,2-Dichloropropane	7.29	63	74519	20.25	PPB	97
53)	Dibromomethane	7.43	93	47020	19.95	PPB	95
54)	Methyl methacrylate	7.45	69	40141	20.21	PPB	99
55)	1,4-Dioxane	7.46	88	12919	948.36	PPB	93
56)	Bromodichloromethane	7.62	83	113043	21.08	PPB	99
57)	2-Nitropropane	7.99	41	49221	101.66	PPB	95
58)	2-Chloroethyl Vinyl Ether	8.02	63	41688	21.42	PPB	99
59)	cis-1,3-Dichloropropene	8.14	75	137142	20.30	PPB	99
60)	4-Methyl-2-pentanone (MIBK	8.34	58	368654	407.65	PPB	98
62)	Toluene	8.45	92	224923	20.10	PPB	96
64)	n-Octane	8.53	85	54128	21.98	PPB	95
65)	trans-1,3-Dichloropropene	8.81	75	120834	20.08	PPB	99
66)	Ethyl methacrylate	8.87	69	82595	19.95	PPB	99
67)	1,1,2-Trichloroethane	9.00	83	59819	19.68	PPB	96
68)	Tetrachloroethene	9.02	164	93512	19.59	PPB	99
69)	2-Hexanone	9.27	57	114725	406.91	PPB	97
70)	1,3-Dichloropropane	9.19	76	119917	20.05	PPB	98
71)	Dibromochloromethane	9.39	129	102426	20.04	PPB	99
72)	1,2-Dibromoethane (EDB)	9.52	107	77822	19.95	PPB	97
73)	1-Chlorohexane	10.01	91	116846	19.91	PPB	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F013.D Vial: 10
Acq On : 19 Nov 2018 07:20 pm Operator: LM
Sample : ICAL 20 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:11 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

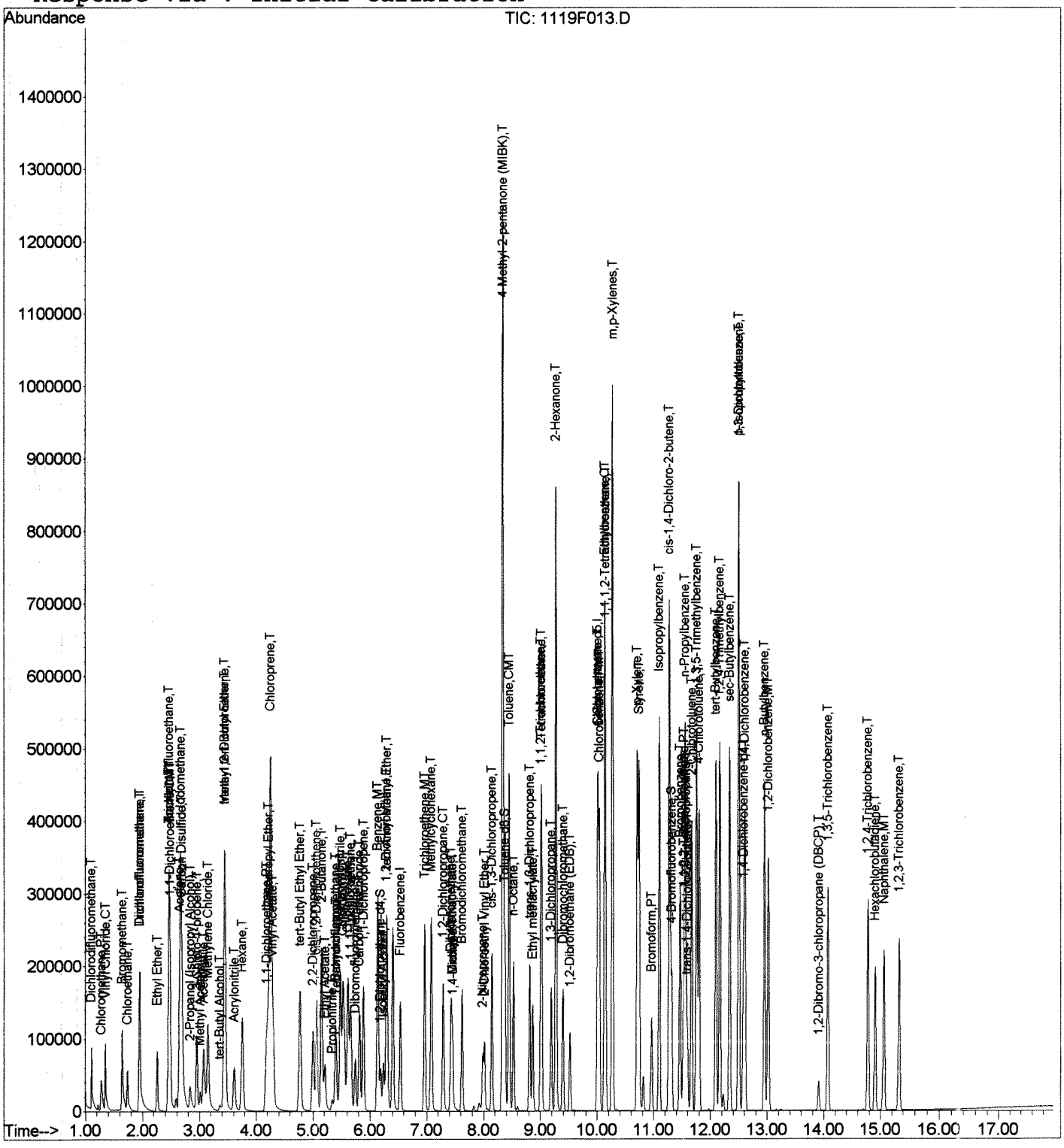
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
74)	Chlorobenzene	10.04	112	267385	19.97	PPB		98
75)	Ethylbenzene	10.13	106	139539	19.49	PPB		95
76)	1,1,1,2-Tetrachloroethane	10.15	131	103458	20.24	PPB		94
77)	m,p-Xylenes	10.27	106	341817	39.65	PPB		99
78)	o-Xylene	10.70	106	166597	19.86	PPB		99
79)	Styrene	10.74	103	151994	20.15	PPB		99
80)	Bromoform	10.96	173	70710	20.16	PPB		97
81)	Isopropylbenzene	11.10	105	419501	19.82	PPB		99
82)	cis-1,4-Dichloro-2-butene	11.27	89	48999	81.35	PPB		98
85)	1,1,2,2-Tetrachloroethane	11.53	83	76523	20.27	PPB		99
86)	trans-1,4-Dichloro-2-buten	11.59	53	17417	19.88	PPB	#	72
87)	Bromobenzene	11.46	156	123046	20.13	PPB		99
88)	n-Propylbenzene	11.55	91	461146	20.15	PPB		98
89)	1,2,3-Trichloropropane	11.57	110	26976	20.00	PPB		89
90)	2-Chlorotoluene	11.67	91	269836	20.13	PPB		99
91)	1,3,5-Trimethylbenzene	11.76	105	338217	20.29	PPB		99
92)	4-Chlorotoluene	11.80	91	284369	20.33	PPB		99
93)	tert-Butylbenzene	12.10	119	302964	20.19	PPB		100
94)	1,2,4-Trimethylbenzene	12.17	105	337400	20.12	PPB		98
95)	sec-Butylbenzene	12.34	105	415960	20.50	PPB		99
96)	p-Isopropyltoluene	12.50	119	363530	20.51	PPB		98
97)	1,3-Dichlorobenzene	12.50	146	215441	20.12	PPB		98
98)	1,4-Dichlorobenzene	12.61	146	218452	20.31	PPB		99
99)	n-Butylbenzene	12.95	91	283350	20.78	PPB		97
100)	1,2-Dichlorobenzene	13.02	146	199168	20.50	PPB		99
101)	1,2-Dibromo-3-chloropropan	13.91	155	14297	21.09	PPB		91
102)	1,3,5-Trichlorobenzene	14.07	180	139185	20.59	PPB		99
103)	1,2,4-Trichlorobenzene	14.78	180	130981	20.40	PPB		99
104)	Hexachlorobutadiene	14.90	225	59363	21.23	PPB		99
105)	Naphthalene	15.06	128	242805	20.82	PPB		98
106)	1,2,3-Trichlorobenzene	15.33	180	110813	20.75	PPB		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F013.D Vial: 10
Acq On : 19 Nov 2018 07:20 pm Operator: LM
Sample : ICAL 20 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:08 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F014.D Vial: 11
Acq On : 19 Nov 2018 07:46 pm Operator: LM
Sample : ICAL 40 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:13 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.54	96	165471	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	61531	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	66903	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	54611	13.93	PPB	0.00
Spiked Amount 10.000			Recovery =	139.30%		
46) 1,2-Dichloroethane-d4	6.19	65	45389	13.86	PPB	0.00
Spiked Amount 10.000			Recovery =	138.60%		
61) Toluene-d8	8.37	98	200708	13.28	PPB	0.00
Spiked Amount 10.000			Recovery =	132.80%		
83) 4-Bromofluorobenzene	11.32	95	75373	13.65	PPB	0.00
Spiked Amount 10.000			Recovery =	136.50%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.10	85	151837	49.02	PPB	95
3) Chloromethane	1.28	50	120908	44.07	PPB	99
4) Vinyl Chloride	1.35	62	161641	47.11	PPB	97
5) Bromomethane	1.64	96	131956	40.33	PPB	100
6) Chloroethane	1.74	64	97712	43.30	PPB	98
7) Dichlorofluoromethane	1.95	67	246549	44.80	PPB	100
8) Trichlorofluoromethane	1.94	101	253329	49.57	PPB	99
9) Ethyl Ether	2.26	59	83164	40.26	PPB	97
10) Acrolein	2.47	56	280887	765.11	PPB	99
11) Trichlorotrifluoroethane	2.46	151	171584	49.53	PPB	96
12) 1,1-Dichloroethene	2.49	96	152136	45.96	PPB	95
13) Acetone	2.64	43	335952	827.25	PPB	100
14) Iodomethane	2.66	142	941190	184.20	PPB	100
15) Carbon Disulfide	2.69	76	444614	46.32	PPB	100
16) 2-Propanol (Isopropyl Alco	2.83	45	128688	2278.08	PPB	98
17) 3-Chloro-1-propene	2.95	76	79101	41.18	PPB	93
18) Methyl Acetate	3.02	43	59344	39.74	PPB	93
19) Acetonitrile	3.07	40	156665	1771.78	PPB	98
20) Methylene Chloride	3.15	84	158526	40.04	PPB	99
21) tert-Butyl Alcohol	3.36	59	28815	220.95	PPB	90
22) Acrylonitrile	3.61	53	126633	162.29	PPB	98
23) Methyl tert-Butyl Ether	3.44	73	738325	81.59	PPB	99
24) trans-1,2-Dichloroethene	3.45	96	180950	45.03	PPB	100
25) Hexane	3.76	57	211590	46.51	PPB	98
26) Diisopropyl Ether	4.22	45	367542	40.82	PPB	99
27) 1,1-Dichloroethane	4.18	63	248458	42.48	PPB	98
28) Vinyl Acetate	4.30	86	67138	80.32	PPB #	90

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F014.D Vial: 11
Acq On : 19 Nov 2018 07:46 pm Operator: LM
Sample : ICAL 40 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:13 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroprene	4.25	53	831361	183.90	PPB	98
30)	tert-Butyl Ethyl Ether	4.77	59	395767	40.63	PPB	97
31)	2,2-Dichloropropane	5.00	77	236638	44.64	PPB	98
32)	cis-1,2-Dichloroethene	5.07	96	193928	41.45	PPB	98
33)	2-Butanone	5.15	72	224124	825.46	PPB	98
34)	Ethyl Acetate	5.21	61	28530	78.40	PPB	98
35)	Propionitrile	5.34	54	44059	168.69	PPB	97
36)	Methacrylonitrile	5.48	67	188610	164.13	PPB	99
37)	Bromochloromethane	5.40	128	87625	37.78	PPB	99
38)	Tetrahydrofuran	5.41	71	12205	43.25	PPB	97
39)	Chloroform	5.52	83	280259	39.37	PPB	97
40)	Cyclohexane	5.61	56	251576	47.86	PPB	96
41)	1,1,1-Trichloroethane	5.66	97	273230	45.83	PPB	99
43)	Carbon Tetrachloride	5.82	117	260805	47.43	PPB	99
44)	1,1-Dichloropropene	5.88	75	232040	46.26	PPB	97
45)	Isobutyl Alcohol	6.24	43	86203	1761.76	PPB	98
47)	Benzene	6.14	78	675026	42.95	PPB	99
48)	1,2-Dichloroethane	6.29	62	164990	39.28	PPB	98
49)	tert-Amyl Methyl Ether	6.30	55	77922	38.78	PPB	98
50)	Trichloroethene	6.96	95	191603	44.14	PPB	99
51)	Methylcyclohexane	7.08	83	316331	46.77	PPB	99
52)	1,2-Dichloropropane	7.29	63	156844	41.58	PPB	97
53)	Dibromomethane	7.43	93	99258	41.08	PPB	98
54)	Methyl methacrylate	7.45	69	86562	42.51	PPB	95
55)	1,4-Dioxane	7.46	88	26079	1867.34	PPB	83
56)	Bromodichloromethane	7.62	83	232121	42.22	PPB	99
57)	2-Nitropropane	7.99	41	103593	208.70	PPB	95
58)	2-Chloroethyl Vinyl Ether	8.02	63	84911	42.55	PPB	98
59)	cis-1,3-Dichloropropene	8.15	75	279124	40.30	PPB	98
60)	4-Methyl-2-pentanone (MIBK	8.34	58	765052	825.17	PPB	99
62)	Toluene	8.45	92	491058	42.80	PPB	99
64)	n-Octane	8.53	85	116883	47.21	PPB	94
65)	trans-1,3-Dichloropropene	8.81	75	243004	40.18	PPB	100
66)	Ethyl methacrylate	8.87	69	171652	41.25	PPB	98
67)	1,1,2-Trichloroethane	9.00	83	121423	39.75	PPB	97
68)	Tetrachloroethene	9.02	164	219777	45.81	PPB	98
69)	2-Hexanone	9.27	57	238266	840.76	PPB	98
70)	1,3-Dichloropropane	9.19	76	242977	40.41	PPB	98
71)	Dibromochloromethane	9.40	129	207322	40.36	PPB	97
72)	1,2-Dibromoethane (EDB)	9.52	107	159270	40.62	PPB	98
73)	1-Chlorohexane	10.01	91	271082	45.96	PPB	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F014.D Vial: 11
Acq On : 19 Nov 2018 07:46 pm Operator: LM
Sample : ICAL 40 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:13 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

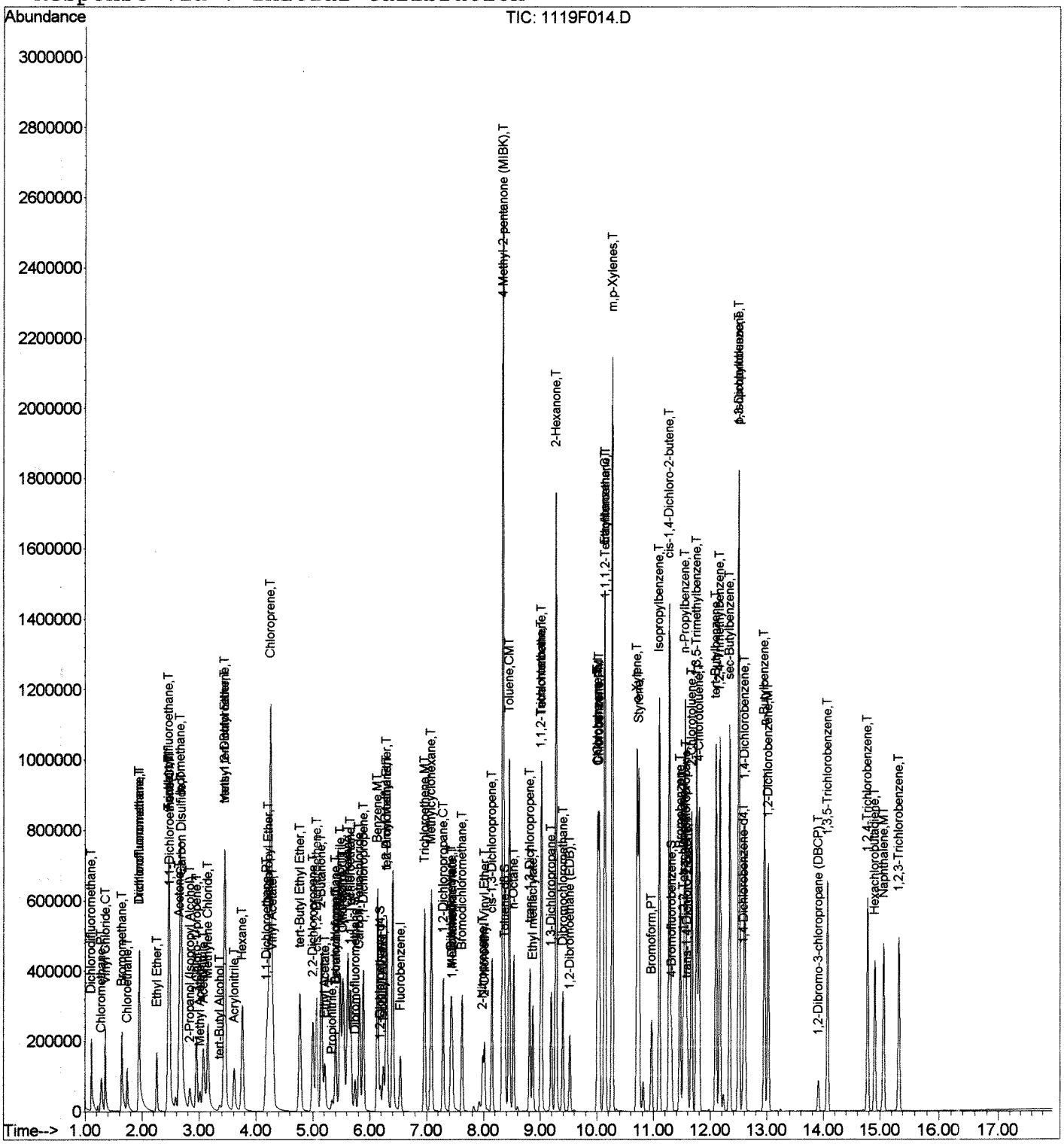
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	10.04	112	555421	41.28	PPB	98
75)	Ethylbenzene	10.13	106	304217	42.27	PPB	94
76)	1,1,1,2-Tetrachloroethane	10.15	131	209464	40.78	PPB	96
77)	m,p-Xylenes	10.27	106	743008	85.74	PPB	100
78)	o-Xylene	10.70	106	350559	41.58	PPB	98
79)	Styrene	10.74	103	314093	41.43	PPB	97
80)	Bromoform	10.96	173	146117	41.45	PPB	96
81)	Isopropylbenzene	11.10	105	918362	43.17	PPB	99
82)	cis-1,4-Dichloro-2-butene	11.27	89	99451	164.26	PPB	98
85)	1,1,2,2-Tetrachloroethane	11.52	83	154461	40.64	PPB	98
86)	trans-1,4-Dichloro-2-buten	11.59	53	35274	39.98	PPB	81
87)	Bromobenzene	11.46	156	249354	40.52	PPB	97
88)	n-Propylbenzene	11.55	91	1004007	43.57	PPB	99
89)	1,2,3-Trichloropropane	11.57	110	55038	40.51	PPB	94
90)	2-Chlorotoluene	11.67	91	563827	41.76	PPB	99
91)	1,3,5-Trimethylbenzene	11.76	105	716284	42.68	PPB	98
92)	4-Chlorotoluene	11.80	91	585117	41.53	PPB	99
93)	tert-Butylbenzene	12.10	119	651686	43.14	PPB	99
94)	1,2,4-Trimethylbenzene	12.17	105	703945	41.69	PPB	98
95)	sec-Butylbenzene	12.34	105	898884	43.98	PPB	98
96)	p-Isopropyltoluene	12.50	119	778500	43.62	PPB	99
97)	1,3-Dichlorobenzene	12.50	146	439758	40.78	PPB	98
98)	1,4-Dichlorobenzene	12.61	146	439762	40.61	PPB	99
99)	n-Butylbenzene	12.95	91	614247	44.73	PPB	97
100)	1,2-Dichlorobenzene	13.02	146	397817	40.66	PPB	99
101)	1,2-Dibromo-3-chloropropan	13.91	155	31125	45.59	PPB	97
102)	1,3,5-Trichlorobenzene	14.07	180	294717	43.29	PPB	99
103)	1,2,4-Trichlorobenzene	14.78	180	278893	43.14	PPB	98
104)	Hexachlorobutadiene	14.91	225	129579	46.02	PPB	97
105)	Naphthalene	15.06	128	517100	44.04	PPB	98
106)	1,2,3-Trichlorobenzene	15.33	180	233685	43.45	PPB	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F014.D Vial: 11
Acq On : 19 Nov 2018 07:46 pm Operator: LM
Sample : ICAL 40 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:08 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F015.D Vial: 12
Acq On : 19 Nov 2018 08:12 pm Operator: LM
Sample : ICAL 60 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:14 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.53	96	162348	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	61042	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	65537	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	59520	15.47	PPB	0.00
Spiked Amount 10.000			Recovery =	154.70%		
46) 1,2-Dichloroethane-d4	6.19	65	50882	15.83	PPB	0.00
Spiked Amount 10.000			Recovery =	158.30%		
61) Toluene-d8	8.37	98	197286	13.31	PPB	0.00
Spiked Amount 10.000			Recovery =	133.10%		
83) 4-Bromofluorobenzene	11.32	95	81258	14.83	PPB	0.00
Spiked Amount 10.000			Recovery =	148.30%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.10	85	210297	69.20	PPB	96
3) Chloromethane	1.28	50	179566	66.72	PPB	100
4) Vinyl Chloride	1.35	62	228986	68.02	PPB	98
5) Bromomethane	1.64	96	202270	63.00	PPB	98
6) Chloroethane	1.74	64	138599	62.60	PPB	98
7) Dichlorofluoromethane	1.95	67	347506	64.36	PPB	98
8) Trichlorofluoromethane	1.94	101	344204	68.65	PPB	100
9) Ethyl Ether	2.26	59	124375	61.38	PPB	98
10) Acrolein	2.47	56	396802	1101.65	PPB	99
11) Trichlorotrifluoroethane	2.46	151	242164	71.24	PPB	95
12) 1,1-Dichloroethene	2.49	96	216986	66.81	PPB	97
13) Acetone	2.64	43	613528	1539.81	PPB	99
14) Iodomethane	2.66	142	1369688	273.21	PPB	99
15) Carbon Disulfide	2.69	76	638088	67.76	PPB	99
16) 2-Propanol (Isopropyl Alco	2.83	45	175978	3175.15	PPB	97
17) 3-Chloro-1-propene	2.95	76	112486	59.69	PPB	96
18) Methyl Acetate	3.02	43	94297	64.36	PPB	95
19) Acetonitrile	3.07	40	212920	2454.31	PPB	98
20) Methylene Chloride	3.15	84	235327	60.59	PPB	97
21) tert-Butyl Alcohol	3.36	59	38882	303.88	PPB	91
22) Acrylonitrile	3.61	53	181255	236.77	PPB	98
23) Methyl tert-Butyl Ether	3.44	73	1097250	123.58	PPB	99
24) trans-1,2-Dichloroethene	3.45	96	261910	66.44	PPB	99
25) Hexane	3.76	57	301376	67.53	PPB	100
26) Diisopropyl Ether	4.22	45	547869	62.02	PPB	99
27) 1,1-Dichloroethane	4.18	63	365718	63.74	PPB	98
28) Vinyl Acetate	4.30	86	98726	120.38	PPB	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F015.D Vial: 12
Acq On : 19 Nov 2018 08:12 pm Operator: LM
Sample : ICAL 60 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:14 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroprene	4.25	53	1195622	269.57	PPB	99
30)	tert-Butyl Ethyl Ether	4.77	59	588067	61.54	PPB	98
31)	2,2-Dichloropropane	5.00	77	340905	65.54	PPB	99
32)	cis-1,2-Dichloroethene	5.07	96	290176	63.22	PPB	96
33)	2-Butanone	5.15	72	425956	1599.00	PPB	99
34)	Ethyl Acetate	5.21	61	42166	118.10	PPB	94
35)	Propionitrile	5.34	54	62742	244.85	PPB	97
36)	Methacrylonitrile	5.48	67	272180	241.40	PPB	99
37)	Bromochloromethane	5.40	128	129610	56.95	PPB	99
38)	Tetrahydrofuran	5.41	71	16751	60.50	PPB	93
39)	Chloroform	5.52	83	414789	59.39	PPB	97
40)	Cyclohexane	5.61	56	358864	69.58	PPB	96
41)	1,1,1-Trichloroethane	5.66	97	391156	66.87	PPB	98
43)	Carbon Tetrachloride	5.82	117	372447	69.03	PPB	100
44)	1,1-Dichloropropene	5.88	75	330964	67.24	PPB	96
45)	Isobutyl Alcohol	6.24	43	114281	2380.52	PPB	99
47)	Benzene	6.14	78	992149	64.34	PPB	99
48)	1,2-Dichloroethane	6.29	62	246784	59.88	PPB	99
49)	tert-Amyl Methyl Ether	6.30	55	117083	59.39	PPB	91
50)	Trichloroethene	6.96	95	279834	65.71	PPB	98
51)	Methylcyclohexane	7.08	83	451282	68.01	PPB	98
52)	1,2-Dichloropropane	7.29	63	227705	61.53	PPB	96
53)	Dibromomethane	7.43	93	143524	60.55	PPB	98
54)	Methyl methacrylate	7.45	69	124863	62.50	PPB	98
55)	1,4-Dioxane	7.46	88	36836	2688.31	PPB	87
56)	Bromodichloromethane	7.62	83	335016	62.11	PPB	99
57)	2-Nitropropane	7.99	41	148890	305.73	PPB	96
58)	2-Chloroethyl Vinyl Ether	8.02	63	122365	62.50	PPB	99
59)	cis-1,3-Dichloropropene	8.15	75	405325	59.64	PPB	99
60)	4-Methyl-2-pentanone (MIBK	8.34	58	1415345	1555.93	PPB	98
62)	Toluene	8.45	92	687614	61.08	PPB	98
64)	n-Octane	8.53	85	168974	68.80	PPB	94
65)	trans-1,3-Dichloropropene	8.81	75	348416	58.07	PPB	100
66)	Ethyl methacrylate	8.87	69	248336	60.16	PPB	99
67)	1,1,2-Trichloroethane	9.01	83	178766	58.98	PPB	96
68)	Tetrachloroethene	9.02	164	313284	65.82	PPB	98
69)	2-Hexanone	9.28	57	452664	1610.10	PPB	96
70)	1,3-Dichloropropane	9.19	76	357872	60.00	PPB	99
71)	Dibromochloromethane	9.40	129	310844	60.99	PPB	98
72)	1,2-Dibromoethane (EDB)	9.52	107	233380	60.00	PPB	95
73)	1-Chlorohexane	10.01	91	387663	66.25	PPB	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F015.D Vial: 12
Acq On : 19 Nov 2018 08:12 pm Operator: LM
Sample : ICAL 60 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:14 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

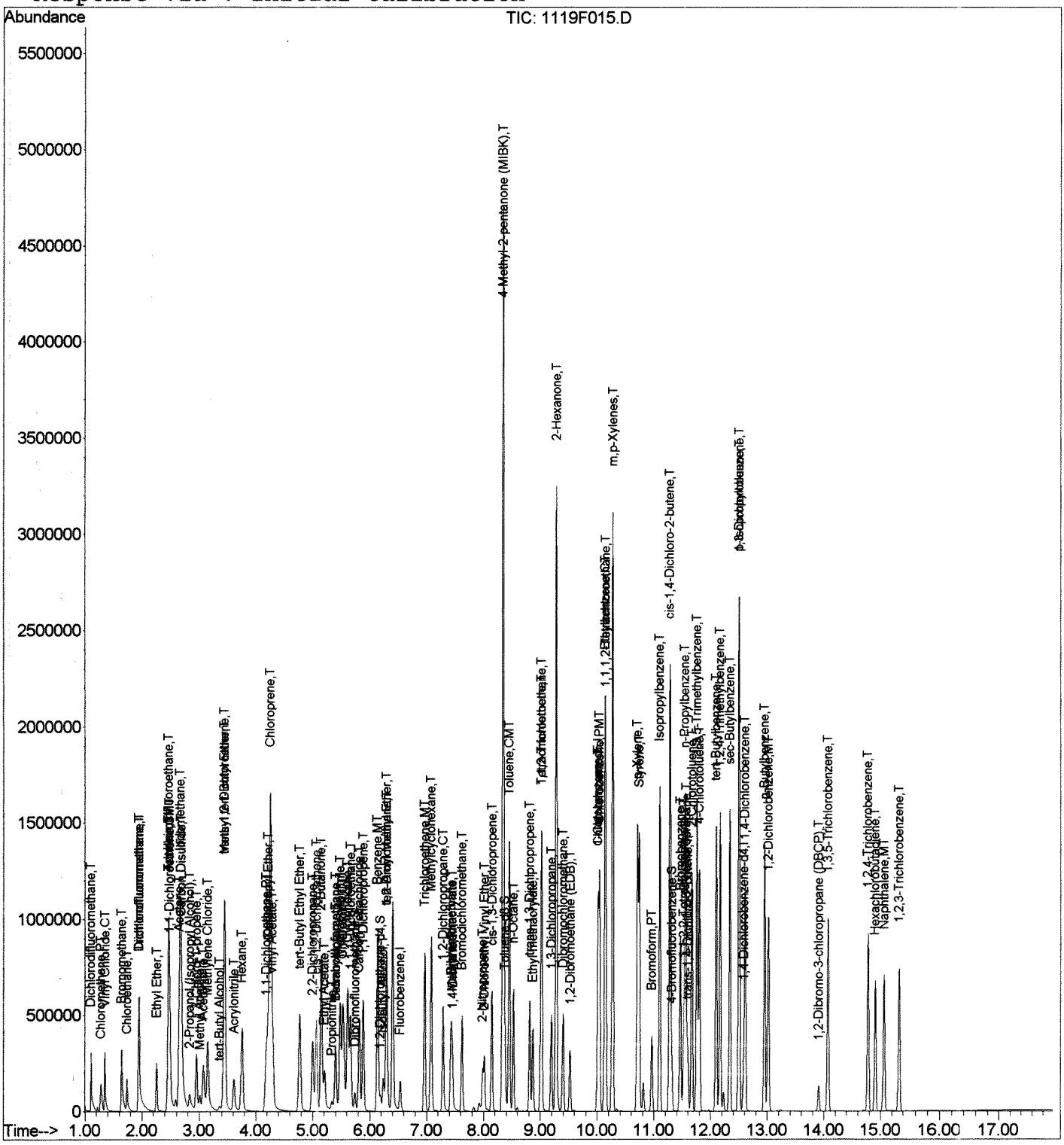
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	10.04	112	821361	61.53	PPB	98
75)	Ethylbenzene	10.13	106	444049	62.19	PPB	96
76)	1,1,1,2-Tetrachloroethane	10.15	131	308692	60.58	PPB	96
77)	m,p-Xylenes	10.27	106	1075434	125.10	PPB	99
78)	o-Xylene	10.70	106	513231	61.36	PPB	100
79)	Styrene	10.74	103	461054	61.30	PPB	96
80)	Bromoform	10.96	173	214881	61.45	PPB	96
81)	Isopropylbenzene	11.10	105	1312356	62.19	PPB	100
82)	cis-1,4-Dichloro-2-butene	11.27	89	143989	239.73	PPB	98
85)	1,1,2,2-Tetrachloroethane	11.52	83	224382	60.26	PPB	99
86)	trans-1,4-Dichloro-2-buten	11.60	53	50204	58.09	PPB	93
87)	Bromobenzene	11.46	156	367926	61.03	PPB	98
88)	n-Propylbenzene	11.55	91	1432437	63.46	PPB	99
89)	1,2,3-Trichloropropane	11.57	110	78278	58.82	PPB	87
90)	2-Chlorotoluene	11.67	91	818339	61.87	PPB	98
91)	1,3,5-Trimethylbenzene	11.76	105	1030404	62.67	PPB	99
92)	4-Chlorotoluene	11.80	91	854676	61.93	PPB	99
93)	tert-Butylbenzene	12.10	119	937227	63.33	PPB	100
94)	1,2,4-Trimethylbenzene	12.17	105	1019911	61.66	PPB	99
95)	sec-Butylbenzene	12.34	105	1296168	64.75	PPB	98
96)	p-Isopropyltoluene	12.50	119	1128290	64.54	PPB	98
97)	1,3-Dichlorobenzene	12.50	146	647731	61.32	PPB	98
98)	1,4-Dichlorobenzene	12.61	146	653429	61.59	PPB	98
99)	n-Butylbenzene	12.95	91	900222	66.92	PPB	98
100)	1,2-Dichlorobenzene	13.02	146	596073	62.19	PPB	99
101)	1,2-Dibromo-3-chloropropan	13.91	155	45880	68.60	PPB	94
102)	1,3,5-Trichlorobenzene	14.07	180	448056	67.19	PPB	99
103)	1,2,4-Trichlorobenzene	14.78	180	423762	66.92	PPB	97
104)	Hexachlorobutadiene	14.91	225	199068	72.17	PPB	98
105)	Naphthalene	15.06	128	771198	67.05	PPB	98
106)	1,2,3-Trichlorobenzene	15.33	180	352519	66.91	PPB	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F015.D Vial: 12
Acq On : 19 Nov 2018 08:12 pm Operator: LM
Sample : ICAL 60 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:08 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F016.D Vial: 13
Acq On : 19 Nov 2018 08:38 pm Operator: LM
Sample : ICAL 80 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:15 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.54	96	169905	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	61420	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	66408	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	74106	18.41	PPB	0.00
Spiked Amount 10.000			Recovery =	184.10%		
46) 1,2-Dichloroethane-d4	6.19	65	64697	19.23	PPB	0.00
Spiked Amount 10.000			Recovery =	192.30%		
61) Toluene-d8	8.37	98	256325	16.52	PPB	0.00
Spiked Amount 10.000			Recovery =	165.20%		
83) 4-Bromofluorobenzene	11.32	95	99880	18.12	PPB	0.00
Spiked Amount 10.000			Recovery =	181.20%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.10	85	278834	87.67	PPB	96
3) Chloromethane	1.28	50	239388	84.99	PPB	99
4) Vinyl Chloride	1.35	62	305211	86.63	PPB	97
5) Bromomethane	1.64	96	279455	83.17	PPB	98
6) Chloroethane	1.74	64	184623	79.68	PPB	97
7) Dichlorofluoromethane	1.95	67	466802	82.61	PPB	98
8) Trichlorofluoromethane	1.94	101	464260	88.47	PPB	99
9) Ethyl Ether	2.26	59	161785	76.28	PPB	97
10) Acrolein	2.47	56	509847	1352.54	PPB	99
11) Trichlorotrifluoroethane	2.46	151	321285	90.32	PPB	96
12) 1,1-Dichloroethene	2.49	96	283802	83.50	PPB	97
13) Acetone	2.64	43	772003	1851.37	PPB	99
14) Iodomethane	2.66	142	1779894	339.25	PPB	99
15) Carbon Disulfide	2.69	76	840614	85.30	PPB	99
16) 2-Propanol (Isopropyl Alco	2.84	45	234104	4036.04	PPB	99
17) 3-Chloro-1-propene	2.95	76	146208	74.13	PPB	92
18) Methyl Acetate	3.02	43	117790	76.82	PPB	96
19) Acetonitrile	3.07	40	290537	3200.04	PPB	97
20) Methylene Chloride	3.15	84	308027	75.78	PPB	98
21) tert-Butyl Alcohol	3.37	59	52803	394.32	PPB	91
22) Acrylonitrile	3.61	53	238620	297.83	PPB	98
23) Methyl tert-Butyl Ether	3.44	73	1431162	154.02	PPB	99
24) trans-1,2-Dichloroethene	3.45	96	347870	84.32	PPB	100
25) Hexane	3.76	57	399472	85.53	PPB	98
26) Diisopropyl Ether	4.22	45	714407	77.28	PPB	99
27) 1,1-Dichloroethane	4.18	63	459577	76.53	PPB	99
28) Vinyl Acetate	4.30	86	135450	157.81	PPB	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F016.D Vial: 13
Acq On : 19 Nov 2018 08:38 pm Operator: LM
Sample : ICAL 80 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:15 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroprene	4.25	53	1584596	341.38	PPB	99
30)	tert-Butyl Ethyl Ether	4.77	59	779299	77.92	PPB	98
31)	2,2-Dichloropropane	5.00	77	447480	82.20	PPB	98
32)	cis-1,2-Dichloroethene	5.07	96	380451	79.20	PPB	94
33)	2-Butanone	5.15	72	531906	1907.91	PPB	98
34)	Ethyl Acetate	5.21	61	55178	147.67	PPB	98
35)	Propionitrile	5.34	54	83000	309.50	PPB	99
36)	Methacrylonitrile	5.48	67	357071	302.61	PPB	98
37)	Bromochloromethane	5.40	128	166308	69.83	PPB	99
38)	Tetrahydrofuran	5.41	71	22157	76.47	PPB	99
39)	Chloroform	5.52	83	550825	75.36	PPB	97
40)	Cyclohexane	5.61	56	478397	88.63	PPB	95
41)	1,1,1-Trichloroethane	5.66	97	521409	85.17	PPB	98
43)	Carbon Tetrachloride	5.82	117	496154	87.87	PPB	99
44)	1,1-Dichloropropene	5.88	75	442058	85.82	PPB	97
45)	Isobutyl Alcohol	6.24	43	153047	3046.24	PPB	99
47)	Benzene	6.14	78	1335896	82.78	PPB	99
48)	1,2-Dichloroethane	6.29	62	327959	76.04	PPB	97
49)	tert-Amyl Methyl Ether	6.30	55	156472	75.84	PPB	96
50)	Trichloroethene	6.96	95	382486	85.82	PPB	99
51)	Methylcyclohexane	7.08	83	611350	88.03	PPB	98
52)	1,2-Dichloropropane	7.29	63	304289	78.56	PPB	96
53)	Dibromomethane	7.43	93	192491	77.60	PPB	99
54)	Methyl methacrylate	7.45	69	166845	79.80	PPB	97
55)	1,4-Dioxane	7.46	88	54929	3830.45	PPB	86
56)	Bromodichloromethane	7.62	83	453333	80.30	PPB	99
57)	2-Nitropropane	7.99	41	193444	379.55	PPB	96
58)	2-Chloroethyl Vinyl Ether	8.02	63	162584	79.35	PPB	99
59)	cis-1,3-Dichloropropene	8.15	75	542865	76.33	PPB	98
60)	4-Methyl-2-pentanone (MIBK	8.34	58	1784067	1874.04	PPB	96
62)	Toluene	8.45	92	929830	78.92	PPB	99
64)	n-Octane	8.53	85	227745	92.16	PPB	93
65)	trans-1,3-Dichloropropene	8.81	75	467937	77.51	PPB	98
66)	Ethyl methacrylate	8.87	69	329422	79.31	PPB	98
67)	1,1,2-Trichloroethane	9.00	83	232238	76.16	PPB	98
68)	Tetrachloroethene	9.02	164	413154	86.27	PPB	98
69)	2-Hexanone	9.28	57	552687	1953.78	PPB	97
70)	1,3-Dichloropropane	9.19	76	462370	77.04	PPB	98
71)	Dibromochloromethane	9.40	129	399495	77.90	PPB	98
72)	1,2-Dibromoethane (EDB)	9.52	107	300414	76.76	PPB	97
73)	1-Chlorohexane	10.01	91	509054	86.47	PPB	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F016.D Vial: 13
Acq On : 19 Nov 2018 08:38 pm Operator: LM
Sample : ICAL 80 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:15 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

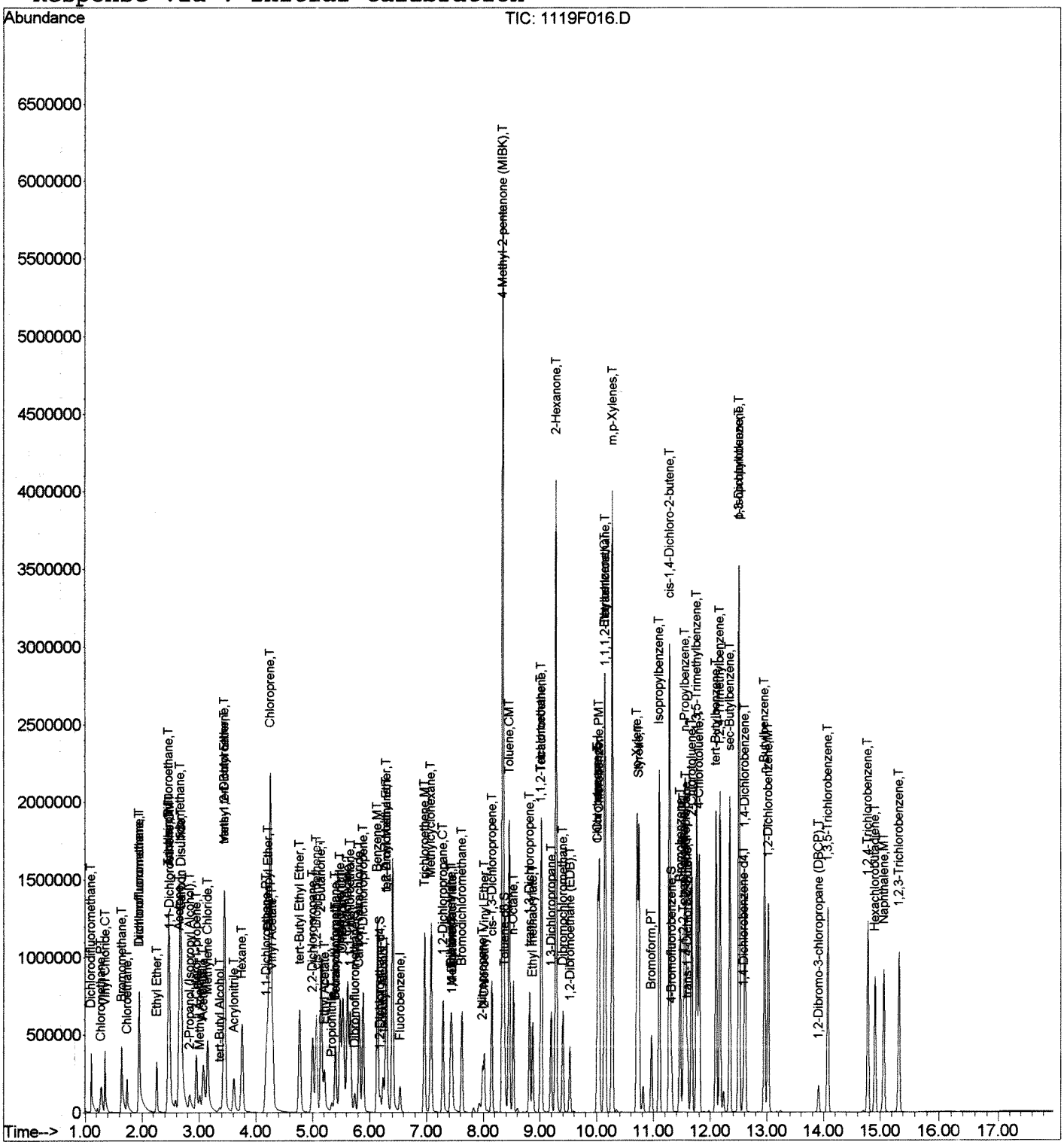
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	10.04	112	1064098	79.22	PPB	98
75)	Ethylbenzene	10.13	106	577973	80.45	PPB	98
76)	1,1,1,2-Tetrachloroethane	10.15	131	403373	78.67	PPB	96
77)	m,p-Xylenes	10.27	106	1391326	160.85	PPB	99
78)	o-Xylene	10.70	106	665071	79.02	PPB	100
79)	Styrene	10.74	103	599012	79.15	PPB	99
80)	Bromoform	10.96	173	277755	78.94	PPB	97
81)	Isopropylbenzene	11.10	105	1705787	80.33	PPB	100
82)	cis-1,4-Dichloro-2-butene	11.27	89	184336	305.02	PPB	98
85)	1,1,2,2-Tetrachloroethane	11.52	83	289733	76.79	PPB	99
86)	trans-1,4-Dichloro-2-buten	11.60	53	65593	74.90	PPB	94
87)	Bromobenzene	11.46	156	475140	77.78	PPB	98
88)	n-Propylbenzene	11.55	91	1862834	81.44	PPB	99
89)	1,2,3-Trichloropropane	11.57	110	100301	74.38	PPB	92
90)	2-Chlorotoluene	11.67	91	1068444	79.72	PPB	98
91)	1,3,5-Trimethylbenzene	11.76	105	1348591	80.95	PPB	98
92)	4-Chlorotoluene	11.80	91	1111746	79.50	PPB	100
93)	tert-Butylbenzene	12.10	119	1226414	81.78	PPB	100
94)	1,2,4-Trimethylbenzene	12.17	105	1334661	79.64	PPB	99
95)	sec-Butylbenzene	12.34	105	1689802	83.30	PPB	99
96)	p-Isopropyltoluene	12.50	119	1481618	83.64	PPB	99
97)	1,3-Dichlorobenzene	12.50	146	851758	79.58	PPB	98
98)	1,4-Dichlorobenzene	12.61	146	851600	79.22	PPB	99
99)	n-Butylbenzene	12.95	91	1184928	86.93	PPB	98
100)	1,2-Dichlorobenzene	13.02	146	781147	80.43	PPB	99
101)	1,2-Dibromo-3-chloropropan	13.91	155	59982	88.51	PPB	92
102)	1,3,5-Trichlorobenzene	14.07	180	592135	87.63	PPB	99
103)	1,2,4-Trichlorobenzene	14.78	180	556998	86.80	PPB	98
104)	Hexachlorobutadiene	14.90	225	262124	93.79	PPB	98
105)	Naphthalene	15.06	128	1015790	87.16	PPB	98
106)	1,2,3-Trichlorobenzene	15.33	180	486339	91.10	PPB	97

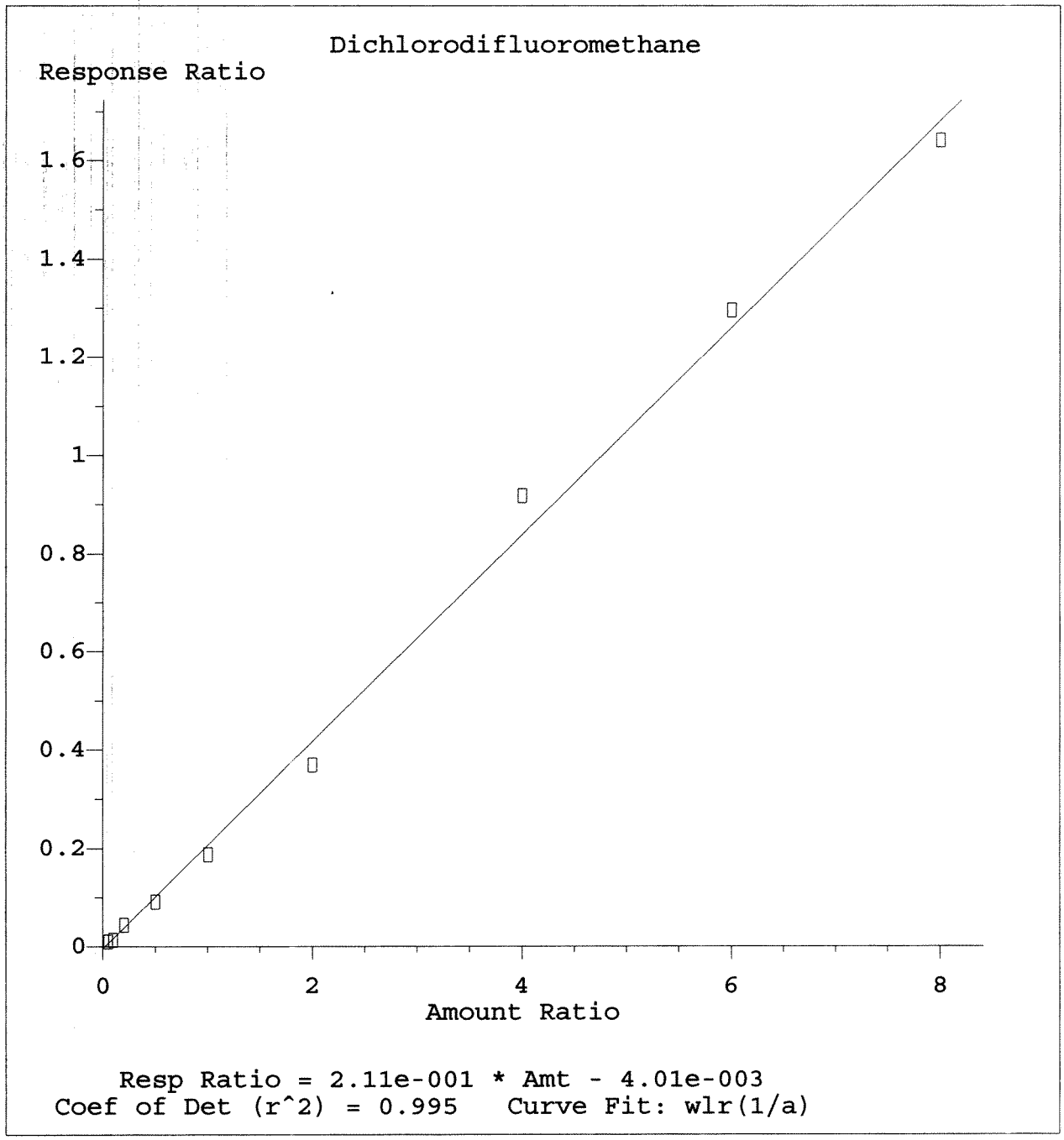
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F016.D Vial: 13
Acq On : 19 Nov 2018 08:38 pm Operator: LM
Sample : ICAL 80 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:08 2018 Quant Results File: 111918MS46_8

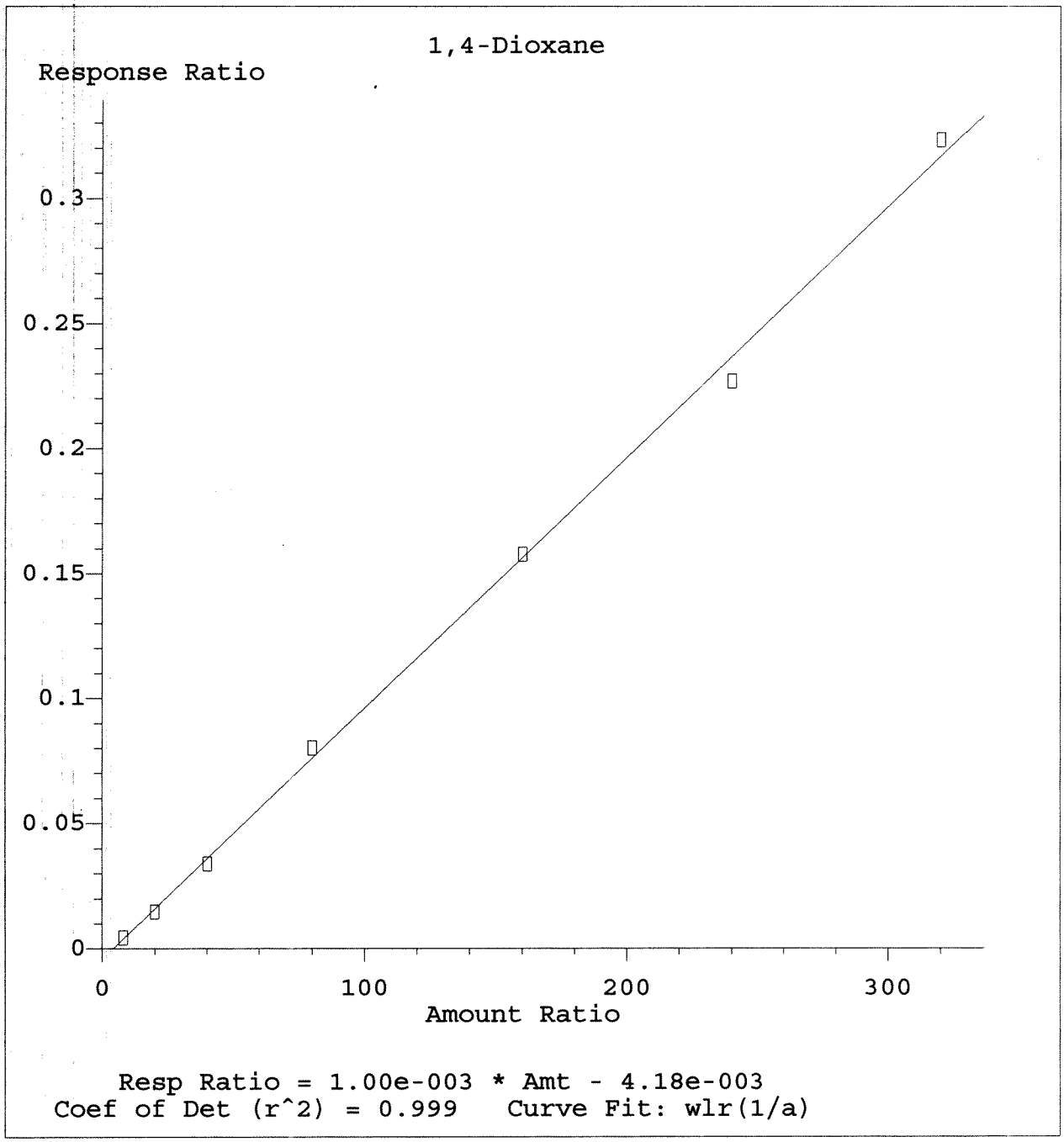
Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration





Method Name: J:\MS46\METHODS\111918MS46_8260.M
Calibration Table Last Updated: Tue Dec 04 11:26:45 2018

CM 12-04-19



Method Name: J:\MS46\METHODS\111918MS46_8260.M
Calibration Table Last Updated: Tue Dec 04 11:26:45 2018

LM 12-04-18

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F020.D Vial: 17
Acq On : 19 Nov 2018 10:23 pm Operator: LM
Sample : 8260 ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 04 11:40:35 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Dec 04 11:26:45 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.54	96	171483	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	63322	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	68785	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	38762	10.04	PPB	0.00
Spiked Amount 10.000			Recovery = 100.40%			
46) 1,2-Dichloroethane-d4	6.19	65	32204	9.68	PPB	0.00
Spiked Amount 10.000			Recovery = 96.80%			
61) Toluene-d8	8.37	98	145435	10.65	PPB	0.00
Spiked Amount 10.000			Recovery = 106.50%			
83) 4-Bromofluorobenzene	11.32	95	54955	10.24	PPB	0.00
Spiked Amount 10.000			Recovery = 102.40%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.10	85	29067	8.24	PPB	98
3) Chloromethane	1.28	50	26616	8.77	PPB	96
4) Vinyl Chloride	1.35	62	29811	8.14	PPB	98
5) Bromomethane	1.64	96	26145	7.00	PPB	98
6) Chloroethane	1.73	64	19754	8.58	PPB	98
7) Dichlorofluoromethane	1.95	67	48147	8.21	PPB	99
8) Trichlorofluoromethane	1.94	101	40002	7.12	PPB	95
9) Ethyl Ether	2.26	59	23912	11.89	PPB	93
10) Acrolein	2.47	56	45324	120.79	PPB	98
11) Trichlorotrifluoroethane	2.46	151	30401	7.95	PPB	96
12) 1,1-Dichloroethene	2.49	96	31462	8.90	PPB	94
13) Acetone	2.65	43	20467	46.49	PPB	92
14) Iodomethane	2.66	142	144607	28.22	PPB	100
15) Carbon Disulfide	2.69	76	142506	13.04	PPB	99
16) 2-Propanol (Isopropyl Alco	2.84	45	36215	568.68	PPB	97
17) 3-Chloro-1-propene	2.95	76	52171	26.35	PPB	97
19) Acetonitrile	3.08	40	29365	307.33	PPB	93
20) Methylene Chloride	3.15	84	38654	9.47	PPB	96
21) tert-Butyl Alcohol	3.37	59	16141	113.74	PPB	99
22) Acrylonitrile	3.61	53	32103	41.57	PPB	98
23) Methyl tert-Butyl Ether	3.45	73	96624	10.40	PPB	99
24) trans-1,2-Dichloroethene	3.45	96	37587	8.68	PPB	98
25) Hexane	3.76	57	107915	21.80	PPB	99
26) Diisopropyl Ether	4.22	45	184899	20.65	PPB	98
27) 1,1-Dichloroethane	4.17	63	55969	9.29	PPB	99
28) Vinyl Acetate	4.30	86	39706	46.98	PPB	95
29) Chloroprene	4.25	53	106317	21.71	PPB	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F020.D Vial: 17
Acq On : 19 Nov 2018 10:23 pm Operator: LM
Sample : 8260 ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 04 11:40:35 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Dec 04 11:26:45 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
30)	tert-Butyl Ethyl Ether	4.77	59	197691	20.14	PPB	98
31)	2,2-Dichloropropane	5.00	77	48013	8.30	PPB	99
32)	cis-1,2-Dichloroethene	5.07	96	42742	8.69	PPB	96
33)	2-Butanone	5.16	72	13605	49.30	PPB	92
34)	Ethyl Acetate	5.21	61	10729	31.02	PPB	98
35)	Propionitrile	5.34	54	8368	30.80	PPB	83
36)	Methacrylonitrile	5.48	67	35181	30.42	PPB	95
37)	Bromochloromethane	5.40	128	22217	9.84	PPB	91
38)	Tetrahydrofuran	5.41	71	6130	18.64	PPB	79
39)	Chloroform	5.52	83	65172	9.00	PPB	97
41)	1,1,1-Trichloroethane	5.66	97	52984	7.97	PPB	96
43)	Carbon Tetrachloride	5.82	117	49368	8.22	PPB	99
44)	1,1-Dichloropropene	5.88	75	44838	8.32	PPB	98
45)	Isobutyl Alcohol	6.24	43	17425	316.49	PPB	95
47)	Benzene	6.14	78	148956	8.84	PPB	99
48)	1,2-Dichloroethane	6.28	62	40228	9.58	PPB	98
49)	tert-Amyl Methyl Ether	6.29	55	40001	20.04	PPB	96
50)	Trichloroethene	6.96	95	41405	8.74	PPB	91
52)	1,2-Dichloropropane	7.28	63	36291	9.55	PPB	98
53)	Dibromomethane	7.43	93	24161	9.66	PPB	98
54)	Methyl methacrylate	7.45	69	65121	31.40	PPB	97
55)	1,4-Dioxane	7.46	88	5676	371.97	PPB	82
56)	Bromodichloromethane	7.62	83	53944	9.37	PPB	95
57)	2-Nitropropane	7.99	41	15686	29.96	PPB	95
58)	2-Chloroethyl Vinyl Ether	8.01	63	21678	10.64	PPB	93
59)	cis-1,3-Dichloropropene	8.14	75	67520	9.71	PPB	99
60)	4-Methyl-2-pentanone (MIBK	8.34	58	46076	49.18	PPB	96
62)	Toluene	8.45	92	104985	8.59	PPB	97
64)	n-Octane	8.53	85	42336	15.91	PPB	98
65)	trans-1,3-Dichloropropene	8.81	75	58163	9.28	PPB	98
66)	Ethyl methacrylate	8.87	69	127976	31.29	PPB	98
67)	1,1,2-Trichloroethane	9.00	83	29652	9.90	PPB	96
68)	Tetrachloroethene	9.02	164	43617	8.67	PPB	96
69)	2-Hexanone	9.28	57	14282	49.31	PPB	93
70)	1,3-Dichloropropane	9.19	76	59416	9.70	PPB	99
71)	Dibromochloromethane	9.39	129	48759	9.34	PPB	98
72)	1,2-Dibromoethane (EDB)	9.52	107	37736	9.57	PPB	97
73)	1-Chlorohexane	10.01	91	53120	8.20	PPB	99
74)	Chlorobenzene	10.04	112	129521	9.22	PPB	97
75)	Ethylbenzene	10.13	106	66193	8.90	PPB	99
76)	1,1,1,2-Tetrachloroethane	10.15	131	49166	9.43	PPB	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F020.D Vial: 17
Acq On : 19 Nov 2018 10:23 pm Operator: LM
Sample : 8260 ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 04 11:40:35 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Dec 04 11:26:45 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

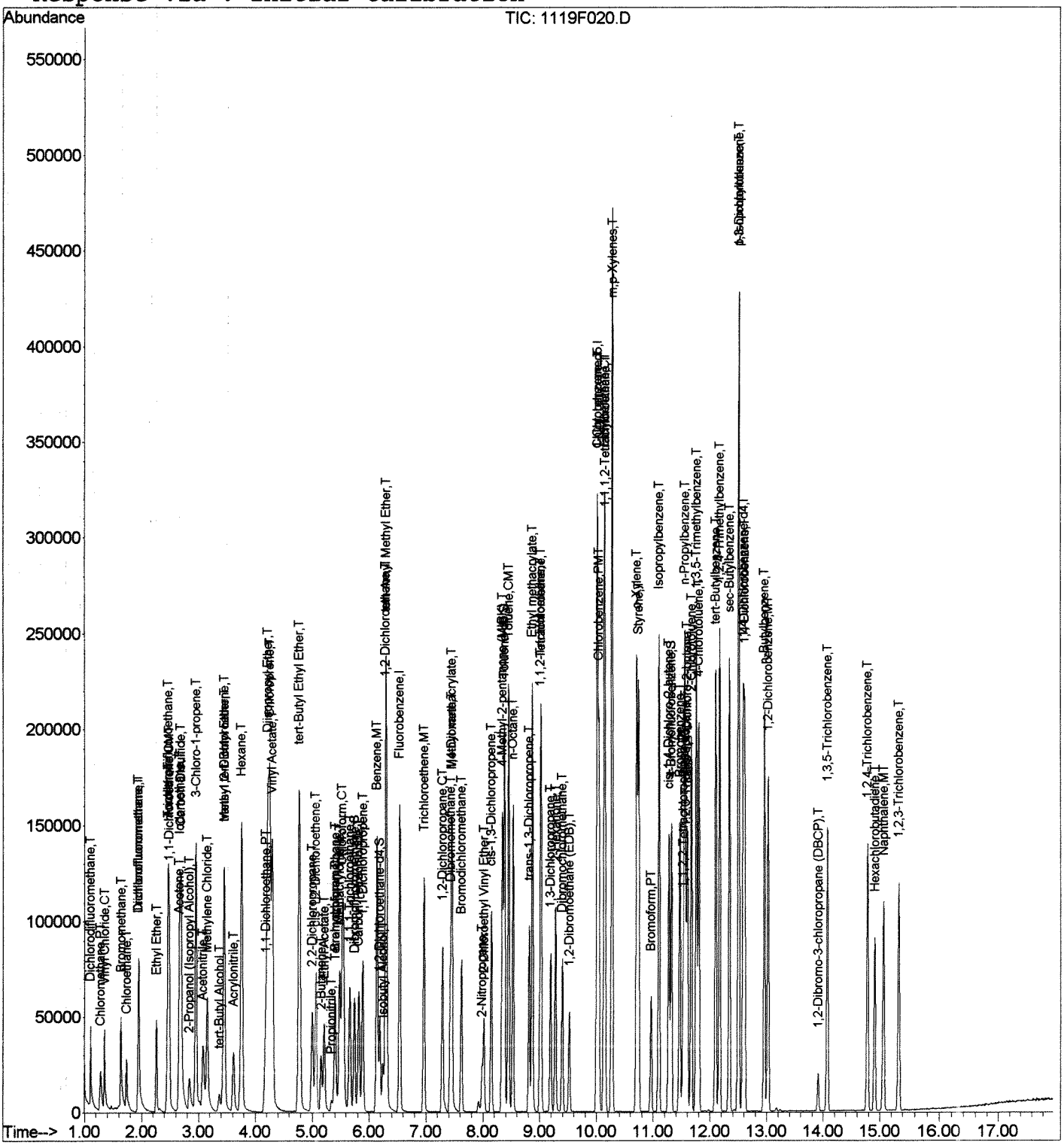
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
77)	m,p-Xylenes	10.27	106	161576	17.90	PPB		96
78)	o-Xylene	10.70	106	79572	9.12	PPB		96
79)	Styrene	10.74	103	72801	9.74	PPB		98
80)	Bromoform	10.96	173	32483	9.27	PPB		97
81)	Isopropylbenzene	11.10	105	195415	8.83	PPB		100
82)	cis-1,4-Dichloro-2-butene	11.27	89	19847	32.70	PPB		96
85)	1,1,2,2-Tetrachloroethane	11.52	83	37652	9.71	PPB		98
86)	trans-1,4-Dichloro-2-buten	11.59	53	25940	29.45	PPB		84
87)	Bromobenzene	11.46	156	61014	9.56	PPB		95
88)	n-Propylbenzene	11.55	91	215841	9.01	PPB		99
89)	1,2,3-Trichloropropane	11.57	110	13115	10.11	PPB	#	76
90)	2-Chlorotoluene	11.67	91	130365	9.25	PPB		99
91)	1,3,5-Trimethylbenzene	11.76	105	158821	9.14	PPB		97
92)	4-Chlorotoluene	11.80	91	140395	9.40	PPB		99
93)	tert-Butylbenzene	12.10	119	142138	9.03	PPB		98
94)	1,2,4-Trimethylbenzene	12.17	105	164188	9.51	PPB		99
95)	sec-Butylbenzene	12.34	105	193956	8.98	PPB		98
96)	p-Isopropyltoluene	12.50	119	173666	9.30	PPB		98
97)	1,3-Dichlorobenzene	12.50	146	105844	9.41	PPB		97
98)	1,4-Dichlorobenzene	12.61	146	107550	9.34	PPB		96
99)	n-Butylbenzene	12.95	91	130097	9.12	PPB		99
100)	1,2-Dichlorobenzene	13.02	146	97396	9.55	PPB		97
101)	1,2-Dibromo-3-chloropropan	13.91	155	6923	9.56	PPB		96
102)	1,3,5-Trichlorobenzene	14.07	180	64827	8.97	PPB		98
103)	1,2,4-Trichlorobenzene	14.78	180	64215	9.50	PPB		97
104)	Hexachlorobutadiene	14.91	225	26928	8.71	PPB		96
105)	Naphthalene	15.06	128	118812	9.70	PPB		99
106)	1,2,3-Trichlorobenzene	15.33	180	54382	9.66	PPB		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F020.D Vial: 17
Acq On : 19 Nov 2018 10:23 pm Operator: LM
Sample : 8260 ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 4 11:41 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Dec 04 11:26:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F022.D Vial: 19
Acq On : 19 Nov 2018 11:15 pm Operator: LM
Sample : CLP ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 04 11:40:36 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Dec 04 11:26:45 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

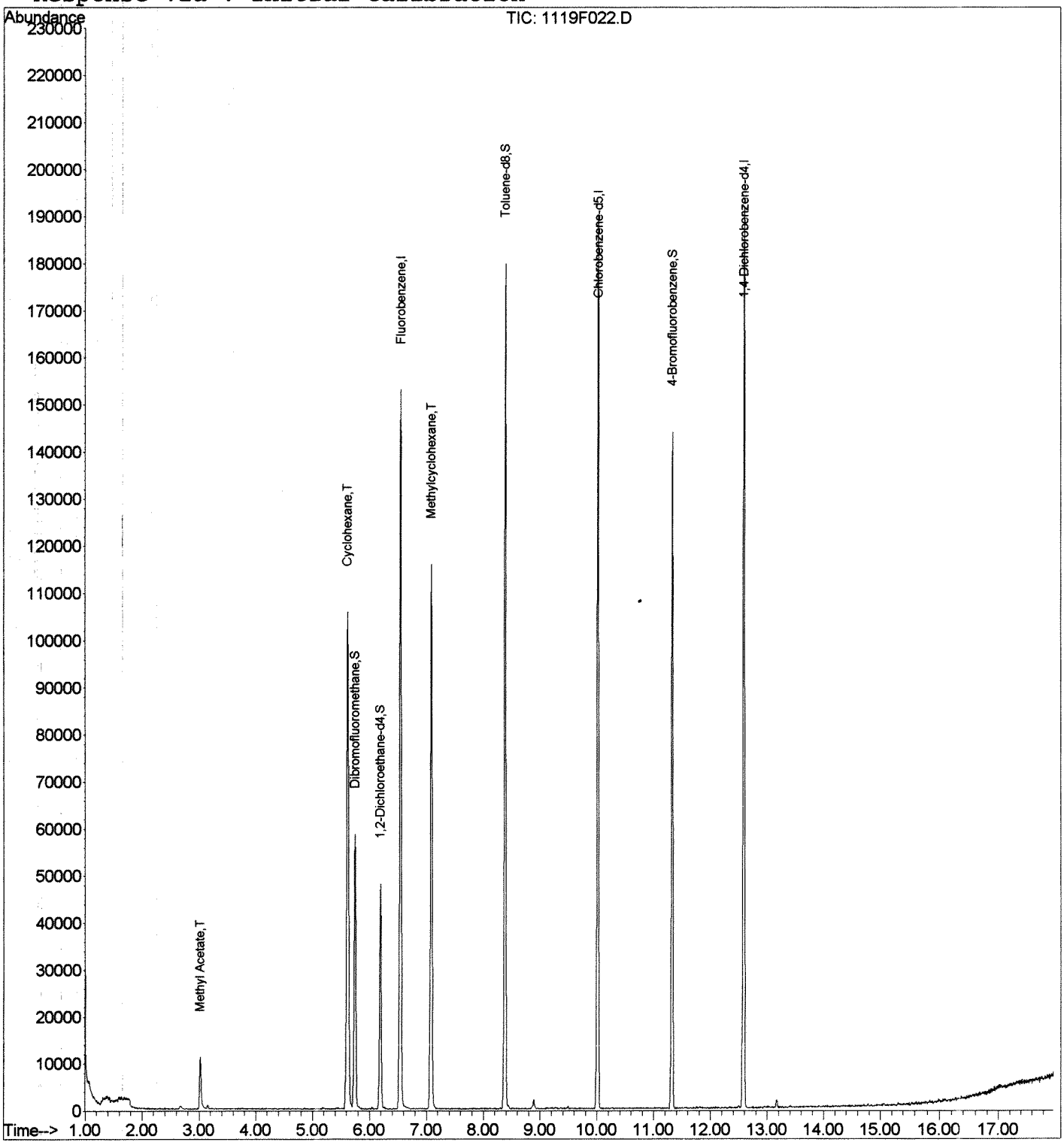
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.53	96	164376	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	61622	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	66981	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	37305	10.08	PPB	0.00
Spiked Amount 10.000			Recovery = 100.80%			
46) 1,2-Dichloroethane-d4	6.19	65	33321	10.44	PPB	0.00
Spiked Amount 10.000			Recovery = 104.40%			
61) Toluene-d8	8.37	98	132175	10.10	PPB	0.00
Spiked Amount 10.000			Recovery = 101.00%			
83) 4-Bromofluorobenzene	11.32	95	52841	10.11	PPB	0.00
Spiked Amount 10.000			Recovery = 101.10%			
Target Compounds						Qvalue
18) Methyl Acetate	3.02	43	15095	9.82	PPB	94
40) Cyclohexane	5.61	56	59799	10.29	PPB	97
51) Methylcyclohexane	7.08	83	57955	8.33	PPB	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F022.D Vial: 19
Acq On : 19 Nov 2018 11:15 pm Operator: LM
Sample : CLP ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 4 11:43 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Dec 04 11:26:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F020.D Vial: 17
Acq On : 19 Nov 2018 10:23 pm Operator: LM
Sample : 8260 ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 05 10:36:34 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-05-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.54	96	171483	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	63322	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	68785	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	38762	10.04	PPB	0.00
Spiked Amount 10.000			Recovery =	100.40%		
46) 1,2-Dichloroethane-d4	6.19	65	32204	9.68	PPB	0.00
Spiked Amount 10.000			Recovery =	96.80%		
61) Toluene-d8	8.37	98	145435	10.65	PPB	0.00
Spiked Amount 10.000			Recovery =	106.50%		
83) 4-Bromofluorobenzene	11.32	95	54955	10.24	PPB	0.00
Spiked Amount 10.000			Recovery =	102.40%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.10	85	29067	8.24	PPB	98
3) Chloromethane	1.28	50	26616	8.77	PPB	96
4) Vinyl Chloride	1.35	62	29811	8.14	PPB	98
5) Bromomethane	1.64	96	26145	7.62	PPB	98
6) Chloroethane	1.73	64	19754	8.58	PPB	98
7) Dichlorofluoromethane	1.95	67	48147	8.21	PPB	99
8) Trichlorofluoromethane	1.94	101	40002	7.12	PPB	95
9) Ethyl Ether	2.26	59	23912	11.89	PPB	93
10) Acrolein	2.47	56	45324	129.69	PPB	98
11) Trichlorotrifluoroethane	2.46	151	30401	7.88	PPB	96
12) 1,1-Dichloroethene	2.49	96	31462	8.90	PPB	94
13) Acetone	2.65	43	20467	46.49	PPB	92
14) Iodomethane	2.66	142	144607	28.22	PPB	100
15) Carbon Disulfide	2.69	76	142506	13.04	PPB	99
16) 2-Propanol (Isopropyl Alco	2.84	45	36215	568.68	PPB	97
17) 3-Chloro-1-propene	2.95	76	52171	26.35	PPB	97
19) Acetonitrile	3.08	40	29365	307.33	PPB	93
20) Methylene Chloride	3.15	84	38654	9.47	PPB	96
21) tert-Butyl Alcohol	3.37	59	16141	113.74	PPB	99
22) Acrylonitrile	3.61	53	32103	41.57	PPB	98
23) Methyl tert-Butyl Ether	3.45	73	96624	10.40	PPB	99
24) trans-1,2-Dichloroethene	3.45	96	37587	8.68	PPB	98
25) Hexane	3.76	57	107915	21.80	PPB	99
26) Diisopropyl Ether	4.22	45	184899	20.65	PPB	98
27) 1,1-Dichloroethane	4.17	63	55969	9.29	PPB	99
28) Vinyl Acetate	4.30	86	39706	46.98	PPB	95
29) Chloroprene	4.25	53	106317	21.71	PPB	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F020.D Vial: 17
Acq On : 19 Nov 2018 10:23 pm Operator: LM
Sample : 8260 ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 05 10:36:34 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
30)	tert-Butyl Ethyl Ether	4.77	59	197691	20.14	PPB	98
31)	2,2-Dichloropropane	5.00	77	48013	8.30	PPB	99
32)	cis-1,2-Dichloroethene	5.07	96	42742	8.69	PPB	96
33)	2-Butanone	5.16	72	13605	49.30	PPB	92
34)	Ethyl Acetate	5.21	61	10729	31.02	PPB	98
35)	Propionitrile	5.34	54	8368	30.80	PPB	83
36)	Methacrylonitrile	5.48	67	35181	30.42	PPB	95
37)	Bromochloromethane	5.40	128	22217	9.84	PPB	91
38)	Tetrahydrofuran	5.41	71	6130	18.64	PPB	79
39)	Chloroform	5.52	83	65172	9.00	PPB	97
41)	1,1,1-Trichloroethane	5.66	97	52984	8.16	PPB	96
43)	Carbon Tetrachloride	5.82	117	49368	8.22	PPB	99
44)	1,1-Dichloropropene	5.88	75	44838	8.32	PPB	98
45)	Isobutyl Alcohol	6.24	43	17425	316.49	PPB	95
47)	Benzene	6.14	78	148956	8.84	PPB	99
48)	1,2-Dichloroethane	6.28	62	40228	9.58	PPB	98
49)	tert-Amyl Methyl Ether	6.29	55	40001	19.64	PPB	96
50)	Trichloroethene	6.96	95	41405	8.74	PPB	91
52)	1,2-Dichloropropane	7.28	63	36291	9.55	PPB	98
53)	Dibromomethane	7.43	93	24161	9.66	PPB	98
54)	Methyl methacrylate	7.45	69	65121	31.18	PPB	97
55)	1,4-Dioxane	7.46	88	5676	371.97	PPB	82
56)	Bromodichloromethane	7.62	83	53944	9.37	PPB	95
57)	2-Nitropropane	7.99	41	15686	29.96	PPB	95
58)	2-Chloroethyl Vinyl Ether	8.01	63	21678	10.64	PPB	93
59)	cis-1,3-Dichloropropene	8.14	75	67520	9.71	PPB	99
60)	4-Methyl-2-pentanone (MIBK	8.34	58	46076	49.18	PPB	96
62)	Toluene	8.45	92	104985	8.59	PPB	97
64)	n-Octane	8.53	85	42336	15.91	PPB	98
65)	trans-1,3-Dichloropropene	8.81	75	58163	9.28	PPB	98
66)	Ethyl methacrylate	8.87	69	127976	31.29	PPB	98
67)	1,1,2-Trichloroethane	9.00	83	29652	9.66	PPB	96
68)	Tetrachloroethene	9.02	164	43617	8.67	PPB	96
69)	2-Hexanone	9.28	57	14282	49.31	PPB	93
70)	1,3-Dichloropropane	9.19	76	59416	9.70	PPB	99
71)	Dibromochloromethane	9.39	129	48759	9.34	PPB	98
72)	1,2-Dibromoethane (EDB)	9.52	107	37736	9.57	PPB	97
73)	1-Chlorohexane	10.01	91	53120	8.20	PPB	99
74)	Chlorobenzene	10.04	112	129521	9.22	PPB	97
75)	Ethylbenzene	10.13	106	66193	8.90	PPB	99
76)	1,1,1,2-Tetrachloroethane	10.15	131	49166	9.43	PPB	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F020.D Vial: 17
Acq On : 19 Nov 2018 10:23 pm Operator: LM
Sample : 8260 ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 05 10:36:34 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

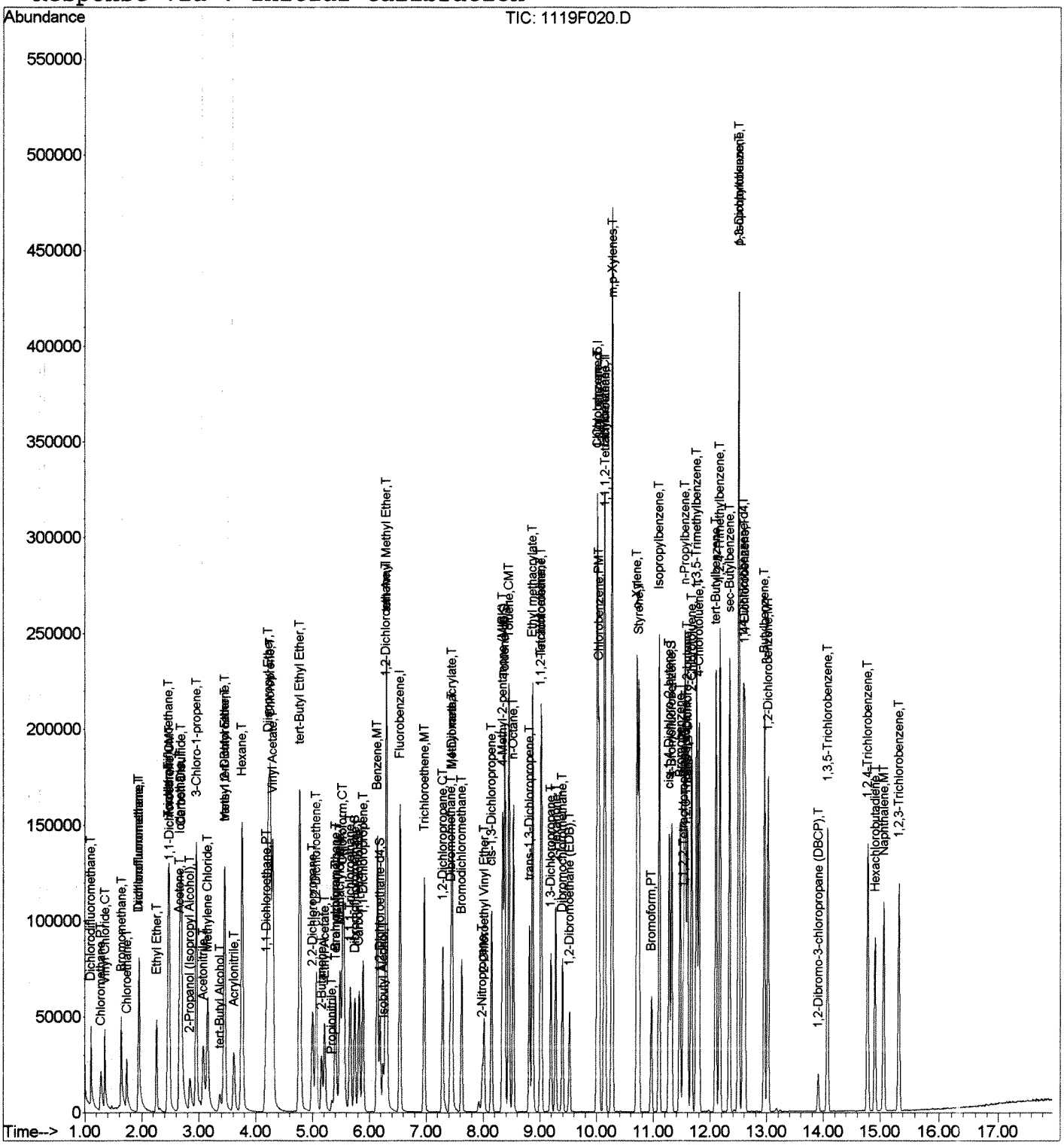
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
77)	m,p-Xylenes	10.27	106	161576	17.90	PPB		96
78)	o-Xylene	10.70	106	79572	9.12	PPB		96
79)	Styrene	10.74	103	72801	9.74	PPB		98
80)	Bromoform	10.96	173	32483	9.27	PPB		97
81)	Isopropylbenzene	11.10	105	195415	8.83	PPB		100
82)	cis-1,4-Dichloro-2-butene	11.27	89	19847	32.70	PPB		96
85)	1,1,2,2-Tetrachloroethane	11.52	83	37652	9.71	PPB		98
86)	trans-1,4-Dichloro-2-buten	11.59	53	25940	29.45	PPB		84
87)	Bromobenzene	11.46	156	61014	9.56	PPB		95
88)	n-Propylbenzene	11.55	91	215841	9.01	PPB		99
89)	1,2,3-Trichloropropane	11.57	110	13115	10.11	PPB	#	76
90)	2-Chlorotoluene	11.67	91	130365	9.25	PPB		99
91)	1,3,5-Trimethylbenzene	11.76	105	158821	9.14	PPB		97
92)	4-Chlorotoluene	11.80	91	140395	9.40	PPB		99
93)	tert-Butylbenzene	12.10	119	142138	9.03	PPB		98
94)	1,2,4-Trimethylbenzene	12.17	105	164188	9.51	PPB		99
95)	sec-Butylbenzene	12.34	105	193956	8.98	PPB		98
96)	p-Isopropyltoluene	12.50	119	173666	9.30	PPB		98
97)	1,3-Dichlorobenzene	12.50	146	105844	9.41	PPB		97
98)	1,4-Dichlorobenzene	12.61	146	107550	9.34	PPB		96
99)	n-Butylbenzene	12.95	91	130097	9.12	PPB		99
100)	1,2-Dichlorobenzene	13.02	146	97396	9.55	PPB		97
101)	1,2-Dibromo-3-chloropropan	13.91	155	6923	9.56	PPB		96
102)	1,3,5-Trichlorobenzene	14.07	180	64827	8.97	PPB		98
103)	1,2,4-Trichlorobenzene	14.78	180	64215	9.50	PPB		97
104)	Hexachlorobutadiene	14.91	225	26928	8.71	PPB		96
105)	Naphthalene	15.06	128	118812	9.70	PPB		99
106)	1,2,3-Trichlorobenzene	15.33	180	54382	9.66	PPB		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F020.D Vial: 17
Acq On : 19 Nov 2018 10:23 pm Operator: LM
Sample : 8260 ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 5 10:37 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F022.D Vial: 19
Acq On : 19 Nov 2018 11:15 pm Operator: LM
Sample : CLP ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 05 10:36:46 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-05-18

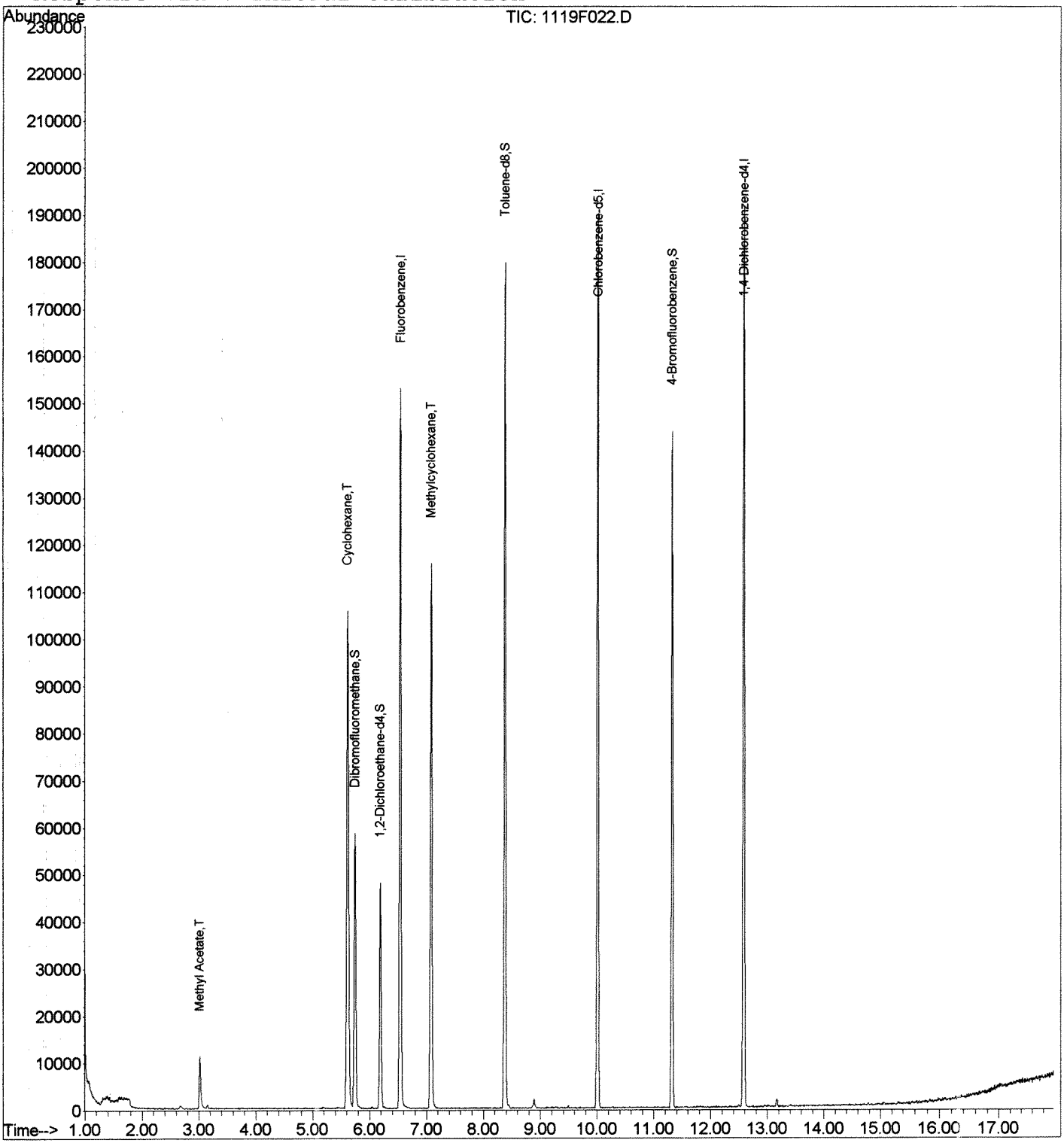
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.53	96	164376	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	61622	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	66981	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	37305	10.08	PPB	0.00
Spiked Amount 10.000			Recovery =	100.80%		
46) 1,2-Dichloroethane-d4	6.19	65	33321	10.44	PPB	0.00
Spiked Amount 10.000			Recovery =	104.40%		
61) Toluene-d8	8.37	98	132175	10.10	PPB	0.00
Spiked Amount 10.000			Recovery =	101.00%		
83) 4-Bromofluorobenzene	11.32	95	52841	10.11	PPB	0.00
Spiked Amount 10.000			Recovery =	101.10%		
Target Compounds						Qvalue
18) Methyl Acetate	3.02	43	15095	9.82	PPB	94
40) Cyclohexane	5.61	56	59799	10.29	PPB	97
51) Methylcyclohexane	7.08	83	57955	8.33	PPB	97

(#) = qualifier out of range (m) = manual integration
1119F022.D 111918MS46_8260.M Wed Dec 05 10:38:21 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F022.D Vial: 19
Acq On : 19 Nov 2018 11:15 pm Operator: LM
Sample : CLP ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 5 10:37 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration



Preparation Information

Group ID:	KWG1900204	**Prep Method:**	EPA 5030B	**Prep Date:**	12/31/18 00:00
Department:	VOA GCMS	**Pre-Prep Method:**	EPA 1311	**Pre-Prep Date:**	12/21/2018 - 12/22/2018

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1812382-001	SL0594	8260C VOC TCLP	SOIL	125uL	50ml	
KWG1900204-1	Matrix Spike	8260C VOC TCLP	SOIL	125uL	50ml	
KWG1900204-2	Lab Control Sample	8260C VOC TCLP	SOIL	125uL	50ml	
KWG1900204-3	Method Blank	8260C VOC TCLP	SOIL	125uL	50ml	

Lab Code	Parent Lab Code	Comments
KWG1900204-1	K1812382-001	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1812382-001	1708394					
KWG1900204-1	1708395					
KWG1900204-2	1708396					
KWG1900204-3	1708397					

Comments:

Started By: LMuresan Assisted By: _____ Training Yes No

Completed By: LMuresan Assisted By: _____ Yes No

Reviewed By: _____ Date: JAN 10 2019 Storage: _____

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Service Request #: K1812382 Date Extracted: 12-21-18

Analyst: Richard Holden

TCLP/ZHE

Unit #	Sample	I.D. ✓	Matrix	Particle Size Reduced?	Wt of Solids	Vol of Extract Fluid	pH of Extract Fluid	Tedlar Bag Used?	ZHE Unit Still Pressurized?	Filtrate Mixed with Extract?	pH of Filtrat ?
AL57	K1812382-1	✓	Soil	NA	25.121g	500mL	4.90	NA	Yes	NA	7
AL5-5	method Blank	—	Ext Fluid	NA	0.000g	500mL	4.90	NA	Yes	NA	5

Wt. to Charge ZHE = $\frac{n}{\%Solids}$ x 100 , n = desired wt. of solids (max 25 grams)

PERCENT SOLIDS

Sample	Total Wt of Sample For Filtering	Wt of Beaker Residue	Net Sample Wt	Initial Filter Wt (1)	Final Filter Wt (2)	Wt of Filtered Solids	% Solids

(1) = Before Filtering Sample (2) = After Drying %Solids = $\frac{\text{Final Filer Wt} - \text{Initial Filter Wt}}{\text{Total Wt of Sample}}$ X 100

Extract Fluid Lot # TCLP-19D Rotation Speed: 29.8 RPM
Initial Temp: 21°C Constant Temp: Yes or N (23±2°C)
Date/Time/Initials Weighed: 12-21-18/13:10/RRH Balance ID: K-Balance-46 Calibration Verified ☐
VOA Vial Lot# 8-206-001
Filter Lot #: 306090
Extract Started (Time/Date/Initial): 14:00 12-21-18 RRH
Stopped (Time/Date/Initial): 06:00 12-22-18 RRH
Extracts Stored: Misty
Comments: Tumble 18 ± 2 hours

Reviewed By:

R:\Extractions\Active Benchsheets\ZHE\ZERO HEADSPACE EXTRACTION.doc

Chart

TempSys: Temperature Assurance System

Equipment
ZHE RM

Area
108

Period
Past 7 days

Reference Date:
12/26/2018

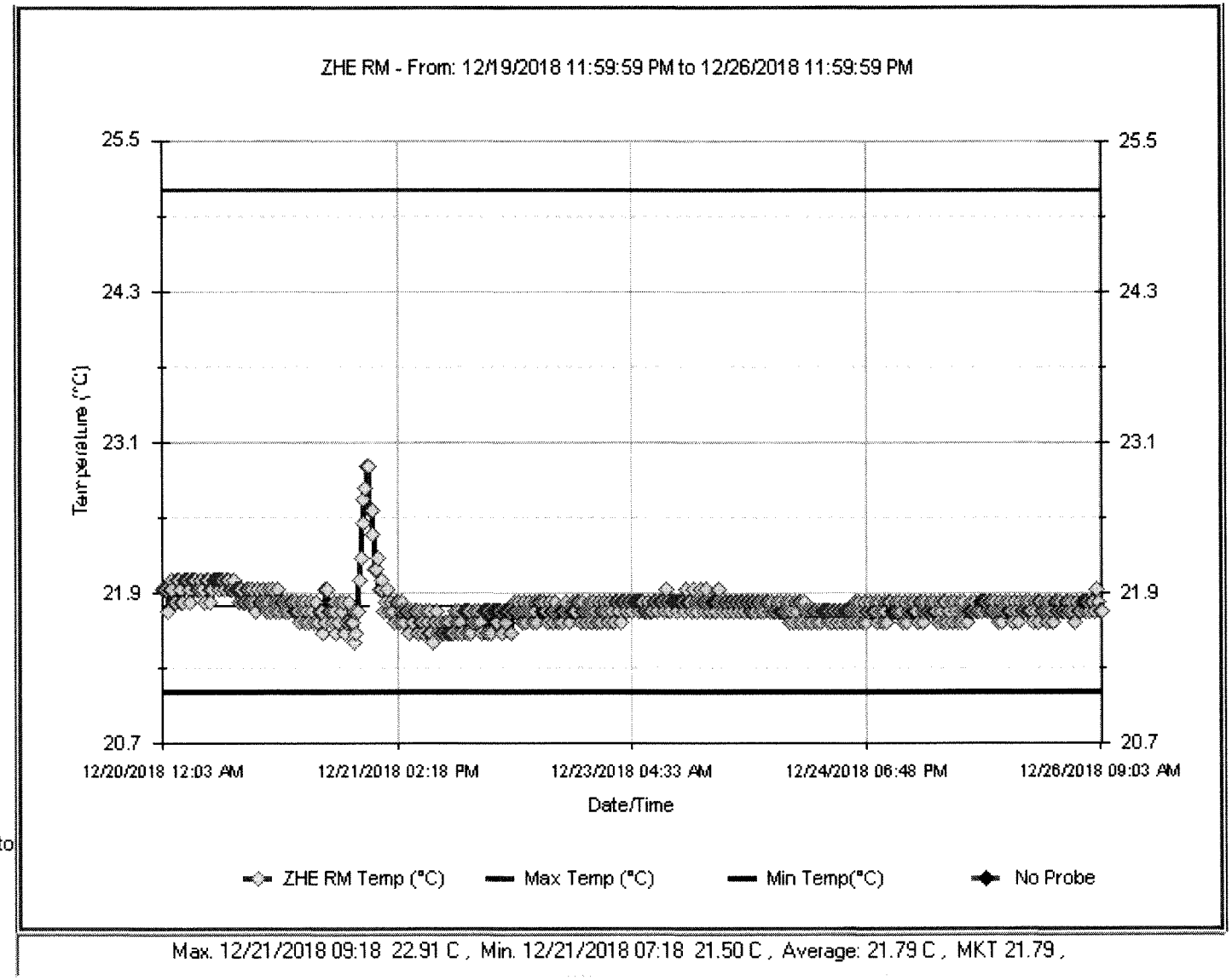
☑ Show data points

Print

Capture Snapshot

View Numeric Table

Click a legend to hide or show chart lines



Max. 12/21/2018 09:18 22.91 C , Min. 12/21/2018 07:18 21.50 C , Average: 21.79 C , MKT 21.79 ,

Date: 12-31-18

By: LM

ALS Environmental Injection Log

MS46 - Agilent 5977A

Tune File: BFB

New Tune: NO

#620683

IS/SS Std. ID: 91V0A-17A XP 01-20-19

CCV Std ID: 91V0A-22A XP 01-03-19 / -10E XP 02-17-19 / -19B, -20A, -19D, -19C XP 01-02-19

MS/DMS/LCS/ICV Std ID: 91V0A-22C XP 01-03-19

BFB Std. ID: 90V0A-99C XP 01-05-19

ICAL Date: 11-19-18 - 15902

Second RV: JAN 10 2019

LIMS ID: KWG1806757 / -6759(W) / 1900204 (TCLPN 12382) / 1900205 (TCLPN 12550)

	Sample Name	File Name	Method	Dilution	pH<2	Comments
1	BFB	1231F002	BFB	1µL DI		
2	CCV	3	8260M	10/5µL->50mL		
3	LCS	4		10/50/5/5/7.5µL->50mL		
4	DLCS	5		↓		NR
5	400x K12382 LCS	6		400x(125µL->50mL) 10µL->50mL		
6	400x K12550 LCS	7				
7	400x K12382-001 MS	8				
8	400x K12550-001 MS	9				
9	K12676-002 MS	10		8.8/44/4.4/4.4/6.6µL->44mL		
10	↓ DMS	11		↓	5	
11	IB	12				
12	MRL	13		0.5/0.25µL->50mL		
13	MB	14				
14	400x K12382 MB	15		400x 125µL->50mL		
15	400x K12550 MB	16		↓		
16	K12676-001	17			5	TB 052218RB
17	K12676-002	18			5	
18	400x K12382-001	19		400x 125µL->50mL		
19	400x K12550-001	↓ 20	↓	↓		
20						
21						
22						
23						
24						
25						
26						
27						

R:\VOA\Injection Logs\INJLOG_MS46_Rev1

11/19/18 ICAL

Date: 11-19-18

By: LM

IS/SS Std. ID: 8VOA-81D XP 12-15-18

CCV Std ID:

MS/DMS/LCS/ICV Std ID:

BFB Std. ID: 8VOA-76A XP 12-05-18

ALS Environmental
Injection Log
MS46 - Agilent 5977A

Tune File: BFB

New Tune: NO

ICAL Date: new cal - 15902

Second RV: 11/19/18

LIMS ID: VWG1806272

	Sample Name	File Name	Method	Dilution	pH<2	Comments
1	BFB	1119F004	BFB	1µL DI		
2	IB	5	8260			
3	ICAL 0.1 PPB	6		see prep sheet		
4	ICAL 0.2 PPB	7				
5	ICAL 0.5 PPB	8				
6	ICAL 1.0 PPB	9				
7	ICAL 2.0 PPB	10				
8	ICAL 5.0 PPB	11				
9	ICAL 10 PPB	12				
10	ICAL 20 PPB	13				
11	ICAL 40 PPB	14				
12	ICAL 60 PPB	15				
13	ICAL 80 PPB	16		✓		
14	IB	17				
15	IB	18				
16	8260 ICV	19		see prep sheet		
17	8260 ICV	20				
18	CLP ICV	21				
19	CLP ICV	22				
20						
21						
22						
23						
24						
25						
26						
27						

INTIAL CALIBRATION CURVE

Date 11-19-18 Analysis: 8260

Prepared By LM Instrument: MS 46

Matrix: Water

Stock Solution #1 90V0A-86A (XP 11-26-18) Analytes: Surrogate Init. Concentration: 100ppm

Stock Solution #2 90V0A-85D (XP 11-26-18) Analytes: Low 8260 Init. Concentration: 5/10/20/100/200ppm

Stock Solution #3 90V0A-85C (XP 11-26-18) Analytes: 8260 Init. Concentration: 50/100/200/1000/2000ppm

Stock Solution #4 90V0A-86 (XP 12-8-18) Analytes: Low Ketones Init. Concentration: 200ppm

Stock Solution #5 90V0A-75D (XP 1-3-19) Analytes: Ketones Init. Concentration: 2000ppm

Aliquot of Stock Solution #1 (µL)	Final Conc. of #1 (µg/L)	Aliquot of Stock Solution #2 (µL)	Final Conc. of #2 (µg/L)	Aliquot of Stock Solution #3 (µL)	Final Conc. of #3 (µg/L)	Aliquot of Stock Solution #4 (µL)	Final Conc. of #4 (µg/L)	Aliquot of Stock Solution #5 (µL)	Final Conc. of #5 (µg/L)	Final Volume (mL)
		1	0.1			1	4			50
		2	0.2			2	8			50
		5.0	0.5			5	20			50
2.0	4	10	1			10	40			50
3.0	6			2.0	2			2	80	50
4.0	8			5.0	5			2.5	100	50
5.0	10			10	10			5.0	200	50
6	12			20	20			10	400	50
7	14			40	40			20	800	50
8	16			60	60			40	1600	50
10	20			80	80			50	2000	50

8260 ICV: 10uL of 50/250ppm Accustd ICV (90V0A-83C XP 11-23-18) + 50uL of 100ppm Acrolein (90V0A-80B XP 11-22-18) +

5uL of 100ppm Dichlorofluoromethane (90V0A-80C XP 11-22-18) + 5uL of 200ppm n-Octane/TBF/Tetrahydrafuran (90V0A-77B XP 12-8-18)

5uL of 100ppm Oxygenates (90V0A-80D XP 11-22-18) + 7.5uL of Appendix ICV mix(90V0A-80A XP 11-22-18) + 25uL of 1000ppm 2-Propanol(90V0A-76T XP 01-08-19)

5uL of 100ppm CLP (90V0A-86E XP 11-26-18)

Data File : J:\MS46\DATA\111918\1119F005.D Vial: 2
Acq On : 19 Nov 2018 03:52 pm Operator: LM
Sample : IB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 05 08:17:38 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Dec 04 17:01:39 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-05-18

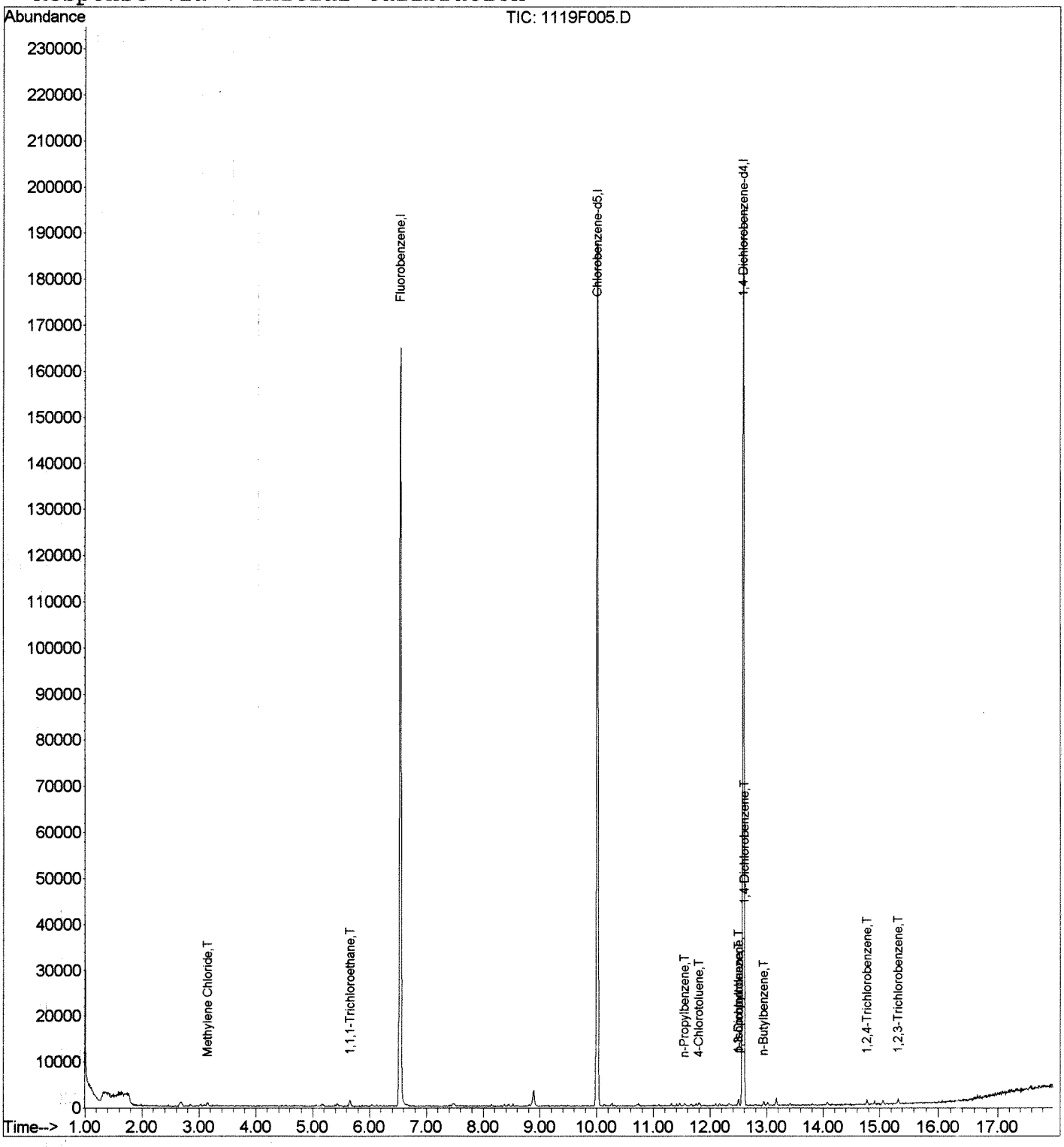
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.53	96	172357	10.00	PPB		0.00
63) Chlorobenzene-d5	10.00	82	61690	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	68562	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	0.00	113	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
46) 1,2-Dichloroethane-d4	0.00	65	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
61) Toluene-d8	0.00	98	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
83) 4-Bromofluorobenzene	0.00	95	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
Target Compounds							Qvalue
20) Methylene Chloride	3.15	84	507	0.12	PPB		79
41) 1,1,1-Trichloroethane	5.65	97	1351	0.20	PPB		91
88) n-Propylbenzene	11.55	91	583	0.02	PPB		90
92) 4-Chlorotoluene	11.80	91	569	0.04	PPB		77
96) p-Isopropyltoluene	12.50	119	600	0.03	PPB		85
97) 1,3-Dichlorobenzene	12.50	146	672	0.06	PPB		97
98) 1,4-Dichlorobenzene	12.61	146	853	0.07	PPB		86
99) n-Butylbenzene	12.94	91	706	0.05	PPB		86
103) 1,2,4-Trichlorobenzene	14.77	180	654	0.10	PPB	#	73
106) 1,2,3-Trichlorobenzene	15.33	180	565	0.10	PPB		83

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F005.D Vial: 2
Acq On : 19 Nov 2018 03:52 pm Operator: LM
Sample : IB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 5 8:20 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Dec 04 17:01:39 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:05 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.53	96	168506	10.00	PPB		0.00
63) Chlorobenzene-d5	10.01	82	62006	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	68733	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	0.00	113	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
46) 1,2-Dichloroethane-d4	0.00	65	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
61) Toluene-d8	0.00	98	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
83) 4-Bromofluorobenzene	0.00	95	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.10	85	234m	0.07	PPB		
3) Chloromethane	1.28	50	293m	0.10	PPB		
4) Vinyl Chloride	1.35	62	287m	0.08	PPB		
5) Bromomethane	1.64	96	729	0.22	PPB		88
6) Chloroethane	1.74	64	254m	0.11	PPB		
7) Dichlorofluoromethane	1.95	67	611	0.11	PPB		86
8) Trichlorofluoromethane	1.95	101	608	0.12	PPB		84
9) Ethyl Ether	2.26	59	182m	0.09	PPB		
10) Acrolein	2.47	56	691	1.85	PPB		77
11) Trichlorotrifluoroethane	2.46	151	373m	0.11	PPB		
12) 1,1-Dichloroethene	2.49	96	312m	0.09	PPB		
13) Acetone	2.66	43	1927	4.66	PPB		91
14) Iodomethane	2.66	142	1926	0.37	PPB		95
15) Carbon Disulfide	2.70	76	1360	0.14	PPB		86
16) 2-Propanol (Isopropyl Alco	2.86	45	72m	1.25	PPB		
17) 3-Chloro-1-propene	2.96	76	162m	0.08	PPB		
18) Methyl Acetate	3.04	43	253m	0.17	PPB		
20) Methylene Chloride	3.15	84	528	0.13	PPB		80
22) Acrylonitrile	3.61	53	181m	0.23	PPB		
23) Methyl tert-Butyl Ether	3.46	73	1798	0.20	PPB		96
24) trans-1,2-Dichloroethene	3.45	96	397m	0.10	PPB		
25) Hexane	3.77	57	632	0.14	PPB		93
26) Diisopropyl Ether	4.23	45	732	0.08	PPB		76
27) 1,1-Dichloroethane	4.19	63	500	0.08	PPB	#	50
29) Chloroprene	4.25	53	1999	0.43	PPB		90
30) tert-Butyl Ethyl Ether	4.78	59	867	0.09	PPB		77
31) 2,2-Dichloropropane	5.00	77	607	0.11	PPB	#	46

(#) = qualifier out of range (m) = manual integration
1119F006.D 111918MS46_8260.M Wed Nov 21 11:04:17 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:05 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
32)	cis-1,2-Dichloroethene	5.07	96	491m	0.10	PPB		
33)	2-Butanone	5.17	72	899	3.25	PPB		87
36)	Methacrylonitrile	5.49	67	280m	0.24	PPB		
37)	Bromochloromethane	5.40	128	151m	0.06	PPB		
39)	Chloroform	5.51	83	712	0.10	PPB		83
40)	Cyclohexane	5.61	56	685	0.13	PPB		86
41)	1,1,1-Trichloroethane	5.65	97	760	0.13	PPB	#	75
43)	Carbon Tetrachloride	5.82	117	599	0.11	PPB	#	84
44)	1,1-Dichloropropene	5.89	75	513	0.10	PPB		69
47)	Benzene	6.14	78	1727	0.11	PPB		97
48)	1,2-Dichloroethane	6.28	62	365m	0.09	PPB		
50)	Trichloroethene	6.96	95	509	0.12	PPB	#	73
51)	Methylcyclohexane	7.08	83	696	0.10	PPB		86
52)	1,2-Dichloropropane	7.28	63	276m	0.07	PPB		
56)	Bromodichloromethane	7.62	83	549	0.10	PPB		84
57)	2-Nitropropane	7.98	41	297m	0.59	PPB		
58)	2-Chloroethyl Vinyl Ether	8.02	63	109m	0.05	PPB		
59)	cis-1,3-Dichloropropene	8.14	75	623	0.09	PPB		90
60)	4-Methyl-2-pentanone (MIBK	8.34	58	3349	3.55	PPB		97
62)	Toluene	8.45	92	1310	0.11	PPB		95
64)	n-Octane	8.53	85	265m	0.11	PPB		
65)	trans-1,3-Dichloropropene	8.81	75	664	0.11	PPB		87
66)	Ethyl methacrylate	8.87	69	334m	0.08	PPB		
68)	Tetrachloroethene	9.02	164	397m	0.08	PPB		
69)	2-Hexanone	9.28	57	1064	3.73	PPB	#	81
70)	1,3-Dichloropropane	9.19	76	539	0.09	PPB	#	48
72)	1,2-Dibromoethane (EDB)	9.52	107	351m	0.09	PPB		
73)	1-Chlorohexane	10.01	91	920	0.15	PPB		78
74)	Chlorobenzene	10.04	112	1457	0.11	PPB		95
75)	Ethylbenzene	10.13	106	767	0.11	PPB		88
77)	m,p-Xylenes	10.26	106	1845	0.21	PPB		94
78)	o-Xylene	10.70	106	885	0.10	PPB	#	77
79)	Styrene	10.74	103	584	0.08	PPB		84
80)	Bromoform	10.95	173	274m	0.08	PPB		
81)	Isopropylbenzene	11.10	105	2284	0.11	PPB		92
82)	cis-1,4-Dichloro-2-butene	11.27	89	176m	0.29	PPB		
85)	1,1,2,2-Tetrachloroethane	11.53	83	416m	0.11	PPB		
87)	Bromobenzene	11.46	156	686	0.11	PPB		88
88)	n-Propylbenzene	11.55	91	2637	0.11	PPB		95
90)	2-Chlorotoluene	11.66	91	1486	0.11	PPB		84
91)	1,3,5-Trimethylbenzene	11.76	105	1759	0.10	PPB		96

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:05 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

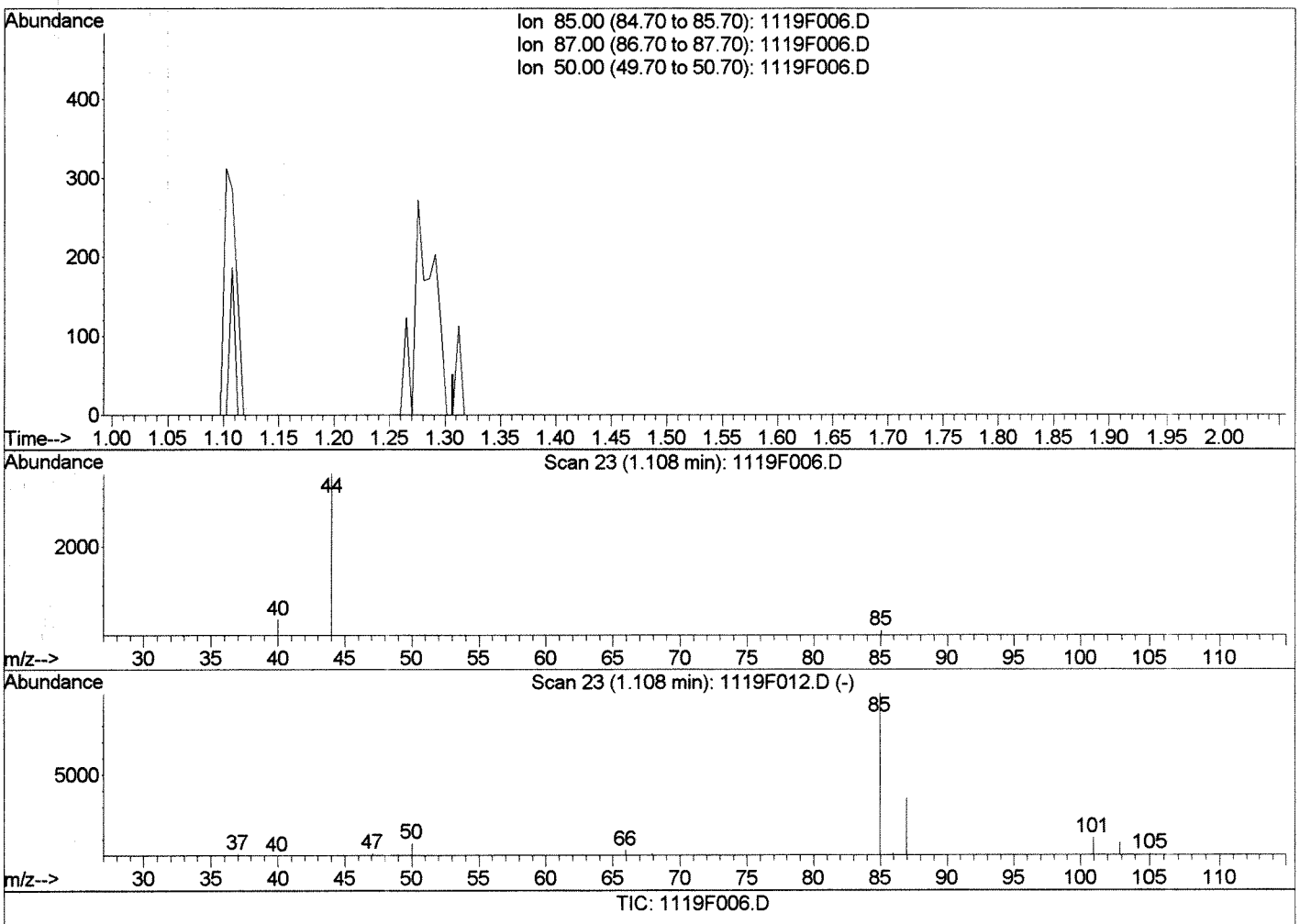
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
92)	4-Chlorotoluene	11.80	91	1877	0.13	PPB	95
93)	tert-Butylbenzene	12.09	119	1649	0.11	PPB	79
94)	1,2,4-Trimethylbenzene	12.16	105	1758	0.10	PPB	95
95)	sec-Butylbenzene	12.33	105	2256	0.11	PPB	89
96)	p-Isopropyltoluene	12.50	119	1975	0.11	PPB	98
97)	1,3-Dichlorobenzene	12.50	146	1160	0.10	PPB	86
98)	1,4-Dichlorobenzene	12.61	146	1323	0.12	PPB	90
99)	n-Butylbenzene	12.95	91	1420	0.10	PPB	82
100)	1,2-Dichlorobenzene	13.02	146	1033	0.10	PPB	88
102)	1,3,5-Trichlorobenzene	14.07	180	760	0.11	PPB	78
103)	1,2,4-Trichlorobenzene	14.78	180	725	0.11	PPB	84
104)	Hexachlorobutadiene	14.90	225	341m	0.12	PPB	
105)	Naphthalene	15.05	128	1201	0.10	PPB	74
106)	1,2,3-Trichlorobenzene	15.33	180	521	0.09	PPB	82

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:08 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(2) Dichlorodifluoromethane (T)

1.11min 0.00PPB

response 0

Ion	Exp%	Act%
85.00	100	0.00
87.00	35.20	0.00#
50.00	7.60	0.00
0.00	0.00	0.00

Manual Integration:

Before

LM

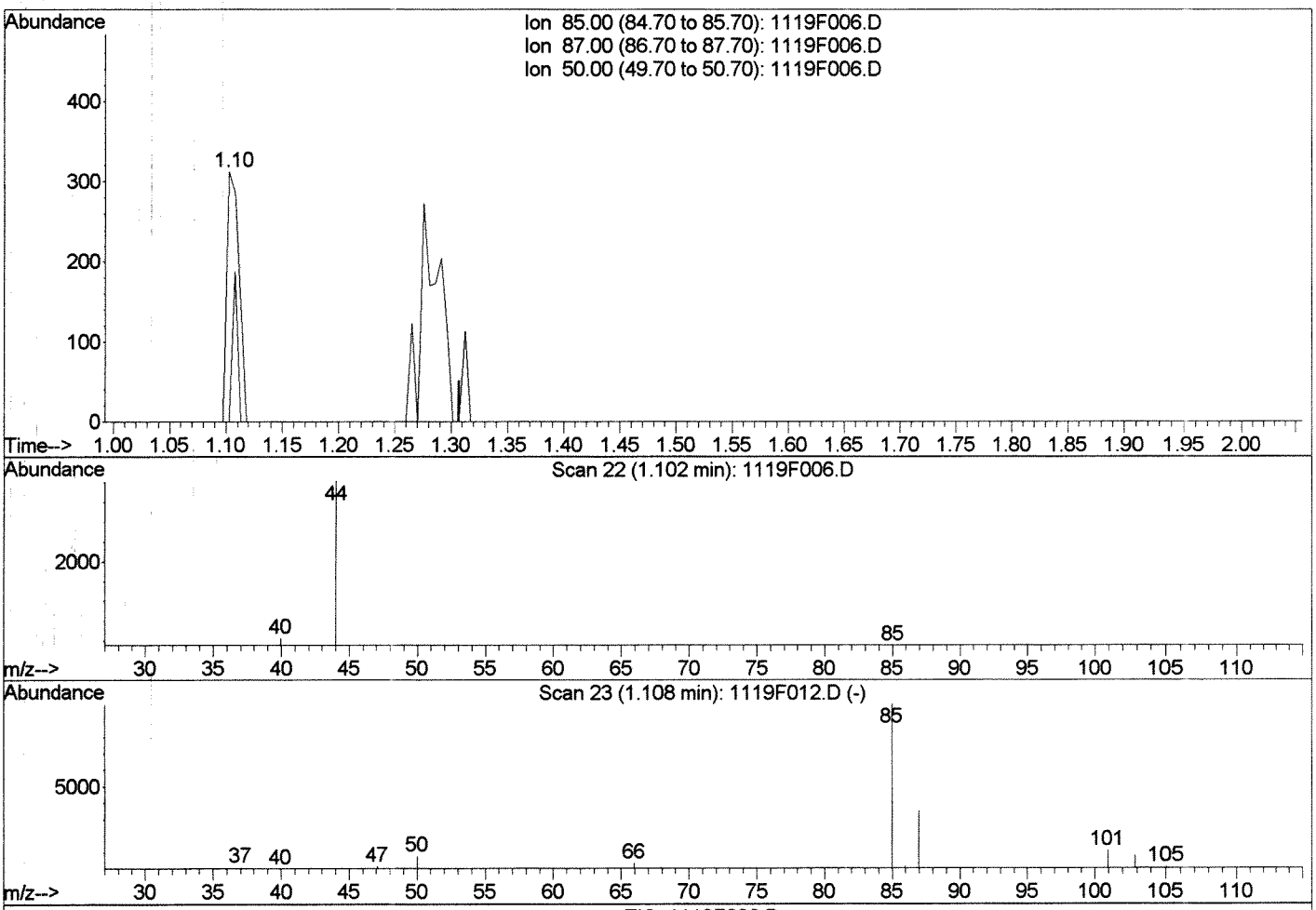
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:09:01 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:09 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(2) Dichlorodifluoromethane (T)

1.10min 0.07PPB m

response 234

Ion	Exp%	Act%
85.00	100	100
87.00	35.20	0.00#
50.00	7.60	0.00
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

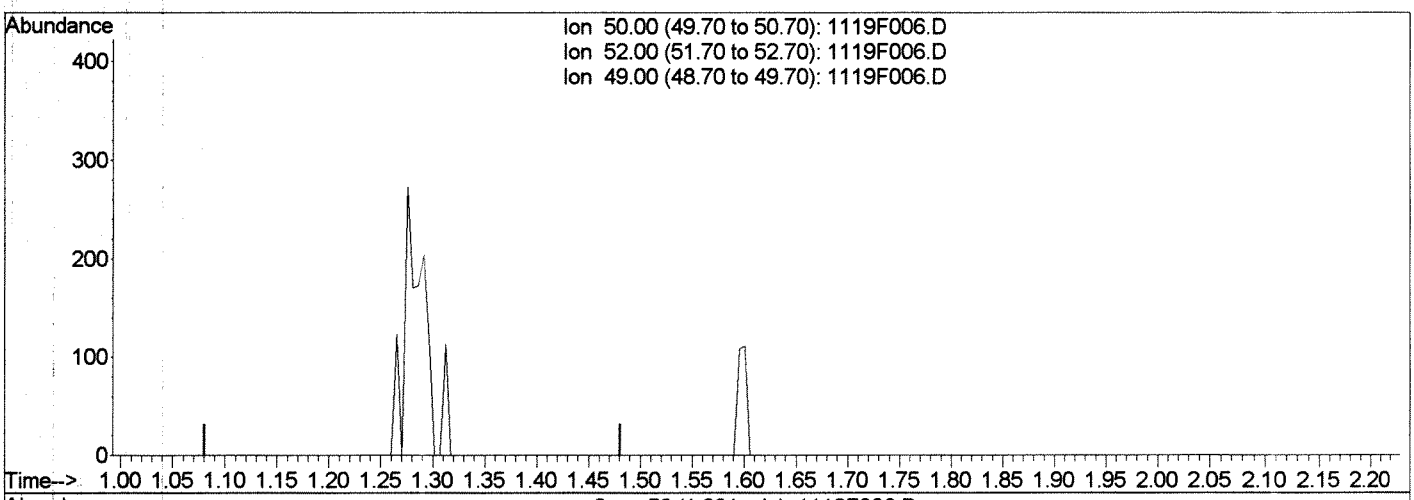
11/21/18

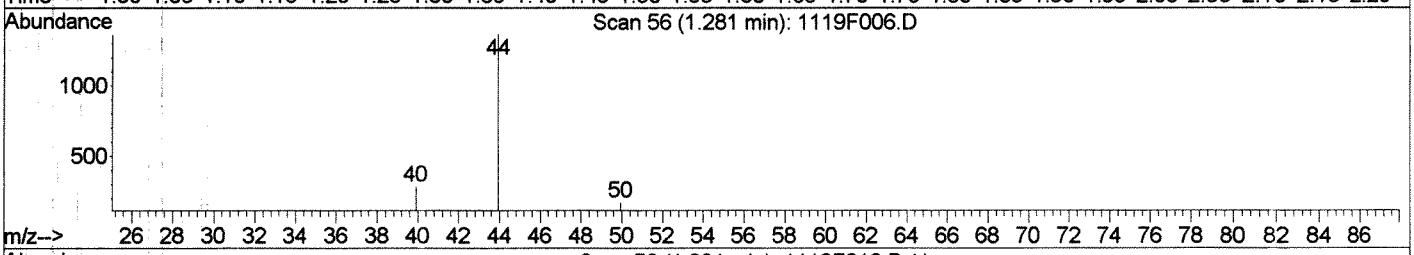
1119F006.D 111918MS46_8260.M Wed Nov 21 09:09:25 2018

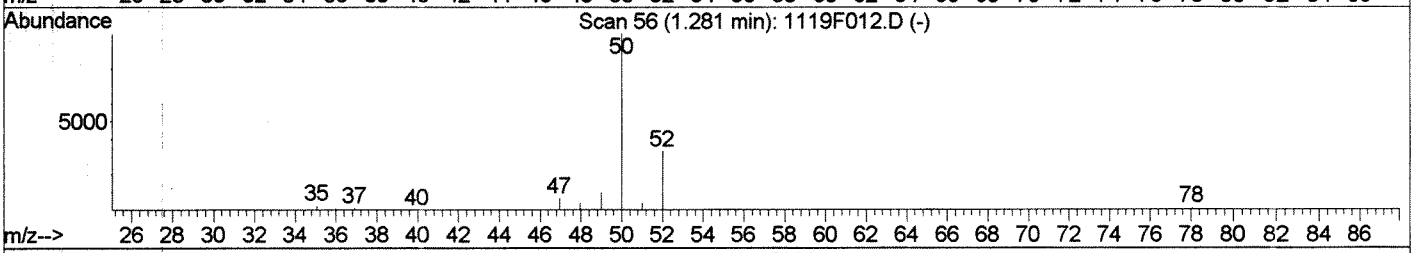
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:09 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(3) Chloromethane (PT)

1.28min 0.00PPB

response 0

Ion	Exp%	Act%
50.00	100	0.00
52.00	33.10	0.00#
49.00	9.80	0.00
0.00	0.00	0.00

Manual Integration:

Before LM

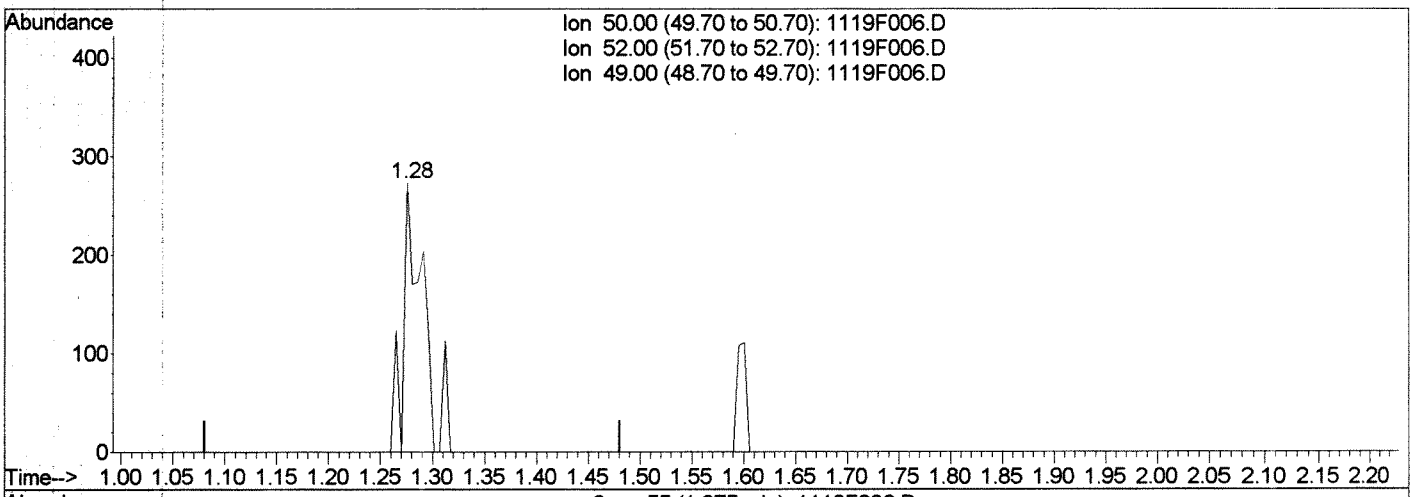
11/21/18 ✓

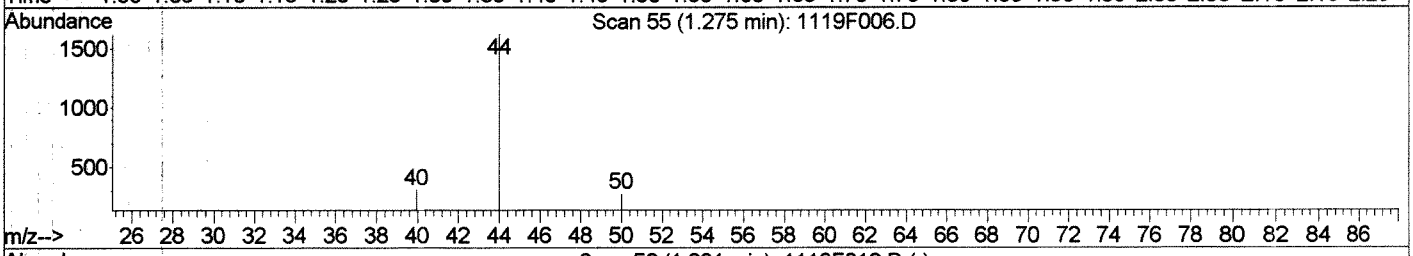
1119F006.D 111918MS46_8260.M Wed Nov 21 09:09:30 2018

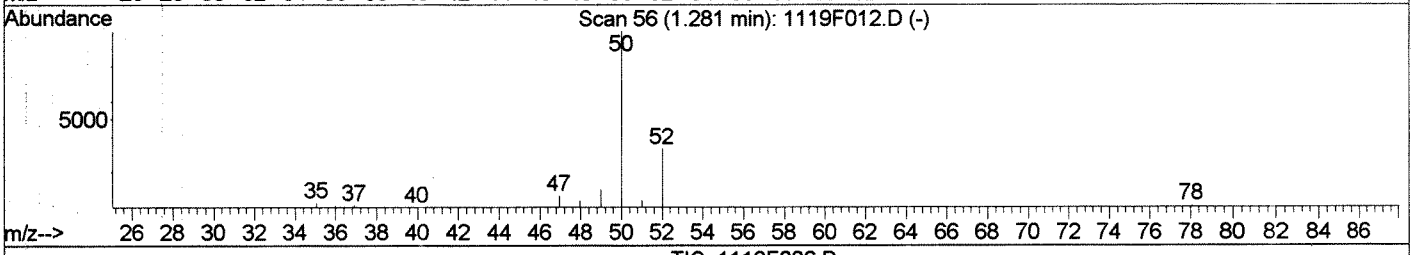
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:09 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(3) Chloromethane (PT)

1.28min 0.10PPB m

response 293

Ion	Exp%	Act%
50.00	100	100
52.00	33.10	0.00#
49.00	9.80	0.00
0.00	0.00	0.00

Manual Integration:

After

Missed peak

11/21/18

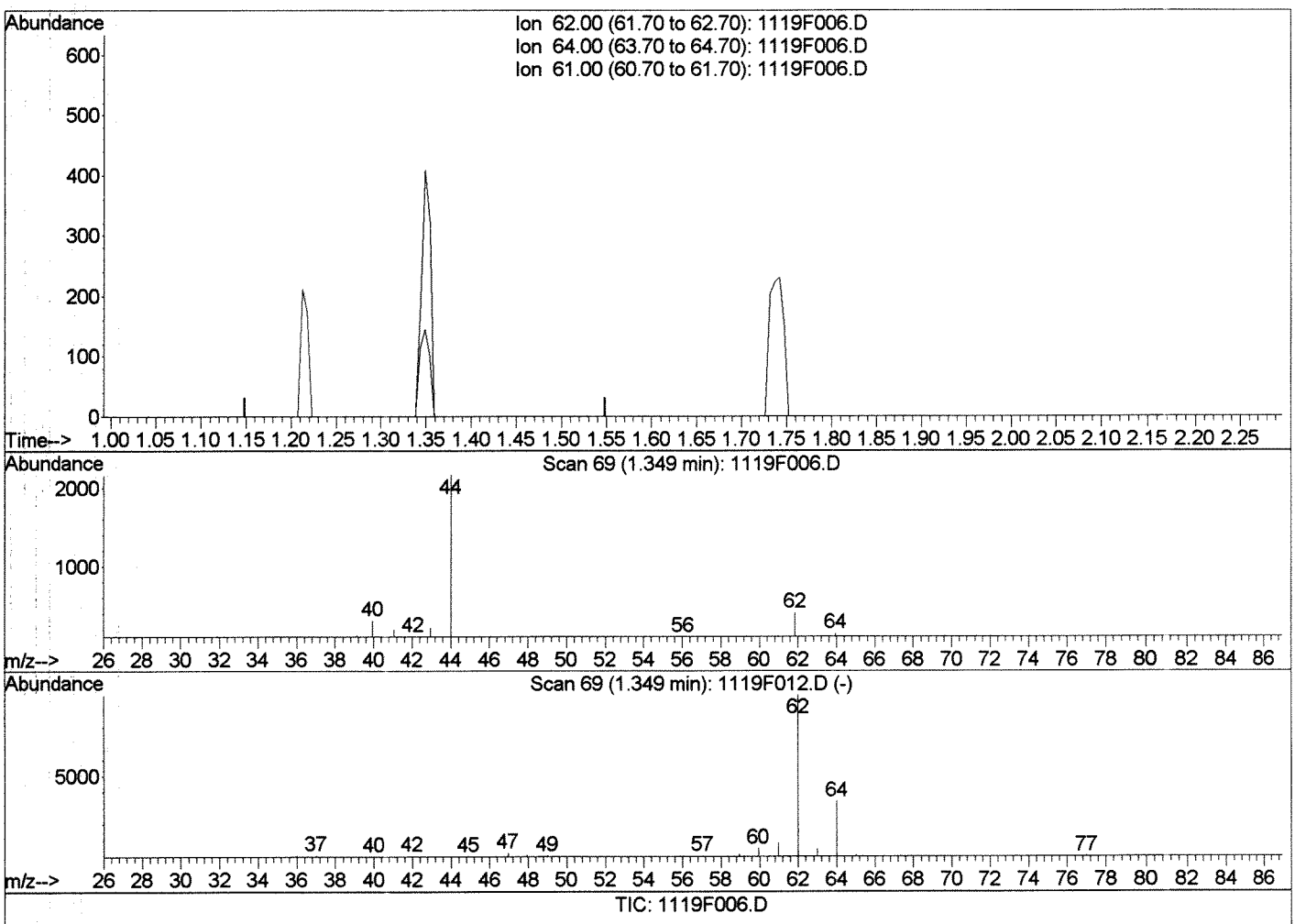
LM

1119F006.D 111918MS46_8260.M Wed Nov 21 09:09:40 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:09 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



(4) Vinyl Chloride (CT)

1.35min 0.00PPB

response 0

Ion	Exp%	Act%
62.00	100	0.00
64.00	34.00	0.00#
61.00	8.70	0.00
0.00	0.00	0.00

Manual Integration:

Before

LM

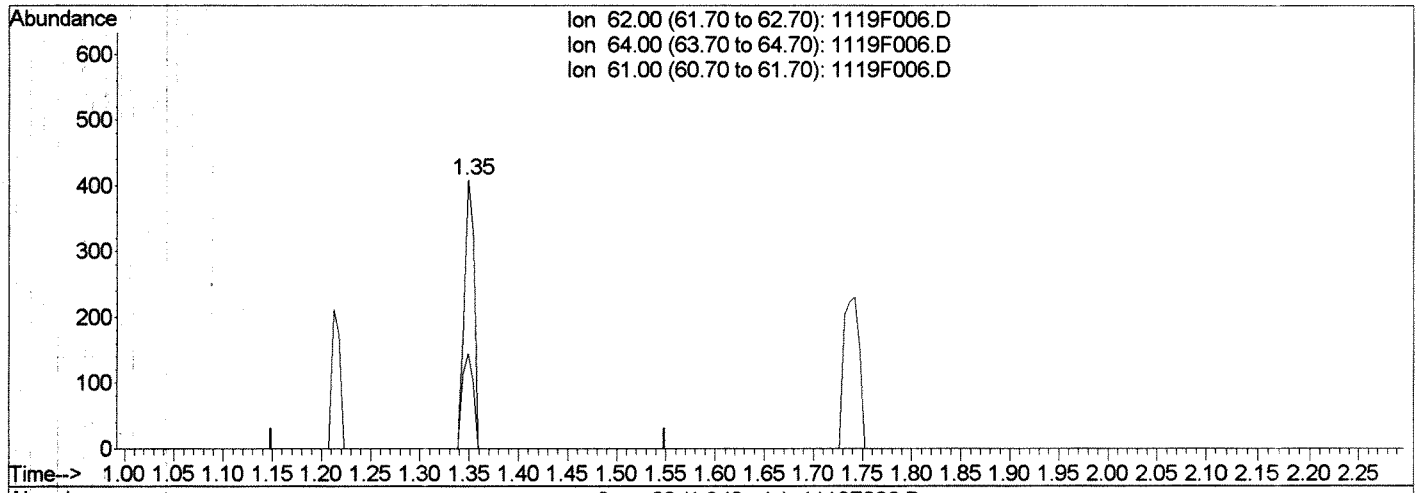
11/21/18

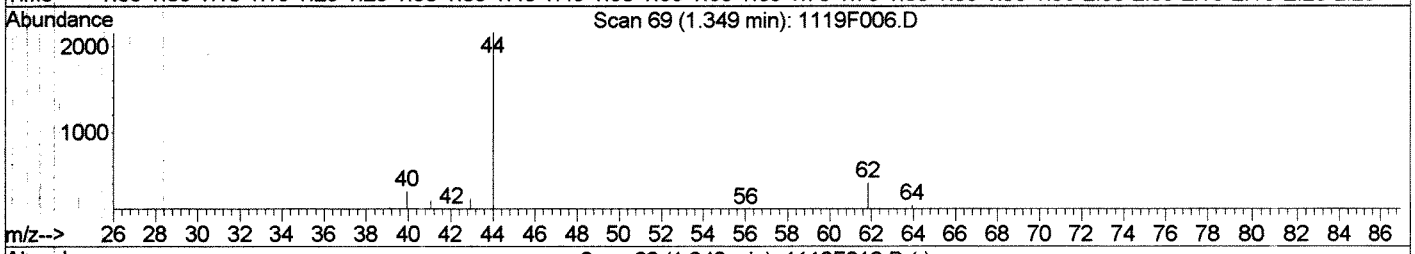
1119F006.D 111918MS46_8260.M Wed Nov 21 09:09:44 2018

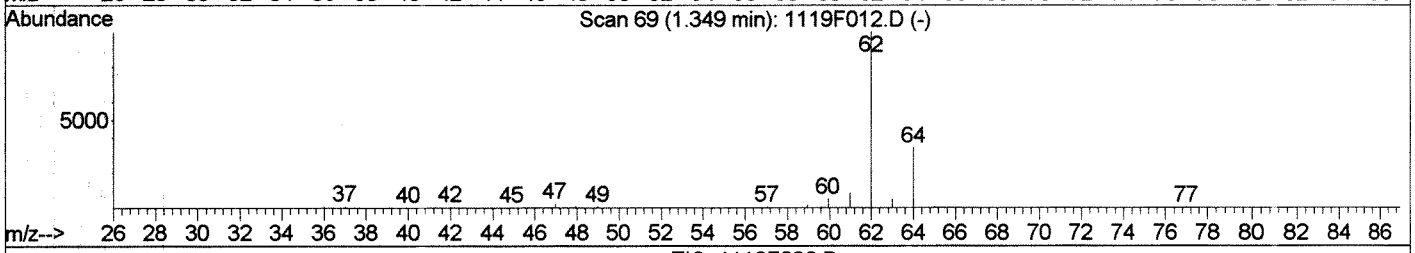
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:09 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(4) Vinyl Chloride (CT)

1.35min 0.08PPB m

response 287

Ion	Exp%	Act%
62.00	100	100
64.00	34.00	35.45
61.00	8.70	0.00
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

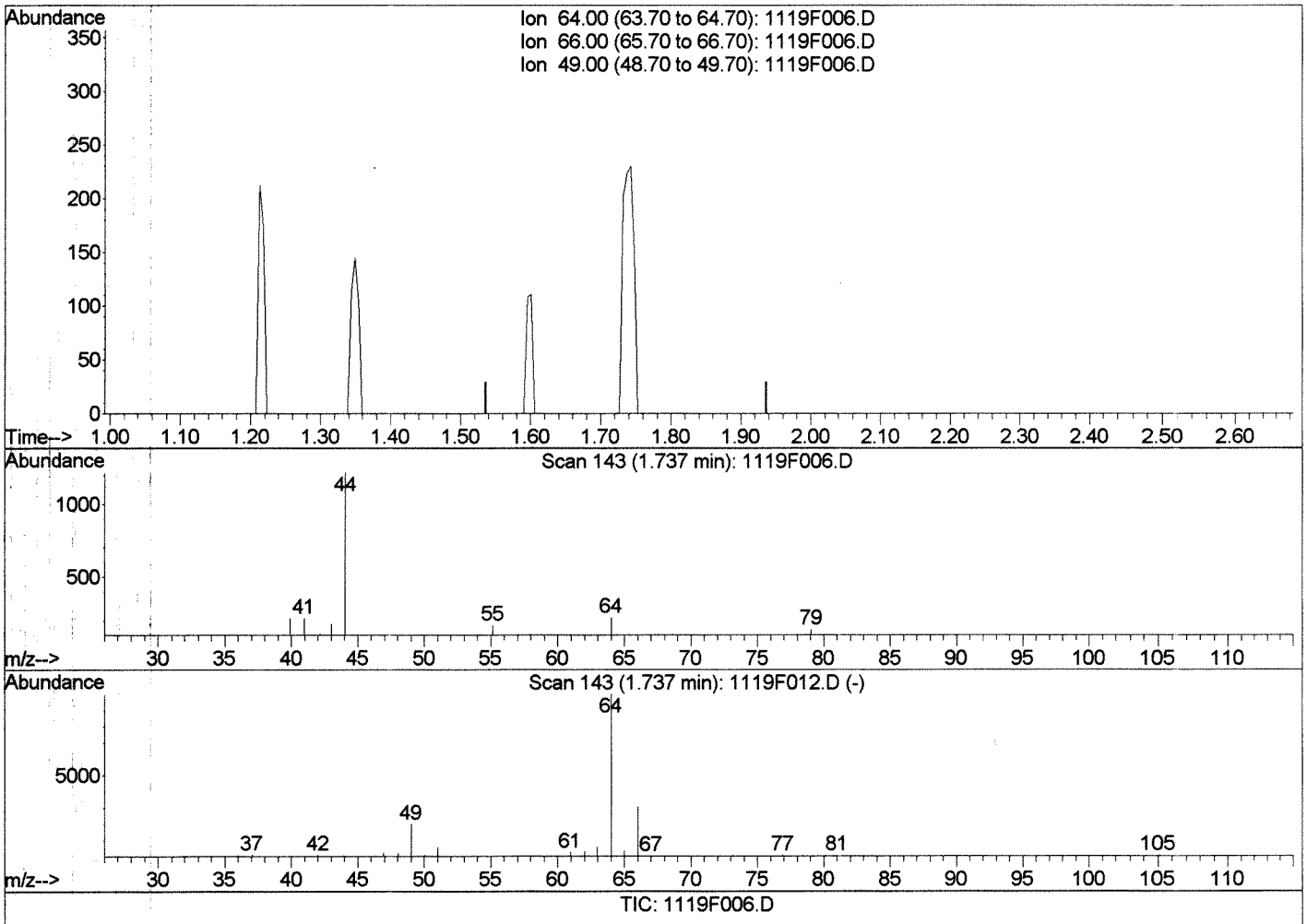
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:09:59 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:09 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(6) Chloroethane (T)

1.74min 0.00PPB

response 0

Ion	Exp%	Act%
64.00	100	0.00
66.00	30.90	0.00#
49.00	20.10	0.00
0.00	0.00	0.00

Manual Integration:

Before

LM

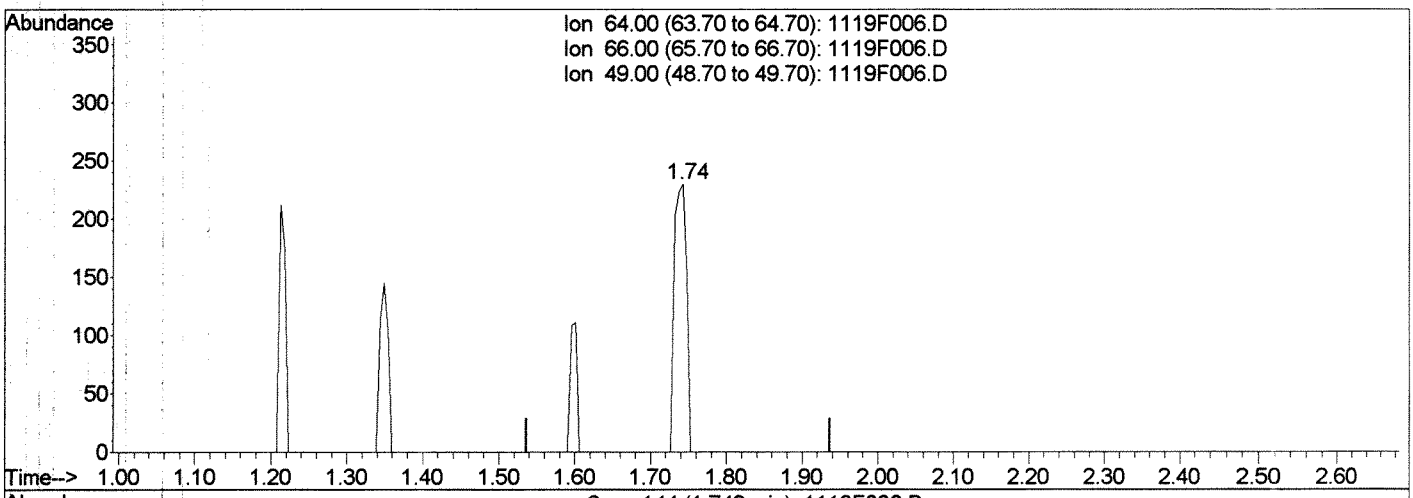
11/21/18

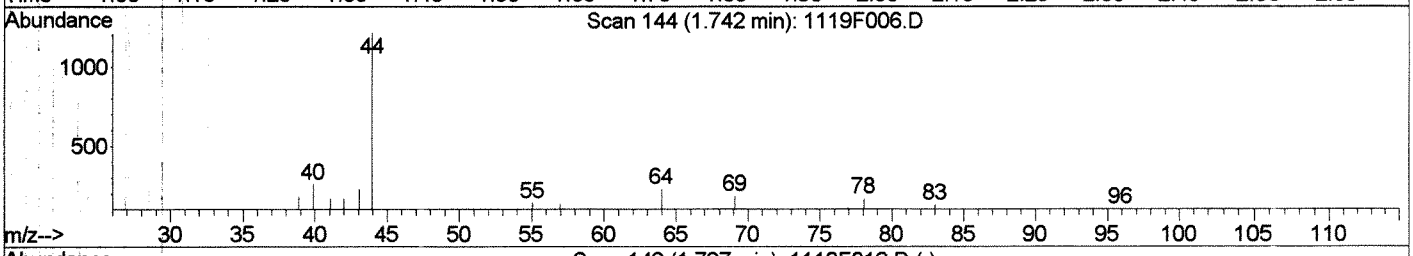
1119F006.D 111918MS46_8260.M Wed Nov 21 09:10:12 2018

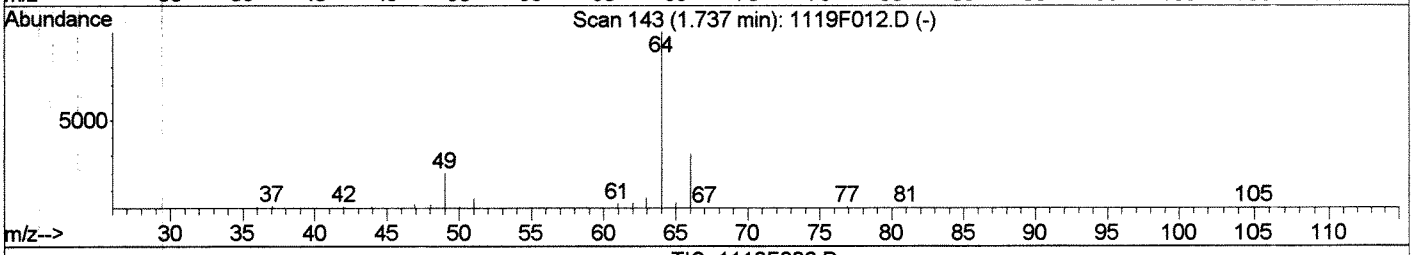
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:10 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(6) Chloroethane (T)

1.74min 0.11PPB m

response 254

Ion	Exp%	Act%
64.00	100	100
66.00	30.90	0.00#
49.00	20.10	0.00
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

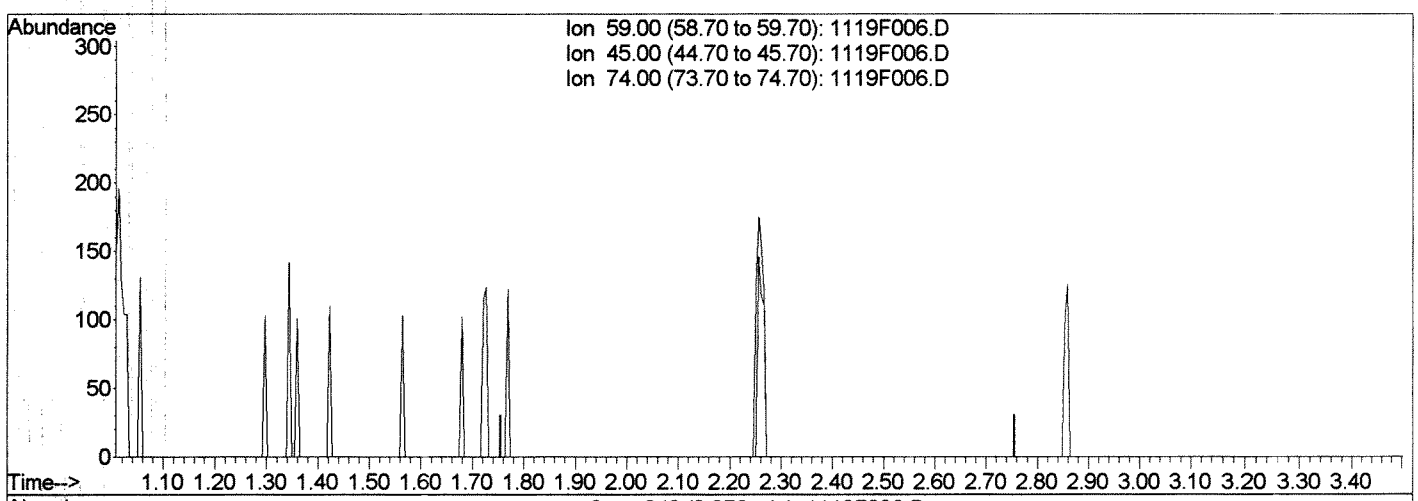
11/21/18

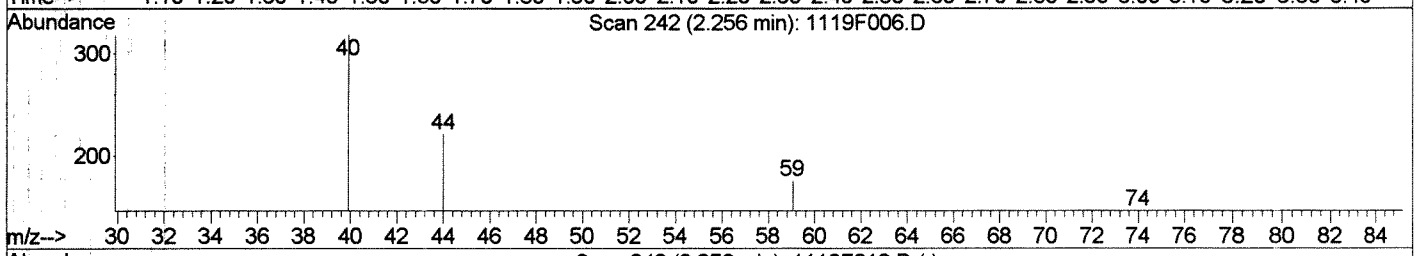
1119F006.D 111918MS46_8260.M Wed Nov 21 09:10:17 2018

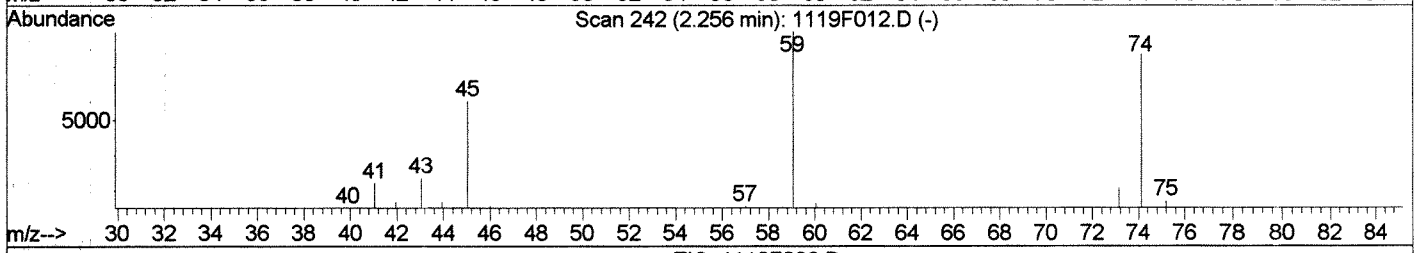
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:10 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(9) Ethyl Ether (T)

2.26min 0.00PPB

response 0

Ion	Exp%	Act%
59.00	100	0.00
45.00	60.70	0.00#
74.00	87.50	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

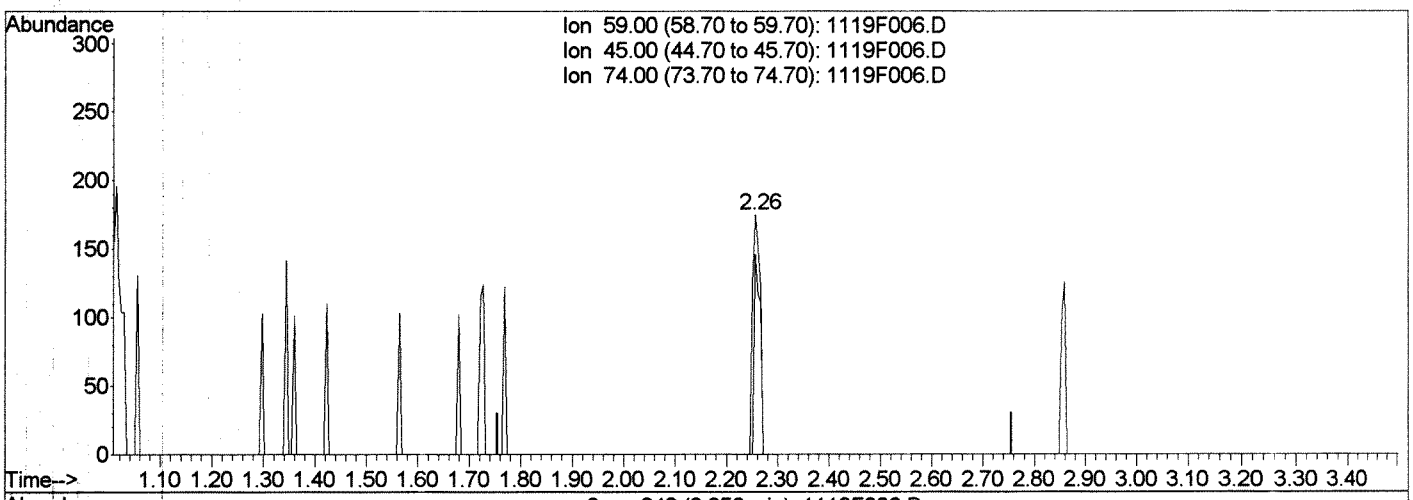
11/21/18

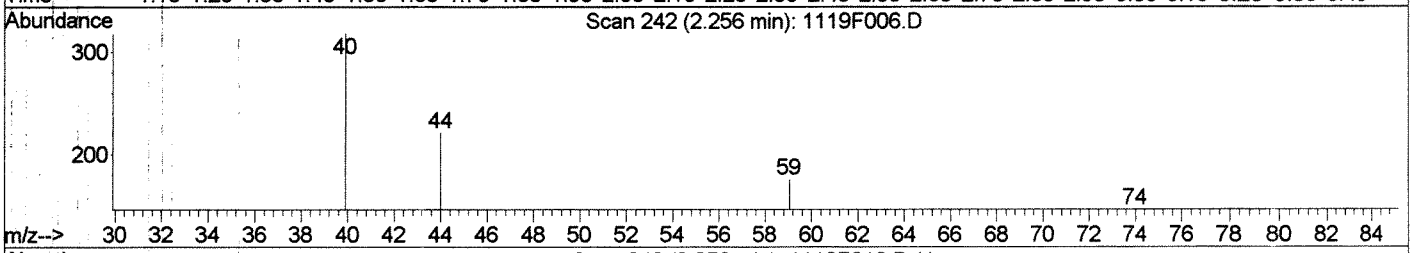
1119F006.D 111918MS46_8260.M Wed Nov 21 09:10:28 2018

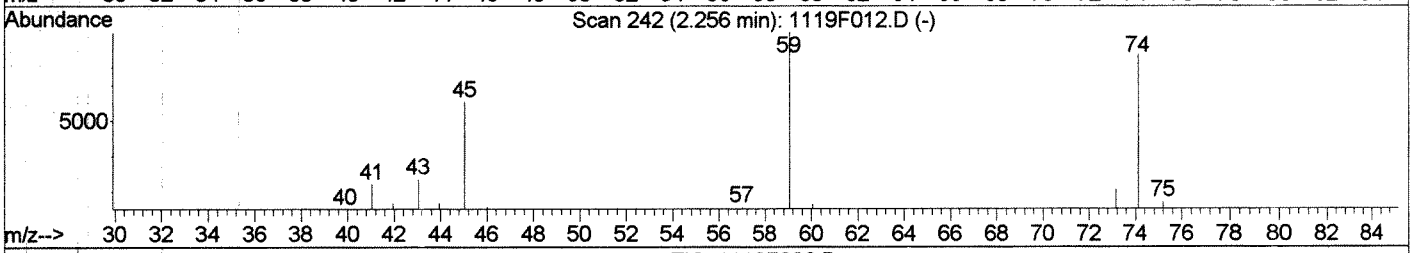
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:10 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(9) Ethyl Ether (T)

2.26min 0.09PPB m

response 182

Ion	Exp%	Act%
59.00	100	100
45.00	60.70	0.00#
74.00	87.50	83.43
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

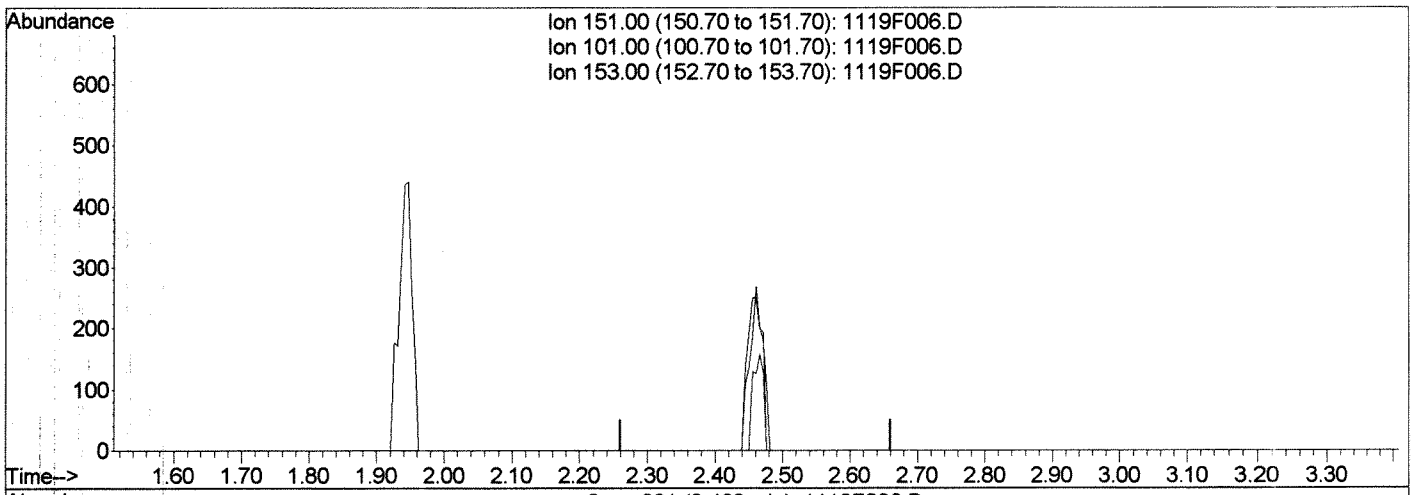
11/21/18

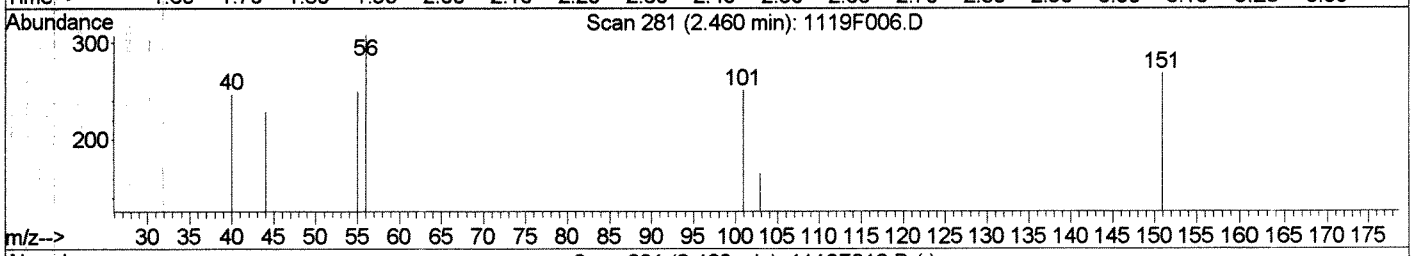
1119F006.D 111918MS46_8260.M Wed Nov 21 09:10:41 2018

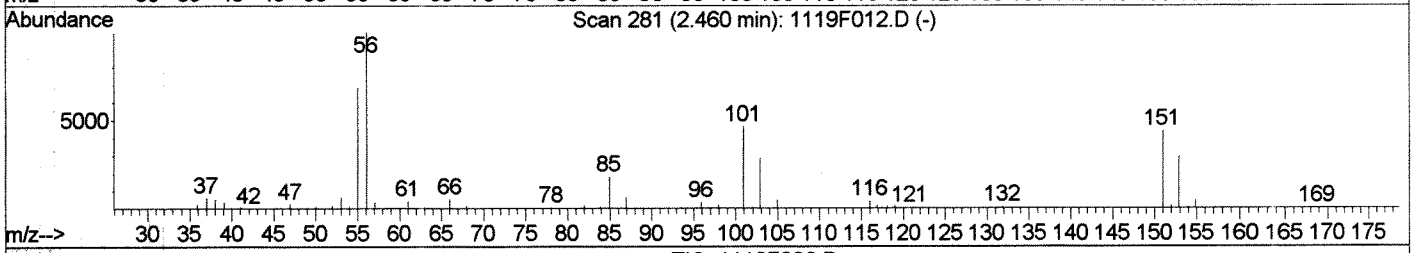
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:10 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(11) Trichlorotrifluoroethane (T)

2.46min 0.00PPB

response 0

Ion	Exp%	Act%
151.00	100	0.00
101.00	105.30	0.00#
153.00	66.70	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

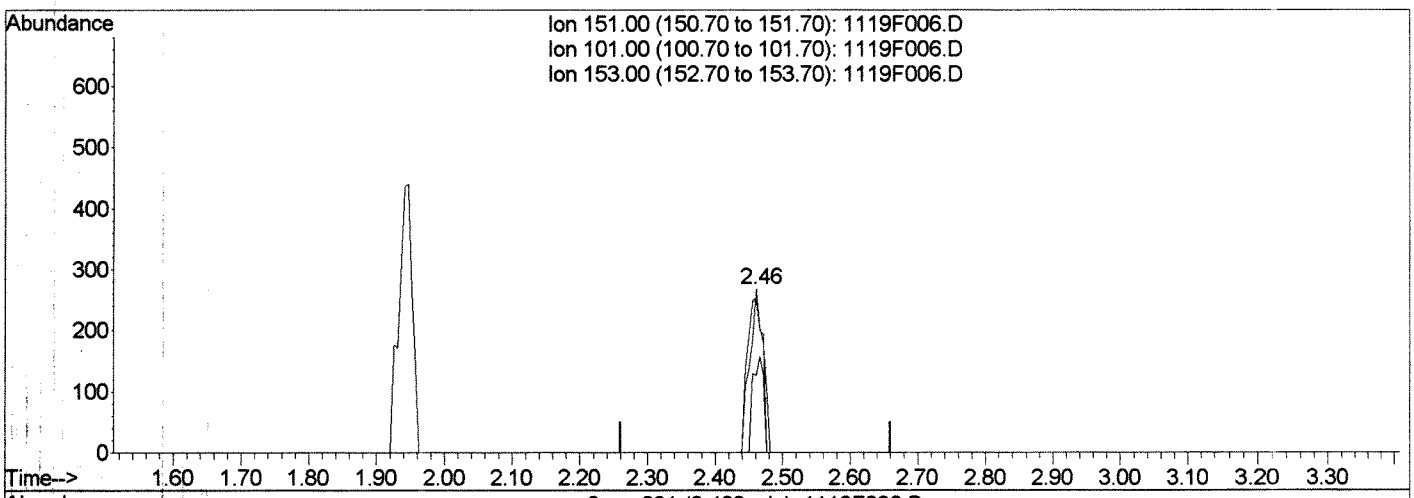
11/21/18

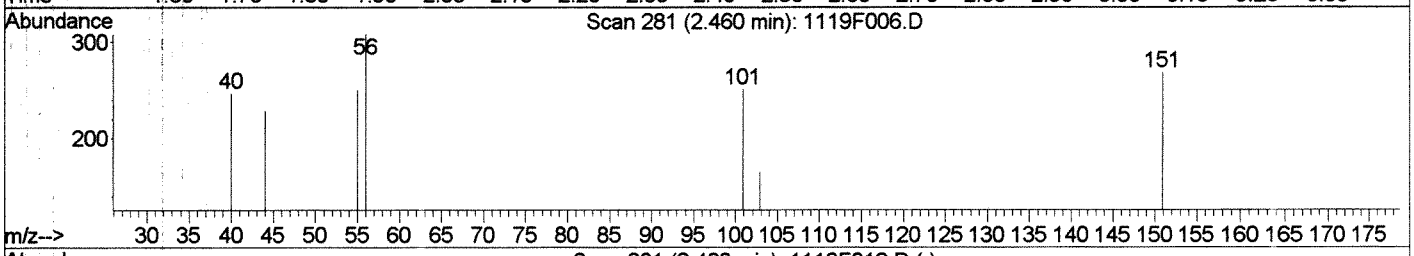
1119F006.D 111918MS46_8260.M Wed Nov 21 09:10:50 2018

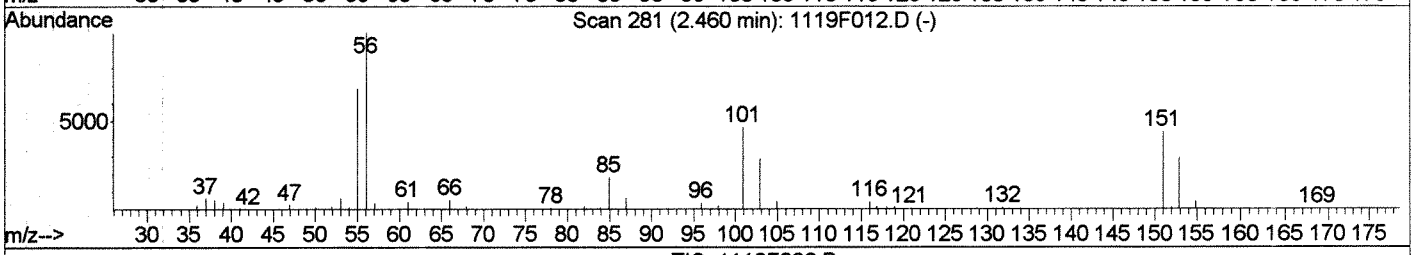
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:10 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(11) Trichlorotrifluoroethane (T)

2.46min 0.11PPB m

response 373

Ion	Exp%	Act%
151.00	100	100
101.00	105.30	93.66
153.00	66.70	47.01
0.00	0.00	0.00

Manual Integration:

After LIN

Missed peak ✓

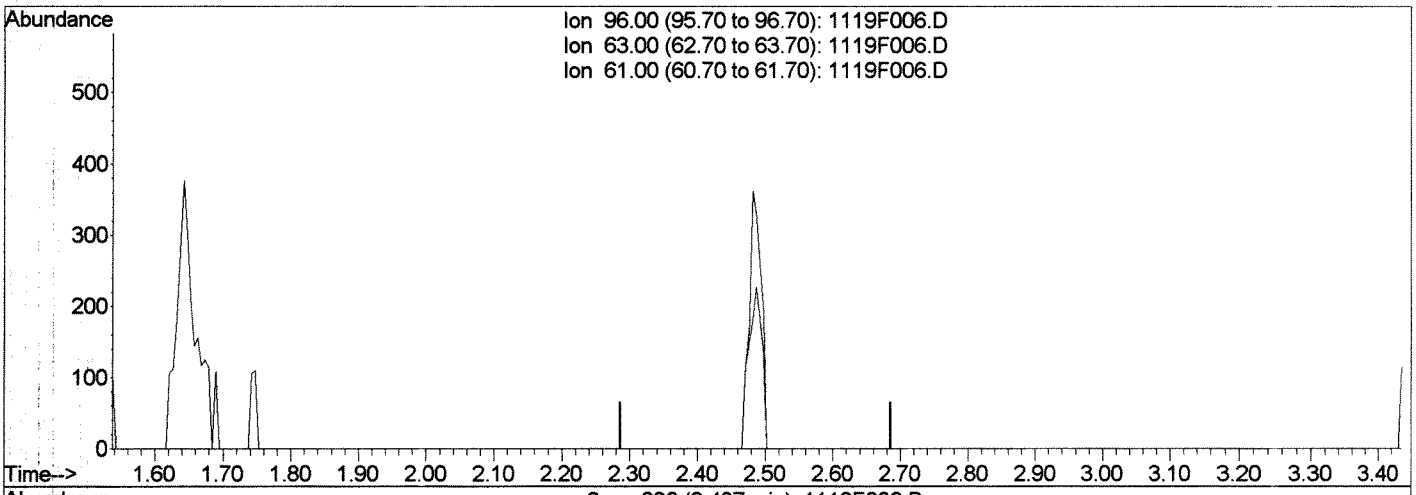
11/21/18

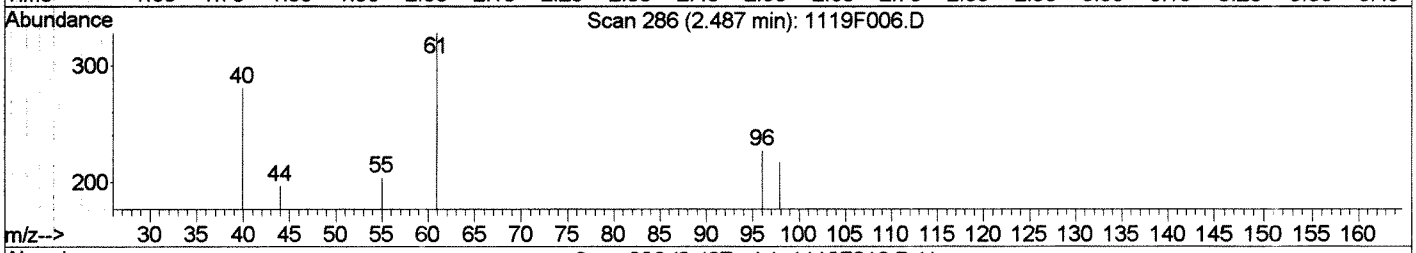
1119F006.D 111918MS46_8260.M Wed Nov 21 09:10:57 2018

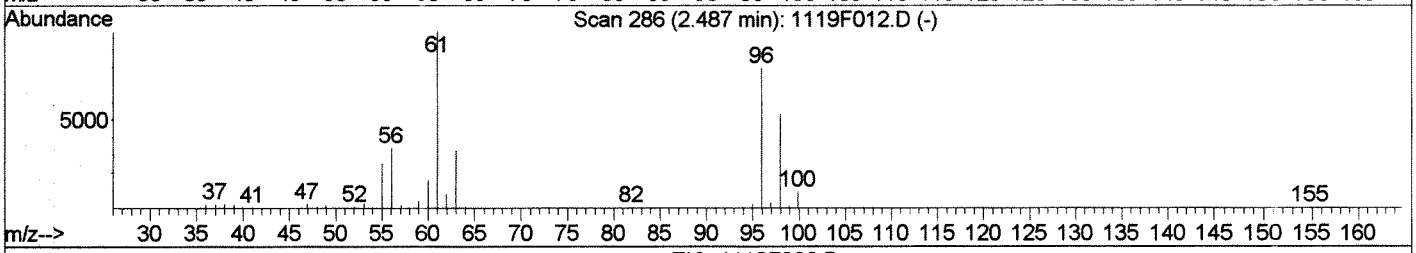
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:10 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(12) 1,1-Dichloroethene (CMT)

2.49min 0.00PPB

response 0

Ion	Exp%	Act%
96.00	100	0.00
63.00	41.10	0.00#
61.00	125.90	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

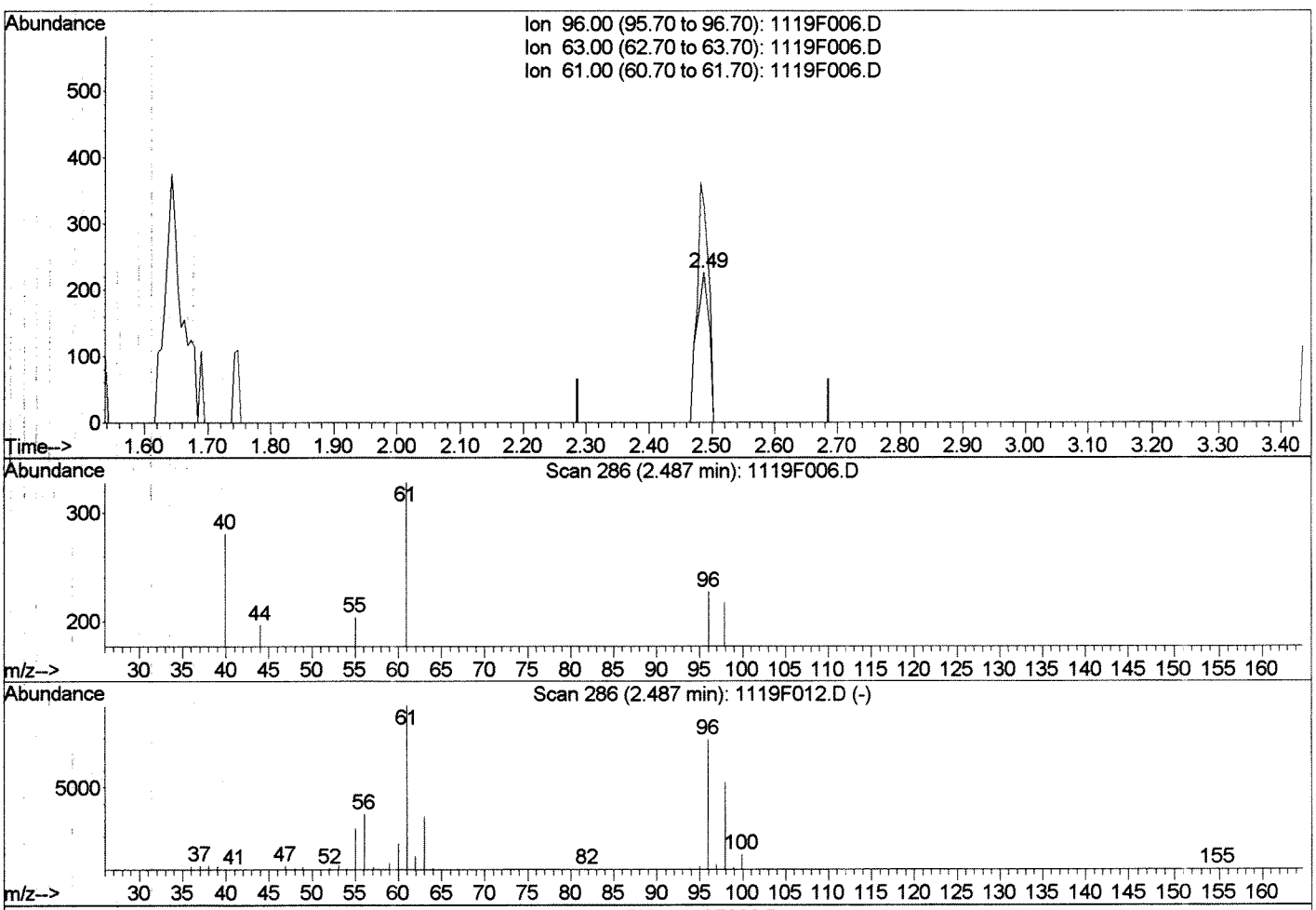
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:11:02 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:11 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(12) 1,1-Dichloroethene (CMT)

2.49min 0.09PPB m

response 312

Ion	Exp%	Act%
96.00	100	100
63.00	41.10	0.00#
61.00	125.90	144.49
0.00	0.00	0.00

Manual Integration:

After

Missed peak

11/21/18

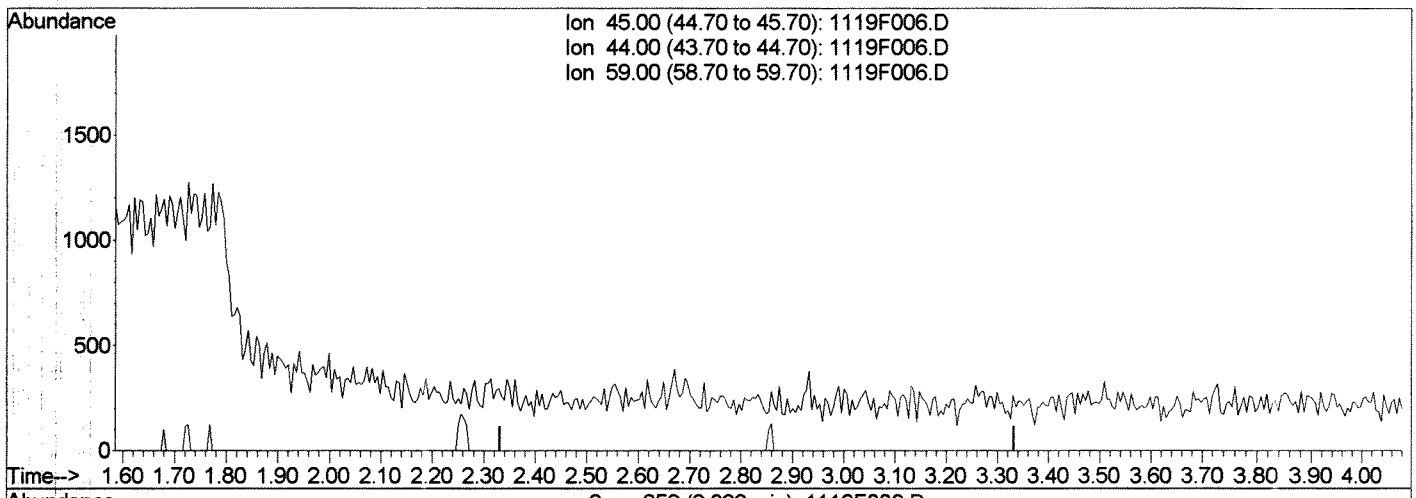
LM

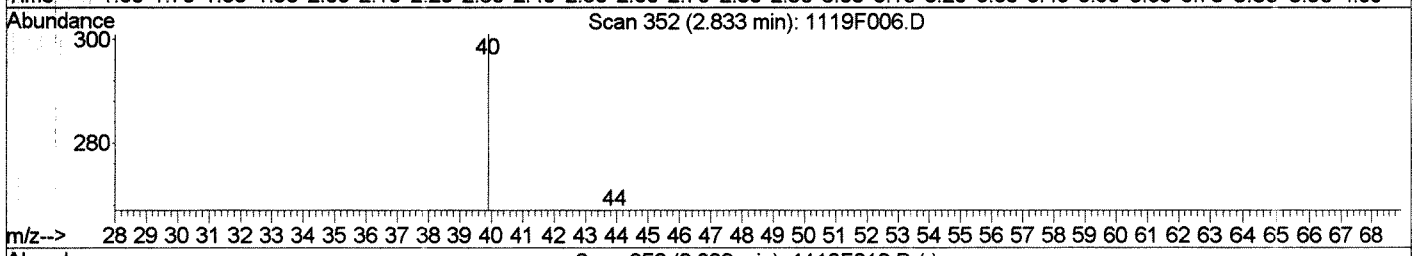
1119F006.D 111918MS46_8260.M Wed Nov 21 09:11:12 2018

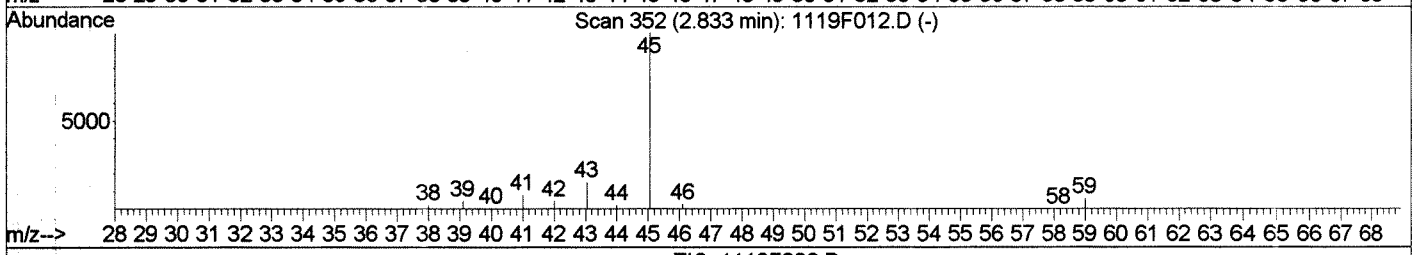
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:11 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(16) 2-Propanol (Isopropyl Alcohol) (T)

2.83min 0.00PPB

response 0

Ion	Exp%	Act%
45.00	100	0.00
44.00	3.90	0.00
59.00	5.70	0.00
0.00	0.00	0.00

Manual Integration:

Before

LM

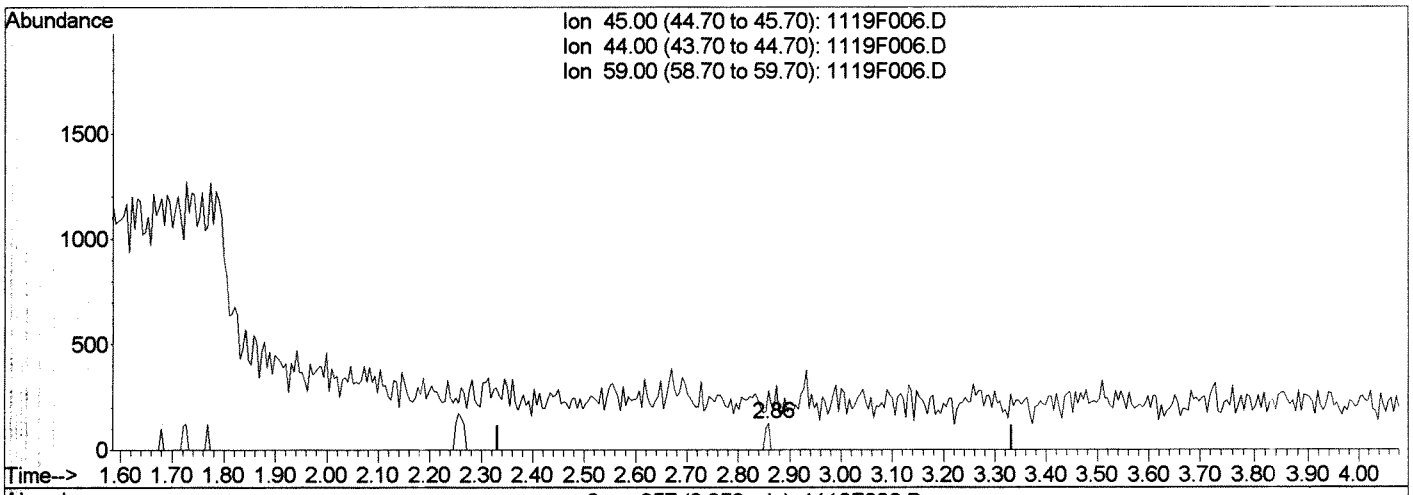
11/21/18

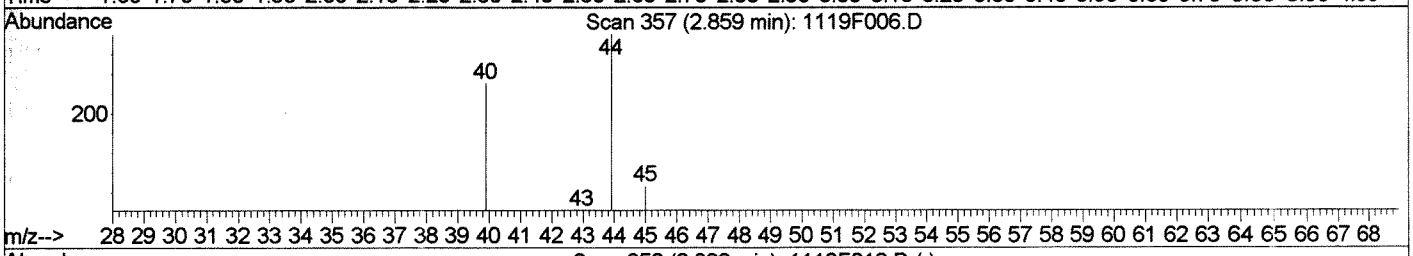
1119F006.D 111918MS46_8260.M Wed Nov 21 09:11:32 2018

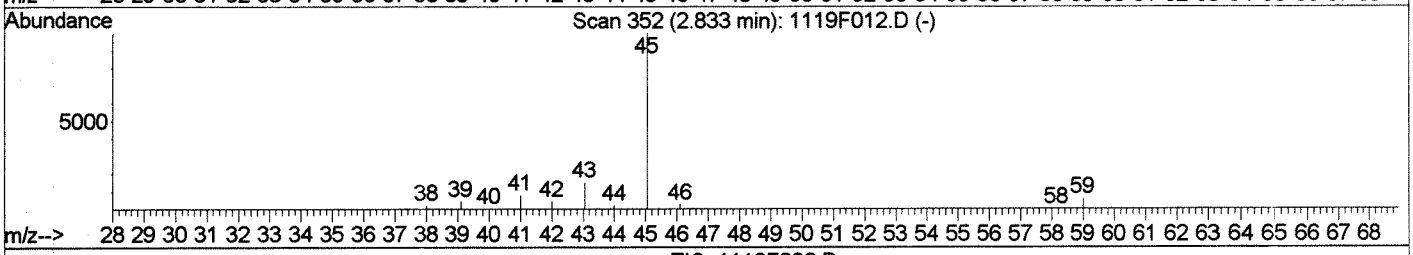
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:11 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(16) 2-Propanol (Isopropyl Alcohol) (T)

2.86min 1.25PPB m

response 72

Ion	Exp%	Act%
45.00	100	100
44.00	3.90	222.22#
59.00	5.70	0.00
0.00	0.00	0.00

Manual Integration:

After

Missed peak

11/21/18

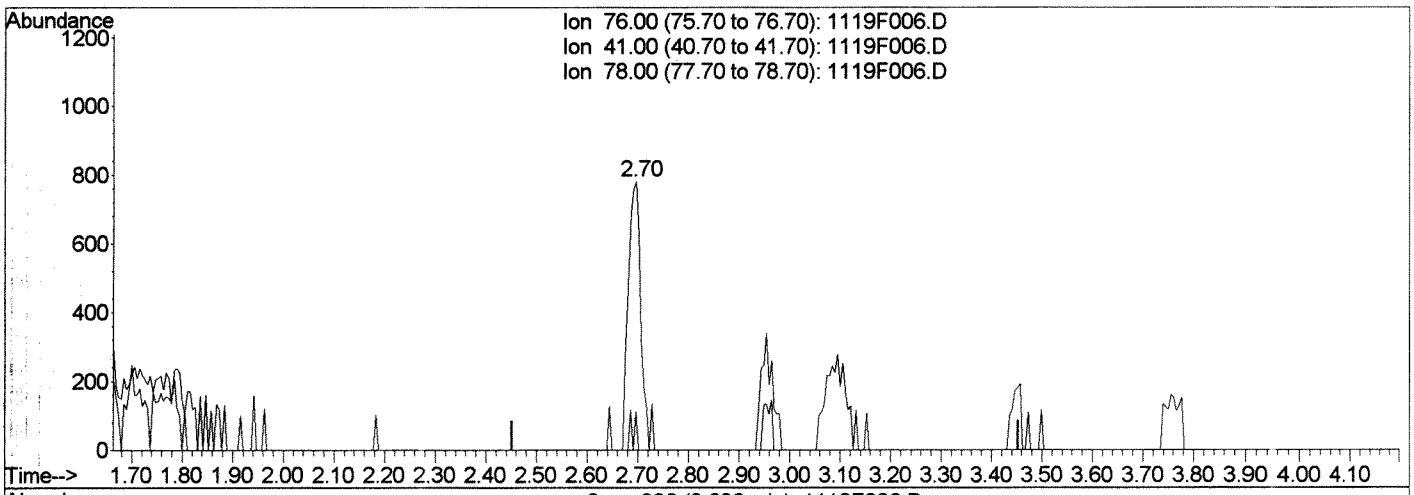
LM

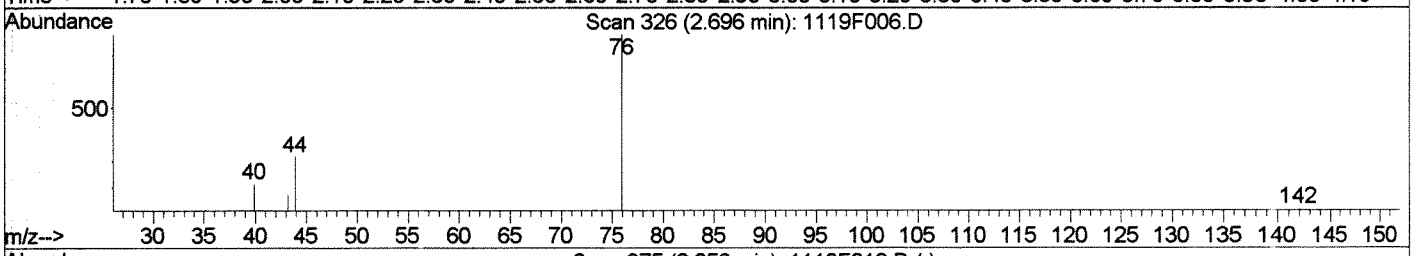
1119F006.D 111918MS46_8260.M Wed Nov 21 09:11:47 2018

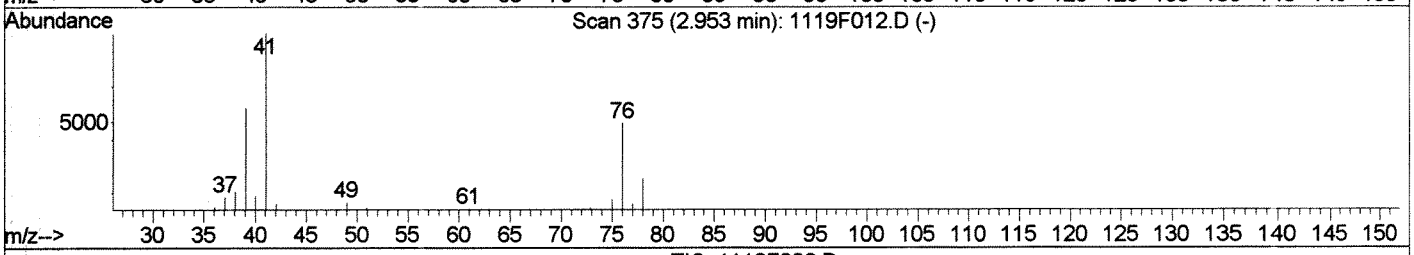
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:11 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(17) 3-Chloro-1-propene (T)

2.70min 0.70PPB

response 1360

Ion	Exp%	Act%
76.00	100	100
41.00	202.80	0.00#
78.00	36.10	14.34
0.00	0.00	0.00

Manual Integration:

Before

LM

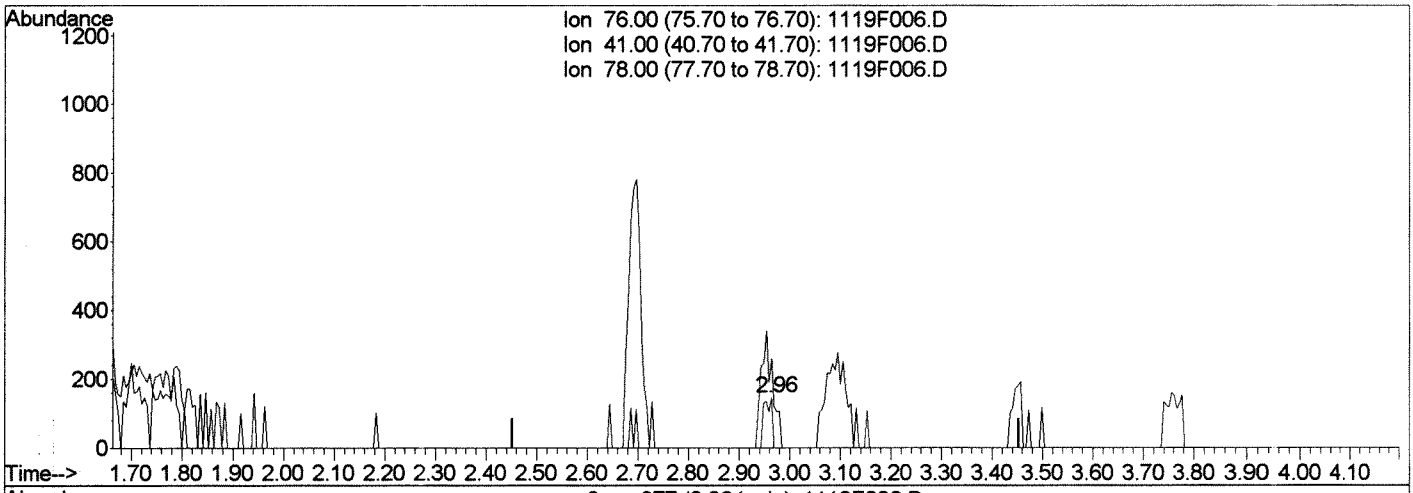
11/21/18

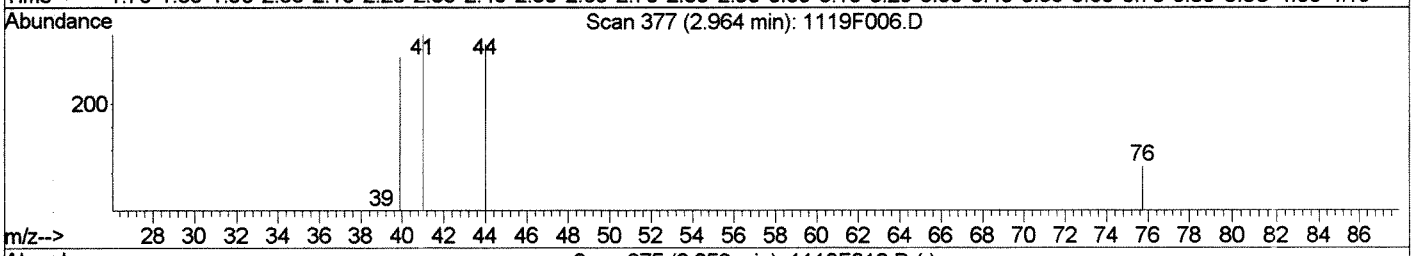
1119F006.D 111918MS46_8260.M Wed Nov 21 09:11:59 2018

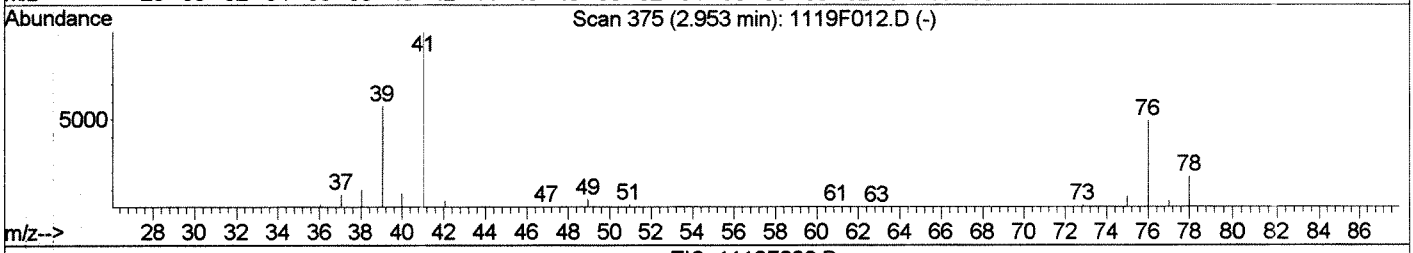
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:12 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(17) 3-Chloro-1-propene (T)

2.96min 0.08PPB m

response 162

Ion	Exp%	Act%
76.00	100	100
41.00	202.80	178.08
78.00	36.10	0.00#
0.00	0.00	0.00

Manual Integration:

After LM

Baseline correction

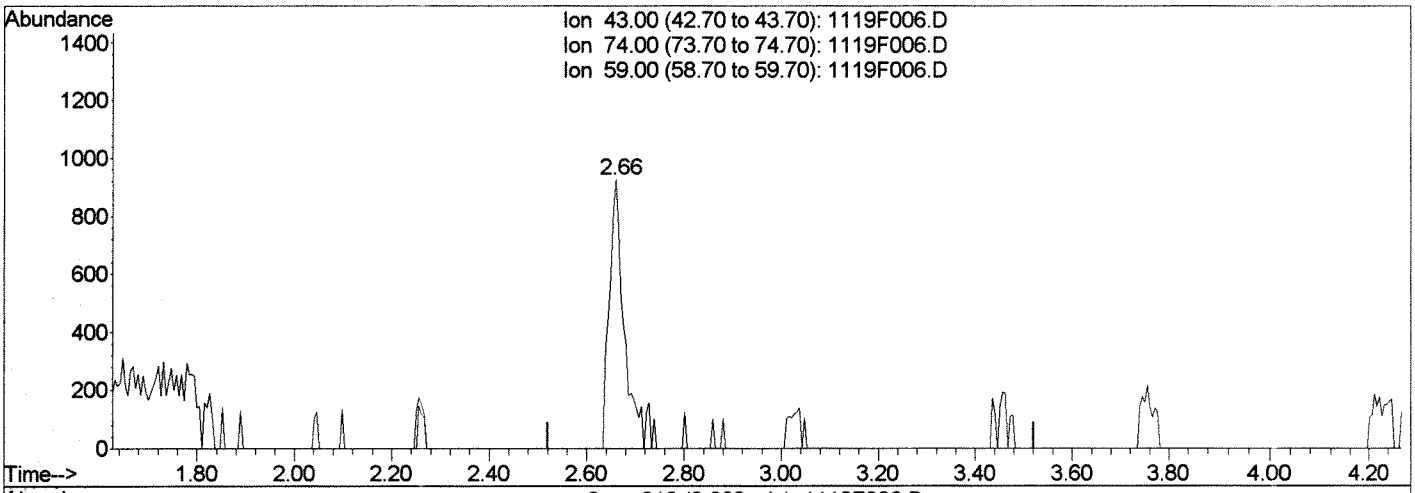
11/21/18

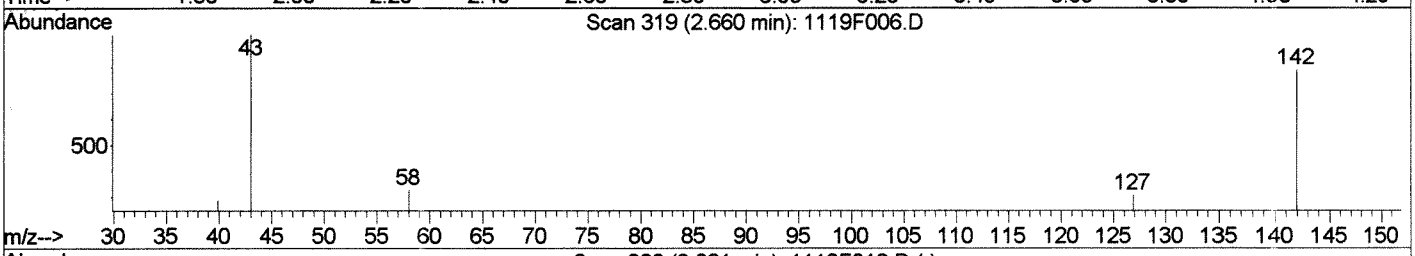
1119F006.D 111918MS46_8260.M Wed Nov 21 09:12:15 2018

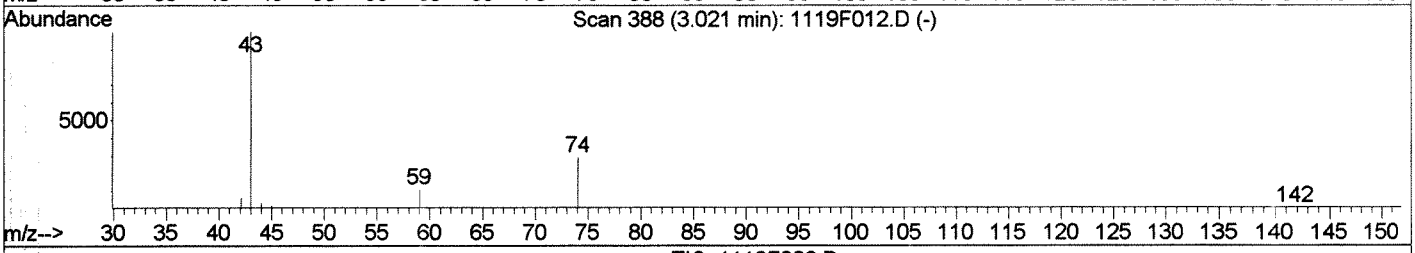
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:12 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(18) Methyl Acetate (T)

2.66min 1.27PPB

response 1927

Ion	Exp%	Act%
43.00	100	100
74.00	29.00	0.00
59.00	10.90	0.00
0.00	0.00	0.00

Manual Integration:

Before LM

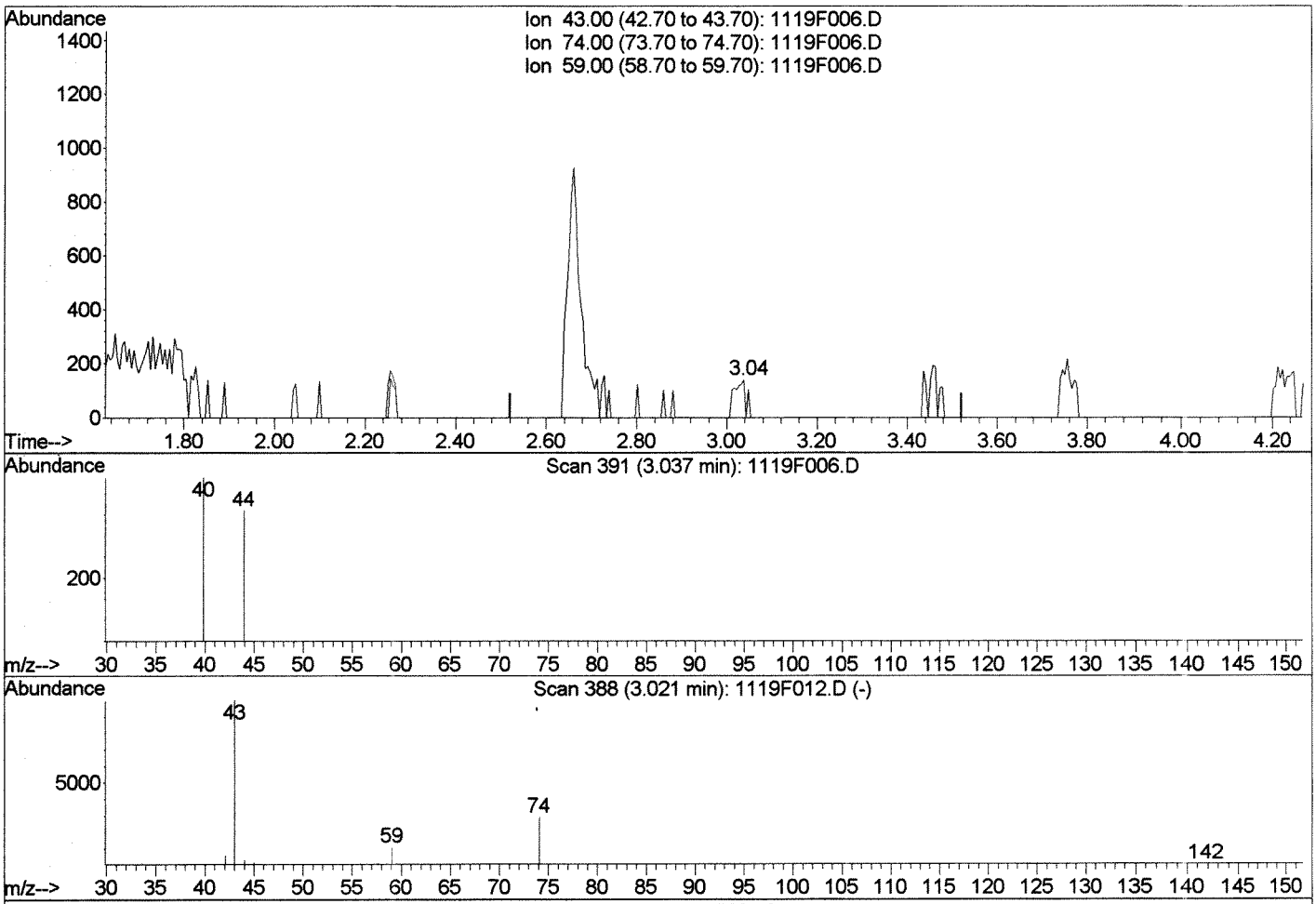
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:12:29 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:12 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(18) Methyl Acetate (T)

3.04min 0.17PPB m

response 253

Ion	Exp%	Act%
43.00	100	100
74.00	29.00	0.00
59.00	10.90	0.00
0.00	0.00	0.00

Manual Integration:

After LM

Baseline correction

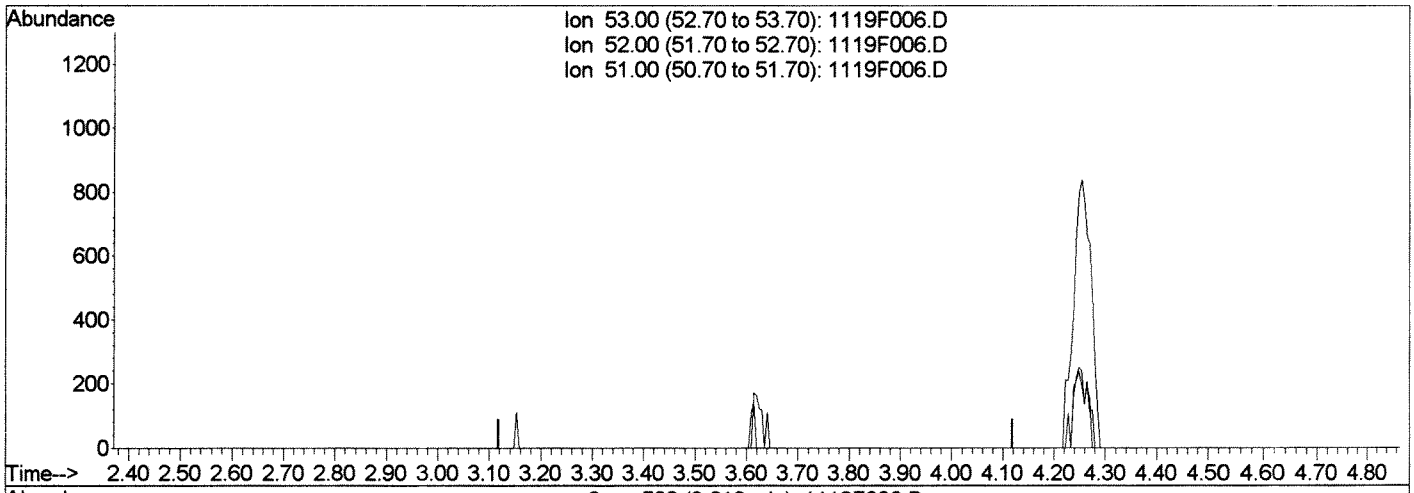
11/21/18

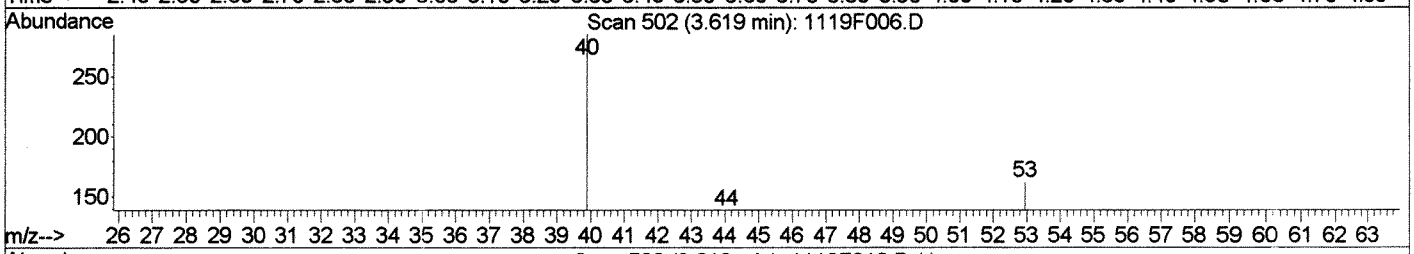
1119F006.D 111918MS46_8260.M Wed Nov 21 09:12:45 2018

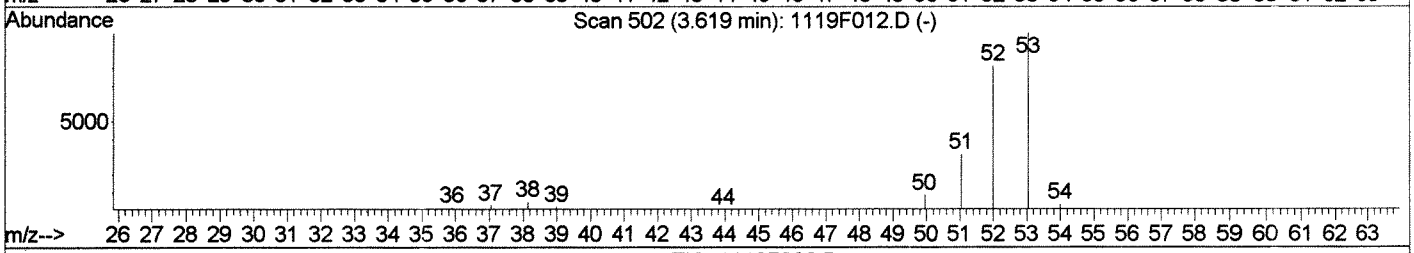
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:12 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(22) Acrylonitrile (T)

3.62min 0.00PPB

response 0

Ion	Exp%	Act%
53.00	100	0.00
52.00	81.20	0.00#
51.00	31.50	0.00#
0.00	0.00	0.00

Manual Integration:

Before LM

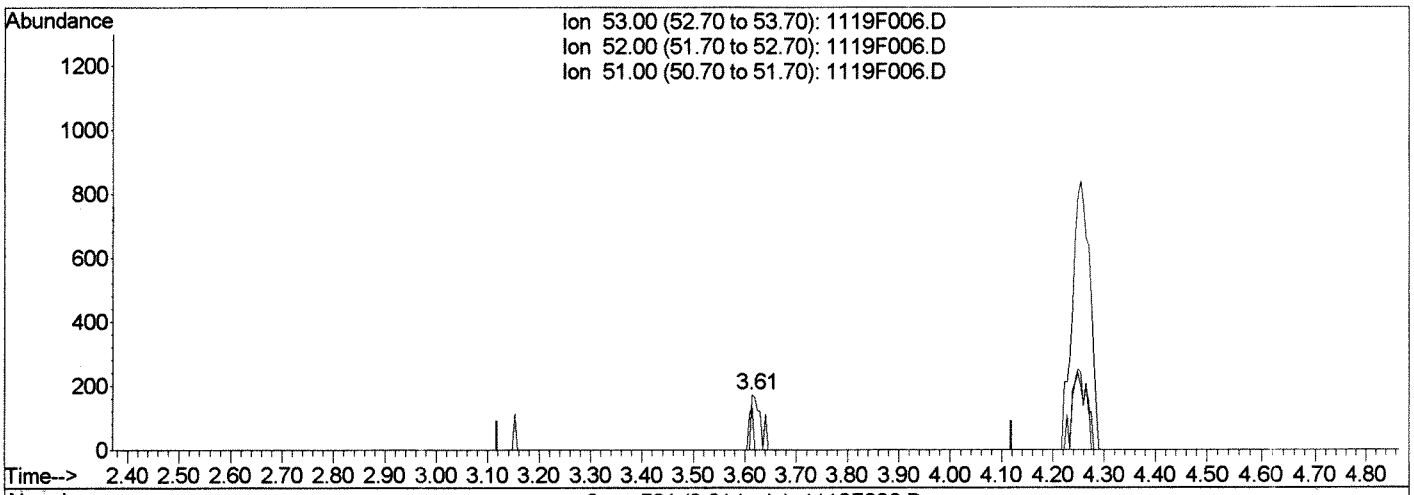
11/21/18

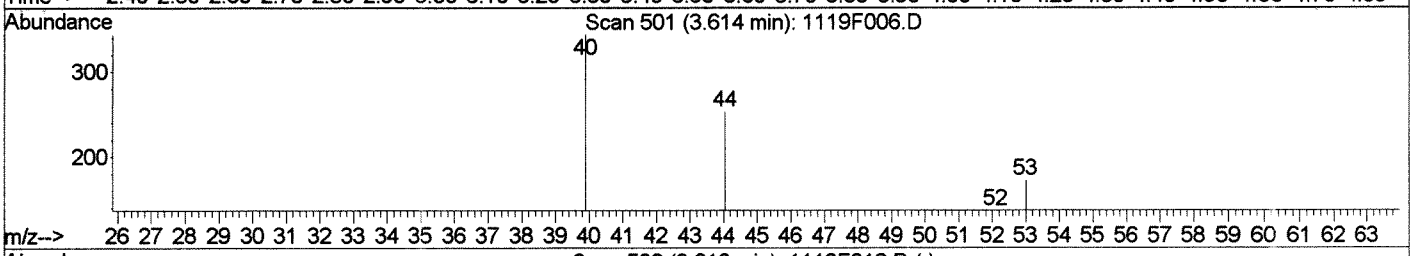
1119F006.D 111918MS46_8260.M Wed Nov 21 09:15:48 2018

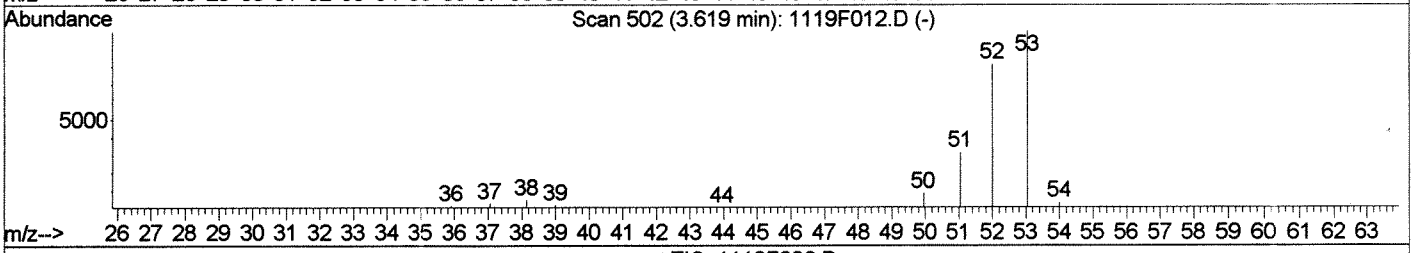
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:15 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(22) Acrylonitrile (T)

3.61min 0.23PPB m

response 181

Ion	Exp%	Act%
53.00	100	100
52.00	81.20	79.65
51.00	31.50	0.00#
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

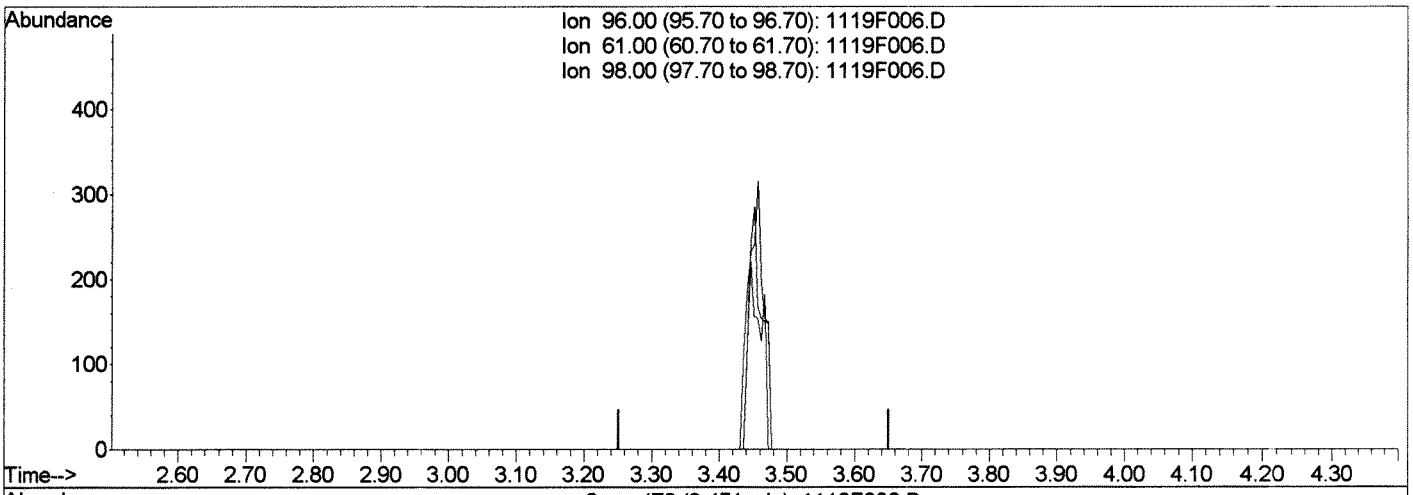
11/21/18

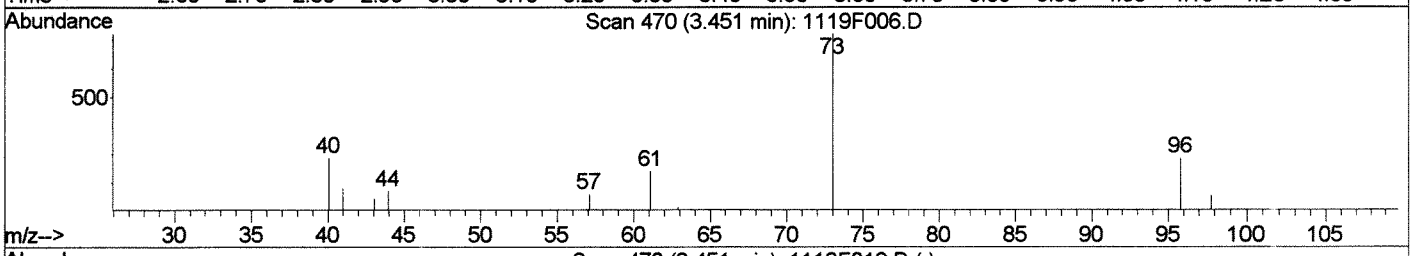
1119F006.D 111918MS46_8260.M Wed Nov 21 09:16:00 2018

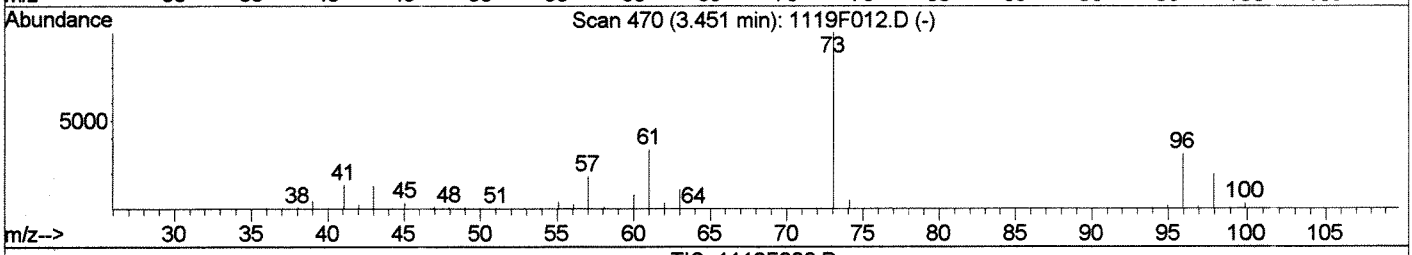
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:15 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(24) trans-1,2-Dichloroethene (T)

3.45min 0.00PPB

response 0

Ion	Exp%	Act%
96.00	100	0.00
61.00	107.70	0.00#
98.00	63.30	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

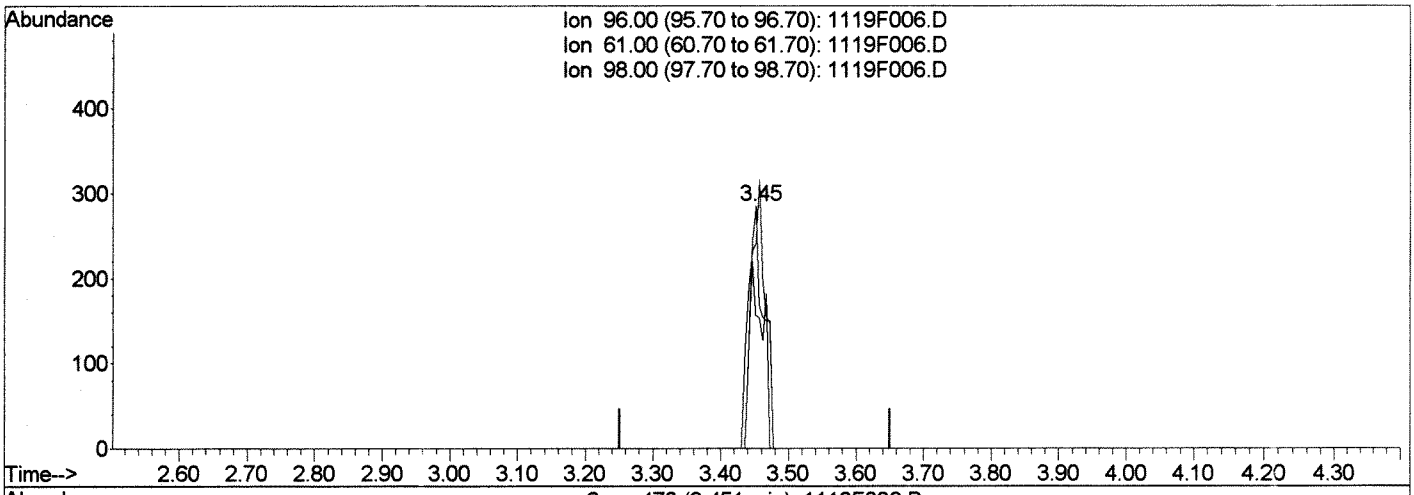
11/21/18

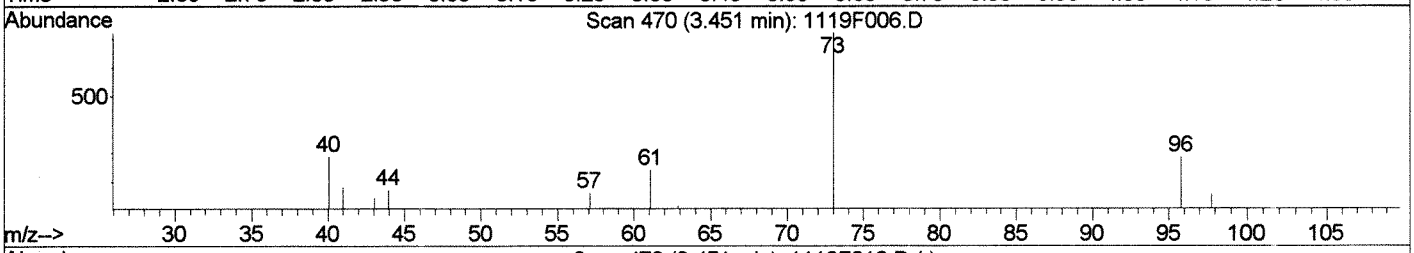
1119F006.D 111918MS46_8260.M Wed Nov 21 09:16:08 2018

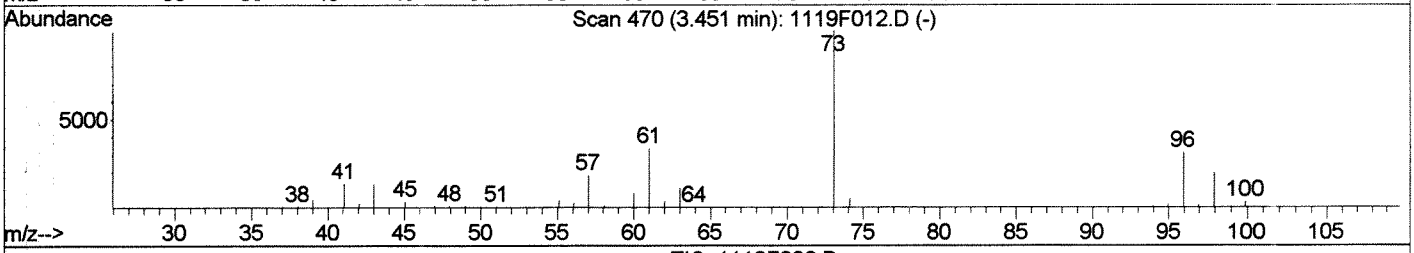
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:16 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(24) trans-1,2-Dichloroethene (T)

3.45min 0.10PPB m

response 397

Ion	Exp%	Act%
96.00	100	100
61.00	107.70	84.56
98.00	63.30	54.74
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

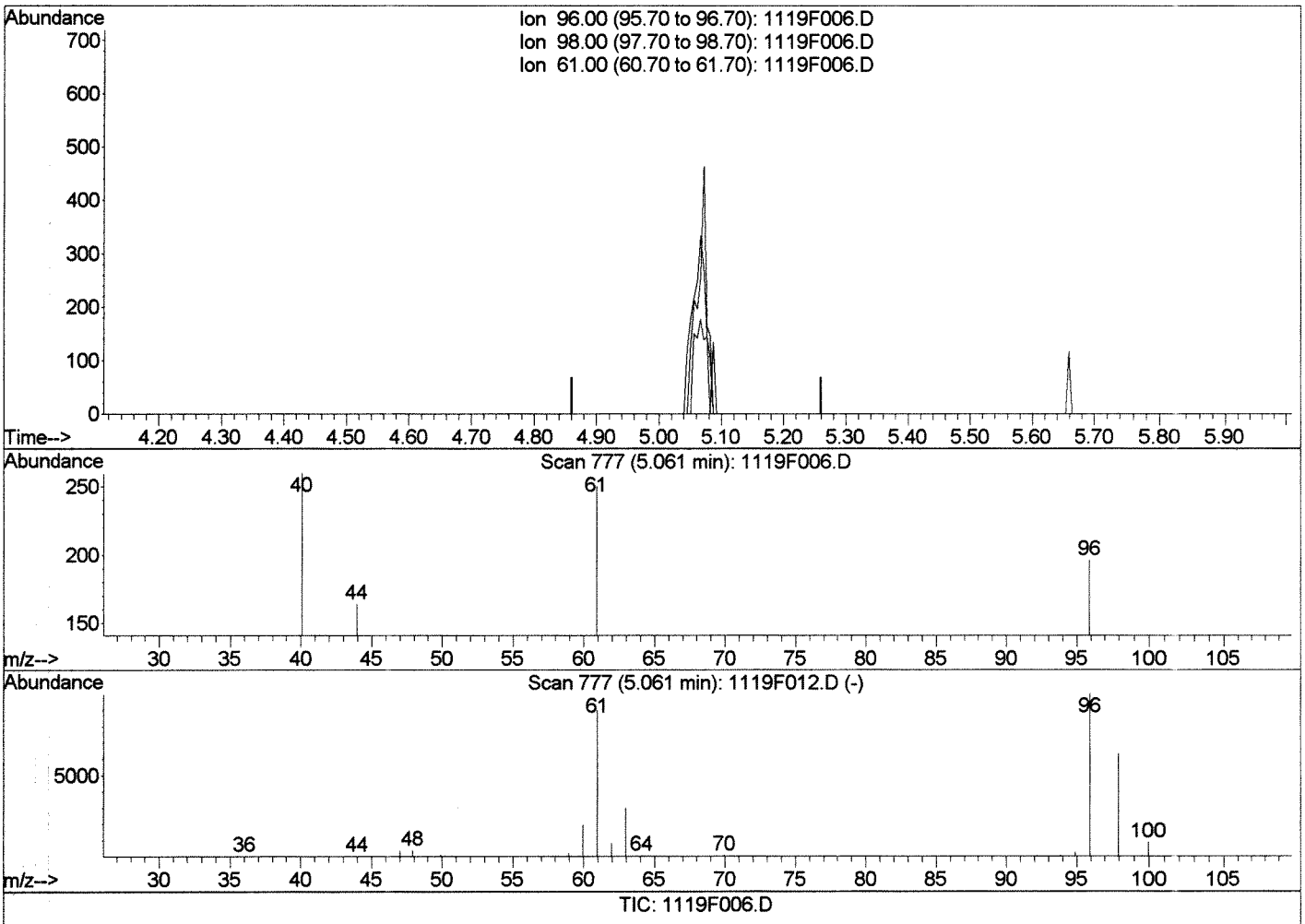
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:16:14 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:16 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(32) cis-1,2-Dichloroethene (T)

5.06min 0.00PPB

response 0

Ion	Exp%	Act%
96.00	100	0.00
98.00	63.00	0.00#
61.00	97.70	0.00#
0.00	0.00	0.00

Manual Integration:

Before LM

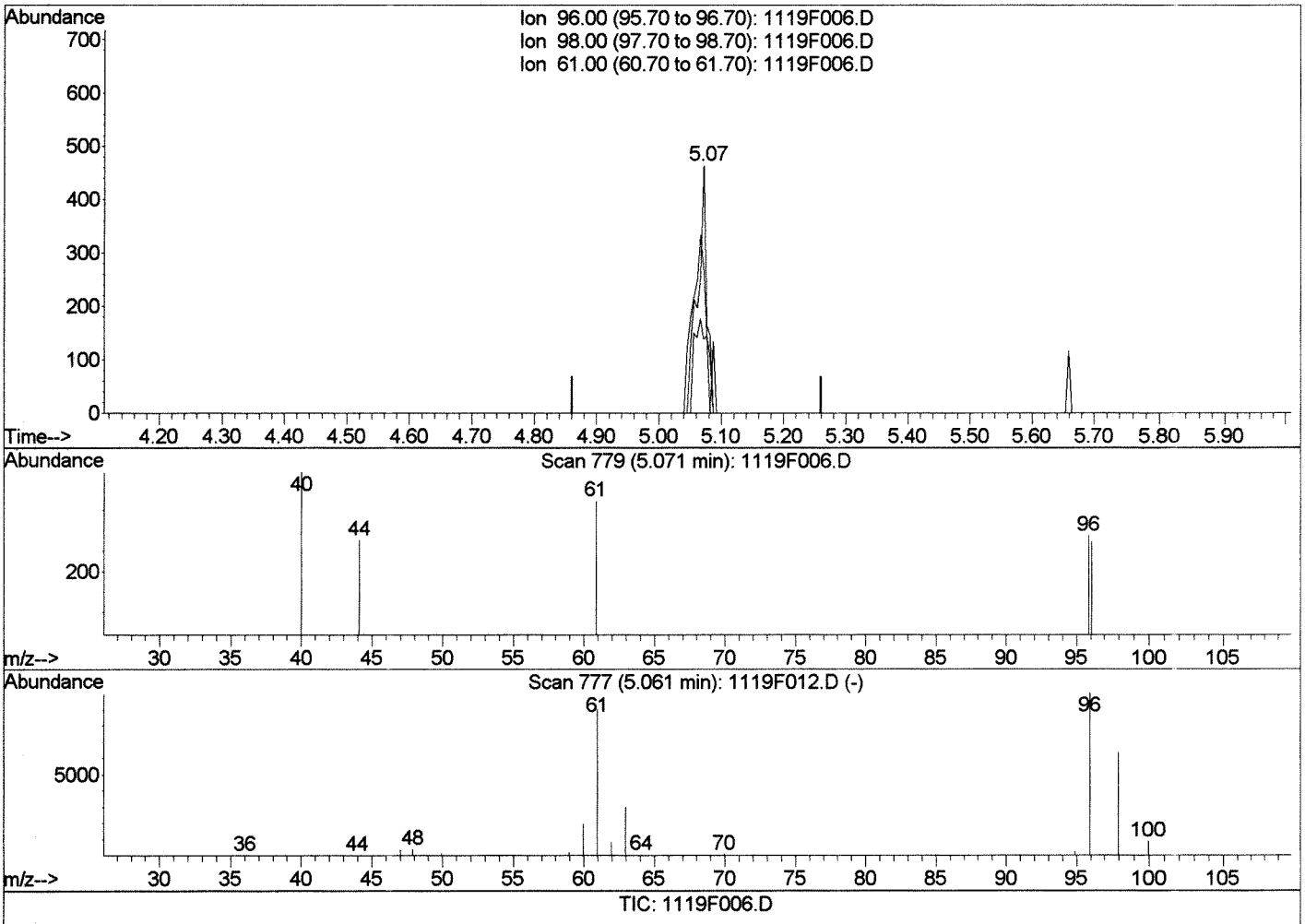
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:16:58 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:16 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(32) cis-1,2-Dichloroethene (T)

5.07min 0.10PPB m

response 491

Ion	Exp%	Act%
96.00	100	100
98.00	63.00	58.72
61.00	97.70	114.47
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak ✓

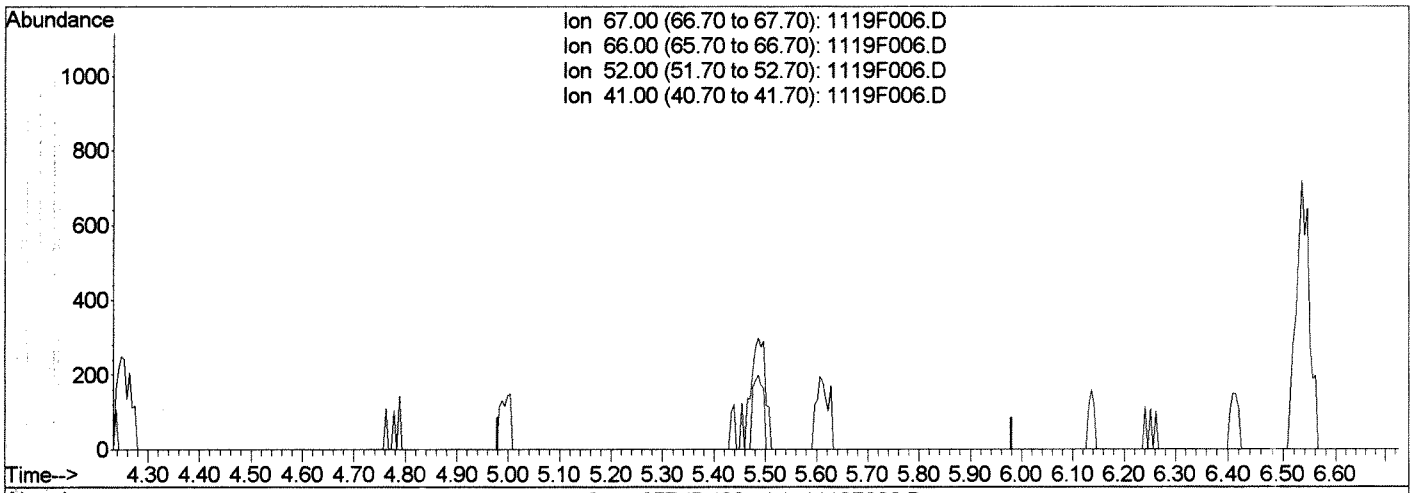
11/21/18

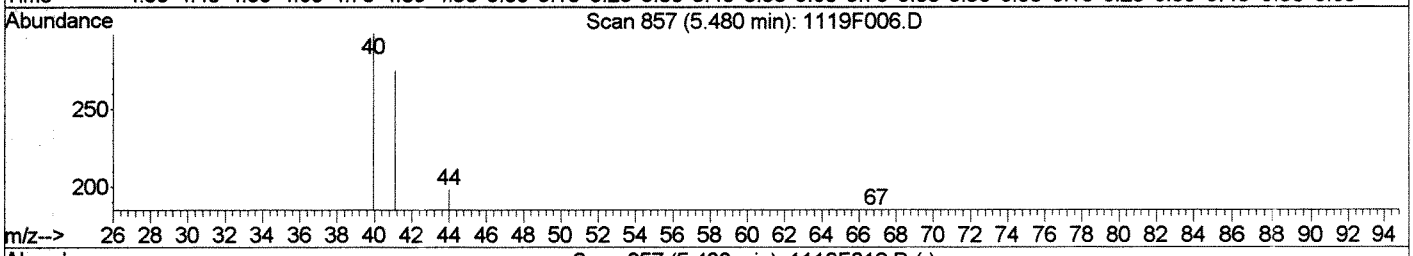
1119F006.D 111918MS46_8260.M Wed Nov 21 09:17:04 2018

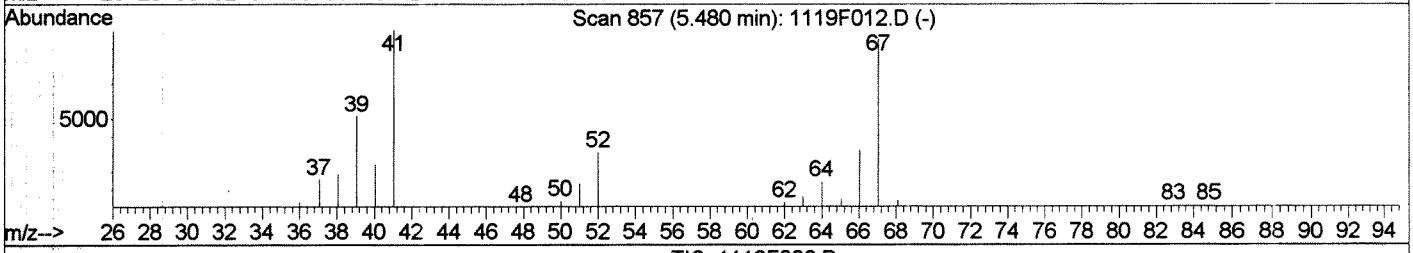
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:17 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(36) Methacrylonitrile (T)

5.48min 0.00PPB

response 0

Ion	Exp%	Act%
67.00	100	0.00
66.00	34.20	0.00#
52.00	32.70	0.00#
41.00	105.20	0.00#

Manual Integration:

Before

LM

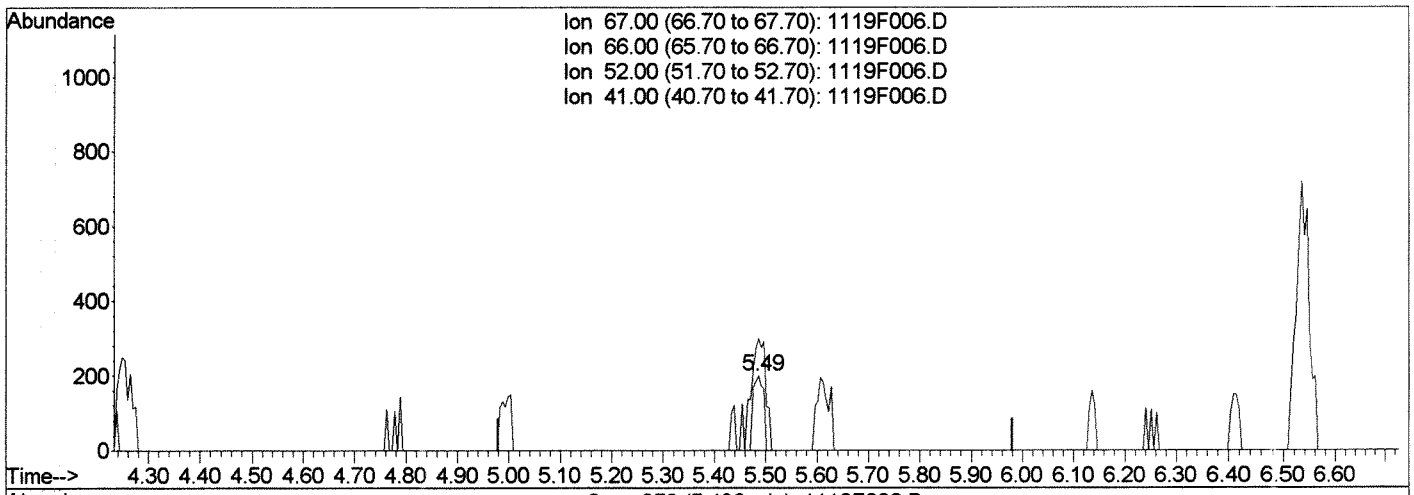
11/21/18

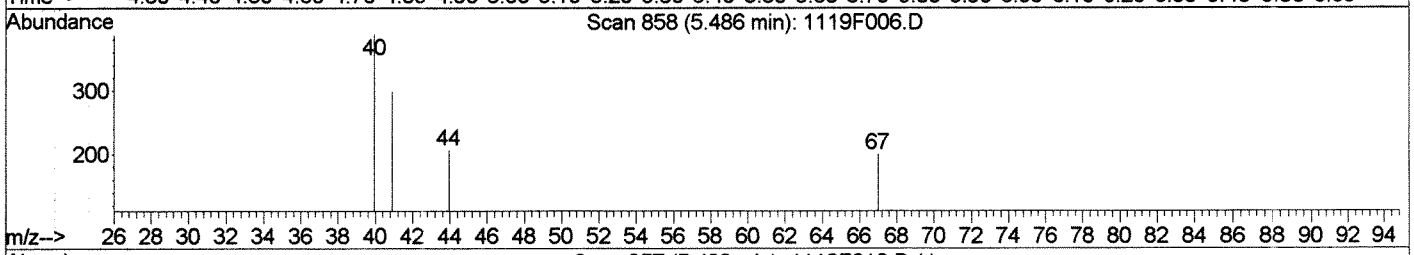
1119F006.D 111918MS46_8260.M Wed Nov 21 09:18:01 2018

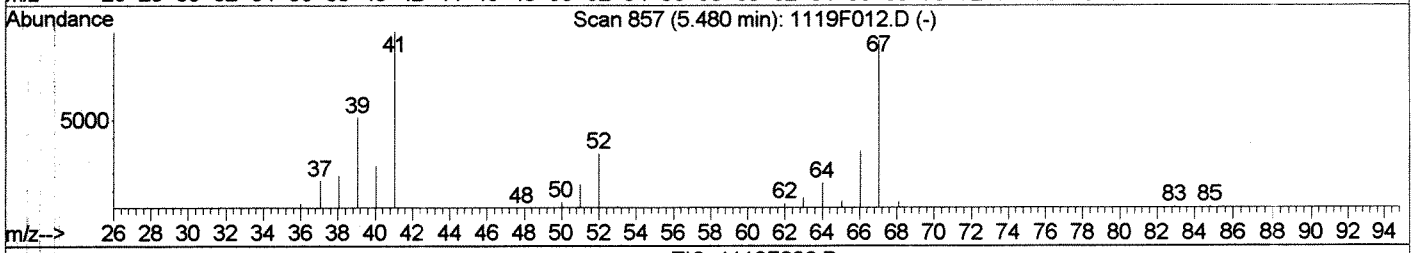
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:18 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(36) Methacrylonitrile (T)

5.49min 0.24PPB m

response 280

Ion	Exp%	Act%
67.00	100	100
66.00	34.20	0.00#
52.00	32.70	0.00#
41.00	105.20	149.50#

Manual Integration:

After LM

Missed peak

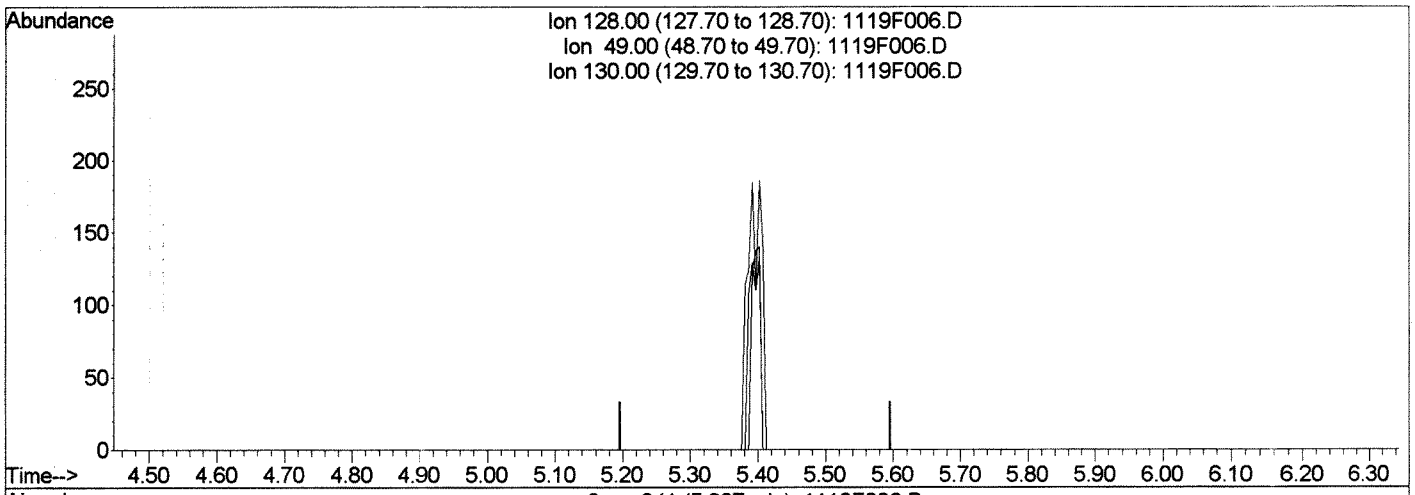
11/21/18

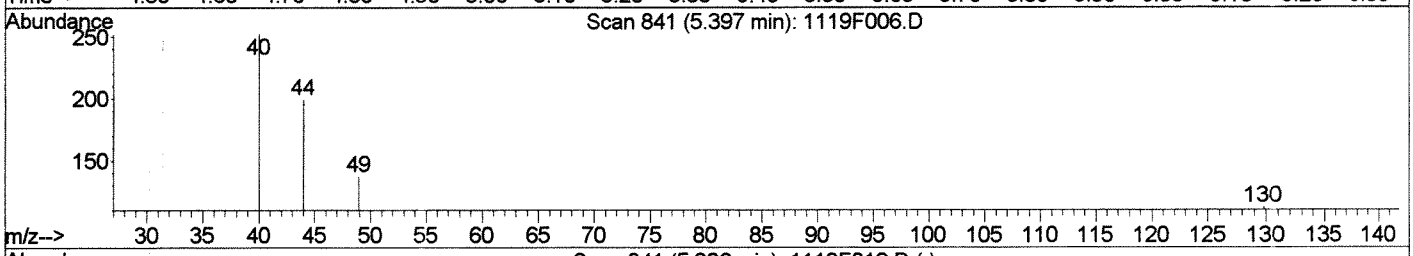
1119F006.D 111918MS46_8260.M Wed Nov 21 09:18:11 2018

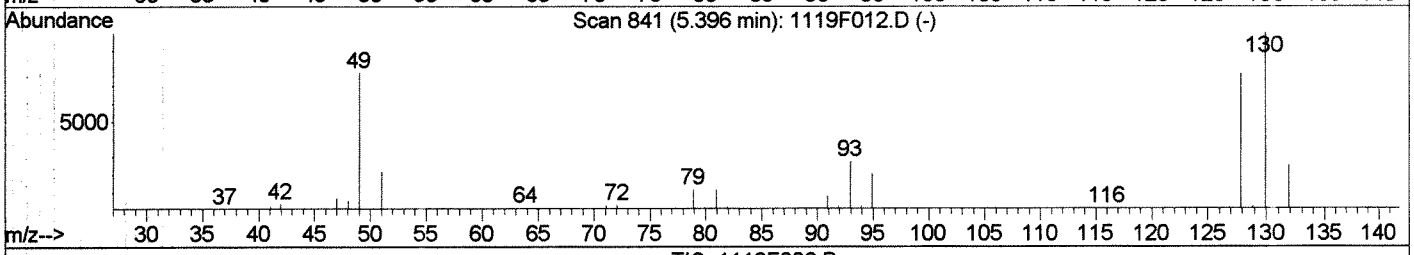
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:18 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(37) Bromochloromethane (T)

5.40min 0.00PPB

response 0

Ion	Exp%	Act%
128.00	100	0.00
49.00	100.70	0.00#
130.00	130.00	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

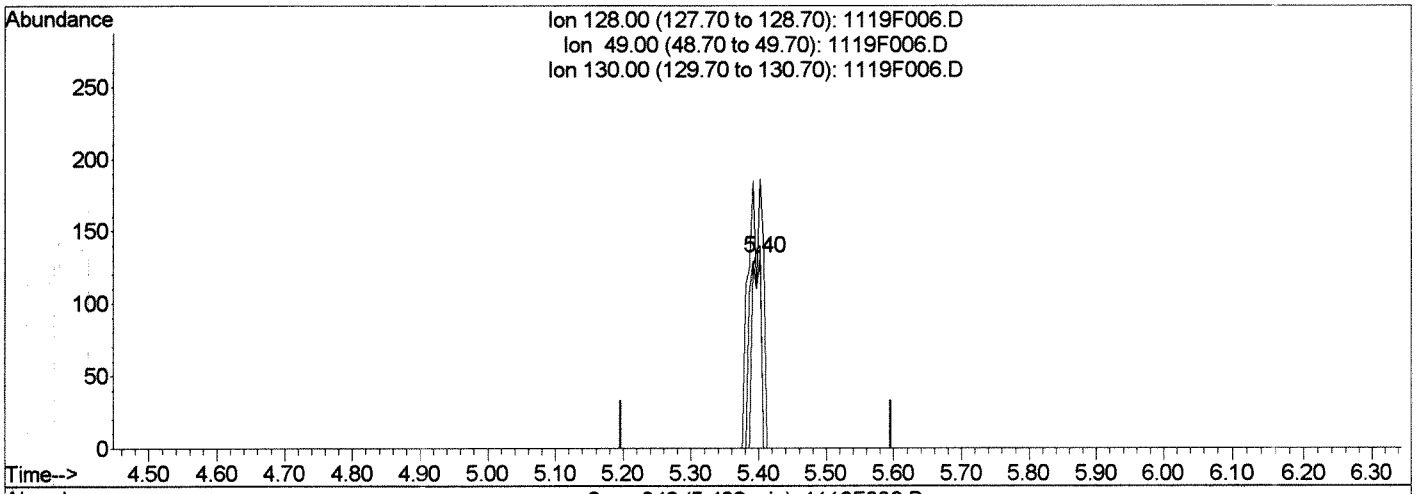
11/21/18

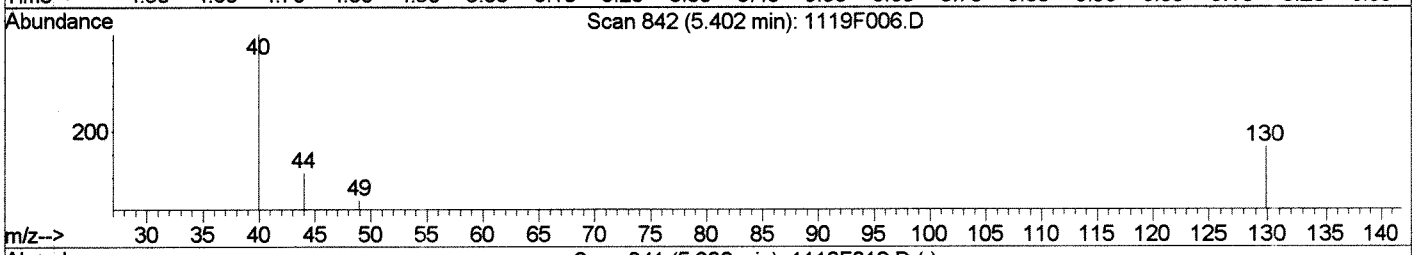
1119F006.D 111918MS46_8260.M Wed Nov 21 09:18:21 2018

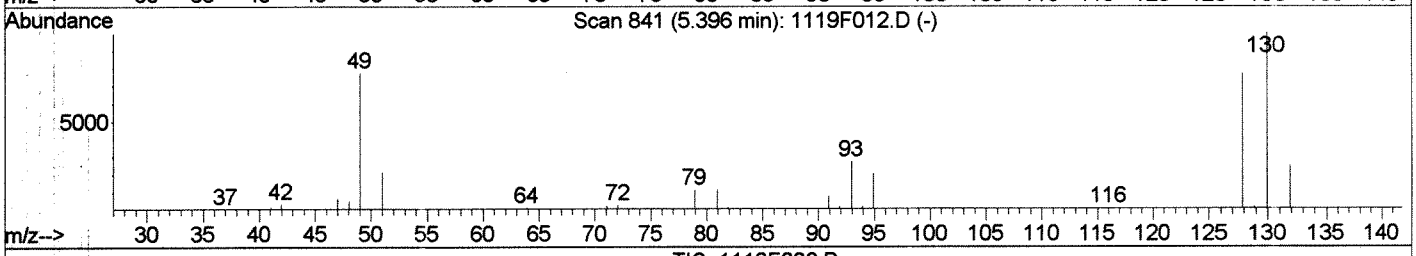
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:18 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(37) Bromochloromethane (T)

5.40min 0.06PPB m

response 151

Ion	Exp%	Act%
128.00	100	100
49.00	100.70	106.06
130.00	130.00	140.91
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak ✓

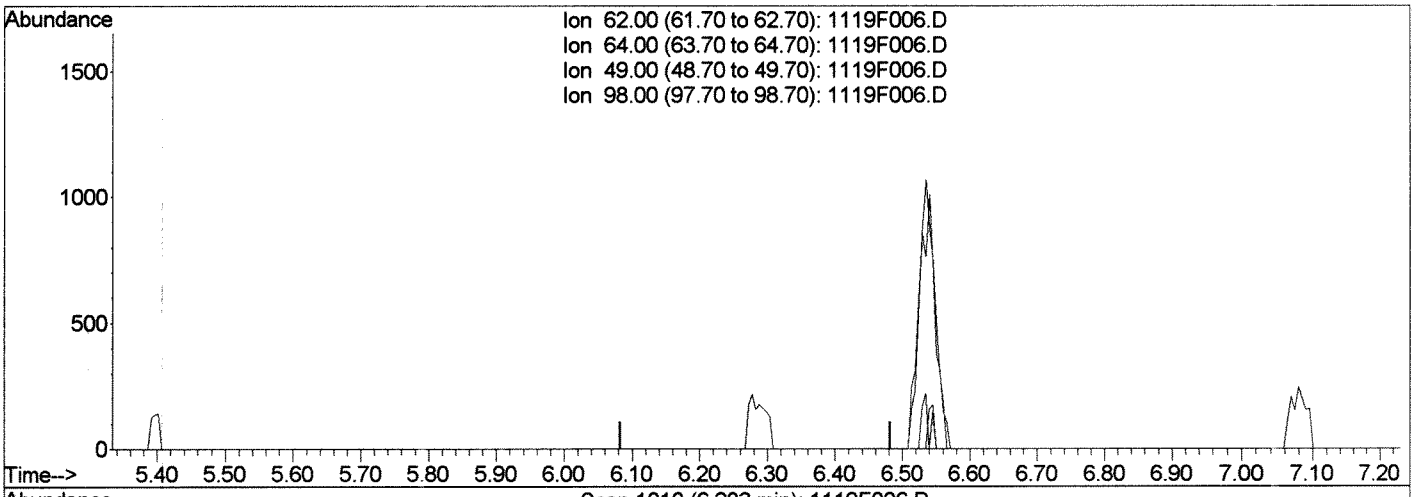
11/21/18

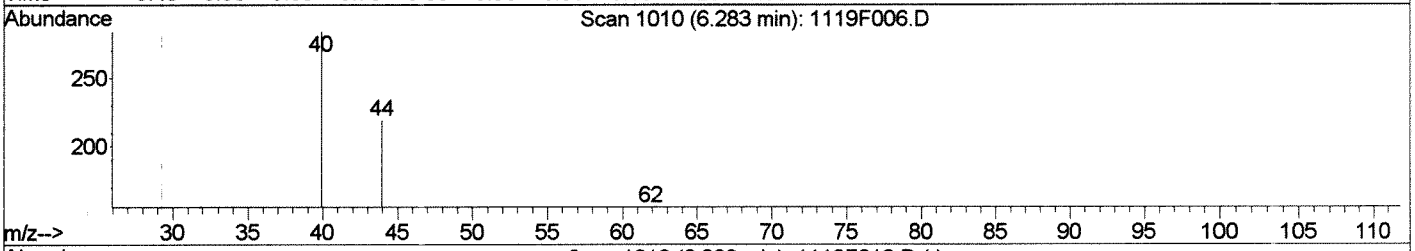
1119F006.D 111918MS46_8260.M Wed Nov 21 09:18:33 2018

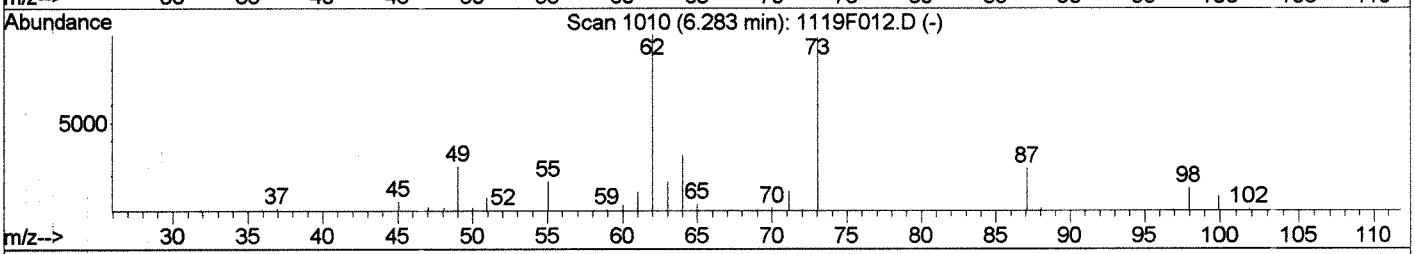
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:18 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(48) 1,2-Dichloroethane (T)

6.28min 0.00PPB

response 0

Ion	Exp%	Act%
62.00	100	0.00
64.00	31.60	0.00#
49.00	25.20	0.00
98.00	12.90	0.00

Manual Integration:

Before LM

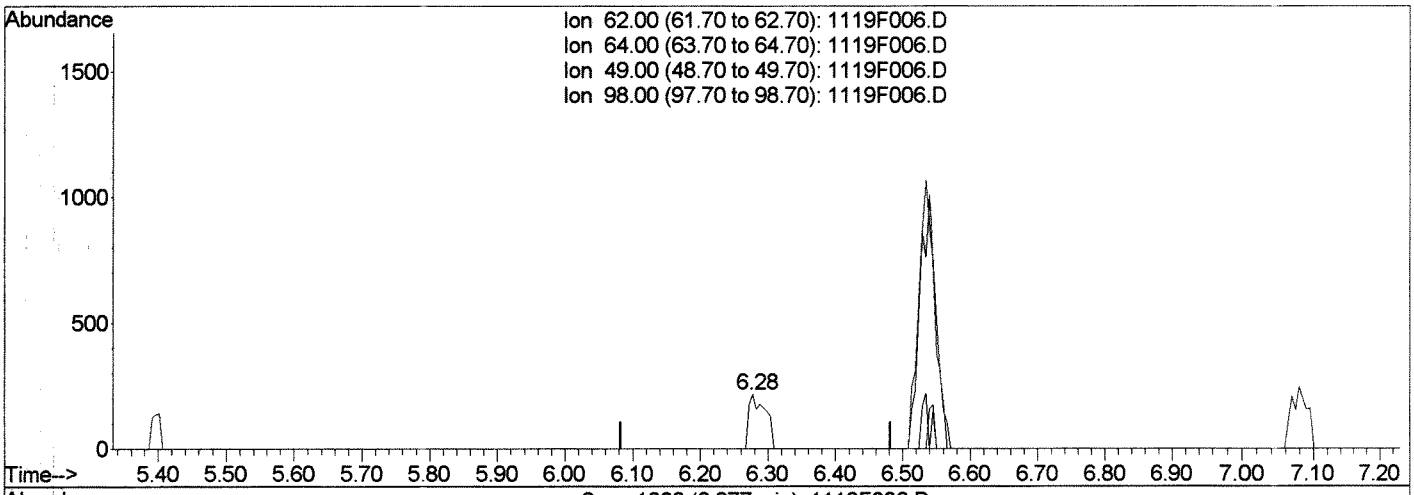
11/21/18

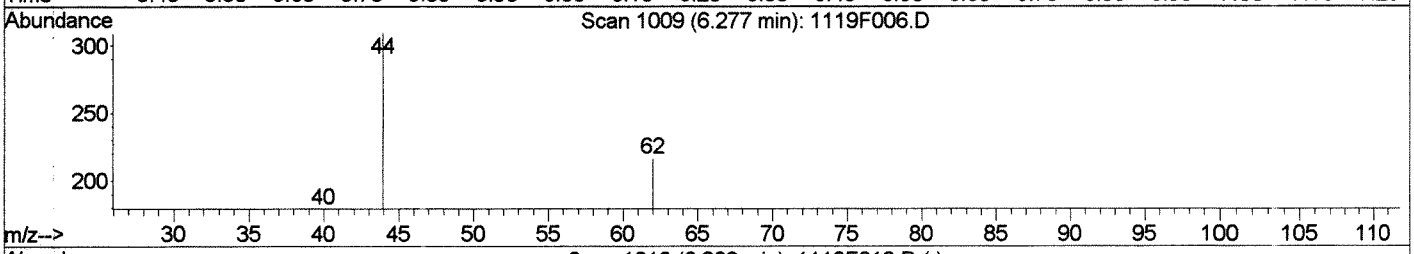
1119F006.D 111918MS46_8260.M Wed Nov 21 09:19:27 2018

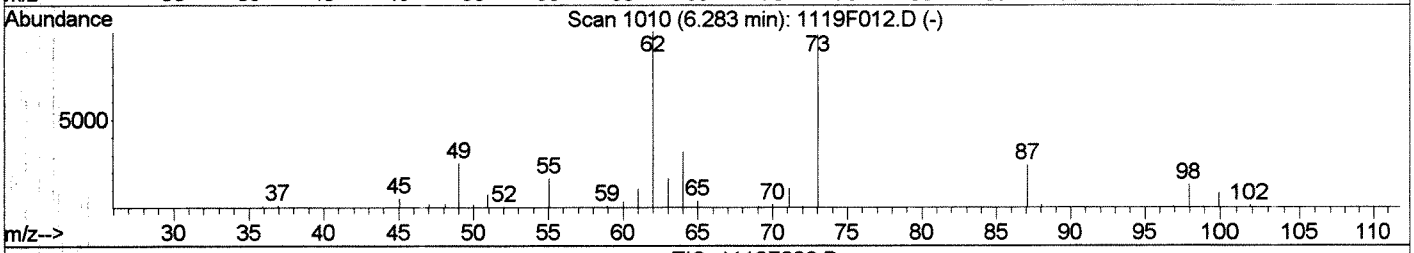
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:19 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(48) 1,2-Dichloroethane (T)

6.28min 0.09PPB m

response 365

Ion	Exp%	Act%
62.00	100	100
64.00	31.60	0.00#
49.00	25.20	0.00
98.00	12.90	0.00

Manual Integration:

After LM

Missed peak

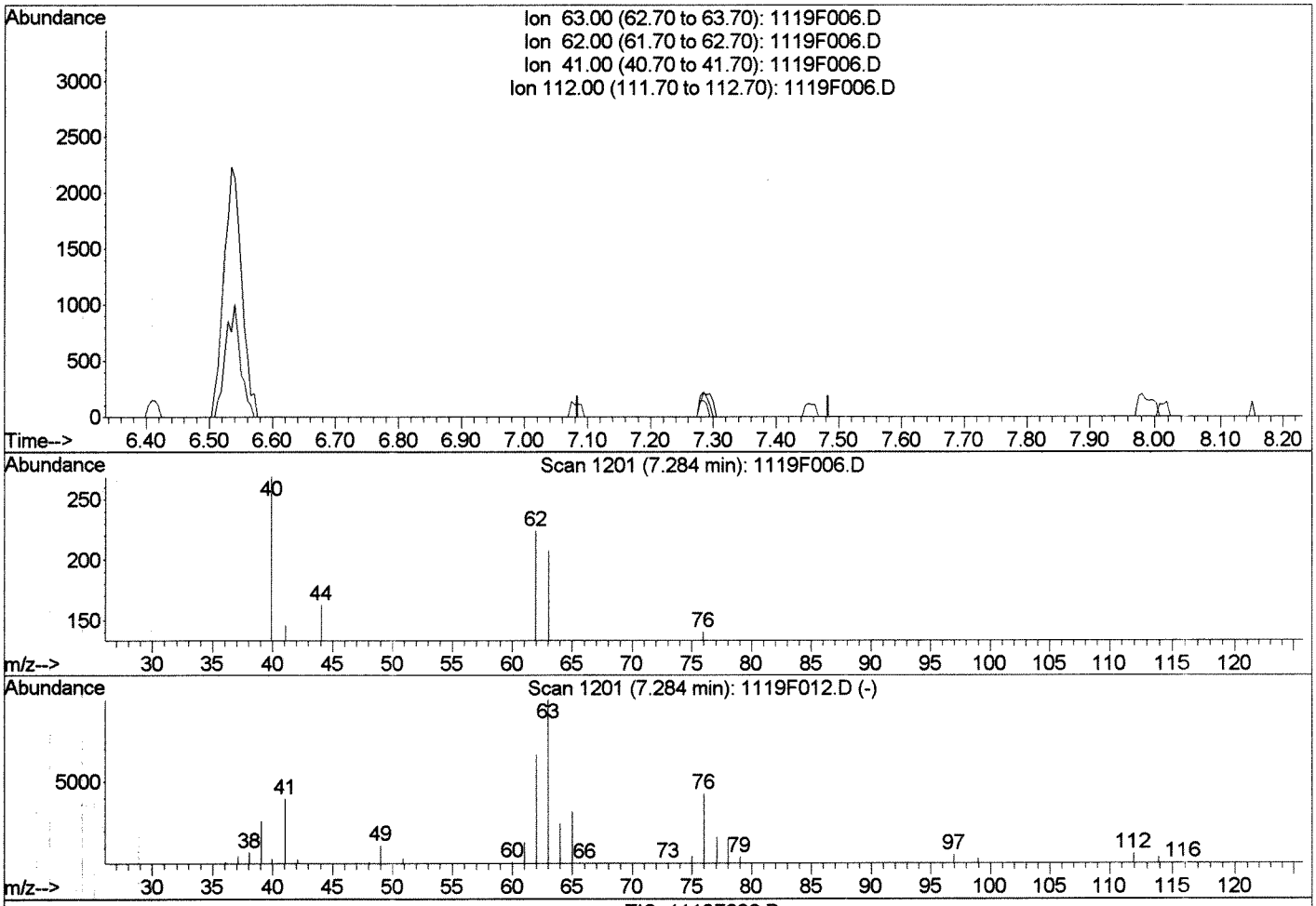
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:19:45 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:19 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(52) 1,2-Dichloropropane (CT)

7.28min 0.00PPB

response 0

Ion	Exp%	Act%
63.00	100	0.00
62.00	66.50	0.00#
41.00	39.60	0.00#
112.00	6.50	0.00

Manual Integration:

Before

LM

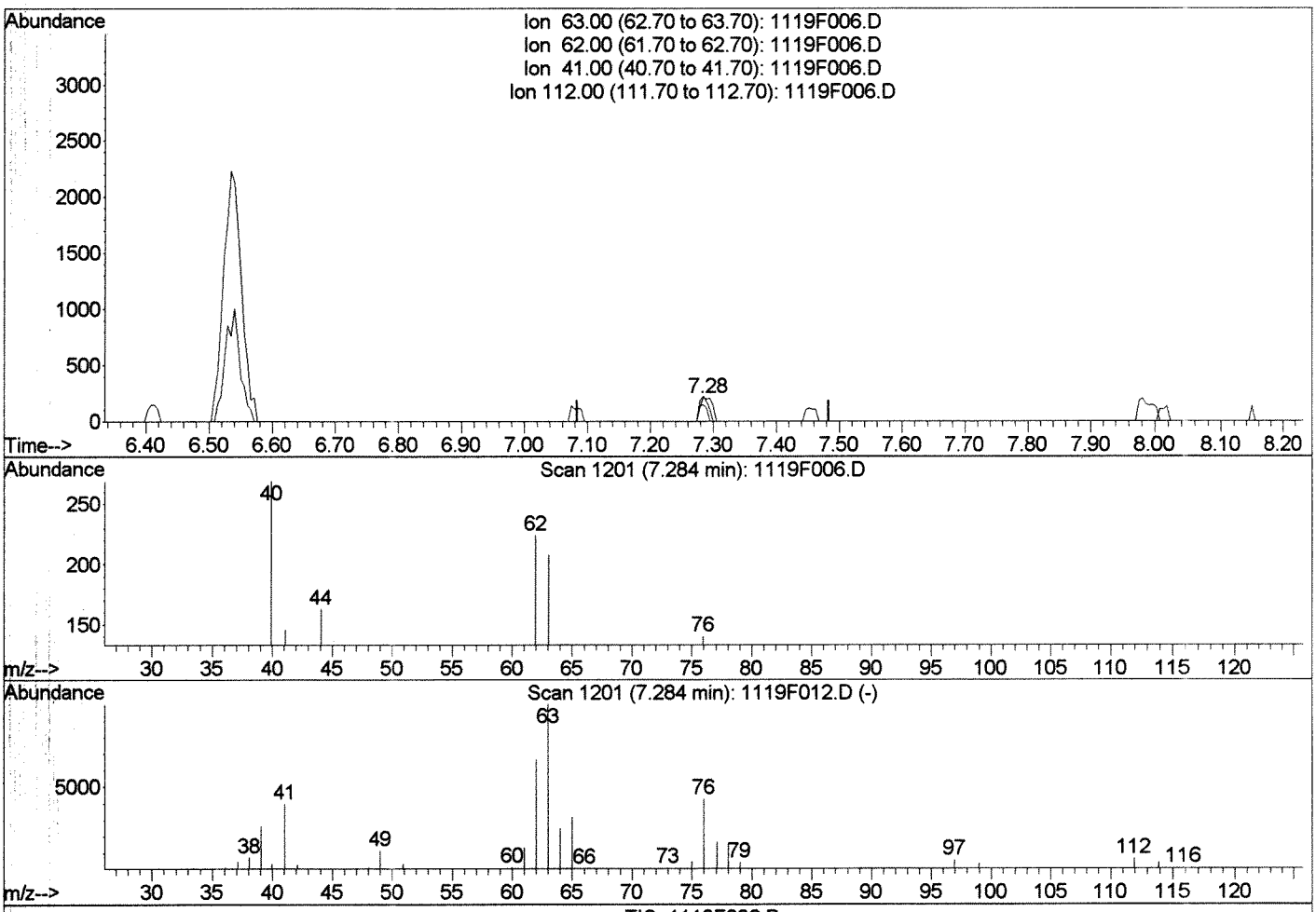
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:20:06 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:20 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(52) 1,2-Dichloropropane (CT)

7.28min 0.07PPB m

response 276

Ion	Exp%	Act%
63.00	100	100
62.00	66.50	107.69#
41.00	39.60	70.19#
112.00	6.50	0.00

Manual Integration:

After LM

Missed peak

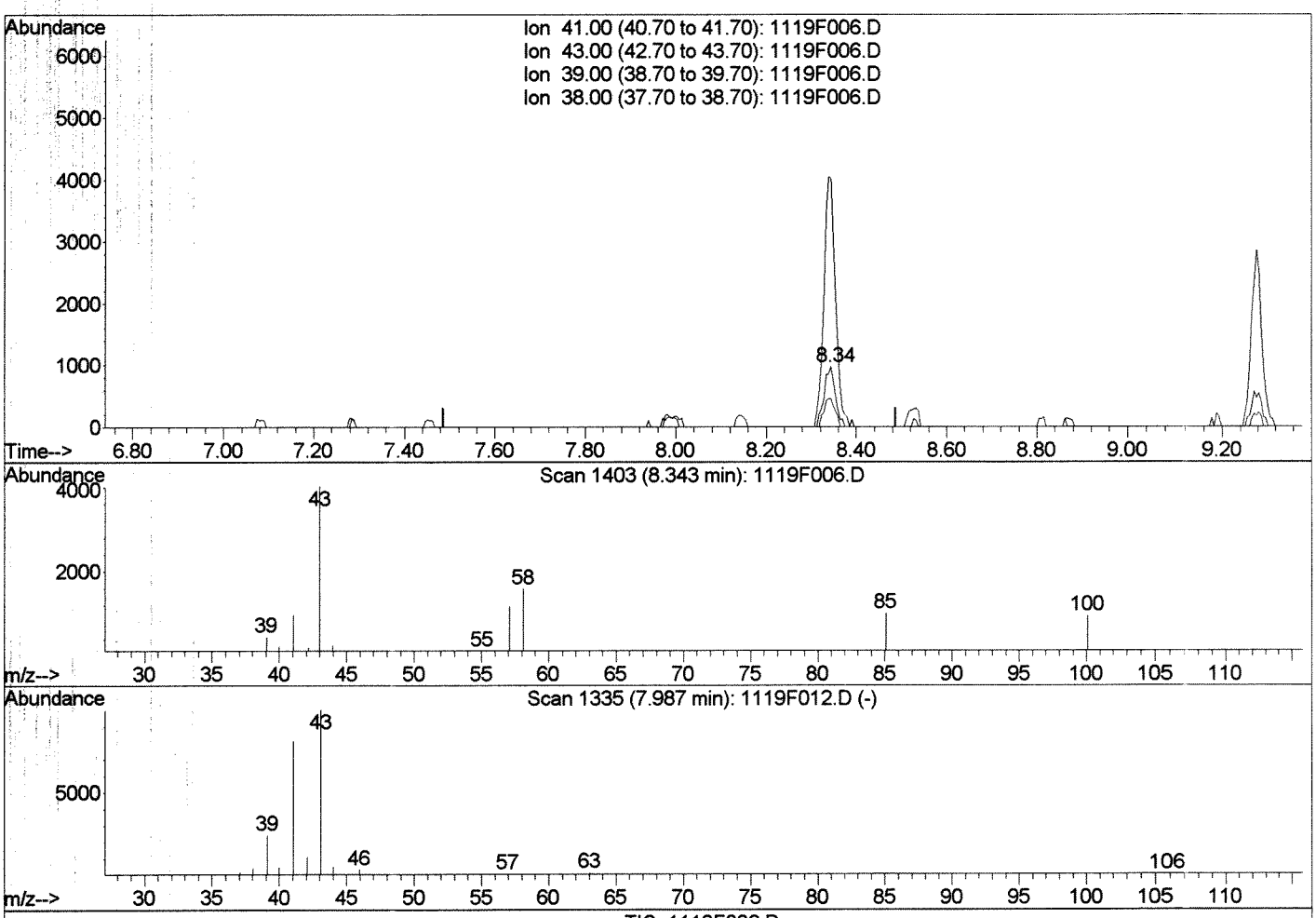
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:20:14 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:20 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(57) 2-Nitropropane (T)

8.34min 3.36PPB

response 1696

Ion	Exp%	Act%
41.00	100	100
43.00	122.90	411.81#
39.00	29.70	47.02
38.00	5.70	0.00

Manual Integration:

Before

LM

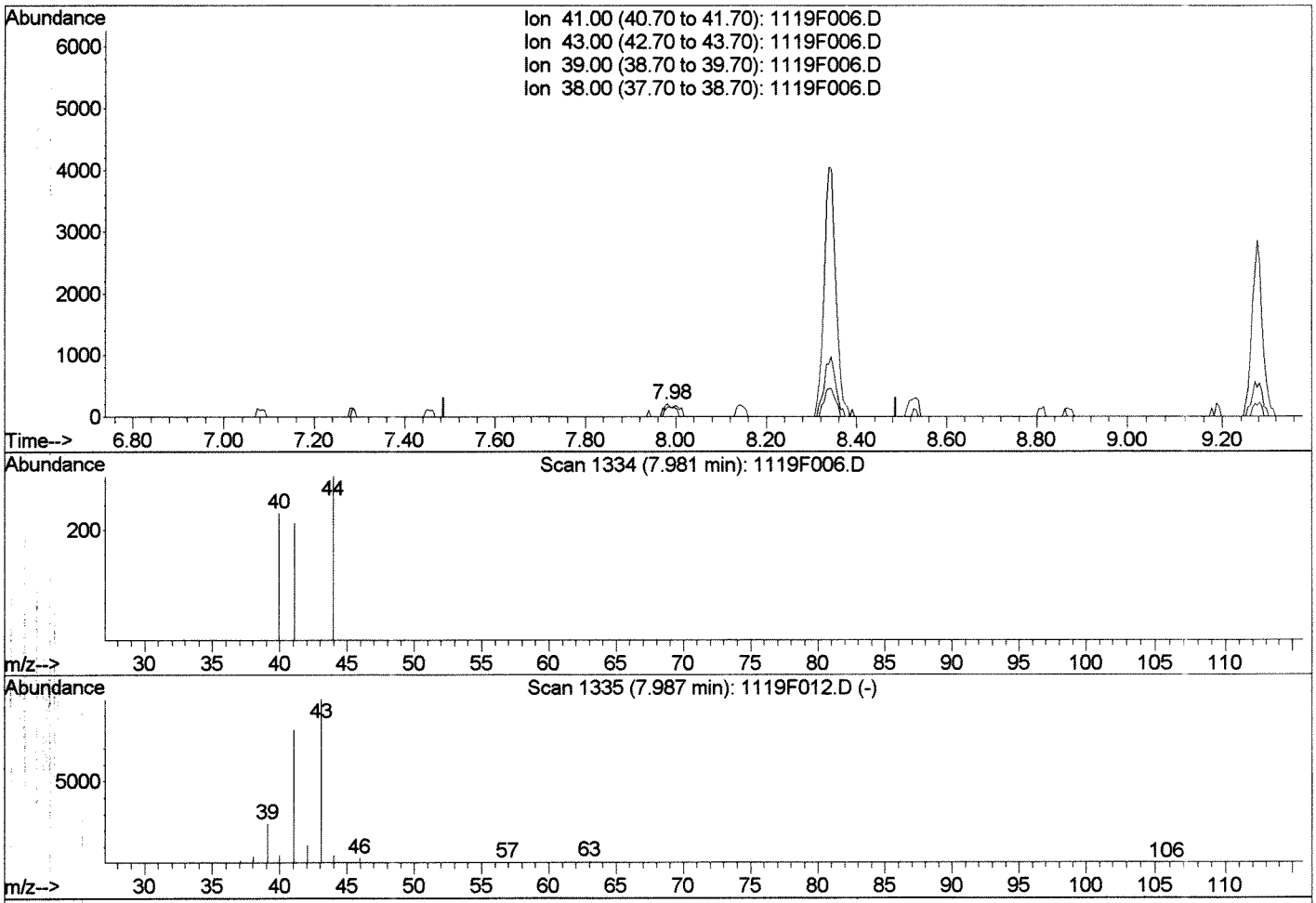
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:20:46 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:20 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(57) 2-Nitropropane (T)

7.98min 0.59PPB m

response 297

Ion	Exp%	Act%
41.00	100	100
43.00	122.90	76.35#
39.00	29.70	0.00
38.00	5.70	0.00

Manual Integration:

After LM

Baseline correction

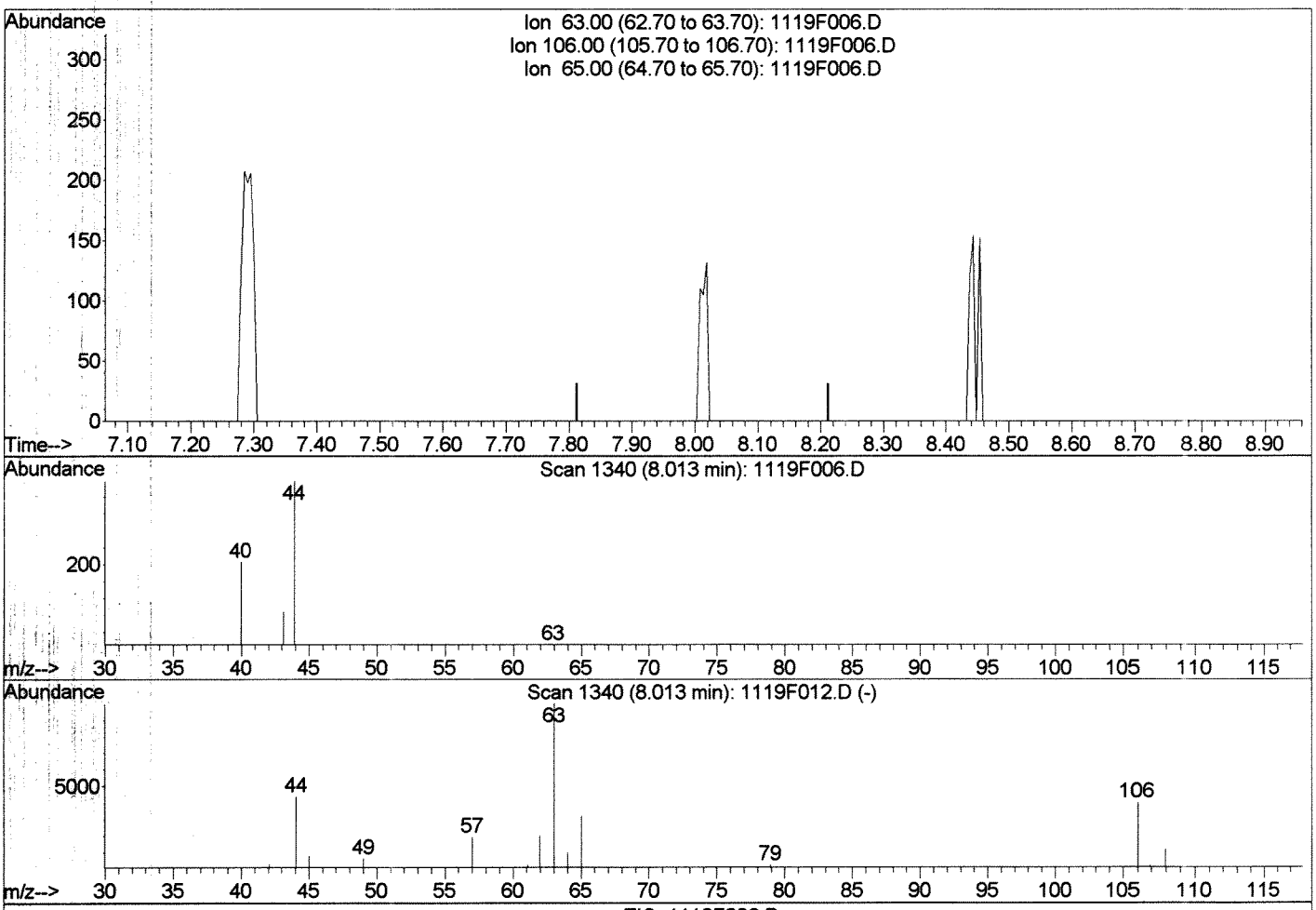
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:21:10 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:20 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(58) 2-Chloroethyl Vinyl Ether (T)

8.01min 0.00PPB

response 0

Ion	Exp%	Act%
63.00	100	0.00
106.00	39.90	0.00#
65.00	32.10	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

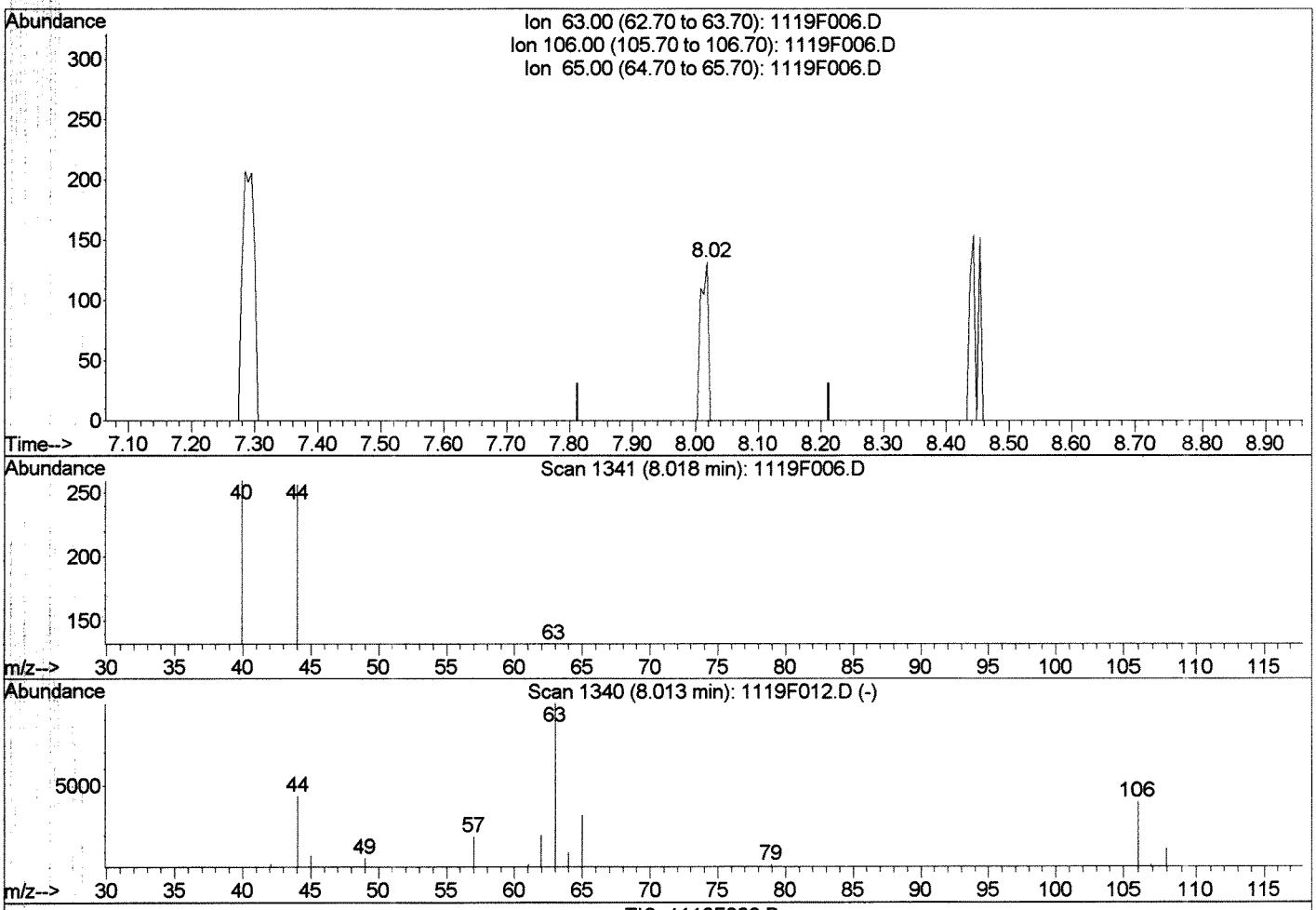
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:21:16 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:21 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(58) 2-Chloroethyl Vinyl Ether (T)

8.02min 0.05PPB m

response 109

Ion	Exp%	Act%
63.00	100	100
106.00	39.90	0.00#
65.00	32.10	0.00#
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

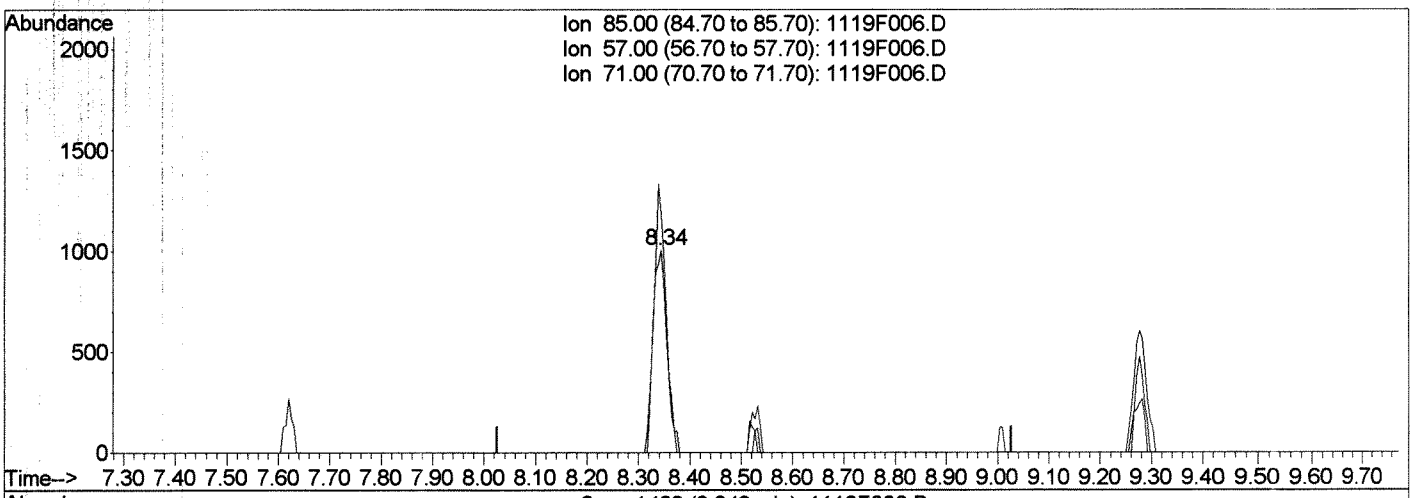
11/21/18

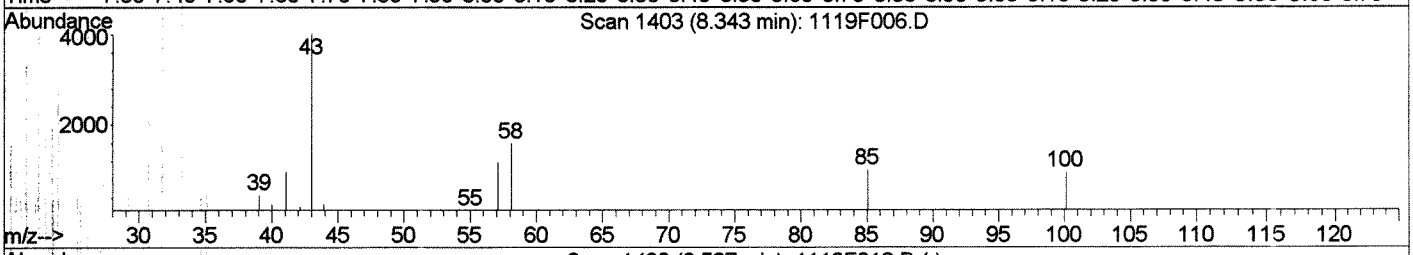
1119F006.D 111918MS46_8260.M Wed Nov 21 09:21:22 2018

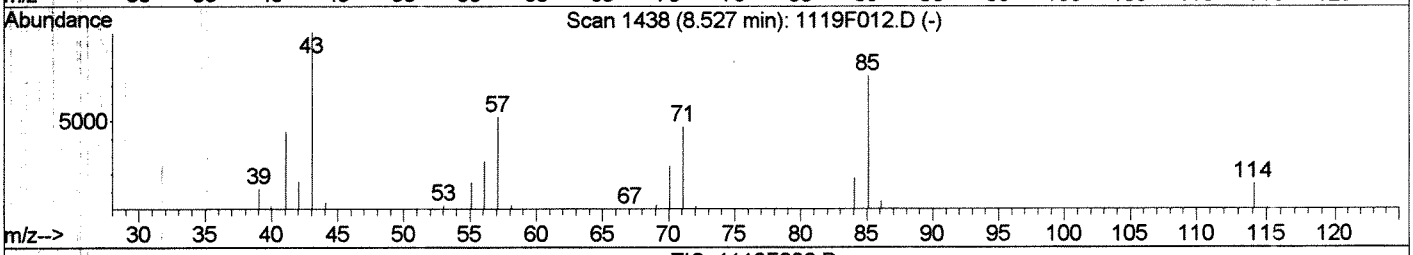
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:21 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(64) n-Octane (T)

8.34min 0.74PPB

response 1835

Ion	Exp%	Act%
85.00	100	100
57.00	69.30	117.18#
71.00	61.90	0.00#
0.00	0.00	0.00

Manual Integration:

Before LM

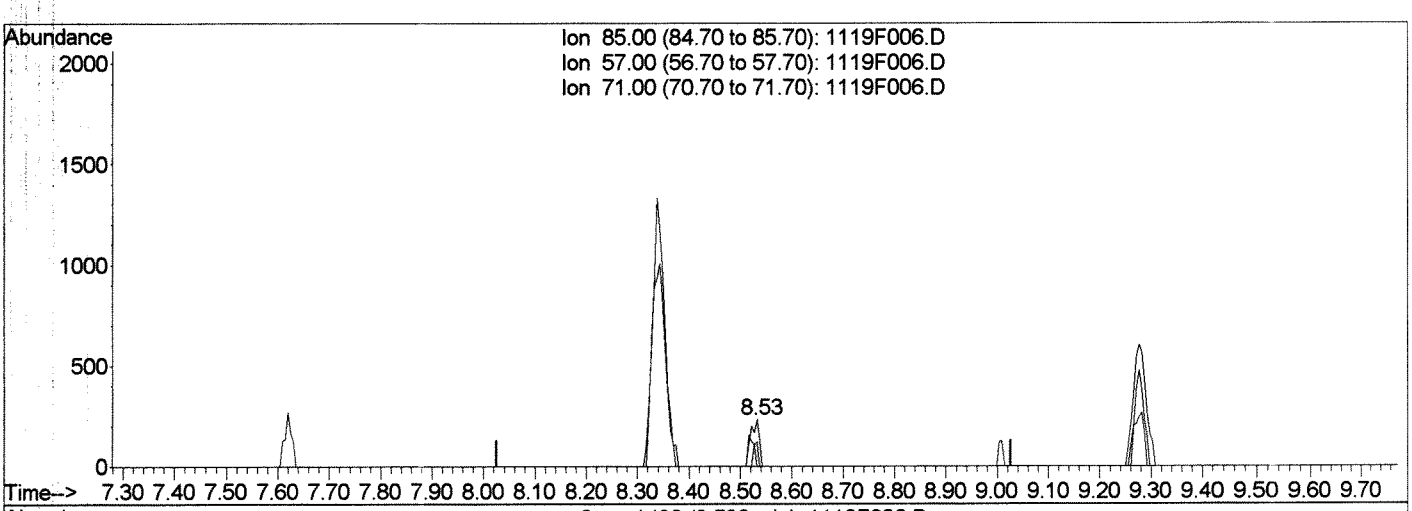
11/21/18

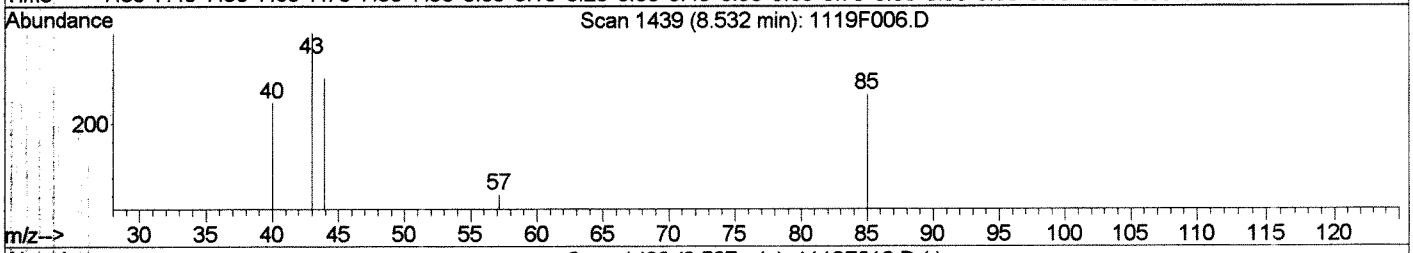
1119F006.D 111918MS46_8260.M Wed Nov 21 09:21:51 2018

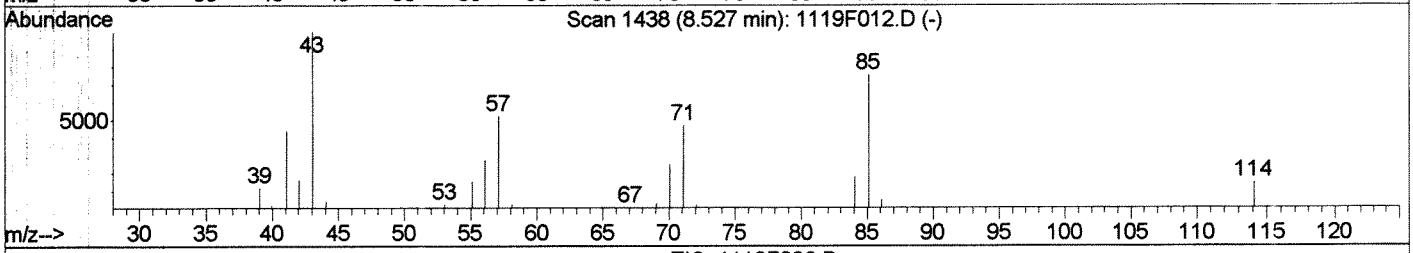
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:21 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(64) n-Octane (T)

8.53min 0.11PPB m

response 265

Ion	Exp%	Act%
85.00	100	100
57.00	69.30	52.59
71.00	61.90	0.00#
0.00	0.00	0.00

Manual Integration:

After LM

Baseline correction

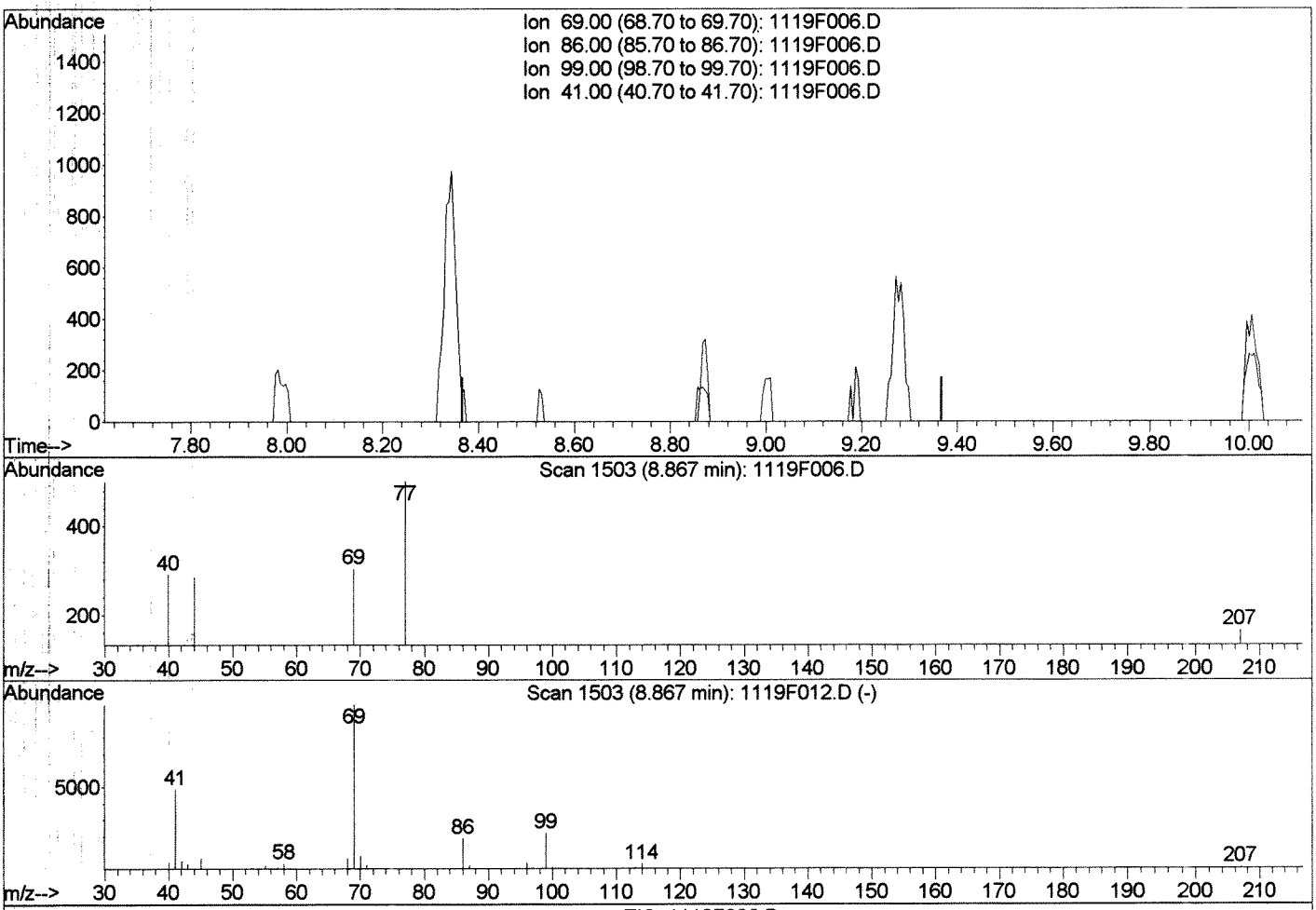
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:22:01 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:21 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(66) Ethyl methacrylate (T)

8.87min 0.00PPB

response 0

Ion	Exp%	Act%
69.00	100	0.00
86.00	18.90	0.00
99.00	21.80	0.00
41.00	48.70	0.00#

Manual Integration:

Before

LM

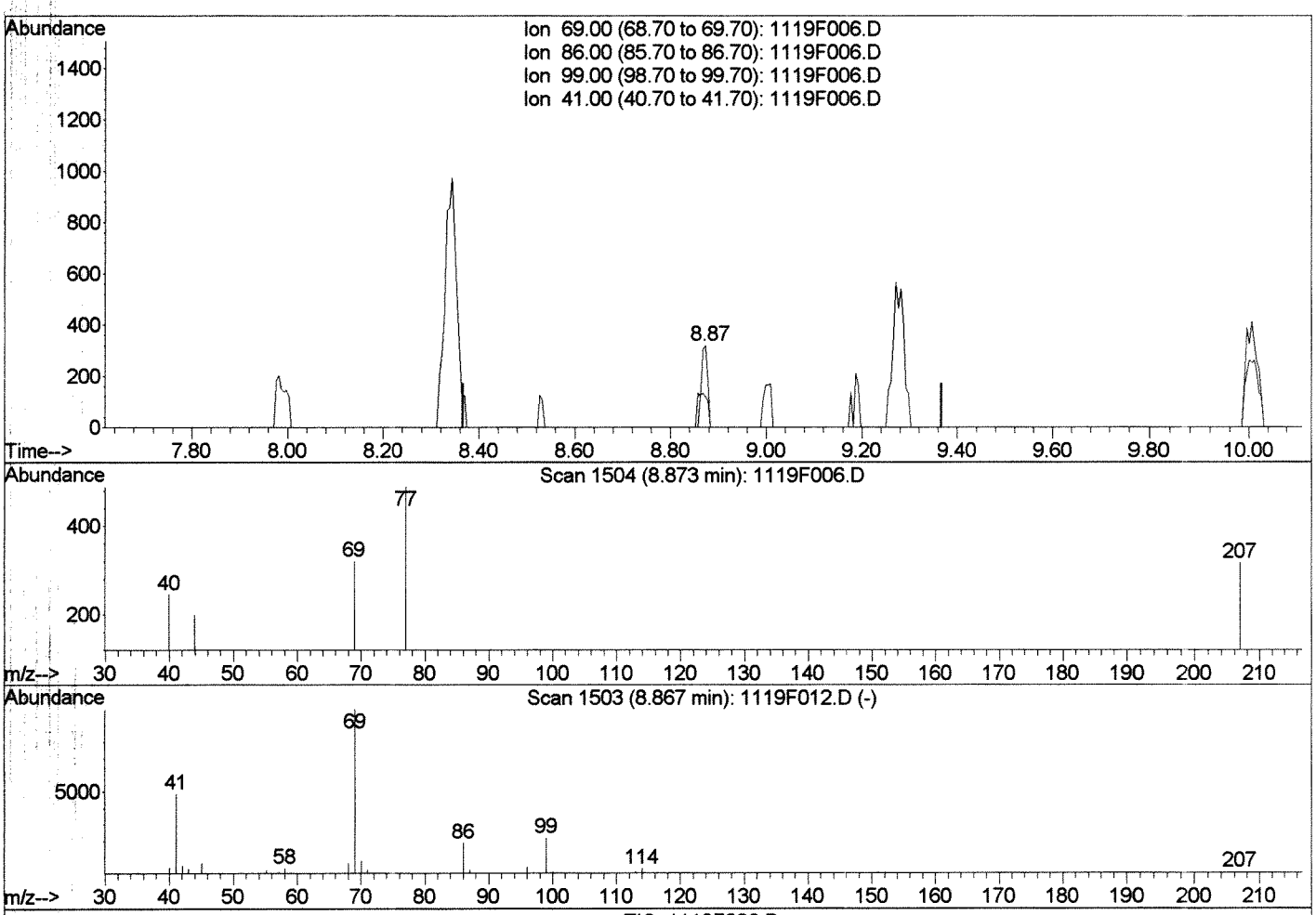
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:22:19 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:22 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(66) Ethyl methacrylate (T)

8.87min 0.08PPB m

response 334

Ion	Exp%	Act%
69.00	100	100
86.00	18.90	0.00
99.00	21.80	0.00
41.00	48.70	37.50

Manual Integration:

After LM

Baseline correction

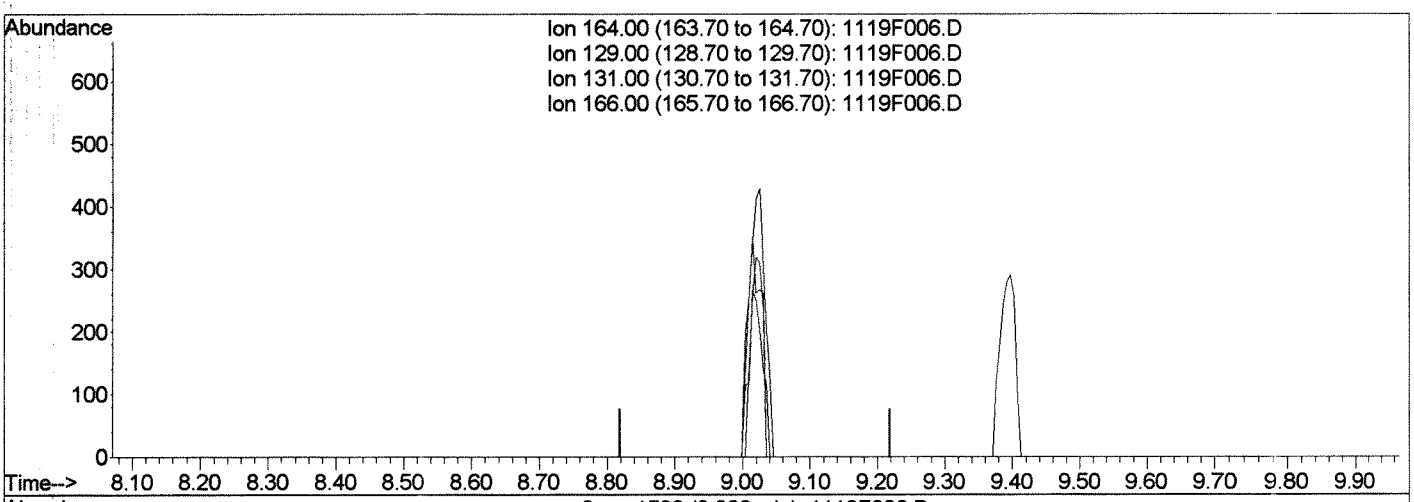
11/21/18

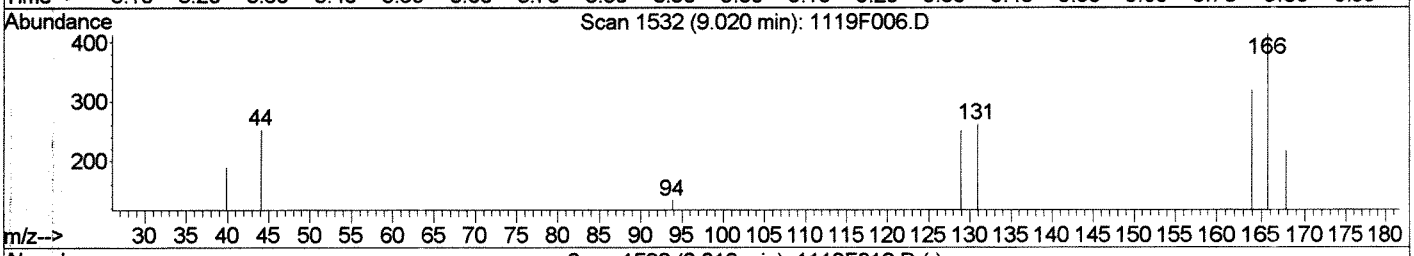
1119F006.D 111918MS46_8260.M Wed Nov 21 09:22:30 2018

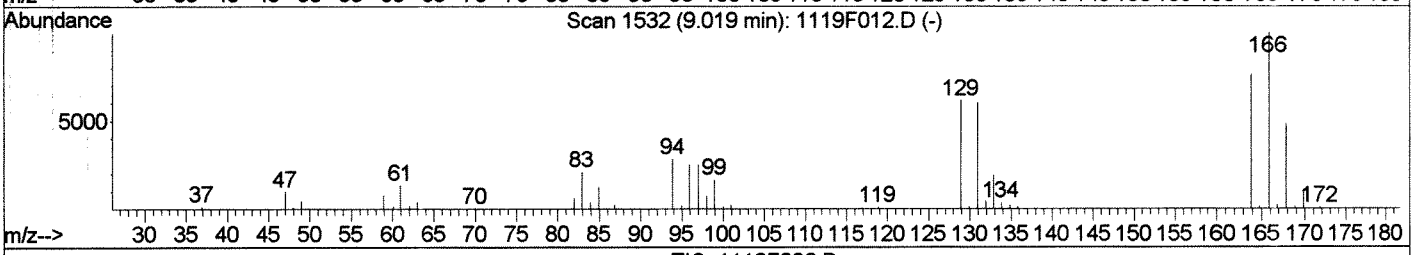
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:25 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(68) Tetrachloroethene (T)

9.02min 0.00PPB

response 0

Ion	Exp%	Act%
164.00	100	0.00
129.00	80.50	0.00#
131.00	78.80	0.00#
166.00	131.20	0.00#

Manual Integration:

Before LM

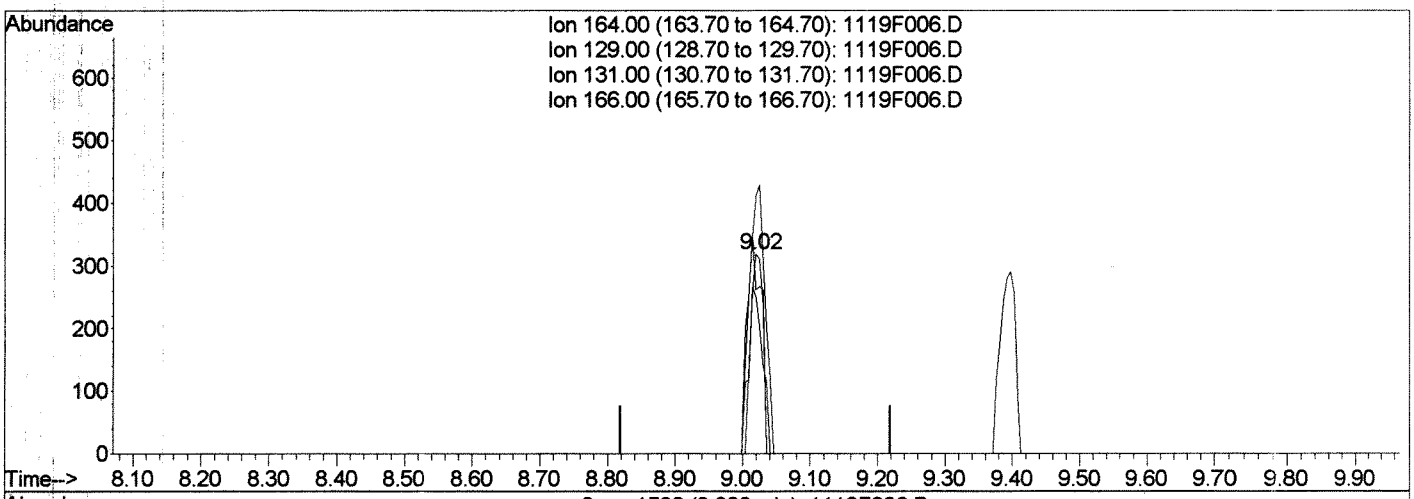
11/21/18

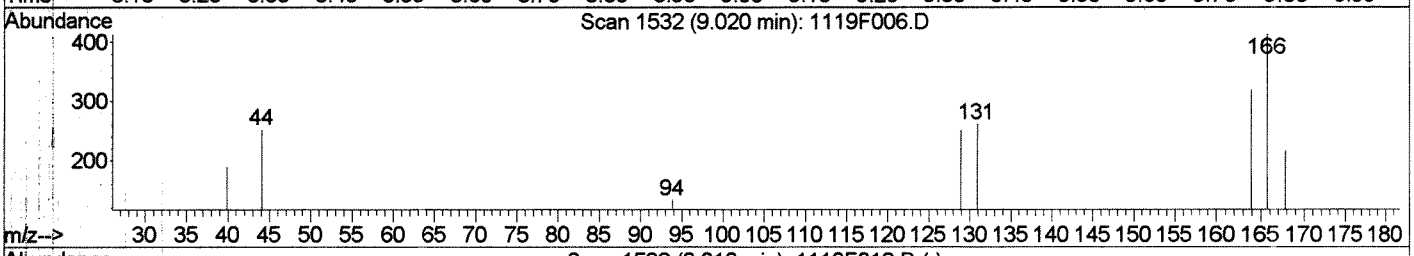
1119F006.D 111918MS46_8260.M Wed Nov 21 09:25:22 2018

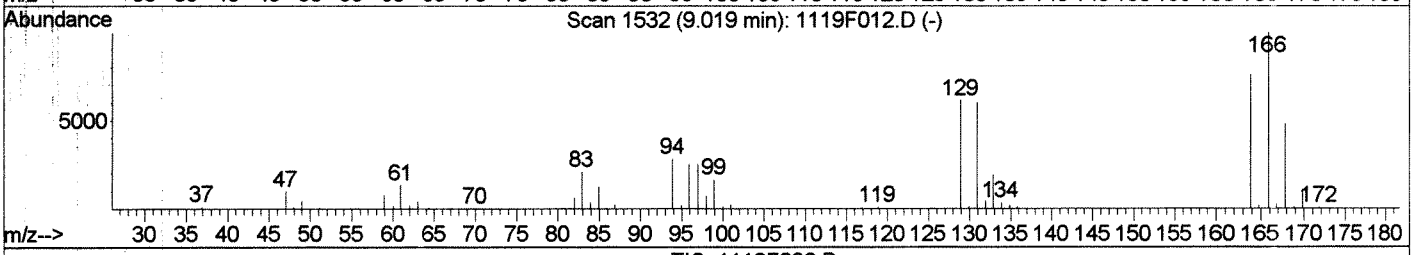
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:25 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(68) Tetrachloroethene (T)

9.02min 0.08PPB m

response 397

Ion	Exp%	Act%
164.00	100	100
129.00	80.50	78.37
131.00	78.80	81.82
166.00	131.20	129.47

Manual Integration:

After (LM)

Missed peak

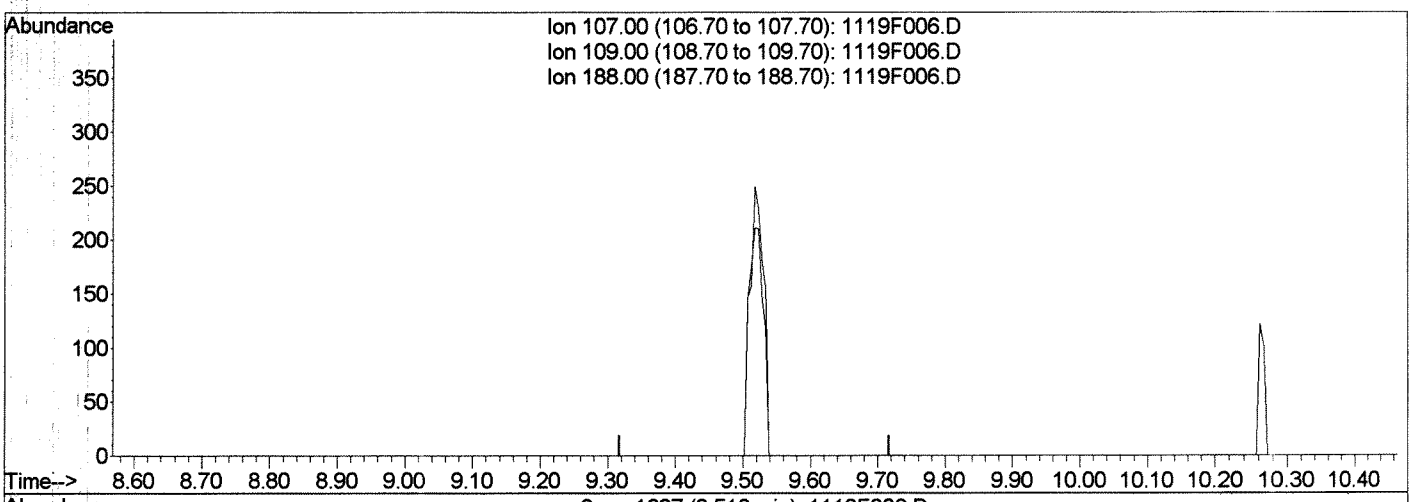
11/21/18

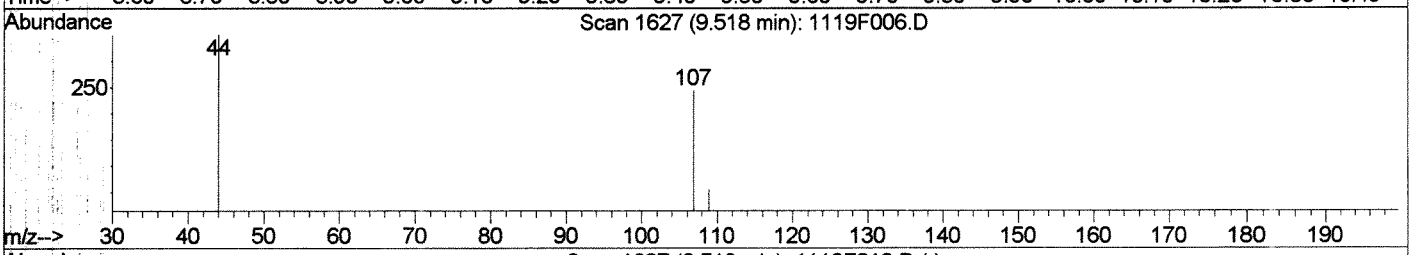
1119F006.D 111918MS46_8260.M Wed Nov 21 09:25:29 2018

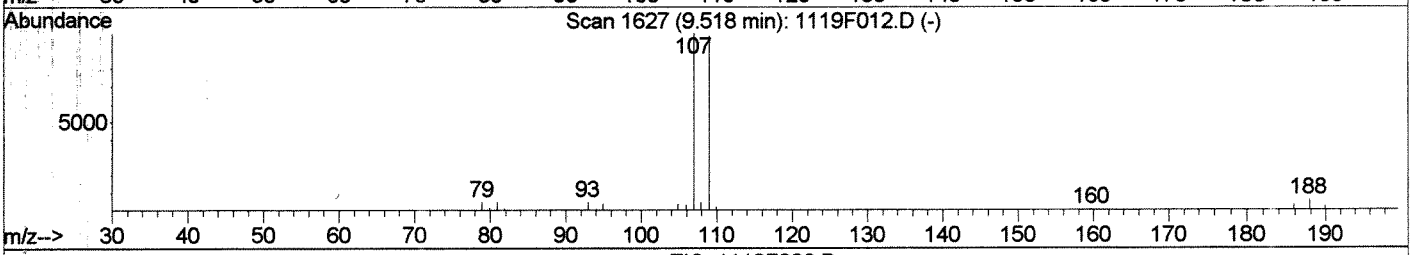
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:25 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(72) 1,2-Dibromoethane (EDB) (T)

9.52min 0.00PPB

response 0

Ion	Exp%	Act%
107.00	100	0.00
109.00	98.70	0.00#
188.00	6.10	0.00
0.00	0.00	0.00

Manual Integration:

Before

LM

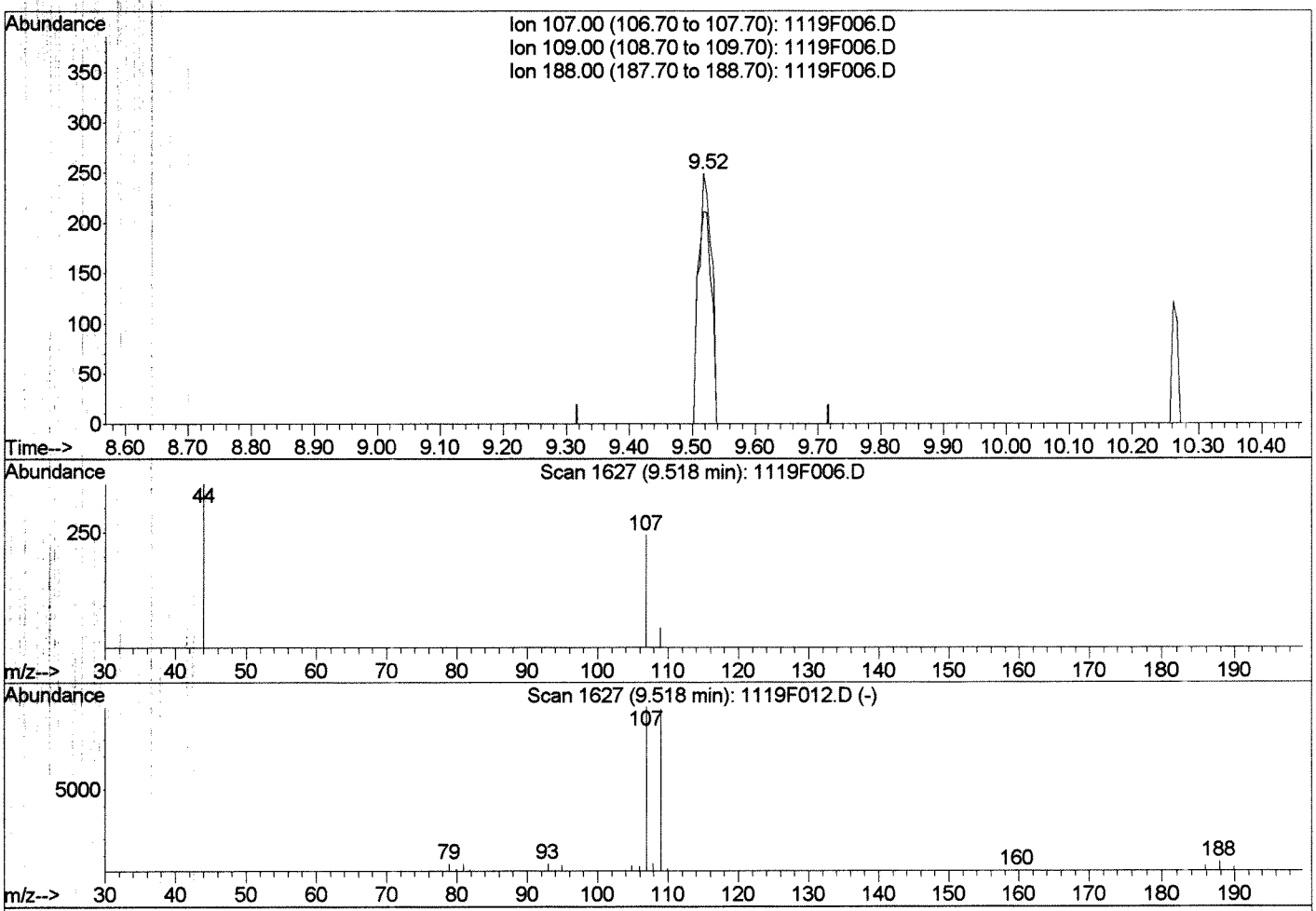
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:25:46 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:25 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(72) 1,2-Dibromoethane (EDB) (T)

9.52min 0.09PPB m

response 351

Ion	Exp%	Act%
107.00	100	100
109.00	98.70	84.74
188.00	6.10	0.00
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak ✓

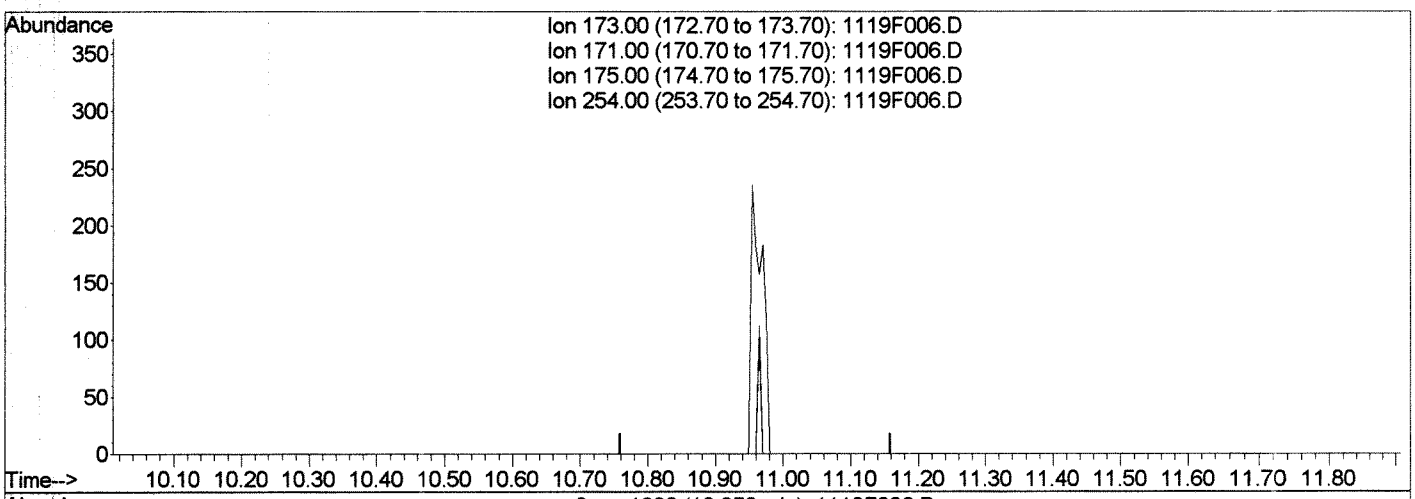
11/21/18

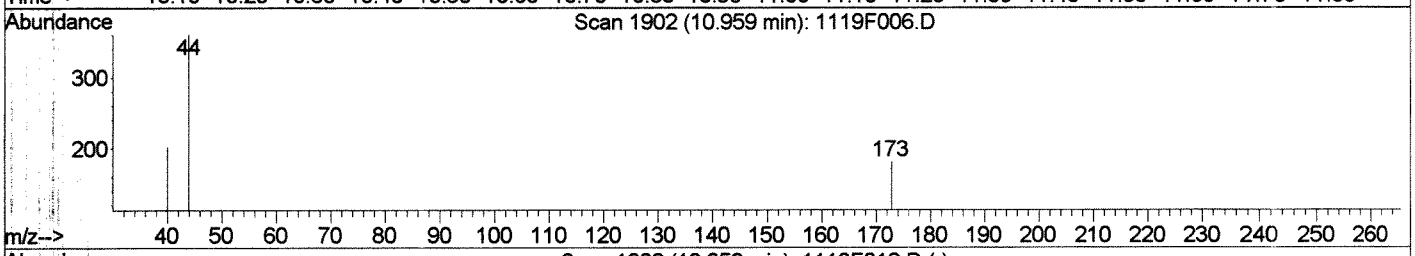
1119F006.D 111918MS46_8260.M Wed Nov 21 09:25:52 2018

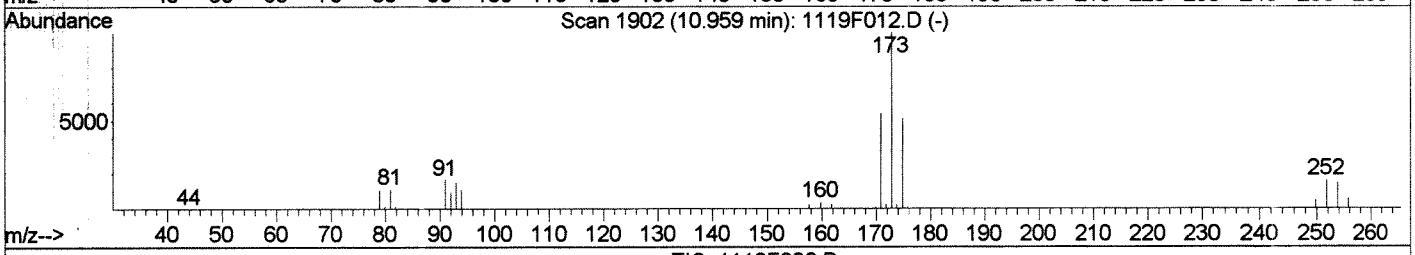
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:25 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(80) Bromoform (PT)

10.96min 0.00PPB

response 0

Ion	Exp%	Act%
173.00	100	0.00
171.00	53.90	0.00#
175.00	51.00	0.00#
254.00	14.40	0.00

Manual Integration:

Before

LM

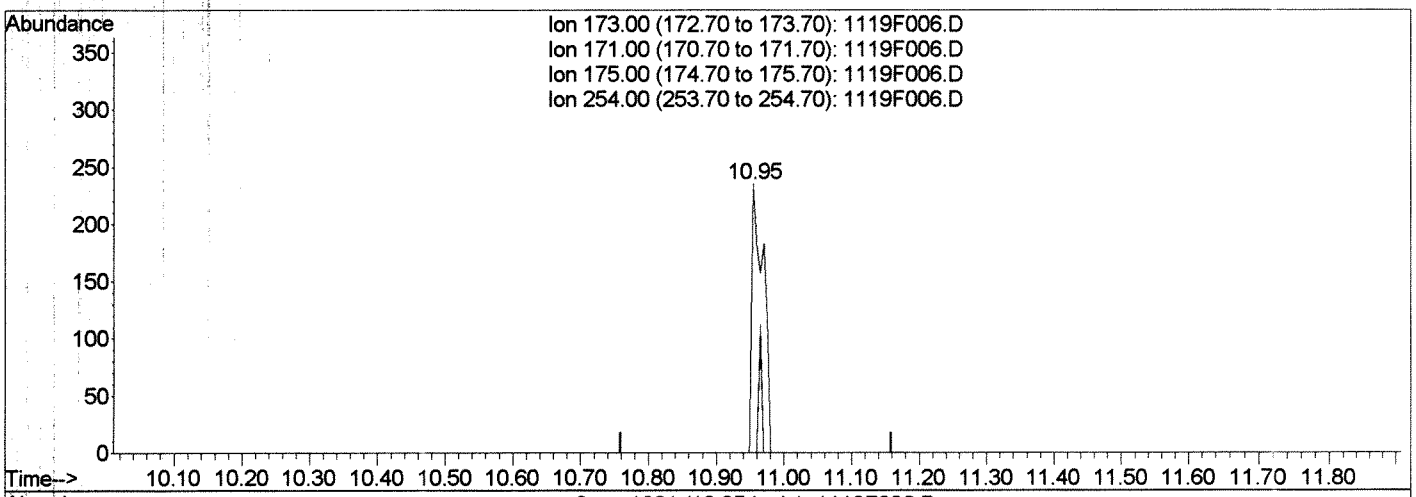
11/21/18

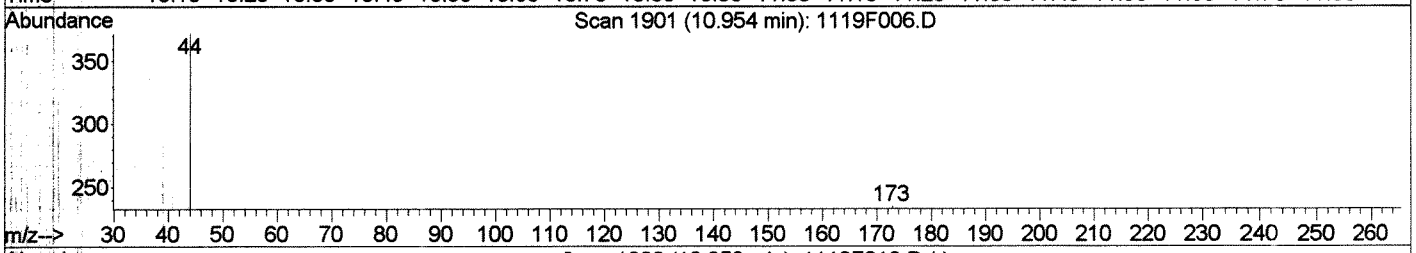
1119F006.D 111918MS46_8260.M Wed Nov 21 09:26:24 2018

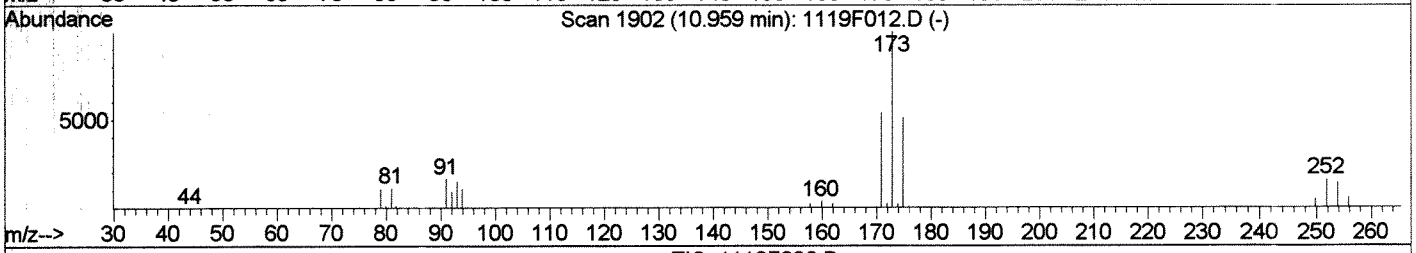
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:26 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(80) Bromoform (PT)

10.95min 0.08PPB m

response 274

Ion	Exp%	Act%
173.00	100	100
171.00	53.90	0.00#
175.00	51.00	0.00#
254.00	14.40	0.00

Manual Integration:

After LM

Missed peak

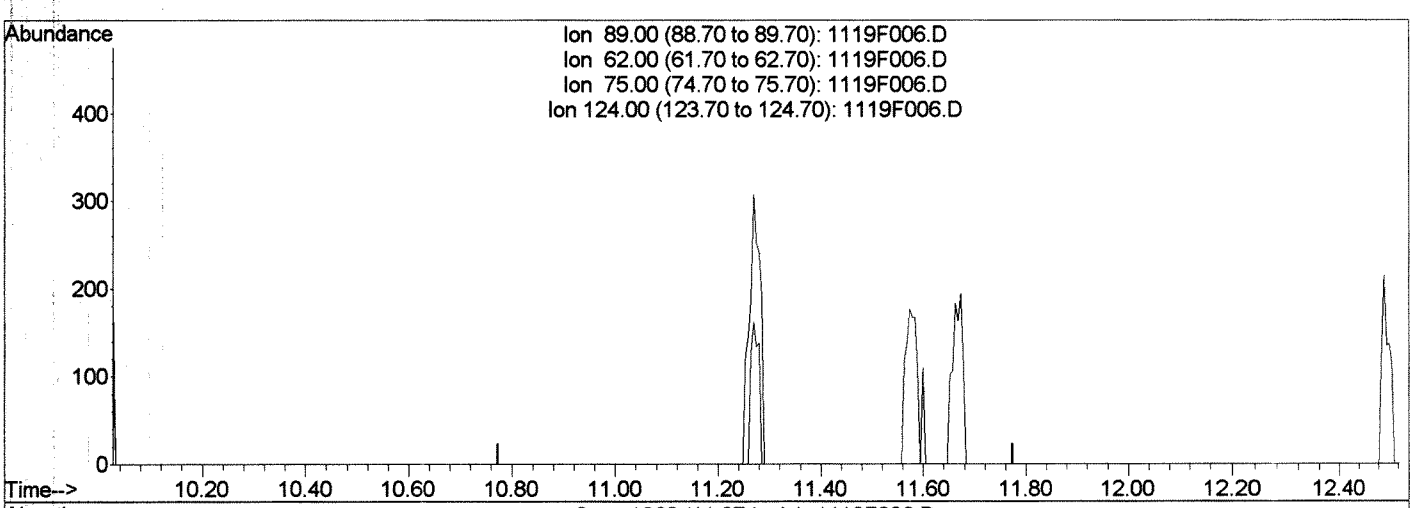
11/21/18

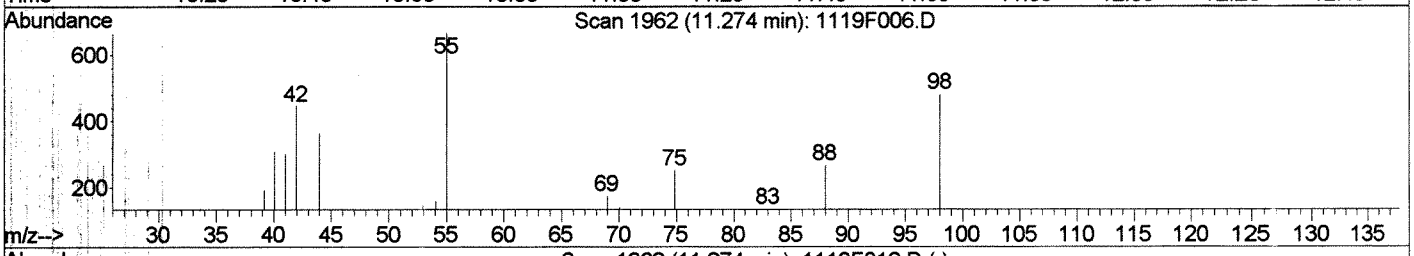
1119F006.D 111918MS46_8260.M Wed Nov 21 09:26:29 2018

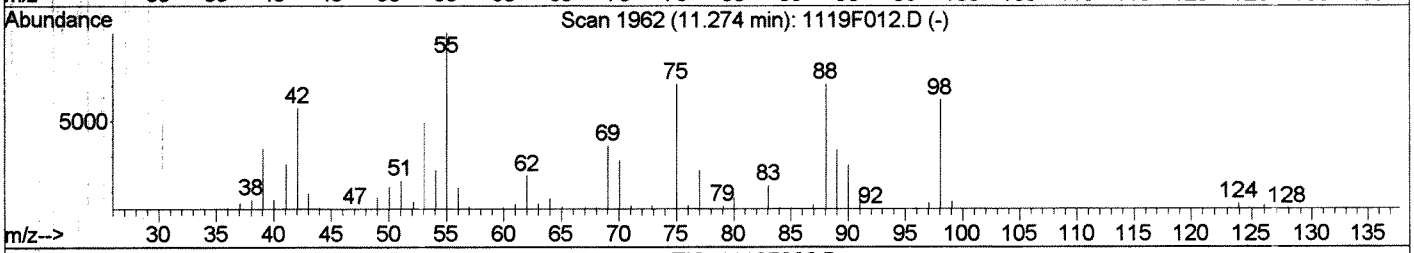
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:26 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(82) cis-1,4-Dichloro-2-butene (T)

11.27min 0.00PPB

response 0

Ion	Exp%	Act%
89.00	100	0.00
62.00	56.40	0.00#
75.00	209.10	0.00#
124.00	9.70	0.00

Manual Integration:

Before LM

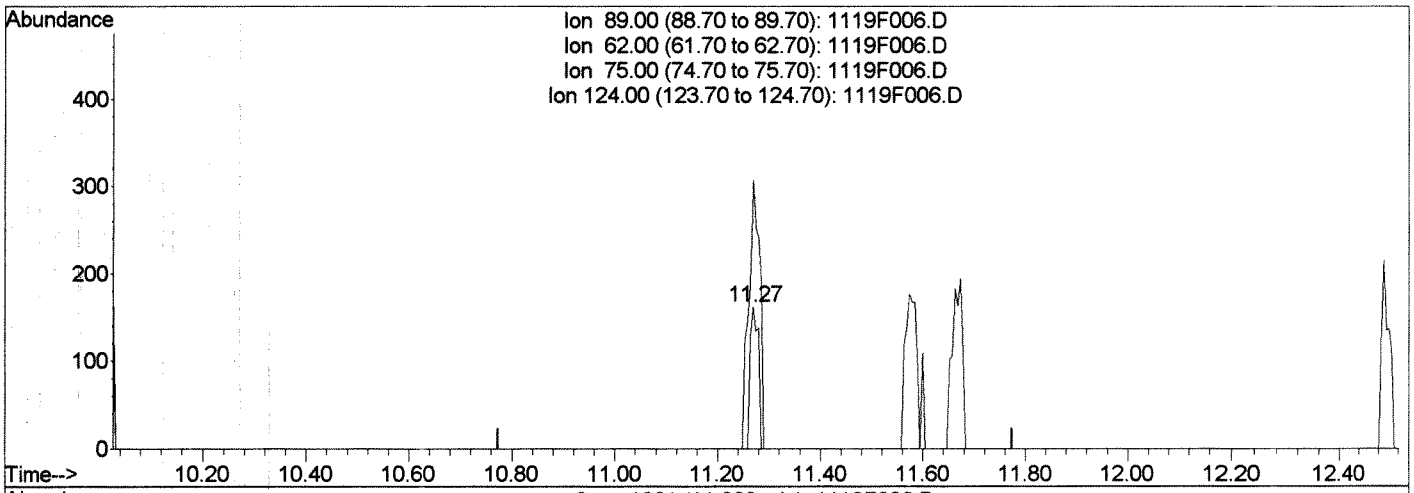
11/21/18 ✓

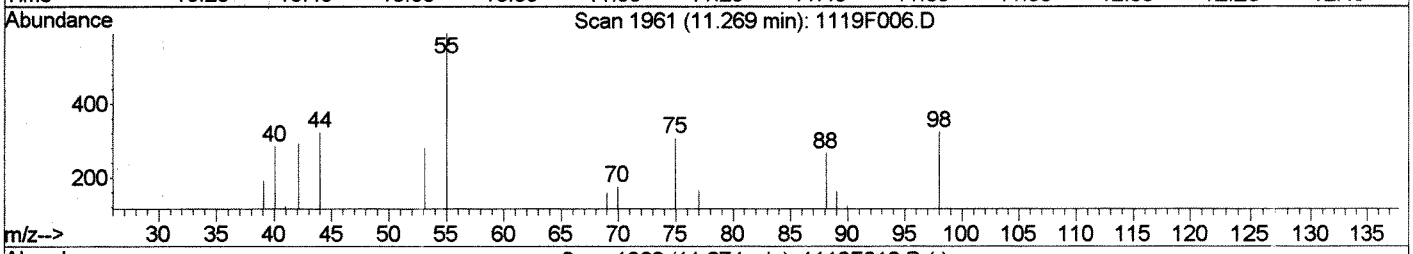
1119F006.D 111918MS46_8260.M Wed Nov 21 09:26:39 2018

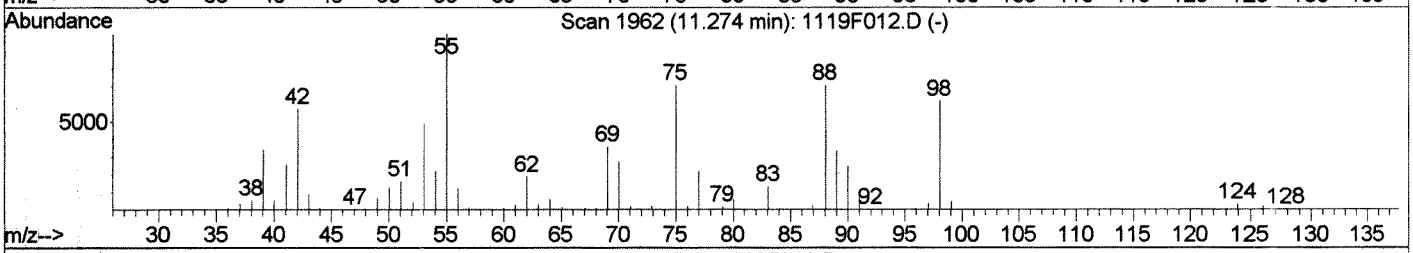
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:26 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(82) cis-1,4-Dichloro-2-butene (T)

11.27min 0.29PPB m

response 176

Ion	Exp%	Act%
89.00	100	100
62.00	56.40	0.00#
75.00	209.10	189.51
124.00	9.70	0.00

Manual Integration:

After

Missed peak

11/21/18

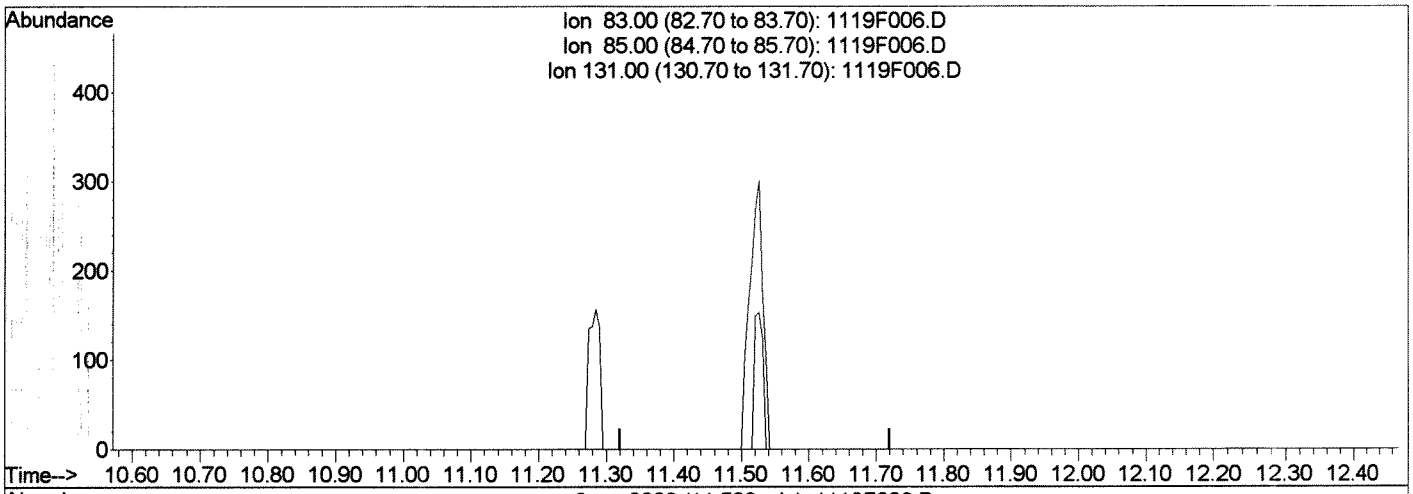
LM

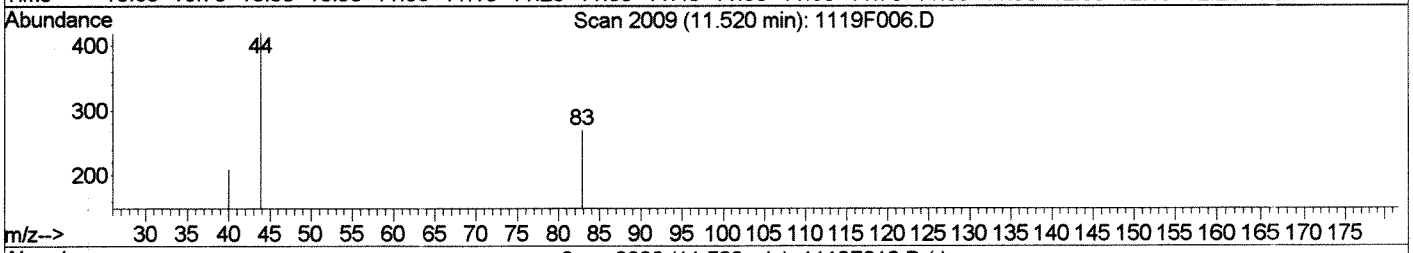
1119F006.D 111918MS46_8260.M Wed Nov 21 09:26:47 2018

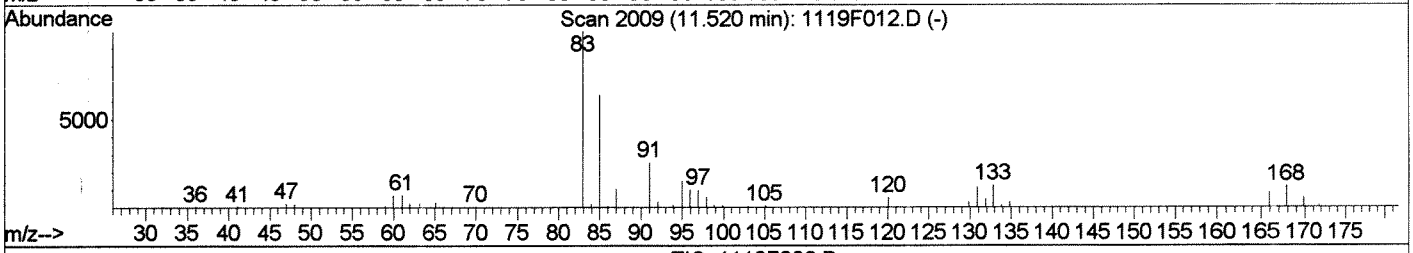
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:26 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(85) 1,1,2,2-Tetrachloroethane (PT)

11.52min 0.00PPB

response 0

Ion	Exp%	Act%
83.00	100	0.00
85.00	63.70	0.00#
131.00	12.10	0.00
0.00	0.00	0.00

Manual Integration:

Before

LM

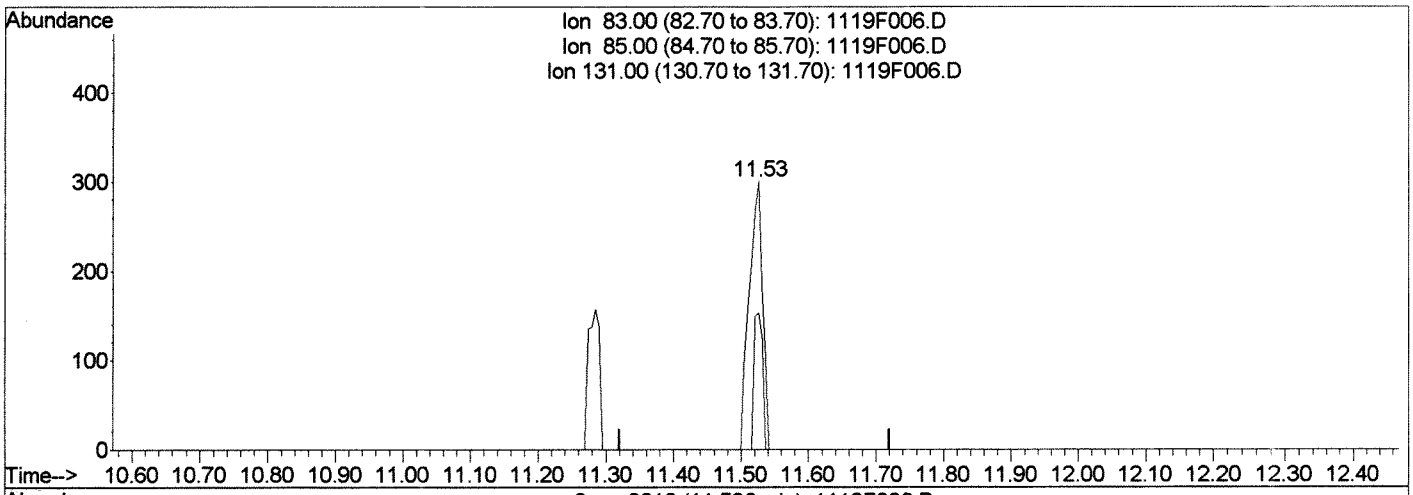
11/21/18

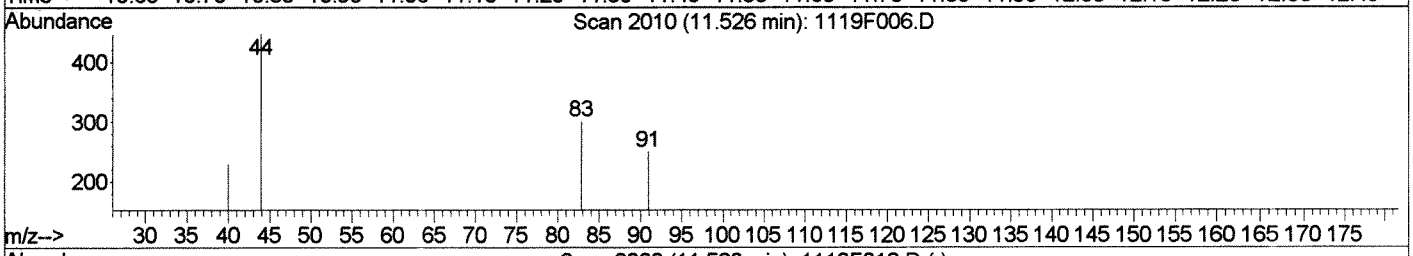
1119F006.D 111918MS46_8260.M Wed Nov 21 09:28:35 2018

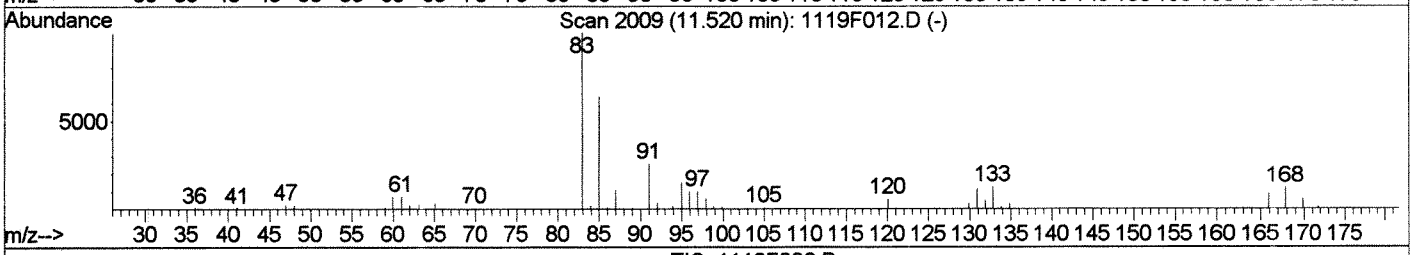
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:28 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(85) 1,1,2,2-Tetrachloroethane (PT)

11.53min 0.11PPB m

response 416

Ion	Exp%	Act%
83.00	100	100
85.00	63.70	50.83
131.00	12.10	0.00
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

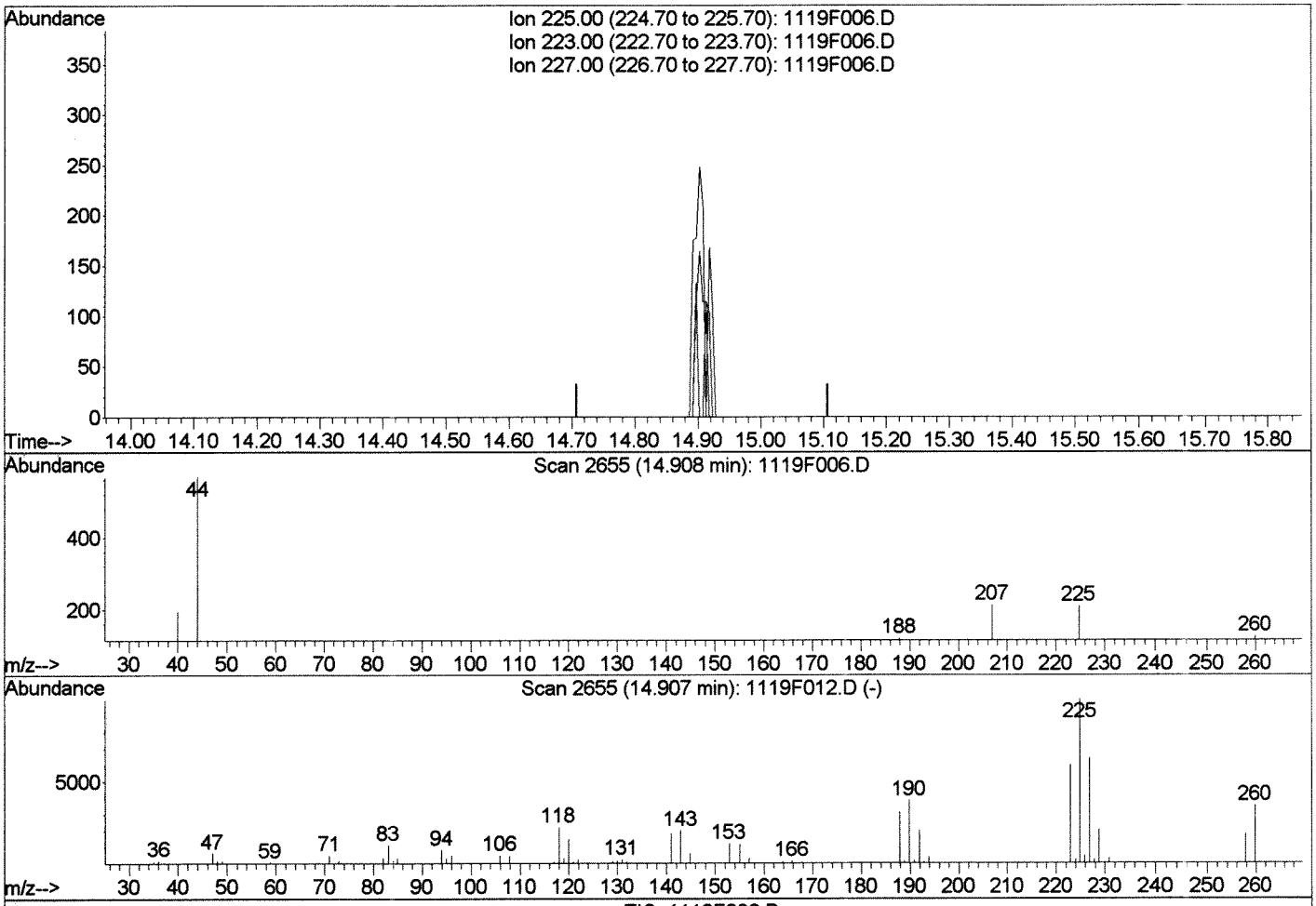
11/21/18

1119F006.D 111918MS46_8260.M Wed Nov 21 09:28:42 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:29 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F006.D

(104) Hexachlorobutadiene (T)

14.91min 0.00PPB

response 0

Ion	Exp%	Act%
225.00	100	0.00
223.00	59.80	0.00#
227.00	64.00	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

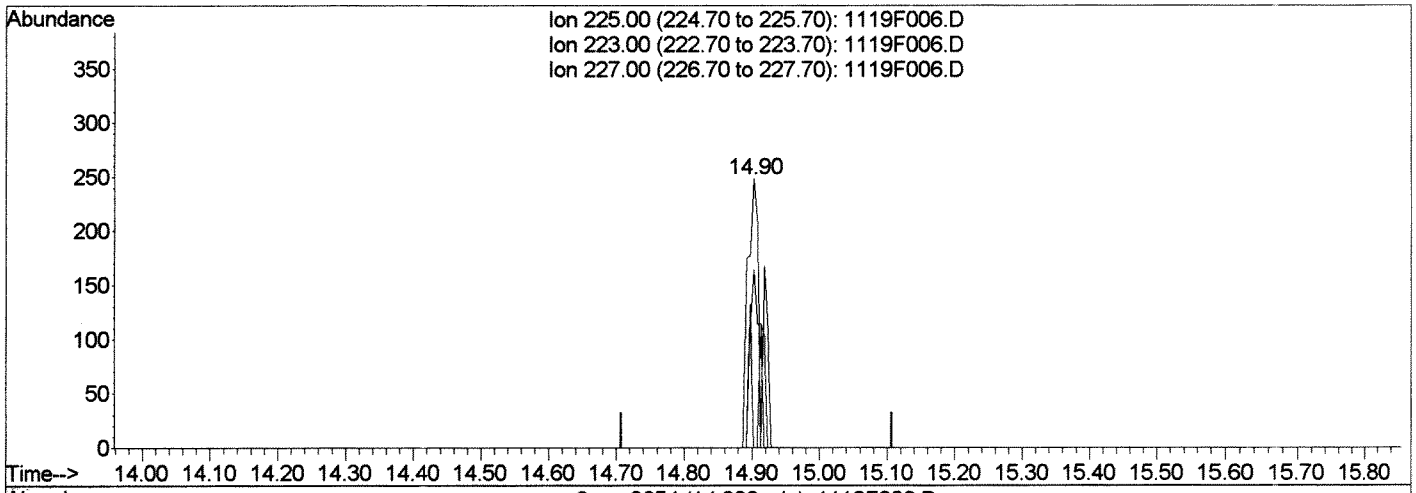
11/21/18

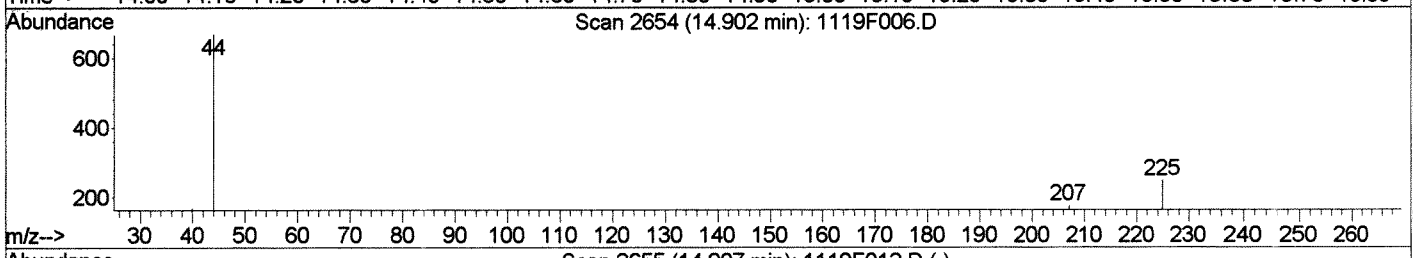
1119F006.D 111918MS46_8260.M Wed Nov 21 09:30:24 2018

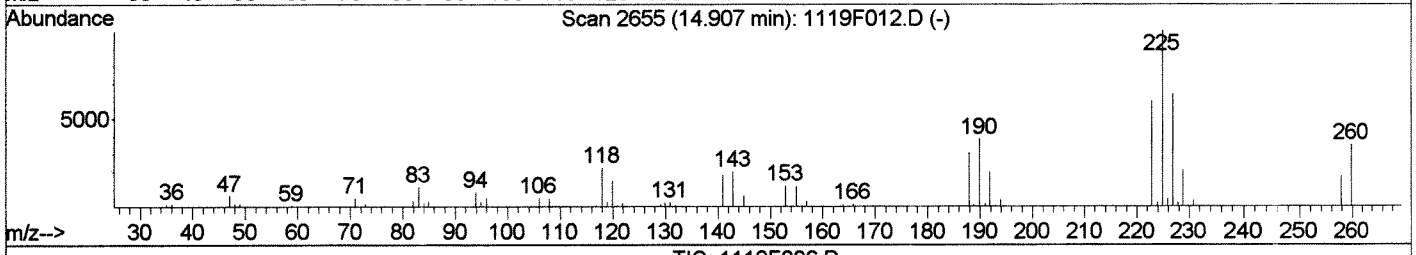
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:30 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F006.D

(104) Hexachlorobutadiene (T)

14.90min 0.12PPB m

response 341

Ion	Exp%	Act%
225.00	100	100
223.00	59.80	66.13
227.00	64.00	0.00#
0.00	0.00	0.00

Manual Integration:

After LM

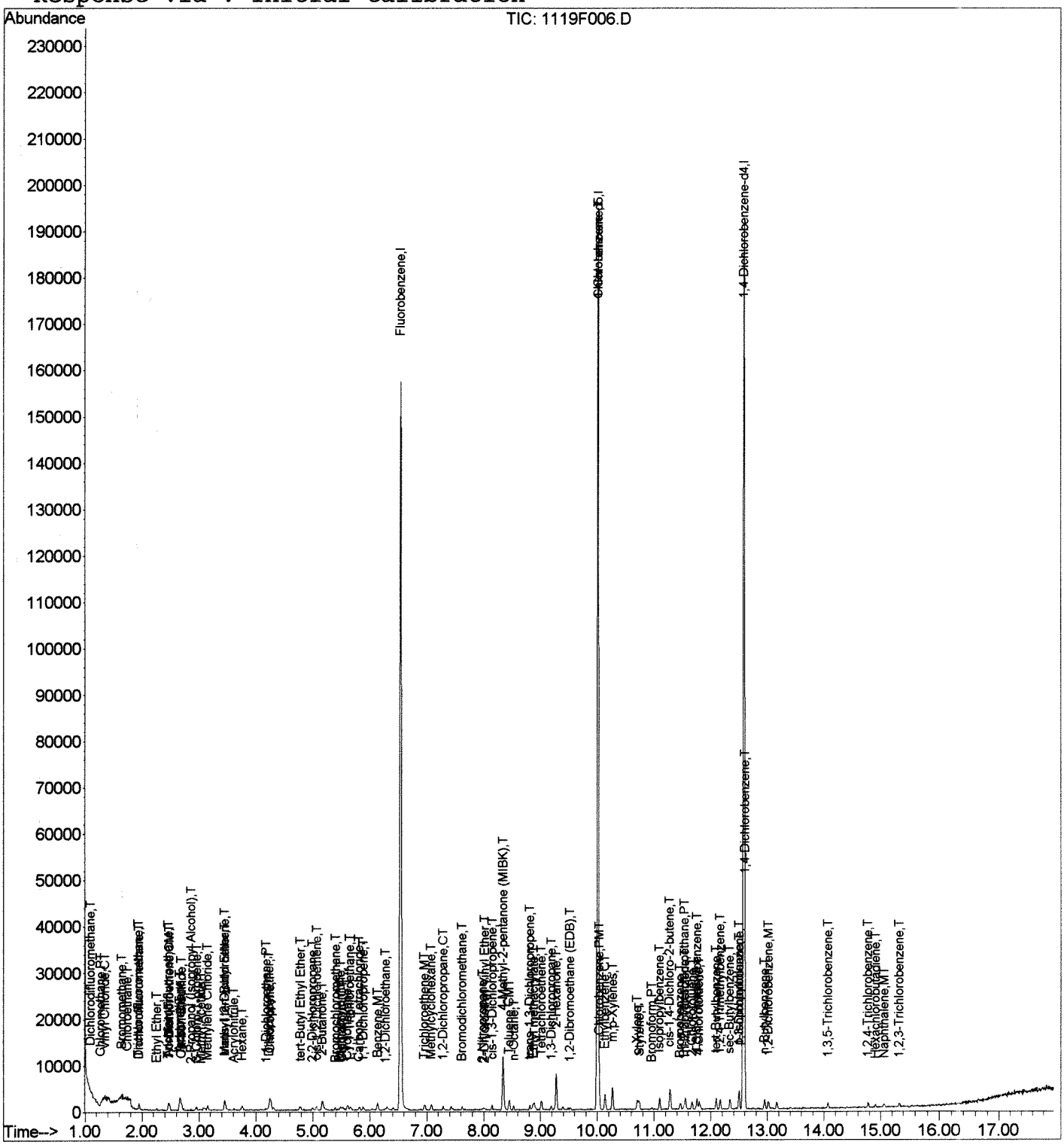
Missed peak

11/21/18 ✓

1119F006.D 111918MS46_8260.M Wed Nov 21 09:30:37 2018

Data File : J:\MS46\DATA\111918\1119F006.D Vial: 3
Acq On : 19 Nov 2018 04:18 pm Operator: LM
Sample : ICAL 0.1 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:30 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:06 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.53	96	166190	10.00	PPB		0.00
63) Chlorobenzene-d5	10.01	82	61425	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	67554	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	0.00	113	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
46) 1,2-Dichloroethane-d4	0.00	65	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
61) Toluene-d8	0.00	98	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
83) 4-Bromofluorobenzene	0.00	95	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.10	85	431m	0.14	PPB		
3) Chloromethane	1.28	50	688	0.25	PPB		83
4) Vinyl Chloride	1.35	62	720	0.21	PPB		87
5) Bromomethane	1.64	96	1059	0.32	PPB		91
6) Chloroethane	1.74	64	365m	0.16	PPB		
7) Dichlorofluoromethane	1.95	67	1039	0.19	PPB		92
8) Trichlorofluoromethane	1.94	101	1044	0.20	PPB		73
9) Ethyl Ether	2.26	59	287m	0.14	PPB		
10) Acrolein	2.48	56	1699	4.61	PPB		85
11) Trichlorotrifluoroethane	2.47	151	823	0.24	PPB	#	79
12) 1,1-Dichloroethene	2.48	96	757	0.23	PPB	#	56
13) Acetone	2.65	43	3719	9.12	PPB		93
14) Iodomethane	2.66	142	3608	0.70	PPB		94
15) Carbon Disulfide	2.69	76	2455	0.25	PPB		96
16) 2-Propanol (Isopropyl Alco	2.85	45	501	8.83	PPB		61
17) 3-Chloro-1-propene	2.95	76	375m	0.19	PPB		
19) Acetonitrile	3.09	40	662	7.45	PPB	#	67
20) Methylene Chloride	3.15	84	861	0.22	PPB		76
22) Acrylonitrile	3.62	53	608	0.78	PPB	#	63
23) Methyl tert-Butyl Ether	3.45	73	3673	0.40	PPB		95
24) trans-1,2-Dichloroethene	3.46	96	951	0.24	PPB		79
25) Hexane	3.77	57	1100	0.24	PPB		95
26) Diisopropyl Ether	4.23	45	1581	0.17	PPB		84
27) 1,1-Dichloroethane	4.17	63	1197	0.20	PPB		71
28) Vinyl Acetate	4.31	86	80m	0.10	PPB		
29) Chloroprene	4.26	53	4237	0.93	PPB		97
30) tert-Butyl Ethyl Ether	4.78	59	1875	0.19	PPB		87

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:06 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
31)	2,2-Dichloropropane	5.00	77	1274	0.24	PPB		88
32)	cis-1,2-Dichloroethene	5.07	96	1000	0.21	PPB		94
33)	2-Butanone	5.16	72	2106	7.72	PPB	#	79
36)	Methacrylonitrile	5.49	67	981	0.85	PPB		89
37)	Bromochloromethane	5.40	128	401m	0.17	PPB		
39)	Chloroform	5.52	83	1553	0.22	PPB		92
40)	Cyclohexane	5.61	56	1394	0.26	PPB		93
41)	1,1,1-Trichloroethane	5.66	97	1452	0.24	PPB		88
43)	Carbon Tetrachloride	5.82	117	1213	0.22	PPB	#	72
44)	1,1-Dichloropropene	5.88	75	1094	0.22	PPB		96
45)	Isobutyl Alcohol	6.27	43	579m	11.78	PPB		
47)	Benzene	6.14	78	3345	0.21	PPB		98
48)	1,2-Dichloroethane	6.28	62	841	0.20	PPB		90
49)	tert-Amyl Methyl Ether	6.30	55	349m	0.17	PPB		
50)	Trichloroethene	6.96	95	933	0.21	PPB	#	83
51)	Methylcyclohexane	7.07	83	1401	0.21	PPB		84
52)	1,2-Dichloropropane	7.29	63	757	0.20	PPB		74
54)	Methyl methacrylate	7.45	69	358m	0.18	PPB		
56)	Bromodichloromethane	7.62	83	1131	0.20	PPB		95
57)	2-Nitropropane	7.99	41	494m	0.99	PPB		
58)	2-Chloroethyl Vinyl Ether	8.01	63	339m	0.17	PPB		
59)	cis-1,3-Dichloropropene	8.14	75	1361	0.20	PPB		89
60)	4-Methyl-2-pentanone (MIBK	8.34	58	7037	7.56	PPB		92
62)	Toluene	8.45	92	2594	0.23	PPB		83
64)	n-Octane	8.52	85	464m	0.19	PPB		
65)	trans-1,3-Dichloropropene	8.82	75	1297	0.21	PPB		85
66)	Ethyl methacrylate	8.86	69	743	0.18	PPB		63
67)	1,1,2-Trichloroethane	9.01	83	589	0.19	PPB		80
68)	Tetrachloroethene	9.02	164	1106	0.23	PPB		82
69)	2-Hexanone	9.27	57	2324	8.21	PPB		97
70)	1,3-Dichloropropane	9.19	76	1182	0.20	PPB		75
71)	Dibromochloromethane	9.40	129	1047	0.20	PPB		81
72)	1,2-Dibromoethane (EDB)	9.52	107	764	0.20	PPB	#	70
73)	1-Chlorohexane	10.01	91	1584	0.27	PPB		86
74)	Chlorobenzene	10.04	112	3024	0.23	PPB		95
75)	Ethylbenzene	10.13	106	1390	0.19	PPB		97
76)	1,1,1,2-Tetrachloroethane	10.15	131	993	0.19	PPB		92
77)	m,p-Xylenes	10.26	106	3636	0.42	PPB		92
78)	o-Xylene	10.70	106	1766	0.21	PPB		83
79)	Styrene	10.74	103	1418	0.19	PPB		86
80)	Bromoform	10.95	173	681	0.19	PPB		88

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:06 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

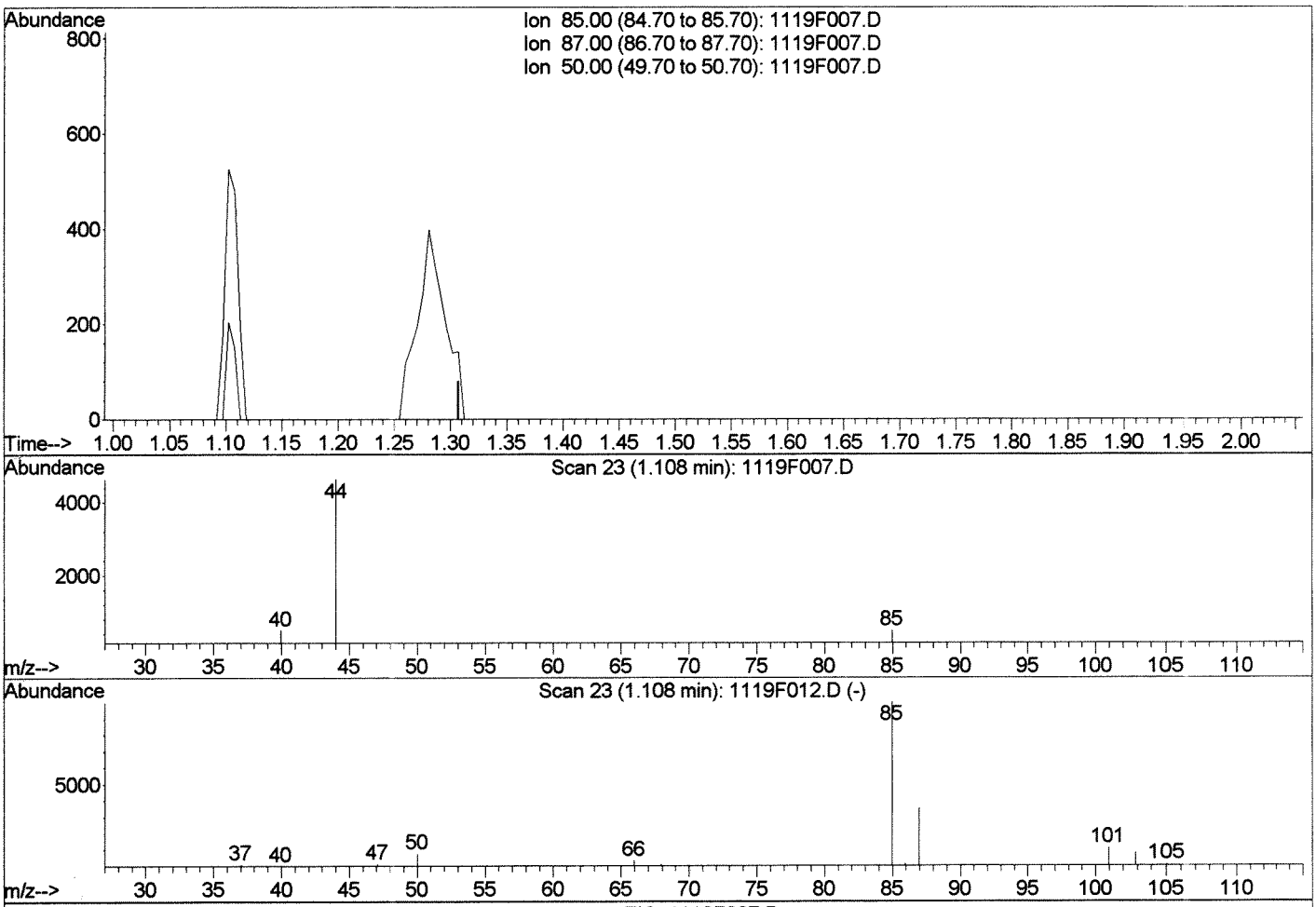
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
81)	Isopropylbenzene	11.10	105	4426	0.21	PPB	94
82)	cis-1,4-Dichloro-2-butene	11.27	89	449m	0.74	PPB	
85)	1,1,2,2-Tetrachloroethane	11.53	83	781	0.20	PPB	94
86)	trans-1,4-Dichloro-2-buten	11.59	53	38m	0.04	PPB	
87)	Bromobenzene	11.46	156	1307	0.21	PPB	95
88)	n-Propylbenzene	11.55	91	4804	0.21	PPB	97
89)	1,2,3-Trichloropropane	11.57	110	160m	0.12	PPB	
90)	2-Chlorotoluene	11.67	91	2836	0.21	PPB	89
91)	1,3,5-Trimethylbenzene	11.76	105	3579	0.21	PPB	92
92)	4-Chlorotoluene	11.79	91	2738	0.19	PPB	89
93)	tert-Butylbenzene	12.09	119	3166	0.21	PPB	91
94)	1,2,4-Trimethylbenzene	12.17	105	3503	0.21	PPB	93
95)	sec-Butylbenzene	12.34	105	4537	0.22	PPB	94
96)	p-Isopropyltoluene	12.50	119	3679	0.20	PPB	99
97)	1,3-Dichlorobenzene	12.50	146	2309	0.21	PPB	85
98)	1,4-Dichlorobenzene	12.61	146	2467	0.23	PPB	90
99)	n-Butylbenzene	12.95	91	2823	0.20	PPB	98
100)	1,2-Dichlorobenzene	13.02	146	1980	0.20	PPB	97
102)	1,3,5-Trichlorobenzene	14.07	180	1430	0.21	PPB	84
103)	1,2,4-Trichlorobenzene	14.78	180	1270	0.19	PPB	91
104)	Hexachlorobutadiene	14.90	225	606	0.21	PPB	93
105)	Naphthalene	15.06	128	2380	0.20	PPB	83
106)	1,2,3-Trichlorobenzene	15.33	180	1065	0.20	PPB	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:08 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(2) Dichlorodifluoromethane (T)

1.11min 0.00PPB

response 0

Ion	Exp%	Act%
85.00	100	0.00
87.00	35.20	0.00#
50.00	7.60	0.00
0.00	0.00	0.00

Manual Integration:

Before

LM ✓

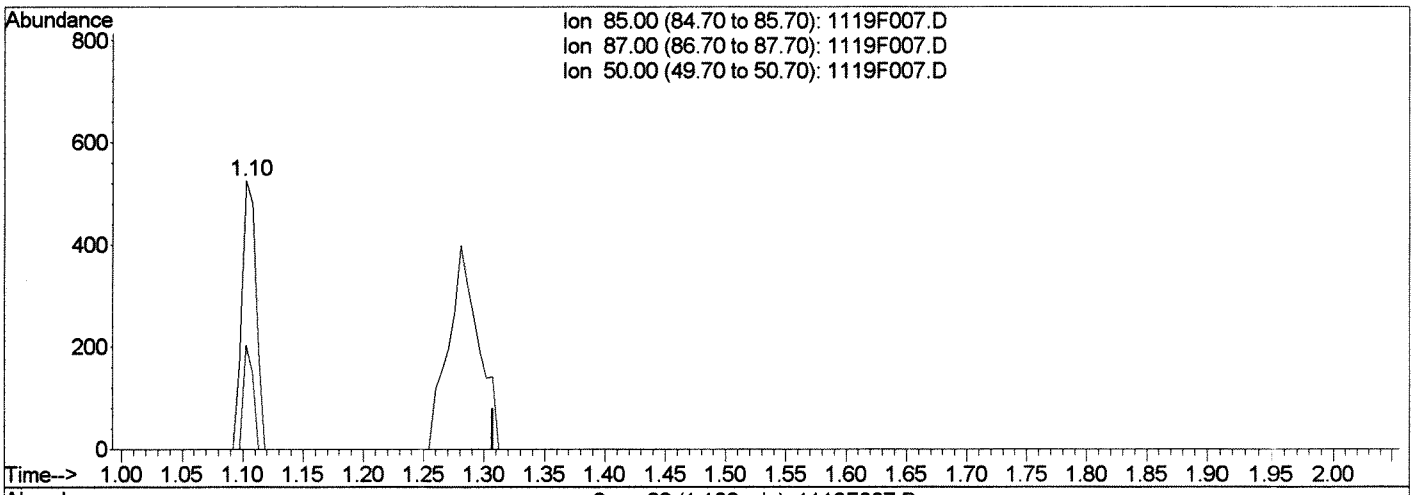
11/21/18

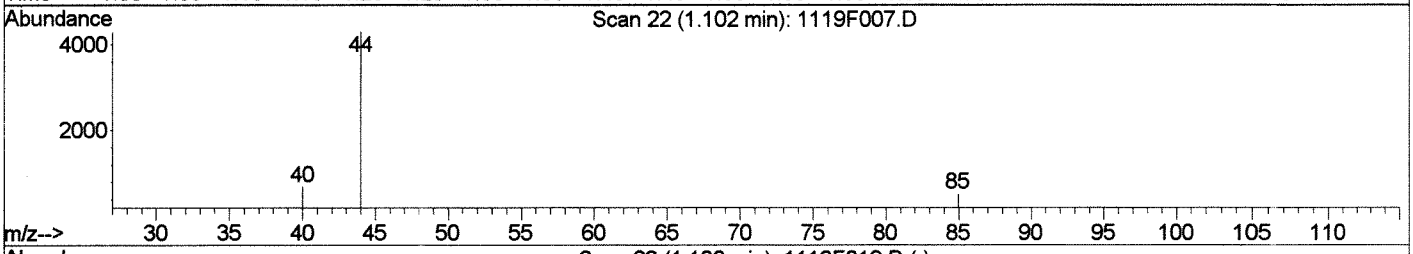
1119F007.D 111918MS46_8260.M Wed Nov 21 09:31:15 2018

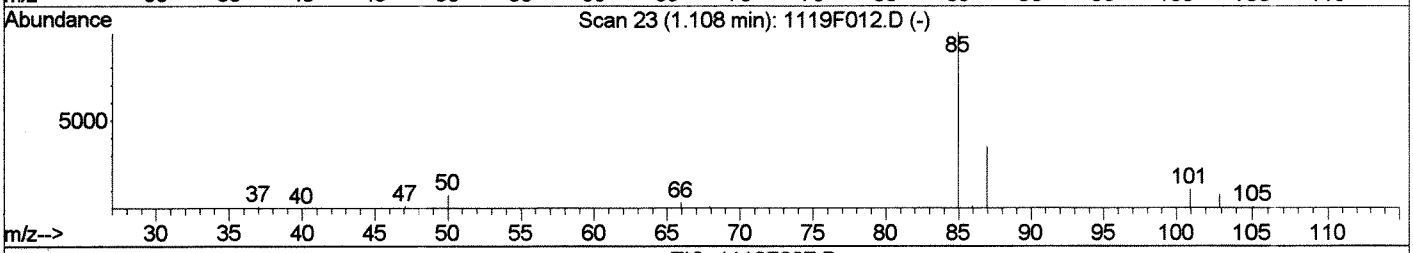
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:31 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(2) Dichlorodifluoromethane (T)

1.10min 0.14PPB m

response 431

Ion	Exp%	Act%
85.00	100	100
87.00	35.20	38.86
50.00	7.60	0.00
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

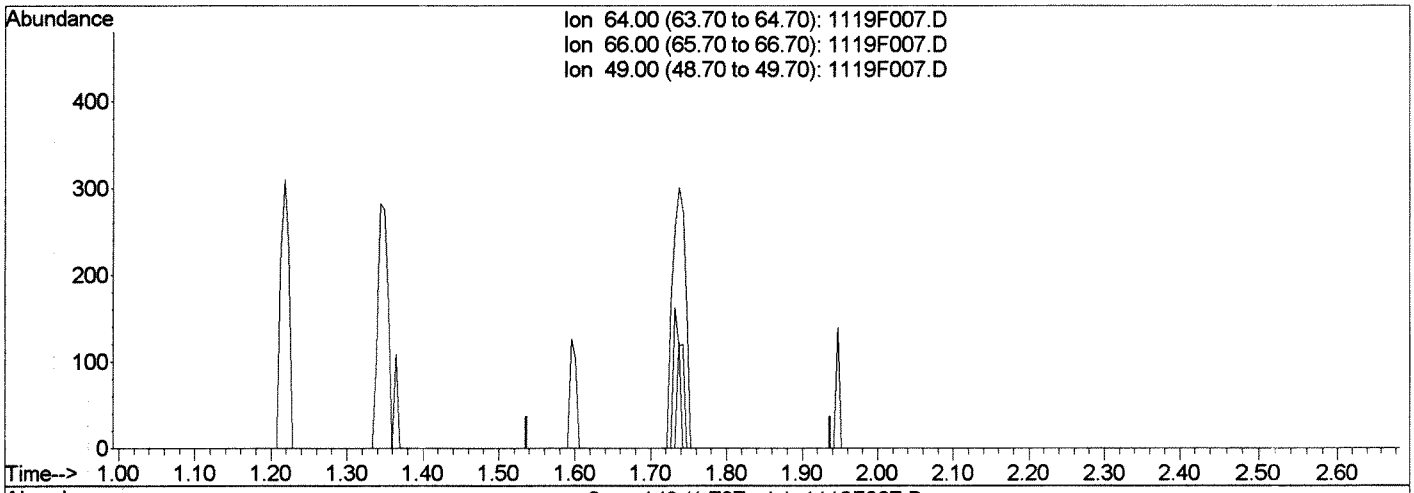
11/21/18

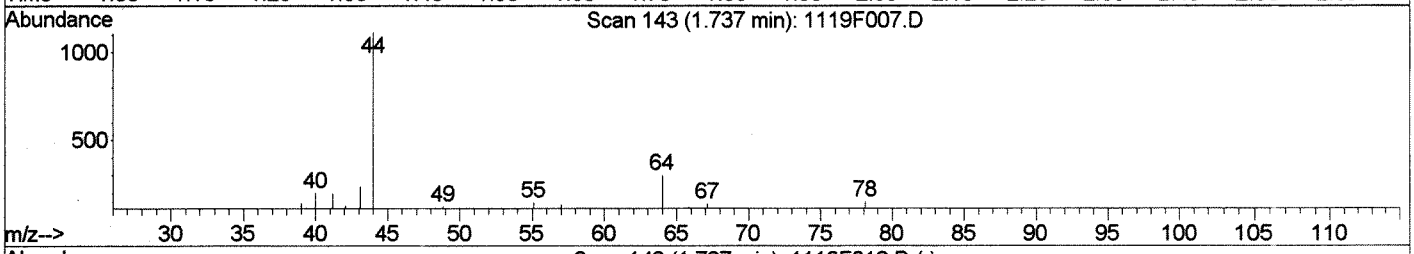
1119F007.D 111918MS46_8260.M Wed Nov 21 09:31:22 2018

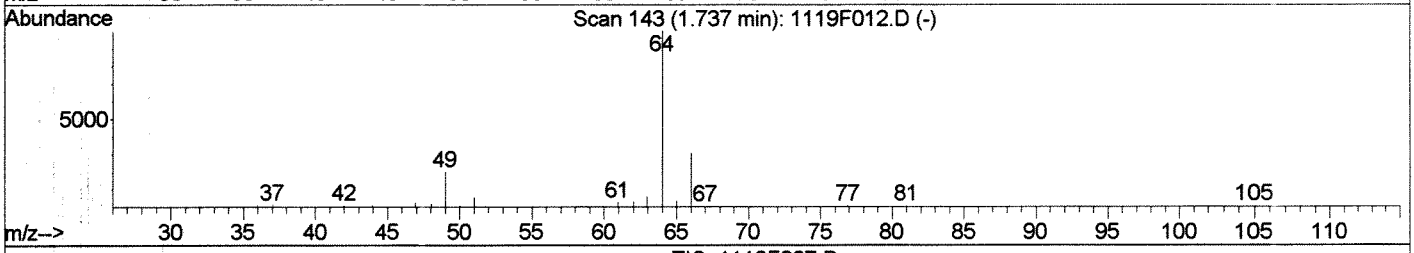
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:31 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(6) Chloroethane (T)

1.74min 0.00PPB

response 0

Ion	Exp%	Act%
64.00	100	0.00
66.00	30.90	0.00#
49.00	20.10	0.00
0.00	0.00	0.00

Manual Integration:

Before

LM

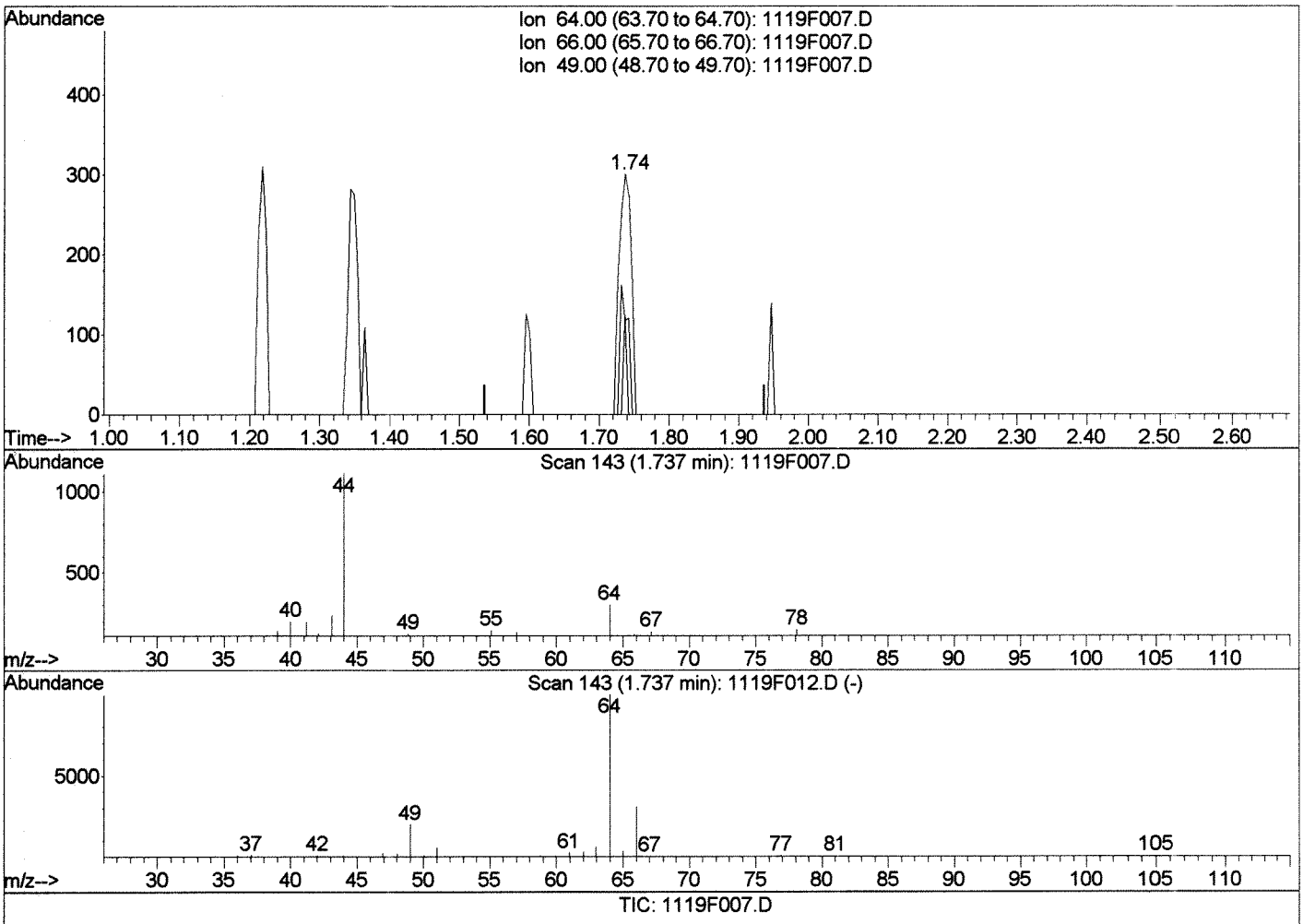
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:31:39 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:31 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(6) Chloroethane (T)

1.74min 0.16PPB m

response 365

Ion	Exp%	Act%
64.00	100	100
66.00	30.90	39.20
49.00	20.10	41.20
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

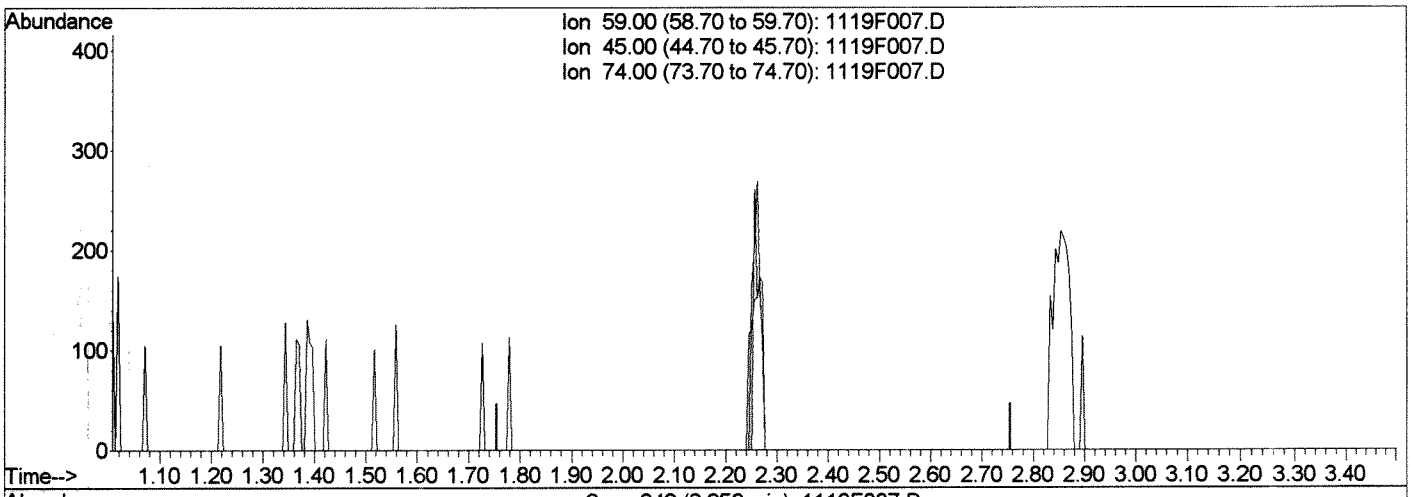
11/21/18

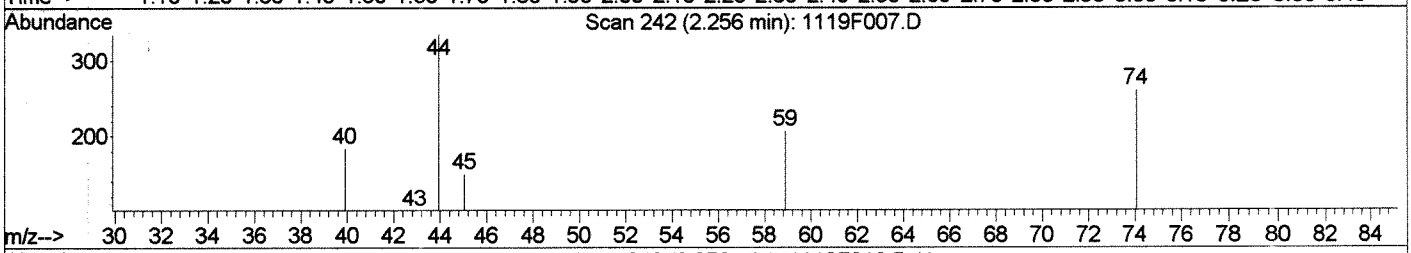
1119F007.D 111918MS46_8260.M Wed Nov 21 09:31:47 2018

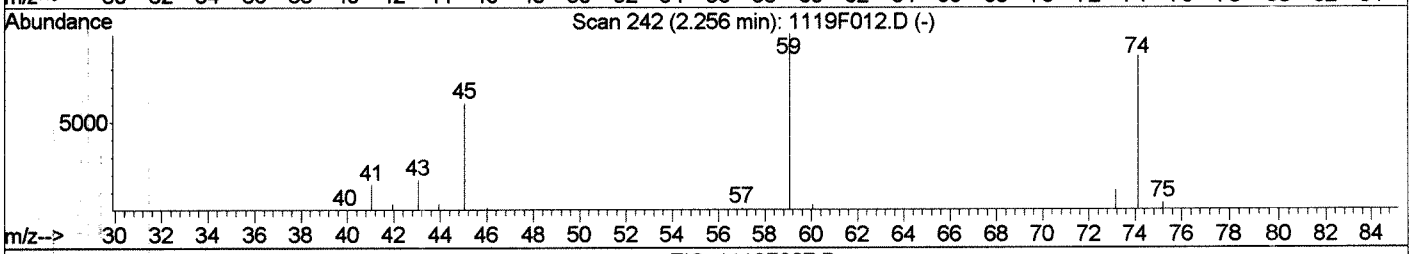
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:31 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(9) Ethyl Ether (T)

2.26min 0.00PPB

response 0

Ion	Exp%	Act%
59.00	100	0.00
45.00	60.70	0.00#
74.00	87.50	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

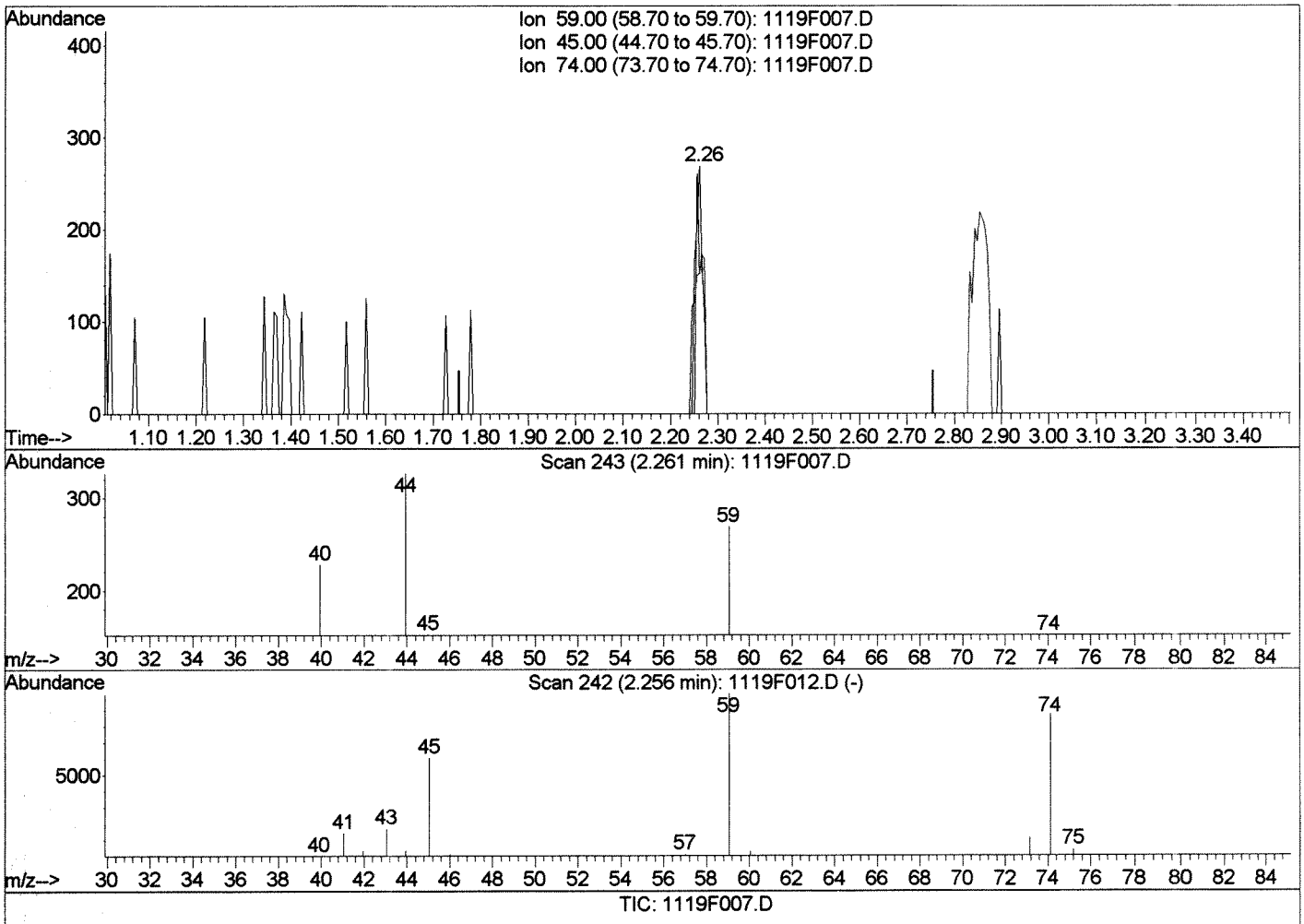
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:31:58 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:32 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(9) Ethyl Ether (T)

2.26min 0.14PPB m

response 287

Ion	Exp%	Act%
59.00	100	100
45.00	60.70	56.88
74.00	87.50	56.51#
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

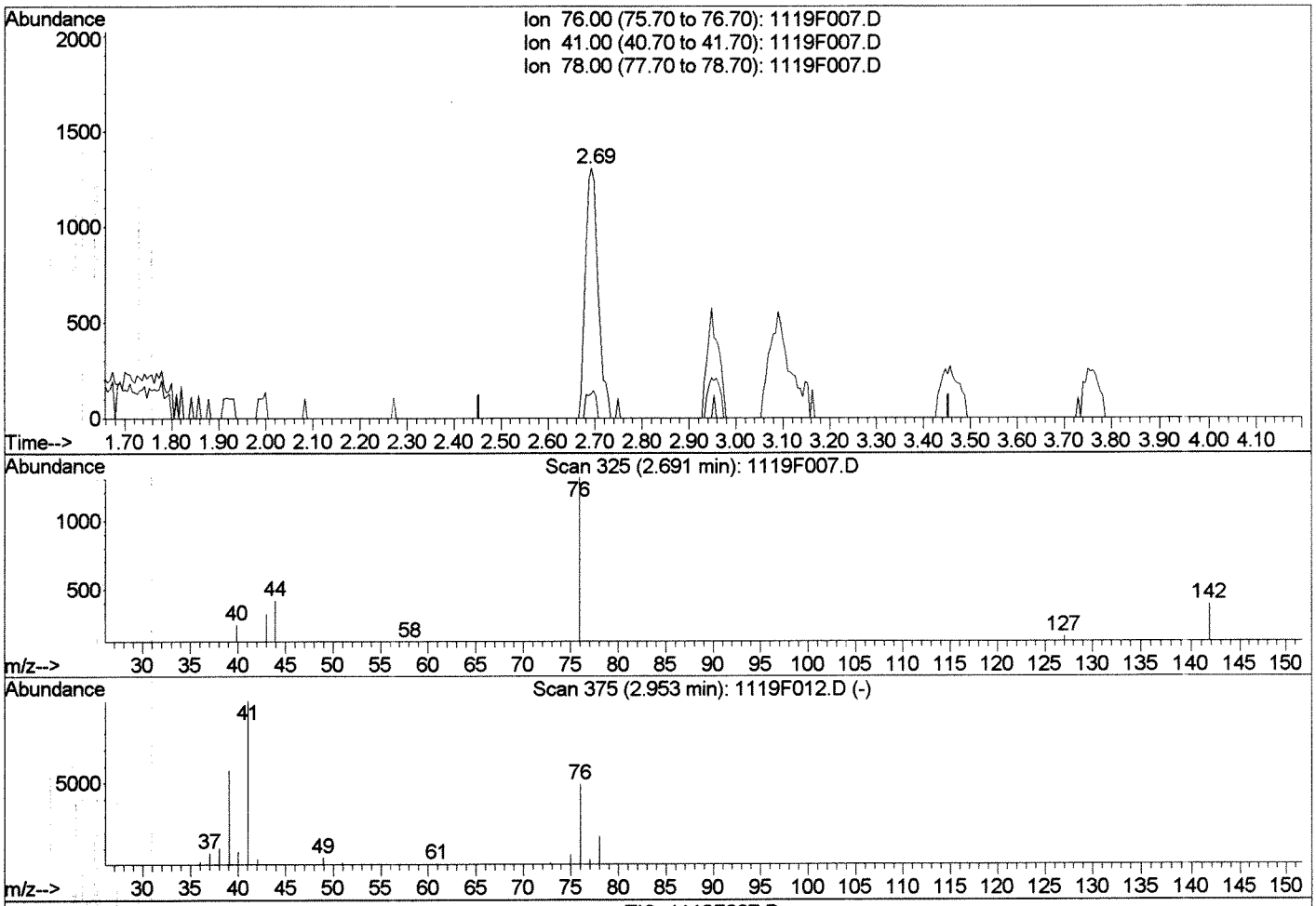
11/21/18 ✓

1119F007.D 111918MS46_8260.M Wed Nov 21 09:32:04 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:32 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(17) 3-Chloro-1-propene (T)

2.69min 1.27PPB

response 2455

Ion	Exp%	Act%
76.00	100	100
41.00	202.80	0.00#
78.00	36.10	9.63
0.00	0.00	0.00

Manual Integration:

Before

LM

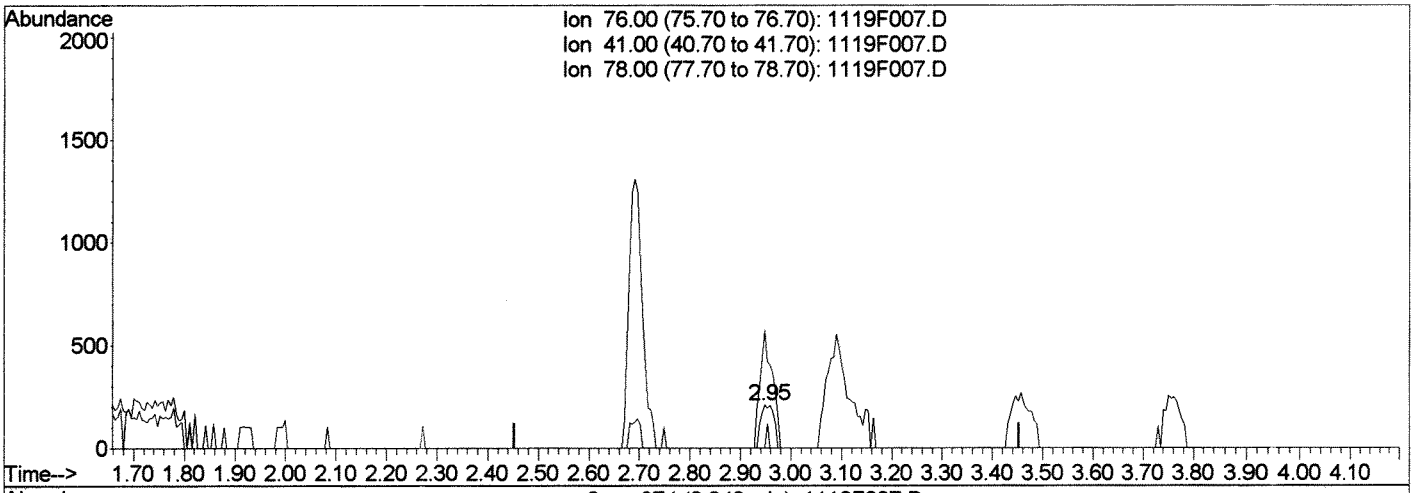
11/21/18

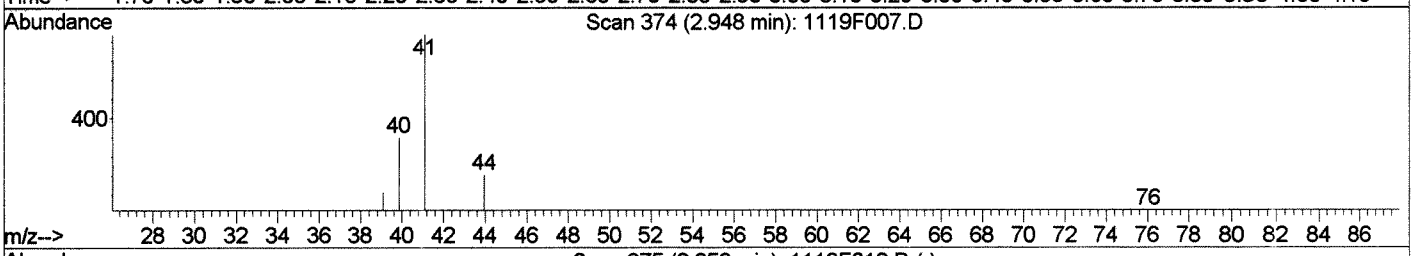
1119F007.D 111918MS46_8260.M Wed Nov 21 09:33:26 2018

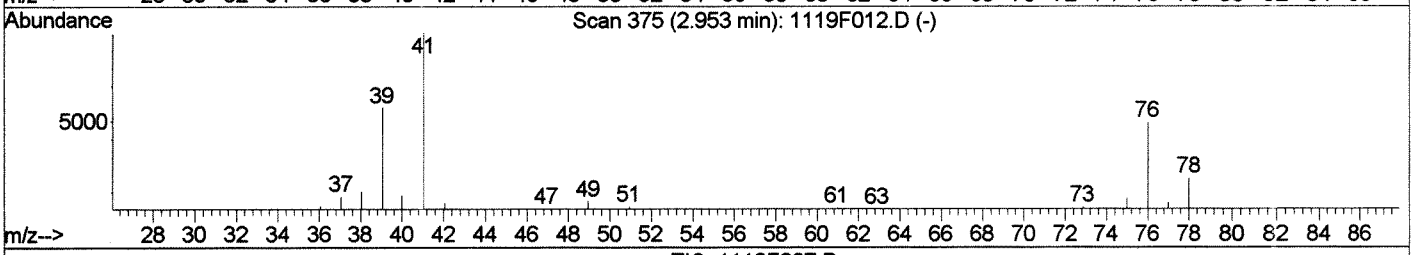
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:33 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(17) 3-Chloro-1-propene (T)

2.95min 0.19PPB m

response 375

Ion	Exp%	Act%
76.00	100	100
41.00	202.80	276.44#
78.00	36.10	0.00#
0.00	0.00	0.00

Manual Integration:

After LM

Baseline correction

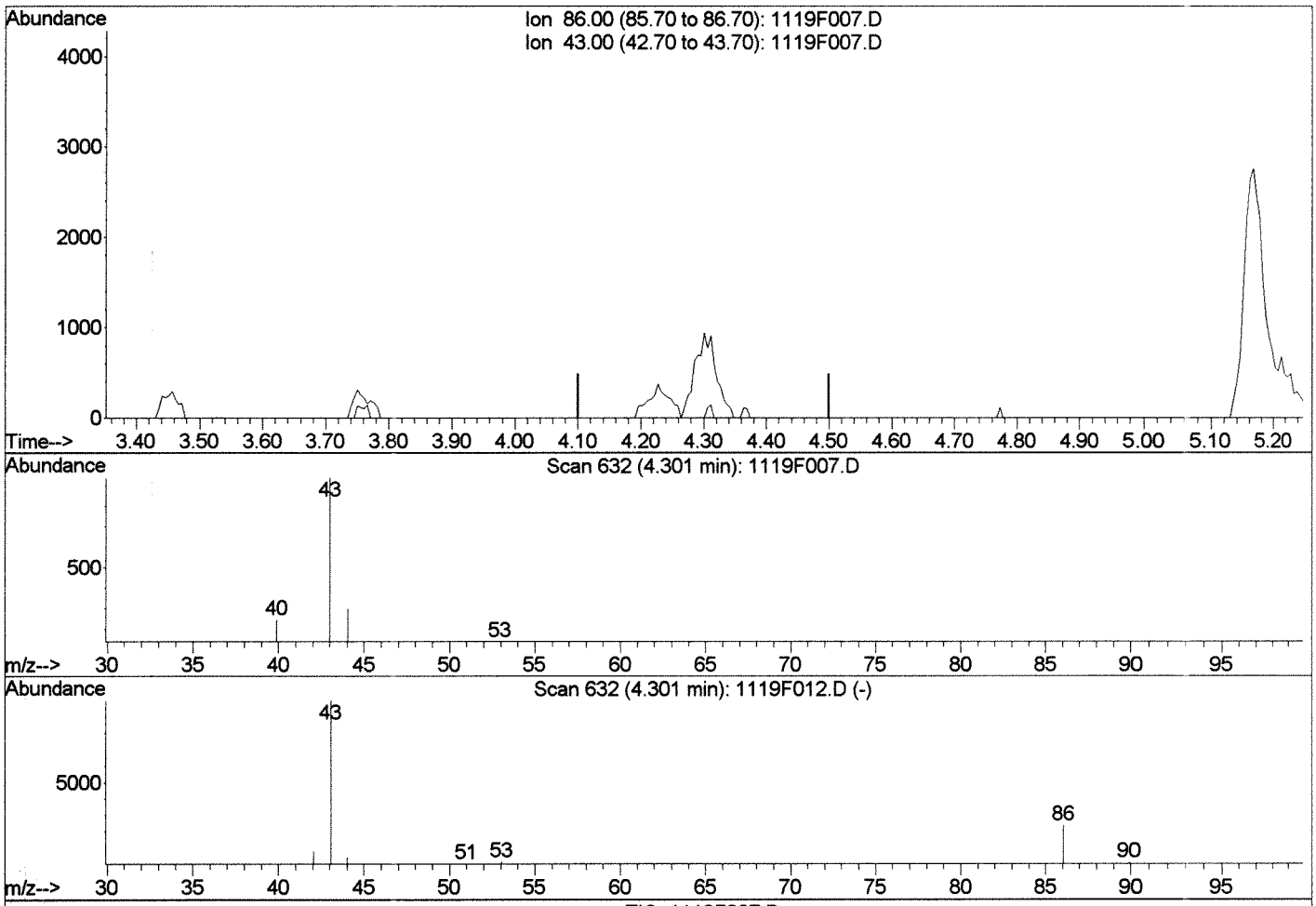
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:33:37 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:34 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(28) Vinyl Acetate (T)

4.30min 0.00PPB

response 0

Ion	Exp%	Act%
86.00	100	0.00
43.00	608.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before LM

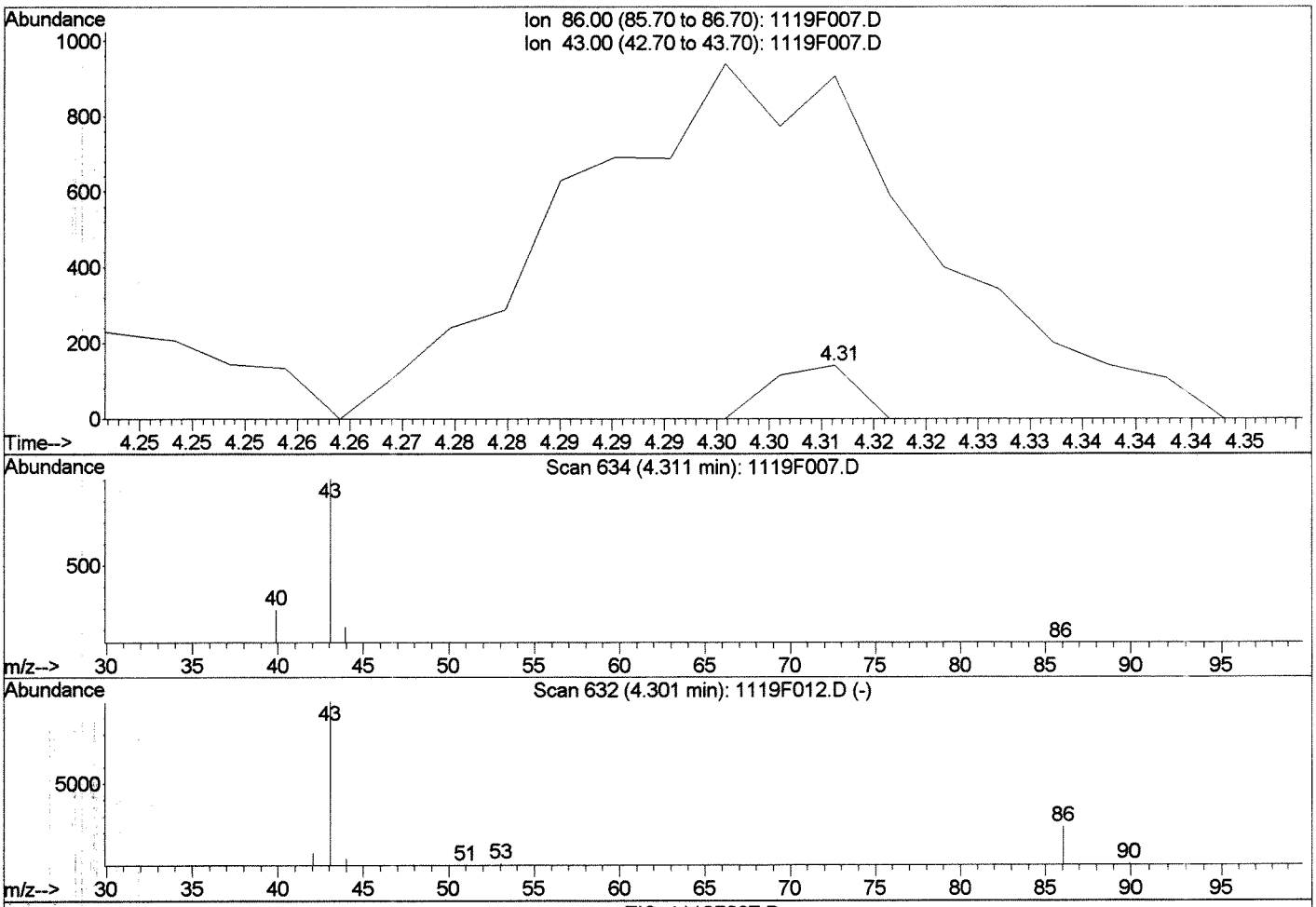
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:35:04 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:35 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(28) Vinyl Acetate (T)

4.31min 0.10PPB m

response 80

Ion	Exp%	Act%
86.00	100	100
43.00	608.80	642.55#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

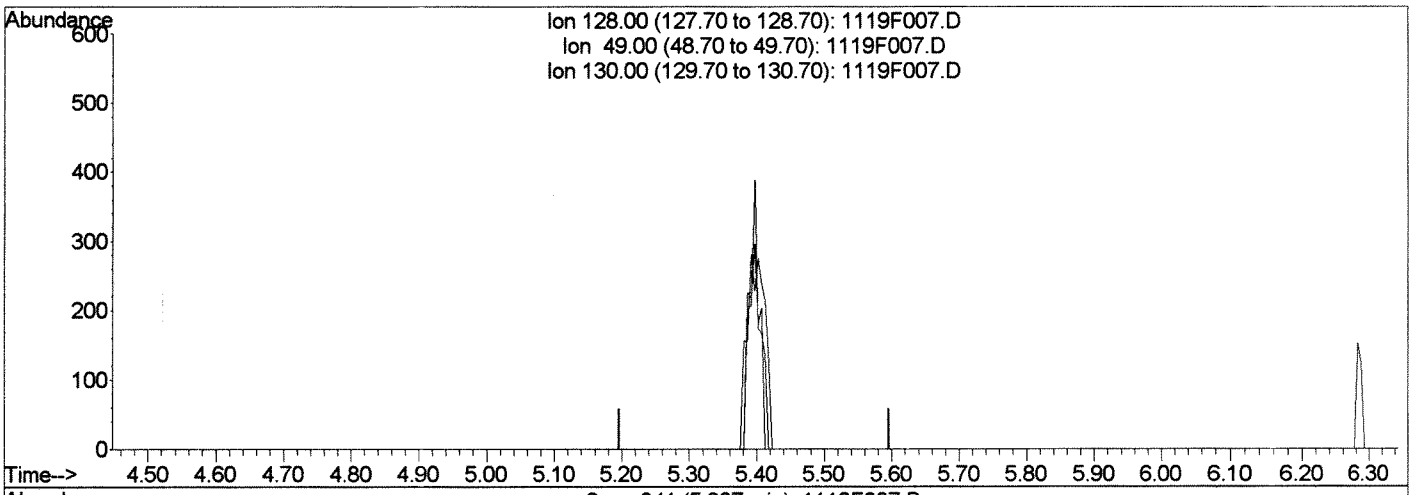
11/21/18

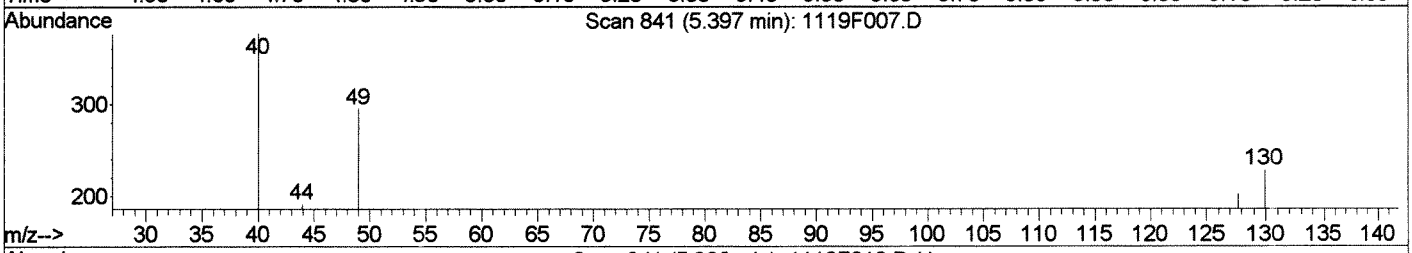
1119F007.D 111918MS46_8260.M Wed Nov 21 09:35:17 2018

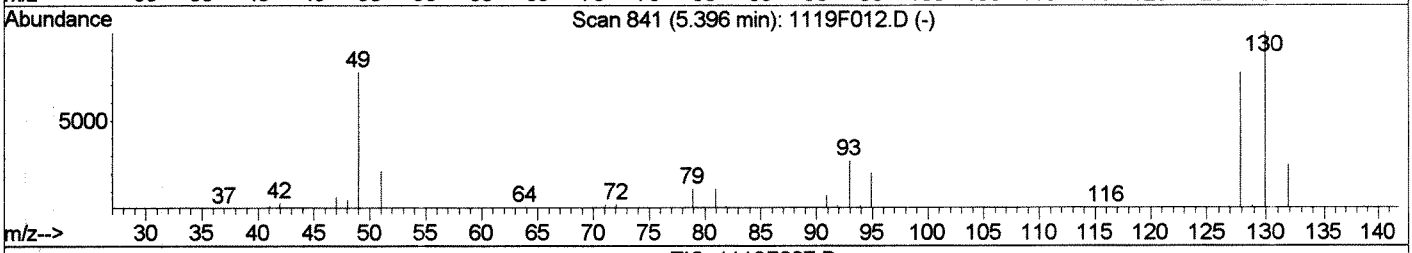
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:35 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(37) Bromochloromethane (T)

5.40min 0.00PPB

response 0

Ion	Exp%	Act%
128.00	100	0.00
49.00	100.70	0.00#
130.00	130.00	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

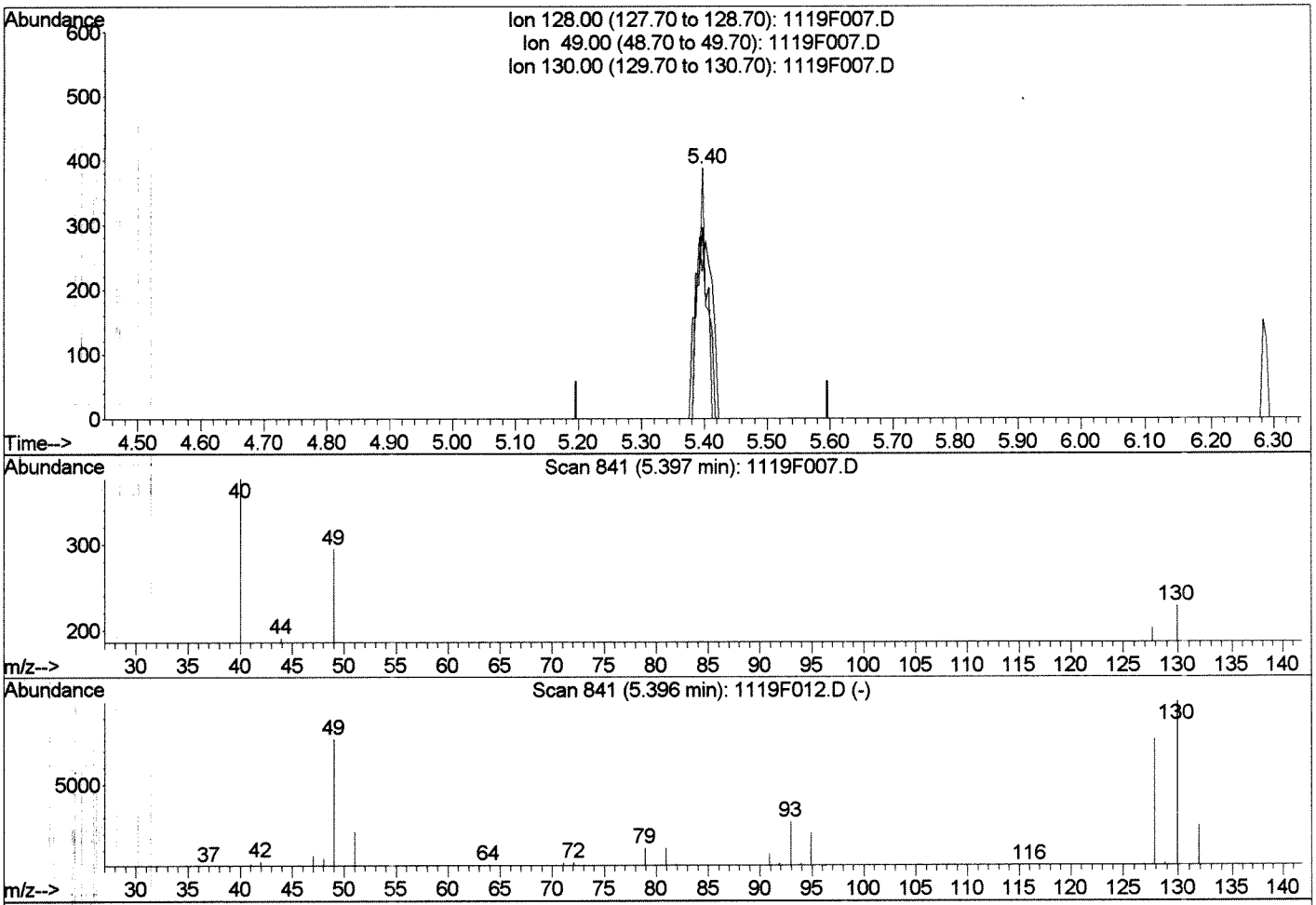
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:36:26 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:36 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(37) Bromochloromethane (T)

5.40min 0.17PPB m

response 401

Ion	Exp%	Act%
128.00	100	100
49.00	100.70	146.04#
130.00	130.00	112.87
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

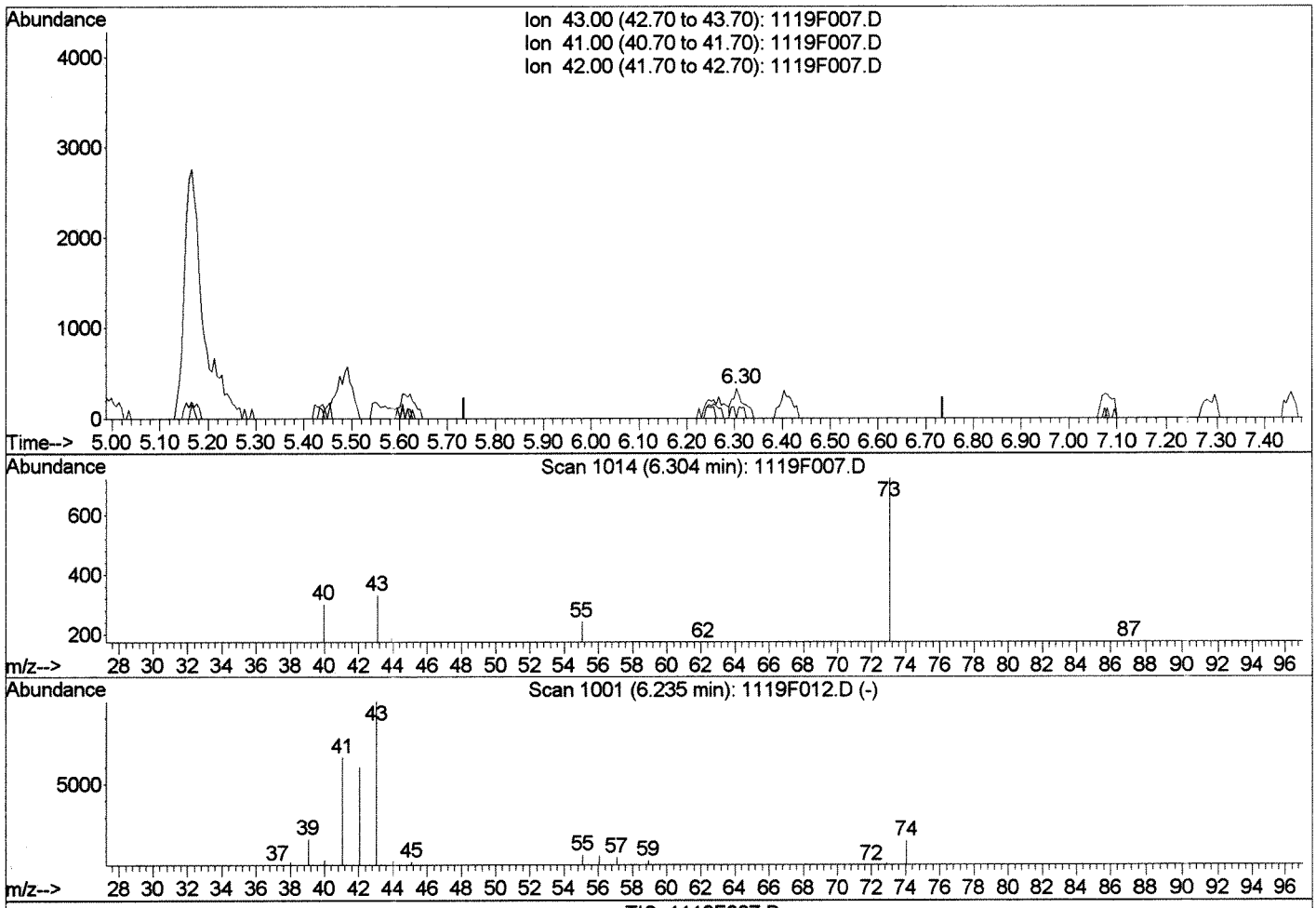
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:36:33 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:36 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(45) Isobutyl Alcohol (T)

6.30min 10.93PPB

response 537

Ion	Exp%	Act%
43.00	100	100
41.00	66.10	0.00#
42.00	60.10	0.00#
0.00	0.00	0.00

Manual Integration:

Before LM

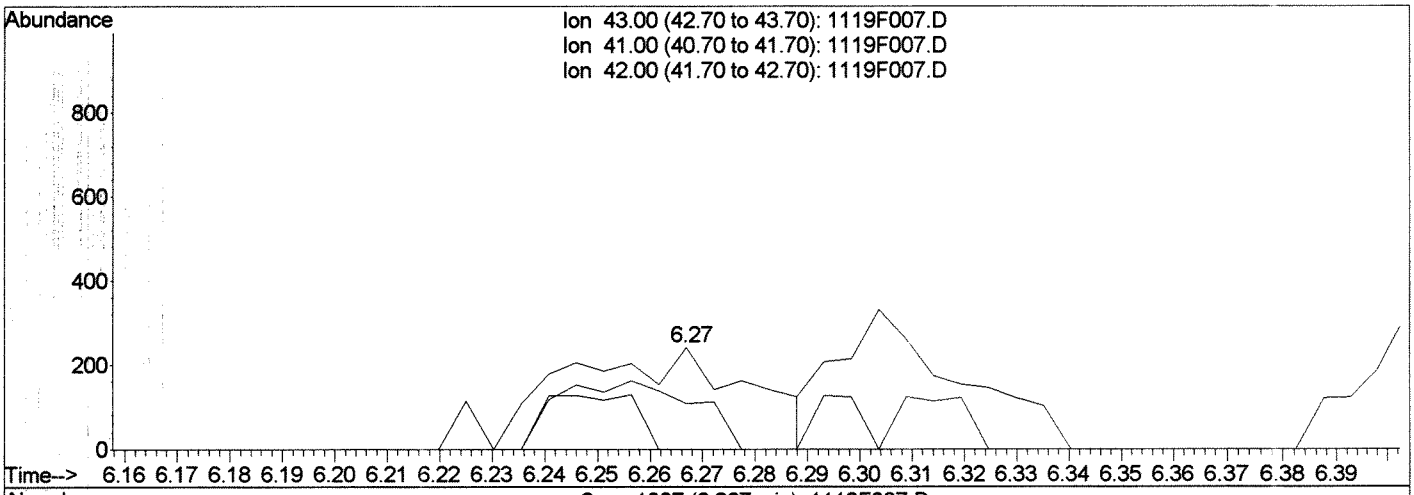
11/21/18

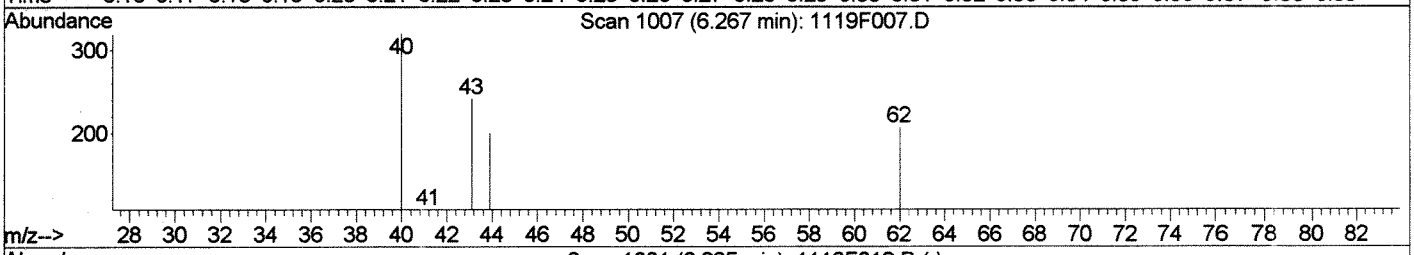
1119F007.D 111918MS46_8260.M Wed Nov 21 09:36:51 2018

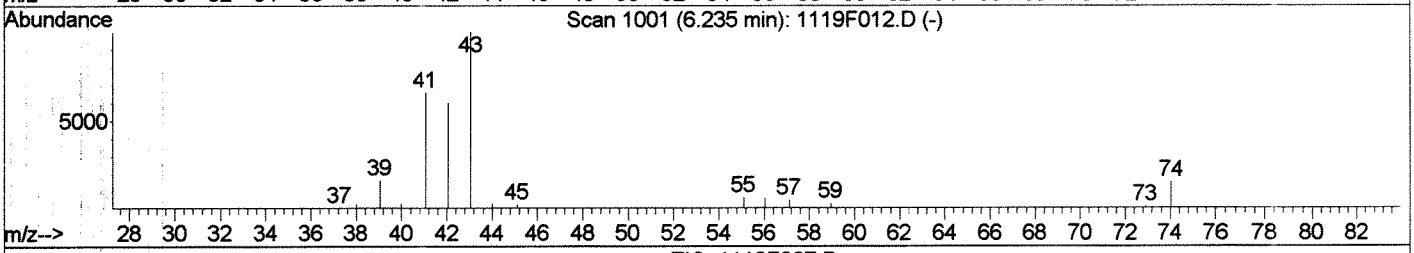
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:36 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(45) Isobutyl Alcohol (T)

6.27min 11.78PPB m

response 579

Ion	Exp%	Act%
43.00	100	100
41.00	66.10	44.81
42.00	60.10	0.00#
0.00	0.00	0.00

Manual Integration:

After LM

Baseline correction ✓

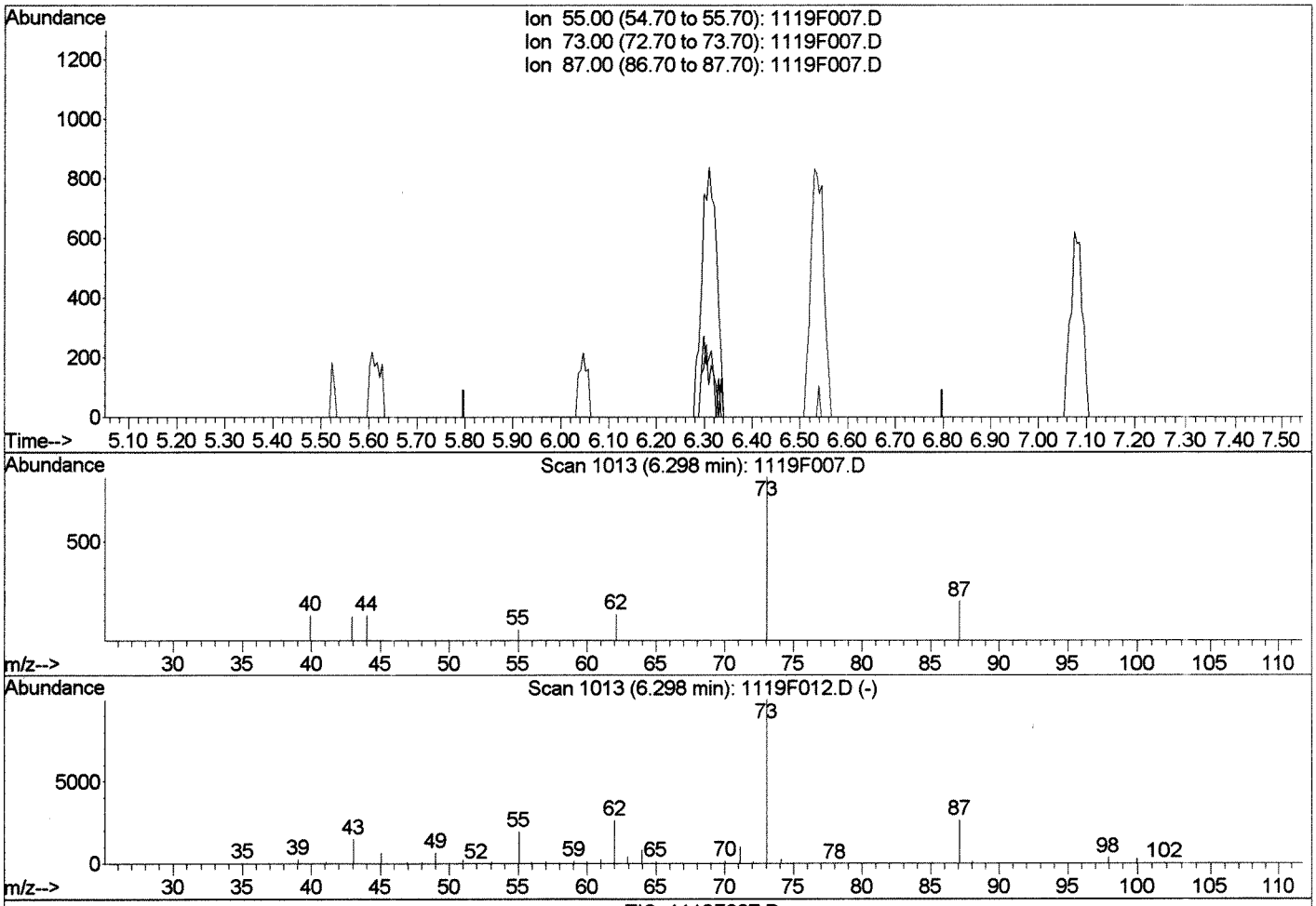
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:37:16 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:36 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(49) tert-Amyl Methyl Ether (T)

6.30min 0.00PPB

response 0

Ion	Exp%	Act%
55.00	100	0.00
73.00	501.10	0.00#
87.00	131.30	0.00#
0.00	0.00	0.00

Manual Integration:

Before LM

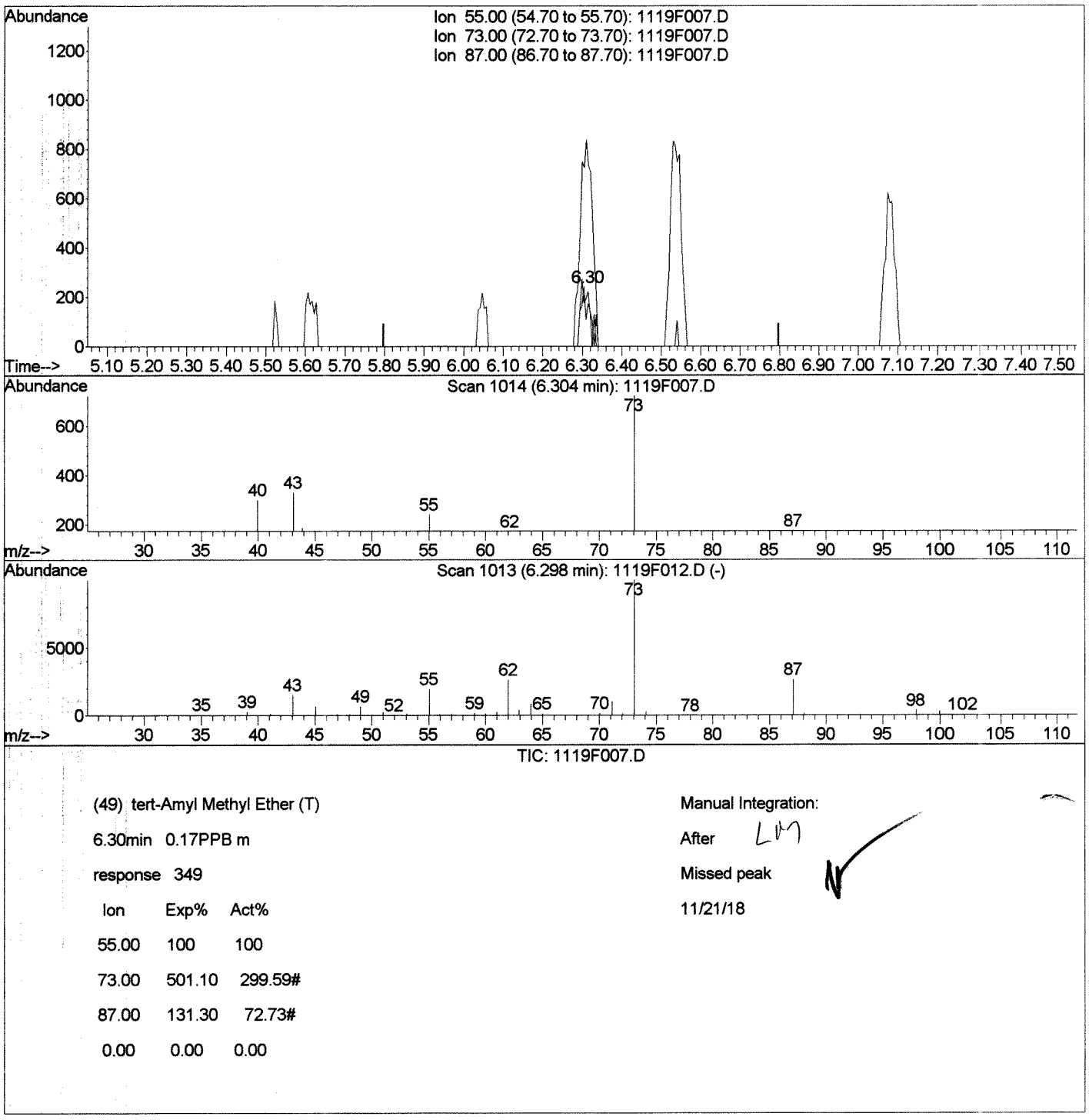
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:37:33 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:37 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(49) tert-Amyl Methyl Ether (T)

6.30min 0.17PPB m

response 349

Ion	Exp%	Act%
55.00	100	100
73.00	501.10	299.59#
87.00	131.30	72.73#
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

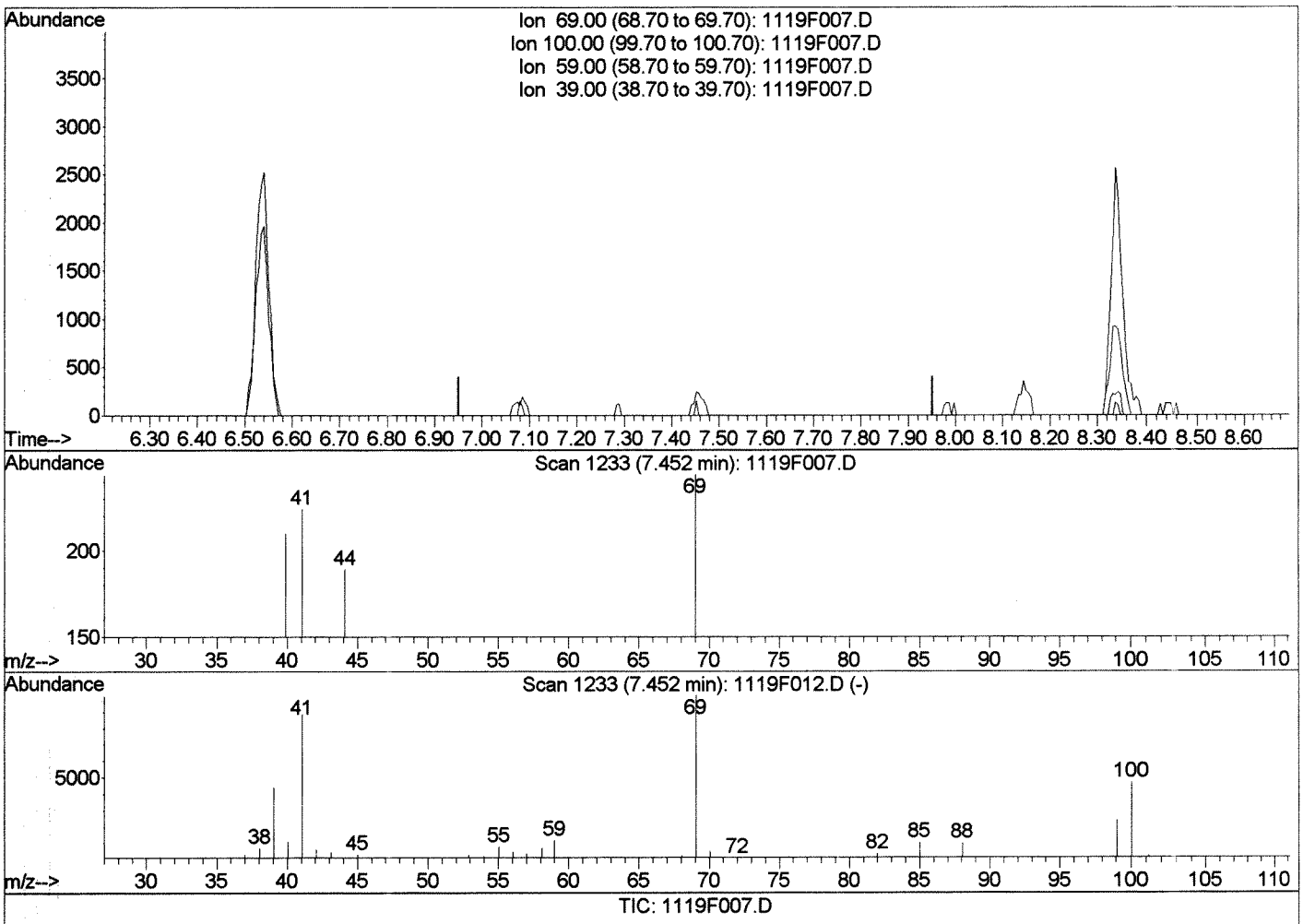
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:37:41 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:37 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(54) Methyl methacrylate (T)

7.45min 0.00PPB

response 0

Ion	Exp%	Act%
69.00	100	0.00
100.00	46.80	0.00#
59.00	11.90	0.00
39.00	44.10	0.00#

Manual Integration:

Before LM

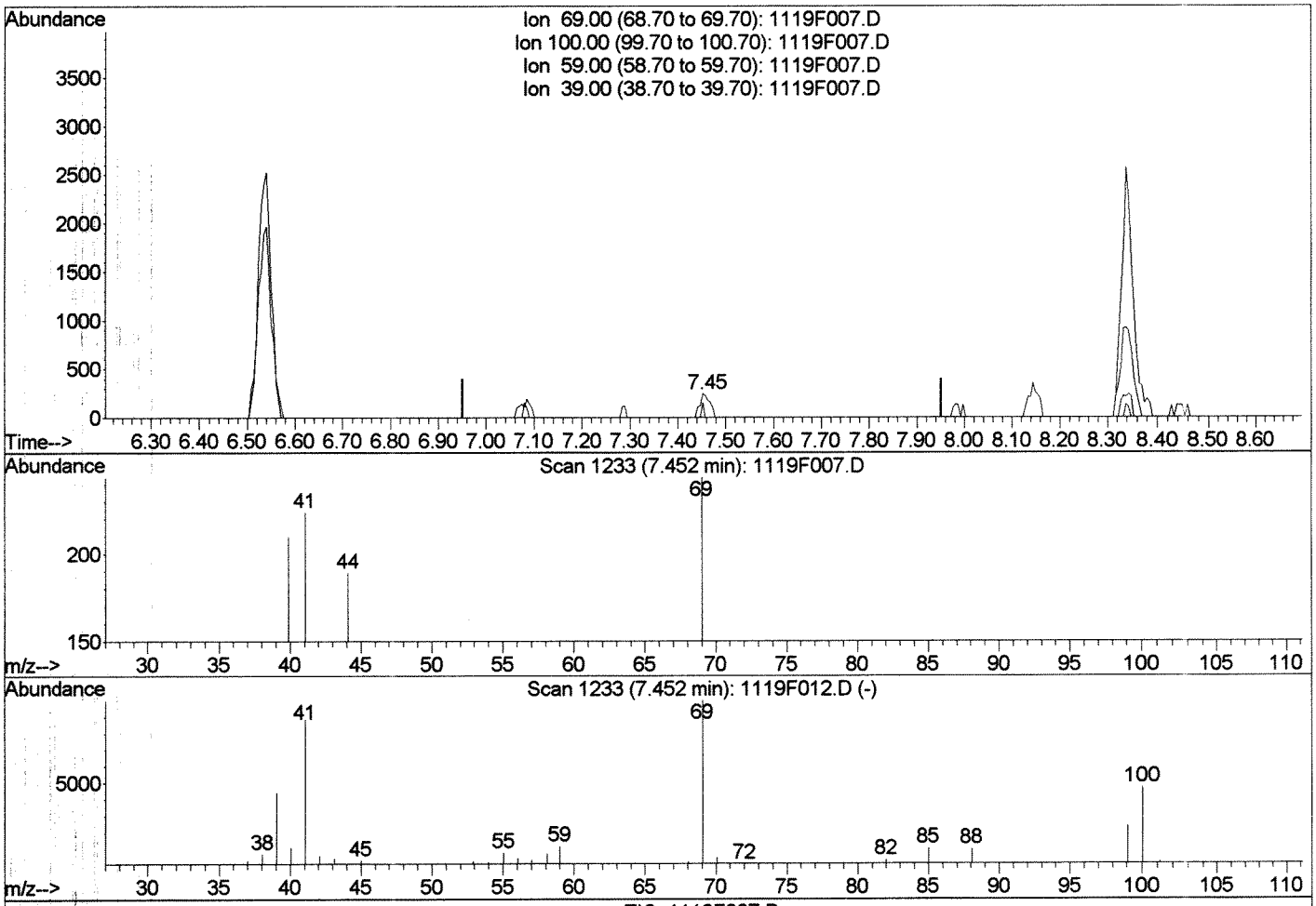
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:38:15 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:38 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(54) Methyl methacrylate (T)

7.45min 0.18PPB m

response 358

Ion	Exp%	Act%
69.00	100	100
100.00	46.80	0.00#
59.00	11.90	0.00
39.00	44.10	61.48

Manual Integration:

After LM

Missed peak

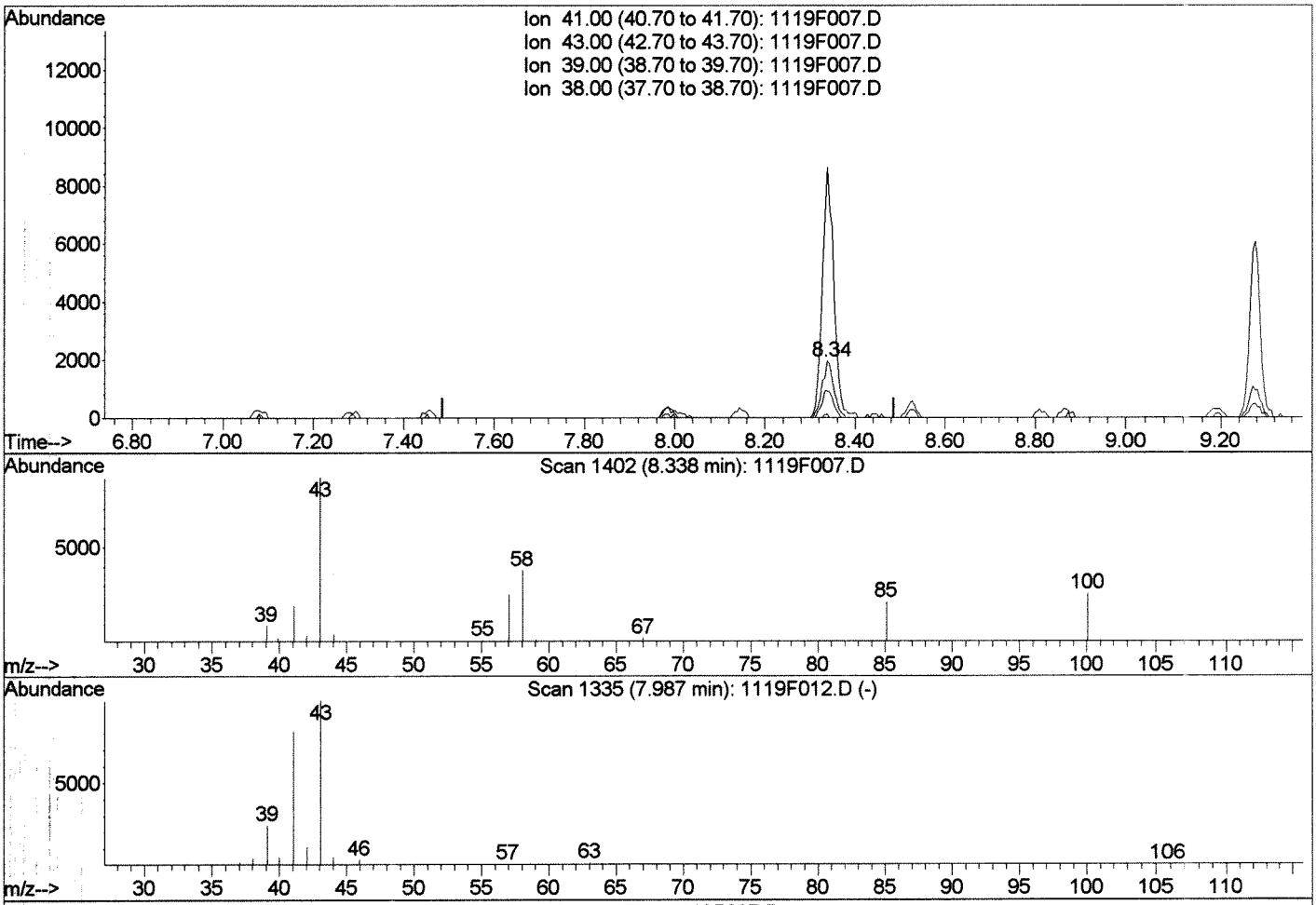
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:38:21 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:38 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(57) 2-Nitropropane (T)

8.34min 6.98PPB

response 3482

Ion	Exp%	Act%
41.00	100	100
43.00	122.90	442.07#
39.00	29.70	47.19
38.00	5.70	6.24

Manual Integration:

Before LM

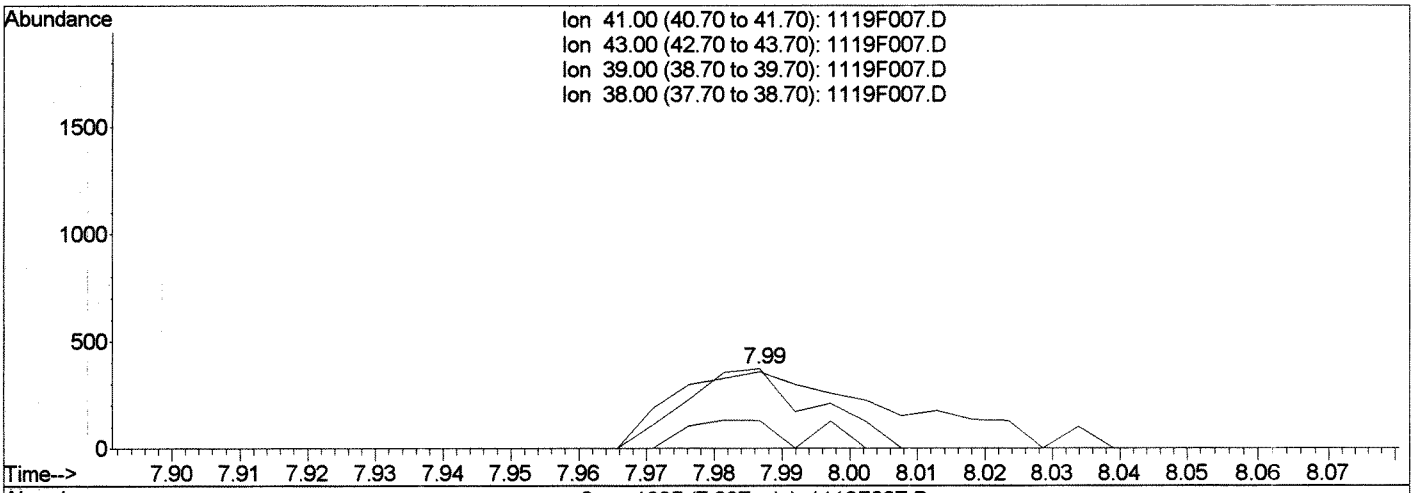
11/21/18

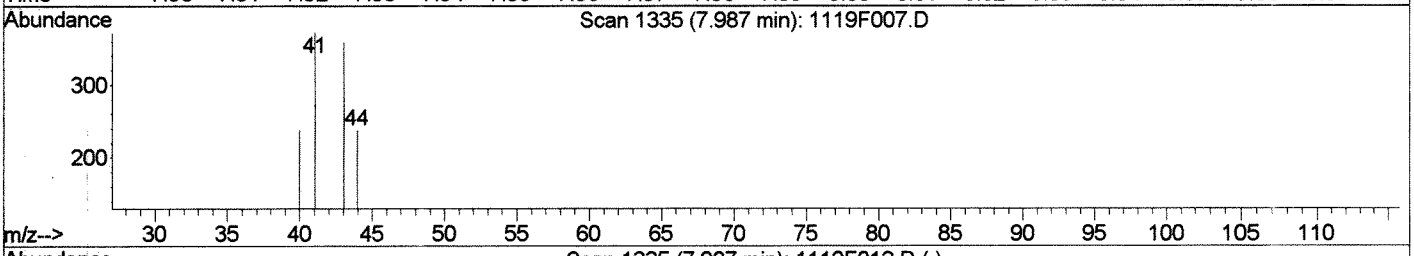
1119F007.D 111918MS46_8260.M Wed Nov 21 09:38:35 2018

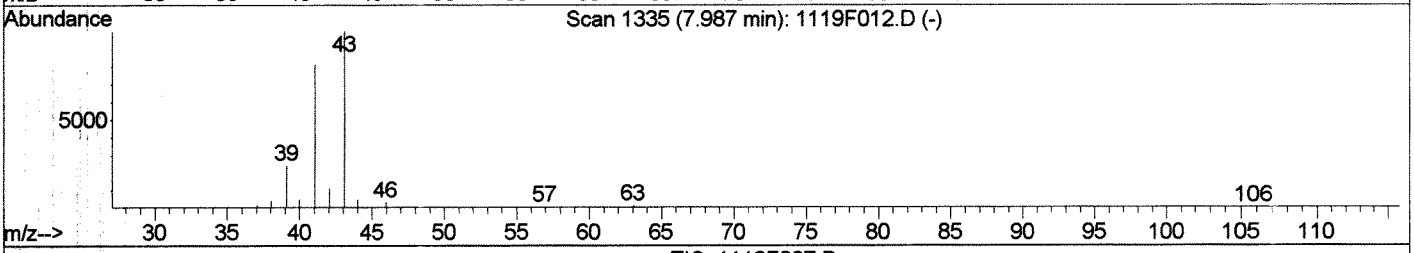
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:38 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(57) 2-Nitropropane (T)

7.99min 0.99PPB m

response 494

Ion	Exp%	Act%
41.00	100	100
43.00	122.90	96.24
39.00	29.70	34.95
38.00	5.70	0.00

Manual Integration:

After LM

Baseline correction

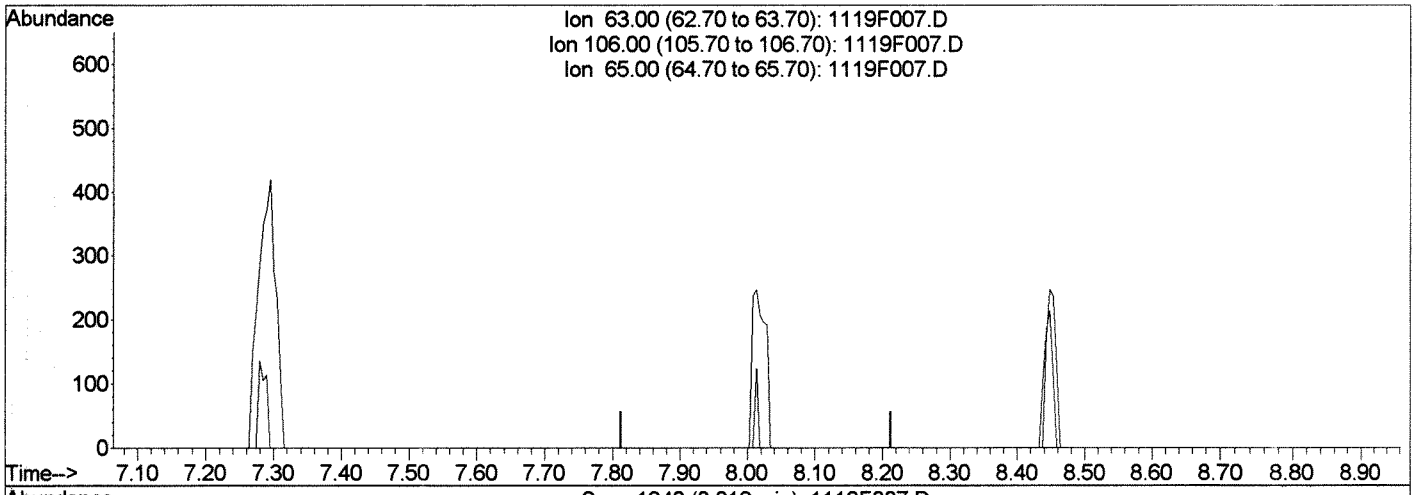
11/21/18

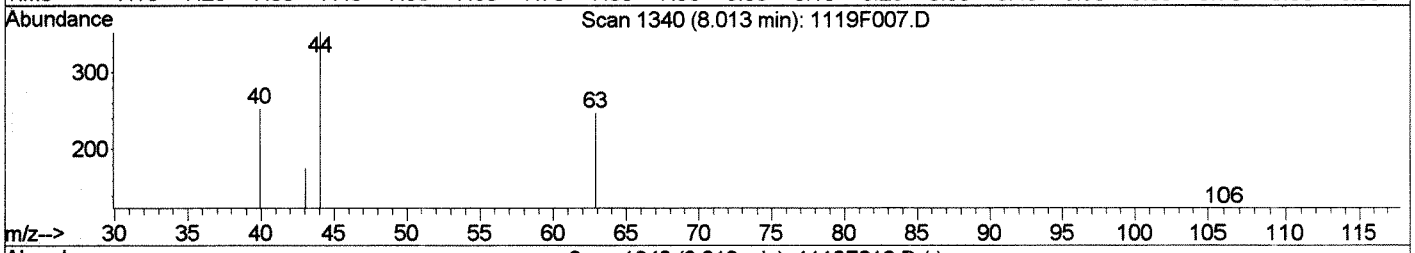
1119F007.D 111918MS46_8260.M Wed Nov 21 09:38:47 2018

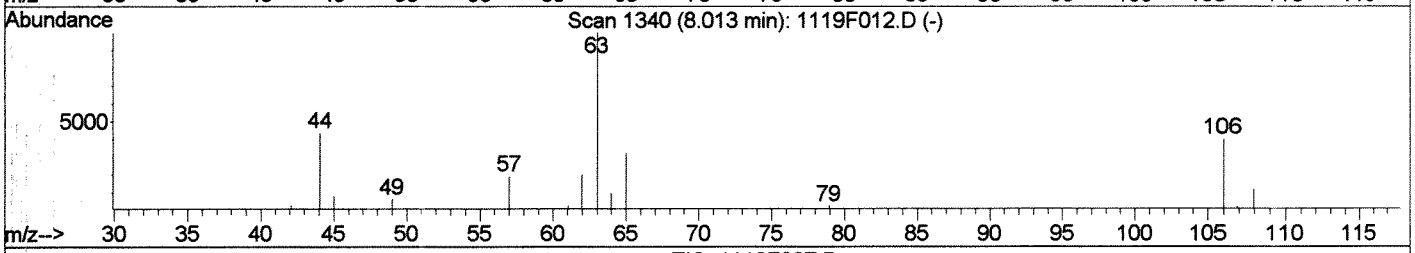
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:38 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(58) 2-Chloroethyl Vinyl Ether (T)

8.01min 0.00PPB

response 0

Ion	Exp%	Act%
63.00	100	0.00
106.00	39.90	0.00#
65.00	32.10	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

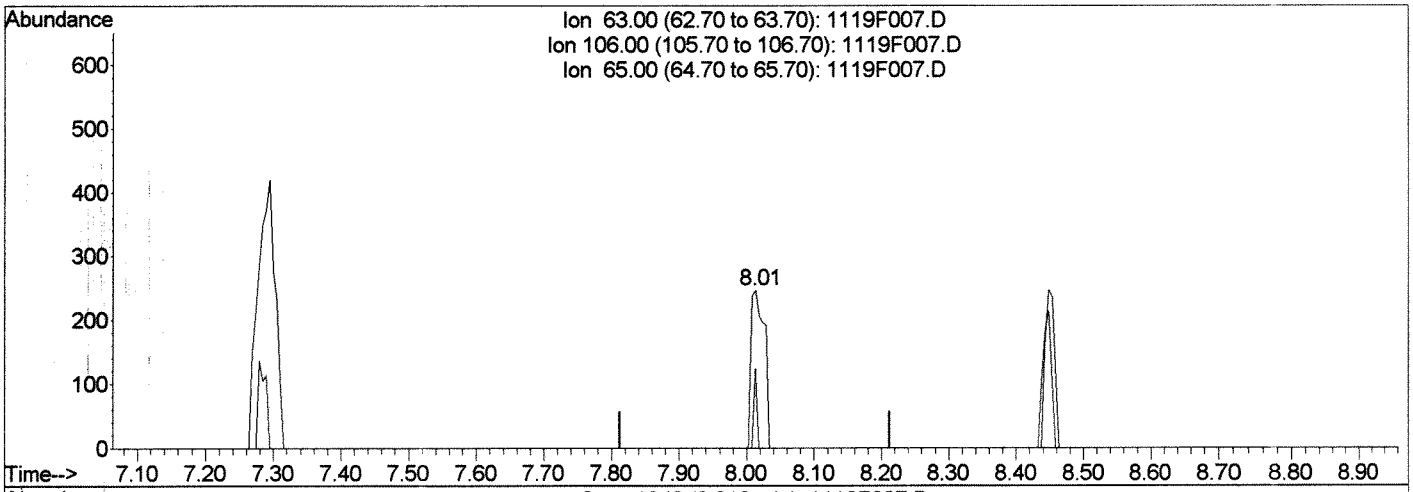
11/21/18

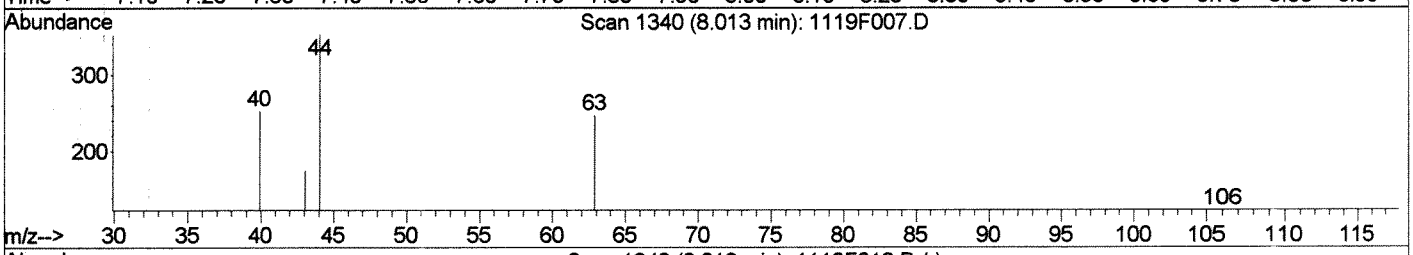
1119F007.D 111918MS46_8260.M Wed Nov 21 09:38:54 2018

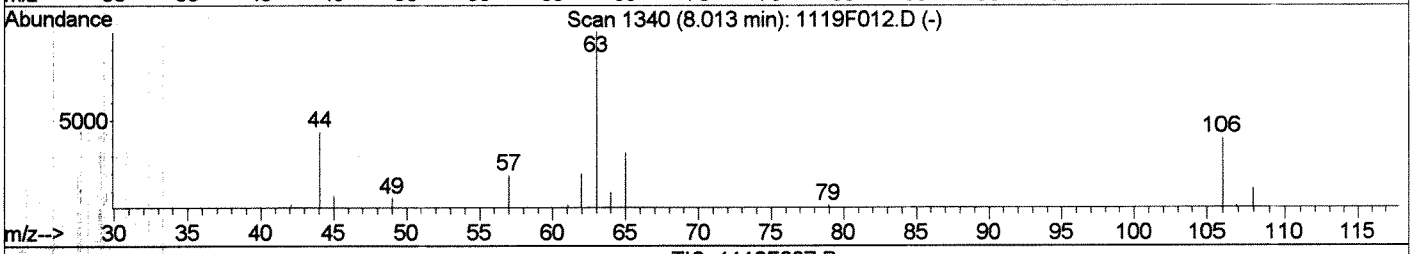
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:38 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(58) 2-Chloroethyl Vinyl Ether (T)

8.01min 0.17PPB m

response 339

Ion	Exp%	Act%
63.00	100	100
106.00	39.90	50.20
65.00	32.10	0.00#
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

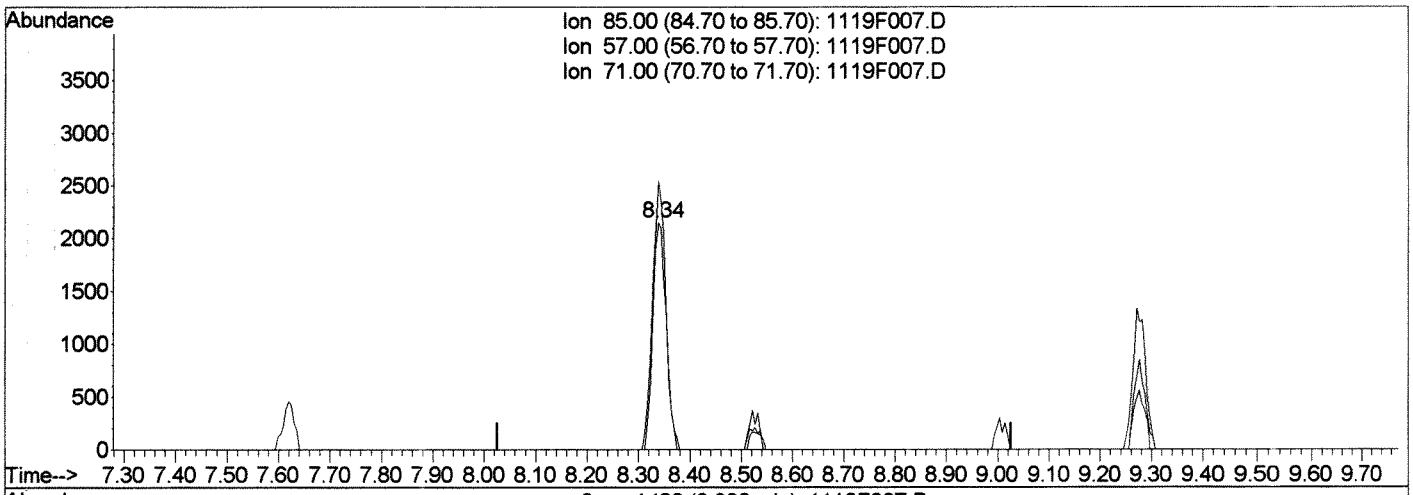
11/21/18

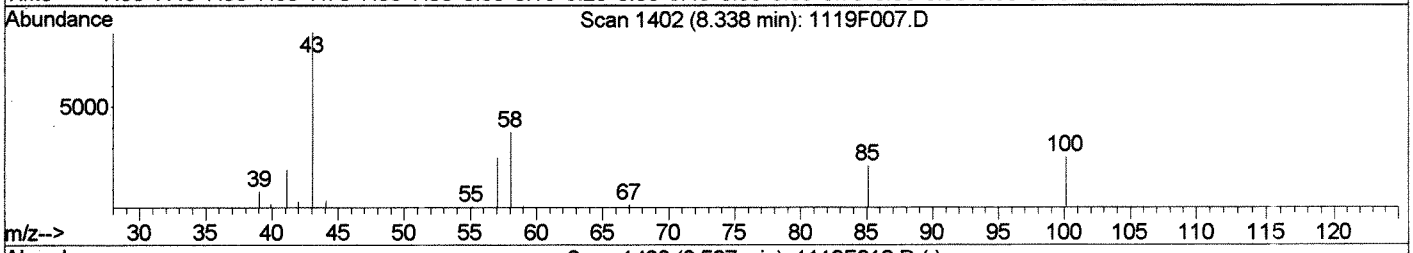
1119F007.D 111918MS46_8260.M Wed Nov 21 09:39:02 2018

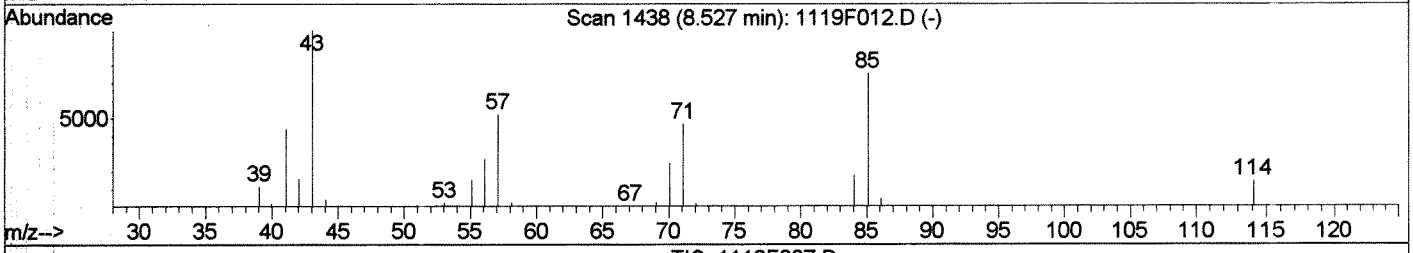
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:38 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(64) n-Octane (T)

8.34min 1.58PPB

response 3909

Ion	Exp%	Act%
85.00	100	100
57.00	69.30	118.26#
71.00	61.90	0.00#
0.00	0.00	0.00

Manual Integration:

Before

LM

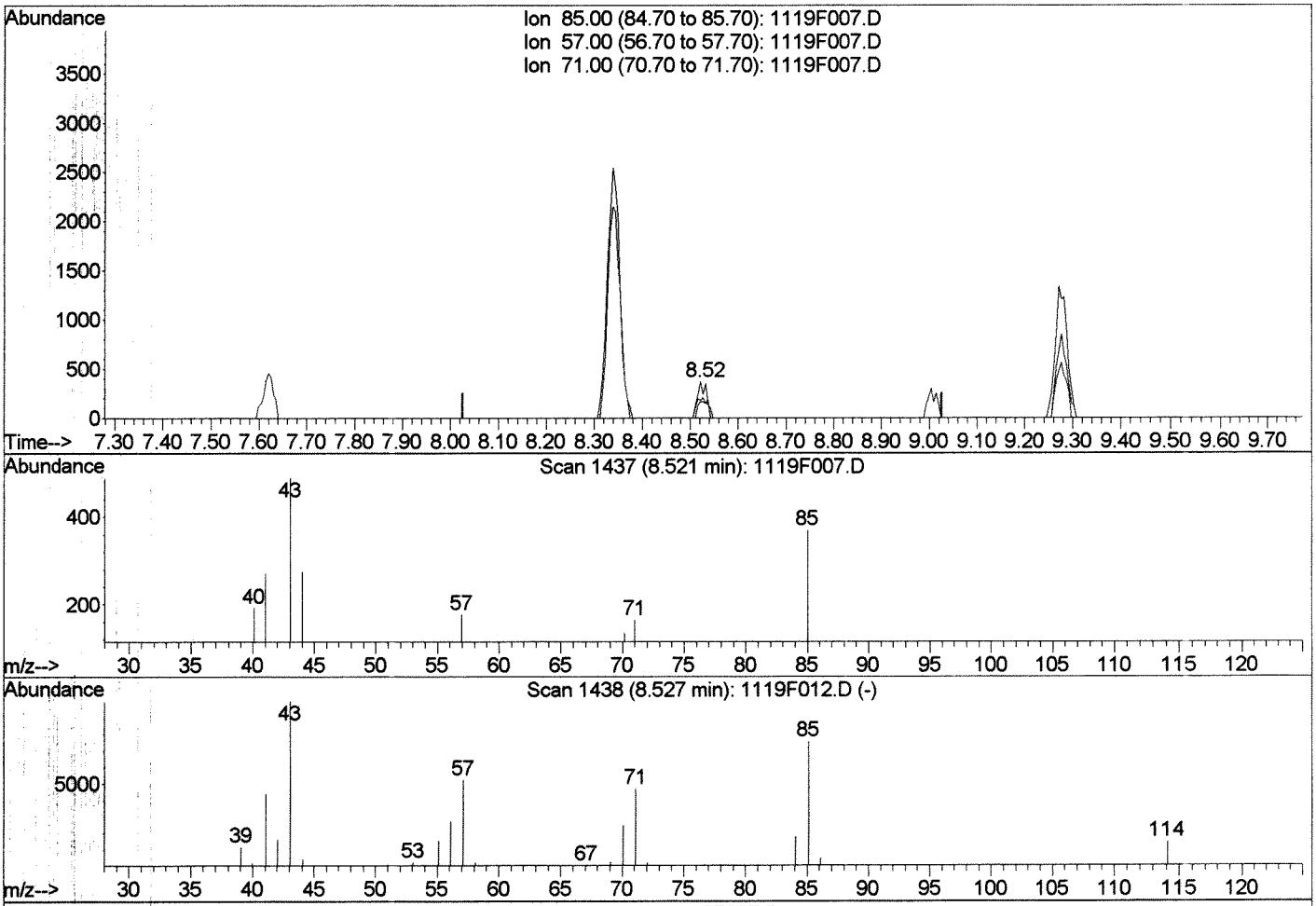
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:39:14 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:39 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(64) n-Octane (T)

8.52min 0.19PPB m

response 464

Ion	Exp%	Act%
85.00	100	100
57.00	69.30	47.84
71.00	61.90	44.59
0.00	0.00	0.00

Manual Integration:

After LM

Baseline correction

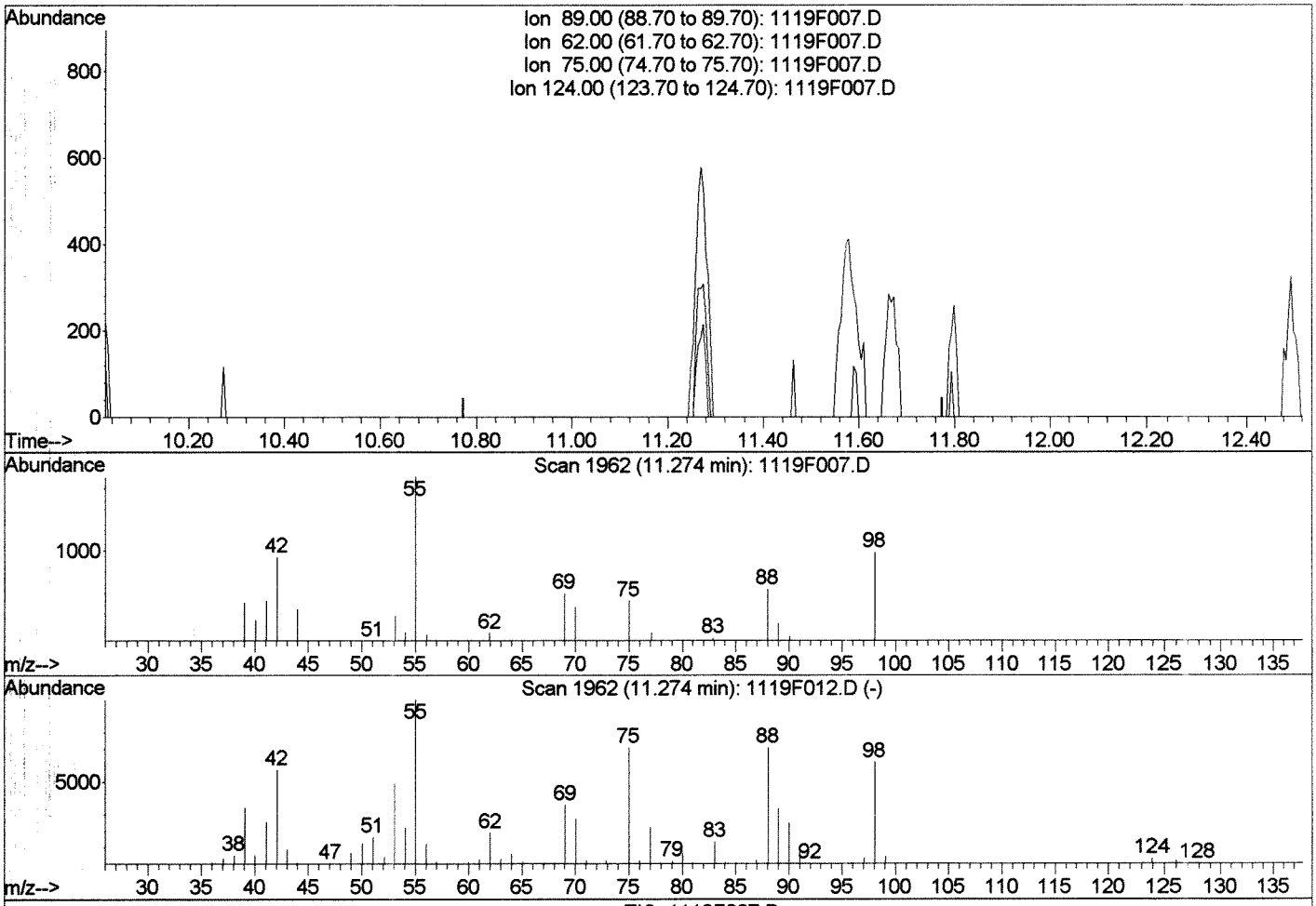
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:39:27 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:39 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(82) cis-1,4-Dichloro-2-butene (T)

11.27min 0.00PPB

response 0

Ion	Exp%	Act%
89.00	100	0.00
62.00	56.40	0.00#
75.00	209.10	0.00#
124.00	9.70	0.00

Manual Integration:

Before LM

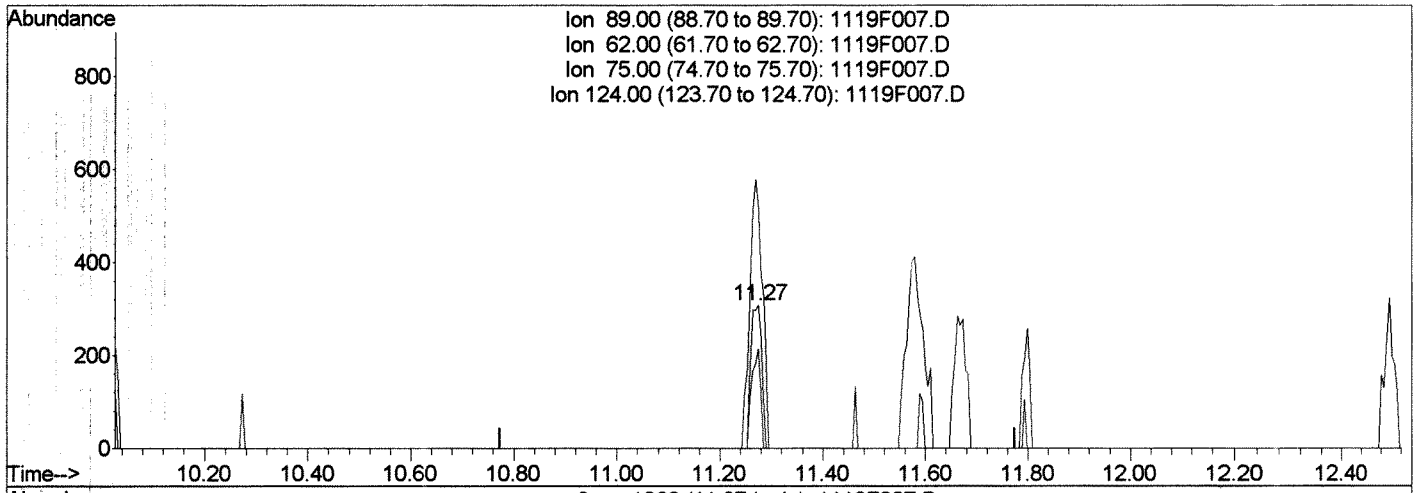
11/21/18

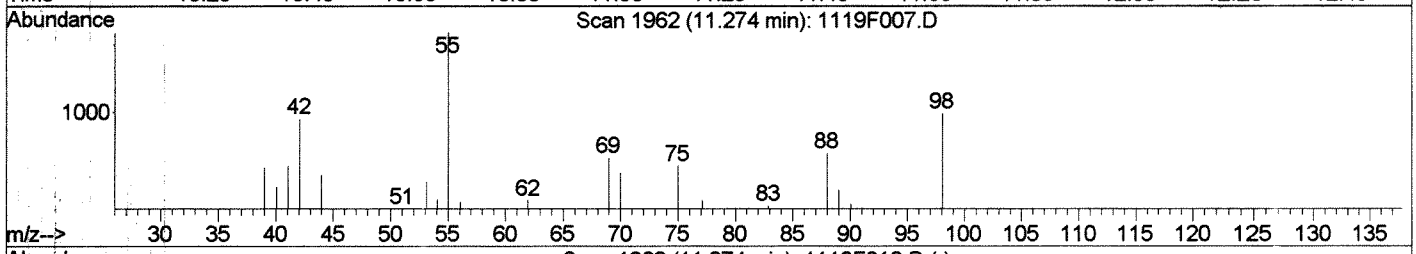
1119F007.D 111918MS46_8260.M Wed Nov 21 09:40:25 2018

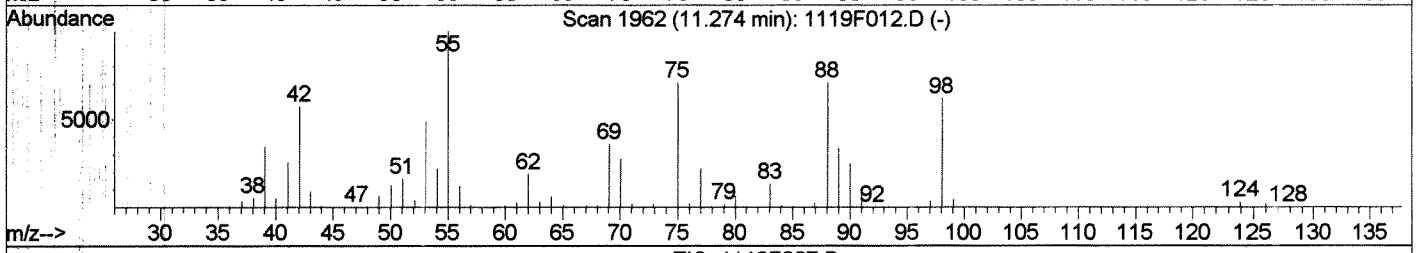
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:40 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(82) cis-1,4-Dichloro-2-butene (T)

11.27min 0.74PPB m

response 449

Ion	Exp%	Act%
89.00	100	100
62.00	56.40	69.48
75.00	209.10	169.48#
124.00	9.70	0.00

Manual Integration:

After LM

Missed peak

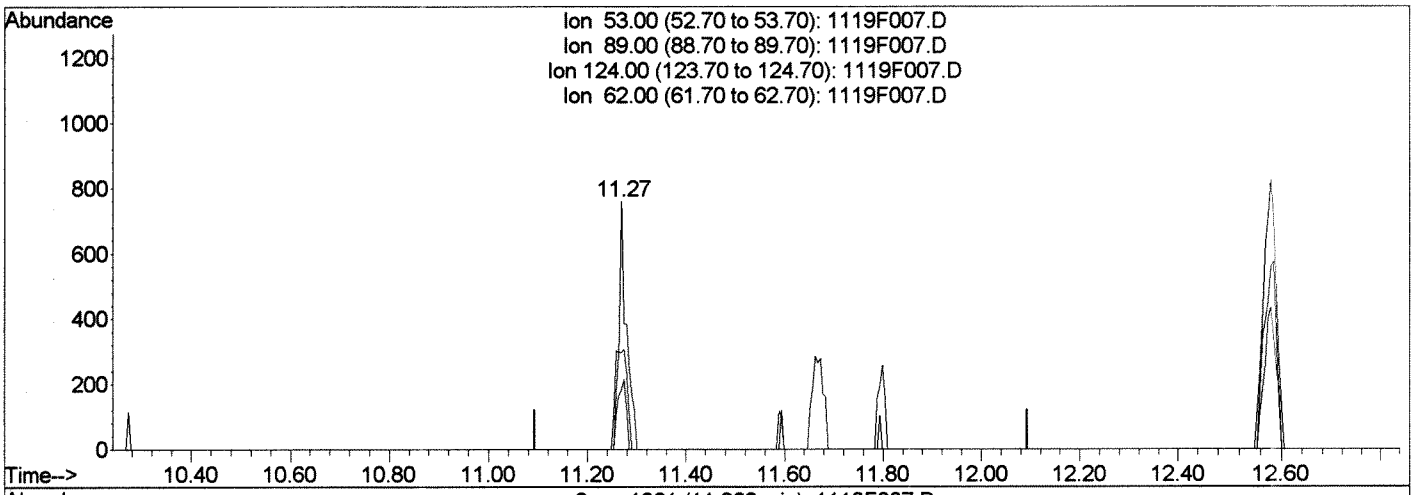
11/21/18

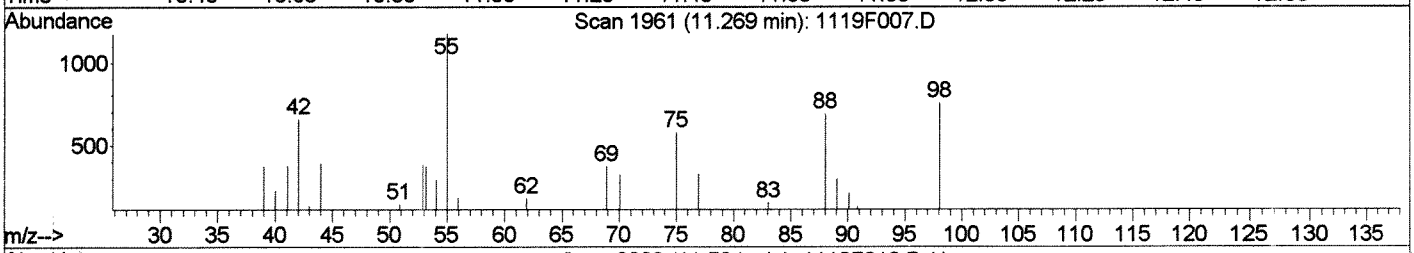
1119F007.D 111918MS46_8260.M Wed Nov 21 09:40:32 2018

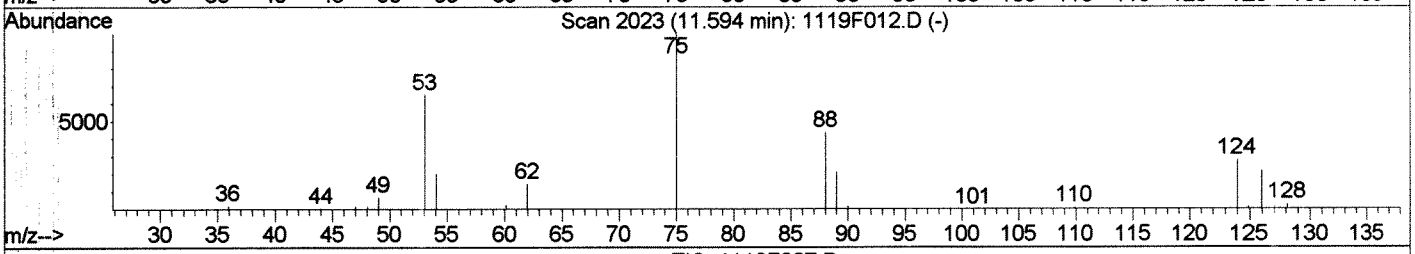
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:40 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F007.D

(86) trans-1,4-Dichloro-2-butene (T)

11.27min 0.98PPB

response 877

Ion	Exp%	Act%
53.00	100	100
89.00	81.90	39.08#
124.00	40.70	0.00#
62.00	43.60	23.82

Manual Integration:

Before LM

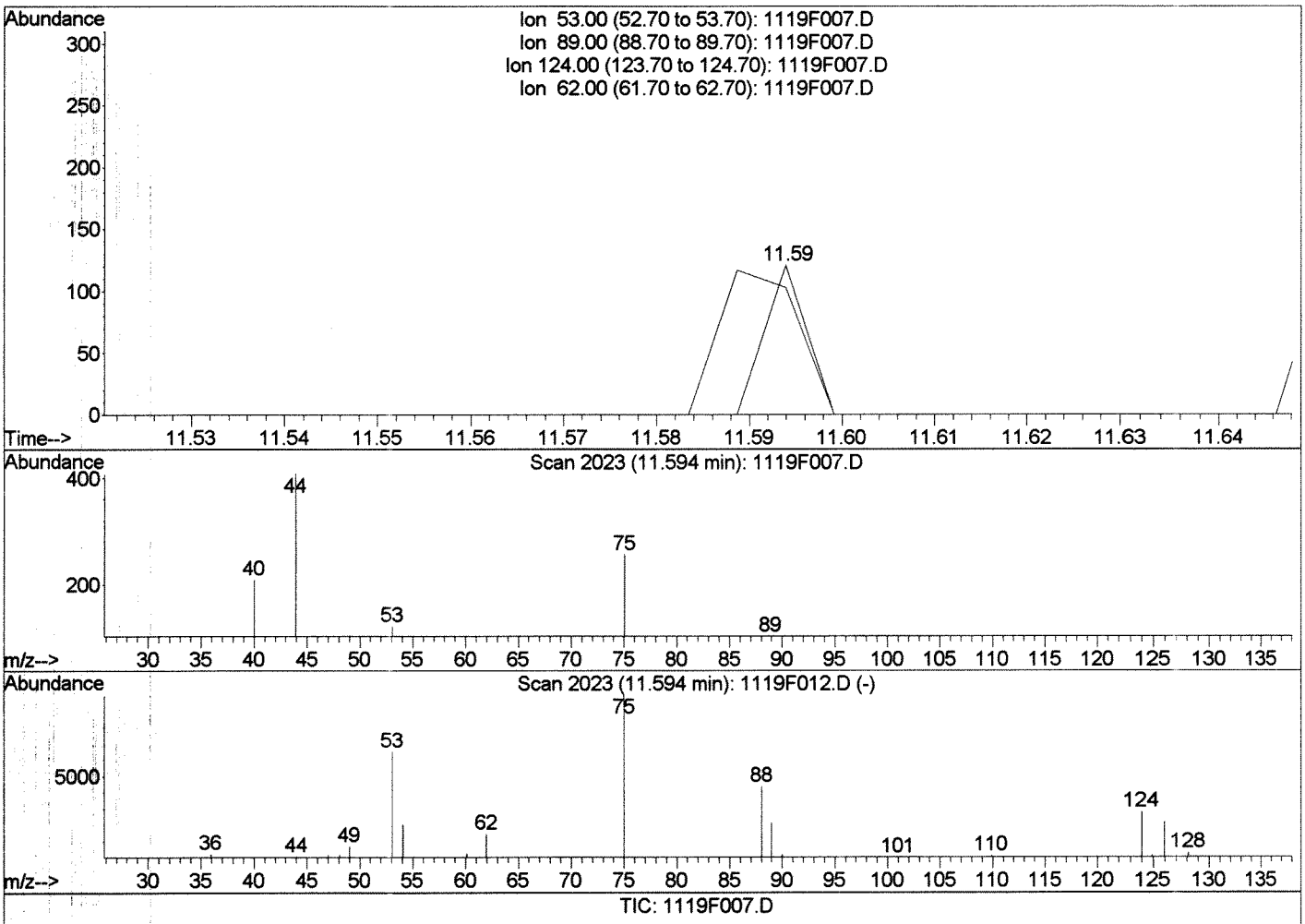
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:40:46 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:40 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(86) trans-1,4-Dichloro-2-butene (T)

11.59min 0.04PPB m

response 38

Ion	Exp%	Act%
53.00	100	100
89.00	81.90	85.12
124.00	40.70	0.00#
62.00	43.60	0.00#

Manual Integration:

After LM

Missed peak

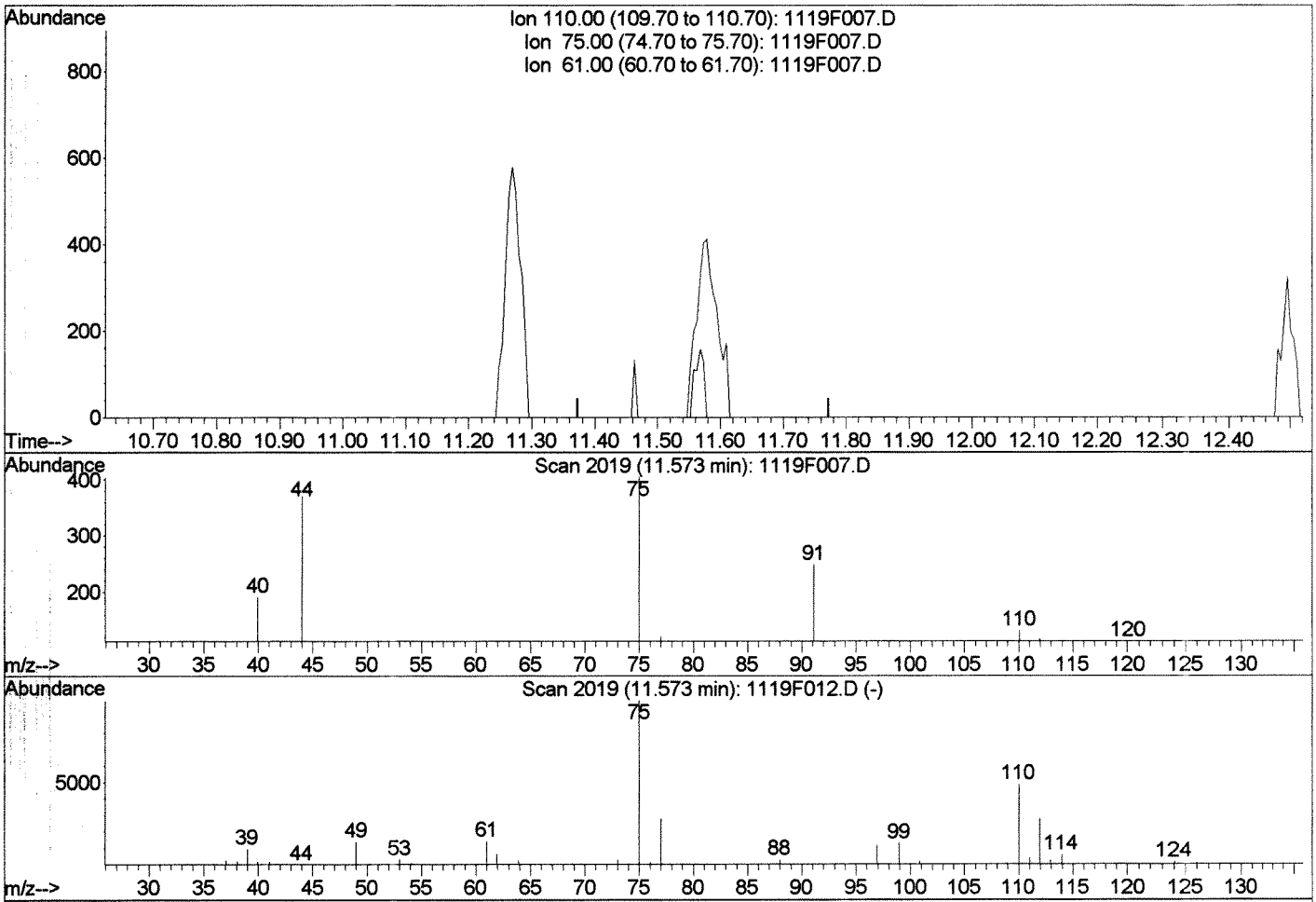
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:41:00 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:40 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(89) 1,2,3-Trichloropropane (T)

11.57min 0.00PPB

response 0

Ion	Exp%	Act%
110.00	100	0.00
75.00	205.90	0.00#
61.00	42.90	0.00#
0.00	0.00	0.00

Manual Integration:

Before LM

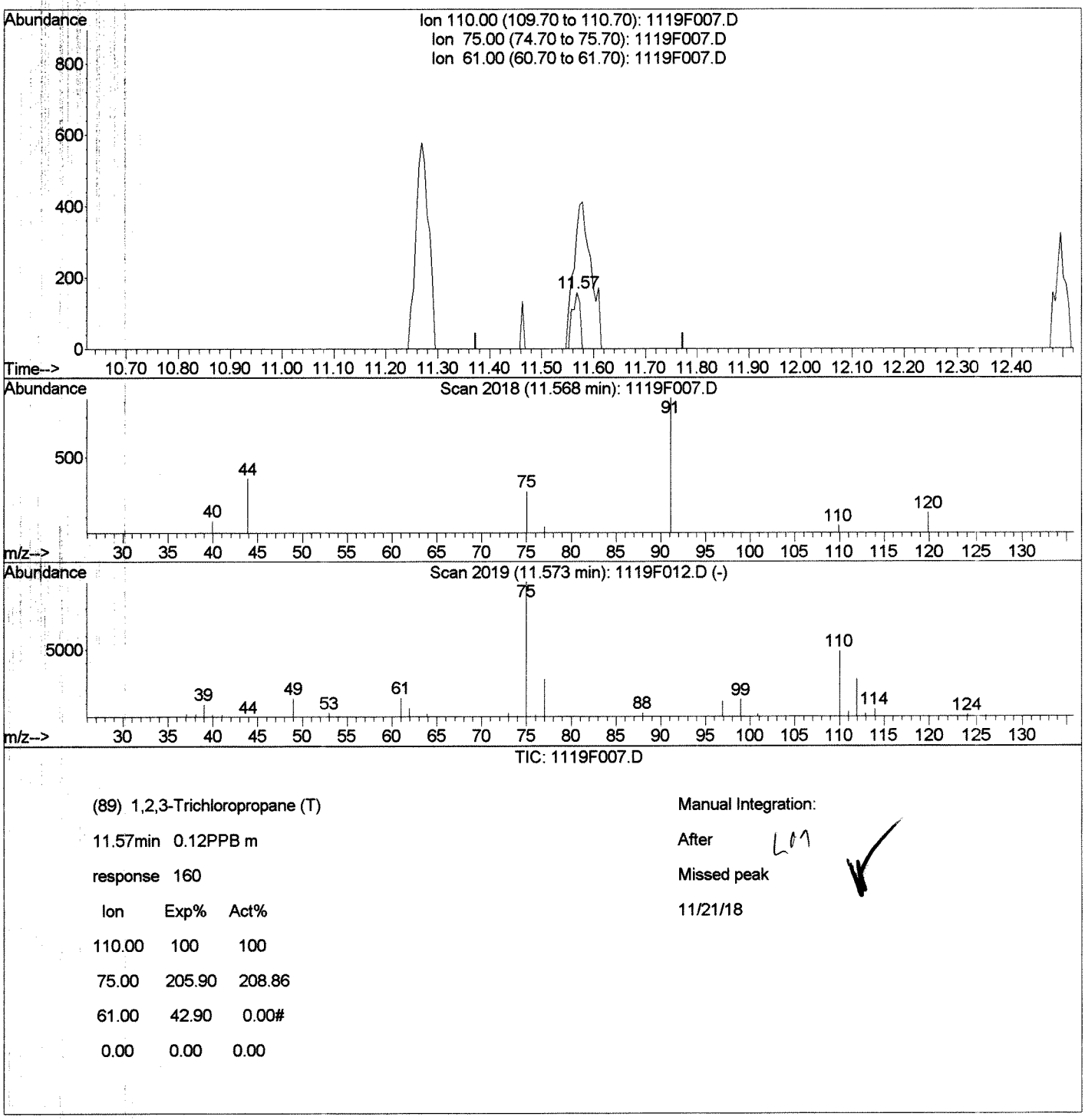
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:41:14 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:41 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



TIC: 1119F007.D

(89) 1,2,3-Trichloropropane (T)

11.57min 0.12PPB m

response 160

Ion	Exp%	Act%
110.00	100	100
75.00	205.90	208.86
61.00	42.90	0.00#
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

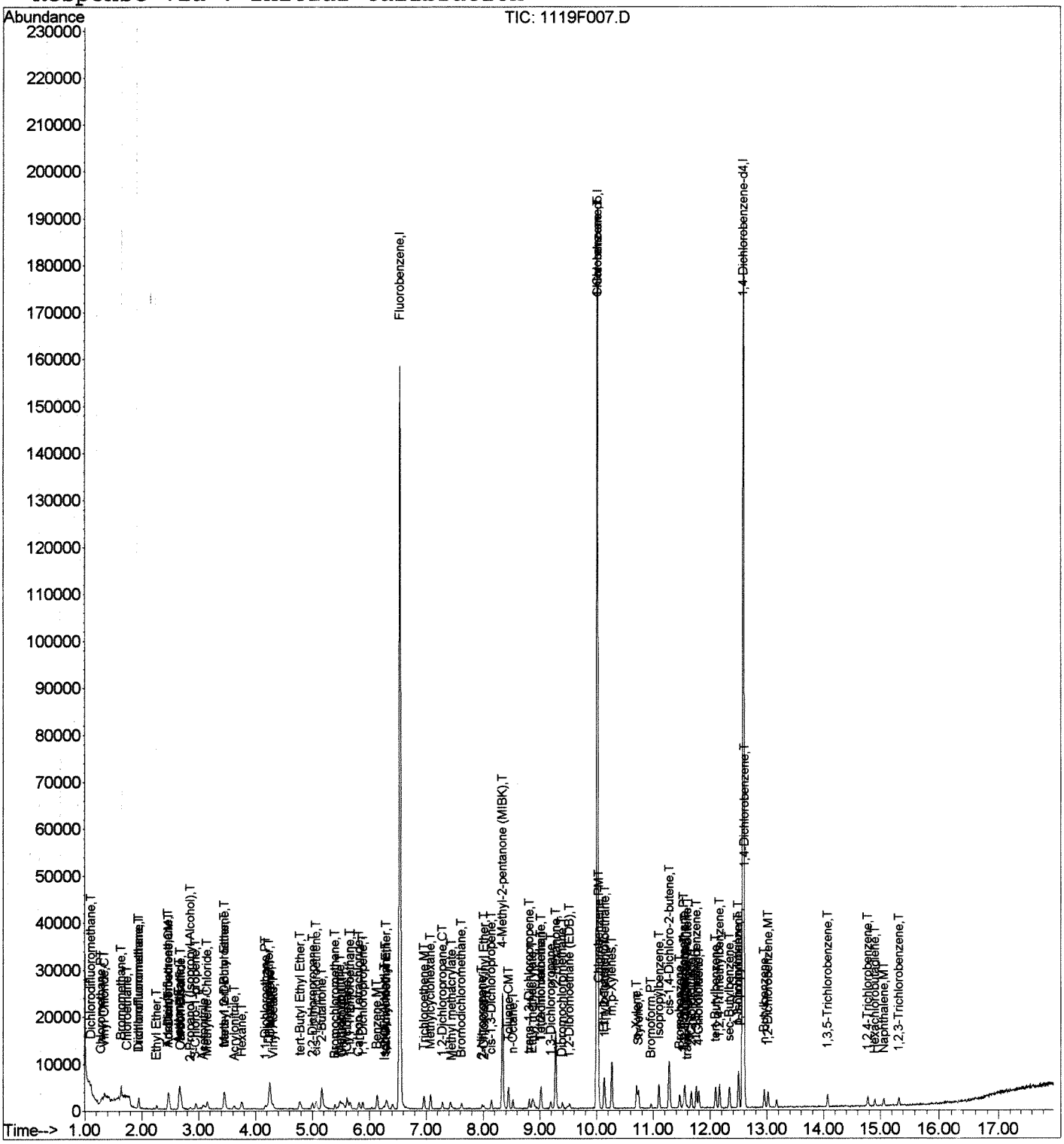
11/21/18

1119F007.D 111918MS46_8260.M Wed Nov 21 09:41:24 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F007.D Vial: 4
Acq On : 19 Nov 2018 04:44 pm Operator: LM
Sample : ICAL 0.2 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:41 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:07 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.53	96	165837	10.00	PPB		0.00
63) Chlorobenzene-d5	10.01	82	62390	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	68355	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	0.00	113	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
46) 1,2-Dichloroethane-d4	0.00	65	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
61) Toluene-d8	0.00	98	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
83) 4-Bromofluorobenzene	0.00	95	0	0.00	PPB		
Spiked Amount 10.000			Recovery =	0.00%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.10	85	1574	0.51	PPB		92
3) Chloromethane	1.29	50	1548	0.56	PPB		72
4) Vinyl Chloride	1.35	62	1907	0.55	PPB		93
5) Bromomethane	1.64	96	2472	0.75	PPB		97
6) Chloroethane	1.73	64	1168	0.52	PPB		95
7) Dichlorofluoromethane	1.95	67	3132	0.57	PPB		100
8) Trichlorofluoromethane	1.94	101	3109	0.61	PPB		94
9) Ethyl Ether	2.26	59	929	0.45	PPB		80
10) Acrolein	2.47	56	3859	10.49	PPB		82
11) Trichlorotrifluoroethane	2.47	151	1914	0.55	PPB		86
12) 1,1-Dichloroethene	2.49	96	1908	0.58	PPB		85
13) Acetone	2.65	43	9054	22.25	PPB		92
14) Iodomethane	2.66	142	8937	1.75	PPB		98
15) Carbon Disulfide	2.69	76	5685	0.59	PPB		97
16) 2-Propanol (Isopropyl Alco	2.85	45	1644	29.04	PPB		85
17) 3-Chloro-1-propene	2.95	76	947	0.49	PPB		96
18) Methyl Acetate	3.03	43	803	0.54	PPB		85
19) Acetonitrile	3.08	40	1827	20.62	PPB		99
20) Methylene Chloride	3.15	84	2019	0.51	PPB		91
22) Acrylonitrile	3.61	53	1661	2.12	PPB		91
23) Methyl tert-Butyl Ether	3.46	73	8957	0.99	PPB		93
24) trans-1,2-Dichloroethene	3.45	96	2220	0.55	PPB		89
25) Hexane	3.76	57	2669	0.59	PPB		90
26) Diisopropyl Ether	4.23	45	4433	0.49	PPB		93
27) 1,1-Dichloroethane	4.17	63	3177	0.54	PPB		97
28) Vinyl Acetate	4.30	86	707	0.84	PPB	#	48
29) Chloroprene	4.25	53	10153	2.24	PPB		96

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:07 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
30)	tert-Butyl Ethyl Ether	4.78	59	4531	0.46	PPB		92
31)	2,2-Dichloropropane	5.00	77	3104	0.58	PPB		97
32)	cis-1,2-Dichloroethene	5.07	96	2370	0.51	PPB		93
33)	2-Butanone	5.16	72	5497	20.20	PPB		97
34)	Ethyl Acetate	5.21	61	58m	0.16	PPB		
35)	Propionitrile	5.34	54	342m	1.31	PPB		
36)	Methacrylonitrile	5.48	67	2291	1.99	PPB	#	77
37)	Bromochloromethane	5.40	128	1093	0.47	PPB		92
38)	Tetrahydrofuran	5.45	71	110m	0.39	PPB		
39)	Chloroform	5.52	83	3812	0.53	PPB		98
40)	Cyclohexane	5.61	56	3300	0.63	PPB		76
41)	1,1,1-Trichloroethane	5.66	97	3544	0.59	PPB		89
43)	Carbon Tetrachloride	5.82	117	3098	0.56	PPB		87
44)	1,1-Dichloropropene	5.89	75	2864	0.57	PPB		98
45)	Isobutyl Alcohol	6.25	43	1131	23.06	PPB		84
47)	Benzene	6.14	78	8528	0.54	PPB		96
48)	1,2-Dichloroethane	6.28	62	1914	0.45	PPB		95
49)	tert-Amyl Methyl Ether	6.30	55	1056	0.52	PPB	#	79
50)	Trichloroethene	6.96	95	2378	0.55	PPB		96
51)	Methylcyclohexane	7.08	83	3860	0.57	PPB		95
52)	1,2-Dichloropropane	7.28	63	1849	0.49	PPB		78
53)	Dibromomethane	7.43	93	1177	0.49	PPB		92
54)	Methyl methacrylate	7.46	69	951	0.47	PPB		71
56)	Bromodichloromethane	7.62	83	2796	0.51	PPB		85
57)	2-Nitropropane	7.99	41	1362	2.74	PPB		95
58)	2-Chloroethyl Vinyl Ether	8.02	63	873	0.44	PPB		89
59)	cis-1,3-Dichloropropene	8.15	75	3406	0.49	PPB		94
60)	4-Methyl-2-pentanone (MIBK	8.34	58	18150	19.53	PPB		98
62)	Toluene	8.45	92	6251	0.54	PPB		100
64)	n-Octane	8.53	85	1305	0.52	PPB		90
65)	trans-1,3-Dichloropropene	8.82	75	3107	0.51	PPB		97
66)	Ethyl methacrylate	8.87	69	1964	0.47	PPB		91
67)	1,1,2-Trichloroethane	9.00	83	1440	0.46	PPB		88
68)	Tetrachloroethene	9.02	164	2625	0.54	PPB		91
69)	2-Hexanone	9.28	57	5728	19.93	PPB		93
70)	1,3-Dichloropropane	9.19	76	3059	0.50	PPB		96
71)	Dibromochloromethane	9.39	129	2440	0.47	PPB		96
72)	1,2-Dibromoethane (EDB)	9.52	107	1845	0.46	PPB		83
73)	1-Chlorohexane	10.01	91	3268	0.55	PPB		91
74)	Chlorobenzene	10.04	112	6758	0.50	PPB		97
75)	Ethylbenzene	10.13	106	3987	0.55	PPB		85

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:07 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

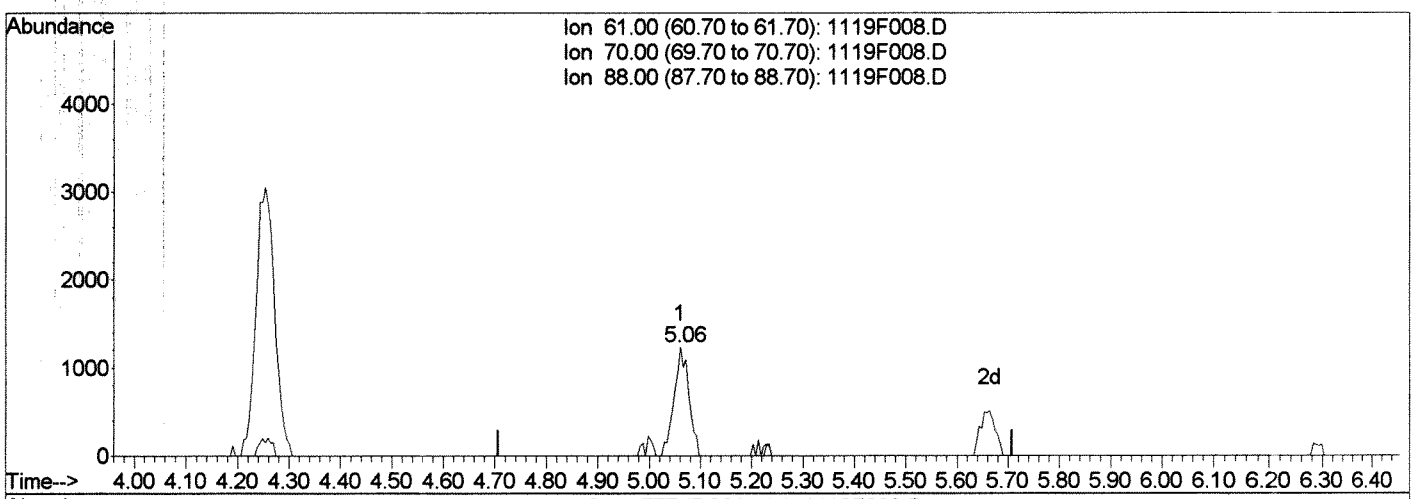
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
76)	1,1,1,2-Tetrachloroethane	10.15	131	2554	0.49	PPB		94
77)	m,p-Xylenes	10.26	106	9032	1.03	PPB		96
78)	o-Xylene	10.70	106	4511	0.53	PPB		90
79)	Styrene	10.73	103	3592	0.47	PPB		93
80)	Bromoform	10.96	173	1696	0.47	PPB		91
81)	Isopropylbenzene	11.10	105	11224	0.52	PPB		96
82)	cis-1,4-Dichloro-2-butene	11.27	89	1193	1.94	PPB		82
85)	1,1,2,2-Tetrachloroethane	11.52	83	1867	0.48	PPB		92
86)	trans-1,4-Dichloro-2-buten	11.60	53	355m	0.39	PPB		
87)	Bromobenzene	11.46	156	3261	0.52	PPB		93
88)	n-Propylbenzene	11.55	91	12243	0.52	PPB		96
89)	1,2,3-Trichloropropane	11.57	110	691	0.50	PPB	#	68
90)	2-Chlorotoluene	11.67	91	7470	0.54	PPB		92
91)	1,3,5-Trimethylbenzene	11.75	105	8939	0.52	PPB		95
92)	4-Chlorotoluene	11.80	91	7622	0.53	PPB		94
93)	tert-Butylbenzene	12.10	119	8482	0.55	PPB		96
94)	1,2,4-Trimethylbenzene	12.17	105	8540	0.50	PPB		93
95)	sec-Butylbenzene	12.33	105	11237	0.54	PPB		94
96)	p-Isopropyltoluene	12.50	119	9632	0.53	PPB		98
97)	1,3-Dichlorobenzene	12.50	146	5625	0.51	PPB		93
98)	1,4-Dichlorobenzene	12.61	146	5793	0.52	PPB		94
99)	n-Butylbenzene	12.95	91	7110	0.51	PPB		97
100)	1,2-Dichlorobenzene	13.02	146	5211	0.52	PPB		95
101)	1,2-Dibromo-3-chloropropan	13.91	155	318m	0.46	PPB		
102)	1,3,5-Trichlorobenzene	14.07	180	3561	0.51	PPB		95
103)	1,2,4-Trichlorobenzene	14.78	180	3172	0.48	PPB		97
104)	Hexachlorobutadiene	14.91	225	1551	0.54	PPB		87
105)	Naphthalene	15.06	128	5735	0.48	PPB		96
106)	1,2,3-Trichlorobenzene	15.33	180	2658	0.48	PPB		88

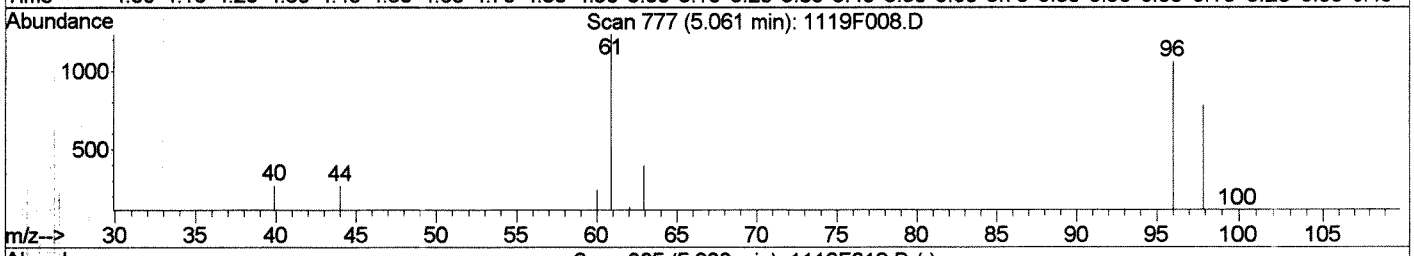
(#) = qualifier out of range (m) = manual integration

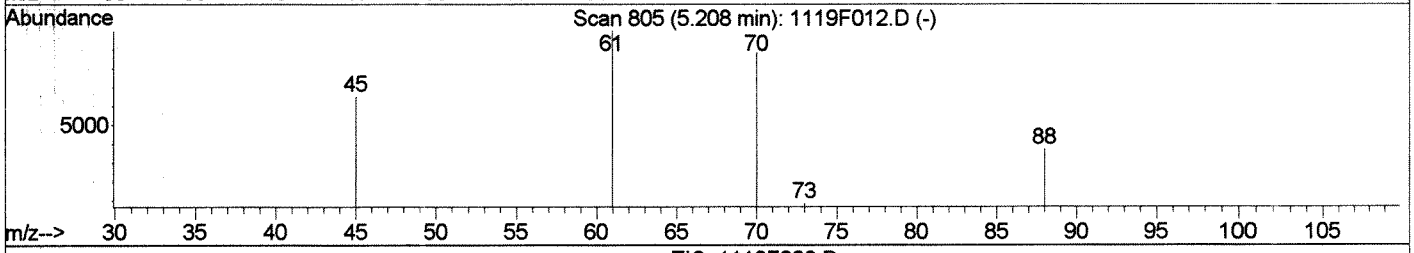
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:44 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F008.D

(34) Ethyl Acetate (T)

5.06min 6.81PPB

response 2485

Ion	Exp%	Act%
61.00	100	100
70.00	84.80	0.00#
88.00	35.50	0.00#
0.00	0.00	0.00

Manual Integration:

Before LM ✓

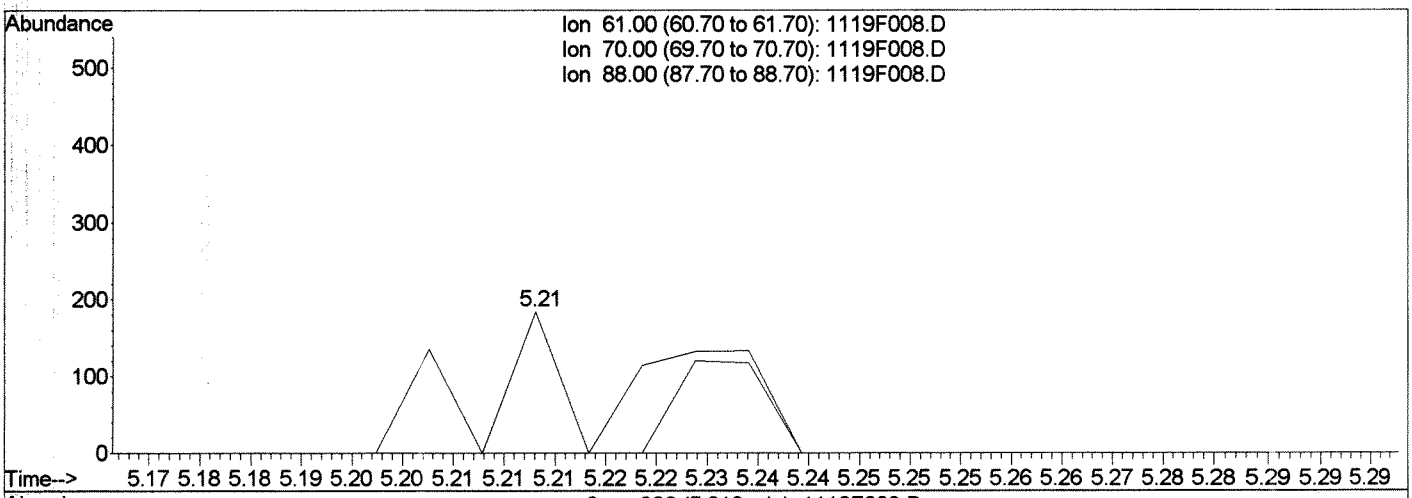
11/21/18

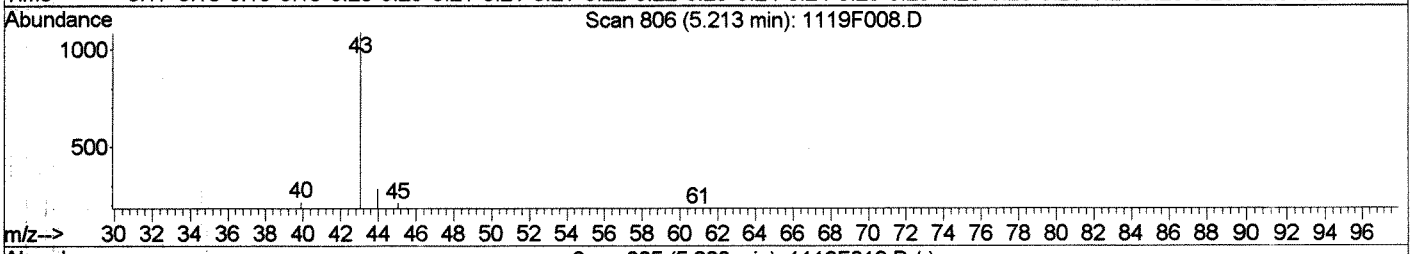
1119F008.D 111918MS46_8260.M Wed Nov 21 09:44:55 2018

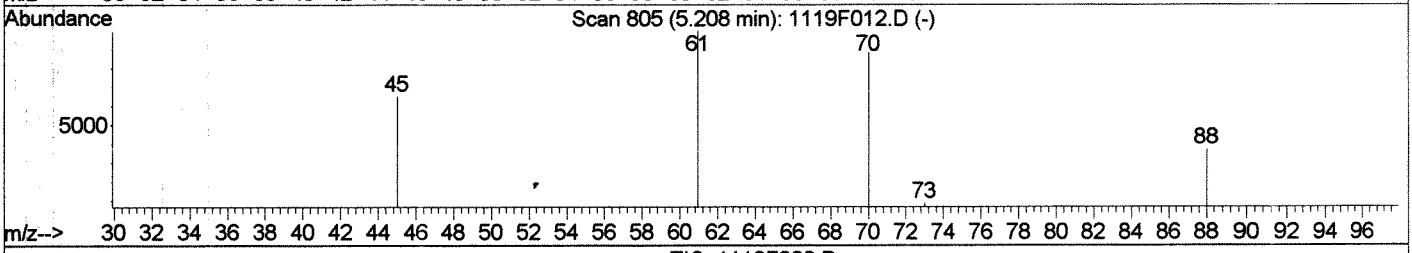
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:45 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F008.D

(34) Ethyl Acetate (T)

5.21min 0.16PPB m

response 58

Ion	Exp%	Act%
61.00	100	100
70.00	84.80	0.00#
88.00	35.50	0.00#
0.00	0.00	0.00

Manual Integration:

After LM ✓

Missed peak

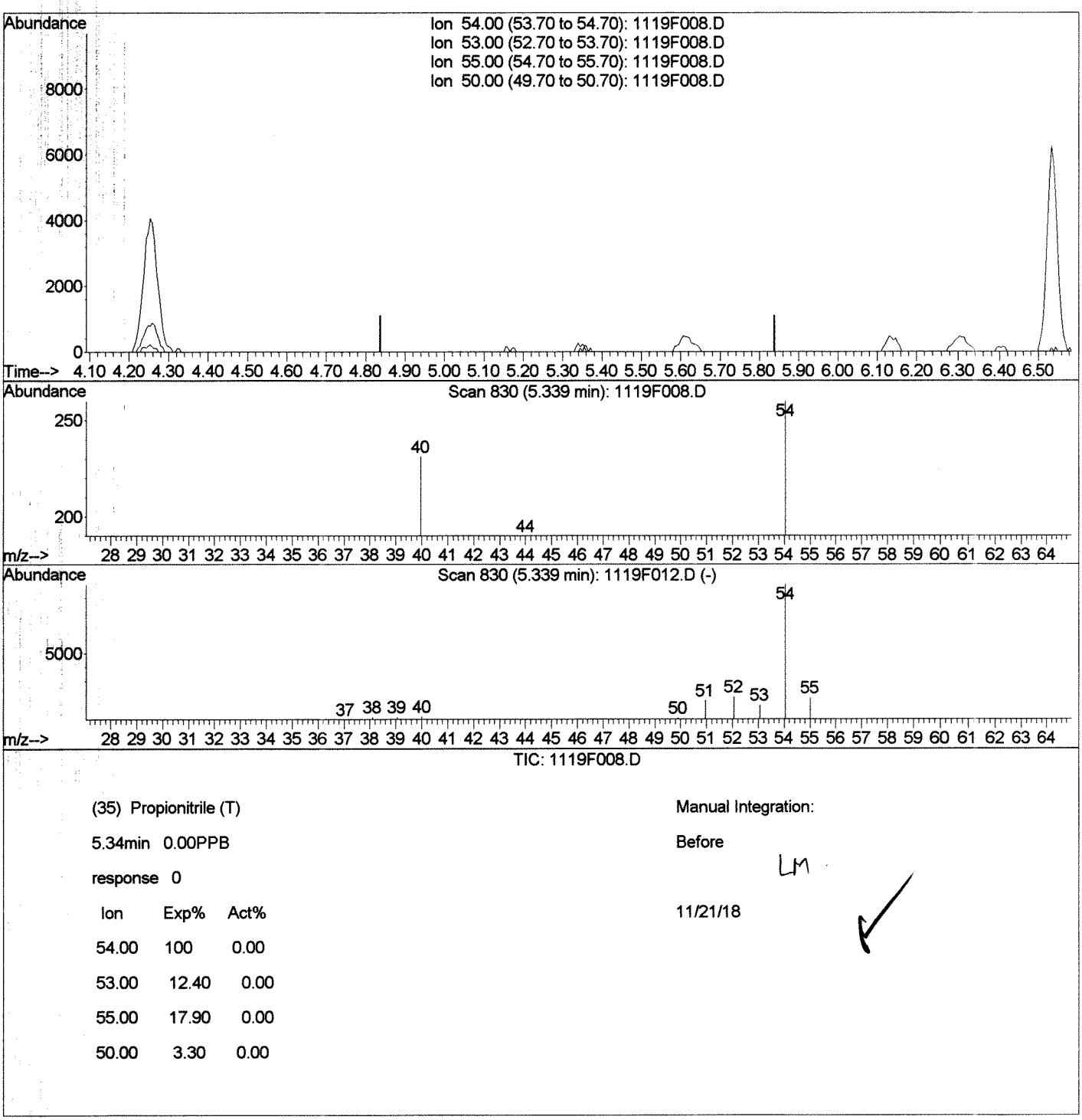
11/21/18

1119F008.D 111918MS46_8260.M Wed Nov 21 09:45:08 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:45 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



(35) Propionitrile (T)

5.34min 0.00PPB

response 0

Ion	Exp%	Act%
54.00	100	0.00
53.00	12.40	0.00
55.00	17.90	0.00
50.00	3.30	0.00

Manual Integration:

Before

LM

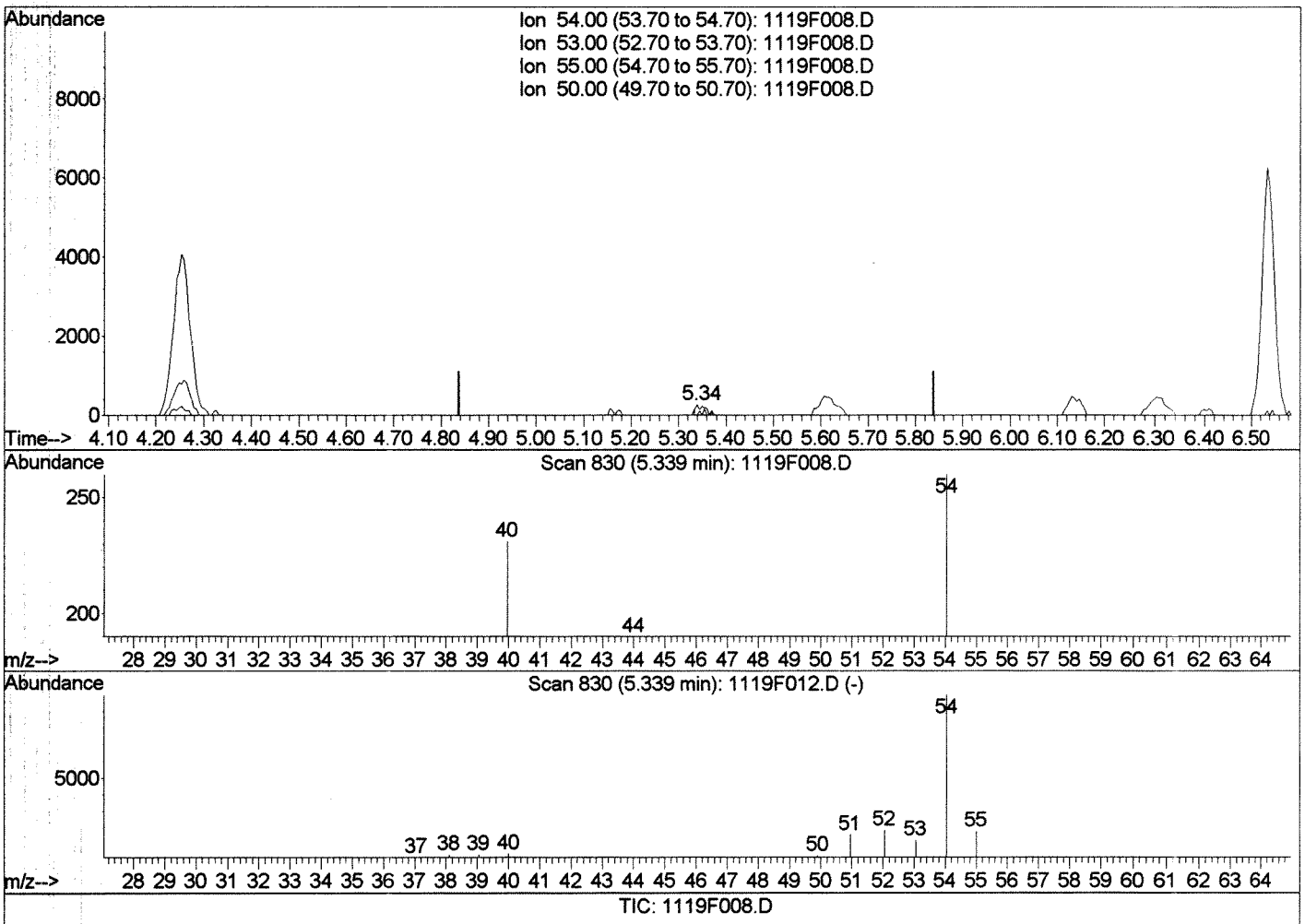
11/21/18

1119F008.D 111918MS46_8260.M Wed Nov 21 09:45:16 2018

Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:45 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration



(35) Propionitrile (T)

5.34min 1.31PPB m

response 342

Ion	Exp%	Act%
54.00	100	100
53.00	12.40	0.00
55.00	17.90	0.00
50.00	3.30	0.00

Manual Integration:

After LM

Missed peak

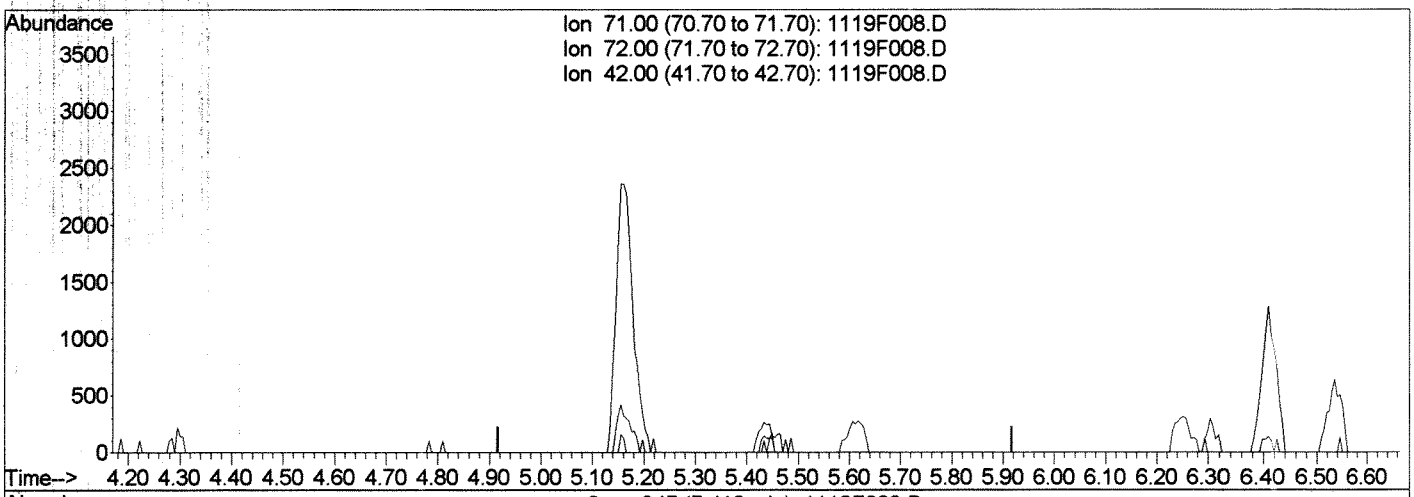
11/21/18

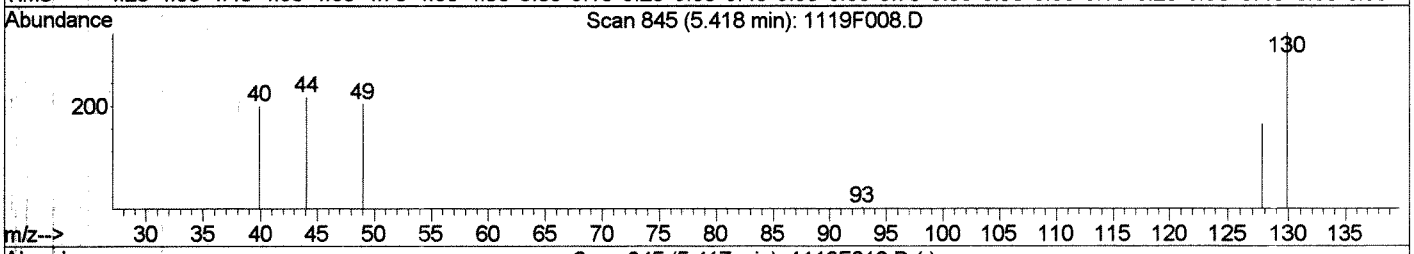
1119F008.D 111918MS46_8260.M Wed Nov 21 09:45:23 2018

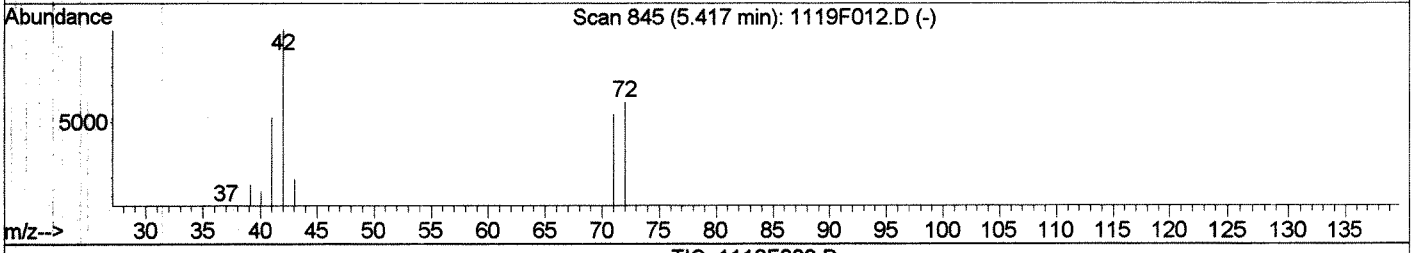
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:45 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F008.D

(38) Tetrahydrofuran (T)

5.42min 0.00PPB

response 0

Ion	Exp%	Act%
71.00	100	0.00
72.00	111.90	0.00#
42.00	184.70	0.00#
0.00	0.00	0.00

Manual Integration:

Before LM

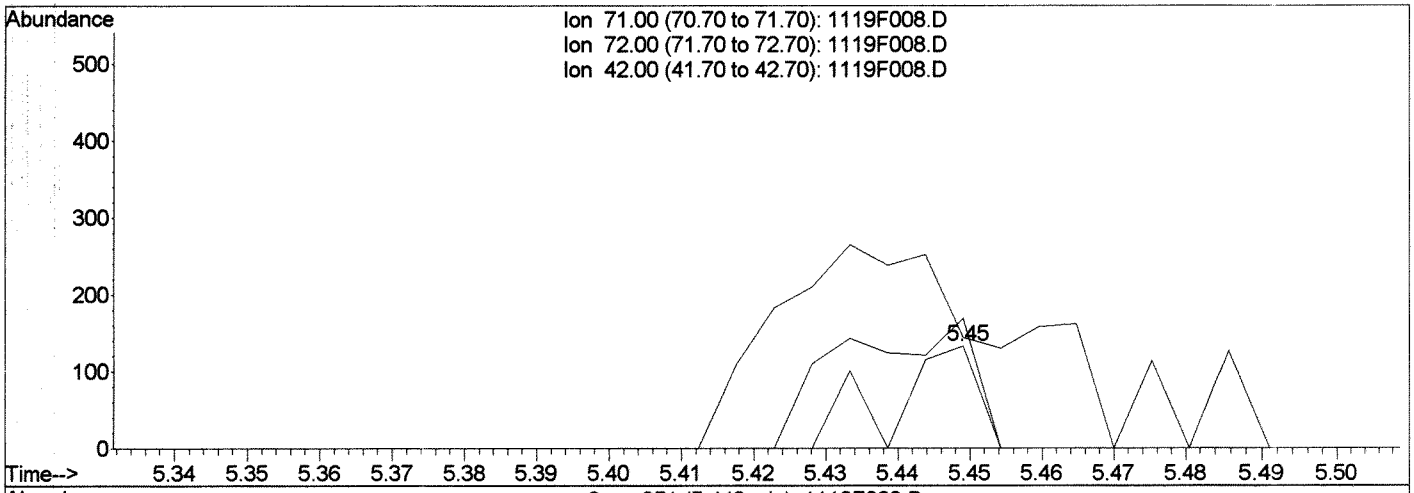
11/21/18

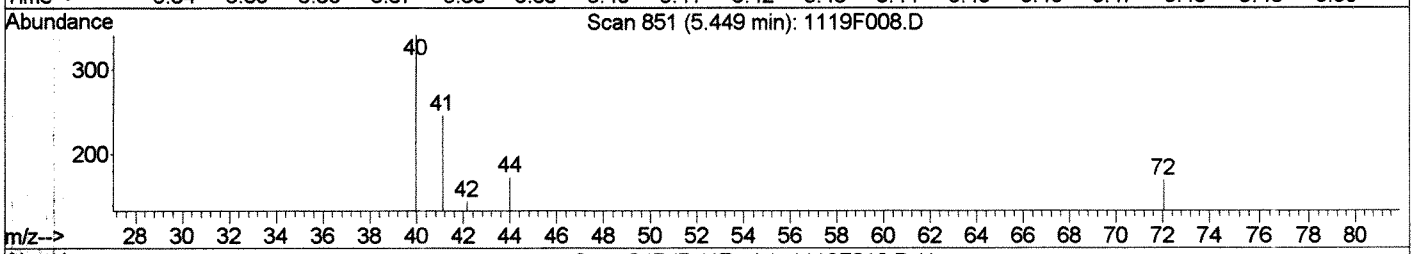
1119F008.D 111918MS46_8260.M Wed Nov 21 09:45:36 2018

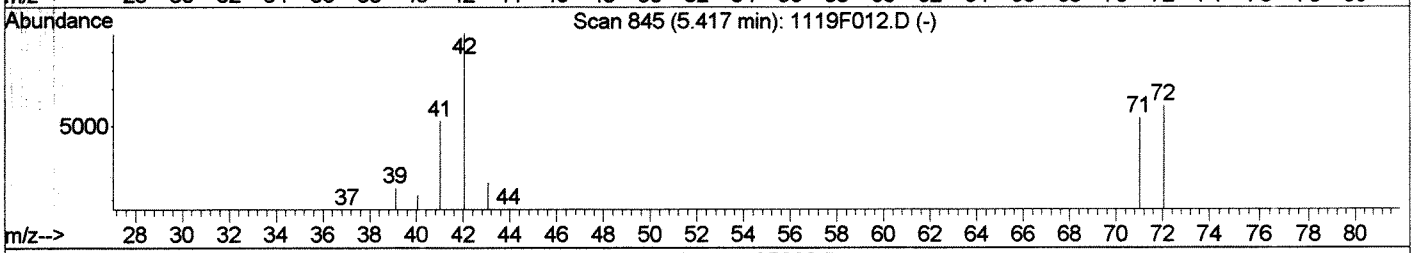
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:46 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F008.D

(38) Tetrahydrofuran (T)

5.45min 0.39PPB m

response 110

Ion	Exp%	Act%
71.00	100	100
72.00	111.90	127.07
42.00	184.70	108.27#
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

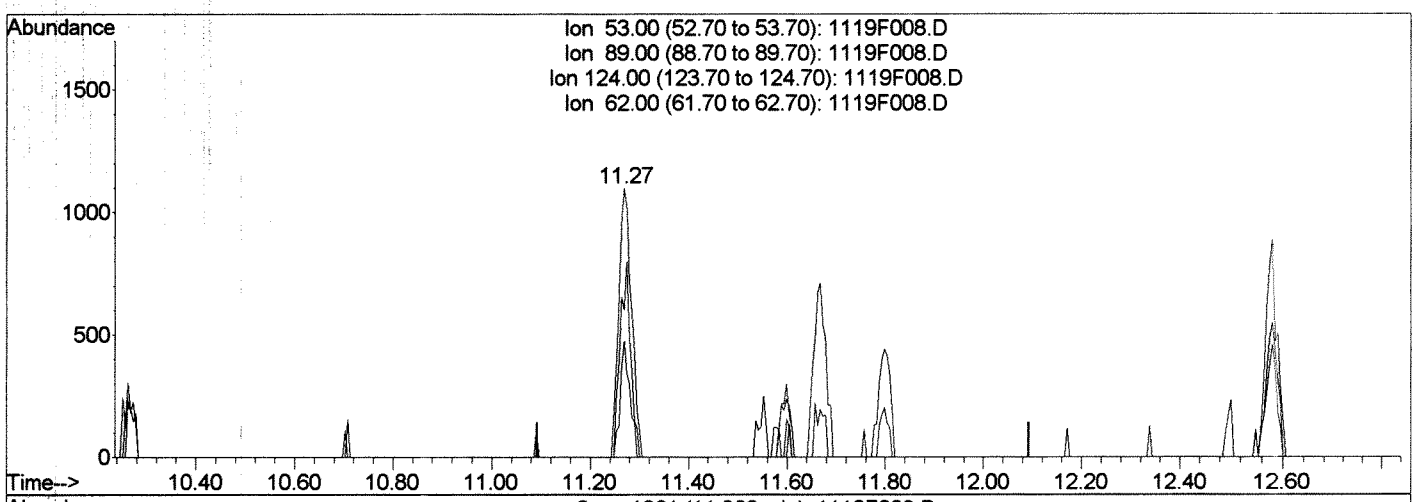
11/21/18

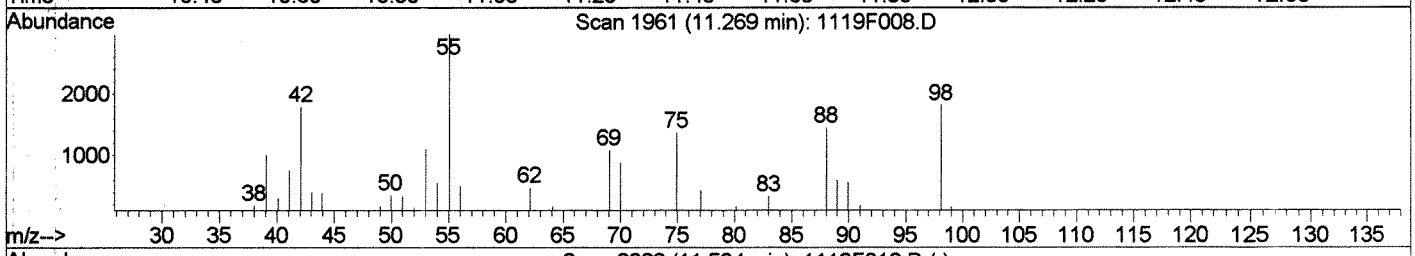
1119F008.D 111918MS46_8260.M Wed Nov 21 09:46:56 2018

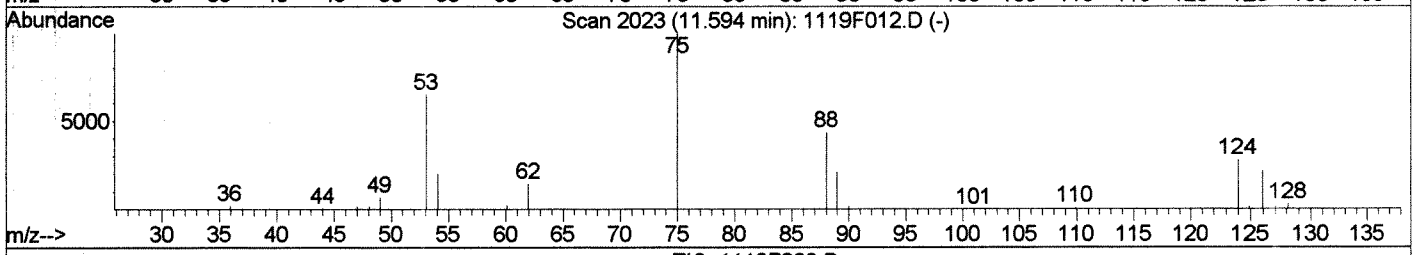
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:46 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F008.D

(86) trans-1,4-Dichloro-2-butene (T)

11.27min 2.21PPB

response 1993

Ion	Exp%	Act%
53.00	100	100
89.00	81.90	54.74
124.00	40.70	0.00#
62.00	43.60	43.17

Manual Integration:

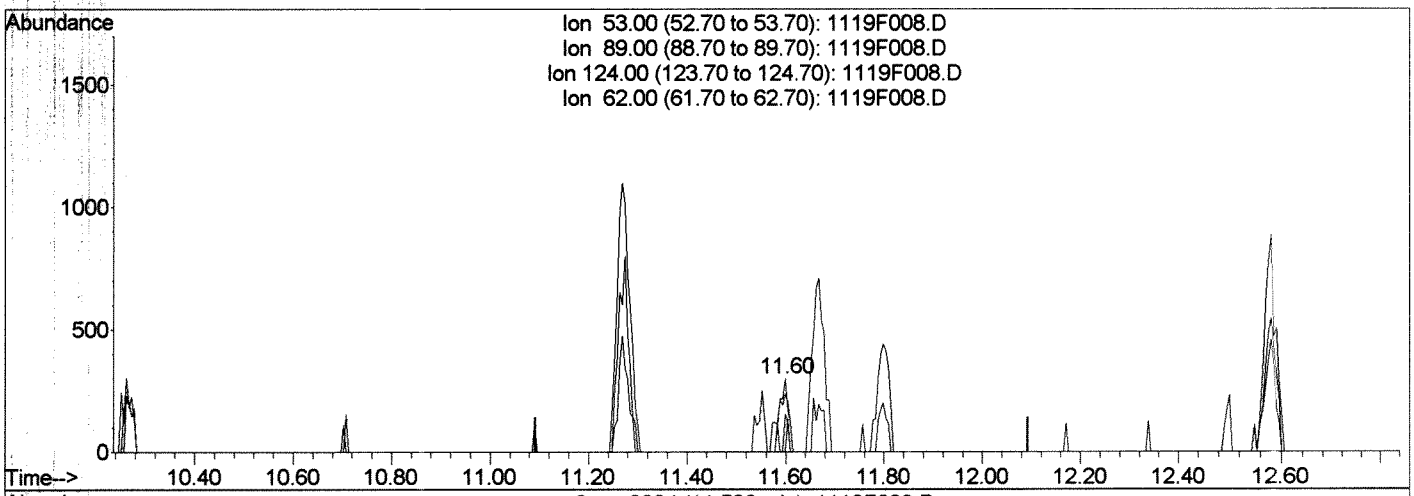
Before LM

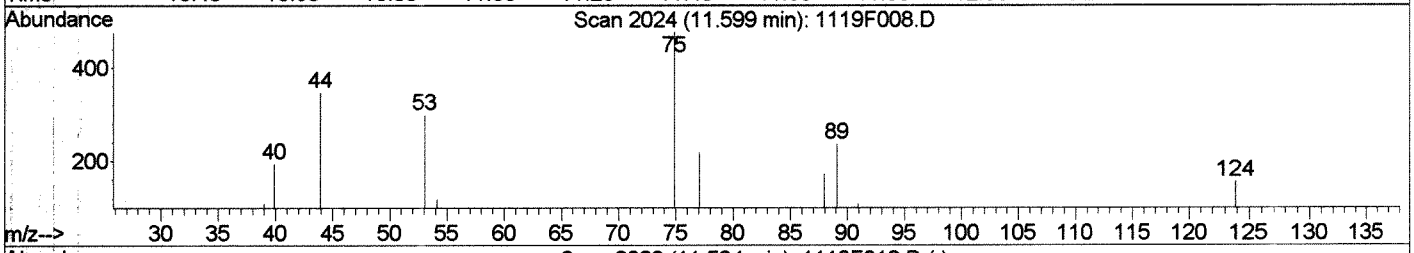
11/21/18

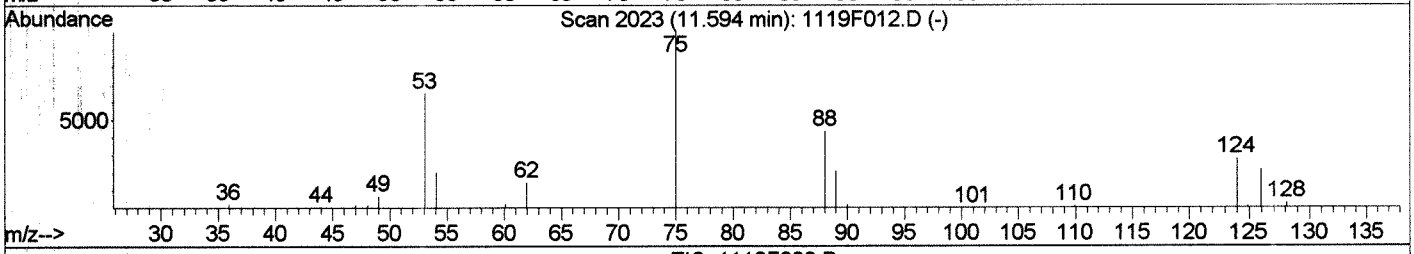
1119F008.D 111918MS46_8260.M Wed Nov 21 09:49:20 2018

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:49 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F008.D

(86) trans-1,4-Dichloro-2-butene (T)

11.60min 0.39PPB m

response 355

Ion	Exp%	Act%
53.00	100	100
89.00	81.90	78.93
124.00	40.70	52.17
62.00	43.60	0.00#

Manual Integration:

After LM

WRT

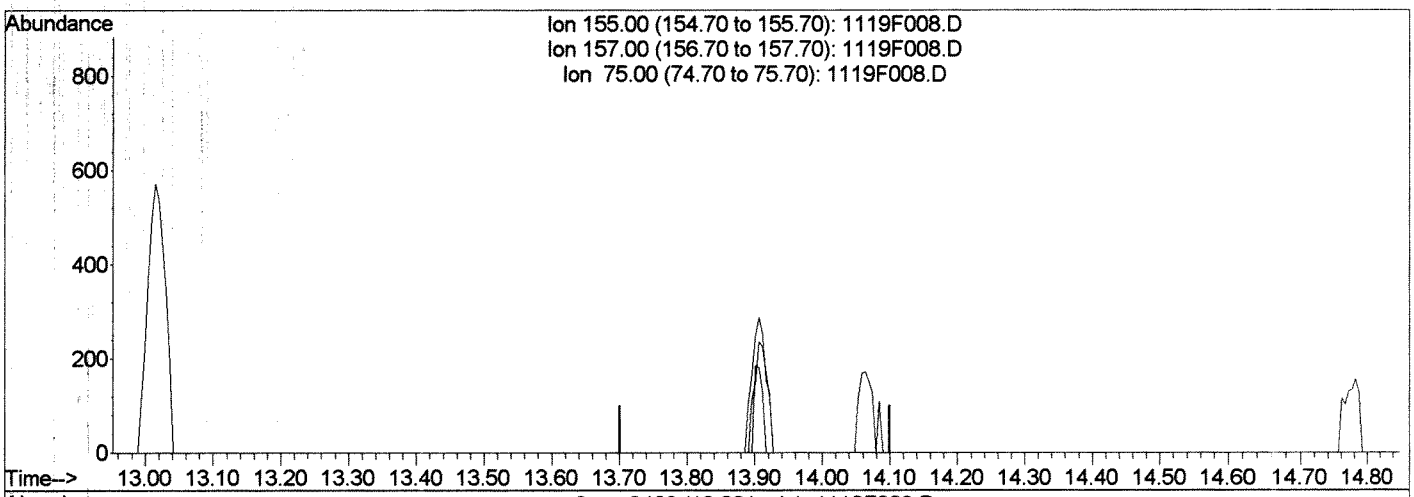
11/21/18 ✓

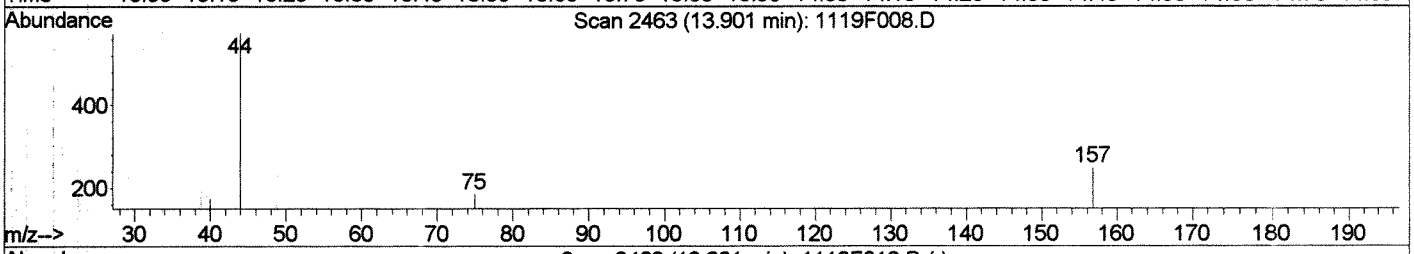
1119F008.D 111918MS46_8260.M Wed Nov 21 09:49:29 2018

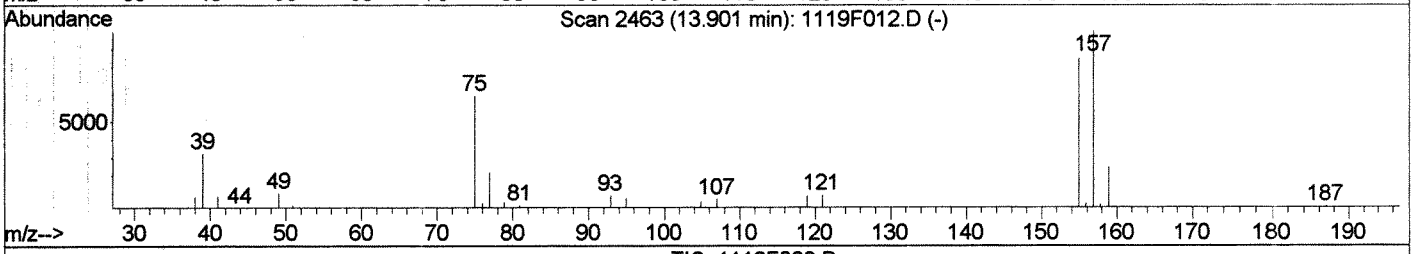
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:49 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F008.D

(101) 1,2-Dibromo-3-chloropropane (DBCP) (T)

13.90min 0.00PPB

response 0

Ion	Exp%	Act%
155.00	100	0.00
157.00	117.90	0.00#
75.00	75.70	0.00#
0.00	0.00	0.00

Manual Integration:

Before LM ✓

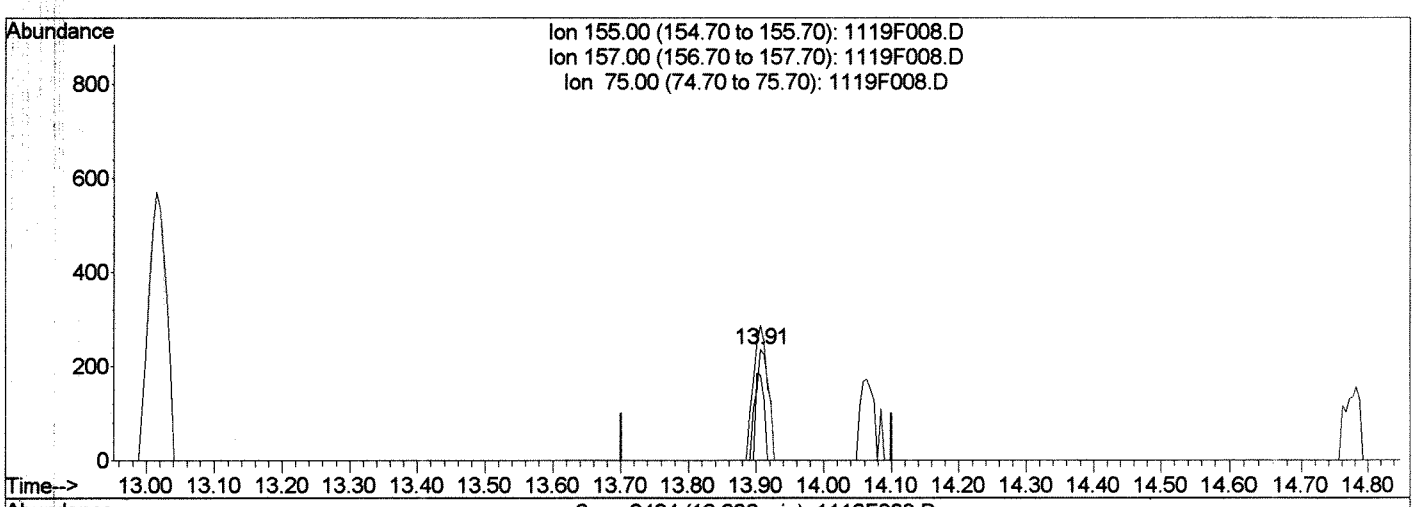
11/21/18

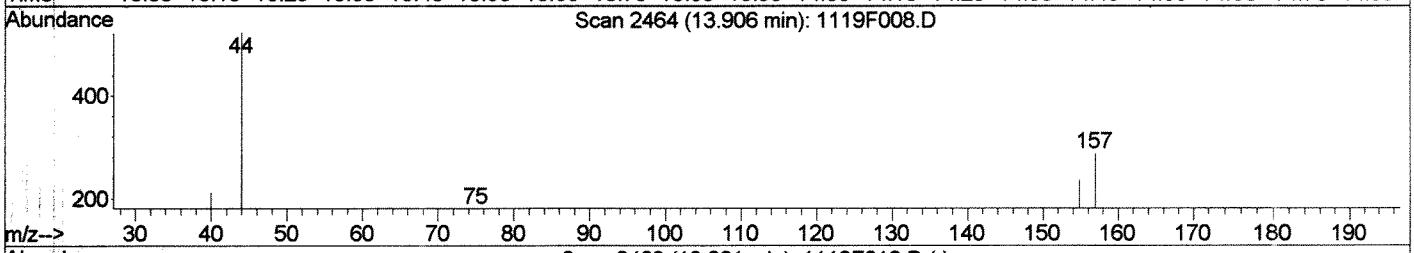
1119F008.D 111918MS46_8260.M Wed Nov 21 09:52:29 2018

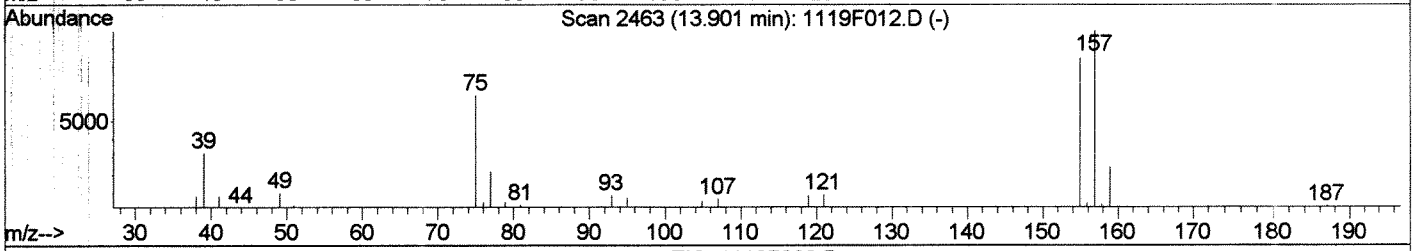
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:52 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F008.D

(101) 1,2-Dibromo-3-chloropropane (DBCP) (T)

13.91min 0.46PPB m

response 318

Ion	Exp%	Act%
155.00	100	100
157.00	117.90	121.61
75.00	75.70	76.69
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak ✓

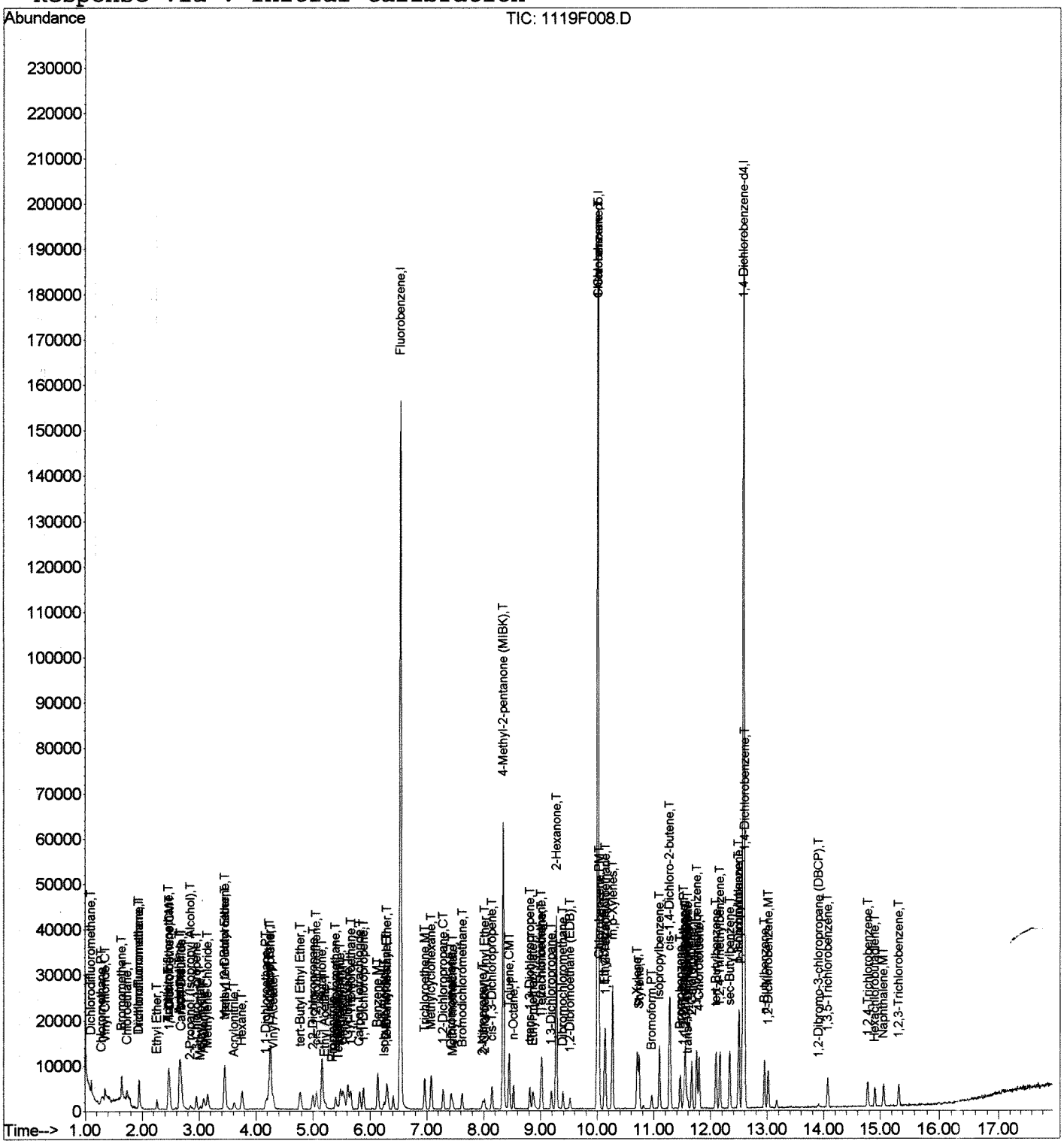
11/21/18

1119F008.D 111918MS46_8260.M Wed Nov 21 09:52:37 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F008.D Vial: 5
Acq On : 19 Nov 2018 05:10 pm Operator: LM
Sample : ICAL 0.5 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:52 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F009.D Vial: 6
Acq On : 19 Nov 2018 05:36 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:08 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.54	96	171560	10.00	PPB		0.00
63) Chlorobenzene-d5	10.01	82	61999	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	67612	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	5.74	113	14367	3.53	PPB		0.00
Spiked Amount 10.000			Recovery =	35.30%			
46) 1,2-Dichloroethane-d4	6.19	65	13261	3.90	PPB		0.00
Spiked Amount 10.000			Recovery =	39.00%			
61) Toluene-d8	8.37	98	48771	3.11	PPB		0.00
Spiked Amount 10.000			Recovery =	31.10%			
83) 4-Bromofluorobenzene	11.32	95	20395	3.66	PPB		0.00
Spiked Amount 10.000			Recovery =	36.60%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.10	85	2199	0.68	PPB		93
3) Chloromethane	1.28	50	2620	0.92	PPB		91
4) Vinyl Chloride	1.35	62	2960	0.83	PPB		96
5) Bromomethane	1.64	96	3754	1.11	PPB		93
6) Chloroethane	1.74	64	1913	0.82	PPB		96
7) Dichlorofluoromethane	1.95	67	5118	0.90	PPB		98
8) Trichlorofluoromethane	1.94	101	3861	0.73	PPB		95
9) Ethyl Ether	2.26	59	2050	0.96	PPB		96
10) Acrolein	2.47	56	7721	20.28	PPB		97
11) Trichlorotrifluoroethane	2.47	151	2863	0.80	PPB	#	75
12) 1,1-Dichloroethene	2.49	96	2716	0.79	PPB		95
13) Acetone	2.65	43	18167	43.15	PPB		100
14) Iodomethane	2.66	142	15845	2.99	PPB		97
15) Carbon Disulfide	2.69	76	8335	0.84	PPB		95
16) 2-Propanol (Isopropyl Alco	2.85	45	3040	51.91	PPB		83
17) 3-Chloro-1-propene	2.95	76	1828	0.92	PPB		88
18) Methyl Acetate	3.02	43	1606	1.04	PPB		92
19) Acetonitrile	3.08	40	4298	46.88	PPB		97
20) Methylene Chloride	3.16	84	3895	0.95	PPB		82
21) tert-Butyl Alcohol	3.38	59	680	5.03	PPB		65
22) Acrylonitrile	3.61	53	2992	3.70	PPB		86
23) Methyl tert-Butyl Ether	3.45	73	17785	1.90	PPB		99
24) trans-1,2-Dichloroethene	3.46	96	3671	0.88	PPB		90
25) Hexane	3.76	57	3107	0.66	PPB		87
26) Diisopropyl Ether	4.22	45	8713	0.93	PPB		89
27) 1,1-Dichloroethane	4.17	63	5615	0.93	PPB		99
28) Vinyl Acetate	4.30	86	1572	1.81	PPB	#	71

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS46\DATA\111918\1119F009.D Vial: 6
Acq On : 19 Nov 2018 05:36 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:08 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroprene	4.25	53	14762	3.15	PPB	96
30)	tert-Butyl Ethyl Ether	4.78	59	9330	0.92	PPB	91
31)	2,2-Dichloropropane	5.00	77	4657	0.85	PPB	96
32)	cis-1,2-Dichloroethene	5.06	96	4519	0.93	PPB	99
33)	2-Butanone	5.16	72	11381	40.43	PPB	98
34)	Ethyl Acetate	5.22	61	530	1.40	PPB	83
35)	Propionitrile	5.35	54	993	3.67	PPB	66
36)	Methacrylonitrile	5.48	67	4826	4.05	PPB	83
37)	Bromochloromethane	5.40	128	2128	0.88	PPB	90
38)	Tetrahydrofuran	5.44	71	420m	1.44	PPB	
39)	Chloroform	5.52	83	6367	0.86	PPB	97
40)	Cyclohexane	5.62	56	4362	0.80	PPB	91
41)	1,1,1-Trichloroethane	5.66	97	5120	0.83	PPB	95
43)	Carbon Tetrachloride	5.82	117	4608	0.81	PPB	81
44)	1,1-Dichloropropene	5.88	75	4254	0.82	PPB	95
45)	Isobutyl Alcohol	6.24	43	2150	42.38	PPB	87
47)	Benzene	6.14	78	15072	0.92	PPB	100
48)	1,2-Dichloroethane	6.29	62	4108	0.94	PPB	96
49)	tert-Amyl Methyl Ether	6.30	55	2038	0.98	PPB	96
50)	Trichloroethene	6.96	95	4060	0.90	PPB	93
51)	Methylcyclohexane	7.07	83	5071	0.72	PPB	94
52)	1,2-Dichloropropane	7.29	63	3738	0.96	PPB	91
53)	Dibromomethane	7.43	93	2540	1.01	PPB	92
54)	Methyl methacrylate	7.45	69	2117	1.00	PPB	99
56)	Bromodichloromethane	7.62	83	5540	0.97	PPB	93
57)	2-Nitropropane	7.99	41	2577	5.01	PPB	88
58)	2-Chloroethyl Vinyl Ether	8.02	63	1982	0.96	PPB	95
59)	cis-1,3-Dichloropropene	8.14	75	6492	0.90	PPB	94
60)	4-Methyl-2-pentanone (MIBK	8.34	58	38652	40.21	PPB	99
62)	Toluene	8.45	92	10755	0.90	PPB	98
64)	n-Octane	8.53	85	1893	0.76	PPB	79
65)	trans-1,3-Dichloropropene	8.81	75	6107	1.00	PPB	95
66)	Ethyl methacrylate	8.87	69	3894	0.93	PPB	98
67)	1,1,2-Trichloroethane	9.00	83	3004	0.98	PPB	95
68)	Tetrachloroethene	9.02	164	4011	0.83	PPB	98
69)	2-Hexanone	9.28	57	12104	42.39	PPB	95
70)	1,3-Dichloropropane	9.19	76	6248	1.03	PPB	97
71)	Dibromochloromethane	9.40	129	5078	0.98	PPB	94
72)	1,2-Dibromoethane (EDB)	9.52	107	3986	1.01	PPB	97
73)	1-Chlorohexane	10.01	91	4996	0.84	PPB	96
74)	Chlorobenzene	10.04	112	12617	0.93	PPB	95

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS46\DATA\111918\1119F009.D Vial: 6
Acq On : 19 Nov 2018 05:36 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:08 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

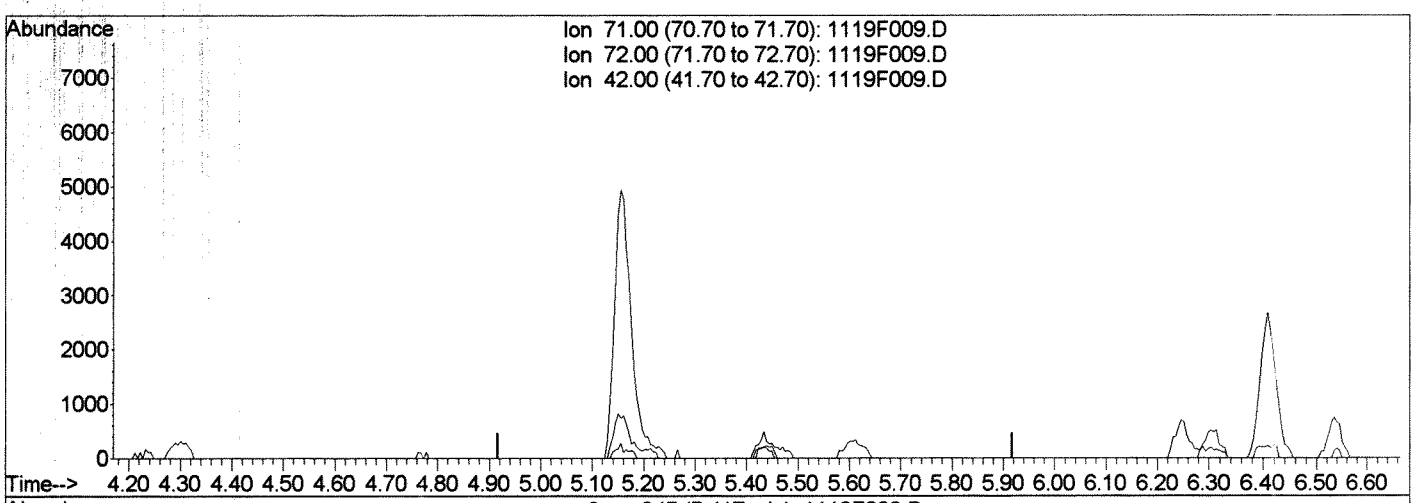
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
75)	Ethylbenzene	10.13	106	6298	0.87	PPB	90
76)	1,1,1,2-Tetrachloroethane	10.15	131	4865	0.94	PPB	98
77)	m,p-Xylenes	10.27	106	15560	1.78	PPB	98
78)	o-Xylene	10.70	106	7757	0.91	PPB	94
79)	Styrene	10.74	103	7012	0.92	PPB	95
80)	Bromoform	10.96	173	3342	0.94	PPB	90
81)	Isopropylbenzene	11.10	105	18386	0.86	PPB	98
82)	cis-1,4-Dichloro-2-butene	11.27	89	2158	3.54	PPB	86
85)	1,1,2,2-Tetrachloroethane	11.53	83	3757	0.98	PPB	96
86)	trans-1,4-Dichloro-2-buten	11.59	53	899	1.01	PPB	89
87)	Bromobenzene	11.46	156	6218	1.00	PPB	97
88)	n-Propylbenzene	11.55	91	19819	0.85	PPB	98
89)	1,2,3-Trichloropropane	11.57	110	1192	0.87	PPB	85
90)	2-Chlorotoluene	11.67	91	12906	0.95	PPB	94
91)	1,3,5-Trimethylbenzene	11.76	105	15010	0.88	PPB	100
92)	4-Chlorotoluene	11.80	91	13563	0.95	PPB	98
93)	tert-Butylbenzene	12.09	119	12882	0.84	PPB	97
94)	1,2,4-Trimethylbenzene	12.17	105	15231	0.89	PPB	97
95)	sec-Butylbenzene	12.34	105	16935	0.82	PPB	97
96)	p-Isopropyltoluene	12.50	119	14902	0.83	PPB	99
97)	1,3-Dichlorobenzene	12.50	146	11099	1.02	PPB	97
98)	1,4-Dichlorobenzene	12.61	146	10903	1.00	PPB	99
99)	n-Butylbenzene	12.95	91	10898	0.79	PPB	99
100)	1,2-Dichlorobenzene	13.02	146	10037	1.02	PPB	98
101)	1,2-Dibromo-3-chloropropan	13.91	155	657	0.95	PPB	92
102)	1,3,5-Trichlorobenzene	14.07	180	6429	0.93	PPB	96
103)	1,2,4-Trichlorobenzene	14.77	180	6430	0.98	PPB	90
104)	Hexachlorobutadiene	14.90	225	2339	0.82	PPB	90
105)	Naphthalene	15.06	128	11244	0.95	PPB	99
106)	1,2,3-Trichlorobenzene	15.33	180	5251	0.97	PPB	97

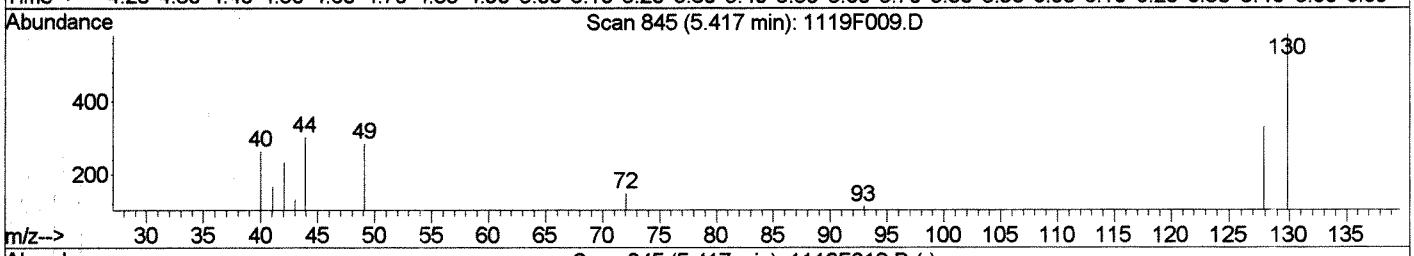
(#) = qualifier out of range (m) = manual integration

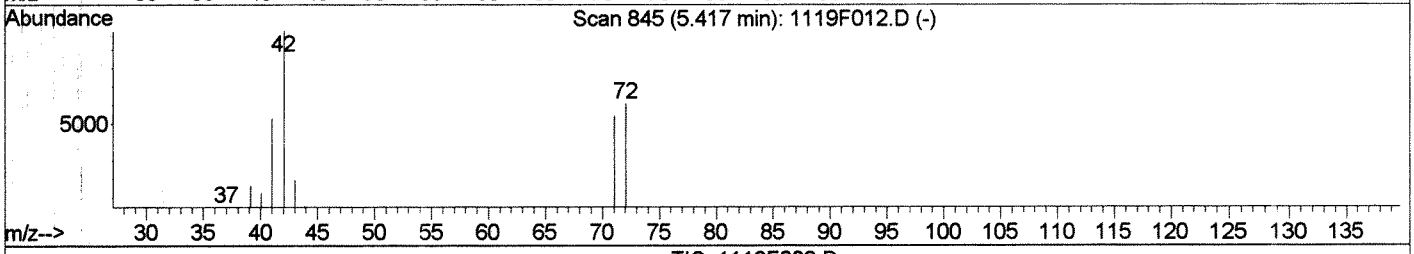
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F009.D Vial: 6
Acq On : 19 Nov 2018 05:36 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:08 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F009.D

(38) Tetrahydrofuran (T)

5.42min 0.00PPB

response 0

Ion	Exp%	Act%
71.00	100	0.00
72.00	111.90	0.00#
42.00	184.70	0.00#
0.00	0.00	0.00

Manual Integration:

Before LM ✓

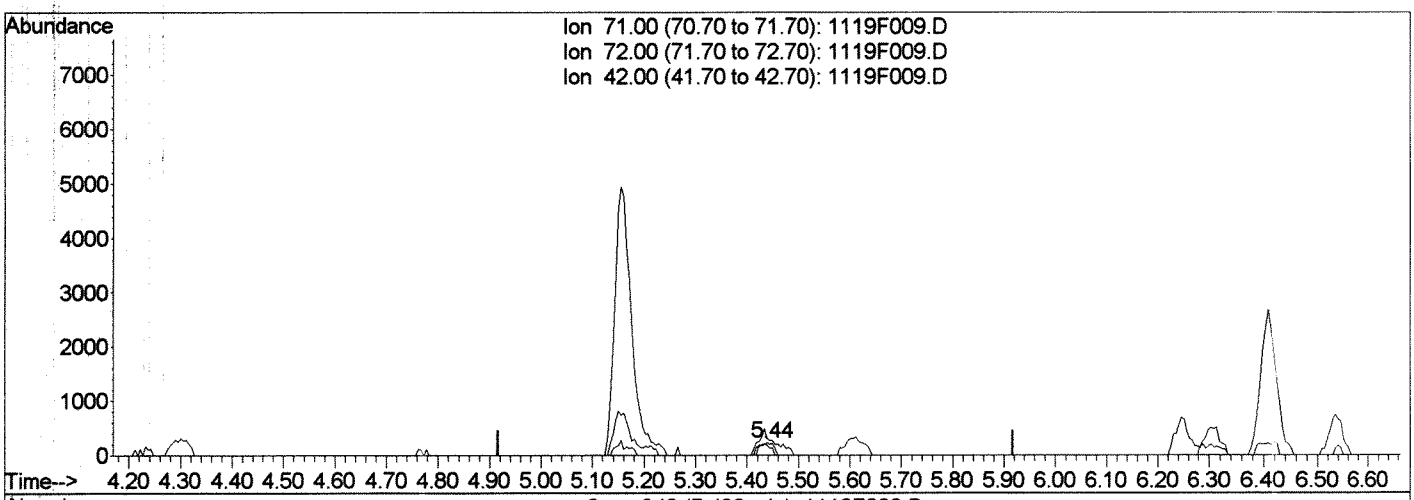
11/21/18

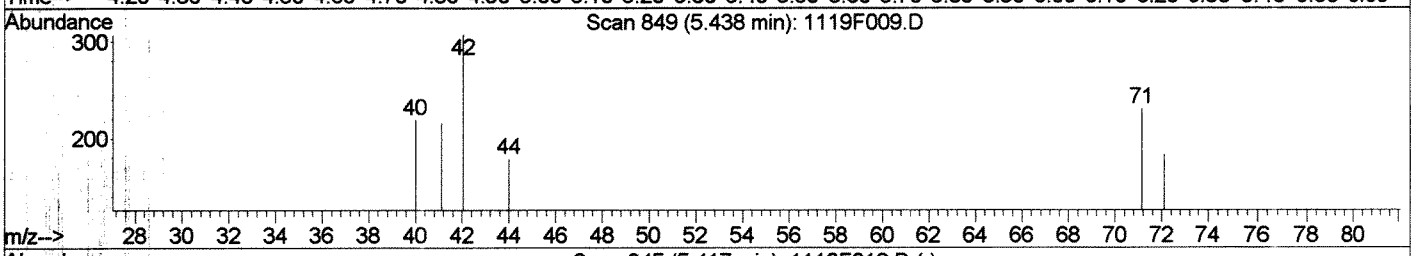
1119F009.D 111918MS46_8260.M Wed Nov 21 09:54:06 2018

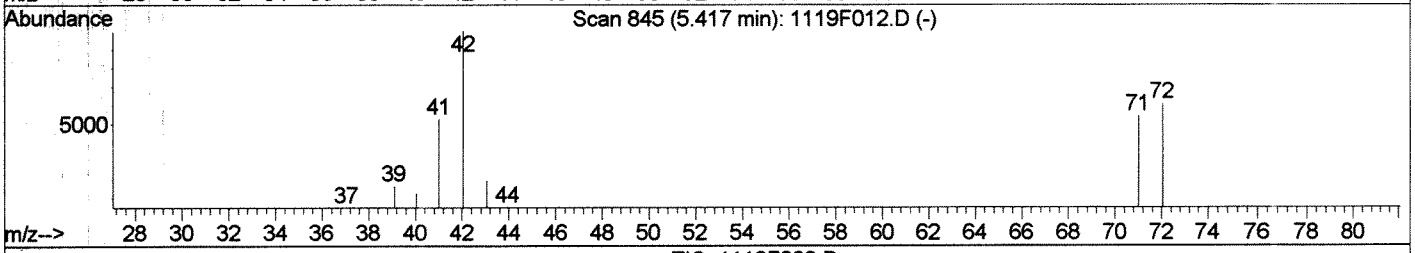
Quantitation Report (Qedit)

Data File : J:\MS46\DATA\111918\1119F009.D Vial: 6
Acq On : 19 Nov 2018 05:36 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:54 2018 Quant Results File: temp.res

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Multiple Level Calibration







TIC: 1119F009.D

(38) Tetrahydrofuran (T)

5.44min 1.44PPB m

response 420

Ion	Exp%	Act%
71.00	100	100
72.00	111.90	79.57#
42.00	184.70	133.48#
0.00	0.00	0.00

Manual Integration:

After LM

Missed peak

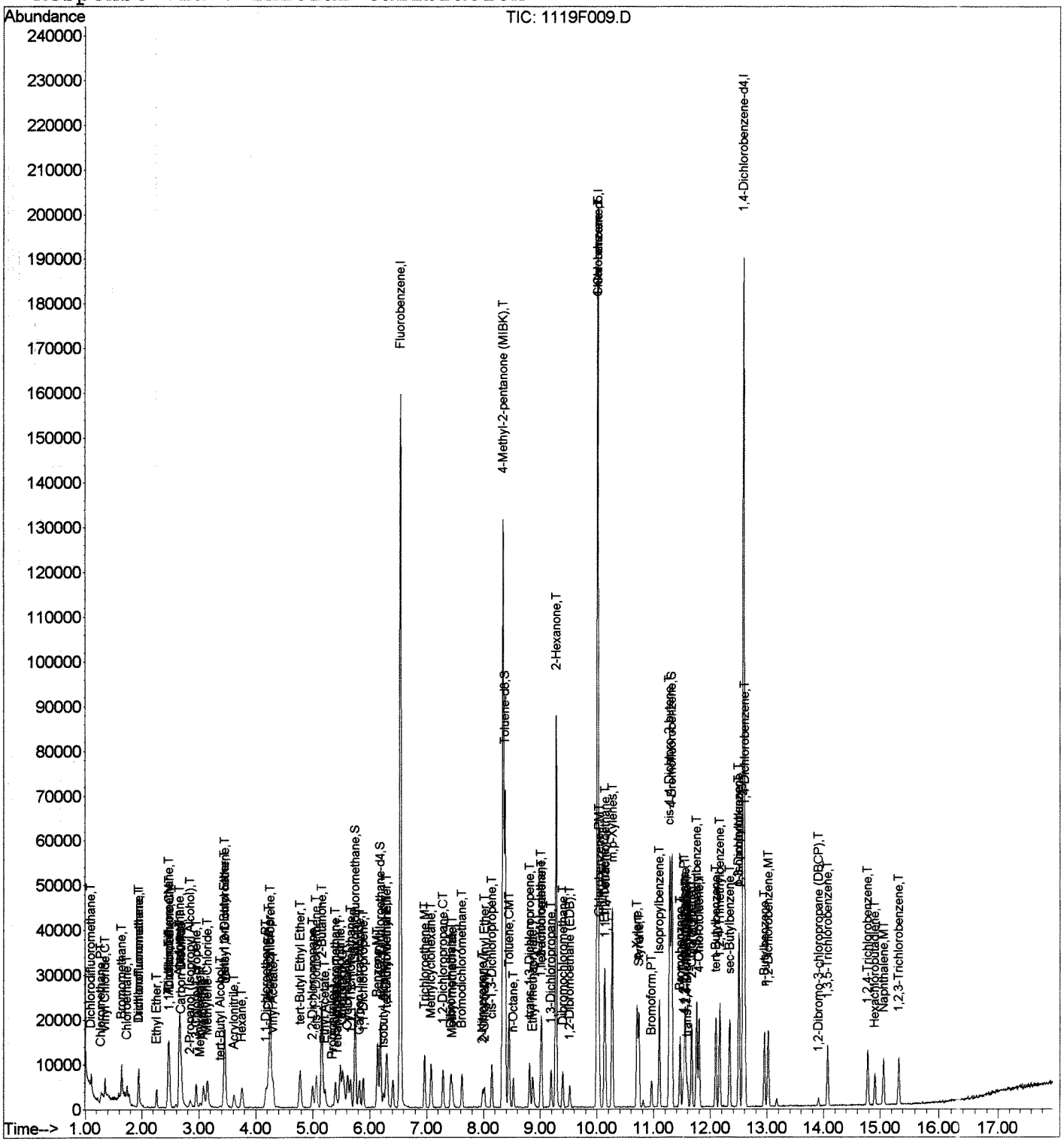
11/21/18

1119F009.D 111918MS46_8260.M Wed Nov 21 09:54:15 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F009.D Vial: 6
Acq On : 19 Nov 2018 05:36 pm Operator: LM
Sample : ICAL 1.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:54 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F010.D Vial: 7
Acq On : 19 Nov 2018 06:02 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:08 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018 LM 12-04-18
Response via : Initial Calibration
DataAcq Meth : 8260.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.53	96	171560	10.00	PPB		0.00
63) Chlorobenzene-d5	10.01	82	61789	10.00	PPB		0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	71874	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	5.74	113	23072	5.68	PPB		0.00
Spiked Amount 10.000			Recovery =	56.80%			
46) 1,2-Dichloroethane-d4	6.19	65	19720	5.81	PPB		0.00
Spiked Amount 10.000			Recovery =	58.10%			
61) Toluene-d8	8.37	98	83927	5.36	PPB		0.00
Spiked Amount 10.000			Recovery =	53.60%			
83) 4-Bromofluorobenzene	11.32	95	32179	5.80	PPB		0.00
Spiked Amount 10.000			Recovery =	58.00%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.10	85	7483	2.33	PPB		92
3) Chloromethane	1.28	50	6258	2.20	PPB		97
4) Vinyl Chloride	1.35	62	8031	2.26	PPB		98
5) Bromomethane	1.64	96	7858	2.32	PPB		85
6) Chloroethane	1.74	64	4640	1.98	PPB		87
7) Dichlorofluoromethane	1.95	67	11834	2.07	PPB		99
8) Trichlorofluoromethane	1.94	101	11513	2.17	PPB		96
9) Ethyl Ether	2.26	59	4022	1.88	PPB		91
10) Acrolein	2.47	56	14438	37.93	PPB		99
11) Trichlorotrifluoroethane	2.46	151	7779	2.17	PPB		95
12) 1,1-Dichloroethene	2.49	96	7357	2.14	PPB		89
13) Acetone	2.64	43	34284	81.42	PPB		99
14) Iodomethane	2.66	142	36879	6.96	PPB		99
15) Carbon Disulfide	2.69	76	21494	2.16	PPB		98
16) 2-Propanol (Isopropyl Alco	2.84	45	6521	111.34	PPB		96
17) 3-Chloro-1-propene	2.95	76	4140	2.08	PPB	#	72
18) Methyl Acetate	3.02	43	3450	2.23	PPB		98
19) Acetonitrile	3.08	40	7360	80.28	PPB	#	80
20) Methylene Chloride	3.15	84	7833	1.91	PPB		96
21) tert-Butyl Alcohol	3.37	59	1484	10.98	PPB		89
22) Acrylonitrile	3.61	53	6519	8.06	PPB		93
23) Methyl tert-Butyl Ether	3.45	73	34874	3.72	PPB		93
24) trans-1,2-Dichloroethene	3.45	96	8431	2.02	PPB		96
25) Hexane	3.76	57	10446	2.21	PPB		98
26) Diisopropyl Ether	4.22	45	17771	1.90	PPB		95
27) 1,1-Dichloroethane	4.17	63	12235	2.02	PPB		98
28) Vinyl Acetate	4.30	86	3415	3.94	PPB	#	75

(#) = qualifier out of range (m) = manual integration
1119F010.D 111918MS46_8260.M Wed Nov 21 11:04:23 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F010.D Vial: 7
Acq On : 19 Nov 2018 06:02 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:08 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
29)	Chloroprene	4.25	53	38888	8.30	PPB		99
30)	tert-Butyl Ethyl Ether	4.77	59	19615	1.94	PPB		98
31)	2,2-Dichloropropane	5.00	77	11588	2.11	PPB		100
32)	cis-1,2-Dichloroethene	5.06	96	9943	2.05	PPB		96
33)	2-Butanone	5.16	72	22403	79.58	PPB		98
34)	Ethyl Acetate	5.21	61	1239	3.28	PPB		93
35)	Propionitrile	5.35	54	2205	8.14	PPB		84
36)	Methacrylonitrile	5.48	67	9497	7.97	PPB		90
37)	Bromochloromethane	5.40	128	4560	1.90	PPB		89
38)	Tetrahydrofuran	5.43	71	724	2.47	PPB		80
39)	Chloroform	5.52	83	14325	1.94	PPB		97
40)	Cyclohexane	5.62	56	12566	2.31	PPB		99
41)	1,1,1-Trichloroethane	5.66	97	13358	2.16	PPB		95
43)	Carbon Tetrachloride	5.82	117	12552	2.20	PPB		95
44)	1,1-Dichloropropene	5.88	75	11043	2.12	PPB		96
45)	Isobutyl Alcohol	6.24	43	3972	78.30	PPB		98
47)	Benzene	6.14	78	33755	2.07	PPB		96
48)	1,2-Dichloroethane	6.28	62	8475	1.95	PPB		98
49)	tert-Amyl Methyl Ether	6.30	55	4090	1.96	PPB	#	86
50)	Trichloroethene	6.96	95	9530	2.12	PPB		99
51)	Methylcyclohexane	7.08	83	15146	2.16	PPB		98
52)	1,2-Dichloropropane	7.29	63	7517	1.92	PPB		100
53)	Dibromomethane	7.43	93	4829	1.93	PPB		96
54)	Methyl methacrylate	7.45	69	3980	1.89	PPB		98
55)	1,4-Dioxane	7.46	88	752	51.93	PPB		73
56)	Bromodichloromethane	7.62	83	10996	1.93	PPB		92
57)	2-Nitropropane	7.98	41	5209	10.12	PPB		90
58)	2-Chloroethyl Vinyl Ether	8.01	63	4012	1.94	PPB		94
59)	cis-1,3-Dichloropropene	8.15	75	13487	1.88	PPB		99
60)	4-Methyl-2-pentanone (MIBK	8.34	58	73078	76.02	PPB		96
62)	Toluene	8.45	92	23639	1.99	PPB		95
64)	n-Octane	8.53	85	5514	2.22	PPB		97
65)	trans-1,3-Dichloropropene	8.81	75	11762	1.94	PPB		97
66)	Ethyl methacrylate	8.87	69	7927	1.90	PPB		93
67)	1,1,2-Trichloroethane	9.00	83	6021	1.96	PPB		96
68)	Tetrachloroethene	9.02	164	10220	2.12	PPB		94
69)	2-Hexanone	9.27	57	23268	81.76	PPB		95
70)	1,3-Dichloropropane	9.19	76	12058	2.00	PPB		98
71)	Dibromochloromethane	9.40	129	9775	1.89	PPB		96
72)	1,2-Dibromoethane (EDB)	9.52	107	7672	1.95	PPB		89
73)	1-Chlorohexane	10.01	91	12968	2.19	PPB		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F010.D Vial: 7
Acq On : 19 Nov 2018 06:02 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:08 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

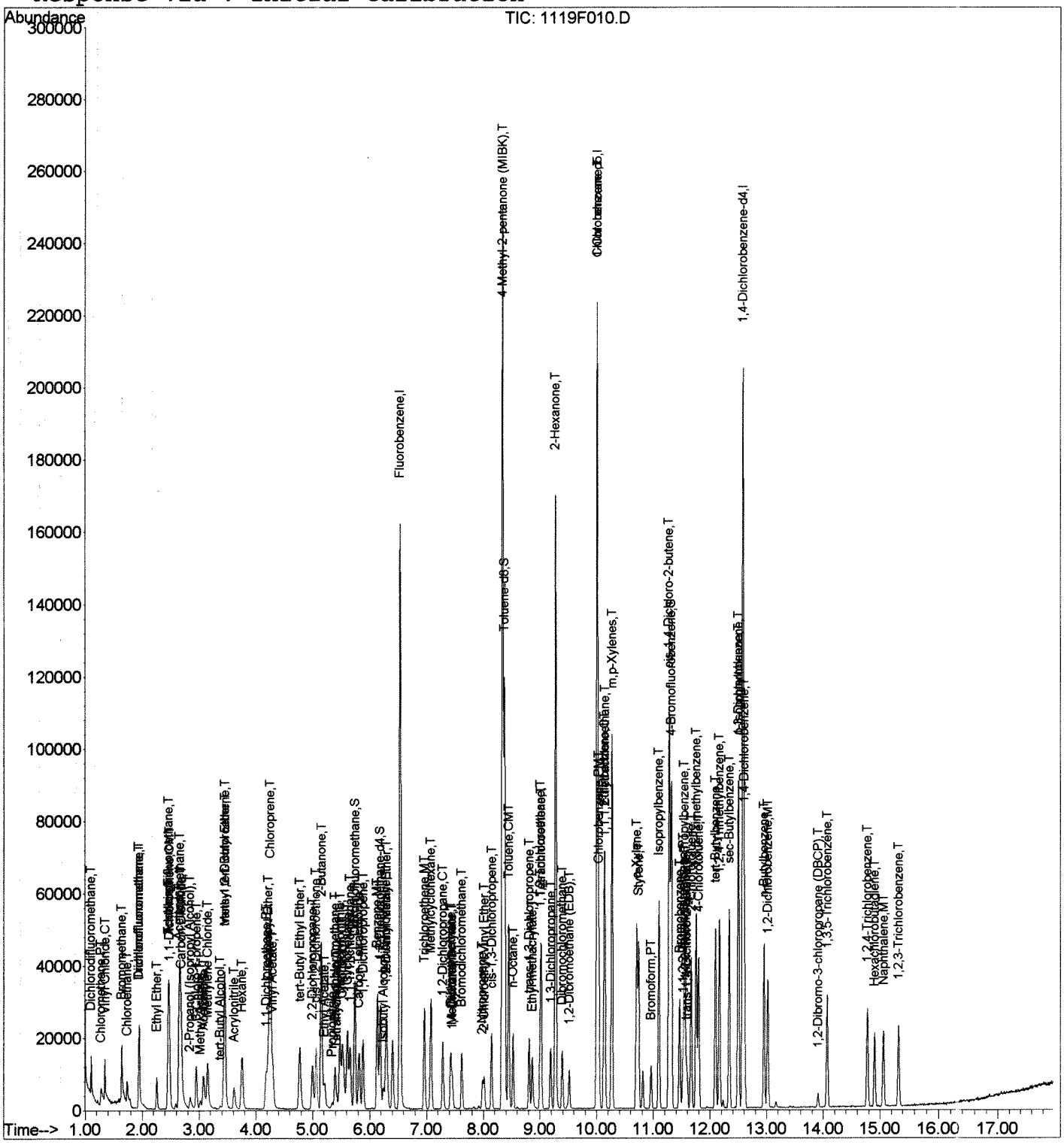
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	10.04	112	26930	1.99	PPB	93
75)	Ethylbenzene	10.13	106	14837	2.05	PPB	96
76)	1,1,1,2-Tetrachloroethane	10.15	131	9902	1.92	PPB	95
77)	m,p-Xylenes	10.27	106	35706	4.10	PPB	97
78)	o-Xylene	10.70	106	16688	1.97	PPB	99
79)	Styrene	10.73	103	14442	1.90	PPB	95
80)	Bromoform	10.96	173	6715	1.90	PPB	97
81)	Isopropylbenzene	11.10	105	44200	2.07	PPB	98
82)	cis-1,4-Dichloro-2-butene	11.27	89	4636	7.63	PPB	93
85)	1,1,2,2-Tetrachloroethane	11.52	83	7554	1.85	PPB	99
86)	trans-1,4-Dichloro-2-buten	11.59	53	1953	2.06	PPB	85
87)	Bromobenzene	11.46	156	12240	1.85	PPB	97
88)	n-Propylbenzene	11.55	91	47359	1.91	PPB	99
89)	1,2,3-Trichloropropane	11.57	110	2697	1.85	PPB	97
90)	2-Chlorotoluene	11.67	91	28147	1.94	PPB	98
91)	1,3,5-Trimethylbenzene	11.76	105	34491	1.91	PPB	96
92)	4-Chlorotoluene	11.80	91	29420	1.94	PPB	99
93)	tert-Butylbenzene	12.10	119	31615	1.95	PPB	97
94)	1,2,4-Trimethylbenzene	12.17	105	35404	1.95	PPB	99
95)	sec-Butylbenzene	12.34	105	44935	2.05	PPB	99
96)	p-Isopropyltoluene	12.50	119	38388	2.00	PPB	96
97)	1,3-Dichlorobenzene	12.50	146	22785	1.97	PPB	98
98)	1,4-Dichlorobenzene	12.61	146	22732	1.95	PPB	94
99)	n-Butylbenzene	12.95	91	28611	1.94	PPB	98
100)	1,2-Dichlorobenzene	13.01	146	20504	1.95	PPB	96
101)	1,2-Dibromo-3-chloropropan	13.91	155	1327	1.81	PPB	98
102)	1,3,5-Trichlorobenzene	14.07	180	14256	1.95	PPB	99
103)	1,2,4-Trichlorobenzene	14.78	180	12876	1.85	PPB	98
104)	Hexachlorobutadiene	14.91	225	6052	2.00	PPB	91
105)	Naphthalene	15.06	128	23199	1.84	PPB	96
106)	1,2,3-Trichlorobenzene	15.32	180	11084	1.92	PPB	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F010.D Vial: 7
Acq On : 19 Nov 2018 06:02 pm Operator: LM
Sample : ICAL 2.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:08 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F011.D Vial: 8
Acq On : 19 Nov 2018 06:28 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:09 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.54	96	168644	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	63111	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	70230	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	28658	7.17	PPB	0.00
Spiked Amount 10.000			Recovery =	71.70%		
46) 1,2-Dichloroethane-d4	6.19	65	25730	7.71	PPB	0.00
Spiked Amount 10.000			Recovery =	77.10%		
61) Toluene-d8	8.37	98	95630	6.21	PPB	0.00
Spiked Amount 10.000			Recovery =	62.10%		
83) 4-Bromofluorobenzene	11.32	95	40479	7.15	PPB	0.00
Spiked Amount 10.000			Recovery =	71.50%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.10	85	15257	4.83	PPB	92
3) Chloromethane	1.28	50	14273	5.11	PPB	98
4) Vinyl Chloride	1.35	62	17372	4.97	PPB	96
5) Bromomethane	1.64	96	17718	5.31	PPB	97
6) Chloroethane	1.74	64	11236	4.89	PPB	93
7) Dichlorofluoromethane	1.95	67	27412	4.89	PPB	98
8) Trichlorofluoromethane	1.94	101	24571	4.72	PPB	97
9) Ethyl Ether	2.26	59	10302	4.89	PPB	93
10) Acrolein	2.47	56	38810	103.73	PPB	97
11) Trichlorotrifluoroethane	2.46	151	16870	4.78	PPB	98
12) 1,1-Dichloroethene	2.49	96	16500	4.89	PPB	98
13) Acetone	2.65	43	43084	104.09	PPB	96
14) Iodomethane	2.66	142	98335	18.88	PPB	100
15) Carbon Disulfide	2.69	76	48266	4.93	PPB	99
16) 2-Propanol (Isopropyl Alco	2.84	45	15793	274.31	PPB	96
17) 3-Chloro-1-propene	2.95	76	10238	5.23	PPB	85
18) Methyl Acetate	3.02	43	8327	5.47	PPB	97
19) Acetonitrile	3.08	40	19354	214.76	PPB	99
20) Methylene Chloride	3.15	84	19931	4.94	PPB	98
21) tert-Butyl Alcohol	3.38	59	3590	27.01	PPB	98
22) Acrylonitrile	3.62	53	16347	20.56	PPB	99
23) Methyl tert-Butyl Ether	3.45	73	93165	10.10	PPB	98
24) trans-1,2-Dichloroethene	3.45	96	20392	4.98	PPB	98
25) Hexane	3.76	57	22907	4.94	PPB	96
26) Diisopropyl Ether	4.22	45	44249	4.82	PPB	96
27) 1,1-Dichloroethane	4.18	63	29001	4.87	PPB	95
28) Vinyl Acetate	4.30	86	8753	10.27	PPB	94

(#) = qualifier out of range (m) = manual integration
1119F011.D 111918MS46_8260.M Wed Nov 21 11:04:24 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F011.D Vial: 8
Acq On : 19 Nov 2018 06:28 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:09 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroprene	4.25	53	89758	19.48	PPB	97
30)	tert-Butyl Ethyl Ether	4.77	59	49701	5.01	PPB	98
31)	2,2-Dichloropropane	5.00	77	26320	4.87	PPB	99
32)	cis-1,2-Dichloroethene	5.07	96	24028	5.04	PPB	96
33)	2-Butanone	5.16	72	27562	99.60	PPB	97
34)	Ethyl Acetate	5.21	61	3612	9.74	PPB	97
35)	Propionitrile	5.34	54	5393	20.26	PPB	95
36)	Methacrylonitrile	5.48	67	24293	20.74	PPB	98
37)	Bromochloromethane	5.40	128	11628	4.92	PPB	97
38)	Tetrahydrofuran	5.43	71	1726	6.00	PPB	93
39)	Chloroform	5.52	83	34122	4.70	PPB	97
40)	Cyclohexane	5.61	56	26254	4.90	PPB	93
41)	1,1,1-Trichloroethane	5.66	97	29128	4.79	PPB	97
43)	Carbon Tetrachloride	5.82	117	26862	4.79	PPB	97
44)	1,1-Dichloropropene	5.88	75	24773	4.85	PPB	98
45)	Isobutyl Alcohol	6.24	43	10375	208.05	PPB	95
47)	Benzene	6.14	78	80130	5.00	PPB	99
48)	1,2-Dichloroethane	6.29	62	21430	5.01	PPB	98
49)	tert-Amyl Methyl Ether	6.30	55	10285	5.02	PPB	97
50)	Trichloroethene	6.96	95	22820	5.16	PPB	96
51)	Methylcyclohexane	7.08	83	33997	4.93	PPB	98
52)	1,2-Dichloropropane	7.29	63	19610	5.10	PPB	96
53)	Dibromomethane	7.43	93	12789	5.19	PPB	97
54)	Methyl methacrylate	7.45	69	10725	5.17	PPB	97
55)	1,4-Dioxane	7.47	88	2487	174.73	PPB	93
56)	Bromodichloromethane	7.62	83	28243	5.04	PPB	99
57)	2-Nitropropane	7.98	41	13297	26.28	PPB	98
58)	2-Chloroethyl Vinyl Ether	8.01	63	10533	5.18	PPB	93
59)	cis-1,3-Dichloropropene	8.14	75	35377	5.01	PPB	98
60)	4-Methyl-2-pentanone (MIBK	8.34	58	94611	100.13	PPB	97
62)	Toluene	8.45	92	57894	4.95	PPB	98
64)	n-Octane	8.53	85	12937	5.09	PPB	91
65)	trans-1,3-Dichloropropene	8.81	75	30380	4.90	PPB	98
66)	Ethyl methacrylate	8.87	69	20972	4.91	PPB	94
67)	1,1,2-Trichloroethane	9.01	83	15569	4.97	PPB	95
68)	Tetrachloroethene	9.02	164	23756	4.83	PPB	97
69)	2-Hexanone	9.27	57	29035	99.89	PPB	96
70)	1,3-Dichloropropane	9.19	76	31164	5.05	PPB	97
71)	Dibromochloromethane	9.40	129	25949	4.92	PPB	97
72)	1,2-Dibromoethane (EDB)	9.52	107	20128	5.01	PPB	96
73)	1-Chlorohexane	10.01	91	29392	4.86	PPB	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F011.D Vial: 8
Acq On : 19 Nov 2018 06:28 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:09 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

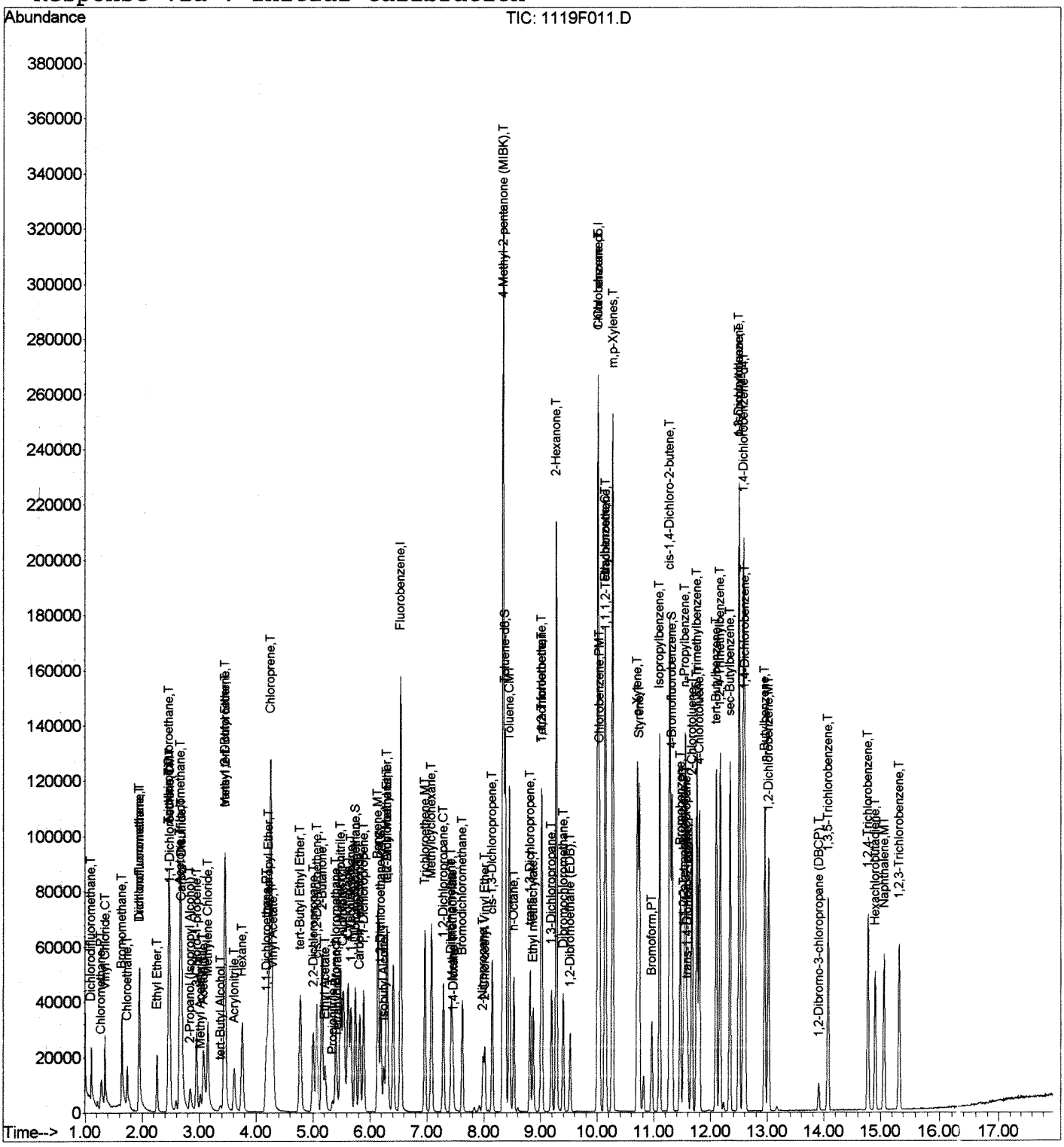
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	10.04	112	68628	4.97	PPB	98
75)	Ethylbenzene	10.13	106	35388	4.79	PPB	95
76)	1,1,1,2-Tetrachloroethane	10.15	131	26002	4.94	PPB	96
77)	m,p-Xylenes	10.27	106	86107	9.69	PPB	98
78)	o-Xylene	10.70	106	42159	4.87	PPB	97
79)	Styrene	10.73	103	38115	4.90	PPB	93
80)	Bromoform	10.96	173	17943	4.96	PPB	98
81)	Isopropylbenzene	11.10	105	105406	4.83	PPB	99
82)	cis-1,4-Dichloro-2-butene	11.27	89	12531	20.18	PPB	98
85)	1,1,2,2-Tetrachloroethane	11.52	83	19481	4.88	PPB	97
86)	trans-1,4-Dichloro-2-buten	11.59	53	4703	5.08	PPB	91
87)	Bromobenzene	11.46	156	31791	4.92	PPB	95
88)	n-Propylbenzene	11.55	91	116073	4.80	PPB	99
89)	1,2,3-Trichloropropane	11.57	110	7107	4.98	PPB	88
90)	2-Chlorotoluene	11.67	91	69740	4.92	PPB	99
91)	1,3,5-Trimethylbenzene	11.75	105	85717	4.87	PPB	99
92)	4-Chlorotoluene	11.80	91	75097	5.08	PPB	98
93)	tert-Butylbenzene	12.10	119	76852	4.85	PPB	98
94)	1,2,4-Trimethylbenzene	12.17	105	86004	4.85	PPB	98
95)	sec-Butylbenzene	12.34	105	104182	4.86	PPB	99
96)	p-Isopropyltoluene	12.50	119	91588	4.89	PPB	98
97)	1,3-Dichlorobenzene	12.50	146	55769	4.93	PPB	96
98)	1,4-Dichlorobenzene	12.61	146	56652	4.98	PPB	97
99)	n-Butylbenzene	12.95	91	69246	4.80	PPB	97
100)	1,2-Dichlorobenzene	13.02	146	51809	5.04	PPB	99
101)	1,2-Dibromo-3-chloropropan	13.91	155	3840	5.36	PPB	95
102)	1,3,5-Trichlorobenzene	14.07	180	34704	4.86	PPB	98
103)	1,2,4-Trichlorobenzene	14.78	180	32409	4.78	PPB	96
104)	Hexachlorobutadiene	14.90	225	14959	5.06	PPB	96
105)	Naphthalene	15.06	128	61289	4.97	PPB	98
106)	1,2,3-Trichlorobenzene	15.33	180	28277	5.01	PPB	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F011.D Vial: 8
Acq On : 19 Nov 2018 06:28 pm Operator: LM
Sample : ICAL 5.0 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:08 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F012.D Vial: 9
Acq On : 19 Nov 2018 06:54 pm Operator: LM
Sample : ICAL 10 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:10 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.53	96	166468	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	62501	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	69473	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	39440	10.00	PPB	0.00
Spiked Amount 10.000			Recovery =	100.00%		
46) 1,2-Dichloroethane-d4	6.19	65	32956	10.00	PPB	0.00
Spiked Amount 10.000			Recovery =	100.00%		
61) Toluene-d8	8.37	98	152037	10.00	PPB	0.00
Spiked Amount 10.000			Recovery =	100.00%		
83) 4-Bromofluorobenzene	11.32	95	56100	10.00	PPB	0.00
Spiked Amount 10.000			Recovery =	100.00%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.11	85	31163	10.00	PPB	100
3) Chloromethane	1.28	50	27598	10.00	PPB	100
4) Vinyl Chloride	1.35	62	34517	10.00	PPB	100
5) Bromomethane	1.64	96	32920	10.00	PPB	100
6) Chloroethane	1.74	64	22701	10.00	PPB	100
7) Dichlorofluoromethane	1.95	67	55364	10.00	PPB	100
8) Trichlorofluoromethane	1.94	101	51414	10.00	PPB	100
9) Ethyl Ether	2.26	59	20779	10.00	PPB	100
10) Acrolein	2.47	56	73866	200.00	PPB	100
11) Trichlorotrifluoroethane	2.46	151	34854	10.00	PPB	100
12) 1,1-Dichloroethene	2.49	96	33300	10.00	PPB	100
13) Acetone	2.64	43	81711	200.00	PPB	100
14) Iodomethane	2.66	142	205618	40.00	PPB	100
15) Carbon Disulfide	2.69	76	96556	10.00	PPB	100
16) 2-Propanol (Isopropyl Alco	2.83	45	28415	500.00	PPB	100
17) 3-Chloro-1-propene	2.95	76	19324	10.00	PPB	100
18) Methyl Acetate	3.02	43	15023	10.00	PPB	100
19) Acetonitrile	3.07	40	35582	400.00	PPB	100
20) Methylene Chloride	3.15	84	39827	10.00	PPB	100
21) tert-Butyl Alcohol	3.37	59	6560	50.00	PPB	100
22) Acrylonitrile	3.62	53	31399	40.00	PPB	100
23) Methyl tert-Butyl Ether	3.45	73	182083	20.00	PPB	100
24) trans-1,2-Dichloroethene	3.45	96	40423	10.00	PPB	100
25) Hexane	3.76	57	45763	10.00	PPB	100
26) Diisopropyl Ether	4.22	45	90577	10.00	PPB	100
27) 1,1-Dichloroethane	4.18	63	58836	10.00	PPB	100
28) Vinyl Acetate	4.30	86	16819	20.00	PPB	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F012.D Vial: 9
Acq On : 19 Nov 2018 06:54 pm Operator: LM
Sample : ICAL 10 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:10 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroprene	4.25	53	181915	40.00	PPB	100
30)	tert-Butyl Ethyl Ether	4.77	59	97991	10.00	PPB	100
31)	2,2-Dichloropropane	5.00	77	53335	10.00	PPB	100
32)	cis-1,2-Dichloroethene	5.06	96	47064	10.00	PPB	100
33)	2-Butanone	5.15	72	54630	200.00	PPB	100
34)	Ethyl Acetate	5.21	61	7322	20.00	PPB	100
35)	Propionitrile	5.34	54	10510	40.00	PPB	100
36)	Methacrylonitrile	5.48	67	46244	40.00	PPB	100
37)	Bromochloromethane	5.40	128	23336	10.00	PPB	100
38)	Tetrahydrofuran	5.42	71	2839	10.00	PPB	100
39)	Chloroform	5.52	83	71611	10.00	PPB	100
40)	Cyclohexane	5.61	56	52885	10.00	PPB	100
41)	1,1,1-Trichloroethane	5.66	97	59981	10.00	PPB	100
43)	Carbon Tetrachloride	5.82	117	55321	10.00	PPB	100
44)	1,1-Dichloropropene	5.88	75	50467	10.00	PPB	100
45)	Isobutyl Alcohol	6.24	43	19690	400.00	PPB	100
47)	Benzene	6.14	78	158121	10.00	PPB	100
48)	1,2-Dichloroethane	6.28	62	42258	10.00	PPB	100
49)	tert-Amyl Methyl Ether	6.30	55	20214	10.00	PPB	100
50)	Trichloroethene	6.96	95	43665	10.00	PPB	100
51)	Methylcyclohexane	7.08	83	68041	10.00	PPB	100
52)	1,2-Dichloropropane	7.28	63	37948	10.00	PPB	100
53)	Dibromomethane	7.43	93	24305	10.00	PPB	100
54)	Methyl methacrylate	7.45	69	20485	10.00	PPB	100
55)	1,4-Dioxane	7.47	88	5620	400.00	PPB	100
56)	Bromodichloromethane	7.62	83	55312	10.00	PPB	100
57)	2-Nitropropane	7.99	41	24968	50.00	PPB	100
58)	2-Chloroethyl Vinyl Ether	8.01	63	20075	10.00	PPB	100
59)	cis-1,3-Dichloropropene	8.14	75	69682	10.00	PPB	100
60)	4-Methyl-2-pentanone (MIBK	8.34	58	186546	200.00	PPB	100
62)	Toluene	8.45	92	115435	10.00	PPB	100
64)	n-Octane	8.53	85	25147	10.00	PPB	100
65)	trans-1,3-Dichloropropene	8.81	75	61430	10.00	PPB	100
66)	Ethyl methacrylate	8.87	69	42269	10.00	PPB	100
67)	1,1,2-Trichloroethane	9.00	83	31032	10.00	PPB	100
68)	Tetrachloroethene	9.02	164	48735	10.00	PPB	100
69)	2-Hexanone	9.27	57	57572	200.00	PPB	100
70)	1,3-Dichloropropane	9.19	76	61076	10.00	PPB	100
71)	Dibromochloromethane	9.39	129	52183	10.00	PPB	100
72)	1,2-Dibromoethane (EDB)	9.52	107	39826	10.00	PPB	100
73)	1-Chlorohexane	10.01	91	59910	10.00	PPB	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F012.D Vial: 9
Acq On : 19 Nov 2018 06:54 pm Operator: LM
Sample : ICAL 10 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:10 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

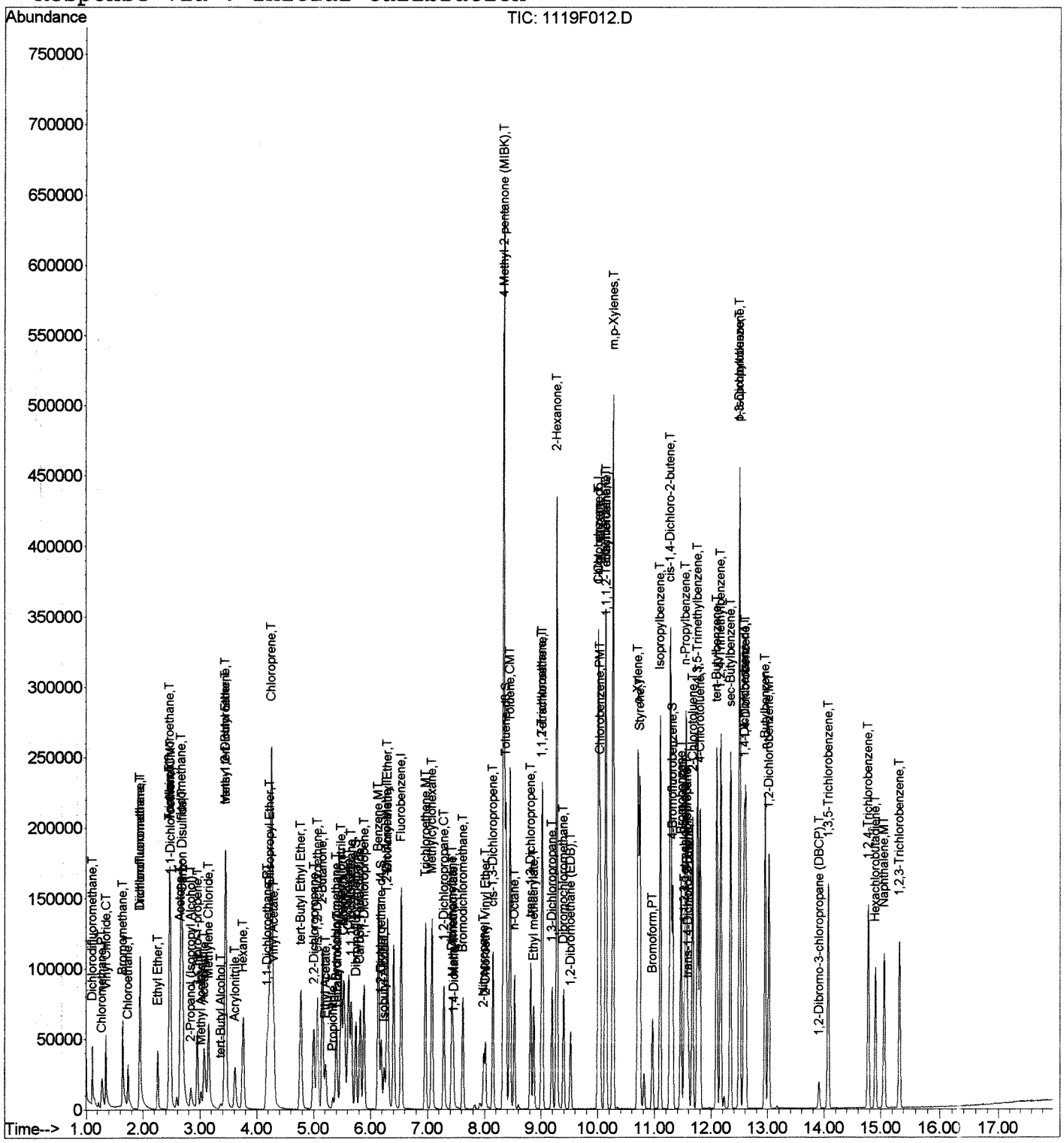
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	10.04	112	136685	10.00	PPB	100
75)	Ethylbenzene	10.13	106	73104	10.00	PPB	100
76)	1,1,1,2-Tetrachloroethane	10.15	131	52176	10.00	PPB	100
77)	m,p-Xylenes	10.27	106	176040	20.00	PPB	100
78)	o-Xylene	10.70	106	85647	10.00	PPB	100
79)	Styrene	10.73	103	77012	10.00	PPB	100
80)	Bromoform	10.96	173	35807	10.00	PPB	100
81)	Isopropylbenzene	11.10	105	216082	10.00	PPB	100
82)	cis-1,4-Dichloro-2-butene	11.27	89	24599	40.00	PPB	100
85)	1,1,2,2-Tetrachloroethane	11.52	83	39470	10.00	PPB	100
86)	trans-1,4-Dichloro-2-buten	11.59	53	9161	10.00	PPB	100
87)	Bromobenzene	11.46	156	63908	10.00	PPB	100
88)	n-Propylbenzene	11.55	91	239287	10.00	PPB	100
89)	1,2,3-Trichloropropane	11.57	110	14107	10.00	PPB	100
90)	2-Chlorotoluene	11.67	91	140204	10.00	PPB	100
91)	1,3,5-Trimethylbenzene	11.76	105	174283	10.00	PPB	100
92)	4-Chlorotoluene	11.80	91	146303	10.00	PPB	100
93)	tert-Butylbenzene	12.09	119	156882	10.00	PPB	100
94)	1,2,4-Trimethylbenzene	12.17	105	175331	10.00	PPB	100
95)	sec-Butylbenzene	12.34	105	212213	10.00	PPB	100
96)	p-Isopropyltoluene	12.50	119	185328	10.00	PPB	100
97)	1,3-Dichlorobenzene	12.50	146	111975	10.00	PPB	100
98)	1,4-Dichlorobenzene	12.61	146	112458	10.00	PPB	100
99)	n-Butylbenzene	12.95	91	142595	10.00	PPB	100
100)	1,2-Dichlorobenzene	13.02	146	101600	10.00	PPB	100
101)	1,2-Dibromo-3-chloropropan	13.90	155	7090	10.00	PPB	100
102)	1,3,5-Trichlorobenzene	14.07	180	70690	10.00	PPB	100
103)	1,2,4-Trichlorobenzene	14.78	180	67129	10.00	PPB	100
104)	Hexachlorobutadiene	14.91	225	29238	10.00	PPB	100
105)	Naphthalene	15.05	128	121927	10.00	PPB	100
106)	1,2,3-Trichlorobenzene	15.33	180	55849	10.00	PPB	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F012.D Vial: 9
Acq On : 19 Nov 2018 06:54 pm Operator: LM
Sample : ICAL 10 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:08 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F013.D Vial: 10
Acq On : 19 Nov 2018 07:20 pm Operator: LM
Sample : ICAL 20 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:11 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.54	96	161402	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	61216	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	66434	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	45437	11.88	PPB	0.00
Spiked Amount 10.000			Recovery = 118.80%			
46) 1,2-Dichloroethane-d4	6.19	65	38165	11.94	PPB	0.00
Spiked Amount 10.000			Recovery = 119.40%			
61) Toluene-d8	8.37	98	163198	11.07	PPB	0.00
Spiked Amount 10.000			Recovery = 110.70%			
83) 4-Bromofluorobenzene	11.32	95	64120	11.67	PPB	0.00
Spiked Amount 10.000			Recovery = 116.70%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.10	85	59627	19.73	PPB	97
3) Chloromethane	1.28	50	53809	20.11	PPB	99
4) Vinyl Chloride	1.35	62	66938	20.00	PPB	99
5) Bromomethane	1.64	96	62780	19.67	PPB	96
6) Chloroethane	1.74	64	43014	19.54	PPB	98
7) Dichlorofluoromethane	1.95	67	108142	20.15	PPB	99
8) Trichlorofluoromethane	1.94	101	102092	20.48	PPB	97
9) Ethyl Ether	2.26	59	41191	20.45	PPB	96
10) Acrolein	2.47	56	143888	401.82	PPB	100
11) Trichlorotrifluoroethane	2.46	151	66153	19.58	PPB	98
12) 1,1-Dichloroethene	2.49	96	62465	19.35	PPB	94
13) Acetone	2.64	43	163285	412.21	PPB	99
14) Iodomethane	2.66	142	420829	84.44	PPB	98
15) Carbon Disulfide	2.69	76	184341	19.69	PPB	99
16) 2-Propanol (Isopropyl Alco	2.83	45	64666	1173.60	PPB	98
17) 3-Chloro-1-propene	2.95	76	38778	20.70	PPB	89
18) Methyl Acetate	3.02	43	28667	19.68	PPB	96
19) Acetonitrile	3.07	40	74863	868.00	PPB	97
20) Methylene Chloride	3.15	84	77474	20.06	PPB	98
21) tert-Butyl Alcohol	3.36	59	14152	111.25	PPB	91
22) Acrylonitrile	3.61	53	61729	81.11	PPB	99
23) Methyl tert-Butyl Ether	3.44	73	360363	40.82	PPB	100
24) trans-1,2-Dichloroethene	3.45	96	79487	20.28	PPB	97
25) Hexane	3.76	57	90141	20.32	PPB	99
26) Diisopropyl Ether	4.22	45	181485	20.67	PPB	97
27) 1,1-Dichloroethane	4.18	63	115023	20.16	PPB	99
28) Vinyl Acetate	4.30	86	33374	40.93	PPB	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F013.D Vial: 10
Acq On : 19 Nov 2018 07:20 pm Operator: LM
Sample : ICAL 20 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:11 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroprene	4.25	53	349357	79.23	PPB	99
30)	tert-Butyl Ethyl Ether	4.77	59	194544	20.48	PPB	99
31)	2,2-Dichloropropane	5.00	77	102023	19.73	PPB	98
32)	cis-1,2-Dichloroethene	5.06	96	91840	20.13	PPB	100
33)	2-Butanone	5.15	72	107277	405.07	PPB	96
34)	Ethyl Acetate	5.21	61	13542	38.15	PPB	98
35)	Propionitrile	5.34	54	21193	83.19	PPB	97
36)	Methacrylonitrile	5.48	67	90138	80.41	PPB	98
37)	Bromochloromethane	5.40	128	45803	20.24	PPB	94
38)	Tetrahydrofuran	5.41	71	5939	21.58	PPB	95
39)	Chloroform	5.52	83	134182	19.33	PPB	97
40)	Cyclohexane	5.61	56	101978	19.89	PPB	96
41)	1,1,1-Trichloroethane	5.66	97	115000	19.77	PPB	98
43)	Carbon Tetrachloride	5.82	117	106615	19.88	PPB	98
44)	1,1-Dichloropropene	5.88	75	95786	19.58	PPB	97
45)	Isobutyl Alcohol	6.24	43	42321	886.73	PPB	98
47)	Benzene	6.14	78	312079	20.36	PPB	99
48)	1,2-Dichloroethane	6.28	62	82311	20.09	PPB	98
49)	tert-Amyl Methyl Ether	6.30	55	39021	19.91	PPB	96
50)	Trichloroethene	6.96	95	84896	20.05	PPB	99
51)	Methylcyclohexane	7.08	83	134613	20.41	PPB	96
52)	1,2-Dichloropropane	7.29	63	74519	20.25	PPB	97
53)	Dibromomethane	7.43	93	47020	19.95	PPB	95
54)	Methyl methacrylate	7.45	69	40141	20.21	PPB	99
55)	1,4-Dioxane	7.46	88	12919	948.36	PPB	93
56)	Bromodichloromethane	7.62	83	113043	21.08	PPB	99
57)	2-Nitropropane	7.99	41	49221	101.66	PPB	95
58)	2-Chloroethyl Vinyl Ether	8.02	63	41688	21.42	PPB	99
59)	cis-1,3-Dichloropropene	8.14	75	137142	20.30	PPB	99
60)	4-Methyl-2-pentanone (MIBK	8.34	58	368654	407.65	PPB	98
62)	Toluene	8.45	92	224923	20.10	PPB	96
64)	n-Octane	8.53	85	54128	21.98	PPB	95
65)	trans-1,3-Dichloropropene	8.81	75	120834	20.08	PPB	99
66)	Ethyl methacrylate	8.87	69	82595	19.95	PPB	99
67)	1,1,2-Trichloroethane	9.00	83	59819	19.68	PPB	96
68)	Tetrachloroethene	9.02	164	93512	19.59	PPB	99
69)	2-Hexanone	9.27	57	114725	406.91	PPB	97
70)	1,3-Dichloropropane	9.19	76	119917	20.05	PPB	98
71)	Dibromochloromethane	9.39	129	102426	20.04	PPB	99
72)	1,2-Dibromoethane (EDB)	9.52	107	77822	19.95	PPB	97
73)	1-Chlorohexane	10.01	91	116846	19.91	PPB	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F013.D Vial: 10
Acq On : 19 Nov 2018 07:20 pm Operator: LM
Sample : ICAL 20 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:11 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

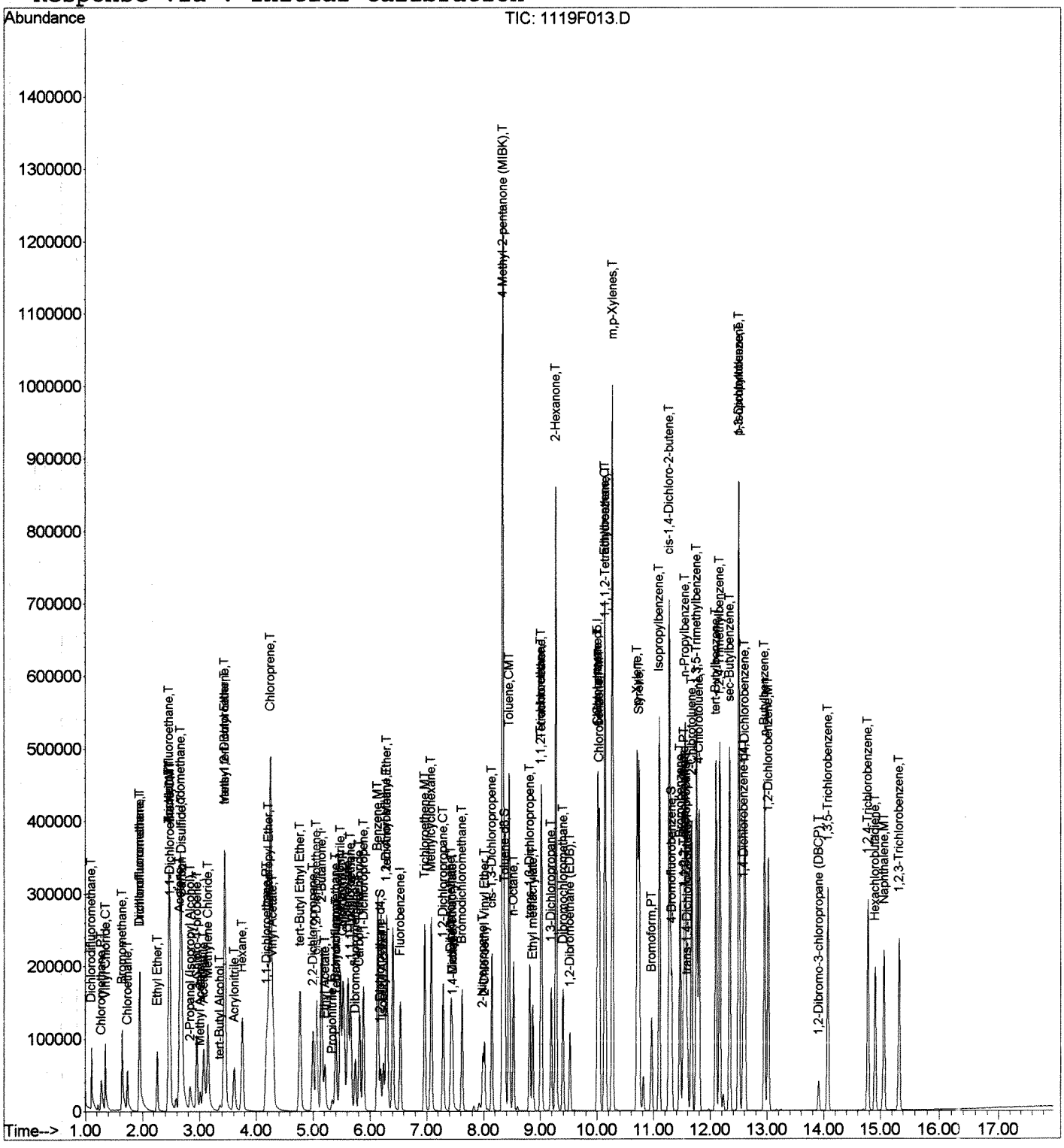
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
74)	Chlorobenzene	10.04	112	267385	19.97	PPB		98
75)	Ethylbenzene	10.13	106	139539	19.49	PPB		95
76)	1,1,1,2-Tetrachloroethane	10.15	131	103458	20.24	PPB		94
77)	m,p-Xylenes	10.27	106	341817	39.65	PPB		99
78)	o-Xylene	10.70	106	166597	19.86	PPB		99
79)	Styrene	10.74	103	151994	20.15	PPB		99
80)	Bromoform	10.96	173	70710	20.16	PPB		97
81)	Isopropylbenzene	11.10	105	419501	19.82	PPB		99
82)	cis-1,4-Dichloro-2-butene	11.27	89	48999	81.35	PPB		98
85)	1,1,2,2-Tetrachloroethane	11.53	83	76523	20.27	PPB		99
86)	trans-1,4-Dichloro-2-buten	11.59	53	17417	19.88	PPB	#	72
87)	Bromobenzene	11.46	156	123046	20.13	PPB		99
88)	n-Propylbenzene	11.55	91	461146	20.15	PPB		98
89)	1,2,3-Trichloropropane	11.57	110	26976	20.00	PPB		89
90)	2-Chlorotoluene	11.67	91	269836	20.13	PPB		99
91)	1,3,5-Trimethylbenzene	11.76	105	338217	20.29	PPB		99
92)	4-Chlorotoluene	11.80	91	284369	20.33	PPB		99
93)	tert-Butylbenzene	12.10	119	302964	20.19	PPB		100
94)	1,2,4-Trimethylbenzene	12.17	105	337400	20.12	PPB		98
95)	sec-Butylbenzene	12.34	105	415960	20.50	PPB		99
96)	p-Isopropyltoluene	12.50	119	363530	20.51	PPB		98
97)	1,3-Dichlorobenzene	12.50	146	215441	20.12	PPB		98
98)	1,4-Dichlorobenzene	12.61	146	218452	20.31	PPB		99
99)	n-Butylbenzene	12.95	91	283350	20.78	PPB		97
100)	1,2-Dichlorobenzene	13.02	146	199168	20.50	PPB		99
101)	1,2-Dibromo-3-chloropropan	13.91	155	14297	21.09	PPB		91
102)	1,3,5-Trichlorobenzene	14.07	180	139185	20.59	PPB		99
103)	1,2,4-Trichlorobenzene	14.78	180	130981	20.40	PPB		99
104)	Hexachlorobutadiene	14.90	225	59363	21.23	PPB		99
105)	Naphthalene	15.06	128	242805	20.82	PPB		98
106)	1,2,3-Trichlorobenzene	15.33	180	110813	20.75	PPB		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F013.D Vial: 10
Acq On : 19 Nov 2018 07:20 pm Operator: LM
Sample : ICAL 20 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:08 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F014.D Vial: 11
Acq On : 19 Nov 2018 07:46 pm Operator: LM
Sample : ICAL 40 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:13 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.54	96	165471	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	61531	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	66903	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	54611	13.93	PPB	0.00
Spiked Amount 10.000			Recovery =	139.30%		
46) 1,2-Dichloroethane-d4	6.19	65	45389	13.86	PPB	0.00
Spiked Amount 10.000			Recovery =	138.60%		
61) Toluene-d8	8.37	98	200708	13.28	PPB	0.00
Spiked Amount 10.000			Recovery =	132.80%		
83) 4-Bromofluorobenzene	11.32	95	75373	13.65	PPB	0.00
Spiked Amount 10.000			Recovery =	136.50%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.10	85	151837	49.02	PPB	95
3) Chloromethane	1.28	50	120908	44.07	PPB	99
4) Vinyl Chloride	1.35	62	161641	47.11	PPB	97
5) Bromomethane	1.64	96	131956	40.33	PPB	100
6) Chloroethane	1.74	64	97712	43.30	PPB	98
7) Dichlorofluoromethane	1.95	67	246549	44.80	PPB	100
8) Trichlorofluoromethane	1.94	101	253329	49.57	PPB	99
9) Ethyl Ether	2.26	59	83164	40.26	PPB	97
10) Acrolein	2.47	56	280887	765.11	PPB	99
11) Trichlorotrifluoroethane	2.46	151	171584	49.53	PPB	96
12) 1,1-Dichloroethene	2.49	96	152136	45.96	PPB	95
13) Acetone	2.64	43	335952	827.25	PPB	100
14) Iodomethane	2.66	142	941190	184.20	PPB	100
15) Carbon Disulfide	2.69	76	444614	46.32	PPB	100
16) 2-Propanol (Isopropyl Alco	2.83	45	128688	2278.08	PPB	98
17) 3-Chloro-1-propene	2.95	76	79101	41.18	PPB	93
18) Methyl Acetate	3.02	43	59344	39.74	PPB	93
19) Acetonitrile	3.07	40	156665	1771.78	PPB	98
20) Methylene Chloride	3.15	84	158526	40.04	PPB	99
21) tert-Butyl Alcohol	3.36	59	28815	220.95	PPB	90
22) Acrylonitrile	3.61	53	126633	162.29	PPB	98
23) Methyl tert-Butyl Ether	3.44	73	738325	81.59	PPB	99
24) trans-1,2-Dichloroethene	3.45	96	180950	45.03	PPB	100
25) Hexane	3.76	57	211590	46.51	PPB	98
26) Diisopropyl Ether	4.22	45	367542	40.82	PPB	99
27) 1,1-Dichloroethane	4.18	63	248458	42.48	PPB	98
28) Vinyl Acetate	4.30	86	67138	80.32	PPB #	90

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F014.D Vial: 11
Acq On : 19 Nov 2018 07:46 pm Operator: LM
Sample : ICAL 40 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:13 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroprene	4.25	53	831361	183.90	PPB	98
30)	tert-Butyl Ethyl Ether	4.77	59	395767	40.63	PPB	97
31)	2,2-Dichloropropane	5.00	77	236638	44.64	PPB	98
32)	cis-1,2-Dichloroethene	5.07	96	193928	41.45	PPB	98
33)	2-Butanone	5.15	72	224124	825.46	PPB	98
34)	Ethyl Acetate	5.21	61	28530	78.40	PPB	98
35)	Propionitrile	5.34	54	44059	168.69	PPB	97
36)	Methacrylonitrile	5.48	67	188610	164.13	PPB	99
37)	Bromochloromethane	5.40	128	87625	37.78	PPB	99
38)	Tetrahydrofuran	5.41	71	12205	43.25	PPB	97
39)	Chloroform	5.52	83	280259	39.37	PPB	97
40)	Cyclohexane	5.61	56	251576	47.86	PPB	96
41)	1,1,1-Trichloroethane	5.66	97	273230	45.83	PPB	99
43)	Carbon Tetrachloride	5.82	117	260805	47.43	PPB	99
44)	1,1-Dichloropropene	5.88	75	232040	46.26	PPB	97
45)	Isobutyl Alcohol	6.24	43	86203	1761.76	PPB	98
47)	Benzene	6.14	78	675026	42.95	PPB	99
48)	1,2-Dichloroethane	6.29	62	164990	39.28	PPB	98
49)	tert-Amyl Methyl Ether	6.30	55	77922	38.78	PPB	98
50)	Trichloroethene	6.96	95	191603	44.14	PPB	99
51)	Methylcyclohexane	7.08	83	316331	46.77	PPB	99
52)	1,2-Dichloropropane	7.29	63	156844	41.58	PPB	97
53)	Dibromomethane	7.43	93	99258	41.08	PPB	98
54)	Methyl methacrylate	7.45	69	86562	42.51	PPB	95
55)	1,4-Dioxane	7.46	88	26079	1867.34	PPB	83
56)	Bromodichloromethane	7.62	83	232121	42.22	PPB	99
57)	2-Nitropropane	7.99	41	103593	208.70	PPB	95
58)	2-Chloroethyl Vinyl Ether	8.02	63	84911	42.55	PPB	98
59)	cis-1,3-Dichloropropene	8.15	75	279124	40.30	PPB	98
60)	4-Methyl-2-pentanone (MIBK	8.34	58	765052	825.17	PPB	99
62)	Toluene	8.45	92	491058	42.80	PPB	99
64)	n-Octane	8.53	85	116883	47.21	PPB	94
65)	trans-1,3-Dichloropropene	8.81	75	243004	40.18	PPB	100
66)	Ethyl methacrylate	8.87	69	171652	41.25	PPB	98
67)	1,1,2-Trichloroethane	9.00	83	121423	39.75	PPB	97
68)	Tetrachloroethene	9.02	164	219777	45.81	PPB	98
69)	2-Hexanone	9.27	57	238266	840.76	PPB	98
70)	1,3-Dichloropropane	9.19	76	242977	40.41	PPB	98
71)	Dibromochloromethane	9.40	129	207322	40.36	PPB	97
72)	1,2-Dibromoethane (EDB)	9.52	107	159270	40.62	PPB	98
73)	1-Chlorohexane	10.01	91	271082	45.96	PPB	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F014.D Vial: 11
Acq On : 19 Nov 2018 07:46 pm Operator: LM
Sample : ICAL 40 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:13 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

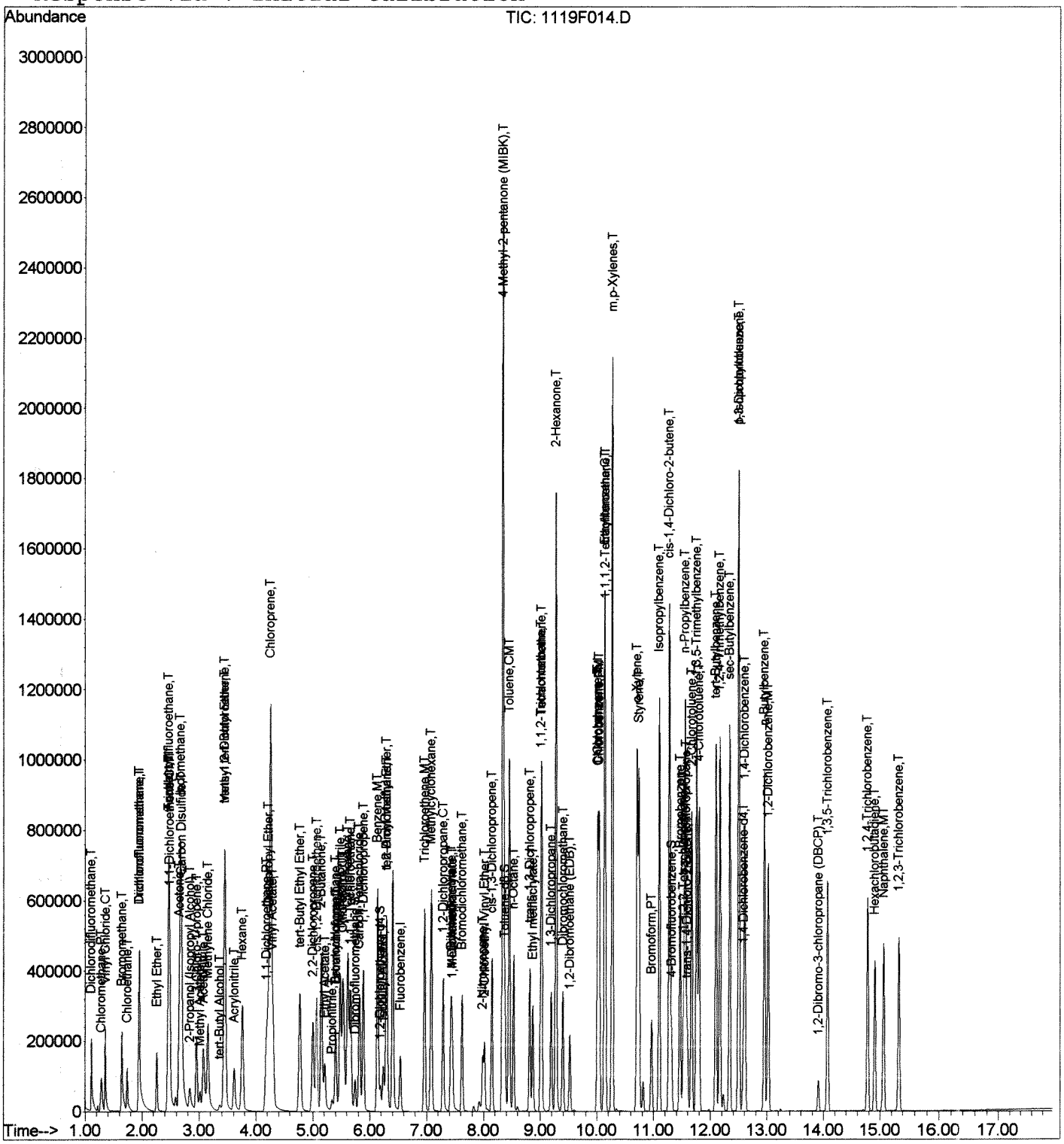
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	10.04	112	555421	41.28	PPB	98
75)	Ethylbenzene	10.13	106	304217	42.27	PPB	94
76)	1,1,1,2-Tetrachloroethane	10.15	131	209464	40.78	PPB	96
77)	m,p-Xylenes	10.27	106	743008	85.74	PPB	100
78)	o-Xylene	10.70	106	350559	41.58	PPB	98
79)	Styrene	10.74	103	314093	41.43	PPB	97
80)	Bromoform	10.96	173	146117	41.45	PPB	96
81)	Isopropylbenzene	11.10	105	918362	43.17	PPB	99
82)	cis-1,4-Dichloro-2-butene	11.27	89	99451	164.26	PPB	98
85)	1,1,2,2-Tetrachloroethane	11.52	83	154461	40.64	PPB	98
86)	trans-1,4-Dichloro-2-buten	11.59	53	35274	39.98	PPB	81
87)	Bromobenzene	11.46	156	249354	40.52	PPB	97
88)	n-Propylbenzene	11.55	91	1004007	43.57	PPB	99
89)	1,2,3-Trichloropropane	11.57	110	55038	40.51	PPB	94
90)	2-Chlorotoluene	11.67	91	563827	41.76	PPB	99
91)	1,3,5-Trimethylbenzene	11.76	105	716284	42.68	PPB	98
92)	4-Chlorotoluene	11.80	91	585117	41.53	PPB	99
93)	tert-Butylbenzene	12.10	119	651686	43.14	PPB	99
94)	1,2,4-Trimethylbenzene	12.17	105	703945	41.69	PPB	98
95)	sec-Butylbenzene	12.34	105	898884	43.98	PPB	98
96)	p-Isopropyltoluene	12.50	119	778500	43.62	PPB	99
97)	1,3-Dichlorobenzene	12.50	146	439758	40.78	PPB	98
98)	1,4-Dichlorobenzene	12.61	146	439762	40.61	PPB	99
99)	n-Butylbenzene	12.95	91	614247	44.73	PPB	97
100)	1,2-Dichlorobenzene	13.02	146	397817	40.66	PPB	99
101)	1,2-Dibromo-3-chloropropan	13.91	155	31125	45.59	PPB	97
102)	1,3,5-Trichlorobenzene	14.07	180	294717	43.29	PPB	99
103)	1,2,4-Trichlorobenzene	14.78	180	278893	43.14	PPB	98
104)	Hexachlorobutadiene	14.91	225	129579	46.02	PPB	97
105)	Naphthalene	15.06	128	517100	44.04	PPB	98
106)	1,2,3-Trichlorobenzene	15.33	180	233685	43.45	PPB	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F014.D Vial: 11
Acq On : 19 Nov 2018 07:46 pm Operator: LM
Sample : ICAL 40 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:08 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F015.D Vial: 12
Acq On : 19 Nov 2018 08:12 pm Operator: LM
Sample : ICAL 60 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:14 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.53	96	162348	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	61042	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	65537	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	59520	15.47	PPB	0.00
Spiked Amount 10.000			Recovery =	154.70%		
46) 1,2-Dichloroethane-d4	6.19	65	50882	15.83	PPB	0.00
Spiked Amount 10.000			Recovery =	158.30%		
61) Toluene-d8	8.37	98	197286	13.31	PPB	0.00
Spiked Amount 10.000			Recovery =	133.10%		
83) 4-Bromofluorobenzene	11.32	95	81258	14.83	PPB	0.00
Spiked Amount 10.000			Recovery =	148.30%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.10	85	210297	69.20	PPB	96
3) Chloromethane	1.28	50	179566	66.72	PPB	100
4) Vinyl Chloride	1.35	62	228986	68.02	PPB	98
5) Bromomethane	1.64	96	202270	63.00	PPB	98
6) Chloroethane	1.74	64	138599	62.60	PPB	98
7) Dichlorofluoromethane	1.95	67	347506	64.36	PPB	98
8) Trichlorofluoromethane	1.94	101	344204	68.65	PPB	100
9) Ethyl Ether	2.26	59	124375	61.38	PPB	98
10) Acrolein	2.47	56	396802	1101.65	PPB	99
11) Trichlorotrifluoroethane	2.46	151	242164	71.24	PPB	95
12) 1,1-Dichloroethene	2.49	96	216986	66.81	PPB	97
13) Acetone	2.64	43	613528	1539.81	PPB	99
14) Iodomethane	2.66	142	1369688	273.21	PPB	99
15) Carbon Disulfide	2.69	76	638088	67.76	PPB	99
16) 2-Propanol (Isopropyl Alco	2.83	45	175978	3175.15	PPB	97
17) 3-Chloro-1-propene	2.95	76	112486	59.69	PPB	96
18) Methyl Acetate	3.02	43	94297	64.36	PPB	95
19) Acetonitrile	3.07	40	212920	2454.31	PPB	98
20) Methylene Chloride	3.15	84	235327	60.59	PPB	97
21) tert-Butyl Alcohol	3.36	59	38882	303.88	PPB	91
22) Acrylonitrile	3.61	53	181255	236.77	PPB	98
23) Methyl tert-Butyl Ether	3.44	73	1097250	123.58	PPB	99
24) trans-1,2-Dichloroethene	3.45	96	261910	66.44	PPB	99
25) Hexane	3.76	57	301376	67.53	PPB	100
26) Diisopropyl Ether	4.22	45	547869	62.02	PPB	99
27) 1,1-Dichloroethane	4.18	63	365718	63.74	PPB	98
28) Vinyl Acetate	4.30	86	98726	120.38	PPB	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F015.D Vial: 12
Acq On : 19 Nov 2018 08:12 pm Operator: LM
Sample : ICAL 60 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:14 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroprene	4.25	53	1195622	269.57	PPB	99
30)	tert-Butyl Ethyl Ether	4.77	59	588067	61.54	PPB	98
31)	2,2-Dichloropropane	5.00	77	340905	65.54	PPB	99
32)	cis-1,2-Dichloroethene	5.07	96	290176	63.22	PPB	96
33)	2-Butanone	5.15	72	425956	1599.00	PPB	99
34)	Ethyl Acetate	5.21	61	42166	118.10	PPB	94
35)	Propionitrile	5.34	54	62742	244.85	PPB	97
36)	Methacrylonitrile	5.48	67	272180	241.40	PPB	99
37)	Bromochloromethane	5.40	128	129610	56.95	PPB	99
38)	Tetrahydrofuran	5.41	71	16751	60.50	PPB	93
39)	Chloroform	5.52	83	414789	59.39	PPB	97
40)	Cyclohexane	5.61	56	358864	69.58	PPB	96
41)	1,1,1-Trichloroethane	5.66	97	391156	66.87	PPB	98
43)	Carbon Tetrachloride	5.82	117	372447	69.03	PPB	100
44)	1,1-Dichloropropene	5.88	75	330964	67.24	PPB	96
45)	Isobutyl Alcohol	6.24	43	114281	2380.52	PPB	99
47)	Benzene	6.14	78	992149	64.34	PPB	99
48)	1,2-Dichloroethane	6.29	62	246784	59.88	PPB	99
49)	tert-Amyl Methyl Ether	6.30	55	117083	59.39	PPB	91
50)	Trichloroethene	6.96	95	279834	65.71	PPB	98
51)	Methylcyclohexane	7.08	83	451282	68.01	PPB	98
52)	1,2-Dichloropropane	7.29	63	227705	61.53	PPB	96
53)	Dibromomethane	7.43	93	143524	60.55	PPB	98
54)	Methyl methacrylate	7.45	69	124863	62.50	PPB	98
55)	1,4-Dioxane	7.46	88	36836	2688.31	PPB	87
56)	Bromodichloromethane	7.62	83	335016	62.11	PPB	99
57)	2-Nitropropane	7.99	41	148890	305.73	PPB	96
58)	2-Chloroethyl Vinyl Ether	8.02	63	122365	62.50	PPB	99
59)	cis-1,3-Dichloropropene	8.15	75	405325	59.64	PPB	99
60)	4-Methyl-2-pentanone (MIBK	8.34	58	1415345	1555.93	PPB	98
62)	Toluene	8.45	92	687614	61.08	PPB	98
64)	n-Octane	8.53	85	168974	68.80	PPB	94
65)	trans-1,3-Dichloropropene	8.81	75	348416	58.07	PPB	100
66)	Ethyl methacrylate	8.87	69	248336	60.16	PPB	99
67)	1,1,2-Trichloroethane	9.01	83	178766	58.98	PPB	96
68)	Tetrachloroethene	9.02	164	313284	65.82	PPB	98
69)	2-Hexanone	9.28	57	452664	1610.10	PPB	96
70)	1,3-Dichloropropane	9.19	76	357872	60.00	PPB	99
71)	Dibromochloromethane	9.40	129	310844	60.99	PPB	98
72)	1,2-Dibromoethane (EDB)	9.52	107	233380	60.00	PPB	95
73)	1-Chlorohexane	10.01	91	387663	66.25	PPB	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F015.D Vial: 12
Acq On : 19 Nov 2018 08:12 pm Operator: LM
Sample : ICAL 60 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:14 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

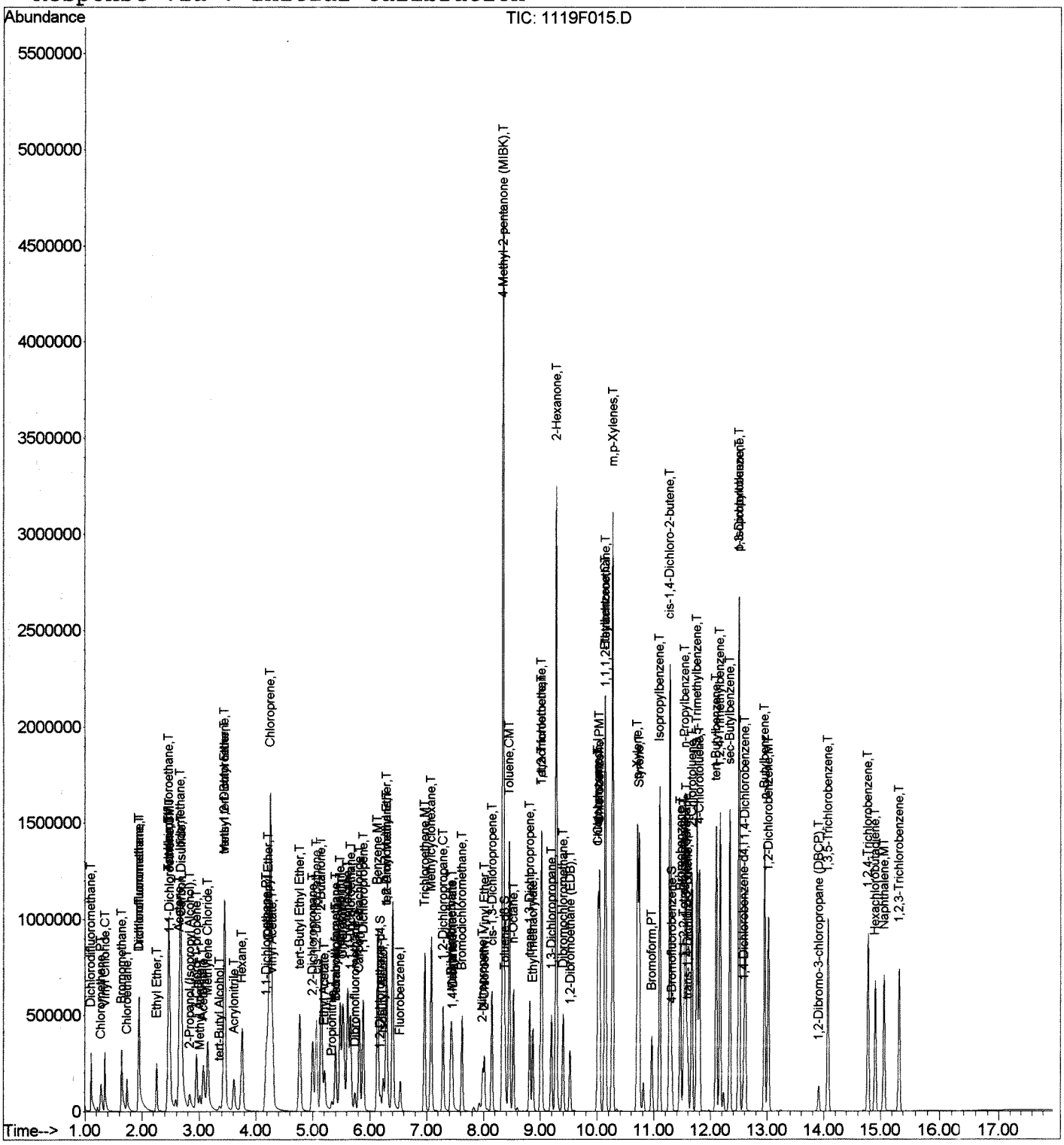
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	10.04	112	821361	61.53	PPB	98
75)	Ethylbenzene	10.13	106	444049	62.19	PPB	96
76)	1,1,1,2-Tetrachloroethane	10.15	131	308692	60.58	PPB	96
77)	m,p-Xylenes	10.27	106	1075434	125.10	PPB	99
78)	o-Xylene	10.70	106	513231	61.36	PPB	100
79)	Styrene	10.74	103	461054	61.30	PPB	96
80)	Bromoform	10.96	173	214881	61.45	PPB	96
81)	Isopropylbenzene	11.10	105	1312356	62.19	PPB	100
82)	cis-1,4-Dichloro-2-butene	11.27	89	143989	239.73	PPB	98
85)	1,1,2,2-Tetrachloroethane	11.52	83	224382	60.26	PPB	99
86)	trans-1,4-Dichloro-2-buten	11.60	53	50204	58.09	PPB	93
87)	Bromobenzene	11.46	156	367926	61.03	PPB	98
88)	n-Propylbenzene	11.55	91	1432437	63.46	PPB	99
89)	1,2,3-Trichloropropane	11.57	110	78278	58.82	PPB	87
90)	2-Chlorotoluene	11.67	91	818339	61.87	PPB	98
91)	1,3,5-Trimethylbenzene	11.76	105	1030404	62.67	PPB	99
92)	4-Chlorotoluene	11.80	91	854676	61.93	PPB	99
93)	tert-Butylbenzene	12.10	119	937227	63.33	PPB	100
94)	1,2,4-Trimethylbenzene	12.17	105	1019911	61.66	PPB	99
95)	sec-Butylbenzene	12.34	105	1296168	64.75	PPB	98
96)	p-Isopropyltoluene	12.50	119	1128290	64.54	PPB	98
97)	1,3-Dichlorobenzene	12.50	146	647731	61.32	PPB	98
98)	1,4-Dichlorobenzene	12.61	146	653429	61.59	PPB	98
99)	n-Butylbenzene	12.95	91	900222	66.92	PPB	98
100)	1,2-Dichlorobenzene	13.02	146	596073	62.19	PPB	99
101)	1,2-Dibromo-3-chloropropan	13.91	155	45880	68.60	PPB	94
102)	1,3,5-Trichlorobenzene	14.07	180	448056	67.19	PPB	99
103)	1,2,4-Trichlorobenzene	14.78	180	423762	66.92	PPB	97
104)	Hexachlorobutadiene	14.91	225	199068	72.17	PPB	98
105)	Naphthalene	15.06	128	771198	67.05	PPB	98
106)	1,2,3-Trichlorobenzene	15.33	180	352519	66.91	PPB	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F015.D Vial: 12
Acq On : 19 Nov 2018 08:12 pm Operator: LM
Sample : ICAL 60 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:08 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F016.D Vial: 13
Acq On : 19 Nov 2018 08:38 pm Operator: LM
Sample : ICAL 80 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:15 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.54	96	169905	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	61420	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	66408	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	74106	18.41	PPB	0.00
Spiked Amount 10.000			Recovery =	184.10%		
46) 1,2-Dichloroethane-d4	6.19	65	64697	19.23	PPB	0.00
Spiked Amount 10.000			Recovery =	192.30%		
61) Toluene-d8	8.37	98	256325	16.52	PPB	0.00
Spiked Amount 10.000			Recovery =	165.20%		
83) 4-Bromofluorobenzene	11.32	95	99880	18.12	PPB	0.00
Spiked Amount 10.000			Recovery =	181.20%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.10	85	278834	87.67	PPB	96
3) Chloromethane	1.28	50	239388	84.99	PPB	99
4) Vinyl Chloride	1.35	62	305211	86.63	PPB	97
5) Bromomethane	1.64	96	279455	83.17	PPB	98
6) Chloroethane	1.74	64	184623	79.68	PPB	97
7) Dichlorofluoromethane	1.95	67	466802	82.61	PPB	98
8) Trichlorofluoromethane	1.94	101	464260	88.47	PPB	99
9) Ethyl Ether	2.26	59	161785	76.28	PPB	97
10) Acrolein	2.47	56	509847	1352.54	PPB	99
11) Trichlorotrifluoroethane	2.46	151	321285	90.32	PPB	96
12) 1,1-Dichloroethene	2.49	96	283802	83.50	PPB	97
13) Acetone	2.64	43	772003	1851.37	PPB	99
14) Iodomethane	2.66	142	1779894	339.25	PPB	99
15) Carbon Disulfide	2.69	76	840614	85.30	PPB	99
16) 2-Propanol (Isopropyl Alco	2.84	45	234104	4036.04	PPB	99
17) 3-Chloro-1-propene	2.95	76	146208	74.13	PPB	92
18) Methyl Acetate	3.02	43	117790	76.82	PPB	96
19) Acetonitrile	3.07	40	290537	3200.04	PPB	97
20) Methylene Chloride	3.15	84	308027	75.78	PPB	98
21) tert-Butyl Alcohol	3.37	59	52803	394.32	PPB	91
22) Acrylonitrile	3.61	53	238620	297.83	PPB	98
23) Methyl tert-Butyl Ether	3.44	73	1431162	154.02	PPB	99
24) trans-1,2-Dichloroethene	3.45	96	347870	84.32	PPB	100
25) Hexane	3.76	57	399472	85.53	PPB	98
26) Diisopropyl Ether	4.22	45	714407	77.28	PPB	99
27) 1,1-Dichloroethane	4.18	63	459577	76.53	PPB	99
28) Vinyl Acetate	4.30	86	135450	157.81	PPB	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F016.D Vial: 13
Acq On : 19 Nov 2018 08:38 pm Operator: LM
Sample : ICAL 80 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:15 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	Chloroprene	4.25	53	1584596	341.38 PPB	99
30)	tert-Butyl Ethyl Ether	4.77	59	779299	77.92 PPB	98
31)	2,2-Dichloropropane	5.00	77	447480	82.20 PPB	98
32)	cis-1,2-Dichloroethene	5.07	96	380451	79.20 PPB	94
33)	2-Butanone	5.15	72	531906	1907.91 PPB	98
34)	Ethyl Acetate	5.21	61	55178	147.67 PPB	98
35)	Propionitrile	5.34	54	83000	309.50 PPB	99
36)	Methacrylonitrile	5.48	67	357071	302.61 PPB	98
37)	Bromochloromethane	5.40	128	166308	69.83 PPB	99
38)	Tetrahydrofuran	5.41	71	22157	76.47 PPB	99
39)	Chloroform	5.52	83	550825	75.36 PPB	97
40)	Cyclohexane	5.61	56	478397	88.63 PPB	95
41)	1,1,1-Trichloroethane	5.66	97	521409	85.17 PPB	98
43)	Carbon Tetrachloride	5.82	117	496154	87.87 PPB	99
44)	1,1-Dichloropropene	5.88	75	442058	85.82 PPB	97
45)	Isobutyl Alcohol	6.24	43	153047	3046.24 PPB	99
47)	Benzene	6.14	78	1335896	82.78 PPB	99
48)	1,2-Dichloroethane	6.29	62	327959	76.04 PPB	97
49)	tert-Amyl Methyl Ether	6.30	55	156472	75.84 PPB	96
50)	Trichloroethene	6.96	95	382486	85.82 PPB	99
51)	Methylcyclohexane	7.08	83	611350	88.03 PPB	98
52)	1,2-Dichloropropane	7.29	63	304289	78.56 PPB	96
53)	Dibromomethane	7.43	93	192491	77.60 PPB	99
54)	Methyl methacrylate	7.45	69	166845	79.80 PPB	97
55)	1,4-Dioxane	7.46	88	54929	3830.45 PPB	86
56)	Bromodichloromethane	7.62	83	453333	80.30 PPB	99
57)	2-Nitropropane	7.99	41	193444	379.55 PPB	96
58)	2-Chloroethyl Vinyl Ether	8.02	63	162584	79.35 PPB	99
59)	cis-1,3-Dichloropropene	8.15	75	542865	76.33 PPB	98
60)	4-Methyl-2-pentanone (MIBK	8.34	58	1784067	1874.04 PPB	96
62)	Toluene	8.45	92	929830	78.92 PPB	99
64)	n-Octane	8.53	85	227745	92.16 PPB	93
65)	trans-1,3-Dichloropropene	8.81	75	467937	77.51 PPB	98
66)	Ethyl methacrylate	8.87	69	329422	79.31 PPB	98
67)	1,1,2-Trichloroethane	9.00	83	232238	76.16 PPB	98
68)	Tetrachloroethene	9.02	164	413154	86.27 PPB	98
69)	2-Hexanone	9.28	57	552687	1953.78 PPB	97
70)	1,3-Dichloropropane	9.19	76	462370	77.04 PPB	98
71)	Dibromochloromethane	9.40	129	399495	77.90 PPB	98
72)	1,2-Dibromoethane (EDB)	9.52	107	300414	76.76 PPB	97
73)	1-Chlorohexane	10.01	91	509054	86.47 PPB	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F016.D Vial: 13
Acq On : 19 Nov 2018 08:38 pm Operator: LM
Sample : ICAL 80 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 09:08:15 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

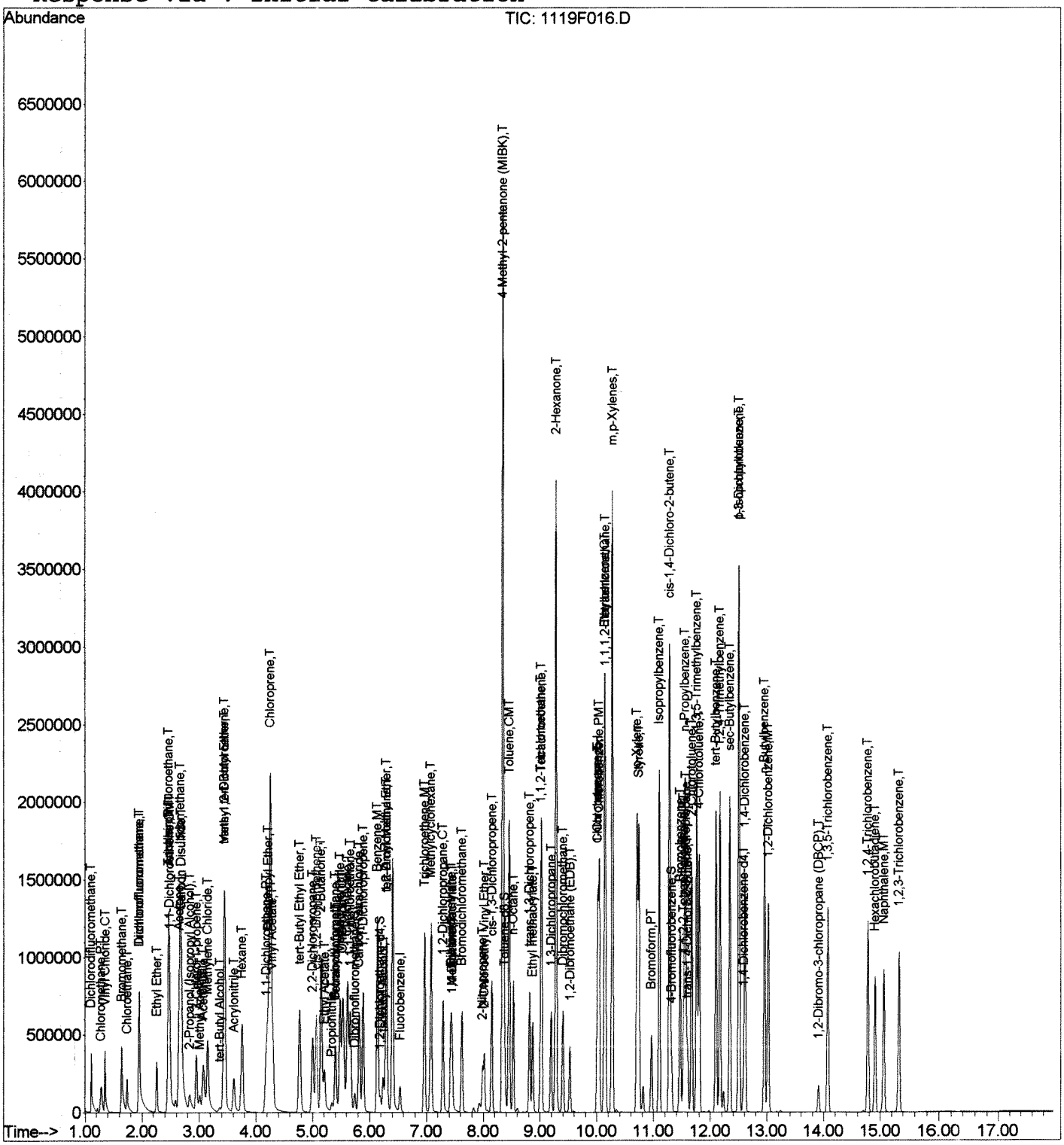
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chlorobenzene	10.04	112	1064098	79.22	PPB	98
75)	Ethylbenzene	10.13	106	577973	80.45	PPB	98
76)	1,1,1,2-Tetrachloroethane	10.15	131	403373	78.67	PPB	96
77)	m,p-Xylenes	10.27	106	1391326	160.85	PPB	99
78)	o-Xylene	10.70	106	665071	79.02	PPB	100
79)	Styrene	10.74	103	599012	79.15	PPB	99
80)	Bromoform	10.96	173	277755	78.94	PPB	97
81)	Isopropylbenzene	11.10	105	1705787	80.33	PPB	100
82)	cis-1,4-Dichloro-2-butene	11.27	89	184336	305.02	PPB	98
85)	1,1,2,2-Tetrachloroethane	11.52	83	289733	76.79	PPB	99
86)	trans-1,4-Dichloro-2-buten	11.60	53	65593	74.90	PPB	94
87)	Bromobenzene	11.46	156	475140	77.78	PPB	98
88)	n-Propylbenzene	11.55	91	1862834	81.44	PPB	99
89)	1,2,3-Trichloropropane	11.57	110	100301	74.38	PPB	92
90)	2-Chlorotoluene	11.67	91	1068444	79.72	PPB	98
91)	1,3,5-Trimethylbenzene	11.76	105	1348591	80.95	PPB	98
92)	4-Chlorotoluene	11.80	91	1111746	79.50	PPB	100
93)	tert-Butylbenzene	12.10	119	1226414	81.78	PPB	100
94)	1,2,4-Trimethylbenzene	12.17	105	1334661	79.64	PPB	99
95)	sec-Butylbenzene	12.34	105	1689802	83.30	PPB	99
96)	p-Isopropyltoluene	12.50	119	1481618	83.64	PPB	99
97)	1,3-Dichlorobenzene	12.50	146	851758	79.58	PPB	98
98)	1,4-Dichlorobenzene	12.61	146	851600	79.22	PPB	99
99)	n-Butylbenzene	12.95	91	1184928	86.93	PPB	98
100)	1,2-Dichlorobenzene	13.02	146	781147	80.43	PPB	99
101)	1,2-Dibromo-3-chloropropan	13.91	155	59982	88.51	PPB	92
102)	1,3,5-Trichlorobenzene	14.07	180	592135	87.63	PPB	99
103)	1,2,4-Trichlorobenzene	14.78	180	556998	86.80	PPB	98
104)	Hexachlorobutadiene	14.90	225	262124	93.79	PPB	98
105)	Naphthalene	15.06	128	1015790	87.16	PPB	98
106)	1,2,3-Trichlorobenzene	15.33	180	486339	91.10	PPB	97

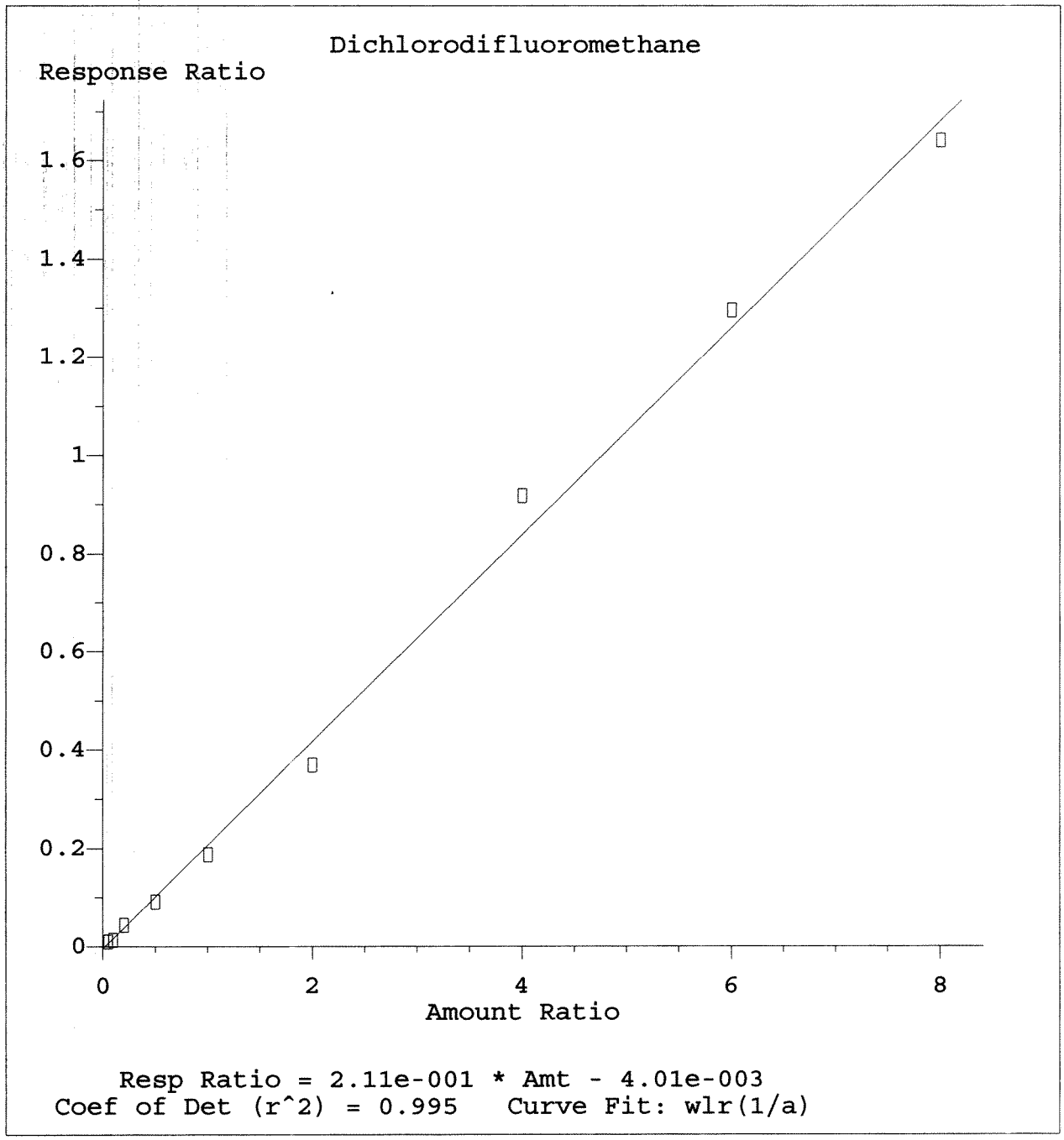
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F016.D Vial: 13
Acq On : 19 Nov 2018 08:38 pm Operator: LM
Sample : ICAL 80 PPB Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 21 9:08 2018 Quant Results File: 111918MS46_8

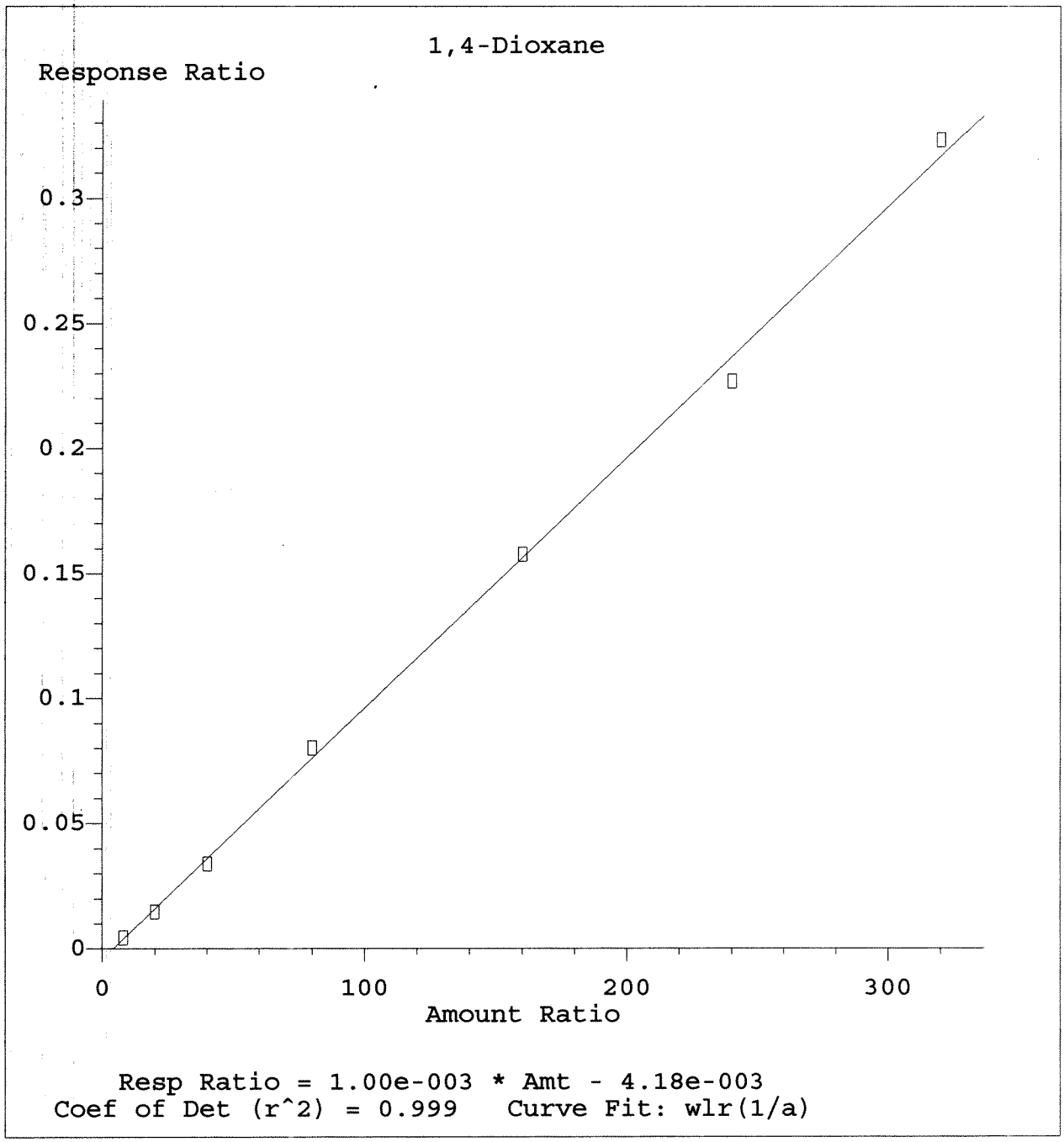
Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Nov 21 09:07:46 2018
Response via : Initial Calibration





Method Name: J:\MS46\METHODS\111918MS46_8260.M
Calibration Table Last Updated: Tue Dec 04 11:26:45 2018

CM 12-04-19



Method Name: J:\MS46\METHODS\111918MS46_8260.M
Calibration Table Last Updated: Tue Dec 04 11:26:45 2018

LM 12-04-18

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F020.D Vial: 17
Acq On : 19 Nov 2018 10:23 pm Operator: LM
Sample : 8260 ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 04 11:40:35 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Dec 04 11:26:45 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.54	96	171483	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	63322	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	68785	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	38762	10.04	PPB	0.00
Spiked Amount 10.000			Recovery = 100.40%			
46) 1,2-Dichloroethane-d4	6.19	65	32204	9.68	PPB	0.00
Spiked Amount 10.000			Recovery = 96.80%			
61) Toluene-d8	8.37	98	145435	10.65	PPB	0.00
Spiked Amount 10.000			Recovery = 106.50%			
83) 4-Bromofluorobenzene	11.32	95	54955	10.24	PPB	0.00
Spiked Amount 10.000			Recovery = 102.40%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.10	85	29067	8.24	PPB	98
3) Chloromethane	1.28	50	26616	8.77	PPB	96
4) Vinyl Chloride	1.35	62	29811	8.14	PPB	98
5) Bromomethane	1.64	96	26145	7.00	PPB	98
6) Chloroethane	1.73	64	19754	8.58	PPB	98
7) Dichlorofluoromethane	1.95	67	48147	8.21	PPB	99
8) Trichlorofluoromethane	1.94	101	40002	7.12	PPB	95
9) Ethyl Ether	2.26	59	23912	11.89	PPB	93
10) Acrolein	2.47	56	45324	120.79	PPB	98
11) Trichlorotrifluoroethane	2.46	151	30401	7.95	PPB	96
12) 1,1-Dichloroethene	2.49	96	31462	8.90	PPB	94
13) Acetone	2.65	43	20467	46.49	PPB	92
14) Iodomethane	2.66	142	144607	28.22	PPB	100
15) Carbon Disulfide	2.69	76	142506	13.04	PPB	99
16) 2-Propanol (Isopropyl Alco	2.84	45	36215	568.68	PPB	97
17) 3-Chloro-1-propene	2.95	76	52171	26.35	PPB	97
19) Acetonitrile	3.08	40	29365	307.33	PPB	93
20) Methylene Chloride	3.15	84	38654	9.47	PPB	96
21) tert-Butyl Alcohol	3.37	59	16141	113.74	PPB	99
22) Acrylonitrile	3.61	53	32103	41.57	PPB	98
23) Methyl tert-Butyl Ether	3.45	73	96624	10.40	PPB	99
24) trans-1,2-Dichloroethene	3.45	96	37587	8.68	PPB	98
25) Hexane	3.76	57	107915	21.80	PPB	99
26) Diisopropyl Ether	4.22	45	184899	20.65	PPB	98
27) 1,1-Dichloroethane	4.17	63	55969	9.29	PPB	99
28) Vinyl Acetate	4.30	86	39706	46.98	PPB	95
29) Chloroprene	4.25	53	106317	21.71	PPB	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F020.D Vial: 17
Acq On : 19 Nov 2018 10:23 pm Operator: LM
Sample : 8260 ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 04 11:40:35 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Dec 04 11:26:45 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
30)	tert-Butyl Ethyl Ether	4.77	59	197691	20.14	PPB	98
31)	2,2-Dichloropropane	5.00	77	48013	8.30	PPB	99
32)	cis-1,2-Dichloroethene	5.07	96	42742	8.69	PPB	96
33)	2-Butanone	5.16	72	13605	49.30	PPB	92
34)	Ethyl Acetate	5.21	61	10729	31.02	PPB	98
35)	Propionitrile	5.34	54	8368	30.80	PPB	83
36)	Methacrylonitrile	5.48	67	35181	30.42	PPB	95
37)	Bromochloromethane	5.40	128	22217	9.84	PPB	91
38)	Tetrahydrofuran	5.41	71	6130	18.64	PPB	79
39)	Chloroform	5.52	83	65172	9.00	PPB	97
41)	1,1,1-Trichloroethane	5.66	97	52984	7.97	PPB	96
43)	Carbon Tetrachloride	5.82	117	49368	8.22	PPB	99
44)	1,1-Dichloropropene	5.88	75	44838	8.32	PPB	98
45)	Isobutyl Alcohol	6.24	43	17425	316.49	PPB	95
47)	Benzene	6.14	78	148956	8.84	PPB	99
48)	1,2-Dichloroethane	6.28	62	40228	9.58	PPB	98
49)	tert-Amyl Methyl Ether	6.29	55	40001	20.04	PPB	96
50)	Trichloroethene	6.96	95	41405	8.74	PPB	91
52)	1,2-Dichloropropane	7.28	63	36291	9.55	PPB	98
53)	Dibromomethane	7.43	93	24161	9.66	PPB	98
54)	Methyl methacrylate	7.45	69	65121	31.40	PPB	97
55)	1,4-Dioxane	7.46	88	5676	371.97	PPB	82
56)	Bromodichloromethane	7.62	83	53944	9.37	PPB	95
57)	2-Nitropropane	7.99	41	15686	29.96	PPB	95
58)	2-Chloroethyl Vinyl Ether	8.01	63	21678	10.64	PPB	93
59)	cis-1,3-Dichloropropene	8.14	75	67520	9.71	PPB	99
60)	4-Methyl-2-pentanone (MIBK	8.34	58	46076	49.18	PPB	96
62)	Toluene	8.45	92	104985	8.59	PPB	97
64)	n-Octane	8.53	85	42336	15.91	PPB	98
65)	trans-1,3-Dichloropropene	8.81	75	58163	9.28	PPB	98
66)	Ethyl methacrylate	8.87	69	127976	31.29	PPB	98
67)	1,1,2-Trichloroethane	9.00	83	29652	9.90	PPB	96
68)	Tetrachloroethene	9.02	164	43617	8.67	PPB	96
69)	2-Hexanone	9.28	57	14282	49.31	PPB	93
70)	1,3-Dichloropropane	9.19	76	59416	9.70	PPB	99
71)	Dibromochloromethane	9.39	129	48759	9.34	PPB	98
72)	1,2-Dibromoethane (EDB)	9.52	107	37736	9.57	PPB	97
73)	1-Chlorohexane	10.01	91	53120	8.20	PPB	99
74)	Chlorobenzene	10.04	112	129521	9.22	PPB	97
75)	Ethylbenzene	10.13	106	66193	8.90	PPB	99
76)	1,1,1,2-Tetrachloroethane	10.15	131	49166	9.43	PPB	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F020.D Vial: 17
Acq On : 19 Nov 2018 10:23 pm Operator: LM
Sample : 8260 ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 04 11:40:35 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Dec 04 11:26:45 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

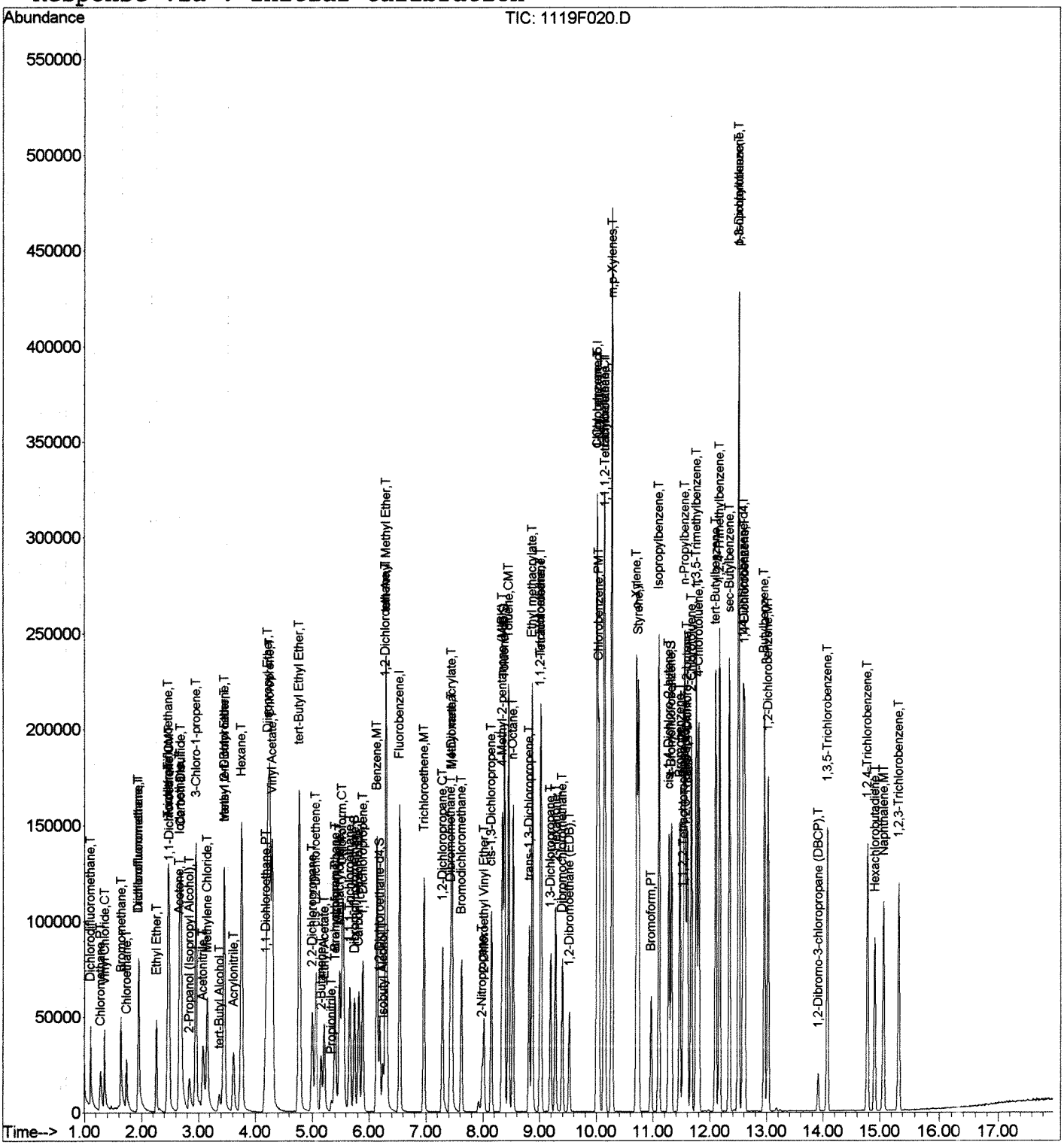
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
77)	m,p-Xylenes	10.27	106	161576	17.90	PPB		96
78)	o-Xylene	10.70	106	79572	9.12	PPB		96
79)	Styrene	10.74	103	72801	9.74	PPB		98
80)	Bromoform	10.96	173	32483	9.27	PPB		97
81)	Isopropylbenzene	11.10	105	195415	8.83	PPB		100
82)	cis-1,4-Dichloro-2-butene	11.27	89	19847	32.70	PPB		96
85)	1,1,2,2-Tetrachloroethane	11.52	83	37652	9.71	PPB		98
86)	trans-1,4-Dichloro-2-buten	11.59	53	25940	29.45	PPB		84
87)	Bromobenzene	11.46	156	61014	9.56	PPB		95
88)	n-Propylbenzene	11.55	91	215841	9.01	PPB		99
89)	1,2,3-Trichloropropane	11.57	110	13115	10.11	PPB	#	76
90)	2-Chlorotoluene	11.67	91	130365	9.25	PPB		99
91)	1,3,5-Trimethylbenzene	11.76	105	158821	9.14	PPB		97
92)	4-Chlorotoluene	11.80	91	140395	9.40	PPB		99
93)	tert-Butylbenzene	12.10	119	142138	9.03	PPB		98
94)	1,2,4-Trimethylbenzene	12.17	105	164188	9.51	PPB		99
95)	sec-Butylbenzene	12.34	105	193956	8.98	PPB		98
96)	p-Isopropyltoluene	12.50	119	173666	9.30	PPB		98
97)	1,3-Dichlorobenzene	12.50	146	105844	9.41	PPB		97
98)	1,4-Dichlorobenzene	12.61	146	107550	9.34	PPB		96
99)	n-Butylbenzene	12.95	91	130097	9.12	PPB		99
100)	1,2-Dichlorobenzene	13.02	146	97396	9.55	PPB		97
101)	1,2-Dibromo-3-chloropropan	13.91	155	6923	9.56	PPB		96
102)	1,3,5-Trichlorobenzene	14.07	180	64827	8.97	PPB		98
103)	1,2,4-Trichlorobenzene	14.78	180	64215	9.50	PPB		97
104)	Hexachlorobutadiene	14.91	225	26928	8.71	PPB		96
105)	Naphthalene	15.06	128	118812	9.70	PPB		99
106)	1,2,3-Trichlorobenzene	15.33	180	54382	9.66	PPB		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F020.D Vial: 17
Acq On : 19 Nov 2018 10:23 pm Operator: LM
Sample : 8260 ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 4 11:41 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Dec 04 11:26:45 2018
Response via : Initial Calibration



1119F020.D 111918MS46_8260.M Tue Dec 04 11:43:25 2018 Page 4

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F022.D Vial: 19
Acq On : 19 Nov 2018 11:15 pm Operator: LM
Sample : CLP ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 04 11:40:36 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Dec 04 11:26:45 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-04-18

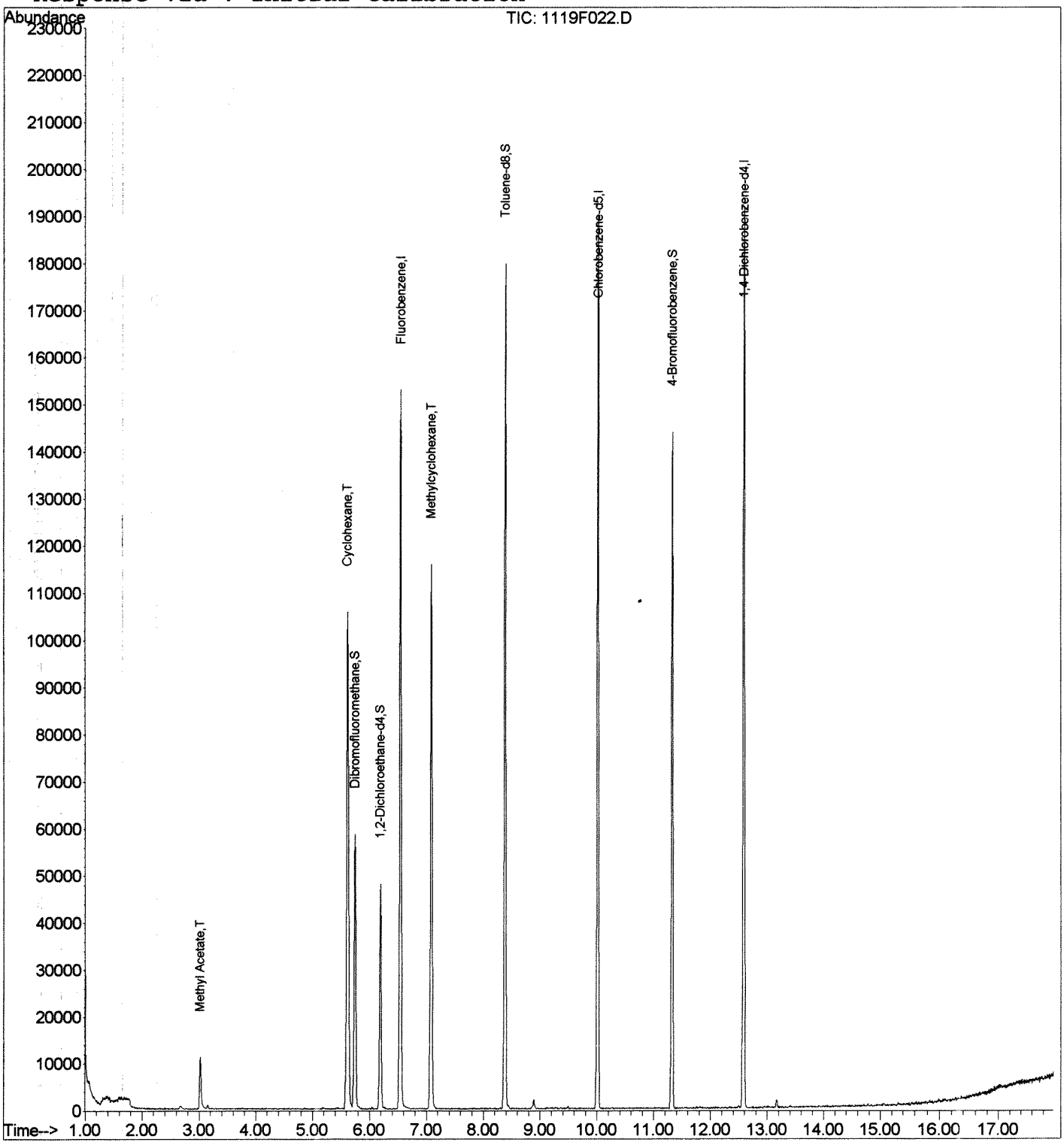
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.53	96	164376	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	61622	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	66981	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	37305	10.08	PPB	0.00
Spiked Amount 10.000			Recovery = 100.80%			
46) 1,2-Dichloroethane-d4	6.19	65	33321	10.44	PPB	0.00
Spiked Amount 10.000			Recovery = 104.40%			
61) Toluene-d8	8.37	98	132175	10.10	PPB	0.00
Spiked Amount 10.000			Recovery = 101.00%			
83) 4-Bromofluorobenzene	11.32	95	52841	10.11	PPB	0.00
Spiked Amount 10.000			Recovery = 101.10%			
Target Compounds						Qvalue
18) Methyl Acetate	3.02	43	15095	9.82	PPB	94
40) Cyclohexane	5.61	56	59799	10.29	PPB	97
51) Methylcyclohexane	7.08	83	57955	8.33	PPB	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F022.D Vial: 19
Acq On : 19 Nov 2018 11:15 pm Operator: LM
Sample : CLP ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 4 11:43 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Dec 04 11:26:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F020.D Vial: 17
Acq On : 19 Nov 2018 10:23 pm Operator: LM
Sample : 8260 ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 05 10:36:34 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-05-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.54	96	171483	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	63322	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	68785	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	38762	10.04	PPB	0.00
Spiked Amount 10.000			Recovery = 100.40%			
46) 1,2-Dichloroethane-d4	6.19	65	32204	9.68	PPB	0.00
Spiked Amount 10.000			Recovery = 96.80%			
61) Toluene-d8	8.37	98	145435	10.65	PPB	0.00
Spiked Amount 10.000			Recovery = 106.50%			
83) 4-Bromofluorobenzene	11.32	95	54955	10.24	PPB	0.00
Spiked Amount 10.000			Recovery = 102.40%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.10	85	29067	8.24	PPB	98
3) Chloromethane	1.28	50	26616	8.77	PPB	96
4) Vinyl Chloride	1.35	62	29811	8.14	PPB	98
5) Bromomethane	1.64	96	26145	7.62	PPB	98
6) Chloroethane	1.73	64	19754	8.58	PPB	98
7) Dichlorofluoromethane	1.95	67	48147	8.21	PPB	99
8) Trichlorofluoromethane	1.94	101	40002	7.12	PPB	95
9) Ethyl Ether	2.26	59	23912	11.89	PPB	93
10) Acrolein	2.47	56	45324	129.69	PPB	98
11) Trichlorotrifluoroethane	2.46	151	30401	7.88	PPB	96
12) 1,1-Dichloroethene	2.49	96	31462	8.90	PPB	94
13) Acetone	2.65	43	20467	46.49	PPB	92
14) Iodomethane	2.66	142	144607	28.22	PPB	100
15) Carbon Disulfide	2.69	76	142506	13.04	PPB	99
16) 2-Propanol (Isopropyl Alco	2.84	45	36215	568.68	PPB	97
17) 3-Chloro-1-propene	2.95	76	52171	26.35	PPB	97
19) Acetonitrile	3.08	40	29365	307.33	PPB	93
20) Methylene Chloride	3.15	84	38654	9.47	PPB	96
21) tert-Butyl Alcohol	3.37	59	16141	113.74	PPB	99
22) Acrylonitrile	3.61	53	32103	41.57	PPB	98
23) Methyl tert-Butyl Ether	3.45	73	96624	10.40	PPB	99
24) trans-1,2-Dichloroethene	3.45	96	37587	8.68	PPB	98
25) Hexane	3.76	57	107915	21.80	PPB	99
26) Diisopropyl Ether	4.22	45	184899	20.65	PPB	98
27) 1,1-Dichloroethane	4.17	63	55969	9.29	PPB	99
28) Vinyl Acetate	4.30	86	39706	46.98	PPB	95
29) Chloroprene	4.25	53	106317	21.71	PPB	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F020.D Vial: 17
Acq On : 19 Nov 2018 10:23 pm Operator: LM
Sample : 8260 ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 05 10:36:34 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
30)	tert-Butyl Ethyl Ether	4.77	59	197691	20.14	PPB	98
31)	2,2-Dichloropropane	5.00	77	48013	8.30	PPB	99
32)	cis-1,2-Dichloroethene	5.07	96	42742	8.69	PPB	96
33)	2-Butanone	5.16	72	13605	49.30	PPB	92
34)	Ethyl Acetate	5.21	61	10729	31.02	PPB	98
35)	Propionitrile	5.34	54	8368	30.80	PPB	83
36)	Methacrylonitrile	5.48	67	35181	30.42	PPB	95
37)	Bromochloromethane	5.40	128	22217	9.84	PPB	91
38)	Tetrahydrofuran	5.41	71	6130	18.64	PPB	79
39)	Chloroform	5.52	83	65172	9.00	PPB	97
41)	1,1,1-Trichloroethane	5.66	97	52984	8.16	PPB	96
43)	Carbon Tetrachloride	5.82	117	49368	8.22	PPB	99
44)	1,1-Dichloropropene	5.88	75	44838	8.32	PPB	98
45)	Isobutyl Alcohol	6.24	43	17425	316.49	PPB	95
47)	Benzene	6.14	78	148956	8.84	PPB	99
48)	1,2-Dichloroethane	6.28	62	40228	9.58	PPB	98
49)	tert-Amyl Methyl Ether	6.29	55	40001	19.64	PPB	96
50)	Trichloroethene	6.96	95	41405	8.74	PPB	91
52)	1,2-Dichloropropane	7.28	63	36291	9.55	PPB	98
53)	Dibromomethane	7.43	93	24161	9.66	PPB	98
54)	Methyl methacrylate	7.45	69	65121	31.18	PPB	97
55)	1,4-Dioxane	7.46	88	5676	371.97	PPB	82
56)	Bromodichloromethane	7.62	83	53944	9.37	PPB	95
57)	2-Nitropropane	7.99	41	15686	29.96	PPB	95
58)	2-Chloroethyl Vinyl Ether	8.01	63	21678	10.64	PPB	93
59)	cis-1,3-Dichloropropene	8.14	75	67520	9.71	PPB	99
60)	4-Methyl-2-pentanone (MIBK	8.34	58	46076	49.18	PPB	96
62)	Toluene	8.45	92	104985	8.59	PPB	97
64)	n-Octane	8.53	85	42336	15.91	PPB	98
65)	trans-1,3-Dichloropropene	8.81	75	58163	9.28	PPB	98
66)	Ethyl methacrylate	8.87	69	127976	31.29	PPB	98
67)	1,1,2-Trichloroethane	9.00	83	29652	9.66	PPB	96
68)	Tetrachloroethene	9.02	164	43617	8.67	PPB	96
69)	2-Hexanone	9.28	57	14282	49.31	PPB	93
70)	1,3-Dichloropropane	9.19	76	59416	9.70	PPB	99
71)	Dibromochloromethane	9.39	129	48759	9.34	PPB	98
72)	1,2-Dibromoethane (EDB)	9.52	107	37736	9.57	PPB	97
73)	1-Chlorohexane	10.01	91	53120	8.20	PPB	99
74)	Chlorobenzene	10.04	112	129521	9.22	PPB	97
75)	Ethylbenzene	10.13	106	66193	8.90	PPB	99
76)	1,1,1,2-Tetrachloroethane	10.15	131	49166	9.43	PPB	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F020.D Vial: 17
Acq On : 19 Nov 2018 10:23 pm Operator: LM
Sample : 8260 ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 05 10:36:34 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

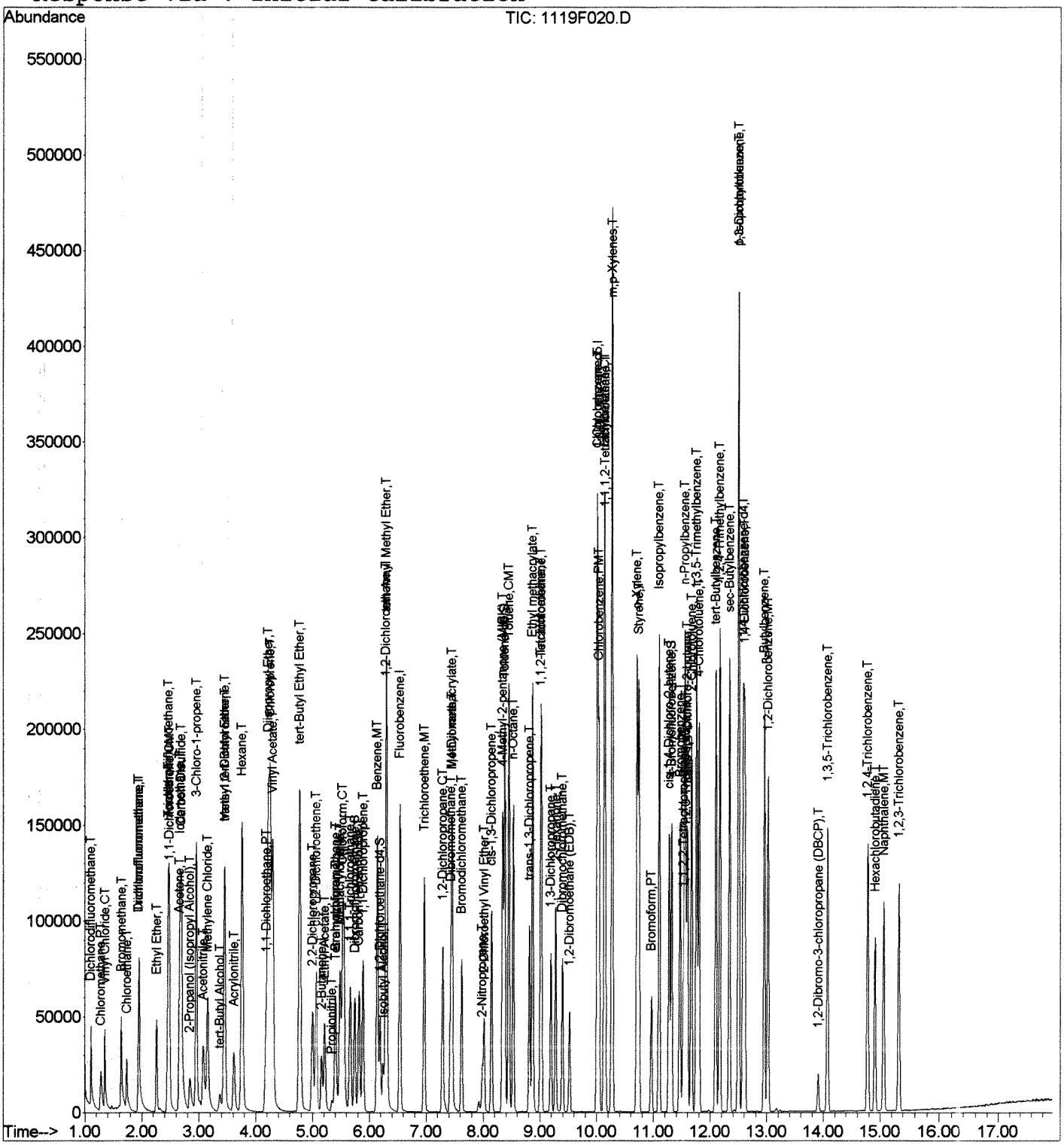
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
77)	m,p-Xylenes	10.27	106	161576	17.90	PPB		96
78)	o-Xylene	10.70	106	79572	9.12	PPB		96
79)	Styrene	10.74	103	72801	9.74	PPB		98
80)	Bromoform	10.96	173	32483	9.27	PPB		97
81)	Isopropylbenzene	11.10	105	195415	8.83	PPB		100
82)	cis-1,4-Dichloro-2-butene	11.27	89	19847	32.70	PPB		96
85)	1,1,2,2-Tetrachloroethane	11.52	83	37652	9.71	PPB		98
86)	trans-1,4-Dichloro-2-buten	11.59	53	25940	29.45	PPB		84
87)	Bromobenzene	11.46	156	61014	9.56	PPB		95
88)	n-Propylbenzene	11.55	91	215841	9.01	PPB		99
89)	1,2,3-Trichloropropane	11.57	110	13115	10.11	PPB	#	76
90)	2-Chlorotoluene	11.67	91	130365	9.25	PPB		99
91)	1,3,5-Trimethylbenzene	11.76	105	158821	9.14	PPB		97
92)	4-Chlorotoluene	11.80	91	140395	9.40	PPB		99
93)	tert-Butylbenzene	12.10	119	142138	9.03	PPB		98
94)	1,2,4-Trimethylbenzene	12.17	105	164188	9.51	PPB		99
95)	sec-Butylbenzene	12.34	105	193956	8.98	PPB		98
96)	p-Isopropyltoluene	12.50	119	173666	9.30	PPB		98
97)	1,3-Dichlorobenzene	12.50	146	105844	9.41	PPB		97
98)	1,4-Dichlorobenzene	12.61	146	107550	9.34	PPB		96
99)	n-Butylbenzene	12.95	91	130097	9.12	PPB		99
100)	1,2-Dichlorobenzene	13.02	146	97396	9.55	PPB		97
101)	1,2-Dibromo-3-chloropropan	13.91	155	6923	9.56	PPB		96
102)	1,3,5-Trichlorobenzene	14.07	180	64827	8.97	PPB		98
103)	1,2,4-Trichlorobenzene	14.78	180	64215	9.50	PPB		97
104)	Hexachlorobutadiene	14.91	225	26928	8.71	PPB		96
105)	Naphthalene	15.06	128	118812	9.70	PPB		99
106)	1,2,3-Trichlorobenzene	15.33	180	54382	9.66	PPB		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F020.D Vial: 17
Acq On : 19 Nov 2018 10:23 pm Operator: LM
Sample : 8260 ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 5 10:37 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F022.D Vial: 19
Acq On : 19 Nov 2018 11:15 pm Operator: LM
Sample : CLP ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 05 10:36:46 2018 Quant Results File: 111918MS46_8260

Quant Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration
DataAcq Meth : 8260.M

LM 12-05-18

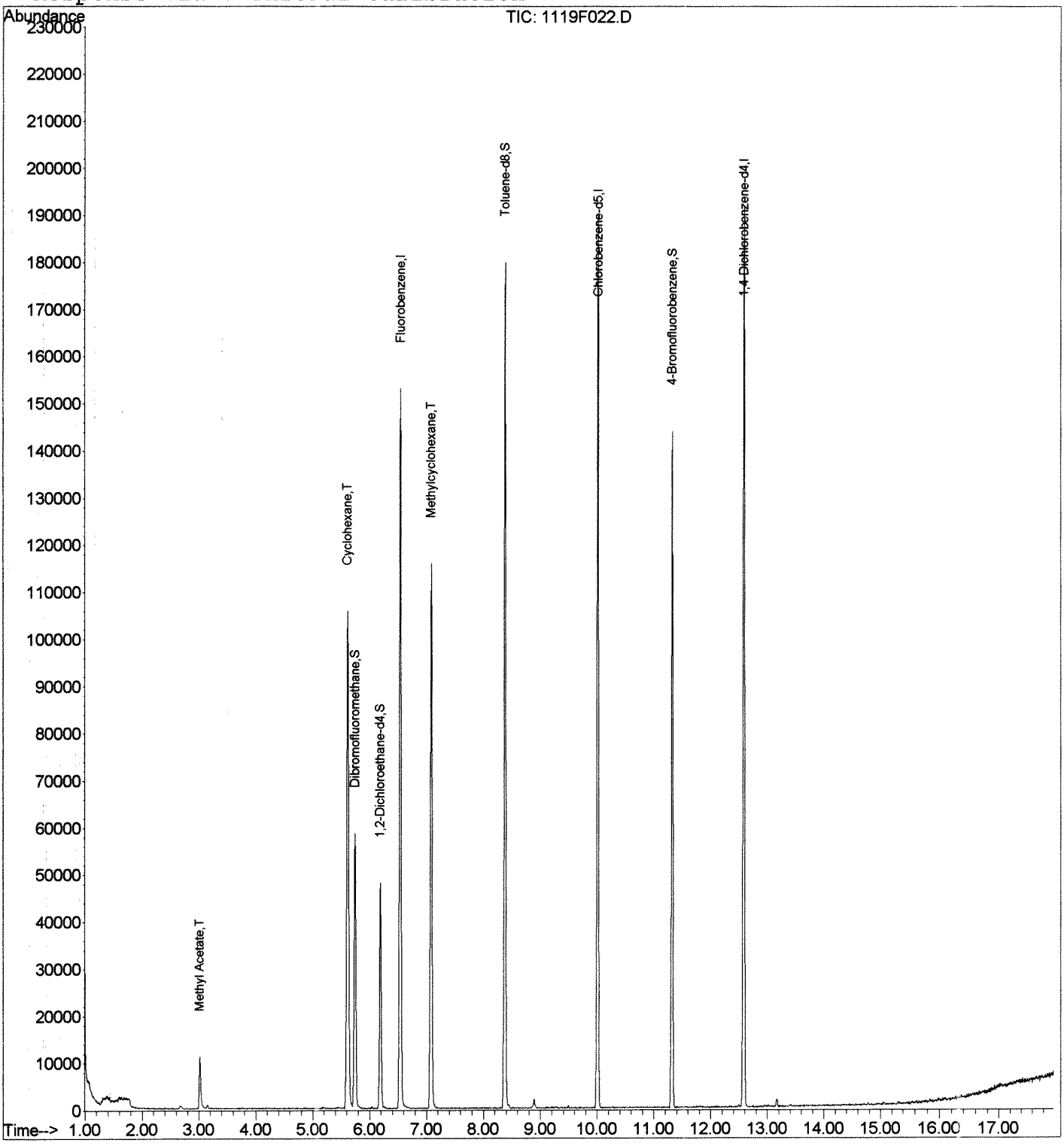
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.53	96	164376	10.00	PPB	0.00
63) Chlorobenzene-d5	10.01	82	61622	10.00	PPB	0.00
84) 1,4-Dichlorobenzene-d4	12.58	152	66981	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.74	113	37305	10.08	PPB	0.00
Spiked Amount 10.000			Recovery =	100.80%		
46) 1,2-Dichloroethane-d4	6.19	65	33321	10.44	PPB	0.00
Spiked Amount 10.000			Recovery =	104.40%		
61) Toluene-d8	8.37	98	132175	10.10	PPB	0.00
Spiked Amount 10.000			Recovery =	101.00%		
83) 4-Bromofluorobenzene	11.32	95	52841	10.11	PPB	0.00
Spiked Amount 10.000			Recovery =	101.10%		
Target Compounds						Qvalue
18) Methyl Acetate	3.02	43	15095	9.82	PPB	94
40) Cyclohexane	5.61	56	59799	10.29	PPB	97
51) Methylcyclohexane	7.08	83	57955	8.33	PPB	97

(#) = qualifier out of range (m) = manual integration
1119F022.D 111918MS46_8260.M Wed Dec 05 10:38:21 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS46\DATA\111918\1119F022.D Vial: 19
Acq On : 19 Nov 2018 11:15 pm Operator: LM
Sample : CLP ICV Inst : GCMS46
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 5 10:37 2018 Quant Results File: 111918MS46_8

Method : J:\MS46\METHODS\111918MS46_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Wed Dec 05 10:31:28 2018
Response via : Initial Calibration



Preparation Information

Group ID:	KWG1900204	**Prep Method:**	EPA 5030B	**Prep Date:**	12/31/18 00:00
Department:	VOA GCMS	**Pre-Prep Method:**	EPA 1311	**Pre-Prep Date:**	12/21/2018 - 12/22/2018

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1812382-001	SL0594	8260C VOC TCLP	SOIL	125uL	50ml	
KWG1900204-1	Matrix Spike	8260C VOC TCLP	SOIL	125uL	50ml	
KWG1900204-2	Lab Control Sample	8260C VOC TCLP	SOIL	125uL	50ml	
KWG1900204-3	Method Blank	8260C VOC TCLP	SOIL	125uL	50ml	

Lab Code	Parent Lab Code	Comments
KWG1900204-1	K1812382-001	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1812382-001	1708394					
KWG1900204-1	1708395					
KWG1900204-2	1708396					
KWG1900204-3	1708397					

Comments:

Started By: LMuresan Assisted By: _____ Training Yes No

Completed By: LMuresan Assisted By: _____ Yes No

Reviewed By: _____ Date: JAN 10 2019 Storage: _____

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Service Request #: K1812382 Date Extracted: 12-21-18

Analyst: Richard Holden

TCLP/ZHE

Unit #	Sample	I.D. ✓	Matrix	Particle Size Reduced?	Wt of Solids	Vol of Extract Fluid	pH of Extract Fluid	Tedlar Bag Used?	ZHE Unit Still Pressurized?	Filtrate Mixed with Extract?	pH of Filtrat ?
AL57	K1812382-1	✓	Soil	NA	25.12 g	500mL	4.90	NA	Yes	NA	7
AL55	Method Blank	—	Ext Fluid	NA	0.000 g	500mL	4.90	NA	Yes	NA	5

Wt. to Charge ZHE = $\frac{n}{\%Solids}$ x 100 , n = desired wt. of solids (max 25 grams)

PERCENT SOLIDS

Sample	Total Wt of Sample For Filtering	Wt of Beaker Residue	Net Sample Wt	Initial Filter Wt (1)	Final Filter Wt (2)	Wt of Filtered Solids	% Solids

(1) = Before Filtering Sample (2) = After Drying %Solids = $\frac{\text{Final Filer Wt} - \text{Initial Filter Wt}}{\text{Total Wt of Sample}}$ X 100

Extract Fluid Lot # TCLP-19D Rotation Speed: 29.8 RPM
Initial Temp: 21°C Constant Temp: Yes or N (23±2°C)
Date/Time/Initials Weighed: 12-21-18/13:10/RRH Balance ID: K-Balance-46 Calibration Verified ☐
VOA Vial Lot# 8-206-061
Filter Lot #: 306090
Extract Started (Time/Date/Initial): 14:00 12-21-18 RRH
Stopped (Time/Date/Initial): 06:00 12-22-18 RRH
Extracts Stored: M15F4
Comments: Tumble 18 ± 2 hours

Reviewed By:

R:\Extractions\Active Benchsheets\ZHE\ZERO HEADSPACE EXTRACTION.doc

Chart

TempSys: Temperature Assurance System

Equipment
ZHE RM

Area
108

Period
Past 7 days

Reference Date:
12/26/2018

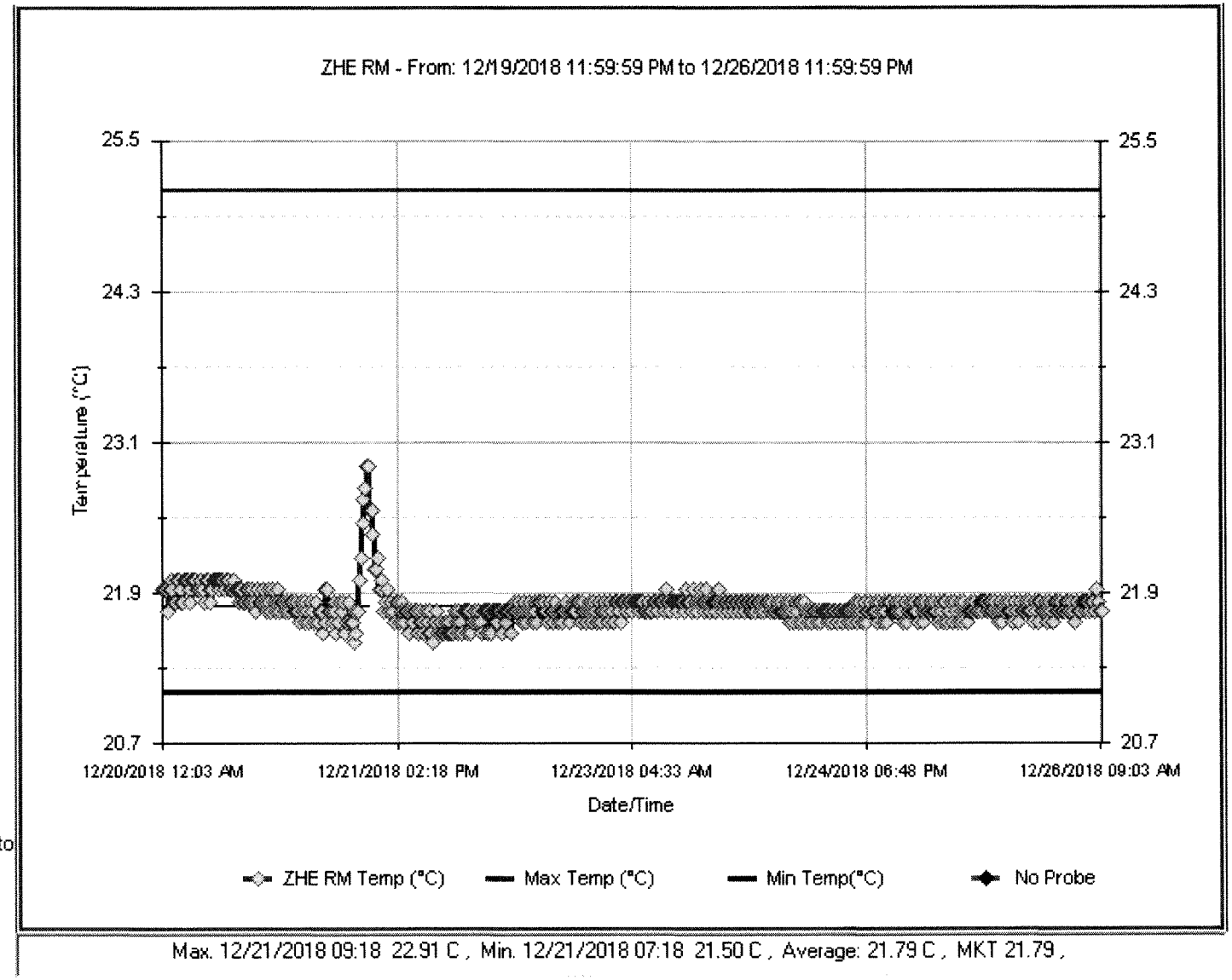
Show data points

Print

Capture Snapshot

View Numeric Table

Click a legend to hide or show chart lines



Max. 12/21/2018 09:18 22.91 C , Min. 12/21/2018 07:18 21.50 C , Average: 21.79 C , MKT 21.79 ,

Semi-Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Preparation Information Benchsheet

rep Run#: 328902
'eam: Semivoa GCMS/TJONES
Number of Copies to make: 1

Prep WorkFlow: OrgExtLP
Prep Method: EPA 3510C

Status: Prepped
Prep Date/Time: 12/26/18 ~~03:00 PM~~ 1604

	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	K1812382-001	SL0594	.01	8270D/SVO TCLP		Soil	100mL	1.00mL	
2	KQ1818722-01	K1812382-001 MS	.01	8270D/SVO TCLP		Solid	100mL	1.00mL	
3	KQ1818722-02	K1812382-001 DMS	.01	8270D/SVO TCLP		Solid	100mL	1.00mL	
4	KQ1818722-03	LCS		8270D/SVO TCLP		Solid	100mL	1.00mL	
5	KQ1818722-04	MB		8270D/SVO TCLP		Solid	100mL	1.00mL	
6	KQ1818722-05	MB		8270D/SVO TCLP		Solid	100mL	1.00mL	

piking Solutions

Name: 8270 ALL PURPOSE SURROGATE Inventory ID 189727 Logbook Ref: SVM59-50D Expires On: 03/04/2019

K1812382-001 1.00mL KQ1818722-01 1.00mL KQ1818722-02 1.00mL KQ1818722-03 1.00mL KQ1818722-04 1.00mL KQ1818722-05 1.00mL

Name: 8270 Matrix Spike Inventory ID 195768 Logbook Ref: SVM60-14B Expires On: 06/18/2019

KQ1818722-01 1.00mL KQ1818722-02 1.00mL KQ1818722-03 1.00mL

reparation Steps

tep: Extraction ~~1644~~ 1611
tarted: 12/26/18 ~~15:00~~
inished: ~~12/31/18 14:51~~ 12/26/18
y: ~~BGREER~~ 1/7/18
omments TJONES
JW 1/3/19

Step: Final Volume
Started: 12/31/18 14:51
Finished: 12/31/18 14:51
By: BGREER
Comments

omments: IS: SVM58.BBG

eviewed By: [signature] Date: 1/3/19

hain of Custody

Relinquished By: BG Date: 12/31/18

Received By: Chris R Cano Date: 01/04/19

Extracts Examined
Yes No

Preparation Information Benchsheet

1/1 V

p Run#: 328902 **Prep WorkFlow:** OrgExtLP **Status:** Draft
m: Semivoa GCMS/TJONES **Prep Method:** EPA 3510C **Prep Date/Time:** 12/26/18 03:00 PM
Number of Copies to make: 1

Lab Code	Client ID	B#	√	Method /Test	Matrix	Amt. Ext. (mL)	pH	Int. Vol	Final Vol mL	Surr Amt	Spike Amt
K1812382-001	SL0594	.01	✓	8270D / SVO TCLP	Soil	100	5	N/A	1	1mL	—
KQ1818722-01	K1812382-001 MS	.01	✓	8270D / SVO TCLP	Solid	100	5	〃	1	〃	1mL
KQ1818722-02	K1812382-001 DMS	.01	✓	8270D / SVO TCLP	Solid	100	5	〃	1	〃	〃
KQ1818722-03	LCS		—	8270D / SVO TCLP	Solid	100	5	〃	1	〃	〃
KQ1818722-04	MB Leachate Blank Sol'd		✓	8270D / SVO TCLP	Solid	100	5	〃	1	〃	—
KQ1818722-05	MB		—	8270D / SVO TCLP	Solid	100	5	〃	1	〃	—

omments:

urrogate ID: SVM59-50D, 100/150 ppm, exp. 5/4/19, 1mL, 4F epp. Spike ID: SVM60-14B, 100ppm, exp. 6/18/19, 1mL, 4F epp.

Witnessed By:

nalyst: Assisted By: —

Additional Prep Information for 8270 TCLP by 3510C

Service Request: K18/2382 Workgroup: KQ18/8722

Pre-Prep Information:

DCM (GC^2) Lot#: DV077 Glass Wool Lot#: 21317999

Sulfuric Acid Lot#: 7121159 NaOH Lot#: 52476

Sulfate Lot#: 20180905g6

pH<2 (Time/Date/Initial): 16:04 12/26/18 [initials]

pH>11 (Time/Date/Initial): 16:57 12/26/18 [initials]

Batch Start (Time/Date/Initial): 16:11 12/26/18 [initials]

Batch Stop (Time/Date/Initial): 17:18 12/26/18 [initials]

S-Evap (Time/Date/Initial): 0900 12/31/18 BG S-Evap Therm. ID: DWB-46

Temp as measured: 72 °C Correction factor: 0.0 °C Adjusted temp: 72.0 °C

N-Evap (Time/Date/Initial): 0956 12/31/18 BG N-Evap Therm. ID: X-SVM-010

Temp as measured: 20 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Pipet Lot: 20717645

Extract Storage: —

Date Completed (Time/Date/Initial): 1118 12/31/18 BG

Comments/Observations:

Bench Sheet Review Check List	
☑	Hold Times Met (if no, Reason:)
☑	Prep date, dept, method, product code correct in stealth
☑	Spike Information correct
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked—Bottle numbers appended if required
☑	Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑	Training has been circled
☑	Extract Storage recorded
☑	Additional Prep Sheet completely filled out (NA or line out Blanks)
☑	All clean-ups have been noted on additional prep sheet
☑	Signed service request with Form V, if applicable, has been attached

TCLP Extraction Worksheet

Service Request Number(s): K1812382

Method : TCLP 1311 [X] SPLP 1312 [ ] Wet Ext. [ ] MEP [ ] If Autofluff sample is used please place an X in this box [ ] Prep Run# : 328582

Note: 1 Blank needed per every 20 extracts.

Sample Number	Teflon Extraction Vessel #	Sample Description (Solid, Liquid, Multiphasic)	Partical Size < 1cm ?	Solution Determination Weight (g)	Initial pH	Aliquot of 1N HCl (mL)	Final pH	Solution To Be Used	Extraction Weight (g)	Extraction Solution Volume (mL)	Post-Extraction pH
K1812382-1	26	S	Y	5.19	8.68	3.5	5.65	2	100.24	2000	5.69
MB	36	L	-	-	-	-	-	↓	-	↓	-

CCL 12/19

pH Meter Calibrated at pH4 & pH7 Today? [X] 12/19/18 12/20/18 pH Meter I.D. K-pH-08 Balance I.D. 57 Date Balance Checked: 12/19/18

Extraction Solution Prep date: 11/6/18 Tumbler # 1 Thermometer# 664244 Hot Plate Temp °C(50°C): 50

Today's Solution pH: 2.86 12/19/18 Extraction Solution I.D. MET-0G-73-I Filter Lot # 180145 HCl I.D. RE1-48-A

Extraction Started Time: 1430 Date: 12/19/18 Disposable Extraction Vessel Lot #: -

Extraction Finished Time: 815 Date: 12/20/18

Tumbler Rotational Speed (28 - 32 rpm): 29.6

Room Temperature at the Beginning of Extraction (Temp. Range 21° C - 25°C): 21.83

Analyst: Cody Hill Date: 12/19/18 Reviewer: [signature] Date: 12/21/18

Pre-Prep Information Benchsheet

Prep Run #: 328582 **Prep Method:** **Team:** **Container Lot No:** **Prep Due Date:** Dec-28-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1812382-001	.01	TCLP	100.24g		PrepComments:~~SSPAIN-K~~-Balance-51 CLVKKEN
2	K1812382-001 DUP KQ1818459-01	.01	TCLP	5.19g		PrepComments:~~SSPAIN-K~~-Balance-51 12/19

Relinquished By:	Date/Time:	Received By:	Date/Time:
Caly Lilla	12/19/18 11:17	Caly Lilla	12/19/18 11:27

1st 01/10/19
2nd 01/10/19

Validation Report

Data File: J:\MS07\DATA\010419\0104F008.D\
Lab ID: K1812382-001
RunType: N/A
Matrix: Soil

Date Acquired: 1/4/19 14:43:00
Batch ID: 621360
Analysis Method: 8270D/SVO TCLP

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	2,4,6-Tribromophenol	38		20	OK, <40%

Primary Review: _____

Secondary Review: _____

1st 01/10/19
2nd 01/10/19

Quantitation Report

Data File:	J:\MS07\DATA\010419\0104F008.D\	**Instrument:**	K-MS-07
Acqu Date:	1/4/19 14:43:00	**Vial:**	10
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1812382-001	**Raw Units:**	ug/mL

Bottle ID:	K1812382-001.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	SVO TCLP	**Collect Date:**	12/9/18	**Receive Date:**	12/18/18

Analysis Lot:	621360	**Prep Lot:**	328902	**Report Group:**	K1812382
Analysis	8270D	**Prep Method:**	EPA 3510C		
		Prep Date:	12/26/18		

Title:	TCLP Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800550
		Report List ID:	18580

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
1,4-Dichlorobenzene-d4	9.43		39694	40.00	OK
Acenaphthene-d10	14.39		80483	40.00	OK
Chrysene-d12	21.27	-0.01	103498	40.00	OK
Naphthalene-d8	11.52	-0.01	138716	40.00	OK
Perylene-d12	24.50	-0.01	113534	40.00	OK
Phenanthrene-d10	16.80		144410	40.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
2,4,6-Tribromophenol	15.69		62621	150.73	100	52 - 122	Y
2-Fluorobiphenyl	13.32		202839	67.51	68	44 - 114	Y
Nitrobenzene-d5	10.37	+0.01	102892	75.56	76	45 - 122	Y
Phenol-d6	8.92		117982	91.70	61	35 - 105	Y
p-Terphenyl-d14	19.44	+0.01	207113	87.33	87	50 - 145	Y

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4,5-Trichlorophenol, TCLP	0.00		0	0.00	0	U	Y
2,4,6-Trichlorophenol, TCLP	0.00		0	0.00	0	U	Y
2,4-Dinitrotoluene, TCLP	0.00		0	0.00	0	U	Y
2-Methylphenol, TCLP	0.00		0	0.00	0	U	Y
4-Methylphenol, TCLP	0.00		0	0.00	0	U	Y
Hexachlorobenzene, TCLP	0.00		0	0.00	0	U	Y
Hexachlorobutadiene, TCLP	0.00		0	0.00	0	U	Y
Hexachloroethane, TCLP	0.00		0	0.00	0	U	Y
Nitrobenzene, TCLP	0.00		0	0.00	0	U	Y
Pentachlorophenol (PCP), TCLP	0.00		0	0.00	0	U	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Printed: 1/10/19 12:23
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Data File:	J:\MS07\DATA\010419\0104F008.D\	**Instrument:**	K-MS-07
Acqu Date:	1/4/19 14:43:00	**Vial:**	10
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1812382-001	**Raw Units:**	ug/mL

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Pyridine, TCLP	0.00		0	0.00	0	U	Y

Prep Amount:	100 mL	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

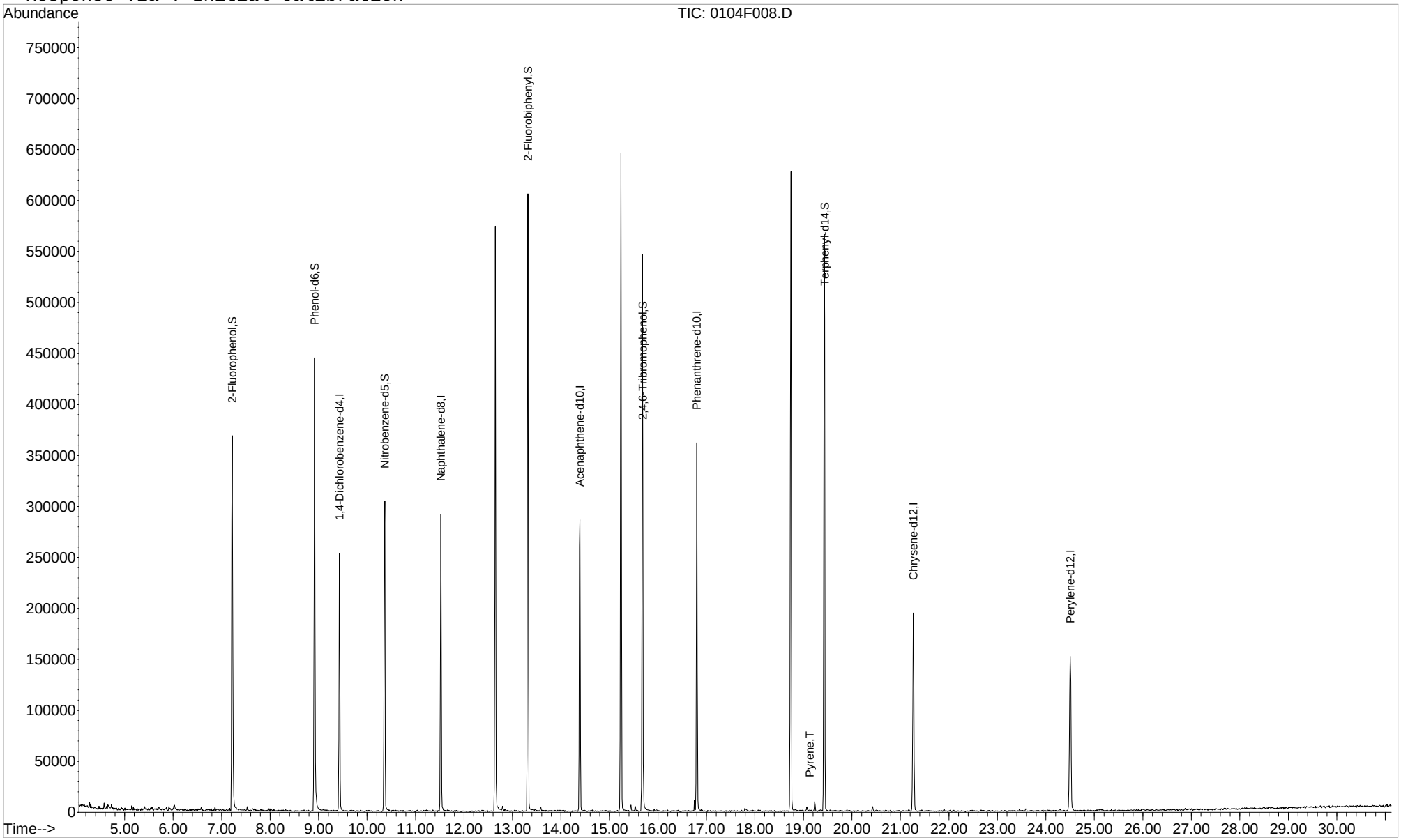
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 01/10/19
2nd 01/10/19

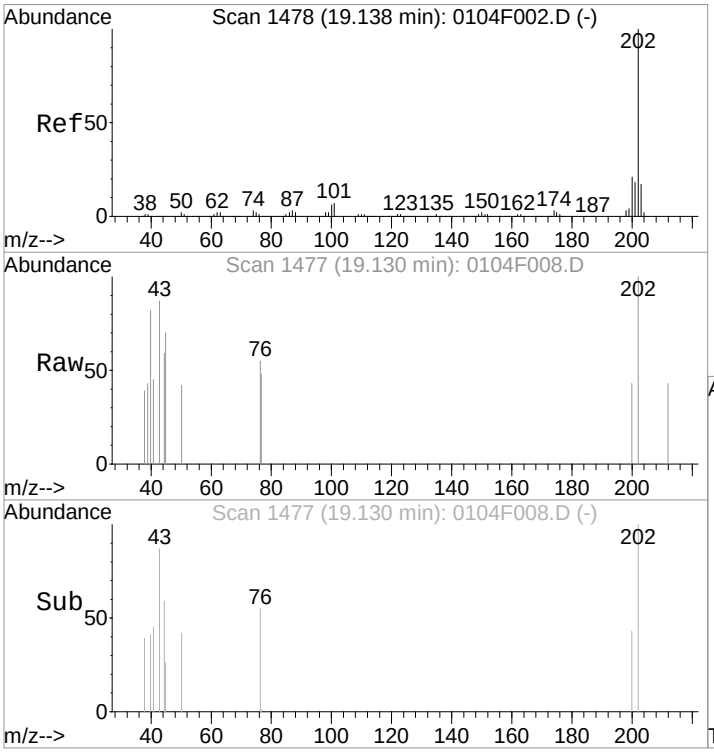
Data File : J:\MS07\DATA\010419\0104F008.D Vial: 24
Acq On : 4 Jan 2019 2:43 pm Operator: CConover
Sample : K1812382-001 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 9 17:12 2019 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Initial Calibration



1st 01/10/19

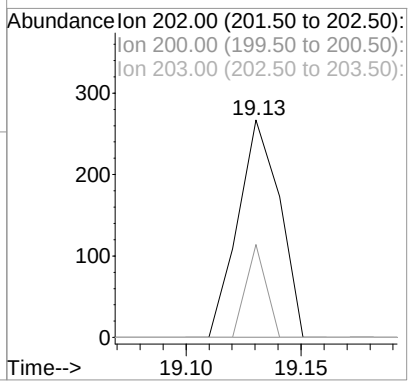
2nd 01/10/19



#75
Pyrene
Concen: 0.10 ug/ml
RT: 19.13 min Scan# 1477
Delta R.T. 0.00 min
Lab File: 0104F008.D
Acq: 4 Jan 2019 2:43 pm

Tgt Ion:202 Resp: 337

Ion	Ratio	Lower	Upper
202	100		
200	42.7	0.0	50.4
203	0.0	0.0	47.9



1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F008.D Vial: 24
Acq On : 4 Jan 2019 2:43 pm Operator: CConover
Sample : K1812382-001 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 09 17:01:59 2019 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.43	152	39694	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	138716	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.39	164	80483	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	144410	40.00	ug/ml	0.00
73) Chrysene-d12	21.27	240	103498	40.00	ug/ml	-0.02
83) Perylene-d12	24.50	264	113534	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.22	112	101255	97.87	ug/ml	0.03
Spiked Amount 150.000	Range 21 - 100		Recovery = 65.25%			
8) Phenol-d6	8.92	99	117982	91.70	ug/ml	0.05
Spiked Amount 150.000	Range 10 - 94		Recovery = 61.13%			
20) Nitrobenzene-d5	10.37	82	102892	75.56	ug/ml	0.01
Spiked Amount 100.000	Range 35 - 114		Recovery = 75.56%			
40) 2-Fluorobiphenyl	13.32	172	202839	67.51	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 67.51%			
62) 2,4,6-Tribromophenol	15.69	330	62621	150.73	ug/ml	0.01
Spiked Amount 150.000	Range 10 - 123		Recovery = 100.49%			
76) Terphenyl-d14	19.44	244	207113	87.33	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 87.33%			
Target Compounds						Qvalue
75) Pyrene	19.13	202	337	0.10	ug/ml	55

(#) = qualifier out of range (m) = manual integration

1st 01/10/19
2nd 01/10/19

Validation Report

Data File: J:\MS07\DATA\010419\0104F004.D\
Lab ID: KQ1818722-04
RunType: MB
Matrix: Soil

Date Acquired: 1/4/19 12:00:00
Batch ID: 621360
Analysis Method: 8270D/SVO TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	2,4,6-Tribromophenol	38		20	OK, <40%

Primary Review: _____

Printed: 1/10/19 12:23
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Secondary Review: _____

1st 01/10/19
2nd 01/10/19

Quantitation Report

Data File:	J:\MS07\DATA\010419\0104F004.D\	**Instrument:**	K-MS-07
Acqu Date:	1/4/19 12:00:00	**Vial:**	6
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1818722-04	**Raw Units:**	ug/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	SVO TCLP	**Collect Date:**	12/9/18	**Receive Date:**	12/18/18

Analysis Lot:	621360	**Prep Lot:**	328902	**Report Group:**	KQ1818722
Analysis	8270D	**Prep Method:**	EPA 3510C		
		Prep Date:	12/26/18		

Title:	TCLP Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800550
		Report List ID:	18580

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
1,4-Dichlorobenzene-d4	9.42	-0.01	43108	40.00	OK
Acenaphthene-d10	14.39		85707	40.00	OK
Chrysene-d12	21.27	-0.01	100447	40.00	OK
Naphthalene-d8	11.52	-0.01	141709	40.00	OK
Perylene-d12	24.50	-0.01	107000	40.00	OK
Phenanthrene-d10	16.80		152364	40.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
2,4,6-Tribromophenol	15.69		66023	150.62	100	52 - 122	Y
2-Fluorobiphenyl	13.32		235510	73.60	74	44 - 114	Y
Nitrobenzene-d5	10.36		116663	78.89	79	45 - 122	Y
Phenol-d6	8.91	-0.01	132564	94.88	63	35 - 105	Y
p-Terphenyl-d14	19.44	+0.01	214478	93.18	93	50 - 145	Y

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4,5-Trichlorophenol, TCLP	0.00		0	0.00	0	U	Y
2,4,6-Trichlorophenol, TCLP	0.00		0	0.00	0	U	Y
2,4-Dinitrotoluene, TCLP	0.00		0	0.00	0	U	Y
2-Methylphenol, TCLP	0.00		0	0.00	0	U	Y
4-Methylphenol, TCLP	0.00		0	0.00	0	U	Y
Hexachlorobenzene, TCLP	0.00		0	0.00	0	U	Y
Hexachlorobutadiene, TCLP	0.00		0	0.00	0	U	Y
Hexachloroethane, TCLP	0.00		0	0.00	0	U	Y
Nitrobenzene, TCLP	0.00		0	0.00	0	U	Y
Pentachlorophenol (PCP), TCLP	0.00		0	0.00	0	U	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	J:\MS07\DATA\010419\0104F004.D\	**Instrument:**	K-MS-07
Acqu Date:	1/4/19 12:00:00	**Vial:**	6
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1818722-04	**Raw Units:**	ug/mL

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Pyridine, TCLP	0.00		0	0.00	0	U	Y

Prep Amount:	100 mL	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

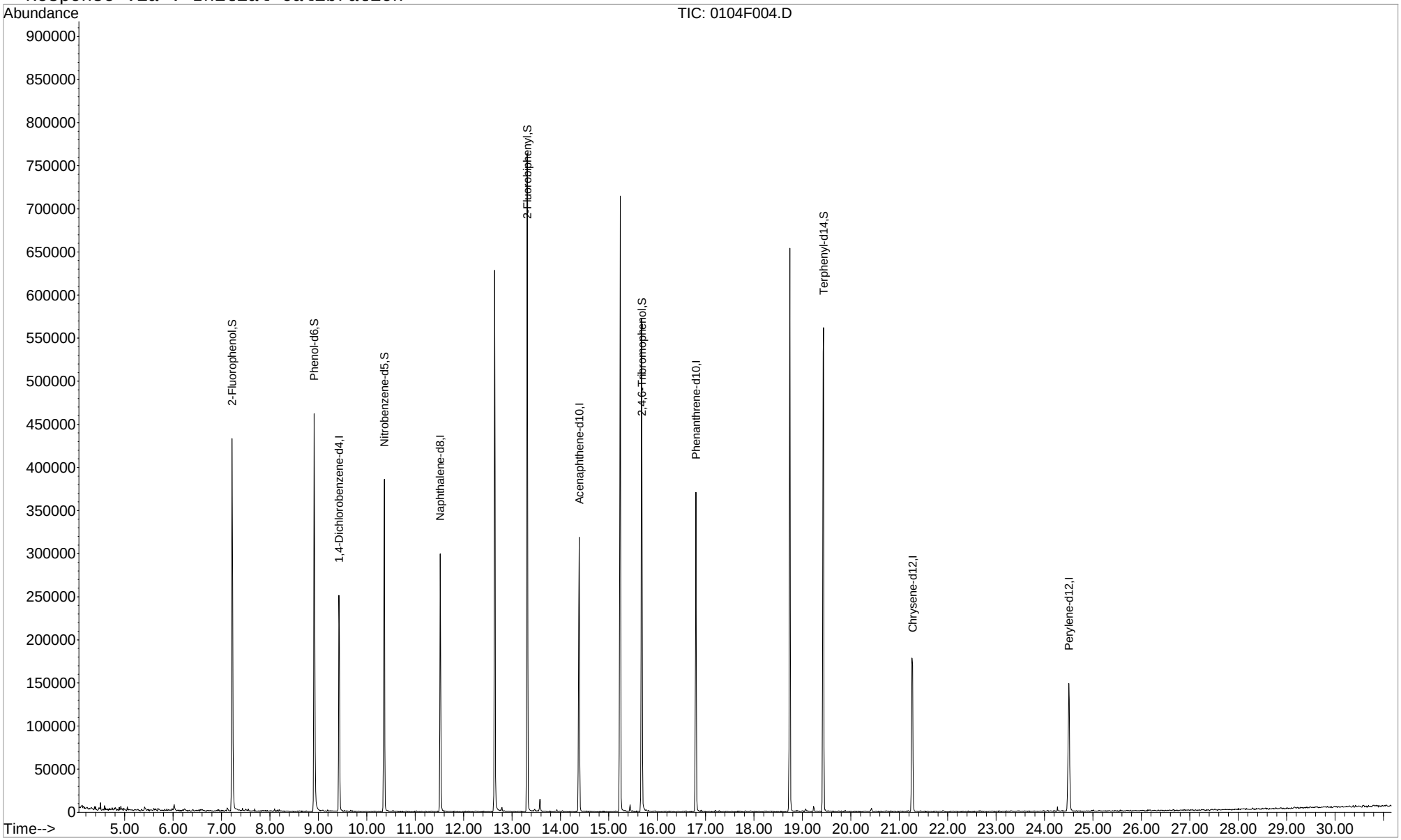
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F004.D Vial: 20
Acq On : 4 Jan 2019 12:00 pm Operator: CConover
Sample : KQ1818722-04 | MB Inst : MS07
Misc : Leachate Blank Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 9 17:05 2019 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Initial Calibration



1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F004.D Vial: 20
Acq On : 4 Jan 2019 12:00 pm Operator: CConover
Sample : KQ1818722-04 | MB Inst : MS07
Misc : Leachate Blank Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 09 17:01:55 2019 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	43108	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	141709	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.39	164	85707	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	152364	40.00	ug/ml	0.00
73) Chrysene-d12	21.27	240	100447	40.00	ug/ml	-0.01
83) Perylene-d12	24.50	264	107000	40.00	ug/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	7.22	112	115651	102.93	ug/ml	0.03
Spiked Amount 150.000	Range 21 - 100		Recovery = 68.62%			
8) Phenol-d6	8.91	99	132564	94.88	ug/ml	0.05
Spiked Amount 150.000	Range 10 - 94		Recovery = 63.25%			
20) Nitrobenzene-d5	10.36	82	116663	78.89	ug/ml	0.01
Spiked Amount 100.000	Range 35 - 114		Recovery = 78.89%			
40) 2-Fluorobiphenyl	13.32	172	235510	73.60	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 73.60%			
62) 2,4,6-Tribromophenol	15.69	330	66023	150.62	ug/ml	0.01
Spiked Amount 150.000	Range 10 - 123		Recovery = 100.41%			
76) Terphenyl-d14	19.44	244	214478	93.18	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 93.18%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration

1st 01/10/19
2nd 01/10/19

Validation Report

Data File: J:\MS07\DATA\010419\0104F003.D\
Lab ID: KQ1818722-05
RunType: MB
Matrix: Soil

Date Acquired: 1/4/19 11:20:00
Batch ID: 621360
Analysis Method: 8270D/SVO TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	2,4,6-Tribromophenol	38		20	OK, <40%

Primary Review: _____

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Secondary Review: _____

1st 01/10/19
2nd 01/10/19

Quantitation Report

Data File:	J:\MS07\DATA\010419\0104F003.D\	**Instrument:**	K-MS-07
Acqu Date:	1/4/19 11:20:00	**Vial:**	5
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1818722-05	**Raw Units:**	ug/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	SVO TCLP	**Collect Date:**	12/9/18	**Receive Date:**	12/18/18

Analysis Lot:	621360	**Prep Lot:**	328902	**Report Group:**	KQ1818722
Analysis	8270D	**Prep Method:**	EPA 3510C		
		Prep Date:	12/26/18		

Title:	TCLP Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800550
		Report List ID:	18580

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
1,4-Dichlorobenzene-d4	9.42	-0.01	40581	40.00	OK
Acenaphthene-d10	14.39		82278	40.00	OK
Chrysene-d12	21.27	-0.01	102395	40.00	OK
Naphthalene-d8	11.52	-0.01	144326	40.00	OK
Perylene-d12	24.51		106698	40.00	OK
Phenanthrene-d10	16.80		144941	40.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
2,4,6-Tribromophenol	15.69		59218	142.02	95	52 - 122	Y
2-Fluorobiphenyl	13.32		234573	76.37	76	44 - 114	Y
Nitrobenzene-d5	10.36		115549	83.00	83	45 - 122	Y
Phenol-d6	8.91	-0.01	133213	101.28	68	35 - 105	Y
p-Terphenyl-d14	19.43		220288	93.89	94	50 - 145	Y

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4,5-Trichlorophenol, TCLP	0.00		0	0.00	0	U	Y
2,4,6-Trichlorophenol, TCLP	0.00		0	0.00	0	U	Y
2,4-Dinitrotoluene, TCLP	0.00		0	0.00	0	U	Y
2-Methylphenol, TCLP	0.00		0	0.00	0	U	Y
4-Methylphenol, TCLP	0.00		0	0.00	0	U	Y
Hexachlorobenzene, TCLP	0.00		0	0.00	0	U	Y
Hexachlorobutadiene, TCLP	0.00		0	0.00	0	U	Y
Hexachloroethane, TCLP	0.00		0	0.00	0	U	Y
Nitrobenzene, TCLP	0.00		0	0.00	0	U	Y
Pentachlorophenol (PCP), TCLP	0.00		0	0.00	0	U	Y

1st 01/10/19

2nd 01/10/19

Data File:	J:\MS07\DATA\010419\0104F003.D\	**Instrument:**	K-MS-07
Acqu Date:	1/4/19 11:20:00	**Vial:**	5
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1818722-05	**Raw Units:**	ug/mL

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Pyridine, TCLP	0.00		0	0.00	0	U	Y

Prep Amount:	100 mL	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Printed: 1/10/19 12:23

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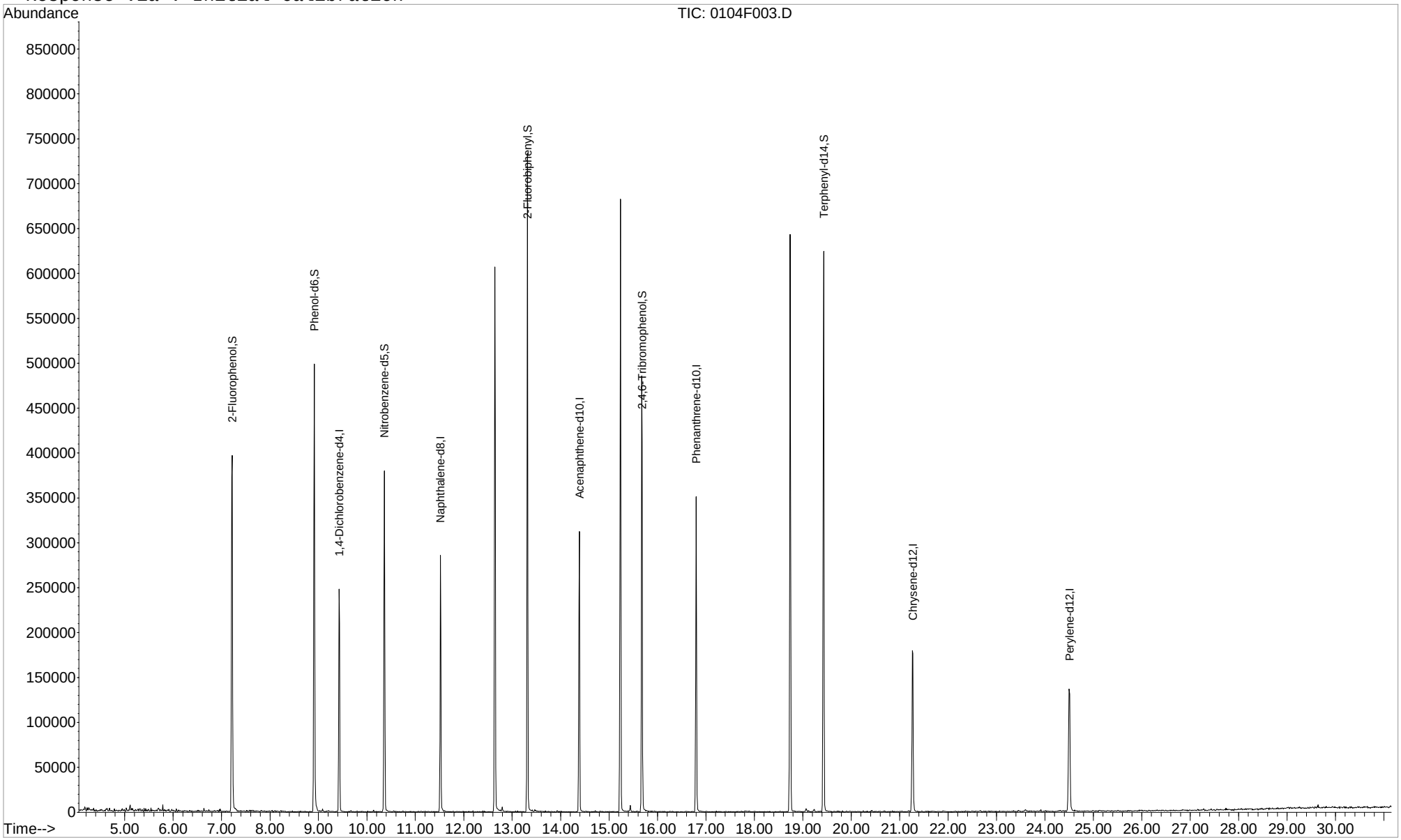
1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F003.D Vial: 19
Acq On : 4 Jan 2019 11:20 am Operator: CConover
Sample : KQ1818722-05 | MB Inst : MS07
Misc : DI Blank Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 9 17:04 2019 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Initial Calibration



Columbia Analytical Services Quantitation Report (QT Reviewed)

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F003.D Vial: 19
Acq On : 4 Jan 2019 11:20 am Operator: CConover
Sample : KQ1818722-05 | MB Inst : MS07
Misc : DI Blank Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 09 17:01:54 2019 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Dec 13 15:14:09 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	40581	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	144326	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.39	164	82278	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	144941	40.00	ug/ml	0.00
73) Chrysene-d12	21.27	240	102395	40.00	ug/ml	-0.01
83) Perylene-d12	24.51	264	106698	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.22	112	118375	111.92	ug/ml	0.03
Spiked Amount 150.000	Range 21 - 100		Recovery = 74.61%			
8) Phenol-d6	8.91	99	133213	101.28	ug/ml	0.05
Spiked Amount 150.000	Range 10 - 94		Recovery = 67.52%			
20) Nitrobenzene-d5	10.36	82	115549	83.00	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 83.00%			
40) 2-Fluorobiphenyl	13.32	172	234573	76.37	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 76.37%			
62) 2,4,6-Tribromophenol	15.69	330	59218	142.02	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 94.68%			
76) Terphenyl-d14	19.43	244	220288	93.89	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 93.89%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

1st 01/10/19
2nd 01/10/19

Validation Report

Data File: J:\MS07\DATA\010419\0104F005.D\
Lab ID: KQ1818722-03
RunType: LCS
Matrix: Soil

Date Acquired: 1/4/19 12:41:00
Batch ID: 621360
Analysis Method: 8270D/SVO TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	2,4,6-Tribromophenol	38		20	OK, <40%

Primary Review: _____

Secondary Review: _____

1st 01/10/19
2nd 01/10/19

Quantitation Report

Data File:	J:\MS07\DATA\010419\0104F005.D\	**Instrument:**	K-MS-07
Acqu Date:	1/4/19 12:41:00	**Vial:**	7
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1818722-03	**Raw Units:**	ug/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	SVO TCLP	**Collect Date:**	12/9/18	**Receive Date:**	12/18/18

Analysis Lot:	621360	**Prep Lot:**	328902	**Report Group:**	KQ1818722
Analysis	8270D	**Prep Method:**	EPA 3510C		
		Prep Date:	12/26/18		

Title:	TCLP Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800550
		Report List ID:	18580

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
1,4-Dichlorobenzene-d4	9.44	+0.01	43336	40.00	OK
Acenaphthene-d10	14.39		92763	40.00	OK
Chrysene-d12	21.28		108860	40.00	OK
Naphthalene-d8	11.53		152459	40.00	OK
Perylene-d12	24.51		114263	40.00	OK
Phenanthrene-d10	16.80		115746	40.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
2,4,6-Tribromophenol	15.69		59295	178.07	119	52 - 122	Y
2-Fluorobiphenyl	13.32		250738	72.40	72	44 - 114	Y
Nitrobenzene-d5	10.37	+0.01	114980	77.34	77	45 - 122	Y
Phenol-d6	8.93	+0.01	135797	96.68	64	35 - 105	Y
p-Terphenyl-d14	19.44	+0.01	183613	73.61	74	50 - 145	Y

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4,5-Trichlorophenol, TCLP	13.25	+0.07	78362	79.11	0.791		Y
2,4,6-Trichlorophenol, TCLP	13.18		73936	75.92	0.759		Y
2,4-Dinitrotoluene, TCLP	14.76		60400	69.94	0.699		Y
2-Methylphenol, TCLP	9.93	-0.03	70082	71.61	0.716		Y
4-Methylphenol, TCLP	10.19	-0.02	97412	64.10	0.641		Y
Hexachlorobenzene, TCLP	16.17		59674	84.95	0.850		Y
Hexachlorobutadiene, TCLP	11.77		74298	69.67	0.697		Y
Hexachloroethane, TCLP	10.25		48080	63.98	0.640		Y
Nitrobenzene, TCLP	10.40		104845	70.26	0.703		Y
Pentachlorophenol (PCP), TCLP	16.51		30270	69.72	0.697		Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st 01/10/19

2nd 01/10/19

Data File:	J:\MS07\DATA\010419\0104F005.D\	**Instrument:**	K-MS-07
Acqu Date:	1/4/19 12:41:00	**Vial:**	7
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1818722-03	**Raw Units:**	ug/mL

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Pyridine, TCLP	4.40		76049	69.64	0.696		Y

Prep Amount:	100 mL	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	100.00

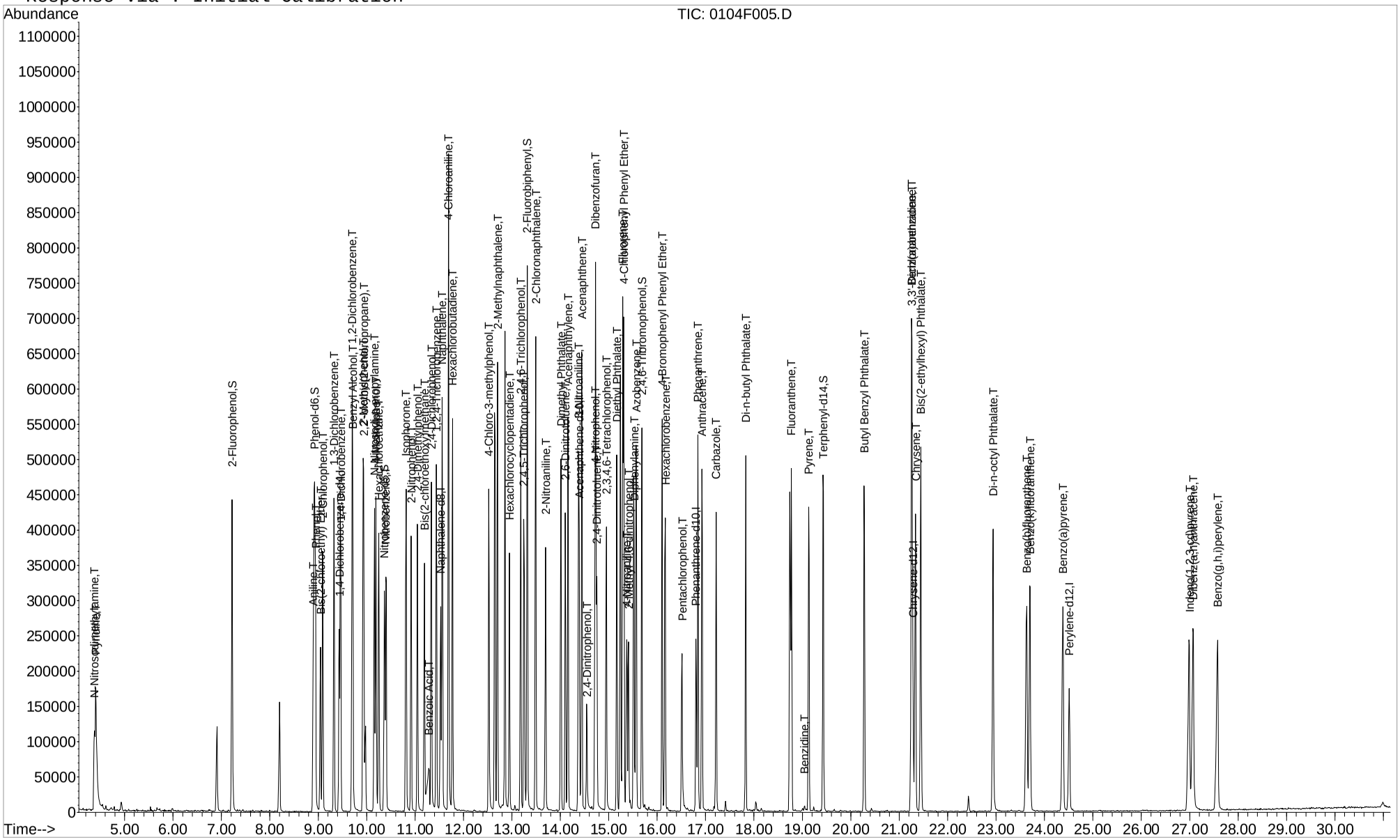
U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS07\DATA\010419\0104F005.D Vial: 21
Acq On : 4 Jan 2019 12:41 pm Operator: CConover
Sample : KQ1818722-03 | LCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 9 17:07 2019 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Initial Calibration



1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F005.D Vial: 21
Acq On : 4 Jan 2019 12:41 pm Operator: CConover
Sample : KQ1818722-03 | LCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 09 17:01:56 2019 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.44	152	43336	40.00	ug/ml	0.01
22) Naphthalene-d8	11.53	136	152459	40.00	ug/ml	0.01
36) Acenaphthene-d10	14.39	164	92763	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	115746	40.00	ug/ml	0.00
73) Chrysene-d12	21.28	240	108860	40.00	ug/ml	0.00
83) Perylene-d12	24.51	264	114263	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.22	112	113779	100.73	ug/ml	0.03
Spiked Amount 150.000	Range 21 - 100		Recovery = 67.15%			
8) Phenol-d6	8.93	99	135797	96.68	ug/ml	0.06
Spiked Amount 150.000	Range 10 - 94		Recovery = 64.45%			
20) Nitrobenzene-d5	10.37	82	114980	77.34	ug/ml	0.01
Spiked Amount 100.000	Range 35 - 114		Recovery = 77.34%			
40) 2-Fluorobiphenyl	13.32	172	250738	72.40	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 72.40%			
62) 2,4,6-Tribromophenol	15.69	330	59295	178.07	ug/ml	0.01
Spiked Amount 150.000	Range 10 - 123		Recovery = 118.71%			
76) Terphenyl-d14	19.44	244	183613	73.61	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 73.61%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.38	42	106935	71.75	ug/ml	95
3) Pyridine	4.40	79	76049	69.64	ug/ml	99
6) Aniline	8.89	93	81948	44.16	ug/ml#	15
7) Bis(2-chloroethyl) Ether	9.05	93	72381	61.54	ug/ml	80
9) Phenol	8.95	94	95251	59.14	ug/ml#	66
10) 2-Chlorophenol	9.09	128	89375	65.76	ug/ml	99
11) 1,3-Dichlorobenzene	9.32	146	100825	60.85	ug/ml	99
12) 1,4-Dichlorobenzene	9.47	146	106128	62.25	ug/ml	98
13) 1,2-Dichlorobenzene	9.70	146	100785	61.65	ug/ml	97
14) Benzyl Alcohol	9.71	108	53182	63.30	ug/ml	83
15) 2,2'-oxybis(2-chloropropan	9.94	45	113507m	63.23	ug/ml	
16) 2-Methylphenol	9.93	107	70082	71.61	ug/ml	83
17) Hexachloroethane	10.25	117	48080	63.98	ug/ml	100
18) N-Nitrosodi-n-propylamine	10.16	70	68777	71.53	ug/ml	98
19) 4-Methylphenol	10.19	107	97412	64.10	ug/ml	97
21) Nitrobenzene	10.40	77	104845	70.26	ug/ml	89
23) Isophorone	10.81	82	185706	80.03	ug/ml	98
24) 2-Nitrophenol	10.92	139	56955	76.26	ug/ml	77
25) 2,4-Dimethylphenol	11.05	122	55292	53.33	ug/ml	91
26) Bis(2-chloroethoxy)methane	11.19	93	97905	72.45	ug/ml	99
27) 2,4-Dichlorophenol	11.34	162	92833	75.50	ug/ml	95
28) Benzoic Acid	11.28	122	29188	54.75	ug/ml	92
29) 1,2,4-Trichlorobenzene	11.44	180	97275	68.40	ug/ml	99
30) Naphthalene	11.56	128	258984	66.12	ug/ml	98
32) 4-Chloroaniline	11.69	127	117320	66.90	ug/ml	93
33) Hexachlorobutadiene	11.77	225	74298	69.67	ug/ml	94
34) 4-Chloro-3-methylphenol	12.52	107	89999	86.94	ug/ml	94
35) 2-Methylnaphthalene	12.70	142	195493	73.01	ug/ml	96
37) Hexachlorocyclopentadiene	12.95	237	58155	54.10	ug/ml	98
38) 2,4,6-Trichlorophenol	13.18	196	73936	75.92	ug/ml	98
39) 2,4,5-Trichlorophenol	13.25	196	78362m	79.11	ug/ml	
41) 2-Chloronaphthalene	13.49	162	199355	67.30	ug/ml	98
42) 2-Nitroaniline	13.70	65	73181	76.17	ug/ml	96
43) Acenaphthylene	14.15	152	289871	74.27	ug/ml	99
44) Dimethyl Phthalate	14.01	163	225823	73.60	ug/ml	100
45) 2,6-Dinitrotoluene	14.10	165	49931	75.10	ug/ml#	69

(#) = qualifier out of range (m) = manual integration

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F005.D Vial: 21
Acq On : 4 Jan 2019 12:41 pm Operator: CConover
Sample : KQ1818722-03 | LCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 09 17:01:56 2019 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Acenaphthene	14.44	154	186897	71.93	ug/ml	97
47) 3-Nitroaniline	14.38	138	46032	68.37	ug/ml	93
48) 2,4-Dinitrophenol	14.55	184	22298	74.19	ug/ml#	79
49) Dibenzofuran	14.73	168	287624	72.35	ug/ml	87
50) 4-Nitrophenol	14.72	109	37056	73.92	ug/ml#	28
51) 2,4-Dinitrotoluene	14.76	165	60400	69.94	ug/ml	91
52) 2,3,4,6-Tetrachlorophenol	14.95	232	57836	80.33	ug/ml	99
53) Fluorene	15.29	166	221154	74.04	ug/ml	99
54) 4-Chlorophenyl Phenyl Ethe	15.31	204	122724	76.77	ug/ml	99
55) Diethyl Phthalate	15.17	149	208465	73.31	ug/ml	99
56) 4-Nitroaniline	15.37	138	41332	64.98	ug/ml	88
57) 2-Methyl-4,6-dinitrophenol	15.41	198	36079	73.78	ug/ml#	62
58) Diphenylamine	15.52	169	138277	76.20	ug/ml	98
59) Azobenzene	15.56	77	223587	65.41	ug/ml	98
63) 4-Bromophenyl Phenyl Ether	16.11	248	65266	87.93	ug/ml	92
64) Hexachlorobenzene	16.17	284	59674	84.95	ug/ml	87
66) Pentachlorophenol	16.51	266	30270	69.72	ug/ml	97
68) Phenanthrene	16.84	178	237321	73.54	ug/ml	99
69) Anthracene	16.92	178	250420	75.15	ug/ml	99
70) Carbazole	17.22	167	205108	64.13	ug/ml	100
71) Di-n-butyl Phthalate	17.83	149	271835	72.03	ug/ml	99
72) Fluoranthene	18.77	202	238572	70.39	ug/ml	99
74) Benzidine	19.04	184	1374	1.19	ug/ml	92
75) Pyrene	19.13	202	248862	72.12	ug/ml	99
77) Butyl Benzyl Phthalate	20.27	149	138387	77.54	ug/ml	93
79) 3,3'-Dichlorobenzidine	21.26	252	95405	71.97	ug/ml	97
80) Benz(a)anthracene	21.25	228	258033	76.93	ug/ml	99
81) Chrysene	21.34	228	237424	74.45	ug/ml	100
82) Bis(2-ethylhexyl) Phthalat	21.45	149	192857	78.89	ug/ml	97
84) Di-n-octyl Phthalate	22.94	149	298279	72.40	ug/ml	100
85) Benzo(b)fluoranthene	23.63	252	247257	72.32	ug/ml	99
86) Benzo(k)fluoranthene	23.71	252	242688	70.12	ug/ml	98
89) Benzo(a)pyrene	24.38	252	233748	74.48	ug/ml	98
90) Indeno(1,2,3-cd)pyrene	26.99	276	233023	72.71	ug/ml	95
91) Dibenz(a,h)anthracene	27.08	278	226503	71.25	ug/ml	96
92) Benzo(g,h,i)perylene	27.58	276	242078	74.70	ug/ml	95

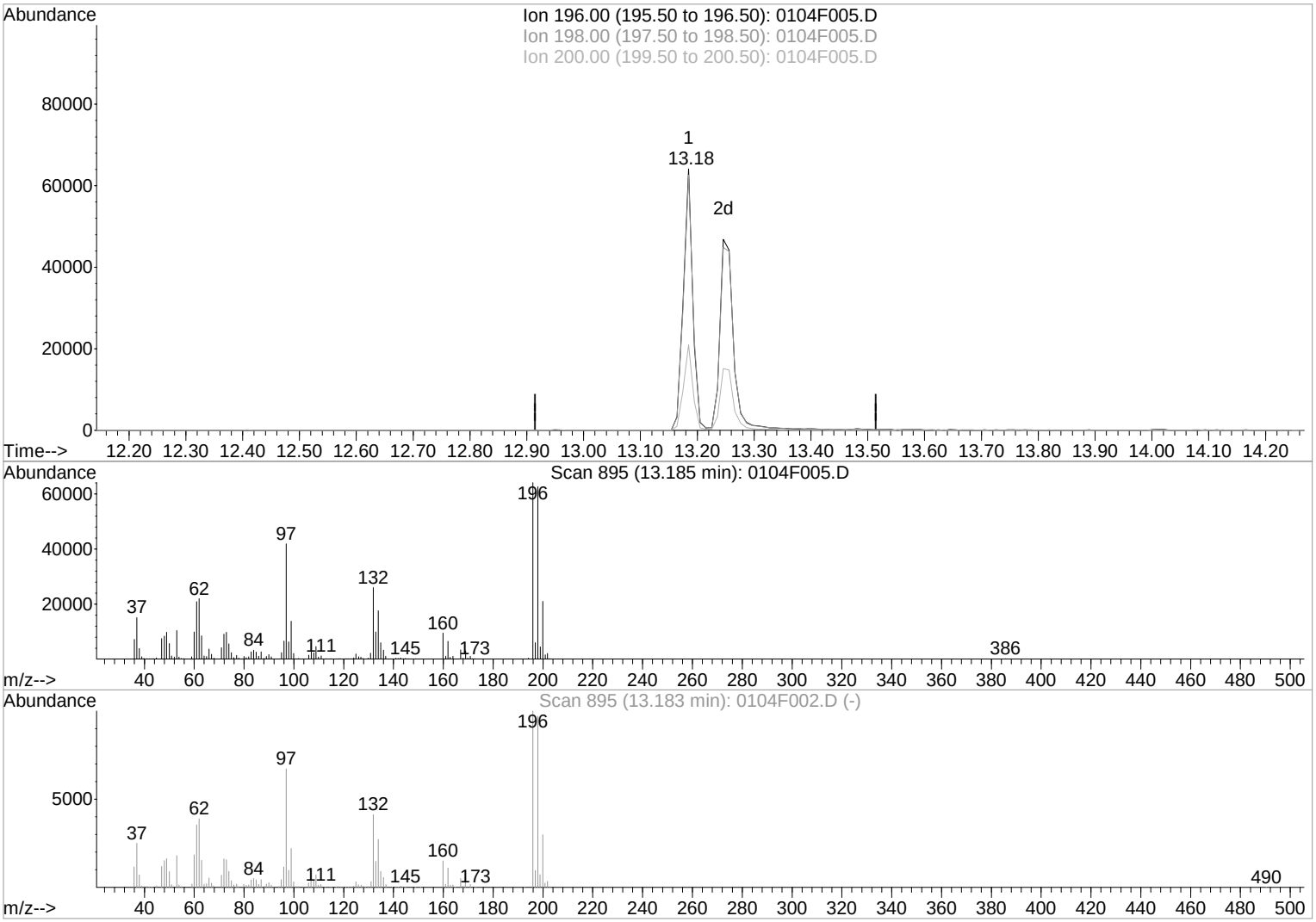
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F005.D Vial: 21
Acq On : 4 Jan 2019 12:41 pm Operator: CConover
Sample : KQ1818722-03 | LCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 9 17:06 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Multiple Level Calibration



TIC: 0104F005.D

(39) 2,4,5-Trichlorophenol (T)

13.18min 74.64ug/ml

response 73936

Ion	Exp%	Act%
196.00	100	100
198.00	98.10	97.51
200.00	33.10	32.72
0.00	0.00	0.00

Manual Integration:

Before

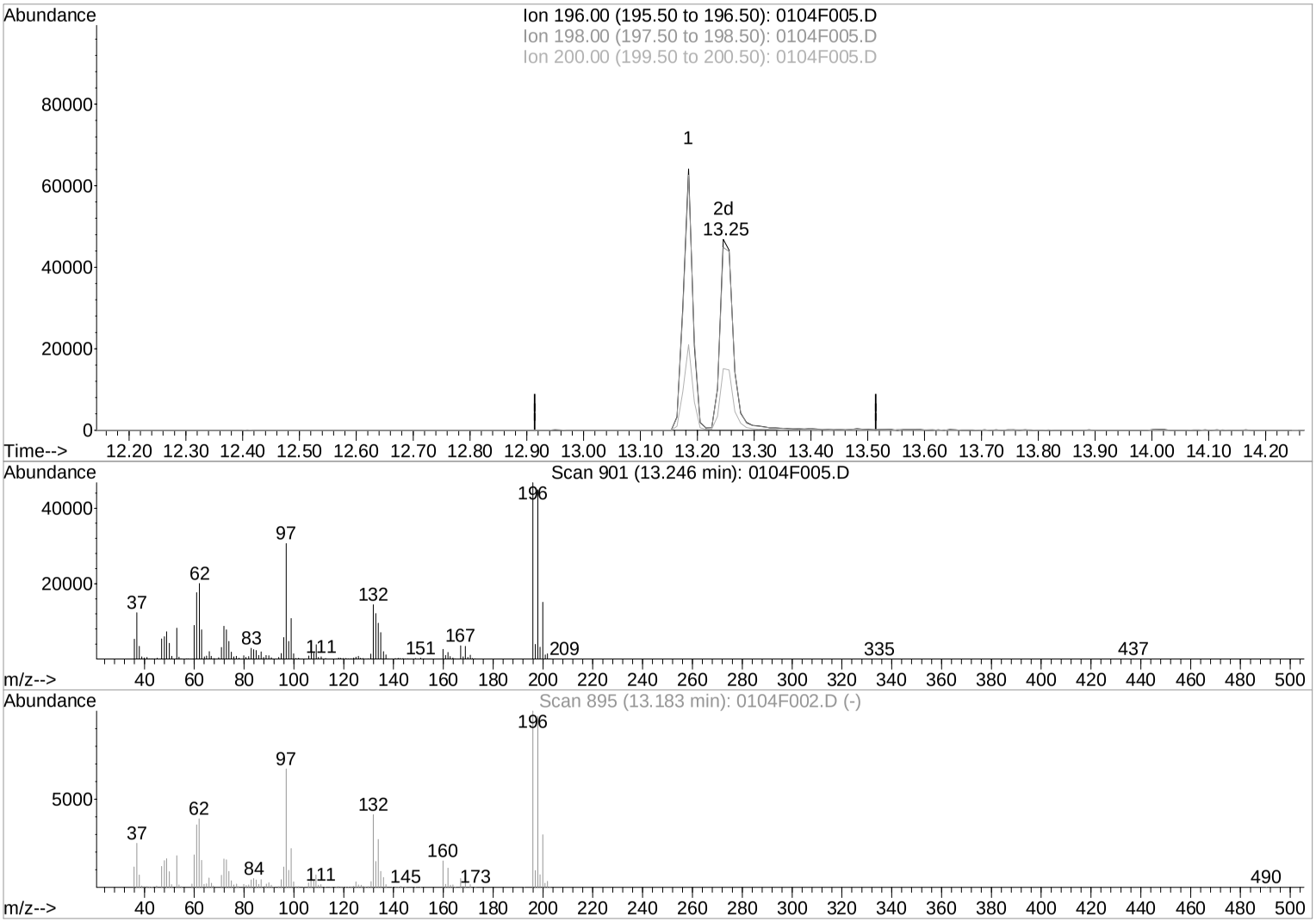
01/09/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F005.D Vial: 21
Acq On : 4 Jan 2019 12:41 pm Operator: CConover
Sample : KQ1818722-03 | LCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 9 17:06 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Multiple Level Calibration



TIC: 0104F005.D

(39) 2,4,5-Trichlorophenol (T)

13.25min 79.11ug/ml m

response 78362

Ion	Exp%	Act%
196.00	100	100
198.00	98.10	95.86
200.00	33.10	32.24
0.00	0.00	0.00

Manual Integration:

After

WP

01/09/19

1st 01/10/19
2nd 01/10/19

Validation Report

Data File: J:\MS07\DATA\010419\0104F006.D\
Lab ID: KQ1818722-01
RunType: MS
Matrix: Soil

Date Acquired: 1/4/19 13:21:00
Batch ID: 621360
Analysis Method: 8270D/SVO TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	2,4,6-Tribromophenol	38		20	OK, <40%

Primary Review: _____

Printed: 1/10/19 12:23
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Secondary Review: _____

1st 01/10/19
2nd 01/10/19

Quantitation Report

Data File:	J:\MS07\DATA\010419\0104F006.D\	**Instrument:**	K-MS-07
Acqu Date:	1/4/19 13:21:00	**Vial:**	8
Run Type:	MS	**Dilution:**	1
Lab ID:	KQ1818722-01	**Raw Units:**	ug/mL

Bottle ID:	K1812382-001.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	SVO TCLP	**Collect Date:**	12/9/18	**Receive Date:**	12/18/18

Analysis Lot:	621360	**Prep Lot:**	328902	**Report Group:**	KQ1818722
Analysis	8270D	**Prep Method:**	EPA 3510C		
		Prep Date:	12/26/18		

Title:	TCLP Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800550
		Report List ID:	18580

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
1,4-Dichlorobenzene-d4	9.43		38874	40.00	OK
Acenaphthene-d10	14.39		89816	40.00	OK
Chrysene-d12	21.28		109441	40.00	OK
Naphthalene-d8	11.53		138331	40.00	OK
Perylene-d12	24.51		114027	40.00	OK
Phenanthrene-d10	16.81	+0.01	120708	40.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
2,4,6-Tribromophenol	15.69		62190	179.09	119	52 - 122	Y
2-Fluorobiphenyl	13.32		245559	73.23	73	44 - 114	Y
Nitrobenzene-d5	10.37	+0.01	114406	85.79	86	45 - 122	Y
Phenol-d6	8.92		136805	108.58	72	35 - 105	Y
p-Terphenyl-d14	19.43		185726	74.06	74	50 - 145	Y

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4,5-Trichlorophenol, TCLP	13.25	+0.07	74438	77.62	0.776		Y
2,4,6-Trichlorophenol, TCLP	13.18		69202	73.39	0.734		Y
2,4-Dinitrotoluene, TCLP	14.76		63195	75.58	0.756		Y
2-Methylphenol, TCLP	9.93	-0.03	67384	76.76	0.768		Y
4-Methylphenol, TCLP	10.19	-0.02	92959	68.20	0.682		Y
Hexachlorobenzene, TCLP	16.17		59756	81.57	0.816		Y
Hexachlorobutadiene, TCLP	11.77		71556	73.95	0.740		Y
Hexachloroethane, TCLP	10.25		46154	68.46	0.685		Y
Nitrobenzene, TCLP	10.40		97744	73.01	0.730		Y
Pentachlorophenol (PCP), TCLP	16.51		33747	73.61	0.736		Y

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

1st 01/10/19

2nd 01/10/19

Data File:	J:\MS07\DATA\010419\0104F006.D\	**Instrument:**	K-MS-07
Acqu Date:	1/4/19 13:21:00	**Vial:**	8
Run Type:	MS	**Dilution:**	1
Lab ID:	KQ1818722-01	**Raw Units:**	ug/mL

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Pyridine, TCLP	4.43	+0.03	104945	107.14	1.07		Y

Prep Amount:	100 mL	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Printed: 1/10/19 12:23

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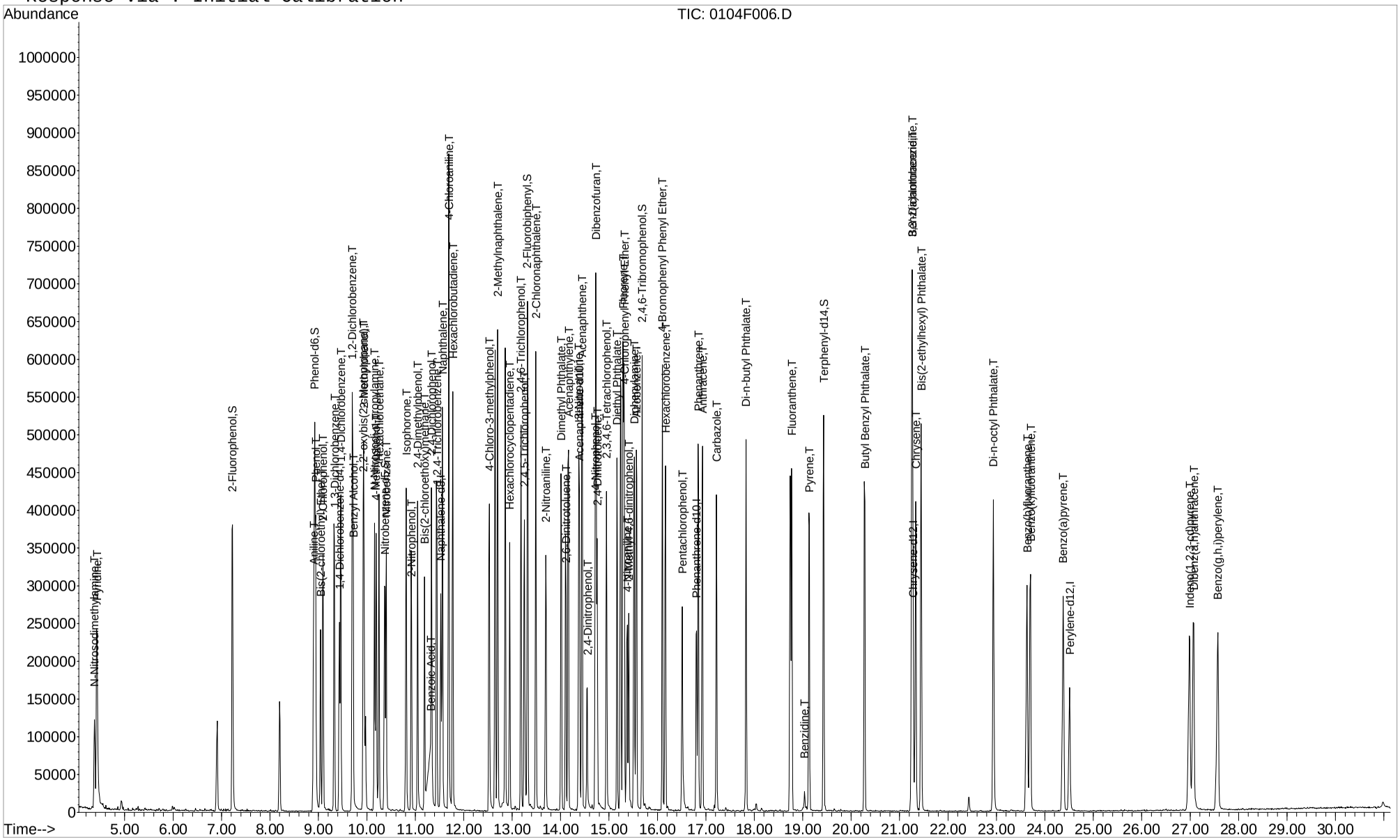
Data File : J:\MS07\DATA\010419\0104F006.D Vial: 22
Acq On : 4 Jan 2019 1:21 pm Operator: CConover
Sample : KQ1818722-01 | MS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 9 17:08 2019 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Initial Calibration



1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F006.D Vial: 22
Acq On : 4 Jan 2019 1:21 pm Operator: CConover
Sample : KQ1818722-01 | MS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 09 17:01:57 2019 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.43	152	38874	40.00	ug/ml	0.00
22) Naphthalene-d8	11.53	136	138331	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.39	164	89816	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.81	188	120708	40.00	ug/ml	0.00
73) Chrysene-d12	21.28	240	109441	40.00	ug/ml	0.00
83) Perylene-d12	24.51	264	114027	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.23	112	113187	111.71	ug/ml	0.04
Spiked Amount 150.000	Range 21 - 100		Recovery = 74.47%			
8) Phenol-d6	8.92	99	136805	108.58	ug/ml	0.06
Spiked Amount 150.000	Range 10 - 94		Recovery = 72.39%			
20) Nitrobenzene-d5	10.37	82	114406	85.79	ug/ml	0.02
Spiked Amount 100.000	Range 35 - 114		Recovery = 85.79%			
40) 2-Fluorobiphenyl	13.32	172	245559	73.23	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 73.23%			
62) 2,4,6-Tribromophenol	15.69	330	62190	179.09	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 119.39%			
76) Terphenyl-d14	19.43	244	185726	74.06	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 74.06%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.38	42	108408	81.09	ug/ml	92
3) Pyridine	4.43	79	104945	107.14	ug/ml	100
6) Aniline	8.90	93	78375	47.08	ug/ml#	39
7) Bis(2-chloroethyl) Ether	9.05	93	70388	66.72	ug/ml	90
9) Phenol	8.94	94	89965	62.27	ug/ml#	70
10) 2-Chlorophenol	9.10	128	86693	71.11	ug/ml	99
11) 1,3-Dichlorobenzene	9.33	146	100446	67.58	ug/ml	98
12) 1,4-Dichlorobenzene	9.46	146	104479	68.32	ug/ml	96
13) 1,2-Dichlorobenzene	9.70	146	99280	67.70	ug/ml	96
14) Benzyl Alcohol	9.72	108	48081	63.80	ug/ml	90
15) 2,2'-oxybis(2-chloropropan	9.92	45	109797m	68.19	ug/ml	
16) 2-Methylphenol	9.93	107	67384	76.76	ug/ml	85
17) Hexachloroethane	10.25	117	46154	68.46	ug/ml	100
18) N-Nitrosodi-n-propylamine	10.16	70	62857	72.87	ug/ml	99
19) 4-Methylphenol	10.19	107	92959	68.20	ug/ml	95
21) Nitrobenzene	10.40	77	97744	73.01	ug/ml	96
23) Isophorone	10.81	82	170332	80.90	ug/ml	99
24) 2-Nitrophenol	10.93	139	54250	80.06	ug/ml	93
25) 2,4-Dimethylphenol	11.05	122	59464	63.21	ug/ml	93
26) Bis(2-chloroethoxy)methane	11.19	93	87659	71.49	ug/ml	99
27) 2,4-Dichlorophenol	11.33	162	86635	77.66	ug/ml	98
28) Benzoic Acid	11.31	122	43047	80.27	ug/ml	99
29) 1,2,4-Trichlorobenzene	11.45	180	92043	71.34	ug/ml	100
30) Naphthalene	11.56	128	244925	68.92	ug/ml	98
32) 4-Chloroaniline	11.69	127	108704	68.32	ug/ml	93
33) Hexachlorobutadiene	11.77	225	71556	73.95	ug/ml	98
34) 4-Chloro-3-methylphenol	12.53	107	81517	86.79	ug/ml	98
35) 2-Methylnaphthalene	12.70	142	181989	74.91	ug/ml	99
37) Hexachlorocyclopentadiene	12.95	237	55768	53.66	ug/ml	99
38) 2,4,6-Trichlorophenol	13.18	196	69202	73.39	ug/ml	98
39) 2,4,5-Trichlorophenol	13.25	196	74438m	77.62	ug/ml	
41) 2-Chloronaphthalene	13.49	162	179107	62.45	ug/ml	99
42) 2-Nitroaniline	13.69	65	70505	75.79	ug/ml	98
43) Acenaphthylene	14.16	152	270527	71.59	ug/ml	99
44) Dimethyl Phthalate	14.01	163	218780	73.65	ug/ml	99
45) 2,6-Dinitrotoluene	14.11	165	48970	76.07	ug/ml	95

(#) = qualifier out of range (m) = manual integration

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F006.D Vial: 22
Acq On : 4 Jan 2019 1:21 pm Operator: CConover
Sample : KQ1818722-01 | MS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 09 17:01:57 2019 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Acenaphthene	14.45	154	175252	69.66	ug/ml	97
47) 3-Nitroaniline	14.38	138	45242	69.40	ug/ml	91
48) 2,4-Dinitrophenol	14.55	184	27014	86.23	ug/ml	87
49) Dibenzofuran	14.73	168	275593	71.60	ug/ml	82
50) 4-Nitrophenol	14.71	109	37845m	77.97	ug/ml	
51) 2,4-Dinitrotoluene	14.76	165	63195	75.58	ug/ml	85
52) 2,3,4,6-Tetrachlorophenol	14.95	232	57759	82.85	ug/ml	96
53) Fluorene	15.29	166	205545	71.07	ug/ml	99
54) 4-Chlorophenyl Phenyl Ethe	15.32	204	116711	75.41	ug/ml	88
55) Diethyl Phthalate	15.16	149	205597	74.68	ug/ml	90
56) 4-Nitroaniline	15.38	138	40014	64.97	ug/ml	88
57) 2-Methyl-4,6-dinitrophenol	15.41	198	36151	75.83	ug/ml	76
58) Diphenylamine	15.52	169	139141	79.20	ug/ml	99
59) Azobenzene	15.56	77	219718m	66.38	ug/ml	
63) 4-Bromophenyl Phenyl Ether	16.10	248	62064	80.18	ug/ml	96
64) Hexachlorobenzene	16.17	284	59756	81.57	ug/ml	90
66) Pentachlorophenol	16.51	266	33747	73.61	ug/ml	97
68) Phenanthrene	16.84	178	247244	73.46	ug/ml	100
69) Anthracene	16.93	178	250265	72.01	ug/ml	99
70) Carbazole	17.22	167	206443	61.89	ug/ml	99
71) Di-n-butyl Phthalate	17.83	149	263763	67.78	ug/ml	98
72) Fluoranthene	18.77	202	233011	66.55	ug/ml	99
74) Benzidine	19.04	184	11181	9.62	ug/ml	95
75) Pyrene	19.14	202	236666	68.22	ug/ml	99
77) Butyl Benzyl Phthalate	20.28	149	132654	73.94	ug/ml	94
79) 3,3'-Dichlorobenzidine	21.26	252	94624	71.00	ug/ml	96
80) Benz(a)anthracene	21.26	228	253014	75.04	ug/ml	99
81) Chrysene	21.33	228	228503	71.27	ug/ml	100
82) Bis(2-ethylhexyl) Phthalat	21.45	149	189149	76.96	ug/ml	99
84) Di-n-octyl Phthalate	22.94	149	300279	73.03	ug/ml	100
85) Benzo(b)fluoranthene	23.63	252	234293	68.67	ug/ml	98
86) Benzo(k)fluoranthene	23.70	252	235425	68.16	ug/ml	98
89) Benzo(a)pyrene	24.38	252	227378	72.60	ug/ml	97
90) Indeno(1,2,3-cd)pyrene	26.99	276	225467	70.50	ug/ml	94
91) Dibenz(a,h)anthracene	27.07	278	218144	68.76	ug/ml	96
92) Benzo(g,h,i)perylene	27.57	276	231370	71.54	ug/ml	94

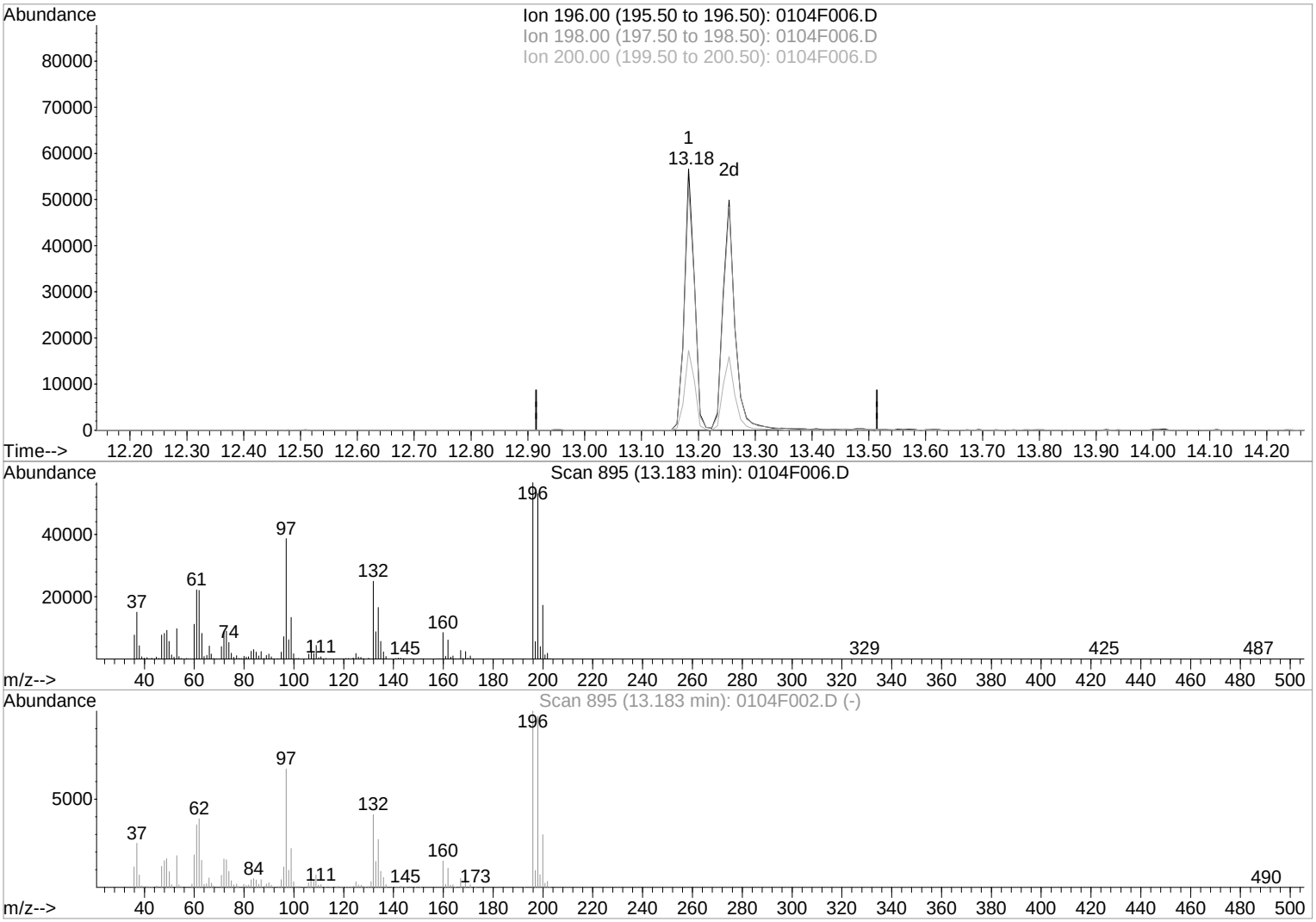
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F006.D Vial: 22
Acq On : 4 Jan 2019 1:21 pm Operator: CConover
Sample : KQ1818722-01 | MS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 9 17:07 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Multiple Level Calibration



TIC: 0104F006.D

(39) 2,4,5-Trichlorophenol (T)

13.18min 72.16ug/ml

response 69202

Ion	Exp%	Act%
196.00	100	100
198.00	98.10	93.60
200.00	33.10	30.63
0.00	0.00	0.00

Manual Integration:

Before

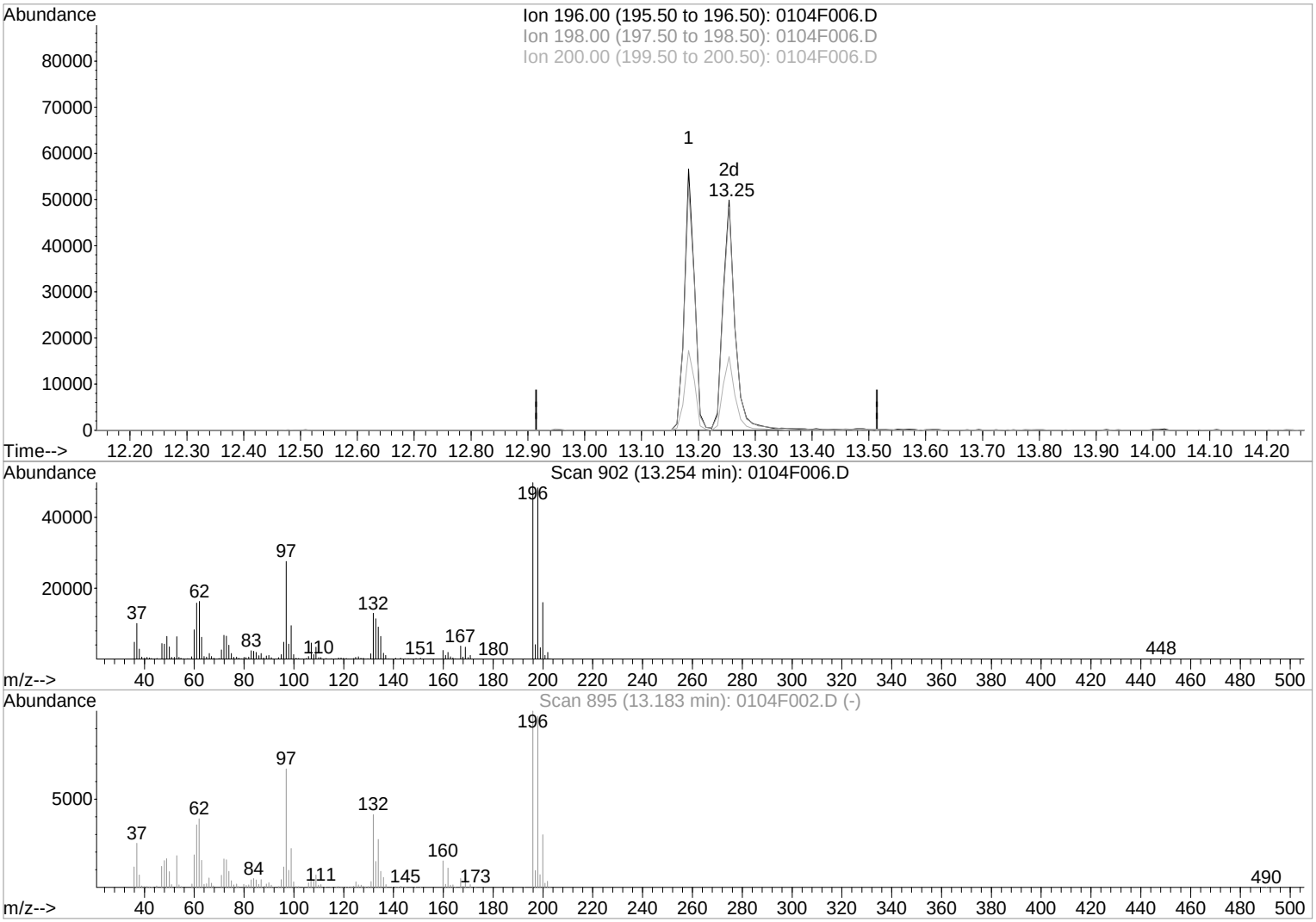
01/09/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F006.D Vial: 22
Acq On : 4 Jan 2019 1:21 pm Operator: CConover
Sample : KQ1818722-01 | MS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 9 17:07 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Multiple Level Calibration



TIC: 0104F006.D

(39) 2,4,5-Trichlorophenol (T)

13.25min 77.62ug/ml m

response 74438

Ion	Exp%	Act%
196.00	100	100
198.00	98.10	97.00
200.00	33.10	32.05
0.00	0.00	0.00

Manual Integration:

After

WP

01/09/19

1st 01/10/19
2nd 01/10/19

Validation Report

Data File: J:\MS07\DATA\010419\0104F007.D\
Lab ID: KQ1818722-02
RunType: DMS
Matrix: Soil

Date Acquired: 1/4/19 14:02:00
Batch ID: 621360
Analysis Method: 8270D/SVO TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	2,4,6-Tribromophenol	38		20	OK, <40%

Primary Review: _____

Secondary Review: _____

1st 01/10/19
2nd 01/10/19

Quantitation Report

Data File:	J:\MS07\DATA\010419\0104F007.D\	**Instrument:**	K-MS-07
Acqu Date:	1/4/19 14:02:00	**Vial:**	9
Run Type:	DMS	**Dilution:**	1
Lab ID:	KQ1818722-02	**Raw Units:**	ug/mL

Bottle ID:	K1812382-001.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	SVO TCLP	**Collect Date:**	12/9/18	**Receive Date:**	12/18/18

Analysis Lot:	621360	**Prep Lot:**	328902	**Report Group:**	KQ1818722
Analysis	8270D	**Prep Method:**	EPA 3510C		
		Prep Date:	12/26/18		

Title:	TCLP Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800550
		Report List ID:	18580

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
1,4-Dichlorobenzene-d4	9.43		38789	40.00	OK
Acenaphthene-d10	14.39		87625	40.00	OK
Chrysene-d12	21.28		112615	40.00	OK
Naphthalene-d8	11.53		137320	40.00	OK
Perylene-d12	24.51		114811	40.00	OK
Phenanthrene-d10	16.81	+0.01	123843	40.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
2,4,6-Tribromophenol	15.68	-0.01	60594	170.08	113	52 - 122	Y
2-Fluorobiphenyl	13.33	+0.01	246257	75.28	75	44 - 114	Y
Nitrobenzene-d5	10.36		111166	83.54	84	45 - 122	Y
Phenol-d6	8.92		128313	102.06	68	35 - 105	Y
p-Terphenyl-d14	19.43		192553	74.62	75	50 - 145	Y

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4,5-Trichlorophenol, TCLP	13.25	+0.07	74221	79.32	0.793		Y
2,4,6-Trichlorophenol, TCLP	13.18		70388	76.51	0.765		Y
2,4-Dinitrotoluene, TCLP	14.76		61674	75.60	0.756		Y
2-Methylphenol, TCLP	9.93	-0.03	63992	73.05	0.731		Y
4-Methylphenol, TCLP	10.19	-0.02	95443	70.17	0.702		Y
Hexachlorobenzene, TCLP	16.16	-0.01	61672	82.05	0.821		Y
Hexachlorobutadiene, TCLP	11.77		70896	73.81	0.738		Y
Hexachloroethane, TCLP	10.25		42489	63.16	0.632		Y
Nitrobenzene, TCLP	10.40		100286	75.08	0.751		Y
Pentachlorophenol (PCP), TCLP	16.51		36865	77.46	0.775		Y

1st 01/10/19

2nd 01/10/19

Data File:	J:\MS07\DATA\010419\0104F007.D\	**Instrument:**	K-MS-07
Acqu Date:	1/4/19 14:02:00	**Vial:**	9
Run Type:	DMS	**Dilution:**	1
Lab ID:	KQ1818722-02	**Raw Units:**	ug/mL

Target Compounds

Final Conc.Units: mg/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Pyridine, TCLP	4.42	+0.02	97509	99.76	0.998		Y

Prep Amount:	100 mL	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	100.00

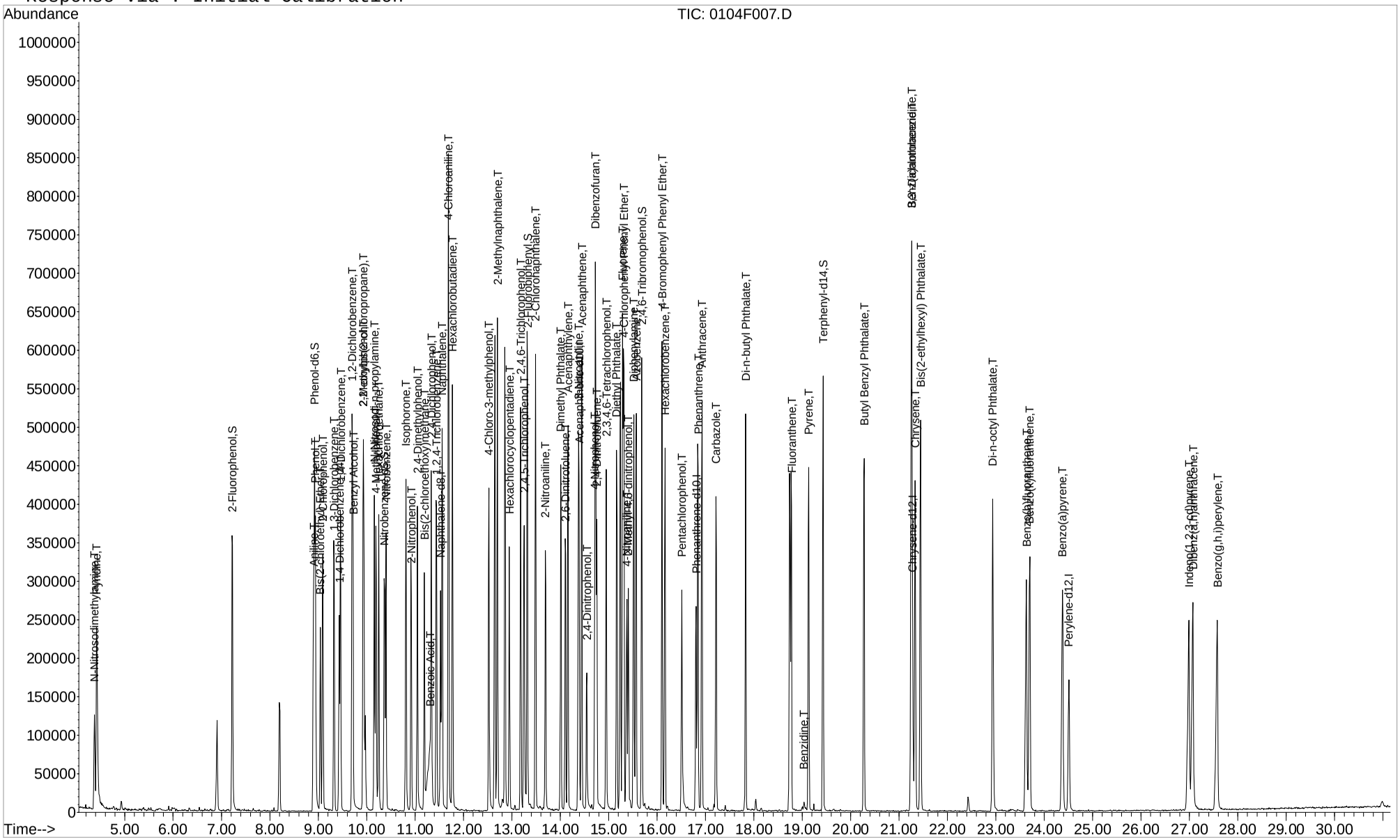
U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS07\DATA\010419\0104F007.D Vial: 23
Acq On : 4 Jan 2019 2:02 pm Operator: CConover
Sample : KQ1818722-02 | DMS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 9 17:10 2019 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Initial Calibration



1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F007.D Vial: 23
Acq On : 4 Jan 2019 2:02 pm Operator: CConover
Sample : KQ1818722-02 | DMS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 09 17:01:58 2019 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.43	152	38789	40.00	ug/ml	0.00
22) Naphthalene-d8	11.53	136	137320	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.39	164	87625	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.81	188	123843	40.00	ug/ml	0.00
73) Chrysene-d12	21.28	240	112615	40.00	ug/ml	0.00
83) Perylene-d12	24.51	264	114811	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.23	112	107208	106.04	ug/ml	0.04
Spiked Amount 150.000	Range 21 - 100		Recovery = 70.69%			
8) Phenol-d6	8.92	99	128313	102.06	ug/ml	0.06
Spiked Amount 150.000	Range 10 - 94		Recovery = 68.04%			
20) Nitrobenzene-d5	10.36	82	111166	83.54	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 83.54%			
40) 2-Fluorobiphenyl	13.33	172	246257	75.28	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 75.28%			
62) 2,4,6-Tribromophenol	15.68	330	60594	170.08	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 113.39%			
76) Terphenyl-d14	19.43	244	192553	74.62	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 74.62%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.38	42	107154	80.33	ug/ml	97
3) Pyridine	4.42	79	97509	99.76	ug/ml	100
6) Aniline	8.90	93	73507	44.26	ug/ml#	12
7) Bis(2-chloroethyl) Ether	9.05	93	68653	65.21	ug/ml	88
9) Phenol	8.94	94	88890	61.66	ug/ml#	72
10) 2-Chlorophenol	9.10	128	84631	69.57	ug/ml	97
11) 1,3-Dichlorobenzene	9.33	146	89539	60.38	ug/ml	98
12) 1,4-Dichlorobenzene	9.46	146	92754	60.78	ug/ml	97
13) 1,2-Dichlorobenzene	9.70	146	91526	62.55	ug/ml	96
14) Benzyl Alcohol	9.72	108	49077	65.26	ug/ml	93
15) 2,2'-oxybis(2-chloropropan	9.93	45	105815m	65.86	ug/ml	
16) 2-Methylphenol	9.93	107	63992	73.05	ug/ml	82
17) Hexachloroethane	10.25	117	42489	63.16	ug/ml	98
18) N-Nitrosodi-n-propylamine	10.16	70	64943	75.46	ug/ml	95
19) 4-Methylphenol	10.19	107	95443	70.17	ug/ml	93
21) Nitrobenzene	10.40	77	100286	75.08	ug/ml	96
23) Isophorone	10.81	82	172024	82.30	ug/ml	98
24) 2-Nitrophenol	10.92	139	53816	80.00	ug/ml	92
25) 2,4-Dimethylphenol	11.05	122	58312	62.45	ug/ml	97
26) Bis(2-chloroethoxy)methane	11.19	93	90558	74.40	ug/ml	97
27) 2,4-Dichlorophenol	11.33	162	88646	80.04	ug/ml	99
28) Benzoic Acid	11.31	122	45516	84.45	ug/ml	96
29) 1,2,4-Trichlorobenzene	11.45	180	89866	70.16	ug/ml	97
30) Naphthalene	11.56	128	240532	68.18	ug/ml	99
32) 4-Chloroaniline	11.69	127	107410	68.00	ug/ml	90
33) Hexachlorobutadiene	11.77	225	70896	73.81	ug/ml	99
34) 4-Chloro-3-methylphenol	12.53	107	84754	90.90	ug/ml	99
35) 2-Methylnaphthalene	12.70	142	176942	73.37	ug/ml	99
37) Hexachlorocyclopentadiene	12.95	237	54899	54.07	ug/ml	100
38) 2,4,6-Trichlorophenol	13.18	196	70388	76.51	ug/ml	98
39) 2,4,5-Trichlorophenol	13.25	196	74221m	79.32	ug/ml	
41) 2-Chloronaphthalene	13.49	162	183182	65.47	ug/ml	100
42) 2-Nitroaniline	13.69	65	71087	78.33	ug/ml	97
43) Acenaphthylene	14.16	152	273604	74.21	ug/ml	99
44) Dimethyl Phthalate	14.01	163	222536	76.78	ug/ml	99
45) 2,6-Dinitrotoluene	14.11	165	51437	81.90	ug/ml	97

(#) = qualifier out of range (m) = manual integration

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F007.D Vial: 23
Acq On : 4 Jan 2019 2:02 pm Operator: CConover
Sample : KQ1818722-02 | DMS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 09 17:01:58 2019 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Acenaphthene	14.45	154	175047	71.32	ug/ml	98
47) 3-Nitroaniline	14.38	138	47448	74.61	ug/ml	89
48) 2,4-Dinitrophenol	14.55	184	28327	90.53	ug/ml	83
49) Dibenzofuran	14.72	168	273041	72.71	ug/ml	82
50) 4-Nitrophenol	14.71	109	39539	83.50	ug/ml#	55
51) 2,4-Dinitrotoluene	14.76	165	61674	75.60	ug/ml	81
52) 2,3,4,6-Tetrachlorophenol	14.95	232	60257	88.60	ug/ml	92
53) Fluorene	15.29	166	208508	73.90	ug/ml	99
54) 4-Chlorophenyl Phenyl Ethe	15.32	204	116636	77.24	ug/ml	89
55) Diethyl Phthalate	15.16	149	216513	80.61	ug/ml	97
56) 4-Nitroaniline	15.38	138	41150	68.48	ug/ml	82
57) 2-Methyl-4,6-dinitrophenol	15.41	198	38015	80.55	ug/ml#	71
58) Diphenylamine	15.52	169	140689	82.08	ug/ml	99
59) Azobenzene	15.57	77	222805	69.00	ug/ml	94
63) 4-Bromophenyl Phenyl Ether	16.10	248	63178	79.55	ug/ml	96
64) Hexachlorobenzene	16.16	284	61672	82.05	ug/ml	90
66) Pentachlorophenol	16.51	266	36865	77.46	ug/ml	99
68) Phenanthrene	16.85	178	250802	72.63	ug/ml	99
69) Anthracene	16.93	178	258002	72.36	ug/ml	99
70) Carbazole	17.22	167	214558	62.70	ug/ml	99
71) Di-n-butyl Phthalate	17.83	149	273954	68.49	ug/ml	98
72) Fluoranthene	18.78	202	241135	67.05	ug/ml	98
74) Benzidine	19.04	184	4776	4.00	ug/ml	96
75) Pyrene	19.14	202	246245	68.98	ug/ml	99
77) Butyl Benzyl Phthalate	20.28	149	137552	74.51	ug/ml	93
79) 3,3'-Dichlorobenzidine	21.26	252	96890	70.65	ug/ml	99
80) Benz(a)anthracene	21.26	228	257809	74.30	ug/ml	100
81) Chrysene	21.33	228	238324	72.24	ug/ml	98
82) Bis(2-ethylhexyl) Phthalat	21.45	149	196961	77.88	ug/ml	98
84) Di-n-octyl Phthalate	22.94	149	305921	73.90	ug/ml	99
85) Benzo(b)fluoranthene	23.63	252	242230	70.51	ug/ml	99
86) Benzo(k)fluoranthene	23.70	252	241080	69.32	ug/ml	99
89) Benzo(a)pyrene	24.38	252	233077	73.92	ug/ml	98
90) Indeno(1,2,3-cd)pyrene	26.99	276	224577m	69.74	ug/ml	
91) Dibenz(a,h)anthracene	27.07	278	223973	70.12	ug/ml	96
92) Benzo(g,h,i)perylene	27.57	276	235963	72.46	ug/ml	96

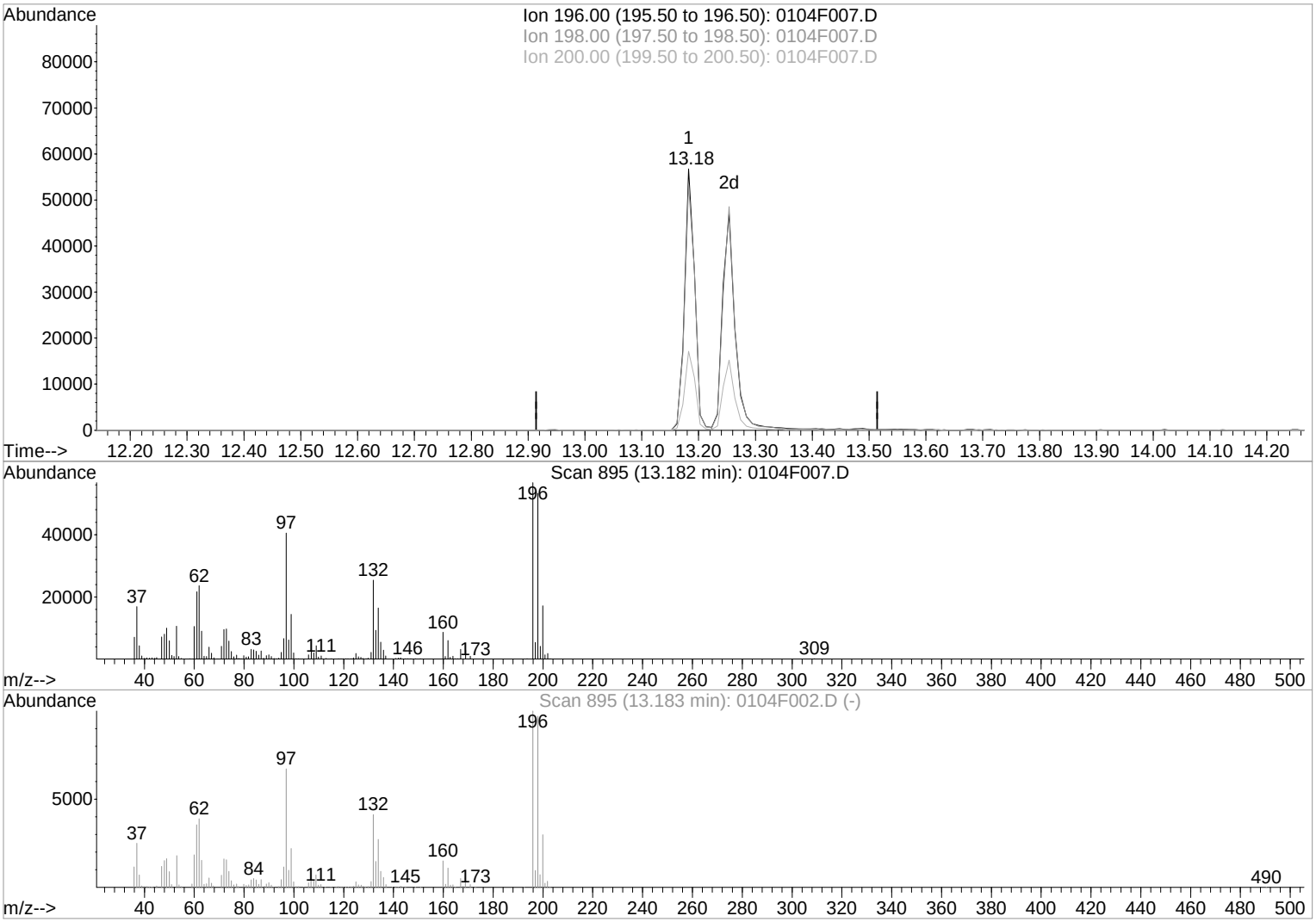
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F007.D Vial: 23
Acq On : 4 Jan 2019 2:02 pm Operator: CConover
Sample : KQ1818722-02 | DMS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 9 17:09 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Multiple Level Calibration



TIC: 0104F007.D

(39) 2,4,5-Trichlorophenol (T)

13.18min 75.23ug/ml

response 70388

Ion	Exp%	Act%
196.00	100	100
198.00	98.10	93.95
200.00	33.10	30.20
0.00	0.00	0.00

Manual Integration:

Before

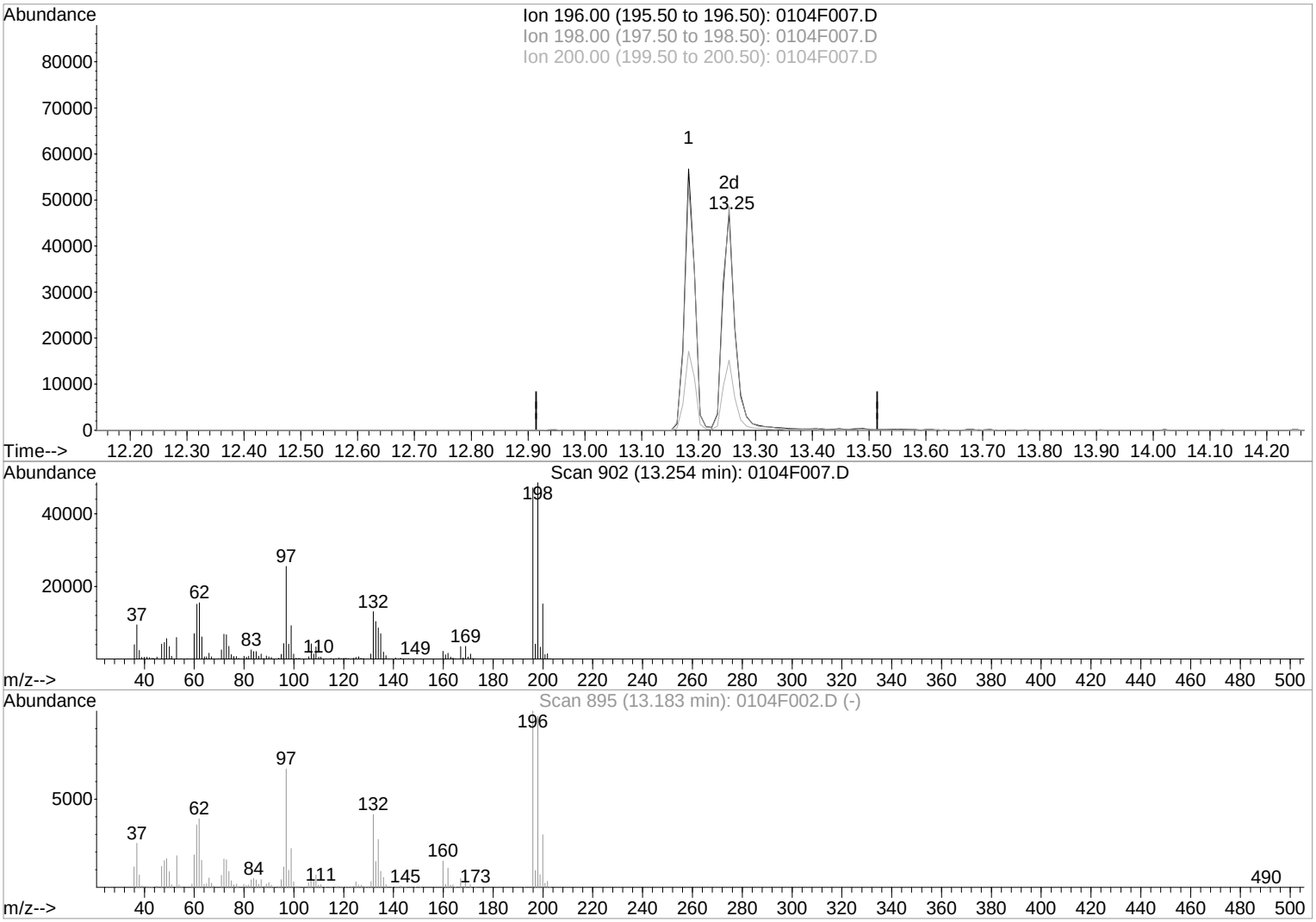
01/09/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F007.D Vial: 23
Acq On : 4 Jan 2019 2:02 pm Operator: CConover
Sample : KQ1818722-02 | DMS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 9 17:09 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Multiple Level Calibration



TIC: 0104F007.D

(39) 2,4,5-Trichlorophenol (T)

13.25min 79.32ug/ml m

response 74221

Ion	Exp%	Act%
196.00	100	100
198.00	98.10	103.06
200.00	33.10	32.33
0.00	0.00	0.00

Manual Integration:

After

WP

01/09/19

1st 01/10/19
2nd 01/10/19

Validation Report

Data File: J:\MS07\DATA\010419\0104F002.D\
Lab ID: KQ1900290-04
RunType: CCV
Matrix: Storm Water

Date Acquired: 1/4/19 10:39:00
Batch ID: 621360
Analysis Method: 8270D/SVO

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Internal Standards	X	
Above Highest ICAL Level	X	

Primary Review: _____

Printed: 1/10/19 12:23
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Secondary Review: _____

1st 01/10/19
2nd 01/10/19

Quantitation Report

Data File:	J:\MS07\DATA\010419\0104F002.D\	**Instrument:**	K-MS-07
Acqu Date:	1/4/19 10:39:00	**Vial:**	2
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1900290-02	**Raw Units:**	ug/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	SVO TCLP	**Collect Date:**	12/9/18	**Receive Date:**	12/18/18

Analysis Lot:	621360	**Prep Lot:**		**Report Group:**	KQ1900290
Analysis	8270D	**Prep Method:**			
		Prep Date:			

Title:	TCLP Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800550
		Report List ID:	18580

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
1,4-Dichlorobenzene-d4	9.43		37441	40.00	OK
Acenaphthene-d10	14.39		84343	40.00	OK
Chrysene-d12	21.28		105835	40.00	OK
Naphthalene-d8	11.53		135929	40.00	OK
Perylene-d12	24.51		104929	40.00	OK
Phenanthrene-d10	16.80		117734	40.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
2,4,6-Tribromophenol	15.69		37371	110.34	Y
2-Fluorobiphenyl	13.32		231665	73.57	Y
Nitrobenzene-d5	10.36		109794	85.48	Y
Phenol-d6	8.92		96308	79.36	Y
p-Terphenyl-d14	19.43		185730	76.59	Y

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
2,4,5-Trichlorophenol, TCLP	13.18		69338	76.99	Y
2,4,6-Trichlorophenol, TCLP	13.18		69338	78.30	Y
2,4-Dinitrotoluene, TCLP	14.76		65716	83.69	Y
2-Methylphenol, TCLP	9.96		72672	85.95	Y
4-Methylphenol, TCLP	10.21		101658	77.43	Y
Hexachlorobenzene, TCLP	16.17		64226	89.88	Y
Hexachlorobutadiene, TCLP	11.77		80553	84.72	Y
Hexachloroethane, TCLP	10.25		55226	85.06	Y
Nitrobenzene, TCLP	10.40		104602	81.13	Y
Pentachlorophenol (PCP), TCLP	16.51		33470	74.62	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Printed: 1/10/19 12:23
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1st 01/10/19

2nd 01/10/19

Data File:	J:\MS07\DATA\010419\0104F002.D\	**Instrument:**	K-MS-07
Acqu Date:	1/4/19 10:39:00	**Vial:**	2
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1900290-02	**Raw Units:**	ug/mL

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Pyridine, TCLP	4.40		68922	73.05	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Printed: 1/10/19 12:23

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1st 01/10/19
2nd 01/10/19

Quantitation Report

Data File:	J:\MS07\DATA\010419\0104F002.D\	**Instrument:**	K-MS-07
Acqu Date:	1/4/19 10:39:00	**Vial:**	4
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1900290-04	**Raw Units:**	ug/mL

Bottle ID:		**Tier:**	II	**Matrix:**	Storm Water
Prod Code:	SVO	**Collect Date:**	12/18/18	**Receive Date:**	12/19/18

Analysis Lot:	621360	**Prep Lot:**		**Report Group:**	KQ1900290
Analysis	8270D	**Prep Method:**			
		Prep Date:			

Title:	Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800550
		Report List ID:	18699

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
1,4-Dichlorobenzene-d4	9.43		37441	40.00	OK
Acenaphthene-d10	14.39		84343	40.00	OK
Chrysene-d12	21.28		105835	40.00	OK
Naphthalene-d8	11.53		135929	40.00	OK
Perylene-d12	24.51		104929	40.00	OK
Phenanthrene-d10	16.80		117734	40.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
2,4,6-Tribromophenol	15.69		37371	110.34	Y
2-Fluorobiphenyl	13.32		231665	73.57	Y
2-Fluorophenol	7.23		78041	79.97	Y
Nitrobenzene-d5	10.36		109794	85.48	Y
Phenol-d6	8.92		96308	79.36	Y
Terphenyl-d14	19.43		185730	76.59	Y

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
1,2,4-Trichlorobenzene	11.44		104039	82.06	Y
1,2-Dichlorobenzene	9.70		108936	77.13	Y
1,3-Dichlorobenzene	9.32		113445	79.25	Y
1,4-Dichlorobenzene	9.45		116607	79.16	Y
2,4,5-Trichlorophenol	13.18		69338	76.99	Y
2,4,6-Trichlorophenol	13.18		69338	78.30	Y
2,4-Dichlorophenol	11.34		91932	83.86	Y
2,4-Dimethylphenol	11.06		77984	84.37	Y
2,4-Dinitrophenol	14.55		24168	83.46	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Printed: 1/10/19 12:23
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Data File:	J:\MS07\DATA\010419\0104F002.D\	**Instrument:**	K-MS-07
Acqu Date:	1/4/19 10:39:00	**Vial:**	4
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1900290-04	**Raw Units:**	ug/mL

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
2,4-Dinitrotoluene	14.76		65716	83.69	Y
2,6-Dinitrotoluene	14.10		50973	84.32	Y
2-Chloronaphthalene	13.49		192264	71.39	Y
2-Chlorophenol	9.10		90060	76.70	Y
2-Methyl-4,6-dinitrophenol	15.41		37439	82.05	Y
2-Methylnaphthalene	12.70		192334	80.57	Y
2-Methylphenol	9.96		72672	85.95	Y
2-Nitroaniline	13.69		71776	82.17	Y
2-Nitrophenol	10.92		55758	83.74	Y
3,3'-Dichlorobenzidine	21.26		107237	83.20	Y
3-Nitroaniline	14.38		47843	78.16	Y
4-Bromophenyl Phenyl Ether	16.10		65692	87.01	Y
4-Chloro-3-methylphenol	12.53		83931	90.94	Y
4-Chloroaniline	11.69		118638	75.88	Y
4-Chlorophenyl Phenyl Ether	15.31		122784	84.48	Y
4-Methylphenol	10.21		101658	77.43	Y
4-Nitroaniline	15.38		43706	75.57	Y
4-Nitrophenol	14.72		42161	92.50	Y
Acenaphthene	14.44		184530	78.11	Y
Acenaphthylene	14.15		286919	80.85	Y
Aniline	8.90		109396	68.24	Y
Anthracene	16.93		272685	80.45	Y
Benz(a)anthracene	21.25		268448	82.33	Y
Benzo(a)pyrene	24.39		237820	82.52	Y
Benzo(b)fluoranthene	23.63		253331	80.68	Y
Benzo(g,h,i)perylene	27.58		240994	80.98	Y
Benzo(k)fluoranthene	23.70		256209	80.61	Y
Benzoic Acid	11.31		42506	80.59	Y
Benzyl Alcohol	9.71		53457	73.65	Y
Bis(2-chloroethoxy)methane	11.19		97085	80.58	Y
Bis(2-chloroethyl) Ether	9.05		78285	77.04	Y
Bis(2-ethylhexyl) Phthalate	21.45		202808	85.33	Y
Butyl Benzyl Phthalate	20.28		143433	82.67	Y
Chrysene	21.33		247447	79.81	Y
Dibenz(a,h)anthracene	27.07		223256	76.47	Y
Dibenzofuran	14.73		284062	78.59	Y
Diethyl Phthalate	15.16		221914	85.83	Y
Dimethyl Phthalate	14.01		227975	81.72	Y
Di-n-butyl Phthalate	17.83		282646	73.38	Y
Di-n-octyl Phthalate	22.94		319385	84.41	Y
Fluoranthene	18.77		244409	70.82	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 01/10/19

2nd 01/10/19

Data File:	J:\MS07\DATA\010419\0104F002.D\	**Instrument:**	K-MS-07
Acqu Date:	1/4/19 10:39:00	**Vial:**	4
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1900290-04	**Raw Units:**	ug/mL

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Fluorene	15.29		217017	79.90	Y
Hexachlorobenzene	16.17		64226	89.88	Y
Hexachlorobutadiene	11.77		80553	84.72	Y
Hexachlorocyclopentadiene	12.95		70039	68.71	Y
Hexachloroethane	10.25		55226	85.06	Y
Indeno(1,2,3-cd)pyrene	26.99		233373	79.30	Y
Isophorone	10.80		177788	85.93	Y
Naphthalene	11.56		277856	79.57	Y
Nitrobenzene	10.40		104602	81.13	Y
N-Nitrosodimethylamine	4.38		110737	86.00	Y
N-Nitrosodi-n-propylamine	10.16		65734	79.12	Y
N-Nitrosodiphenylamine	15.52		144450	87.55	Y
Pentachlorophenol	16.51		33470	74.62	Y
Phenanthrene	16.84		260571	79.38	Y
Phenol	8.94		95360	68.53	Y
Pyrene	19.14		254532	75.87	Y
2,2'-Oxybis(1-chloropropane)	9.93		116313	75.00	Y

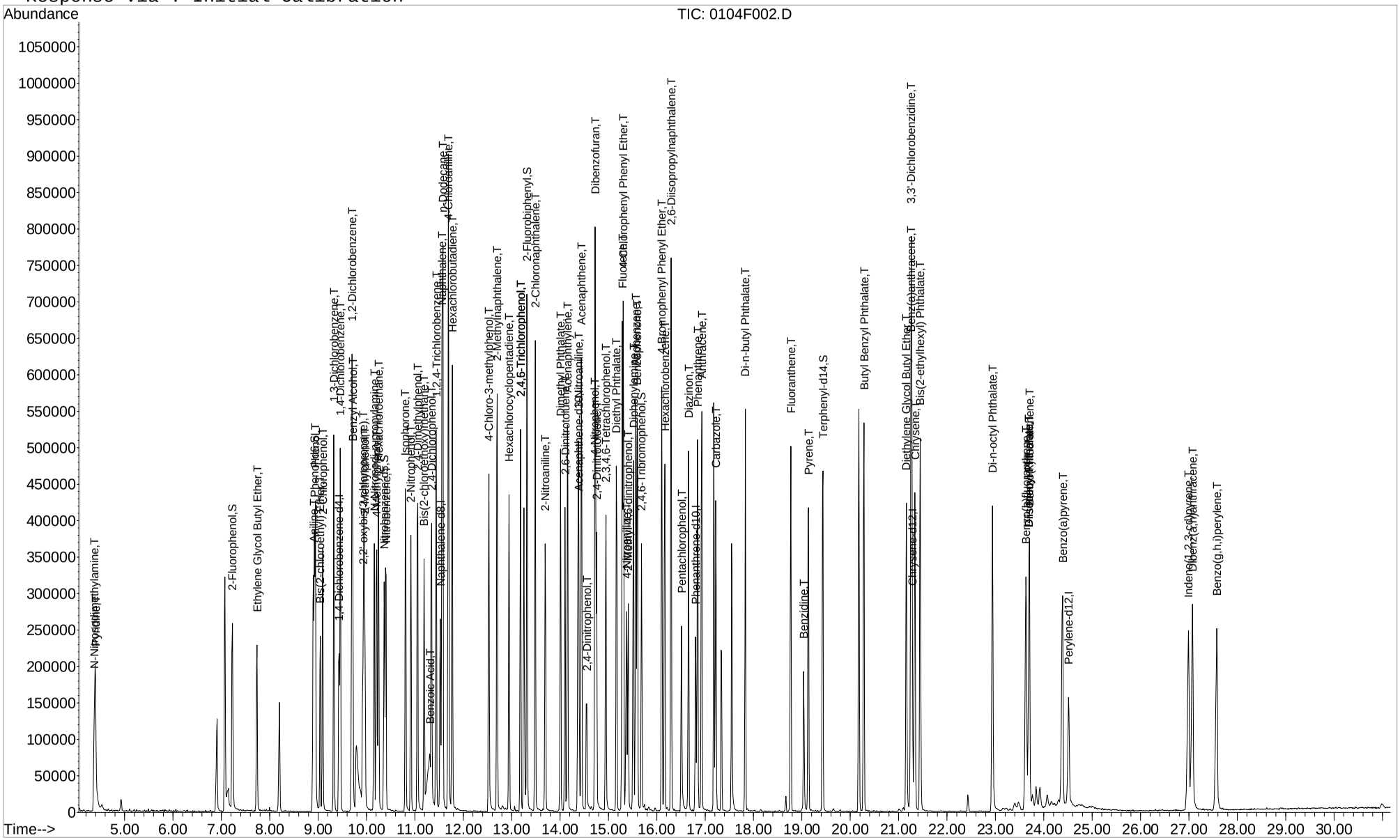
U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS07\DATA\010419\0104F002.D Vial: 2
Acq On : 4 Jan 2019 10:39 am Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 9 17:01 2019 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Jan 09 17:01:38 2019
Response via : Initial Calibration



1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F002.D Vial: 2
Acq On : 4 Jan 2019 10:39 am Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 04 14:11:41 2019 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Jan 04 10:40:46 2019
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.43	152	37441	40.00	ug/ml	0.00
22) Naphthalene-d8	11.53	136	135929	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.39	164	84343	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	117734	40.00	ug/ml	0.00
73) Chrysene-d12	21.28	240	105835	40.00	ug/ml	0.00
83) Perylene-d12	24.51	264	104929	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.23	112	78041	79.97	ug/ml	0.04
Spiked Amount 150.000	Range 21 - 100		Recovery = 53.31%			
8) Phenol-d6	8.92	99	96308	79.36	ug/ml	0.06
Spiked Amount 150.000	Range 10 - 94		Recovery = 52.91%			
20) Nitrobenzene-d5	10.36	82	109794	85.48	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 85.48%			
40) 2-Fluorobiphenyl	13.32	172	231665	73.57	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 73.57%			
62) 2,4,6-Tribromophenol	15.69	330	37371	110.34	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 73.56%			
76) Terphenyl-d14	19.43	244	185730	76.59	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 76.59%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.38	42	110737	86.00	ug/ml	97
3) Pyridine	4.40	79	68922	73.05	ug/ml	99
5) Ethylene Glycol Butyl Ethe	7.74	57	80457	73.32	ug/ml	98
6) Aniline	8.90	93	109396	68.24	ug/ml#	35
7) Bis(2-chloroethyl) Ether	9.05	93	78285	77.04	ug/ml	87
9) Phenol	8.94	94	95360m	68.53	ug/ml	
10) 2-Chlorophenol	9.10	128	90060	76.70	ug/ml	98
11) 1,3-Dichlorobenzene	9.32	146	113445	79.25	ug/ml	98
12) 1,4-Dichlorobenzene	9.45	146	116607	79.16	ug/ml	96
13) 1,2-Dichlorobenzene	9.70	146	108936	77.13	ug/ml	97
14) Benzyl Alcohol	9.71	108	53457	73.65	ug/ml	86
15) 2,2'-oxybis(2-chloropropan	9.93	45	116313	75.00	ug/ml	83
16) 2-Methylphenol	9.96	107	72672	85.95	ug/ml	89
17) Hexachloroethane	10.25	117	55226	85.06	ug/ml	93
18) N-Nitrosodi-n-propylamine	10.16	70	65734	79.12	ug/ml	97
19) 4-Methylphenol	10.21	107	101658	77.43	ug/ml	99
21) Nitrobenzene	10.40	77	104602	81.13	ug/ml	97
23) Isophorone	10.80	82	177788	85.93	ug/ml	99
24) 2-Nitrophenol	10.92	139	55758	83.74	ug/ml	78
25) 2,4-Dimethylphenol	11.06	122	77984	84.37	ug/ml	97
26) Bis(2-chloroethoxy)methane	11.19	93	97085	80.58	ug/ml	97
27) 2,4-Dichlorophenol	11.34	162	91932	83.86	ug/ml	93
28) Benzoic Acid	11.31	122	42506	80.59	ug/ml	92
29) 1,2,4-Trichlorobenzene	11.44	180	104039	82.06	ug/ml	98
30) Naphthalene	11.56	128	277856	79.57	ug/ml	99
31) n-Dodecane	11.58	57	118794	76.74	ug/ml	99
32) 4-Chloroaniline	11.69	127	118638	75.88	ug/ml	90
33) Hexachlorobutadiene	11.77	225	80553	84.72	ug/ml	96
34) 4-Chloro-3-methylphenol	12.53	107	83931	90.94	ug/ml	98
35) 2-Methylnaphthalene	12.70	142	192334	80.57	ug/ml	100
37) Hexachlorocyclopentadiene	12.95	237	70039	68.71	ug/ml	96
38) 2,4,6-Trichlorophenol	13.18	196	69338	78.30	ug/ml	99
39) 2,4,5-Trichlorophenol	13.18	196	69338	76.99	ug/ml	98
41) 2-Chloronaphthalene	13.49	162	192264	71.39	ug/ml	98
42) 2-Nitroaniline	13.69	65	71776	82.17	ug/ml	98
43) Acenaphthylene	14.15	152	286919	80.85	ug/ml	99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\010419\0104F002.D Vial: 2
Acq On : 4 Jan 2019 10:39 am Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 04 14:11:41 2019 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Jan 04 10:40:46 2019
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
44) Dimethyl Phthalate	14.01	163	227975	81.72	ug/ml	99
45) 2,6-Dinitrotoluene	14.10	165	50973	84.32	ug/ml#	71
46) Acenaphthene	14.44	154	184530	78.11	ug/ml	98
47) 3-Nitroaniline	14.38	138	47843	78.16	ug/ml	93
48) 2,4-Dinitrophenol	14.55	184	24168	83.46	ug/ml	86
49) Dibenzofuran	14.73	168	284062	78.59	ug/ml	80
50) 4-Nitrophenol	14.72	109	42161	92.50	ug/ml#	39
51) 2,4-Dinitrotoluene	14.76	165	65716	83.69	ug/ml	82
52) 2,3,4,6-Tetrachlorophenol	14.95	232	57477	87.80	ug/ml	98
53) Fluorene	15.29	166	217017	79.90	ug/ml	100
54) 4-Chlorophenyl Phenyl Ethe	15.31	204	122784	84.48	ug/ml	97
55) Diethyl Phthalate	15.16	149	221914	85.83	ug/ml	98
56) 4-Nitroaniline	15.38	138	43706	75.57	ug/ml	91
57) 2-Methyl-4,6-dinitrophenol	15.41	198	37439	82.05	ug/ml	73
58) Diphenylamine	15.52	169	144450	87.55	ug/ml	100
59) Azobenzene	15.56	77	259985m	83.65	ug/ml	
60) Benzophenone	15.59	105	182450	81.65	ug/ml	97
63) 4-Bromophenyl Phenyl Ether	16.10	248	65692	87.01	ug/ml	96
64) Hexachlorobenzene	16.17	284	64226	89.88	ug/ml	88
65) 2,6-Diisopropylnaphthalene	16.30	197	193056	89.83	ug/ml	99
66) Pentachlorophenol	16.51	266	33470	74.62	ug/ml	98
67) Diazinon	16.66	137	41237	90.38	ug/ml	96
68) Phenanthrene	16.84	178	260571	79.38	ug/ml	98
69) Anthracene	16.93	178	272685	80.45	ug/ml	100
70) Carbazole	17.22	167	223764	68.78	ug/ml	97
71) Di-n-butyl Phthalate	17.83	149	282646	73.38	ug/ml	99
72) Fluoranthene	18.77	202	244409	70.82	ug/ml	99
74) Benzidine	19.04	184	85914	76.47	ug/ml	99
75) Pyrene	19.14	202	254532	75.87	ug/ml	99
77) Butyl Benzyl Phthalate	20.28	149	143433	82.67	ug/ml	95
78) Diethylene Glycol Butyl Et	21.16	105	201477	85.49	ug/ml	98
79) 3,3'-Dichlorobenzidine	21.26	252	107237	83.20	ug/ml	98
80) Benz(a)anthracene	21.25	228	268448	82.33	ug/ml	99
81) Chrysene	21.33	228	247447	79.81	ug/ml	99
82) Bis(2-ethylhexyl) Phthalat	21.45	149	202808	85.33	ug/ml	97
84) Di-n-octyl Phthalate	22.94	149	319385	84.41	ug/ml	98
85) Benzo(b)fluoranthene	23.63	252	253331	80.68	ug/ml	100
86) Benzo(k)fluoranthene	23.70	252	256209	80.61	ug/ml	99
87) Diisononyl Phthalate	23.69	293	13950m	88.70	ug/ml	
88) Diisodecyl Phthalate	23.69	149	261088m	87.65	ug/ml	
89) Benzo(a)pyrene	24.39	252	237820	82.52	ug/ml	97
90) Indeno(1,2,3-cd)pyrene	26.99	276	233373	79.30	ug/ml	97
91) Dibenz(a,h)anthracene	27.07	278	223256	76.47	ug/ml	96
92) Benzo(g,h,i)perylene	27.58	276	240994	80.98	ug/ml	97

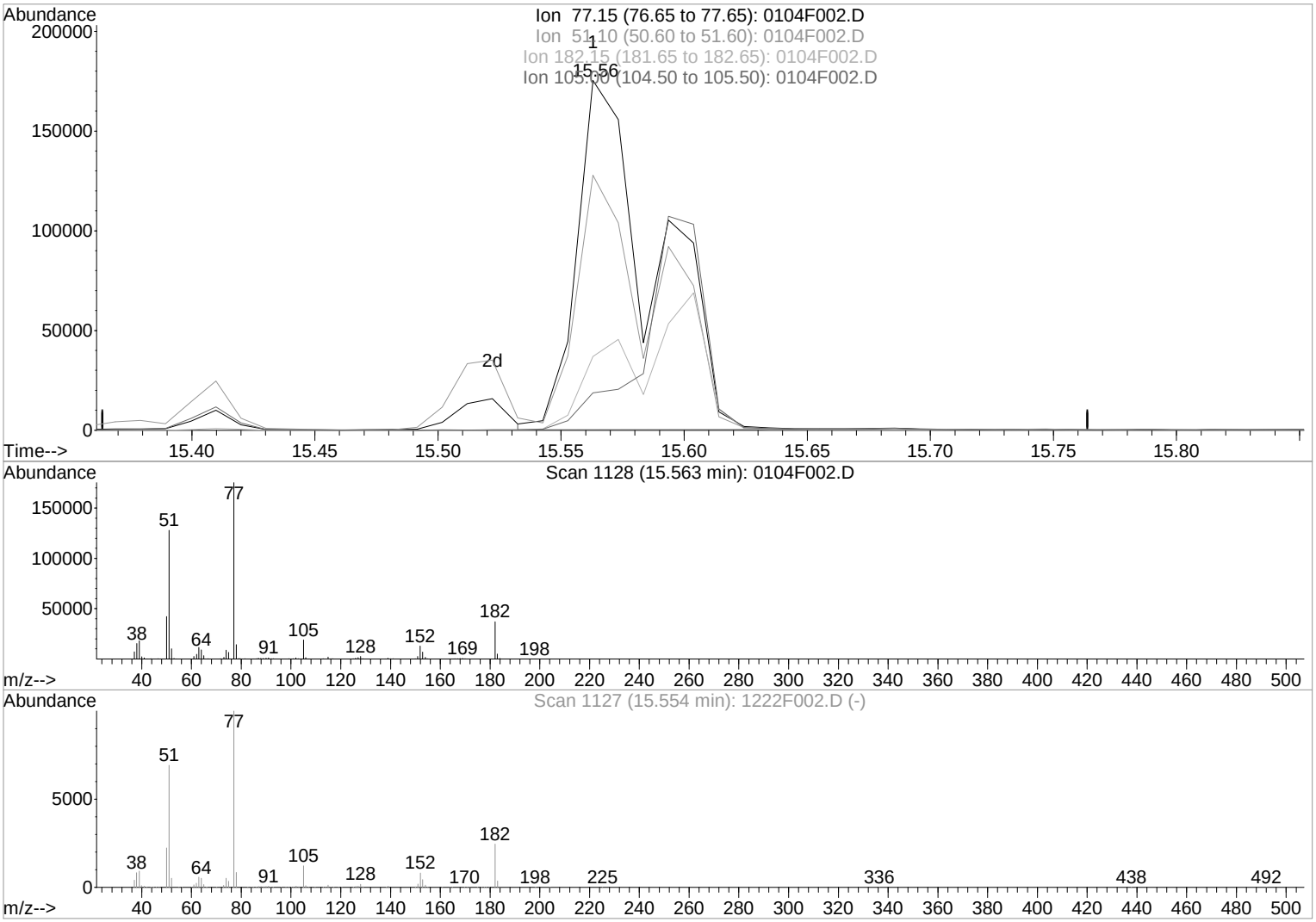
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F002.D Vial: 2
Acq On : 4 Jan 2019 10:39 am Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 9 17:00 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Dec 13 15:14:09 2018
Response via : Multiple Level Calibration



TIC: 0104F002.D

(59) Azobenzene (T)

15.56min 124.94ug/ml

response 388321

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	71.75
182.15	21.70	21.19
105.00	12.30	10.66

Manual Integration:

Before

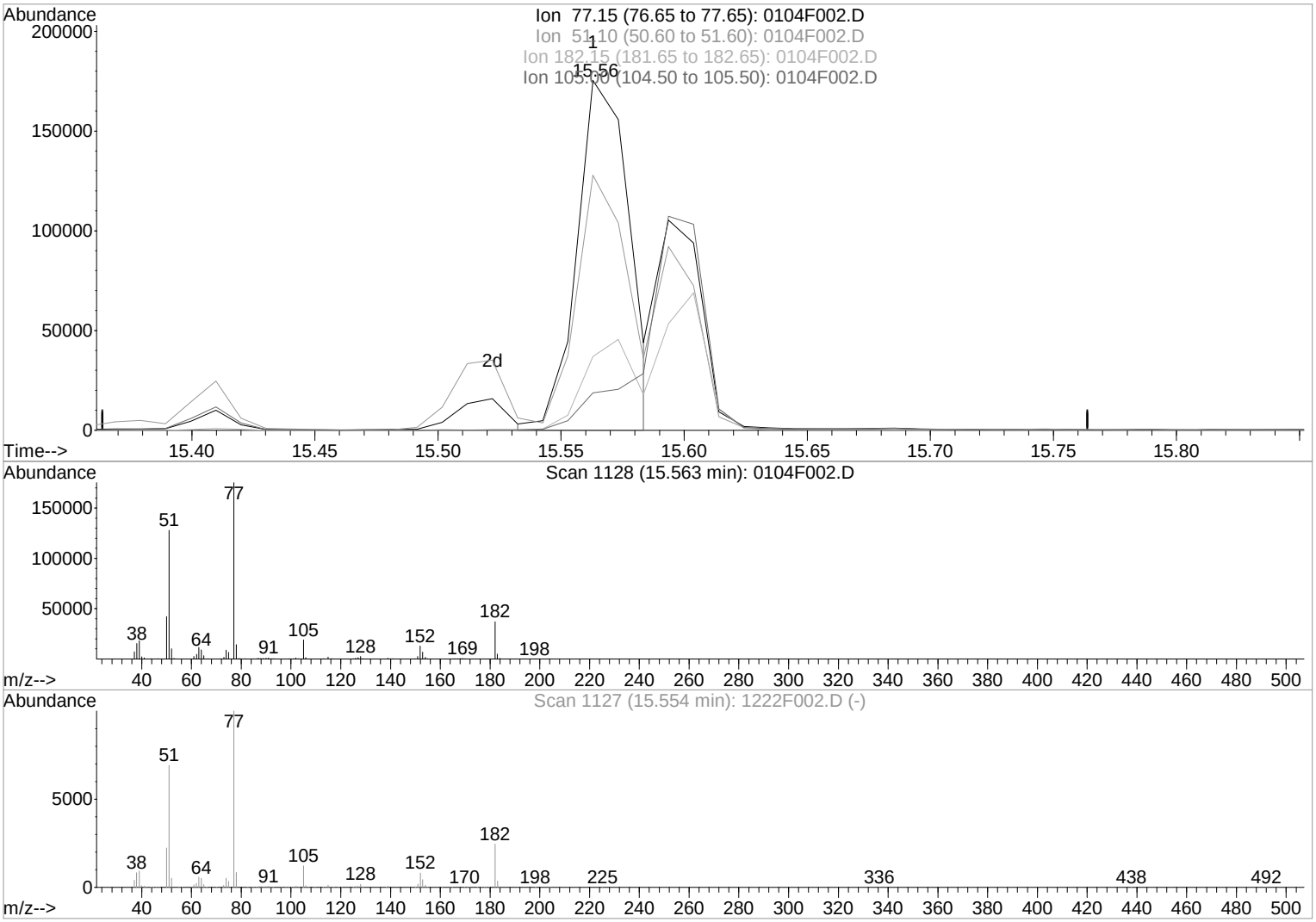
01/09/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F002.D Vial: 2
Acq On : 4 Jan 2019 10:39 am Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 9 17:00 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Dec 13 15:14:09 2018
Response via : Multiple Level Calibration



TIC: 0104F002.D

(59) Azobenzene (T)

15.56min 83.65ug/ml m

response 259985

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	72.91
182.15	21.70	21.07
105.00	12.30	10.69

Manual Integration:

After

IC-Overintegrated

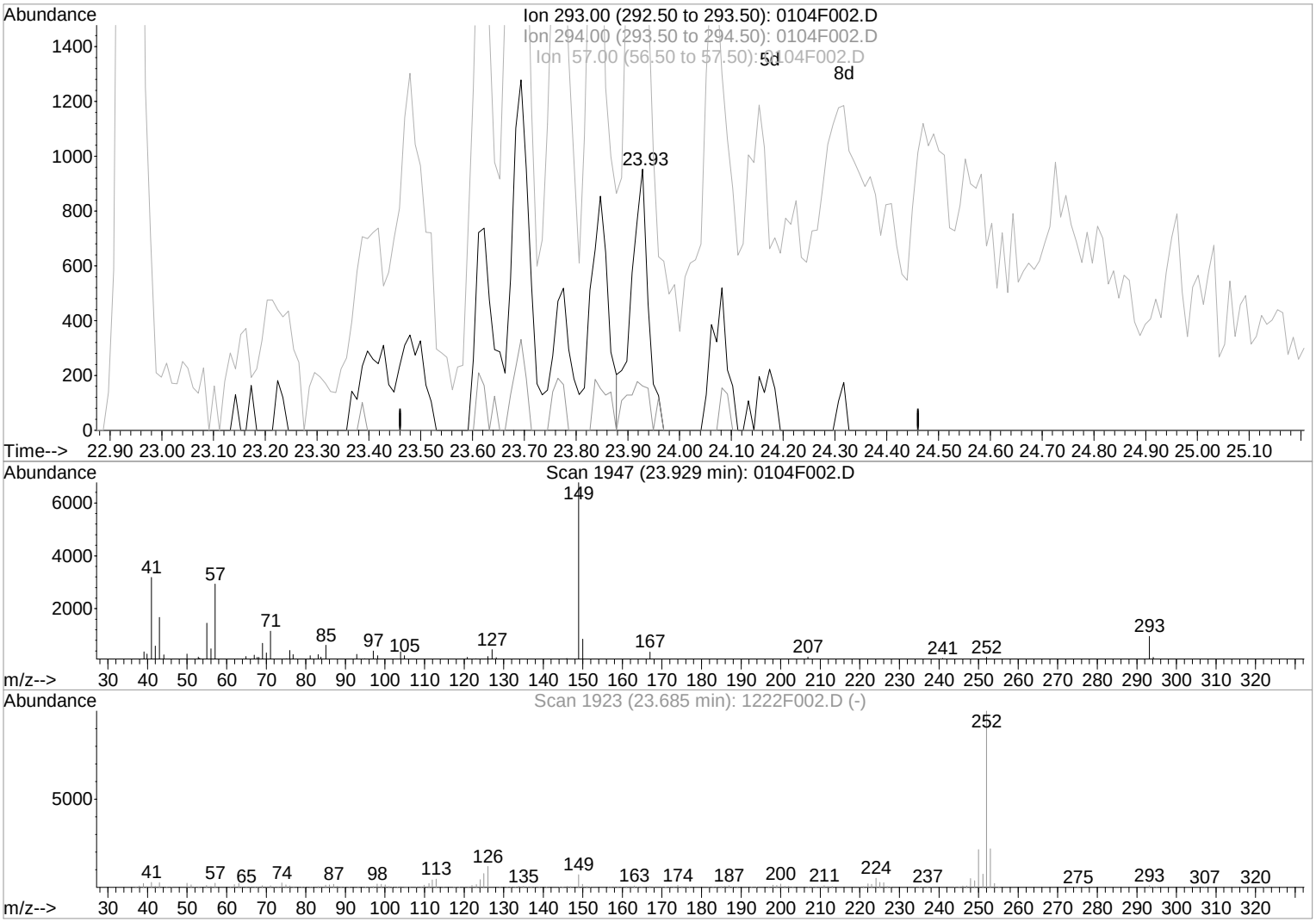
01/09/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F002.D Vial: 2
Acq On : 4 Jan 2019 10:39 am Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 9 17:00 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Dec 13 15:14:09 2018
Response via : Multiple Level Calibration



TIC: 0104F002.D

(87) Diisononyl Phthalate (T)

23.93min 13.73ug/ml

response 2160

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	27.59
57.00	33.10	366.76#
0.00	0.00	0.00

Manual Integration:

Before

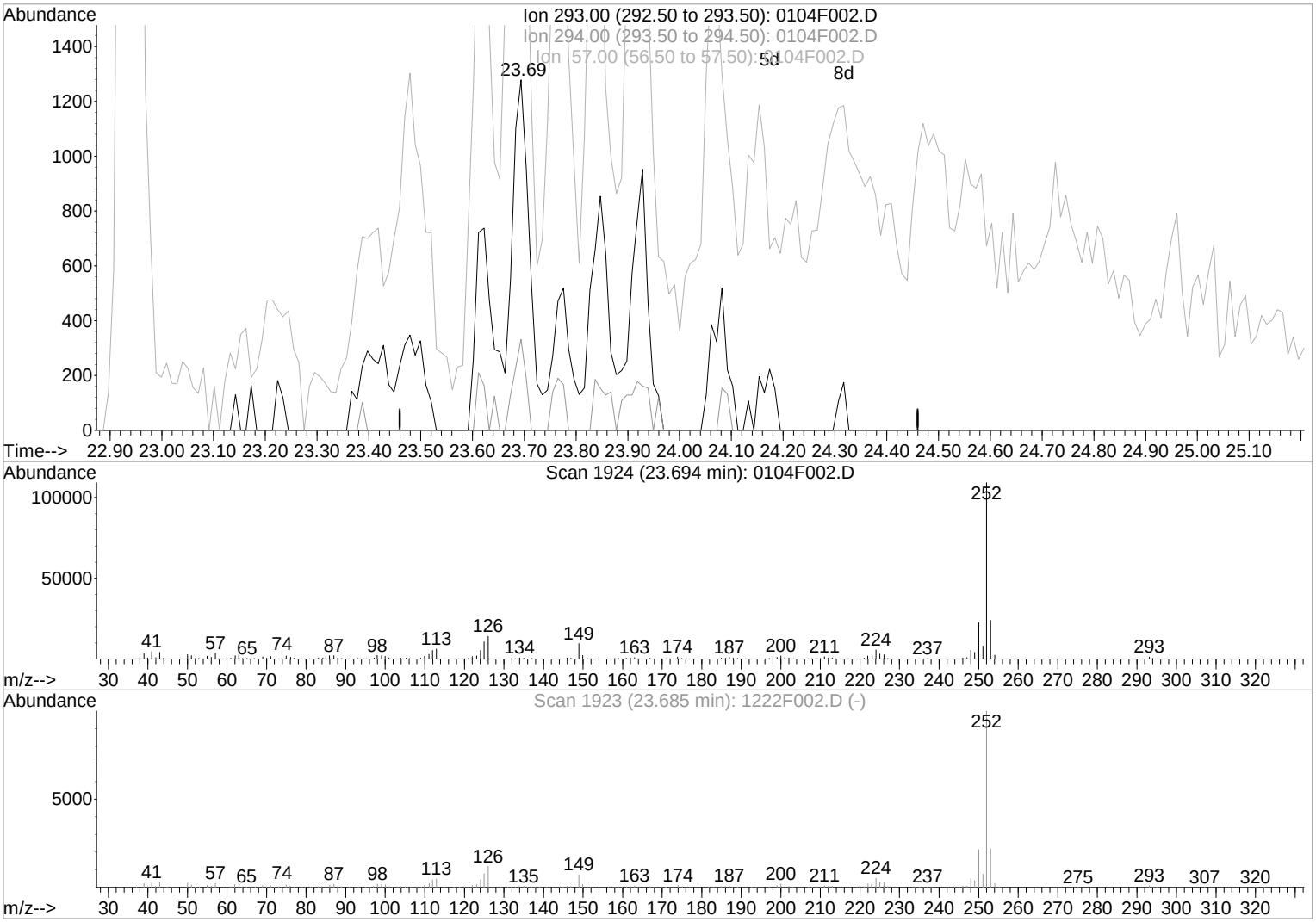
01/09/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F002.D Vial: 2
Acq On : 4 Jan 2019 10:39 am Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 9 17:01 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Dec 13 15:14:09 2018
Response via : Multiple Level Calibration



TIC: 0104F002.D

(87) Diisononyl Phthalate (T)

23.69min 88.70ug/ml m

response 13950

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	4.27
57.00	33.10	56.79
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

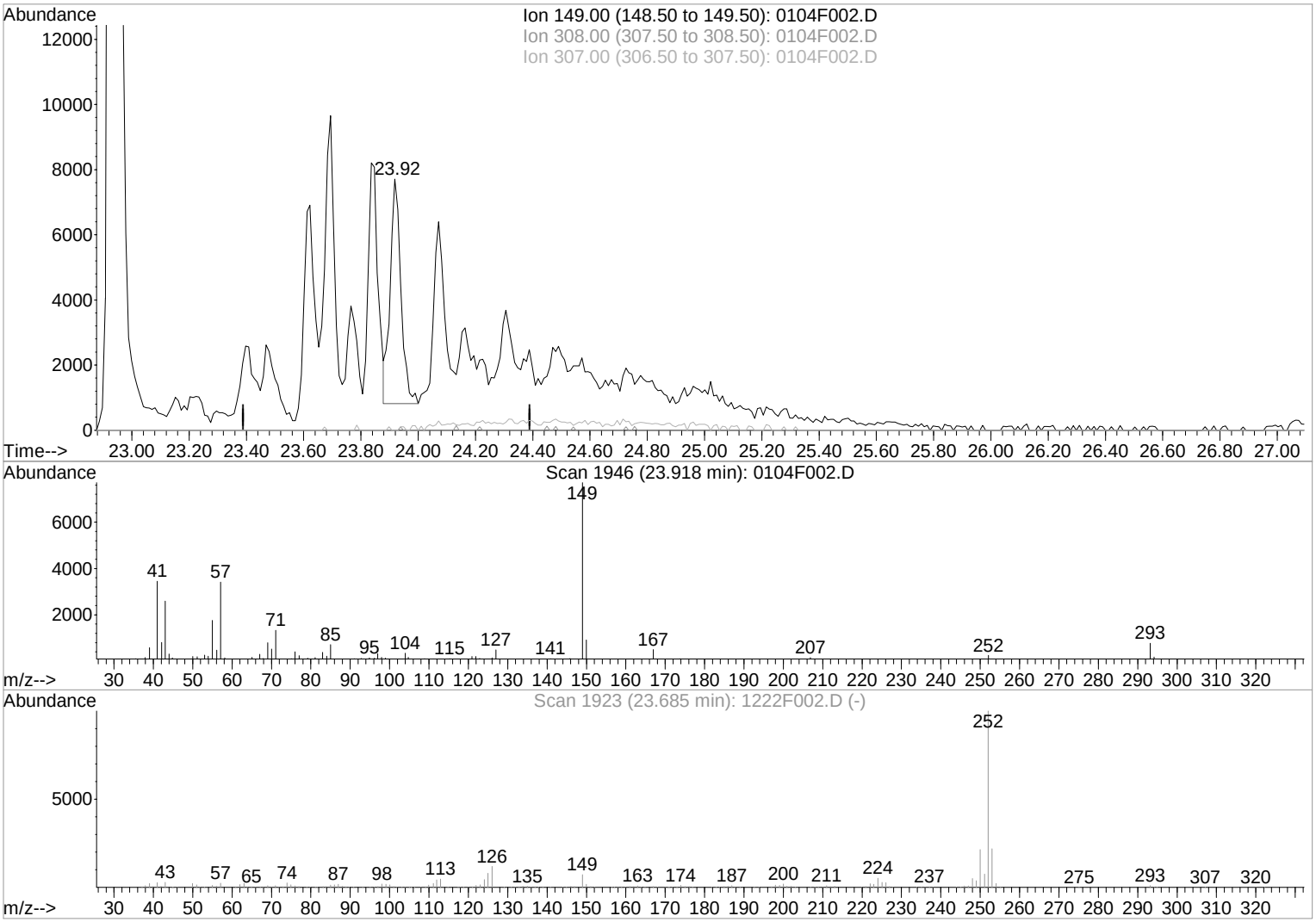
01/09/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F002.D Vial: 2
Acq On : 4 Jan 2019 10:39 am Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 9 17:01 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Dec 13 15:14:09 2018
Response via : Multiple Level Calibration



TIC: 0104F002.D

(88) Diisodecyl Phthalate (T)

23.92min 6.07ug/ml

response 18081

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.74
0.00	0.00	0.00

Manual Integration:

Before

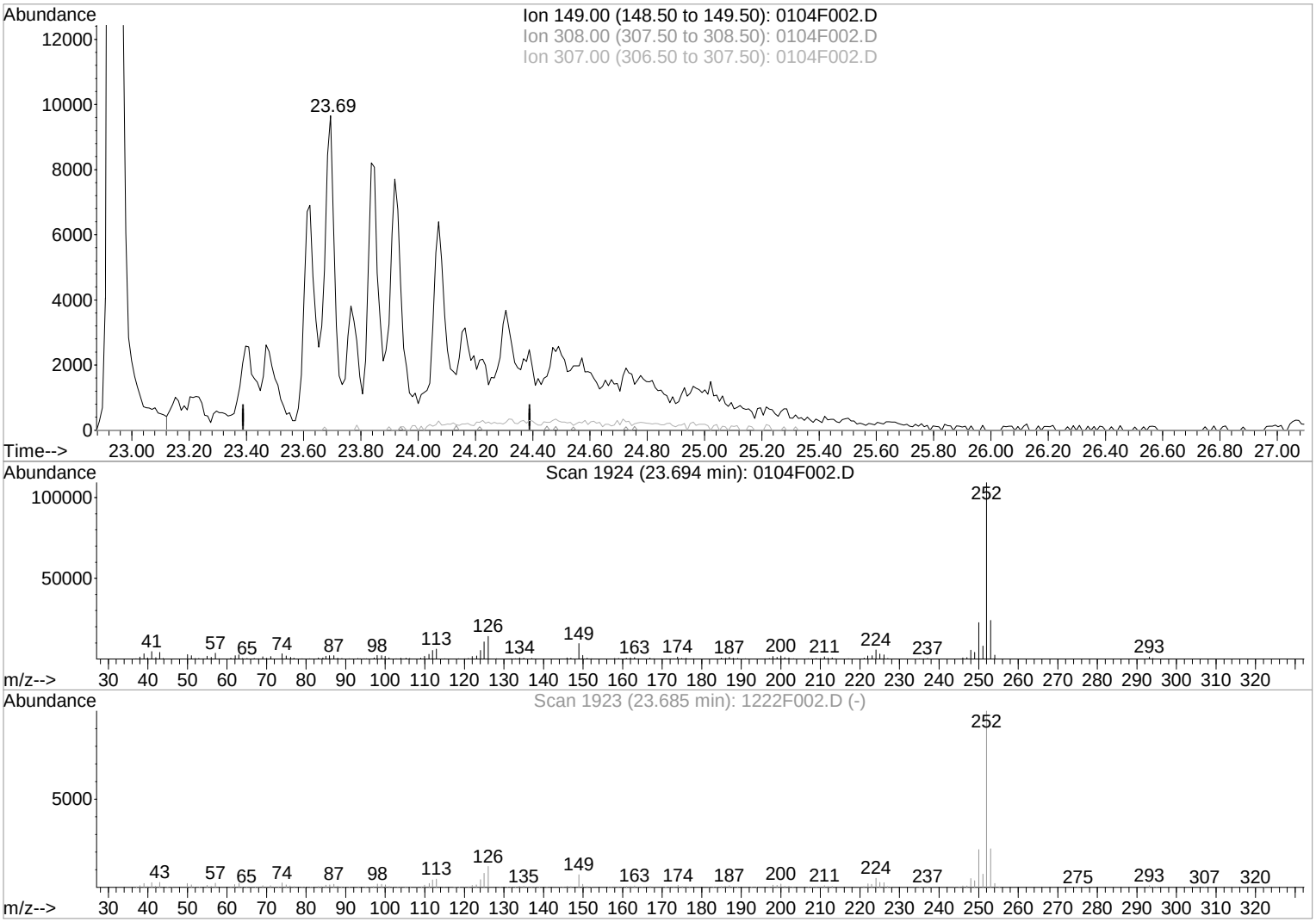
01/09/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F002.D Vial: 2
Acq On : 4 Jan 2019 10:39 am Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 9 17:01 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Dec 13 15:14:09 2018
Response via : Multiple Level Calibration



TIC: 0104F002.D

(88) Diisodecyl Phthalate (T)

23.69min 87.65ug/ml m

response 261088

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.05
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

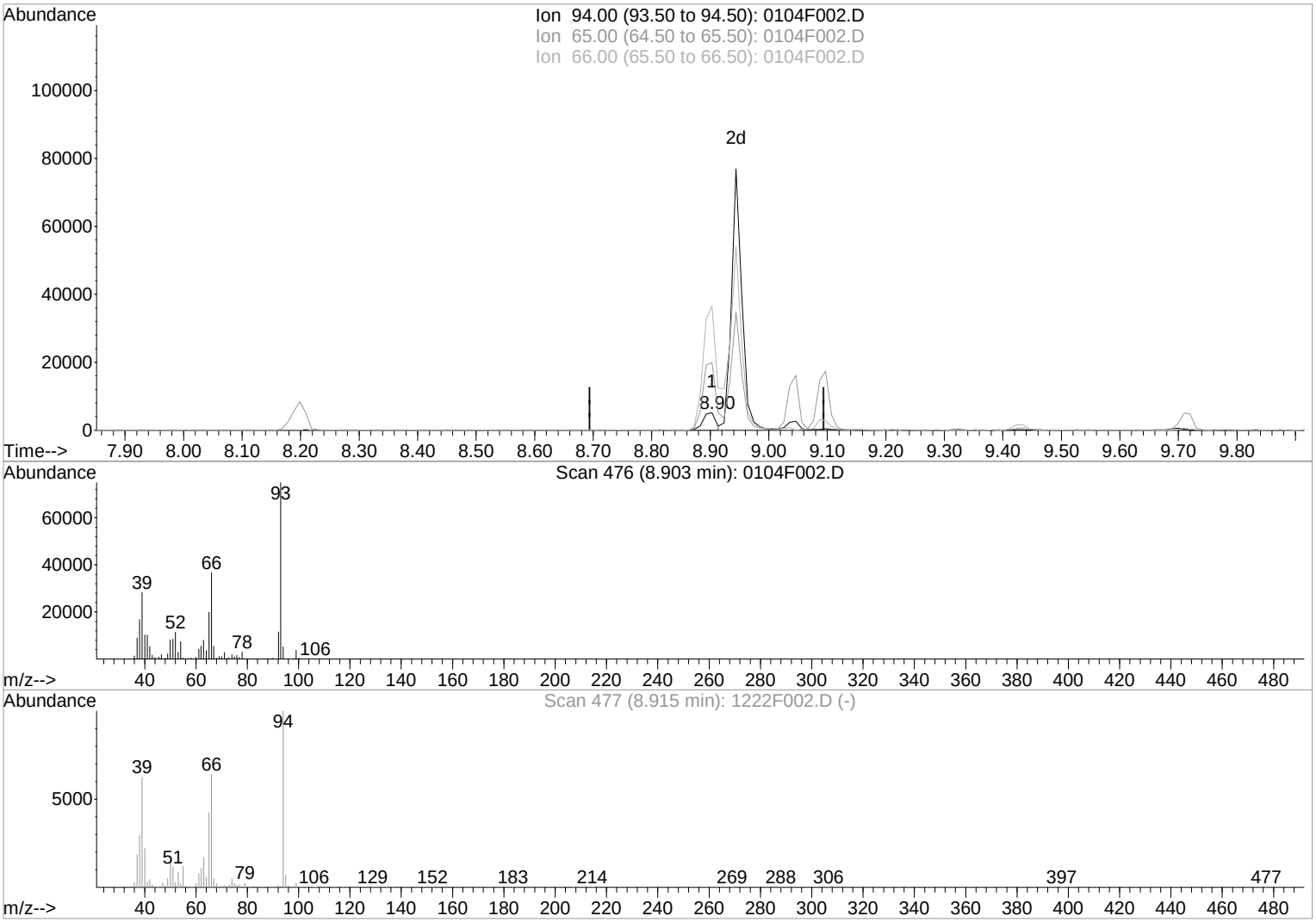
01/09/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F002.D Vial: 2
Acq On : 4 Jan 2019 10:39 am Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 4 14:11 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Dec 13 15:14:09 2018
Response via : Multiple Level Calibration



TIC: 0104F002.D

(9) Phenol (T)

8.90min 5.59ug/ml

response 7776

Ion	Exp%	Act%
94.00	100	100
65.00	63.50	377.05#
66.00	103.80	664.66#
0.00	0.00	0.00

Manual Integration:

Before

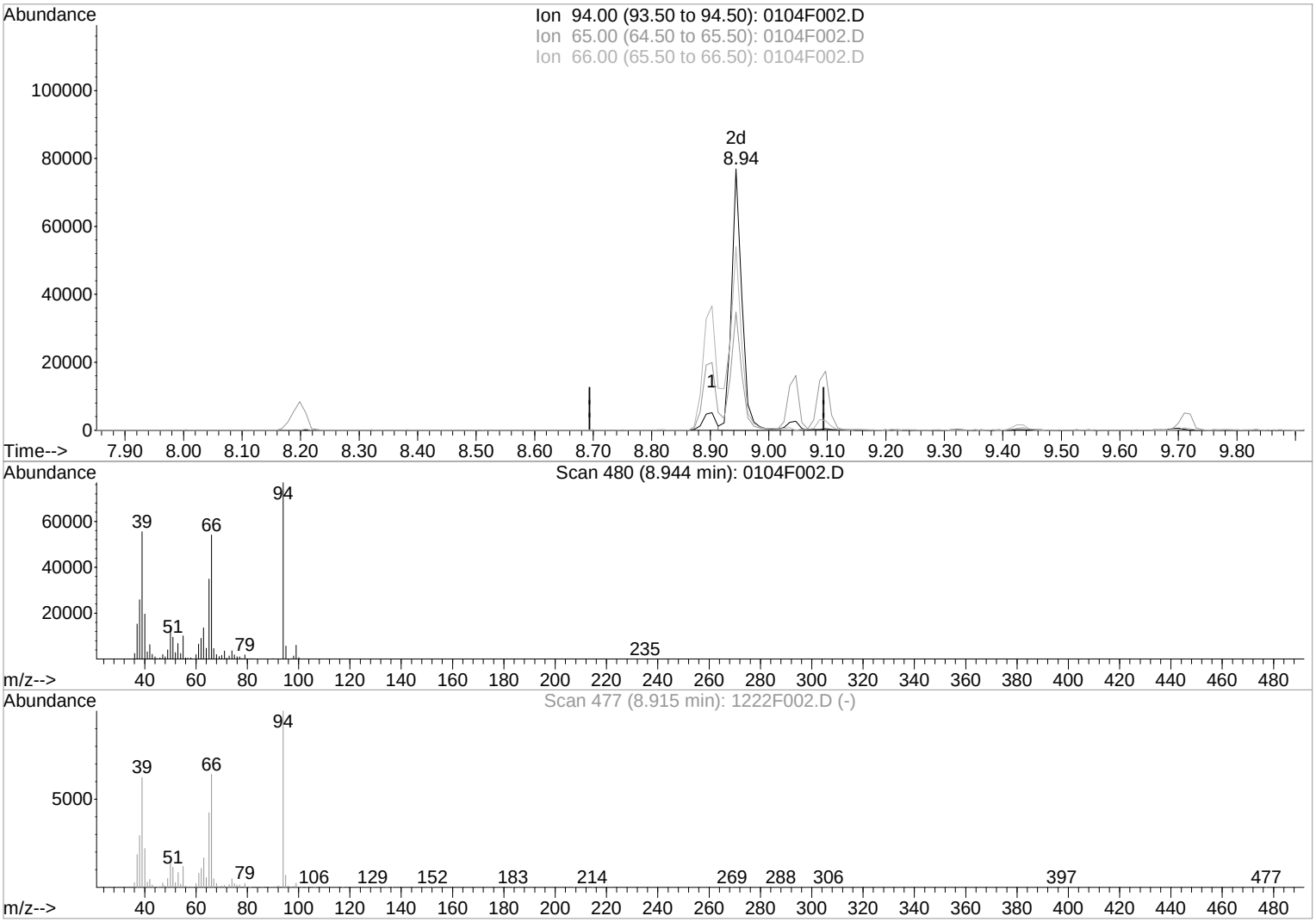
01/09/19

Quantitation Report (Qedit)

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F002.D Vial: 2
Acq On : 4 Jan 2019 10:39 am Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 9 17:00 2019 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Dec 13 15:14:09 2018
Response via : Multiple Level Calibration



TIC: 0104F002.D

(9) Phenol (T)

8.94min 68.53ug/ml m

response 95360

Ion	Exp%	Act%
94.00	100	100
65.00	63.50	45.31
66.00	103.80	70.33#
0.00	0.00	0.00

Manual Integration:

After

WP

01/09/19

Evaluate Continuing Calibration Report

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F002.D Vial: 2
Acq On : 4 Jan 2019 10:39 am Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Dec 13 15:14:09 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	78	0.00
2	T	N-Nitrosodimethylamine	80.000	86.000	-7.5	83	0.00
3	T	Pyridine	80.000	73.054	8.7	72	-0.01
4	S	2-Fluorophenol	80.000	79.971	0.0	79	0.04
5	T	Ethylene Glycol Butyl Ether	80.000	73.315	8.4	70	0.00
6	T	Aniline	80.000	68.235	14.7	68	0.00
7	T	Bis(2-chloroethyl) Ether	80.000	77.040	3.7	77	0.00
8	S	Phenol-d6	80.000	79.362	0.8	79	0.06
9	T	Phenol	80.000	68.526	14.3	67	0.05
10	T	2-Chlorophenol	80.000	76.695	4.1	75	0.03
11	T	1,3-Dichlorobenzene	80.000	79.253	0.9	80	0.00
12	T	1,4-Dichlorobenzene	80.000	79.164	1.0	80	0.00
13	T	1,2-Dichlorobenzene	80.000	77.132	3.6	76	0.00
14	T	Benzyl Alcohol	80.000	73.649	7.9	73	0.00
15	T	2,2'-oxybis(2-chloropropane	80.000	74.998	6.3	74	0.00
16	T	2-Methylphenol	80.000	85.948	-7.4	87	0.05
17	T	Hexachloroethane	80.000	85.055	-6.3	83	0.00
18	T	N-Nitrosodi-n-propylamine	80.000	79.125	1.1	76	0.00
19	T	4-Methylphenol	80.000	77.432	3.2	77	0.05
20	S	Nitrobenzene-d5	80.000	85.480	-6.9	85	0.00
21	T	Nitrobenzene	80.000	81.128	-1.4	80	0.00
22	I	Naphthalene-d8	40.000	40.000	0.0	78	0.00
23	T	Isophorone	80.000	85.931	-7.4	85	0.00
24	T	2-Nitrophenol	80.000	83.738	-4.7	82	0.00
25	T	2,4-Dimethylphenol	80.000	84.367	-5.5	83	0.03
26	T	Bis(2-chloroethoxy)methane	80.000	80.578	-0.7	79	0.00
27	T	2,4-Dichlorophenol	80.000	83.860	-4.8	81	0.04
28	T	Benzoic Acid	80.000	80.585	-0.7	80	0.07
29	T	1,2,4-Trichlorobenzene	80.000	82.058	-2.6	83	0.00
30	T	Naphthalene	80.000	79.568	0.5	80	0.00
31	T	n-Dodecane	80.000	76.737	4.1	78	0.00
32	T	4-Chloroaniline	80.000	75.882	5.1	76	0.00
33	T	Hexachlorobutadiene	80.000	84.723	-5.9	85	0.00
34	T	4-Chloro-3-methylphenol	80.000	90.943	-13.7	92	0.05
35	T	2-Methylnaphthalene	80.000	80.570	-0.7	82	0.00
36	I	Acenaphthene-d10	40.000	40.000	0.0	96	0.00
37	T	Hexachlorocyclopentadiene	80.000	68.708	14.1	83	0.00
38	T	2,4,6-Trichlorophenol	80.000	78.302	2.1	95	0.02
39	T	2,4,5-Trichlorophenol	80.000	76.990	3.8	88	-0.03
40	S	2-Fluorobiphenyl	80.000	73.573	8.0	91	0.00
41	T	2-Chloronaphthalene	80.000	71.390	10.8	89	0.00
42	T	2-Nitroaniline	80.000	82.168	-2.7	97	0.02
43	T	Acenaphthylene	80.000	80.853	-1.1	97	0.00
44	T	Dimethyl Phthalate	80.000	81.722	-2.2	101	0.00
45	T	2,6-Dinitrotoluene	80.000	84.321	-5.4	101	0.00
46	T	Acenaphthene	80.000	78.106	2.4	97	0.00
47	T	3-Nitroaniline	80.000	78.156	2.3	95	0.02
48	T	2,4-Dinitrophenol	80.000	83.462	-4.3	104	0.03
49	T	Dibenzofuran	80.000	78.587	1.8	95	0.00
50	T	4-Nitrophenol	80.000	92.497	-15.6	103	0.08
51	T	2,4-Dinitrotoluene	80.000	83.692	-4.6	100	0.00
52	T	2,3,4,6-Tetrachlorophenol	80.000	87.797	-9.7	108	0.02
53	T	Fluorene	80.000	79.904	0.1	101	0.00
54	T	4-Chlorophenyl Phenyl Ether	80.000	84.479	-5.6	105	0.00
55	T	Diethyl Phthalate	80.000	85.833	-7.3	107	-0.01

(#) = Out of Range

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F002.D Vial: 2
Acq On : 4 Jan 2019 10:39 am Operator: CConover
Sample : 8270/P CCV @ 80ppm | SVM60-20A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Thu Dec 13 15:14:09 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
56	T	4-Nitroaniline	80.000	75.568	5.5	85	0.03
57	T	2-Methyl-4,6-dinitrophenol	80.000	82.054	-2.6	102	0.02
58	T	Diphenylamine	80.000	87.553	-9.4	108	0.00
59	T	Azobenzene	80.000	83.646	-4.6	98	0.00
60	T	Benzophenone	80.000	81.647	-2.1	103	0.00
61	I	Phenanthrene-d10	40.000	40.000	0.0	98	0.00
62	S	2,4,6-Tribromophenol	80.000	110.336	-37.9#	134	0.00
63	T	4-Bromophenyl Phenyl Ether	80.000	87.009	-8.8	108	0.00
64	T	Hexachlorobenzene	80.000	89.881	-12.4	113	0.00
65	T	2,6-Diisopropylnaphthalene	80.000	89.827	-12.3	112	0.00
66	T	Pentachlorophenol	80.000	74.618	6.7	89	0.02
67	T	Diazinon	80.000	90.382	-13.0	106	-0.01
68	T	Phenanthrene	80.000	79.378	0.8	98	0.00
69	T	Anthracene	80.000	80.447	-0.6	99	0.00
70	T	Carbazole	80.000	68.781	14.0	84	0.00
71	T	Di-n-butyl Phthalate	80.000	73.376	8.3	87	-0.01
72	T	Fluoranthene	80.000	70.822	11.5	82	0.00
73	I	Chrysene-d12	40.000	40.000	0.0	91	0.00
74	T	Benzidine	80.000	76.470	4.4	99	0.00
75	T	Pyrene	80.000	75.870	5.2	82	0.00
76	S	Terphenyl-d14	80.000	76.586	4.3	85	0.00
77	T	Butyl Benzyl Phthalate	80.000	82.668	-3.3	85	-0.01
78	T	Diethylene Glycol Butyl Eth	80.000	85.494	-6.9	95	-0.01
79	T	3,3'-Dichlorobenzidine	80.000	83.202	-4.0	97	0.00
80	T	Benz(a)anthracene	80.000	82.327	-2.9	91	-0.01
81	T	Chrysene	80.000	79.811	0.2	92	0.00
82	T	Bis(2-ethylhexyl) Phthalate	80.000	85.334	-6.7	90	-0.03
83	I	Perylene-d12	40.000	40.000	0.0	88	0.00
84	T	Di-n-octyl Phthalate	80.000	84.414	-5.5	95	-0.04
85	T	Benzo(b)fluoranthene	80.000	80.684	-0.9	94	0.00
86	T	Benzo(k)fluoranthene	80.000	80.609	-0.8	95	0.00
87	T	Diisononyl Phthalate	80.000	88.704	-10.9	102	-0.27
88	T	Diisodecyl Phthalate	80.000	87.648	-9.6	101	-0.19
89	T	Benzo(a)pyrene	80.000	82.523	-3.2	91	0.00
90	T	Indeno(1,2,3-cd)pyrene	80.000	79.299	0.9	83	0.00
91	T	Dibenz(a,h)anthracene	80.000	76.474	4.4	82	-0.01
92	T	Benzo(g,h,i)perylene	80.000	80.979	-1.2	81	0.00

1st 01/10/19
2nd 01/10/19

Validation Report

Data File: J:\MS07\DATA\010419\0104F001.D\
Lab ID: KQ1900290-03
RunType: TUNE
Matrix: Storm Water

Date Acquired: 1/4/19 09:59:00
Batch ID: 621360
Analysis Method: 8270D/SVO

Validations

Validation Categories	Pass	Fail
Tune Ion Ratio	X	

Primary Review: _____

Printed: 1/10/19 12:23
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Secondary Review: _____

Quantitation Report

Data File:	J:\MS07\DATA\010419\0104F001.D\	**Instrument:**	K-MS-07
Acqu Date:	1/4/19 09:59:00	**Vial:**	1
Run Type:	TUNE	**Dilution:**	1
Lab ID:	KQ1900290-01	**Raw Units:**	

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	SVO TCLP	**Collect Date:**	12/9/18	**Receive Date:**	12/18/18

Analysis Lot:	621360	**Prep Lot:**		**Report Group:**	KQ1900290
Analysis	8270D	**Prep Method:**			
		Prep Date:			

Title:	TCLP Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800550
		Report List ID:	18580

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
443	442	15	24	19.43	3083	Pass
51	198	30	80	71.50	17258	Pass
68	69	0	2	0.00	0	Pass
69	198	0	100	66.84	16133	Pass
70	69	0	2	0.00	0	Pass
127	198	25	75	45.45	10970	Pass
197	198	0	1	0.00	0	Pass
198	198	100	100	100.00	24137	Pass
199	198	5	9	6.33	1527	Pass
275	198	10	30	25.41	6134	Pass
365	198	0.75	100	3.87	934	Pass
441	443	0.01	100	80.41	2479	Pass
442	198	40	110	65.73	15866	Pass

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report

Data File:	J:\MS07\DATA\010419\0104F001.D\	**Instrument:**	K-MS-07
Acqu Date:	1/4/19 09:59:00	**Vial:**	3
Run Type:	TUNE	**Dilution:**	1
Lab ID:	KQ1900290-03	**Raw Units:**	

Bottle ID:		**Tier:**	II	**Matrix:**	Storm Water
Prod Code:	SVO	**Collect Date:**	12/18/18	**Receive Date:**	12/19/18

Analysis Lot:	621360	**Prep Lot:**		**Report Group:**	KQ1900290
Analysis	8270D	**Prep Method:**			
		Prep Date:			

Title:	Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800550
		Report List ID:	18699

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	71.50	17258	Pass
68	69	0	2	0.00	0	Pass
69	198	0	100	66.84	16133	Pass
70	69	0	2	0.00	0	Pass
127	198	25	75	45.45	10970	Pass
197	198	0	1	0.00	0	Pass
198	198	100	100	100.00	24137	Pass
199	198	5	9	6.33	1527	Pass
275	198	10	30	25.41	6134	Pass
365	198	0.75	100	3.87	934	Pass
441	443	0.01	100	80.41	2479	Pass
442	198	40	110	65.73	15866	Pass
443	442	15	24	19.43	3083	Pass

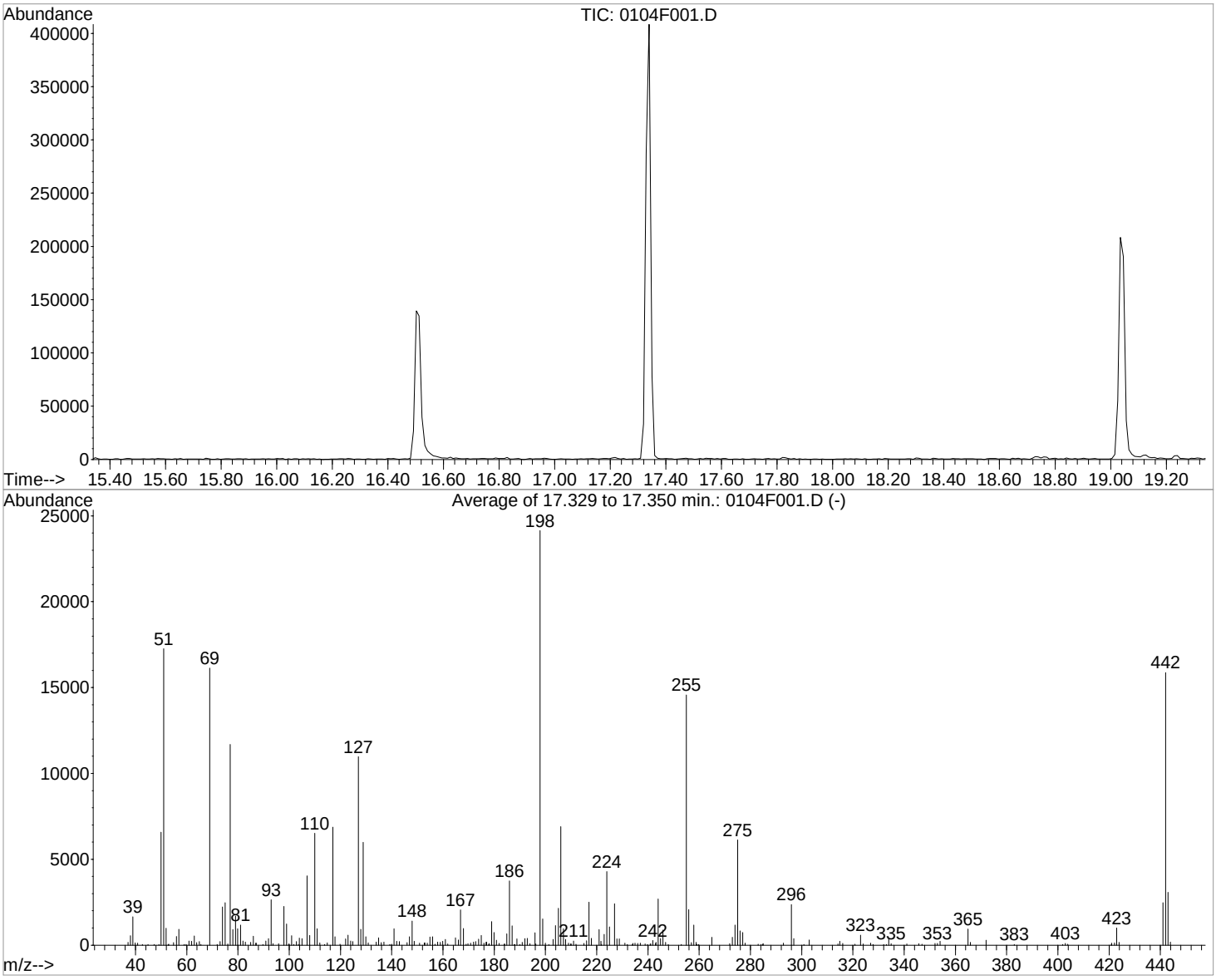
U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 01/10/19
2nd 01/10/19

Data File : J:\MS07\DATA\010419\0104F001.D Vial: 1
Acq On : 4 Jan 2019 9:59 am Operator: CConover
Sample : DFTPP @ 50ppm | SVM60-17B Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07



AutoFind: Scans 1301, 1302, 1303; Background Corrected with Scan 1297

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	71.5	17258	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	66.8	16133	PASS
70	69	0.00	2	0.0	0	PASS
127	198	25	75	45.4	10970	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	24137	PASS
199	198	5	9	6.3	1527	PASS
275	198	10	30	25.4	6134	PASS
365	198	0.75	100	3.9	934	PASS
441	443	0.01	100	80.4	2479	PASS
442	198	40	110	65.7	15866	PASS
443	442	15	24	19.4	3083	PASS

1st 01/10/19
2nd 01/10/19

Average of 17.329 to 17.350 min.: 0104F001.D
DFTPP @ 50ppm | SVM60-17B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.05	162	51.90	986	63.85	141	79.00	1695
38.05	549	52.80	40	64.95	208	79.90	954
39.00	1655	53.00	56	65.55	38	81.00	1176
39.85	131	54.80	151	68.95	16133	81.95	239
40.85	111	55.95	501	71.85	36	82.85	178
42.70	43	56.95	922	73.00	208	84.95	170
44.90	41	59.05	34	73.95	2221	86.00	512
47.30	44	59.75	36	74.95	2477	86.90	112
49.10	35	60.90	240	76.05	73	87.10	117
50.00	6584	61.90	232	77.00	11694	89.70	33
51.00	17258	62.95	533	78.00	905	90.90	245

Average of 17.329 to 17.350 min.: 0104F001.D
DFTPP @ 50ppm | SVM60-17B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
91.95	379	103.65	42	117.85	488	133.90	183
92.90	2641	103.95	410	119.80	61	134.90	425
93.70	89	104.95	382	122.00	367	135.95	153
95.90	88	106.95	4029	122.95	581	136.95	172
97.95	2250	107.95	559	123.95	239	139.25	37
98.95	1225	109.95	6509	124.85	213	139.95	59
99.75	65	110.90	958	127.00	10970	140.95	950
99.95	50	111.90	128	127.95	920	141.90	227
100.95	549	113.85	35	128.90	5993	142.95	209
101.75	39	114.85	126	129.90	487	146.00	154
102.85	213	117.00	6875	130.85	130	146.95	495

Average of 17.329 to 17.350 min.: 0104F001.D
DFTPP @ 50ppm | SVM60-17B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
147.95	1409	159.85	222	172.80	213	181.90	106
148.80	225	160.95	327	173.90	343	183.85	49
150.90	121	161.90	77	174.95	571	184.05	63
152.70	138	164.90	425	176.00	117	184.90	662
152.95	139	166.00	304	176.85	159	185.95	3737
153.90	116	166.90	2054	177.05	181	186.95	1127
154.90	469	167.95	973	177.85	58	187.85	43
155.95	484	169.00	49	178.05	82	188.05	46
156.90	54	169.80	89	178.95	1366	188.90	371
157.90	171	170.75	119	179.90	731	189.95	35
158.95	164	171.90	180	180.90	290	190.90	162

Average of 17.329 to 17.350 min.: 0104F001.D
DFTPP @ 50ppm | SVM60-17B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
191.95	385	205.00	2149	216.95	2501	230.95	117
192.90	403	206.00	6897	217.90	399	231.95	36
193.90	80	207.00	950	220.95	914	233.90	37
195.95	720	207.85	337	221.65	231	234.10	100
196.20	67	208.95	112	221.85	40	234.95	119
197.90	24137	209.80	70	222.90	629	235.95	106
198.90	1527	210.00	70	223.95	4281	237.00	121
200.00	109	210.95	246	224.95	1062	238.90	67
201.30	37	211.90	50	226.95	2408	239.80	35
202.95	335	215.05	96	227.90	360	240.90	58
203.90	1141	216.05	257	228.85	358	241.10	85

Average of 17.329 to 17.350 min.: 0104F001.D
DFTPP @ 50ppm | SVM60-17B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
241.90	274	256.90	154	276.95	739	314.10	72
242.90	108	257.90	1173	277.90	117	314.90	218
243.10	162	258.85	159	283.00	62	316.05	96
244.00	2695	259.15	34	284.10	36	320.80	47
244.95	378	259.75	34	284.80	52	323.00	585
245.85	870	264.90	453	285.00	90	324.00	73
246.90	160	271.85	80	292.90	124	326.90	112
247.90	37	272.95	451	295.95	2364	327.80	35
253.00	39	273.95	1163	296.90	379	331.95	41
254.95	14576	275.00	6134	300.85	35	333.05	37
255.95	2071	275.90	831	302.95	302	333.95	357

Average of 17.329 to 17.350 min.: 0104F001.D

DFTPP @ 50ppm | SVM60-17B
Modified:subtracted

1st 01/10/19
2nd 01/10/19

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
334.95	78	401.90	42	443.90	172		
341.00	73	402.90	108				
345.75	84	403.80	48				
346.95	48	420.85	33				
352.00	94	421.00	118				
352.95	103	422.10	125				
354.00	223	422.95	1005				
364.90	934	423.85	170				
365.85	165	441.00	2479				
371.95	293	442.00	15866				
382.95	39	443.00	3083				

Injection Log

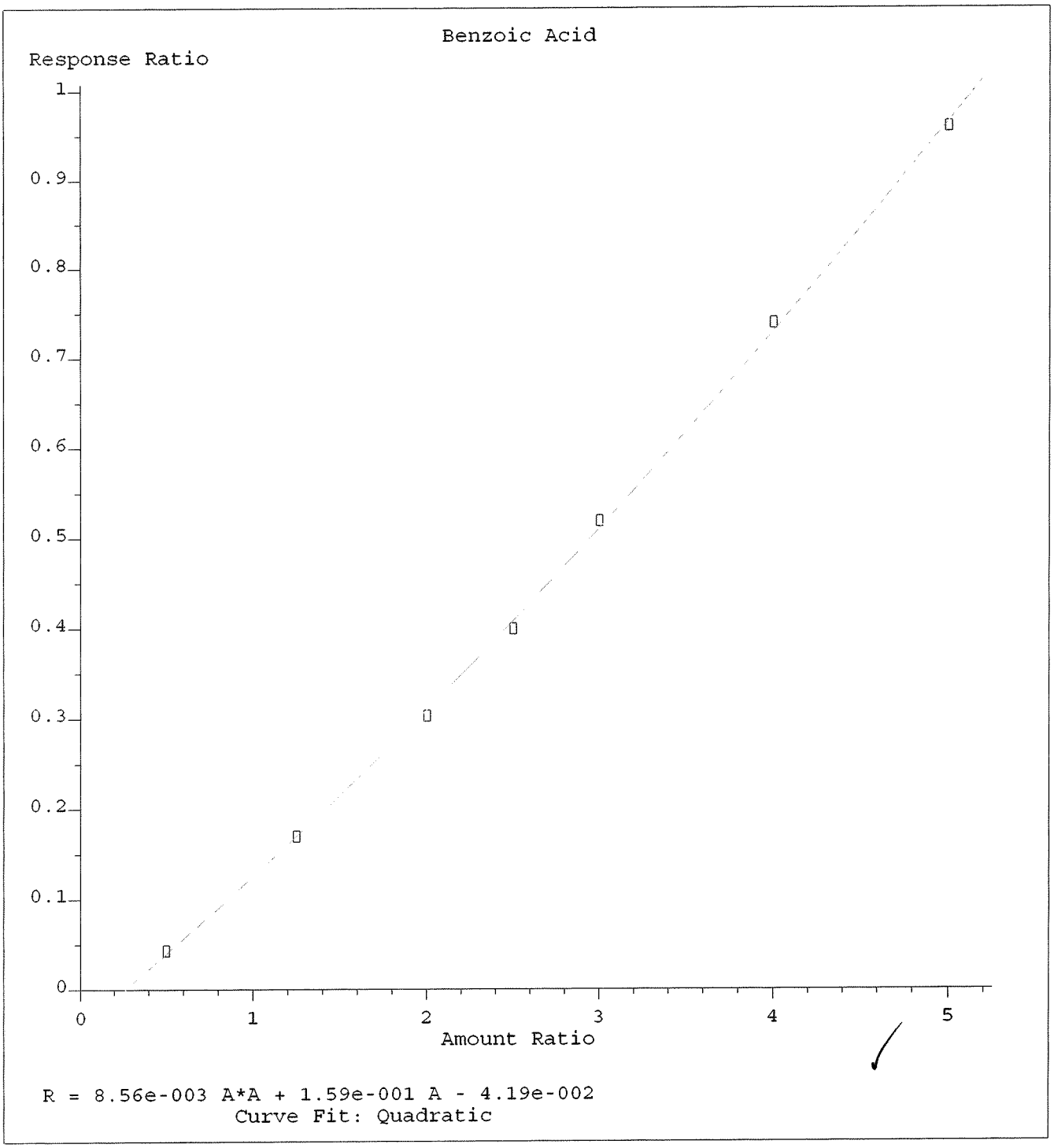
Directory: J:\MS07\DATA\120718

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1207F001.D	1.	DFTPP @ 50ppm | SVM59-97Y		7 Dec 2018 14:41
2	2	1207F002.D	1.	IB		7 Dec 2018 15:51
3	3	1207F003.D	1.	8270/P ICAL @ 1ppm | SVM59-92D		7 Dec 2018 16:32
4	4	1207F004.D	1.	8270/P ICAL @ 5ppm | SVM59-92E		7 Dec 2018 17:13
5	5	1207F005.D	1.	8270/P ICAL @ 10ppm | SVM59-92F		7 Dec 2018 17:54
6	6	1207F006.D	1.	8270/P ICAL @ 20ppm | SVM59-92G		7 Dec 2018 18:35
7	7	1207F007.D	1.	8270/P ICAL @ 50ppm | SVM59-92H		7 Dec 2018 19:16
8	8	1207F008.D	1.	8270/P ICAL @ 80ppm | SVM59-92I		7 Dec 2018 19:57
9	9	1207F009.D	1.	8270/P ICAL @ 100ppm | SVM59-92J		7 Dec 2018 20:38
10	10	1207F010.D	1.	8270/P ICAL @ 120ppm | SVM59-92K		7 Dec 2018 21:19
11	11	1207F011.D	1.	8270/P ICAL @ 160ppm | SVM59-92L		7 Dec 2018 22:00
12	12	1207F012.D	1.	8270/P ICAL @ 200ppm | SVM59-92M		7 Dec 2018 22:41
13	13	1207F013.D	1.	8270 ICV @ 80ppm | SVM59-93C		7 Dec 2018 23:22
14	14	1207F014.D	1.	PAPER ICV @ 80ppm | SVM58-87A		8 Dec 2018 00:03
15	15	1207F015.D	1.	Benzidine ICV @ 50ppm | SVM59-93D		8 Dec 2018 00:44

Cal 15906 / KC1800550

Cl 12.08.18

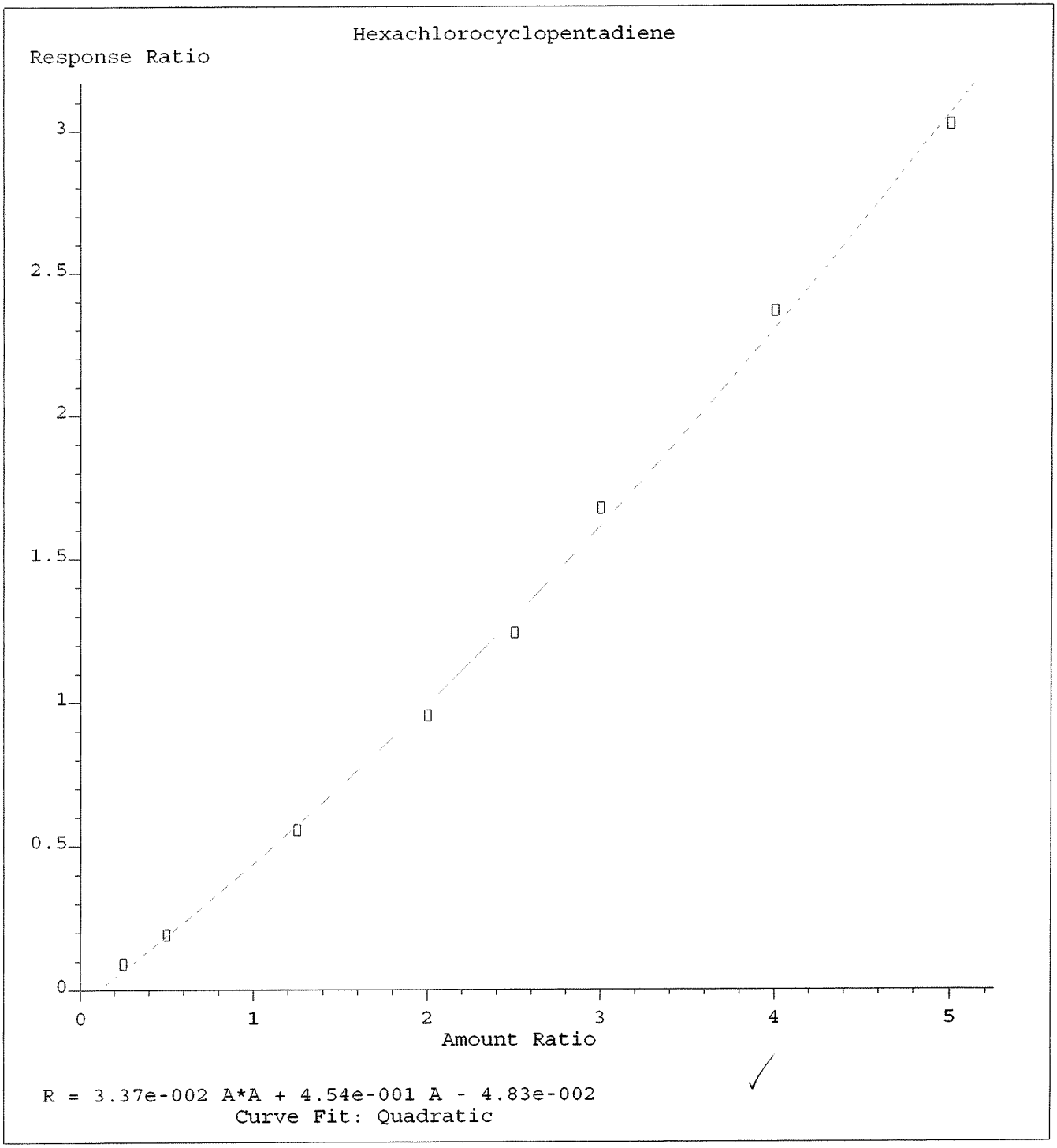
12/13/18



Method Name: J:\MS07\METHODS\8270_625\120718BNP7.M
Calibration Table Last Updated: Fri Dec 07 23:41:58 2018

DEC 0 8 2018

12/13/18



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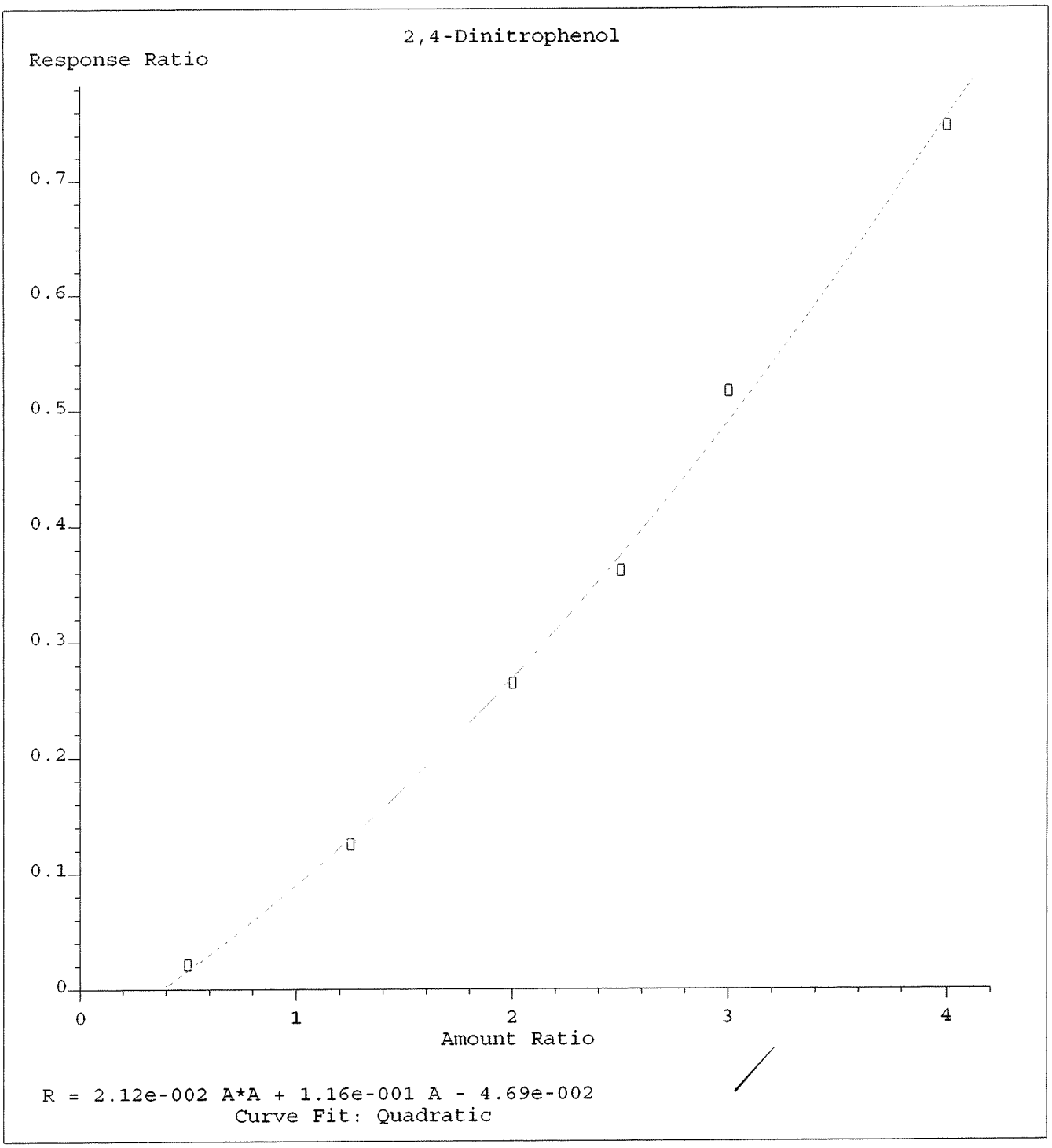
Calibration Table Last Updated: Fri Dec 07 23:41:58 2018

DEC 0 8 2018



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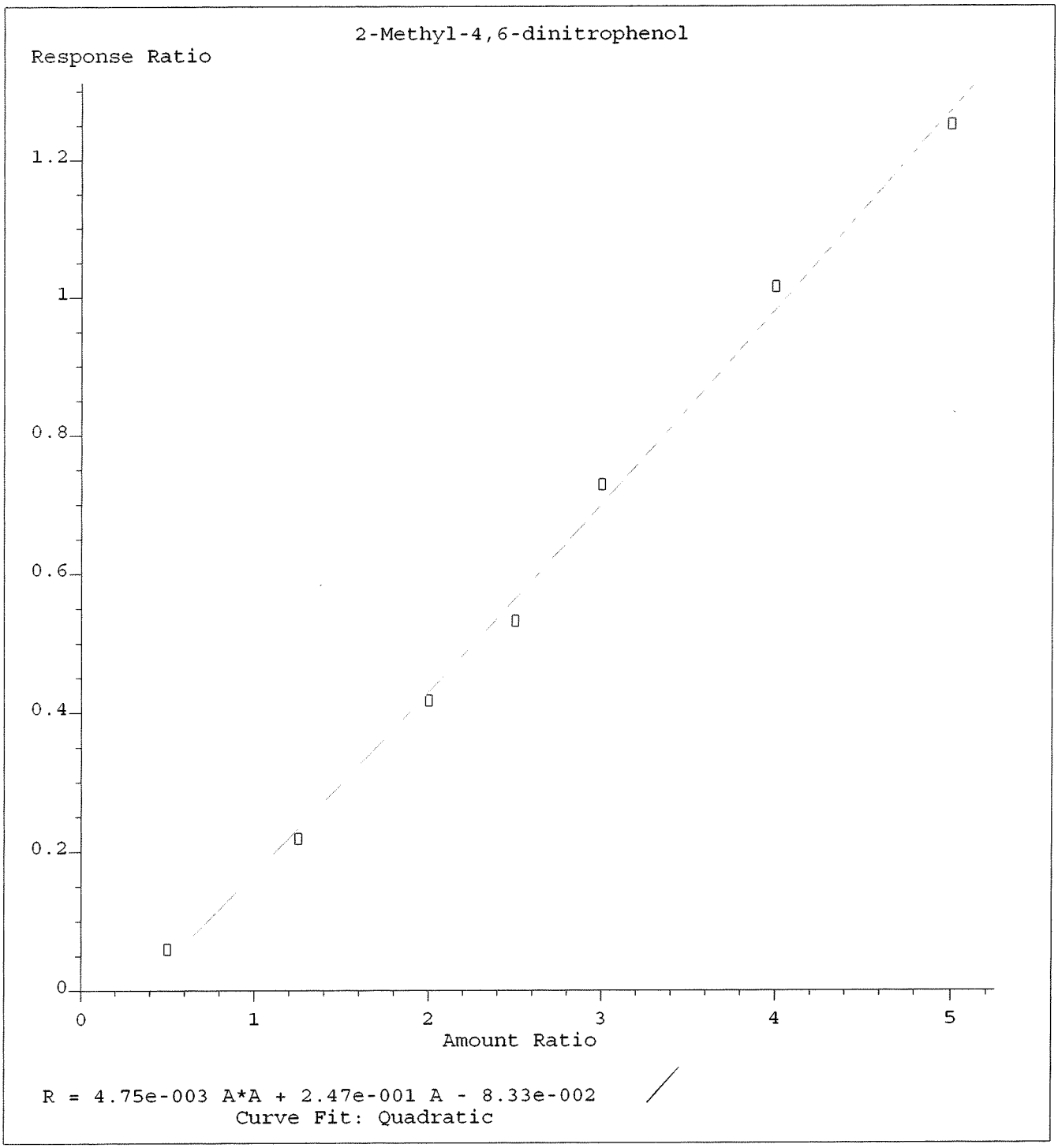
Calibration Table Last Updated: Sat Dec 08 00:05:44 2018

12/13/18

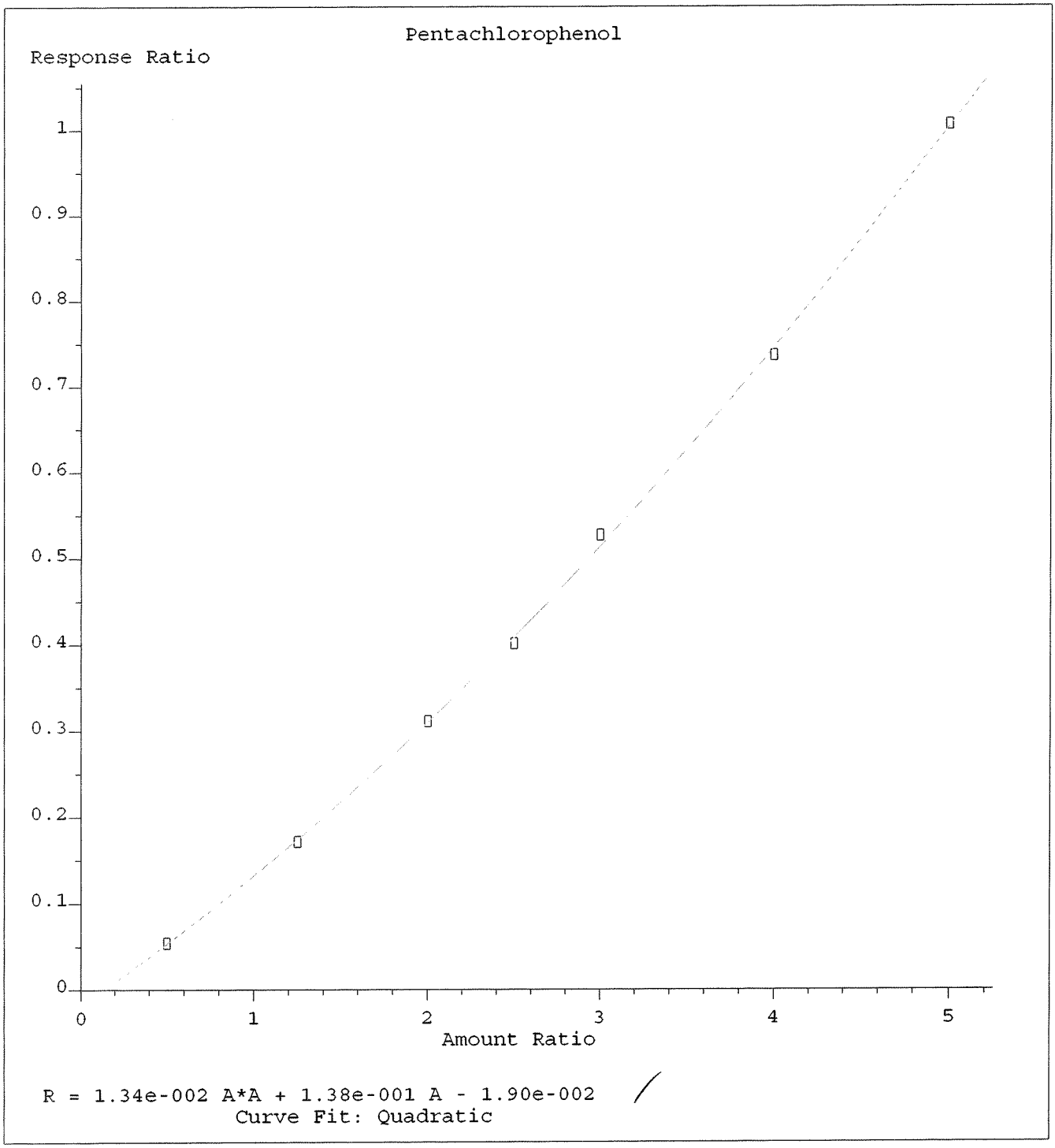
DEC 0 8 2018



Method Name: J:\MS07\METHODS\8270_625\120718BNP7.M
Calibration Table Last Updated: Fri Dec 07 23:41:58 2018

12/13/18

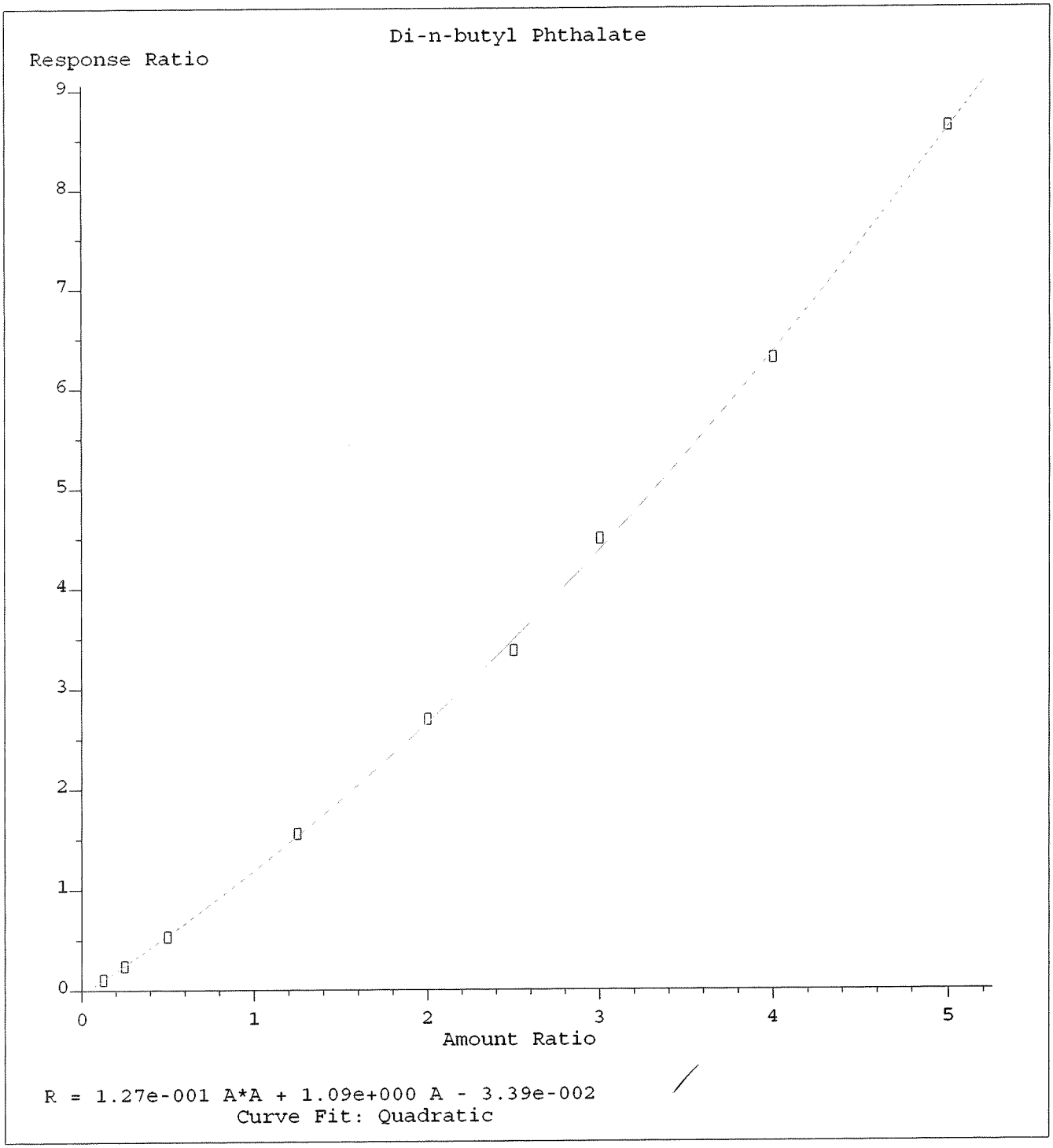
DEC 0 8 2018



Method Name: J:\MS07\METHODS\8270_625\120718BNP7.M
Calibration Table Last Updated: Fri Dec 07 23:41:58 2018

12/13/18

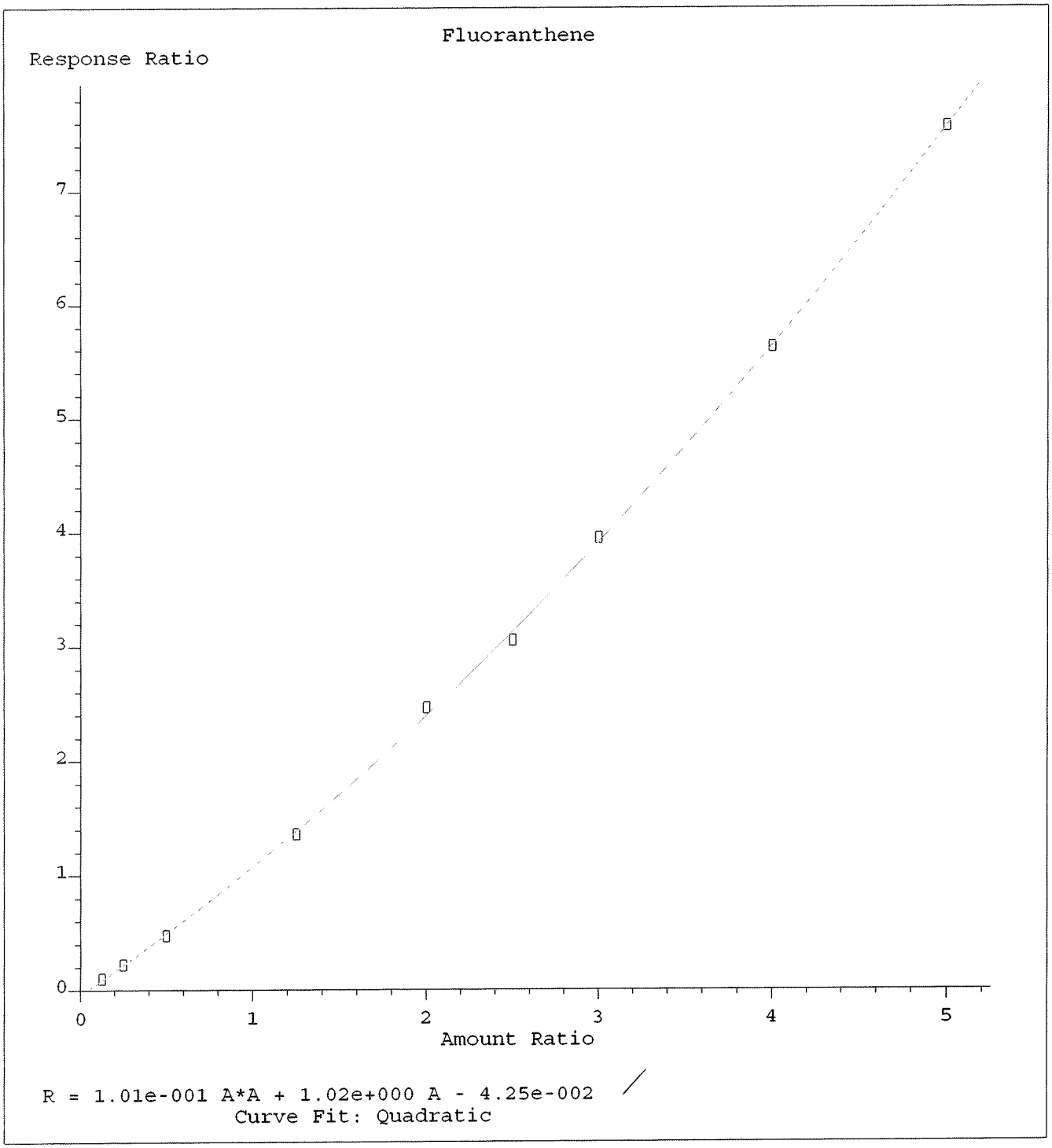
DEC 0 8 2018



Method Name: J:\MS07\METHODS\8270_625\120718BNP7.M
Calibration Table Last Updated: Sat Dec 08 00:06:08 2018

DEC 0 8 2018

12/18/18



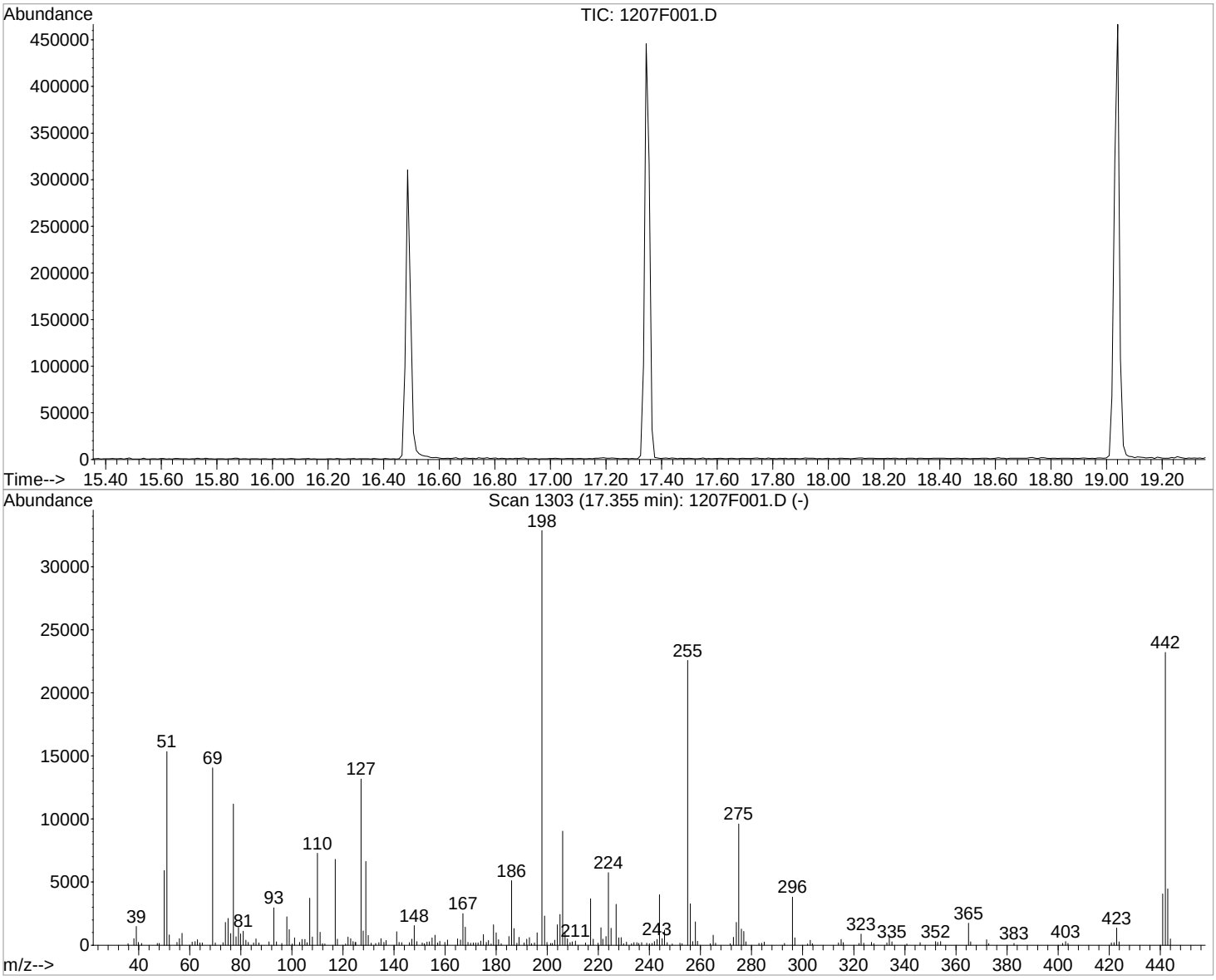
Method Name: J:\MS07\METHODS\8270_625\120718BNP7.M
Calibration Table Last Updated: Fri Dec 07 23:41:58 2018

DEC 0 8 2018

12/13/18

DFTPP

Data File : J:\MS07\DATA\120718\1207F001.D Vial: 1
Acq On : 7 Dec 2018 2:41 pm Operator: CConover
Sample : DFTPP @ 50ppm | SVM59-97Y Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07



Spectrum Information: Scan 1303

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	46.7	15328	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	42.7	14042	PASS
70	69	0.00	2	1.2	172	PASS
127	198	25	75	40.1	13177	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	32849	PASS
199	198	5	9	7.0	2307	PASS
275	198	10	30	29.2	9606	PASS
365	198	0.75	100	5.3	1734	PASS
441	443	0.01	100	91.0	4058	PASS
442	198	40	110	70.6	23192	PASS
443	442	15	24	19.2	4461	PASS

1st 12/08/18
2nd 12/13/18

Scan 1303 (17.355 min): 1207F001.D
DFTPP @ 50ppm | SVM59-97Y
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.75	114	55.90	520	74.95	2112	87.00	176
38.10	526	56.95	949	76.05	921	91.00	267
39.00	1478	60.85	245	77.00	11183	92.90	2958
39.90	213	62.05	287	78.10	660	93.90	266
41.10	130	62.95	438	79.00	1410	95.95	143
47.20	128	63.95	191	79.90	896	97.95	2245
48.00	143	64.85	170	80.90	1109	98.95	1230
50.00	5924	68.90	14042	81.90	387	100.05	101
50.95	15328	69.95	172	82.90	226	100.95	577
51.90	821	72.95	205	85.00	177	102.95	222
55.00	218	73.95	1798	85.90	489	103.95	447

Scan 1303 (17.355 min): 1207F001.D
DFTPP @ 50ppm | SVM59-97Y
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
105.05	460	121.90	646	134.00	193	150.95	187
105.85	194	123.00	521	134.90	509	151.85	115
106.95	3731	123.90	280	135.95	229	152.85	246
107.95	649	124.70	228	136.85	372	153.85	275
109.95	7283	125.00	230	140.95	1069	154.90	573
110.95	1023	127.00	13177	141.95	228	156.00	782
111.95	127	127.90	1131	142.95	199	157.00	181
112.85	106	128.90	6634	145.95	195	157.90	297
116.90	6790	129.90	769	146.95	477	159.90	228
117.80	473	131.00	169	147.85	1553	160.90	412
121.00	106	132.80	133	148.95	285	164.90	504

Scan 1303 (17.355 min): 1207F001.D
DFTPP @ 50ppm | SVM59-97Y
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
166.00	409	176.95	377	190.85	173	202.90	390
166.90	2493	177.95	105	191.95	477	203.90	1619
167.90	1414	178.95	1619	192.95	607	205.00	2428
168.90	217	179.95	977	193.85	121	206.00	9030
170.00	164	180.85	440	195.00	175	206.95	1031
171.00	180	181.95	122	196.00	974	207.90	490
171.90	172	184.95	696	197.90	32849	208.90	196
172.90	187	185.95	5104	198.90	2307	209.70	261
173.90	319	186.95	1314	199.90	213	211.00	333
174.95	837	188.05	154	201.30	134	214.95	186
176.05	228	188.95	629	201.90	128	216.95	3681

Scan 1303 (17.355 min): 1207F001.D
DFTPP @ 50ppm | SVM59-97Y
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
217.95	479	230.95	242	243.90	4007	258.85	304
219.85	159	232.95	110	244.90	510	263.85	116
220.95	1392	233.90	211	245.90	1202	264.95	799
221.75	479	235.10	192	246.90	192	265.85	159
222.95	689	235.80	129	248.90	104	271.65	121
223.95	5745	236.90	193	251.90	150	272.90	620
224.95	1346	238.90	161	252.80	109	274.00	1798
226.95	3244	240.00	120	254.95	22576	274.90	9606
227.95	570	241.00	129	255.95	3286	276.00	1266
228.95	612	241.90	278	256.95	290	276.90	1090
229.85	122	243.00	456	257.95	1843	277.80	273

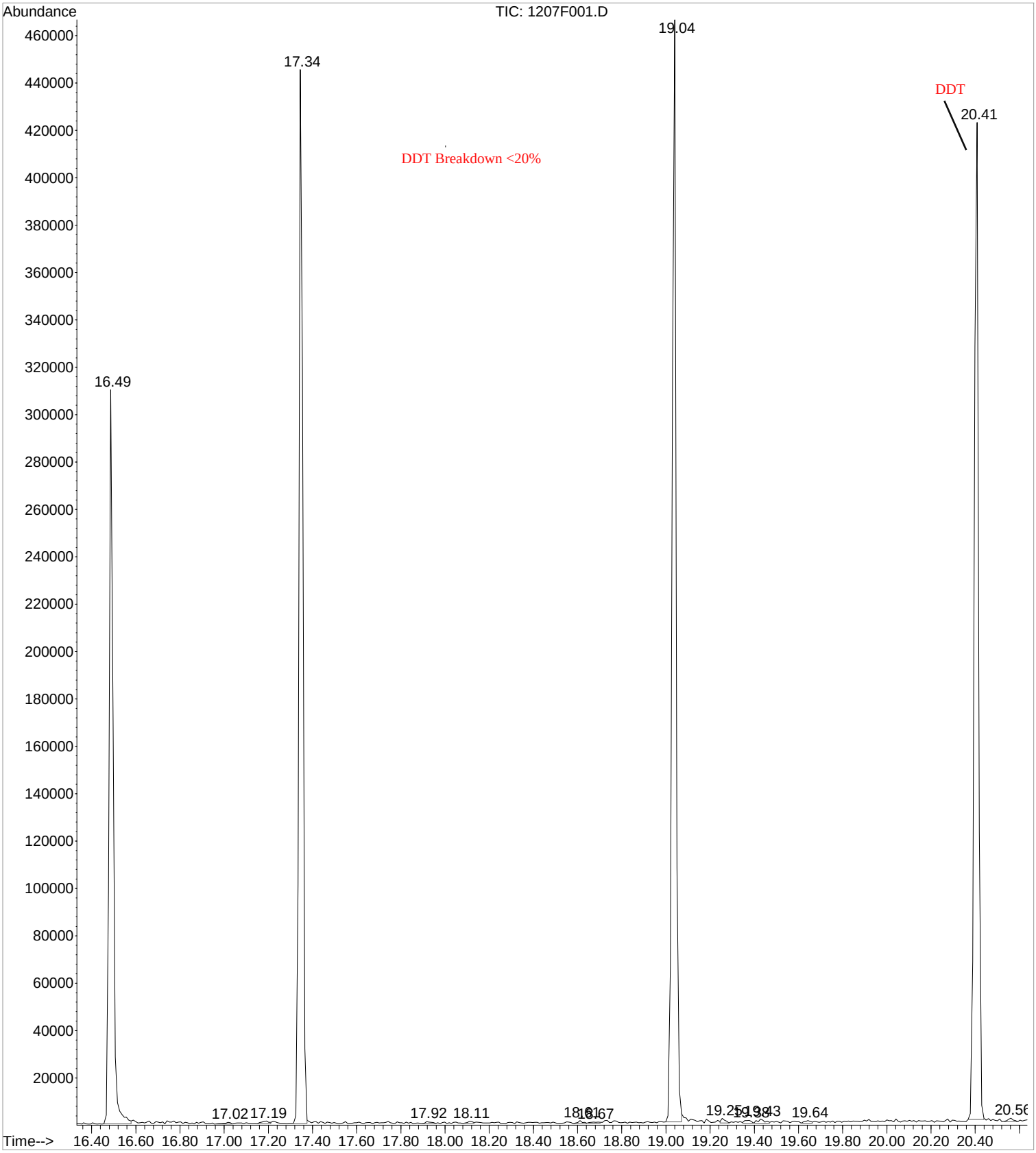
Scan 1303 (17.355 min): 1207F001.D
DFTPP @ 50ppm | SVM59-97Y
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
282.90	142	315.90	203	352.00	286	420.85	170
283.90	151	322.00	137	352.90	222	421.95	201
284.90	251	322.90	886	354.00	288	422.95	1360
292.85	146	323.90	165	364.90	1734	423.95	258
295.95	3815	326.90	218	365.80	268	441.00	4058
296.95	577	327.90	120	372.05	433	442.00	23192
301.95	107	332.95	189	372.85	108	443.00	4461
302.95	388	333.95	681	382.75	141	444.00	487
303.85	114	334.95	263	401.80	136		
314.00	184	340.75	105	403.00	281		
315.00	461	345.95	195	403.90	136		

1st 12/08/18

2nd 12/13/18

File : J:\MS07\DATA\120718\1207F001.D
Operator : CConover
Acquired : 7 Dec 2018 2:41 pm using AcqMethod 8270_1
Instrument : MS07
Sample Name: DFTPP @ 50ppm | SVM59-97Y
Misc Info :
Vial Number: 1

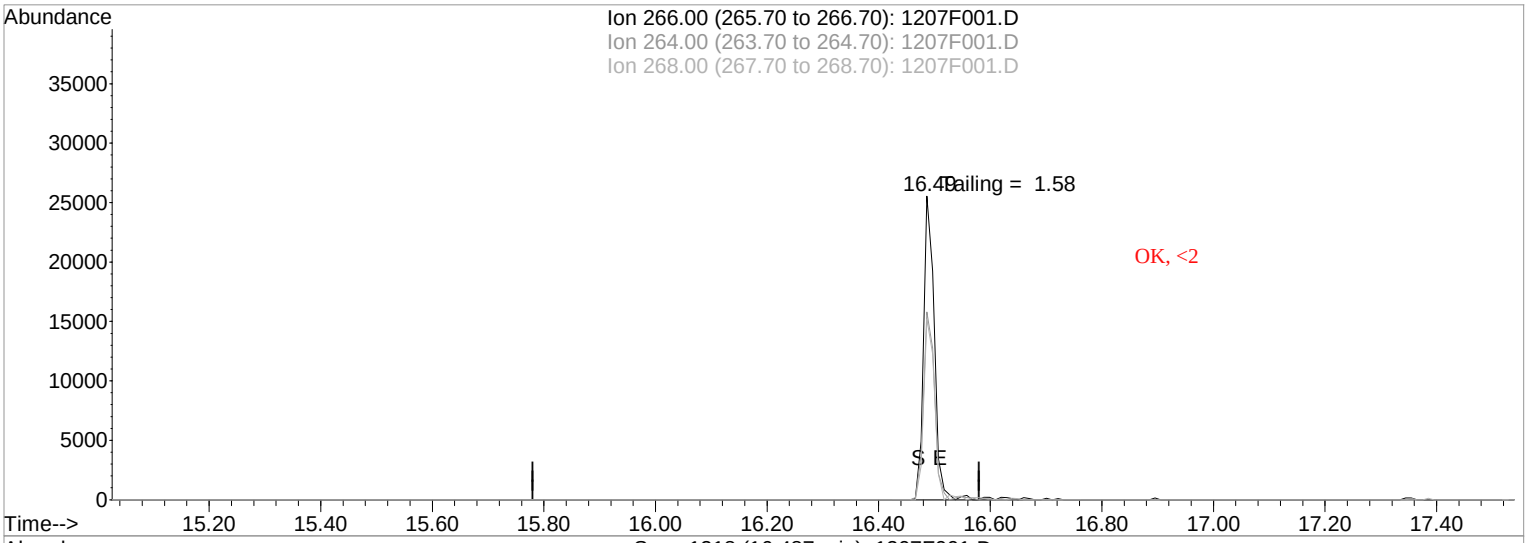


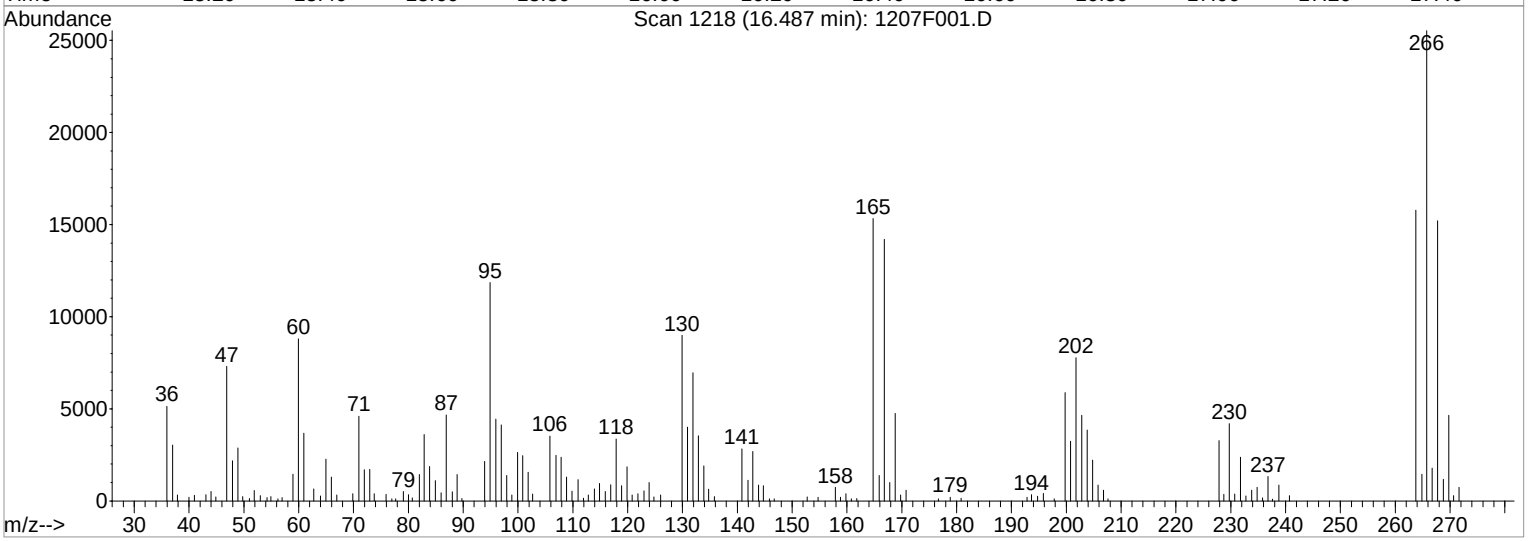
Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F001.D Vial: 1
Acq On : 7 Dec 2018 2:41 pm Operator: CConover
Sample : DFTPP @ 50ppm | SVM59-97Y Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 7 15:33 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\625DFTPP.M (RTE Integrator)
Title : 8270C Calibration/RTX-5MS 30m X .25mm MS08
Last Update : Tue Mar 09 13:28:48 2010
Response via : Single Level Calibration





TIC: 1207F001.D

(1) Pentachlorophenol (TMC)

16.49min 44.90ug/ml

response 33424

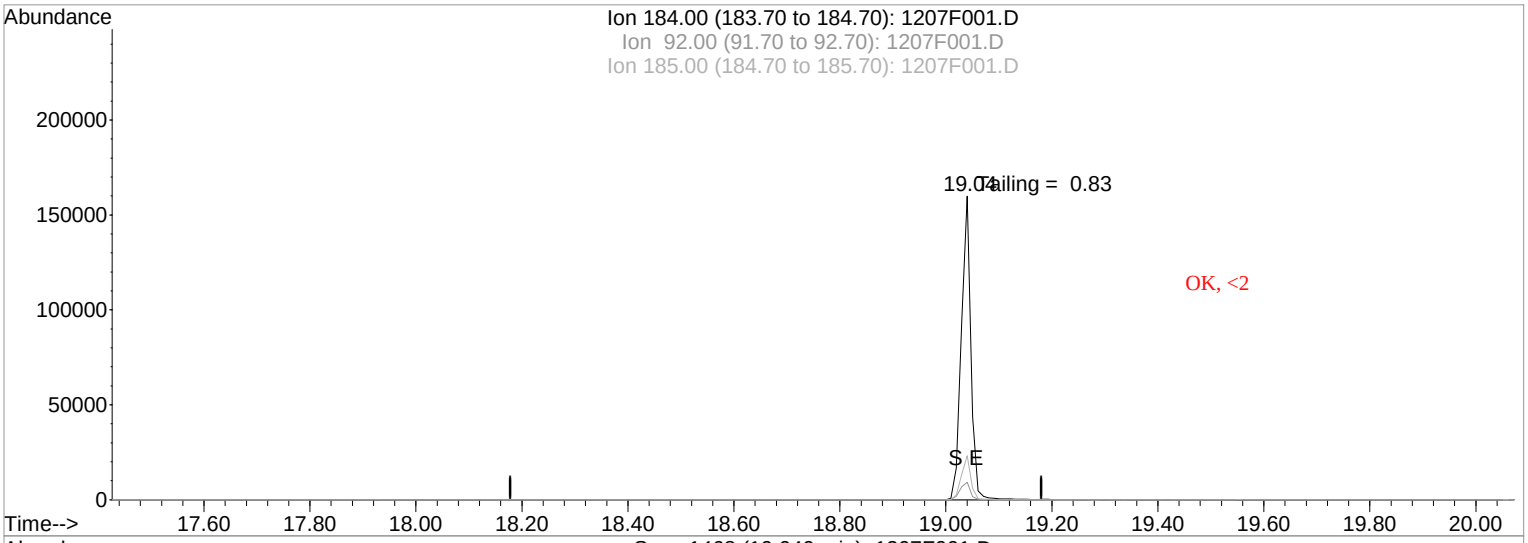
Ion	Exp%	Act%
266.00	100	100
264.00	64.90	61.51
268.00	64.90	59.01
0.00	0.00	0.00

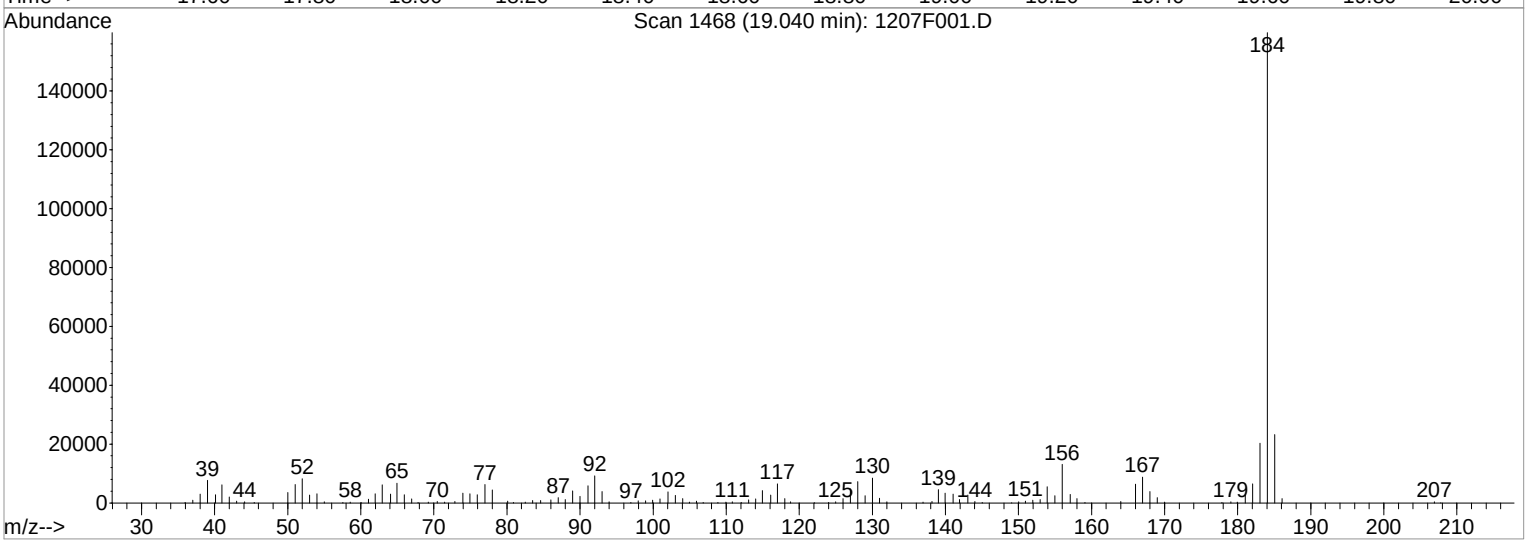
Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F001.D Vial: 1
Acq On : 7 Dec 2018 2:41 pm Operator: CConover
Sample : DFTPP @ 50ppm | SVM59-97Y Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 7 15:33 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\625DFTPP.M (RTE Integrator)
Title : 8270C Calibration/RTX-5MS 30m X .25mm MS08
Last Update : Tue Mar 09 13:28:48 2010
Response via : Single Level Calibration





TIC: 1207F001.D

(2) Benzidine (T)

19.04min 155.85ug/ml

response 196891

Ion	Exp%	Act%
184.00	100	100
92.00	13.20	5.76
185.00	15.50	14.53
0.00	0.00	0.00

1st 12/08/18
2nd 12/13/18

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F002.D Vial: 2
Acq On : 7 Dec 2018 3:51 pm Operator: CConover
Sample : IB Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:24 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	52081	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	192581	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.39	164	111358	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	180099	40.00	ug/ml	0.00
73) Chrysene-d12	21.27	240	125696	40.00	ug/ml	-0.01
83) Perylene-d12	24.50	264	136510	40.00	ug/ml	-0.01

System Monitoring Compounds						
4) 2-Fluorophenol		0.00	112	0	0.00	ug/ml
Spiked Amount	150.000	Range	21 - 100	Recovery	=	0.00%#
8) Phenol-d6		0.00	99	0	0.00	ug/ml
Spiked Amount	150.000	Range	10 - 94	Recovery	=	0.00%#
20) Nitrobenzene-d5		0.00	82	0	0.00	ug/ml
Spiked Amount	100.000	Range	35 - 114	Recovery	=	0.00%#
40) 2-Fluorobiphenyl		0.00	172	0	0.00	ug/ml
Spiked Amount	100.000	Range	43 - 116	Recovery	=	0.00%#
62) 2,4,6-Tribromophenol		0.00	330	0	0.00	ug/ml
Spiked Amount	150.000	Range	10 - 123	Recovery	=	0.00%#
76) Terphenyl-d14		0.00	244	0d	0.00	ug/ml
Spiked Amount	100.000	Range	33 - 141	Recovery	=	0.00%#

Target Compounds	Qvalue

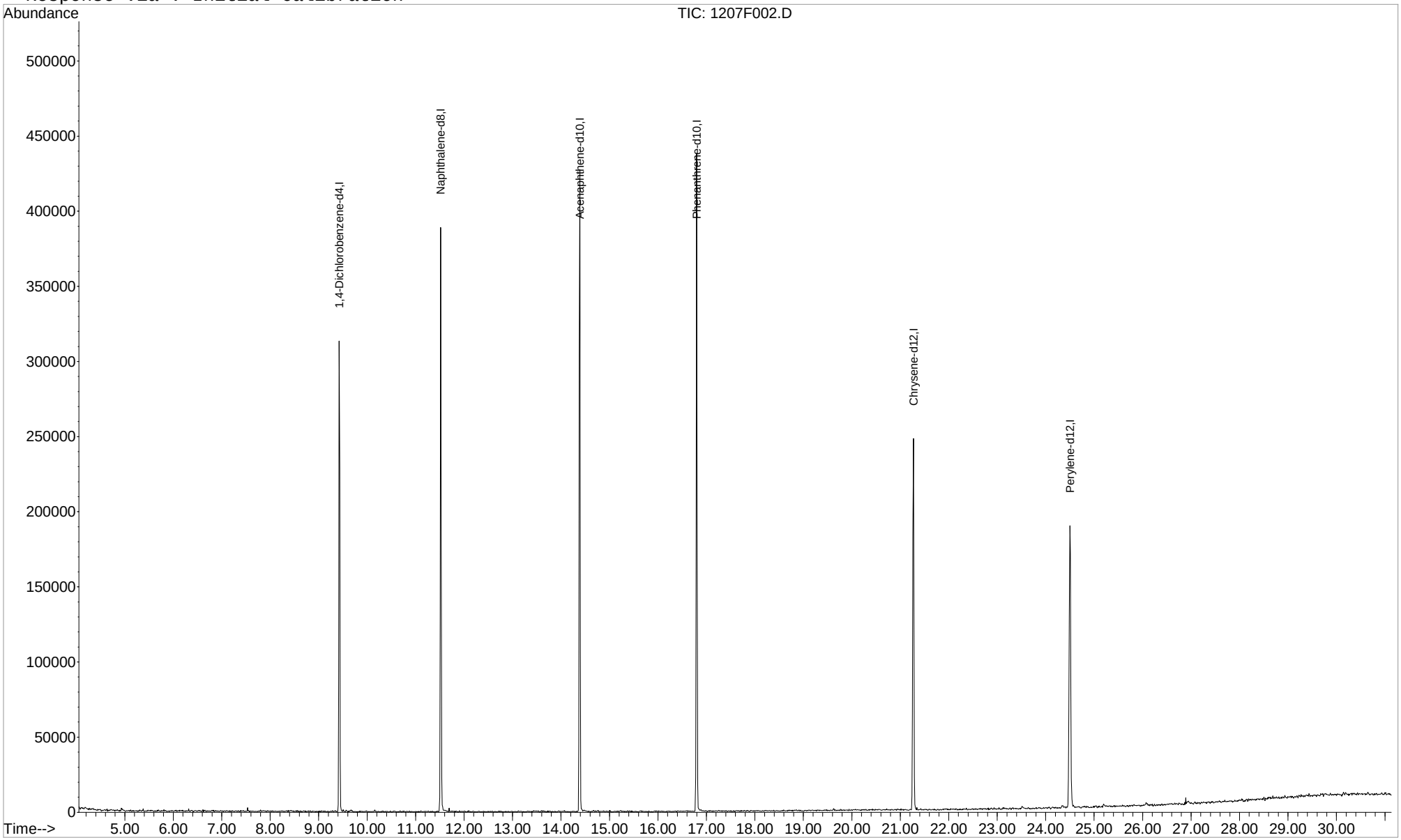
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F002.D Vial: 2
Acq On : 7 Dec 2018 3:51 pm Operator: CConover
Sample : IB Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:56 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F003.D Vial: 3
Acq On : 7 Dec 2018 4:32 pm Operator: CConover
Sample : 8270/P ICAL @ 1ppm | SVM59-92D Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:25 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	42345	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	153806	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.39	164	88721	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	142441	40.00	ug/ml	0.00
73) Chrysene-d12	21.26	240	98652	40.00	ug/ml	-0.02
83) Perylene-d12	24.50	264	91625	40.00	ug/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	ug/ml	
Spiked Amount 150.000	Range 21 - 100		Recovery =	0.00%#		
8) Phenol-d6	0.00	99	0d	0.00	ug/ml	
Spiked Amount 150.000	Range 10 - 94		Recovery =	0.00%#		
20) Nitrobenzene-d5	0.00	82	0d	0.00	ug/ml	
Spiked Amount 100.000	Range 35 - 114		Recovery =	0.00%#		
40) 2-Fluorobiphenyl	0.00	172	0d	0.00	ug/ml	
Spiked Amount 100.000	Range 43 - 116		Recovery =	0.00%#		
62) 2,4,6-Tribromophenol	0.00	330	0d	0.00	ug/ml	
Spiked Amount 150.000	Range 10 - 123		Recovery =	0.00%#		
76) Terphenyl-d14	19.42	244	2633	1.28	ug/ml	-0.01
Spiked Amount 100.000	Range 33 - 141		Recovery =	1.28%#		
Target Compounds						Qvalue
30) Naphthalene	11.55	128	3673	0.98	ug/ml	92
35) 2-Methylnaphthalene	12.69	142	2574	0.96	ug/ml	87
43) Acenaphthylene	14.14	152	3148	0.84	ug/ml	92
44) Dimethyl Phthalate	14.00	163	2694	0.95	ug/ml	97
46) Acenaphthene	14.43	154	2513	1.06	ug/ml	97
49) Dibenzofuran	14.71	168	3692	0.99	ug/ml	95
53) Fluorene	15.28	166	3050	1.11	ug/ml	94
55) Diethyl Phthalate	15.15	149	2570	0.96	ug/ml	87
68) Phenanthrene	16.83	178	3548	0.90	ug/ml	97
69) Anthracene	16.91	178	4072	1.01	ug/ml	94
70) Carbazole	17.20	167	3278	0.92	ug/ml	90
71) Di-n-butyl Phthalate	17.84	149	2773	0.64	ug/ml	97
72) Fluoranthene	18.76	202	2794	0.71	ug/ml	97
75) Pyrene	19.13	202	2809	0.92	ug/ml	95
77) Butyl Benzyl Phthalate	20.28	149	1228	0.84	ug/ml	83
80) Benz(a)anthracene	21.25	228	2797	0.96	ug/ml	91
81) Chrysene	21.31	228	2815	1.01	ug/ml	95
82) Bis(2-ethylhexyl) Phthalat	21.48	149	663	0.33	ug/ml	50
84) Di-n-octyl Phthalate	22.97	149	1150	0.36	ug/ml	84
85) Benzo(b)fluoranthene	23.61	252	2193	0.83	ug/ml	89
86) Benzo(k)fluoranthene	23.67	252	2430	0.93	ug/ml	78
89) Benzo(a)pyrene	24.35	252	1836	0.76	ug/ml	78
90) Indeno(1,2,3-cd)pyrene	26.95	276	1334	0.57	ug/ml	69
91) Dibenz(a,h)anthracene	27.03	278	1559	0.66	ug/ml	89
92) Benzo(g,h,i)perylene	27.52	276	1712	0.70	ug/ml	85

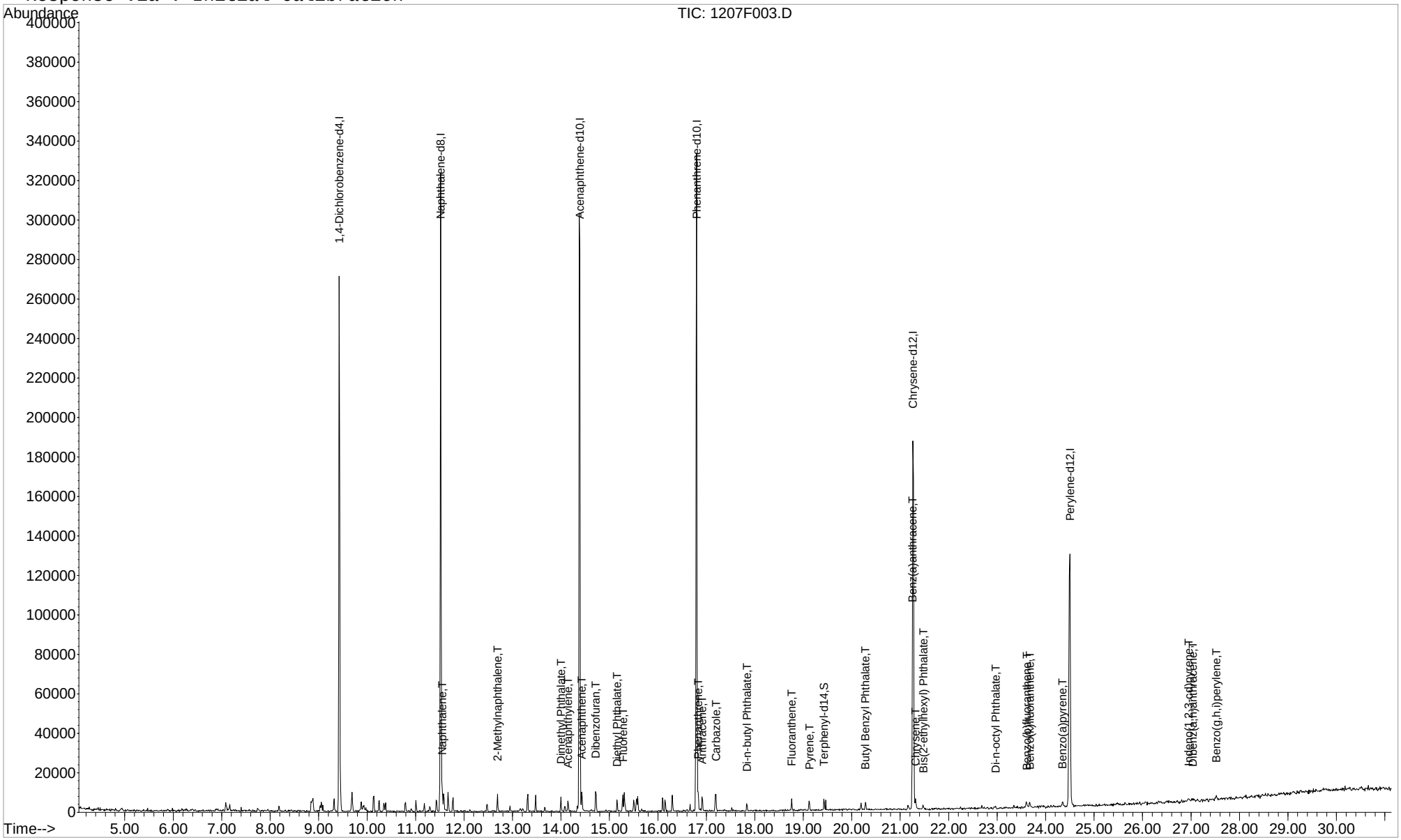
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F003.D Vial: 3
Acq On : 7 Dec 2018 4:32 pm Operator: CConover
Sample : 8270/P ICAL @ 1ppm | SVM59-92D Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:58 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F004.D Vial: 4
Acq On : 7 Dec 2018 5:13 pm Operator: CConover
Sample : 8270/P ICAL @ 5ppm | SVM59-92E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:26 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.43	152	42508	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	163035	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.38	164	95409	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	139095	40.00	ug/ml	0.00
73) Chrysene-d12	21.26	240	107801	40.00	ug/ml	-0.02
83) Perylene-d12	24.50	264	96716	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.16	112	5076	4.57	ug/ml	-0.03
Spiked Amount 150.000	Range 21 - 100		Recovery =	3.05%#		
8) Phenol-d6	8.84	99	5839	4.33	ug/ml	-0.02
Spiked Amount 150.000	Range 10 - 94		Recovery =	2.89%#		
20) Nitrobenzene-d5	10.34	82	6907	5.29	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery =	5.29%#		
40) 2-Fluorobiphenyl	13.31	172	16002	4.73	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery =	4.73%#		
62) 2,4,6-Tribromophenol	15.67	330	1513	2.66	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery =	1.77%#		
76) Terphenyl-d14	19.43	244	10206	4.54	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery =	4.54%#		
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.39	42	5354	5.01	ug/ml	91
3) Pyridine	4.45	79	4759m	5.00	ug/ml	
5) Ethylene Glycol Butyl Ethe	7.73	57	5260	5.22	ug/ml	94
6) Aniline	8.88	93	8661	5.44	ug/ml#	48
7) Bis(2-chloroethyl) Ether	9.03	93	5211	5.19	ug/ml	87
9) Phenol	8.86	94	7070	5.08	ug/ml#	69
10) 2-Chlorophenol	9.06	128	5787	4.24	ug/ml	97
11) 1,3-Dichlorobenzene	9.32	146	7995	4.92	ug/ml	96
12) 1,4-Dichlorobenzene	9.46	146	8359	5.04	ug/ml	95
13) 1,2-Dichlorobenzene	9.69	146	7296	4.62	ug/ml	94
14) Benzyl Alcohol	9.68	108	3532	4.44	ug/ml	90
15) 2,2'-oxybis(2-chloropropan	9.94	45	8102m	6.08	ug/ml	
16) 2-Methylphenol	9.87	107	4464	4.38	ug/ml	90
17) Hexachloroethane	10.24	117	3219	4.78	ug/ml	87
18) N-Nitrosodi-n-propylamine	10.13	70	3962	4.93	ug/ml	82
19) 4-Methylphenol	10.14	107	6391	4.41	ug/ml	90
21) Nitrobenzene	10.38	77	6663	5.33	ug/ml	91
23) Isophorone	10.78	82	11495	5.14	ug/ml	97
24) 2-Nitrophenol	10.91	139	2623	3.28	ug/ml	79
25) 2,4-Dimethylphenol	11.01	122	5082	4.74	ug/ml	87
26) Bis(2-chloroethoxy)methane	11.18	93	6305	5.13	ug/ml	98
27) 2,4-Dichlorophenol	11.29	162	5647	4.46	ug/ml	93
29) 1,2,4-Trichlorobenzene	11.43	180	6983	4.78	ug/ml	93
30) Naphthalene	11.55	128	20455	5.13	ug/ml	98
31) n-Dodecane	11.58	57	7783	6.09	ug/ml	96
32) 4-Chloroaniline	11.67	127	8513	4.77	ug/ml	90
33) Hexachlorobutadiene	11.77	225	5176	5.17	ug/ml	95
34) 4-Chloro-3-methylphenol	12.47	107	4895	4.57	ug/ml	98
35) 2-Methylnaphthalene	12.69	142	13759	4.87	ug/ml	96
37) Hexachlorocyclopentadiene	12.95	237	3680	5.94	ug/ml	91
38) 2,4,6-Trichlorophenol	13.15	196	3448	3.64	ug/ml	84
39) 2,4,5-Trichlorophenol	13.20	196	3986	4.14	ug/ml	97
41) 2-Chloronaphthalene	13.48	162	13432	4.75	ug/ml	99
42) 2-Nitroaniline	13.66	65	3951	5.12	ug/ml	96
43) Acenaphthylene	14.14	152	18557	4.62	ug/ml	99
44) Dimethyl Phthalate	14.00	163	15959	5.26	ug/ml	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F004.D Vial: 4
Acq On : 7 Dec 2018 5:13 pm Operator: CConover
Sample : 8270/P ICAL @ 5ppm | SVM59-92E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:26 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

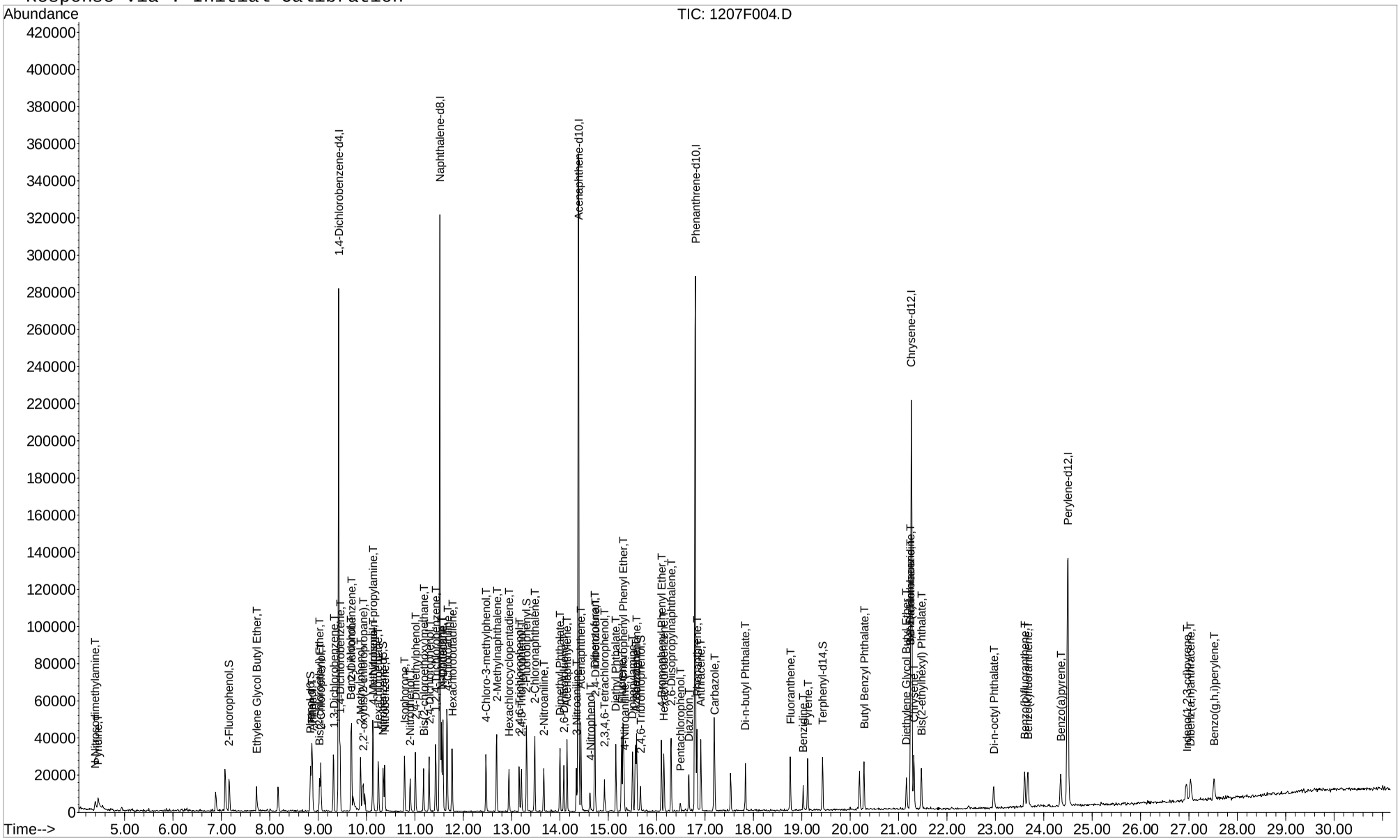
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
45)	2,6-Dinitrotoluene	14.08	165	2809	3.97	ug/ml	87
46)	Acenaphthene	14.43	154	12225	4.80	ug/ml	98
47)	3-Nitroaniline	14.34	138	2921	4.08	ug/ml	81
49)	Dibenzofuran	14.72	168	19605	4.90	ug/ml	97
50)	4-Nitrophenol	14.62	109	1436	4.52	ug/ml	86
51)	2,4-Dinitrotoluene	14.73	165	3465	3.93	ug/ml#	66
52)	2,3,4,6-Tetrachlorophenol	14.92	232	2198	3.35	ug/ml	97
53)	Fluorene	15.28	166	14396	4.85	ug/ml	95
54)	4-Chlorophenyl Phenyl Ethe	15.31	204	7677	5.12	ug/ml	88
55)	Diethyl Phthalate	15.16	149	14734	5.11	ug/ml	95
56)	4-Nitroaniline	15.33	138	2386	3.69	ug/ml	91
58)	Diphenylamine	15.50	169	8235	4.25	ug/ml	87
59)	Azobenzene	15.56	77	17569m	6.82	ug/ml	
60)	Benzophenone	15.58	105	12109	5.41	ug/ml	97
63)	4-Bromophenyl Phenyl Ether	16.10	248	3806	3.98	ug/ml	85
64)	Hexachlorobenzene	16.15	284	3790	3.63	ug/ml	84
65)	2,6-Diisopropylnaphthalene	16.30	197	10598	4.29	ug/ml	97
66)	Pentachlorophenol	16.49	266	801	1.92	ug/ml	74
67)	Diazinon	16.67	137	2274	3.99	ug/ml	86
68)	Phenanthrene	16.83	178	17625	4.59	ug/ml	96
69)	Anthracene	16.91	178	17534	4.46	ug/ml	96
70)	Carbazole	17.20	167	14624	4.22	ug/ml	98
71)	Di-n-butyl Phthalate	17.83	149	14893	3.53	ug/ml	96
72)	Fluoranthene	18.76	202	13856	3.61	ug/ml	94
74)	Benzidine	19.03	184	5452	3.74	ug/ml	98
75)	Pyrene	19.12	202	14479	4.34	ug/ml	95
77)	Butyl Benzyl Phthalate	20.28	149	7437	4.64	ug/ml	94
78)	Diethylene Glycol Butyl Et	21.16	105	9236	4.82	ug/ml	94
79)	3,3'-Dichlorobenzidine	21.24	252	5039	3.70	ug/ml	98
80)	Benz(a)anthracene	21.24	228	14840	4.65	ug/ml	98
81)	Chrysene	21.32	228	14906	4.89	ug/ml	93
82)	Bis(2-ethylhexyl) Phthalat	21.47	149	8709	3.94	ug/ml	97
84)	Di-n-octyl Phthalate	22.97	149	10657	3.12	ug/ml	98
85)	Benzo(b)fluoranthene	23.60	252	13347	4.81	ug/ml	96
86)	Benzo(k)fluoranthene	23.67	252	15747	5.71	ug/ml	97
89)	Benzo(a)pyrene	24.35	252	12531	4.89	ug/ml	97
90)	Indeno(1,2,3-cd)pyrene	26.95	276	9265	3.74	ug/ml	100
91)	Dibenz(a,h)anthracene	27.04	278	9946	3.97	ug/ml	89
92)	Benzo(g,h,i)perylene	27.52	276	10666	4.14	ug/ml	95

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\120718\1207F004.D Vial: 4
Acq On : 7 Dec 2018 5:13 pm Operator: CConover
Sample : 8270/P ICAL @ 5ppm | SVM59-92E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:00 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

12/08/18 12/13/18 1st 2nd

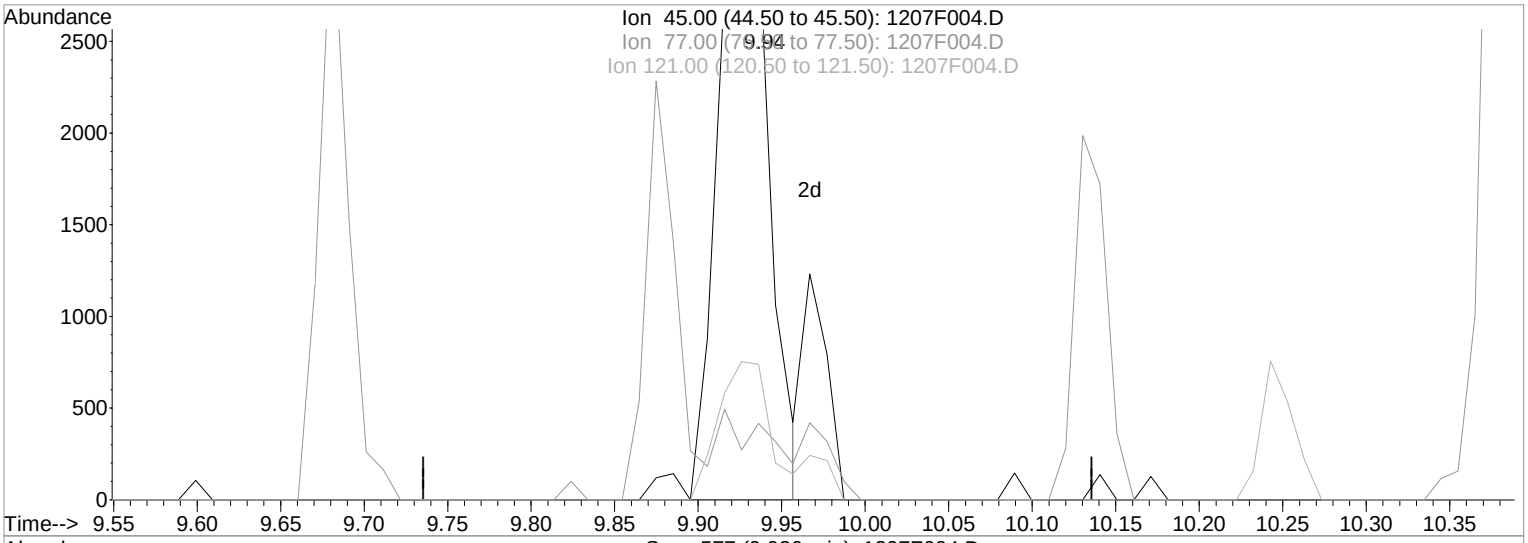


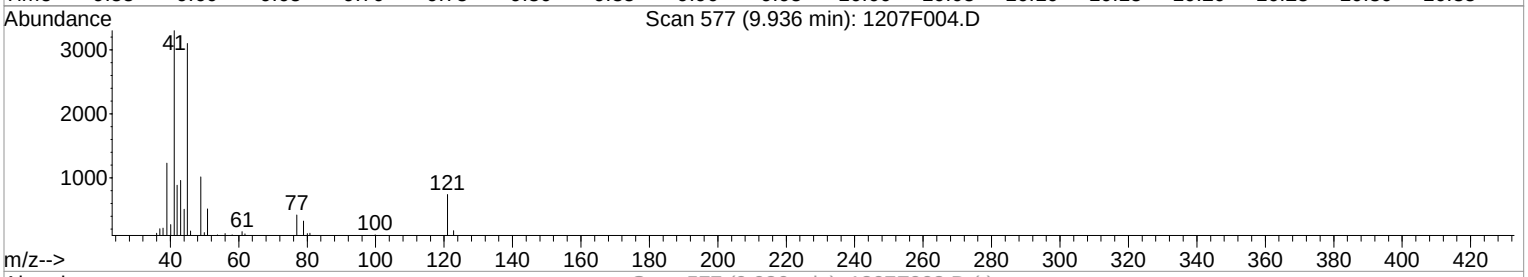
Quantitation Report (Qedit)

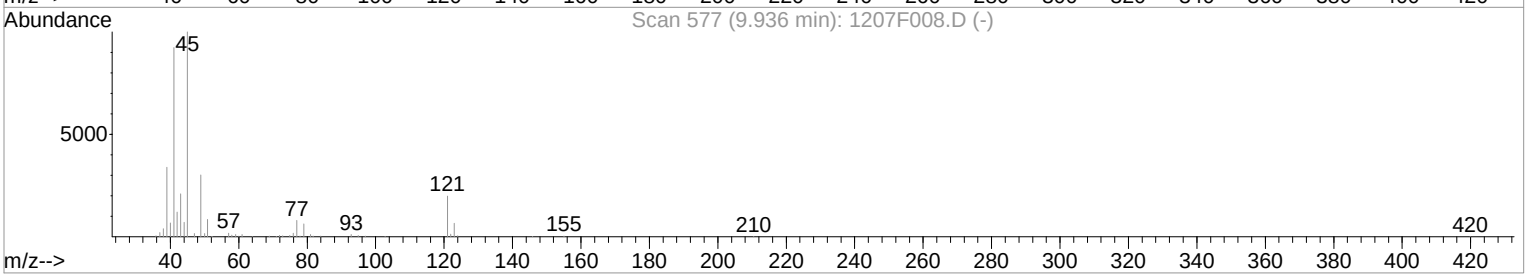
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F004.D Vial: 4
Acq On : 7 Dec 2018 5:13 pm Operator: CConover
Sample : 8270/P ICAL @ 5ppm | SVM59-92E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:58 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F004.D

(15) 2,2'-oxybis(2-chloropropane) (T)

9.94min 5.15ug/ml

response 6862

Ion	Exp%	Act%
45.00	100	100
77.00	9.40	11.04
121.00	19.70	23.19
0.00	0.00	0.00

Manual Integration:

Before

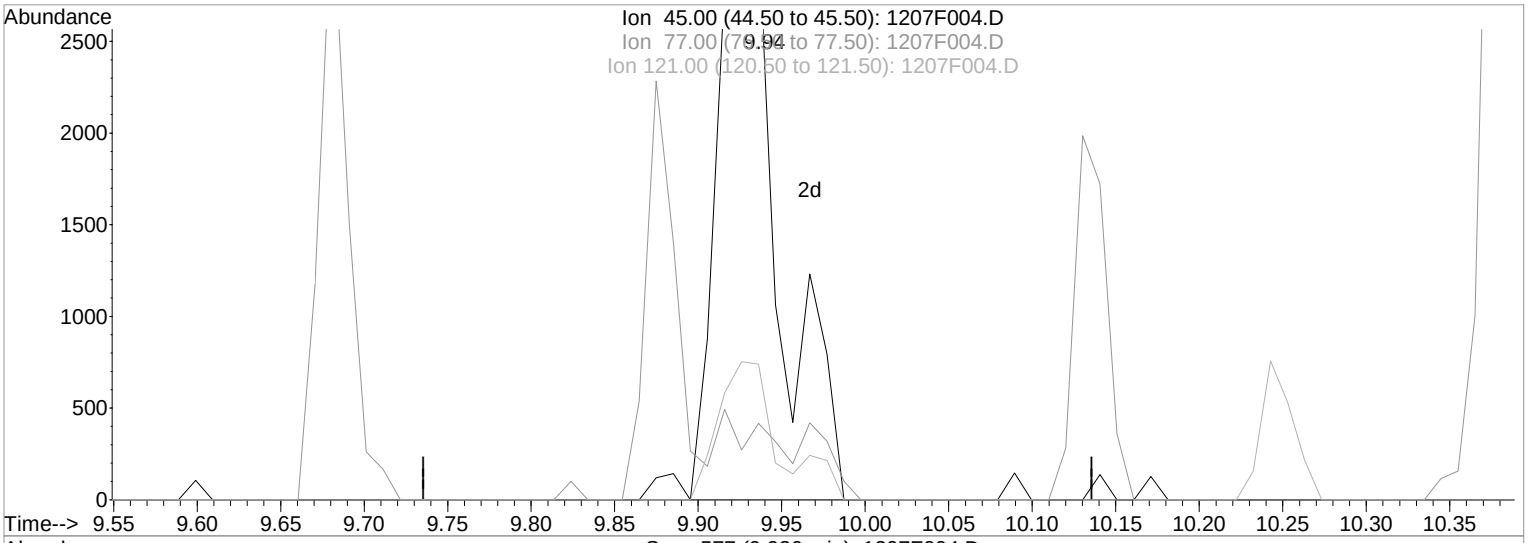
12/07/18

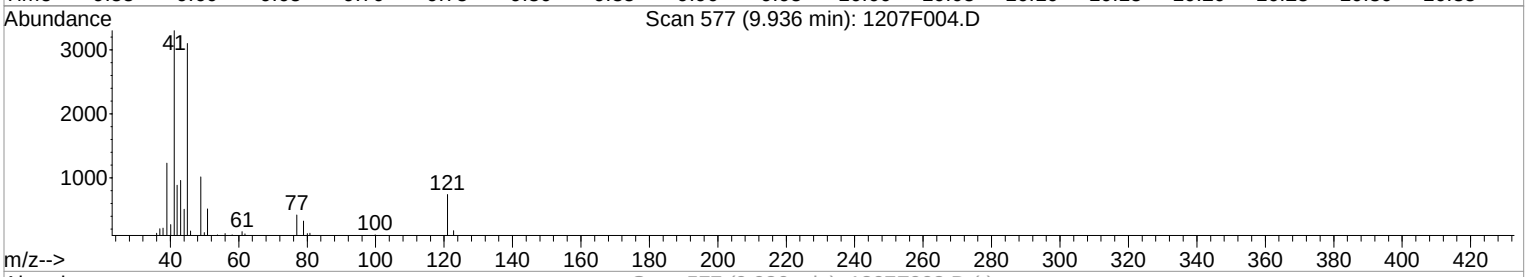
Quantitation Report (Qedit)

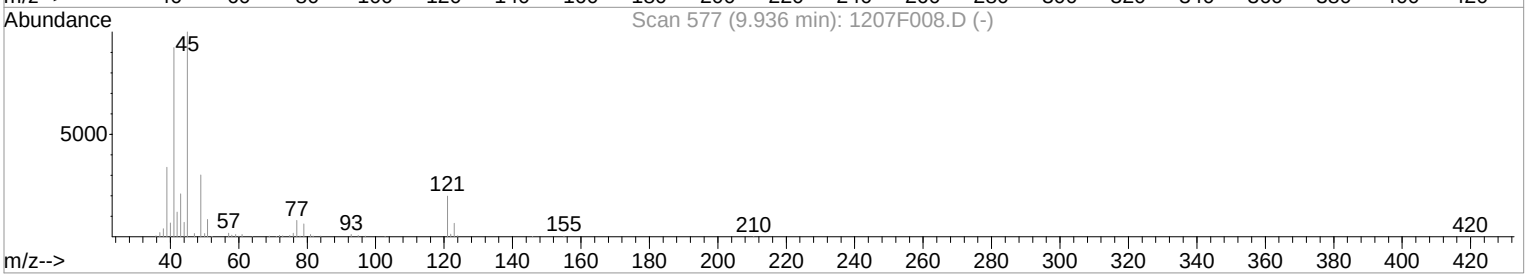
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F004.D Vial: 4
Acq On : 7 Dec 2018 5:13 pm Operator: CConover
Sample : 8270/P ICAL @ 5ppm | SVM59-92E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:59 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F004.D

(15) 2,2'-oxybis(2-chloropropane) (T)

9.94min 6.08ug/ml m

response 8102

Ion	Exp%	Act%
45.00	100	100
77.00	9.40	13.45
121.00	19.70	23.87
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

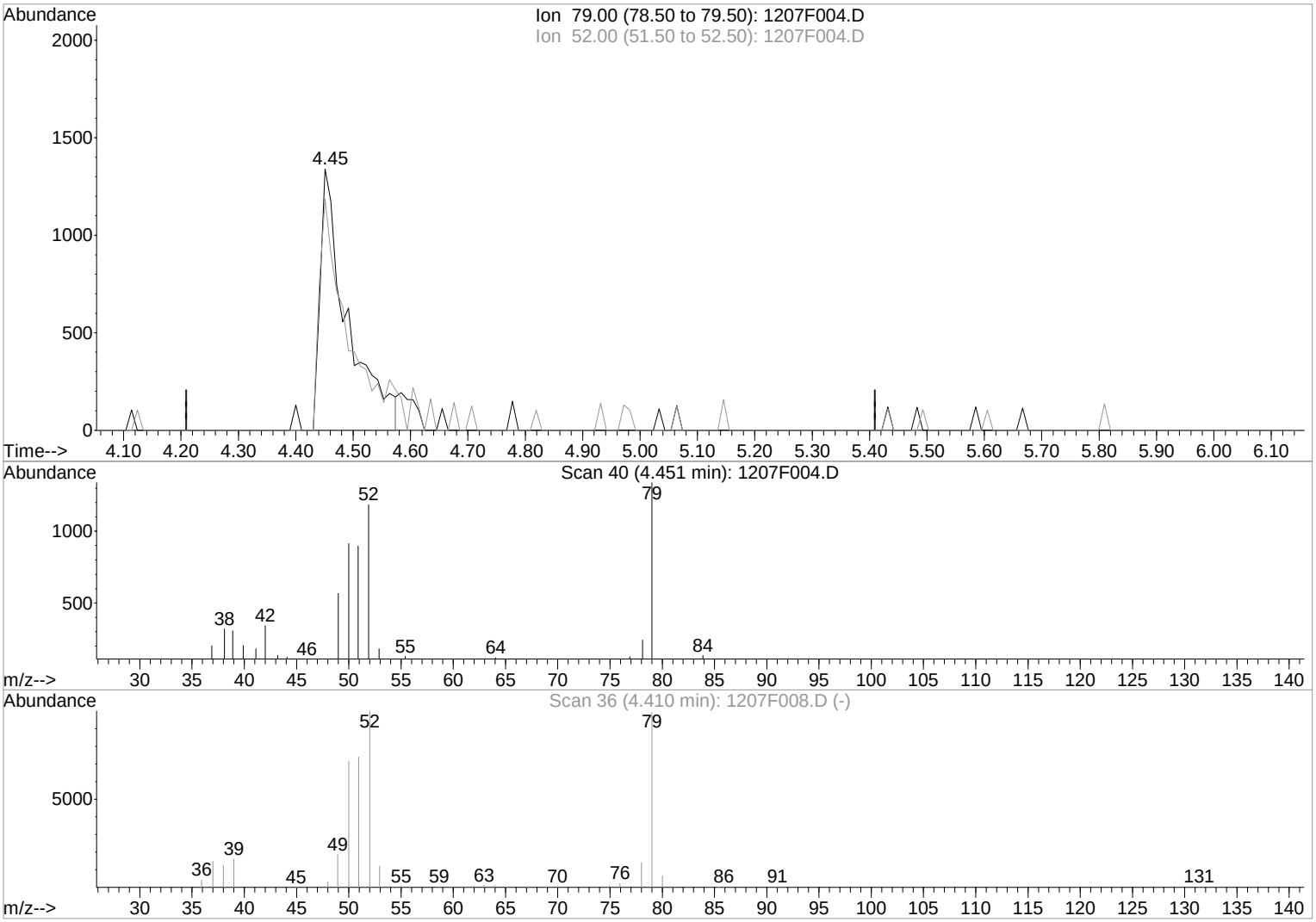
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F004.D Vial: 4
Acq On : 7 Dec 2018 5:13 pm Operator: CConover
Sample : 8270/P ICAL @ 5ppm | SVM59-92E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:54 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F004.D

(3) Pyridine (T)

4.45min 4.61ug/ml

response 4386

Ion	Exp%	Act%
79.00	100	100
52.00	100.80	86.22
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

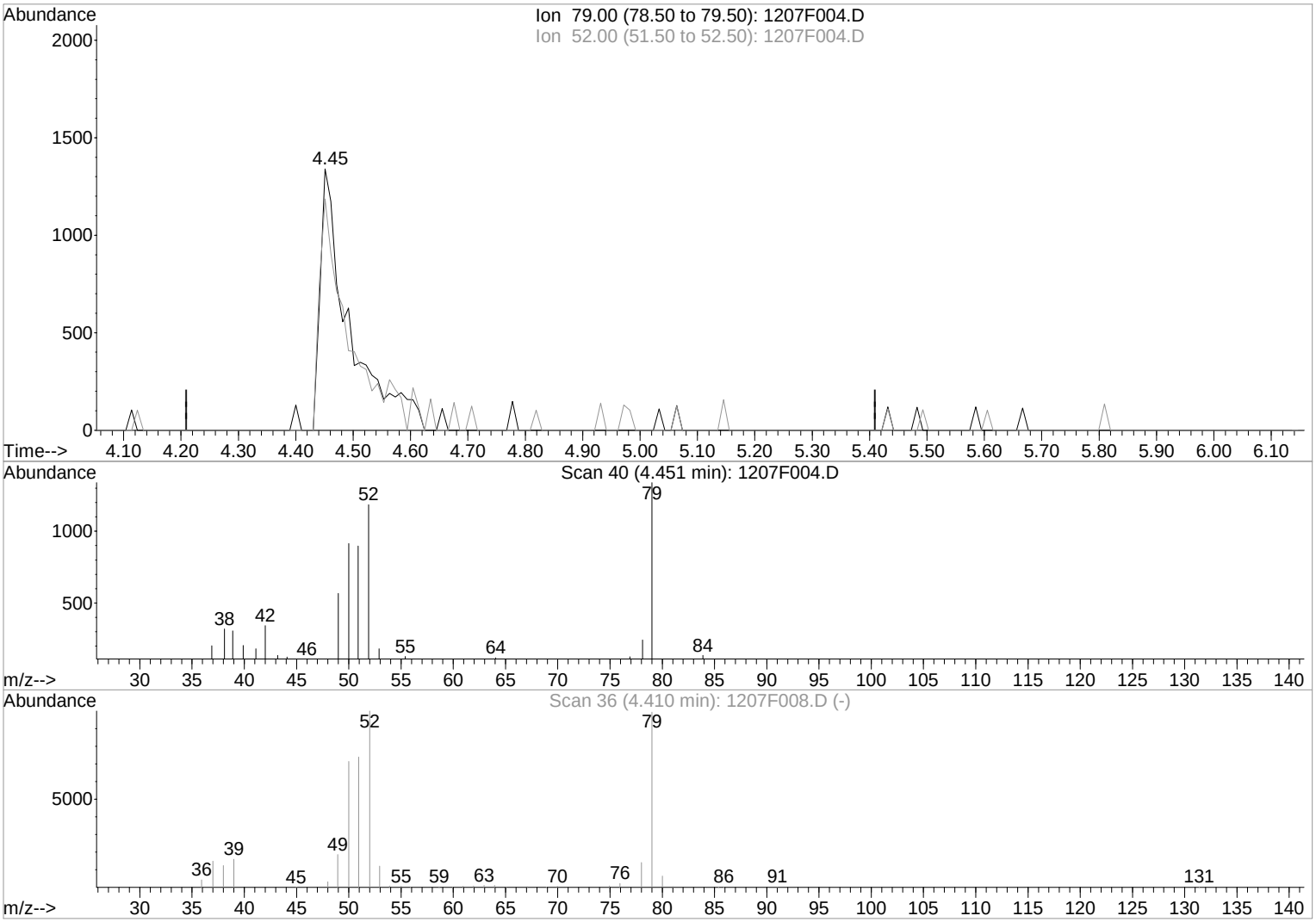
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F004.D Vial: 4
Acq On : 7 Dec 2018 5:13 pm Operator: CConover
Sample : 8270/P ICAL @ 5ppm | SVM59-92E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:58 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F004.D

(3) Pyridine (T)

4.45min 5.00ug/ml m

response 4759

Ion	Exp%	Act%
79.00	100	100
52.00	100.80	88.51
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

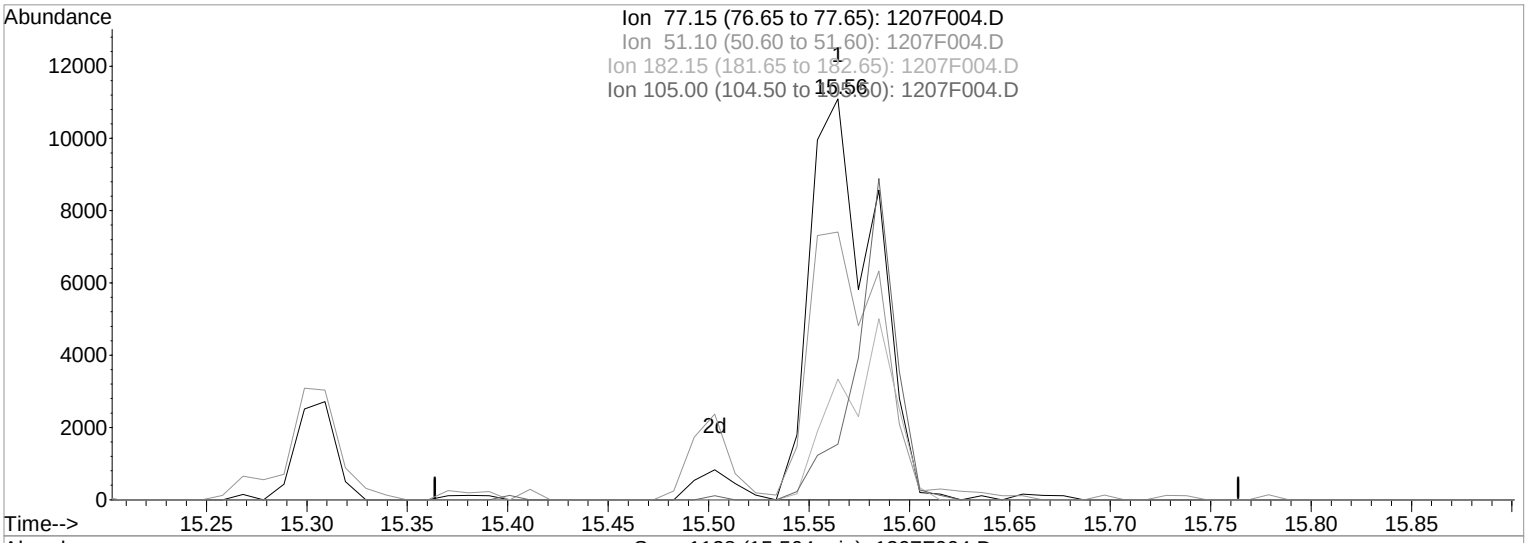
12/07/18

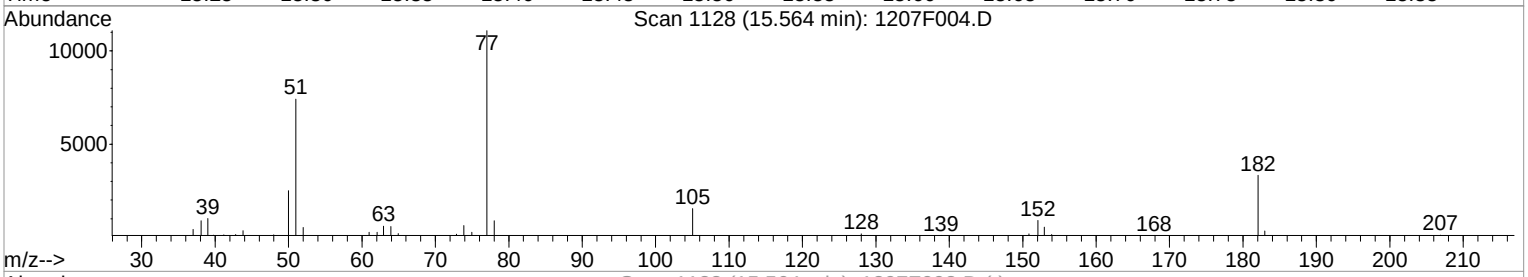
Quantitation Report (Qedit)

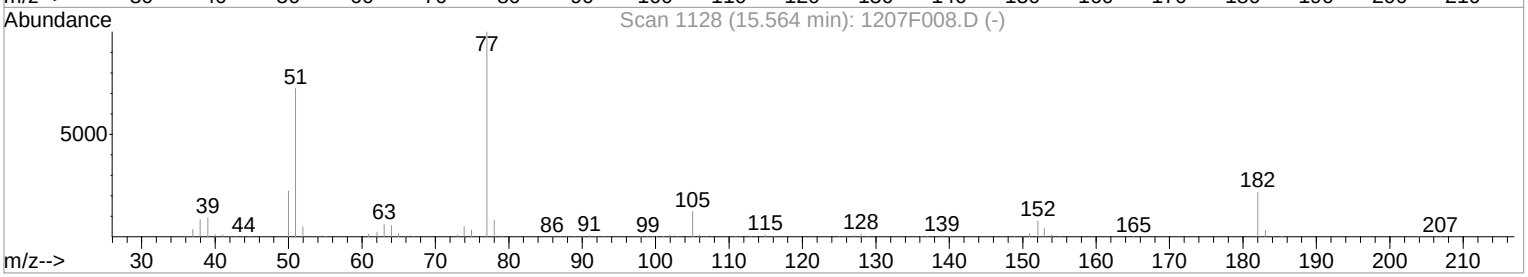
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F004.D Vial: 4
Acq On : 7 Dec 2018 5:13 pm Operator: CConover
Sample : 8270/P ICAL @ 5ppm | SVM59-92E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:59 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F004.D

(59) Azobenzene (T)

15.56min 9.62ug/ml

response 24759

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	65.08
182.15	21.70	30.07
105.00	12.30	13.89

Manual Integration:

Before

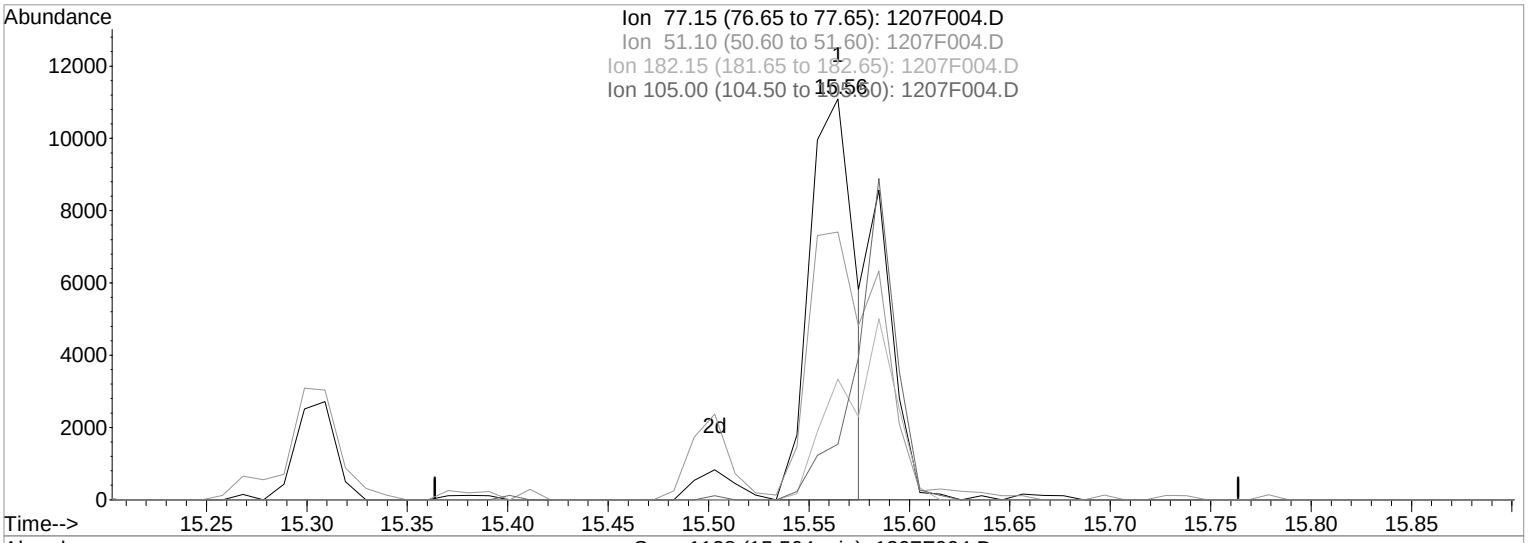
12/07/18

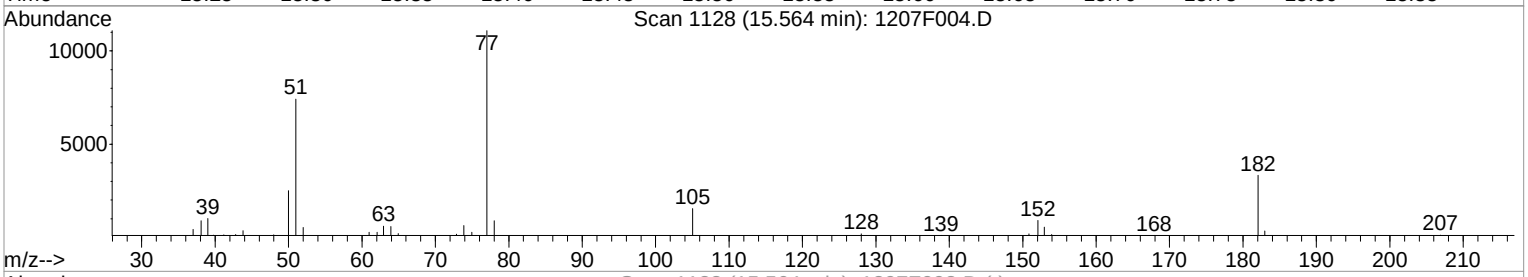
Quantitation Report (Qedit)

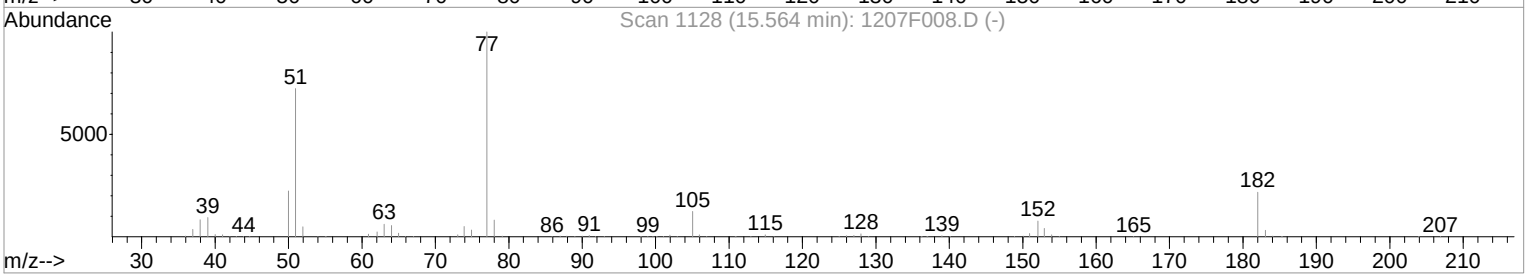
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F004.D Vial: 4
Acq On : 7 Dec 2018 5:13 pm Operator: CConover
Sample : 8270/P ICAL @ 5ppm | SVM59-92E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:59 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F004.D

(59) Azobenzene (T)

15.56min 6.82ug/ml m

response 17569

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	66.75
182.15	21.70	30.07
105.00	12.30	13.89

Manual Integration:

After

IC-Overintegrated

12/07/18

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F005.D Vial: 5
Acq On : 7 Dec 2018 5:54 pm Operator: CConover
Sample : 8270/P ICAL @ 10ppm | SVM59-92F Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:27 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.43	152	44614	40.00	ug/ml	0.00
22) Naphthalene-d8	11.51	136	166235	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.38	164	93020	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.79	188	131846	40.00	ug/ml	0.00
73) Chrysene-d12	21.27	240	110949	40.00	ug/ml	-0.02
83) Perylene-d12	24.50	264	102767	40.00	ug/ml	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	7.16	112	10493	9.00	ug/ml	-0.03
Spiked Amount 150.000	Range 21 - 100		Recovery =	6.00%#		
8) Phenol-d6	8.85	99	12947	9.14	ug/ml	-0.02
Spiked Amount 150.000	Range 10 - 94		Recovery =	6.09%#		
20) Nitrobenzene-d5	10.35	82	13517	9.87	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery =	9.87%#		
40) 2-Fluorobiphenyl	13.31	172	31312	9.49	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery =	9.49%#		
62) 2,4,6-Tribromophenol	15.67	330	3074	5.70	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery =	3.80%#		
76) Terphenyl-d14	19.43	244	20668	8.93	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery =	8.93%#		
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.38	42	13907	12.40	ug/ml	98
3) Pyridine	4.43	79	10753m	10.77	ug/ml	
5) Ethylene Glycol Butyl Ethe	7.72	57	11219	10.60	ug/ml	100
6) Aniline	8.88	93	17921	10.73	ug/ml#	69
7) Bis(2-chloroethyl) Ether	9.03	93	11711	11.11	ug/ml	85
9) Phenol	8.87	94	15205	10.42	ug/ml	81
10) 2-Chlorophenol	9.06	128	12926	9.03	ug/ml	96
11) 1,3-Dichlorobenzene	9.32	146	16618	9.74	ug/ml	95
12) 1,4-Dichlorobenzene	9.45	146	16297	9.36	ug/ml	91
13) 1,2-Dichlorobenzene	9.69	146	15903	9.59	ug/ml	95
14) Benzyl Alcohol	9.68	108	7490	8.97	ug/ml	95
15) 2,2'-oxybis(2-chloropropan	9.93	45	16425	11.74	ug/ml	89
16) 2-Methylphenol	9.88	107	9611	8.98	ug/ml	94
17) Hexachloroethane	10.25	117	7234	10.24	ug/ml	91
18) N-Nitrosodi-n-propylamine	10.13	70	8914	10.56	ug/ml	93
19) 4-Methylphenol	10.13	107	14804	9.74	ug/ml	96
21) Nitrobenzene	10.38	77	14205	10.82	ug/ml	92
23) Isophorone	10.79	82	23535	10.33	ug/ml	97
24) 2-Nitrophenol	10.90	139	6196	7.59	ug/ml	79
25) 2,4-Dimethylphenol	11.01	122	9886	9.04	ug/ml	97
26) Bis(2-chloroethoxy)methane	11.19	93	13282	10.59	ug/ml	96
27) 2,4-Dichlorophenol	11.30	162	11555	8.95	ug/ml	92
28) Benzoic Acid	11.10	122	1441	2.33	ug/ml	82
29) 1,2,4-Trichlorobenzene	11.43	180	14656	9.84	ug/ml	96
30) Naphthalene	11.55	128	40103	9.86	ug/ml	99
31) n-Dodecane	11.58	57	15924	12.22	ug/ml	99
32) 4-Chloroaniline	11.67	127	17610	9.69	ug/ml	93
33) Hexachlorobutadiene	11.77	225	10602	10.40	ug/ml	97
34) 4-Chloro-3-methylphenol	12.47	107	10987	10.05	ug/ml	98
35) 2-Methylnaphthalene	12.69	142	27054	9.38	ug/ml	95
37) Hexachlorocyclopentadiene	12.94	237	8382	13.87	ug/ml	94
38) 2,4,6-Trichlorophenol	13.16	196	7486	8.10	ug/ml	97
39) 2,4,5-Trichlorophenol	13.20	196	8807	9.39	ug/ml	99
41) 2-Chloronaphthalene	13.47	162	26877	9.75	ug/ml	98
42) 2-Nitroaniline	13.67	65	8947	11.90	ug/ml	96
43) Acenaphthylene	14.15	152	37902	9.68	ug/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F005.D Vial: 5
Acq On : 7 Dec 2018 5:54 pm Operator: CConover
Sample : 8270/P ICAL @ 10ppm | SVM59-92F Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:27 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
44)	Dimethyl Phthalate	13.99	163	30677	10.37	ug/ml	98
45)	2,6-Dinitrotoluene	14.09	165	6069	8.79	ug/ml	95
46)	Acenaphthene	14.43	154	25733	10.36	ug/ml	100
47)	3-Nitroaniline	14.34	138	6625	9.50	ug/ml	92
48)	2,4-Dinitrophenol	14.52	184	497	1.49	ug/ml	81
49)	Dibenzofuran	14.72	168	38823	9.96	ug/ml	100
50)	4-Nitrophenol	14.62	109	4046	13.05	ug/ml	95
51)	2,4-Dinitrotoluene	14.73	165	7831	9.12	ug/ml	89
52)	2,3,4,6-Tetrachlorophenol	14.92	232	5576	8.72	ug/ml	96
53)	Fluorene	15.27	166	28965	10.01	ug/ml	98
54)	4-Chlorophenyl Phenyl Ethe	15.30	204	15223	10.41	ug/ml	95
55)	Diethyl Phthalate	15.16	149	28220	10.03	ug/ml	98
56)	4-Nitroaniline	15.32	138	5665	8.98	ug/ml	91
57)	2-Methyl-4,6-dinitrophenol	15.37	198	1492	3.10	ug/ml#	34
58)	Diphenylamine	15.51	169	17337	9.17	ug/ml	99
59)	Azobenzene	15.56	77	38561m	15.36	ug/ml	
60)	Benzophenone	15.59	105	24621	11.29	ug/ml	95
63)	4-Bromophenyl Phenyl Ether	16.10	248	7995	8.82	ug/ml	96
64)	Hexachlorobenzene	16.15	284	7874	7.96	ug/ml	91
65)	2,6-Diisopropylnaphthalene	16.29	197	22414	9.57	ug/ml	98
66)	Pentachlorophenol	16.49	266	2681	6.79	ug/ml	94
67)	Diazinon	16.66	137	4901	9.07	ug/ml	97
68)	Phenanthrene	16.83	178	35546	9.77	ug/ml	98
69)	Anthracene	16.92	178	35231	9.45	ug/ml	97
70)	Carbazole	17.19	167	29270	8.91	ug/ml	97
71)	Di-n-butyl Phthalate	17.84	149	31617	7.90	ug/ml	97
72)	Fluoranthene	18.76	202	29226	8.03	ug/ml	98
74)	Benzidine	19.03	184	12712	8.47	ug/ml	97
75)	Pyrene	19.12	202	30110	8.77	ug/ml	99
77)	Butyl Benzyl Phthalate	20.29	149	15530	9.40	ug/ml	96
78)	Diethylene Glycol Butyl Et	21.17	105	22628	11.47	ug/ml	99
79)	3,3'-Dichlorobenzidine	21.25	252	12050	8.59	ug/ml	98
80)	Benz(a)anthracene	21.25	228	31434	9.57	ug/ml	98
81)	Chrysene	21.32	228	32853	10.47	ug/ml	99
82)	Bis(2-ethylhexyl) Phthalat	21.47	149	20651	9.09	ug/ml	99
84)	Di-n-octyl Phthalate	22.96	149	30241	8.33	ug/ml	99
85)	Benzo(b)fluoranthene	23.61	252	30490	10.34	ug/ml	98
86)	Benzo(k)fluoranthene	23.67	252	31423	10.73	ug/ml	98
89)	Benzo(a)pyrene	24.35	252	26765	9.84	ug/ml	97
90)	Indeno(1,2,3-cd)pyrene	26.95	276	19875	7.55	ug/ml	97
91)	Dibenz(a,h)anthracene	27.04	278	20555	7.73	ug/ml	100
92)	Benzo(g,h,i)perylene	27.52	276	22533	8.22	ug/ml	94

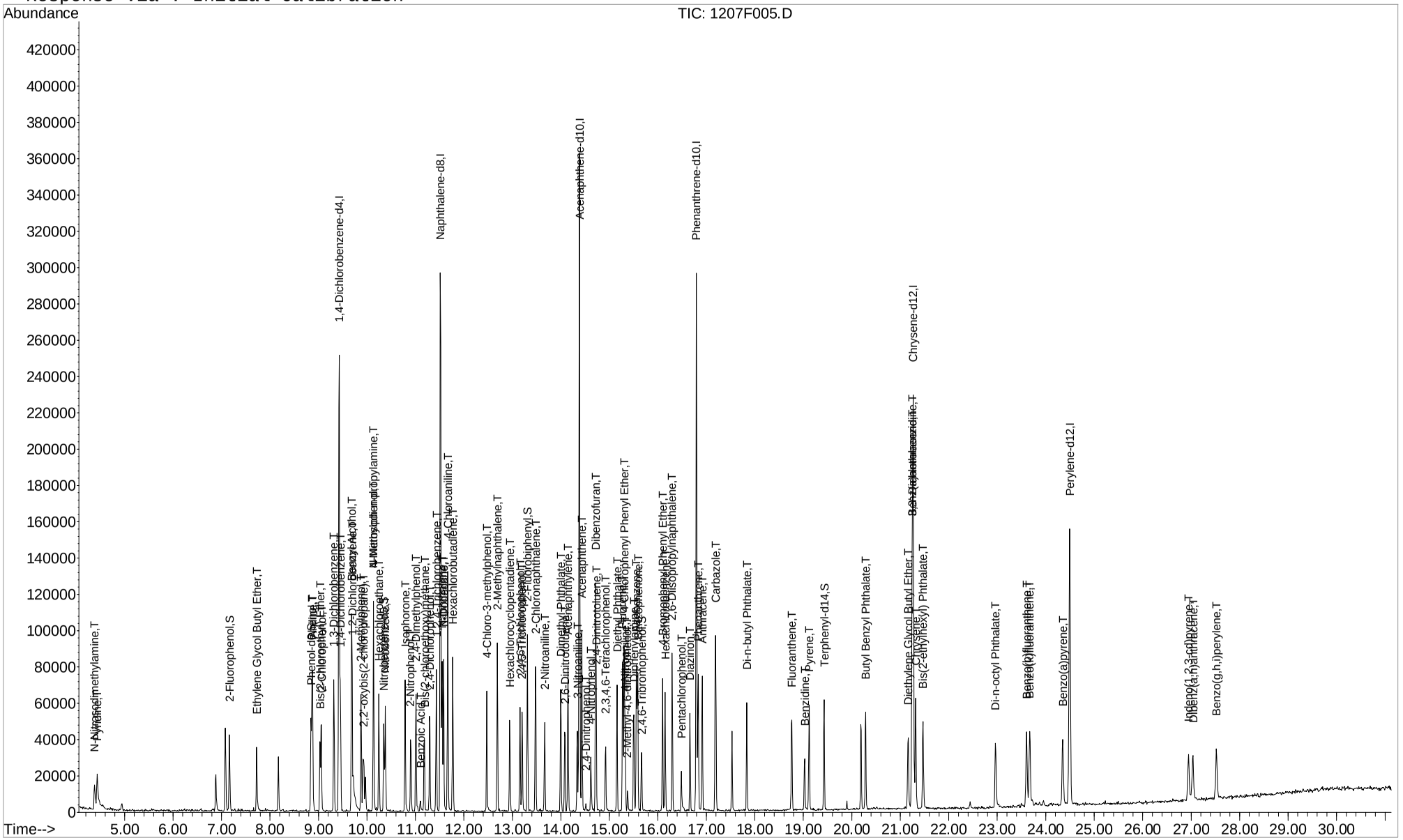
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F005.D Vial: 5
Acq On : 7 Dec 2018 5:54 pm Operator: CConover
Sample : 8270/P ICAL @ 10ppm | SVM59-92F Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:01 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

12/08/18 12/13/18 1st 2nd



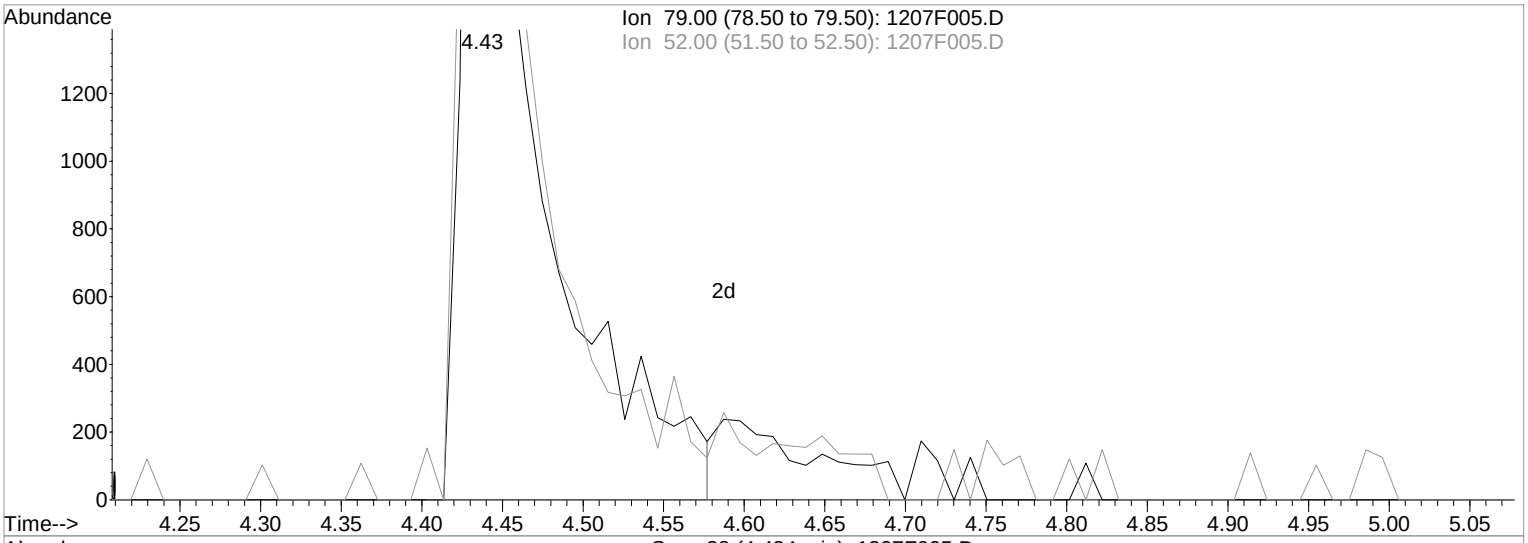
Page 1418 of 1512

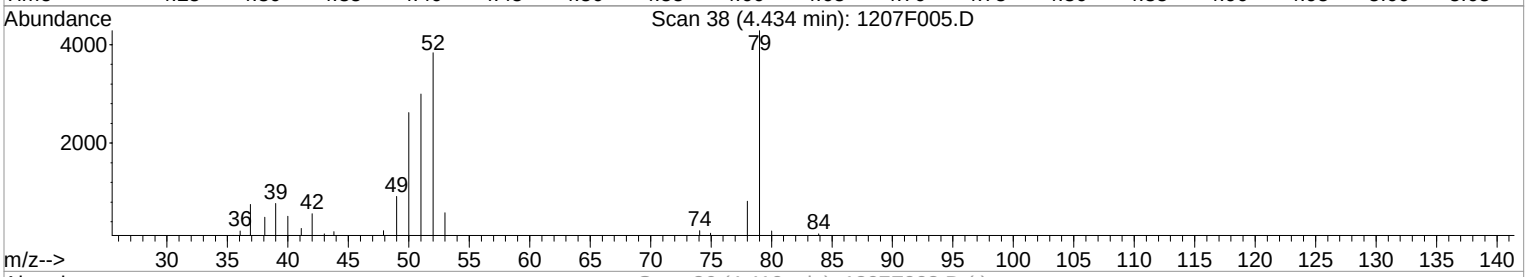
Quantitation Report (Qedit)

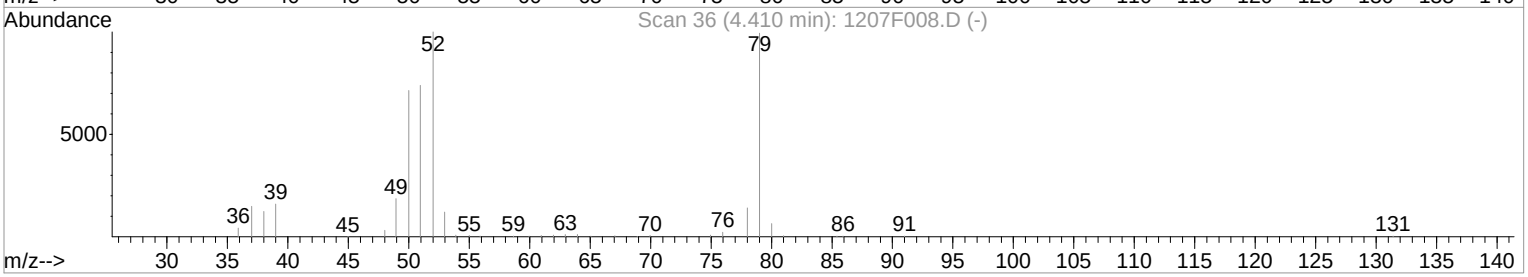
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F005.D Vial: 5
Acq On : 7 Dec 2018 5:54 pm Operator: CConover
Sample : 8270/P ICAL @ 10ppm | SVM59-92F Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:54 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F005.D

(3) Pyridine (T)

4.43min 9.77ug/ml

response 9753

Ion	Exp%	Act%
79.00	100	100
52.00	100.80	87.98
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

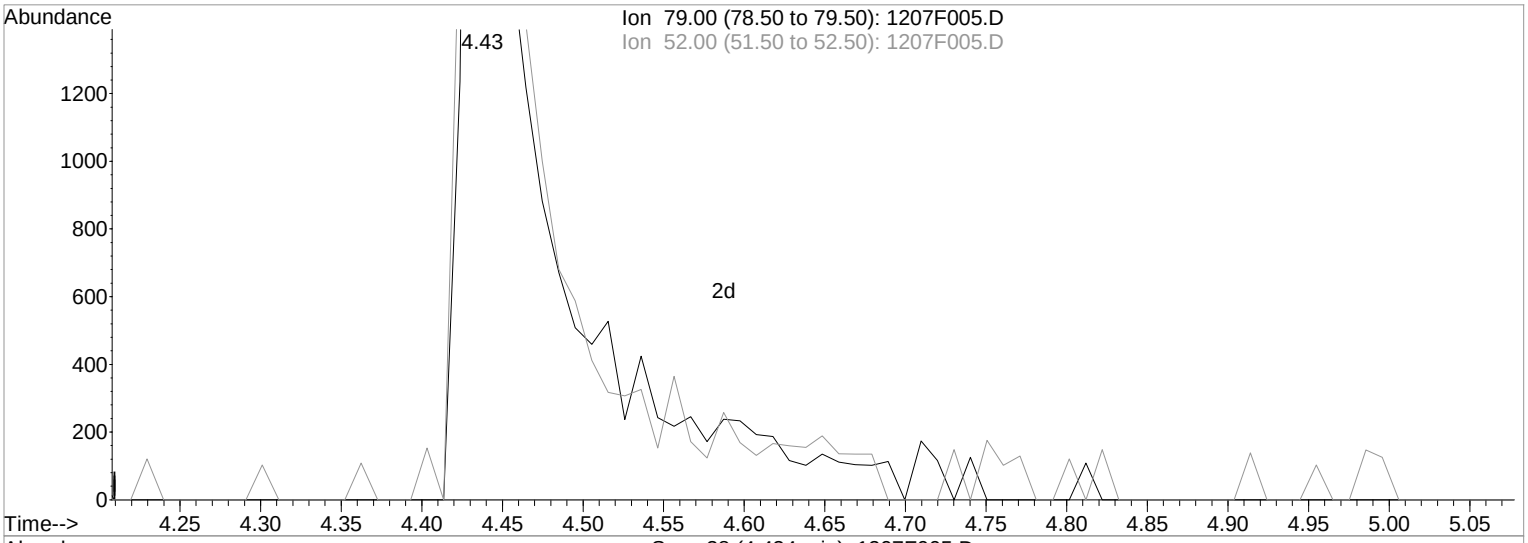
12/07/18

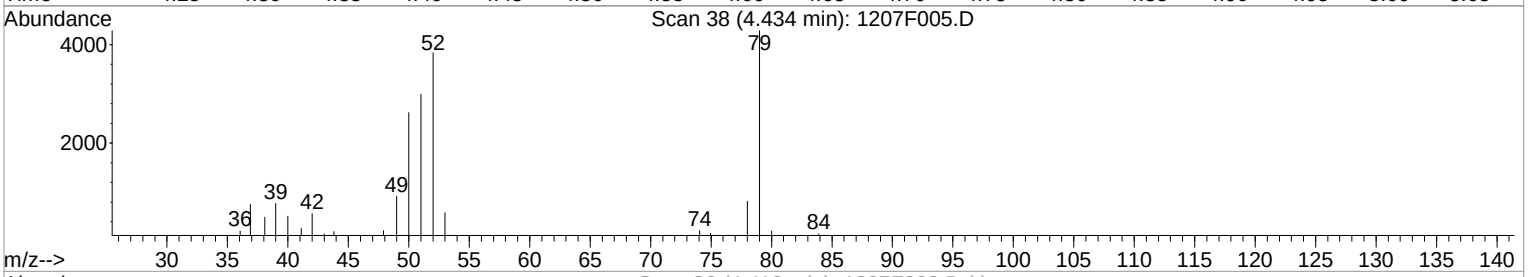
Quantitation Report (Qedit)

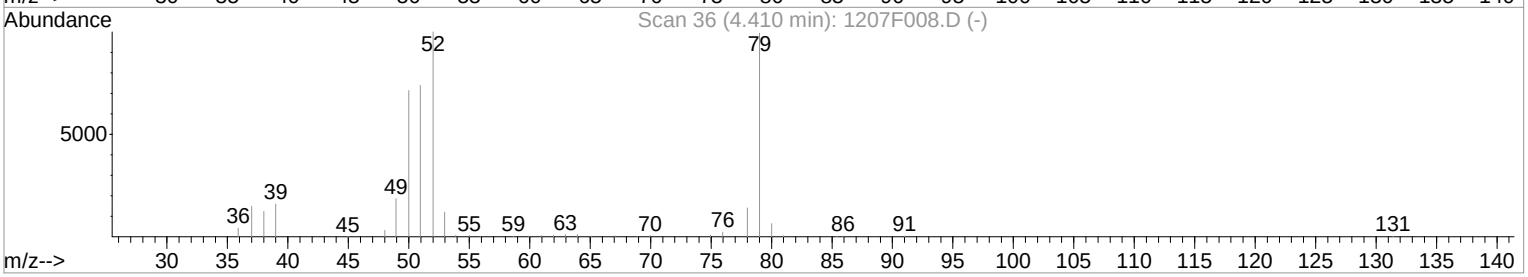
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F005.D Vial: 5
Acq On : 7 Dec 2018 5:54 pm Operator: CConover
Sample : 8270/P ICAL @ 10ppm | SVM59-92F Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:00 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F005.D

(3) Pyridine (T)

4.43min 10.77ug/ml m

response 10753

Ion	Exp%	Act%
79.00	100	100
52.00	100.80	89.43
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

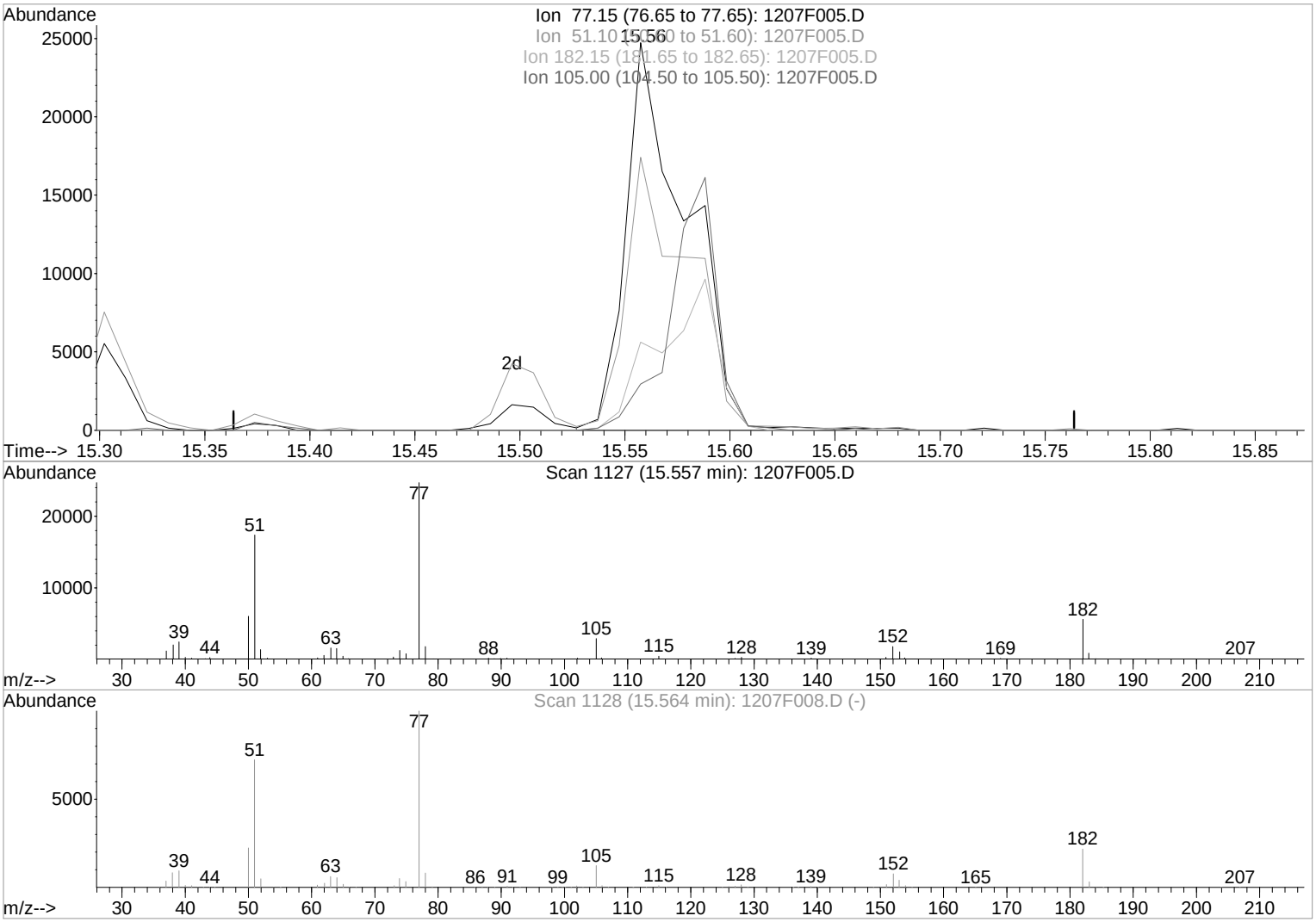
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F005.D Vial: 5
Acq On : 7 Dec 2018 5:54 pm Operator: CConover
Sample : 8270/P ICAL @ 10ppm | SVM59-92F Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:00 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F005.D

(59) Azobenzene (T)

15.56min 19.73ug/ml

response 49539

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	70.04
182.15	21.70	22.60
105.00	12.30	11.94

Manual Integration:

Before

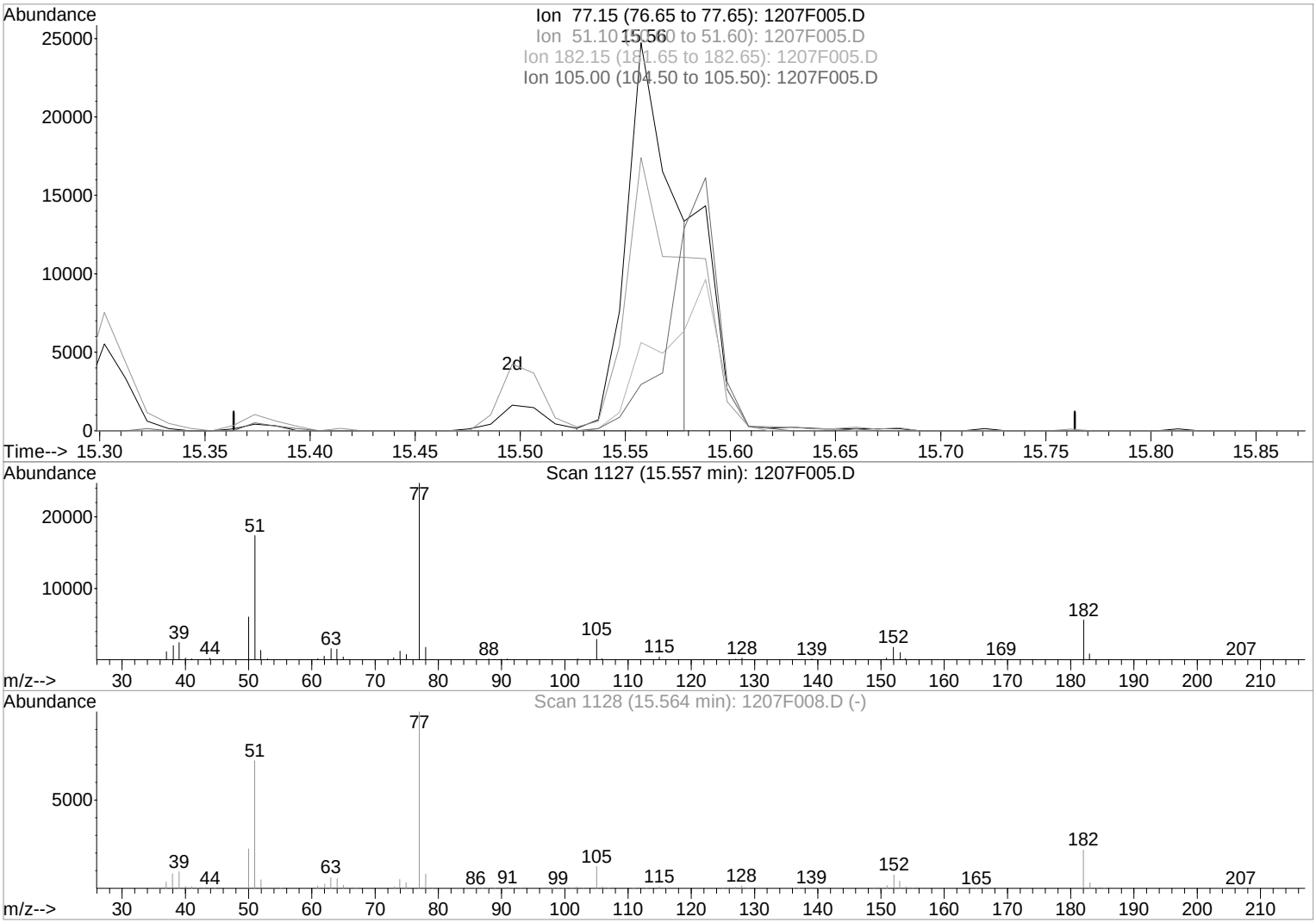
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F005.D Vial: 5
Acq On : 7 Dec 2018 5:54 pm Operator: CConover
Sample : 8270/P ICAL @ 10ppm | SVM59-92F Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:01 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F005.D

(59) Azobenzene (T)

15.56min 15.36ug/ml m

response 38561

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	70.43
182.15	21.70	22.71
105.00	12.30	11.88

Manual Integration:

After

IC-Overintegrated

12/07/18

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F006.D Vial: 6
Acq On : 7 Dec 2018 6:35 pm Operator: CConover
Sample : 8270/P ICAL @ 20ppm | SVM59-92G Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:28 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	48866	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	179120	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.39	164	103375	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	142433	40.00	ug/ml	0.00
73) Chrysene-d12	21.27	240	117418	40.00	ug/ml	-0.01
83) Perylene-d12	24.50	264	103916	40.00	ug/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	7.17	112	24806	19.43	ug/ml	-0.02
Spiked Amount 150.000	Range 21 - 100		Recovery = 12.95%#			
8) Phenol-d6	8.85	99	30396	19.59	ug/ml	-0.01
Spiked Amount 150.000	Range 10 - 94		Recovery = 13.06%			
20) Nitrobenzene-d5	10.35	82	32914	21.93	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 21.93%#			
40) 2-Fluorobiphenyl	13.32	172	70961	19.35	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 19.35%#			
62) 2,4,6-Tribromophenol	15.66	330	7689	13.20	ug/ml	-0.01
Spiked Amount 150.000	Range 10 - 123		Recovery = 8.80%#			
76) Terphenyl-d14	19.43	244	46286	18.90	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 18.90%#			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.38	42	32747	26.66	ug/ml	91
3) Pyridine	4.42	79	22382	20.47	ug/ml	100
5) Ethylene Glycol Butyl Ethe	7.73	57	26303	22.69	ug/ml	99
6) Aniline	8.88	93	40067	21.91	ug/ml#	62
7) Bis(2-chloroethyl) Ether	9.04	93	24989	21.65	ug/ml	93
9) Phenol	8.87	94	33353	20.86	ug/ml	93
10) 2-Chlorophenol	9.06	128	29169	18.61	ug/ml	98
11) 1,3-Dichlorobenzene	9.32	146	34985	18.73	ug/ml	96
12) 1,4-Dichlorobenzene	9.45	146	37809	19.82	ug/ml	98
13) 1,2-Dichlorobenzene	9.69	146	34950	19.24	ug/ml	99
14) Benzyl Alcohol	9.68	108	17163	18.77	ug/ml	91
15) 2,2'-oxybis(2-chloropropan	9.93	45	37058	24.18	ug/ml	91
16) 2-Methylphenol	9.88	107	20772	17.72	ug/ml	96
17) Hexachloroethane	10.25	117	16773	21.68	ug/ml	96
18) N-Nitrosodi-n-propylamine	10.14	70	21152	22.88	ug/ml	97
19) 4-Methylphenol	10.14	107	33200	19.95	ug/ml	98
21) Nitrobenzene	10.38	77	32081	22.32	ug/ml	99
23) Isophorone	10.79	82	54062	22.02	ug/ml	97
24) 2-Nitrophenol	10.90	139	15876	18.05	ug/ml	85
25) 2,4-Dimethylphenol	11.02	122	24372	20.67	ug/ml	97
26) Bis(2-chloroethoxy)methane	11.18	93	30772	22.77	ug/ml	98
27) 2,4-Dichlorophenol	11.29	162	27561	19.81	ug/ml	96
28) Benzoic Acid	11.14	122	7738	11.62	ug/ml	95
29) 1,2,4-Trichlorobenzene	11.44	180	32216	20.07	ug/ml	98
30) Naphthalene	11.55	128	88144	20.12	ug/ml	97
31) n-Dodecane	11.58	57	37772	26.90	ug/ml	99
32) 4-Chloroaniline	11.67	127	41056	20.96	ug/ml	96
33) Hexachlorobutadiene	11.77	225	23776	21.64	ug/ml	98
34) 4-Chloro-3-methylphenol	12.48	107	25722	21.84	ug/ml	98
35) 2-Methylnaphthalene	12.69	142	62423	20.09	ug/ml	100
37) Hexachlorocyclopentadiene	12.95	237	19777	29.44	ug/ml	97
38) 2,4,6-Trichlorophenol	13.16	196	19228	18.73	ug/ml	99
39) 2,4,5-Trichlorophenol	13.20	196	21645	20.77	ug/ml	95
41) 2-Chloronaphthalene	13.48	162	61162	19.97	ug/ml	95
42) 2-Nitroaniline	13.67	65	20884	24.98	ug/ml	85
43) Acenaphthylene	14.14	152	85642	19.68	ug/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F006.D Vial: 6
Acq On : 7 Dec 2018 6:35 pm Operator: CConover
Sample : 8270/P ICAL @ 20ppm | SVM59-92G Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:28 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
44) Dimethyl Phthalate	14.00	163	70232	21.36	ug/ml	99
45) 2,6-Dinitrotoluene	14.08	165	15220	19.84	ug/ml	79
46) Acenaphthene	14.43	154	56075	20.32	ug/ml	99
47) 3-Nitroaniline	14.35	138	15542	20.06	ug/ml	94
48) 2,4-Dinitrophenol	14.52	184	2222	6.01	ug/ml#	76
49) Dibenzofuran	14.71	168	87635	20.22	ug/ml	97
50) 4-Nitrophenol	14.62	109	9489	27.55	ug/ml	94
51) 2,4-Dinitrotoluene	14.74	165	18808	19.70	ug/ml	96
52) 2,3,4,6-Tetrachlorophenol	14.92	232	15146	21.32	ug/ml	85
53) Fluorene	15.28	166	67118	20.87	ug/ml	100
54) 4-Chlorophenyl Phenyl Ethe	15.31	204	35637	21.92	ug/ml	96
55) Diethyl Phthalate	15.16	149	65984	21.11	ug/ml	99
56) 4-Nitroaniline	15.33	138	12749	18.19	ug/ml	94
57) 2-Methyl-4,6-dinitrophenol	15.38	198	6182	11.56	ug/ml#	55
58) Diphenylamine	15.50	169	40828	19.43	ug/ml	99
59) Azobenzene	15.56	77	74262m	26.62	ug/ml	
60) Benzophenone	15.58	105	55000	22.69	ug/ml	97
63) 4-Bromophenyl Phenyl Ether	16.10	248	18384	18.78	ug/ml	93
64) Hexachlorobenzene	16.16	284	16705	15.63	ug/ml	90
65) 2,6-Diisopropylnaphthalene	16.30	197	52905	20.92	ug/ml	99
66) Pentachlorophenol	16.48	266	7719	18.08	ug/ml	98
67) Diazinon	16.67	137	11248	19.26	ug/ml	95
68) Phenanthrene	16.83	178	77662	19.76	ug/ml	98
69) Anthracene	16.91	178	81529	20.23	ug/ml	98
70) Carbazole	17.20	167	66149	18.63	ug/ml	99
71) Di-n-butyl Phthalate	17.84	149	76059	17.60	ug/ml	99
72) Fluoranthene	18.76	202	67670	17.22	ug/ml	98
74) Benzidine	19.03	184	29072	18.31	ug/ml	97
75) Pyrene	19.13	202	69116	19.02	ug/ml	98
77) Butyl Benzyl Phthalate	20.28	149	36752	21.03	ug/ml	95
78) Diethylene Glycol Butyl Et	21.16	105	53064	25.42	ug/ml	98
79) 3,3'-Dichlorobenzidine	21.25	252	28531	19.22	ug/ml	100
80) Benz(a)anthracene	21.24	228	71340	20.52	ug/ml	99
81) Chrysene	21.32	228	69622	20.96	ug/ml	98
82) Bis(2-ethylhexyl) Phthalat	21.47	149	51670	21.48	ug/ml	96
84) Di-n-octyl Phthalate	22.97	149	82273	22.42	ug/ml	96
85) Benzo(b)fluoranthene	23.61	252	66785	22.39	ug/ml	96
86) Benzo(k)fluoranthene	23.67	252	65677	22.18	ug/ml	98
88) Diisodecyl Phthalate	23.72	149	48665m	15.65	ug/ml	
89) Benzo(a)pyrene	24.36	252	57811	21.01	ug/ml	98
90) Indeno(1,2,3-cd)pyrene	26.95	276	52374	19.69	ug/ml	98
91) Dibenz(a,h)anthracene	27.04	278	49416	18.38	ug/ml	100
92) Benzo(g,h,i)perylene	27.52	276	55799	20.14	ug/ml	98

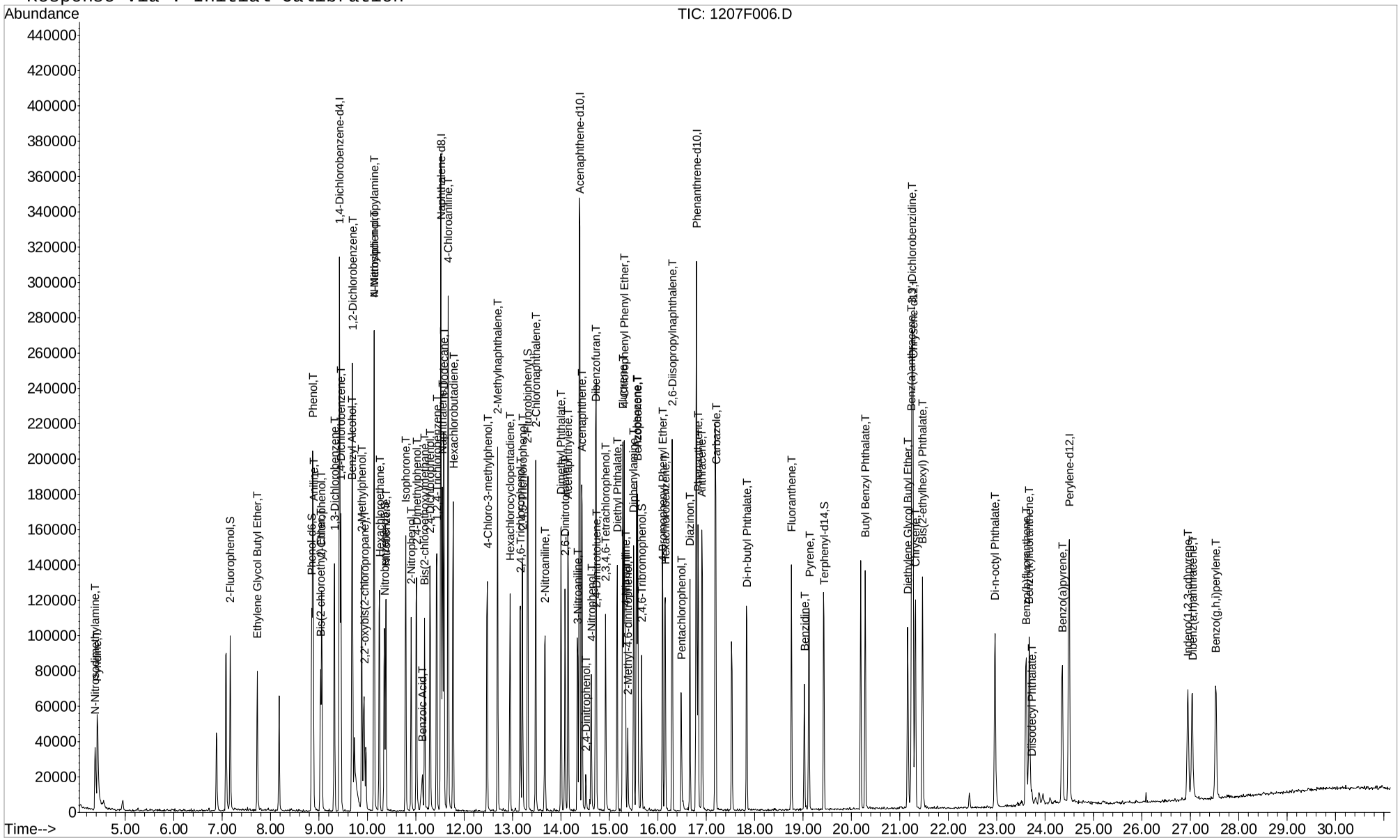
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F006.D Vial: 6
Acq On : 7 Dec 2018 6:35 pm Operator: CCononver
Sample : 8270/P ICAL @ 20ppm | SVM59-92G Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:09 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

12/08/18 12/13/18 1st 2nd

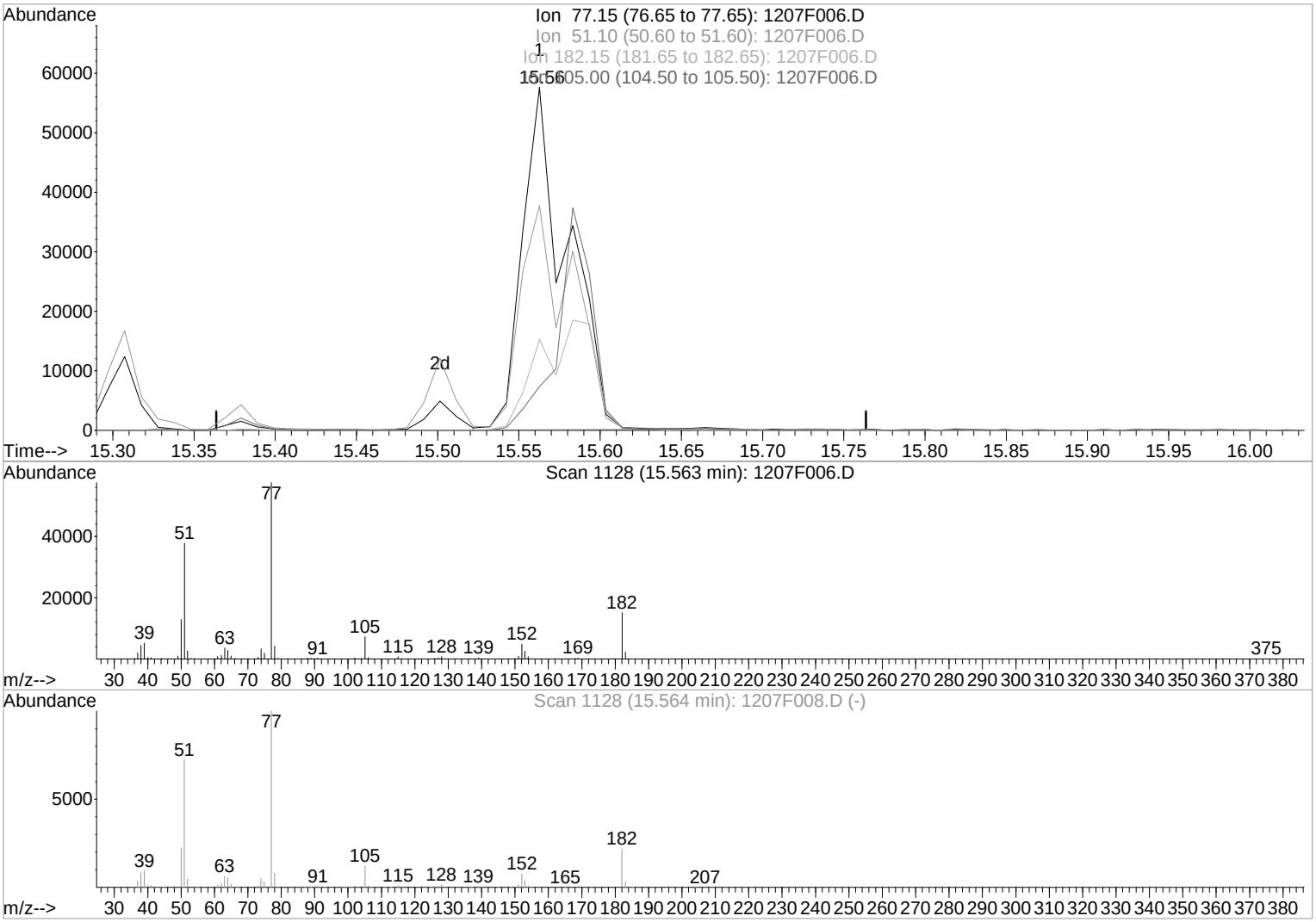


Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F006.D Vial: 6
Acq On : 7 Dec 2018 6:35 pm Operator: CConover
Sample : 8270/P ICAL @ 20ppm | SVM59-92G Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:54 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F006.D

(59) Azobenzene (T)

15.56min 39.74ug/ml

response 110864

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	65.14
182.15	21.70	26.53
105.00	12.30	12.67

Manual Integration:

Before

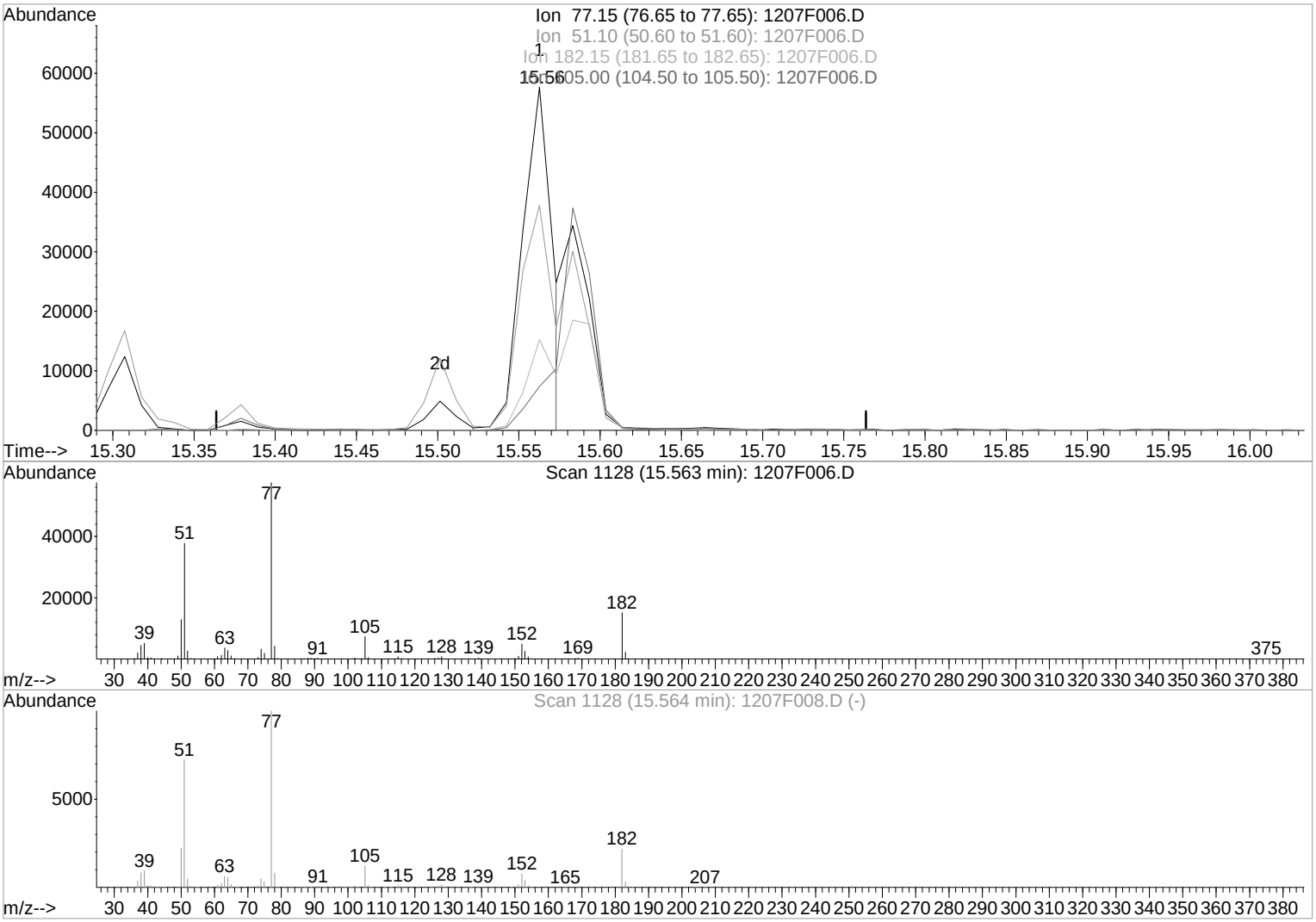
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F006.D Vial: 6
Acq On : 7 Dec 2018 6:35 pm Operator: CConover
Sample : 8270/P ICAL @ 20ppm | SVM59-92G Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:08 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F006.D

(59) Azobenzene (T)

15.56min 26.62ug/ml m

response 74262

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	65.55
182.15	21.70	26.37
105.00	12.30	12.74

Manual Integration:

After

IC-Overintegrated

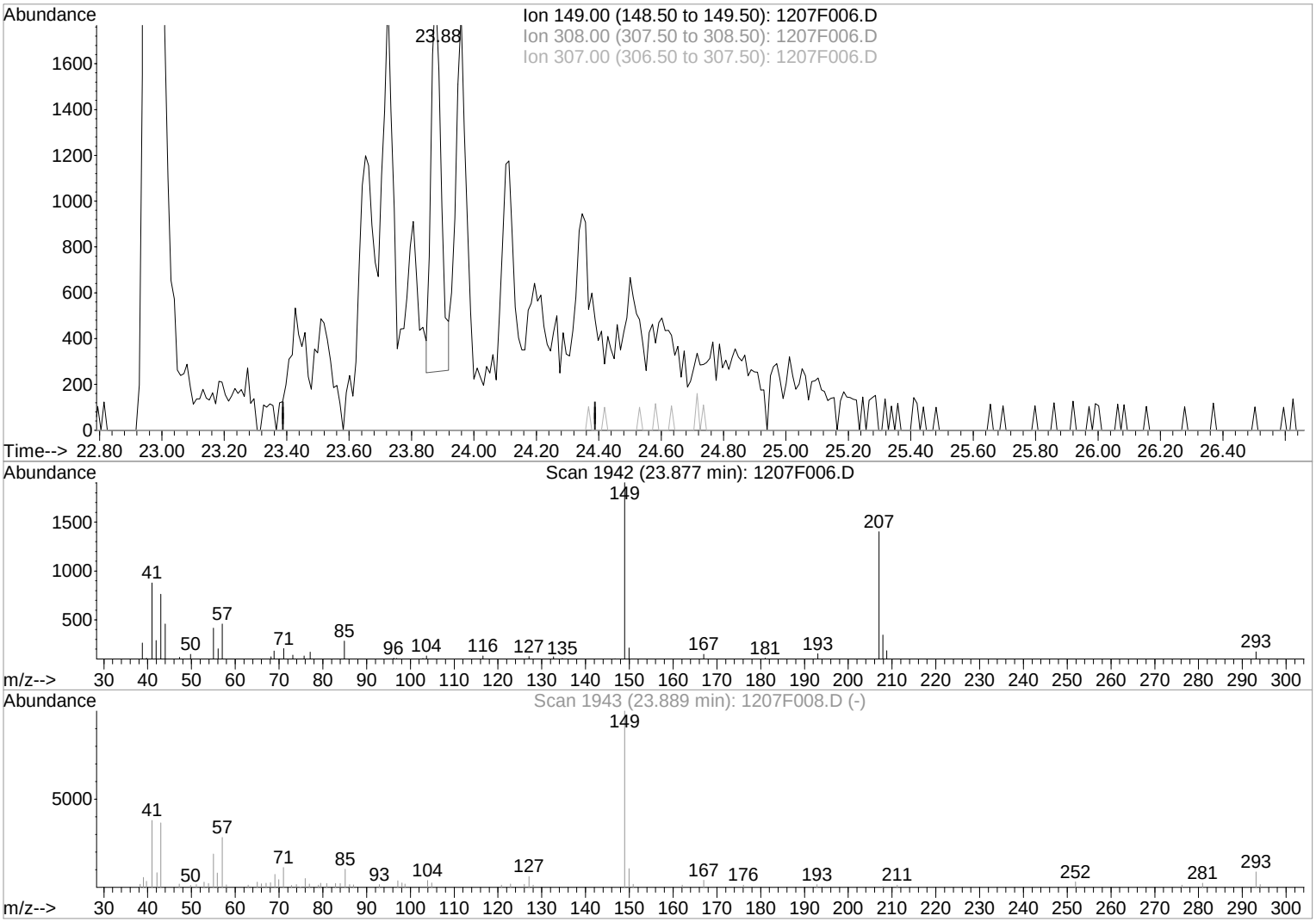
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F006.D Vial: 6
Acq On : 7 Dec 2018 6:35 pm Operator: CConover
Sample : 8270/P ICAL @ 20ppm | SVM59-92G Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:09 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F006.D

(88) Diisodecyl Phthalate (T)

23.88min 1.19ug/ml

response 3688

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

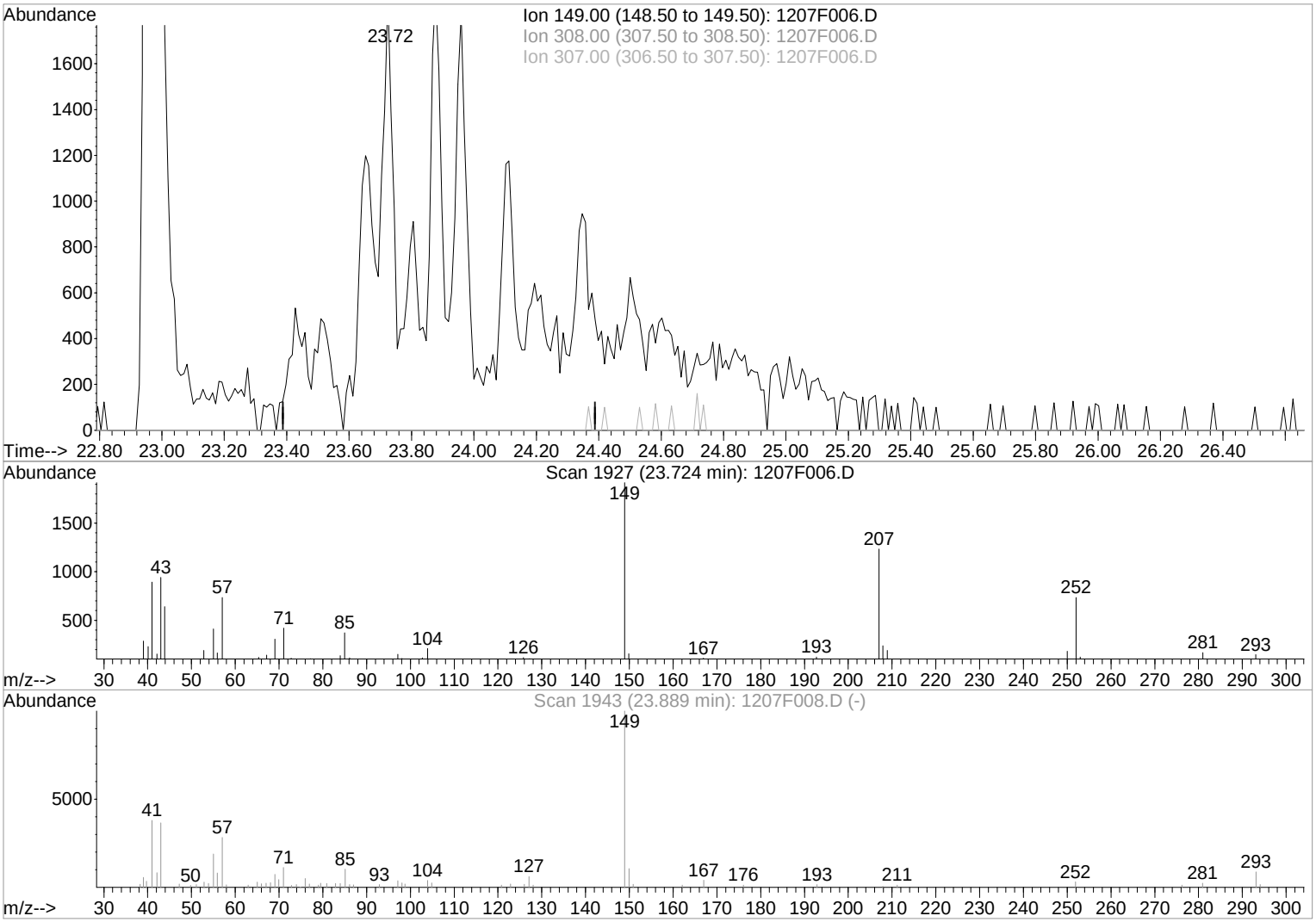
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F006.D Vial: 6
Acq On : 7 Dec 2018 6:35 pm Operator: CConover
Sample : 8270/P ICAL @ 20ppm | SVM59-92G Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:09 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F006.D

(88) Diisodecyl Phthalate (T)

23.72min 15.65ug/ml m

response 48665

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

12/07/18

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:29 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.43	152	45876	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	172430	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.38	164	95825	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	130435	40.00	ug/ml	0.00
73) Chrysene-d12	21.28	240	115888	40.00	ug/ml	0.00
83) Perylene-d12	24.51	264	100899	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.18	112	59306	49.48	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 32.99%			
8) Phenol-d6	8.86	99	75548	51.87	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 34.58%			
20) Nitrobenzene-d5	10.36	82	81882	58.12	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 58.12%			
40) 2-Fluorobiphenyl	13.32	172	172638	50.79	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 50.79%			
62) 2,4,6-Tribromophenol	15.67	330	19372	36.31	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 24.21%			
76) Terphenyl-d14	19.44	244	125095	51.75	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 51.75%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.37	42	79907	69.29	ug/ml	98
3) Pyridine	4.41	79	57204	55.72	ug/ml	96
5) Ethylene Glycol Butyl Ethe	7.73	57	66801	61.39	ug/ml	100
6) Aniline	8.89	93	99653	58.04	ug/ml	79
7) Bis(2-chloroethyl) Ether	9.04	93	61859	57.07	ug/ml	92
9) Phenol	8.88	94	84858	56.53	ug/ml	98
10) 2-Chlorophenol	9.06	128	71037	48.28	ug/ml	98
11) 1,3-Dichlorobenzene	9.32	146	86883	49.55	ug/ml	98
12) 1,4-Dichlorobenzene	9.46	146	87325	48.76	ug/ml	97
13) 1,2-Dichlorobenzene	9.69	146	86792	50.88	ug/ml	95
14) Benzyl Alcohol	9.69	108	46647	54.34	ug/ml	98
15) 2,2'-oxybis(2-chloropropan	9.94	45	95743m	66.53	ug/ml	
16) 2-Methylphenol	9.90	107	52708	47.88	ug/ml	96
17) Hexachloroethane	10.25	117	39637	54.56	ug/ml	87
18) N-Nitrosodi-n-propylamine	10.14	70	51962	59.86	ug/ml	96
19) 4-Methylphenol	10.15	107	82747	52.96	ug/ml	100
21) Nitrobenzene	10.39	77	82531	61.16	ug/ml	98
23) Isophorone	10.80	82	134856	57.07	ug/ml	99
24) 2-Nitrophenol	10.91	139	41816	49.39	ug/ml	93
25) 2,4-Dimethylphenol	11.02	122	58558	51.60	ug/ml	99
26) Bis(2-chloroethoxy)methane	11.19	93	76543	58.84	ug/ml	100
27) 2,4-Dichlorophenol	11.31	162	68351	51.04	ug/ml	91
28) Benzoic Acid	11.21	122	29276	45.68	ug/ml	92
29) 1,2,4-Trichlorobenzene	11.43	180	78528	50.83	ug/ml	97
30) Naphthalene	11.55	128	216217	51.27	ug/ml	100
31) n-Dodecane	11.58	57	93520	69.20	ug/ml	99
32) 4-Chloroaniline	11.68	127	101309	53.72	ug/ml	95
33) Hexachlorobutadiene	11.78	225	60110	56.82	ug/ml	97
34) 4-Chloro-3-methylphenol	12.48	107	62767	55.36	ug/ml	94
35) 2-Methylnaphthalene	12.70	142	154759	51.75	ug/ml	100
37) Hexachlorocyclopentadiene	12.95	237	53284	85.58	ug/ml	98
38) 2,4,6-Trichlorophenol	13.17	196	50367	52.92	ug/ml	95
39) 2,4,5-Trichlorophenol	13.21	196	52026	53.86	ug/ml	95
41) 2-Chloronaphthalene	13.48	162	148706	52.37	ug/ml	95
42) 2-Nitroaniline	13.68	65	50832	65.61	ug/ml	88
43) Acenaphthylene	14.15	152	204640	50.72	ug/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:29 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
44) Dimethyl Phthalate	14.00	163	160409	52.62	ug/ml	99
45) 2,6-Dinitrotoluene	14.10	165	35235	49.54	ug/ml	91
46) Acenaphthene	14.43	154	130190	50.89	ug/ml	98
47) 3-Nitroaniline	14.35	138	35049	48.80	ug/ml	100
48) 2,4-Dinitrophenol	14.53	184	11979	34.94	ug/ml#	74
49) Dibenzofuran	14.72	168	203480	50.65	ug/ml	97
50) 4-Nitrophenol	14.63	109	24921	78.05	ug/ml	98
51) 2,4-Dinitrotoluene	14.74	165	44667	50.47	ug/ml	90
52) 2,3,4,6-Tetrachlorophenol	14.92	232	37514	56.97	ug/ml	90
53) Fluorene	15.28	166	154941	51.98	ug/ml	99
54) 4-Chlorophenyl Phenyl Ethe	15.31	204	84333	55.96	ug/ml	92
55) Diethyl Phthalate	15.17	149	149355	51.54	ug/ml	100
56) 4-Nitroaniline	15.34	138	33273	51.23	ug/ml	96
57) 2-Methyl-4,6-dinitrophenol	15.39	198	20962	42.28	ug/ml	70
58) Diphenylamine	15.51	169	94251	48.38	ug/ml	98
59) Azobenzene	15.57	77	170179m	65.81	ug/ml	
60) Benzophenone	15.59	105	127115	56.56	ug/ml	97
63) 4-Bromophenyl Phenyl Ether	16.11	248	42442	47.34	ug/ml	87
64) Hexachlorobenzene	16.16	284	39502	40.35	ug/ml	86
65) 2,6-Diisopropylnaphthalene	16.30	197	120866	52.18	ug/ml	99
66) Pentachlorophenol	16.49	266	22363	57.21	ug/ml	96
67) Diazinon	16.67	137	28449	53.21	ug/ml	99
68) Phenanthrene	16.83	178	179803	49.95	ug/ml	98
69) Anthracene	16.93	178	184632	50.03	ug/ml	99
70) Carbazole	17.20	167	167063	51.38	ug/ml	99
71) Di-n-butyl Phthalate	17.84	149	203119	51.33	ug/ml	98
72) Fluoranthene	18.76	202	177527	49.32	ug/ml	98
74) Benzidine	19.03	184	70446	44.96	ug/ml	98
75) Pyrene	19.13	202	185978	51.87	ug/ml	100
77) Butyl Benzyl Phthalate	20.30	149	102488	59.42	ug/ml	93
78) Diethylene Glycol Butyl Et	21.18	105	137217	66.60	ug/ml	99
79) 3,3'-Dichlorobenzidine	21.26	252	68994	47.09	ug/ml	98
80) Benz(a)anthracene	21.26	228	185696	54.13	ug/ml	99
81) Chrysene	21.33	228	171960	52.45	ug/ml	99
82) Bis(2-ethylhexyl) Phthalat	21.48	149	138043	58.15	ug/ml	98
84) Di-n-octyl Phthalate	22.97	149	203325	57.07	ug/ml	98
85) Benzo(b)fluoranthene	23.63	252	153522	53.01	ug/ml	98
86) Benzo(k)fluoranthene	23.70	252	153395	53.36	ug/ml	99
87) Diisononyl Phthalate	23.74	293	7382m	36.77	ug/ml	
88) Diisodecyl Phthalate	23.96	149	149768m	49.59	ug/ml	
89) Benzo(a)pyrene	24.37	252	141715	53.05	ug/ml	100
90) Indeno(1,2,3-cd)pyrene	26.98	276	164327	63.61	ug/ml	100
91) Dibenz(a,h)anthracene	27.07	278	158990	60.91	ug/ml	99
92) Benzo(g,h,i)perylene	27.56	276	172872	64.25	ug/ml	99

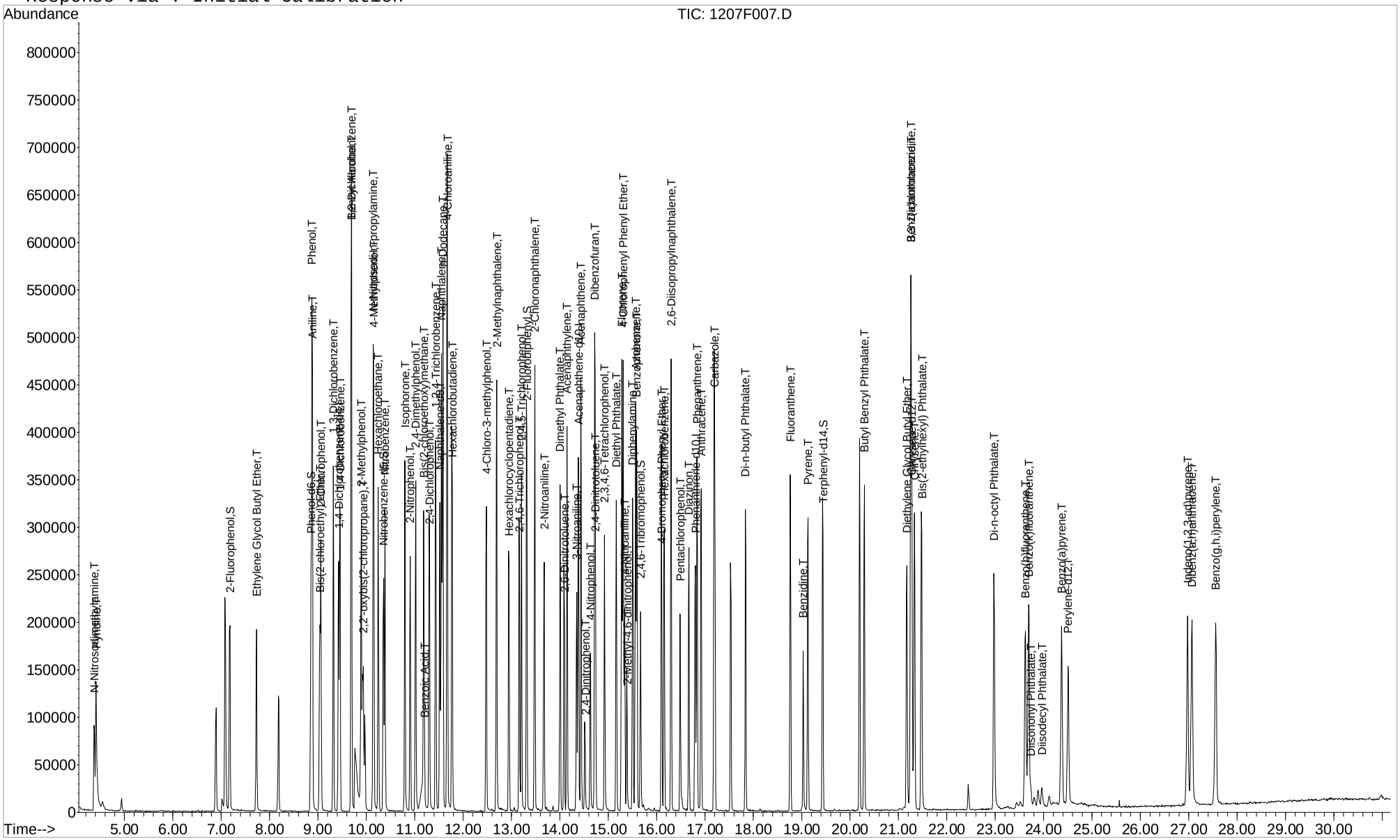
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:15 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

12/08/18 12/13/18 1st 2nd

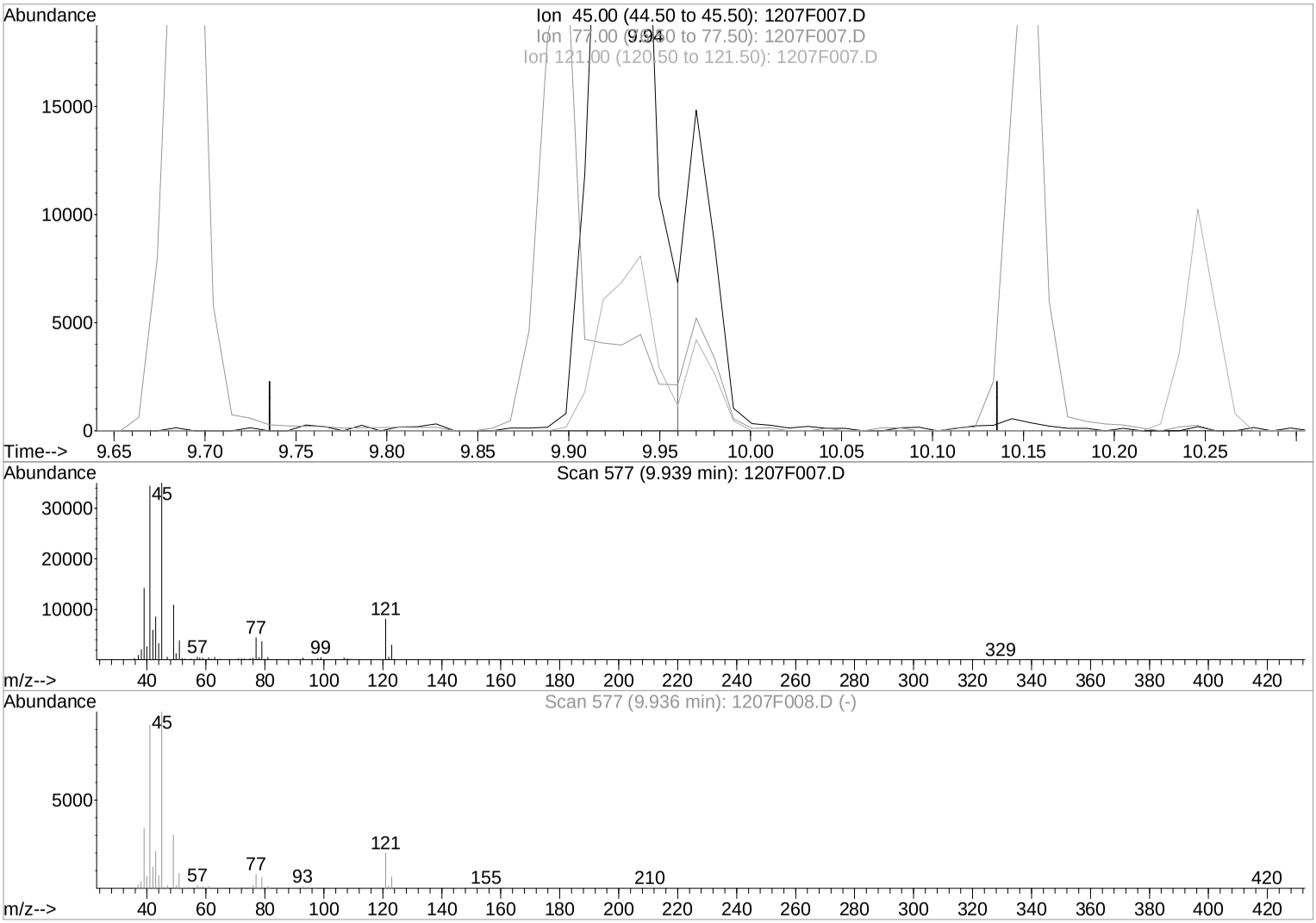


Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:54 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F007.D

(15) 2,2'-oxybis(2-chloropropane) (T)

9.94min 55.82ug/ml

response 80321

Ion	Exp%	Act%
45.00	100	100
77.00	9.40	10.56
121.00	19.70	23.79
0.00	0.00	0.00

Manual Integration:

Before

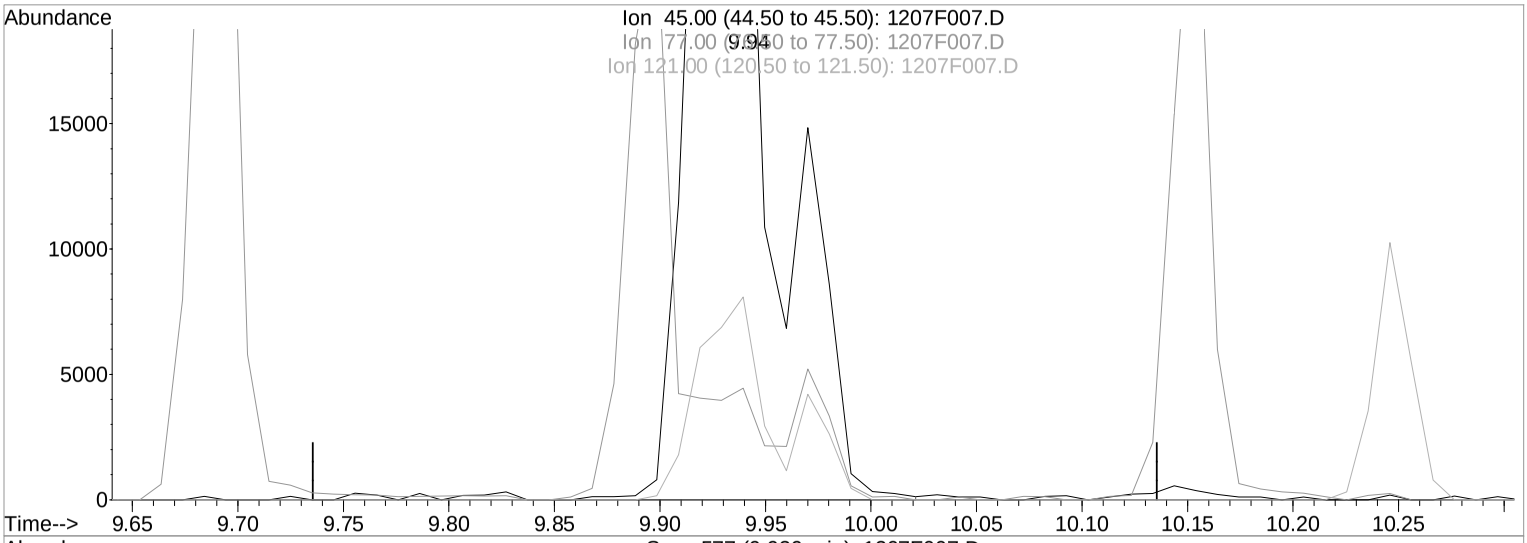
12/07/18

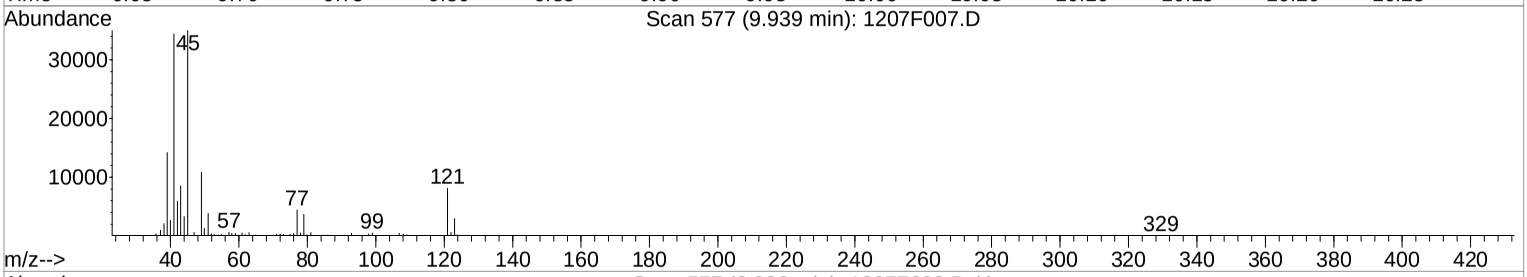
Quantitation Report (Qedit)

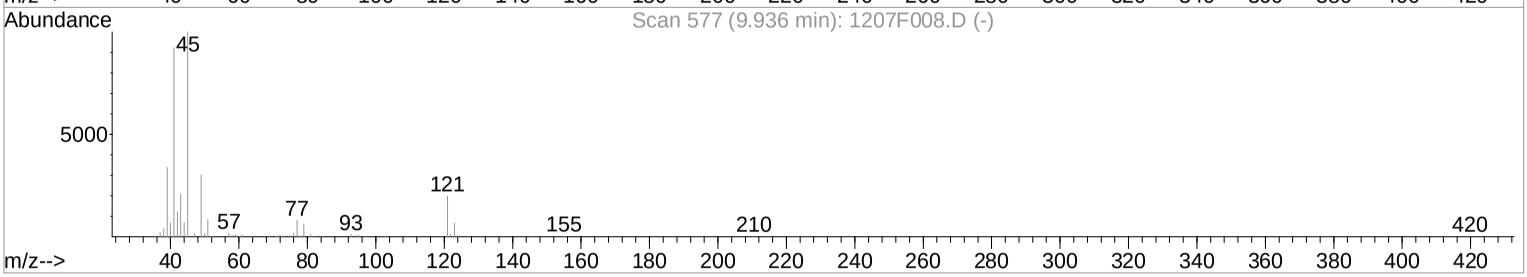
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:10 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F007.D

(15) 2,2'-oxybis(2-chloropropane) (T)

9.94min 66.53ug/ml m

response 95743

Ion	Exp%	Act%
45.00	100	100
77.00	9.40	12.72
121.00	19.70	23.11
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

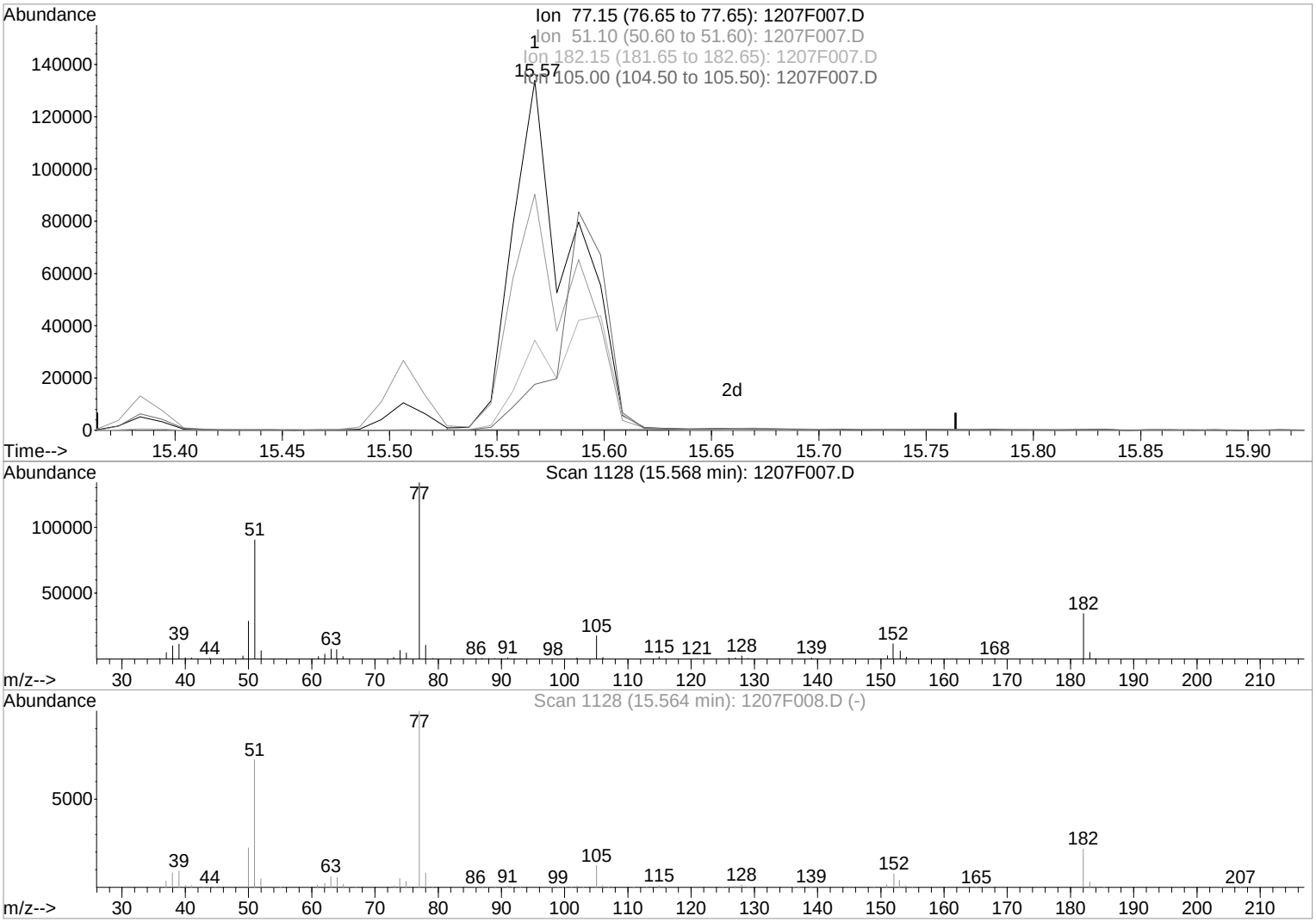
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:10 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F007.D

(59) Azobenzene (T)

15.57min 99.19ug/ml

response 256523

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	66.99
182.15	21.70	25.76
105.00	12.30	12.96

Manual Integration:

Before

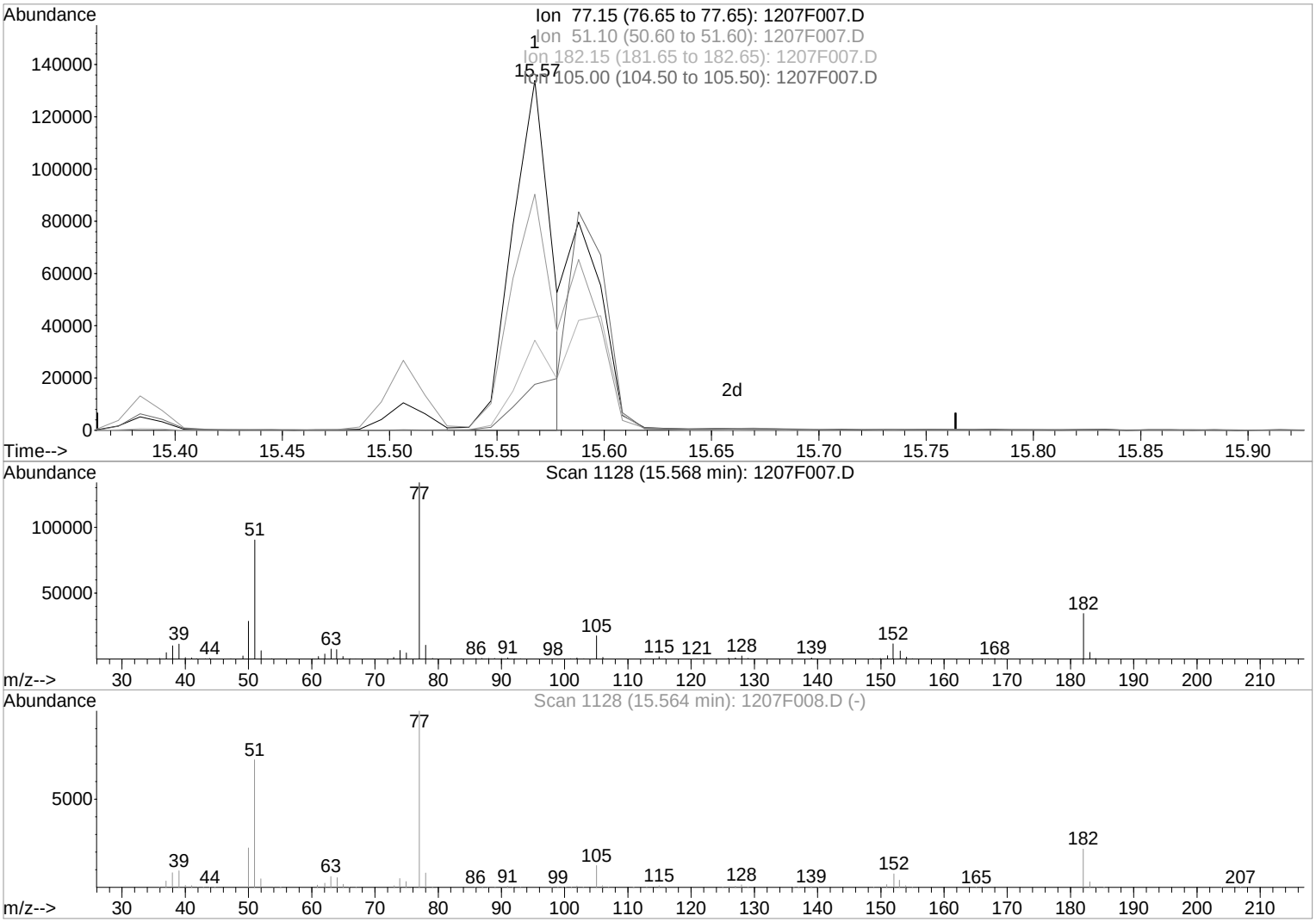
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:15 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F007.D

(59) Azobenzene (T)

15.57min 65.81ug/ml m

response 170179

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	67.44
182.15	21.70	25.71
105.00	12.30	13.11

Manual Integration:

After

IC-Overintegrated

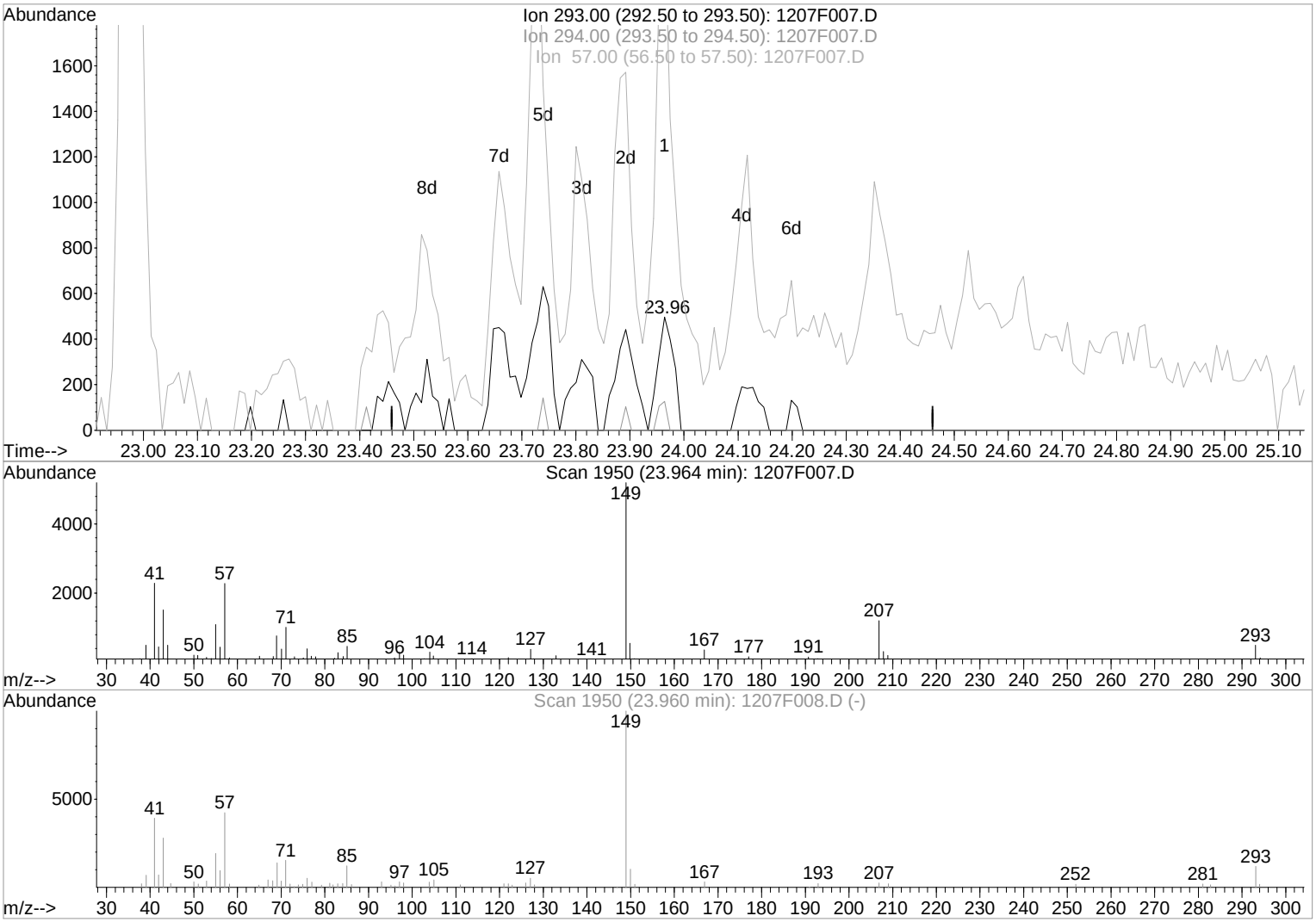
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:15 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F007.D

(87) Diisononyl Phthalate (T)

23.96min 5.02ug/ml

response 1008

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	14.19
57.00	33.10	485.42#
0.00	0.00	0.00

Manual Integration:

Before

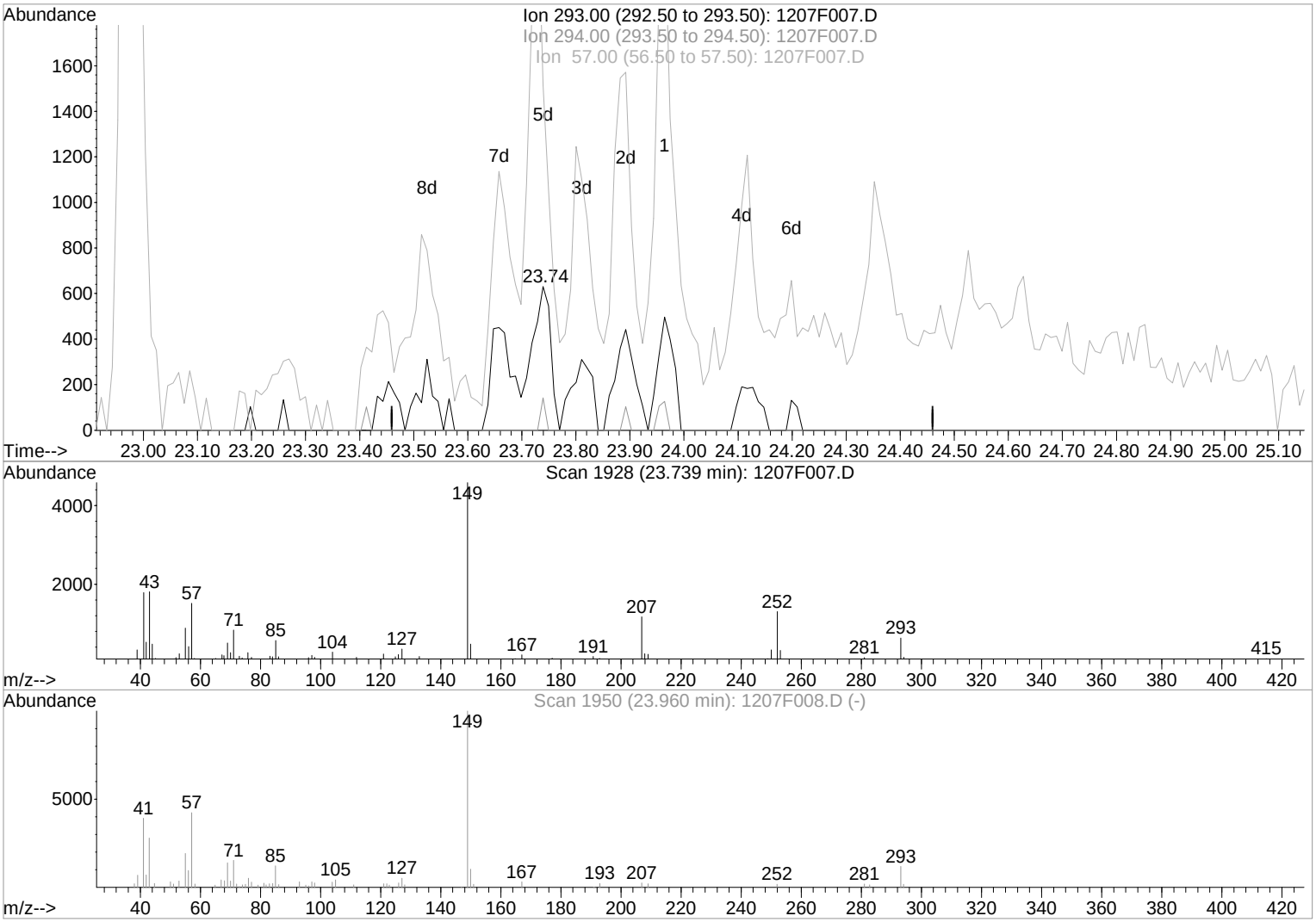
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:15 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F007.D

(87) Diisononyl Phthalate (T)

23.74min 36.77ug/ml m

response 7382

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	1.94
57.00	33.10	66.28#
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

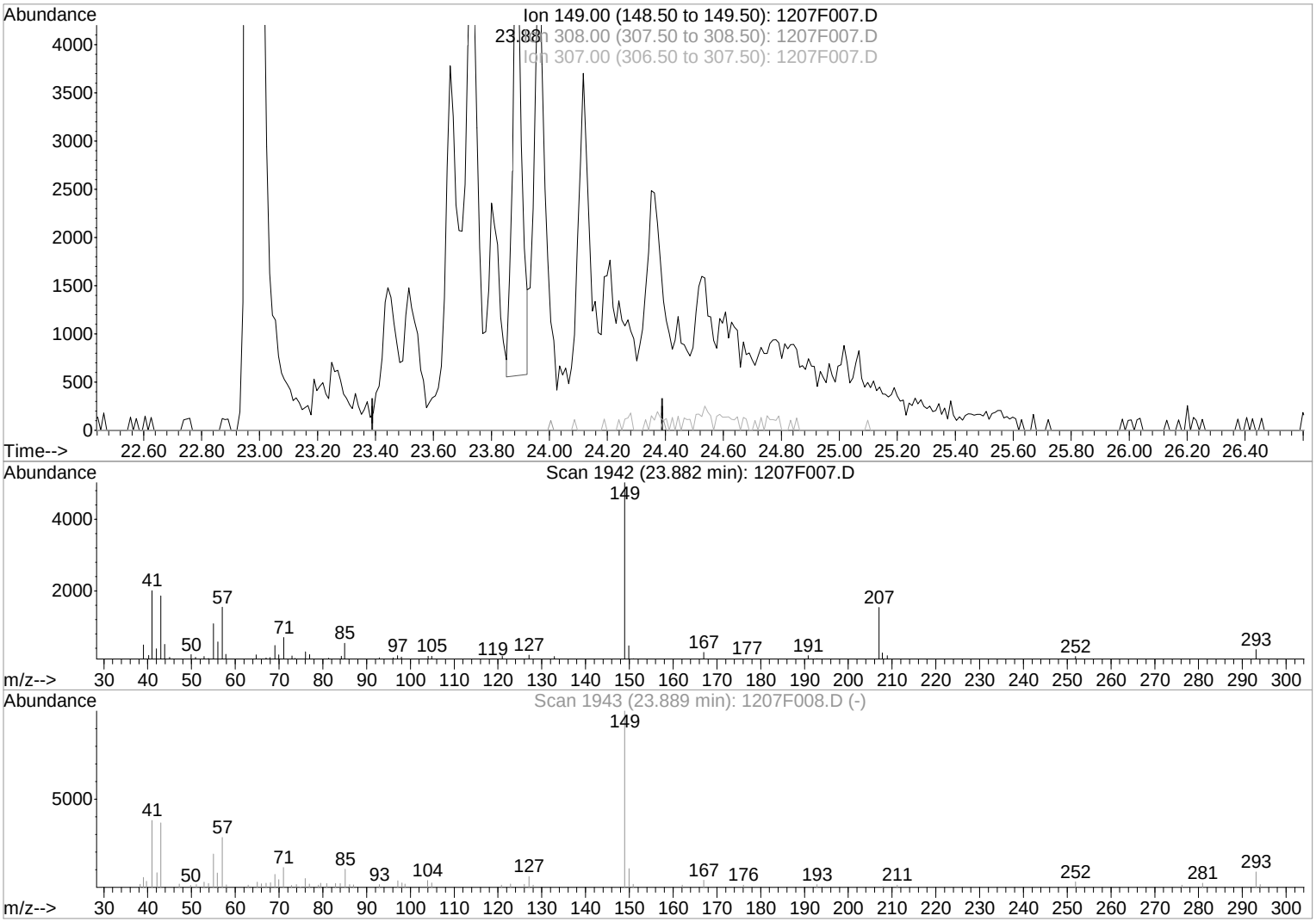
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:15 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F007.D

(88) Diisodecyl Phthalate (T)

23.88min 3.37ug/ml

response 10166

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

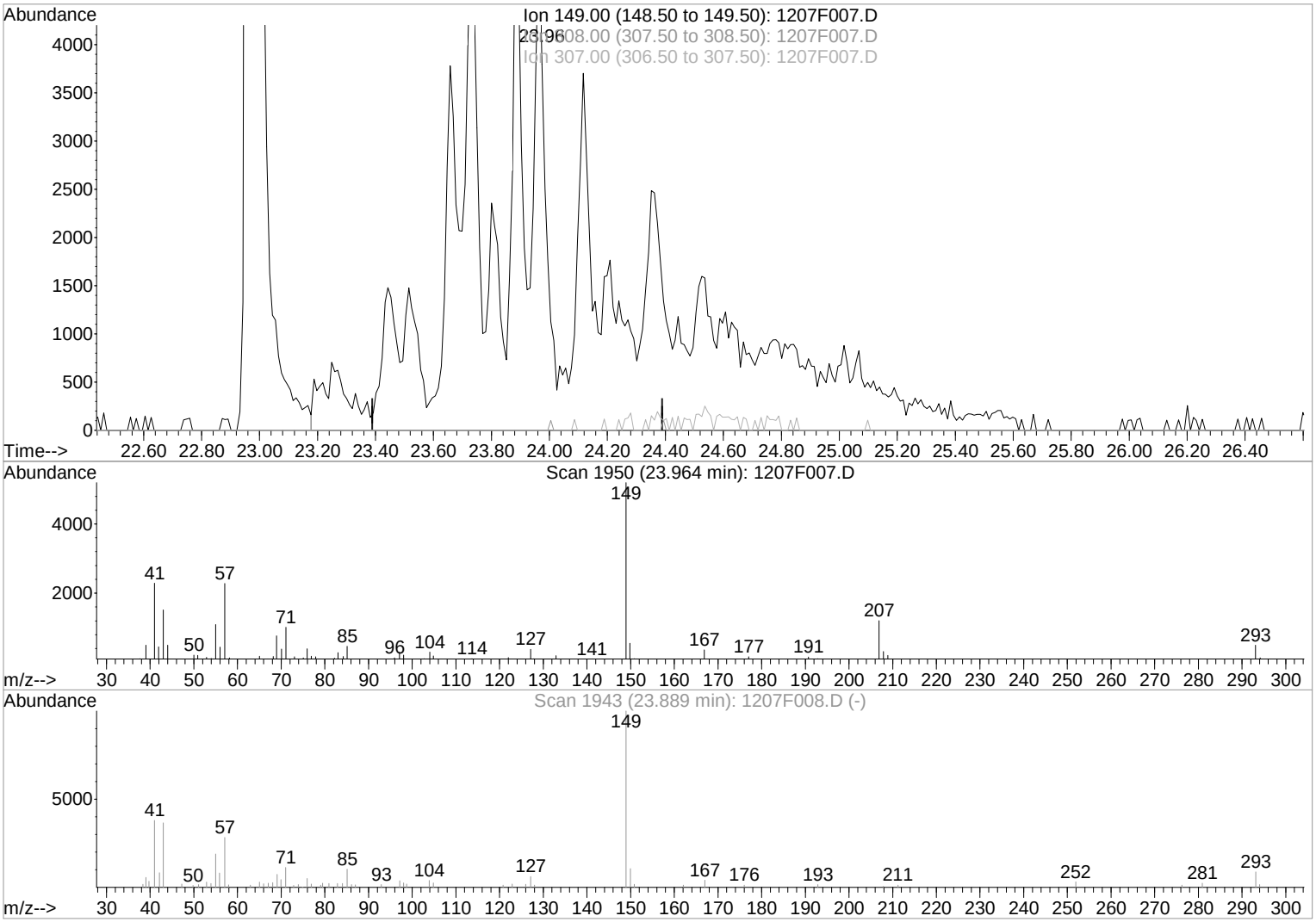
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F007.D Vial: 7
Acq On : 7 Dec 2018 7:16 pm Operator: CConover
Sample : 8270/P ICAL @ 50ppm | SVM59-92H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:15 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F007.D

(88) Diisodecyl Phthalate (T)

23.96min 49.59ug/ml m

response 149768

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

12/07/18

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F008.D Vial: 8
Acq On : 7 Dec 2018 7:57 pm Operator: CConover
Sample : 8270/P ICAL @ 80ppm | SVM59-92I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:30 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	48007	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	174754	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.39	164	88261	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	120482	40.00	ug/ml	0.00
73) Chrysene-d12	21.28	240	116510	40.00	ug/ml	0.00
83) Perylene-d12	24.51	264	118617	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.19	112	98252	78.34	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 52.23%			
8) Phenol-d6	8.86	99	121666	79.82	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 53.21%			
20) Nitrobenzene-d5	10.35	82	129856	88.09	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 88.09%			
40) 2-Fluorobiphenyl	13.32	172	254352	81.24	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 81.24%			
62) 2,4,6-Tribromophenol	15.68	330	27974	56.77	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 37.85%			
76) Terphenyl-d14	19.44	244	217364	89.44	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 89.44%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.38	42	133444	110.57	ug/ml	100
3) Pyridine	4.41	79	95311	88.72	ug/ml	100
5) Ethylene Glycol Butyl Ethe	7.74	57	114289	100.36	ug/ml	100
6) Aniline	8.89	93	161106	89.67	ug/ml	100
7) Bis(2-chloroethyl) Ether	9.04	93	101172	89.20	ug/ml	100
9) Phenol	8.89	94	141833	90.29	ug/ml	100
10) 2-Chlorophenol	9.07	128	120060	77.97	ug/ml	100
11) 1,3-Dichlorobenzene	9.32	146	141593	77.16	ug/ml	100
12) 1,4-Dichlorobenzene	9.46	146	145119	77.44	ug/ml	100
13) 1,2-Dichlorobenzene	9.69	146	143047	80.14	ug/ml	100
14) Benzyl Alcohol	9.70	108	72868	81.11	ug/ml	100
15) 2,2'-oxybis(2-chloropropan	9.94	45	156328	103.81	ug/ml	100
16) 2-Methylphenol	9.90	107	83727	72.69	ug/ml	100
17) Hexachloroethane	10.25	117	66607	87.62	ug/ml	100
18) N-Nitrosodi-n-propylamine	10.15	70	85967	94.64	ug/ml	100
19) 4-Methylphenol	10.16	107	131308	80.31	ug/ml	100
21) Nitrobenzene	10.40	77	130457	92.38	ug/ml	100
23) Isophorone	10.80	82	209630	87.53	ug/ml	100
24) 2-Nitrophenol	10.92	139	67845	79.07	ug/ml	100
25) 2,4-Dimethylphenol	11.03	122	93559	81.35	ug/ml	100
26) Bis(2-chloroethoxy)methane	11.19	93	123664	93.80	ug/ml	100
27) 2,4-Dichlorophenol	11.30	162	112983	83.25	ug/ml	100
28) Benzoic Acid	11.24	122	53038	81.65	ug/ml	98
29) 1,2,4-Trichlorobenzene	11.44	180	125141	79.93	ug/ml	100
30) Naphthalene	11.56	128	347090	81.21	ug/ml	100
31) n-Dodecane	11.58	57	152577	111.40	ug/ml	100
32) 4-Chloroaniline	11.68	127	155601	81.41	ug/ml	100
33) Hexachlorobutadiene	11.77	225	95129	88.73	ug/ml	100
34) 4-Chloro-3-methylphenol	12.48	107	91024	79.21	ug/ml	100
35) 2-Methylnaphthalene	12.69	142	234154	77.25	ug/ml	100
37) Hexachlorocyclopentadiene	12.95	237	84253	146.92	ug/ml	100
38) 2,4,6-Trichlorophenol	13.16	196	72635	82.86	ug/ml	100
39) 2,4,5-Trichlorophenol	13.21	196	79111	88.92	ug/ml	100
41) 2-Chloronaphthalene	13.48	162	216175	82.66	ug/ml	100
42) 2-Nitroaniline	13.67	65	73874	103.51	ug/ml	100
43) Acenaphthylene	14.15	152	296751	79.86	ug/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F008.D Vial: 8
Acq On : 7 Dec 2018 7:57 pm Operator: CConover
Sample : 8270/P ICAL @ 80ppm | SVM59-92I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:30 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
44) Dimethyl Phthalate	14.01	163	224648	80.00 ug/ml	100
45) 2,6-Dinitrotoluene	14.09	165	50313	76.81 ug/ml	100
46) Acenaphthene	14.44	154	189291	80.34 ug/ml	100
47) 3-Nitroaniline	14.36	138	50343	76.10 ug/ml	100
48) 2,4-Dinitrophenol	14.52	184	23333	73.88 ug/ml	100
49) Dibenzofuran	14.73	168	297865	80.50 ug/ml	100
50) 4-Nitrophenol	14.63	109	40744	138.55 ug/ml	100
51) 2,4-Dinitrotoluene	14.75	165	65434	80.27 ug/ml	100
52) 2,3,4,6-Tetrachlorophenol	14.93	232	53051	87.47 ug/ml	100
53) Fluorene	15.29	166	215645	78.55 ug/ml	100
54) 4-Chlorophenyl Phenyl Ethe	15.31	204	117059	84.33 ug/ml	100
55) Diethyl Phthalate	15.18	149	207048	77.58 ug/ml	100
56) 4-Nitroaniline	15.35	138	51341	85.82 ug/ml	100
57) 2-Methyl-4,6-dinitrophenol	15.39	198	36867	80.74 ug/ml	100
58) Diphenylamine	15.51	169	134330	74.86 ug/ml	100
59) Azobenzene	15.56	77	264128m	110.89 ug/ml	
60) Benzophenone	15.59	105	176564	85.30 ug/ml	100
63) 4-Bromophenyl Phenyl Ether	16.11	248	60832	73.46 ug/ml	100
64) Hexachlorobenzene	16.16	284	56946	62.98 ug/ml	100
65) 2,6-Diisopropylnaphthalene	16.30	197	172840	80.78 ug/ml	100
66) Pentachlorophenol	16.49	266	37499	103.85 ug/ml	100
67) Diazinon	16.67	137	38909	78.78 ug/ml	100
68) Phenanthrene	16.84	178	266107	80.03 ug/ml	100
69) Anthracene	16.92	178	274424	80.51 ug/ml	100
70) Carbazole	17.21	167	266786	88.83 ug/ml	100
71) Di-n-butyl Phthalate	17.84	149	325216	88.98 ug/ml	100
72) Fluoranthene	18.77	202	297195	89.39 ug/ml	100
74) Benzidine	19.04	184	86593	54.97 ug/ml	100
75) Pyrene	19.13	202	309688	85.91 ug/ml	100
77) Butyl Benzyl Phthalate	20.29	149	167783	96.76 ug/ml	100
78) Diethylene Glycol Butyl Et	21.17	105	211811	102.26 ug/ml	100
79) 3,3'-Dichlorobenzidine	21.26	252	110430	74.97 ug/ml	100
80) Benz(a)anthracene	21.26	228	294052	85.25 ug/ml	100
81) Chrysene	21.33	228	269481	81.75 ug/ml	100
82) Bis(2-ethylhexyl) Phthalat	21.48	149	226061	94.72 ug/ml	100
84) Di-n-octyl Phthalate	22.98	149	334589	79.88 ug/ml	100
85) Benzo(b)fluoranthene	23.63	252	270086	79.32 ug/ml	100
86) Benzo(k)fluoranthene	23.70	252	268340	79.40 ug/ml	100
87) Diisononyl Phthalate	23.96	293	13664m	57.89 ug/ml	
88) Diisodecyl Phthalate	23.89	149	259719m	73.15 ug/ml	
89) Benzo(a)pyrene	24.38	252	260097	82.82 ug/ml	100
90) Indeno(1,2,3-cd)pyrene	26.99	276	281679	92.75 ug/ml	100
91) Dibenz(a,h)anthracene	27.09	278	273103	88.99 ug/ml	100
92) Benzo(g,h,i)perylene	27.58	276	297328	94.00 ug/ml	100

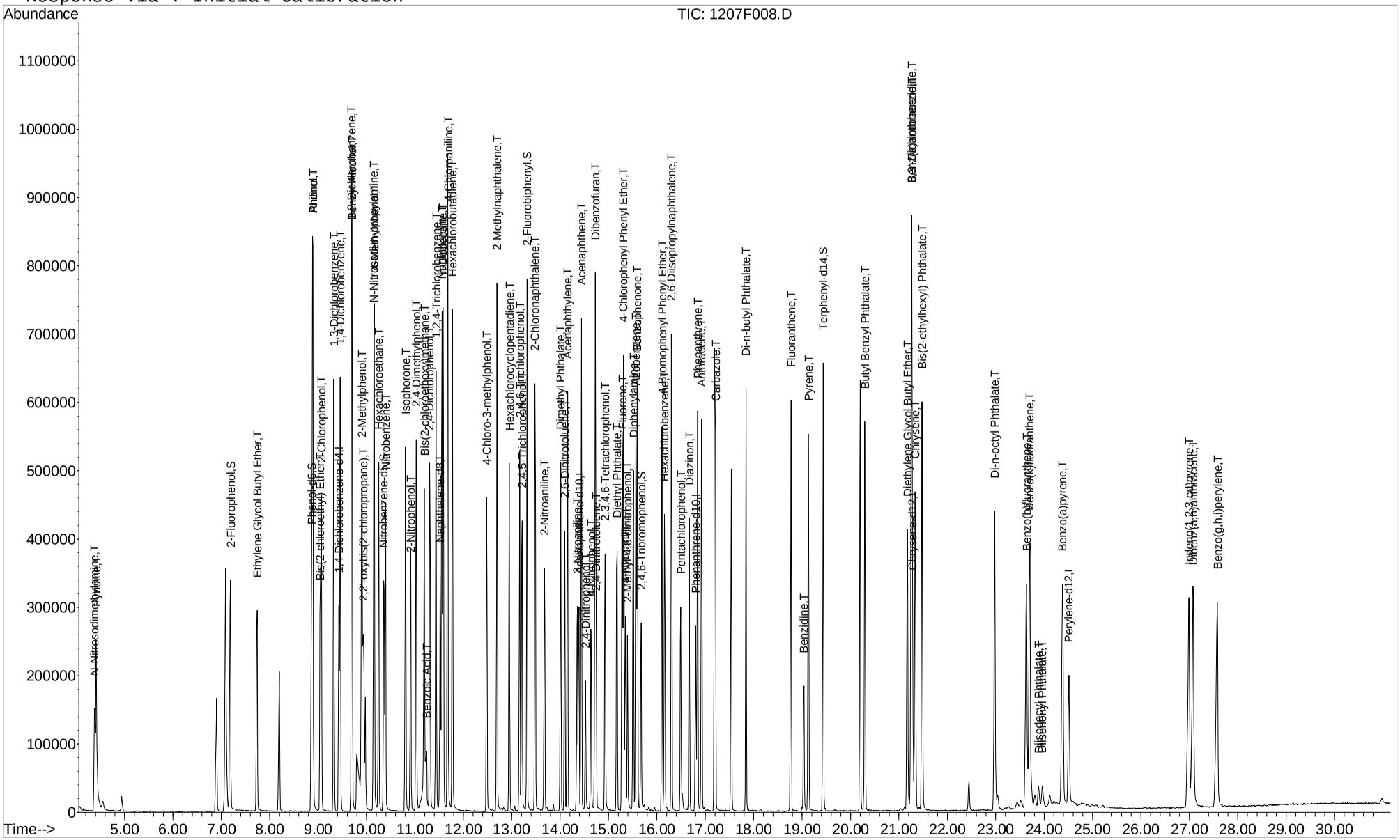
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F008.D Vial: 8
Acq On : 7 Dec 2018 7:57 pm Operator: CConover
Sample : 8270/P ICAL @ 80ppm | SVM59-92I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:17 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

12/08/18 12/13/18 1st 2nd

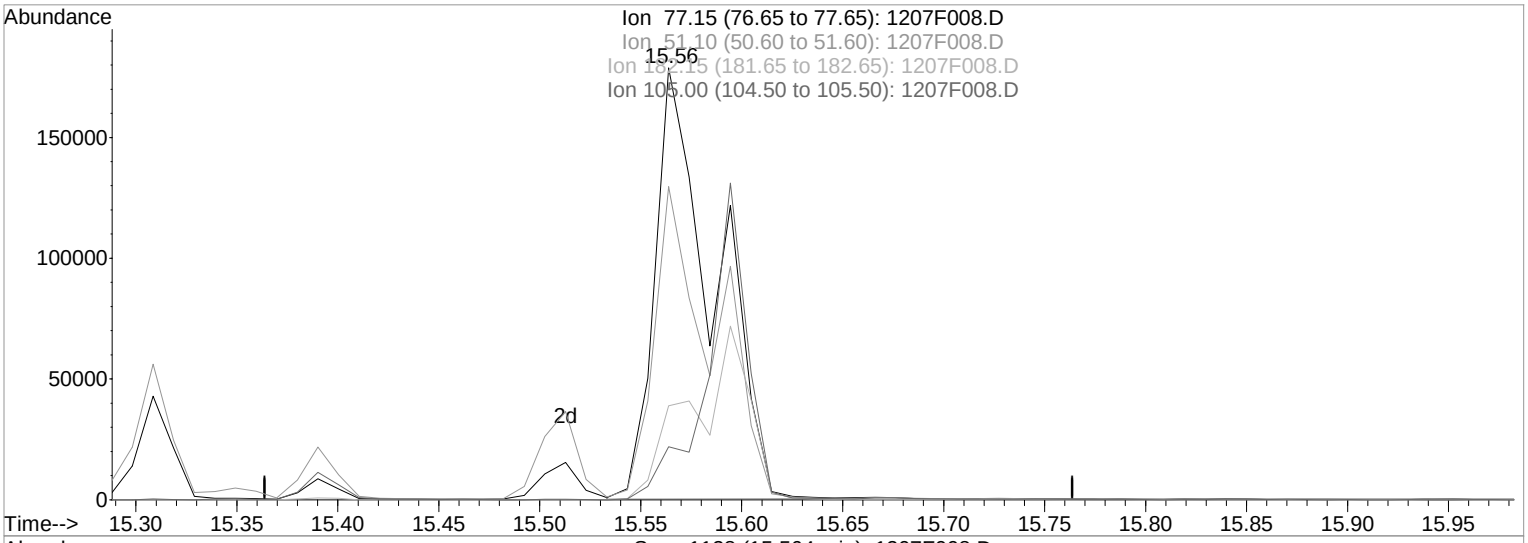


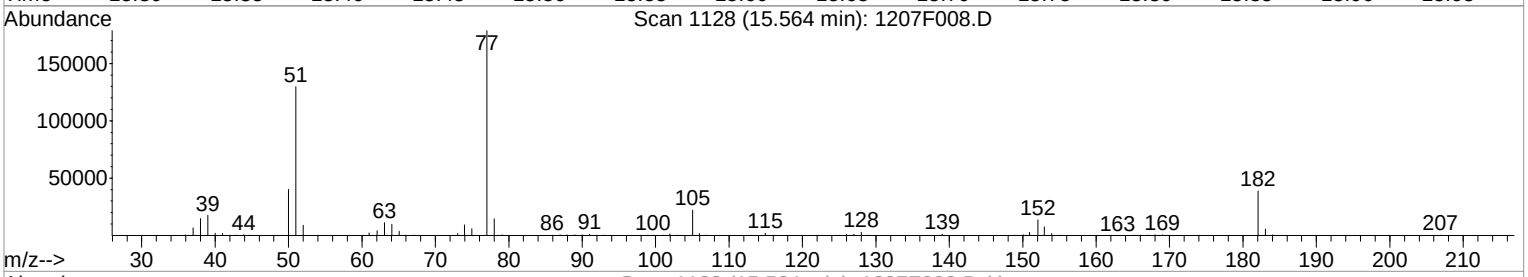
Quantitation Report (Qedit)

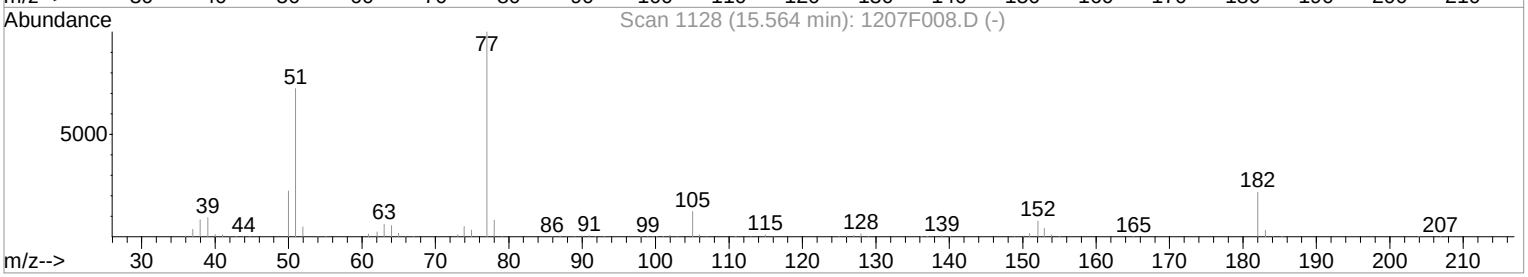
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F008.D Vial: 8
Acq On : 7 Dec 2018 7:57 pm Operator: CConover
Sample : 8270/P ICAL @ 80ppm | SVM59-92I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:54 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F008.D

(59) Azobenzene (T)

15.56min 153.90ug/ml

response 366568

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	72.36
182.15	21.70	21.73
105.00	12.30	12.22

Manual Integration:

Before

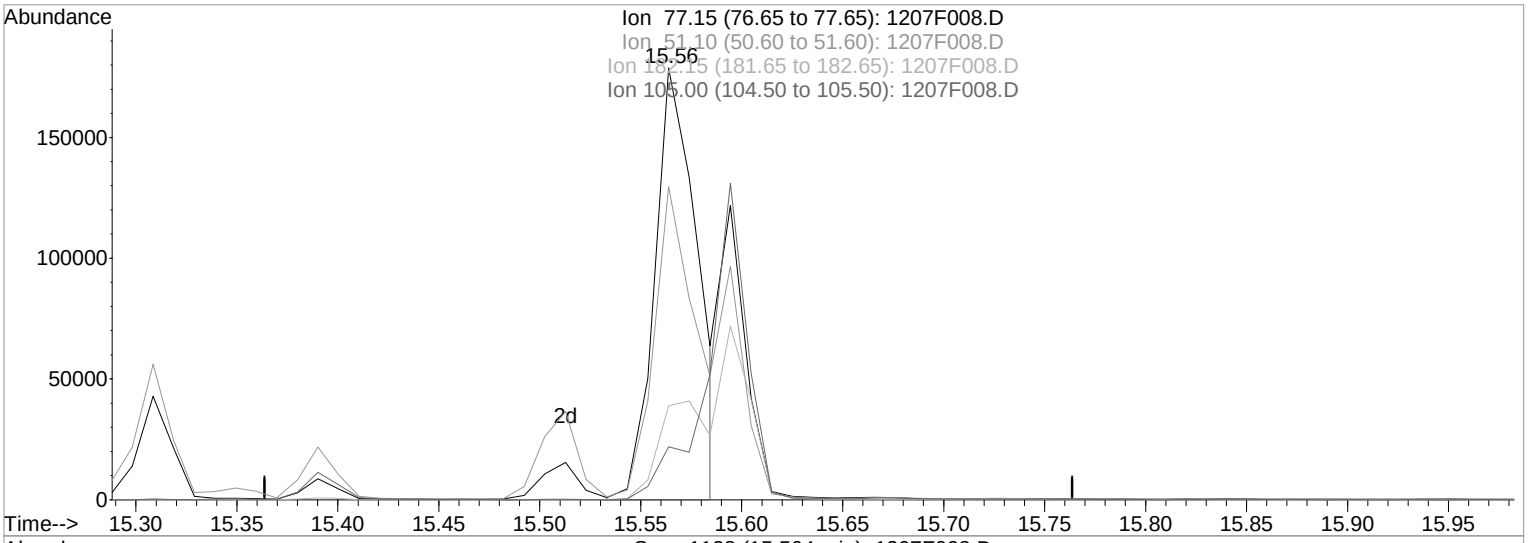
12/07/18

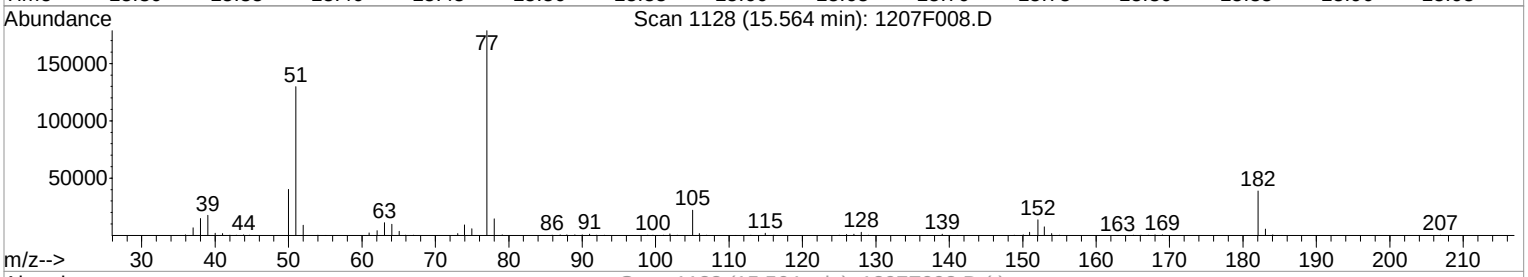
Quantitation Report (Qedit)

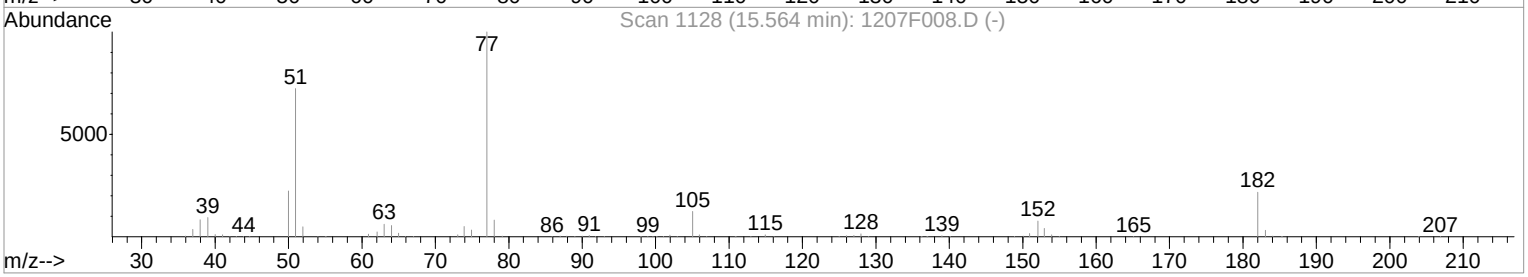
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F008.D Vial: 8
Acq On : 7 Dec 2018 7:57 pm Operator: CConover
Sample : 8270/P ICAL @ 80ppm | SVM59-92I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:16 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F008.D

(59) Azobenzene (T)

15.56min 110.89ug/ml m

response 264128

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	72.52
182.15	21.70	21.73
105.00	12.30	12.28

Manual Integration:

After

IC-Overintegrated

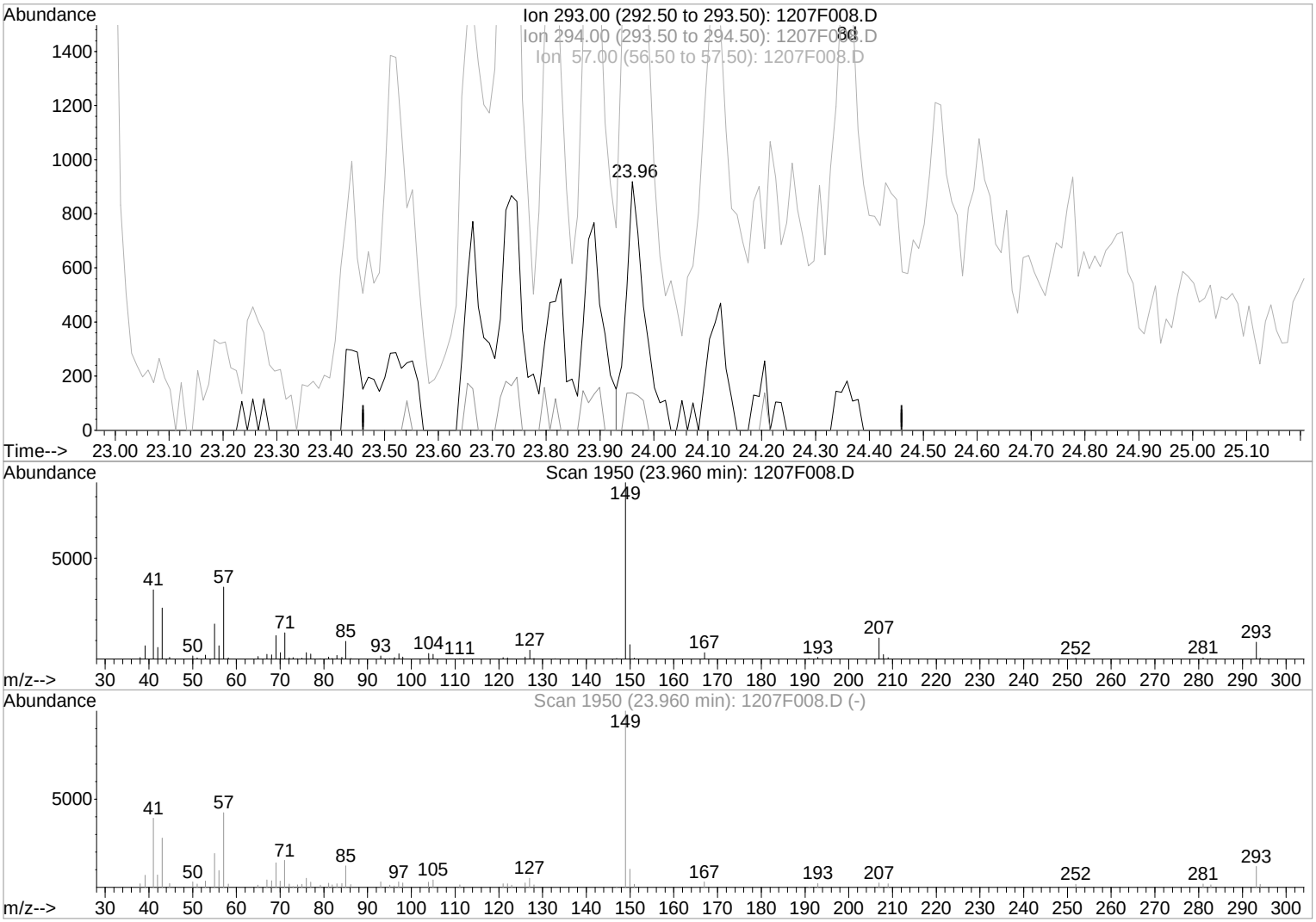
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F008.D Vial: 8
Acq On : 7 Dec 2018 7:57 pm Operator: CConover
Sample : 8270/P ICAL @ 80ppm | SVM59-92I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:16 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F008.D

(87) Diisononyl Phthalate (T)

23.96min 9.21ug/ml

response 2174

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	14.44
57.00	33.10	377.92#
0.00	0.00	0.00

Manual Integration:

Before

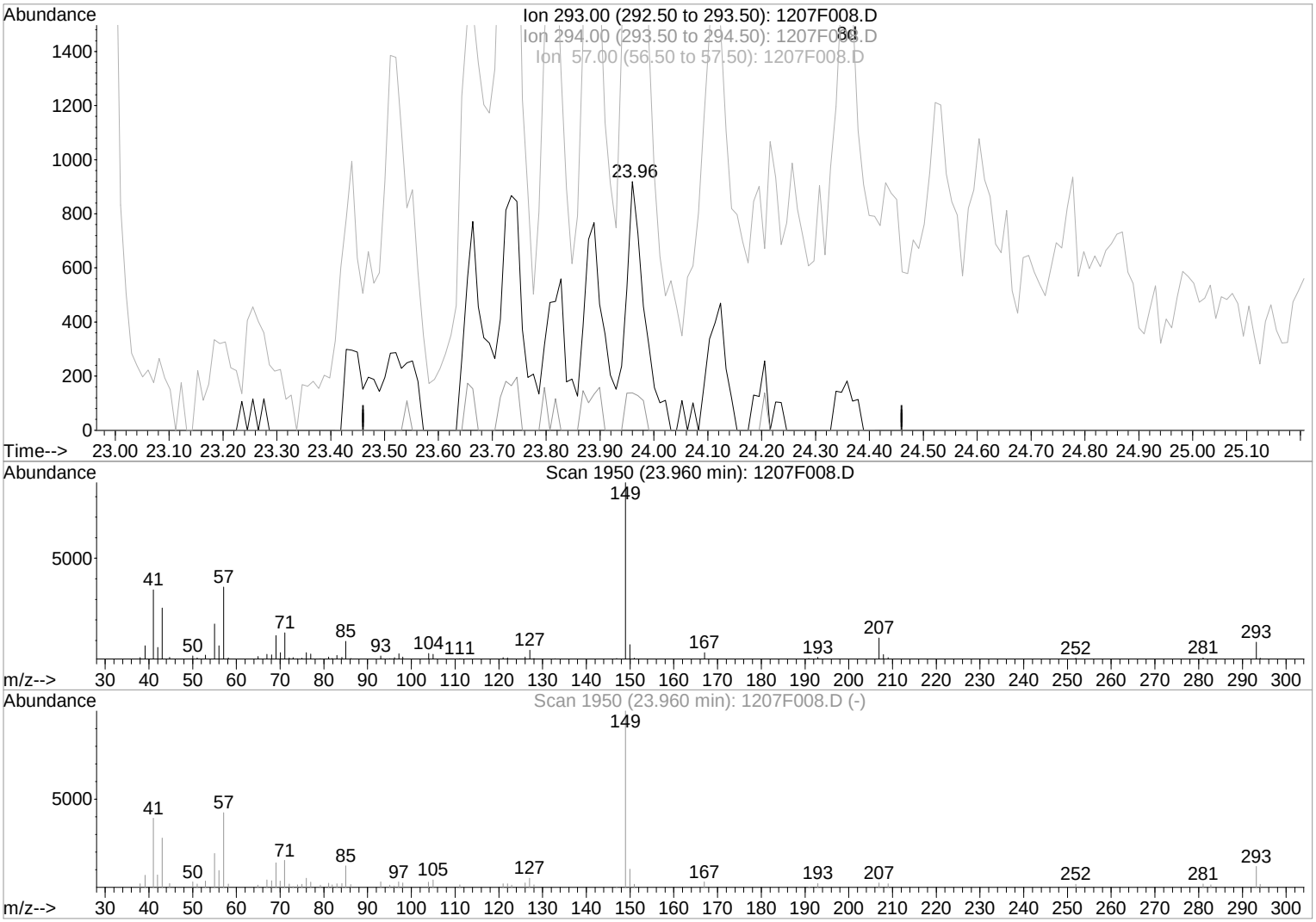
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F008.D Vial: 8
Acq On : 7 Dec 2018 7:57 pm Operator: CConover
Sample : 8270/P ICAL @ 80ppm | SVM59-92I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:17 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F008.D

(87) Diisononyl Phthalate (T)

23.96min 57.89ug/ml m

response 13664

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	2.30
57.00	33.10	60.13
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

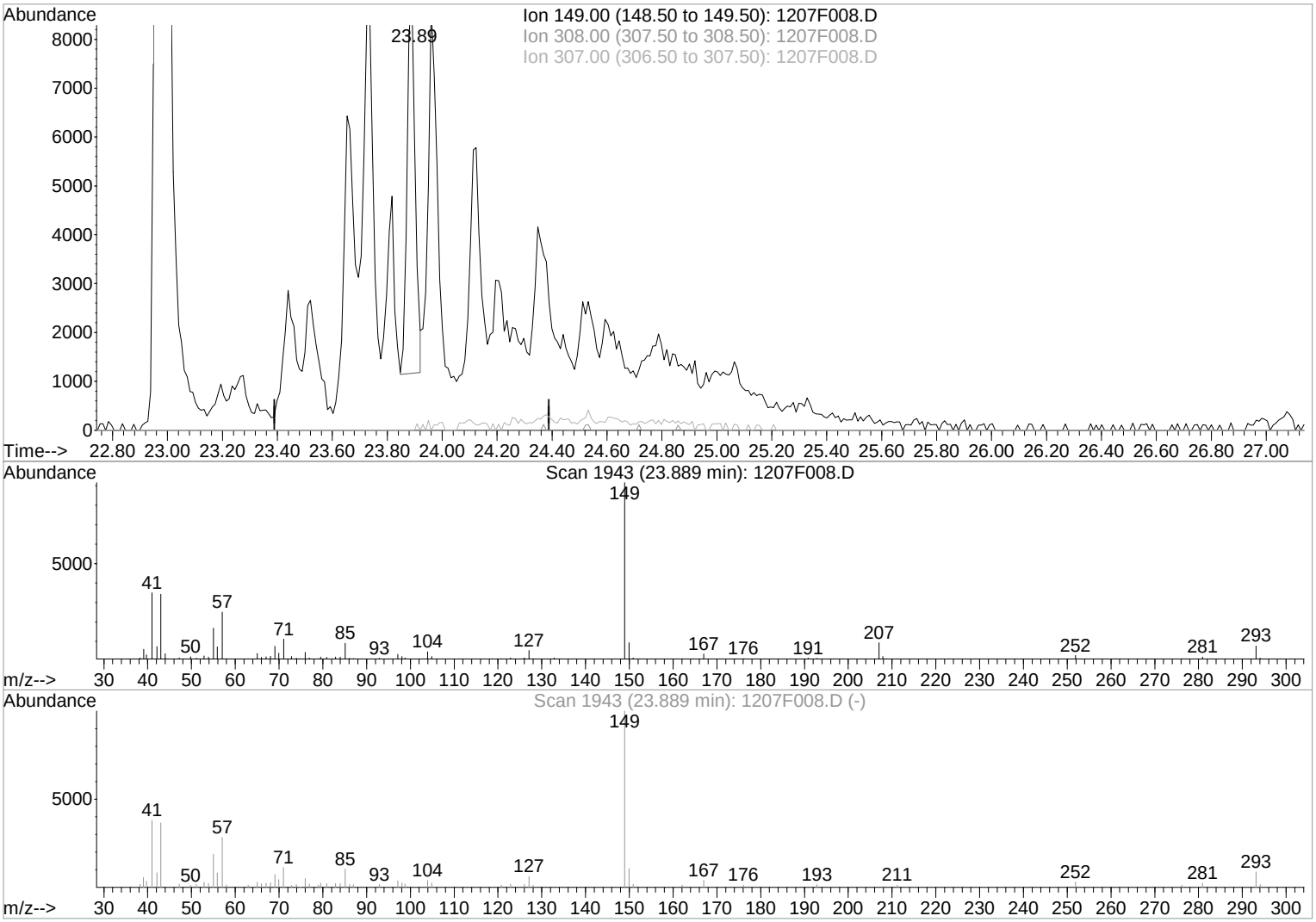
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F008.D Vial: 8
Acq On : 7 Dec 2018 7:57 pm Operator: CConover
Sample : 8270/P ICAL @ 80ppm | SVM59-92I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:17 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F008.D

(88) Diisodecyl Phthalate (T)

23.89min 4.50ug/ml

response 15986

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

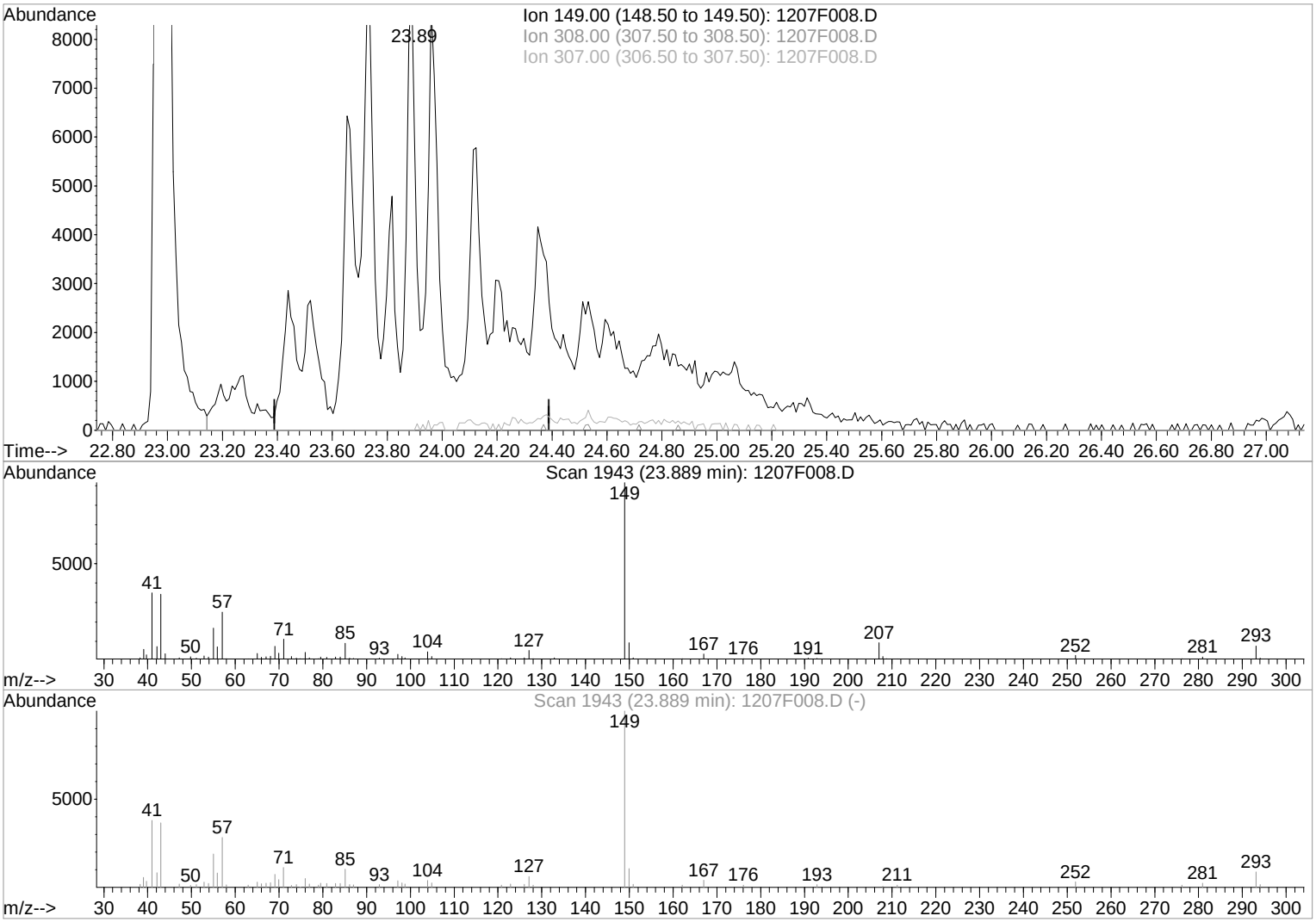
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F008.D Vial: 8
Acq On : 7 Dec 2018 7:57 pm Operator: CConover
Sample : 8270/P ICAL @ 80ppm | SVM59-92I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:17 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F008.D

(88) Diisodecyl Phthalate (T)

23.89min 73.15ug/ml m

response 259719

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

12/07/18

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:31 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	48867	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	174830	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.39	164	89237	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	119705	40.00	ug/ml	0.00
73) Chrysene-d12	21.28	240	116189	40.00	ug/ml	0.00
83) Perylene-d12	24.51	264	122683	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.19	112	125688	98.45	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 65.63%			
8) Phenol-d6	8.87	99	156853	101.09	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 67.39%			
20) Nitrobenzene-d5	10.36	82	169381	112.87	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 112.87%			
40) 2-Fluorobiphenyl	13.32	172	343432	108.50	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 108.50%			
62) 2,4,6-Tribromophenol	15.67	330	36170	73.88	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 49.25%			
76) Terphenyl-d14	19.43	244	272532	112.44	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 112.44%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.39	42	173690	141.39	ug/ml	96
3) Pyridine	4.41	79	123143	112.61	ug/ml	98
5) Ethylene Glycol Butyl Ethe	7.74	57	143585	123.87	ug/ml	100
6) Aniline	8.89	93	207970	113.72	ug/ml	99
7) Bis(2-chloroethyl) Ether	9.05	93	133913	115.99	ug/ml	95
9) Phenol	8.89	94	182929	114.40	ug/ml	89
10) 2-Chlorophenol	9.07	128	151665	96.76	ug/ml	96
11) 1,3-Dichlorobenzene	9.32	146	182068	97.47	ug/ml	99
12) 1,4-Dichlorobenzene	9.45	146	186965	98.01	ug/ml	98
13) 1,2-Dichlorobenzene	9.70	146	180976	99.61	ug/ml	95
14) Benzyl Alcohol	9.70	108	97773	106.92	ug/ml	94
15) 2,2'-oxybis(2-chloropropan	9.93	45	202007	131.79	ug/ml	97
16) 2-Methylphenol	9.90	107	109860	93.70	ug/ml	96
17) Hexachloroethane	10.25	117	83363	107.73	ug/ml	99
18) N-Nitrosodi-n-propylamine	10.16	70	110223	119.21	ug/ml	99
19) 4-Methylphenol	10.17	107	170559	102.49	ug/ml	100
21) Nitrobenzene	10.39	77	165026	114.81	ug/ml	94
23) Isophorone	10.81	82	268351	112.01	ug/ml	96
24) 2-Nitrophenol	10.91	139	89283	104.01	ug/ml	94
25) 2,4-Dimethylphenol	11.03	122	120698	104.90	ug/ml	96
26) Bis(2-chloroethoxy)methane	11.19	93	158219	119.96	ug/ml	98
27) 2,4-Dichlorophenol	11.31	162	144821	106.66	ug/ml	96
28) Benzoic Acid	11.26	122	69891m	107.55	ug/ml	
29) 1,2,4-Trichlorobenzene	11.44	180	162482	103.73	ug/ml	99
30) Naphthalene	11.56	128	446308	104.38	ug/ml	100
31) n-Dodecane	11.59	57	197429	144.08	ug/ml	99
32) 4-Chloroaniline	11.68	127	204661	107.03	ug/ml	96
33) Hexachlorobutadiene	11.77	225	120522	112.37	ug/ml	97
34) 4-Chloro-3-methylphenol	12.49	107	120783	105.07	ug/ml	95
35) 2-Methylnaphthalene	12.69	142	311494	102.73	ug/ml	100
37) Hexachlorocyclopentadiene	12.95	237	110901	191.27	ug/ml	98
38) 2,4,6-Trichlorophenol	13.16	196	97336	109.83	ug/ml	99
39) 2,4,5-Trichlorophenol	13.21	196	99661	110.79	ug/ml	98
41) 2-Chloronaphthalene	13.49	162	301261	113.94	ug/ml	96
42) 2-Nitroaniline	13.68	65	98019	135.85	ug/ml	94
43) Acenaphthylene	14.15	152	388109	103.30	ug/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:31 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
44) Dimethyl Phthalate	14.01	163	293111	103.25 ug/ml	99
45) 2,6-Dinitrotoluene	14.10	165	65605	99.06 ug/ml	93
46) Acenaphthene	14.44	154	254764	106.95 ug/ml	97
47) 3-Nitroaniline	14.36	138	64223	96.02 ug/ml	93
48) 2,4-Dinitrophenol	14.53	184	32266	101.05 ug/ml	84
49) Dibenzofuran	14.72	168	389252	104.05 ug/ml	98
50) 4-Nitrophenol	14.64	109	48085	161.72 ug/ml	95
51) 2,4-Dinitrotoluene	14.75	165	85820	104.13 ug/ml	88
52) 2,3,4,6-Tetrachlorophenol	14.93	232	72157	117.67 ug/ml	92
53) Fluorene	15.29	166	285830	102.97 ug/ml	99
54) 4-Chlorophenyl Phenyl Ethe	15.32	204	153402	109.30 ug/ml	87
55) Diethyl Phthalate	15.17	149	269299	99.80 ug/ml	100
56) 4-Nitroaniline	15.36	138	63804	105.49 ug/ml	99
57) 2-Methyl-4,6-dinitrophenol	15.40	198	47527	102.95 ug/ml#	64
58) Diphenylamine	15.51	169	174905	96.40 ug/ml	99
59) Azobenzene	15.57	77	317678m	131.91 ug/ml	
60) Benzophenone	15.60	105	232530	111.11 ug/ml	98
63) 4-Bromophenyl Phenyl Ether	16.10	248	78325	95.20 ug/ml	98
64) Hexachlorobenzene	16.17	284	73148	81.42 ug/ml	84
65) 2,6-Diisopropylnaphthalene	16.30	197	229172	107.80 ug/ml	99
66) Pentachlorophenol	16.49	266	48064	133.98 ug/ml	99
67) Diazinon	16.67	137	50343	102.59 ug/ml	99
68) Phenanthrene	16.84	178	340052	102.94 ug/ml	98
69) Anthracene	16.92	178	339175	100.15 ug/ml	99
70) Carbazole	17.21	167	336583	112.80 ug/ml	100
71) Di-n-butyl Phthalate	17.84	149	404867	111.49 ug/ml	99
72) Fluoranthene	18.77	202	366120	110.84 ug/ml	99
74) Benzidine	19.04	184	117247	74.64 ug/ml	99
75) Pyrene	19.14	202	390205	108.54 ug/ml	99
77) Butyl Benzyl Phthalate	20.30	149	213563	123.50 ug/ml	89
78) Diethylene Glycol Butyl Et	21.18	105	267366	129.43 ug/ml	99
79) 3,3'-Dichlorobenzidine	21.26	252	142372	96.93 ug/ml	99
80) Benz(a)anthracene	21.26	228	372717	108.36 ug/ml	99
81) Chrysene	21.34	228	344885	104.91 ug/ml	99
82) Bis(2-ethylhexyl) Phthalat	21.48	149	282773	118.81 ug/ml	100
84) Di-n-octyl Phthalate	22.98	149	423400	97.74 ug/ml	98
85) Benzo(b)fluoranthene	23.64	252	348512	98.96 ug/ml	98
86) Benzo(k)fluoranthene	23.71	252	352743	100.92 ug/ml	99
87) Diisononyl Phthalate	23.73	293	16879m	69.15 ug/ml	
88) Diisodecyl Phthalate	23.73	149	336244m	91.57 ug/ml	
89) Benzo(a)pyrene	24.39	252	345882	106.49 ug/ml	98
90) Indeno(1,2,3-cd)pyrene	27.00	276	362256	115.33 ug/ml	98
91) Dibenz(a,h)anthracene	27.08	278	353713	111.44 ug/ml	97
92) Benzo(g,h,i)perylene	27.58	276	367493	112.34 ug/ml	99

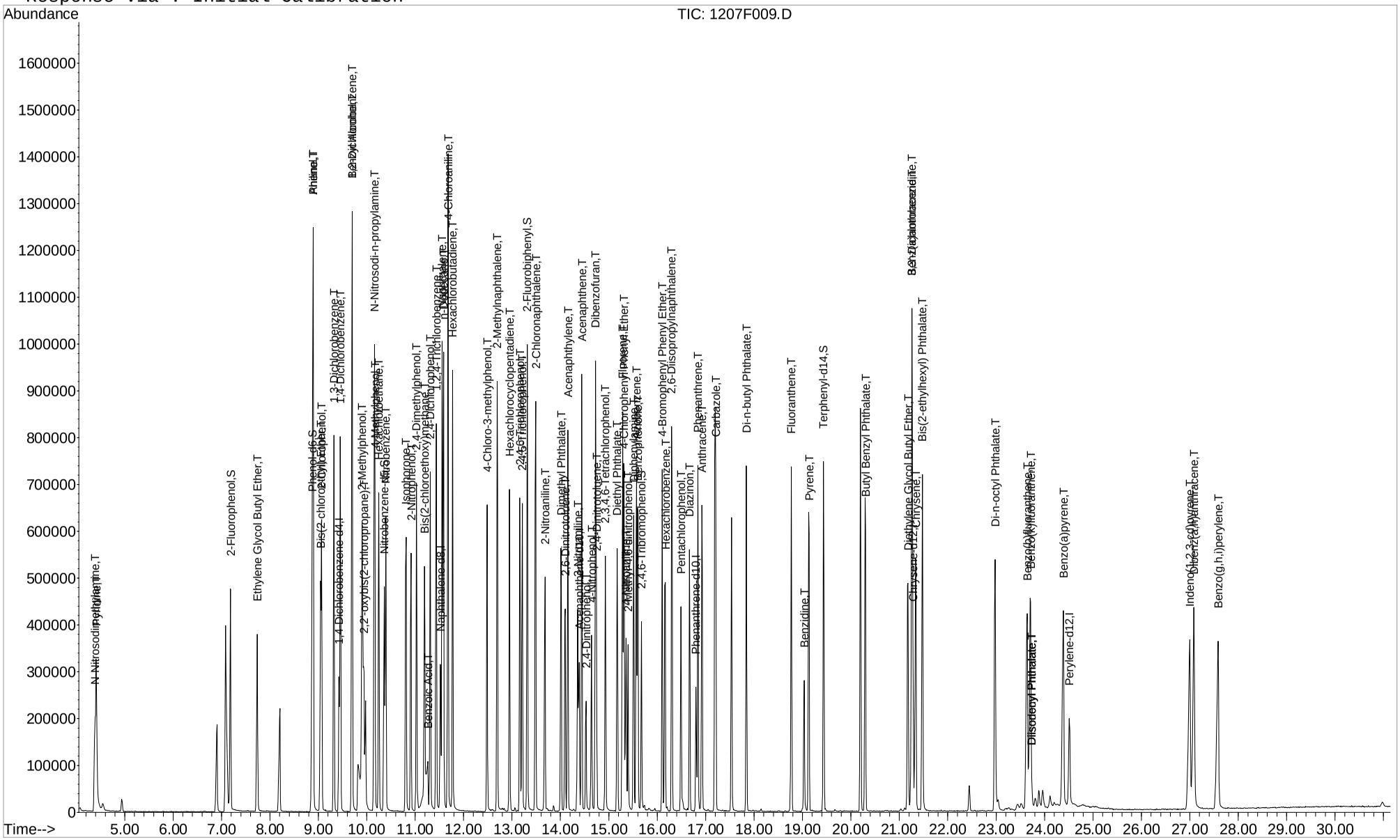
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:20 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

12/08/18 12/13/18 1st 2nd

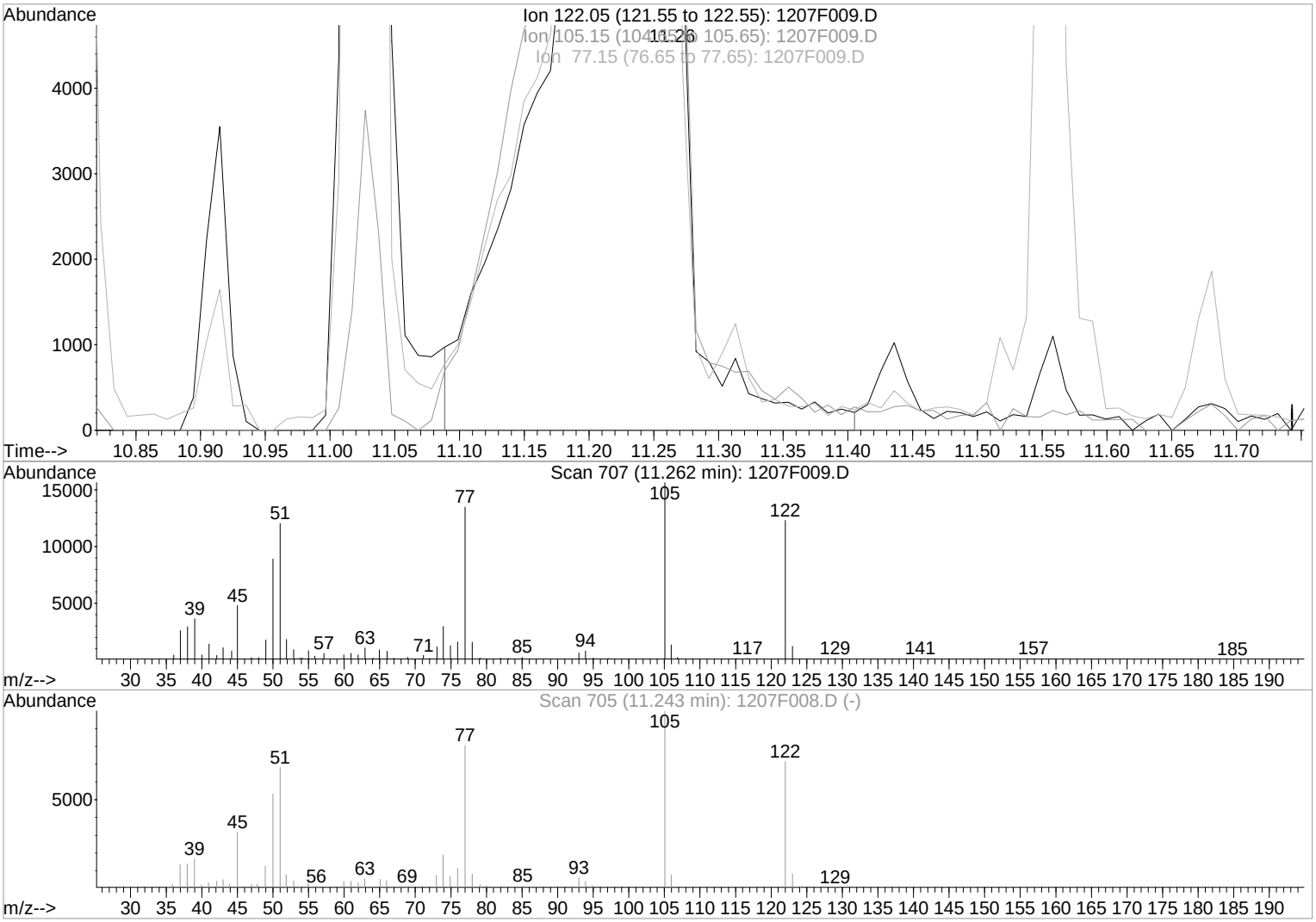


Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:54 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F009.D

(28) Benzoic Acid (T)

11.26min 107.56ug/ml

response 69903

Ion	Exp%	Act%
122.05	100	100
105.15	132.80	129.44
77.15	110.60	110.73
0.00	0.00	0.00

Manual Integration:

Before

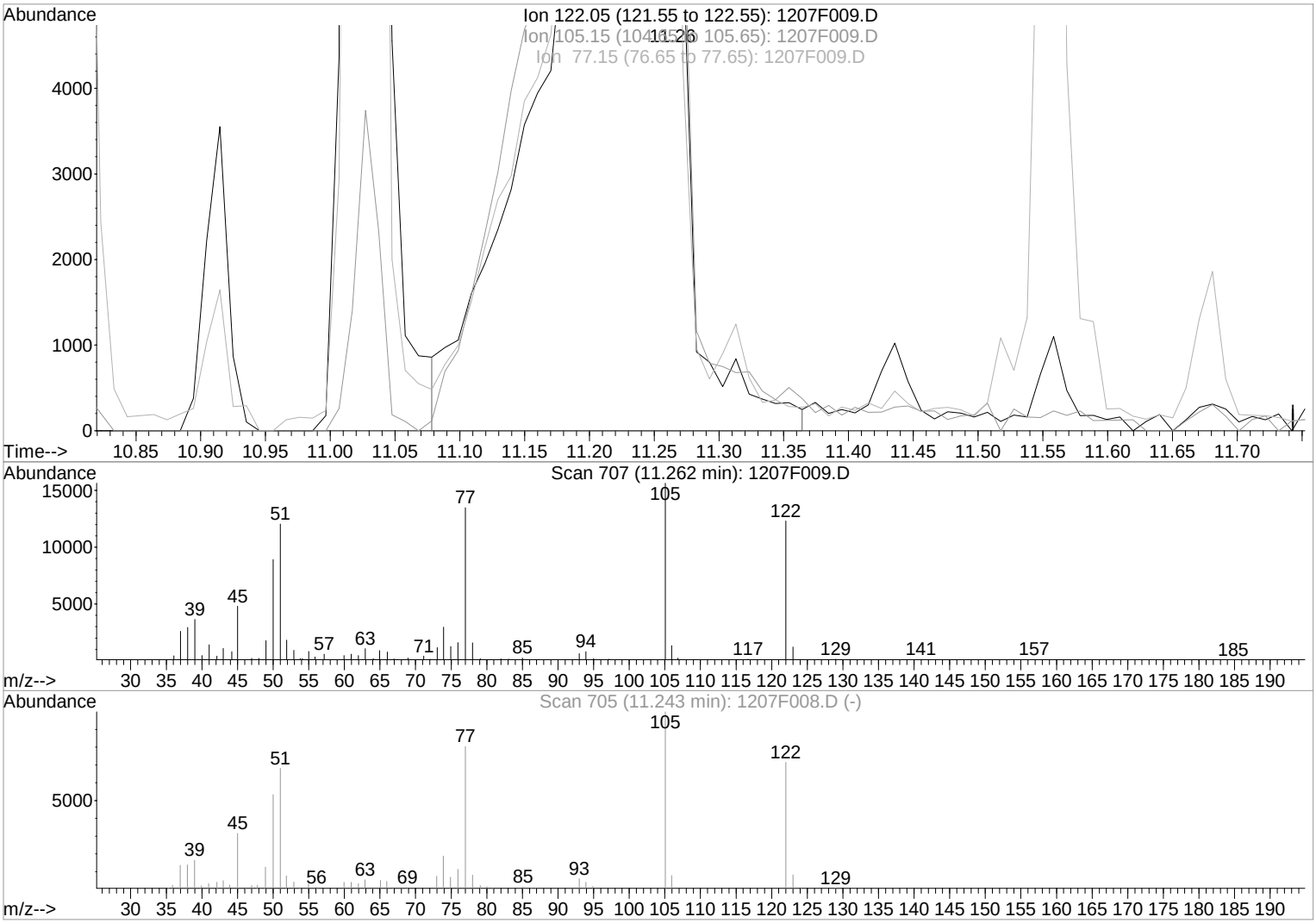
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:18 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F009.D

(28) Benzoic Acid (T)

11.26min 107.55ug/ml m

response 69891

Ion	Exp%	Act%
122.05	100	100
105.15	132.80	127.16
77.15	110.60	109.52
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

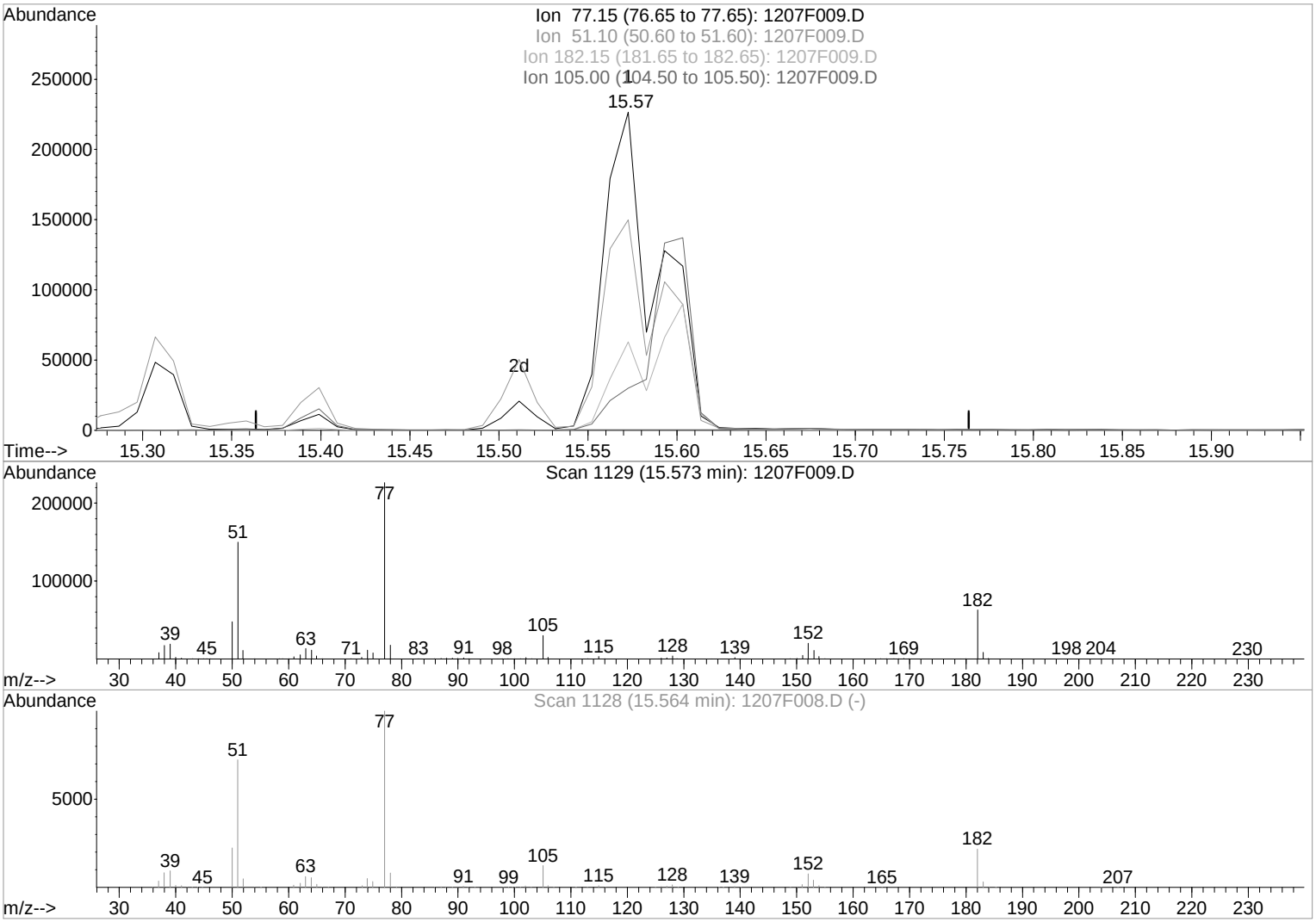
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:18 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F009.D

(59) Azobenzene (T)

15.57min 197.03ug/ml

response 474502

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	65.80
182.15	21.70	27.82
105.00	12.30	13.14

Manual Integration:

Before

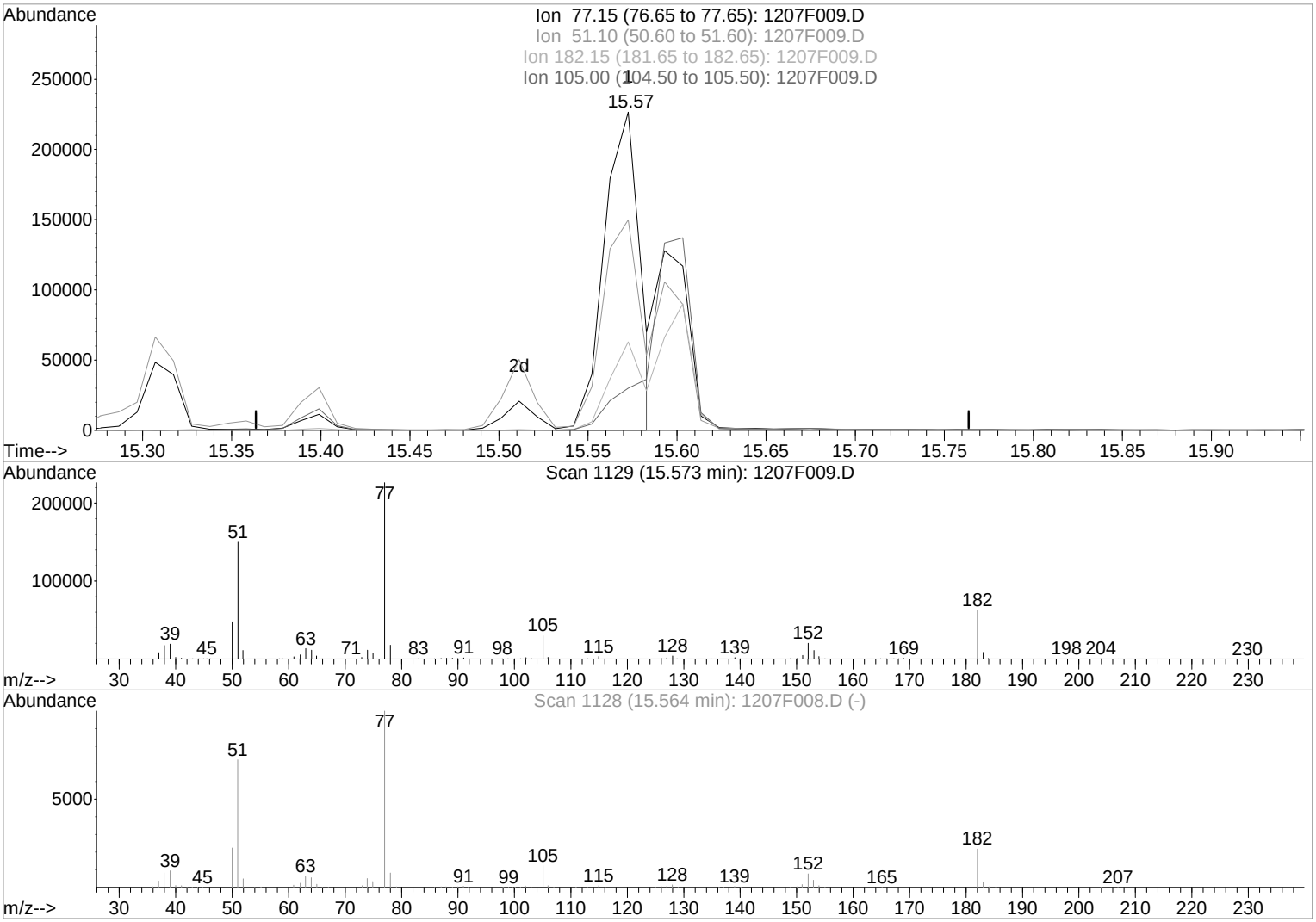
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:19 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F009.D

(59) Azobenzene (T)

15.57min 131.91ug/ml m

response 317678

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	66.12
182.15	21.70	27.80
105.00	12.30	13.22

Manual Integration:

After

IC-Overintegrated

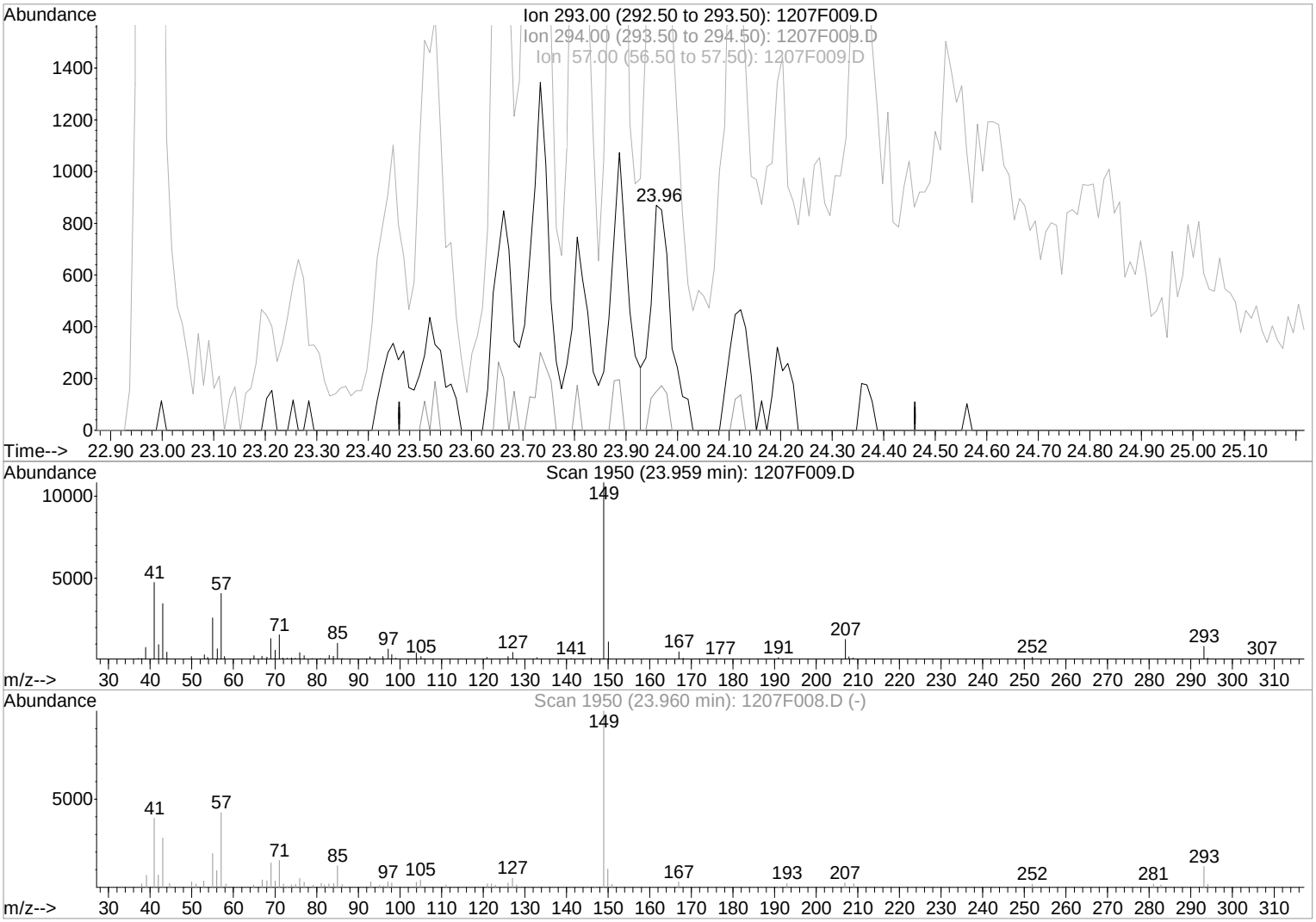
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:19 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F009.D

(87) Diisononyl Phthalate (T)

23.96min 9.99ug/ml

response 2438

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	14.77
57.00	33.10	391.10#
0.00	0.00	0.00

Manual Integration:

Before

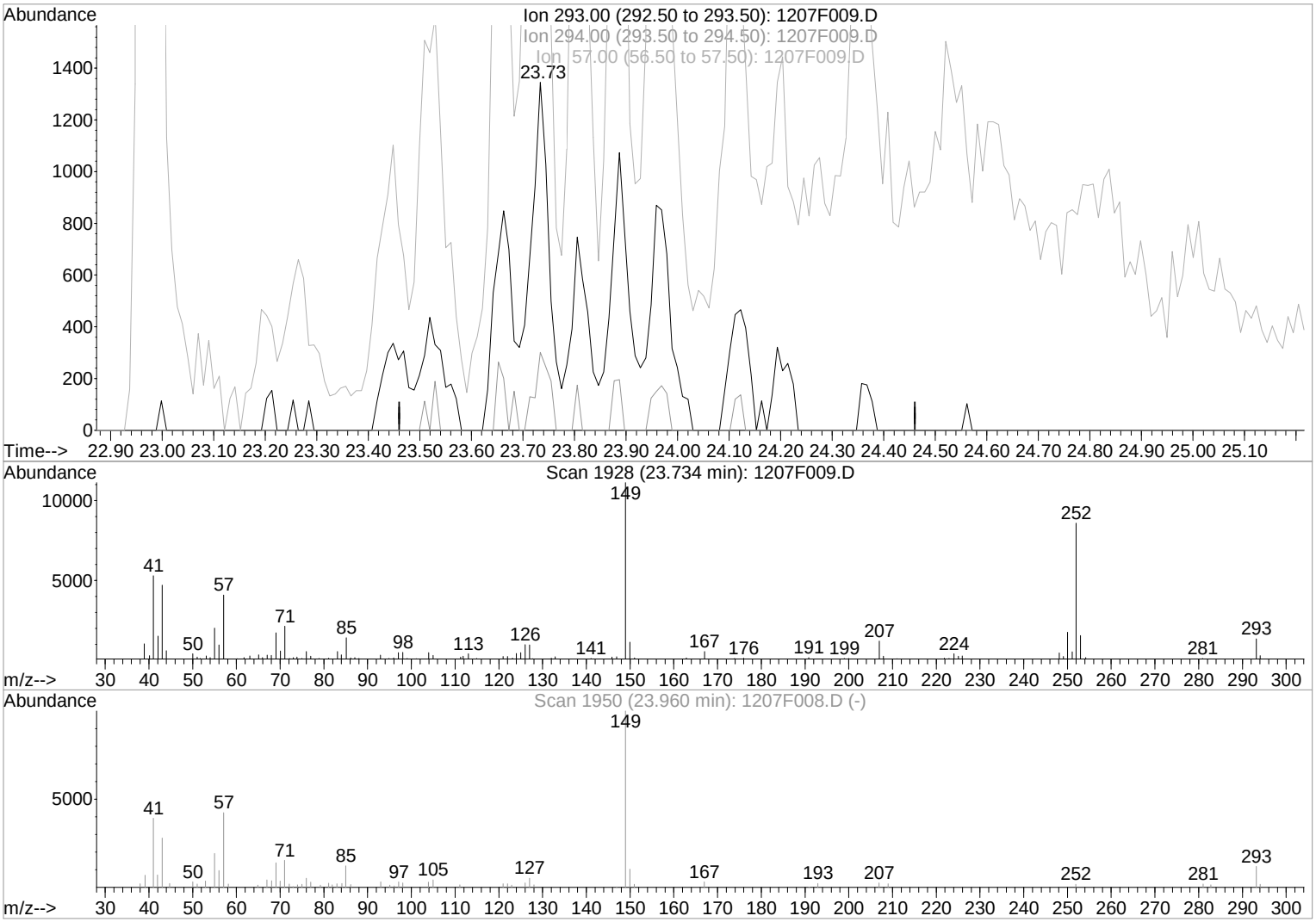
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:19 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F009.D

(87) Diisononyl Phthalate (T)

23.73min 69.15ug/ml m

response 16879

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	2.13
57.00	33.10	56.49
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

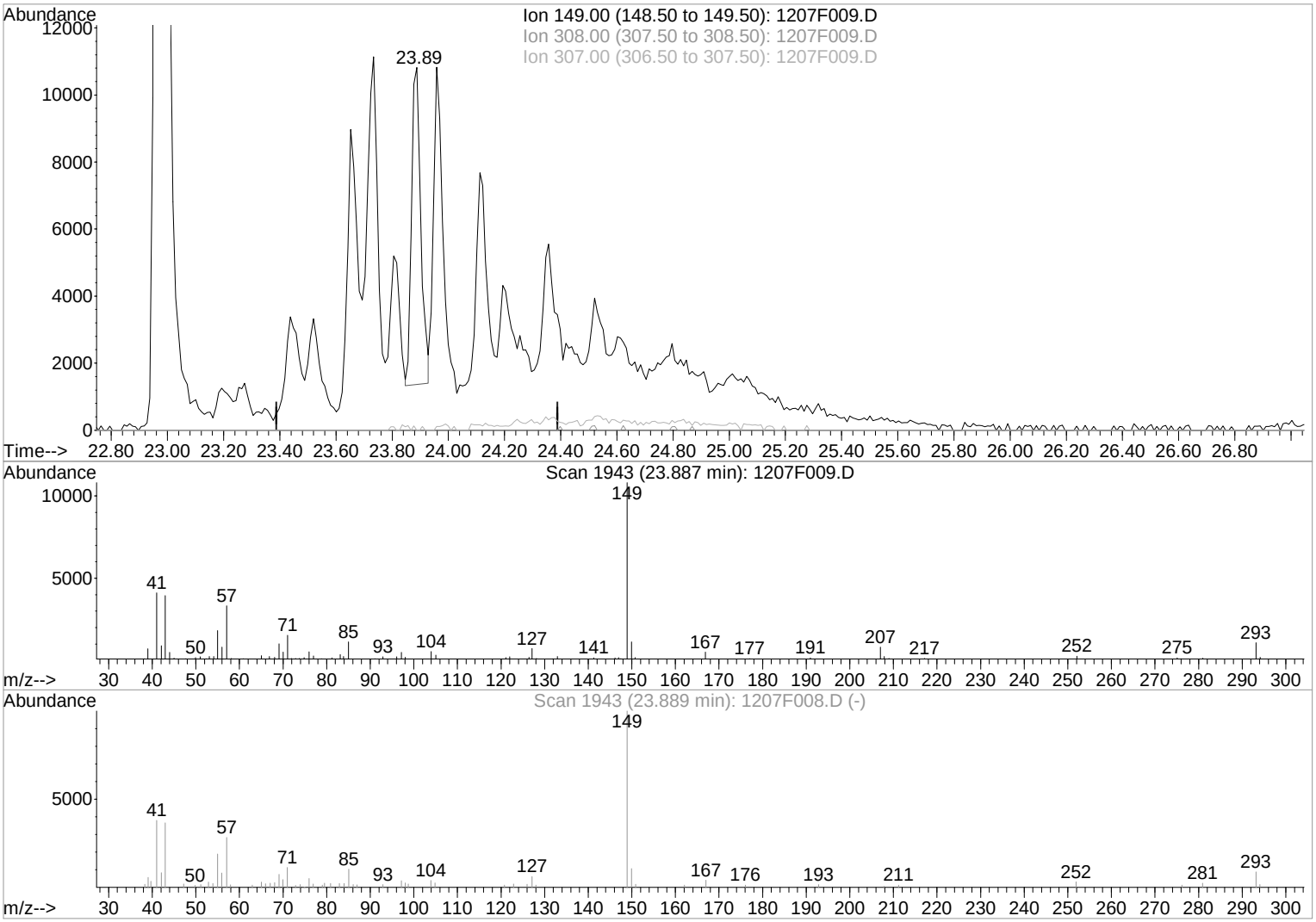
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:19 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F009.D

(88) Diisodecyl Phthalate (T)

23.89min 5.91ug/ml

response 21712

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

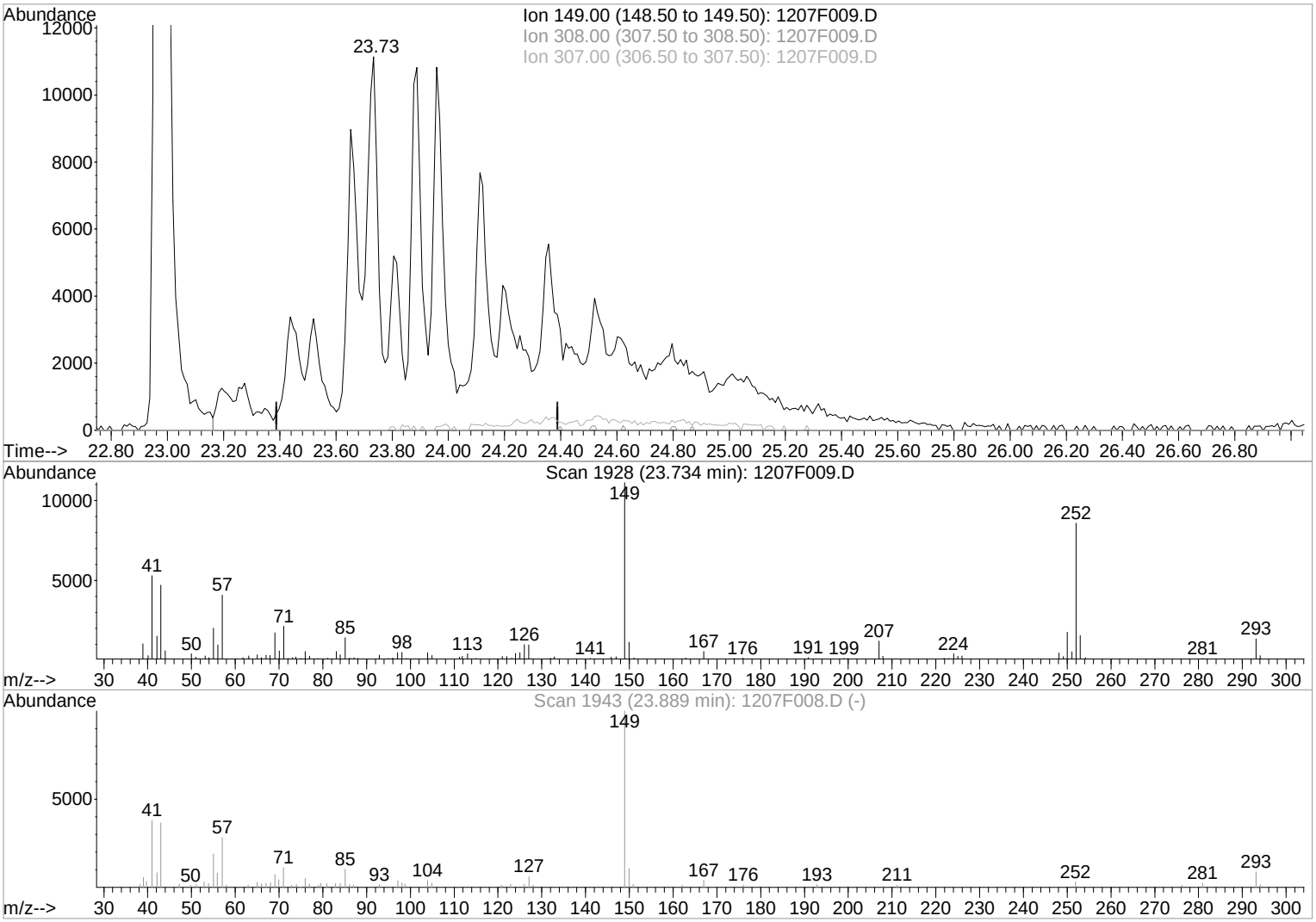
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F009.D Vial: 9
Acq On : 7 Dec 2018 8:38 pm Operator: CConover
Sample : 8270/P ICAL @ 100ppm | SVM59-92J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:20 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F009.D

(88) Diisodecyl Phthalate (T)

23.73min 91.57ug/ml m

response 336244

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

12/07/18

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:32 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	48165	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	167758	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.39	164	81083	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	116321	40.00	ug/ml	0.00
73) Chrysene-d12	21.28	240	117765	40.00	ug/ml	0.00
83) Perylene-d12	24.52	264	129376	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.19	112	157340	125.04	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 83.36%			
8) Phenol-d6	8.88	99	192468	125.86	ug/ml	0.02
Spiked Amount 150.000	Range 10 - 94		Recovery = 83.91%			
20) Nitrobenzene-d5	10.36	82	200083	135.28	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 135.28%#			
40) 2-Fluorobiphenyl	13.32	172	389776	135.52	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 135.52%#			
62) 2,4,6-Tribromophenol	15.68	330	42751	89.86	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 59.91%			
76) Terphenyl-d14	19.43	244	345501	140.64	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 140.64%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.39	42	213585	176.40	ug/ml	95
3) Pyridine	4.41	79	153855	142.75	ug/ml	98
5) Ethylene Glycol Butyl Ethe	7.74	57	184898	161.83	ug/ml	99
6) Aniline	8.89	93	252949	140.33	ug/ml	89
7) Bis(2-chloroethyl) Ether	9.05	93	159896	140.52	ug/ml	98
9) Phenol	8.90	94	224950	142.73	ug/ml	82
10) 2-Chlorophenol	9.07	128	188625	122.09	ug/ml	96
11) 1,3-Dichlorobenzene	9.32	146	227819	123.74	ug/ml	99
12) 1,4-Dichlorobenzene	9.45	146	235455	125.23	ug/ml	99
13) 1,2-Dichlorobenzene	9.70	146	230625	128.78	ug/ml	95
14) Benzyl Alcohol	9.71	108	119612	132.71	ug/ml	98
15) 2,2'-oxybis(2-chloropropan	9.93	45	249295	165.01	ug/ml	98
16) 2-Methylphenol	9.90	107	131084	113.43	ug/ml	98
17) Hexachloroethane	10.25	117	104904	137.54	ug/ml	98
18) N-Nitrosodi-n-propylamine	10.16	70	132524	145.41	ug/ml	99
19) 4-Methylphenol	10.17	107	203485	124.05	ug/ml	97
21) Nitrobenzene	10.39	77	200350	141.41	ug/ml	93
23) Isophorone	10.81	82	311787	135.62	ug/ml	98
24) 2-Nitrophenol	10.92	139	106415	129.19	ug/ml	94
25) 2,4-Dimethylphenol	11.03	122	145208	131.52	ug/ml	100
26) Bis(2-chloroethoxy)methane	11.19	93	188213	148.71	ug/ml	98
27) 2,4-Dichlorophenol	11.31	162	171914	131.95	ug/ml	98
28) Benzoic Acid	11.28	122	87139m	139.74	ug/ml	
29) 1,2,4-Trichlorobenzene	11.44	180	195895	130.33	ug/ml	99
30) Naphthalene	11.56	128	537078	130.91	ug/ml	100
31) n-Dodecane	11.59	57	252218	191.82	ug/ml	99
32) 4-Chloroaniline	11.68	127	237644	129.51	ug/ml	95
33) Hexachlorobutadiene	11.77	225	147848	143.66	ug/ml	98
34) 4-Chloro-3-methylphenol	12.49	107	137402	124.56	ug/ml	96
35) 2-Methylnaphthalene	12.69	142	356395	122.49	ug/ml	99
37) Hexachlorocyclopentadiene	12.95	237	135917	257.99	ug/ml	98
38) 2,4,6-Trichlorophenol	13.16	196	112257	139.40	ug/ml	99
39) 2,4,5-Trichlorophenol	13.21	196	109273	133.69	ug/ml	98
41) 2-Chloronaphthalene	13.49	162	333502	138.81	ug/ml	95
42) 2-Nitroaniline	13.68	65	109195	166.55	ug/ml	93
43) Acenaphthylene	14.15	152	434555	127.29	ug/ml	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:32 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
44) Dimethyl Phthalate	14.02	163	343092	133.00 ug/ml	98
45) 2,6-Dinitrotoluene	14.10	165	75192	124.95 ug/ml	93
46) Acenaphthene	14.44	154	286501	132.36 ug/ml	99
47) 3-Nitroaniline	14.36	138	74339	122.32 ug/ml	90
48) 2,4-Dinitrophenol	14.53	184	41879	144.35 ug/ml	83
49) Dibenzofuran	14.73	168	434889	127.94 ug/ml	99
50) 4-Nitrophenol	14.64	109	61677	228.30 ug/ml	99
51) 2,4-Dinitrotoluene	14.75	165	103775	138.57 ug/ml	82
52) 2,3,4,6-Tetrachlorophenol	14.93	232	82318	147.74 ug/ml	96
53) Fluorene	15.29	166	316046	125.31 ug/ml	99
54) 4-Chlorophenyl Phenyl Ethe	15.32	204	174971	137.20 ug/ml	87
55) Diethyl Phthalate	15.17	149	313133	127.71 ug/ml	99
56) 4-Nitroaniline	15.37	138	78733	143.26 ug/ml	94
57) 2-Methyl-4,6-dinitrophenol	15.40	198	59128	140.95 ug/ml	82
58) Diphenylamine	15.51	169	204171	123.85 ug/ml	99
59) Azobenzene	15.57	77	355834m	162.61 ug/ml	
60) Benzophenone	15.60	105	273623	143.89 ug/ml	94
63) 4-Bromophenyl Phenyl Ether	16.10	248	92268	115.40 ug/ml	99
64) Hexachlorobenzene	16.17	284	86063	98.59 ug/ml	83
65) 2,6-Diisopropylnaphthalene	16.30	197	259798	125.76 ug/ml	99
66) Pentachlorophenol	16.49	266	61398	176.13 ug/ml	98
67) Diazinon	16.67	137	57367	120.31 ug/ml	99
68) Phenanthrene	16.84	178	404879	126.13 ug/ml	99
69) Anthracene	16.93	178	425020	129.15 ug/ml	99
70) Carbazole	17.21	167	424774	146.49 ug/ml	99
71) Di-n-butyl Phthalate	17.84	149	523544	148.37 ug/ml	99
72) Fluoranthene	18.77	202	460426	143.45 ug/ml	98
74) Benzidine	19.04	184	124612	78.26 ug/ml	98
75) Pyrene	19.14	202	477468	131.04 ug/ml	98
77) Butyl Benzyl Phthalate	20.30	149	254769	145.35 ug/ml	92
78) Diethylene Glycol Butyl Et	21.18	105	328058	156.69 ug/ml	99
79) 3,3'-Dichlorobenzidine	21.27	252	179272	120.42 ug/ml	97
80) Benz(a)anthracene	21.26	228	452481	129.79 ug/ml	100
81) Chrysene	21.34	228	410233	123.12 ug/ml	99
82) Bis(2-ethylhexyl) Phthalat	21.48	149	341121	141.41 ug/ml	100
84) Di-n-octyl Phthalate	22.98	149	536667	117.47 ug/ml	100
85) Benzo(b)fluoranthene	23.64	252	458744	123.53 ug/ml	97
86) Benzo(k)fluoranthene	23.71	252	460107	124.82 ug/ml	99
87) Diisononyl Phthalate	23.73	293	22816m	88.63 ug/ml	
88) Diisodecyl Phthalate	23.72	149	441447m	114.00 ug/ml	
89) Benzo(a)pyrene	24.40	252	440837	128.70 ug/ml	99
90) Indeno(1,2,3-cd)pyrene	27.01	276	446497	134.79 ug/ml	98
91) Dibenz(a,h)anthracene	27.09	278	445532m	133.11 ug/ml	
92) Benzo(g,h,i)perylene	27.60	276	454281	131.68 ug/ml	99

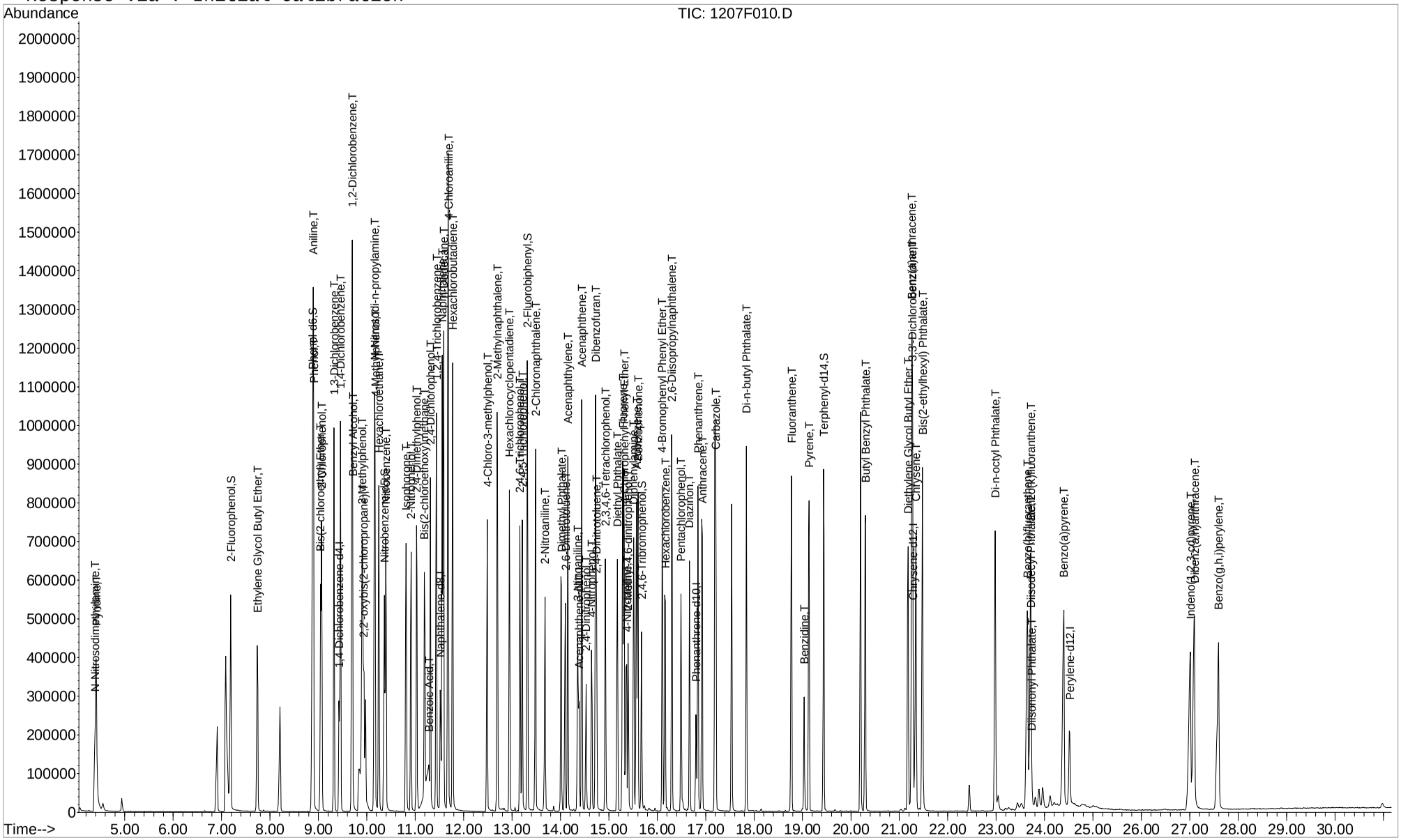
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:22 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

12/08/18 12/13/18 1st 2nd

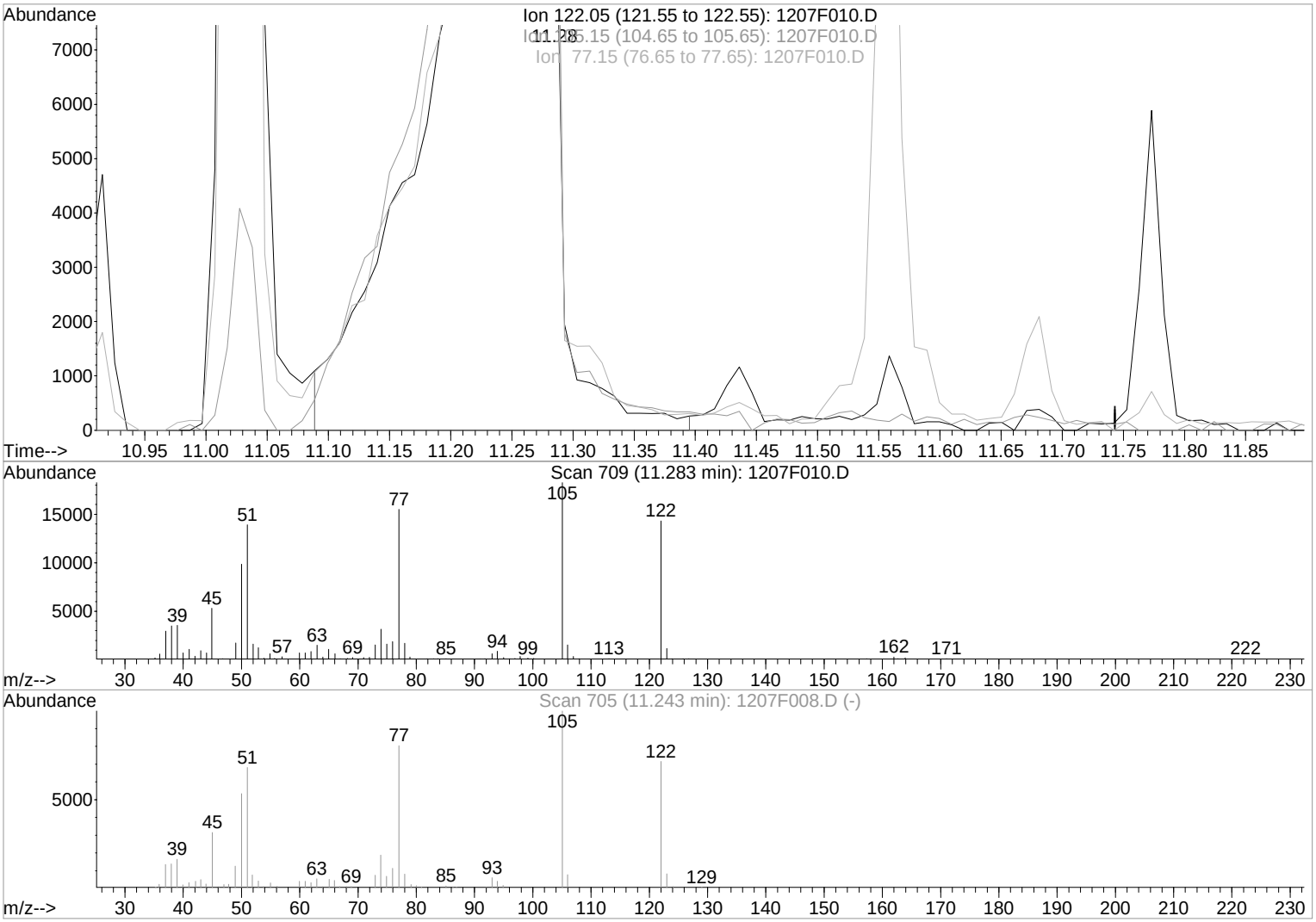


Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:54 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F010.D

(28) Benzoic Acid (T)

11.28min 138.92ug/ml

response 86629

Ion	Exp%	Act%
122.05	100	100
105.15	132.80	130.71
77.15	110.60	108.57
0.00	0.00	0.00

Manual Integration:

Before

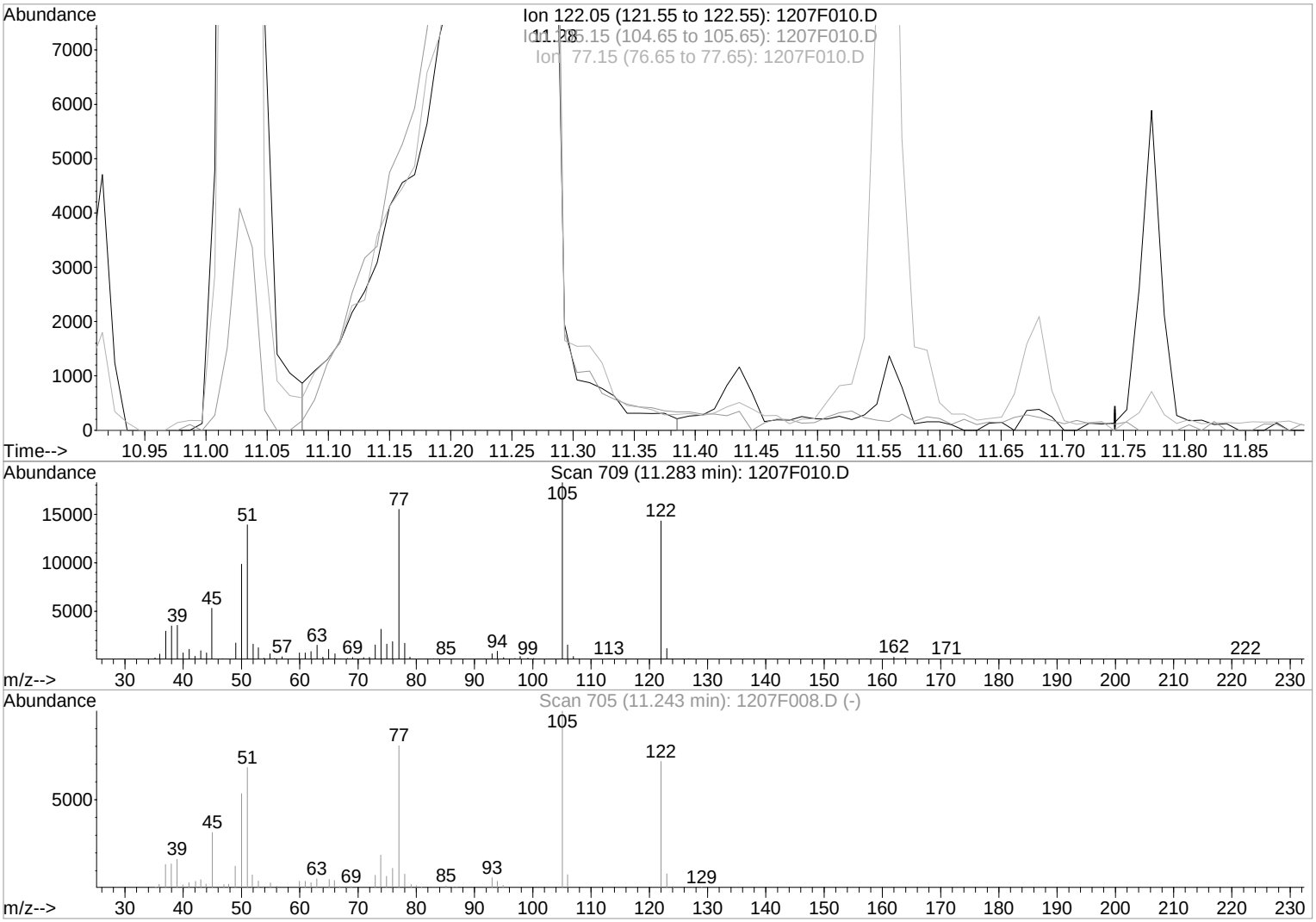
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:20 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F010.D

(28) Benzoic Acid (T)

11.28min 139.74ug/ml m

response 87139

Ion	Exp%	Act%
122.05	100	100
105.15	132.80	127.68
77.15	110.60	108.26
0.00	0.00	0.00

Manual Integration:

After

BLC

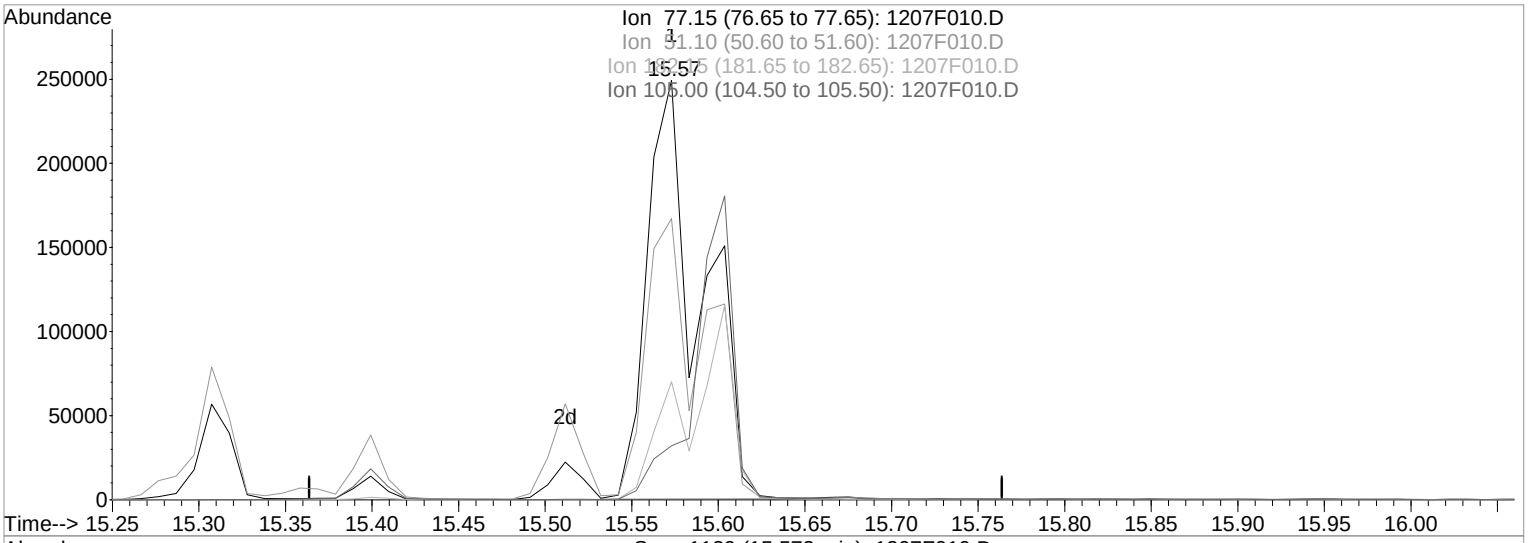
12/07/18

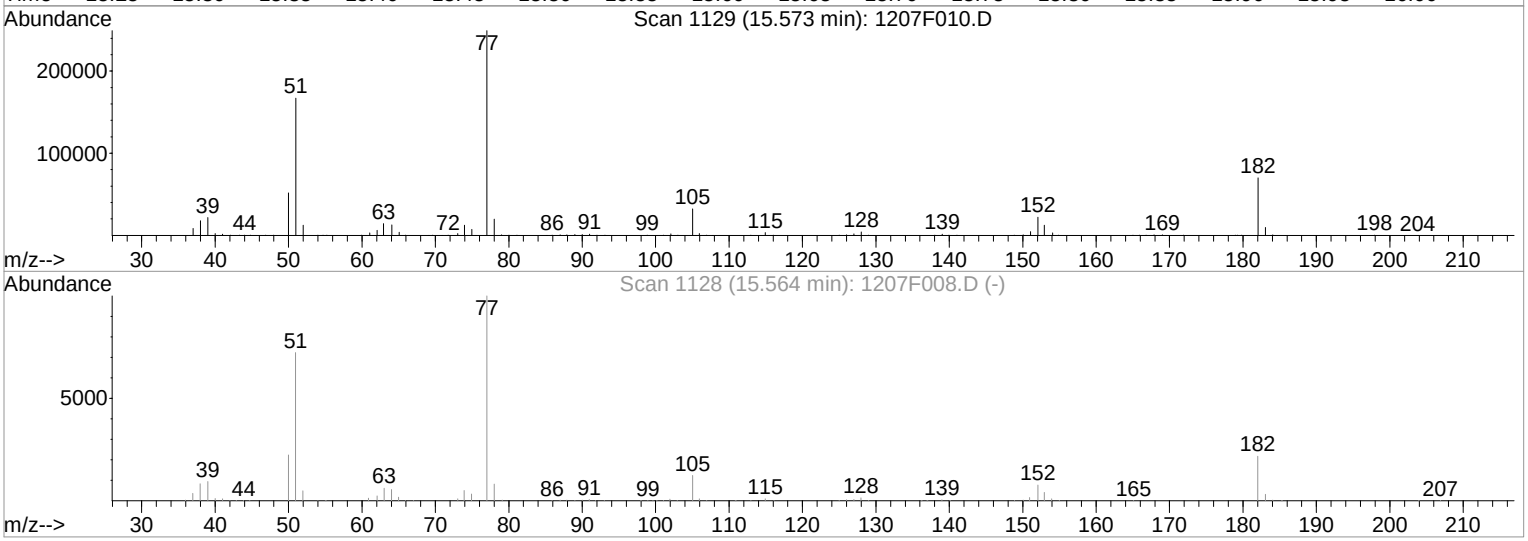
Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:20 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration





TIC: 1207F010.D

(59) Azobenzene (T)

15.57min 246.12ug/ml

response 538569

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	66.61
182.15	21.70	28.09
105.00	12.30	12.78

Manual Integration:

Before

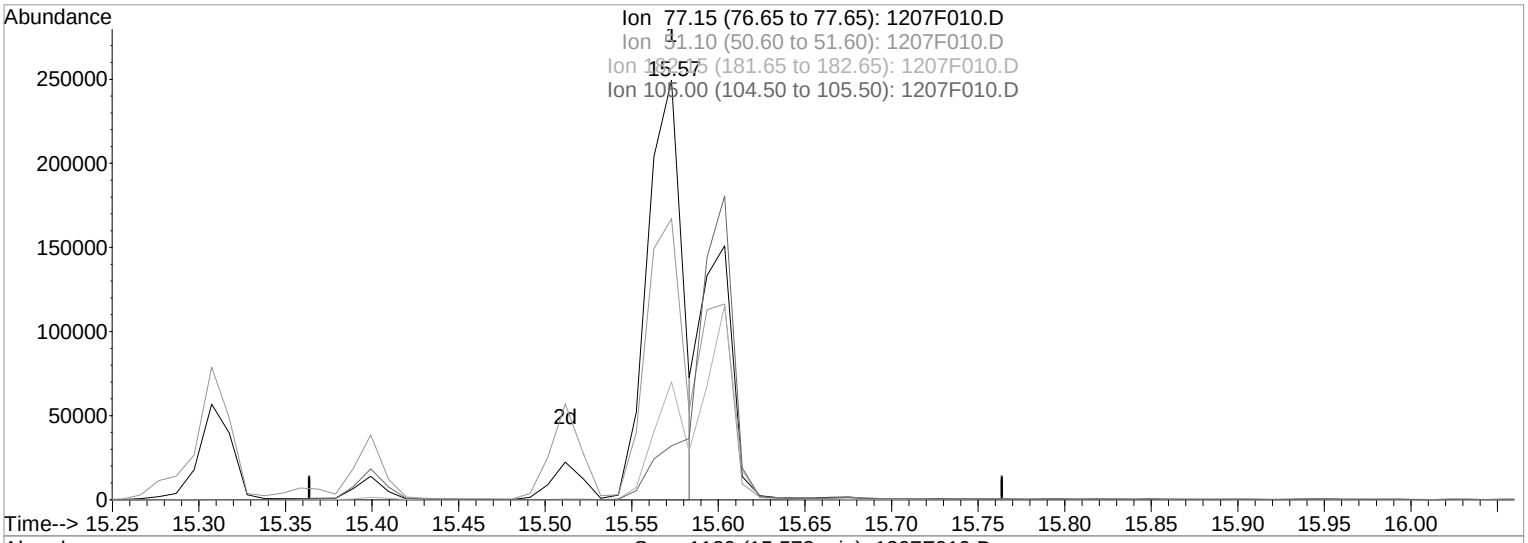
12/07/18

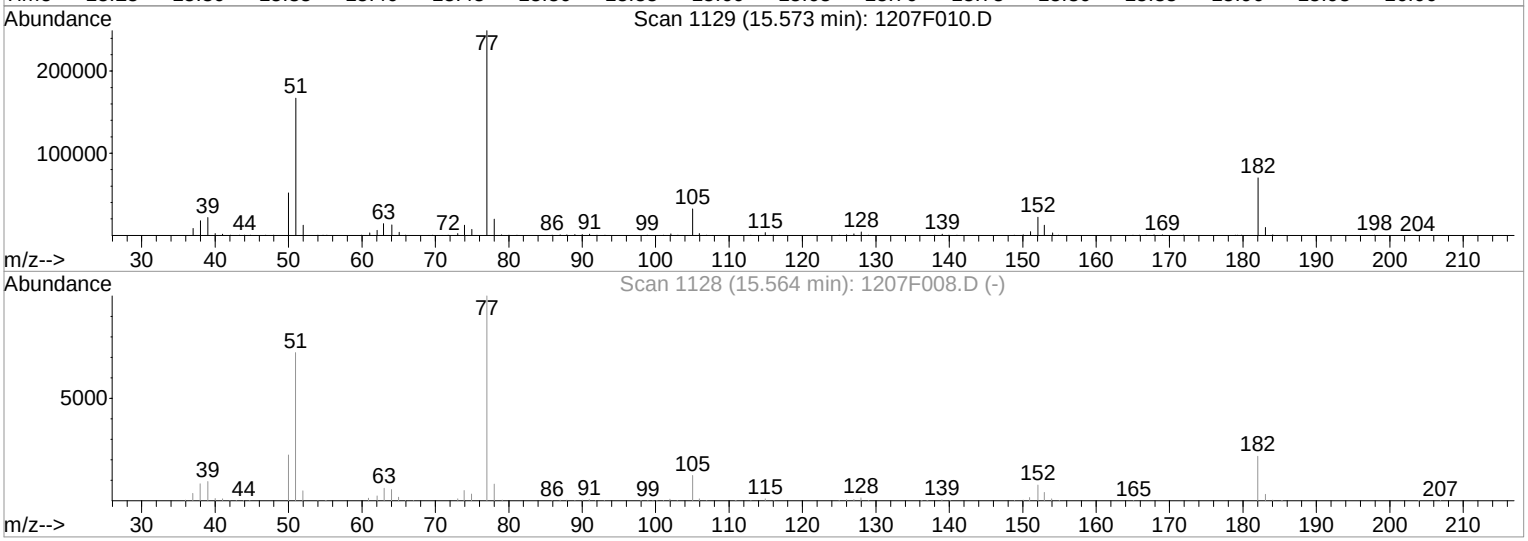
Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:21 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration





TIC: 1207F010.D

(59) Azobenzene (T)

15.57min 162.61ug/ml m

response 355834

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	67.03
182.15	21.70	28.10
105.00	12.30	12.90

Manual Integration:

After

IC-Overintegrated

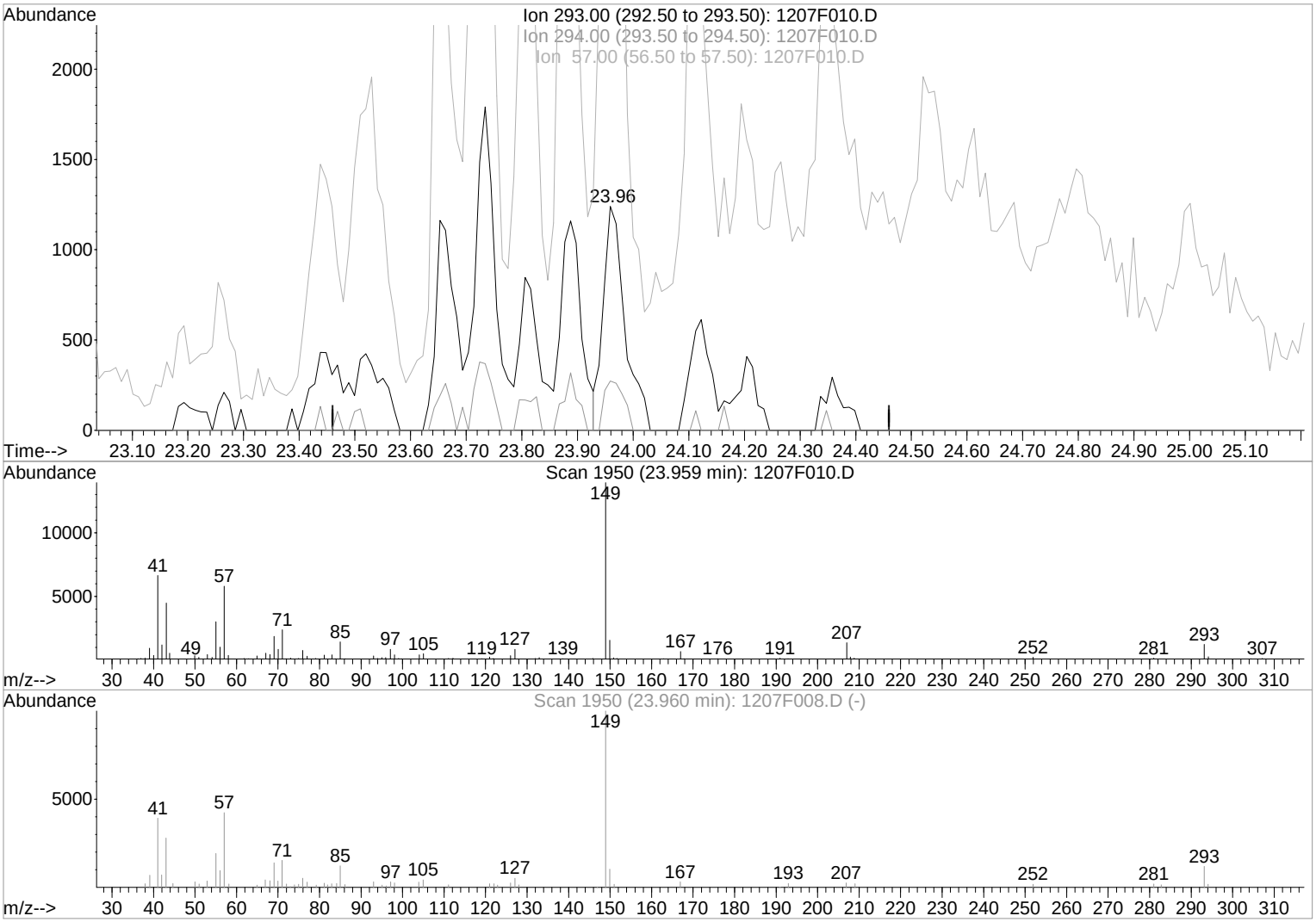
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:21 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F010.D

(87) Diisononyl Phthalate (T)

23.96min 13.00ug/ml

response 3347

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	20.02
57.00	33.10	363.10#
0.00	0.00	0.00

Manual Integration:

Before

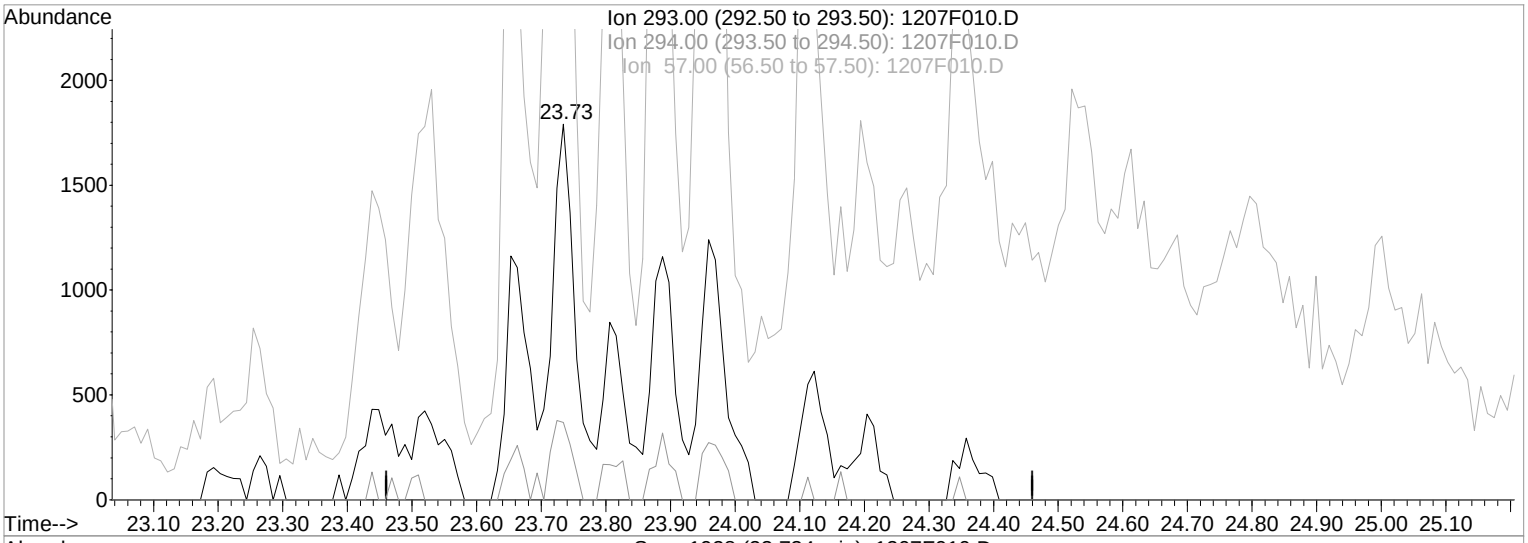
12/07/18

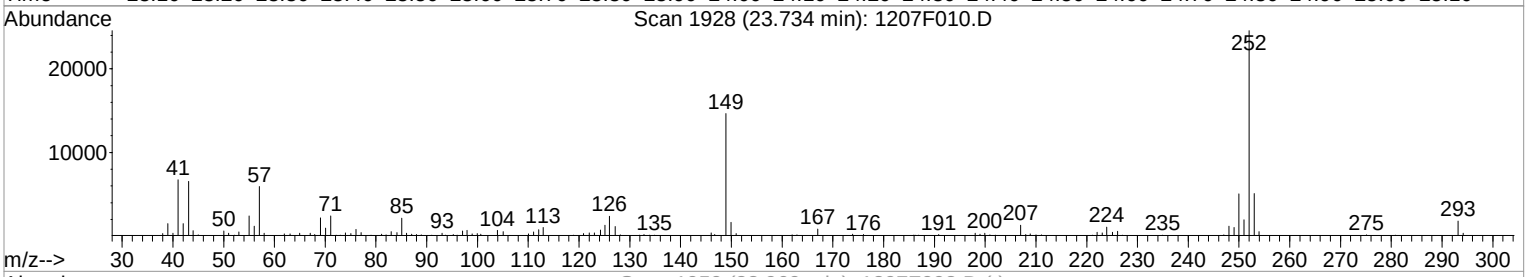
Quantitation Report (Qedit)

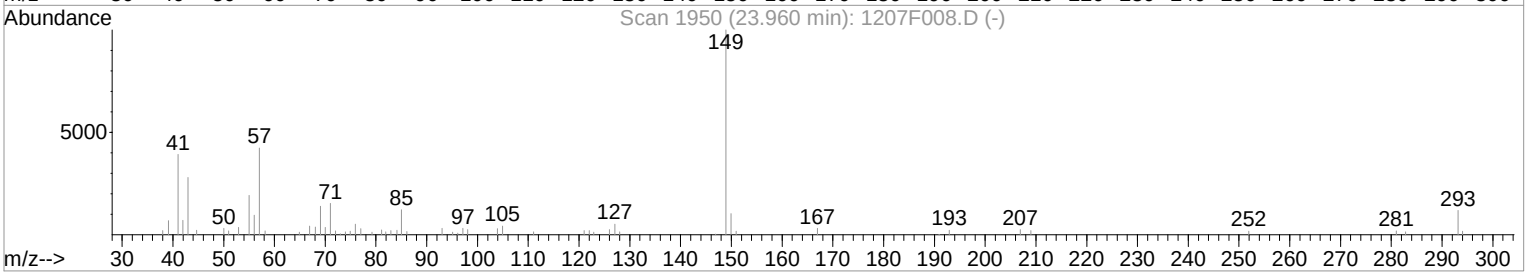
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:21 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F010.D

(87) Diisononyl Phthalate (T)

23.73min 88.63ug/ml m

response 22816

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	2.94
57.00	33.10	53.27
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

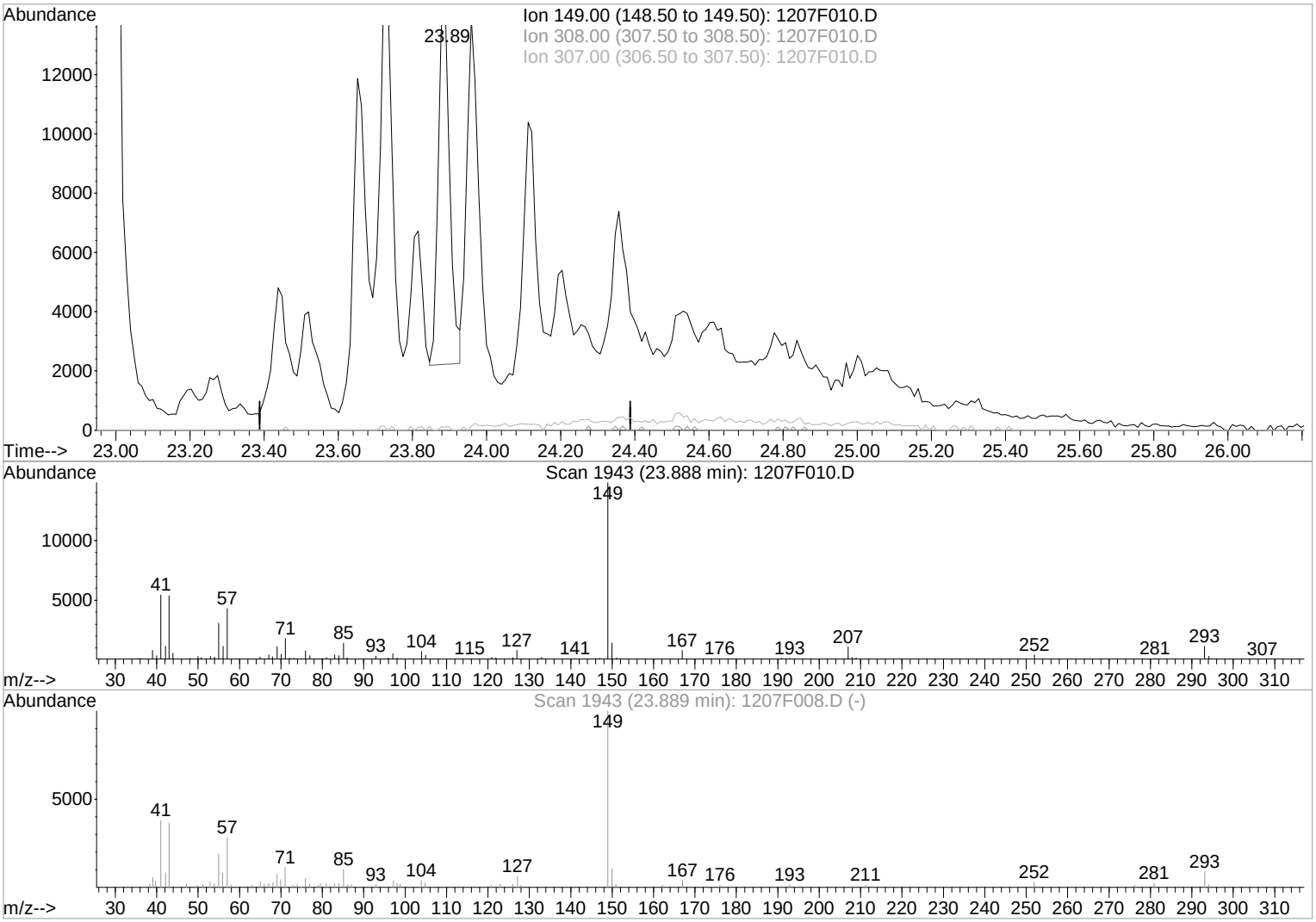
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:21 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F010.D

(88) Diisodecyl Phthalate (T)

23.89min 6.85ug/ml

response 26537

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.80
0.00	0.00	0.00

Manual Integration:

Before

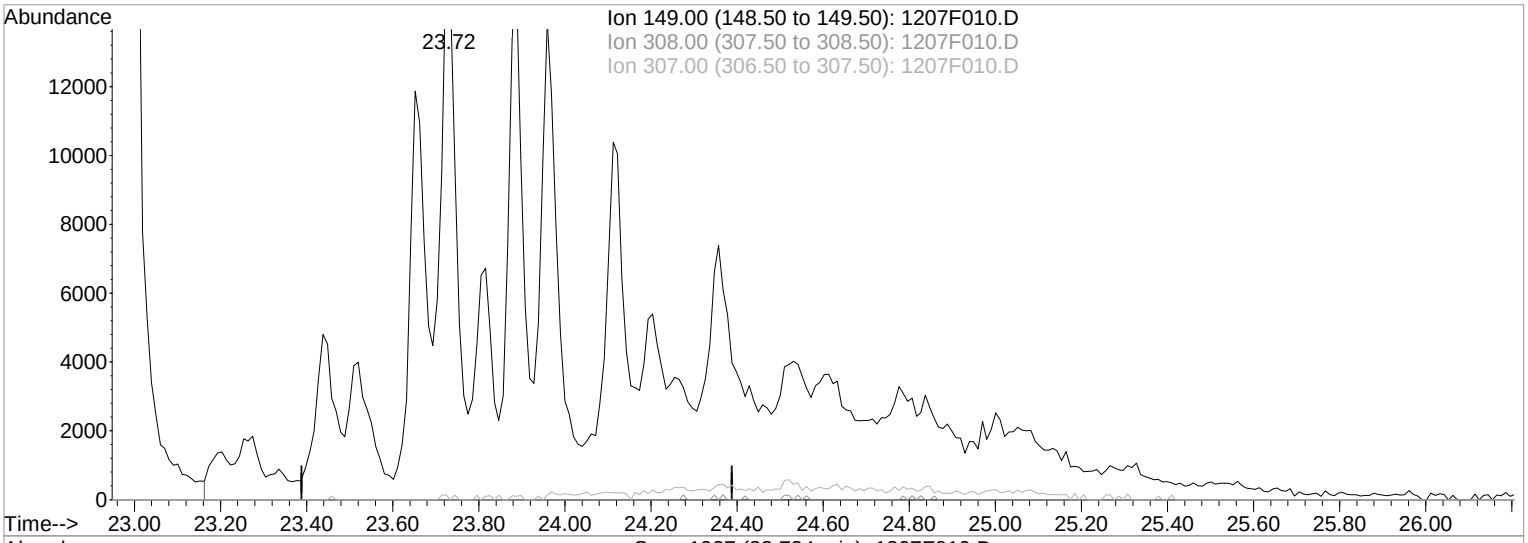
12/07/18

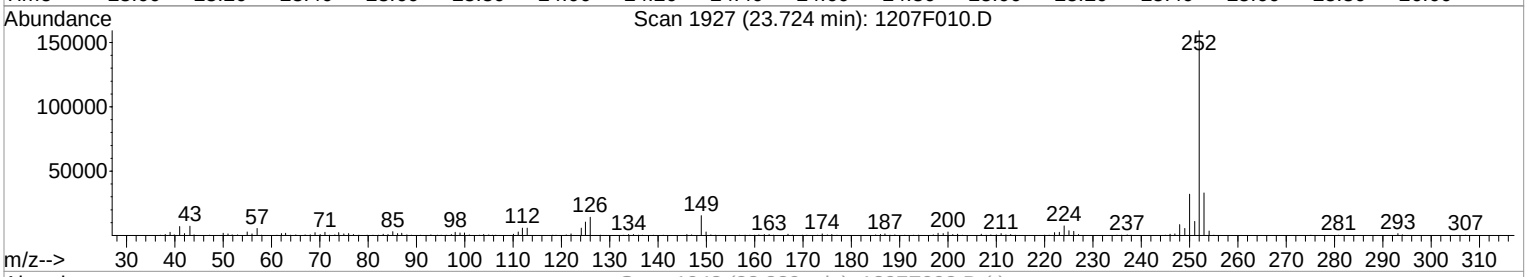
Quantitation Report (Qedit)

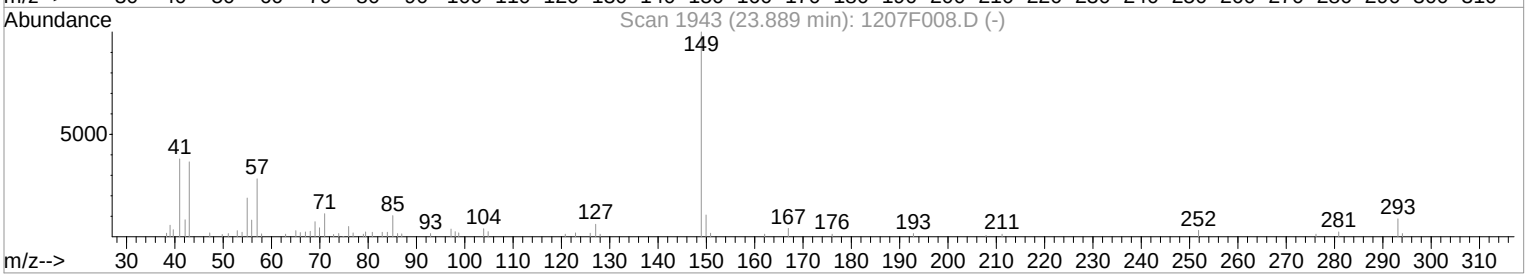
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:22 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F010.D

(88) Diisodecyl Phthalate (T)

23.72min 114.00ug/ml m

response 441447

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.05
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

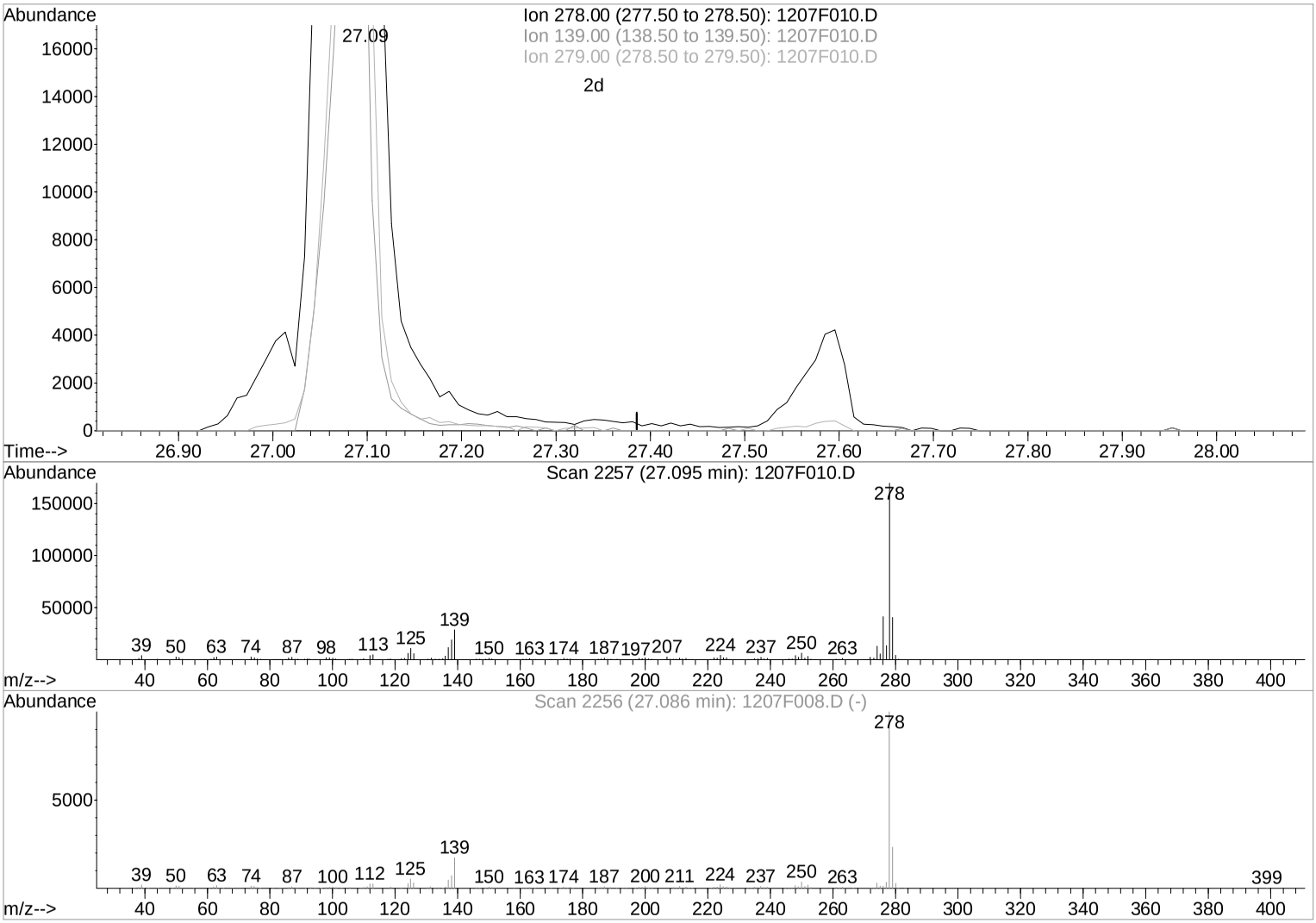
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:22 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F010.D

(91) Dibenz(a,h)anthracene (T)

27.09min 136.72ug/ml

response 457615

Ion	Exp%	Act%
278.00	100	100
139.00	17.30	16.78
279.00	23.20	23.85
0.00	0.00	0.00

Manual Integration:

Before

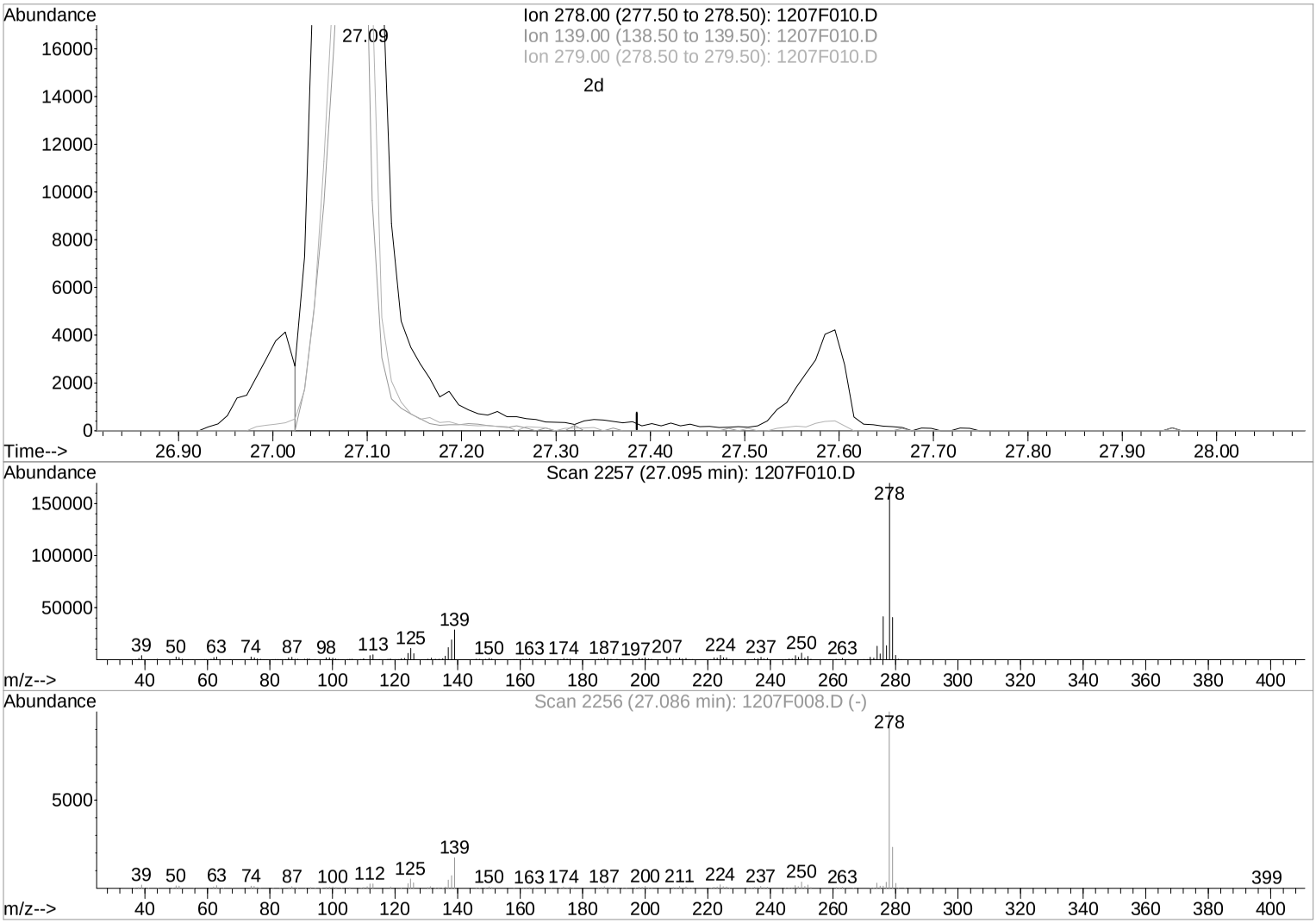
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F010.D Vial: 10
Acq On : 7 Dec 2018 9:19 pm Operator: CConover
Sample : 8270/P ICAL @ 120ppm | SVM59-92K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:22 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F010.D

(91) Dibenz(a,h)anthracene (T)

27.09min 133.11ug/ml m

response 445532

Ion	Exp%	Act%
278.00	100	100
139.00	17.30	16.83
279.00	23.20	23.86
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

12/07/18

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:33 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.43	152	50578	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	185212	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.38	164	88556	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	121612	40.00	ug/ml	0.00
73) Chrysene-d12	21.29	240	122826	40.00	ug/ml	0.00
83) Perylene-d12	24.52	264	135060	40.00	ug/ml	0.01
System Monitoring Compounds						
4) 2-Fluorophenol	7.20	112	230770	174.64	ug/ml	0.01
Spiked Amount 150.000	Range 21 - 100		Recovery = 116.43%#			
8) Phenol-d6	8.89	99	295426	183.97	ug/ml	0.02
Spiked Amount 150.000	Range 10 - 94		Recovery = 122.65%#			
20) Nitrobenzene-d5	10.37	82	297693	191.67	ug/ml	0.01
Spiked Amount 100.000	Range 35 - 114		Recovery = 191.67%#			
40) 2-Fluorobiphenyl	13.32	172	594194	189.16	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 189.16%#			
62) 2,4,6-Tribromophenol	15.68	330	64369	129.42	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 86.28%			
76) Terphenyl-d14	19.44	244	517319	201.91	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 201.91%#			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.40	42	309675	243.56	ug/ml	95
3) Pyridine	4.41	79	224043	197.95	ug/ml	98
5) Ethylene Glycol Butyl Ethe	7.75	57	265356	221.18	ug/ml	99
6) Aniline	8.90	93	373007	197.07	ug/ml	74
7) Bis(2-chloroethyl) Ether	9.05	93	236787	198.16	ug/ml	99
9) Phenol	8.92	94	335093	202.48	ug/ml#	67
10) 2-Chlorophenol	9.07	128	282140	173.91	ug/ml	94
11) 1,3-Dichlorobenzene	9.33	146	328869	170.11	ug/ml	99
12) 1,4-Dichlorobenzene	9.46	146	334301	169.32	ug/ml	98
13) 1,2-Dichlorobenzene	9.70	146	329151	175.03	ug/ml	94
14) Benzyl Alcohol	9.71	108	175814	185.76	ug/ml	96
15) 2,2'-oxybis(2-chloropropan	9.94	45	372020	234.49	ug/ml	98
16) 2-Methylphenol	9.91	107	198630	163.68	ug/ml	98
17) Hexachloroethane	10.24	117	149023	186.06	ug/ml	84
18) N-Nitrosodi-n-propylamine	10.17	70	198652	207.57	ug/ml	96
19) 4-Methylphenol	10.18	107	317183	184.14	ug/ml	98
21) Nitrobenzene	10.41	77	302032	203.01	ug/ml	98
23) Isophorone	10.82	82	470127	185.22	ug/ml	100
24) 2-Nitrophenol	10.92	139	157494	173.19	ug/ml	89
25) 2,4-Dimethylphenol	11.04	122	210495	172.69	ug/ml	95
26) Bis(2-chloroethoxy)methane	11.19	93	278517	199.32	ug/ml	98
27) 2,4-Dichlorophenol	11.33	162	261391	181.72	ug/ml	95
28) Benzoic Acid	11.33	122	136981m	198.97	ug/ml	
29) 1,2,4-Trichlorobenzene	11.44	180	293640	176.95	ug/ml	98
30) Naphthalene	11.56	128	828943	183.01	ug/ml	99
31) n-Dodecane	11.59	57	395308	272.31	ug/ml	99
32) 4-Chloroaniline	11.69	127	361016	178.21	ug/ml	91
33) Hexachlorobutadiene	11.78	225	222458	195.78	ug/ml	98
34) 4-Chloro-3-methylphenol	12.49	107	201317	165.31	ug/ml	98
35) 2-Methylnaphthalene	12.70	142	555301	172.87	ug/ml	100
37) Hexachlorocyclopentadiene	12.95	237	209540	364.17	ug/ml	99
38) 2,4,6-Trichlorophenol	13.17	196	169346	192.54	ug/ml	99
39) 2,4,5-Trichlorophenol	13.22	196	165019	184.86	ug/ml	98
41) 2-Chloronaphthalene	13.49	162	507740	193.50	ug/ml	95
42) 2-Nitroaniline	13.69	65	157602	220.10	ug/ml	96
43) Acenaphthylene	14.16	152	655214	175.74	ug/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 22:54:33 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
44)	Dimethyl Phthalate	14.02	163	477868	169.62	ug/ml	98
45)	2,6-Dinitrotoluene	14.11	165	108142	164.54	ug/ml	88
46)	Acenaphthene	14.44	154	425542	180.01	ug/ml	99
47)	3-Nitroaniline	14.37	138	110293	166.16	ug/ml	99
48)	2,4-Dinitrophenol	14.54	184	66138	208.73	ug/ml	95
49)	Dibenzofuran	14.73	168	630548	169.85	ug/ml	98
50)	4-Nitrophenol	14.66	109	84164	285.25	ug/ml	96
51)	2,4-Dinitrotoluene	14.76	165	145468	177.86	ug/ml	98
52)	2,3,4,6-Tetrachlorophenol	14.93	232	120802	198.51	ug/ml	95
53)	Fluorene	15.29	166	475775	172.72	ug/ml	99
54)	4-Chlorophenyl Phenyl Ethe	15.31	204	257454	184.84	ug/ml	97
55)	Diethyl Phthalate	15.18	149	442367	165.20	ug/ml	99
56)	4-Nitroaniline	15.38	138	109147	181.84	ug/ml	98
57)	2-Methyl-4,6-dinitrophenol	15.41	198	89879	196.18	ug/ml	81
58)	Diphenylamine	15.52	169	297339	165.14	ug/ml	99
59)	Azobenzene	15.58	77	510739m	213.71	ug/ml	
60)	Benzophenone	15.61	105	393812	189.62	ug/ml	95
63)	4-Bromophenyl Phenyl Ether	16.11	248	131020	156.74	ug/ml	98
64)	Hexachlorobenzene	16.17	284	125375	137.37	ug/ml	84
65)	2,6-Diisopropylnaphthalene	16.30	197	375858	174.03	ug/ml	99
66)	Pentachlorophenol	16.50	266	89609	245.87	ug/ml	99
67)	Diazinon	16.67	137	73111	146.66	ug/ml	100
68)	Phenanthrene	16.84	178	592612	176.58	ug/ml	98
69)	Anthracene	16.94	178	607272	176.51	ug/ml	99
70)	Carbazole	17.21	167	596784	196.86	ug/ml	99
71)	Di-n-butyl Phthalate	17.84	149	767294	207.98	ug/ml	99
72)	Fluoranthene	18.77	202	685142	204.17	ug/ml	98
74)	Benzidine	19.04	184	146468	88.20	ug/ml	98
75)	Pyrene	19.14	202	717350	188.76	ug/ml	99
77)	Butyl Benzyl Phthalate	20.30	149	361969	198.00	ug/ml	99
78)	Diethylene Glycol Butyl Et	21.18	105	475459	217.73	ug/ml	99
79)	3,3'-Dichlorobenzidine	21.28	252	274550	176.81	ug/ml	99
80)	Benz(a)anthracene	21.27	228	648497	178.35	ug/ml	100
81)	Chrysene	21.35	228	598425	172.20	ug/ml	98
82)	Bis(2-ethylhexyl) Phthalat	21.48	149	480755	191.08	ug/ml	99
84)	Di-n-octyl Phthalate	22.98	149	803505	168.48	ug/ml	99
85)	Benzo(b)fluoranthene	23.66	252	738622	190.52	ug/ml	99
86)	Benzo(k)fluoranthene	23.73	252	692369	179.93	ug/ml	99
87)	Diisononyl Phthalate	23.73	293	34246m	127.44	ug/ml	
88)	Diisodecyl Phthalate	23.73	149	669147m	165.53	ug/ml	
89)	Benzo(a)pyrene	24.41	252	671042	187.67	ug/ml	98
90)	Indeno(1,2,3-cd)pyrene	27.03	276	632594	182.94	ug/ml	100
91)	Dibenz(a,h)anthracene	27.11	278	657535	188.18	ug/ml	99
92)	Benzo(g,h,i)perylene	27.61	276	642156	178.31	ug/ml	100

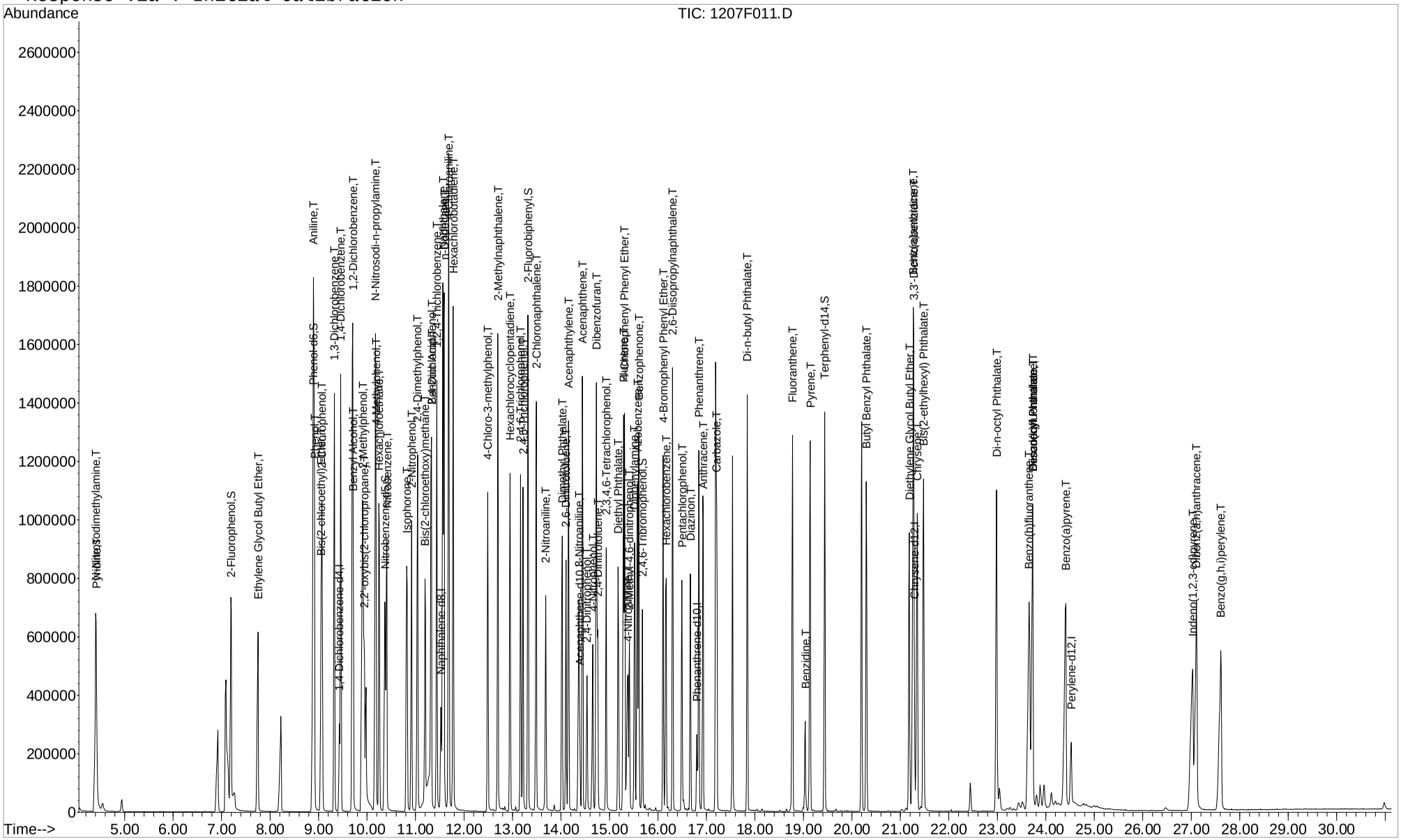
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:24 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

12/08/18
12/13/18
1st
2nd

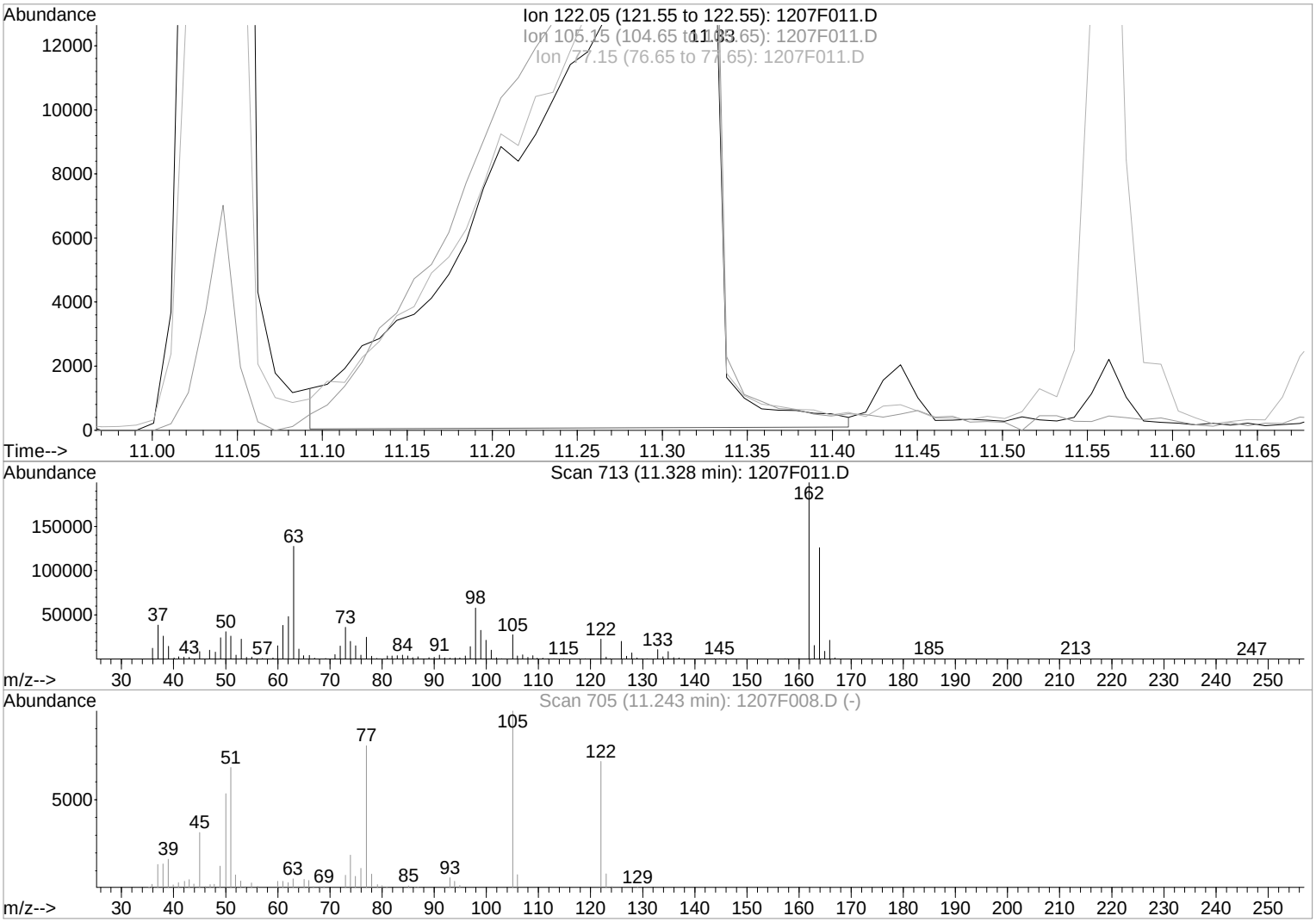


Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 22:54 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F011.D

(28) Benzoic Acid (T)

11.33min 195.89ug/ml

response 134862

Ion	Exp%	Act%
122.05	100	100
105.15	132.80	124.91
77.15	110.60	110.56
0.00	0.00	0.00

Manual Integration:

Before

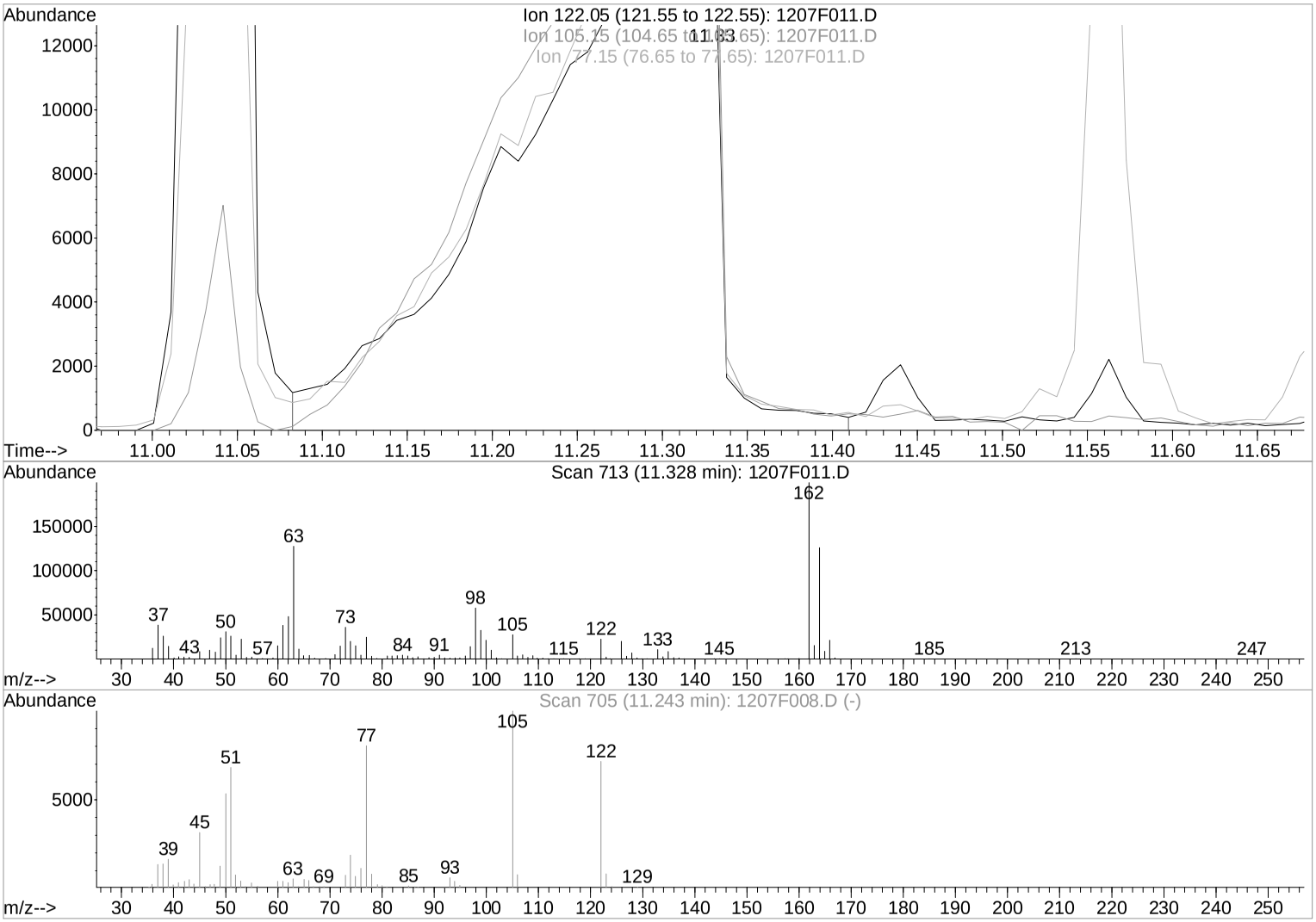
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:23 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F011.D

(28) Benzoic Acid (T)

11.33min 198.97ug/ml m

response 136981

Ion	Exp%	Act%
122.05	100	100
105.15	132.80	122.43
77.15	110.60	109.78
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

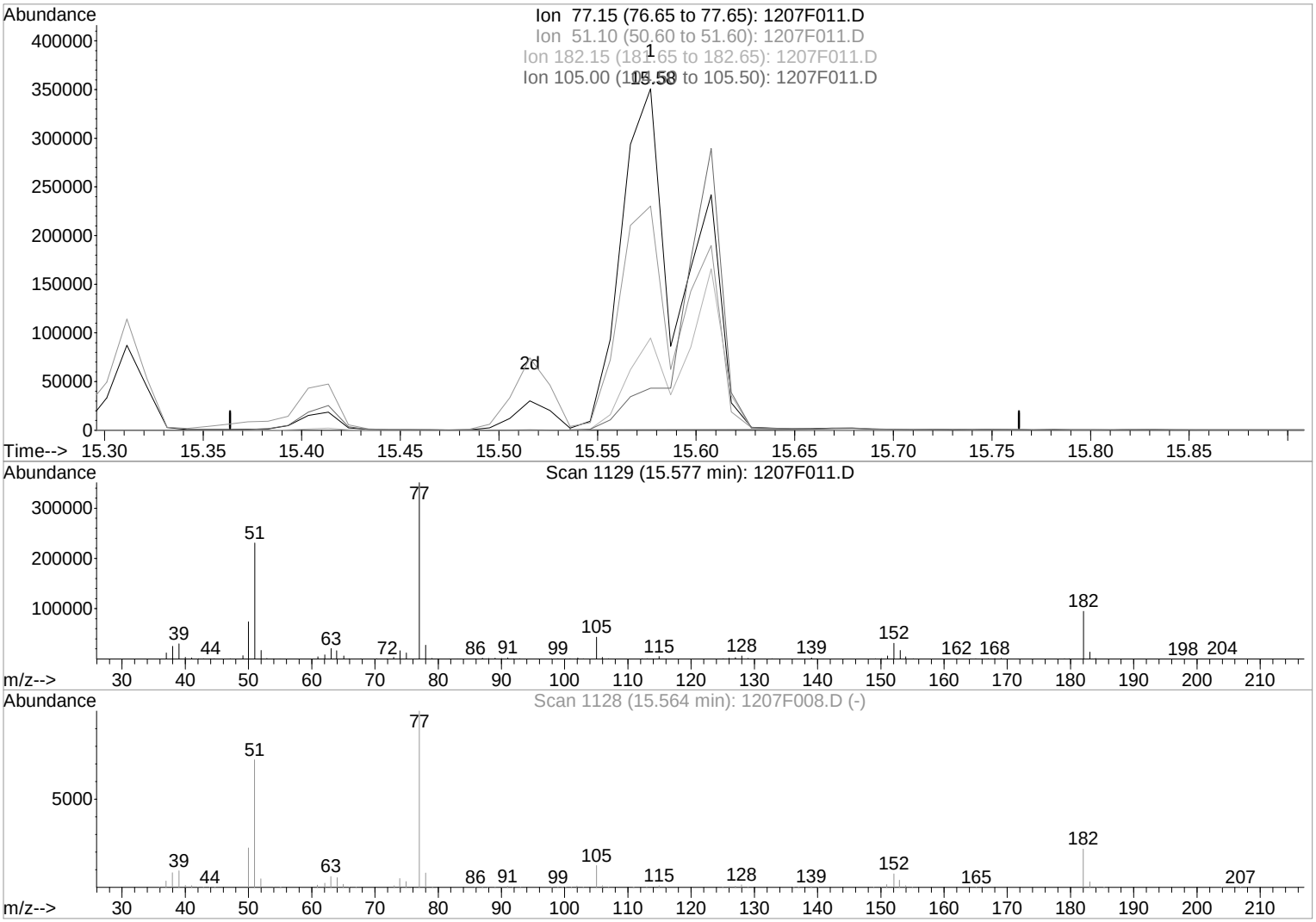
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:23 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F011.D

(59) Azobenzene (T)

15.58min 325.93ug/ml

response 778927

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	65.28
182.15	21.70	27.11
105.00	12.30	12.21

Manual Integration:

Before

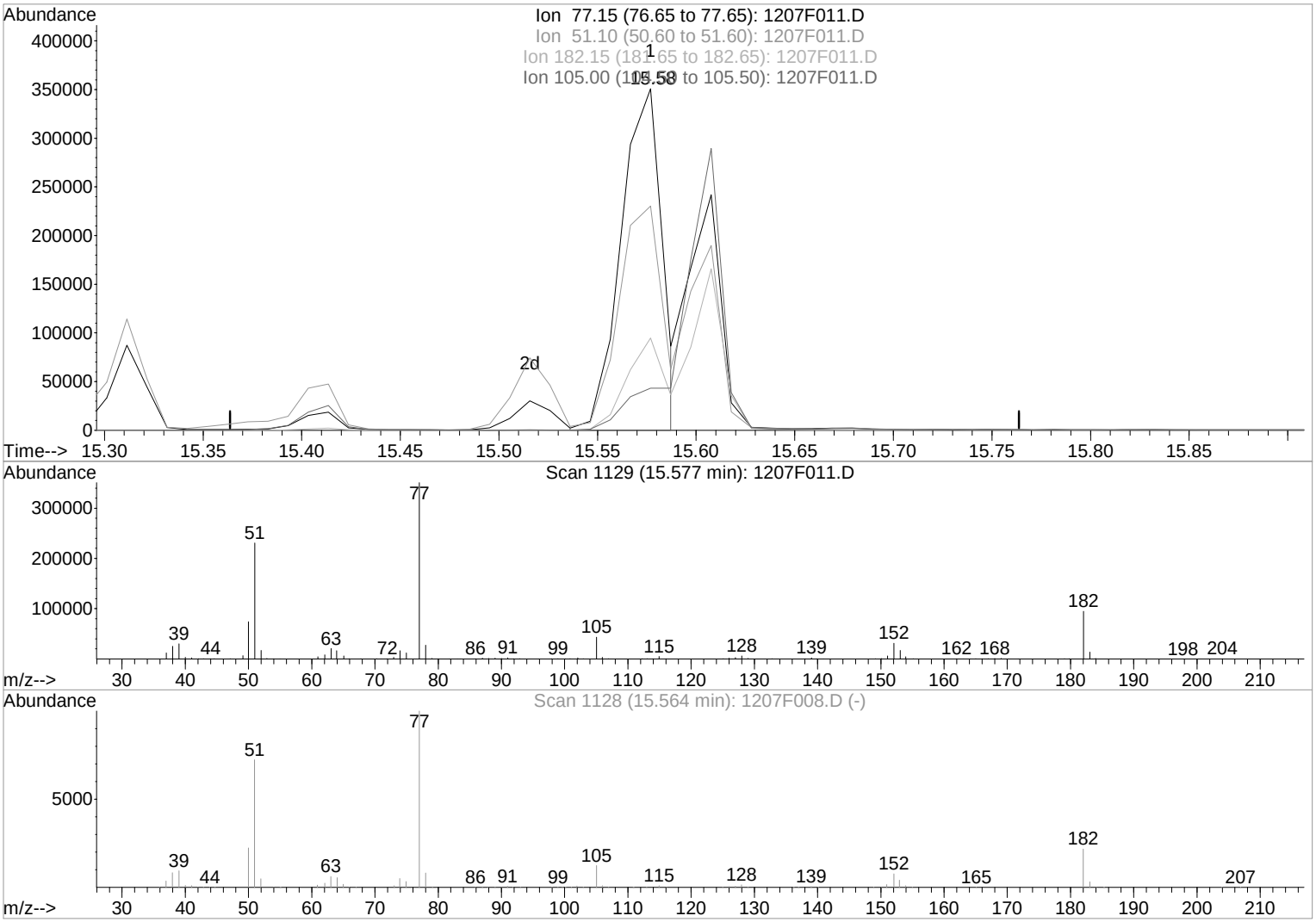
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:23 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F011.D

(59) Azobenzene (T)

15.58min 213.71ug/ml m

response 510739

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	65.65
182.15	21.70	27.02
105.00	12.30	12.31

Manual Integration:

After

IC-Overintegrated

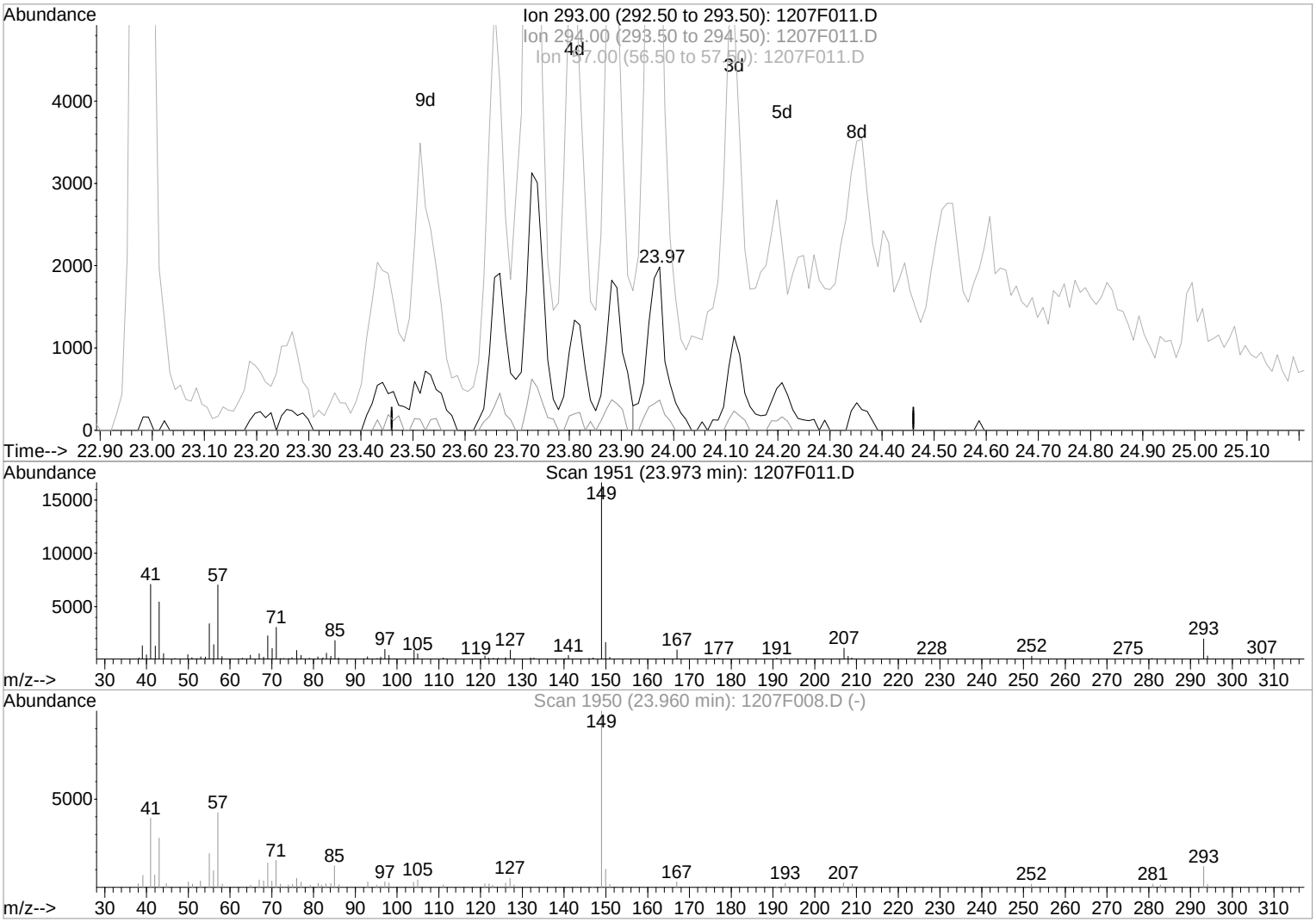
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:23 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F011.D

(87) Diisononyl Phthalate (T)

23.97min 18.48ug/ml

response 4966

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	17.58
57.00	33.10	366.17#
0.00	0.00	0.00

Manual Integration:

Before

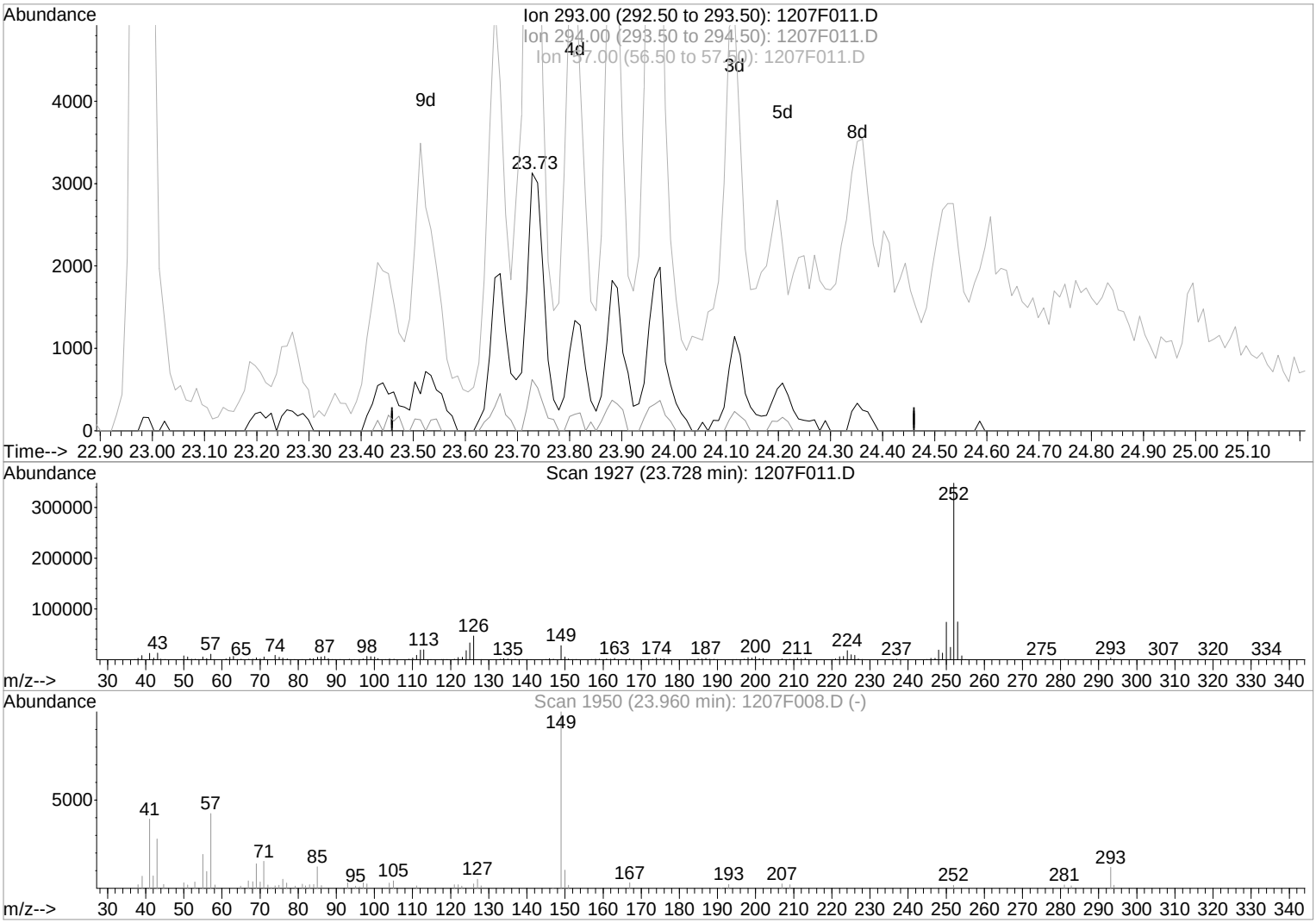
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:24 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F011.D

(87) Diisononyl Phthalate (T)

23.73min 127.44ug/ml m

response 34246

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	2.55
57.00	33.10	53.10
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

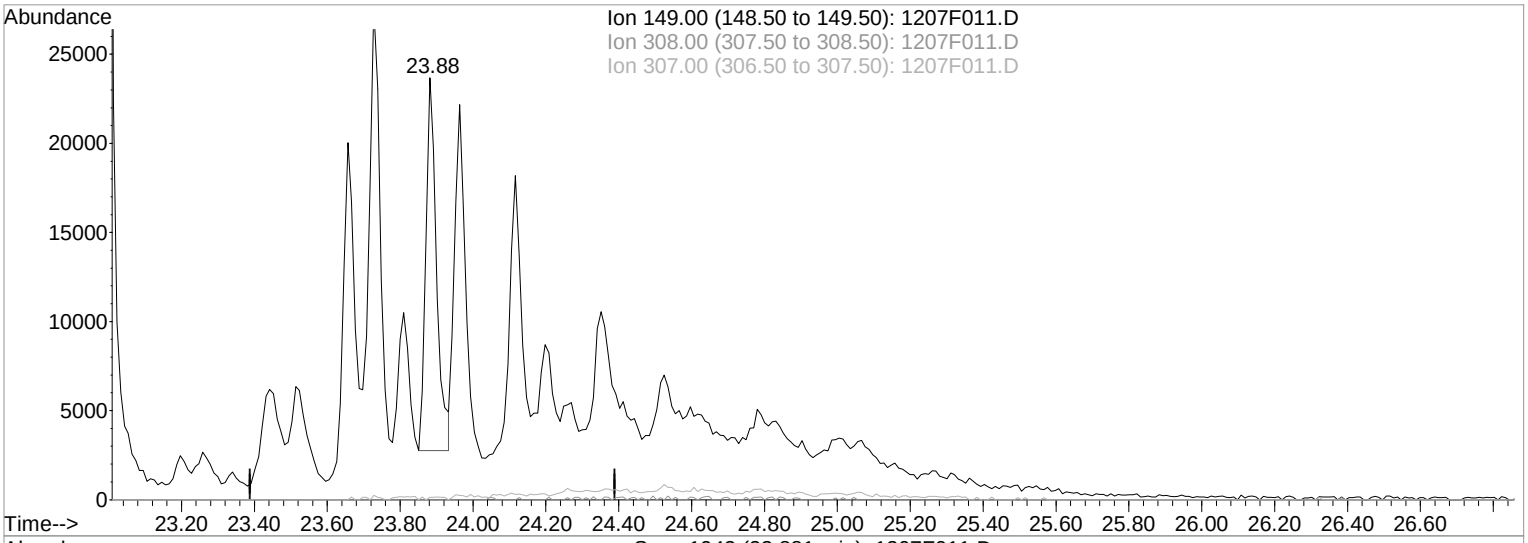
12/07/18

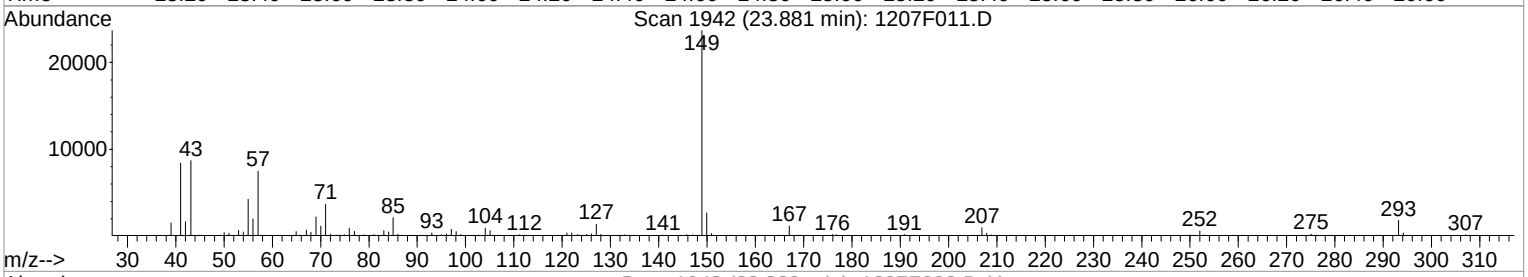
Quantitation Report (Qedit)

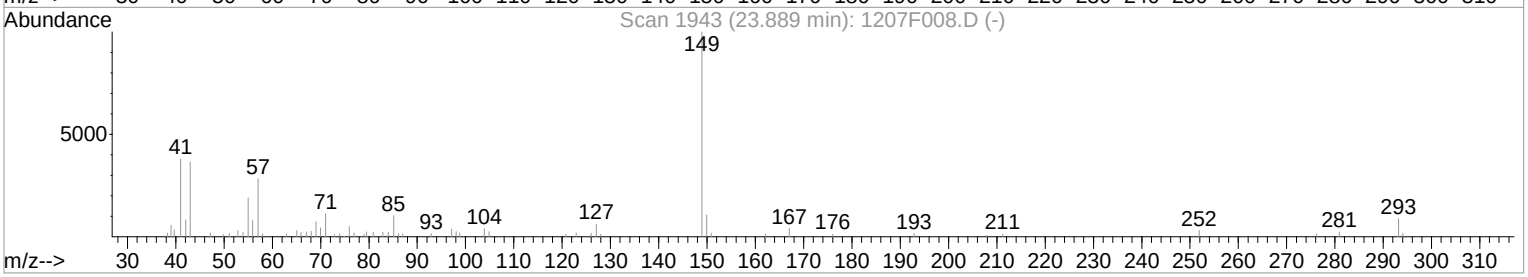
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:24 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F011.D

(88) Diisodecyl Phthalate (T)

23.88min 10.66ug/ml

response 43087

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	1.02
0.00	0.00	0.00

Manual Integration:

Before

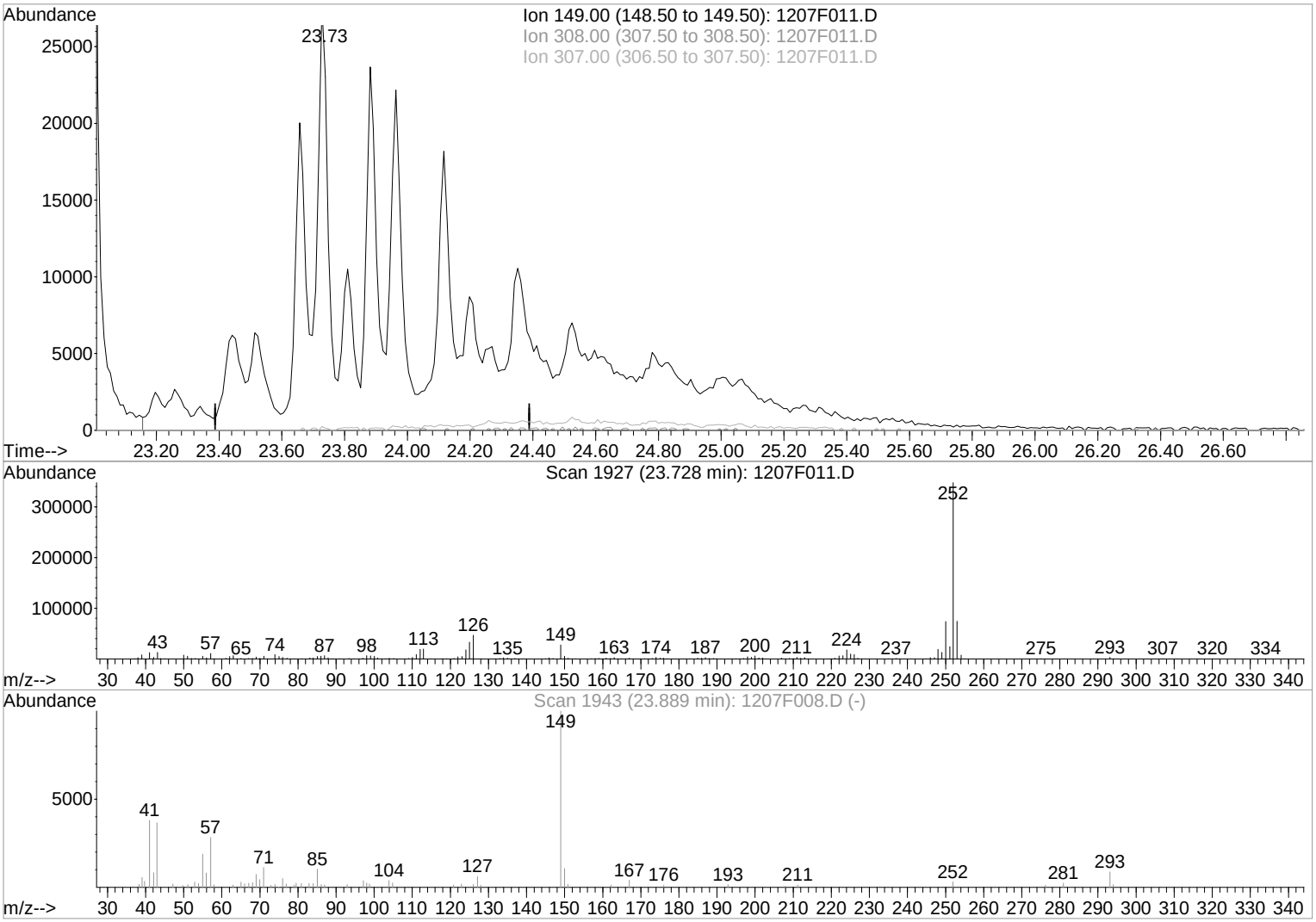
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F011.D Vial: 11
Acq On : 7 Dec 2018 10:00 pm Operator: CConover
Sample : 8270/P ICAL @ 160ppm | SVM59-92L Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:24 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F011.D

(88) Diisodecyl Phthalate (T)

23.73min 165.53ug/ml m

response 669147

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.07
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

12/07/18

1st 12/08/18
2nd 12/13/18

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 23:25:25 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.43	152	51876	40.00	ug/ml	0.00
22) Naphthalene-d8	11.53	136	182096	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.39	164	90063	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.80	188	116870	40.00	ug/ml	0.00
73) Chrysene-d12	21.29	240	124628	40.00	ug/ml	0.00
83) Perylene-d12	24.53	264	136308	40.00	ug/ml	0.02
System Monitoring Compounds						
4) 2-Fluorophenol	7.20	112	299789	221.20	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 147.47%#			
8) Phenol-d6	8.90	99	390028	236.80	ug/ml	0.04
Spiked Amount 150.000	Range 10 - 94		Recovery = 157.87%#			
20) Nitrobenzene-d5	10.37	82	380830	239.06	ug/ml	0.02
Spiked Amount 100.000	Range 35 - 114		Recovery = 239.06%#			
40) 2-Fluorobiphenyl	13.33	172	755307	236.43	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 236.43%#			
62) 2,4,6-Tribromophenol	15.69	330	79948	167.26	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 111.51%			
76) Terphenyl-d14	19.44	244	649114	249.68	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 249.68%#			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.41	42	407798	312.71	ug/ml	94
3) Pyridine	4.42	79	291830	251.39	ug/ml	98
5) Ethylene Glycol Butyl Ethe	7.76	57	352137	286.17	ug/ml	99
6) Aniline	8.90	93	473671	243.99	ug/ml#	70
7) Bis(2-chloroethyl) Ether	9.06	93	314240	256.40	ug/ml	96
9) Phenol	8.92	94	429014	252.74	ug/ml#	69
10) 2-Chlorophenol	9.08	128	367841	221.07	ug/ml	96
11) 1,3-Dichlorobenzene	9.33	146	429180	216.44	ug/ml	97
12) 1,4-Dichlorobenzene	9.46	146	449928	222.19	ug/ml	97
13) 1,2-Dichlorobenzene	9.70	146	426039	220.88	ug/ml	98
14) Benzyl Alcohol	9.73	108	225860	232.66	ug/ml	97
15) 2,2'-oxybis(2-chloropropan	9.94	45	488241	300.04	ug/ml	96
16) 2-Methylphenol	9.91	107	259004	208.08	ug/ml	99
17) Hexachloroethane	10.25	117	200309	243.84	ug/ml	95
18) N-Nitrosodi-n-propylamine	10.18	70	252774	257.52	ug/ml	98
19) 4-Methylphenol	10.20	107	402523	227.84	ug/ml	98
21) Nitrobenzene	10.41	77	396430	259.80	ug/ml	99
23) Isophorone	10.82	82	593624	237.88	ug/ml	99
24) 2-Nitrophenol	10.93	139	204648	228.89	ug/ml	93
25) 2,4-Dimethylphenol	11.05	122	273608	228.31	ug/ml	97
26) Bis(2-chloroethoxy)methane	11.20	93	361989	263.49	ug/ml	97
27) 2,4-Dichlorophenol	11.33	162	340859	241.02	ug/ml	93
28) Benzoic Acid	11.35	122	174851m	258.32	ug/ml	
29) 1,2,4-Trichlorobenzene	11.45	180	385244	236.13	ug/ml	98
30) Naphthalene	11.57	128	1060291	238.09	ug/ml	99
31) n-Dodecane	11.59	57	506447	354.84	ug/ml	99
32) 4-Chloroaniline	11.69	127	453306	227.60	ug/ml	93
33) Hexachlorobutadiene	11.78	225	293775	262.97	ug/ml	97
34) 4-Chloro-3-methylphenol	12.50	107	254692	212.71	ug/ml	98
35) 2-Methylnaphthalene	12.70	142	704593	223.09	ug/ml	99
37) Hexachlorocyclopentadiene	12.95	237	272146	465.06	ug/ml	98
38) 2,4,6-Trichlorophenol	13.17	196	206222	230.55	ug/ml	99
39) 2,4,5-Trichlorophenol	13.22	196	210771	232.16	ug/ml	99
41) 2-Chloronaphthalene	13.49	162	634479	237.76	ug/ml	97
42) 2-Nitroaniline	13.69	65	194686	267.34	ug/ml	93
43) Acenaphthylene	14.16	152	811569	214.03	ug/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 07 23:25:25 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
44) Dimethyl Phthalate	14.03	163	591730	206.52	ug/ml	98
45) 2,6-Dinitrotoluene	14.11	165	135816	203.19	ug/ml	92
46) Acenaphthene	14.45	154	528980	220.02	ug/ml	98
47) 3-Nitroaniline	14.38	138	134937	199.89	ug/ml	99
48) 2,4-Dinitrophenol	14.54	184	85235	264.49	ug/ml	93
49) Dibenzofuran	14.74	168	797208	211.15	ug/ml	97
50) 4-Nitrophenol	14.66	109	101871	339.48	ug/ml	95
51) 2,4-Dinitrotoluene	14.77	165	177777	213.72	ug/ml	99
52) 2,3,4,6-Tetrachlorophenol	14.94	232	150579	243.30	ug/ml	94
53) Fluorene	15.29	166	592427	211.47	ug/ml	99
54) 4-Chlorophenyl Phenyl Ethe	15.32	204	321928	227.27	ug/ml	90
55) Diethyl Phthalate	15.18	149	546750	200.76	ug/ml	99
56) 4-Nitroaniline	15.39	138	131438	215.31	ug/ml	97
57) 2-Methyl-4,6-dinitrophenol	15.42	198	112672m	241.82	ug/ml	
58) Diphenylamine	15.52	169	362735	198.09	ug/ml	99
59) Azobenzene	15.57	77	654184	269.15	ug/ml	92
60) Benzophenone	15.60	105	477082m	225.87	ug/ml	
63) 4-Bromophenyl Phenyl Ether	16.11	248	164061	204.24	ug/ml	88
64) Hexachlorobenzene	16.17	284	155511	177.30	ug/ml	85
65) 2,6-Diisopropylnaphthalene	16.31	197	466145	224.59	ug/ml	100
66) Pentachlorophenol	16.49	266	117627	335.84	ug/ml	99
67) Diazinon	16.67	137	81117	169.32	ug/ml	98
68) Phenanthrene	16.85	178	731573	226.83	ug/ml	98
69) Anthracene	16.93	178	747718	226.15	ug/ml	99
70) Carbazole	17.22	167	774260	265.76	ug/ml	100
71) Di-n-butyl Phthalate	17.85	149	1008819	284.55	ug/ml	99
72) Fluoranthene	18.78	202	884895	274.39	ug/ml	99
74) Benzidine	19.04	184	164044	97.36	ug/ml	98
75) Pyrene	19.14	202	894562	231.98	ug/ml	99
77) Butyl Benzyl Phthalate	20.30	149	436940	235.56	ug/ml	99
78) Diethylene Glycol Butyl Et	21.19	105	584561	263.83	ug/ml	99
79) 3,3'-Dichlorobenzidine	21.28	252	363404	230.65	ug/ml	98
80) Benz(a)anthracene	21.27	228	817825	221.66	ug/ml	99
81) Chrysene	21.35	228	741523	210.30	ug/ml	99
82) Bis(2-ethylhexyl) Phthalat	21.48	149	606076	237.41	ug/ml	99
84) Di-n-octyl Phthalate	22.99	149	1025804	213.12	ug/ml	100
85) Benzo(b)fluoranthene	23.66	252	950385	242.90	ug/ml	99
86) Benzo(k)fluoranthene	23.73	252	887026	228.40	ug/ml	99
87) Diisononyl Phthalate	23.73	293	45235m	166.79	ug/ml	
88) Diisodecyl Phthalate	23.73	149	857179m	210.10	ug/ml	
89) Benzo(a)pyrene	24.42	252	864046	239.43	ug/ml	99
90) Indeno(1,2,3-cd)pyrene	27.03	276	818388	234.50	ug/ml	99
91) Dibenz(a,h)anthracene	27.13	278	832822	236.17	ug/ml	97
92) Benzo(g,h,i)perylene	27.63	276	815037	224.24	ug/ml	99

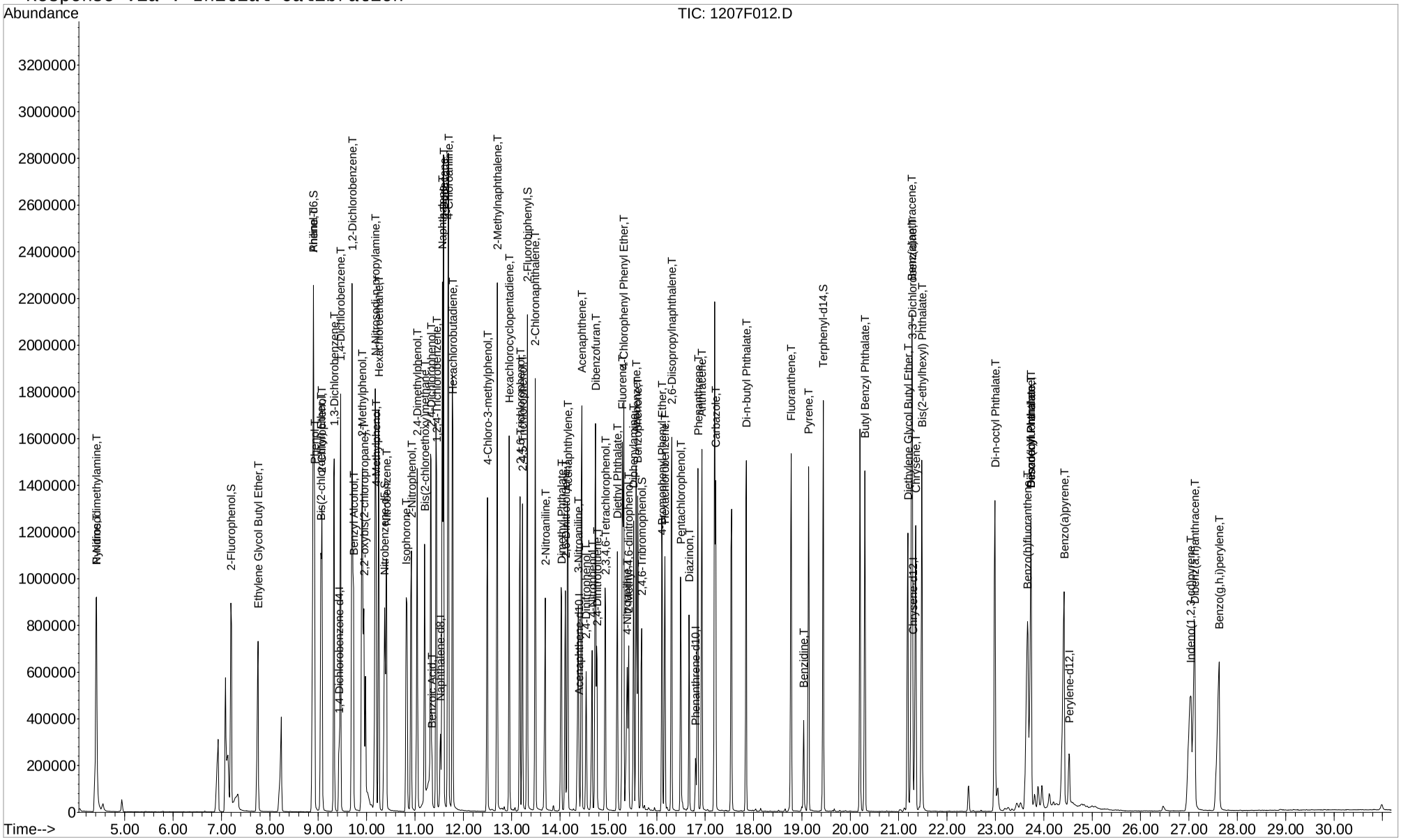
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:27 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

12/08/18 12/13/18 1st 2nd



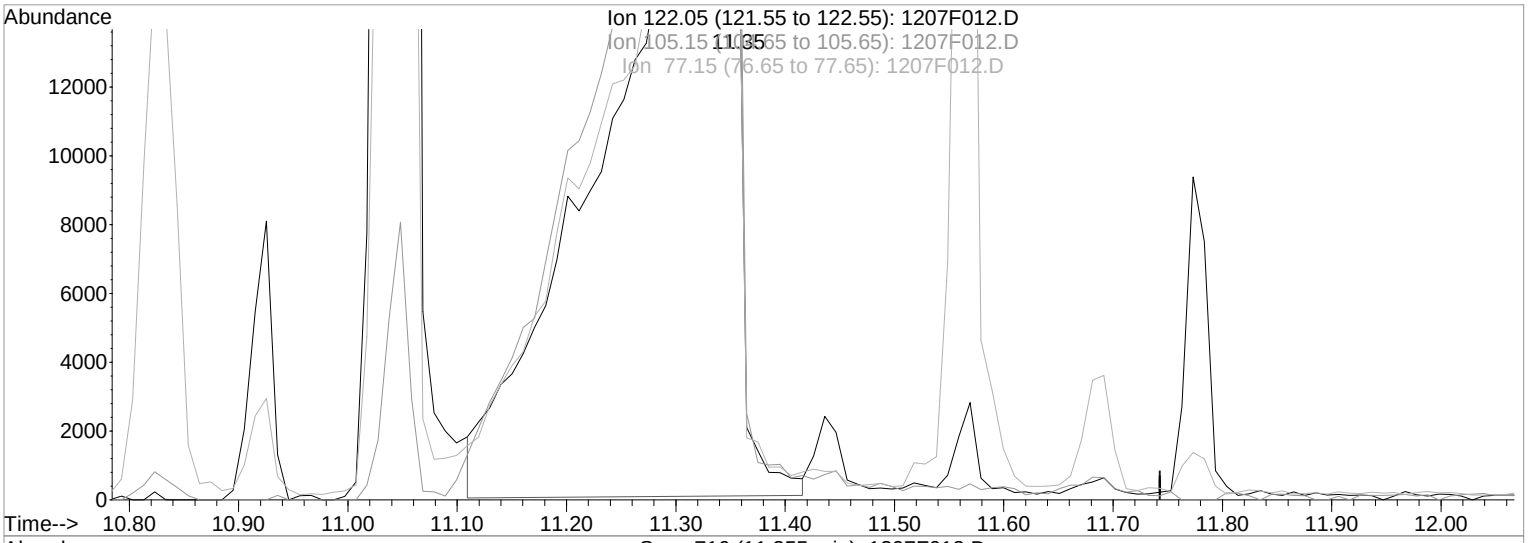
Page 1487 of 1512

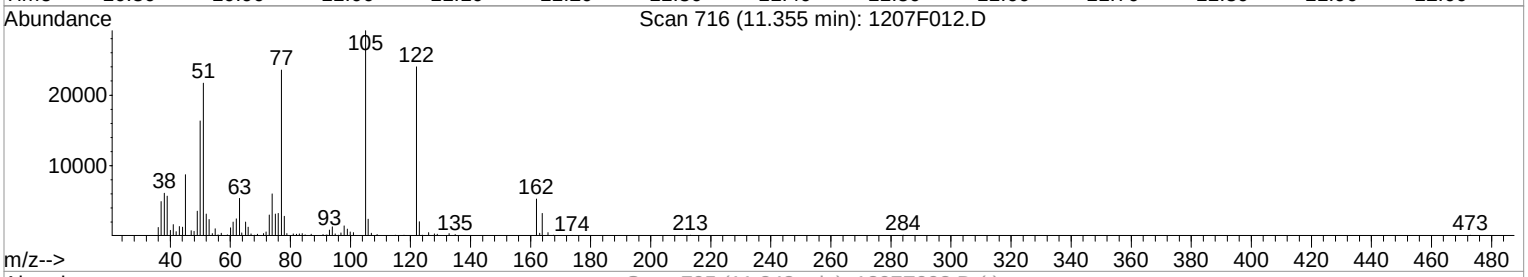
Quantitation Report (Qedit)

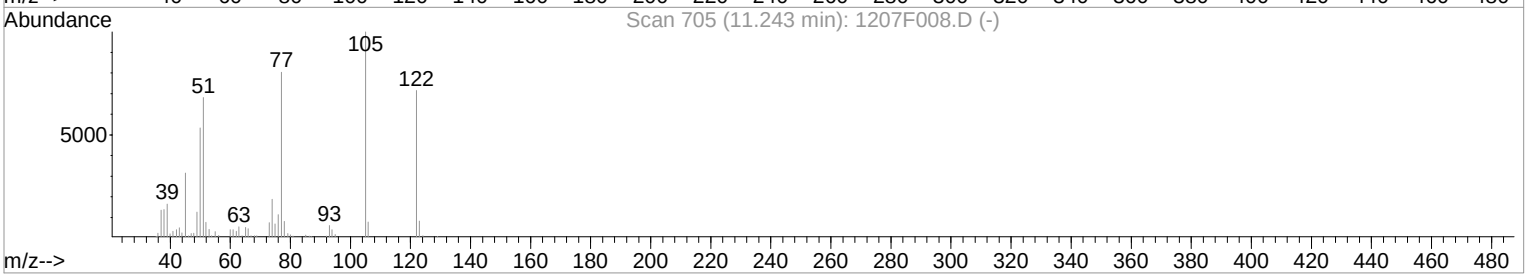
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:25 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F012.D

(28) Benzoic Acid (T)

11.35min 254.20ug/ml

response 172067

Ion	Exp%	Act%
122.05	100	100
105.15	132.80	123.53
77.15	110.60	98.16
0.00	0.00	0.00

Manual Integration:

Before

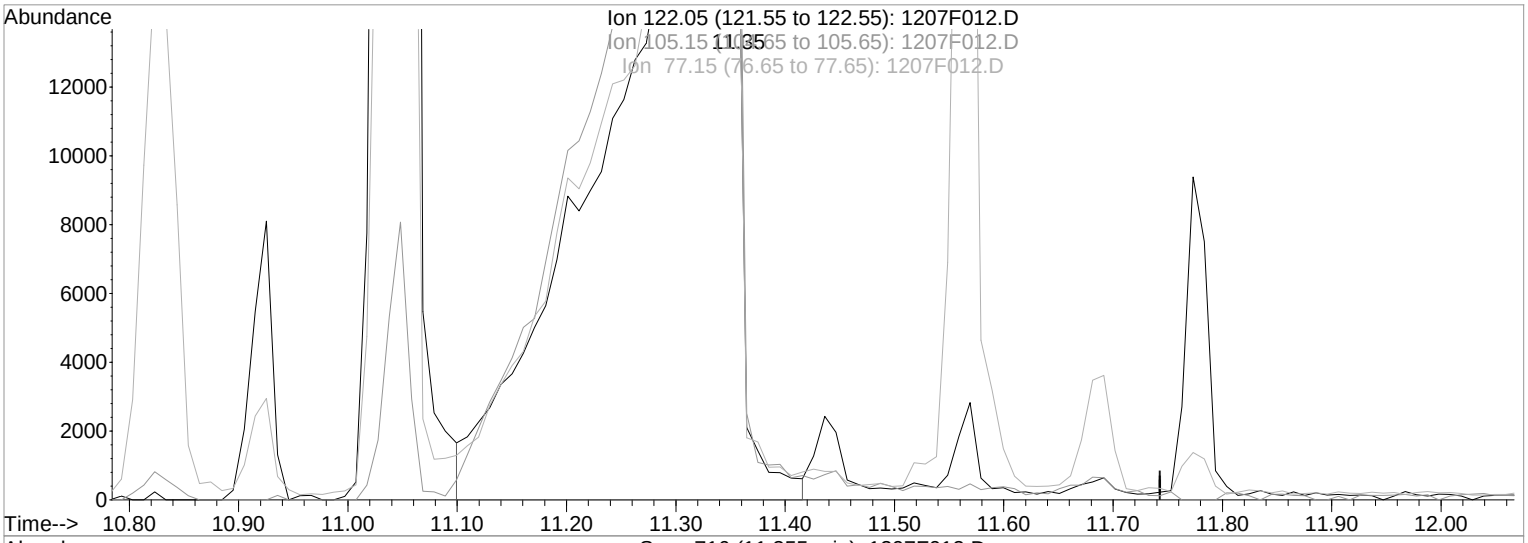
12/07/18

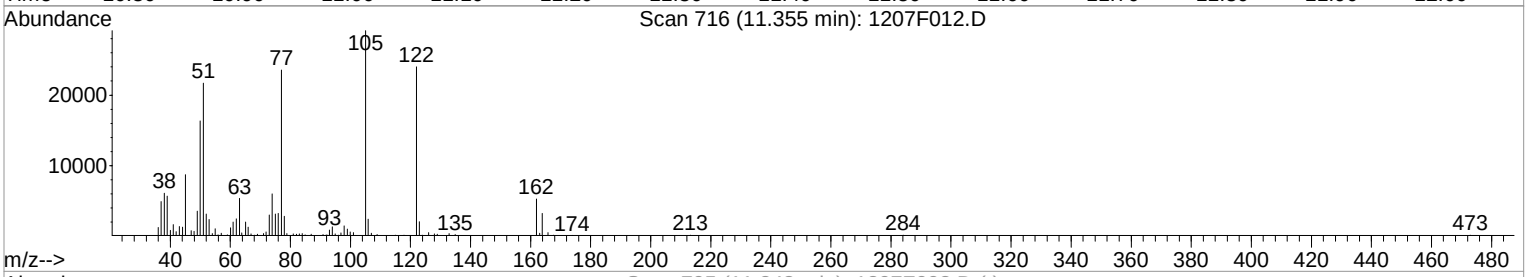
Quantitation Report (Qedit)

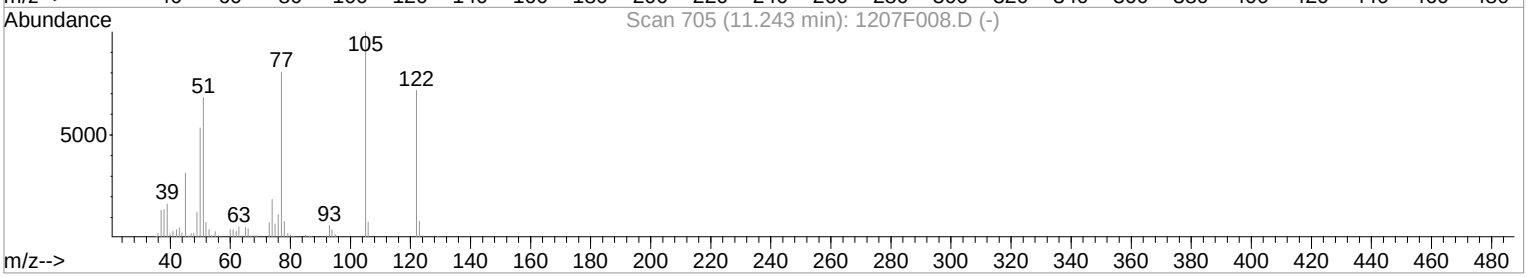
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:25 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration







TIC: 1207F012.D

(28) Benzoic Acid (T)

11.35min 258.32ug/ml m

response 174851

Ion	Exp%	Act%
122.05	100	100
105.15	132.80	121.45
77.15	110.60	98.10
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

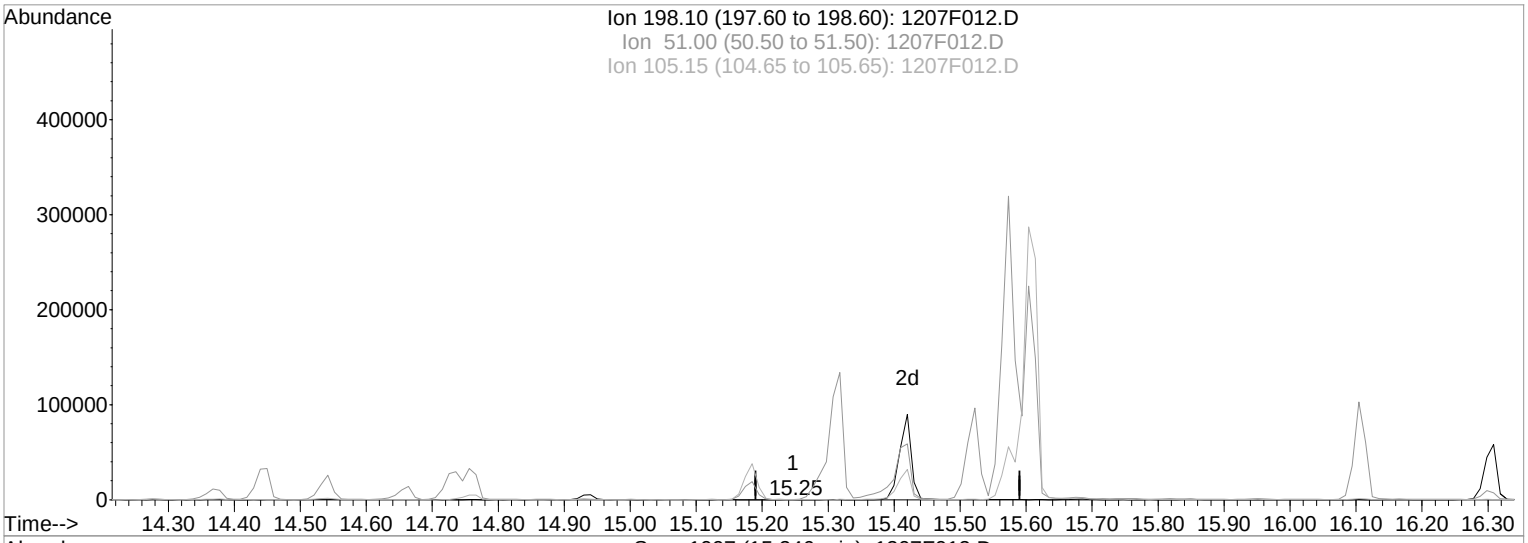
12/07/18

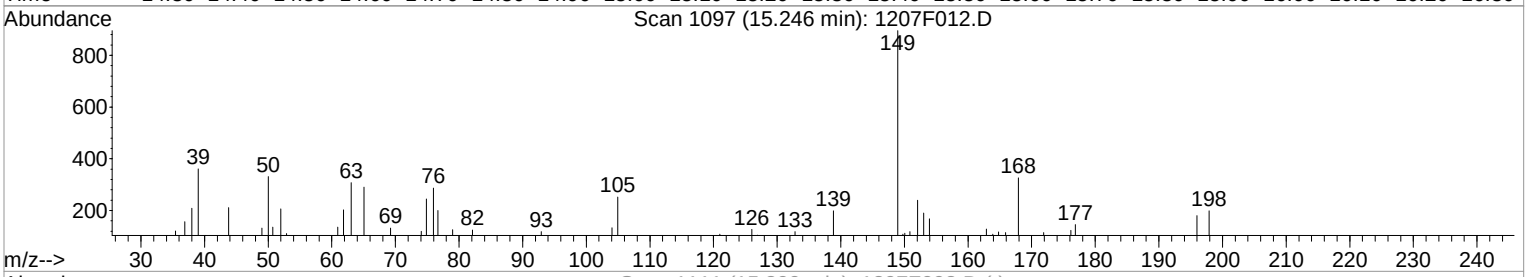
Quantitation Report (Qedit)

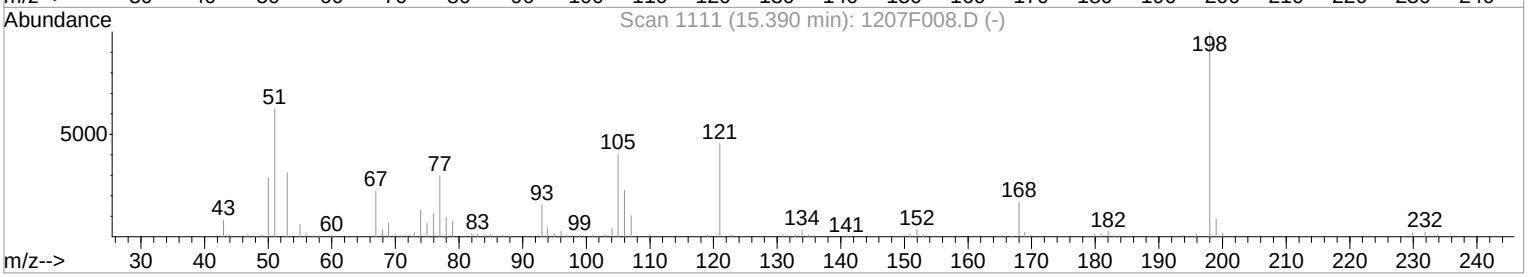
1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:25 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Single Level Calibration







TIC: 1207F012.D

(57) 2-Methyl-4,6-dinitrophenol (T)

15.25min 0.44ug/ml

response 207

Ion	Exp%	Act%
198.10	100	100
51.00	23.10	0.00
105.15	40.60	20.10
0.00	0.00	0.00

Manual Integration:

Before

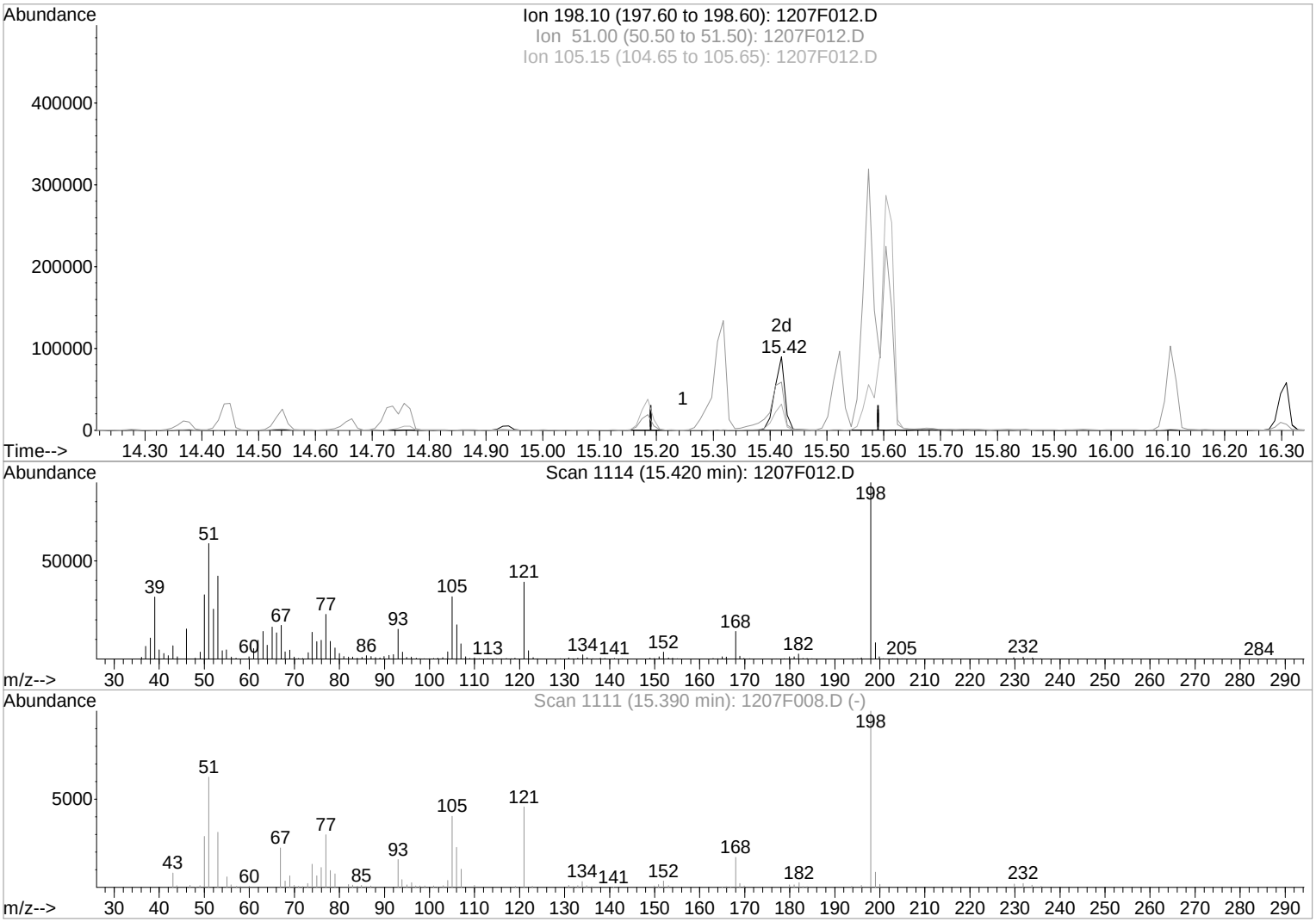
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:26 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Single Level Calibration



TIC: 1207F012.D

(57) 2-Methyl-4,6-dinitrophenol (T)

15.42min 241.82ug/ml m

response 112672

Ion	Exp%	Act%
198.10	100	100
51.00	23.10	65.42#
105.15	40.60	35.31
0.00	0.00	0.00

Manual Integration:

After

WP

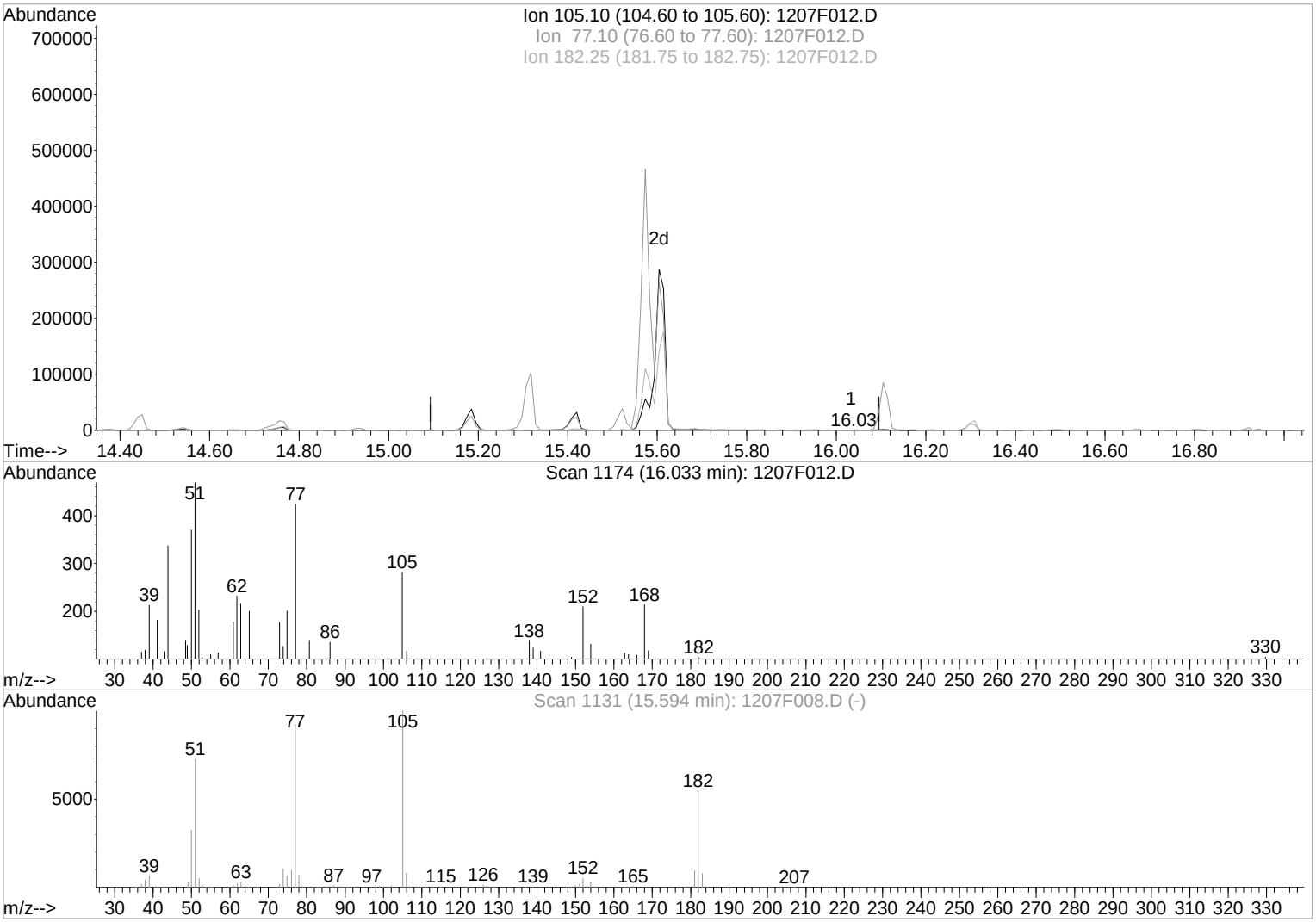
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:26 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F012.D

(60) Benzophenone (T)

16.03min 0.09ug/ml

response 186

Ion	Exp%	Act%
105.10	100	100
77.10	208.40	178.49
182.25	80.80	82.26
0.00	0.00	0.00

Manual Integration:

Before

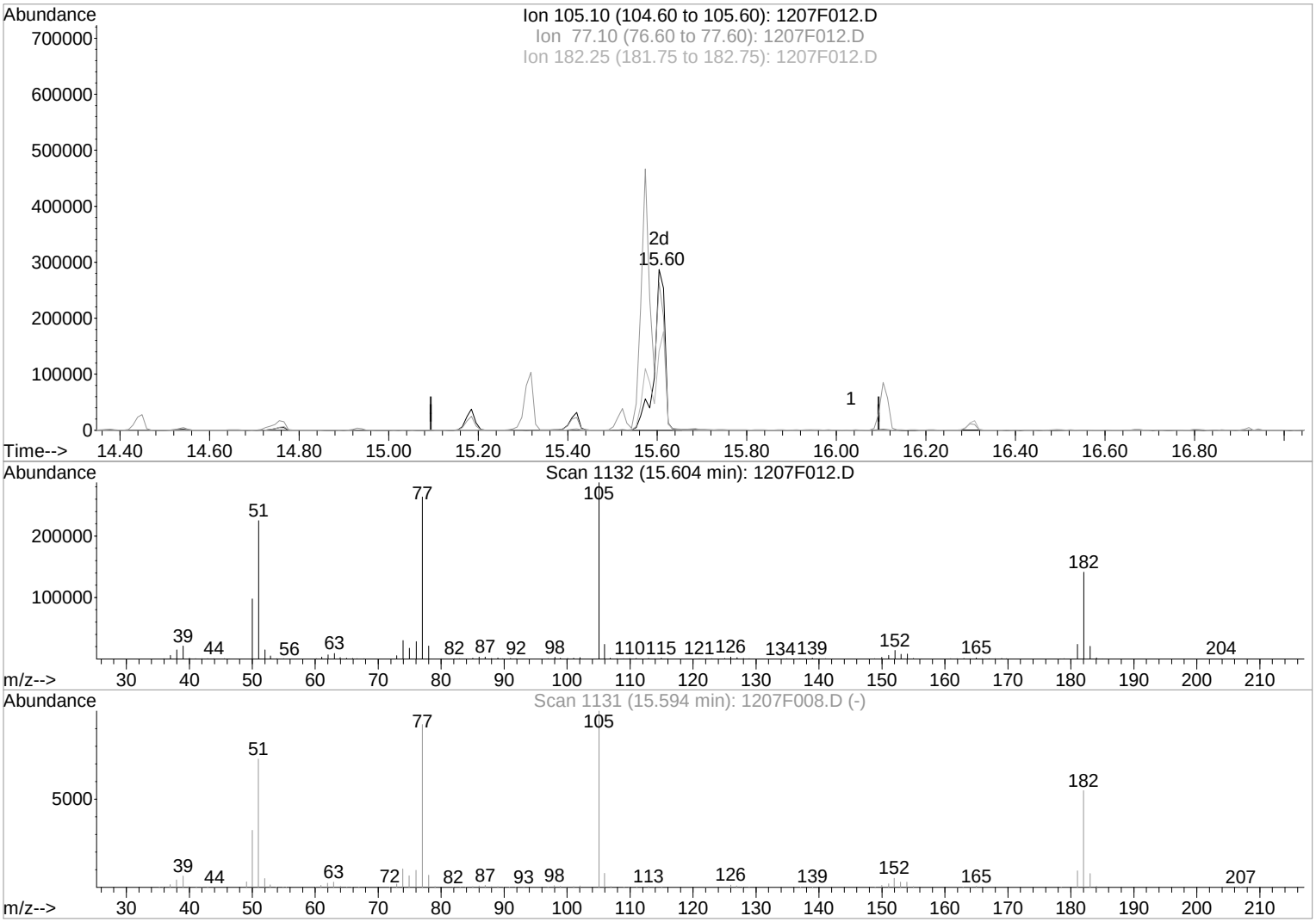
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:26 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F012.D

(60) Benzophenone (T)

15.60min 225.87ug/ml m

response 477082

Ion	Exp%	Act%
105.10	100	100
77.10	208.40	0.07#
182.25	80.80	0.03#
0.00	0.00	0.00

Manual Integration:

After

WP

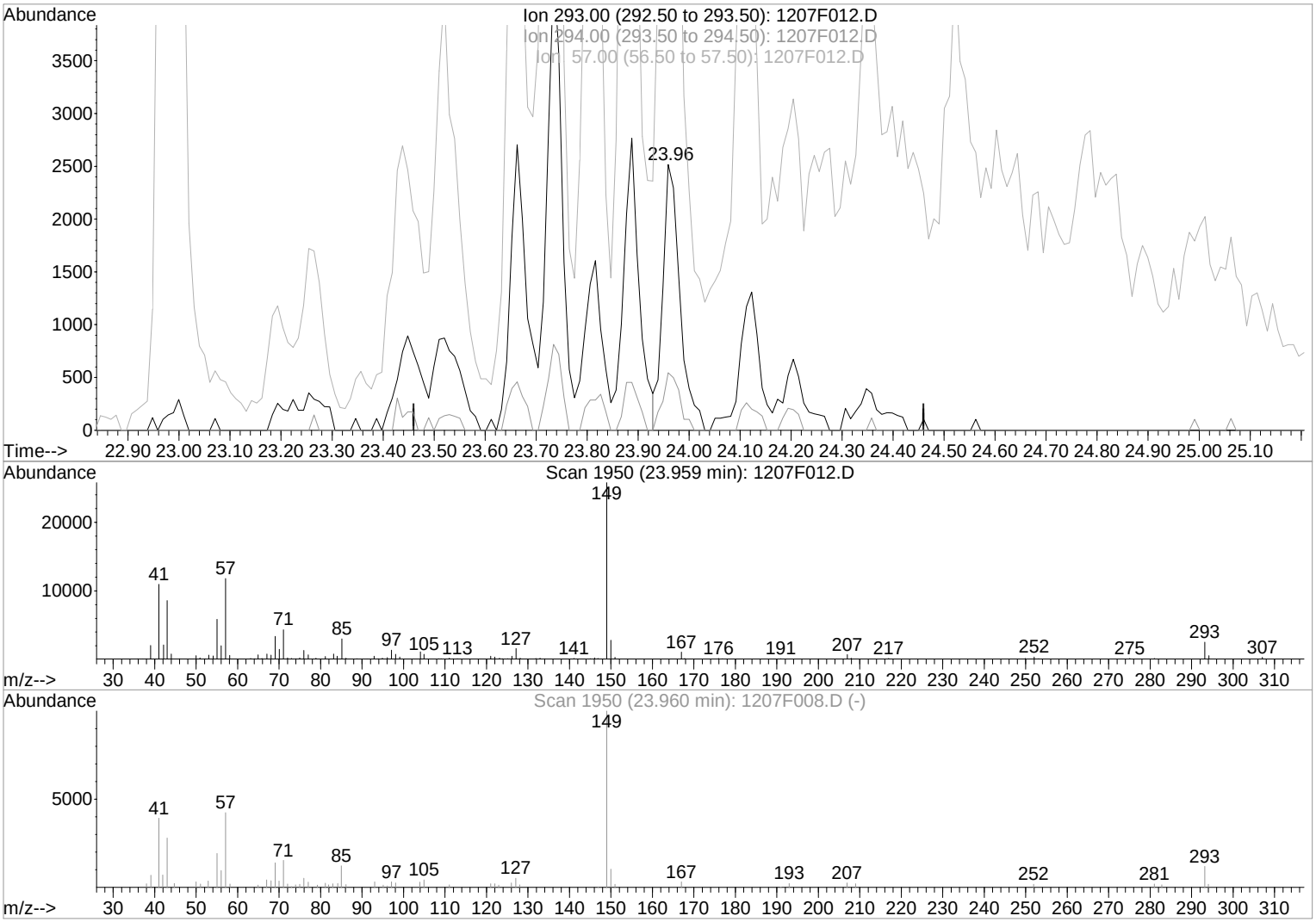
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:26 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F012.D

(87) Diisononyl Phthalate (T)

23.96min 21.66ug/ml

response 5874

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	21.71
57.00	33.10	385.94#
0.00	0.00	0.00

Manual Integration:

Before

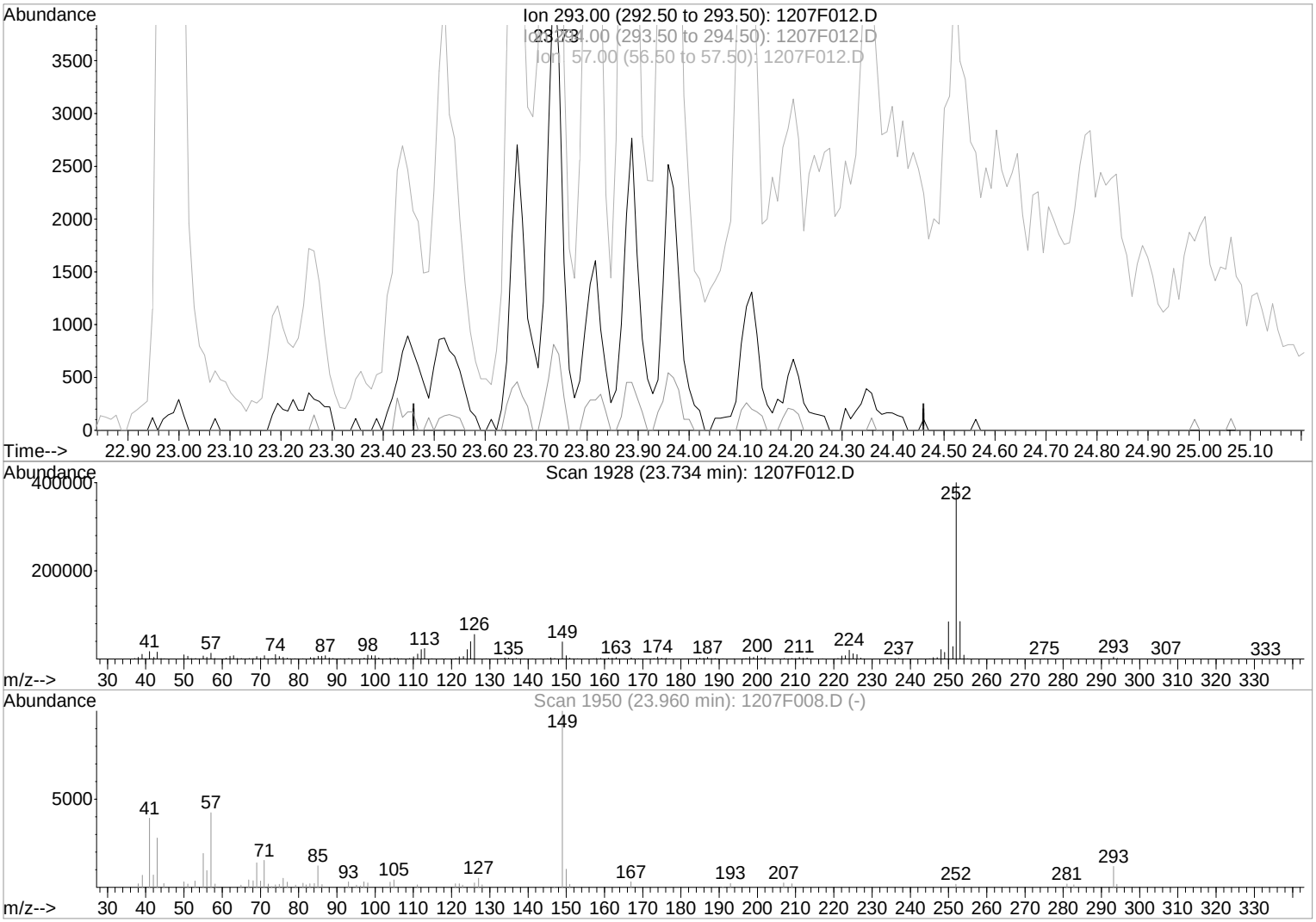
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:27 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F012.D

(87) Diisononyl Phthalate (T)

23.73min 166.79ug/ml m

response 45235

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	2.82
57.00	33.10	50.12
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

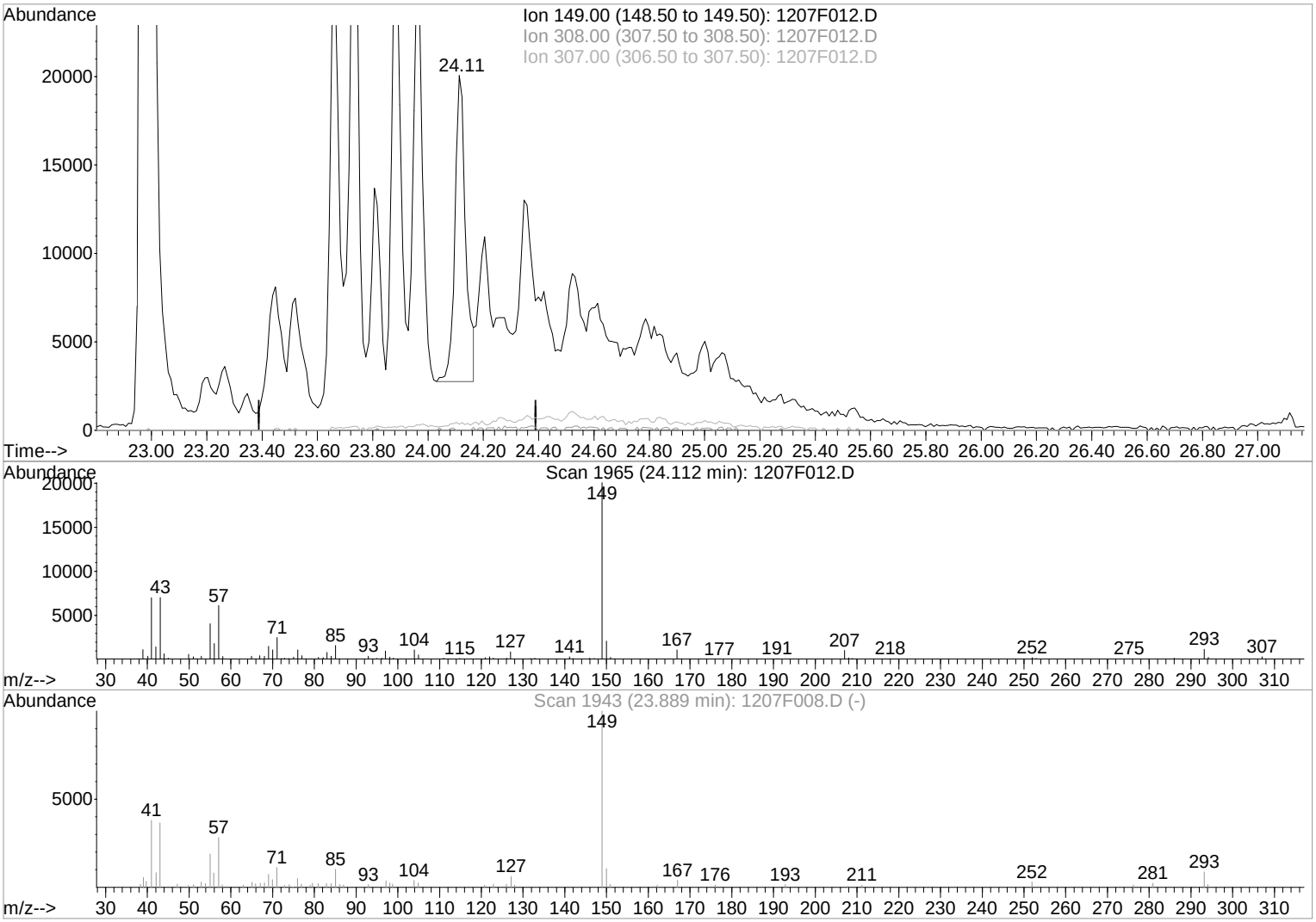
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:27 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F012.D

(88) Diisodecyl Phthalate (T)

24.11min 11.43ug/ml

response 46629

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.30
307.00	0.00	1.90
0.00	0.00	0.00

Manual Integration:

Before

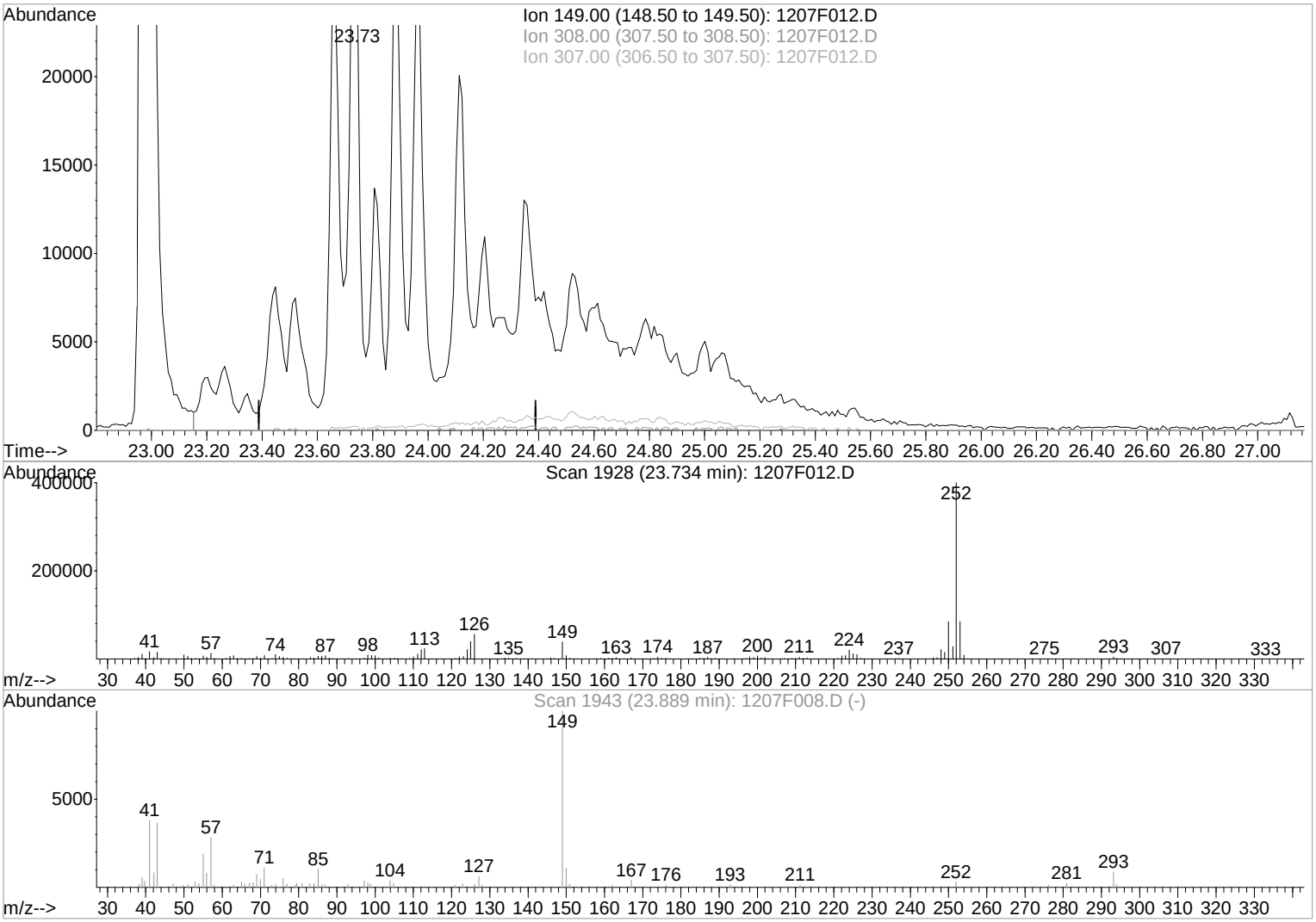
12/07/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F012.D Vial: 12
Acq On : 7 Dec 2018 10:41 pm Operator: CConover
Sample : 8270/P ICAL @ 200ppm | SVM59-92M Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 7 23:27 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Dec 07 22:51:55 2018
Response via : Multiple Level Calibration



TIC: 1207F012.D

(88) Diisodecyl Phthalate (T)

23.73min 210.10ug/ml m

response 857179

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.02
307.00	0.00	0.10
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

12/07/18

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F013.D Vial: 13
Acq On : 7 Dec 2018 11:22 pm Operator: CConover
Sample : 8270 ICV @ 80ppm | SVM59-93C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 08 00:07:30 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	50638	40.00	ug/ml	0.00
22) Naphthalene-d8	11.52	136	184360	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.38	164	97140	40.00	ug/ml	-0.01
61) Phenanthrene-d10	16.80	188	128624	40.00	ug/ml	0.00
73) Chrysene-d12	21.27	240	117554	40.00	ug/ml	-0.01
83) Perylene-d12	24.50	264	119146	40.00	ug/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	7.18	112	100468	76.12	ug/ml	-0.01
Spiked Amount 150.000	Range 21 - 100		Recovery = 50.75%			
8) Phenol-d6	8.86	99	126998	77.38	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 51.59%			
20) Nitrobenzene-d5	10.35	82	140850	81.08	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 81.08%			
40) 2-Fluorobiphenyl	13.32	172	291786	80.46	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 80.46%			
62) 2,4,6-Tribromophenol	15.68	330	33067	89.36	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 59.57%			
76) Terphenyl-d14	19.43	244	214628	79.68	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 79.68%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.38	42	121411	69.72	ug/ml	94
3) Pyridine	4.41	79	97245	76.21	ug/ml	99
6) Aniline	8.88	93	171834	79.25	ug/ml	95
7) Bis(2-chloroethyl) Ether	9.04	93	110177	80.17	ug/ml	96
9) Phenol	8.88	94	153709	81.67	ug/ml	96
10) 2-Chlorophenol	9.06	128	132512	83.44	ug/ml	94
11) 1,3-Dichlorobenzene	9.32	146	148326	76.62	ug/ml	97
12) 1,4-Dichlorobenzene	9.45	146	156702	78.66	ug/ml	96
13) 1,2-Dichlorobenzene	9.69	146	149646	78.34	ug/ml	96
14) Benzyl Alcohol	9.69	108	79506	80.99	ug/ml	96
15) 2,2'-oxybis(2-chloropropan	9.93	45	207962	99.15	ug/ml	99
16) 2-Methylphenol	9.89	107	92763	81.12	ug/ml	95
17) Hexachloroethane	10.24	117	69727	79.40	ug/ml	86
18) N-Nitrosodi-n-propylamine	10.15	70	101223	90.09	ug/ml	99
19) 4-Methylphenol	10.17	107	260558	146.74	ug/ml	86
21) Nitrobenzene	10.38	77	144644	82.95	ug/ml	92
23) Isophorone	10.80	82	227827	81.19	ug/ml	100
24) 2-Nitrophenol	10.91	139	75676	83.80	ug/ml	85
25) 2,4-Dimethylphenol	11.03	122	107748	85.95	ug/ml	99
26) Bis(2-chloroethoxy)methane	11.19	93	138236	84.59	ug/ml	99
27) 2,4-Dichlorophenol	11.30	162	124611	83.81	ug/ml	99
28) Benzoic Acid	11.24	122	63029m	86.58	ug/ml	
29) 1,2,4-Trichlorobenzene	11.44	180	137145	79.75	ug/ml	98
30) Naphthalene	11.56	128	378040	79.82	ug/ml	100
32) 4-Chloroaniline	11.67	127	159598	75.26	ug/ml	96
33) Hexachlorobutadiene	11.77	225	104613	81.12	ug/ml	98
34) 4-Chloro-3-methylphenol	12.48	107	103162	82.42	ug/ml	98
35) 2-Methylnaphthalene	12.69	142	257491	79.53	ug/ml	99
37) Hexachlorocyclopentadiene	12.95	237	108622	88.36	ug/ml	97
38) 2,4,6-Trichlorophenol	13.16	196	85489	83.82	ug/ml	98
39) 2,4,5-Trichlorophenol	13.20	196	94391	91.00	ug/ml	97
41) 2-Chloronaphthalene	13.48	162	252150	81.29	ug/ml	97
42) 2-Nitroaniline	13.67	65	83521	83.02	ug/ml	98
43) Acenaphthylene	14.15	152	372705	91.19	ug/ml	99
44) Dimethyl Phthalate	14.02	163	266871	83.06	ug/ml	98
45) 2,6-Dinitrotoluene	14.09	165	58358	83.82	ug/ml	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F013.D Vial: 13
Acq On : 7 Dec 2018 11:22 pm Operator: CConover
Sample : 8270 ICV @ 80ppm | SVM59-93C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 08 00:07:30 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Acenaphthene	14.44	154	221544	81.42	ug/ml	96
47) 3-Nitroaniline	14.36	138	57865	82.08	ug/ml	99
48) 2,4-Dinitrophenol	14.52	184	29793	87.37	ug/ml	99
49) Dibenzofuran	14.73	168	323040	77.60	ug/ml	98
50) 4-Nitrophenol	14.64	109	44281	84.35	ug/ml	88
51) 2,4-Dinitrotoluene	14.75	165	77541	85.74	ug/ml	96
52) 2,3,4,6-Tetrachlorophenol	14.93	232	69974	92.81	ug/ml	93
53) Fluorene	15.28	166	256998	82.16	ug/ml	100
54) 4-Chlorophenyl Phenyl Ethe	15.31	204	136543	81.57	ug/ml	94
55) Diethyl Phthalate	15.17	149	245080	82.31	ug/ml	99
56) 4-Nitroaniline	15.35	138	55169	82.82	ug/ml	95
57) 2-Methyl-4,6-dinitrophenol	15.39	198	44065	83.51	ug/ml#	55
58) Diphenylamine	15.51	169	194903	102.57	ug/ml	98
59) Azobenzene	15.56	77	305458m	85.33	ug/ml	
63) 4-Bromophenyl Phenyl Ether	16.10	248	68793	83.40	ug/ml	91
64) Hexachlorobenzene	16.16	284	65791	84.28	ug/ml	95
66) Pentachlorophenol	16.49	266	42629	84.50	ug/ml	98
68) Phenanthrene	16.84	178	292706	81.62	ug/ml	99
69) Anthracene	16.92	178	310474	83.84	ug/ml	99
70) Carbazole	17.21	167	281055	79.08	ug/ml	99
71) Di-n-butyl Phthalate	17.84	149	335942	78.73	ug/ml	100
72) Fluoranthene	18.77	202	312330	80.88	ug/ml	98
74) Benzidine	19.04	184	199159	159.60	ug/ml	98
75) Pyrene	19.13	202	308659	82.83	ug/ml	99
77) Butyl Benzyl Phthalate	20.29	149	170184	88.31	ug/ml	94
79) 3,3'-Dichlorobenzidine	21.26	252	116846	81.62	ug/ml	98
80) Benz(a)anthracene	21.25	228	307196	84.82	ug/ml	99
81) Chrysene	21.33	228	285439	82.89	ug/ml	98
82) Bis(2-ethylhexyl) Phthalat	21.47	149	234296	88.76	ug/ml	100
84) Di-n-octyl Phthalate	22.97	149	349114	81.26	ug/ml	97
85) Benzo(b)fluoranthene	23.62	252	268194	75.23	ug/ml	99
86) Benzo(k)fluoranthene	23.69	252	271811	75.31	ug/ml	99
89) Benzo(a)pyrene	24.38	252	278120	84.99	ug/ml	98
90) Indeno(1,2,3-cd)pyrene	26.98	276	298810	89.42	ug/ml	100
91) Dibenz(a,h)anthracene	27.07	278	291706	88.00	ug/ml	99
92) Benzo(g,h,i)perylene	27.58	276	325230	96.24	ug/ml	96

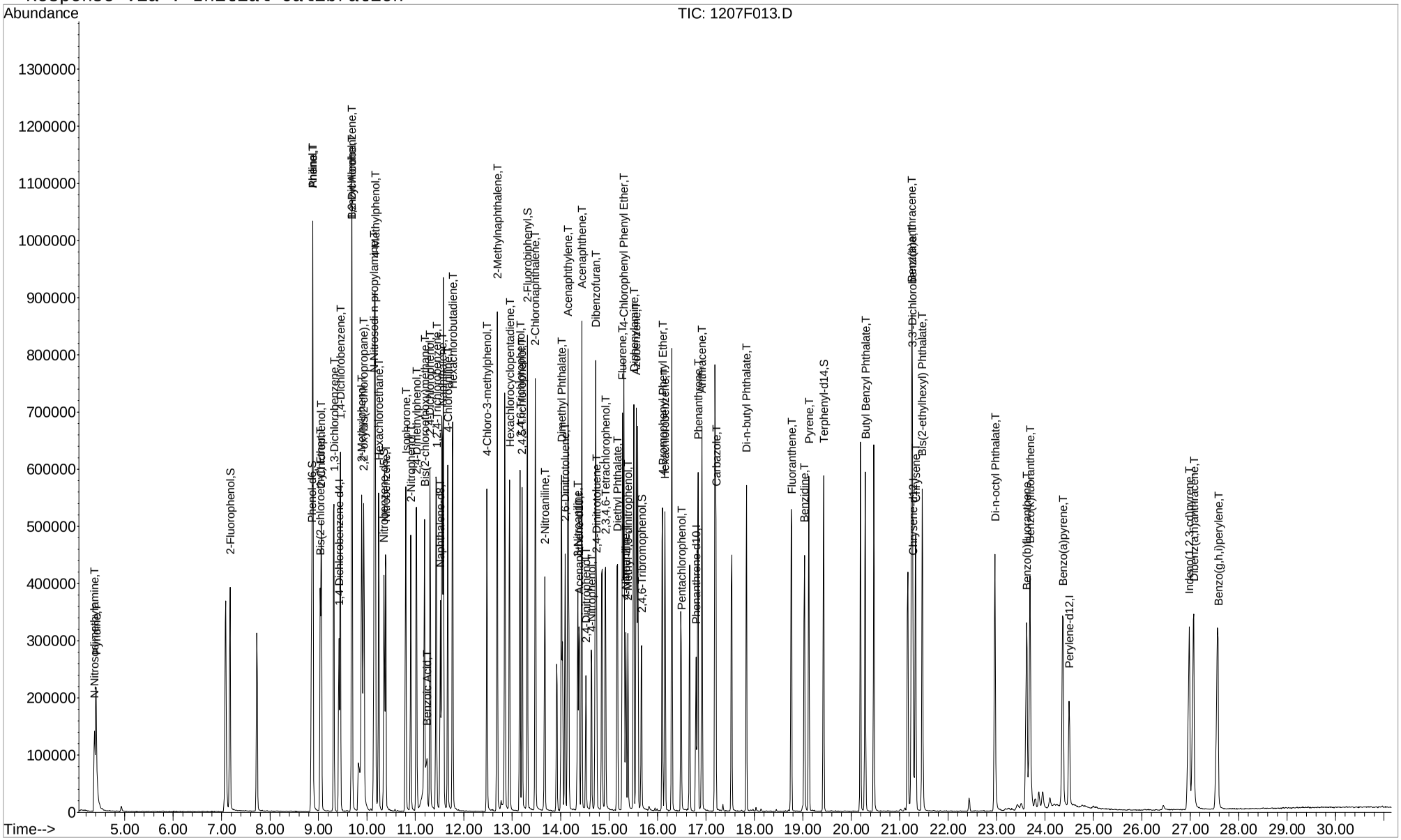
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F013.D Vial: 13
Acq On : 7 Dec 2018 11:22 pm Operator: CConover
Sample : 8270 ICV @ 80ppm | SVM59-93C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 8 0:10 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

12/08/18 12/13/18 1st 2nd

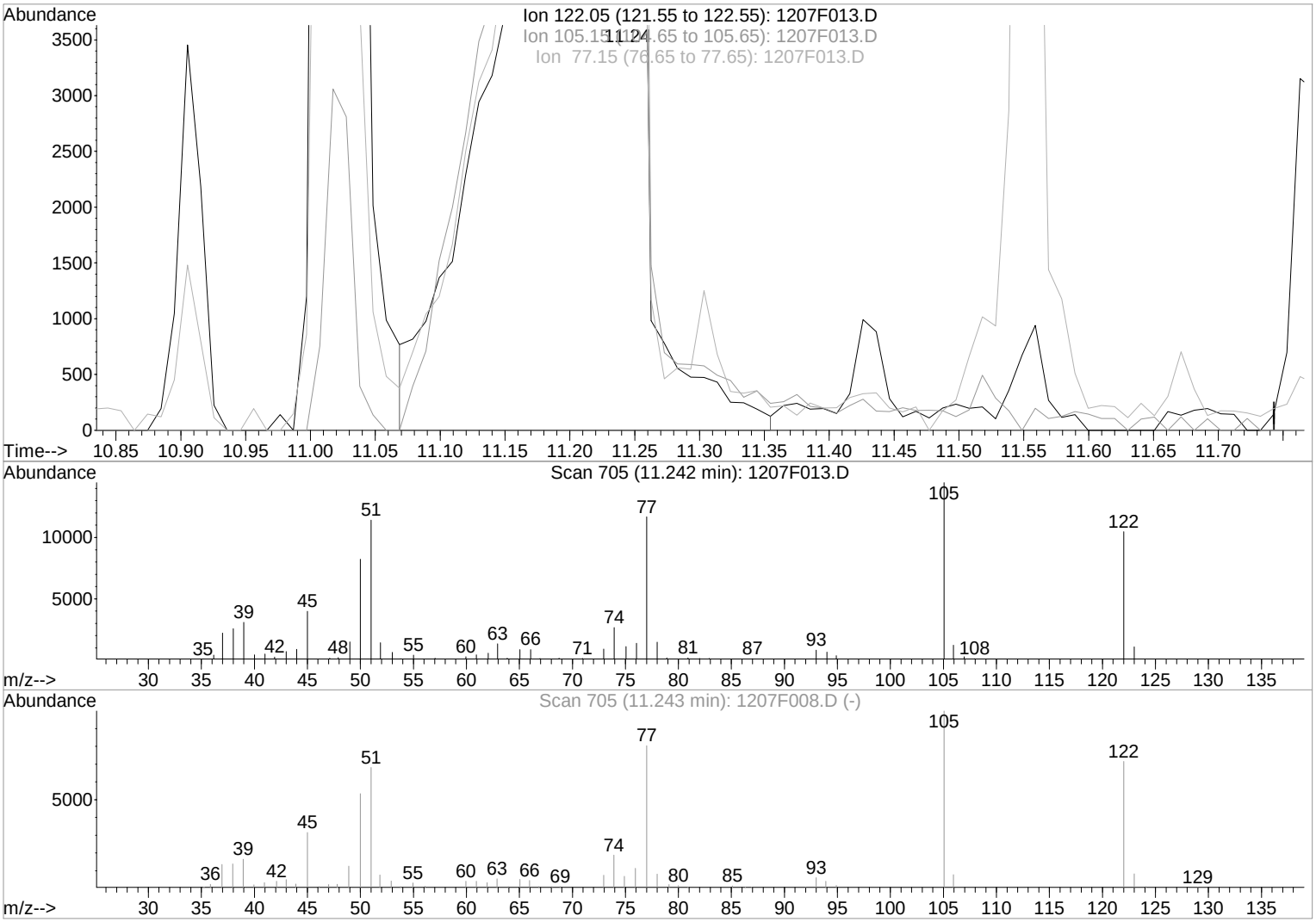


Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F013.D Vial: 13
Acq On : 7 Dec 2018 11:22 pm Operator: CConover
Sample : 8270 ICV @ 80ppm | SVM59-93C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 8 0:08 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Single Level Calibration



TIC: 1207F013.D

(28) Benzoic Acid (T)

11.24min 86.58ug/ml m

response 63029

Ion	Exp%	Act%
122.05	100	100
105.15	132.80	138.27
77.15	110.60	111.48
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

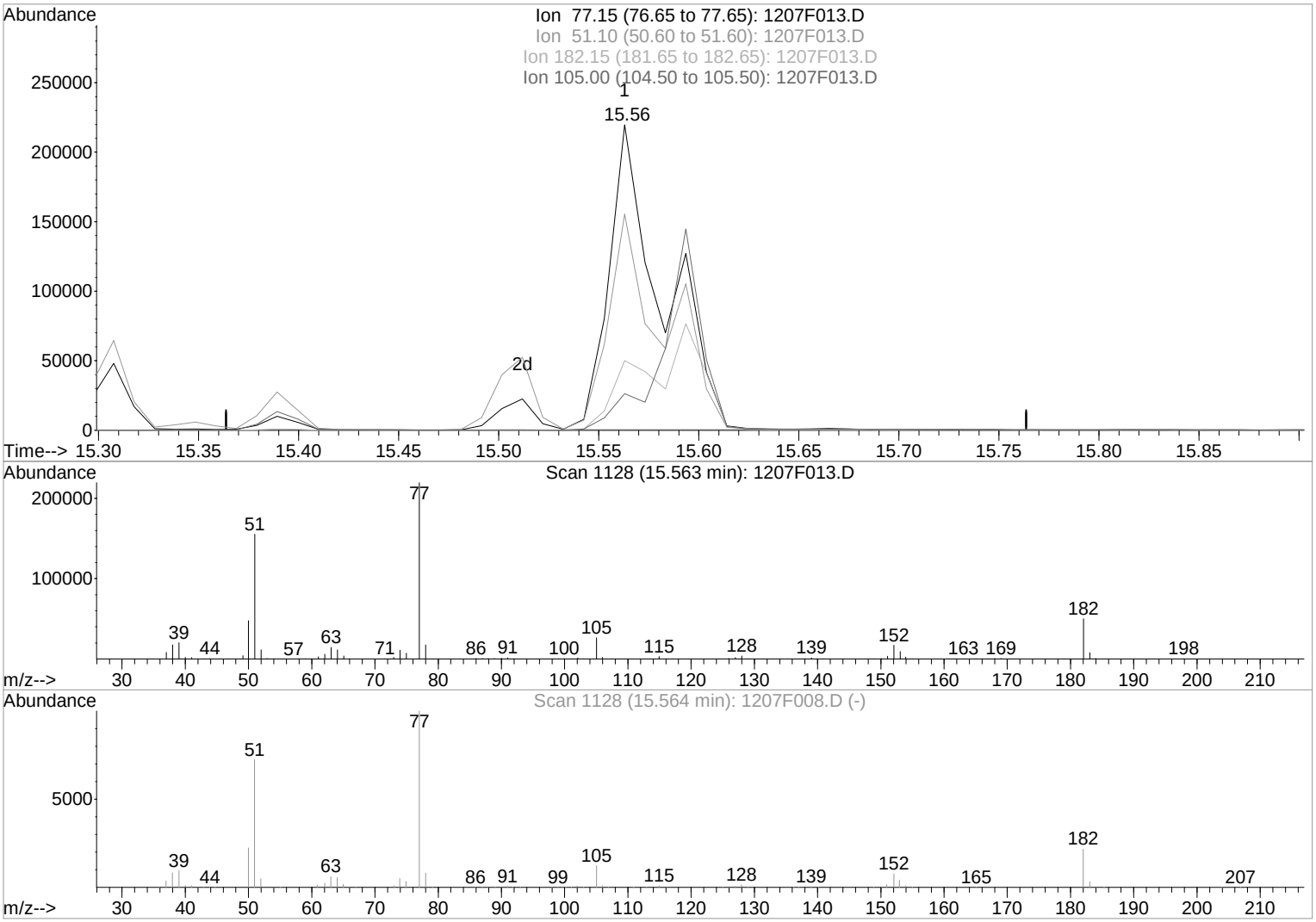
12/08/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F013.D Vial: 13
Acq On : 7 Dec 2018 11:22 pm Operator: CConover
Sample : 8270 ICV @ 80ppm | SVM59-93C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 8 0:08 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Multiple Level Calibration



TIC: 1207F013.D

(59) Azobenzene (T)

15.56min 114.52ug/ml

response 409947

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	70.57
182.15	21.70	22.72
105.00	12.30	11.89

Manual Integration:

Before

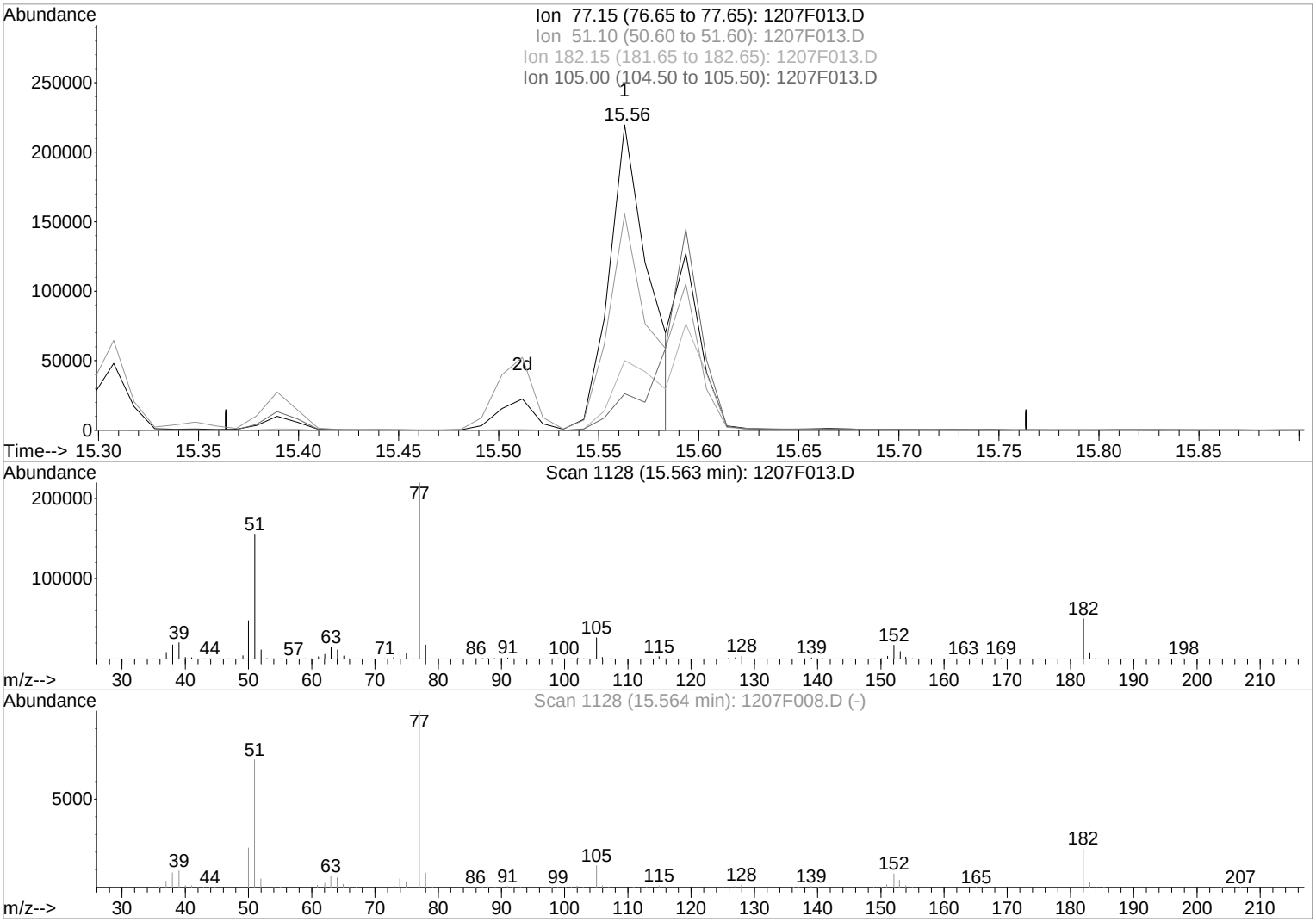
12/08/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F013.D Vial: 13
Acq On : 7 Dec 2018 11:22 pm Operator: CConover
Sample : 8270 ICV @ 80ppm | SVM59-93C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 8 0:08 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Multiple Level Calibration



TIC: 1207F013.D

(59) Azobenzene (T)

15.56min 85.33ug/ml m

response 305458

Ion	Exp%	Act%
77.15	100	100
51.10	72.50	70.76
182.15	21.70	22.73
105.00	12.30	11.97

Manual Integration:

After

IC-Overintegrated

12/08/18

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F014.D Vial: 14
Acq On : 8 Dec 2018 12:03 am Operator: CConover
Sample : PAPER ICV @ 80ppm | SVM58-87A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 08 01:24:26 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

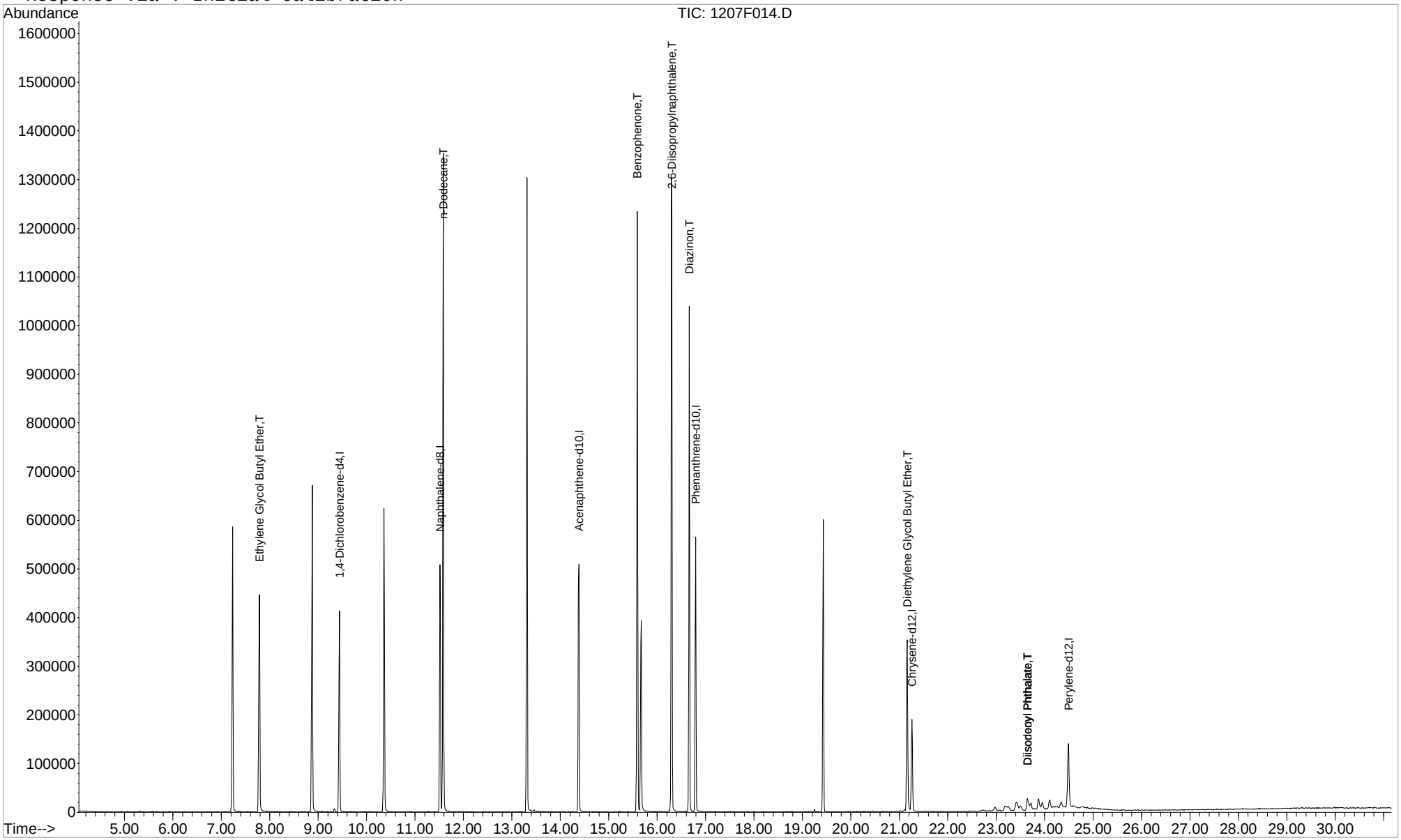
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.44	152	75038	40.00	ug/ml	0.02
22) Naphthalene-d8	11.51	136	273752	40.00	ug/ml	0.00
36) Acenaphthene-d10	14.38	164	144581	40.00	ug/ml	0.00
61) Phenanthrene-d10	16.79	188	243224	40.00	ug/ml	0.00
73) Chrysene-d12	21.26	240	98622	40.00	ug/ml	-0.03
83) Perylene-d12	24.50	264	96376	40.00	ug/ml	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	ug/ml	
Spiked Amount 150.000	Range 21 - 100		Recovery =	0.00%#		
8) Phenol-d6	0.00	99	0d	0.00	ug/ml	
Spiked Amount 150.000	Range 10 - 94		Recovery =	0.00%#		
20) Nitrobenzene-d5	0.00	82	0d	0.00	ug/ml	
Spiked Amount 100.000	Range 35 - 114		Recovery =	0.00%#		
40) 2-Fluorobiphenyl	0.00	172	0d	0.00	ug/ml	
Spiked Amount 100.000	Range 43 - 116		Recovery =	0.00%#		
62) 2,4,6-Tribromophenol	0.00	330	0d	0.00	ug/ml	
Spiked Amount 150.000	Range 10 - 123		Recovery =	0.00%#		
76) Terphenyl-d14	0.00	244	0d	0.00	ug/ml	
Spiked Amount 100.000	Range 33 - 141		Recovery =	0.00%#		
Target Compounds						Qvalue
5) Ethylene Glycol Butyl Ethe	7.79	57	184809	84.03	ug/ml	98
31) n-Dodecane	11.58	57	255734	82.03	ug/ml	97
60) Benzophenone	15.59	105	330817	86.36	ug/ml#	37
65) 2,6-Diisopropylnaphthalene	16.30	197	401524	90.43	ug/ml	99
67) Diazinon	16.66	137	92447	98.08	ug/ml	98
78) Diethylene Glycol Butyl Et	21.17	105	193768	88.24	ug/ml	98
87) Diisononyl Phthalate	23.65	293	11605m	80.34	ug/ml	
88) Diisodecyl Phthalate	23.65	149	256951m	93.91	ug/ml	

(#) = qualifier out of range (m) = manual integration

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F014.D Vial: 14
Acq On : 8 Dec 2018 12:03 am Operator: CConover
Sample : PAPER ICV @ 80ppm | SVM58-87A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 8 1:28 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration

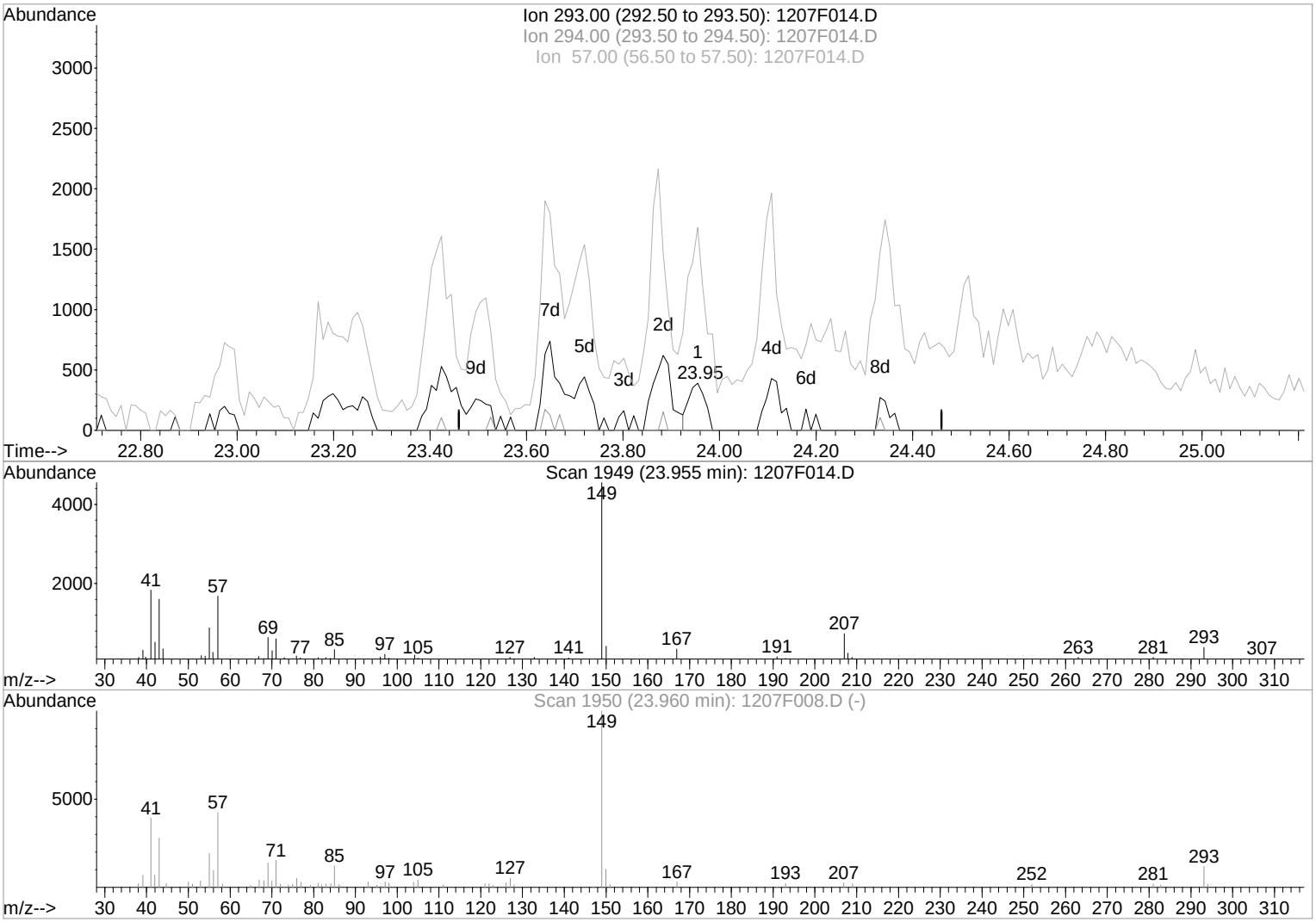


Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F014.D Vial: 14
Acq On : 8 Dec 2018 12:03 am Operator: CConover
Sample : PAPER ICV @ 80ppm | SVM58-87A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 8 1:27 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Multiple Level Calibration



TIC: 1207F014.D

(87) Diisononyl Phthalate (T)

23.95min 6.22ug/ml

response 899

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	0.00
57.00	33.10	376.08#
0.00	0.00	0.00

Manual Integration:

Before

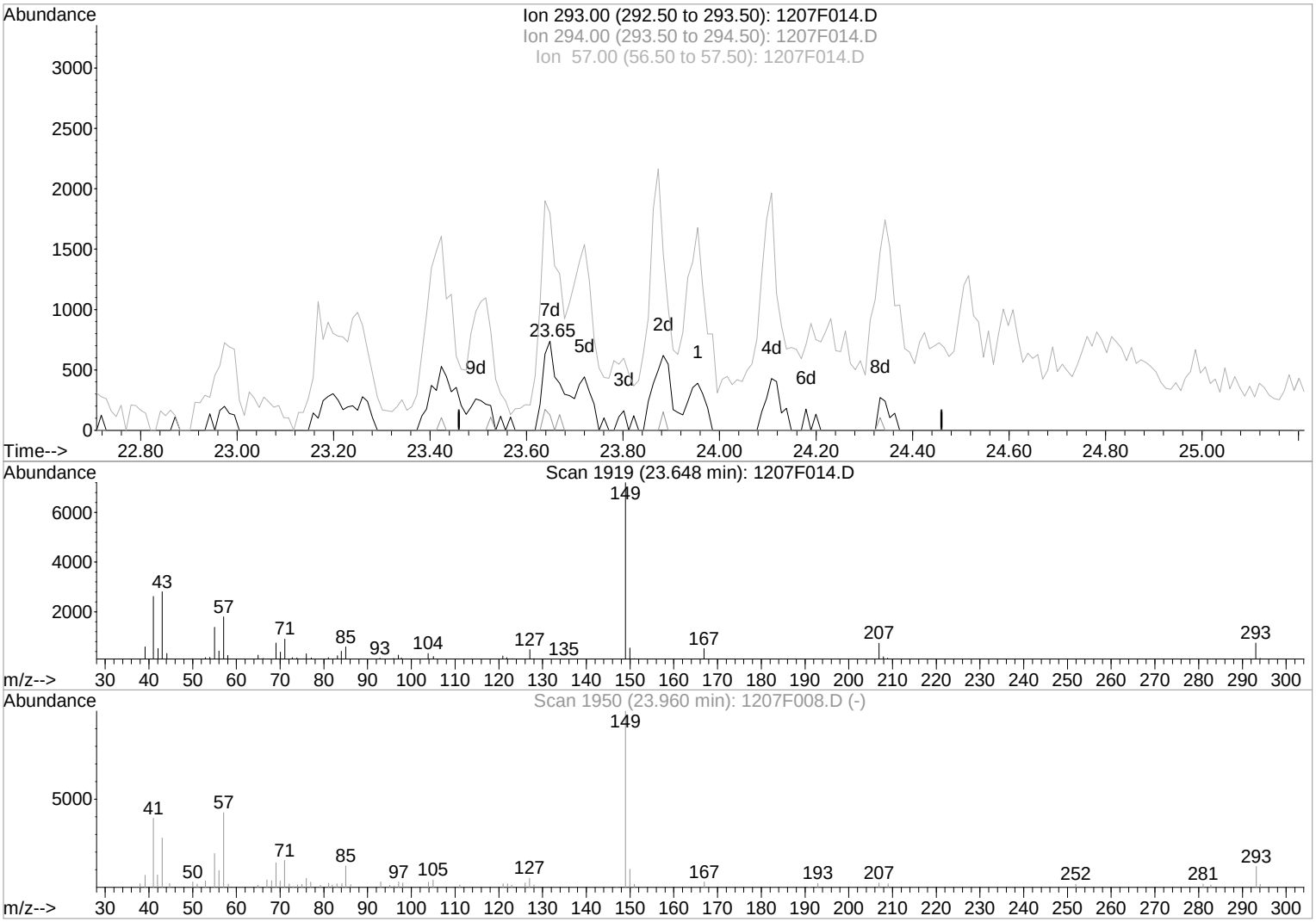
12/08/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F014.D Vial: 14
Acq On : 8 Dec 2018 12:03 am Operator: CConover
Sample : PAPER ICV @ 80ppm | SVM58-87A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 8 1:27 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Multiple Level Calibration



TIC: 1207F014.D

(87) Diisononyl Phthalate (T)

23.65min 80.34ug/ml m

response 11605

Ion	Exp%	Act%
293.00	100	100
294.00	1.40	0.00
57.00	33.10	29.13
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

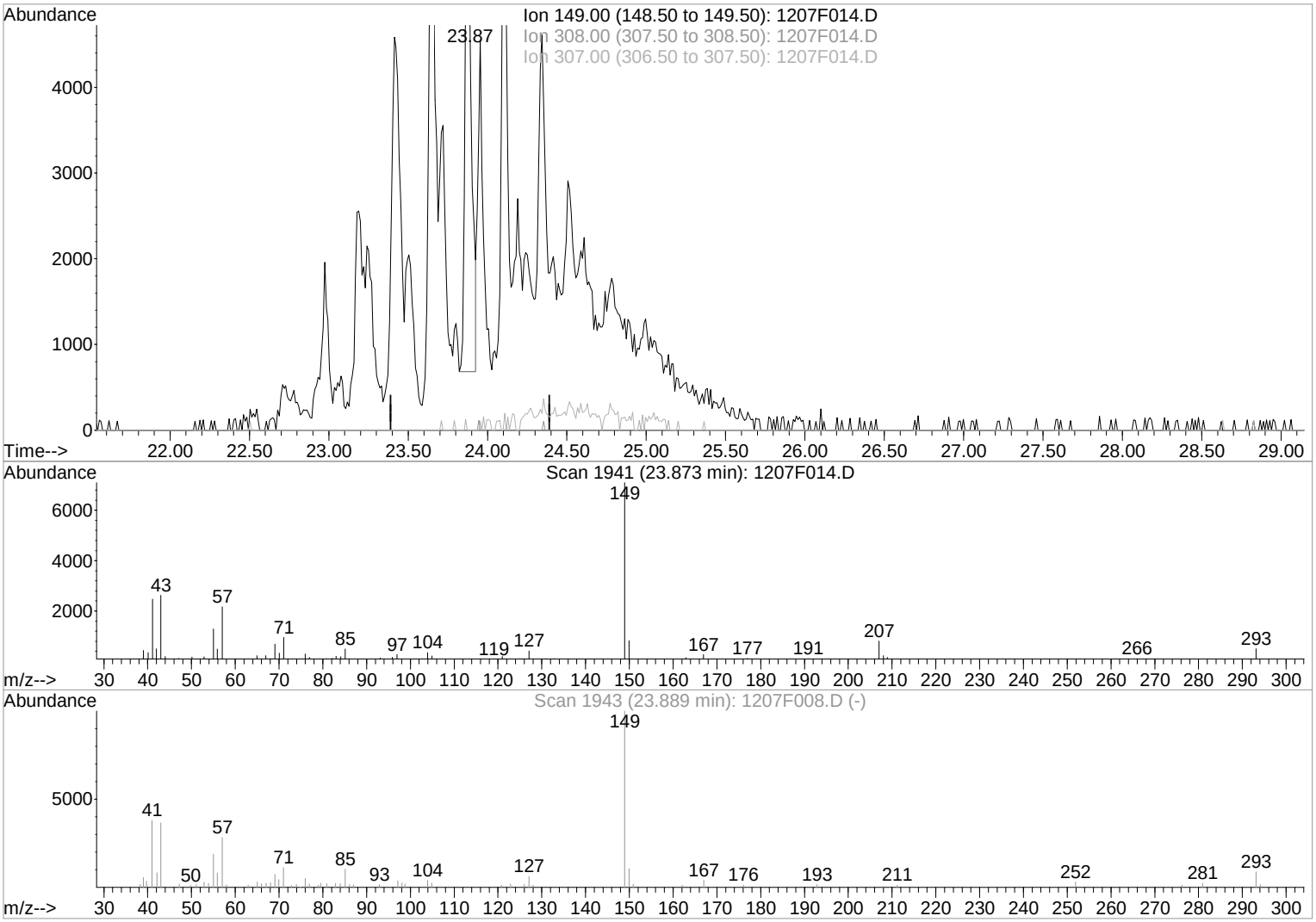
12/08/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F014.D Vial: 14
Acq On : 8 Dec 2018 12:03 am Operator: CConover
Sample : PAPER ICV @ 80ppm | SVM58-87A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 8 1:27 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Multiple Level Calibration



TIC: 1207F014.D

(88) Diisodecyl Phthalate (T)

23.87min 6.11ug/ml

response 16710

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

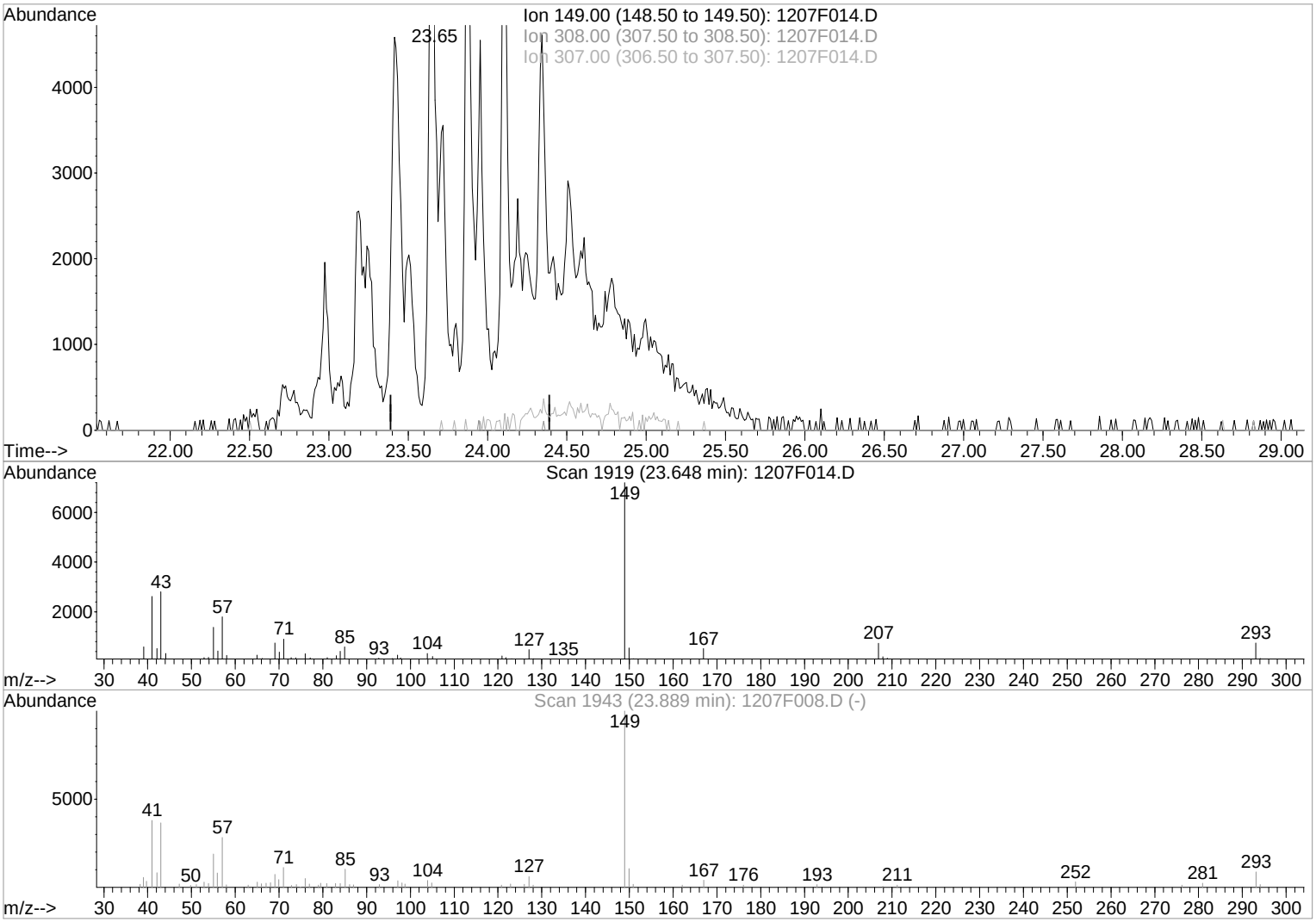
12/08/18

Quantitation Report (Qedit)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F014.D Vial: 14
Acq On : 8 Dec 2018 12:03 am Operator: CConover
Sample : PAPER ICV @ 80ppm | SVM58-87A Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 8 1:28 2018 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Multiple Level Calibration



TIC: 1207F014.D

(88) Diisodecyl Phthalate (T)

23.65min 93.91ug/ml m

response 256951

Ion	Exp%	Act%
149.00	100	100
308.00	0.00	0.00
307.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

12/08/18

1st 12/08/18
2nd 12/13/18

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\120718\1207F015.D Vial: 15
Acq On : 8 Dec 2018 12:44 am Operator: CConover
Sample : Benzidine ICV @ 50ppm | SVM59-93D Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 08 01:29:19 2018 Quant Results File: 120718BNP7.RES

Quant Method : J:\MS07\M...\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.42	152	41074	40.00	ug/ml	0.00
22) Naphthalene-d8	11.51	136	148976	40.00	ug/ml	-0.01
36) Acenaphthene-d10	14.38	164	84176	40.00	ug/ml	-0.01
61) Phenanthrene-d10	16.79	188	137996	40.00	ug/ml	-0.01
73) Chrysene-d12	21.26	240	98299	40.00	ug/ml	-0.02
83) Perylene-d12	24.49	264	92575	40.00	ug/ml	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	ug/ml	
Spiked Amount 150.000	Range 21 - 100		Recovery =	0.00%#		
8) Phenol-d6	0.00	99	0	0.00	ug/ml	
Spiked Amount 150.000	Range 10 - 94		Recovery =	0.00%#		
20) Nitrobenzene-d5	0.00	82	0	0.00	ug/ml	
Spiked Amount 100.000	Range 35 - 114		Recovery =	0.00%#		
40) 2-Fluorobiphenyl	0.00	172	0	0.00	ug/ml	
Spiked Amount 100.000	Range 43 - 116		Recovery =	0.00%#		
62) 2,4,6-Tribromophenol	0.00	330	0	0.00	ug/ml	
Spiked Amount 150.000	Range 10 - 123		Recovery =	0.00%#		
76) Terphenyl-d14	0.00	244	0d	0.00	ug/ml	
Spiked Amount 100.000	Range 33 - 141		Recovery =	0.00%#		
Target Compounds						Qvalue
74) Benzidine	19.02	184	104168	99.83	ug/ml	98

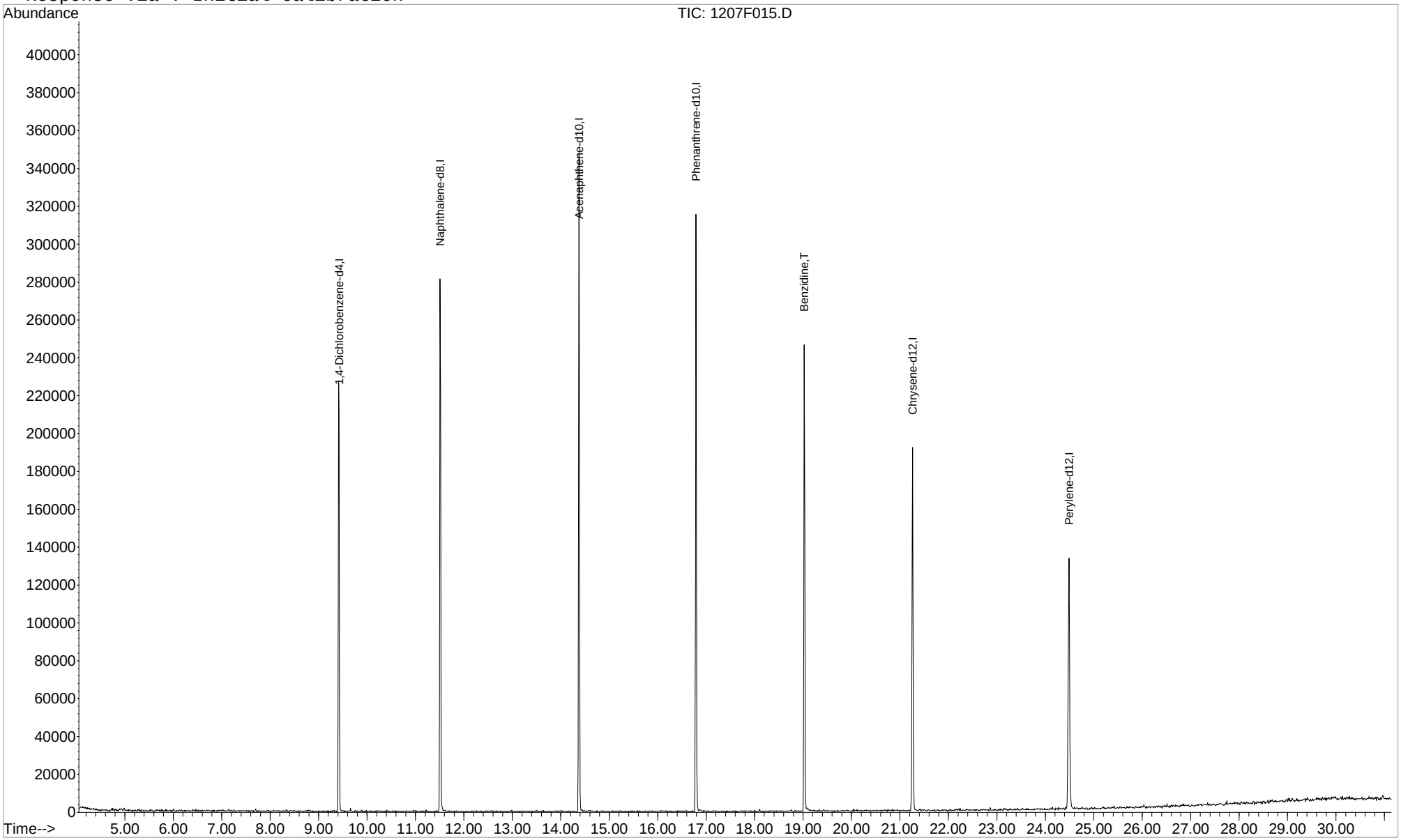
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 12/08/18
2nd 12/13/18

Data File : J:\MS07\DATA\120718\1207F015.D Vial: 15
Acq On : 8 Dec 2018 12:44 am Operator: CConover
Sample : Benzidine ICV @ 50ppm | SVM59-93D Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 8 1:30 2018 Quant Results File: 120718BNP7.RES

Method : J:\MS07\METHODS\8270_625\120718BNP7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Sat Dec 08 00:06:23 2018
Response via : Initial Calibration



Injection Log

Directory: J:\MS07\DATA\010419

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0104F001.D	1.	DFTPP @ 50ppm | SVM60-17B		4 Jan 2019 09:59
2	2	0104F002.D	1.	8270/P CCV @ 80ppm | SVM60-20A		4 Jan 2019 10:39
3	19	0104F003.D	1.	KQ1818722-05 | MB	DI Blank	4 Jan 2019 11:20
4	20	0104F004.D	1.	KQ1818722-04 | MB	Leachate Blank	4 Jan 2019 12:00
5	21	0104F005.D	1.	KQ1818722-03 | LCS		4 Jan 2019 12:41
6	22	0104F006.D	1.	KQ1818722-01 | MS		4 Jan 2019 13:21
7	23	0104F007.D	1.	KQ1818722-02 | DMS		4 Jan 2019 14:02
8	24	0104F008.D	1.	K1812382-001	KC1800550	4 Jan 2019 14:43
9	25	0104F009.D	1.	KQ1818490-03 | MB		4 Jan 2019 15:23
10	26	0104F010.D	1.	KQ1818490-01 | LCS	Stanlims 621360	4 Jan 2019 16:04
11	27	0104F011.D	1.	KQ1818490-02 | DLCS		4 Jan 2019 16:45
12	28	0104F012.D	1.	K1812430-001	CC 01/10/19	4 Jan 2019 17:25
13	29	0104F013.D	1.	K1812409-002		4 Jan 2019 18:05
14	30	0104F014.D	1.	K1812409-003		4 Jan 2019 18:46
15	31	0104F015.D	1.	K1812409-001	GI 1/10/19	4 Jan 2019 19:26 ✓
16	100	0104F016.D	1.	IB		4 Jan 2019 20:07
17	100	0104F017.D	1.	IB		4 Jan 2019 20:47
18	1	0104F018.D	1.	DFTPP @ 50ppm | SVM60-17B		4 Jan 2019 21:28
19	2	0104F019.D	1.	8270/P CCV @ 80ppm | SVM60-20A		4 Jan 2019 22:08
20	32	0104F020.D	1.	KWG1806593-3 | MB		4 Jan 2019 22:48
21	33	0104F021.D	1.	KWG1806593-1 | LCS		4 Jan 2019 23:29
22	34	0104F022.D	1.	KWG1806593-2 | DLCS		5 Jan 2019 00:09
23	35	0104F023.D	1.	K1811914-008		5 Jan 2019 00:49
24	36	0104F024.D	1.	K1811915-008		5 Jan 2019 01:30
25	37	0104F025.D	1.	K1811949-008		5 Jan 2019 02:10
26	38	0104F026.D	1.	K1812022-008		5 Jan 2019 02:50
27	39	0104F027.D	1.	K1812081-007		5 Jan 2019 03:31
28	40	0104F028.D	1.	K1812083-003		5 Jan 2019 04:11
29	41	0104F029.D	1.	K1812085-003		5 Jan 2019 04:52
30	42	0104F030.D	1.	KWG1806635-3 | MB		5 Jan 2019 05:32
31	43	0104F031.D	1.	KWG1806635-1 | LCS		5 Jan 2019 06:13
32	44	0104F032.D	1.	KWG1806635-2 | DLCS		5 Jan 2019 06:53
33	45	0104F033.D	1.	K1812076-008		5 Jan 2019 07:34
34	46	0104F034.D	1.	K1812211-008		5 Jan 2019 08:14
35	47	0104F035.D	1.	K1812220-008		5 Jan 2019 08:55
36	48	0104F036.D	1.	K1812281-008		5 Jan 2019 09:35
37	100	0104F037.D	1.	IB		5 Jan 2019 10:16
38	100	0104F038.D	1.	IB		5 Jan 2019 10:57

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